



B.I.G.
CONSULTING
INC.

DRAFT - PHASE TWO **ENVIRONMENTAL** **SITE ASSESSMENT**

590 Argus Road, Oakville, Ontario

Client

Mr. Clarence Zichen Qian
590 Argus Developments Inc.
1-90 Wingold Avenue
Toronto, Ontario
M6B 1P5

Project Number

BIGC-ENV-554D

Prepared By:

B.I.G. Consulting Inc.
12-5500 Tomken Road
Mississauga, Ontario, L4W 2Z4
T: 416.214.4880
www.bigconsultinginc.com

Date Submitted

September 28, 2023

Executive Summary

B.I.G. Consulting Inc. (BIG) was retained by Mr. Clarence Zichen Qian on behalf of 590 Argus Developments Inc. (Client), to complete a Phase Two Environmental Site Assessment (ESA) at the property located at 590 Argus Road, in Oakville, Ontario (the Site).

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

The objective of the Phase Two ESA was to assess the areas of potential environmental concern (APECs) identified in the Phase One ESA completed by BIG in April 2023; and, to obtain soil and groundwater data to characterize the Site to support the filing of a Record of Site Condition (RSC) on the Ontario Ministry of the Environment, Conservation and Parks (MECP) Brownfields Environmental Site Registry (BESR).

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

1. The general stratigraphy at the Site, as revealed in the borehole logs, consists of asphalt or topsoil followed by sand and gravel, silty sand and silty clay/clayey silt fill material, underlain by native clayey silt/silty clay and shale complex underlain by shale bedrock.
2. Based on the stratigraphy observed on the borehole logs, coarse textured standards were applied.
3. The groundwater depths in the shallow aquifer ranged between approximately 2.48 m and 4.32 m bgs and groundwater depths within the deep aquifer ranged between approximately 2.83 m and 20.49 m bgs, on May 5, 2023.
4. The soil analytical results indicated that select parameters were detected at concentrations above the applicable MECP (2011a) Table 2 Full Generic Site Condition Standards in a Potable Ground Water Condition for Residential Property Use and coarse textured soils including:

Parameter	MECP (2011a) Table 2 SCS (µg/g)	Number of Soil Samples Submitted ⁽¹⁾	Number of Soil Samples Exceeding the applicable SCS ⁽¹⁾	Maximum concentration detected (µg/g)
PHCs				
PHC F2	98	5	2	1,400
PHC F3	300	5	2	1,000
PAHs				
Benzo(a)pyrene	0.30	24	1	0.52
Fluoranthene	0.69	24	1	1.60
Metals				
Copper	140	27	4	360

(1) Excluding duplicate samples

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

Conclusions and Recommendations

The COCs present at the Site are comprised of PHC F2, PHC F3, benzo(a)pyrene, fluoranthene, and copper in soil. Based on the former activities on-Site, the PAH and copper impacts are associated with fill material of unknown quality. Based on the historical records available for review, the source of the PHC impacts in soil is unknown.

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

1. Complete delineation of copper and PHCs in soil.
2. Excavate the impacted soil and dispose of off-Site at a registered landfill facility.
3. Conduct confirmatory sampling.
4. Prepare a report documenting remedial activities.
5. Update the Phase Two ESA.
6. File the RSC.

Table of Contents

1	Introduction	1
1.2	Legal Description and Property Ownership.....	1
1.3	Current and Proposed Future Uses	2
1.4	Applicable Site Condition Standards	2
2	Background Information	4
2.1	Physical Setting.....	4
2.2	Past Environmental Investigations	4
3	Scope of the Investigation.....	6
3.1	Overview of Site Investigation.....	6
3.2	Media Investigated.....	6
3.3	Phase One Conceptual Site Model	6
3.4	Deviations from Sampling and Analysis Plan.....	10
3.5	Impediments.....	10
4	Investigation Method	11
4.1	General	11
4.2	Borehole Drilling.....	11
4.3	Soil Sampling.....	11
4.4	Field Screening Measurements	12
4.5	Groundwater: Monitoring Well Installation.....	12
4.6	Monitoring Well Development.....	13
4.7	Groundwater Monitoring	13
4.8	Monitoring Well Purging	13
4.9	Field Measurements of Water Quality Parameters	14
4.10	Groundwater Sampling.....	14
4.11	Sediment Sampling.....	14
4.12	Analytical Testing.....	14
4.13	Elevation Survey	16
4.14	Quality Assurance and Quality Control Measures.....	18
5	Review and Evaluation.....	20
5.1	Geology.....	20
5.2	Groundwater Elevations and Flow Direction	21
5.3	Soil Texture.....	22
5.4	Soil Field Screening.....	22
5.5	Soil Quality.....	22
5.6	Groundwater Quality.....	24
5.7	Sediment Quality	25
5.8	Quality Assurance and Quality Control Measures.....	25
5.9	Phase Two Conceptual Site Model	26
6	Summary of Findings	41
7	Conclusions and Recommendations	42
8	General Limitations	43
9	References	44

List of Appendices

- Appendix A:** Site Sampling and Analysis Plan (SSAP)
- Appendix B:** Analytical Tables
- Appendix C:** Borehole Logs
- Appendix D:** Conceptual Site Models
- Appendix E:** Survey Plan
- Appendix F:** Laboratory Certificates of Analysis

List of Attached Tables

- Table 1:** Areas of Potential Environmental Concern (APEC)
- Table 2:** Summary of Soil Samples Submitted for Chemical Analyses
- Table 3:** Monitoring Well Installation Details
- Table 4:** Water Level Depths and Elevations
- Table 5:** Summary of Groundwater Samples Submitted for Chemical Analyses

List of Figures

- Figure 1:** Site Location Plan
- Figure 2:** Site Layout and Utilities Plan
- Figure 3:** Phase Two Study Area and Potentially Contaminating Activities (PCAs)
- Figure 4:** Borehole/Monitoring Well Location Plan
- Figure 5:** Borehole/Monitoring Well Location Plan with Areas of Potential Environmental Concern (APECs)
- Figure 6A:** Shallow Groundwater Contour Plan
- Figure 6B:** Deep Groundwater Contour Plan
- Figure 7A:** Geological Cross Section A-A'
- Figure 7B:** Geological Cross Section A-A' with PHC Impacts in Soil
- Figure 7C:** Geological Cross Section A-A' with PAH Impacts in Soil
- Figure 7D:** Geological Cross Section A-A' with Metals, As, Sb, Se, Cr(VI), Hg, B-HWS and CN- Impacts in Soil
- Figure 8A:** Geological Cross Section B-B'
- Figure 8B:** Geological Cross Section B-B' with Metals, As, Sb, Se, Cr(VI), Hg, B-HWS and CN- Impacts in Soil
- Figure 9A:** Geological Cross Section C-C'
- Figure 9B:** Geological Cross Section C-C' with PHC Impacts in Soil
- Figure 9C:** Geological Cross Section C-C' with PAH Impacts in Soil
- Figure 10:** PHC Impacts in Soil
- Figure 11:** BTEX Concentrations in Soil
- Figure 12:** VOCs Concentrations in Soil
- Figure 13:** PAH Impacts in Soil
- Figure 14:** PCB Concentrations in Soil
- Figure 15:** Metals, As, Sb, Se, Cr(VI), Hg, B-HWS and CN- Impacts in Soil
- Figure 16:** EC and SAR Concentrations in Soil
- Figure 17:** PHC (including BTEX) Concentrations in Groundwater
- Figure 18:** VOC Concentrations in Groundwater
- Figure 19:** PAH Concentrations in Groundwater
- Figure 20:** Metals, As, Sb, Se, Cr(VI), Hg and CN- Concentrations in Groundwater
- Figure 21:** Sodium and Chloride Concentrations in Groundwater

1 Introduction

B.I.G. Consulting Inc. (BIG) was retained by Mr. Clarence Zichen Qian on behalf of 590 Argus Developments Inc. (Client), to complete a Phase Two Environmental Site Assessment (ESA) at the property located at 590 Argus Road, in Oakville, Ontario (the Site).

The objective of the investigation was to support the filing of a Record of Site Condition (RSC) in accordance with Ontario Regulation 153/04 (O.Reg.153/04), as amended. It is BIG’s understanding that the Client is planning on redeveloping the Site with three (3) condominium buildings which is expected to have seven (7) levels of underground parking in the future, which would require a land use change and a Record of Site Condition (RSC). Contact information for the Client is provided in Section 1.2.

The objective of the Phase Two ESA was to assess the areas of potential environmental concern (APECs) identified in the Phase One ESA completed by BIG in April 2023 and, to obtain soil and groundwater data to characterize the Site to support the preparation of the filing of an RSC on the Ontario Ministry of the Environment, Conservation and Parks (MECP) Brownfields Environmental Site Registry (BESR).

1.1 Site Description

The Site is located south of South Service Road East, and north of Argus Road in Oakville, Ontario, as shown on Figure 1. The Site measures approximately 15,500 m² in size and is currently occupied by a six-storey commercial building (Site building). The Site building has a footprint of approximately 3,300 m² and occupies approximately 23 % of the Site. The Site building was reportedly constructed prior to 1960. The Site building is currently used as a hotel and is occupied by the Holiday Inn Oakville. The areas surrounding the Site building are covered with asphalt paved parking with landscaping along the southern, eastern and northern property boundaries. The nearest surface water body is Sixteen Mile Creek, located approximately 470 m southwest, and Lake Ontario is located approximately 2.30 km southeast of the Site. A Site layout plan is shown on Figure 2.

The Site is bound to the north by South Service Road East followed by the QEW, to the east by commercial land use followed by South Service Road East, to the south by Argus Road followed by commercial properties, and to the west by commercial 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 Address	590 Argus Road, Oakville, Ontario
Current Owners	590 Argus Developments Inc.
Owner Address	1-90 Wingold Avenue, Toronto, Ontario, M6B 1P5
Owner Contact Information	Mr. Emil Toma
Legal Description	Lot 15, Plan 1333; part lots 13 and 14, concession 3 Trafalgar South of Dundas Street as in 82493 S & E parts 6, 7, 9 and 10, 20R15677; Town of Oakville
Property Identification Number (PIN)	24816-0113
Property Size	15,500 m ²
Approximate Universal Transverse Mercator (UTM) coordinates	Zone: 17 Easting: 606332.34 Northing: 4812516.62 (1m, NAD83, QGIS)

1.3 Current and Proposed Future Uses

At the time of the Phase Two ESA investigation, the Site was occupied by a multi-storey commercial building (Site building). The Site will be redeveloped for residential purposes with three (3) condominium building towers which is expected to have seven (7) levels of underground parking. Section 168.3.1 of the *Environmental Protection Act* does not prohibit the proposed future use of the Property. Current surrounding land uses is included in Figure 3.

1.4 Applicable Site Condition Standards

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

Tables 1 to 9 of MECP are summarized as follows:

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

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

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

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

- f) The future land use of the Site is residential.
- g) Coarse textured soils were used as part of the Phase Two ESA.
- h) There was no intention to carry out a stratified restoration at the Site.

2 Background Information

2.1 Physical Setting

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

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

The following information was obtained from these maps:

- a) The Site is at an elevation of approximately 105 m above sea level (asl), generally at the same elevation as properties to the west and east of the Site. The surrounding properties to the south are generally at lower elevation than the Site, and the surrounding properties to the northwest are generally at higher elevation than the Site.
- b) No water bodies are located on the Site. The nearest water body is Sixteen Mile Creek located approximately 470 m southwest and Lake Ontario is located approximately 2.30 km southeast. The inferred groundwater flow direction is likely towards the south/southeast.
- c) The bedrock in the general area of the Site consists of shale, limestone, dolostone and siltstone and is part of the Georgian Bay Formation, Blue Mountain Formation, Billings Formation, Collingwood Member and Eastview Member.
- d) The surficial geology of the Site is described as Paleozoic bedrock.
- e) The physiography of the Site is within the Iroquois Plains characterized as shale plains.

2.2 Past Environmental Investigations

Previous environmental investigations have been conducted at the Site. The following environmental investigations were reviewed in support of this Phase Two ESA report:

1. Pinchin (2016) Phase I Environmental Site Assessment, 590 Argus Road, Oakville, Ontario. Dated July 15, 2016, prepared by Pinchin Ltd.
2. BIG (2022a) Phase I Environmental Site Assessment, 590 Argus Road, Oakville, Ontario, dated October 3, 2022, prepared by B.I.G. Consulting Inc.
3. BIG (2022b) Phase II Environmental Site Assessment, 590 Argus Road, Oakville, Ontario, dated October 4, 2022, prepared by B.I.G. Consulting Inc.
4. BIG (2023) Phase One Environmental Site Assessment, 590 Argus Road, Oakville, Ontario, dated April 28, 2023, prepared by B.I.G. Consulting Inc.

A brief summary of the investigations is included below:

Pinchin (2016) Phase I Environmental Site Assessment	
Objective	Identify former and existing potential environmental concerns at the Site.
Potential Environmental Concerns Identified	<ul style="list-style-type: none"> • None identified at the Site.

BIG (2022a) Phase I Environmental Site Assessment	
Objective	Identify former and existing potential environmental concerns at the Site.
Potential Environmental Concerns Identified	<ul style="list-style-type: none"> • Potential fill material of unknown quality at the Site.

BIG (2022b) Phase II Environmental Site Assessment	
Objective	Investigate soil and groundwater quality at the Site.
Program	<ul style="list-style-type: none"> • Advancement of eight (8) boreholes (BH1 to BH8) up to a maximum depth of approximately 7.7 m below ground surface (bgs). • Installation of five (5) monitoring wells (MW1, MW3, MW4, MW6, and MW8). • Soil samples submitted for the analysis of polycyclic aromatic hydrocarbons (PAHs), and metals and inorganics. • Groundwater samples submitted for petroleum hydrocarbons (PHCs), benzene, toluene, ethylbenzene, and xylenes (BTEX), and volatile organic compounds (VOCs).
Site Condition Standards	MECP (2011) Table 6 Generic SCS for Shallow Soils in Potable Groundwater Condition for Residential/Parkland/Institutional property with and coarse textured soil.
Soil	<ul style="list-style-type: none"> • The stratigraphy consists of asphalt followed by silty clay/clayey silt or sand & gravel fill material, underlain by weathered shale bedrock. • Shale bedrock was encountered between 0.8 to 1.5 m bgs.
Groundwater	<ul style="list-style-type: none"> • Depth = 2.92 m bgs to 4.55 m bgs (May 4, 2021).
Soil Conditions	<ul style="list-style-type: none"> • Copper was detected at a concentration of 190 µg/g which is in exceedance of the SCS of 140 µg/g. • All other parameters were either non-detect or below the SCS.
Groundwater Conditions	<ul style="list-style-type: none"> • All groundwater samples submitted were either non-detect or were detected below the applicable SCS.

BIG (2023) Phase One Environmental Site Assessment	
Objective	Identify existing or former potential sources of environmental concerns at the Site.
Areas of potential environmental concerns identified	<ul style="list-style-type: none"> • Fill material of unknown quality at the exterior portions Site. • Usage of de-icing salts at the exterior portions of the Site. • Current transformer at the western portion of the Site. • Previously identified metals exceedance at the eastern portion of the Site.

3 Scope of the Investigation

3.1 Overview of Site Investigation

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

3.1.1 Scope of Work

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

- a) Request public utility locating companies (e.g., cable, telephone, gas, hydro, water, sewer and storm water) to mark any underground utilities present at the Site;
- b) Advance a total of twenty-two (22) boreholes (BH101 – BH113 and BH201 – BH209) up to a maximum depth of 30.8 m bgs;
- c) Instrument eleven (11) boreholes as monitoring wells (MW102, MW105 – MW113, and MW203);
- 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 hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), metals and inorganics.
- e) Develop the newly installed groundwater monitoring wells;
- f) Collect groundwater levels from both the newly and previously installed monitoring wells;
- g) Collect groundwater samples from both the newly and previously installed monitoring wells for laboratory chemical analysis of PHCs, BTEX, VOCs, PAHs, metals and inorganics;
- h) Complete an elevation survey of all newly installed monitoring wells to determine the groundwater flow direction in the overburden aquifer beneath the Site;
- i) Analyze the data and prepare a report of the findings.

3.2 Media Investigated

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

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

3.3 Phase One Conceptual Site Model

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

The Site is located south of South Service Road East, and north of Argus Road in Oakville, Ontario, as shown on Figure 1. The Site measures approximately 15,500 m² in size and is currently occupied by a six-storey commercial building (Site building). The Site building has a footprint of approximately 3,300 m² and occupies approximately 23 % of the Site. The Site building was reportedly constructed prior to 1960. The Site building is currently used as a hotel and is occupied by the Holiday Inn Oakville. The areas surrounding the Site building are covered with asphalt paved parking with landscaping along the southern, eastern and northern property boundaries. The nearest surface water body is Sixteen Mile Creek, located approximately 470 m southwest, and Lake Ontario is located approximately 2.30 km southeast of the Site. A Site layout plan is shown on Figure 2.

The legal description of the Site as obtained from the PIN abstract is “Lot 15, Plan 1333; part lots 13 and 14, concession 3 Trafalgar South of Dundas Street as in 82493 S & E parts 6, 7, 9 and 10, 20R15677; Town of Oakville”. The Property Identification Number (PIN) is 24816-0113 (LT).

The approximate Universal Transverse Mercator (UTM) coordinates for the Site centroid was NAD83 17-4812516.62m N, 606332.34 m E. The UTM coordinates are based on measurements obtained from QGIS. The accuracy of the centroid is estimated to be 1 m.

Potentially Contaminating Activities

The Phase One ESA conducted by BIG in 2023 identified PCAs based on a groundwater flow direction towards the south/southeast. The water levels collected from across the Site during the BIG Hydrogeological Investigation and BIG Phase Two ESA determined that the shallow groundwater flow direction is flowing towards the southeast and the deep groundwater flow is towards the southwest. The shallow groundwater flow direction was used to determine PCAs contributing to APECs on-Site in the Phase One ESA. Four (4) PCAs in total were determined to be contributing to an APEC.

PCA Identifier	Address	PCA	PCA Location	Contributing to APEC at the Site?	Rationale
1.	590 Argus Road	Importation of Unknown Fill (PCA#30 – Importation of Fill Material of Unknown Quality)	On-Site	Yes	On-Site
2.		Usage of de-icing salts (PCA"Other" – Usage of de-icing salts)			
3.		Current transformer (PCA#55 – Transformer Manufacturing, Processing and Use)			
4.		Previously Identified Soil Exceedance (PCA"Other" – Previously Identified Metals Exceedance in Soil)			
5.	226 South Service Road East	Historic PCB Storage (PCA#55 – Transformer Manufacturing, Processing and Use)	Off-site (north adjacent)	No	PCBs are immobile
6.	234 South Service Road East	Current Transformer Use (PCA#55 – Transformer Manufacturing, Processing and Use)	Off-Site (east adjacent)	No	PCBs are immobile
7.	570 Trafalgar Road	Private fuel tank (PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)	Off-Site (25 m east)	No	Inferred transgradient
8.		Current Autobody Shop (PCA#10 – Commercial Autobody Shops)			
9.	580 Argus	Former Autobody Shop	Off-Site	No	Down gradient

PCA Identifier	Address	PCA	PCA Location	Contributing to APEC at the Site?	Rationale
	Road	(PCA#10 – Commercial Autobody Shops)	(45 m southeast)		
10.	570 Argus Road	Current Autobody Shop (PCA#10 – Commercial Autobody Shops)	Off-Site (90 m southeast)	No	Down gradient
11.	570 Argus Road	Sheet Metal Workshop (PCA#34 – Metal Fabrication)			
12.	(Formerly 572 Argus Road)	Sheet Metal Workshop (PCA #33 - Metal Treatment, Coating, Plating and Finishing)			
13.	187 Cross Avenue (Formerly 185 Cross avenue)	Leather Tanning Facility (PCA#53 – Tannery)	Off-Site (135 m southeast)	No	Down gradient
14.	155 North Service Road East	Historic Gasoline Spill (PCA"Other" – Gasoline Spill)	Off-Site (145 m northwest)	No	Significant distance
15.	562 Trafalgar Road	Auto Service Facility (PCA#10 – Commercial Autobody Shops)	Off-Site (170 m east)	No	Trans-gradient
16.		Underground Fuel Storage Tank (PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)			
17.		Gasoline Service Station (PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)			
18.		Current Transformer (PCA#55 – Transformer Manufacturing, Processing, and Use)			
19.	125 Cross Avenue	Underground Fuel Storage Tank (PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)	Off-Site (180 m southwest)	No	Down gradient
20.	238 Cross Avenue (Formerly 218 Cross Avenue)	Fuel Storage Tanks (PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)	Off-Site (200 m south)	No	Down gradient
21.	312 Davis	Autobody Shop	Off-Site	No	Trans-gradient

PCA Identifier	Address	PCA	PCA Location	Contributing to APEC at the Site?	Rationale
	Road	(PCA#10 – Commercial Autobody Shops)	(225 m east)		
22.	547 Trafalgar Road	Paint Manufacturing (PCA#39 – Paint Manufacturing, Processing, and Bulk Storage)	Off-Site (230 m east)	No	Trans-gradient
23.		Underground Storage Tank (PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)			
24.	148 Cross Avenue	Steel Foundry (PCA#32 – Iron and Steel Manufacturing)	Off-Site (235 m South)	No	Down gradient

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

The identification of the PCAs both on-Site and off-Site within the Phase One study area are shown on Figure 3. Based on the rationale provided, it is the opinion of the Qualified Person (QP) that four (4) PCAs are considered APECs at the Site. Further discussion is provided below.

Areas of Potential Environmental Concern

Based on the evaluation of the PCAs located on- and off-Site, four (4) APECs were identified, as presented below:

APEC	Location of APEC on Phase One Property	PCA	Location of PCA (On-Site or Off-Site)	Potential Contaminants of Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC 1: Importation of fill material	Exterior portion of the Site	#30 – Importation of Fill Material of Unknown Quality	On-Site	PAHs, metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN-	Soil
APEC 2: Use of de-icing salts	Exterior portion of the Site	“Other” – Usage of De-icing Salts	On-Site	Electrical Conductivity and SAR	Soil
APEC 3: Current Transformer	Western portion	#55 – Transformer Manufacturing, Processing and Use	On-Site	PCBs	Soil
APEC 4: Previously Identified Soil Exceedance	Eastern portion east of the Site building	“Other” – Previously Identified Metals Exceedance in Soil	On-Site	Metals	Soil and Groundwater

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

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

The surficial geology of the Site is described as Paleozoic bedrock. The physiography of the Site is within the Iroquois Plains characterized as shale plains. The bedrock in the general area of the Site consists of shale, limestone, dolostone and siltstone and is part of the Georgian Bay Formation, Blue Mountain Formation, Billings Formation, Collingwood Member and Eastview Member.

Based on the review of the OBM and Toporama map, the Site is at an elevation of approximately 105 m above sea level (asl), generally at the same elevation as properties to the west and east of the Site. The surrounding properties to the south are generally at lower elevation than the Site, and the surrounding properties to the northwest are generally at higher elevation than the Site.

There are no water bodies located on the Site. The nearest water body is Sixteen Mile Creek located approximately 470 m southwest and Lake Ontario is located approximately 2.30 km southeast. The inferred groundwater flow direction is likely towards the south/southeast.

Based on the review of available resources from the Ministry of Natural Resources and Forestry (MNRF) on March 15, 2023, no areas of natural significance were identified at the Site or within the Phase One Study Area.

The Site utilities and services that were identified at the Site based on the relevant utility infrastructure observed during the Phase One ESA conducted by BIG in 2023 are summarized in the table below. It is noted that the precise underground location of the utilities cannot be determined without professional locate services.

Utility	Source	Location	Site Entry
Storm Sewer	Municipality – Town of Oakville	North, east, south, west	Catch basins are located along Argus Road and surrounding the Site building.
Sanitary Sewer	Municipality – Halton Region	South	Manholes are located along Argus Road and in the on-Site parking lot.
Water	Municipality – Halton Region	South	Given that the Site is located in a mixed commercial area, the water lines are anticipated to run along Argus Road.
Natural Gas	Enbridge Gas	South	Given that the Site is located in a commercial area, the natural gas lines are anticipated to run along Argus Road.
Electricity	Oakville Hydro	South	Overhead hydro lines were observed along Argus Road.

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 twenty-two (22) 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, overburden soils and bedrock 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 February 10 and March 1, 2023, and April 20, 2023.

The boreholes were advanced by Davis Drilling and Whittle's Drilling under full-time supervision of BIG staff using a truck mount power operated hollow and solid stem continuous flight augers to a maximum depth of 30.8 m bgs to sufficiently assess the APECs identified in the Phase One ESA. The approximate locations of the boreholes and monitoring wells are shown on Figure 4.

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

4.3 Soil Sampling

Soil samples for geologic characterization and chemical analysis were collected on a discrete basis in the overburden materials using 5 cm diameter, 60 cm long, split spoon samples advanced into the subsurface using a track 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 Bureau Veritas (BV) of Mississauga, Ontario. The samples were transported/submitted within the acceptable holding time to BV 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. Eleven (11) of the boreholes that were advanced were installed with monitoring wells (MW102, MW104 – MW113, and MW203).

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.

Eleven (11) duplicate soil samples were collected for QA/QC purposes as summarized below.

Borehole	Duplicate Sample Identification	Analytical Test Group
BH101-SS1	DUP10101	Metals, As, Sb and Se
BH102-SS1	DUP10201	Metals, As, Sb, Se, Cr (VI), B-HWS, Hg, CN- and Inorganics
BH102-SS2	DUP10202	Metals, As, Sb and Se
BH105-SS3	DUP10503	BTEX and VOCs
BH106-SS1	DUP10601	PAHs
BH107-SS1	DUP10701	PAHs
BH109-SS1	DUP10901	PAHs
BH201-SS1	DUP20101	PAHs
BH203-SS3	DUP20303	PHCs and BTEX
BH206-SS1	DUP20601	Metals, As, Sb and Se
BH208-SS1	DUP20801	PCBs

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 isobutylene 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

Eleven (11) boreholes were instrumented with groundwater monitoring wells at the Site (MW102, MW105 – MW113, and MW203). 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, 50 mm diameter PVC screen, and an appropriate length of PVC riser pipe. All pipe connections were factory machined threaded flush couplings. The annular space around the wells was backfilled with sand to an average height of 0.3 m 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 February 28, May 5, and July 27, 2023, using dedicated Waterra tubing to disturb the water column and recover groundwater containing dislodged sediment particles.

4.7 Groundwater Monitoring

Groundwater monitoring activities, which consisted of measuring the depths to groundwater in each monitoring well, were conducted on newly installed monitoring wells so that groundwater flow and direction below the Site could be assessed and groundwater samples can be collected. These groundwater monitoring activities were conducted on March 3 and May 5, 2023. 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 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 $\pm 10\%$, and turbidity $\pm 10\%$ of the average value of the three readings with the temperature within $\pm 3\%$. Field parameters including pH, conductivity and temperature were monitored during monitoring well purging using a Horiba U-52 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 Horiba U-52 multiparameter water quality meter.

4.10 Groundwater Sampling

Upon completion of purging, the newly installed monitoring well MW102 was sampled on March 3, 2023, monitoring well MW112 was sampled on May 16, 2023, and monitoring wells BH/MW3, BH/MW108 and BH/MW203 were sampled on July 27, 2023. 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 BV 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 Phase Two ESA.

4.12 Analytical Testing

All analytical testing was performed by BV, which is accredited under the Standards Council of Canada/Canadian Association of Environmental Analytical Laboratories (Accredited Laboratory No. 15025) 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	APECs 1 and 2 characterization	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2022b)
BH2-SS1	APECs 1 and 2 characterization	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2022b)
BH3-SS1	APECs 1 and 2 characterization	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2022b)
BH4-SS1	APECs 1 and 2 characterization	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2022b)
BH5-SS1	APEC 1 characterization	PAHs	BIG (2022b)
BH5-SS2	APECs 1 and 2 characterization	Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2022b)
BH6-SS1	APECs 1 and 2 characterization	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2022b)
BH7-SS1	APECs 1 and 2 characterization	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2022b)
BH8-SS1	APECs 1 and 2 characterization	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2022b)

Soil Sample ID	Rationale	Requested Analyses	Consultant
BH101-SS1	Horizontal delineation	Metals, As, Sb, and Se	BIG (2023)
BH102-SS1	Horizontal delineation	Metals, As, Sb, and Se	BIG (2023)
BH102-SS2	Vertical delineation	Metals, As, Sb, and Se	BIG (2023)
BH103-SS1	Horizontal delineation	Metals, As, Sb, and Se	BIG (2023)
BH104-SS1	Horizontal delineation	Metals, As, Sb, and Se	BIG (2023)
BH104-SS2	Site characterization and vertical delineation	BTEX, VOCs, Metals, As, Sb, and Se	BIG (2023)
BH105-SS1	APECs 1 and 2 characterization	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2023)
BH105-SS3	High PID value	BTEX and VOCs	BIG (2023)
BH106-SS1	APECs 1 and 2 characterization	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2023)
BH107-SS1	APECs 1 and 2 characterization	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2023)
BH108-SS1	APECs 1 and 2 characterization	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2023)
BH108-SS2	High PID value	BTEX and VOCs	BIG (2023)
BH109-SS1	APECs 1 and 2 characterization	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2023)
BH110-SS1	APECs 1 and 2 characterization	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2023)
BH110-SS3	High PID value	BTEX and VOCs	BIG (2023)
BH111-SS1	APECs 1 and 2 characterization	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2023)
BH112-SS1	APEC 1 characterization	PAHs	BIG (2023)
BH112-SS2	APECs 1 and 2 characterization and vertical delineation	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2023)
BH112-SS3	High PID value	BTEX and VOCs	BIG (2023)
BH113-SS1	APECs 1 and 2 characterization	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2023)
BH113-SS2	High PID value	BTEX and VOCs	BIG (2023)
BH201-SS1	Horizontal delineation	PAHs	BIG (2023)
BH201-SS2	Horizontal delineation	PHCs and BTEX	BIG (2023)
BH202-SS1	Horizontal delineation	PAHs	BIG (2023)
BH202-SS2	Horizontal and vertical delineation	PHCs, BTEX and PAHs	BIG (2023)
BH203-SS1	Horizontal delineation	PAHs	BIG (2023)
BH203-SS2	PHC odour and black staining	PHCs and BTEX	BIG (2023)
BH203-SS3	High PID value	PHCs and BTEX	BIG (2023)
BH204-SS1	Horizontal delineation	PAHs	BIG (2023)
BH204-SS2	PHC odour, black staining and vertical delineation	PHCs, BTEX and PAHs	BIG (2023)
BH205-SS1	Horizontal delineation	Metals, As, Sb, and Se	BIG (2023)
BH206-SS1	Horizontal delineation	Metals, As, Sb, and Se	BIG (2023)
BH207-SS1	Horizontal delineation	Metals, As, Sb, and Se	BIG (2023)
BH208-SS1	APEC 3 characterization	PCBs	BIG (2023)
BH209-SS1	Horizontal delineation	Metals, As, Sb, and Se	BIG (2023)

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	Sampling Date	Rationale	Requested Analyses	Consultant
BH/MW1	May 31, 2022	Site characterization	PHCs, BTEX and VOCs	BIG (2022b)
	September 30, 2022	Site characterization	VOCs	
	May 5, 2023	Site characterization	PHCs and BTEX	BIG (2023)
BH/MW3	May 31, 2022	Site characterization	PHCs, BTEX and VOCs	BIG (2022b)
	July 27, 2023	Site characterization	Metals, As, Sb, Se, Cr (VI), Hg, CN- and Inorganics	BIG (2023)
BH/MW4	May 31, 2022	Site characterization	PHCs, BTEX and VOCs	BIG (2022b)
BH/MW6	May 31, 2022	Site characterization	PHCs, BTEX and VOCs	BIG (2022b)
BH/MW8	May 31, 2022	Site characterization	PHCs, BTEX and VOCs	BIG (2022b)
BH/MW102	March 3, 2023	APEC 4 characterization	Metals, As, Sb, Se, Cr (VI), Hg, CN- and Inorganics	BIG (2023)
BH/MW108	July 27, 2023	APEC 4 characterization	Metals, As, Sb, Se, Cr (VI), Hg, CN- and Inorganics	BIG (2023)
BH/MW112	May 16, 2023	Site characterization	PHCs and BTEX	BIG (2023)
BH/MW203	July 27, 2023	Site characterization	PHCs, BTEX, VOCs, and PAHs	BIG (2023)

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 and borehole locations were surveyed relative to the geodetic benchmark. The ground surface elevations were surveyed by BIG personnel and referenced to previously surveyed wells. 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 Level Monitoring Date
BH/MW1	104.45	3.90	100.55	May 31, 2022
		3.36	101.09	March 3, 2023
		3.58	100.87	May 5, 2023
		3.69	100.76	July 27, 2023
BH2	105.02	-	-	-
BH/MW3	104.84	3.37	101.47	May 31, 2022
		2.88	101.96	March 3, 2023
		4.01	100.83	May 5, 2023
		3.00	101.84	July 27, 2023
BH/MW4	105.05	3.44	101.61	May 31, 2022
		3.08	101.97	March 3, 2023
		3.53	101.52	May 5, 2023
		3.12	101.93	July 27, 2023

Monitoring Well ID	Ground Surface Elevation	Groundwater Level (m bgs)	Groundwater Elevation (m ASL)	Groundwater Level Monitoring Date
BH5	105.13	-	-	-
BH/MW6	105.36	2.92	102.44	May 31, 2022
		Well not accessible on March 3, 2023		
		2.50	102.86	May 5, 2023
		2.60	102.76	July 27, 2023
BH7	105.08	-	-	-
BH/MW8	105.12	4.55	100.57	May 31, 2022
		Well not accessible on March 3, 2023		
		4.32	100.80	May 5, 2023
		4.43	100.69	July 27, 2023
BH101	105.00	-	-	-
BH/MW102	105.04	3.52	101.52	March 3, 2023
		3.37	101.67	May 5, 2023
		3.62	101.42	July 27, 2023
BH103	104.90	-	-	-
BH104	104.90	-	-	-
BH/MW105	104.96	4.20	100.76	March 3, 2023
		4.30	100.66	May 5, 2023
		4.49	100.47	July 27, 2023
BH/MW106	105.13	2.41	102.72	March 3, 2023
		2.48	102.65	May 5, 2023
		2.60	102.53	July 27, 2023
BH/MW107	104.65	Well not accessible on March 3, 2023		
		3.65	101.01	May 5, 2023
		3.18	101.48	July 27, 2023
BH/MW108	104.51	3.45	101.06	March 3, 2023
		3.58	100.93	May 5, 2023
		3.70	100.81	July 27, 2023
BH/MW109	105.09	23.09	82.00	March 3, 2023
		11.47	93.62	May 5, 2023
		11.64	93.45	July 27, 2023
BH/MW110	105.30	3.66	101.64	March 3, 2023
		4.82	100.48	May 5, 2023
		3.82	101.48	July 27, 2023
BH/MW111	105.08	6.84	98.24	March 3, 2023
		7.76	97.32	May 5, 2023
		6.92	98.16	July 27, 2023
BH/MW112	104.85	5.04	99.81	March 3, 2023
		5.25	99.60	May 5, 2023
		5.27	99.58	July 27, 2023
BH/MW113	105.08	23.84	81.24	March 3, 2023
		20.49	84.59	May 5, 2023
		20.06	85.02	July 27, 2023
BH201	104.86	-	-	-
BH202	104.89	-	-	-
BH/MW203	104.94	2.83	102.11	May 5, 2023
		3.02	101.92	July 27, 2023
BH204	104.76	-	-	-

Monitoring Well ID	Ground Surface Elevation	Groundwater Level (m bgs)	Groundwater Elevation (m ASL)	Groundwater Level Monitoring Date
BH205	104.97	-	-	-
BH206	104.89	-	-	-
BH207	104.91	-	-	-
BH208	105.24	-	-	-
BH209	104.99	-	-	-

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

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

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

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.

Eleven (11) duplicate soil samples were collected for QA/QC purposes as summarized below.

Borehole	Duplicate Sample Identification	Analytical Test Group
BH101-SS1	DUP10101	Metals, As, Sb and Se
BH102-SS1	DUP10201	Metals, As, Sb, Se, Cr (VI), B-HWS, Hg, CN- and Inorganics
BH102-SS2	DUP10202	Metals, As, Sb and Se
BH105-SS3	DUP10503	BTEX and VOCs
BH106-SS1	DUP10601	PAHs
BH107-SS1	DUP10701	PAHs
BH109-SS1	DUP10901	PAHs
BH201-SS1	DUP20101	PAHs
BH203-SS3	DUP20303	PHCs and BTEX
BH206-SS1	DUP20601	Metals, As, Sb and Se
BH208-SS1	DUP20801	PCBs

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

Borehole	Duplicate Sample Identification	Analytical Test Group
MW102	DUP1020	Metals, As, Sb, Se, Cr (VI), Hg, CN- and Inorganics
MW203	DUP2030	PHCs, BTEX, VOCs and PAHs

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 twenty-two (22) boreholes into the surficial soil, the underlying native and bedrock materials to a maximum depth of 30.8 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 or topsoil followed by sand and gravel, silty sand/sandy silt and silty clay/clayey silt fill material, underlain by native clayey silt/silty clay and shale complex underlain by shale bedrock.

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, 8A and 9A).

5.1.1 Surficial Material

An asphalt layer was encountered at all boreholes except for BH208. The asphalt ranged in thickness from 40 mm to 100 mm and was underlain by granular material ranging in thickness from 100 mm to 400 mm. A layer of crushed asphalt in 140 mm thickness was encountered at BH111. A layer of topsoil was encountered at BH208 with a thickness of 300 mm.

5.1.2 Fill Material

Fill material comprised of sand and gravel, silty sand/sandy silt and silty clay/clayey silt was encountered in all boreholes advanced at the Site except for BH205, BH206, and BH209 and extended to depths ranging between 0.91 m to 2.29 m bgs. The fill material contained trace to some gravel and limestone fragments.

5.1.3 Native Material

Silty Clay/Shale Complex

Below the fill material, a native deposit of silty clay/shale complex was observed in boreholes BH101, BH/MW102, BH103, BH104, BH/MW105 to BH/MW113, BH201, BH202, BH/MW203, and BH204 and below the asphalt at BH205 and BH209. The silty clay/shale complex layer extended to depths ranging from 0.6 m to 2.6 m bgs. Within this layer, occasional shale and limestone fragments were encountered.

Clayey Silt/Silty Clay

Below the asphalt, a native deposit of clayey silt/silty clay was observed in BH206 and BH207. The silt layer extended to a depth of 2.1 m bgs. Within this layer, trace sand, trace gravel and trace to some limestone were encountered.

5.1.4 Bedrock

Below the silty clay/shale complex, a highly weathered reddish brown and/or grey shale bedrock was encountered in all boreholes with the exception of shallow boreholes BH201, BH202, BH205 to BH209. The shale bedrock unit was encountered at depths ranging from 1.5 m to 2.6 m bgs, with more than two-thirds (2/3) of the Site consisting of soil equal to or greater than 2 m in depth before the bedrock was encountered.

Refer to the geological cross sections in Figures 7A, 8A and 9A for an overview of the Site stratigraphy.

5.2 Groundwater Elevations and Flow Direction

The on-Site monitoring well network consists of a total of sixteen (16) monitoring wells advanced by BIG screened within the bedrock. Monitoring well screens were installed to assess both the shallow and deep aquifers present at the Site with ten (10) monitoring wells installed within the shallow aquifer and six (6) monitoring wells installed within the deep aquifer.

Groundwater depths in the shallow aquifer ranged between approximately 2.48 m and 4.32 m bgs and groundwater depths within the deep aquifer ranged between approximately 2.83 m and 20.49 m bgs, on May 5, 2023.

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. Based on the static water levels observed, the interpreted shallow groundwater flow was towards the southeast and the interpreted deep groundwater flow was towards the southwest. The interpreted shallow groundwater flow was used to determine if any off-Site PCAs were to be considered as APECs. The interpreted shallow groundwater flow direction is presented on Figure 6A and the interpreted deep groundwater flow direction is presented on Figure 6B.

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 in the shallow aquifer, based on groundwater measurements collected on May 5, 2023 was 0.053 m/m between BH/MW106 and BH/MW8 and 0.017 m/m between BH/MW6 and BH/MW105 with a geomean of 0.030 m/m. The horizontal hydraulic gradient in groundwater in the deep aquifer, based on groundwater measurements collected on May 5, 2023 was 0.054 m/m between BH/MW110 and BH/MW111 and 0.012 m/m between BH/MW108 and BH/MW112 with a geomean of 0.025 m/m.

The vertical hydraulic gradient in groundwater, based on groundwater measurements collected on May 5, 2023 was 0.005 m/m in a downward direction (between BH/MW1 and BH/MW108).

5.2.2 Groundwater: Hydraulic Conductivity

Single Well Response Test (SWRT) analyses were conducted by BIG at select monitoring wells within the shallow and deep aquifers. In the deep aquifer, BH/MW108 to BH/MW113 were selected for the SWRT analyses. Estimates of the saturated hydraulic conductivity in the deep aquifer ranged from 1.52×10^{-8} m/s to 4.07×10^{-6} m/s, with a geometric mean of 3.65×10^{-7} m/s. In the shallow aquifer, BH/MW1, BH/MW3, BH/MW4, BH/MW6, BH/MW8, BH/MW102 and BH/MW106 were selected for the SWRT analyses. Estimates of the saturated hydraulic conductivity in the shallow aquifer ranged from 5.87×10^{-8} m/s to 2.71×10^{-5} m/s, with a geometric mean of 3.41×10^{-6} m/s.

5.3 Soil Texture

The fill materials encountered were comprised of sandy silt, silty sand, sand and gravel, silty clay and clayey silt and the native materials encountered, are comprised of clayey silt/silty clay and shale complex. Coarse textured standards were applied as part of this Phase Two ESA.

5.4 Soil Field Screening

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

5.5 Soil Quality

In accordance with the scope of work, chemical analyses were performed on selected soil samples recovered from the boreholes. The selection of representative “worst case” soil samples was based on field screening, visual and/or olfactory evidence of impacts, and the presence of potential water bearing zones. Copies of the laboratory Certificates of Analysis for the analyzed soil samples are provided in Appendix F.

5.5.1 PHCs

The soil samples submitted for PHCs analysis indicated that select parameters were detected at concentrations above the applicable MECP Table 2 SCS:

Parameter	MECP (2011a) Table 2 SCS (µg/g)	Number of Soil Samples Submitted	Number of Soil Samples Exceeding the applicable SCS	Maximum concentration detected (µg/g)
PHC F2	98	5	2	1,400
PHC F3	300	5	2	1,000

The remaining parameters were all detected below the applicable MECP Table 2 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 2 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 2 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 applicable MECP Table 2 SCS:

Parameter	MECP (2011a) Table 2 SCS (µg/g)	Number of Soil Samples Submitted	Number of Soil Samples Exceeding the applicable SCS	Maximum concentration detected (µg/g)
Benzo(a)pyrene	0.30	24	1	0.52
Fluoranthene	0.69	24	1	1.60

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

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

5.5.5 PCBs

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

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

5.5.6 Metals

The soil samples submitted for metals analysis indicated that select parameters were detected at concentrations above the applicable MECP Table 2 SCS:

Parameter	MECP (2011a) Table 2 SCS (µg/g)	Number of Soil Samples Submitted	Number of Soil Samples Exceeding the applicable SCS	Maximum concentration detected (µg/g)
Copper	140	27	4	360

The remaining parameters were all detected below the applicable MECP Table 2 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

Electrical conductivity (EC) and/or sodium adsorption ratio (SAR) exceedances were identified in soil across the exterior portion of the Site. EC and SAR are not considered as contaminants of concern (COC) at the Site as 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 2 SCS.

As de-icing salts were used at the Site for vehicular and pedestrian safety, EC and SAR are not considered as COCs in soil at the Site.

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

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

5.5.8 Chemical Transformation and Soil Contaminant Sources

PHC F2, PHC F3, benzo(a)pyrene, fluoranthene, and copper were identified in soil at concentrations in exceedance of the applicable MECP Table 2 SCS. 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 property. 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 indicated the presence of some black staining and PHC odours at BH203 and BH204.

5.6 Groundwater Quality

Representative groundwater samples were collected from the newly installed interior monitoring wells and some of the previously 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 5.6.7).

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

5.6.1 PHCs

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

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

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

5.6.6 Sodium and Chloride

Sodium and chloride exceedances were identified in groundwater at MW3, MW102 and MW108. The contaminants were not considered as contaminants of concerns (COCs) at the Site as under the newly amended O.Reg.153/04 (O.Reg.407/19), if a substance has been applied to surfaces for the safety of vehicular or pedestrian traffic under the conditions of snow or ice or both (i.e., application of de-icing salts), its related parameters are not deemed to be in exceedance of the MECP Table 2 SCS. As de-icing salts were used at the Site in the past for vehicular and pedestrian safety, sodium and chloride are not considered as COCs in groundwater at the Site.

The remaining parameters were either non-detect or 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 groundwater results analyzed for sodium and chloride.

5.6.7 Chemical Transformation and Contaminant Sources

No parameters were identified in groundwater in exceedance of the applicable MECP Table 2 SCS and as such it is not expected that any chemical transformation (i.e., presence of parent compounds and daughter products) has occurred on the property.

5.6.8 Evidence of Non-Aqueous Phase Liquid

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

5.7 Sediment Quality

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

5.8 Quality Assurance and Quality Control Measures

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

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

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

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

Eleven (11) duplicate soil samples were collected for QA/QC purposes as summarized below.

Borehole	Duplicate Sample Identification	Analytical Test Group
BH101-SS1	DUP10101	Metals, As, Sb and Se
BH102-SS1	DUP10201	Metals, As, Sb, Se, Cr (VI), B-HWS, Hg, CN- and Inorganics
BH102-SS2	DUP10202	Metals, As, Sb and Se
BH105-SS3	DUP10503	BTEX and VOCs
BH106-SS1	DUP10601	PAHs
BH107-SS1	DUP10701	PAHs
BH109-SS1	DUP10901	PAHs
BH201-SS1	DUP20101	PAHs
BH203-SS3	DUP20303	PHCs and BTEX

Borehole	Duplicate Sample Identification	Analytical Test Group
BH206-SS1	DUP20601	Metals, As, Sb and Se
BH208-SS1	DUP20801	PCBs

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

Borehole	Duplicate Sample Identification	Analytical Test Group
MW102	DUP1020	Metals, As, Sb, Se, Cr (VI), Hg, CN- and Inorganics
MW203	DUP2030	PHCs, BTEX, VOCs and PAHs

The field duplicate sample results were quantitatively evaluated by calculating the relative percent difference (RPD). Assessment of the duplicate soil and groundwater samples, where quantifiable, showed that the results met analytical test group specific acceptance criteria with the exception of copper at BH101-SS1, BH102-SS1, and BH102-SS2 in soil, uranium at BH102-SS2 in soil, and chromium (total), cobalt, nickel and vanadium at BH102-SS1 which were above the MECP standard for metals in soils of 30% RPD (MECP, 2011b). The high RPDs at BH101-SS1, BH102-SS1 and BH102-SS2 in soil are likely due to the heterogeneity of the sampled fill material. The overall assessment indicates that the soil and groundwater 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 BV. BV is accredited by the Standards Council of Canada/Canadian Association of Environmental Analytical Laboratories (Accredited Laboratory No. 15025) in accordance with ISO/IEC 17025:2017 - "General Requirements for the Competence of Testing and Calibration Laboratories".

Certificates of Analysis were received from BV reporting the results of all the chemical analyses performed on the submitted soil and groundwater samples. Copies of the BV Certificates of Analysis are provided in Appendix F. Review of the Certificates of Analysis prepared by BV Labs 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 BV 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 BV. 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 BV 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 BV indicated that they were within acceptable control limits or below applicable alert criteria for the sampled media and analytical test groups. Based on the assessment of the QA/QC, the analytical results reported by BV are of acceptable quality and data qualifications are not required.

5.9 Phase Two Conceptual Site Model

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

5.9.1 Introduction

The Site is located south of South Service Road East, and north of Argus Road in Oakville, Ontario, as shown on Figure 1. The Site measures approximately 15,500 m² in size and is currently occupied by a six-storey commercial building (Site building). The Site building has a footprint of approximately 3,300 m² and occupies approximately 23 % of the Site. The Site building was reportedly constructed prior to 1960. The Site building is currently used as a hotel and is occupied by the Holiday Inn Oakville. The areas surrounding the Site building are covered with asphalt paved parking with landscaping along the southern, eastern and northern property boundaries. The nearest surface water body is Sixteen Mile Creek, located approximately 470 m southwest, and Lake Ontario is located approximately 2.30 km southeast of the Site. A Site layout plan is shown on Figure 2.

Refer to the following table for the Site identification information.

Table 1: Site Information

Site Details	
Municipal Address	590 Argus Road, Oakville, Ontario
Current Owners	590 Argus Developments Inc.
Owner Address	1-90 Wingold Avenue, Toronto, Ontario, M6B 1P5
Owner Contact Information	Mr. Emil Toma
Legal Description	Lot 15, Plan 1333; part lots 13 and 14, concession 3 Trafalgar South of Dundas Street as in 82493 S & E parts 6, 7, 9 and 10, 20R15677; Town of Oakville
Property Identification Number (PIN)	24816-0113
Property Size	15,500 m ²
Approximate Universal Transverse Mercator (UTM) coordinates	Zone: 17 Easting: 606332.34 Northing: 4812516.62 (1m, NAD83, QGIS)

5.9.2 Potentially Contaminating Activities and Areas of Potential Environmental Concern

A Phase One ESA, in accordance with O. Reg. 153/04, as amended, has been conducted by BIG for the Site. The surrounding land use plan and PCAs identified On-Site and in the Phase One ESA Study Area are shown on Figure 2. A list of all PCA's identified at the Site and within the Phase One ESA Study Area are presented in Table 2. The interpreted shallow groundwater contour plan (Figure 6A) was used to determine if an off-Site PCA was to be considered as an APEC.

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

PCA Identifier	Address	PCA	PCA Location	Contributing to APEC at the Site?	Rationale
1.	590 Argus Road	Importation of Unknown Fill (PCA#30 – Importation of Fill Material of Unknown Quality)	On-Site	Yes	On-Site
2.		Usage of de-icing salts (PCA"Other" – Usage of de-icing salts)			
3.		Current transformer (PCA#55 – Transformer			

PCA Identifier	Address	PCA	PCA Location	Contributing to APEC at the Site?	Rationale
4.		Manufacturing, Processing and Use)			
		Previously Identified Soil Exceedance (PCA"Other" – Previously Identified Metals Exceedance in Soil)			
5.	226 South Service Road East	Historic PCB Storage (PCA#55 – Transformer Manufacturing, Processing and Use)	Off-site (north adjacent)	No	PCBs are immobile
6.	234 South Service Road East	Current Transformer Use (PCA#55 – Transformer Manufacturing, Processing and Use)	Off-Site (east adjacent)	No	PCBs are immobile
7.	570 Trafalgar Road	Private fuel tank (PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)	Off-Site (25 m east)	No	Inferred transgradient
8.		Current Autobody Shop (PCA#10 – Commercial Autobody Shops)			
9.	580 Argus Road	Former Autobody Shop (PCA#10 – Commercial Autobody Shops)	Off-Site (45 m southeast)	No	Down gradient
10.	570 Argus Road	Current Autobody Shop (PCA#10 – Commercial Autobody Shops)	Off-Site (90 m southeast)	No	Down gradient
11.	570 Argus Road	Sheet Metal Workshop (PCA#34 – Metal Fabrication)			
12.	(Formerly 572 Argus Road)	Sheet Metal Workshop (PCA #33 - Metal Treatment, Coating, Plating and Finishing)			
13.	187 Cross Avenue (Formerly 185 Cross avenue)	Leather Tanning Facility (PCA#53 – Tannery)	Off-Site (135 m southeast)	No	Down gradient
14.	155 North Service Road East	Historic Gasoline Spill (PCA"Other" – Gasoline Spill)	Off-Site (145 m northwest)	No	Significant distance
15.	562 Trafalgar Road	Auto Service Facility (PCA#10 – Commercial Autobody Shops)	Off-Site (170 m east)	No	Trans-gradient
16.		Underground Fuel Storage			

PCA Identifier	Address	PCA	PCA Location	Contributing to APEC at the Site?	Rationale
		Tank (PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)			
17.		Gasoline Service Station (PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)			
18.		Current Transformer (PCA#55 – Transformer Manufacturing, Processing, and Use)			
19.	125 Cross Avenue	Underground Fuel Storage Tank (PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)	Off-Site (180 m southwest)	No	Down gradient
20.	238 Cross Avenue (Formerly 218 Cross Avenue)	Fuel Storage Tanks (PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)	Off-Site (200 m south)	No	Down gradient
21.	312 Davis Road	Autobody Shop (PCA#10 – Commercial Autobody Shops)	Off-Site (225 m east)	No	Trans-gradient
22.	547 Trafalgar Road	Paint Manufacturing (PCA#39 – Paint Manufacturing, Processing, and Bulk Storage)	Off-Site (230 m east)	No	Trans-gradient
23.		Underground Storage Tank (PCA#28 – Gasoline and Associated Products Storage in Fixed Tanks)			
24.	148 Cross Avenue	Steel Foundry (PCA#32 – Iron and Steel Manufacturing)	Off-Site (235 m South)	No	Down gradient

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

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

Based on the rationale provided, it is the opinion of the Qualified Person (QP) that four (4) PCAs are considered APECs at the Site. Further discussion is provided below.

5.9.3 Areas of Potential Environmental Concern

Based on the evaluation of the PCAs located on- and off-Site, four (4) APECs were identified, as presented below:

Table 3: Areas of Potential Environmental Concern (APECs)

APEC	Location of APEC on Phase One Property	PCA	PCA Details	Location of PCA (On-Site or Off-Site)	Potential Contaminants of Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC 1: Importation of fill material	Exterior portion of the Site	#30 – Importation of Fill Material of Unknown Quality	Fill material of unknown quality was identified on-Site. As the quality of the fill was unknown, it could be contaminated.	On-Site	PAHs, metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN-	Soil
APEC 2: Use of de-icing salts	Exterior portion of the Site	“Other” – Usage of De-icing Salts	De-icing salt were used during the winter months on the exterior portion of the Site for vehicular and pedestrian safety during the winter months.	On-Site	Electrical Conductivity and SAR	Soil
APEC 3: Current Transformer	Western portion	#55 – Transformer Manufacturing, Processing and Use	The on-Site transformer located at the western portion of the Site may have leaked.	On-Site	PCBs	Soil
APEC 4: Previously Identified Soil Exceedance	Eastern portion east of the Site building	“Other” – Previously Identified Metals Exceedance in Soil	Previously identified metals soil exceedance at BH2 may have leached into the groundwater.	On-Site	Metals	Soil and Groundwater

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

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

Refer to Figures 4 and 5 for the Site plan illustrating the borehole/monitoring well locations and APECs and to Table 4 below for details on APEC characterization.

Table 4: APECs Characterization Details

APEC	APEC Details	Media Potentially Impacted	Boreholes/ Monitoring Wells Advanced within APEC	Depth(s) of Soil Samples Submitted for Analysis (m bgs)	Well Screen Depth (m bgs)	Parameters Tested	Figure #
APEC 1	Fill material of unknown quality was identified on-Site. As the quality of the fill was unknown, it could be contaminated	Soil	BH/MW1	0.00 – 0.61	NA	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN-	13, 15
			BH2	0.00 – 0.61			
			BH/MW3	0.00 – 0.61			
			BH/MW4	0.00 – 0.61			
			BH5	0.00 – 0.61			
			BH/MW6	0.00 – 0.61			
			BH7	0.00 – 0.61			
			BH/MW8	0.00 – 0.61			
			BH101	0.15-0.76		Metals, As, Sb, Se	
			BH/MW102	0.15-0.76 0.76-1.37			
			BH103	0.00-0.61		PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN-	
			BH104	0.15-0.76			
			BH/MW105	0.15-0.76			
			BH/MW106	0.15-0.76			
			BH/MW107	0.15-0.76			
			BH/MW108	0.15-0.76			
			BH/MW109	0.00 – 0.61			
			BH/MW110	0.15-0.76			
			BH/MW111	0.15-0.76		PAHs	
			BH/MW112	0.15-0.76 0.76-1.37			
			BH/MW113	0.15-0.76		PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN-	
			BH201	0.00 – 0.61		PAHs	
			BH202	0.00 – 0.61			
			BH/MW203	0.00 – 0.61		Metals, As, Sb, Se	
BH204	0.00 – 0.61 0.76-1.37						
BH205	0.00-0.61						
BH206	0.00-0.61						
BH207	0.00-0.61						
BH209	0.00-0.61						
BH/MW1	0.00 – 0.61	NA	Electrical Conductivity and SAR	16			
BH2	0.00 – 0.61						
BH/MW3	0.00 – 0.61						
BH/MW4	0.00 – 0.61						
BH5	0.00 – 0.61						
BH/MW6	0.00 – 0.61						

APEC	APEC Details	Media Potentially Impacted	Boreholes/ Monitoring Wells Advanced within APEC	Depth(s) of Soil Samples Submitted for Analysis (m bgs)	Well Screen Depth (m bgs)	Parameters Tested	Figure #
	portion of the Site for vehicular and pedestrian safety during the winter months		BH7	0.00 – 0.61			
			BH/MW8	0.00 – 0.61			
			BH/MW102	0.15-0.76			
			BH/MW105	0.15-0.76			
			BH/MW107	0.15-0.76			
			BH/MW108	0.15-0.76			
			BH/MW109	0.00 – 0.61			
			BH/MW110	0.15-0.76			
			BH/MW111	0.15-0.76			
			BH/MW112	0.76-1.37			
	BH/MW113	0.15-0.76					
APEC 3	The on-Site transformer located at the western portion of the Site may have leaked	Soil	BH208	0.00-0.61	NA	PCBs	14
APEC 4	Previously identified copper impact at BH2, located at the eastern portion of the Site. The copper impact may have leached into the groundwater.	Soil and Groundwater	BH2	0.00-0.61	-	Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN-	15

5.9.4 Underground Utilities

One (1) hydro line enters the Site on the southern property boundary of the Site and extends north where it connects to the transformer located in the central western transformer portion of the Site. A second hydro line enters the Site on the southeastern property boundary where it extends northwest and exits the Site on the northern property boundary.

Four (4) streetlights are located at the western portion of the Site.

One (1) gas line is located at the western portion of the Site, the gas line extends northwest running parallel to the Site building and then extends east where it enters the site building.

One (1) Bell line enters the Site on the southern property boundary, the Bell line extends north where it then enters the Site building.

One (1) sanitary sewer line enters the Site on the southeastern property boundary, the sanitary sewer line extends northwest and exits the Site on the northern property boundary.

5.9.5 Physical Site Description

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

Surface Features

The Site building is currently occupied by Holiday Inn Oakville. The areas surrounding the Site building are covered with an asphalt parking lot.

Geologic Setting

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

The Site is located in the physiographic region within the Iroquois Plains characterized as shale plains. The surficial geology of the Site is described as Paleozoic bedrock. The bedrock in the general area of the Site consists of shale, limestone, dolostone and siltstone and is part of the Georgian Bay Formation, Blue Mountain Formation, Billings Formation, Collingwood Member and Eastview Member.

Based on the review of the OBM and Toporama map, the Site is at an elevation of approximately 105 m above sea level (asl), generally at the same elevation as properties to the west and east of the Site. The surrounding properties to the south are generally at lower elevation than the Site, and the surrounding properties to the northwest are generally at higher elevation than the Site.

Based on the review of available resources from 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 general stratigraphy at the Site, as revealed in the borehole logs, consists of asphalt or topsoil followed by sand and gravel, sandy silt/silty sand and silty clay/clayey silt fill material, underlain by native clayey silt/silty clay and shale complex underlain by shale bedrock.

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

Surface Material

An asphalt layer was encountered at all boreholes except for BH208. The asphalt ranged in thickness from 40 mm to 100 mm and was underlain by granular material ranging in thickness from 100 mm to 400 mm. A layer of crushed asphalt in 140 mm thickness was encountered at BH111. Topsoil was encountered at BH208 with a thickness of 300 mm.

Fill

Fill material comprised of sand and gravel, silty sand and silty clay/clayey silt was encountered in all boreholes advanced at the Site except for BH205, BH206, and BH209 and extended to depths ranging between 0.91 m to 2.29 m bgs. The fill material contained trace to some gravel and limestone fragments.

Silty Clay/Shale Complex

Below the fill material, a native deposit of silty clay/shale complex was observed in boreholes BH101, BH/MW102, BH103, BH104, BH/MW105 to BH/MW113, BH201, BH202, BH/MW203, and BH204 and below the asphalt at BH205 and BH209. The silty clay/shale complex layer extended to depths ranging from 0.6 m to 2.6 m bgs. Within this layer, occasional shale and limestone fragments were encountered.

Clayey Silt/Silty Clay

Below the asphalt, a native deposit of clayey silt/silty clay was observed in BH206 and BH207. The silt layer extended to a depth of 2.1 m bgs. Within this layer, trace sand, trace gravel and trace to some limestone were encountered.

Bedrock

Below the silty clay/shale complex, a highly weathered reddish brown and/or grey shale bedrock was encountered in all boreholes with the exception of shallow boreholes BH201, BH202, BH205 to BH209. The shale bedrock unit was encountered at depths ranging from 1.5 m to 2.6 m bgs, with more than two-thirds (2/3) of the Site consisting of soil equal to or greater than 2 m in depth before the bedrock was encountered.

Refer to the geological cross sections in Figures 7A, 8A and 9A for an overview of the Site stratigraphy.

Hydrogeologic Setting

Two (2) hydrostratigraphic units were encountered at the Site, all of which act as an aquifer.

The on-Site monitoring well network consists of a total of sixteen (16) monitoring wells advanced by BIG screened within the bedrock. Monitoring well screens were installed to assess both the shallow and deep aquifers present at the Site with ten (10) monitoring wells installed within the shallow aquifer and six (6) monitoring wells installed within the deep aquifer.

Groundwater depths in the shallow aquifer ranged between approximately 2.48 m and 4.32 m bgs and groundwater depths within the deep aquifer ranged between approximately 2.83 m and 20.49 m bgs, on May 5, 2023.

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. Based on the static water levels observed, the interpreted shallow groundwater flow was towards the southeast and the interpreted deep groundwater flow was towards the southwest. The interpreted shallow groundwater flow was used to determine if any off-Site PCAs were to be considered as APECs. The interpreted shallow groundwater flow direction is presented on Figure 6A and the interpreted deep groundwater flow direction is presented on Figure 6B.

Single Well Response Test (SWRT) analyses were conducted by BIG at select monitoring wells within the shallow and deep aquifers. In the deep aquifer, BH/MW108 to BH/MW113 were selected for the SWRT analyses. Estimates of the saturated hydraulic conductivity in the deep aquifer ranged from 1.52×10^{-8} m/s to 4.07×10^{-6} m/s, with a geometric mean of 3.65×10^{-7} m/s. In the shallow aquifer, BH/MW1, BH/MW3, BH/MW4, BH/MW6, BH/MW8, BH/MW102 and BH/MW106 were selected for the SWRT analyses. Estimates of the saturated hydraulic conductivity in the shallow aquifer ranged from 5.87×10^{-8} m/s to 2.71×10^{-5} m/s, with a geometric mean of 3.41×10^{-6} m/s.

The horizontal hydraulic gradient in groundwater in the shallow aquifer, based on groundwater measurements collected on May 5, 2023, was 0.053 m/m between BH/MW106 and BH/MW8 and 0.017 m/m between BH/MW6 and BH/MW105 with a geomean of 0.030 m/m. The horizontal hydraulic gradient in groundwater in the deep aquifer, based on groundwater measurements collected on May 5, 2023, was 0.054 m/m between BH/MW110 and BH/MW111 and 0.012 m/m between BH/MW108 and BH/MW112 with a geomean of 0.025 m/m.

The vertical hydraulic gradient in groundwater, based on groundwater measurements collected on May 5, 2023, was 0.005 m/m in a downward direction (between BH/MW1 and BH/MW108).

5.9.6 Site Sensitivity

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

Table 5: Site Sensitivity

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

5.9.7 Soil Importation

No soil importation has occurred on-Site.

5.9.8 Remediation

No remediation has occurred on-Site.

5.9.9 Previous Reports

Pinchin had previously conducted a due diligence Phase I Environmental Site Assessment (ESA) and BIG had previously conducted due diligence Phase I and Phase II ESAs at the Site in 2022 and a Phase One ESA in 2023. No other previous reports were provided to BIG for review. The previous reports prepared by Pinchin and BIG were relied upon in the Phase Two ESA and Phase Two CSM.

5.9.10 Land Use

The Site is currently used for commercial purposes and is developed with one (1) multi-storey building occupying approximately 23 % on the Site. The Site will be redeveloped for residential purposes with three (3) condominium building towers which is expected to have seven (7) levels of underground parking.

5.9.11 Contaminants of Concern

The MECP (2011a) Table 2: Full Generic Site Condition Standards in a Potable Ground Water Condition for Residential Property Use and coarse textured soil were considered applicable for determining contaminants of concern (COCs), based on the reasons presented below:

Table 6: Site Condition Standards

Descriptor	Site-Specific Condition
Section 41 Site Sensitivity	Not applicable <ul style="list-style-type: none"> ○ The soil at the Site has pH values between 5 and 9 for surficial soil; and, between 5 and 11 for subsurface soil. ○ The Site is not located within, or adjacent to, an area of natural significance, or part of such an area; and, the Site does not include land that is within 30 m of an area of natural significance, or part of such an area.
Section 43.1 Site Sensitivity	Not applicable <ul style="list-style-type: none"> ○ The Site is not considered a shallow soil property, based on the recovered soil cores, which indicated that more than two-thirds of the Site has an overburden thickness in excess of 2 m. ○ The Site is not located within 30 m of a surface water body; the nearest water body is Sixteen Mile Creek located approximately 470 m southwest and Lake Ontario is located approximately 2.30 km southeast.
Section 35 Ground Water	Potable <ul style="list-style-type: none"> ○ The Site is supplied by the City of Oakville municipal water system however the Site is considered potable.
Land Use	Residential/Parkland/Institutional <ul style="list-style-type: none"> ○ The future use of the Site will be residential land use.
Soil Texture	Coarse textured

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

Electrical conductivity (EC) and/or sodium adsorption ratio (SAR) exceedances were identified in soil and sodium and chloride were identified in groundwater across the exterior portion of the Site in exceedance of the applicable SCS. EC, SAR, sodium and chloride are not considered as contaminants of concern (COC) at the Site as 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 2 SCS.

As de-icing salts were used at the Site for vehicular and pedestrian safety, EC and SAR are not considered as COCs in soil and sodium and chloride are not considered as COCs in groundwater at the Site.

Table 7: Contaminants of Concern in Soil Prior to Remediation

Parameter Analyzed	Maximum Concentration (µg/g)	Site Condition Standard (µg/g) ⁽¹⁾	Maximum Concentration above Applicable SCS?
PHC F2	1,400	98	Yes
PHC F3	1,000	300	Yes
Benzo(a)pyrene	0.52	0.30	Yes
Fluoranthene	1.60	0.69	Yes
Copper	360	140	Yes

(1) MECP Table 2 Full Generic Site Condition Standards in a Potable Ground Water Condition for Residential Property Use and coarse textured soils.

5.9.12 Soil Impacts

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

Table 8: Reasons for Discharge of Soil Impacts

Parameter Group and Media	Contaminants Associated with Each Parameter Group	Reason for Discharge
PHCs parameters in soil	PHC F2 and PHC F3	Based on review of the available historical records, the reason for discharge of PHCs is unknown
PAH parameters in soil	Benzo(a)pyrene and Fluoranthene	Likely associated with fill material of unknown quality
Metal parameter in soil	Copper	Likely associated with fill material of unknown quality

Table 9: Distribution of Soil Impacts

Parameter Group and Media	Contaminants Associated with Each Parameter Group	Distribution
PHC parameters in soil	PHC F2 and PHC F3	Southwestern portion of the Site
PAH parameters in soil	Benzo(a)pyrene and Fluoranthene	Southwestern portion of the Site
Metal parameter in soil	Copper	East central portion of the Site

Table 10: Delineation of Soil Impacts

Parameter Group and Media	Contaminants Associated with Each Parameter Group	Horizontal Delineation	Associated Figures	Vertical Delineation	Associated Figures
PHC parameters in soil	PHC F2 and PHC F3	Southwestern portion of the Site	10	1.52-2.13 m bgs at BH203	7B, 9B
PAH parameters in soil	Benzo(a)pyrene and Fluoranthene	Southwestern portion of the Site	13	0.76-1.37 m bgs at BH112, BH202 and BH204	7C, 9C
Metal parameter in soil	Copper	East central portion of the Site	15	0.76-1.37 m bgs at BH/MW102 and BH104	7D, 8B

5.9.13 Contaminant Fate and Transport

Soil Media

The soil COCs that were present at the Site include PHC F2, PHC F3, benzo(a)pyrene, fluoranthene and copper.

Based on the former activities on-Site, the PAH and copper impacts are associated with fill material of unknown quality. Based on the historical records available for review, the source of the PHC impacts in soil is unknown.

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

Concentrations of COCs in soil will be reduced by the effects of molecular diffusion and the creation of concentration gradients. Select parameters at the Site are volatile chemical constituents (i.e., moderate Henry's Law Constant and saturate vapour pressure), these select parameters (i.e., PHC F1 and PHC F1-BTEX) can volatilize into soil gas and be transported through soil gas under the influence of pressure (e.g., water table fluctuations) and partial pressure gradients in the unsaturated zone. The transport of volatile COCs can also be retarded by sorption on to organic material that may be associated with the soil mineral particles throughout the overburden material.

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

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

Groundwater Media

No groundwater COCs were identified at the Site.

5.9.14 Preferential Pathways

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

Underground utilities were identified at the Site, as described in Section 5.9.4. As such, there is a potential for underground utilities to affect soil vapour migration.

5.9.15 Climatic Conditions

It is noted that climatic or meteorological conditions may influence the distribution and migration of COCs at the Site. Seasonal fluctuations in groundwater due to cyclical increases and decreases in precipitation can affect groundwater recharge. Groundwater levels may be elevated in the spring and fall due to snow melt and/or increases in precipitation; and groundwater levels may be lowered in the winter and summer due to snow storage and/or increased evaporation. Such fluctuations can increase the vertical distribution of COCs in the capillary zone, as well as alter the direction of groundwater flow paths based on changes in infiltration rates. However, based on the conditions observed at the Site, it is not anticipated that the climatic or meteorological changes will result in significant alterations in the distribution of contaminants.

5.9.16 Soil Vapour Migration

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

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

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

The design features of the future residential Site buildings are not known at this time. However, they will have heating, ventilation and an air condition design and operation that will be in accordance with the Ontario Building Code. The design features will potentially have an impact on soil vapour migration.

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

5.9.17 Receptors and Exposure Pathways

Human Health Receptors and Exposure Pathways

The on-Site human receptors could have been exposed to the PHC F2, PHC F3, benzo(a)pyrene, fluoranthene and copper in soil. The receptors and complete on-Site exposure pathways prior to remediation are presented in Table 11 below.

Table 11: Human Health Receptors and Exposure Pathways

Scenario	Receptor	Exposure Pathways
Property Residents	Adult (including pregnant female), Teen, Child, Toddler, Infant	Soil ingestion, soil skin contact, soil particle inhalation, indoor air inhalation, vapour skin contact
Workers – Long Term (indoor)	Adult (including pregnant female)	Soil ingestion, soil skin contact, soil particle inhalation, indoor air inhalation, vapour skin contact
Workers – Short Term (outdoor)	Adult (including pregnant female)	Soil ingestion, soil skin contact, soil particle inhalation, outdoor air inhalation, vapour skin contact
Property Visitor - Recreational	Adult (including pregnant female), Teen, Child, Toddler, Infant	Soil ingestion, soil skin contact, soil particle inhalation, indoor air inhalation, vapour skin contact
Property Visitor - Trespassers	Adult (including pregnant female), Teen, Child, Toddler, Infant	Soil ingestion, soil skin contact, soil particle inhalation, indoor air inhalation, vapour skin contact
Workers – Construction/Remediation	Adult (including pregnant female)	Soil ingestion, soil skin contact, soil particle inhalation, trench air inhalation, vapour skin contact

The human health conceptual on-Site model is included in D.1 in Appendix D.

Ecological Receptors and Exposure Pathways

The on-Site ecological receptors could have been exposed to the PHC F2, PHC F3, benzo(a)pyrene, fluoranthene and copper in soil. The receptors and complete on-Site exposure pathways prior to remediation are presented in Table 12 below.

Table 12: Ecological Receptors and Exposure Pathways Prior to Remediation

Primary Source	Secondary Source	Receptor	Exposure Pathway
Impacted Soil	Impacted Soil	Vegetation	Root uptake of soil
		Soil invertebrates	Soil dermal contact, soil ingestion, soil inhalation
		Terrestrial birds and mammals	Soil dermal contact, soil ingestion, soil inhalation
	Impacted Ambient air	Vegetation	Stem and foliar uptake
		Soil Invertebrates	Vapour inhalation
		Terrestrial birds and mammals	Vapour inhalation
	Impacted Groundwater	Terrestrial vegetation	None
		Soil invertebrates	None
		Terrestrial birds and mammals	None
	Impacted Plant and animal tissue	Soil invertebrates	Ingestion of plant and animal tissue
		Terrestrial birds and mammals	Ingestion of plant and animal tissue

The ecological health conceptual on-Site model is included in Figure D.2 in Appendix D.

6 Summary of Findings

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

1. The general stratigraphy at the Site, as revealed in the borehole logs, consists of asphalt or topsoil followed by sand and gravel, silty sand and silty clay/clayey silt fill material, underlain by native clayey silt/silty clay and shale complex underlain by shale bedrock.
2. The native materials encountered, are comprised of clayey silt/silty clay and shale complex. However, coarse textured standards were applied.
3. The groundwater depths in the shallow aquifer ranged between approximately 2.48 m and 4.32 m bgs and groundwater depths within the deep aquifer ranged between approximately 2.83 m and 20.49 m bgs, on May 5, 2023.
4. The soil analytical results indicated that select parameters were detected at concentrations above the applicable MECP (2011a) Table 2 Full Generic Site Condition Standards in a Potable Ground Water Condition for Residential Property Use and coarse textured soils including:

Parameter	MECP (2011a) Table 2 SCS (µg/g)	Number of Soil Samples Submitted ⁽¹⁾	Number of Soil Samples Exceeding the applicable SCS ⁽¹⁾	Maximum concentration detected (µg/g)
PHCs				
PHC F2	98	5	2	1,400
PHC F3	300	5	2	1,000
PAHs				
Benzo(a)pyrene	0.30	24	1	0.52
Fluoranthene	0.69	24	1	1.60
Metals				
Copper	140	27	4	360

(1) Excluding duplicate samples

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

7 Conclusions and Recommendations

The COCs present at the Site are comprised of PHC F2, PHC F3, benzo(a)pyrene, fluoranthene, and copper in soil. Based on the former activities on-Site, the PAH and copper impacts are associated with fill material of unknown quality. Based on the historical records available for review, the source of the PHC impacts in soil is unknown.

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

1. Complete delineation of copper and PHCs in soil.
2. Excavate the impacted soil and dispose of off-Site at a registered landfill facility.
3. Conduct confirmatory sampling.
4. Prepare a report documenting remedial activities.
5. Update the Phase Two ESA.
6. File the RSC.

8 General Limitations

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

This report was prepared for the exclusive use of the Client and may not be reproduced in whole or in part, without the prior written consent of BIG, or used or relied upon in whole or in part by other parties for any purposes whatsoever. Any use which a third party makes of this report, or any part thereof, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. BIG. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

Yours truly,

B.I.G. Consulting Inc.

DRAFT

Rebecca Morrison, M.Env.Sc.
Vice President, Environmental Services

DRAFT

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

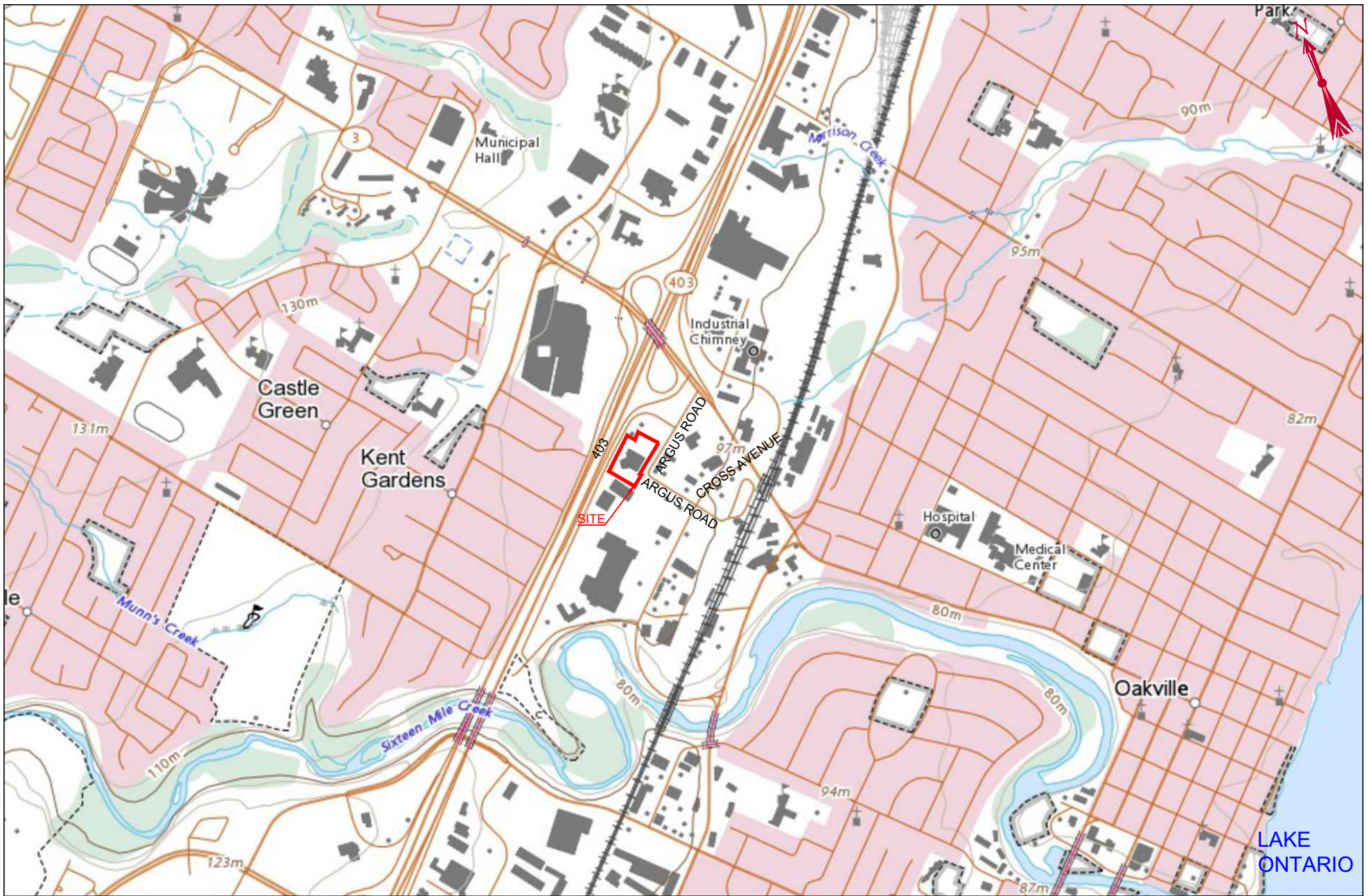
9 References

1. MECP (2011a) "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the *Environmental Protection Act*";
2. MECP (2011b) Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the *Environmental Protection Act*. PIBS 4696e01
3. MECP (2021); Well Records Map. Retrieved from <https://www.ontario.ca/environment-and-energy/map-well-records>
4. NHIC (2022); Make a Natural Heritage Map. Retrieved from http://www.gisapplication.lrc.gov.on.ca/mamnh/Index.html?site=MNR_NHLUPS_NaturalHeritage&viewer=NaturalHeritage&locale=en-US
5. 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. Pinchin (2016) Phase I Environmental Site Assessment, 590 Argus Road, Oakville, Ontario. Dated July 15, 2016, prepared by Pinchin Ltd.
2. BIG (2022a) Phase I Environmental Site Assessment, 590 Argus Road, Oakville, Ontario, dated October 3, 2022, prepared by B.I.G. Consulting Inc.
3. BIG (2022b) Phase II Environmental Site Assessment, 590 Argus Road, Oakville, Ontario, dated October 4, 2022, prepared by B.I.G. Consulting Inc.
4. BIG (2023) Phase One Environmental Site Assessment, 590 Argus Road, Oakville, Ontario, dated April 28, 2023, prepared by B.I.G. Consulting Inc.

Figures



B.I.G. CONSULTING INC.
 t: (416) 214 - 4880 f: (416) 551 - 2633
 12-5500 Tomken Rd.
 Mississauga, ON L4W 2Z4
 Canada



bigconsultinginc.com

LEGEND

— SITE BOUNDARY

SCALE

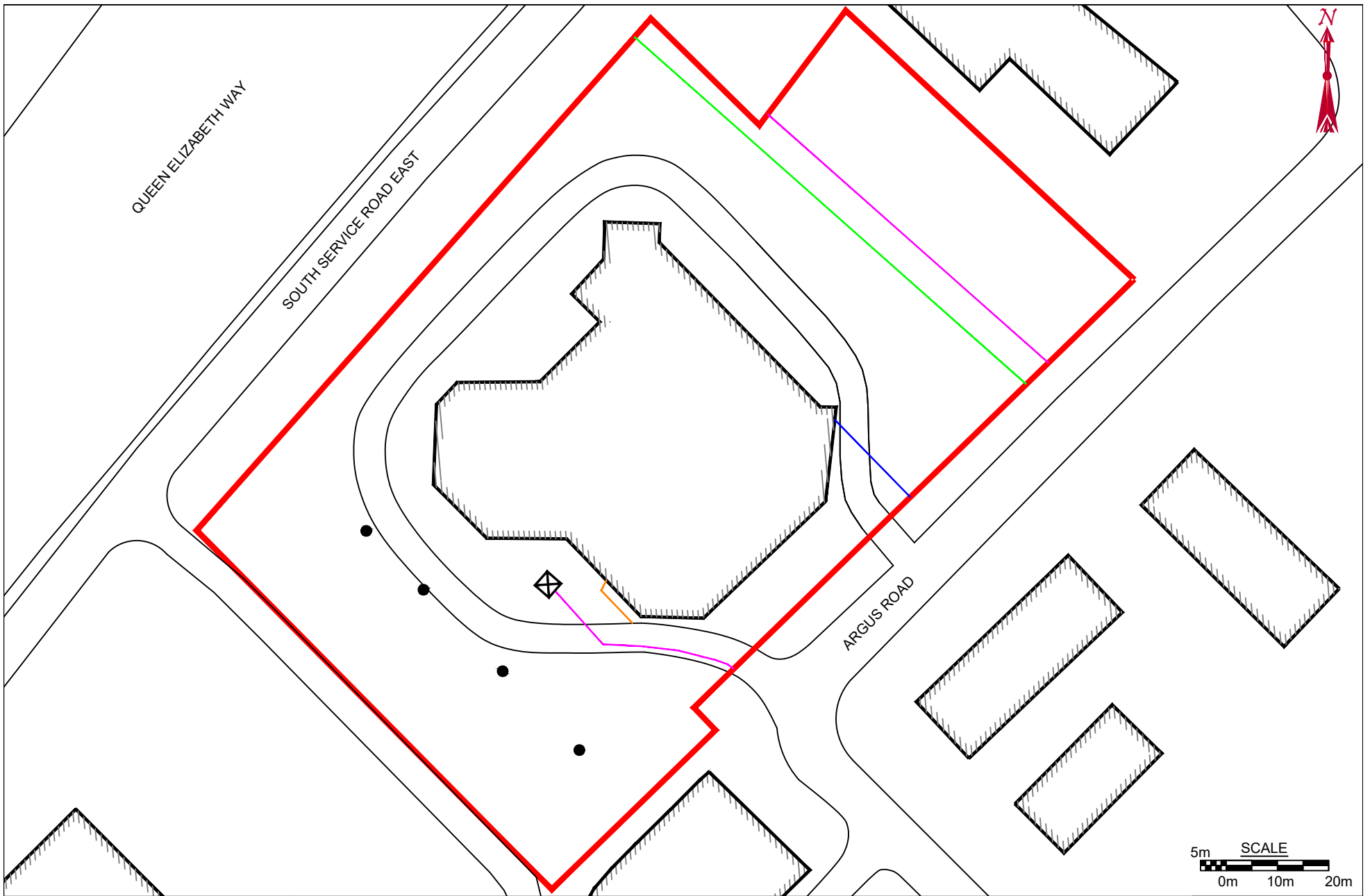
100m 0m 100m 200m 300m 400m 500m



TITLE AND LOCATION

**SITE LOCATION PLAN
 PHASE TWO ESA
 590 ARGUS ROAD,
 OAKVILLE, ONTARIO**

PROJECT NO. BIGC-ENV-554D	DWN. E.P.
SCALE AS NOTED	CK. R.C.
DATE JULY 2023	FIG NO. 1



B.I.G. CONSULTING INC.

t: (416) 214 - 4880 f: (416) 551 - 2633
 12-5500 Tomken Rd.
 Mississauga, ON L4W 2Z4
 Canada



bigconsultinginc.com

LEGEND

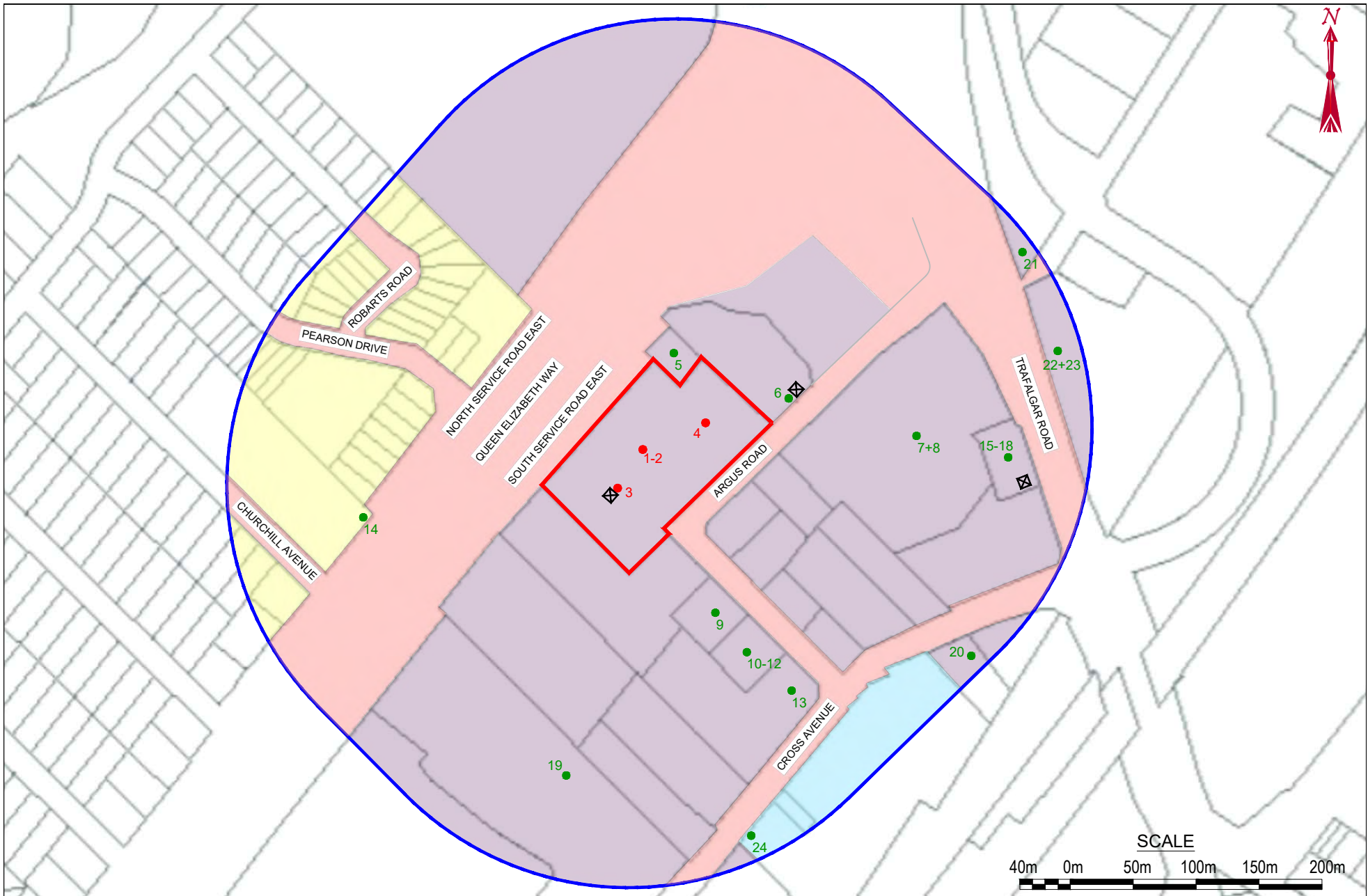
- SITE BOUNDARY
- BUILDING FOOTPRINT
- TRANSFORMER
- STREETLIGHT
- GAS LINE
- HYDRO LINE
- BELL LINE
- SANITARY SEWER LINE

- LOCATION OF THE BOREHOLE/MONITORING WELL (BIG, FEBRUARY 2023)
- LOCATION OF THE BOREHOLE (BIG, FEBRUARY 2023)
- LOCATION OF THE BOREHOLE/MONITORING WELL LOCATION (BIG 2022)
- LOCATION OF THE BOREHOLE (BIG 2022)
- LOCATION OF THE BOREHOLE (BIG, APRIL 2023)
- LOCATION OF THE BOREHOLE/MONITORING WELL (BIG, APRIL 2023)

TITLE AND LOCATION

**SITE LAYOUT AND UTILITIES PLAN
 PHASE TWO ESA
 590 ARGUS ROAD, OAKVILLE,
 ONTARIO**

PROJECT NO. BIGC-ENV-554D	DWN. E.P.
SCALE AS NOTED	CK. R.C.
DATE JULY 2023	FIG NO. 2



B.I.G. CONSULTING INC.
 t: (416) 214 - 4880 f: (416) 551 - 2633
 12-5500 Tomken Rd.
 Mississauga, ON L4W 2Z4
 Canada



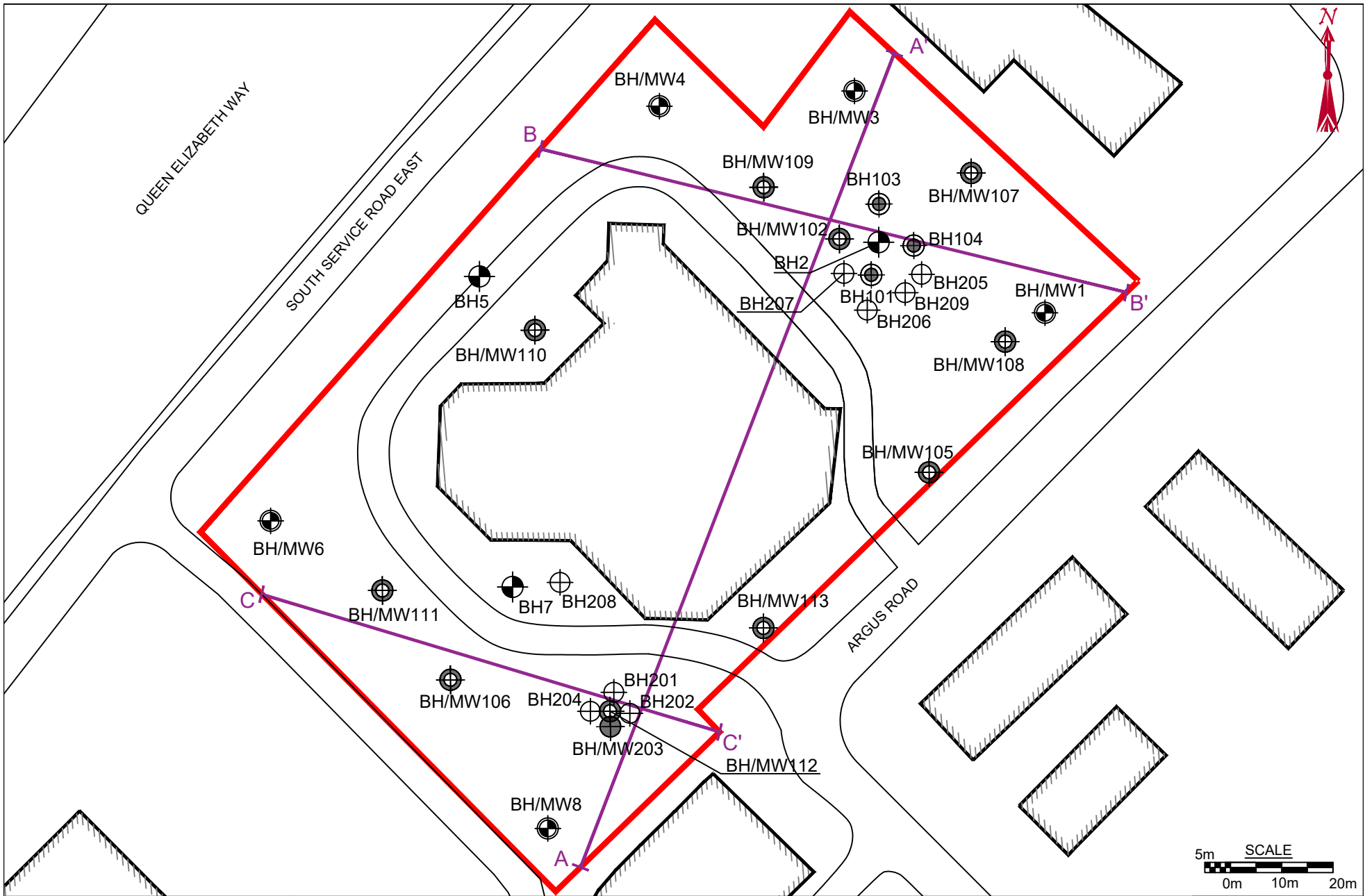
bigconsultinginc.com

LEGEND	
	SITE BOUNDARY
	PHASE ONE STUDY AREA BOUNDARY
	PCA CONTRIBUTING TO APEC
	PCA NOT CONTRIBUTING TO APEC
	RESIDENTIAL LAND USE
	COMMERCIAL LAND USE
	COMMUNITY LAND USE
	INDUSTRIAL LAND USE
	LOCATION OF TRANSFORMER

IMAGERY OBTAINED FROM COSINE ONLINE SERVICES, 2022

TITLE AND LOCATION	
PHASE TWO STUDY AREA AND POTENTIALLY CONTAMINATING ACTIVITIES (PCAs) PHASE TWO ESA 590 ARGUS ROAD, OAKVILLE, ONTARIO	

PROJECT NO.	DWN.
BIGC-ENV-554D	E.P.
SCALE	CK.
AS NOTED	R.C.
DATE	FIG NO.
JULY 2023	3



B.I.G. CONSULTING INC.

t: (416) 214 - 4880 f: (416) 551 - 2633
 12-5500 Tomken Rd.
 Mississauga, ON L4W 2Z4
 Canada



bigconsultinginc.com

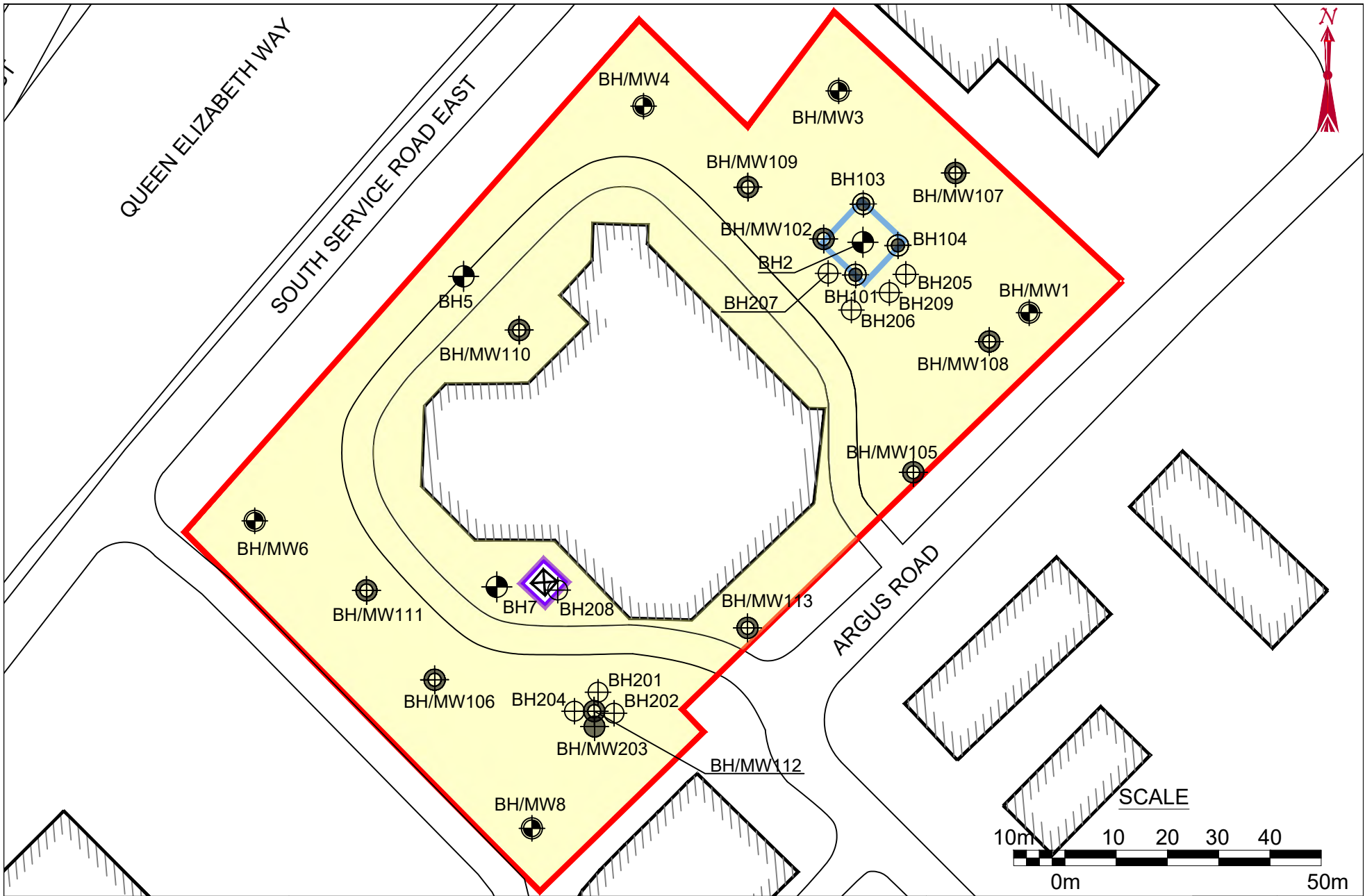
LEGEND

- SITE BOUNDARY
- BUILDING FOOTPRINT
- LOCATION OF THE BOREHOLE/MONITORING WELL (BIG, FEBRUARY 2023)
- LOCATION OF THE BOREHOLE (BIG, FEBRUARY 2023)
- LOCATION OF THE BOREHOLE/MONITORING WELL LOCATION (BIG 2022)
- LOCATION OF THE BOREHOLE (BIG 2022)
- LOCATION OF THE BOREHOLE (BIG, APRIL 2023)
- LOCATION OF THE BOREHOLE/MONITORING WELL (BIG, APRIL 2023)
- GEOLOGICAL CROSS SECTION

TITLE AND LOCATION

**BOREHOLE/MONITORING
 WELL LOCATION PLAN
 PHASE TWO ESA**
 590 ARGUS ROAD, OAKVILLE,
 ONTARIO

PROJECT NO. BIGC-ENV-554D	DWN. E.P.
SCALE AS NOTED	CK. R.C.
DATE JULY 2023	FIG NO. 4



B.I.G. CONSULTING INC.
 t: (416) 214 - 4880 f: (416) 551 - 2633
 12-5500 Tomken Rd.
 Mississauga, ON L4W 2Z4
 Canada

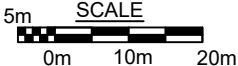
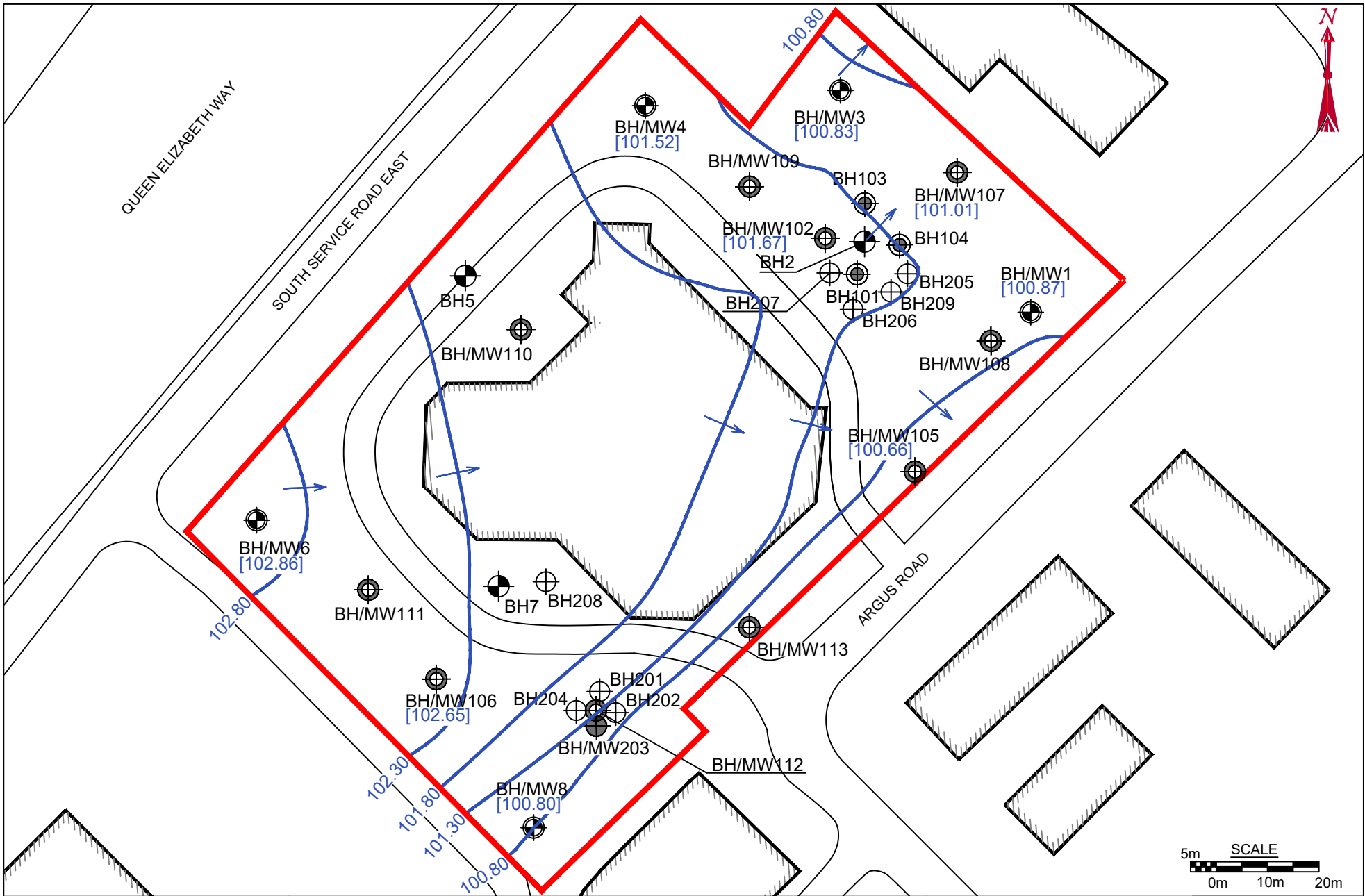
bigconsultinginc.com



LEGEND	
	SITE BOUNDARY
	BUILDING FOOTPRINT
	APEC 1+2
	APEC 3
	APEC 4
	LOCATION OF TRANSFORMER
	LOCATION OF THE BOREHOLE/MONITORING WELL (BIG, FEBRUARY 2023)
	LOCATION OF THE BOREHOLE (BIG, FEBRUARY 2023)
	LOCATION OF THE BOREHOLE/MONITORING WELL LOCATION (BIG 2022)
	LOCATION OF THE BOREHOLE (BIG 2022)
	LOCATION OF THE BOREHOLE (BIG, APRIL 2023)
	LOCATION OF THE BOREHOLE/MONITORING WELL (BIG, APRIL 2023)

TITLE AND LOCATION
BOREHOLE/MONITORING WELL LOCATION PLAN WITH AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APECs)
 PHASE TWO ESA
 590 ARGUS ROAD, OAKVILLE, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-554D	E.P.
SCALE	CK.
AS NOTED	R.C.
DATE	FIG. NO.
JULY 2023	5



B.I.G. CONSULTING INC.
 t: (416) 214 - 4880 f: (416) 551 - 2633
 12-5500 Tomken Rd.
 Mississauga, ON L4W 2Z4
 Canada



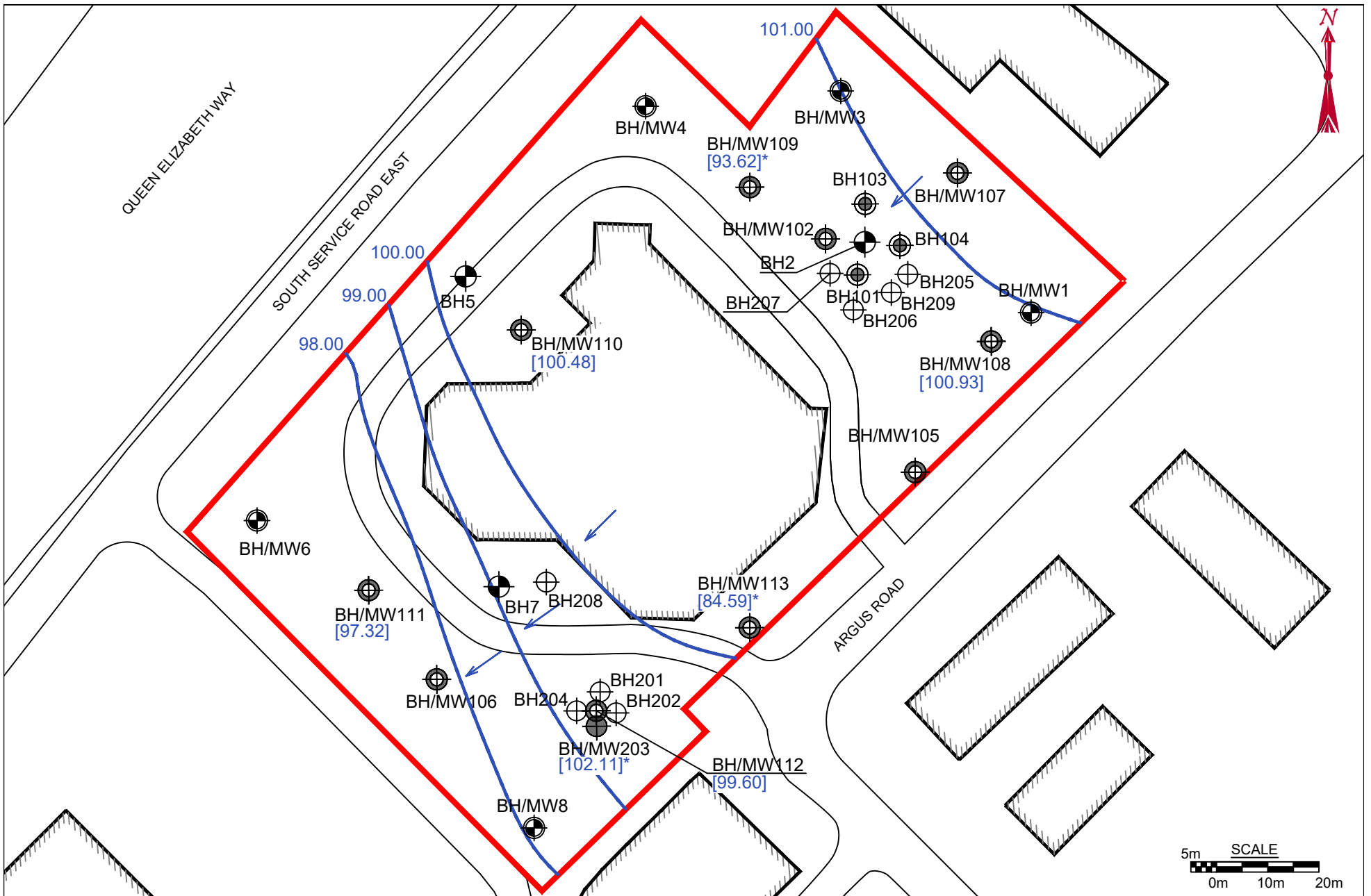
bigconsultinginc.com

LEGEND	
	SITE BOUNDARY
	BUILDING FOOTPRINT
	LOCATION OF THE BOREHOLE/MONITORING WELL (BIG, FEBRUARY 2023)
	LOCATION OF THE BOREHOLE (BIG, FEBRUARY 2023)
	LOCATION OF THE BOREHOLE/MONITORING WELL LOCATION (BIG 2022)
	LOCATION OF THE BOREHOLE (BIG 2022)
	LOCATION OF THE BOREHOLE (BIG, APRIL 2023)
	LOCATION OF THE BOREHOLE/MONITORING WELL (BIG, APRIL 2023)
	GEOLOGICAL CROSS SECTION
	WATER LEVEL MEASUREMENT (m asl) (MAY 5, 2023)
	INTERPRETED DIRECTION OF GROUNDWATER FLOW
	INTERPRETED GROUNDWATER CONTOUR

TITLE AND LOCATION

**SHALLOW GROUNDWATER CONTOUR PLAN
 PHASE TWO ESA
 590 ARGUS ROAD, OAKVILLE,
 ONTARIO**

PROJECT NO.	DWN.
BIGC-ENV-554D	E.P.
SCALE	CK.
AS NOTED	R.C.
DATE	FIG. NO.
AUGUST 2023	6A



B.I.G. CONSULTING INC.
 t: (416) 214 - 4880 f: (416) 551 - 2633
 12-5500 Tomken Rd.
 Mississauga, ON L4W 2Z4
 Canada

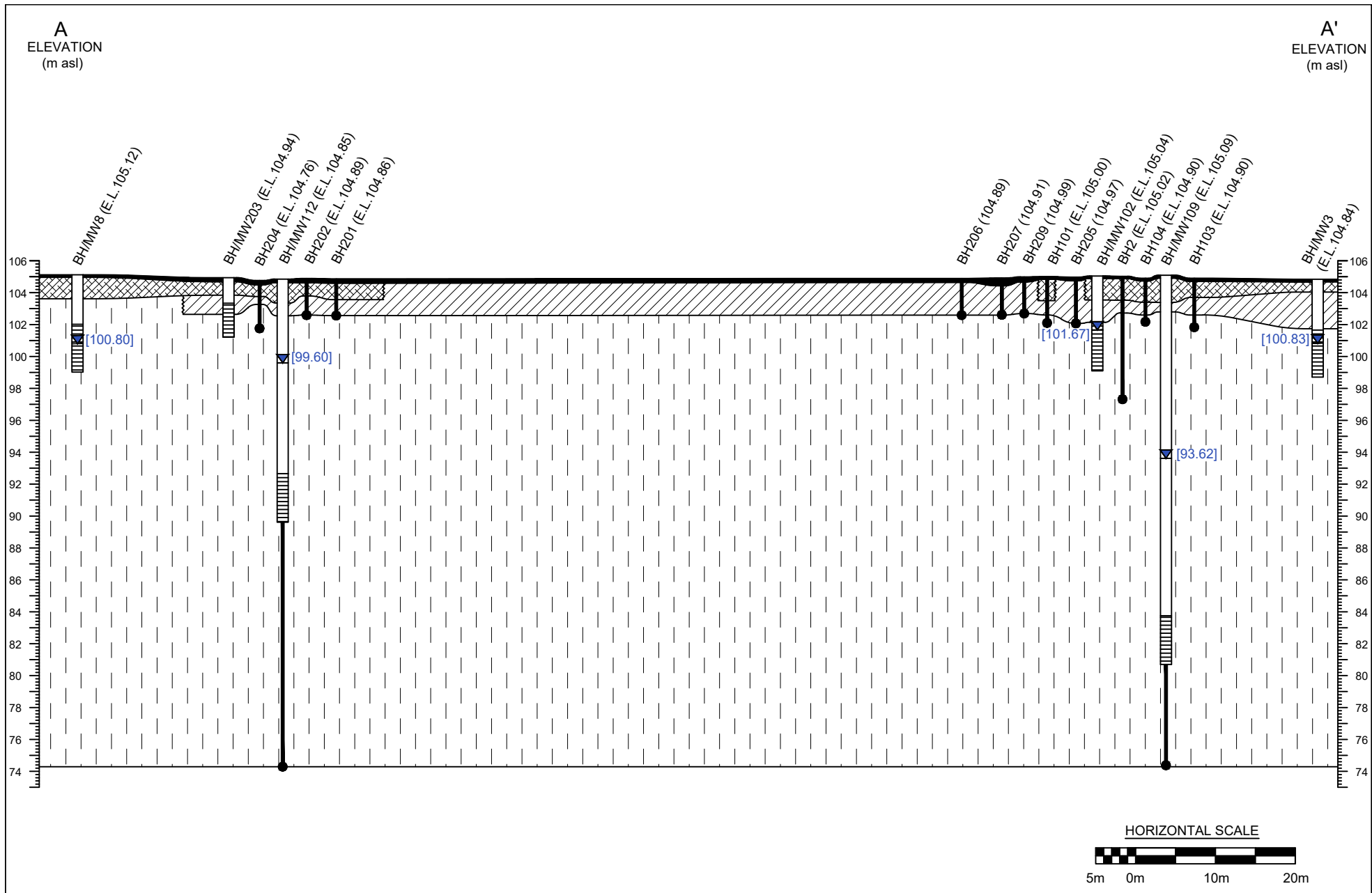
bigconsultinginc.com



LEGEND		LOCATION OF THE BOREHOLE/MONITORING WELL (BIG, APRIL 2023)	
	SITE BOUNDARY		LOCATION OF THE BOREHOLE/MONITORING WELL (BIG, APRIL 2023)
	BUILDING FOOTPRINT		GEOLOGICAL CROSS SECTION
	LOCATION OF THE BOREHOLE/MONITORING WELL (BIG, FEBRUARY 2023)		WATER LEVEL MEASUREMENT (m asl) (MAY 5, 2023)
	LOCATION OF THE BOREHOLE (BIG, FEBRUARY 2023)		INTERPRETED DIRECTION OF GROUNDWATER FLOW
	LOCATION OF THE BOREHOLE/MONITORING WELL LOCATION (BIG 2022)		INTERPRETED GROUNDWATER CONTOUR
	LOCATION OF THE BOREHOLE (BIG 2022)		GROUNDWATER ELEVATION NOT INCLUDED CS MONITORING WELL IS INSTALLED AT A SIGNIFICANTLY DEEPER DEPTH
	LOCATION OF THE BOREHOLE (BIG 2023)		

TITLE AND LOCATION	
DEEP GROUNDWATER CONTOUR PLAN PHASE TWO ESA 590 ARGUS ROAD, OAKVILLE, ONTARIO	

PROJECT NO.	DWN.
BIGC-ENV-554D	E.P.
SCALE	CK.
AS NOTED	R.C.
DATE	FIG. NO.
AUGUST 2023	6B



B.I.G. CONSULTING INC.
 t: (416) 214 - 4880 f: (416) 551 - 2633
 12-5500 Tomken Rd.
 Mississauga, ON L4W 2Z4
 Canada

bigconsultinginc.com

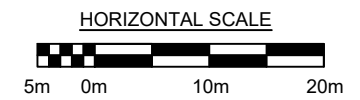
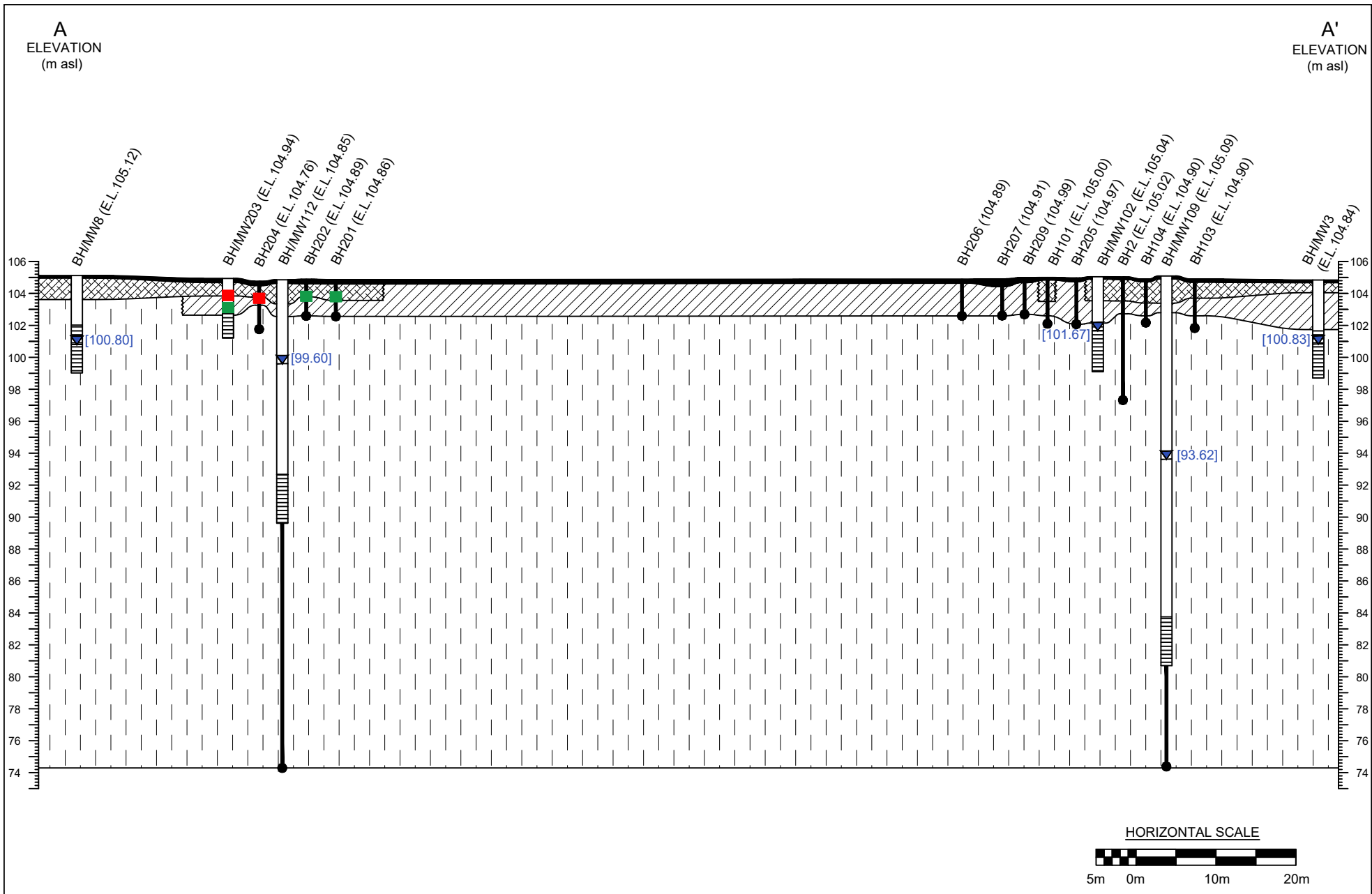
LEGEND









- ASPHALT
- FILL
- SILTY CLAY / CLAYEY SILT / SHALE COMPLEX
- SHALE BEDROCK
- [XX.XX] WATER LEVEL MEASUREMENT (m asl) (MAY 5, 2023)

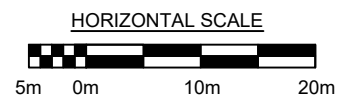
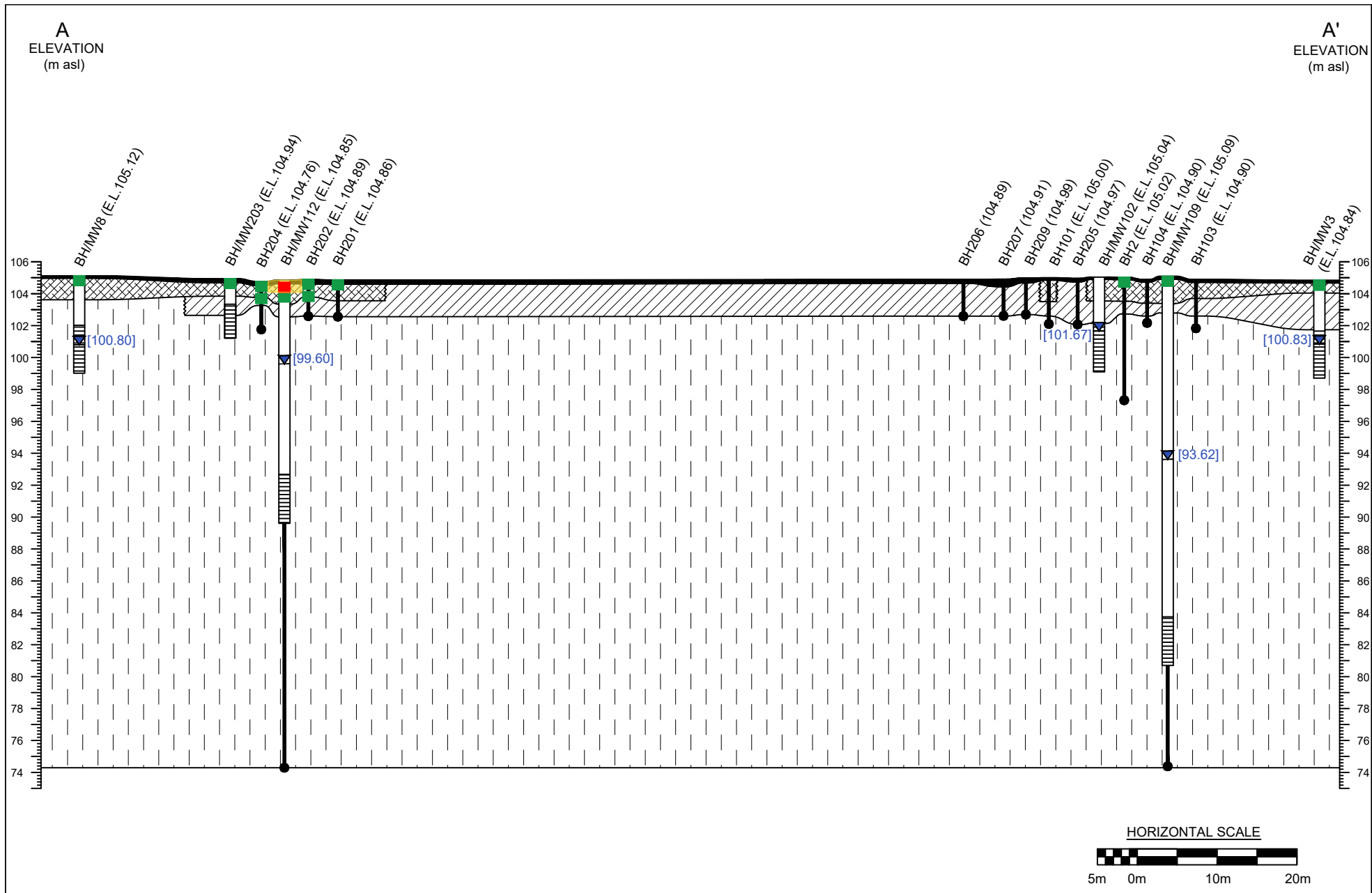
TITLE AND LOCATION




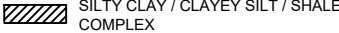





GEOLOGICAL CROSS SECTION A-A'
PHASE TWO ESA
 590 ARGUS ROAD, OAKVILLE, ONTARIO

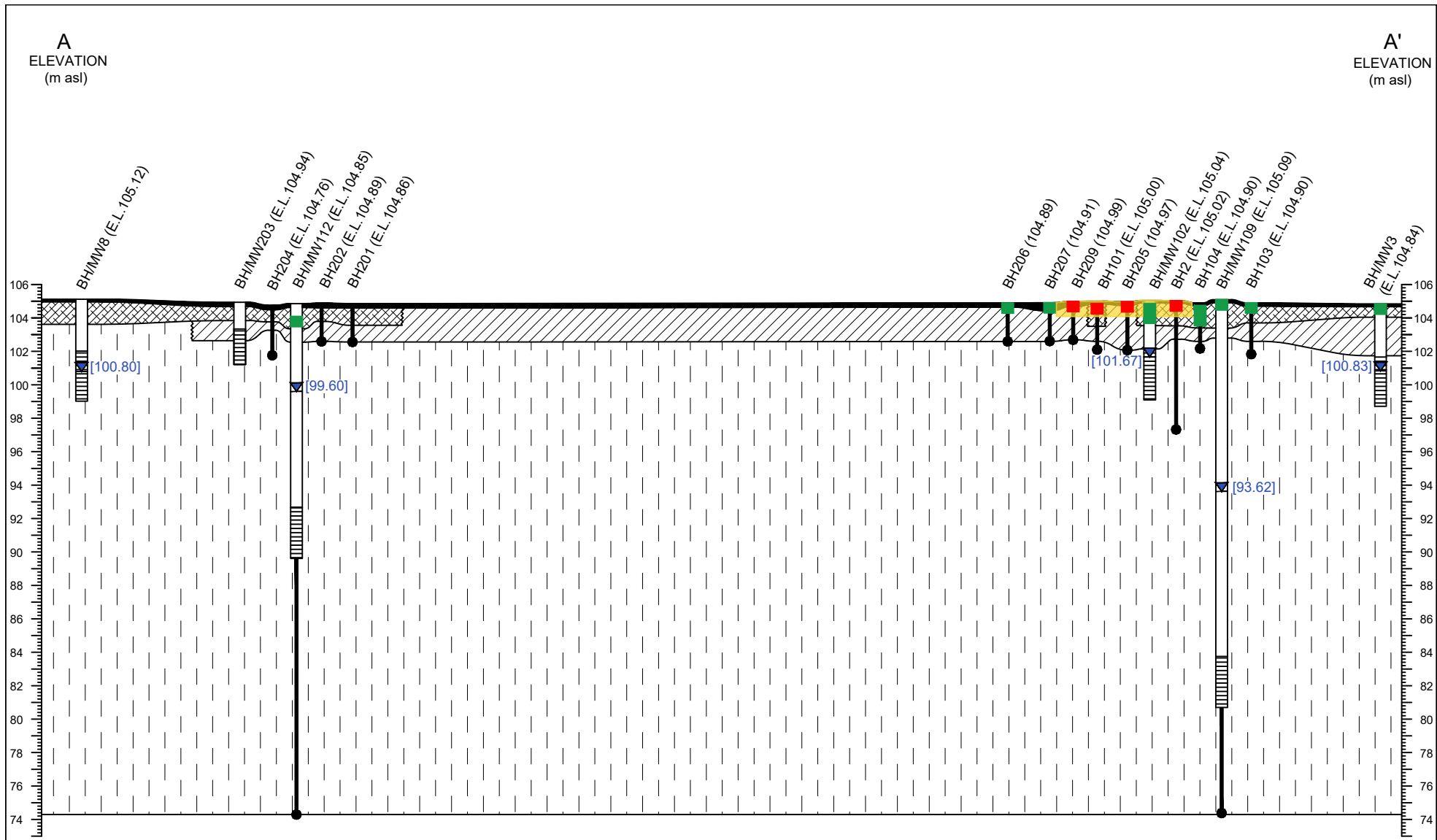
PROJECT NO.	DWN.
BIGC-ENV-554D	E.P.
SCALE	CK.
AS NOTED	R.C.
DATE	FIG. NO.
AUGUST 2023	7A



<p>B.I.G. CONSULTING INC.</p> <p>t: (416) 214 - 4880 f: (416) 551 - 2633 12-5500 Tomken Rd. Mississauga, ON L4W 2Z4 Canada</p> <p>bigconsultinginc.com</p> 	<p>LEGEND</p> <ul style="list-style-type: none">  ASPHALT  FILL  SILTY CLAY / CLAYEY SILT / SHALE COMPLEX  SHALE BEDROCK  [XX.XX] WATER LEVEL MEASUREMENT (m asl) (MAY 5, 2023)  EXCEEDS TABLE 2 SCS  MEETS TABLE 2 SCS 	<p>TITLE AND LOCATION</p> <p>CROSS SECTION A-A' WITH PHC IMPACTS IN SOIL PHASE TWO ESA 590 ARGUS ROAD, OAKVILLE, ONTARIO</p>	<table border="1"> <tr> <td>PROJECT NO.</td> <td>DWN.</td> </tr> <tr> <td>BIGC-ENV-554D</td> <td>E.P.</td> </tr> <tr> <td>SCALE</td> <td>CK.</td> </tr> <tr> <td>AS NOTED</td> <td>R.C.</td> </tr> <tr> <td>DATE</td> <td>FIG NO.</td> </tr> <tr> <td>AUGUST 2023</td> <td>7B</td> </tr> </table>	PROJECT NO.	DWN.	BIGC-ENV-554D	E.P.	SCALE	CK.	AS NOTED	R.C.	DATE	FIG NO.	AUGUST 2023	7B
PROJECT NO.	DWN.														
BIGC-ENV-554D	E.P.														
SCALE	CK.														
AS NOTED	R.C.														
DATE	FIG NO.														
AUGUST 2023	7B														



<p>B.I.G. CONSULTING INC.</p> <p>t: (416) 214 - 4880 f: (416) 551 - 2633 12-5500 Tomken Rd. Mississauga, ON L4W 2Z4 Canada</p> <p>bigconsultinginc.com</p> 	<p>LEGEND</p> <ul style="list-style-type: none">  ASPHALT  FILL  SILTY CLAY / CLAYEY SILT / SHALE COMPLEX  SHALE BEDROCK  [XX.XX] WATER LEVEL MEASUREMENT (m asl) (MAY 5, 2023)  EXCEEDS TABLE 2 SCS  MEETS TABLE 2 SCS  APPROXIMATE IMPACT EXTENT 	<p>TITLE AND LOCATION</p> <p>CROSS SECTION A-A' WITH PAH IMPACTS IN SOIL PHASE TWO ESA 590 ARGUS ROAD, OAKVILLE, ONTARIO</p>	<table border="1"> <tr> <td>PROJECT NO.</td> <td>DWN.</td> </tr> <tr> <td>BIGC-ENV-554D</td> <td>E.P.</td> </tr> <tr> <td>SCALE</td> <td>CK.</td> </tr> <tr> <td>AS NOTED</td> <td>R.C.</td> </tr> <tr> <td>DATE</td> <td>FIG NO.</td> </tr> <tr> <td>AUGUST 2023</td> <td>7C</td> </tr> </table>	PROJECT NO.	DWN.	BIGC-ENV-554D	E.P.	SCALE	CK.	AS NOTED	R.C.	DATE	FIG NO.	AUGUST 2023	7C
PROJECT NO.	DWN.														
BIGC-ENV-554D	E.P.														
SCALE	CK.														
AS NOTED	R.C.														
DATE	FIG NO.														
AUGUST 2023	7C														



HORIZONTAL SCALE



B.I.G. CONSULTING INC.
 t: (416) 214 - 4880 f: (416) 551 - 2633
 12-5500 Tomken Rd.
 Mississauga, ON L4W 2Z4
 Canada
 bigconsultinginc.com

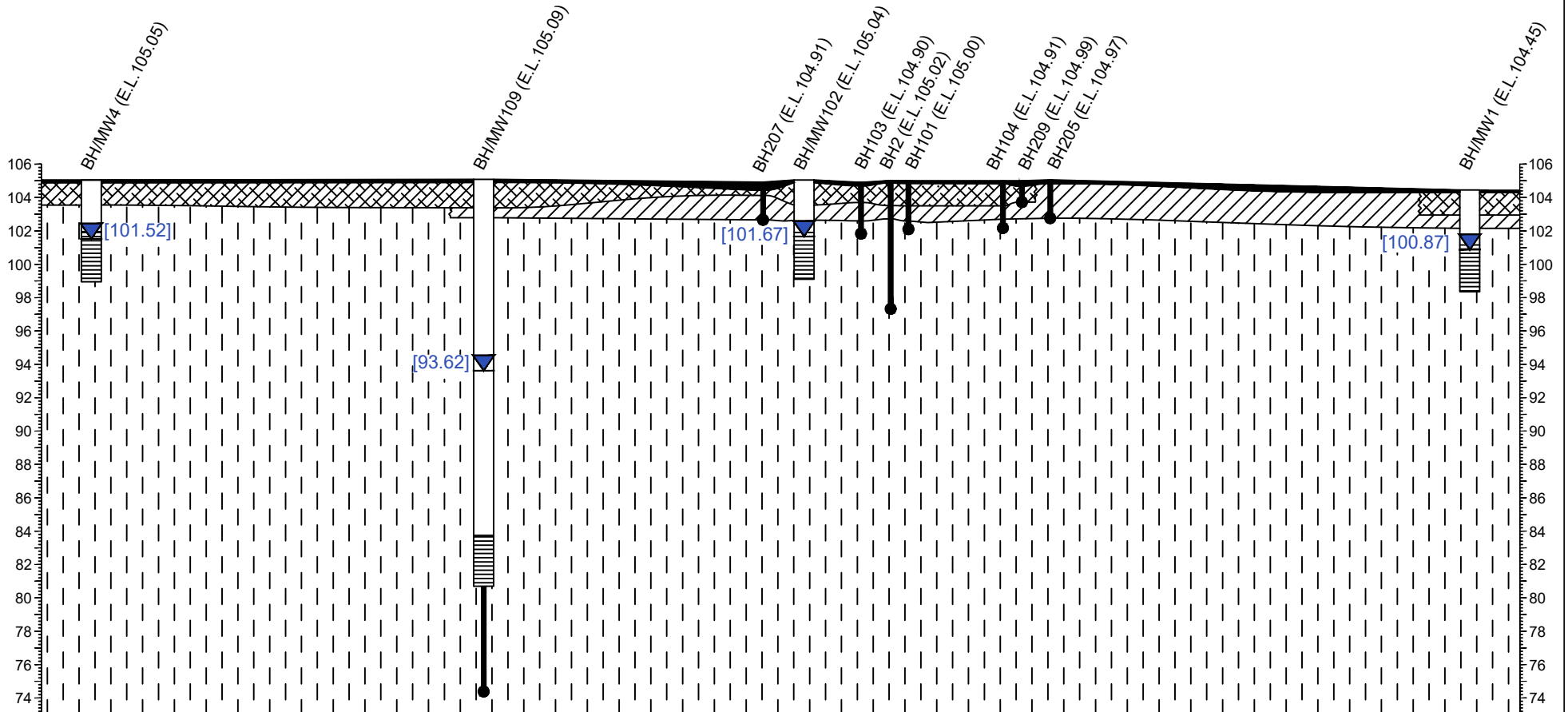
LEGEND	
	ASPHALT
	FILL
	SILTY CLAY / CLAYEY SILT / SHALE COMPLEX
	SHALE BEDROCK
	WATER LEVEL MEASUREMENT (m asl) (MAY 5, 2023)
	EXCEEDS TABLE 2 SCS
	MEETS TABLE 2 SCS
	APPROXIMATE IMPACT EXTENT

TITLE AND LOCATION
CROSS SECTION A-A' WITH METALS, As, Sb, Se, Cr(IV), Hg, B-HWS AND CN- IMPACTS IN SOIL
 PHASE TWO ESA
 590 ARGUS ROAD, OAKVILLE, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-554D	E.P.
SCALE	CK.
AS NOTED	R.C.
DATE	FIG NO.
AUGUST 2023	7D

B
ELEVATION
(m asl)

B'
ELEVATION
(m asl)



B.I.G. CONSULTING INC.
t: (416) 214 - 4880 f: (416) 551 - 2633
12-5500 Tomken Rd.
Mississauga, ON L4W 2Z4
Canada



bigconsultinginc.com

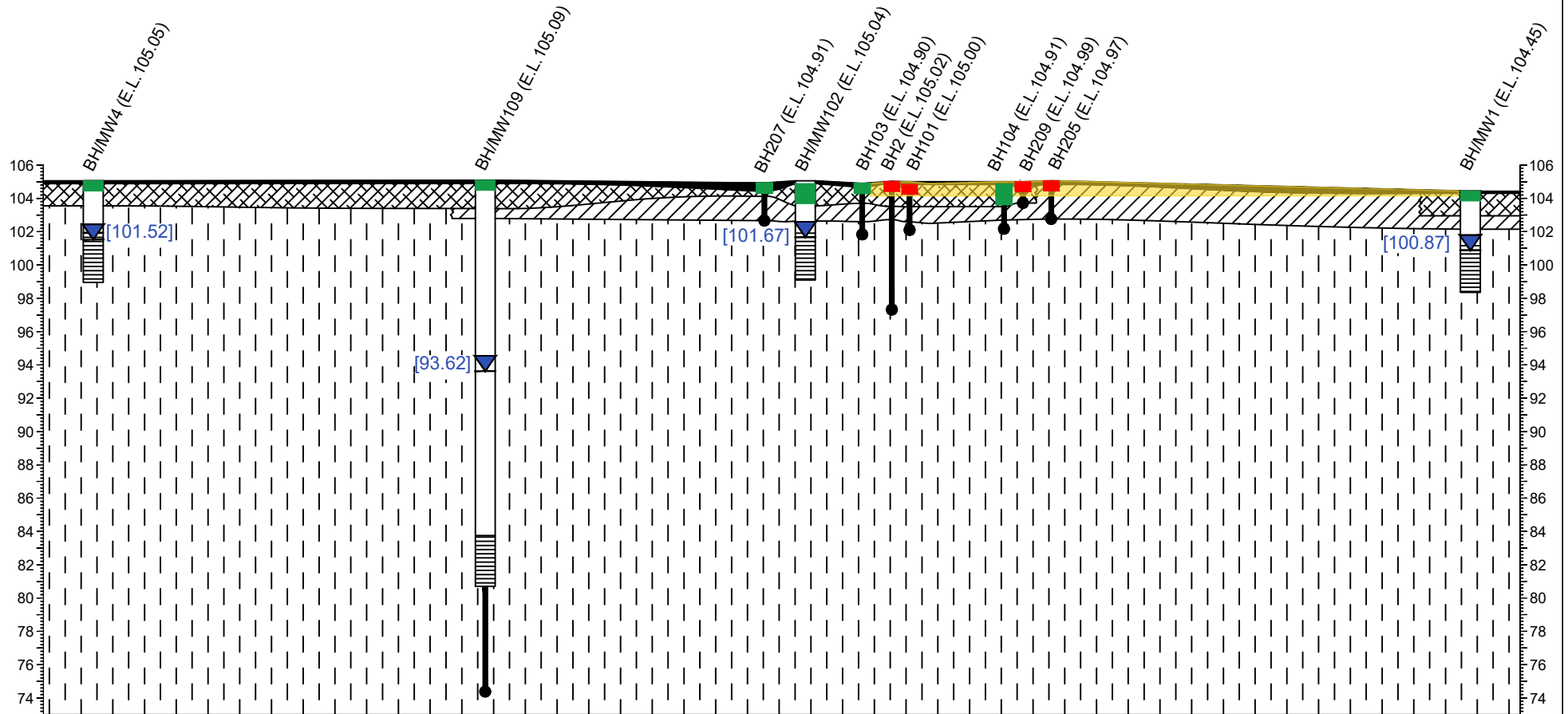
LEGEND	
	ASPHALT
	FILL
	SILTY CLAY / CLAYEY SILT / SHALE COMPLEX
	SHALE BEDROCK
	WATER LEVEL MEASUREMENT (m asl) (MAY 5, 2023)

TITLE AND LOCATION
GEOLOGICAL CROSS SECTION B-B'
PHASE TWO ESA
590 ARGUS ROAD, OAKVILLE,
ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-554D	E.P.
SCALE	CK.
AS NOTED	R.C.
DATE	FIG NO.
AUGUST 2023	8A

B
ELEVATION
(m asl)

B'
ELEVATION
(m asl)

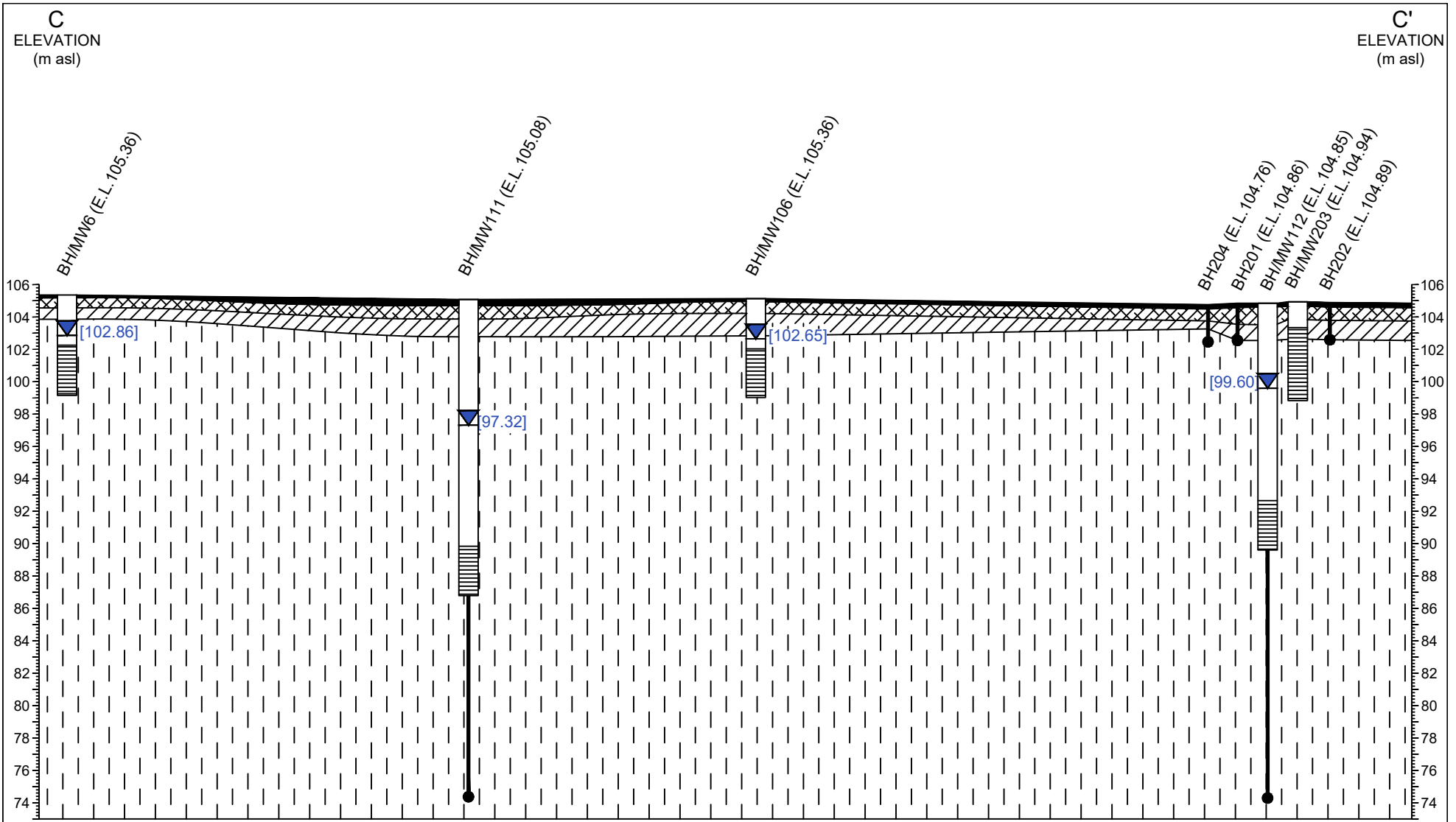


B.I.G. CONSULTING INC.
t: (416) 214 - 4880 f: (416) 551 - 2633
12-5500 Tomken Rd.
Mississauga, ON L4W 2Z4
Canada
bigconsultinginc.com

LEGEND	
	ASPHALT
	FILL
	SILTY CLAY / CLAYEY SILT / SHALE COMPLEX
	SHALE BEDROCK
	WATER LEVEL MEASUREMENT (m asl) (MAY 5, 2023)
	EXCEEDS TABLE 2 SCS
	MEETS TABLE 2 SCS
	APPROXIMATE IMPACT EXTENT

TITLE AND LOCATION
CROSS SECTION B-B' WITH METALS, As, Sb, Se, Cr(IV), Hg, B-WHS AND CN- IMPACTS IN SOIL PHASE TWO ESA
590 ARGUS ROAD, OAKVILLE, ONTARIO

PROJECT NO. BIGC-ENV-554D	DWN. E.P.
SCALE AS NOTED	CK. R.C.
DATE AUGUST 2023	FIG NO. 8B



B.I.G. CONSULTING INC.
 t: (416) 214 - 4880 f: (416) 551 - 2633
 12-5500 Tomken Rd.
 Mississauga, ON L4W 2Z4
 Canada

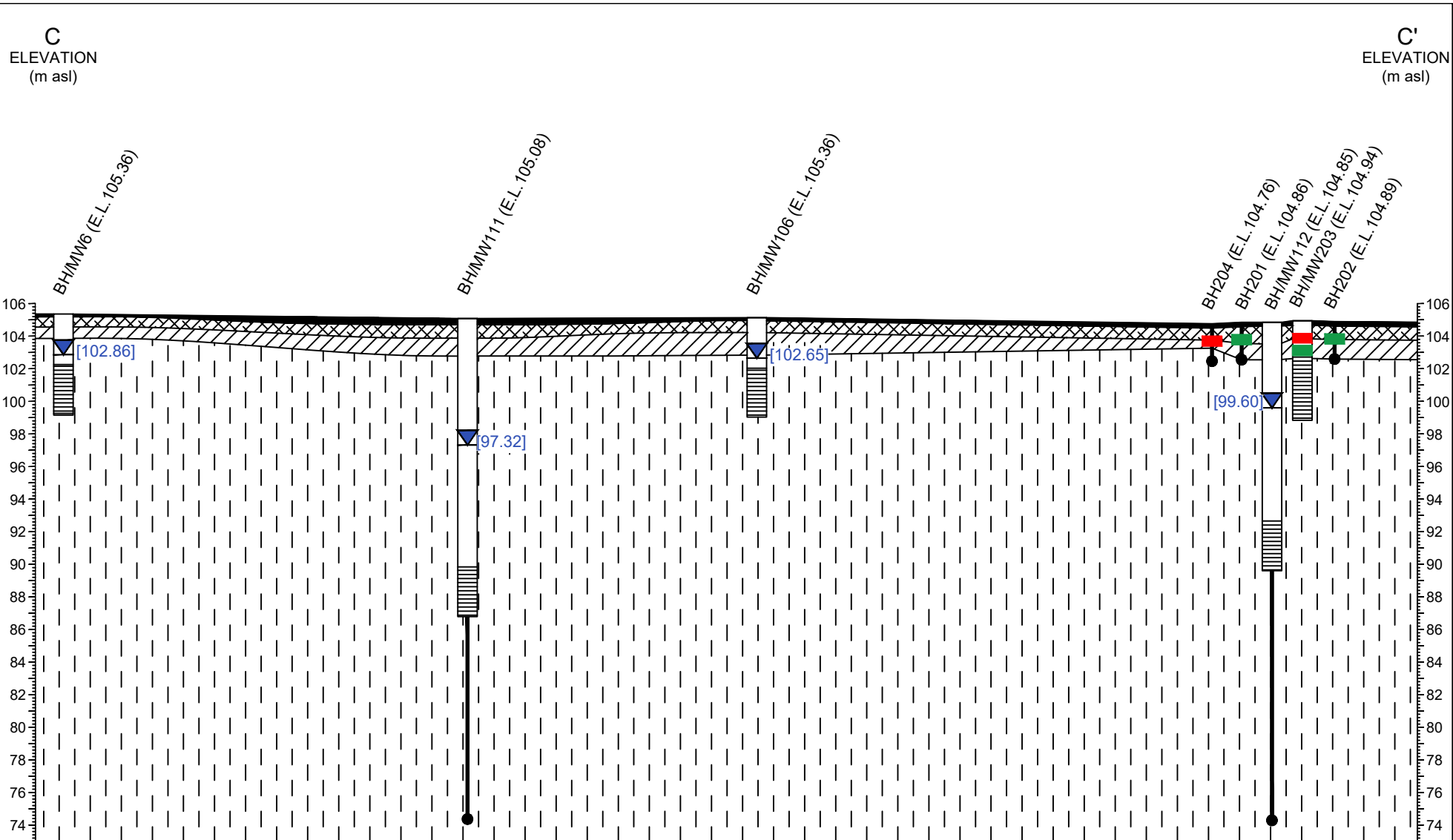
bigconsultinginc.com

LEGEND	
	ASPHALT
	FILL
	SILTY CLAY / CLAYEY SILT / SHALE COMPLEX
	SHALE BEDROCK
	WATER LEVEL MEASUREMENT (m asl) (MAY 5, 2023)

TITLE AND LOCATION

GEOLOGICAL CROSS SECTION C-C'
PHASE TWO ESA
 590 ARGUS ROAD, OAKVILLE, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-554D	E.P.
SCALE	CK.
AS NOTED	R.C.
DATE	FIG NO.
AUGUST 2023	9A



B.I.G. CONSULTING INC.
 t: (416) 214 - 4880 f: (416) 551 - 2633
 12-5500 Tomken Rd.
 Mississauga, ON L4W 2Z4
 Canada

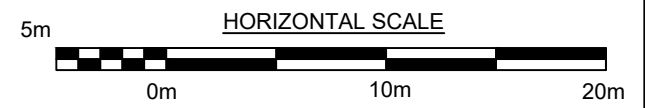
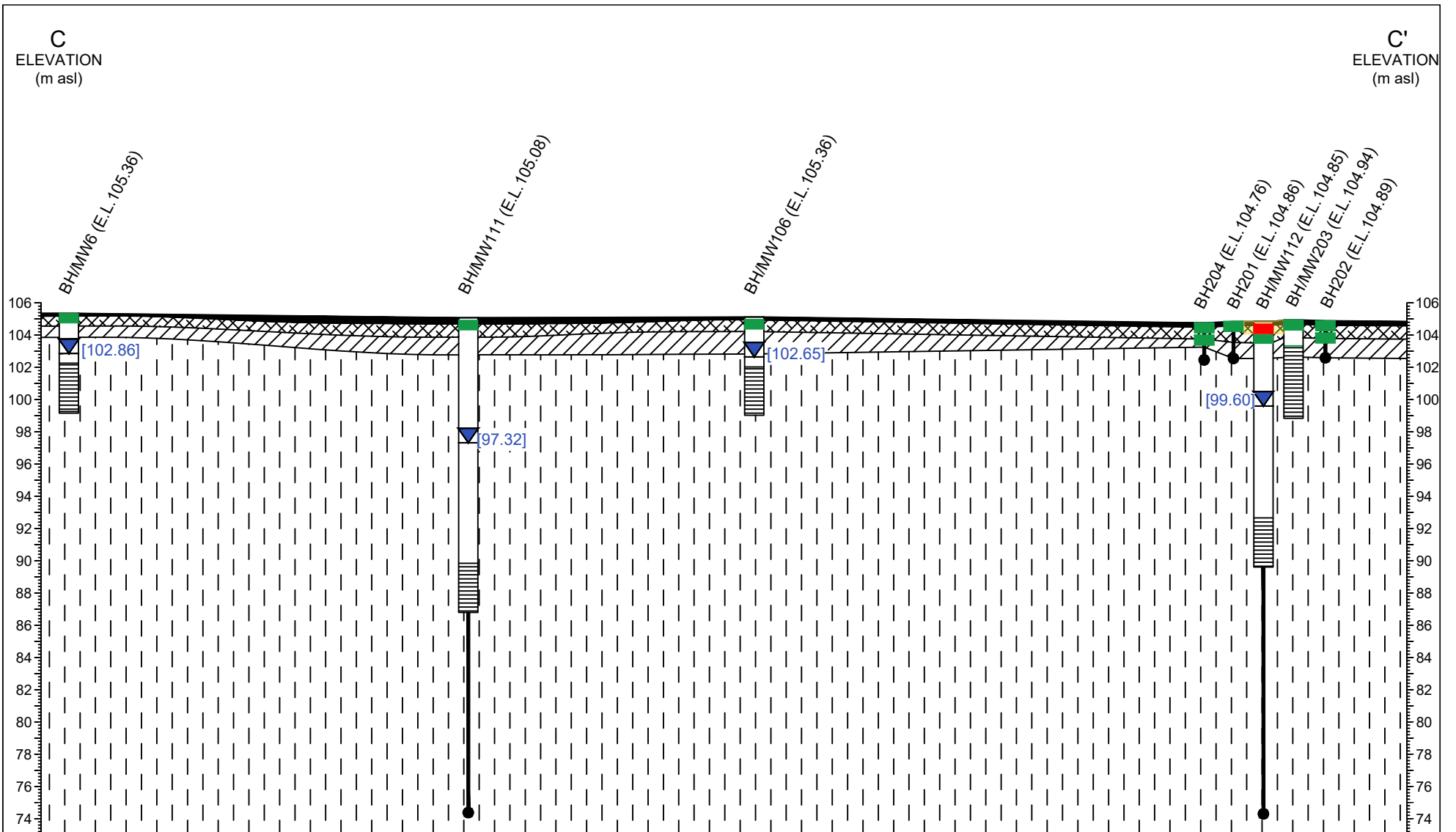
bigconsultinginc.com

LEGEND	
	ASPHALT
	FILL
	SILTY CLAY / CLAYEY SILT / SHALE COMPLEX
	SHALE BEDROCK
	WATER LEVEL MEASUREMENT (m asl) (MAY 5, 2023)
	EXCEEDS TABLE 2 SCS
	MEETS TABLE 2 SCS

TITLE AND LOCATION

**CROSS SECTION C-C' WITH
 PHC IMPACTS IN SOIL
 PHASE TWO ESA
 590 ARGUS ROAD, OAKVILLE,
 ONTARIO**

PROJECT NO.	DWN.
BIGC-ENV-554D	E.P.
SCALE	CK.
AS NOTED	R.C.
DATE	FIG. NO.
AUGUST 2023	9B

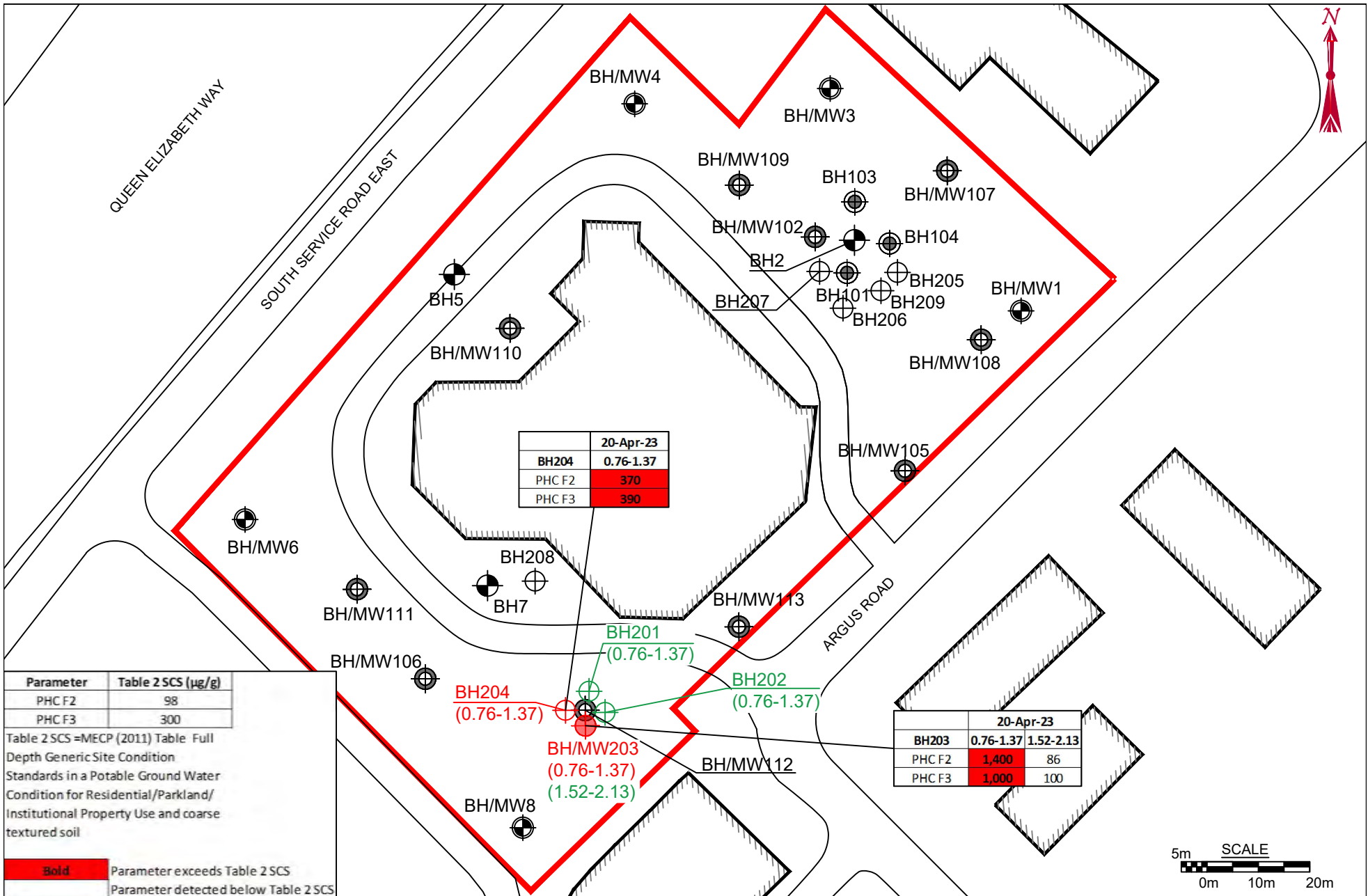


B.I.G. CONSULTING INC.
 t: (416) 214 - 4880 f: (416) 551 - 2633
 12-5500 Tomken Rd.
 Mississauga, ON L4W 2Z4
 Canada

bigconsultinginc.com

LEGEND	
	ASPHALT
	FILL
	SILTY CLAY / CLAYEY SILT / SHALE COMPLEX
	SHALE BEDROCK
	WATER LEVEL MEASUREMENT (m asl) (MAY 5, 2023)
	EXCEEDS TABLE 2 SCS
	MEETS TABLE 2 SCS
	APPROXIMATE IMPACT EXTENT

TITLE AND LOCATION		PROJECT NO.	DWN.
CROSS SECTION C-C' WITH PAH IMPACTS IN SOIL PHASE TWO ESA 590 ARGUS ROAD, OAKVILLE, ONTARIO		BIGC-ENV-554D	E.P.
		SCALE AS NOTED	CK. R.C.
		DATE AUGUST 2023	FIG NO. 9C



Parameter	Table 2 SCS (µg/g)
PHC F2	98
PHC F3	300

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

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

	20-Apr-23	
BH203	0.76-1.37	1.52-2.13
PHC F2	1,400	86
PHC F3	1,000	100



B.I.G. CONSULTING INC.
 t: (416) 214 - 4880 f: (416) 551 - 2633
 12-5500 Tomken Rd.
 Mississauga, ON L4W 2Z4
 Canada

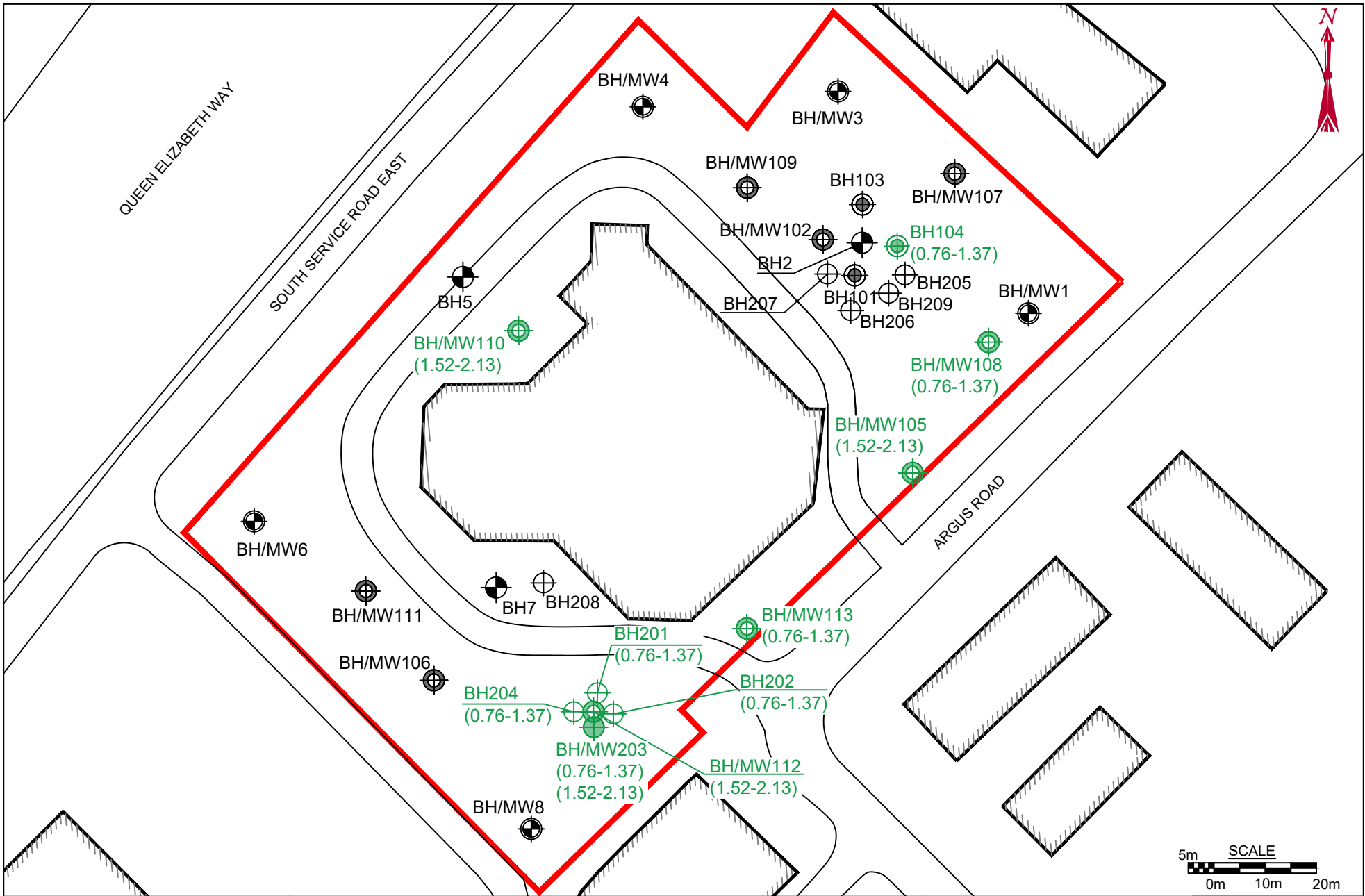
bigconsultinginc.com

LEGEND	
	SITE BOUNDARY
	BUILDING FOOTPRINT
	LOCATION OF THE BOREHOLE/MONITORING WELL (BIG, FEBRUARY 2023)
	LOCATION OF THE BOREHOLE (BIG, FEBRUARY 2023)
	LOCATION OF THE BOREHOLE/MONITORING WELL LOCATION (BIG 2022)
	LOCATION OF THE BOREHOLE (BIG 2022)
	LOCATION OF THE BOREHOLE (BIG, APRIL 2023)
	MEETS TABLE 2 SCS
	EXCEEDS TABLE 2 SCS
[xx.xx]	SOIL SAMPLE DEPTH (m bgs)

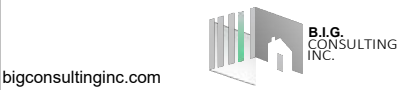
TITLE AND LOCATION

**PHC IMPACTS IN SOIL
 PHASE TWO ESA**
 590 ARGUS ROAD, OAKVILLE,
 ONTARIO

PROJECT NO. BIGC-ENV-554D	DWN. E.P.
SCALE AS NOTED	CK. R.C.
DATE JULY 2023	FIG NO. 10



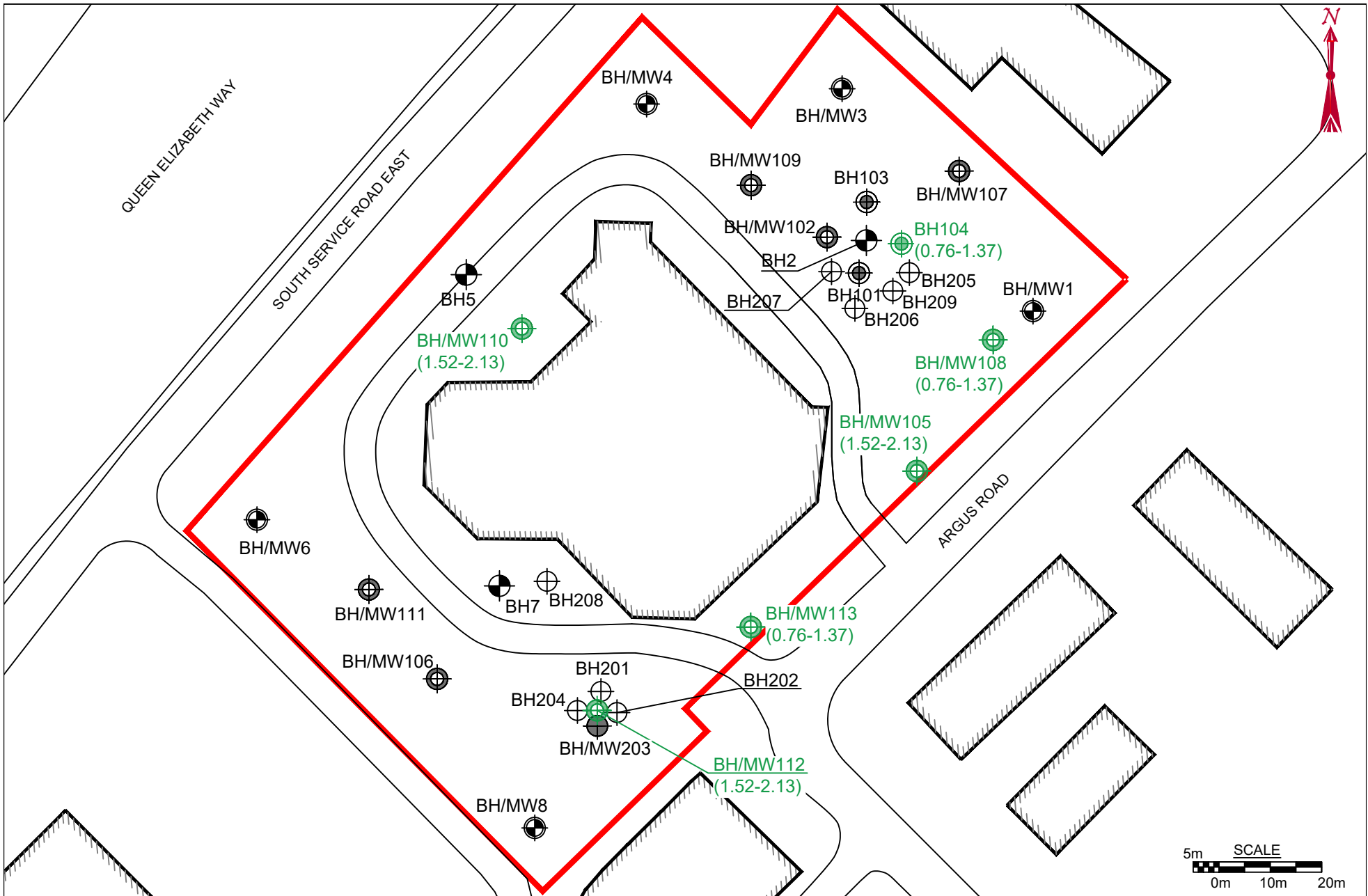
B.I.G. CONSULTING INC.
 t: (416) 214 - 4880 f: (416) 551 - 2633
 12-5500 Tomken Rd.
 Mississauga, ON L4W 2Z4
 Canada



LEGEND		TITLE AND LOCATION	
	SITE BOUNDARY		LOCATION OF THE BOREHOLE/MONITORING WELL (BIG, APRIL 2023)
	BUILDING FOOTPRINT		
	LOCATION OF THE BOREHOLE/MONITORING WELL (BIG, FEBRUARY 2023)		MEETS TABLE 2 SCS
	LOCATION OF THE BOREHOLE (BIG, FEBRUARY 2023) [xx.xx]		SOIL SAMPLE DEPTH (m bgs)
	LOCATION OF THE BOREHOLE/MONITORING WELL LOCATION (BIG 2022)		
	LOCATION OF THE BOREHOLE (BIG 2022)		
	LOCATION OF THE BOREHOLE (BIG, APRIL 2023)		

BTEX CONCENTRATIONS IN SOIL
PHASE TWO ESA
 590 ARGUS ROAD, OAKVILLE, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-554D	E.P.
SCALE	CK.
AS NOTED	R.C.
DATE	FIG NO.
JULY 2023	11



B.I.G. CONSULTING INC.
 t: (416) 214 - 4880 f: (416) 551 - 2633
 12-5500 Tomken Rd.
 Mississauga, ON L4W 2Z4
 Canada

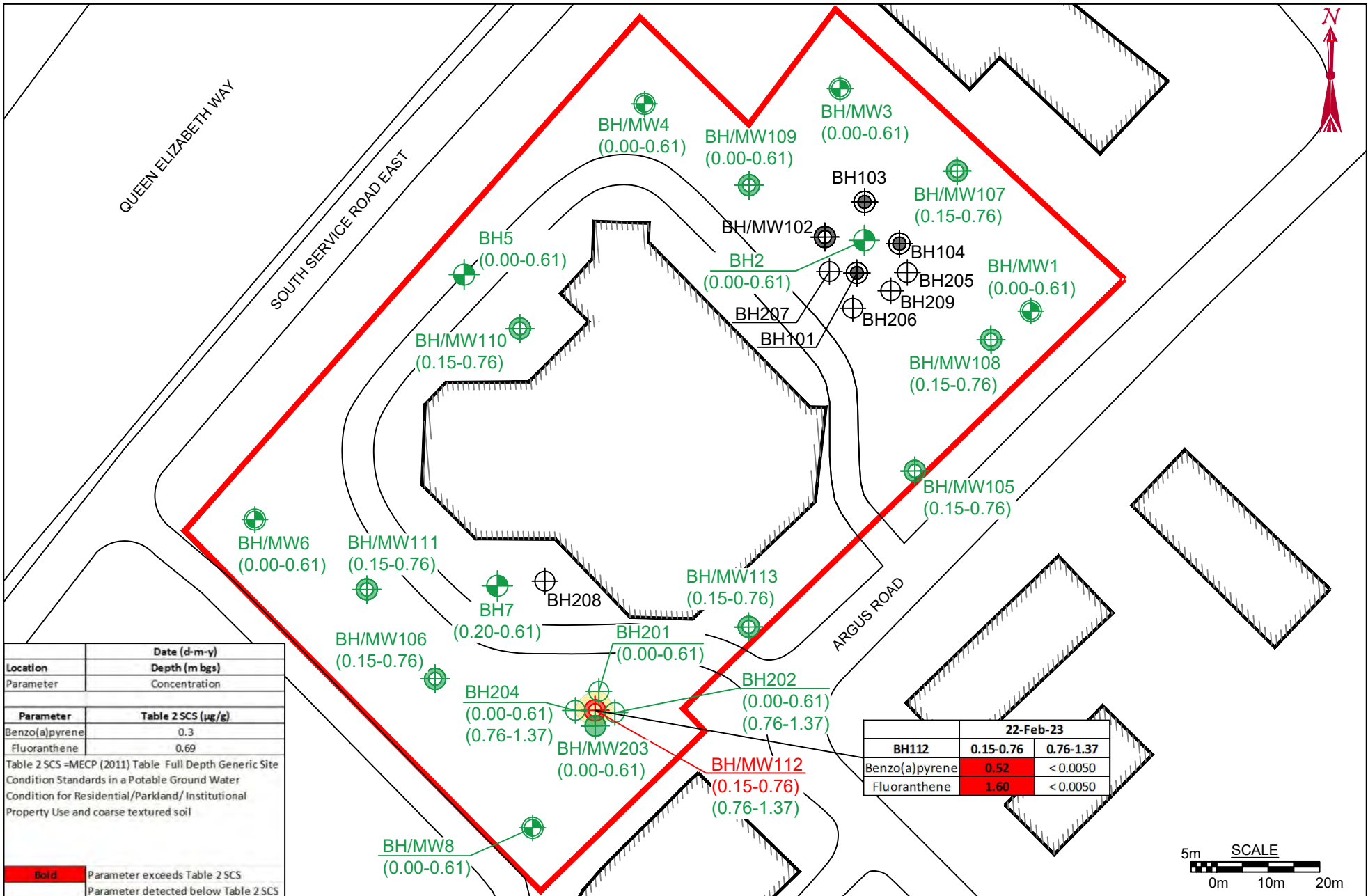
bigconsultinginc.com



LEGEND	
	SITE BOUNDARY
	BUILDING FOOTPRINT
	LOCATION OF THE BOREHOLE/MONITORING WELL (BIG, FEBRUARY 2023)
	LOCATION OF THE BOREHOLE (BIG, FEBRUARY 2023) [xx.xx]
	LOCATION OF THE BOREHOLE/MONITORING WELL LOCATION (BIG 2022)
	LOCATION OF THE BOREHOLE (BIG 2022)
	LOCATION OF THE BOREHOLE (BIG, APRIL 2023)
	LOCATION OF THE BOREHOLE/MONITORING WELL (BIG, APRIL 2023)
	GEOLOGICAL CROSS SECTION
	MEETS TABLE 2 SCS
	SOIL SAMPLE DEPTH (m bgs)

TITLE AND LOCATION
VOC CONCENTRATIONS IN SOIL
 PHASE TWO ESA
 590 ARGUS ROAD, OAKVILLE,
 ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-554D	E.P.
SCALE	CK.
AS NOTED	R.C.
DATE	FIG NO.
JULY 2023	12



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

Parameter	Table 2 SCS (µg/g)
Benzo(a)pyrene	0.3
Fluoranthene	0.69

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

Style	Description
Bold	Parameter exceeds Table 2 SCS
Normal	Parameter detected below Table 2 SCS

B.I.G. CONSULTING INC.

t: (416) 214 - 4880 f: (416) 551 - 2633
 12-5500 Tomken Rd.
 Mississauga, ON L4W 2Z4
 Canada

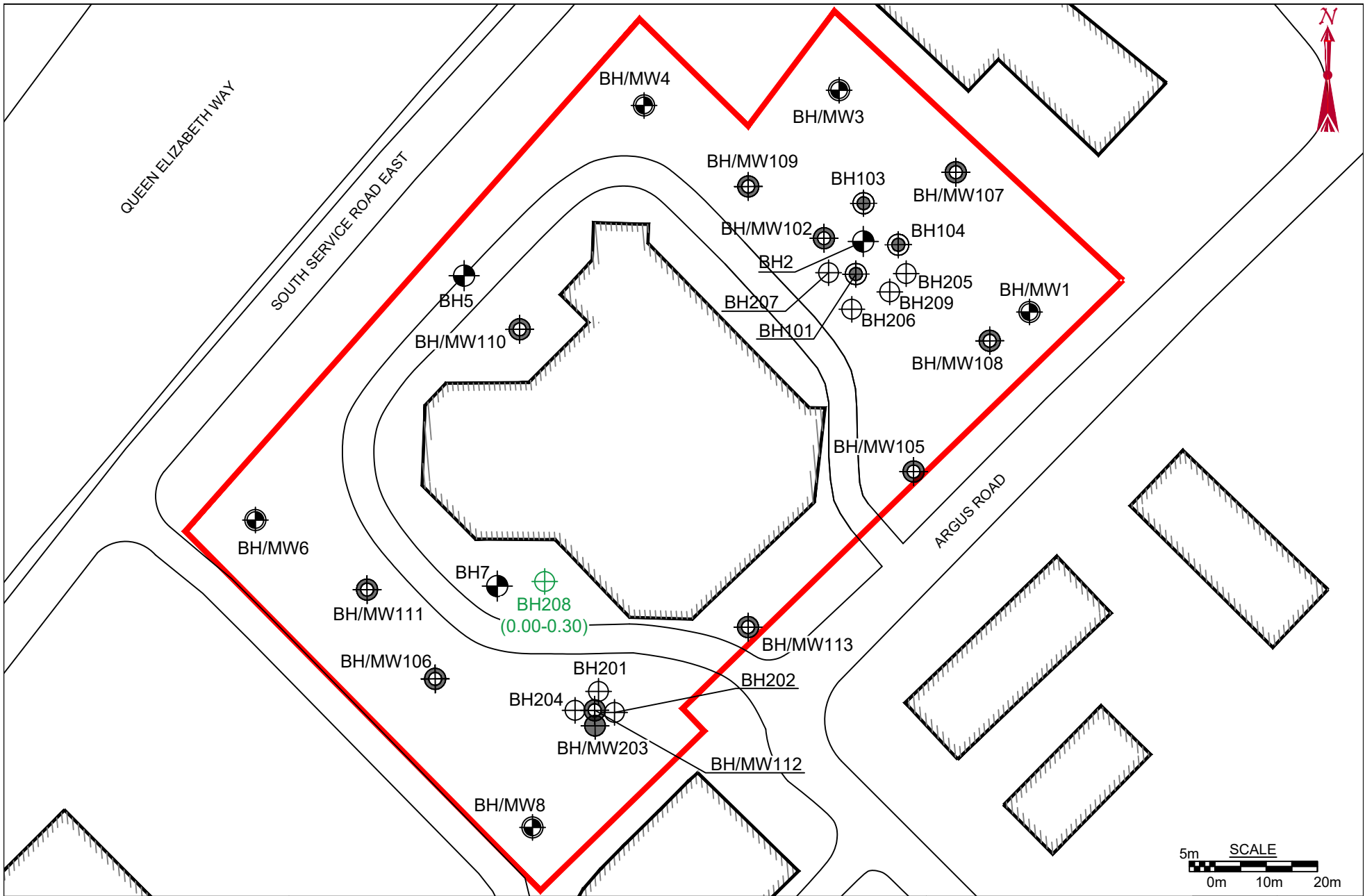
bigconsultinginc.com

LEGEND	
	SITE BOUNDARY
	BUILDING FOOTPRINT
	LOCATION OF THE BOREHOLE/MONITORING WELL (BIG, FEBRUARY 2023)
	LOCATION OF THE BOREHOLE (BIG, FEBRUARY 2023)
	LOCATION OF THE BOREHOLE/MONITORING WELL LOCATION (BIG 2022)
	LOCATION OF THE BOREHOLE (BIG 2022)
	LOCATION OF THE BOREHOLE (BIG, APRIL 2023)
	LOCATION OF THE BOREHOLE/MONITORING WELL (BIG, APRIL 2023)
	MEETS TABLE 2 SCS
	EXCEEDS TABLE 2 SCS
	APPROXIMATE IMPACT EXTENT
[xx.xx]	SOIL SAMPLE DEPTH (m bgs)

TITLE AND LOCATION

**PAH IMPACTS IN SOIL
 PHASE TWO ESA
 590 ARGUS ROAD, OAKVILLE,
 ONTARIO**

PROJECT NO.	DWN.
BIGC-ENV-554D	E.P.
SCALE	CK.
AS NOTED	R.C.
DATE	FIG. NO.
JULY 2023	13



B.I.G. CONSULTING INC.
 t: (416) 214 - 4880 f: (416) 551 - 2633
 12-5500 Tomken Rd.
 Mississauga, ON L4W 2Z4
 Canada

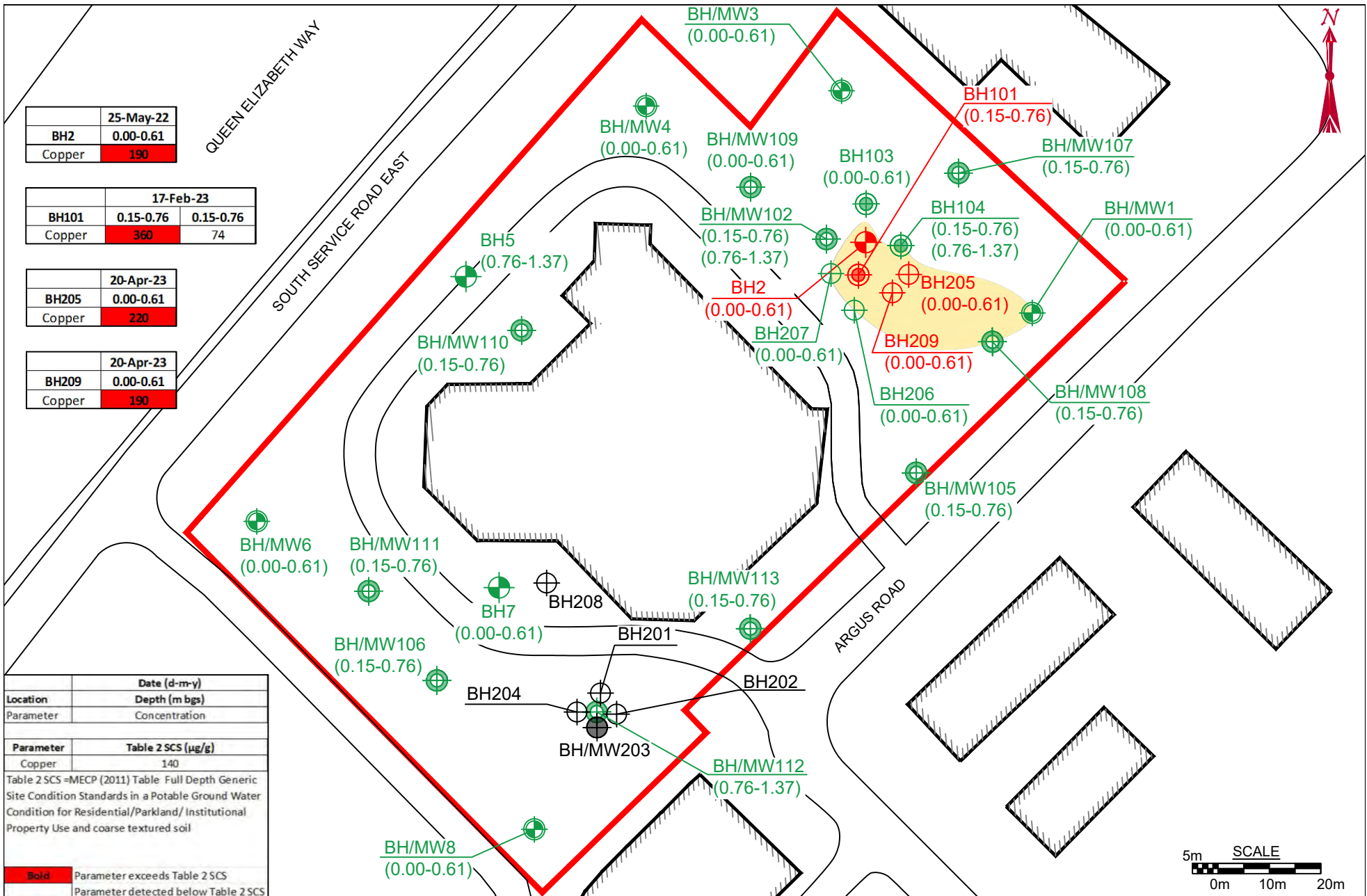
bigconsultinginc.com



LEGEND	
	SITE BOUNDARY
	BUILDING FOOTPRINT
	LOCATION OF THE BOREHOLE/MONITORING WELL (BIG, FEBRUARY 2023)
	LOCATION OF THE BOREHOLE (BIG, FEBRUARY 2023) [xx.xx]
	LOCATION OF THE BOREHOLE/MONITORING WELL LOCATION (BIG 2022)
	LOCATION OF THE BOREHOLE (BIG 2022)
	LOCATION OF THE BOREHOLE (BIG, APRIL 2023)
	LOCATION OF THE BOREHOLE/MONITORING WELL (BIG, APRIL 2023)
	GEOLOGICAL CROSS SECTION
	MEETS TABLE 2 SCS
	SOIL SAMPLE DEPTH (m bgs)

TITLE AND LOCATION
PCB CONCENTRATIONS IN SOIL
 PHASE TWO ESA
 590 ARGUS ROAD, OAKVILLE, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-554D	E.P.
SCALE	CK.
AS NOTED	R.C.
DATE	FIG. NO.
JULY 2023	14



	25-May-22
BH2	0.00-0.61
Copper	190

	17-Feb-23	
BH101	0.15-0.76	0.15-0.76
Copper	360	74

	20-Apr-23
BH205	0.00-0.61
Copper	220

	20-Apr-23
BH209	0.00-0.61
Copper	190

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

Parameter	Table 2 SCS (µg/g)
Copper	140

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

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

B.I.G. CONSULTING INC.

t: (416) 214 - 4880 f: (416) 551 - 2633
 12-5500 Tomken Rd.
 Mississauga, ON L4W 2Z4
 Canada

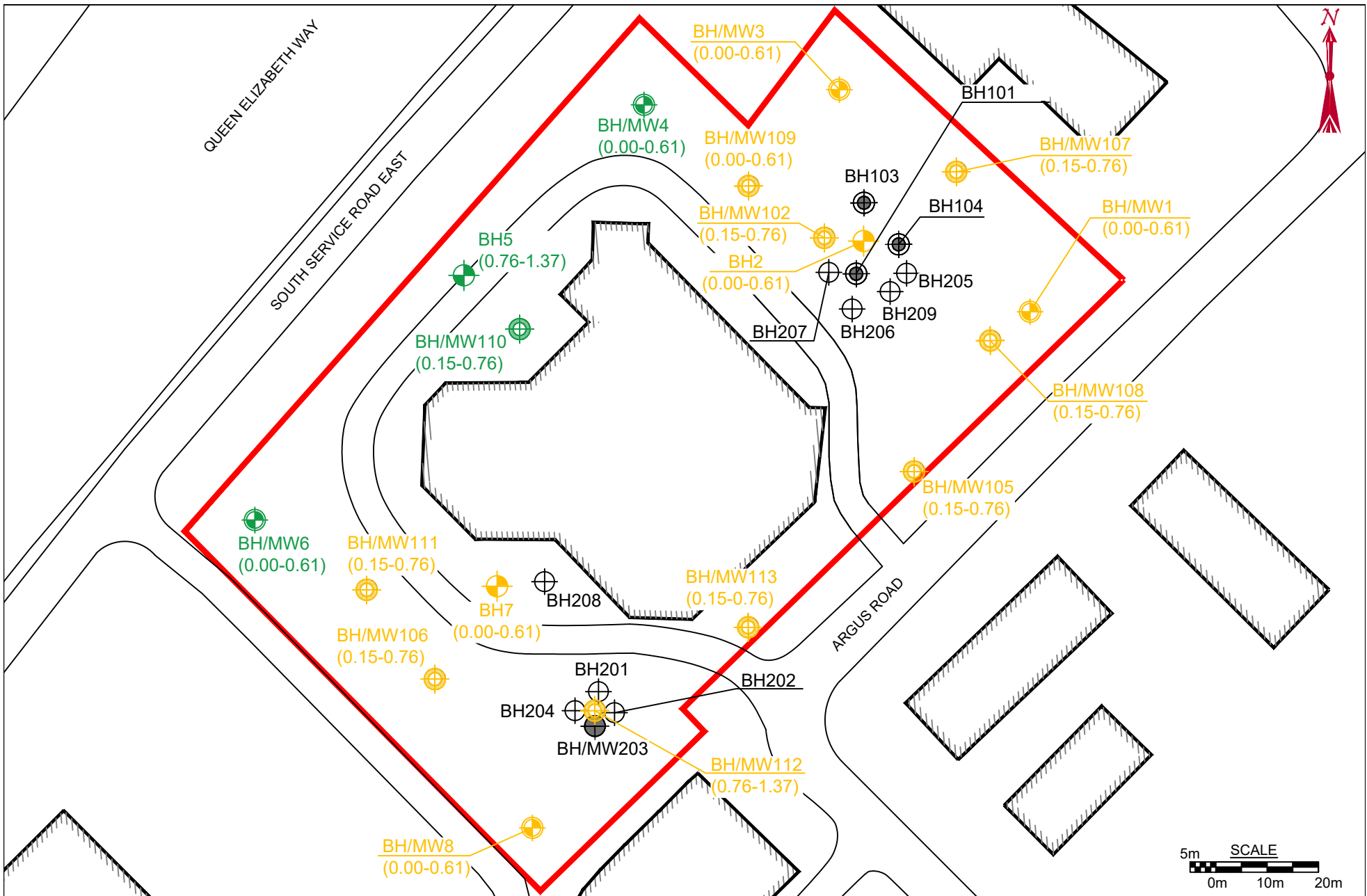
bigconsultinginc.com

LEGEND	
	SITE BOUNDARY
	BUILDING FOOTPRINT
	LOCATION OF THE BOREHOLE/MONITORING WELL (BIG, FEBRUARY 2023)
	LOCATION OF THE BOREHOLE (BIG, FEBRUARY 2023)
	LOCATION OF THE BOREHOLE/MONITORING WELL LOCATION (BIG 2022)
	LOCATION OF THE BOREHOLE (BIG 2022)
	LOCATION OF THE BOREHOLE (BIG, APRIL 2023)
	LOCATION OF THE BOREHOLE/MONITORING WELL (BIG, APRIL 2023)
	GEOLOGICAL CROSS SECTION
	MEETS TABLE 2 SCS
	EXCEEDS TABLE 2 SCS
	APPROXIMATE IMPACT EXTENT
[xx.xx]	SOIL SAMPLE DEPTH (m bgs)

TITLE AND LOCATION

METALS, As, Sb, Se, Cr(VI), Mg, B-HWS, AND CN-IMPACTS IN SOIL PHASE TWO ESA
 590 ARGUS ROAD, OAKVILLE, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-554D	E.P.
SCALE	CK.
AS NOTED	R.C.
DATE	FIG. NO.
JULY 2023	15



B.I.G. CONSULTING INC.

t: (416) 214 - 4880 f: (416) 551 - 2633
 12-5500 Tomken Rd.
 Mississauga, ON L4W 2Z4
 Canada



bigconsultinginc.com

LEGEND

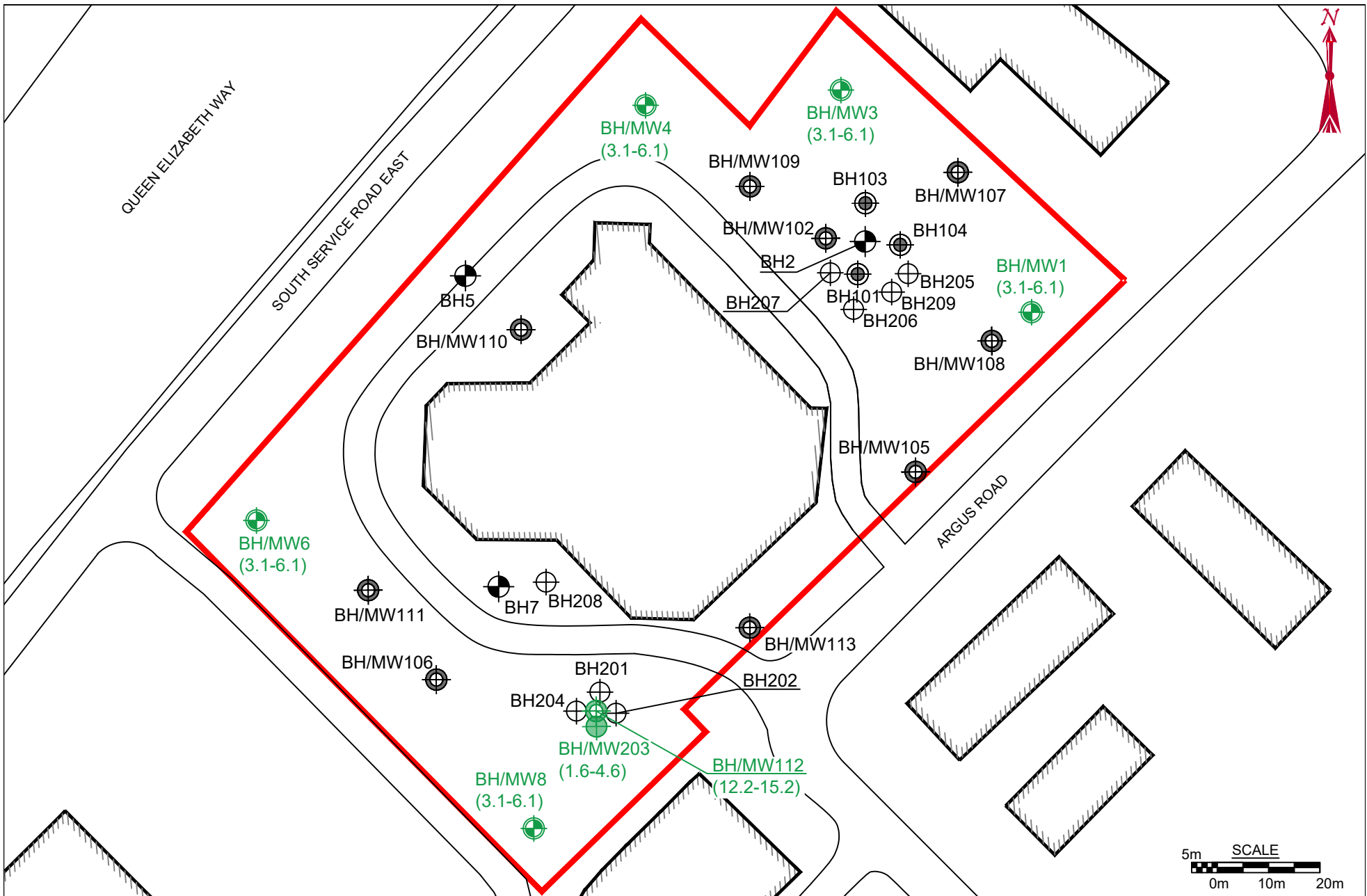
- SITE BOUNDARY
- BUILDING FOOTPRINT
- LOCATION OF THE BOREHOLE/MONITORING WELL (BIG, FEBRUARY 2023)
- LOCATION OF THE BOREHOLE (BIG, FEBRUARY 2023)
- LOCATION OF THE BOREHOLE/MONITORING WELL LOCATION (BIG 2022)
- LOCATION OF THE BOREHOLE (BIG 2022)
- LOCATION OF THE BOREHOLE (BIG, APRIL 2023)

- LOCATION OF THE BOREHOLE/MONITORING WELL (BIG, APRIL 2023)
- GEOLOGICAL CROSS SECTION
- MEETS TABLE 2 SCS
- EXCEEDS TABLE 2 SCS BUT NOT CONSIDERED A COC
- [xx.xx] SOIL SAMPLE DEPTH (m bgs)

TITLE AND LOCATION

**EC AND SAR
 CONCENTRATIONS IN SOIL
 PHASE TWO ESA
 590 ARGUS ROAD, OAKVILLE,
 ONTARIO**

PROJECT NO. BIGC-ENV-554D	DWN. E.P.
SCALE AS NOTED	CK. R.C.
DATE JULY 2023	FIG NO. 16



B.I.G. CONSULTING INC.
 t: (416) 214 - 4880 f: (416) 551 - 2633
 12-5500 Tomken Rd.
 Mississauga, ON L4W 2Z4
 Canada

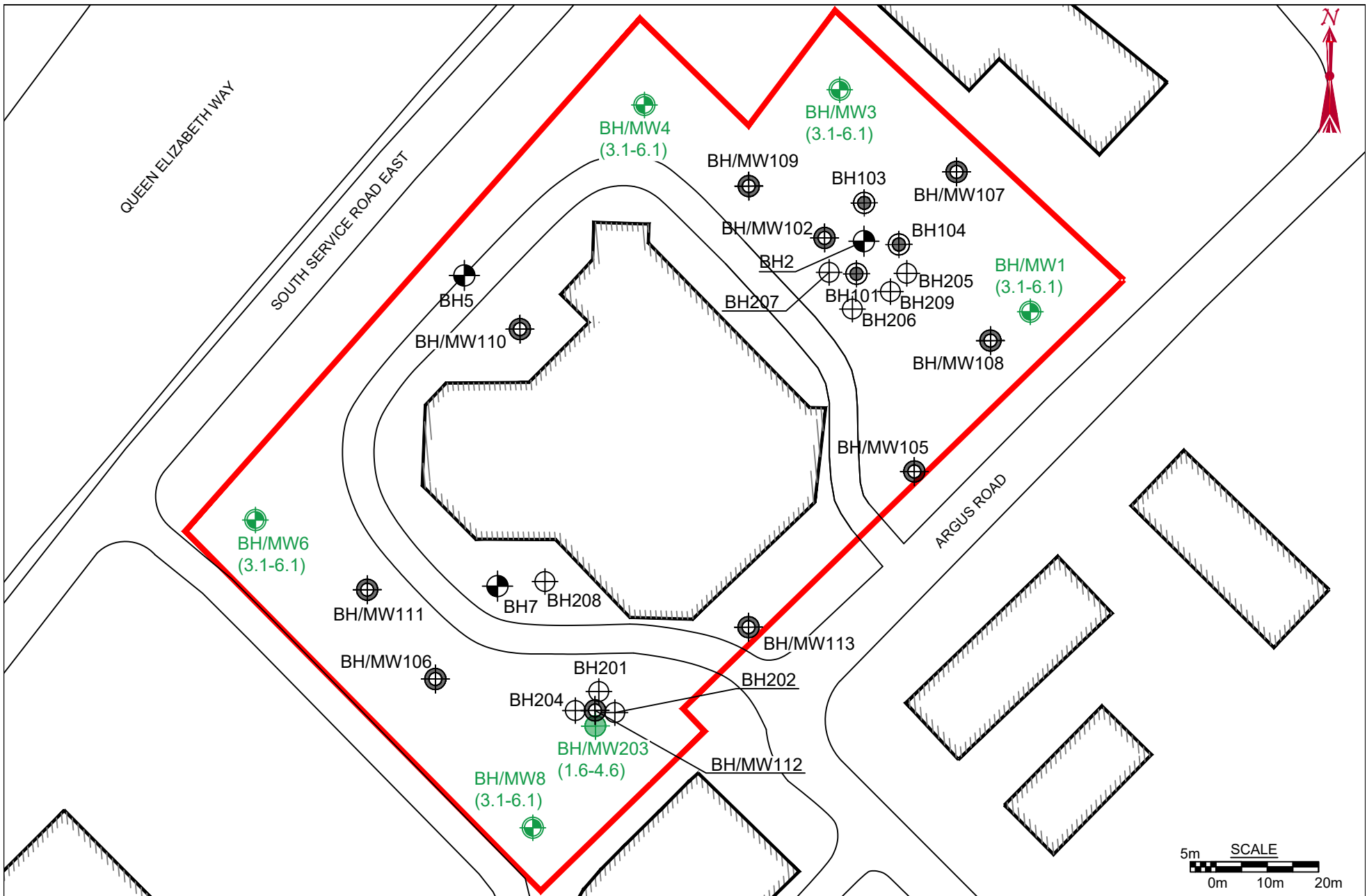
bigconsultinginc.com



LEGEND	
	SITE BOUNDARY
	BUILDING FOOTPRINT
	LOCATION OF THE BOREHOLE/MONITORING WELL (BIG, FEBRUARY 2023)
	LOCATION OF THE BOREHOLE (BIG, FEBRUARY 2023) [xx.xx]
	LOCATION OF THE BOREHOLE/MONITORING WELL LOCATION (BIG 2022)
	LOCATION OF THE BOREHOLE (BIG 2022)
	LOCATION OF THE BOREHOLE (BIG, APRIL 2023)
	GEOLOGICAL CROSS SECTION
	MEETS TABLE 2 SCS
	SOIL SAMPLE DEPTH (m bgs)

TITLE AND LOCATION
**PHC (INCLUDING BTEX)
 CONCENTRATIONS IN
 GROUNDWATER
 PHASE TWO ESA
 590 ARGUS ROAD, OAKVILLE,
 ONTARIO**

PROJECT NO. BIGC-ENV-554D	DWN. E.P.
SCALE AS NOTED	CK. R.C.
DATE AUGUST 2023	FIG NO. 17



B.I.G. CONSULTING INC.
 t: (416) 214 - 4880 f: (416) 551 - 2633
 12-5500 Tomken Rd.
 Mississauga, ON L4W 2Z4
 Canada

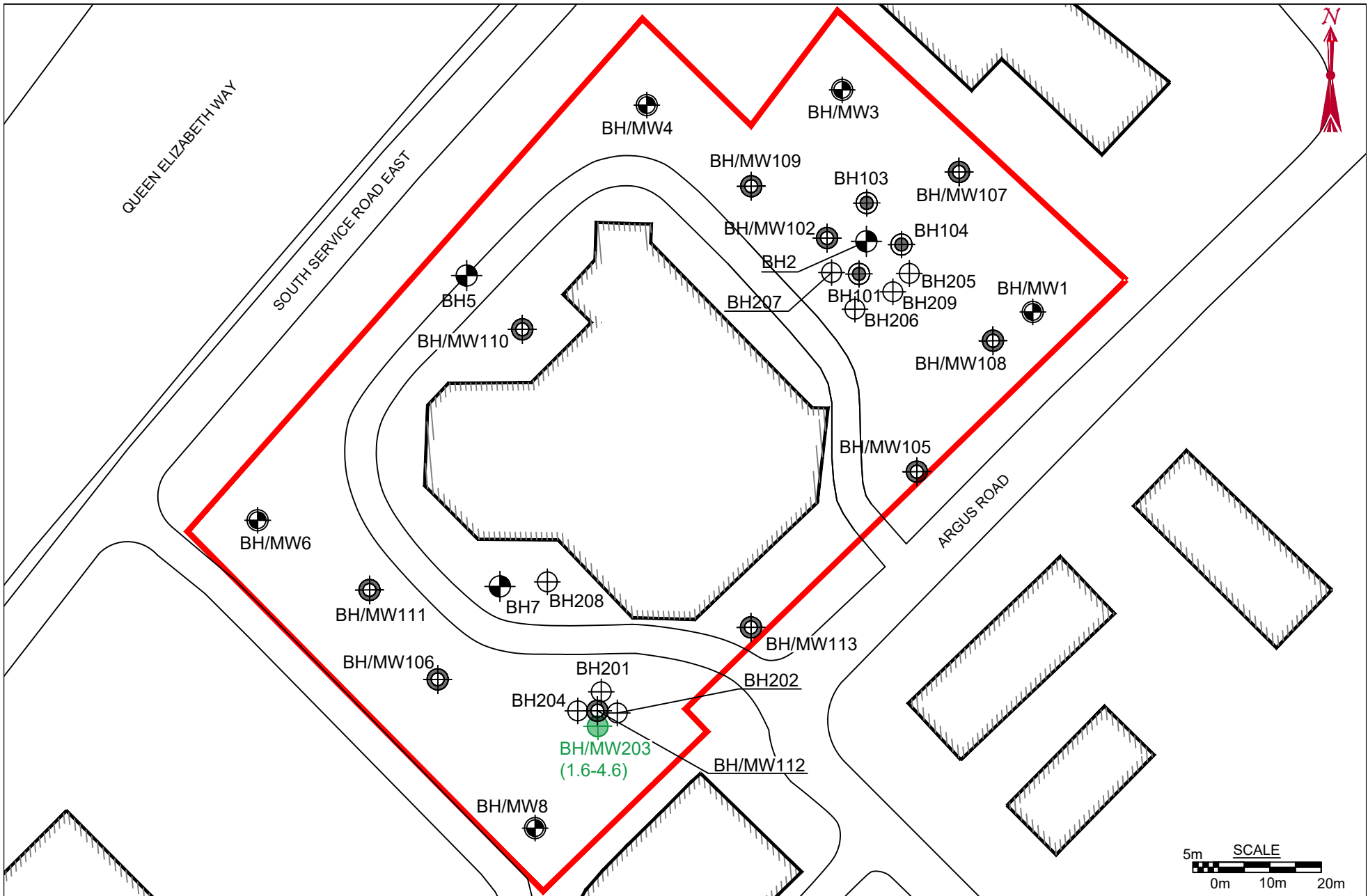
bigconsultinginc.com

LEGEND	
	SITE BOUNDARY
	BUILDING FOOTPRINT
	LOCATION OF THE BOREHOLE/MONITORING WELL (BIG, FEBRUARY 2023)
	LOCATION OF THE BOREHOLE (BIG, FEBRUARY 2023) [xx.xx]
	LOCATION OF THE BOREHOLE/MONITORING WELL LOCATION (BIG 2022)
	LOCATION OF THE BOREHOLE (BIG 2022)
	LOCATION OF THE BOREHOLE (BIG, APRIL 2023)
	LOCATION OF THE BOREHOLE/MONITORING WELL (BIG, APRIL 2023)
	GEOLOGICAL CROSS SECTION
	MEETS TABLE 2 SCS
	[xx.xx] SOIL SAMPLE DEPTH (m bgs)

TITLE AND LOCATION

VOC CONCENTRATIONS IN GROUNDWATER PHASE TWO ESA
 590 ARGUS ROAD, OAKVILLE, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-554D	E.P.
SCALE	CK.
AS NOTED	R.C.
DATE	FIG. NO.
AUGUST 2023	18



B.I.G. CONSULTING INC.
 t: (416) 214 - 4880 f: (416) 551 - 2633
 12-5500 Tomken Rd.
 Mississauga, ON L4W 2Z4
 Canada

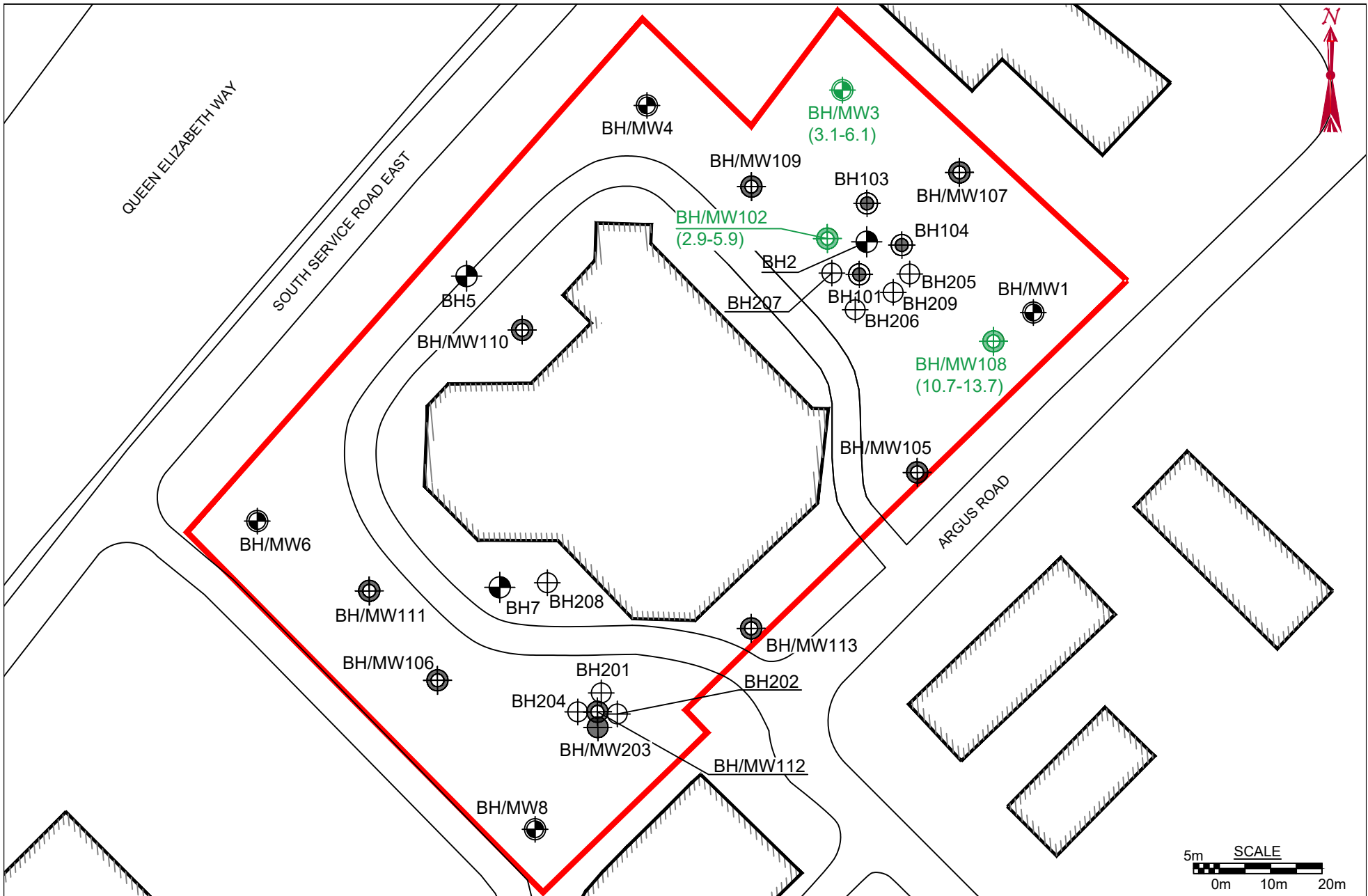
bigconsultinginc.com



LEGEND	
	SITE BOUNDARY
	BUILDING FOOTPRINT
	LOCATION OF THE BOREHOLE/MONITORING WELL (BIG, FEBRUARY 2023)
	LOCATION OF THE BOREHOLE (BIG, FEBRUARY 2023) [xx.xx]
	LOCATION OF THE BOREHOLE/MONITORING WELL LOCATION (BIG 2022)
	LOCATION OF THE BOREHOLE (BIG 2022)
	LOCATION OF THE BOREHOLE (BIG, APRIL 2023)
	MEETS TABLE 2 SCS
	GEOLOGICAL CROSS SECTION
	SOIL SAMPLE DEPTH (m bgs)

TITLE AND LOCATION	
PAH CONCENTRATIONS IN GROUNDWATER PHASE TWO ESA 590 ARGUS ROAD, OAKVILLE, ONTARIO	

PROJECT NO. BIGC-ENV-554D	DWN. E.P.
SCALE AS NOTED	CK. R.C.
DATE AUGUST 2023	FIG NO. 19



B.I.G. CONSULTING INC.
 t: (416) 214 - 4880 f: (416) 551 - 2633
 12-5500 Tomken Rd.
 Mississauga, ON L4W 2Z4
 Canada

bigconsultinginc.com

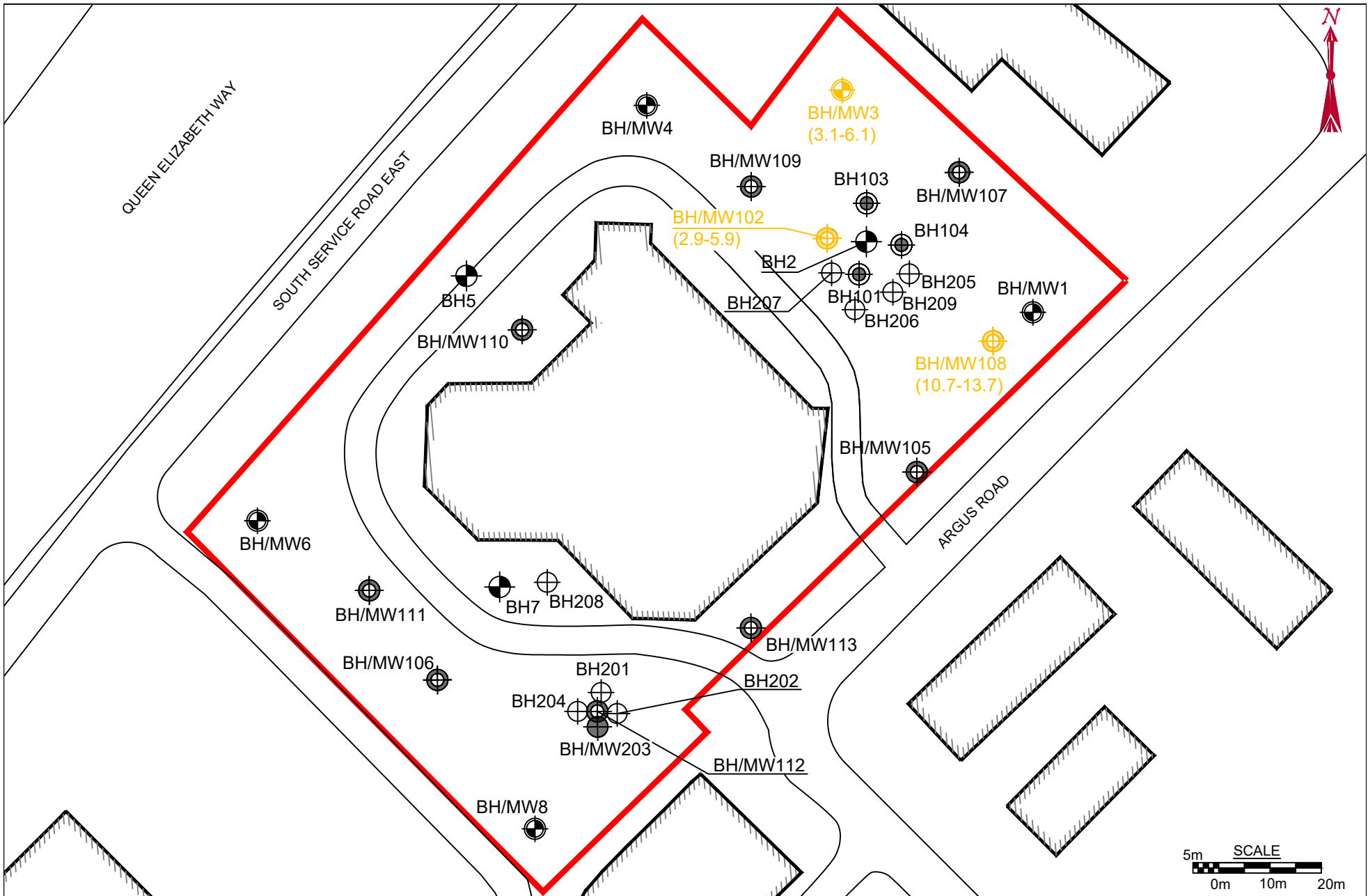


LEGEND	
	SITE BOUNDARY
	BUILDING FOOTPRINT
	LOCATION OF THE BOREHOLE/MONITORING WELL (BIG, FEBRUARY 2023)
	LOCATION OF THE BOREHOLE (BIG, FEBRUARY 2023) [xx.xx]
	LOCATION OF THE BOREHOLE/MONITORING WELL LOCATION (BIG 2022)
	LOCATION OF THE BOREHOLE (BIG 2022)
	LOCATION OF THE BOREHOLE (BIG, APRIL 2023)
	GEOLOGICAL CROSS SECTION
	MEETS TABLE 2 SCS
	SOIL SAMPLE DEPTH (m bgs)

TITLE AND LOCATION

METALS, As, Sb, Se, Cr(VI), Hg AND CN- CONCENTRATIONS IN GROUNDWATER PHASE TWO ESA
 590 ARGUS ROAD, OAKVILLE, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-554D	E.P.
SCALE	CK.
AS NOTED	R.C.
DATE	FIG. NO.
AUGUST 2023	20



B.I.G. CONSULTING INC.
 t: (416) 214 - 4880 f: (416) 551 - 2633
 12-5500 Tomken Rd.
 Mississauga, ON L4W 2Z4
 Canada

bigconsultinginc.com



LEGEND	
	SITE BOUNDARY
	BUILDING FOOTPRINT
	LOCATION OF THE BOREHOLE/MONITORING WELL (BIG, FEBRUARY 2023)
	LOCATION OF THE BOREHOLE (BIG, FEBRUARY 2023)
	LOCATION OF THE BOREHOLE/MONITORING WELL LOCATION (BIG 2022)
	LOCATION OF THE BOREHOLE (BIG 2022)
	LOCATION OF THE BOREHOLE (BIG, APRIL 2023)
	LOCATION OF THE BOREHOLE/MONITORING WELL (BIG, APRIL 2023)
	GEOLOGICAL CROSS SECTION
	EXCEEDS TABLE 2 SCS BUT NOT CONSIDERED A COC
	SOIL SAMPLE DEPTH (m bgs)

TITLE AND LOCATION

SODIUM AND CHLORIDE CONCENTRATIONS IN GROUNDWATER PHASE TWO ESA
 590 ARGUS ROAD, OAKVILLE, ONTARIO

PROJECT NO.	DWN.
BIGC-ENV-554D	E.P.
SCALE	CK.
AS NOTED	R.C.
DATE	FIG. NO.
AUGUST 2023	21

Tables

TABLE 1 – Areas of Potential Environmental Concern (APECs)

BIGC-ENV-554D – Phase Two Environmental Site Assessment
590 Argus Road, Oakville, Ontario

APEC	Location of APEC on Phase One Property	PCA	PCA Details	Location of PCA (On-Site or Off-Site)	Potential Contaminants of Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC 1: Importation of fill material	Exterior portion of the Site	#30 – Importation of Fill Material of Unknown Quality	Fill material of unknown quality was identified on-Site. As the quality of the fill was unknown, it could be contaminated.	On-Site	PAHs, metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN-	Soil
APEC 2: Use of de-icing salts	Exterior portion of the Site	“Other” – Usage of De-icing Salts	De-icing salts were used during the winter months on the exterior portion of the Site for vehicular and pedestrian safety.	On-Site	Electrical Conductivity and SAR	Soil
APEC 3: Current Transformer	Western portion	#55 – Transformer Manufacturing, Processing and Use	The on-Site transformer located at the western portion of the Site may have leaked.	On-Site	PCBs	Soil
APEC 4: Previously Identified Soil Exceedance	Eastern portion east of the Site building	“Other” – Previously Identified Metals Exceedance in Soil	Previously identified copper soil exceedance at BH2 may have leached into the groundwater.	On-Site	Metals	Soil and 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.
- PAHs = polycyclic aromatic hydrocarbons; As = arsenic; Sb = antimony; Se = selenium; B-HWS = boron-hot water soluble; Cr (VI) = hexavalent chromium; Hg = mercury; CN- = cyanide; PCBs = polychlorinated biphenyls; SAR = sodium adsorption ratio.

TABLE 2 – Summary of Soil Samples Submitted for Chemical Analysis

BIGC-ENV-554D – Phase Two Environmental Site Assessment
590 Argus Road, Oakville, Ontario

Soil Sample ID	Rationale	Requested Analyses	Consultant
BH1-SS1	APECs 1 and 2 characterization	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2022b)
BH2-SS1	APECs 1 and 2 characterization	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2022b)
BH3-SS1	APECs 1 and 2 characterization	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2022b)
BH4-SS1	APECs 1 and 2 characterization	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2022b)
BH5-SS1	APEC 1 characterization	PAHs	BIG (2022b)
BH5-SS2	APECs 1 and 2 characterization	Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2022b)
BH6-SS1	APECs 1 and 2 characterization	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2022b)
BH7-SS1	APECs 1 and 2 characterization	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2022b)
BH8-SS1	APECs 1 and 2 characterization	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2022b)
BH101-SS1	Horizontal delineation	Metals, As, Sb, and Se	BIG (2023)
BH102-SS1	Horizontal delineation	Metals, As, Sb, and Se	BIG (2023)
BH102-SS2	Vertical delineation	Metals, As, Sb, and Se	BIG (2023)
BH103-SS1	Horizontal delineation	Metals, As, Sb, and Se	BIG (2023)
BH104-SS1	Horizontal delineation	Metals, As, Sb, and Se	BIG (2023)
BH104-SS2	Site characterization and vertical delineation	BTEX, VOCs, Metals, As, Sb, and Se	BIG (2023)
BH105-SS1	APECs 1 and 2 characterization	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2023)
BH105-SS3	High PID value	BTEX and VOCs	BIG (2023)
BH106-SS1	APECs 1 and 2 characterization	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2023)
BH107-SS1	APECs 1 and 2 characterization	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2023)
BH108-SS1	APECs 1 and 2 characterization	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2023)
BH108-SS2	High PID value	BTEX and VOCs	BIG (2023)
BH109-SS1	APECs 1 and 2 characterization	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2023)
BH110-SS1	APECs 1 and 2 characterization	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2023)

Soil Sample ID	Rationale	Requested Analyses	Consultant
BH110-SS3	High PID value	BTEX and VOCs	BIG (2023)
BH111-SS1	APECs 1 and 2 characterization	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2023)
BH112-SS1	APEC 1 characterization	PAHs	BIG (2023)
BH112-SS2	APECs 1 and 2 characterization and vertical delineation	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2023)
BH112-SS3	High PID value	BTEX and VOCs	BIG (2023)
BH113-SS1	APECs 1 and 2 characterization	PAHs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN- and Inorganics	BIG (2023)
BH113-SS2	High PID value	BTEX and VOCs	BIG (2023)
BH201-SS1	Horizontal delineation	PAHs	BIG (2023)
BH201-SS2	Horizontal delineation	PHCs and BTEX	BIG (2023)
BH202-SS1	Horizontal delineation	PAHs	BIG (2023)
BH202-SS2	Horizontal and vertical delineation	PHCs, BTEX and PAHs	BIG (2023)
BH203-SS1	Horizontal delineation	PAHs	BIG (2023)
BH203-SS2	PHC odour and black staining	PHCs and BTEX	BIG (2023)
BH203-SS3	High PID value	PHCs and BTEX	BIG (2023)
BH204-SS1	Horizontal delineation	PAHs	BIG (2023)
BH204-SS2	PHC odour, black staining and vertical delineation	PHCs, BTEX and PAHs	BIG (2023)
BH205-SS1	Horizontal delineation	Metals, As, Sb, and Se	BIG (2023)
BH206-SS1	Horizontal delineation	Metals, As, Sb, and Se	BIG (2023)
BH207-SS1	Horizontal delineation	Metals, As, Sb, and Se	BIG (2023)
BH208-SS1	APEC 3 characterization	PCBs	BIG (2023)
BH209-SS1	Horizontal delineation	Metals, As, Sb, and Se	BIG (2023)

TABLE 3 – Monitoring Well Installation Details

BIGC-ENV-554D – Phase Two Environmental Site Assessment
590 Argus Road, Oakville, Ontario

Well ID	Consultant	Ground Elevation (m asl)	Stick down/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 (2022b)	104.45	0.15	3.1	6.1	3.0	101.35	98.35	Shale	Intact
BH/MW3	BIG (2022b)	104.84	0.16	3.1	6.1	3.0	101.74	98.74	Shale	Intact
BH/MW4	BIG (2022b)	105.05	0.13	3.1	6.1	3.0	101.95	98.95	Shale	Intact
BH/MW6	BIG (2022b)	105.36	0.13	3.1	6.1	3.0	102.26	99.26	Shale	Intact
BH/MW8	BIG (2022b)	105.12	0.17	3.1	6.1	3.0	102.02	99.02	Shale	Intact
BH/MW102	BIG (2023)	105.04	0.12	2.9	5.9	3.0	102.14	99.14	Shale	Intact
BH/MW105	BIG (2023)	104.96	0.08	3.1	6.1	3.0	101.86	98.86	Shale	Intact
BH/MW106	BIG (2023)	105.13	0.06	3.1	6.1	3.0	102.03	99.03	Shale	Intact
BH/MW107	BIG (2023)	104.65	0.045	2.9	5.9	3.0	101.75	98.75	Shale	Intact
BH/MW108	BIG (2023)	104.51	0.07	10.7	13.7	3.0	93.81	90.81	Shale	Intact
BH/MW109	BIG (2023)	105.09	0.09	21.4	24.4	3.0	83.69	80.69	Shale	Intact
BH/MW110	BIG (2023)	105.30	0.12	9.2	12.2	3.0	96.1	93.1	Shale	Intact
BH/MW111	BIG (2023)	105.08	0.15	15.3	18.3	3.0	89.78	86.78	Shale	Intact
BH/MW112	BIG (2023)	104.85	0.07	12.2	15.2	3.0	92.65	89.65	Shale	Intact
BH/MW113	BIG (2023)	105.08	0.10	21.4	24.4	3.0	83.68	80.68	Shale	Intact
BH/MW203	BIG (2023)	104.94	0.11	1.6	4.6	3.0	103.34	100.34	Silty Clay/Shale Complex and Shale	Intact

TABLE 4 – Water Level Depths and Elevations

BIGC-ENV-554D – Phase Two Environmental Site Assessment
590 Argus Road, Oakville, Ontario

Monitoring Well ID	Ground Surface Elevation	Groundwater Level (m bgs)	Groundwater Elevation (m ASL)	Groundwater Level Monitoring Date
BH/MW1	104.45	3.90	100.55	May 31, 2022
		3.36	101.09	March 3, 2023
		3.58	100.87	May 5, 2023
		3.69	100.76	July 27, 2023
BH2	105.02	-	-	-
BH/MW3	104.84	3.37	101.47	May 31, 2022
		2.88	101.96	March 3, 2023
		4.01	100.83	May 5, 2023
		3.00	101.84	July 27, 2023
BH/MW4	105.05	3.44	101.61	May 31, 2022
		3.08	101.97	March 3, 2023
		3.53	101.52	May 5, 2023
		3.12	101.93	July 27, 2023
BH5	105.13	-	-	-
BH/MW6	105.36	2.92	102.44	May 31, 2022
		Well not accessible on March 3, 2023		
		2.50	102.86	May 5, 2023
		2.60	102.76	July 27, 2023
BH7	105.08	-	-	-
BH/MW8	105.12	4.55	100.57	May 31, 2022
		Well not accessible on March 3, 2023		
		4.32	100.80	May 5, 2023
		4.43	100.69	July 27, 2023
BH101	105.00	-	-	-
BH/MW102	105.04	3.52	101.52	March 3, 2023
		3.37	101.67	May 5, 2023
		3.62	101.42	July 27, 2023
BH103	104.90	-	-	-
BH104	104.90	-	-	-
BH/MW105	104.96	4.20	100.76	March 3, 2023
		4.30	100.66	May 5, 2023
		4.49	100.47	July 27, 2023
BH/MW106	105.13	2.41	102.72	March 3, 2023
		2.48	102.65	May 5, 2023
		2.60	102.53	July 27, 2023

Monitoring Well ID	Ground Surface Elevation	Groundwater Level (m bgs)	Groundwater Elevation (m ASL)	Groundwater Level Monitoring Date
BH/MW107	104.65	Well not accessible on March 3, 2023		
		3.65	101.01	May 5, 2023
		3.18	101.48	July 27, 2023
BH/MW108	104.51	3.45	101.06	March 3, 2023
		3.58	100.93	May 5, 2023
		3.70	100.81	July 27, 2023
BH/MW109	105.09	23.09	82.00	March 3, 2023
		11.47	93.62	May 5, 2023
		11.64	93.45	July 27, 2023
BH/MW110	105.30	3.66	101.64	March 3, 2023
		4.82	100.48	May 5, 2023
		3.82	101.48	July 27, 2023
BH/MW111	105.08	6.84	98.24	March 3, 2023
		7.76	97.32	May 5, 2023
		6.92	98.16	July 27, 2023
BH/MW112	104.85	5.04	99.81	March 3, 2023
		5.25	99.60	May 5, 2023
		5.27	99.58	July 27, 2023
BH/MW113	105.08	23.84	81.24	March 3, 2023
		20.49	84.59	May 5, 2023
		20.06	85.02	July 27, 2023
BH201	104.86	-	-	-
BH202	104.89	-	-	-
BH/MW203	104.94	2.83	102.11	May 5, 2023
		3.02	101.92	July 27, 2023
BH204	104.76	-	-	-
BH205	104.97	-	-	-
BH206	104.89	-	-	-
BH207	104.91	-	-	-
BH208	105.24	-	-	-
BH209	104.99	-	-	-

TABLE 5 – Summary of Groundwater Samples Submitted for Chemical Analysis

BIGC-ENV-554D – Phase Two Environmental Site Assessment

590 Argus Road, Oakville, Ontario

Monitoring Well ID	Sampling Date	Rationale	Requested Analyses	Consultant
BH/MW1	May 31, 2022	Site characterization	PHCs, BTEX and VOCs	BIG (2022b)
	September 30, 2022	Site characterization	VOCs	
	May 5, 2023	Site characterization	PHCs and BTEX	BIG (2023)
BH/MW3	May 31, 2022	Site characterization	PHCs, BTEX and VOCs	BIG (2022b)
	July 27, 2023	Site characterization	Metals, As, Sb, Se, Cr (VI), Hg, CN- and Inorganics	BIG (2023)
BH/MW4	May 31, 2022	Site characterization	PHCs, BTEX and VOCs	BIG (2022b)
BH/MW6	May 31, 2022	Site characterization	PHCs, BTEX and VOCs	BIG (2022b)
BH/MW8	May 31, 2022	Site characterization	PHCs, BTEX and VOCs	BIG (2022b)
BH/MW102	March 3, 2023	APEC 4 characterization	Metals, As, Sb, Se, Cr (VI), Hg, CN- and Inorganics	BIG (2023)
BH/MW108	July 27, 2023	APEC 4 characterization	Metals, As, Sb, Se, Cr (VI), Hg, CN- and Inorganics	BIG (2023)
BH/MW112	May 16, 2023	Site characterization	PHCs and BTEX	BIG (2023)
BH/MW203	July 27, 2023	Site characterization	PHCs, BTEX, VOCs, and PAHs	BIG (2023)

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 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 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 the surficial 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 24.4 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 30.8 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 reworked native and overburden soils by a drilling company under the full-time supervision of BIG staff. A track mounted drilling machine equipped with solid and 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. Split-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 Waterra® tubing. 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 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 2: Full Depth Generic SCS in a Potable Groundwater Condition Residential/Parkland/Institutional Land Use (coarse textured soil)	BH201-SS2	BH202-SS2	BH203-SS2	BH203-SS3	DUP 20303 (DUP of BH203-SS3)	BH204-SS2
Lab ID		VRF356	VRF357	VRF358	VQO932	VQO951	VQO957
Sampling Date		20-Apr-23	20-Apr-23	20-Apr-23	20-Apr-23	20-Apr-23	20-Apr-23
Soil Sample Depth (m)		0.76-1.37	0.76-1.37	0.76-1.37	1.52-2.13	1.52-2.13	0.76-1.37
Consultant		BIG	BIG	BIG	BIG	BIG	BIG
Laboratory		BV	BV	BV	BV	BV	BV
PHC F1 (C6-C10)	55	<10	<10	19	<10	12	<10
PHC F1 (C6-C10) - BTEX	55	<10	<10	19	<10	12	<10
PHC F2 (C10-C16)	98	<10	<10	1,400	86	60	370
PHC F3 (C16-C34)	300	<50	<50	1,000	100	80	390
PHC F4 (C34-C50)	2800	<50	<50	<50	<50	<50	<50
Reached baseline at C50?	-	YES	YES	YES	YES	YES	YES
PHC F4 (C34-C50)-gravimetric	2800	-	-	-	-	-	-
<p>All soil concentrations reported in µg/g. '<' = Parameter below detection limit, as indicated 'NV'= No value</p> <p>Bold Concentration exceeds MOECC (2011) SCS. Non-detect but detection limit exceeds the MOECC (2011) SCS.</p>							

Sample ID	MOECC (2011) Table 2: Full Depth Generic SCS in a Potable Groundwater Condition Residential/Parkland/Institutional Land Use (coarse textured soil)	BH104-SS2	BH105-SS3	DUP10503 (Dup of BH105-SS3)	BH108-SS2	BH110-SS3	BH112-SS3	BH113-SS2	BH201-SS2	BH202-SS2	BH203-SS2	BH203-SS3	DUP20303 (Dup of BH203-SS3)	BH204-SS2	
Lab ID		VDC590	VEV743	VEV750	VEV745	VDC591	VEV748	VDC592	VRF356	VRF357	VRF358	VQO932	VQO951	VQO957	
Sampling Date		17-Feb-23	1-Mar-23	1-Mar-23	27-Feb-23	10-Feb-23	22-Feb-23	21-Feb-23	20-Apr-23	20-Apr-23	20-Apr-23	20-Apr-23	20-Apr-23	20-Apr-23	20-Apr-23
Soil Sample Depth (m)		0.76-1.37	1.52-2.13	1.52-2.13	0.76-1.37	1.52-2.13	1.52-2.13	0.76-1.37	0.76-1.37	0.76-1.37	0.76-1.37	0.76-1.37	1.52-2.13	1.52-2.13	0.76-1.37
Consultant		BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG
Laboratory		BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV
Acetone	16	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49	-	-	-	-	-	-	
Benzene	0.21	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	
Bromodichloromethane	1.5	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	-	-	-	-	-	-	
Bromoform	0.27	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	-	-	-	-	-	-	
Bromomethane	0.05	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	-	-	-	-	-	-	
Carbon Tetrachloride	0.05	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	-	-	-	-	-	-	
Chlorobenzene	2.4	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	-	-	-	-	-	-	
Chloroform	0.05	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	-	-	-	-	-	-	
Dibromochloromethane	2.3	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	-	-	-	-	-	-	
1,2-Dichlorobenzene	1.2	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	-	-	-	-	-	-	
1,3-Dichlorobenzene	4.8	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	-	-	-	-	-	-	
1,4-Dichlorobenzene	0.083	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	-	-	-	-	-	-	
Dichlorodifluoromethane	16	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	-	-	-	-	-	-	
1,1-Dichloroethane	0.47	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	-	-	-	-	-	-	
1,2-Dichloroethane	0.05	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	-	-	-	-	-	-	
1,1-Dichloroethylene	0.05	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	-	-	-	-	-	-	
cis-1,2-Dichloroethylene	1.9	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	-	-	-	-	-	-	
trans-1,2-Dichloroethylene	0.084	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	-	-	-	-	-	-	
1,2-Dichloropropane	0.05	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	-	-	-	-	-	-	
cis-1,3-Dichloropropene	0.05	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	-	-	-	-	-	-	
trans-1,3-Dichloropropene	0.05	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	-	-	-	-	-	-	
cis- & trans-1,3-Dichloropropene	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-	-	-	-	-	-	
Ethylbenzene	1.1	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	
Ethylene Dibromide (1,2-Dibromoethane)	0.05	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	-	-	-	-	-	-	
Hexane (n)	2.8	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	-	-	-	-	-	-	
Methylene chloride (Dichloromethane)	0.1	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	-	-	-	-	-	-	
Methyl ethyl ketone (2-Butanone)	16	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	-	-	-	-	-	-	
Methyl Isobutyl Ketone	1.7	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	-	-	-	-	-	-	
Methyl t-butyl ether (MTBE)	0.75	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	-	-	-	-	-	-	
Styrene	0.7	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	-	-	-	-	-	-	
1,1,1,2-Tetrachloroethane	0.058	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	-	-	-	-	-	-	
1,1,2,2-Tetrachloroethane	0.05	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	-	-	-	-	-	-	
Tetrachloroethylene	0.28	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	-	-	-	-	-	-	
Toluene	2.3	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	
1,1,1-Trichloroethane	0.38	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	-	-	-	-	-	-	
1,1,2-Trichloroethane	0.05	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	-	-	-	-	-	-	
Trichloroethylene	0.061	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	-	-	-	-	-	-	
Trichlorofluoromethane	4	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	-	-	-	-	-	-	
Vinyl Chloride	0.02	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	-	-	-	-	-	-	
m-Xylene + p-Xylene	NV	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	
o-Xylene	NV	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	
Xylenes (total)	3.1	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	

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

Sample ID	MOECC (2011) Table 2: Full Depth Generic SCS in a Potable Groundwater Condition Residential/Parkland/Institutional Land Use (coarse textured soil)	BH1-SS1	BH2-SS1	BH3-SS1	BH4-SS1	BH5-SS1	BH6-SS1	BH7-SS1	BH8-SS1	BH105-SS1	BH/MW 106-SS1	DUP10601 (Dup of BH/MW106-SS1)	BH107-SS1	DUP10701 (Dup of BH107-SS1)	BH108-SS1	
Lab ID		STX556	STX557	STX558	STX559	STX560	STX562	STX563	STX564	VEV742	VHG526	VHG528	VDC686	VDC692	VEV744	
Sampling Date		25-May-22	25-May-22	25-May-22	25-May-22	25-May-22	26-May-22	26-May-22	26-May-22	01-Mar-23	01-Mar-23	01-Mar-23	17-Feb-23	17-Feb-23	27-Feb-23	
Soil Sample Depth (m)		0.00-0.61	0.00-0.61	0.00-0.61	0.00-0.61	0.00-0.61	0.00-0.61	0.00-0.61	0.00-0.61	0.00-0.61	0.15-0.76	0.15-0.76	0.15-0.76	0.15-0.76	0.15-0.76	0.15-0.76
Consultant		BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG
Laboratory		BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV
Acenaphthene	7.9	<0.0050	<0.0050	<0.0050	<0.0050	0.0075	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.050	<0.0050	
Acenaphthylene	0.15	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.050	0.01	
Anthracene	0.67	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.050	0.0075	
Benzo(a)anthracene	0.5	0.01	<0.0050	<0.0050	<0.0050	0.011	<0.0050	<0.0050	0.01	<0.0050	<0.0050	<0.0050	<0.050	<0.050	0.049	
Benzo(a)pyrene	0.3	0.011	<0.0050	<0.0050	<0.0050	0.015	<0.0050	<0.0050	0.011	<0.0050	<0.0050	<0.0050	<0.050	<0.050	0.061	
Benzo(b)fluoranthene	0.78	0.018	<0.0050	0.0061	<0.0050	0.021	<0.0050	<0.0050	0.017	0.0055	<0.0050	<0.0050	<0.050	<0.050	0.088	
Benzo(ghi)perylene	6.6	0.014	<0.0050	0.0065	<0.0050	0.017	<0.0050	<0.0050	0.011	<0.0050	<0.0050	<0.0050	<0.050	<0.050	0.043	
Benzo(k)fluoranthene	0.78	0.0056	<0.0050	<0.0050	<0.0050	0.006	<0.0050	<0.0050	0.0051	<0.0050	<0.0050	<0.0050	<0.050	<0.050	0.029	
Chrysene	7	0.01	<0.0050	<0.0050	<0.0050	0.012	<0.0050	<0.0050	0.01	<0.0050	<0.0050	<0.0050	<0.050	<0.050	0.05	
Dibenz(a,h)anthracene	0.1	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.050	0.0096	
Fluoranthene	0.69	0.019	<0.0050	0.0051	<0.0050	0.028	<0.0050	<0.0050	0.02	0.006	<0.0050	0.0076	<0.050	<0.050	0.083	
Fluorene	62	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.050	<0.0050	
Indeno(1,2,3-cd)pyrene	0.38	0.01	<0.0050	<0.0050	<0.0050	0.013	<0.0050	<0.0050	0.0098	<0.0050	<0.0050	<0.0050	<0.050	<0.050	0.044	
1-Methylnaphthalene	0.99	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.050	<0.0050	
2-Methylnaphthalene	0.99	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.050	<0.0050	
1&2-Methylnaphthalene	0.99	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.071	<0.071	<0.0071	
Naphthalene	0.6	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.050	<0.0050	
Phenanthrene	6.2	0.007	<0.0050	0.01	<0.0050	0.017	<0.0050	<0.0050	0.0095	<0.0050	<0.0050	<0.0050	<0.050	<0.050	0.026	
Pyrene	78	0.016	<0.0050	0.0055	<0.0050	0.024	<0.0050	<0.0050	0.02	0.0051	<0.0050	0.0071	<0.050	<0.050	0.073	

All soil concentrations reported in µg/g.
'<' = Parameter below detection limit, as indicated
'NV' = No value

Concentration exceeds MOECC (2011) SCS.
Non-detect but detection limit exceeds the MOECC (2011) SCS.

Sample ID	MOECC (2011) Table 2: Full Depth Generic SCS in a Potable Groundwater Condition Residential/Parkland/Institutional Land Use (coarse textured soil)	BH109-SS1	DUP10901 (Dup of BH109-SS1)	BH110-SS1	BH111-SS1	BH112-SS1	BH/MW 112-SS2	BH113-SS1	BH201-SS1	DUP20101 (Dup of BH201-SS1)	BH202-SS1	BH202-SS2	BH203-SS1	BH204-SS1	BH204-SS2	
Lab ID		VDC687	VDC693	VDC688	VDC689	VEV746	VHG527	VEV749	VQP092	VQP118	VQP203	VSD622	VQP195	VQP168	VSD623	
Sampling Date		15-Feb-23	15-Feb-23	10-Feb-23	10-Feb-23	22-Feb-23	22-Feb-23	21-Feb-23	20-Apr-23	20-Apr-23	21-Apr-23	20-Apr-23	20-Apr-23	20-Apr-23	20-Apr-23	20-Apr-23
Soil Sample Depth (m)		0.00-0.61	0.00-0.61	0.15-0.76	0.15-0.76	0.15-0.76	0.76-1.37	0.15-0.76	0.00-0.61	0.00-0.61	0.00-0.61	0.76-1.37	0.00-0.61	0.00-0.61	0.76-1.37	
Consultant		BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG
Laboratory		BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV
Acenaphthene	7.9	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<0.050	<0.0050	
Acenaphthylene	0.15	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<0.050	<0.0050	
Anthracene	0.67	<0.0050	<0.0050	<0.0050	<0.0050	0.065	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<0.050	<0.0050	
Benzo(a)anthracene	0.5	<0.0050	<0.0050	<0.0050	<0.0050	0.5	<0.0050	0.02	<0.0050	<0.0050	0.056	<0.0050	<0.0050	0.076	<0.0050	
Benzo(a)pyrene	0.3	<0.0050	<0.0050	<0.0050	<0.0050	0.52	<0.0050	0.017	<0.0050	<0.0050	0.075	<0.0050	<0.0050	0.083	<0.0050	
Benzo(b)fluoranthene	0.78	<0.0050	<0.0050	<0.0050	<0.0050	0.77	<0.0050	0.02	<0.0050	<0.0050	0.12	<0.0050	<0.0050	0.11	<0.0050	
Benzo(ghi)perylene	6.6	<0.0050	<0.0050	<0.0050	<0.0050	0.46	<0.0050	0.01	<0.0050	<0.0050	0.09	<0.0050	<0.0050	0.07	<0.0050	
Benzo(k)fluoranthene	0.78	<0.0050	<0.0050	<0.0050	<0.0050	0.26	<0.0050	0.01	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<0.050	<0.0050	
Chrysene	7	<0.0050	<0.0050	<0.0050	<0.0050	0.58	<0.0050	0.015	<0.0050	<0.0050	0.071	<0.0050	<0.0050	0.089	<0.0050	
Dibenz(a,h)anthracene	0.1	<0.0050	<0.0050	<0.0050	<0.0050	0.071	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<0.050	<0.0050	
Fluoranthene	0.69	<0.0050	<0.0050	<0.0050	<0.0050	1.6	<0.0050	0.03	<0.0050	<0.0050	0.16	<0.0050	0.008	0.28	<0.0050	
Fluorene	62	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	0.0062	<0.050	<0.0050	
Indeno(1,2,3-cd)pyrene	0.38	<0.0050	<0.0050	<0.0050	<0.0050	0.38	<0.0050	0.01	<0.0050	<0.0050	0.063	<0.0050	<0.0050	0.058	<0.0050	
1-Methylnaphthalene	0.99	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	0.028	<0.050	<0.0050	
2-Methylnaphthalene	0.99	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<0.050	<0.0050	
1&2-Methylnaphthalene	0.99	<0.0071	<0.0071	<0.0071	<0.0071	<0.071	<0.071	<0.0071	<0.0071	<0.0071	<0.071	<0.0071	0.028	<0.071	<0.0071	
Naphthalene	0.6	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.050	<0.0050	<0.0050	<0.050	<0.0050	
Phenanthrene	6.2	<0.0050	<0.0050	<0.0050	<0.0050	0.39	<0.0050	0.013	<0.0050	<0.0050	<0.050	<0.0050	0.013	0.13	<0.0050	
Pyrene	78	<0.0050	<0.0050	<0.0050	<0.0050	1.3	<0.0050	0.029	<0.0050	<0.0050	0.17	<0.0050	0.0076	0.22	<0.0050	

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 2: Full Depth Generic SCS in a Potable Groundwater Condition Residential/Parkland/Institutional Land Use (coarse textured soil)	BH208-SS1	DUP20801 (Dup of BH208-SS1)
Lab ID		VQP000	VQP030
Sampling Date		20-Apr-23	20-Apr-23
Soil Sample Depth (m)		0.00-0.30	0.00-0.30
Consultant		BIG	BIG
Laboratory		BV	BV
Aroclor 1242		NV	<0.010
Aroclor 1248	NV	<0.010	<0.010
Aroclor 1254	NV	<0.010	<0.010
Aroclor 1260	NV	<0.010	<0.010
Total Polychlorinated Biphenyls	0.35	<0.010	<0.010
<p>All soil concentrations reported in µg/g. '<' = Parameter below detection limit, as indicated 'NV'= No value</p> <p>Bold Concentration exceeds MOECC (2011) SCS. Non-detect but detection limit exceeds the MOECC (2011) SCS.</p>			

Sample ID	MOECC (2011) Table 2: Full Depth Generic SCS in a Potable Groundwater Condition Residential/Parkland/Institutional Land Use (coarse textured soil)	BH1-SS1	BH2-SS1	BH3-SS1	BH4-SS1	BH5-SS2	BH6-SS1	BH7-SS1	BH8-SS1	BH101-SS1	DUP10101 (Dup of BH101-SS1)	BH102-SS1	DUP10201 (Dup of BH102-SS1)	BH102-SS2	DUP10202 (Dup of BH102-SS2)	BH103-SS1	BH104-SS1	
Lab ID		STX556	STX557	STX558	STX559	STX560	STX562	STX563	STX564	VDC680	VDC690	VDC681	VHG529	VDC682	VDC691	VDC683	VDC684	
Sampling Date		25-May-22	25-May-22	25-May-22	25-May-22	25-May-22	26-May-22	26-May-22	26-May-22	26-May-22	17-Feb-23	17-Feb-23	17-Feb-23	17-Feb-23	17-Feb-23	17-Feb-23	17-Feb-23	17-Feb-23
Soil Sample Depth (m)		0.00-0.61	0.00-0.61	0.00-0.61	0.00-0.61	0.00-0.61	0.76-1.37	0.00-0.61	0.00-0.61	0.00-0.61	0.15-0.76	0.15-0.76	0.15-0.76	0.15-0.76	0.76-1.37	0.76-1.37	0.00-0.61	0.15-0.76
Consultant		BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG
Laboratory	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	
Antimony	7.5	0.5	0.33	0.24	<0.20	0.73	0.76	0.41	0.55	0.36	0.43	0.41	0.3	0.31	0.36	0.3	0.24	
Arsenic	18	5.6	6.2	5.3	2.6	6.5	9.2	4.5	6.1	3.6	4	4.3	4.1	5.2	6.2	4.6	3.9	
Barium	390	73	54.0	54.0	120.0	83.0	110.0	170.0	110.0	59.0	67	97.0	73.0	83.0	110	57.0	76.0	
Beryllium	4	0.73	0.81	0.58	1.3	1	1.2	0.82	0.75	0.82	0.67	1.2	0.74	0.75	0.85	0.52	0.65	
Boron (Total)	120	12	16	6.2	15	20	14	14	12	9.7	8.6	15	9.9	8	8.9	7.2	8.2	
Boron (Hot water soluble)	1.5	1.1	0.45	0.28	0.2	0.2	0.48	0.33	0.48	-	-	-	0.35	-	-	-	-	
Cadmium	1.2	0.34	0.12	<0.10	<0.10	<0.10	<0.10	0.1	0.19	<0.10	0.15	<0.10	<0.10	<0.10	<0.10	0.2	<0.10	
Chromium (total)	160	20	22	15	28.0	25.0	28.0	22.0	21.0	20.0	17	28.0	19.0	19.0	23	14.0	17.0	
Chromium VI	8	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	-	-	-	<0.18	-	-	-	-	
Cobalt	22	11	13	6.1	16	14	14	13	11	11	8.7	15	9	9.4	11	6	8.9	
Copper	140	100	190	58	31	91	95	43	65	360	74	39	88	24	51	40	130	
Lead	120	37	13	20	4.6	8.9	12	14	23	12	12	10	11	9.4	9.3	29	10	
Mercury	0.27	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	-	-	-	<0.050	-	-	-	-	
Molybdenum	6.9	1.3	1.2	0.76	1.4	2.7	3.6	1.2	2.1	1.3	1.4	2	1.5	1.7	2.4	0.86	0.75	
Nickel	100	23	29	16	38	32	33	28	24	24	19	36	21	19	24	13	19	
Selenium	2.4	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Silver	20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
Thallium	1	0.11	0.11	0.082	0.12	0.094	0.095	0.1	0.1	0.11	0.11	0.12	0.088	0.099	0.11	0.091	0.11	
Uranium	23	1.2	0.95	0.69	1.4	1.7	1.6	0.75	1.1	0.88	1	1.3	1.4	1.6	3.9	0.87	0.48	
Vanadium	86	30	31	29	37	35	42	32	32	29	27	42	30	34	41	23	29	
Zinc	340	150	86	44	73.0	62.0	65.0	66.0	71.0	59.0	54	68.0	51.0	42.0	44	65.0	43.0	
Electrical Conductivity (mS/cm)	0.7	1.1	0.87	0.81	0.46	0.33	0.61	1.3	1.2	-	-	-	0.96	-	-	-	-	
Sodium Adsorption Ratio (unitless)	5	12	4.2	6.4	1.5	1	3.8	8.3	18	-	-	-	6.5	-	-	-	-	
Free Cyanide	0.051	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	<0.01	-	-	-	-	
pH (pH units)	5-9 (surface soil); 5-11 (subsurface soil)	7.09	7.85	7.28	7.3	7.85	7.77	7.8	7.16	-	-	-	7.46	-	-	-	-	

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 2: Full Depth Generic SCS in a Potable Groundwater Condition Residential/Parkland/Institutional Land Use (coarse textured soil)	BH104-SS2	BH105-SS1	BH106-SS1	BH107-SS1	BH108-SS1	BH109-SS1	BH110-SS1	BH111-SS1	BH112-SS2	BH113-SS1	BH205-SS1	BH206-SS1	DUP20601 (Dup of BH 206- SS1)	BH207-SS1	BH209-SS1	
Lab ID		VDC685	VEV742	VHG526	VDC686	VEV744	VDC687	VDC688	VDC689	VEV747	VEV749	VQP178	VQP137	VQP127	VQP061	VQP039	
Sampling Date		17-Feb-23	1-Mar-23	1-Mar-23	17-Feb-23	27-Feb-23	15-Feb-23	10-Feb-23	17-Feb-23	22-Feb-23	21-Feb-23	20-Apr-23	20-Apr-23	20-Apr-23	20-Apr-23	20-Apr-23	
Soil Sample Depth (m)		0.76-1.37	0.15-0.76	0.15-0.76	0.15-0.76	0.15-0.76	0.00-0.61	0.15-0.76	0.15-0.76	0.76-1.37	0.15-0.76	0.00-0.61	0.00-0.61	0.00-0.61	0.00-0.61	0.00-0.61	
Consultant		BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG
Laboratory		BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV	BV
Antimony	7.5	0.23	0.38	<0.20	0.37	0.36	0.28	0.52	0.46	0.3	0.3	0.23	0.42	0.26	0.26	0.29	
Arsenic	18	2.6	5.6	6.1	2.7	4.2	5.3	4.6	4.9	4	6.3	6.4	7.8	6.6	6.5	5.9	
Barium	390	64.0	81	84	25.0	83	69	32	140	53	110	50	100	42	76	76	
Beryllium	4	0.5	0.73	0.58	0.26	0.52	0.65	0.5	0.86	0.66	0.64	0.9	0.59	0.21	0.5	0.79	
Boron (Total)	120	<5.0	10	<5.0	5.3	5.5	8.3	13	16	7.2	7.4	14	12	9.6	12	6.7	
Boron (Hot water soluble)	1.5	-	0.43	0.28	1.3	1.5	0.59	0.31	0.44	0.19	0.86	-	-	-	-	-	
Cadmium	1.2	<0.10	0.34	0.16	0.15	0.16	0.18	0.21	<0.10	<0.10	0.36	<0.10	0.32	0.82	0.2	<0.10	
Chromium (total)	160	14.0	20	16	7.5	22	16	13	24	18	17	24	16	6.3	14	20	
Chromium VI	8	-	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	-	-	-	-	-	
Cobalt	22	5.1	9.4	8.8	2.9	5.1	7.7	7.8	14	8.6	8.9	15	9.5	4.3	9	9.9	
Copper	140	37	120	50	23	39	37	14	36.0	84	71	220	33	22	32	190	
Lead	120	10	22	8.6	14	29	15	18	13	7.2	23	10	25	23	16	13	
Mercury	0.27	-	<0.050	<0.050	0.076	0.063	<0.050	<0.050	<0.050	<0.050	<0.050	-	-	-	-	-	
Molybdenum	6.9	0.52	1.3	1.9	0.54	0.9	2	1.3	1.5	1.6	1.6	0.94	1.1	0.96	0.87	0.89	
Nickel	100	11	21	18	6.2	11	15	17	30	21	19	32	21	8.9	18	22	
Selenium	2.4	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.5	<0.50	<0.50	<0.50	
Silver	20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20	<0.20	
Thallium	1	0.074	0.11	0.084	0.066	0.1	0.099	0.089	0.096	0.063	0.11	0.12	0.11	0.08	0.11	0.089	
Uranium	23	0.42	0.9	0.91	0.33	1.1	1.6	0.91	0.77	0.69	1.2	0.94	0.59	0.42	0.51	0.71	
Vanadium	86	25	31	29	15	24	29	18	33	29	32	32	25	14	23	32	
Zinc	340	28.0	98	39	35.0	60	60	250	69	42	69	77	130	180	70	62	
Electrical Conductivity (mS/cm)	0.7	-	1	1	0.74	0.84	1.4	0.62	1.1	1.5	1.1	-	-	-	-	-	
Sodium Adsorption Ratio (unitless)	5	-	17	13	6.2	10	12	2.6	8.5	33	13	-	-	-	-	-	
Free Cyanide	0.051	-	<0.01	<0.01	<0.01	0.01	0.01	<0.01	<0.01	<0.01	0.01	-	-	-	-	-	
pH (pH units)	5-9 (surface soil); 5-11 (subsurface soil)	-	7.62	7.37	7.17	7.12	6.93	7.91	7.74	7.93	7.19	-	-	-	-	-	

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 2: Full Depth Generic SCS in a Potable Groundwater Condition All Types of Land Use (coarse textured soil)	BH/MW1		BH/MW3	BH/MW4	BH/MW6	BH/MW8	BH/MW112	BH/MW 203	DUP2030 (BH/MW203 Duplicate)	TRIP BLANK
		STP222	VSY640	STP223	STP224	STP225	STP226	VVE520	WNE972	WNE973	WNE980
Lab ID		31-May-22	5-May-23	31-May-22	31-May-22	31-May-22	31-May-22	16-May-23	27-Jul-23	27-Jul-23	27-Jul-23
Sampling Date		3.1-6.1		3.1-6.1	3.1-6.1	3.1-6.1	3.1-6.1	12.2-15.2	1.6-4.6	1.6-4.6	-
Screen Depth Interval (m)		BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG
Consultant		BV	BV	BV	BV	BV	BV	BV	BV	BV	BV
Laboratory											
PHC F1 (C6-C10)	750	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
PHC F1 (C6-C10) - BTEX	750	<25	<25	<25	<25	<25	<25	<25	<25	<25	<25
PHC F2 (C10-C16)	150	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
PHC F3 (C16-C34)	500	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
PHC F4 (C34-C50)	500	<200	<200	<200	<200	<200	<200	<200	<200	<200	<200
Reached baseline at C50?	-	YES	YES	YES	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 Non-detect but detection limit exceeds the MOECC (2011) SCS.

Sample ID	MOECC (2011) Table 2: Full Depth Generic SCS in a Potable Groundwater Condition All Types of Land Use (coarse textured soil)	BH/MW1		BH/MW3	BH/MW4	BH/MW6	BH/MW8	BH/MW112	BH/MW 203	DUP2030 (BH/MW203 Duplicate)
		STP222 31-May-22	TWS683 30-Sep-22	STP223 31-May-22	STP224 31-May-22	STP225 31-May-22	STP226 31-May-22	VVE520 16-May-23	WNE972 27-Jul-23	WNE973 27-Jul-23
Lab ID		3.1-6.1		3.1-6.1	3.1-6.1	3.1-6.1	3.1-6.1	12.2-15.2	1.6-4.6	1.6-4.6
Sampling Date		BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG	BIG
Screen Depth Interval (m)		BV	BV	BV	BV	BV	BV	BV	BV	BV
Consultant										
Laboratory										
Acetone	2700	<10	<10	<10	<10	<10	<10	-	<10	<10
Benzene	5	1.1	<0.20	<0.17	0.18	<0.17	<0.17	<0.20	<0.17	<0.17
Bromodichloromethane	16	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50
Bromoform	25	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0
Bromomethane	0.89	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50
Carbon Tetrachloride	0.79	<0.20	<0.19	<0.20	<0.20	<0.20	<0.20	-	<0.20	<0.20
Chlorobenzene	30	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	<0.20	<0.20
Chloroform	2.4	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	<0.20	<0.20
Dibromochloromethane	25	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50
1,2-Dichlorobenzene	3	<0.50	<0.40	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50
1,3-Dichlorobenzene	59	<0.50	<0.40	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50
1,4-Dichlorobenzene	1	<0.50	<0.40	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50
Dichlorodifluoromethane	590	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0
1,1-Dichloroethane	5	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	<0.20	<0.20
1,2-Dichloroethane	1.6	<0.50	<0.49	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50
1,1-Dichloroethylene	1.6	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	<0.20	<0.20
cis-1,2-Dichloroethylene	1.6	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50
trans-1,2-Dichloroethylene	1.6	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50
1,2-Dichloropropane	5	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	<0.20	<0.20
cis-1,3-Dichloropropene	0.5	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	-	<0.30	<0.30
trans-1,3-Dichloropropene	0.5	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	-	<0.40	<0.40
cis- & trans-1,3-Dichloropropene	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50
Ethylbenzene	2.4	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Ethylene Dibromide (1,2-Dibromoethane)	0.2	<0.20	<0.19	<0.20	<0.20	<0.20	<0.20	-	<0.20	<0.20
Hexane (n)	51	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0
Methylene chloride (Dichloromethane)	50	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	-	<2.0	<2.0
Methyl ethyl ketone (2-Butanone)	1800	<10	<10	<10	<10	<10	<10	-	<10	<10
Methyl Isobutyl Ketone	640	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	-	<5.0	<5.0
Methyl t-butyl ether (MTBE)	15	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50
Styrene	5.4	<0.50	<0.40	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50
1,1,1,2-Tetrachloroethane	1.1	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50
1,1,2,2-Tetrachloroethane	1	<0.50	<0.40	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50
Tetrachloroethylene	1.6	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	<0.20	<0.20
Toluene	24	<0.20	<0.20	<0.20	<0.20	1.4	0.47	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	200	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	<0.20	<0.20
1,1,2-Trichloroethane	4.7	<0.50	<0.40	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50
Trichloroethylene	1.6	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	<0.20	<0.20
Trichlorofluoromethane	150	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50
Vinyl Chloride	0.5	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	<0.20	<0.20
m-Xylene + p-Xylene	NV	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.4	<0.20	<0.20
o-Xylene	NV	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.2	<0.20	<0.20
Xylenes (total)	300	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.4	<0.20	<0.20

All groundwater concentrations reported in µg/L.
'<' = Parameter below detection limit, as indicated
'NV' = No value

Concentration exceeds MOECC (2011) SCS.

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

Samle ID	MOECC (2011) Table 2: Full Depth Generic SCS in a Potable Groundwater Condition All Types of Land Use (coarse textured soil)	BH/MW 203	DUP2030 (BH/MW203 Duplicate)
Lab ID		WNE972	WNE973
Sampling Date		27-Jul-23	27-Jul-23
Screen Depth Interval (m)		1.6-4.6	1.6-4.6
Consultant		BIG	BIG
Laboratory		BV	BV
Acenaphthene	4.1	<0.050	<0.050
Acenaphthylene	1	<0.050	<0.050
Anthracene	2.4	<0.050	<0.050
Benzo(a)anthracene	1	<0.050	<0.050
Benzo(a)pyrene	0.01	<0.0090	<0.0090
Benzo(b)fluoranthene	0.1	<0.050	<0.050
Benzo(ghi)perylene	0.2	<0.050	<0.050
Benzo(k)fluoranthene	0.1	<0.050	<0.050
Chrysene	0.1	<0.050	<0.050
Dibenz(a,h)anthracene	0.2	<0.050	<0.050
Fluoranthene	0.41	<0.050	<0.050
Fluorene	120	<0.050	<0.050
Indeno(1,2,3-cd)pyrene	0.2	<0.050	<0.050
1-Methylnaphthalene	3.2	<0.050	<0.050
2-Methylnaphthalene	3.2	<0.050	<0.050
1&2-Methylnaphthalene	3.2	<0.071	<0.071
Naphthalene	11	<0.050	<0.050
Phenanthrene	1	<0.030	<0.030
Pyrene	4.1	<0.050	<0.050
<p>All groundwater concentrations reported in µg/L. '<' = Parameter below detection limit, as indicated 'NV' = No value</p> <p>Bold Concentration exceeds MOECC (2011) SCS. Non-detect but detection limit exceeds the MOECC (2011) SCS.</p>			

Sample ID	MOECC (2011) Table 2: Full Depth Generic SCS in a Potable Groundwater Condition All Types of Land Use (coarse textured soil)	BH / MW3	BH/MW102	DUP 1020 (Dup of BH/MW 102)	BH/ MW 108
Lab ID		WNE974	VEV995	VEV996	WNE978
Sampling Date		27-Jul-23	03-Mar-23	03-Mar-23	27-Jul-23
Screen Depth Interval (m)		3.1-6.1	2.9-5.9	2.9-5.9	10.7-13.7
Consultant		BIG	BIG	BIG	BIG
Laboratory		BV	BV	BV	BV
Antimony	6	<0.50	<0.50	<0.50	<0.50
Arsenic	25	<1.0	<1.0	<1.0	<1.0
Barium	1000	140	100	100	57
Beryllium	4	<0.40	<0.40	<0.40	<0.40
Boron (Total)	5000	400	440	480	1100
Cadmium	2.7	<0.090	<0.090	<0.090	<0.090
Chromium (total)	50	<5.0	<5.0	<5.0	<5.0
Chromium VI	25	<0.50	<0.50	<0.50	<0.50
Cobalt	3.8	<0.50	0.9	1.3	<0.50
Copper	87	2.3	3.3	6.9	1.6
Lead	10	<0.50	<0.50	<0.50	<0.50
Mercury	0.29	<0.10	<0.10	<0.10	<0.10
Molybdenum	70	3.2	3.4	2.9	7
Nickel	100	<1.0	1.2	1.9	<1.0
Selenium	10	<2.0	<2.0	<2.0	<2.0
Silver	1.5	<0.090	<0.090	<0.090	<0.090
Thallium	2	<0.050	<0.050	<0.050	<0.050
Uranium	20	4.3	2.9	2.6	2.2
Vanadium	6.2	<0.50	<0.50	0.91	<0.50
Zinc	1100	<5.0	66	<5.0	<5.0
Sodium	490000	750,000	1,500,000	1,500,000	730,000
Chloride	790000	1,400,000	2,800,000	2,700,000	1,500,000
Free Cyanide	66	<1	<1	<1	<1

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. BH201



Project Number: **BIGC-ENV-554E** Drilling Location: **See borehole location plan** Logged by: **CE**
 Project Client: **590 Argus LP** Drilling Method: **115 mm Solid Stem Augering** Compiled by: **RC**
 Project Name: **Phase Two ESA** Drilling Machine: **Truck Mounted Drill** Reviewed by: **RM**
 Project Location: **590 Argus Road, Oakville, ON** Date Started: **20 Apr 23** Date Completed: **20 Apr 23** Revision No.: **0, 20/7/23**

Lithology Plot	DESCRIPTION	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING	LAB TESTING		INSTRUMENTATION INSTALLATION	COMMENTS
		Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RCD%				Rinse pH Values	Soil Vapour Reading parts per million (ppm)		
	Geodetic Ground Surface Elevation:											
	ASPHALT PAVEMENT: 70 mm asphalt over 200 mm granular base											
	FILL: silty clay, some sand, trace to some gravel, trace limestone, trace oxidization, reddish brown, moist, compact	SS	1	75	10				0.3			
	----- clayey silt, some sand, trace gravel, trace to some oxidization, brown to greenish brown, moist, stiff	SS	2	75	11	1			0.4			
	SILTY CLAY/SHALE COMPLEX: trace oxidization, reddish brown, moist, stiff											
	- trace grey, hard	SS	3	88	80/43cm			80 43cm	0.7			
	End of Borehole											
	Notes: 1. Borehole open and dry upon completion of drilling.											

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

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

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 commissioned and the accompanying 'Notes to Record of Boreholes'.

Scale: 1 : 53

Page: 1 of 1

RECORD OF BOREHOLE No. BH202



Project Number: **BIGC-ENV-554E** Drilling Location: **See borehole location plan** Logged by: **CE**
 Project Client: **590 Argus LP** Drilling Method: **115 mm Solid Stem Augering** Compiled by: **RC**
 Project Name: **Phase Two ESA** Drilling Machine: **Truck Mounted Drill** Reviewed by: **RM**
 Project Location: **590 Argus Road, Oakville, ON** Date Started: **20 Apr 23** Date Completed: **20 Apr 23** Revision No.: **0, 20/7/23**

Lithology Plot	DESCRIPTION	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING	LAB TESTING	INSTRUMENTATION INSTALLATION	COMMENTS
		Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RCD%						
	Geodetic Ground Surface Elevation: ASPHALT PAVEMENT: 80 mm asphalt over 200 mm granular base										
	FILL: silty sand, trace clay, trace limestone, trace gravel, trace shale, dark brown, moist, compact 0.3	SS	1	59	13						
	sandy silt, trace clay, trace gravel, trace oxidization, brown, moist, compact 1.1	SS	2	84	12	1					
	SILTY CLAY/SHALE COMPLEX: trace oxidization, reddish brown, some grey, moist, stiff 1.1										
	- reddish brown, trace grey, hard	SS	3	100	48/56cm	2					
	End of Borehole 2.1										
	Notes: 1. Borehole open and dry upon completion of drilling.										

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

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

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 commissioned and the accompanying 'Notes to Record of Boreholes'.

Scale: 1 : 53
 Page: 1 of 1

RECORD OF BOREHOLE No. BH/MW203



Project Number: **BIGC-ENV-554E** Drilling Location: **See borehole location plan** Logged by: **CE**
 Project Client: **590 Argus LP** Drilling Method: **115 mm Solid Stem Augering** Compiled by: **RC**
 Project Name: **Phase Two ESA** Drilling Machine: **Truck Mounted Drill** Reviewed by: **RM**
 Project Location: **590 Argus Road, Oakville, ON** Date Started: **20 Apr 23** Date Completed: **20 Apr 23** Revision No.: **0, 20/7/23**

Lithology Profile	DESCRIPTION	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING	LAB TESTING	INSTRUMENTATION INSTALLATION	COMMENTS
		Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RCD%						
	Geodetic Ground Surface Elevation:										
	ASPHALT PAVEMENT: 60 mm asphalt over 200 mm granular base										
	FILL: sandy silt, trace gravel, trace clay, trace 0.3 oxidization, trace shale complex, dark brown to some reddish brown, moist, loose	SS	1	87	9						
	----- silty sand/sandy silt, reddish brown, moist, loose	SS	2	84	7	1					
	SILTY CLAY/SHALE COMPLEX: reddish brown, moist, very stiff 1.1										
	- trace black staining, PHC odours	SS	3	92	40	2					
	BEDROCK: Shale, reddish brown, moist, hard 2.3	SS	4	100	50/13cm						
	----- grey	SS	5	100	50/13cm	3					
	- auger grinding					4					
	End of Borehole 4.6										
	Notes: 1. Borehole open and dry upon completion of drilling.										

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

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

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 commissioned and the accompanying 'Notes to Record of Boreholes'.

Scale: 1 : 53

Page: 1 of 1

RECORD OF BOREHOLE No. **BH204**



Project Number: **BIGC-ENV-554E** Drilling Location: **See borehole location plan** Logged by: **CE**
 Project Client: **590 Argus LP** Drilling Method: **115 mm Solid Stem Augering** Compiled by: **RC**
 Project Name: **Phase Two ESA** Drilling Machine: **Truck Mounted Drill** Reviewed by: **RM**
 Project Location: **590 Argus Road, Oakville, ON** Date Started: **20 Apr 23** Date Completed: **20 Apr 23** Revision No.: **0, 20/7/23**

Lithology Plot	DESCRIPTION	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING	LAB TESTING	INSTRUMENTATION INSTALLATION	COMMENTS
		Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RCD%						
<p>Geodetic Ground Surface Elevation:</p> <p>ASPHALT PAVEMENT: 70 mm asphalt over 200 mm granular base</p> <p>FILL: sandy silt/silty sand, trace clay, trace gravel, trace black staining, moist, compact</p> <p>-----</p> <p>sand/silty sand, trace oxidization, brown, wet, compact</p> <p>SILTY CLAY/SHALE COMPLEX: trace oxidization, reddish brown, moist, very stiff - trace black staining and PHC odours</p> <p>BEDROCK: Shale, trace PHC odours, reddish brown, trace grey, moist, hard</p> <p>End of Borehole</p> <p>Notes: 1. Borehole open and dry upon completion of drilling.</p>											
		SS	1	46	10						
		SS	2	92	17	1					
		SS	3	100	84/41cm						

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

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

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 commissioned and the accompanying 'Notes to Record of Boreholes'.

RECORD OF BOREHOLE No. **BH205**



Project Number: **BIGC-ENV-554E** Drilling Location: **See borehole location plan** Logged by: **CE**
 Project Client: **590 Argus LP** Drilling Method: **115 mm Solid Stem Augering** Compiled by: **RC**
 Project Name: **Phase Two ESA** Drilling Machine: **Truck Mounted Drill** Reviewed by: **RM**
 Project Location: **590 Argus Road, Oakville, ON** Date Started: **20 Apr 23** Date Completed: **20 Apr 23** Revision No.: **0, 20/7/23**

Lithology Plot	LITHOLOGY PROFILE DESCRIPTION	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING	LAB TESTING	INSTRUMENTATION INSTALLATION	COMMENTS
		Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RCD%						
	Geodetic Ground Surface Elevation: ASPHALT PAVEMENT: 50 mm asphalt over 180 mm granular base SILTY CLAY/SHALE COMPLEX: trace limestone, trace gravel, trace oxidization, grey and reddish brown, moist, stiff - grey, trace reddish brown, very stiff - auger grinding - reddish brown, some grey, very stiff	SS	1	59	14				★ 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 L Plastic Liquid 20 40 60 80		
		SS	2	62	20	1					
		SS	3	54	26	2					
	End of Borehole Notes: 1. Borehole open and dry upon completion of drilling.										

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

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

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 commissioned and the accompanying 'Notes to Record of Boreholes'.

Scale: 1 : 53
 Page: 1 of 1

RECORD OF BOREHOLE No. **BH206**



Project Number: **BIGC-ENV-554E** Drilling Location: **See borehole location plan** Logged by: **CE**
 Project Client: **590 Argus LP** Drilling Method: **115 mm Solid Stem Augering** Compiled by: **RC**
 Project Name: **Phase Two ESA** Drilling Machine: **Truck Mounted Drill** Reviewed by: **RM**
 Project Location: **590 Argus Road, Oakville, ON** Date Started: **20 Apr 23** Date Completed: **20 Apr 23** Revision No.: **0, 20/7/23**

Lithology Plot	LITHOLOGY PROFILE	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING	LAB TESTING	INSTRUMENTATION INSTALLATION	COMMENTS
		DESCRIPTION	Sample Type	Sample Number	Recovery (%)						
	<p>Geodetic Ground Surface Elevation:</p> <p>ASPHALT PAVEMENT: 50 mm asphalt over 200 mm granular base</p> <p>CLAYEY SILT/SILTY CLAY: trace sand, trace 0.3 gravel, trace granular, reddish brown, moist, stiff</p> <p>----- some limestone, firm</p>										
		SS	1	75	12						
		SS	2	25	9	1					
		SS	3	59	7	2					
	<p>End of Borehole 2.1</p> <p>Notes: 1. Borehole open to 0.96 m bgs completion of drilling. 2. Borehole dry upon completion of drilling.</p>										

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

No freestanding groundwater measured in open borehole on completion of drilling. Cave in depth recorded on completion of drilling: 0.96 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 commissioned and the accompanying 'Notes to Record of Boreholes'.

Scale: 1 : 53

Page: 1 of 1

RECORD OF BOREHOLE No. **BH207**



Project Number: **BIGC-ENV-554E** Drilling Location: **See borehole location plan** Logged by: **CE**
 Project Client: **590 Argus LP** Drilling Method: **115 mm Solid Stem Augering** Compiled by: **RC**
 Project Name: **Phase Two ESA** Drilling Machine: **Truck Mounted Drill** Reviewed by: **RM**
 Project Location: **590 Argus Road, Oakville, ON** Date Started: **20 Apr 23** Date Completed: **20 Apr 23** Revision No.: **0, 20/7/23**

Lithology Plot	LITHOLOGY PROFILE	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING	LAB TESTING	INSTRUMENTATION INSTALLATION	COMMENTS
		DESCRIPTION	Sample Type	Sample Number	Recovery (%)						
	Geodetic Ground Surface Elevation: ASPHALT PAVEMENT: 80 mm asphalt over 400 mm granular base	SS	1	67	15				★ 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 L _i Plastic Liquid 20 40 60 80		
	FILL: silty sand, trace clay, trace gravel, trace granular, trace limestone, trace oxidization, brown to reddish brown, moist, compact CLAYEY SILT: trace sand, trace gravel, trace oxidization, reddish brown, moist, stiff ----- trace limestone, firm	SS	2	95	9	1			1.1 0.6 0.4		
	End of Borehole 2.1 Notes: 1. Borehole open and dry upon completion of drilling.										

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

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

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 commissioned and the accompanying 'Notes to Record of Boreholes'.

Scale: 1 : 53
 Page: 1 of 1

RECORD OF BOREHOLE No. **BH208**



Project Number: **BIGC-ENV-554E** Drilling Location: **See borehole location plan** Logged by: **CE**
 Project Client: **590 Argus LP** Drilling Method: **115 mm Manual** Compiled by: **RC**
 Project Name: **Phase Two ESA** Drilling Machine: **Hand Auger** Reviewed by: **RM**
 Project Location: **590 Argus Road, Oakville, ON** Date Started: **20 Apr 23** Date Completed: **20 Apr 23** Revision No.: **0, 20/7/23**

LITHOLOGY PROFILE	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING	LAB TESTING	INSTRUMENTATION INSTALLATION	COMMENTS
	DESCRIPTION	Sample Type	Sample Number	Recovery (%)						
Geodetic Ground Surface Elevation: TOPSOIL: 100 mm FILL: sand and gravel, trace silt, trace organics, brown, moist, loose End of Borehole Notes: 1. Borehole open and dry completion of drilling.	AU	1	100				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 Undrained Shear Strength (kPa): 20, 40, 60, 80	0.2 Δ		

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

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

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 commissioned and the accompanying 'Notes to Record of Boreholes'.

RECORD OF BOREHOLE No. BH209



Project Number: **BIGC-ENV-554E** Drilling Location: **See borehole location plan** Logged by: **CE**
 Project Client: **590 Argus LP** Drilling Method: **115 mm Solid Stem Augering** Compiled by: **RC**
 Project Name: **Phase Two ESA** Drilling Machine: **Truck Mounted Drill** Reviewed by: **RM**
 Project Location: **590 Argus Road, Oakville, ON** Date Started: **20 Apr 23** Date Completed: **20 Apr 23** Revision No.: **0, 20/7/23**

Lithology Plot	LITHOLOGY PROFILE		SOIL SAMPLING				FIELD TESTING		LAB TESTING				INSTRUMENTATION INSTALLATION	COMMENTS	
	DESCRIPTION		Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RCD%	DEPTH (m)	ELEVATION (m)	Penetration Testing ○ SPT ● DCPT MTO Vane* Nilcon Vane* △ Intact ◇ Intact ▲ Remould ◆ 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					
	Geodetic Ground Surface Elevation:														
	ASPHALT PAVEMENT: 50 mm asphalt over 270 mm granular base														
	SILTY CLAY/SHALE COMPLEX: trace limestone, trace oxidization, reddish brown, some grey, moist, stiff		SS	1	75	12			○	▲	0.5				
	End of Borehole														
	Notes: 1. Borehole open and dry upon completion of drilling.														

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

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

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 commissioned and the accompanying 'Notes to Record of Boreholes'.

Scale: 1 : 53

Page: 1 of 1

RECORD OF BOREHOLE No. BH101



Project Number: **BIGC-ENV-554D** Drilling Location: **See borehole location plan** Logged by: **FJ**
 Project Client: **Distrikt Capital Corporation** Drilling Method: **150 mm Solid Stem Augering** Compiled by: **MM**
 Project Name: **Phase II ESA and Supplementary Geotechnical and Hydrogeological Investigations** Drilling Machine: **Truck Mounted Drill** Reviewed by: **KK**
 Project Location: **590 Argus Road, Oakville, ON** Date Started: **17 Feb 23** Date Completed: **17 Feb 23** Revision No.: **0, 10/4/23**

Lithology Profile	DESCRIPTION	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING	LAB TESTING	INSTRUMENTATION INSTALLATION	COMMENTS
		Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RCD%						
	Geodetic Ground Surface Elevation: 105.00 m										
	ASPHALT PAVEMENT: 40 mm asphalt over 120 mm granular base 0.7										
	FILL: silty sand, some clay, trace gravel, trace limestone fragments, black streaks, brown, wet, loose 104.24	SS	1	54	8	1	104	○	○13		
	FILL: silty clay, trace sand, trace gravel, trace 0.8 oxidization, brown to grey, moist, firm 103.48	SS	2	33	6	1	104	○	○23		
	SILTY CLAY/SHALE COMPLEX: trace sand, 1.5 trace gravel, trace limestone fragments, reddish brown to grey, moist, hard 102.56	SS	3	54	38	2	103	○	○20		
	BEDROCK: Shale, grey, moist 102.10	SS	4	100	50/10 cm			○50 10 cm			
	End of Borehole due to Auger Refusal 2.9										
	Notes: 1. Borehole open and dry upon completion of drilling.										

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

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

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 commissioned and the accompanying 'Notes to Record of Boreholes'.

Scale: 1 : 53
 Page: 1 of 1

RECORD OF BOREHOLE No. BH/MW102



Project Number: **BIGC-ENV-554D** Drilling Location: **See borehole location plan** Logged by: **FJ**
 Project Client: **Distrikt Capital Corporation** Drilling Method: **150 mm Solid Stem Augering** Compiled by: **MM**
 Project Name: **Phase II ESA and Supplementary Geotechnical and Hydrogeological Investigations** Drilling Machine: **Truck Mounted Drill** Reviewed by: **KK**
 Project Location: **590 Argus Road, Oakville, ON** Date Started: **17 Feb 23** Date Completed: **17 Feb 23** Revision No.: **0, 10/4/23**

Lithology Profile	DESCRIPTION	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING		LAB TESTING		INSTRUMENTATION INSTALLATION	COMMENTS
		Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RCD%			Penetration Testing	Soil Vapour Reading				
	Geodetic Ground Surface Elevation: 105.04 m												
	ASPHALT PAVEMENT: 50 mm asphalt over 100 mm granular base												
	FILL: silty clay/clayey silt, trace sand, trace gravel, trace oxidization, trace organics, trace shale fragments, reddish brown to grey, moist, stiff	SS	1	59	11								
		SS	2	51	8	1	104						
	SILTY CLAY/SHALE COMPLEX: trace sand, 1.5 trace gravel, trace limestone fragments, reddish brown to grey, moist, hard	SS	3	87	35	2	103						
	BEDROCK: Shale, reddish brown to grey, moist	SS	4	64	50/13 cm	3	102						
		SS	5	56	50/2 cm	4	101						
		SS	6	100	50/8 cm	5	100						
	End of Borehole due to Auger Refusal												
	Notes: 1. Borehole open upon completion of drilling. 2. Groundwater level reading at 4.57 m bgs upon completion of drilling. 3. Ground water level reading at 3.42 m bgs on March 23, 2023.												

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

Groundwater depth on completion of drilling: 4.57 m
 Groundwater depth observed on 3/23/2023 at a depth of: 3.42 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 commissioned and the accompanying 'Notes to Record of Boreholes'.

Scale: 1 : 53

Page: 1 of 1

RECORD OF BOREHOLE No. BH103



Project Number: **BIGC-ENV-554D** Drilling Location: **See borehole location plan** Logged by: **FJ**
 Project Client: **Distrikt Capital Corporation** Drilling Method: **150 mm Solid Stem Augering** Compiled by: **MM**
 Project Name: **Phase II ESA and Supplementary Geotechnical and Hydrogeological Investigations** Drilling Machine: **Truck Mounted Drill** Reviewed by: **KK**
 Project Location: **590 Argus Road, Oakville, ON** Date Started: **17 Feb 23** Date Completed: **17 Feb 23** Revision No.: **0, 10/4/23**

Lithology Profile	DESCRIPTION	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING	LAB TESTING	INSTRUMENTATION INSTALLATION	COMMENTS
		Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RCD%						
	Geodetic Ground Surface Elevation: 104.90 m ASPHALT PAVEMENT: 60 mm asphalt over 140 mm granular base FILL: silty sand, trace clay, trace to some gravel, brown, moist, loose	SS	1	41	8		104.75	○	○ ₁₂		
	103.68 SILTY CLAY/SHALE COMPLEX: trace sand, 1.2 trace gravel, trace limestone fragments, reddish brown to grey, moist, hard	SS	2	67	6	1	104.0	○	○ ₁₈		
	102.61 BEDROCK: Shale, reddish brown to grey, moist	SS	3	59	50	2	103.0	○	○ ₁₀		
	101.83 End of Borehole	SS	4	80	50/10 cm	3	102.0	○ ₅₀ ○ _{10 cm}			
	3.1	SS	5	0	50/2 cm		101.83	○ ₅₀ ○ _{2 cm}			

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

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

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 commissioned and the accompanying 'Notes to Record of Boreholes'.

Scale: 1 : 53

Page: 1 of 1

RECORD OF BOREHOLE No. BH104



Project Number: **BIGC-ENV-554D** Drilling Location: **See borehole location plan** Logged by: **FJ**
 Project Client: **Distrikt Capital Corporation** Drilling Method: **150 mm Solid Stem Augering** Compiled by: **MM**
 Project Name: **Phase II ESA and Supplementary Geotechnical and Hydrogeological Investigations** Drilling Machine: **Truck Mounted Drill** Reviewed by: **KK**
 Project Location: **590 Argus Road, Oakville, ON** Date Started: **17 Feb 23** Date Completed: **17 Feb 23** Revision No.: **0, 10/4/23**

Lithology Profile	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING	LAB TESTING	INSTRUMENTATION INSTALLATION	COMMENTS
	DESCRIPTION	Sample Type	Sample Number	Recovery (%)						
Geodetic Ground Surface Elevation: 104.91 m										
Lithology Plot	ASPHALT PAVEMENT: 50 mm asphalt over 120 mm granular base									
	FILL: silty clay, trace sand, trace gravel, brown, moist, firm	SS	1	5	8	104.76				
	FILL: silty sand, trace to some clay, trace gravel, some reddish brown shale fragments, brown to grey, moist, compact	SS	2	54	10	104.15				
	SILTY CLAY/SHALE COMPLEX: trace sand, 1.5 trace gravel, trace limestone fragments, reddish brown to grey, moist, hard	SS	3	70	43	103.39				
	BEDROCK: Shale, grey, moist	SS	4	100	50/8 cm	102.62				
	End of Borehole due to Auger Refusal					102.17				
Notes: 1. Borehole open and dry upon completion of drilling.										

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

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

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 commissioned and the accompanying 'Notes to Record of Boreholes'.

Scale: 1 : 53

Page: 1 of 1

RECORD OF BOREHOLE No. BH/MW105



Project Number: **BIGC-ENV-554D** Drilling Location: **See borehole location plan** Logged by: **FJ**
 Project Client: **District Capital Corporation** Drilling Method: **150 mm Solid Stem Augering** Compiled by: **MM**
 Project Name: **Phase II ESA and Supplementary Geotechnical and Hydrogeological Investigations** Drilling Machine: **Truck Mounted Drill** Reviewed by: **KK**
 Project Location: **590 Argus Road, Oakville, ON** Date Started: **1 Mar 23** Date Completed: **1 Mar 23** Revision No.: **0, 10/4/23**

Lithology Profile	SOIL SAMPLING				FIELD TESTING		LAB TESTING				INSTRUMENTATION INSTALLATION	COMMENTS
	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RCD%	DEPTH (m)	ELEVATION (m)	Penetration Testing	Soil Vapour Reading	Lower Explosive Limit (LEL)		
Geodetic Ground Surface Elevation: 104.96 m												
ASPHALT PAVEMENT: 40 mm asphalt over 150 mm granular base FILL: silty clay, some sand, trace to some gravel, trace shale fragments, trace organic odour, black to dark brown, moist, firm to very stiff SILTY CLAY/SHALE COMPLEX: trace sand, trace gravel, trace limestone fragments, grey, moist, very stiff to hard BEDROCK: Shale, grey, moist												
	0.7	SS	1	70	8		104	○	○ ⁶			
		SS	2	41	7	1	104	○	○ ¹⁷			
	103.28											
	1.7	SS	3	70	28	2	103	○	○ ²			
	102.37											
2.6	SS	4	77	50/13 cm		102	○ ⁵⁰ ○ ¹³	○ ¹³				
	SS	5	52	50/10 cm	3	102	○ ⁵⁰ ○ ¹⁰					
					4	101						
					5	100						
					6	99						
98.86												
6.1												
End of Borehole Notes: 1. Borehole open upon completion of drilling. 2. Groundwater level reading at 5.49 m bgs upon completion of drilling. 3. Ground water level reading at 4.28 m bgs on March 23, 2023.												

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

∇ Groundwater depth on completion of drilling: 5.49 m.
 ▼ Groundwater depth observed on 3/23/2023 at a depth of: 4.28 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 commissioned and the accompanying 'Notes to Record of Boreholes'.

Scale: 1 : 53
 Page: 1 of 1

RECORD OF BOREHOLE No. BH/MW106



Project Number: **BIGC-ENV-554D** Drilling Location: **See borehole location plan** Logged by: **FJ**
 Project Client: **Distrikt Capital Corporation** Drilling Method: **150 mm Solid Stem Augering** Compiled by: **MM**
 Project Name: **Phase II ESA and Supplementary Geotechnical and Hydrogeological Investigations** Drilling Machine: **Truck Mounted Drill** Reviewed by: **KK**
 Project Location: **590 Argus Road, Oakville, ON** Date Started: **1 Mar 23** Date Completed: **1 Mar 23** Revision No.: **0, 10/4/23**

Lithology Profile	DESCRIPTION	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING	LAB TESTING	INSTRUMENTATION INSTALLATION	COMMENTS
		Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RCD%						
<p>Geodetic Ground Surface Elevation: 105.13 m</p> <p>ASPHALT PAVEMENT: 60 mm asphalt over 120 mm granular base</p> <p>FILL: silty sand, some clayey silt, trace gravel, trace oxidization, reddish brown, moist, compact to dense</p> <p>SILTY CLAY/SHALE COMPLEX: trace sand, trace gravel, trace limestone fragments, reddish brown to grey, moist, hard</p> <p>BEDROCK: Shale, reddish brown to grey, moist</p>											
		SS	1	70	12		105				
		SS	2	70	48	1	104				
		SS	3	70	61	2	103				
		SS	4	65	50/5 cm	3	102				
		SS	5	100	50/13 cm	3	102				
						4	101				
						5	100				
						6					
	<p>End of Borehole</p> <p>Notes: 1. Borehole open upon completion of drilling. 2. Groundwater level reading at 3.05 m bgs upon completion of drilling. 3. Ground water level reading at 2.46 m bgs on March 23, 2023.</p>										

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

Groundwater depth on completion of drilling: 3.05 m
 Groundwater depth observed on 3/23/2023 at a depth of: 2.46 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 commissioned and the accompanying Notes to Record of Boreholes.

RECORD OF BOREHOLE No. BH/MW107



Project Number: **BIGC-ENV-554D** Drilling Location: **See borehole location plan** Logged by: **FJ**
 Project Client: **District Capital Corporation** Drilling Method: **150 mm Solid Stem Augering** Compiled by: **MM**
 Project Name: **Phase II ESA and Supplementary Geotechnical and Hydrogeological Investigations** Drilling Machine: **Truck Mounted Drill** Reviewed by: **KK**
 Project Location: **590 Argus Road, Oakville, ON** Date Started: **17 Feb 23** Date Completed: **17 Feb 23** Revision No.: **0, 10/4/23**

Lithology Profile	DESCRIPTION	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING		LAB TESTING		INSTRUMENTATION INSTALLATION	COMMENTS
		Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RCD%			Penetration Testing	Soil Vapour Reading (ppm)				
	Geodetic Ground Surface Elevation: 104.65 m												
	ASPHALT PAVEMENT: 50 mm asphalt over 110 mm granular base												
	FILL: silty sand, trace gravel, trace oxidization, trace organic odour, grey to black, moist, loose to compact	SS	1	51	5		104						
	SILTY CLAY/SHALE COMPLEX: trace sand, trace gravel, trace limestone fragments, reddish brown to grey, moist, very stiff to hard	SS	2	84	27	1				15			
	BEDROCK: Shale, reddish brown to grey, moist	SS	3	54	50/13 cm		103	50 13 cm		14			
		SS	4	56	50/2 cm	2	102	50 2 cm					
		SS	5	100	50/2 cm	3	101	50 2 cm					
		SS	6	100	50/2 cm	5	100	50 2 cm					
							99						
	End of Borehole					6	98.55						
	Notes: 1. Borehole open upon completion of drilling. 2. Groundwater level reading at 4.27 m bgs upon completion of drilling.												

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

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 commissioned and the accompanying Notes to Record of Boreholes.

Scale: 1 : 53

Page: 1 of 1

RECORD OF BOREHOLE No. BH/MW108



Project Number: **BIGC-ENV-554D** Drilling Location: **See borehole location plan** Logged by: **FJ**
 Project Client: **District Capital Corporation** Drilling Method: **200 mm Hollow Stem Augering** Compiled by: **MM**
 Project Name: **Phase II ESA and Supplementary Geotechnical and Hydrogeological Investigations** Drilling Machine: **Truck Mounted Drill** Reviewed by: **KK**
 Project Location: **590 Argus Road, Oakville, ON** Date Started: **27 Feb 23** Date Completed: **28 Feb 23** Revision No.: **0, 10/4/23**

Lithology Plot	DESCRIPTION	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING		LAB TESTING		INSTRUMENTATION INSTALLATION	COMMENTS
		Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%			Penetration Testing	Soil Vapour Reading (ppm)				
Geodetic Ground Surface Elevation: 104.51 m ASPHALT PAVEMENT: 70 mm asphalt over 170 mm granular base FILL: sandy silt, trace gravel, trace clay, trace limestone fragments, black, moist, loose to compact SILTY CLAY/SHALE COMPLEX: trace sand, 1.1 trace gravel, trace limestone fragments, reddish brown to grey, moist, very stiff to hard BEDROCK: Shale, highly weathered to fresh, 2.3 very poor to excellent quality, trace limestone inclusion, reddish brown to grey, moist													
		SS	1	46	8	104	104.36	○	○	21			
		SS	2	84	18	103.43	103.43	○	○	16			
		SS	3	67	31	102.22	102.22	○	○	12			
		SS	4	50	50/5 cm	102	102	○	○	50			
		SS	5	100	50/2 cm	101	101	○	○	50			
		RC	1	100	50	100	100	○	○				
		RC	2	100	17	99	99	○	○				
		RC	3	100	83	97	97	○	○				
		RC	4	88	36	96	96	○	○				
		RC	5	100	82	94	94	○	○				
		RC	6	100	79	93	93	○	○				

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

Groundwater depth on completion of drilling: N/A m.
 Groundwater depth observed on 3/23/2023 at a depth of: 3.57 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 commissioned and the accompanying Notes to Record of Boreholes.

Scale: 1 : 63
 Page: 1 of 3

RECORD OF BOREHOLE No. BH/MW108



Project Number: **BIGC-ENV-554D**

Drilling Location: **See borehole location plan**

Logged by: **FJ**

Lithology Plot	LITHOLOGY PROFILE	SOIL SAMPLING				DEPTH (m)		ELEVATION (m)		FIELD TESTING		LAB TESTING		INSTRUMENTATION INSTALLATION	COMMENTS
	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%					Penetration Testing ○ SPT ● DCPT △ Intact ◇ Intact ▲ Remould ◆ 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			
	BEDROCK: Shale, highly weathered to fresh, very poor to excellent quality, trace limestone inclusion, reddish brown to grey, moist					92									
	- Good Quality	RC	7	100	79	13					○				
	- Fair Quality	RC	8	100	68	14					○				
	- Excellent Quality	RC	9	100	93	16					○				
	- Excellent Quality	RC	10	100	98	17					○				
	- Excellent Quality	RC	11	100	97	18					○				
	- Excellent Quality	RC	12	100	98	19					○				
	- Good Quality	RC	13	100	89	20					○				
	- Excellent Quality	RC	14	100	93	21					○				
	- Excellent Quality	RC	15	100	93	22					○				
						23									
						24									
						25									
						79									

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 commissioned and the accompanying 'Notes to Record of Boreholes'.

Scale: 1 : 63

Page: 2 of 3

RECORD OF BOREHOLE No. BH/MW108



Project Number: **BIGC-ENV-554D**

Drilling Location: **See borehole location plan**

Logged by: **FJ**

Lithology Plot	LITHOLOGY PROFILE	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING		LAB TESTING		INSTRUMENTATION INSTALLATION	COMMENTS
		DESCRIPTION	Sample Type	Sample Number	Recovery (%)			SPT 'N' Value/RQD%	Penetration Testing	Soil Vapour Reading	Lower Explosive Limit (LEL)		
	BEDROCK: Shale, highly weathered to fresh, very poor to excellent quality, trace limestone inclusion, reddish brown to grey, moist					26							
	- Good Quality	RC	16	100	84	27		○					
	- Excellent Quality	RC	17	100	98	28			○				
	- Excellent Quality	RC	18	100	100	30			○				
	73.75 End of Borehole 30.8												
	Notes: 1. Borehole open upon completion of drilling. 2. Ground water level reading at 3.57 m bgs on March 23, 2023.												

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 commissioned and the accompanying 'Notes to Record of Boreholes'.

RECORD OF BOREHOLE No. BH/MW109



Project Number: **BIGC-ENV-554D** Drilling Location: **See borehole location plan** Logged by: **FJ**
 Project Client: **District Capital Corporation** Drilling Method: **200 mm Hollow Stem Augering** Compiled by: **MM**
 Project Name: **Phase II ESA and Supplementary Geotechnical and Hydrogeological Investigations** Drilling Machine: **Truck Mounted Drill** Reviewed by: **KK**
 Project Location: **590 Argus Road, Oakville, ON** Date Started: **15 Feb 23** Date Completed: **16 Feb 23** Revision No.: **0, 10/4/23**

Lithology Plot	LITHOLOGY PROFILE	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING		LAB TESTING		INSTRUMENTATION INSTALLATION	COMMENTS
		Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RCD%			Penetration Testing	Soil Vapour Reading				
	<p>Geodetic Ground Surface Elevation: 105.09 m</p> <p>ASPHALT PAVEMENT: 50 mm asphalt over 140 mm granular base</p> <p>FILL: clayey silt/silty clay, some sand, trace gravel, trace organics, brown to reddish brown, moist, firm to hard</p> <p>SILTY CLAY/SHALE COMPLEX: trace sand, trace gravel, trace limestone fragments, grey, moist, hard</p> <p>BEDROCK: Shale, highly weathered to fresh, poor to excellent quality, trace limestone inclusion, grey, moist</p>							Penetration Testing ○ SPT ● DCPT △ Intact ◇ Intact ▲ Remould ◆ 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 _l Plastic Liquid 20 40 60 80				
	<p>0.24</p> <p>103.41</p> <p>102.80</p>												
	<p>- Auger Grinding</p>												
	<p>ROCK CORING START</p>												
	<p>- Good Quality</p>	RC	1	100	77	7	98						
	<p>- Poor Quality</p>	RC	2	100	42	8	97						
	<p>- Poor Quality</p>	RC	3	100	44	10	95						
	<p>- Good Quality</p>	RC	4	100	87	11	94						
						12	94						

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

▽ Groundwater depth on completion of drilling: N/A m.
 ▼ Groundwater depth observed on 3/23/2023 at a depth of: 17.43 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 commissioned and the accompanying 'Notes to Record of Boreholes'.

Scale: 1 : 63
 Page: 1 of 3

RECORD OF BOREHOLE No. BH/MW109



Project Number: **BIGC-ENV-554D**

Drilling Location: **See borehole location plan**

Logged by: **FJ**

Lithology Plot	LITHOLOGY PROFILE	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING		LAB TESTING		INSTRUMENTATION INSTALLATION	COMMENTS
		DESCRIPTION	Sample Type	Sample Number	Recovery (%)			SPT 'N' Value/RQD%	Penetration Testing	Soil Vapour Reading	Lower Explosive Limit (LEL)		
	BEDROCK: Shale, highly weathered to fresh, poor to excellent quality, trace limestone inclusion, grey, moist												
	- Good Quality	RC	5	100	84	13	92	○					
	- Good Quality	RC	6	100	76	14	91	○					
	- Excellent Quality	RC	7	100	94	15	90						
	- Good Quality	RC	8	100	85	16	89	○					
	- Excellent Quality	RC	9	100	98	17	88	○					
	- Excellent Quality	RC	10	100	100	18	87	○					
	- Excellent Quality	RC	11	100	100	19	86	○					
	- Weak Strength - Excellent Quality	RC	12	100	95	20	85	○					
	- Excellent Quality	RC	13	100	100	21	84	○					
						22	83	○					
						23	82	○					
						24	81	○					
						25	80	○					

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 commissioned and the accompanying 'Notes to Record of Boreholes'.

Scale: 1 : 63

Page: 2 of 3

RECORD OF BOREHOLE No. BH/MW109



Project Number: **BIGC-ENV-554D**

Drilling Location: **See borehole location plan**

Logged by: **FJ**

Lithology Plot	LITHOLOGY PROFILE DESCRIPTION	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING				LAB TESTING				INSTRUMENTATION INSTALLATION	COMMENTS	
		Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%			Penetration Testing		MTO Vane*		Nilcon Vane*		Soil Vapour Reading parts per million (ppm)				Lower Explosive Limit (LEL)
								○ SPT	● DCPT	△ Intact	◇ Intact	▲ Remould	◆ Remould	★ Rinse pH Values 2 4 6 8 10 12	100 200 300 400	W _p W _L		
	BEDROCK: Shale, highly weathered to fresh, poor to excellent quality, trace limestone inclusion, grey, moist - Excellent Quality - Excellent Quality - Excellent Quality					26	79											
		RC	14	100	100	27	78											
		RC	15	100	100	28	77											
		RC	16	100	100	29	76											
	74.38 30.7 End of Borehole Notes: 1. Borehole open upon completion of drilling. 2. Ground water level reading at 17.43 m bgs on March 23, 2023.					30	75											

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 commissioned and the accompanying 'Notes to Record of Boreholes'.

RECORD OF BOREHOLE No. BH/MW110



Project Number: **BIGC-ENV-554D** Drilling Location: **See borehole location plan** Logged by: **FJ**
 Project Client: **District Capital Corporation** Drilling Method: **200 mm Hollow Stem Augering** Compiled by: **MM**
 Project Name: **Phase II ESA and Supplementary Geotechnical and Hydrogeological Investigations** Drilling Machine: **Truck Mounted Drill** Reviewed by: **KK**
 Project Location: **590 Argus Road, Oakville, ON** Date Started: **10 Feb 23** Date Completed: **13 Feb 23** Revision No.: **0, 10/4/23**

Lithology Profile	DESCRIPTION	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING		LAB TESTING		INSTRUMENTATION INSTALLATION	COMMENTS
		Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RCD%			Penetration Testing	Soil Vapour Reading				
	Geodetic Ground Surface Elevation: 105.30 m												
	ASPHALT PAVEMENT: 60 mm asphalt over 240 mm granular base					105							
	FILL: clayey silt, some sand, trace to some gravel, trace limestone fragments, brown to grey, firm to very stiff	SS	1	62	7	105				24			
		SS	2	33	25	104				12			
	SILTY CLAY/SHALE COMPLEX: trace sand, 1.1 trace gravel, trace limestone fragments, containing cobbles and boulders, reddish brown to grey, moist, very stiff to hard	SS	3	33	65	103							
		SS	4	63	50/8 cm	103							
	BEDROCK: Shale, highly weathered to fresh, 2.3 poor to excellent quality, trace limestone inclusion, reddish brown to grey, moist	SS	5	80	50/10 cm	102							
		SS	6	80	50/10 cm	101							
		SS	7	46	25	99				16			
		SS	8	100	50/10 cm	98							
	ROCK CORING START					97							
	- Poor Quality	RC	1	100	48	97							
		RC	2	100	46	96							
	- Poor Quality					95							
		RC	3	100	48	94							
	- Poor Quality					93							

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

Groundwater depth on completion of drilling: N/A m.
 Groundwater depth observed on 3/23/2023 at a depth of: 3.84 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 commissioned and the accompanying Notes to Record of Boreholes.

Scale: 1 : 63
 Page: 1 of 3

RECORD OF BOREHOLE No. BH/MW110



Project Number: **BIGC-ENV-554D**

Drilling Location: **See borehole location plan**

Logged by: **FJ**

Lithology Plot	LITHOLOGY PROFILE	SOIL SAMPLING						FIELD TESTING		LAB TESTING		INSTRUMENTATION INSTALLATION	COMMENTS
	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	DEPTH (m)	ELEVATION (m)	Penetration Testing ○ SPT ● DCPT △ Intact ◇ Intact ▲ Remould ◆ 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 L _L W _L Plastic Liquid 20 40 60 80			
	BEDROCK: Shale, highly weathered to fresh, poor to excellent quality, trace limestone inclusion, reddish brown to grey, moist					93							
	- Good Quality	RC	4	100	83	13			○				
	- Good Quality	RC	5	100	87	14			○				
	- Excellent Quality	RC	6	100	98	15			○				
	- Excellent Quality	RC	7	100	100	16			○				
	- Excellent Quality	RC	8	100	100	17			○				
	- Excellent Quality	RC	9	100	95	18			○				
	- Excellent Quality	RC	10	100	97	19			○				
	- Weak Strength - Excellent Quality	RC	11	100	95	20			○				
	- Excellent Quality	RC	12	100	97	21			○				
						22							
						23							
						24							
						25							
						26							
						27							
						28							
						29							
						30							
						31							
						32							
						33							
						34							
						35							
						36							
						37							
						38							
						39							
						40							
						41							
						42							
						43							
						44							
						45							
						46							
						47							
						48							
						49							
						50							
						51							
						52							
						53							
						54							
						55							
						56							
						57							
						58							
						59							
						60							
						61							
						62							
						63							
						64							
						65							
						66							
						67							
						68							
						69							
						70							
						71							
						72							
						73							
						74							
						75							
						76							
						77							
						78							
						79							
						80							

UCS: 18.3 MPa

Continued on Next Page

RECORD OF BOREHOLE No. BH/MW110



Project Number: **BIGC-ENV-554D**

Drilling Location: **See borehole location plan**

Logged by: **FJ**

Lithology Plot	LITHOLOGY PROFILE	SOIL SAMPLING				DEPTH (m)		ELEVATION (m)		FIELD TESTING				LAB TESTING				INSTRUMENTATION INSTALLATION	COMMENTS
	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%					Penetration Testing		Soil Vapour Reading parts per million (ppm)		Lower Explosive Limit (LEL)		Plastic Liquid			
										○ SPT ● DCPT	△ Intact ◇ Intact	▲ Remould ◆ Remould	★ Rinse pH Values 2 4 6 8 10 12	100 200 300 400	W _p W _L				
	BEDROCK: Shale, highly weathered to fresh, poor to excellent quality, trace limestone inclusion, reddish brown to grey, moist					26													
	- Excellent Quality	RC	13	100	100	27							○						
	- Good Quality	RC	14	100	83	28								○					
	- Excellent Quality	RC	15	100	95	29								○					
	74.64 30.7					30													
	End of Borehole					30													
	Notes: 1. Borehole open upon completion of drilling. 2. Ground water level reading at 3.84 m bgs on March 23, 2023.																		

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 commissioned and the accompanying 'Notes to Record of Boreholes'.

RECORD OF BOREHOLE No. BH/MW111



Project Number: **BIGC-ENV-554D** Drilling Location: **See borehole location plan** Logged by: **FJ**
 Project Client: **Distrikt Capital Corporation** Drilling Method: **200 mm Hollow Stem Augering** Compiled by: **MM**
 Project Name: **Phase II ESA and Supplementary Geotechnical and Hydrogeological Investigations** Drilling Machine: **Truck Mounted Drill** Reviewed by: **KK**
 Project Location: **590 Argus Road, Oakville, ON** Date Started: **10 Feb 23** Date Completed: **15 Feb 23** Revision No.: **0, 10/4/23**

Lithology Plot	LITHOLOGY PROFILE	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING	LAB TESTING	INSTRUMENTATION INSTALLATION	COMMENTS
		DESCRIPTION	Sample Type	Sample Number	Recovery (%)						
	Geodetic Ground Surface Elevation: 105.08 m										
	ASPHALT PAVEMENT: 50 mm asphalt over 140 mm crush asphalt over 180 mm granular base										
	FILL: silty clay/clayey silt, trace gravel, reddish brown to grey, moist, stiff to very stiff	SS	1	62	13						
		SS	2	62	17	1	104				
	SILTY CLAY/SHALE COMPLEX: trace sand, 1.2 trace gravel, trace limestone fragments, reddish brown, moist, very stiff to hard	SS	3	100	50/13 cm						
		SS	4	71	50/13 cm	2	103				
		SS	5	0	50/5 cm	3	102				
	BEDROCK: Shale, highly weathered to fresh, 2.3 very poor to excellent quality, trace limestone inclusion, grey, moist	RC	1	48	0						
	----- grey					4	101				
		RC	2	100	63						
	ROCK CORING START					5	100				
	- Very Poor Quality					6	99				
		RC	3	100	76						
	- Fair Quality					7	98				
		RC	4	100	64						
	- Good Quality					8	97				
		RC	5	100	62						
	- Fair Quality					9	96				
						10	95				
						11	94				
						12					

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

∇ Groundwater depth on completion of drilling: N/A m.
 ▾ Groundwater depth observed on 3/23/2023 at a depth of: 6.71 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 commissioned and the accompanying Notes to Record of Boreholes.

Scale: 1 : 63
 Page: 1 of 3

RECORD OF BOREHOLE No. BH/MW111



Project Number: **BIGC-ENV-554D**

Drilling Location: **See borehole location plan**

Logged by: **FJ**

Lithology Plot	LITHOLOGY PROFILE DESCRIPTION	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING		LAB TESTING		INSTRUMENTATION INSTALLATION	COMMENTS
		Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%			Penetration Testing ○ SPT ● DCPT	MTO Vane* △ Intact ▲ Remould	Nilcon Vane* ◇ Intact ◆ Remould	★ Rinse pH Values 2 4 6 8 10 12		
	BEDROCK: Shale, highly weathered to fresh, very poor to excellent quality, trace limestone inclusion, grey, moist												
	- Good Quality	RC	6	100	79	13	92	○					
	- Excellent Quality	RC	7	100	94	14	91		○				
	- Good Quality	RC	8	100	80	15	90		○				
	- Fair Quality	RC	9	100	69	16	89	○					
	- Good Quality	RC	10	100	88	17	88		○				
	- Excellent Quality	RC	11	100	97	18	87		○				
	- Good Quality - Weak Strength	RC	12	100	87	19	86		○				
	- Excellent Quality	RC	13	100	95	20	85		○				
	- Excellent Quality	RC	14	100	97	21	84		○				
						22	83		○				
						23	82		○				
						24	81		○				
						25	80		○				

UCS: 17.7 MPa

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 commissioned and the accompanying 'Notes to Record of Boreholes'.

RECORD OF BOREHOLE No. BH/MW111



Project Number: **BIGC-ENV-554D**

Drilling Location: **See borehole location plan**

Logged by: **FJ**

Lithology Plot	LITHOLOGY PROFILE DESCRIPTION	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING				LAB TESTING				INSTRUMENTATION INSTALLATION	COMMENTS
		Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%			Penetration Testing		MTO Vane*		Nilcon Vane*		Soil Vapour Reading parts per million (ppm)			
	BEDROCK: Shale, highly weathered to fresh, very poor to excellent quality, trace limestone inclusion, grey, moist - Excellent Quality					26	79										
	- Excellent Quality	RC	15	100	100	27	78										
	- Excellent Quality	RC	16	100	100	28	77										
	- Excellent Quality	RC	17	100	100	29	76										
	74.37 End of Borehole 30.7 Notes: 1. Borehole open upon completion of drilling. 2. Ground water level reading at 6.71 m bgs on March 23, 2023.					30	75										

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 commissioned and the accompanying 'Notes to Record of Boreholes'.

RECORD OF BOREHOLE No. BH/MW112



Project Number: **BIGC-ENV-554D** Drilling Location: **See borehole location plan** Logged by: **FJ**
 Project Client: **Distrikt Capital Corporation** Drilling Method: **200 mm Hollow Stem Augering** Compiled by: **MM**
 Project Name: **Phase II ESA and Supplementary Geotechnical and Hydrogeological Investigations** Drilling Machine: **Truck Mounted Drill** Reviewed by: **KK**
 Project Location: **590 Argus Road, Oakville, ON** Date Started: **22 Feb 23** Date Completed: **27 Feb 23** Revision No.: **0, 10/4/23**

Lithology Plot	LITHOLOGY PROFILE	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING		LAB TESTING		INSTRUMENTATION INSTALLATION	COMMENTS
		Description	Sample Type	Sample Number	Recovery (%)			SPT 'N' Value/RQD%	Penetration Testing	Soil Vapour Reading	Rinse pH Values		
	<p>Geodetic Ground Surface Elevation: 104.85 m</p> <p>ASPHALT PAVEMENT: 60 mm asphalt over 170 mm granular base</p> <p>FILL: sand and gravel, trace wood pieces, trace red & yellow brick fragments, brown to grey, moist, compact</p> <p>FILL: silty sand, trace gravel, zones of silty clay, reddish brown to grey, moist, loose</p> <p>SILTY CLAY/SHALE COMPLEX: trace sand, 1.5 trace gravel, trace limestone fragments, reddish brown, moist, hard</p> <p>BEDROCK: Shale, highly weathered to fresh, very poor to excellent quality, trace limestone inclusion, reddish brown to grey, moist</p> <p>----- grey</p> <p>----- ROCK CORING START</p> <p>- Very Poor Quality</p> <p>- Fair Quality</p> <p>- Good Quality</p> <p>- Fair Quality</p> <p>- Excellent Quality</p>							Penetration Testing ○ SPT ● DCPT MTO Vane* Nilcon Vane* △ Intact ◇ Intact ▲ Remould ◆ 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 _l Plastic Liquid 20 40 60 80				
		SS	1	41	10	104.70	104.70	○					
		SS	2	75	7	104.09	104.09	○		9			
		SS	3	84	30	103.33	103.33	○		8			
		SS	4	89	50/13 cm	102.56	102.56	○	50				
		SS	5	100	50/10 cm	102.3	102.3	○	50				
						101	101						
						100	100						
		RC	1	100	8	99	99	○					
		RC	2	100	54	98	98	○					
		RC	3	100	79	97	97	○					
		RC	4	100	56	95	95	○					
		RC	5	100	97	93	93	○					

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

▽ Groundwater depth on completion of drilling: N/A m.
 ▼ Groundwater depth observed on 3/23/2023 at a depth of: 5.05 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 commissioned and the accompanying Notes to Record of Boreholes.

Scale: 1 : 63
 Page: 1 of 3

RECORD OF BOREHOLE No. BH/MW112



Project Number: **BIGC-ENV-554D**

Drilling Location: **See borehole location plan**

Logged by: **FJ**

Lithology Plot	LITHOLOGY PROFILE	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING		LAB TESTING		INSTRUMENTATION INSTALLATION	COMMENTS
	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%			Penetration Testing	Soil Vapour Reading parts per million (ppm)	Lower Explosive Limit (LEL)	W _p		
	BEDROCK: Shale, highly weathered to fresh, very poor to excellent quality, trace limestone inclusion, reddish brown to grey, moist												
	- Fair Quality	RC	6	100	58	13	92	○					
	- Good Quality	RC	7	100	75	14	91		○				
	- Excellent Quality	RC	8	100	100	16	89			○			
	- Excellent Quality	RC	9	100	95	17	88				○		
	- Good Quality	RC	10	100	80	19	86		○				
	- Excellent Quality	RC	11	100	97	20	85				○		
	- Excellent Quality	RC	12	100	98	22	83					○	
	- Excellent Quality	RC	13	100	98	23	82						○
	- Excellent Quality	RC	14	100	97	25	80						○

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 commissioned and the accompanying 'Notes to Record of Boreholes'.

Scale: 1 : 63

Page: 2 of 3

RECORD OF BOREHOLE No. BH/MW112



Project Number: **BIGC-ENV-554D**

Drilling Location: **See borehole location plan**

Logged by: **FJ**

Lithology Plot	LITHOLOGY PROFILE		SOIL SAMPLING				FIELD TESTING		LAB TESTING				INSTRUMENTATION INSTALLATION	COMMENTS
	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	DEPTH (m)	ELEVATION (m)	Penetration Testing ○ SPT ● DCPT MTO Vane* Nilcon Vane* △ Intact ◇ Intact ▲ Remould ◆ 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				
	BEDROCK: Shale, highly weathered to fresh, very poor to excellent quality, trace limestone inclusion, reddish brown to grey, moist - Excellent Quality	RC	15	100	98	26	79							
	- Good Quality	RC	16	100	85	28	77							
	- Excellent Quality	RC	17	100	100	29	75							
	74.29													
	30.6													
	End of Borehole Notes: 1. Borehole open upon completion of drilling. 2. Ground water level reading at 5.05 m bgs on March 23, 2023.													

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 commissioned and the accompanying 'Notes to Record of Boreholes'.

RECORD OF BOREHOLE No. BH/MW113



Project Number: **BIGC-ENV-554D** Drilling Location: **See borehole location plan** Logged by: **FJ**
 Project Client: **District Capital Corporation** Drilling Method: **200 mm Hollow Stem Augering** Compiled by: **MM**
 Project Name: **Phase II ESA and Supplementary Geotechnical and Hydrogeological Investigations** Drilling Machine: **Truck Mounted Drill** Reviewed by: **KK**
 Project Location: **590 Argus Road, Oakville, ON** Date Started: **21 Feb 23** Date Completed: **22 Feb 23** Revision No.: **0, 10/4/23**

Lithology Profile	SOIL SAMPLING				FIELD TESTING		LAB TESTING				INSTRUMENTATION INSTALLATION	COMMENTS
	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RCD%	DEPTH (m)	ELEVATION (m)	Penetration Testing ○ SPT ● DCPT △ Intact ◇ Intact ▲ Remould ◆ 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 _L Plastic Liquid 20 40 60 80			
Geodetic Ground Surface Elevation: 105.08 m												
ASPHALT PAVEMENT: 100 mm asphalt over 220 mm granular base FILL: silty sand, trace to some clay, trace to some gravel, trace organics, block to brown, moist, loose to compact SILTY CLAY/SHALE COMPLEX: trace sand, 2.3 trace gravel, trace limestone fragments, red brown, moist, hard BEDROCK: Shale, highly weathered to fresh, poor to excellent quality, trace limestone inclusion, grey, moist	SS	1	62	7		104	○	○ ⁶				
	SS	2	59	7		103	○	○ ²⁰				
	SS	3	41	11		102	○	○ ¹⁵				
	SS	4	100	65/28 cm		102	○	○ ⁶⁵ ○ ^{28 cm}	○ ⁹			
	SS	5	100	82/10 cm		102	○	○ ⁸² ○ ^{10 cm}				
ROCK CORING START												
- Poor Quality	RC	1	100	50		98	○					
- Poor Quality	RC	2	100	43		97	○					
- Fair Quality	RC	3	100	72		95	○					
- Good Quality	RC	4	100	76		94	○					

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

▽ Groundwater depth on completion of drilling: N/A m.
 ▼ Groundwater depth observed on 3/23/2023 at a depth of: 22.00 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 commissioned and the accompanying Notes to Record of Boreholes.

Scale: 1 : 63
 Page: 1 of 3

RECORD OF BOREHOLE No. BH/MW113



Project Number: **BIGC-ENV-554D**

Drilling Location: **See borehole location plan**

Logged by: **FJ**

Lithology Plot	LITHOLOGY PROFILE	SOIL SAMPLING				FIELD TESTING		LAB TESTING				INSTRUMENTATION INSTALLATION	COMMENTS	
	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%	DEPTH (m)	ELEVATION (m)	Penetration Testing ○ SPT ● DCPT △ Intact ◇ Intact ▲ Remould ◆ 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				
	BEDROCK: Shale, highly weathered to fresh, poor to excellent quality, trace limestone inclusion, grey, moist													
	- Good Quality	RC	5	100	75	13	92		○					
	- Good Quality	RC	6	100	77	14	91		○					
	- Excellent Quality	RC	7	100	95	15	90		○					
	- Excellent Quality	RC	8	100	96	16	89		○					
	- Excellent Quality	RC	9	100	100	17	88		○					
	- Excellent Quality	RC	10	100	95	18	87		○					
	- Excellent Quality	RC	11	100	91	19	86		○					
	- Excellent Quality	RC	12	100	94	20	85		○					
	- Excellent Quality	RC	13	100	83	21	84		○					
	- Excellent Quality	RC	14	100	91	22	83		○					
	- Excellent Quality	RC	15	100	94	23	82		○					
	- Good Quality	RC	16	100	83	24	81		○					
	- Good Quality	RC	17	100	83	25	80		○					

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 commissioned and the accompanying 'Notes to Record of Boreholes'.

Scale: 1 : 63

Page: 2 of 3

RECORD OF BOREHOLE No. BH/MW113



Project Number: **BIGC-ENV-554D**

Drilling Location: **See borehole location plan**

Logged by: **FJ**

Lithology Plot	LITHOLOGY PROFILE	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING		LAB TESTING		INSTRUMENTATION INSTALLATION	COMMENTS
		DESCRIPTION	Sample Type	Sample Number	Recovery (%)			SPT 'N' Value/RQD%	Penetration Testing	Soil Vapour Reading parts per million (ppm)	Lower Explosive Limit (LEL)		
	BEDROCK: Shale, highly weathered to fresh, poor to excellent quality, trace limestone inclusion, grey, moist - Excellent Quality - Excellent Quality - Excellent Quality	RC	14	100	100	26	79						
		RC	15	100	95	27	78						
		RC	16	100	100	28	77						
						29	76						
	End of Borehole Notes: 1. Borehole open upon completion of drilling. 2. Ground water level reading at 22.00 m bgs on March 23, 2023.					30	75						
	74.37 30.7												

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 commissioned and the accompanying 'Notes to Record of Boreholes'.

RECORD OF MONITORING WELL No. BH/MW1



Project Number: **BIGC-ENV-554A** Drilling Location: **See Borehole Location Plan** Logged by: **KK**
 Project Client: **Distrikt Capital** Drilling Method: **100 mm Solid Stem Augering** Compiled by: **KK**
 Project Name: **Preliminary Geotechnical Investigation** Drilling Machine: **Truck Mounted Drill** Reviewed by: **AC**
 Project Location: **590 Argus Road, Oakville, Ontario** Date Started: **25 May 22** Date Completed: **25 May 22** Revision No.: **1, 4/4/23**

Lithology Profile	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING		LAB TESTING		INSTRUMENTATION INSTALLATION	COMMENTS
	DESCRIPTION	Sample Type	Sample Number	Recovery (%)			SPT 'N' Value/RCD%	Penetration Testing	Soil Vapour Reading	Lower Explosive Limit (LEL)		
<p>Geodetic Ground Surface Elevation: 104.45 m</p> <p>ASPHALT PAVEMENT: 50 mm asphalt over 100 mm granular base</p> <p>FILL: sand and gravel, trace silt, trace organics, brown, moist, loose</p> <p>- black stains, oxidations</p> <p>SILTY CLAY/CLAYEY SILT/SHALE COMPLEX: trace silt, trace gravel, grey, moist, hard</p> <p>BEDROCK: Shale, highly weathered, grey, damp to moist, hard</p> <p>wet</p> <p>End of Borehole</p> <p>Notes: 1. Borehole open upon completion of drilling. 2. Ground water level reading at 3.89 m bgs upon completion of drilling. 3. Groundwater level reading at 3.9 m bgs on May 31, 2022.</p>												
0.2	SS	1	41	6	104	104	○	○17				
102.93	SS	2	84	8	103	103	○	○16				
102.16	SS	3	95	63	102	102	○	○11				
	SS	4	125	50/8cm	101	101	○	○2				
	SS	5	260	50/5cm	100	100	○	○3				
	SS	6	48	50/15cm	99	99	○	○4				
	SS	7	50	53/28cm			○	○14				
	SS	8	100	50/8cm			○	○16				

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

▽ Groundwater depth on completion of drilling: **4.4 m.**
 ▼ Groundwater depth observed on **2022-05-31** at a depth of: **3.9 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 commissioned and the accompanying 'Notes to Record of Boreholes'.

RECORD OF BOREHOLE No. BH2



Project Number: **BIGC-ENV-554A** Drilling Location: **See Borehole Location Plan** Logged by: **KK**
 Project Client: **District Capital** Drilling Method: **100 mm Solid Stem Augering** Compiled by: **KK**
 Project Name: **Preliminary Geotechnical Investigation** Drilling Machine: **Truck Mounted Drill** Reviewed by: **AC**
 Project Location: **590 Argus Road, Oakville, Ontario** Date Started: **25 May 22** Date Completed: **25 May 22** Revision No.: **1, 4/4/23**

Lithology Profile	DESCRIPTION	SOIL SAMPLING				FIELD TESTING		LAB TESTING				INSTRUMENTATION INSTALLATION	COMMENTS
		Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RCD%	DEPTH (m)	ELEVATION (m)	Penetration Testing ○ SPT ● DCPT △ Intact ◇ Intact ▲ Remould ◆ 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 _L Plastic Liquid 20 40 60 80				
	Geodetic Ground Surface Elevation: 105.02 m												
	ASPHALT PAVEMENT: 50 mm asphalt over 100 mm granular base FILL: sand and gravel, brown, moist, compact	SS	1	38	16		104.87	○	○				
	- silty clay/clayey silt, trace sand, black stains, oxidations, brown/grey, moist, stiff	SS	2	100	10	1	104	○	○				
	SILTY CLAY/CLAYEY SILT/SHALE COMPLEX: trace silt, trace gravel, reddish brown, moist, very stiff	SS	3	92	26	2	103	○	○				
	BEDROCK: Shale, highly weathered, occasional limestone layers, grey, damp to moist	SS	4	100	50/13cm	3	102	○	○				
						4	101						
		SS	5	100	50/10cm	5	100	○	○				
						6	99	○	○				
		SS	6	100	50/5cm	6	99	○	○				
						7	98						
						7	98						
	End of Borehole	SS	7	100	50/5cm	7	97.32	○	○				
	Notes: 1. Borehole open upon completion of drilling. 2. Ground water level reading measured at 4.31 m bgs upon completion of drilling.												

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

∇ Groundwater depth on completion of drilling: 4.30 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 commissioned and the accompanying 'Notes to Record of Boreholes'.

Scale: 1 : 47
 Page: 1 of 1

RECORD OF MONITORING WELL No. **BH/MW3**



Project Number: **BIGC-ENV-554A** Drilling Location: **See Borehole Location Plan** Logged by: **KK**
 Project Client: **District Capital** Drilling Method: **100 mm Solid Stem Augering** Compiled by: **KK**
 Project Name: **Preliminary Geotechnical Investigation** Drilling Machine: **Truck Mounted Drill** Reviewed by: **AC**
 Project Location: **590 Argus Road, Oakville, Ontario** Date Started: **25 May 22** Date Completed: **25 May 22** Revision No.: **1, 4/4/23**

Lithology Profile	DESCRIPTION	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING		LAB TESTING		INSTRUMENTATION INSTALLATION	COMMENTS
		Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RCD%			Penetration Testing	Soil Vapour Reading				
Geodetic Ground Surface Elevation: 104.84 m													
ASPHALT PAVEMENT: 60 mm asphalt over 110 mm granular base													
FILL: sand and gravel, trace silt, trace organics, brown, moist, loose													
- silty clay/clayey silt, trace sand, black stains, oxidations, brown/grey, moist, firm													
SILTY CLAY/CLAYEY SILT/SHALE													
COMPLEX: trace silt, trace gravel, reddish brown to grey, moist, hard													
BEDROCK: Shale, highly weathered, grey, damp to moist, hard													
----- wet													
End of Borehole													
Notes: 1. Borehole open upon completion of drilling. 2. Ground water level reading measured at 3.35 m bgs upon completion of drilling. 3. Groundwater level reading at 3.37m bgs on May 31, 2022.													

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

∇ Groundwater depth on completion of drilling: **3.5 m.**
 ▼ Groundwater depth observed on **2022-05-31** at a depth of: **3.37 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 commissioned and the accompanying Notes to Record of Boreholes.

RECORD OF MONITORING WELL No. **BH/MW4**



Project Number: **BIGC-ENV-554A** Drilling Location: **See Borehole Location Plan** Logged by: **KK**
 Project Client: **District Capital** Drilling Method: **100 mm Solid Stem Augering** Compiled by: **KK**
 Project Name: **Preliminary Geotechnical Investigation** Drilling Machine: **Truck Mounted Drill** Reviewed by: **AC**
 Project Location: **590 Argus Road, Oakville, Ontario** Date Started: **25 May 22** Date Completed: **25 May 22** Revision No.: **1, 4/4/23**

Lithology Profile	SOIL SAMPLING				FIELD TESTING		LAB TESTING				INSTRUMENTATION INSTALLATION	COMMENTS
	DESCRIPTION	Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RCD%	DEPTH (m)	ELEVATION (m)	Penetration Testing	Soil Vapour Reading	Lower Explosive Limit (LEL)		
<p>Geodetic Ground Surface Elevation: 105.05 m</p> <p>ASPHALT PAVEMENT: 50 mm asphalt over 120 mm granular base</p> <p>FILL: sand and gravel, trace silt, trace organics, brown, moist, loose</p> <p>- silty clay/clayey silt, trace sand, black stains, oxidations, brown/grey, moist, firm</p> <p>BEDROCK: Shale, highly weathered, reddish brown, damp to moist</p> <p>----- grey</p>												
104.88	SS	1	84	7								
104.88												
104.02	SS	2	100	6	1	104						
103.53												
103.53	SS	3	100	81	2	103						
	SS	4	100	50/10cm								
	SS	5	100	50/3cm	3	102						
	SS	6	100	50/13cm	4	101						
	SS	7	100	50/3cm	6	99						
98.95	SS	7	100	50/3cm	6	99						
6.1												

Notes:
 1. Borehole open upon completion of drilling.
 2. Ground water level reading measured at 4.88 m bgs upon completion of drilling.
 3. Groundwater level reading at 3.44 on May 31, 2022.

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

∇ Groundwater depth on completion of drilling: **4.9 m.**
 ▾ Groundwater depth observed on **2022-05-31** at a depth of: **3.44 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 commissioned and the accompanying Notes to Record of Boreholes.

RECORD OF BOREHOLE No. BH5



Project Number: **BIGC-ENV-554A** Drilling Location: **See Borehole Location Plan** Logged by: **KK**
 Project Client: **District Capital** Drilling Method: **100 mm Solid Stem Augering** Compiled by: **KK**
 Project Name: **Preliminary Geotechnical Investigation** Drilling Machine: **Truck Mounted Drill** Reviewed by: **AC**
 Project Location: **590 Argus Road, Oakville, Ontario** Date Started: **26 May 22** Date Completed: **26 May 22** Revision No.: **1, 4/4/23**

Lithology Plot	LITHOLOGY PROFILE	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING		LAB TESTING		INSTRUMENTATION INSTALLATION	COMMENTS
		Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%			Penetration Testing		★ Rinse pH Values	Soil Vapour Reading		
	Geodetic Ground Surface Elevation: 105.13 m												
	ASPHALT PAVEMENT: 70 mm asphalt over 100 mm granular base					105							
	FILL: sand and gravel, trace silt, trace organics, brown, moist, compact	SS	1	41	14	104.95		○		5			
						104.37							
	SILTY CLAY/CLAYEY SILT/SHALE COMPLEX: trace silt, trace gravel, reddish brown, moist, very stiff	SS	2	92	20	104		○		6			
						103.61							
	BEDROCK: Shale, highly weathered, reddish brown, damp to moist	SS	3	100	73	103				9			
						102							
		SS	4	100	5/10cm	102		○		6			
						101							
	----- grey	SS	5	56	76/20cm	102		○		15			
						101							
		SS	6	100	50/8cm	100		○		16			
						99							
		SS	7	100	50/3cm	99		○					
						98							
		SS	8	100	50/8cm	97.43		○		10			
	End of Borehole					7.7							

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

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

∇ Groundwater depth on completion of drilling: **5.3 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 commissioned and the accompanying 'Notes to Record of Boreholes'.

Scale: 1 : 47
 Page: 1 of 1

RECORD OF MONITORING WELL No. **BH/MW6**



Project Number: **BIGC-ENV-554A** Drilling Location: **See Borehole Location Plan** Logged by: **KK**
 Project Client: **District Capital** Drilling Method: **100 mm Solid Stem Augering** Compiled by: **KK**
 Project Name: **Preliminary Geotechnical Investigation** Drilling Machine: **Truck Mounted Drill** Reviewed by: **AC**
 Project Location: **590 Argus Road, Oakville, Ontario** Date Started: **26 May 22** Date Completed: **26 May 22** Revision No.: **1, 4/4/23**

Lithology Profile	DESCRIPTION	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING		LAB TESTING		INSTRUMENTATION INSTALLATION	COMMENTS
		Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%			Penetration Testing	Soil Vapour Reading	Lower Explosive Limit (LEL)	Plastic		
	Geodetic Ground Surface Elevation: 105.36 m												
	ASPHALT PAVEMENT: 65 mm asphalt over 115 mm granular base					105.18							
	FILL: clayey silt, trace to some sand, brown, moist, stiff	SS	1	70	11	105.02							
	SILTY CLAY/CLAYEY SILT/SHALE COMPLEX: trace silt, trace gravel, reddish brown, moist, very stiff	SS	2	92	24	104.60							
	BEDROCK: Shale, highly weathered, reddish brown, damp to moist	SS	3	100	100	103.84							
		SS	4	100	50/8cm	103.84							
		SS	5	95	88/28cm	102.84							
		SS	6	100	50/8cm	101.84							
		SS	7	100	50/10cm	99.16							
	End of Borehole					6.2							
	Notes: 1. Borehole open upon completion of drilling. 2. Ground water level reading measured at 3.15 m bgs upon completion of drilling. 3. Groundwater level reading at 2.92 mbgs on May 31, 2022.												

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

∇ Groundwater depth on completion of drilling: **3.1 m.**
 ▾ Groundwater depth observed on **2022-05-31** at a depth of: **2.92 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 commissioned and the accompanying 'Notes to Record of Boreholes'.

Scale: 1 : 47
 Page: 1 of 1

RECORD OF BOREHOLE No. BH7



Project Number: **BIGC-ENV-554A** Drilling Location: **See Borehole Location Plan** Logged by: **KK**
 Project Client: **District Capital** Drilling Method: **100 mm Solid Stem Augering** Compiled by: **KK**
 Project Name: **Preliminary Geotechnical Investigation** Drilling Machine: **Truck Mounted Drill** Reviewed by: **AC**
 Project Location: **590 Argus Road, Oakville, Ontario** Date Started: **26 May 22** Date Completed: **26 May 22** Revision No.: **1, 4/4/23**

Lithology Profile	DESCRIPTION	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING		LAB TESTING		INSTRUMENTATION INSTALLATION	COMMENTS
		Sample Type	Sample Number	Recovery (%)	SPT 'N' Value/RQD%			Penetration Testing	Soil Vapour Reading (ppm)				
	Geodetic Ground Surface Elevation: 105.08 m												
	ASPHALT PAVEMENT: 60 mm asphalt over 110 mm granular base					105							
	FILL: sand and gravel, trace silt, trace organics, brown, moist, loose	SS	1	100	12	0.2		○		○14			
	- silty clay/clayey silt, trace sand, black stains, oxidations, brown/grey, moist, firm	SS	2	95	15	1	104	○		○13			
	BEDROCK: Shale, highly weathered, reddish brown, damp to moist	SS	3	92	69	2	103			○7			
	----- grey	SS	4	135	50/13cm		102	○50 13cm		○5			
		SS	5	100	50/8cm	3	102	○50 8cm		○24			
						4	101						
	----- wet	SS	6	100	50/13cm		100	○50 13cm		○14			
						5	100						
		SS	7	100	50/3cm	6	99	○50 3cm		○15			
						7	98						
	End of Borehole	SS	8	100	50/5cm		97.38	○50 5cm		○18			
	Notes: 1. Borehole open upon completion of drilling. 2. Ground water level reading measured at 3.01 m bgs upon completion of drilling.						7.7						

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

∇ Groundwater depth on completion of drilling: 3.2 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 commissioned and the accompanying 'Notes to Record of Boreholes'.

RECORD OF MONITORING WELL No. **BH/MW8**



Project Number: **BIGC-ENV-554A** Drilling Location: **See Borehole Location Plan** Logged by: **KK**
 Project Client: **District Capital** Drilling Method: **100 mm Solid Stem Augering** Compiled by: **KK**
 Project Name: **Preliminary Geotechnical Investigation** Drilling Machine: **Truck Mounted Drill** Reviewed by: **AC**
 Project Location: **590 Argus Road, Oakville, Ontario** Date Started: **26 May 22** Date Completed: **26 May 22** Revision No.: **1, 4/4/23**

Lithology Profile	SOIL SAMPLING				DEPTH (m)	ELEVATION (m)	FIELD TESTING		LAB TESTING		INSTRUMENTATION INSTALLATION	COMMENTS
	DESCRIPTION	Sample Type	Sample Number	Recovery (%)			SPT 'N' Value/RCD%	Penetration Testing	Soil Vapour Reading	Lower Explosive Limit (LEL)		
<p>Geodetic Ground Surface Elevation: 105.12 m</p> <p>ASPHALT PAVEMENT: 50 mm asphalt over 110 mm granular base</p> <p>FILL: silty clay/clayey silt, trace sand, occasional organics, oxidations, brown/grey, moist, firm to stiff</p> <p>BEDROCK: Shale, highly weathered, reddish brown, damp to moist</p> <p>----- grey</p>												
	SS	1	92	7		105			16			
	SS	2	84	12	1	104			11			
	SS	3	58	70/28cm		103		70 28cm	17			
	SS	4	100	50/3cm		102		50 3cm	7			
	SS	5	100	50/10cm	3	102		50 10cm	3			
	SS	6	100	50/13cm		101		50 13cm	4			
	SS	7	100	50/8cm	6	99		50 8cm	5			
<p>End of Borehole 6.2</p> <p>Notes: 1. Borehole open upon completion of drilling. 2. Ground water level reading measured at 5.80 m bgs upon completion of drilling. 3. Groundwater level reading at 4.55 mbgs on May 31, 2022.</p>												

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

∇ Groundwater depth on completion of drilling: **2.9 m.**
 ▼ Groundwater depth observed on **2022-05-31** at a depth of: **4.55 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 commissioned and the accompanying 'Notes to Record of Boreholes'.

Appendix D – Conceptual Site Models

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

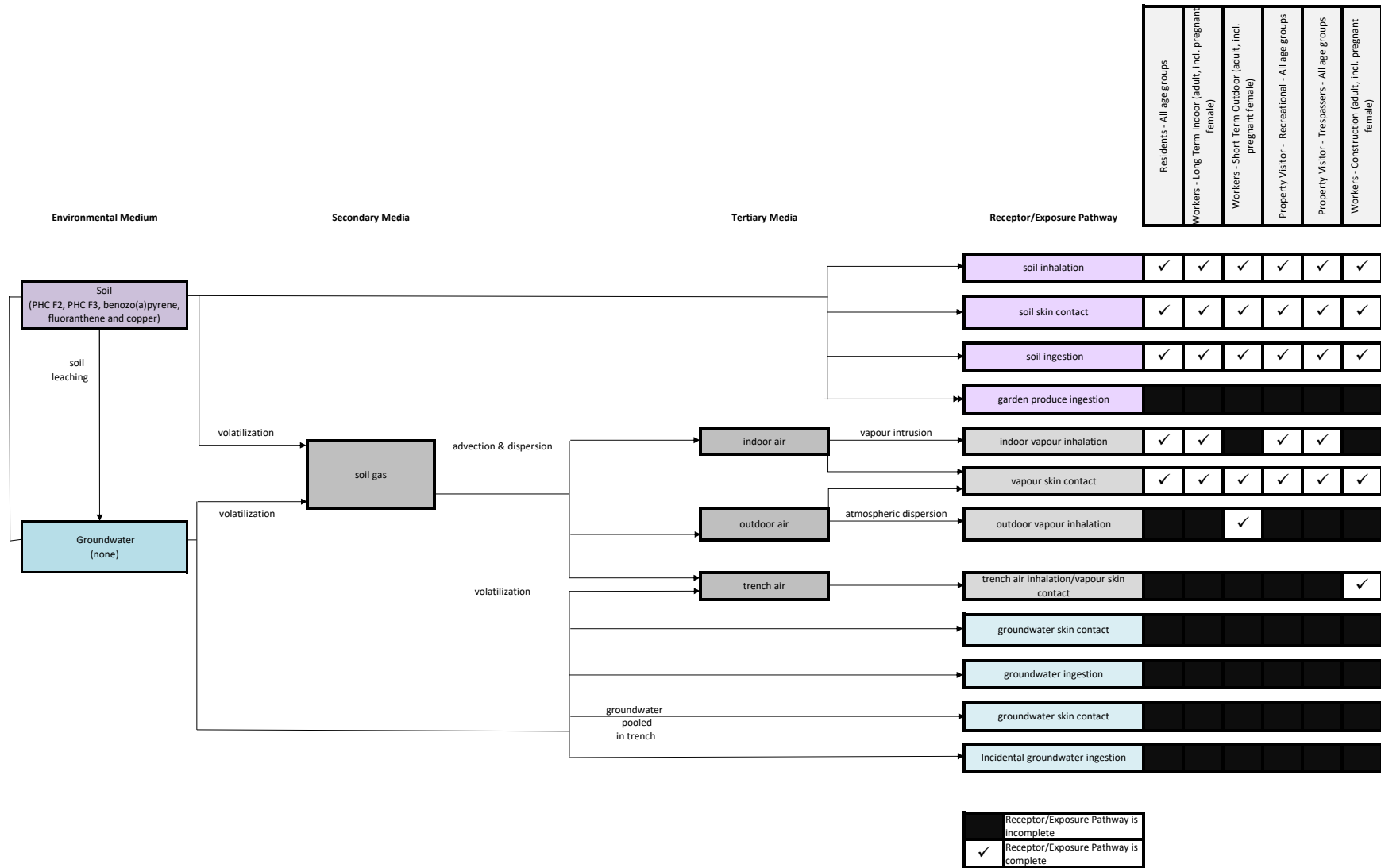
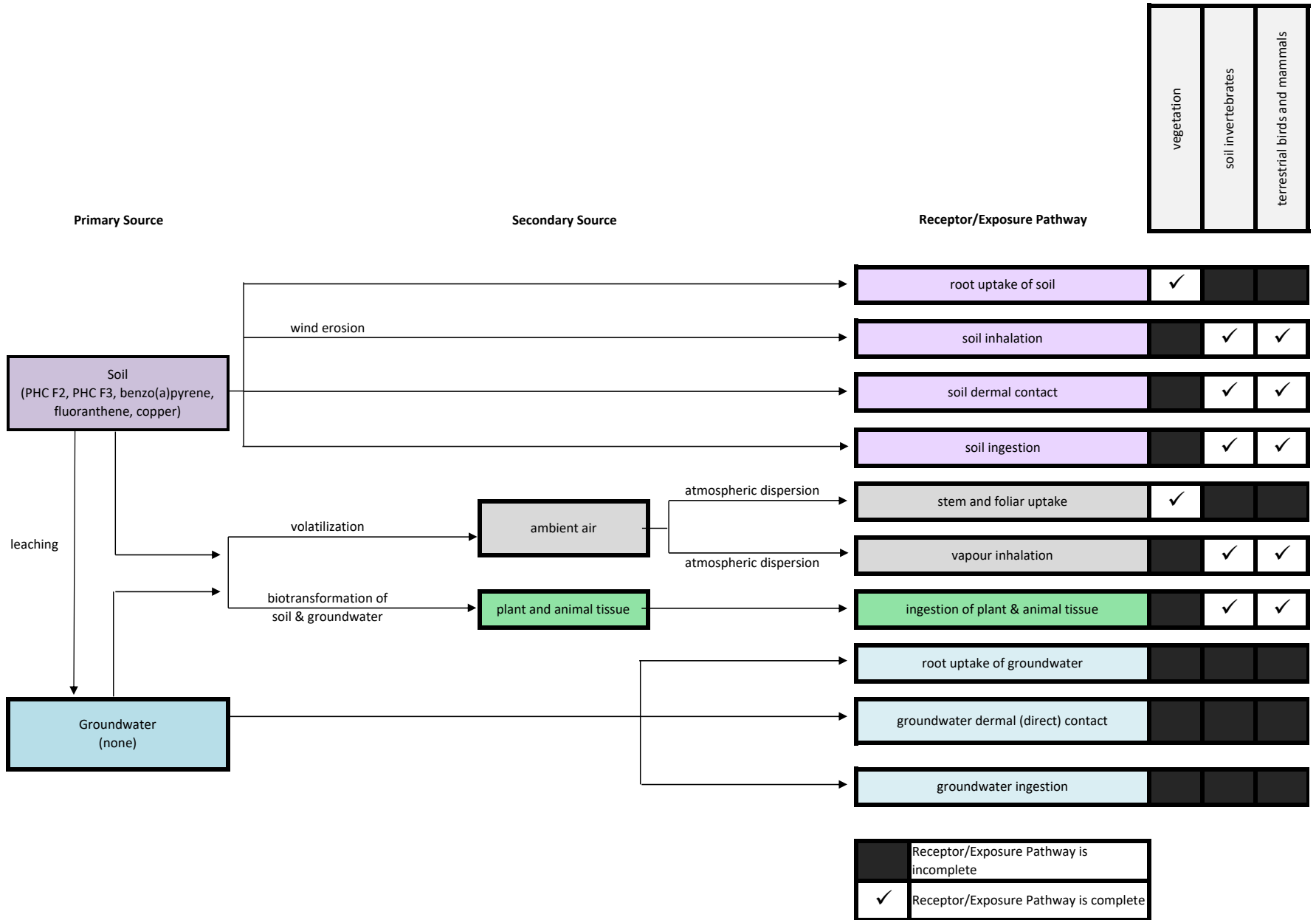


Figure D.2 - Ecological Conceptual On-Site Model



Appendix E - Survey Plan

Appendix F – Laboratory Certificates of Analysis



Your Project #: BIGC-ENV-554E
 Site Location: 590 ARGUS ROAD, OAKVILLE
 Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
 12-5500 Tomken Road
 Mississauga, ON
 CANADA L4W 2Z4

Report Date: 2023/04/27
 Report #: R7605298
 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3B7267

Received: 2023/04/26, 13:57

Sample Matrix: Soil
 # Samples Received: 1

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Petroleum Hydro. CCME F1 & BTEX in Soil (1)	1	N/A	2023/04/27	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (2)	1	2023/04/26	2023/04/27	CAM SOP-00316	CCME CWS m
Moisture	1	N/A	2023/04/26	CAM SOP-00445	Carter 2nd ed 51.2 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

- (1) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.
- (2) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.



Your Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD, OAKVILLE
Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
12-5500 Tomken Road
Mississauga, ON
CANADA L4W 2Z4

Report Date: 2023/04/27
Report #: R7605298
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3B7267

Received: 2023/04/26, 13:57

Encryption Key



Bureau Veritas
27 Apr 2023 16:27:12

Please direct all questions regarding this Certificate of Analysis to:
Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843

=====

This report has been generated and distributed using a secure automated process. Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

Bureau Veritas ID			VQO932		
Sampling Date			2023/04/20 09:35		
COC Number			n/a		
	UNITS	Criteria	BH203-SS3	RDL	QC Batch
BTEX & F1 Hydrocarbons					
Benzene	ug/g	0.21	ND	0.020	8630765
Toluene	ug/g	2.3	ND	0.020	8630765
Ethylbenzene	ug/g	1.1	ND	0.020	8630765
o-Xylene	ug/g	-	ND	0.020	8630765
p+m-Xylene	ug/g	-	ND	0.040	8630765
Total Xylenes	ug/g	3.1	ND	0.040	8630765
F1 (C6-C10)	ug/g	55	ND	10	8630765
F1 (C6-C10) - BTEX	ug/g	55	ND	10	8630765
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/g	98	86	10	8631444
F3 (C16-C34 Hydrocarbons)	ug/g	300	100	50	8631444
F4 (C34-C50 Hydrocarbons)	ug/g	2800	ND	50	8631444
Reached Baseline at C50	ug/g	-	Yes		8631444
Surrogate Recovery (%)					
1,4-Difluorobenzene	%	-	89		8630765
4-Bromofluorobenzene	%	-	109		8630765
D10-o-Xylene	%	-	87		8630765
D4-1,2-Dichloroethane	%	-	96		8630765
o-Terphenyl	%	-	102		8631444
No Fill	No Exceedance				
Grey	Exceeds 1 criteria policy/level				
Black	Exceeds both criteria/levels				
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)					
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition					
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil					
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.					



Bureau Veritas Job #: C3B7267
 Report Date: 2023/04/27

B.I.G Consulting Inc.
 Client Project #: BIGC-ENV-554E
 Site Location: 590 ARGUS ROAD, OAKVILE
 Sampler Initials: MM

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		VQO932		
Sampling Date		2023/04/20 09:35		
COC Number		n/a		
	UNITS	BH203-SS3	RDL	QC Batch
Inorganics				
Moisture	%	13	1.0	8630462
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				



BUREAU
VERITAS

Bureau Veritas Job #: C3B7267

Report Date: 2023/04/27

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILE

Sampler Initials: MM

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.3°C
-----------	-------

Sample VQO932 [BH203-SS3] : F1 BTEX analysis : Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency

Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C3B7267

Report Date: 2023/04/27

QUALITY ASSURANCE REPORT

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8630765	1,4-Difluorobenzene	2023/04/27	88	60 - 140	89	60 - 140	90	%		
8630765	4-Bromofluorobenzene	2023/04/27	106	60 - 140	106	60 - 140	104	%		
8630765	D10-o-Xylene	2023/04/27	89	60 - 140	80	60 - 140	85	%		
8630765	D4-1,2-Dichloroethane	2023/04/27	92	60 - 140	94	60 - 140	95	%		
8631444	o-Terphenyl	2023/04/27	101	60 - 130	99	60 - 130	101	%		
8630462	Moisture	2023/04/26							0.61	20
8630765	Benzene	2023/04/27	82	50 - 140	75	50 - 140	ND, RDL=0.020	ug/g	NC	50
8630765	Ethylbenzene	2023/04/27	92	50 - 140	83	50 - 140	ND, RDL=0.020	ug/g	NC	50
8630765	F1 (C6-C10) - BTEX	2023/04/27					ND, RDL=10	ug/g	NC	30
8630765	F1 (C6-C10)	2023/04/27	87	60 - 140	95	80 - 120	ND, RDL=10	ug/g	NC	30
8630765	o-Xylene	2023/04/27	90	50 - 140	82	50 - 140	ND, RDL=0.020	ug/g	NC	50
8630765	p+m-Xylene	2023/04/27	87	50 - 140	79	50 - 140	ND, RDL=0.040	ug/g	NC	50
8630765	Toluene	2023/04/27	79	50 - 140	73	50 - 140	ND, RDL=0.020	ug/g	7.9	50
8630765	Total Xylenes	2023/04/27					ND, RDL=0.040	ug/g	NC	50
8631444	F2 (C10-C16 Hydrocarbons)	2023/04/27	105	60 - 130	108	80 - 120	ND, RDL=10	ug/g	2.6	30
8631444	F3 (C16-C34 Hydrocarbons)	2023/04/27	112	60 - 130	115	80 - 120	ND, RDL=50	ug/g	44 (1)	30
8631444	F4 (C34-C50 Hydrocarbons)	2023/04/27	108	60 - 130	115	80 - 120	ND, RDL=50	ug/g	NC	30

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Duplicate results exceeded RPD acceptance criteria for flagged analytes. The sample was reanalyzed with the similar results. This is likely due to sample heterogeneity.



Bureau Veritas Job #: C3B7267
Report Date: 2023/04/27

B.I.G Consulting Inc.
Client Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD, OAKVILLE
Sampler Initials: MM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

A handwritten signature in cursive script that reads 'Cristina Carriere'.

Cristina Carriere, Senior Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by {0}, {1} responsible for {2} {3} laboratory operations.



BUREAU
VERITAS

Bureau Veritas Job #: C3B7267

Report Date: 2023/04/27

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

Exceedance Summary Table – Reg153/04 T2-Soil/Res-C
Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
No Exceedances						
The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.						



Your Project #: BIGC-ENV-554E
 Site Location: 590 ARGUS ROAD, OAKVILLE
 Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
 12-5500 Tomken Road
 Mississauga, ON
 CANADA L4W 2Z4

Report Date: 2023/04/27
 Report #: R7605280
 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3B7276

Received: 2023/04/26, 13:57

Sample Matrix: Soil
 # Samples Received: 1

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Petroleum Hydro. CCME F1 & BTEX in Soil (1)	1	N/A	2023/04/27	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (2)	1	2023/04/26	2023/04/27	CAM SOP-00316	CCME CWS m
Moisture	1	N/A	2023/04/26	CAM SOP-00445	Carter 2nd ed 51.2 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

- (1) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.
- (2) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.



Your Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD, OAKVILLE
Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
12-5500 Tomken Road
Mississauga, ON
CANADA L4W 2Z4

Report Date: 2023/04/27
Report #: R7605280
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3B7276

Received: 2023/04/26, 13:57

Encryption Key



Bureau Veritas
27 Apr 2023 16:21:35

Please direct all questions regarding this Certificate of Analysis to:
Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843

=====

This report has been generated and distributed using a secure automated process. Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

Bureau Veritas ID			VQO951		
Sampling Date			2023/04/20 09:35		
COC Number			n/a		
	UNITS	Criteria	DUP20303	RDL	QC Batch
BTEX & F1 Hydrocarbons					
Benzene	ug/g	0.21	ND	0.020	8630765
Toluene	ug/g	2.3	ND	0.020	8630765
Ethylbenzene	ug/g	1.1	ND	0.020	8630765
o-Xylene	ug/g	-	ND	0.020	8630765
p+m-Xylene	ug/g	-	ND	0.040	8630765
Total Xylenes	ug/g	3.1	ND	0.040	8630765
F1 (C6-C10)	ug/g	55	12	10	8630765
F1 (C6-C10) - BTEX	ug/g	55	12	10	8630765
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/g	98	60	10	8631444
F3 (C16-C34 Hydrocarbons)	ug/g	300	80	50	8631444
F4 (C34-C50 Hydrocarbons)	ug/g	2800	ND	50	8631444
Reached Baseline at C50	ug/g	-	Yes		8631444
Surrogate Recovery (%)					
1,4-Difluorobenzene	%	-	88		8630765
4-Bromofluorobenzene	%	-	108		8630765
D10-o-Xylene	%	-	89		8630765
D4-1,2-Dichloroethane	%	-	90		8630765
o-Terphenyl	%	-	102		8631444
No Fill	No Exceedance				
Grey	Exceeds 1 criteria policy/level				
Black	Exceeds both criteria/levels				
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)					
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition					
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil					
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.					



Bureau Veritas Job #: C3B7276
 Report Date: 2023/04/27

B.I.G Consulting Inc.
 Client Project #: BIGC-ENV-554E
 Site Location: 590 ARGUS ROAD, OAKVILLE
 Sampler Initials: MM

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		VQO951		
Sampling Date		2023/04/20 09:35		
COC Number		n/a		
	UNITS	DUP20303	RDL	QC Batch
Inorganics				
Moisture	%	12	1.0	8630462
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				



BUREAU
VERITAS

Bureau Veritas Job #: C3B7276

Report Date: 2023/04/27

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.3°C
-----------	-------

Sample VQO951 [DUP20303] : F1 BTEX analysis : Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency

Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C3B7276

Report Date: 2023/04/27

QUALITY ASSURANCE REPORT

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8630765	1,4-Difluorobenzene	2023/04/27	88	60 - 140	89	60 - 140	90	%		
8630765	4-Bromofluorobenzene	2023/04/27	106	60 - 140	106	60 - 140	104	%		
8630765	D10-o-Xylene	2023/04/27	89	60 - 140	80	60 - 140	85	%		
8630765	D4-1,2-Dichloroethane	2023/04/27	92	60 - 140	94	60 - 140	95	%		
8631444	o-Terphenyl	2023/04/27	101	60 - 130	99	60 - 130	101	%		
8630462	Moisture	2023/04/26							0.61	20
8630765	Benzene	2023/04/27	82	50 - 140	75	50 - 140	ND, RDL=0.020	ug/g	NC	50
8630765	Ethylbenzene	2023/04/27	92	50 - 140	83	50 - 140	ND, RDL=0.020	ug/g	NC	50
8630765	F1 (C6-C10) - BTEX	2023/04/27					ND, RDL=10	ug/g	NC	30
8630765	F1 (C6-C10)	2023/04/27	87	60 - 140	95	80 - 120	ND, RDL=10	ug/g	NC	30
8630765	o-Xylene	2023/04/27	90	50 - 140	82	50 - 140	ND, RDL=0.020	ug/g	NC	50
8630765	p+m-Xylene	2023/04/27	87	50 - 140	79	50 - 140	ND, RDL=0.040	ug/g	NC	50
8630765	Toluene	2023/04/27	79	50 - 140	73	50 - 140	ND, RDL=0.020	ug/g	7.9	50
8630765	Total Xylenes	2023/04/27					ND, RDL=0.040	ug/g	NC	50
8631444	F2 (C10-C16 Hydrocarbons)	2023/04/27	105	60 - 130	108	80 - 120	ND, RDL=10	ug/g	2.6	30
8631444	F3 (C16-C34 Hydrocarbons)	2023/04/27	112	60 - 130	115	80 - 120	ND, RDL=50	ug/g	44 (1)	30
8631444	F4 (C34-C50 Hydrocarbons)	2023/04/27	108	60 - 130	115	80 - 120	ND, RDL=50	ug/g	NC	30

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Duplicate results exceeded RPD acceptance criteria for flagged analytes. The sample was reanalyzed with the similar results. This is likely due to sample heterogeneity.



Bureau Veritas Job #: C3B7276
Report Date: 2023/04/27

B.I.G Consulting Inc.
Client Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD, OAKVILLE
Sampler Initials: MM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

A handwritten signature in cursive script that reads 'Cristina Carriere'.

Cristina Carriere, Senior Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by {0}, {1} responsible for {2} {3} laboratory operations.



BUREAU
VERITAS

Bureau Veritas Job #: C3B7276

Report Date: 2023/04/27

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

Exceedance Summary Table – Reg153/04 T2-Soil/Res-C
Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
No Exceedances						
The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.						



Your Project #: BIGC-ENV-554E
 Site Location: 590 ARGUS ROAD, OAKVILLE
 Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
 12-5500 Tomken Road
 Mississauga, ON
 CANADA L4W 2Z4

Report Date: 2023/04/27
 Report #: R7605279
 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3B7280

Received: 2023/04/26, 13:57

Sample Matrix: Soil
 # Samples Received: 1

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Petroleum Hydro. CCME F1 & BTEX in Soil (1)	1	N/A	2023/04/27	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (2)	1	2023/04/26	2023/04/27	CAM SOP-00316	CCME CWS m
Moisture	1	N/A	2023/04/26	CAM SOP-00445	Carter 2nd ed 51.2 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

- (1) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.
- (2) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.



Your Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD, OAKVILLE
Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
12-5500 Tomken Road
Mississauga, ON
CANADA L4W 2Z4

Report Date: 2023/04/27
Report #: R7605279
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3B7280

Received: 2023/04/26, 13:57

Encryption Key



Bureau Veritas
27 Apr 2023 16:20:57

Please direct all questions regarding this Certificate of Analysis to:
Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843

=====

This report has been generated and distributed using a secure automated process. Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

Bureau Veritas ID			VQO957		
Sampling Date			2023/04/20 09:50		
COC Number			n/a		
	UNITS	Criteria	BH204-SS2	RDL	QC Batch
BTEX & F1 Hydrocarbons					
Benzene	ug/g	0.21	ND	0.020	8630765
Toluene	ug/g	2.3	ND	0.020	8630765
Ethylbenzene	ug/g	1.1	ND	0.020	8630765
o-Xylene	ug/g	-	ND	0.020	8630765
p+m-Xylene	ug/g	-	ND	0.040	8630765
Total Xylenes	ug/g	3.1	ND	0.040	8630765
F1 (C6-C10)	ug/g	55	ND	10	8630765
F1 (C6-C10) - BTEX	ug/g	55	ND	10	8630765
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/g	98	370	10	8631444
F3 (C16-C34 Hydrocarbons)	ug/g	300	390	50	8631444
F4 (C34-C50 Hydrocarbons)	ug/g	2800	ND	50	8631444
Reached Baseline at C50	ug/g	-	Yes		8631444
Surrogate Recovery (%)					
1,4-Difluorobenzene	%	-	91		8630765
4-Bromofluorobenzene	%	-	106		8630765
D10-o-Xylene	%	-	89		8630765
D4-1,2-Dichloroethane	%	-	95		8630765
o-Terphenyl	%	-	102		8631444
No Fill	No Exceedance				
Grey	Exceeds 1 criteria policy/level				
Black	Exceeds both criteria/levels				
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)					
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition					
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil					
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.					



Bureau Veritas Job #: C3B7280
 Report Date: 2023/04/27

B.I.G Consulting Inc.
 Client Project #: BIGC-ENV-554E
 Site Location: 590 ARGUS ROAD, OAKVILLE
 Sampler Initials: MM

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		VQO957		
Sampling Date		2023/04/20 09:50		
COC Number		n/a		
	UNITS	BH204-SS2	RDL	QC Batch
Inorganics				
Moisture	%	13	1.0	8630462
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				



BUREAU
VERITAS

Bureau Veritas Job #: C3B7280
Report Date: 2023/04/27

B.I.G Consulting Inc.
Client Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD, OAKVILLE
Sampler Initials: MM

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.3°C
-----------	-------

Sample VQO957 [BH204-SS2] : F1 BTEX analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency

Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C3B7280

Report Date: 2023/04/27

QUALITY ASSURANCE REPORT

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8630765	1,4-Difluorobenzene	2023/04/27	88	60 - 140	89	60 - 140	90	%		
8630765	4-Bromofluorobenzene	2023/04/27	106	60 - 140	106	60 - 140	104	%		
8630765	D10-o-Xylene	2023/04/27	89	60 - 140	80	60 - 140	85	%		
8630765	D4-1,2-Dichloroethane	2023/04/27	92	60 - 140	94	60 - 140	95	%		
8631444	o-Terphenyl	2023/04/27	101	60 - 130	99	60 - 130	101	%		
8630462	Moisture	2023/04/26							0.61	20
8630765	Benzene	2023/04/27	82	50 - 140	75	50 - 140	ND, RDL=0.020	ug/g	NC	50
8630765	Ethylbenzene	2023/04/27	92	50 - 140	83	50 - 140	ND, RDL=0.020	ug/g	NC	50
8630765	F1 (C6-C10) - BTEX	2023/04/27					ND, RDL=10	ug/g	NC	30
8630765	F1 (C6-C10)	2023/04/27	87	60 - 140	95	80 - 120	ND, RDL=10	ug/g	NC	30
8630765	o-Xylene	2023/04/27	90	50 - 140	82	50 - 140	ND, RDL=0.020	ug/g	NC	50
8630765	p+m-Xylene	2023/04/27	87	50 - 140	79	50 - 140	ND, RDL=0.040	ug/g	NC	50
8630765	Toluene	2023/04/27	79	50 - 140	73	50 - 140	ND, RDL=0.020	ug/g	7.9	50
8630765	Total Xylenes	2023/04/27					ND, RDL=0.040	ug/g	NC	50
8631444	F2 (C10-C16 Hydrocarbons)	2023/04/27	105	60 - 130	108	80 - 120	ND, RDL=10	ug/g	2.6	30
8631444	F3 (C16-C34 Hydrocarbons)	2023/04/27	112	60 - 130	115	80 - 120	ND, RDL=50	ug/g	44 (1)	30
8631444	F4 (C34-C50 Hydrocarbons)	2023/04/27	108	60 - 130	115	80 - 120	ND, RDL=50	ug/g	NC	30

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Duplicate results exceeded RPD acceptance criteria for flagged analytes. The sample was reanalyzed with the similar results. This is likely due to sample heterogeneity.



BUREAU
VERITAS

Bureau Veritas Job #: C3B7280

Report Date: 2023/04/27

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Anastassia Hamanov, Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by {0}, {1} responsible for {2} {3} laboratory operations.



BUREAU
VERITAS

Bureau Veritas Job #: C3B7280

Report Date: 2023/04/27

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

Exceedance Summary Table – Reg153/04 T2-Soil/Res-C
Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
BH204-SS2	VQO957-01	F2 (C10-C16 Hydrocarbons)	98	370	10	ug/g
BH204-SS2	VQO957-01	F3 (C16-C34 Hydrocarbons)	300	390	50	ug/g

The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.



Your Project #: BIGC-ENV-554E
 Site Location: 590 ARGUS ROAD, OAKVILLE
 Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
 12-5500 Tomken Road
 Mississauga, ON
 CANADA L4W 2Z4

Report Date: 2023/05/01
 Report #: R7609470
 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3B7293

Received: 2023/04/26, 13:57

Sample Matrix: Soil
 # Samples Received: 1

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Moisture	1	N/A	2023/04/27	CAM SOP-00445	Carter 2nd ed 51.2 m
Polychlorinated Biphenyl in Soil	1	2023/04/27	2023/04/28	CAM SOP-00309	EPA 8082A m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested. This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.



Your Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD, OAKVILLE
Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
12-5500 Tomken Road
Mississauga, ON
CANADA L4W 2Z4

Report Date: 2023/05/01
Report #: R7609470
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3B7293

Received: 2023/04/26, 13:57

Encryption Key



Bureau Veritas
01 May 2023 11:59:49

Please direct all questions regarding this Certificate of Analysis to:
Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843

=====
This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



O.REG 153 PCBS (SOIL)

Bureau Veritas ID			VQP000		
Sampling Date			2023/04/20 10:30		
COC Number			n/a		
	UNITS	Criteria	BH208-SS1	RDL	QC Batch
PCBs					
Aroclor 1242	ug/g	-	ND	0.010	8634056
Aroclor 1248	ug/g	-	ND	0.010	8634056
Aroclor 1254	ug/g	-	ND	0.010	8634056
Aroclor 1260	ug/g	-	ND	0.010	8634056
Total PCB	ug/g	0.35	ND	0.010	8634056
Surrogate Recovery (%)					
Decachlorobiphenyl	%	-	98		8634056
No Fill	No Exceedance				
Grey	Exceeds 1 criteria policy/level				
Black	Exceeds both criteria/levels				
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)					
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition					
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil					
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.					



Bureau Veritas Job #: C3B7293
 Report Date: 2023/05/01

B.I.G Consulting Inc.
 Client Project #: BIGC-ENV-554E
 Site Location: 590 ARGUS ROAD, OAKVILLE
 Sampler Initials: MM

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		VQP000		
Sampling Date		2023/04/20 10:30		
COC Number		n/a		
	UNITS	BH208-SS1	RDL	QC Batch
Inorganics				
Moisture	%	13	1.0	8633864
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				



BUREAU
VERITAS

Bureau Veritas Job #: C3B7293

Report Date: 2023/05/01

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.3°C
-----------	-------

Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C3B7293

Report Date: 2023/05/01

QUALITY ASSURANCE REPORT

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8634056	Decachlorobiphenyl	2023/04/28	122	60 - 130	85	60 - 130	92	%		
8633864	Moisture	2023/04/27							1.7	20
8634056	Aroclor 1242	2023/04/28					ND, RDL=0.010	ug/g	NC	50
8634056	Aroclor 1248	2023/04/28					ND, RDL=0.010	ug/g	NC	50
8634056	Aroclor 1254	2023/04/28					ND, RDL=0.010	ug/g	NC	50
8634056	Aroclor 1260	2023/04/28	NC (1)	30 - 130	96	30 - 130	ND, RDL=0.010	ug/g	5.2	50
8634056	Total PCB	2023/04/28	NC (1)	30 - 130	96	30 - 130	ND, RDL=0.010	ug/g	5.2	50

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) The recovery in the matrix spike was not calculated (NC) due to background interference.



BUREAU
VERITAS

Bureau Veritas Job #: C3B7293
Report Date: 2023/05/01

B.I.G Consulting Inc.
Client Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD, OAKVILLE
Sampler Initials: MM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Anastassia Hamanov, Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by {0}, {1} responsible for {2} {3} laboratory operations.



**BUREAU
VERITAS**

Bureau Veritas Job #: C3B7293

Report Date: 2023/05/01

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

**Exceedance Summary Table – Reg153/04 T2-Soil/Res-C
Result Exceedances**

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
No Exceedances						
The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.						



Your Project #: BIGC-ENV-554E
 Site Location: 590 ARGUS ROAD, OAKVILLE
 Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
 12-5500 Tomken Road
 Mississauga, ON
 CANADA L4W 2Z4

Report Date: 2023/05/01
 Report #: R7609608
 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3B7301

Received: 2023/04/26, 13:57

Sample Matrix: Soil
 # Samples Received: 1

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Moisture	1	N/A	2023/04/27	CAM SOP-00445	Carter 2nd ed 51.2 m
Polychlorinated Biphenyl in Soil	1	2023/04/28	2023/04/28	CAM SOP-00309	EPA 8082A m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested. This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.



Your Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD, OAKVILLE
Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
12-5500 Tomken Road
Mississauga, ON
CANADA L4W 2Z4

Report Date: 2023/05/01
Report #: R7609608
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3B7301

Received: 2023/04/26, 13:57

Encryption Key



Bureau Veritas
01 May 2023 13:21:42

Please direct all questions regarding this Certificate of Analysis to:
Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843

=====

This report has been generated and distributed using a secure automated process. Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



O.REG 153 PCBS (SOIL)

Bureau Veritas ID			VQP030		
Sampling Date			2023/04/20 10:30		
COC Number			n/a		
	UNITS	Criteria	DUP20801	RDL	QC Batch
PCBs					
Aroclor 1242	ug/g	-	ND	0.010	8634295
Aroclor 1248	ug/g	-	ND	0.010	8634295
Aroclor 1254	ug/g	-	ND	0.010	8634295
Aroclor 1260	ug/g	-	ND	0.010	8634295
Total PCB	ug/g	0.35	ND	0.010	8634295
Surrogate Recovery (%)					
Decachlorobiphenyl	%	-	123		8634295
No Fill	No Exceedance				
Grey	Exceeds 1 criteria policy/level				
Black	Exceeds both criteria/levels				
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)					
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition					
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil					
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.					



Bureau Veritas Job #: C3B7301
 Report Date: 2023/05/01

B.I.G Consulting Inc.
 Client Project #: BIGC-ENV-554E
 Site Location: 590 ARGUS ROAD, OAKVILLE
 Sampler Initials: MM

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		VQP030		
Sampling Date		2023/04/20 10:30		
COC Number		n/a		
	UNITS	DUP20801	RDL	QC Batch
Inorganics				
Moisture	%	13	1.0	8633649
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				



BUREAU
VERITAS

Bureau Veritas Job #: C3B7301

Report Date: 2023/05/01

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.3°C
-----------	-------

Results relate only to the items tested.



Your Project #: BIGC-ENV-554E
 Site Location: 590 ARGUS ROAD, OAKVILLE
 Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
 12-5500 Tomken Road
 Mississauga, ON
 CANADA L4W 2Z4

Report Date: 2023/05/01
 Report #: R7609807
 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3B7304

Received: 2023/04/26, 13:57

Sample Matrix: Soil
 # Samples Received: 1

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Acid Extractable Metals by ICPMS	1	2023/04/29	2023/05/01	CAM SOP-00447	EPA 6020B m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.



Your Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD, OAKVILLE
Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
12-5500 Tomken Road
Mississauga, ON
CANADA L4W 2Z4

Report Date: 2023/05/01
Report #: R7609807
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3B7304

Received: 2023/04/26, 13:57

Encryption Key



Bureau Veritas
01 May 2023 15:04:11

Please direct all questions regarding this Certificate of Analysis to:
Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843

=====

This report has been generated and distributed using a secure automated process. Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



O.REG 153 ICPMS METALS (SOIL)

Bureau Veritas ID			VQP039		
Sampling Date			2023/04/20 10:50		
COC Number			n/a		
	UNITS	Criteria	BH209-SS1	RDL	QC Batch
Metals					
Acid Extractable Antimony (Sb)	ug/g	7.5	0.29	0.20	8637058
Acid Extractable Arsenic (As)	ug/g	18	5.9	1.0	8637058
Acid Extractable Barium (Ba)	ug/g	390	76	0.50	8637058
Acid Extractable Beryllium (Be)	ug/g	4	0.79	0.20	8637058
Acid Extractable Boron (B)	ug/g	120	6.7	5.0	8637058
Acid Extractable Cadmium (Cd)	ug/g	1.2	ND	0.10	8637058
Acid Extractable Chromium (Cr)	ug/g	160	20	1.0	8637058
Acid Extractable Cobalt (Co)	ug/g	22	9.9	0.10	8637058
Acid Extractable Copper (Cu)	ug/g	140	190	0.50	8637058
Acid Extractable Lead (Pb)	ug/g	120	13	1.0	8637058
Acid Extractable Molybdenum (Mo)	ug/g	6.9	0.89	0.50	8637058
Acid Extractable Nickel (Ni)	ug/g	100	22	0.50	8637058
Acid Extractable Selenium (Se)	ug/g	2.4	ND	0.50	8637058
Acid Extractable Silver (Ag)	ug/g	20	ND	0.20	8637058
Acid Extractable Thallium (Tl)	ug/g	1	0.089	0.050	8637058
Acid Extractable Uranium (U)	ug/g	23	0.71	0.050	8637058
Acid Extractable Vanadium (V)	ug/g	86	32	5.0	8637058
Acid Extractable Zinc (Zn)	ug/g	340	62	5.0	8637058
No Fill	No Exceedance				
Grey	Exceeds 1 criteria policy/level				
Black	Exceeds both criteria/levels				
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)					
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition					
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil					
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.					



BUREAU
VERITAS

Bureau Veritas Job #: C3B7304

Report Date: 2023/05/01

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.3°C
-----------	-------

Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C3B7304

Report Date: 2023/05/01

QUALITY ASSURANCE REPORT

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8637058	Acid Extractable Antimony (Sb)	2023/05/01	93	75 - 125	100	80 - 120	ND, RDL=0.20	ug/g	2.2	30
8637058	Acid Extractable Arsenic (As)	2023/05/01	100	75 - 125	103	80 - 120	ND, RDL=1.0	ug/g	1.9	30
8637058	Acid Extractable Barium (Ba)	2023/05/01	NC	75 - 125	100	80 - 120	ND, RDL=0.50	ug/g	2.1	30
8637058	Acid Extractable Beryllium (Be)	2023/05/01	97	75 - 125	98	80 - 120	ND, RDL=0.20	ug/g	1.1	30
8637058	Acid Extractable Boron (B)	2023/05/01	88	75 - 125	97	80 - 120	ND, RDL=5.0	ug/g	3.1	30
8637058	Acid Extractable Cadmium (Cd)	2023/05/01	94	75 - 125	96	80 - 120	ND, RDL=0.10	ug/g	1.3	30
8637058	Acid Extractable Chromium (Cr)	2023/05/01	NC	75 - 125	99	80 - 120	ND, RDL=1.0	ug/g	6.7	30
8637058	Acid Extractable Cobalt (Co)	2023/05/01	96	75 - 125	99	80 - 120	ND, RDL=0.10	ug/g	3.9	30
8637058	Acid Extractable Copper (Cu)	2023/05/01	NC	75 - 125	100	80 - 120	ND, RDL=0.50	ug/g	0.71	30
8637058	Acid Extractable Lead (Pb)	2023/05/01	NC	75 - 125	100	80 - 120	ND, RDL=1.0	ug/g	0.53	30
8637058	Acid Extractable Molybdenum (Mo)	2023/05/01	99	75 - 125	98	80 - 120	ND, RDL=0.50	ug/g	2.0	30
8637058	Acid Extractable Nickel (Ni)	2023/05/01	94	75 - 125	101	80 - 120	ND, RDL=0.50	ug/g	5.2	30
8637058	Acid Extractable Selenium (Se)	2023/05/01	94	75 - 125	99	80 - 120	ND, RDL=0.50	ug/g	3.2	30
8637058	Acid Extractable Silver (Ag)	2023/05/01	97	75 - 125	96	80 - 120	ND, RDL=0.20	ug/g	1.7	30
8637058	Acid Extractable Thallium (Tl)	2023/05/01	94	75 - 125	102	80 - 120	ND, RDL=0.050	ug/g	0.60	30
8637058	Acid Extractable Uranium (U)	2023/05/01	95	75 - 125	96	80 - 120	ND, RDL=0.050	ug/g	2.5	30
8637058	Acid Extractable Vanadium (V)	2023/05/01	NC	75 - 125	97	80 - 120	ND, RDL=5.0	ug/g	1.9	30
8637058	Acid Extractable Zinc (Zn)	2023/05/01	NC	75 - 125	97	80 - 120	ND, RDL=5.0	ug/g	3.1	30

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)



Bureau Veritas Job #: C3B7304
Report Date: 2023/05/01

B.I.G Consulting Inc.
Client Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD, OAKVILLE
Sampler Initials: MM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

A handwritten signature in black ink that reads "Cristina Carriere".

Cristina Carriere, Senior Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by {0}, {1} responsible for {2} {3} laboratory operations.



BUREAU
VERITAS

Bureau Veritas Job #: C3B7304

Report Date: 2023/05/01

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

Exceedance Summary Table – Reg153/04 T2-Soil/Res-C
Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
BH209-SS1	VQP039-01	Acid Extractable Copper (Cu)	140	190	0.50	ug/g
The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.						



Your Project #: BIGC-ENV-554E
 Site Location: 590 ARGUS ROAD,OAKVILLE
 Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
 12-5500 Tomken Road
 Mississauga, ON
 CANADA L4W 2Z4

Report Date: 2023/05/02
 Report #: R7611084
 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3B7310

Received: 2023/04/26, 13:57

Sample Matrix: Soil
 # Samples Received: 1

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Acid Extractable Metals by ICPMS	1	2023/04/29	2023/05/01	CAM SOP-00447	EPA 6020B m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.



Your Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD,OAKVILLE
Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
12-5500 Tomken Road
Mississauga, ON
CANADA L4W 2Z4

Report Date: 2023/05/02
Report #: R7611084
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3B7310

Received: 2023/04/26, 13:57

Encryption Key



Bureau Veritas
02 May 2023 10:24:21

Please direct all questions regarding this Certificate of Analysis to:
Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843

=====
This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



O.REG 153 ICPMS METALS (SOIL)

Bureau Veritas ID			VQP061		
Sampling Date			2023/04/20 10:20		
COC Number			n/a		
	UNITS	Criteria	BH207-SS1	RDL	QC Batch
Metals					
Acid Extractable Antimony (Sb)	ug/g	7.5	0.26	0.20	8637943
Acid Extractable Arsenic (As)	ug/g	18	6.5	1.0	8637943
Acid Extractable Barium (Ba)	ug/g	390	76	0.50	8637943
Acid Extractable Beryllium (Be)	ug/g	4	0.50	0.20	8637943
Acid Extractable Boron (B)	ug/g	120	12	5.0	8637943
Acid Extractable Cadmium (Cd)	ug/g	1.2	0.20	0.10	8637943
Acid Extractable Chromium (Cr)	ug/g	160	14	1.0	8637943
Acid Extractable Cobalt (Co)	ug/g	22	9.0	0.10	8637943
Acid Extractable Copper (Cu)	ug/g	140	32	0.50	8637943
Acid Extractable Lead (Pb)	ug/g	120	16	1.0	8637943
Acid Extractable Molybdenum (Mo)	ug/g	6.9	0.87	0.50	8637943
Acid Extractable Nickel (Ni)	ug/g	100	18	0.50	8637943
Acid Extractable Selenium (Se)	ug/g	2.4	ND	0.50	8637943
Acid Extractable Silver (Ag)	ug/g	20	ND	0.20	8637943
Acid Extractable Thallium (Tl)	ug/g	1	0.11	0.050	8637943
Acid Extractable Uranium (U)	ug/g	23	0.51	0.050	8637943
Acid Extractable Vanadium (V)	ug/g	86	23	5.0	8637943
Acid Extractable Zinc (Zn)	ug/g	340	70	5.0	8637943
No Fill	No Exceedance				
Grey	Exceeds 1 criteria policy/level				
Black	Exceeds both criteria/levels				
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)					
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition					
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil					
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.					



BUREAU
VERITAS

Bureau Veritas Job #: C3B7310

Report Date: 2023/05/02

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.3°C
-----------	-------

Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C3B7310

Report Date: 2023/05/02

QUALITY ASSURANCE REPORT

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8637943	Acid Extractable Antimony (Sb)	2023/05/01	84	75 - 125	96	80 - 120	ND, RDL=0.20	ug/g	NC	30
8637943	Acid Extractable Arsenic (As)	2023/05/01	104	75 - 125	100	80 - 120	ND, RDL=1.0	ug/g	1.2	30
8637943	Acid Extractable Barium (Ba)	2023/05/01	NC	75 - 125	95	80 - 120	ND, RDL=0.50	ug/g	1.5	30
8637943	Acid Extractable Beryllium (Be)	2023/05/01	104	75 - 125	96	80 - 120	ND, RDL=0.20	ug/g	0.46	30
8637943	Acid Extractable Boron (B)	2023/05/01	99	75 - 125	94	80 - 120	ND, RDL=5.0	ug/g	5.9	30
8637943	Acid Extractable Cadmium (Cd)	2023/05/01	103	75 - 125	97	80 - 120	ND, RDL=0.10	ug/g	23	30
8637943	Acid Extractable Chromium (Cr)	2023/05/01	NC	75 - 125	97	80 - 120	ND, RDL=1.0	ug/g	3.0	30
8637943	Acid Extractable Cobalt (Co)	2023/05/01	108	75 - 125	97	80 - 120	ND, RDL=0.10	ug/g	0.58	30
8637943	Acid Extractable Copper (Cu)	2023/05/01	102	75 - 125	98	80 - 120	ND, RDL=0.50	ug/g	1.3	30
8637943	Acid Extractable Lead (Pb)	2023/05/01	106	75 - 125	97	80 - 120	ND, RDL=1.0	ug/g	7.0	30
8637943	Acid Extractable Molybdenum (Mo)	2023/05/01	106	75 - 125	100	80 - 120	ND, RDL=0.50	ug/g	NC	30
8637943	Acid Extractable Nickel (Ni)	2023/05/01	103	75 - 125	99	80 - 120	ND, RDL=0.50	ug/g	0.37	30
8637943	Acid Extractable Selenium (Se)	2023/05/01	106	75 - 125	100	80 - 120	ND, RDL=0.50	ug/g	NC	30
8637943	Acid Extractable Silver (Ag)	2023/05/01	104	75 - 125	99	80 - 120	ND, RDL=0.20	ug/g	NC	30
8637943	Acid Extractable Thallium (Tl)	2023/05/01	104	75 - 125	98	80 - 120	ND, RDL=0.050	ug/g	8.2	30
8637943	Acid Extractable Uranium (U)	2023/05/01	103	75 - 125	95	80 - 120	ND, RDL=0.050	ug/g	8.0	30
8637943	Acid Extractable Vanadium (V)	2023/05/01	NC	75 - 125	97	80 - 120	ND, RDL=5.0	ug/g	1.2	30
8637943	Acid Extractable Zinc (Zn)	2023/05/01	NC	75 - 125	98	80 - 120	ND, RDL=5.0	ug/g	1.1	30

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).



BUREAU
VERITAS

Bureau Veritas Job #: C3B7310
Report Date: 2023/05/02

B.I.G Consulting Inc.
Client Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD,OAKVILLE
Sampler Initials: MM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Cristina Carriere

Cristina Carriere, Senior Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by {0}, {1} responsible for {2} {3} laboratory operations.



BUREAU
VERITAS

Bureau Veritas Job #: C3B7310

Report Date: 2023/05/02

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD,OAKVILLE

Sampler Initials: MM

Exceedance Summary Table – Reg153/04 T2-Soil/Res-C
Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
No Exceedances						
The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.						



Your Project #: BIGC-ENV-554E
 Site Location: 590 ARGUS ROAD, OAKVILLE
 Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
 12-5500 Tomken Road
 Mississauga, ON
 CANADA L4W 2Z4

Report Date: 2023/05/01
 Report #: R7610149
 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3B7314

Received: 2023/04/26, 13:57

Sample Matrix: Soil
 # Samples Received: 1

Analyses	Quantity	Date		Laboratory Method	Analytical Method
		Extracted	Analyzed		
Methylnaphthalene Sum	1	N/A	2023/05/01	CAM SOP-00301	EPA 8270D m
Moisture	1	N/A	2023/04/28	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM)	1	2023/04/28	2023/04/29	CAM SOP-00318	EPA 8270E

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.



Your Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD, OAKVILLE
Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
12-5500 Tomken Road
Mississauga, ON
CANADA L4W 2Z4

Report Date: 2023/05/01
Report #: R7610149
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3B7314

Received: 2023/04/26, 13:57

Encryption Key



Bureau Veritas
01 May 2023 16:46:25

Please direct all questions regarding this Certificate of Analysis to:
Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843

=====

This report has been generated and distributed using a secure automated process. Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



O.REG 153 PAHS (SOIL)

Bureau Veritas ID			VQP092		
Sampling Date			2023/04/20 09:00		
COC Number			n/a		
	UNITS	Criteria	BH201-SS1	RDL	QC Batch
Calculated Parameters					
Methylnaphthalene, 2-(1-)	ug/g	-	ND	0.0071	8629172
Polyaromatic Hydrocarbons					
Acenaphthene	ug/g	7.9	ND	0.0050	8635309
Acenaphthylene	ug/g	0.15	ND	0.0050	8635309
Anthracene	ug/g	0.67	ND	0.0050	8635309
Benzo(a)anthracene	ug/g	0.5	ND	0.0050	8635309
Benzo(a)pyrene	ug/g	0.3	ND	0.0050	8635309
Benzo(b/j)fluoranthene	ug/g	0.78	ND	0.0050	8635309
Benzo(g,h,i)perylene	ug/g	6.6	ND	0.0050	8635309
Benzo(k)fluoranthene	ug/g	0.78	ND	0.0050	8635309
Chrysene	ug/g	7	ND	0.0050	8635309
Dibenzo(a,h)anthracene	ug/g	0.1	ND	0.0050	8635309
Fluoranthene	ug/g	0.69	ND	0.0050	8635309
Fluorene	ug/g	62	ND	0.0050	8635309
Indeno(1,2,3-cd)pyrene	ug/g	0.38	ND	0.0050	8635309
1-Methylnaphthalene	ug/g	0.99	ND	0.0050	8635309
2-Methylnaphthalene	ug/g	0.99	ND	0.0050	8635309
Naphthalene	ug/g	0.6	ND	0.0050	8635309
Phenanthrene	ug/g	6.2	ND	0.0050	8635309
Pyrene	ug/g	78	ND	0.0050	8635309
Surrogate Recovery (%)					
D10-Anthracene	%	-	88		8635309
D14-Terphenyl (FS)	%	-	90		8635309
D8-Acenaphthylene	%	-	88		8635309
No Fill	No Exceedance				
Grey	Exceeds 1 criteria policy/level				
Black	Exceeds both criteria/levels				
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)					
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition					
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil					
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.					



Bureau Veritas Job #: C3B7314
 Report Date: 2023/05/01

B.I.G Consulting Inc.
 Client Project #: BIGC-ENV-554E
 Site Location: 590 ARGUS ROAD, OAKVILLE
 Sampler Initials: MM

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		VQP092		
Sampling Date		2023/04/20 09:00		
COC Number		n/a		
	UNITS	BH201-SS1	RDL	QC Batch
Inorganics				
Moisture	%	13	1.0	8634669
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				



Bureau Veritas Job #: C3B7314
Report Date: 2023/05/01

B.I.G Consulting Inc.
Client Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD, OAKVILLE
Sampler Initials: MM

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.3°C
-----------	-------

Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C3B7314

Report Date: 2023/05/01

QUALITY ASSURANCE REPORT

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8635309	D10-Anthracene	2023/04/29	89	50 - 130	98	50 - 130	97	%		
8635309	D14-Terphenyl (FS)	2023/04/29	92	50 - 130	111	50 - 130	103	%		
8635309	D8-Acenaphthylene	2023/04/29	82	50 - 130	92	50 - 130	90	%		
8634669	Moisture	2023/04/28							1.8	20
8635309	1-Methylnaphthalene	2023/04/29	102	50 - 130	105	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8635309	2-Methylnaphthalene	2023/04/29	91	50 - 130	94	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8635309	Acenaphthene	2023/04/29	94	50 - 130	94	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8635309	Acenaphthylene	2023/04/29	96	50 - 130	95	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8635309	Anthracene	2023/04/29	103	50 - 130	104	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8635309	Benzo(a)anthracene	2023/04/29	101	50 - 130	101	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8635309	Benzo(a)pyrene	2023/04/29	99	50 - 130	101	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8635309	Benzo(b/j)fluoranthene	2023/04/29	105	50 - 130	111	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8635309	Benzo(g,h,i)perylene	2023/04/29	103	50 - 130	116	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8635309	Benzo(k)fluoranthene	2023/04/29	102	50 - 130	109	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8635309	Chrysene	2023/04/29	102	50 - 130	106	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8635309	Dibenzo(a,h)anthracene	2023/04/29	113	50 - 130	124	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8635309	Fluoranthene	2023/04/29	100	50 - 130	110	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8635309	Fluorene	2023/04/29	100	50 - 130	92	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8635309	Indeno(1,2,3-cd)pyrene	2023/04/29	103	50 - 130	113	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8635309	Naphthalene	2023/04/29	84	50 - 130	93	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8635309	Phenanthrene	2023/04/29	99	50 - 130	101	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8635309	Pyrene	2023/04/29	104	50 - 130	115	50 - 130	ND, RDL=0.0050	ug/g	NC	40

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).



Bureau Veritas Job #: C3B7314
Report Date: 2023/05/01

B.I.G Consulting Inc.
Client Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD, OAKVILLE
Sampler Initials: MM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

A handwritten signature in cursive script that reads 'Cristina Carriere'.

Cristina Carriere, Senior Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by {0}, {1} responsible for {2} {3} laboratory operations.



BUREAU
VERITAS

Bureau Veritas Job #: C3B7314

Report Date: 2023/05/01

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

Exceedance Summary Table – Reg153/04 T2-Soil/Res-C
Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
No Exceedances						
The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.						



Your Project #: BIGC-ENV-554E
 Site Location: 590 ARGUS ROAD,OAKVILLE
 Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
 12-5500 Tomken Road
 Mississauga, ON
 CANADA L4W 2Z4

Report Date: 2023/05/01
 Report #: R7610532
 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3B7320

Received: 2023/04/26, 13:57

Sample Matrix: Soil
 # Samples Received: 1

Analyses	Quantity	Date		Laboratory Method	Analytical Method
		Extracted	Analyzed		
Methylnaphthalene Sum	1	N/A	2023/05/01	CAM SOP-00301	EPA 8270D m
Moisture	1	N/A	2023/04/27	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM)	1	2023/04/29	2023/04/30	CAM SOP-00318	EPA 8270E

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.



Your Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD,OAKVILLE
Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
12-5500 Tomken Road
Mississauga, ON
CANADA L4W 2Z4

Report Date: 2023/05/01
Report #: R7610532
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3B7320

Received: 2023/04/26, 13:57

Encryption Key



Bureau Veritas
01 May 2023 18:55:25

Please direct all questions regarding this Certificate of Analysis to:
Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843

=====
This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



BUREAU
VERITAS

Bureau Veritas Job #: C3B7320
Report Date: 2023/05/01

B.I.G Consulting Inc.
Client Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD,OAKVILLE
Sampler Initials: MM

O.REG 153 PAHS (SOIL)

Bureau Veritas ID			VQP118		
Sampling Date			2023/04/20 09:00		
COC Number			n/a		
	UNITS	Criteria	DUP20101	RDL	QC Batch
Calculated Parameters					
Methylnaphthalene, 2-(1-)	ug/g	-	ND	0.0071	8630529
Polyaromatic Hydrocarbons					
Acenaphthene	ug/g	7.9	ND	0.0050	8636718
Acenaphthylene	ug/g	0.15	ND	0.0050	8636718
Anthracene	ug/g	0.67	ND	0.0050	8636718
Benzo(a)anthracene	ug/g	0.5	ND	0.0050	8636718
Benzo(a)pyrene	ug/g	0.3	ND	0.0050	8636718
Benzo(b/j)fluoranthene	ug/g	0.78	ND	0.0050	8636718
Benzo(g,h,i)perylene	ug/g	6.6	ND	0.0050	8636718
Benzo(k)fluoranthene	ug/g	0.78	ND	0.0050	8636718
Chrysene	ug/g	7	ND	0.0050	8636718
Dibenzo(a,h)anthracene	ug/g	0.1	ND	0.0050	8636718
Fluoranthene	ug/g	0.69	ND	0.0050	8636718
Fluorene	ug/g	62	ND	0.0050	8636718
Indeno(1,2,3-cd)pyrene	ug/g	0.38	ND	0.0050	8636718
1-Methylnaphthalene	ug/g	0.99	ND	0.0050	8636718
2-Methylnaphthalene	ug/g	0.99	ND	0.0050	8636718
Naphthalene	ug/g	0.6	ND	0.0050	8636718
Phenanthrene	ug/g	6.2	ND	0.0050	8636718
Pyrene	ug/g	78	ND	0.0050	8636718
Surrogate Recovery (%)					
D10-Anthracene	%	-	113		8636718
D14-Terphenyl (FS)	%	-	109		8636718
D8-Acenaphthylene	%	-	96		8636718
No Fill	No Exceedance				
Grey	Exceeds 1 criteria policy/level				
Black	Exceeds both criteria/levels				
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)					
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition					
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil					
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.					



Bureau Veritas Job #: C3B7320
 Report Date: 2023/05/01

B.I.G Consulting Inc.
 Client Project #: BIGC-ENV-554E
 Site Location: 590 ARGUS ROAD,OAKVILLE
 Sampler Initials: MM

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		VQP118		
Sampling Date		2023/04/20 09:00		
COC Number		n/a		
	UNITS	DUP20101	RDL	QC Batch
Inorganics				
Moisture	%	12	1.0	8633649
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				



Bureau Veritas Job #: C3B7320
Report Date: 2023/05/01

B.I.G Consulting Inc.
Client Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD,OAKVILLE
Sampler Initials: MM

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.3°C
-----------	-------

Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C3B7320

Report Date: 2023/05/01

QUALITY ASSURANCE REPORT

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8636718	D10-Anthracene	2023/04/30	85	50 - 130	114	50 - 130	114	%		
8636718	D14-Terphenyl (FS)	2023/04/30	95	50 - 130	106	50 - 130	105	%		
8636718	D8-Acenaphthylene	2023/04/30	87	50 - 130	98	50 - 130	94	%		
8633649	Moisture	2023/04/27							1.3	20
8636718	1-Methylnaphthalene	2023/04/30	99	50 - 130	111	50 - 130	ND, RDL=0.0050	ug/g	19	40
8636718	2-Methylnaphthalene	2023/04/30	91	50 - 130	101	50 - 130	ND, RDL=0.0050	ug/g	27	40
8636718	Acenaphthene	2023/04/30	86	50 - 130	102	50 - 130	ND, RDL=0.0050	ug/g	7.2	40
8636718	Acenaphthylene	2023/04/30	97	50 - 130	101	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8636718	Anthracene	2023/04/30	94	50 - 130	109	50 - 130	ND, RDL=0.0050	ug/g	16	40
8636718	Benzo(a)anthracene	2023/04/30	77	50 - 130	99	50 - 130	ND, RDL=0.0050	ug/g	5.1	40
8636718	Benzo(a)pyrene	2023/04/30	64	50 - 130	98	50 - 130	ND, RDL=0.0050	ug/g	0.15	40
8636718	Benzo(b/j)fluoranthene	2023/04/30	73	50 - 130	98	50 - 130	ND, RDL=0.0050	ug/g	1.5	40
8636718	Benzo(g,h,i)perylene	2023/04/30	60	50 - 130	99	50 - 130	ND, RDL=0.0050	ug/g	2.8	40
8636718	Benzo(k)fluoranthene	2023/04/30	72	50 - 130	91	50 - 130	ND, RDL=0.0050	ug/g	2.3	40
8636718	Chrysene	2023/04/30	74	50 - 130	102	50 - 130	ND, RDL=0.0050	ug/g	4.7	40
8636718	Dibenzo(a,h)anthracene	2023/04/30	76	50 - 130	93	50 - 130	ND, RDL=0.0050	ug/g	7.2	40
8636718	Fluoranthene	2023/04/30	73	50 - 130	104	50 - 130	ND, RDL=0.0050	ug/g	6.8	40
8636718	Fluorene	2023/04/30	88	50 - 130	98	50 - 130	ND, RDL=0.0050	ug/g	18	40
8636718	Indeno(1,2,3-cd)pyrene	2023/04/30	63	50 - 130	101	50 - 130	ND, RDL=0.0050	ug/g	2.3	40
8636718	Naphthalene	2023/04/30	87	50 - 130	100	50 - 130	ND, RDL=0.0050	ug/g	37	40
8636718	Phenanthrene	2023/04/30	81	50 - 130	101	50 - 130	ND, RDL=0.0050	ug/g	15	40
8636718	Pyrene	2023/04/30	76	50 - 130	104	50 - 130	ND, RDL=0.0050	ug/g	5.6	40

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).



BUREAU
VERITAS

Bureau Veritas Job #: C3B7320
Report Date: 2023/05/01

B.I.G Consulting Inc.
Client Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD,OAKVILLE
Sampler Initials: MM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Anastassia Hamanov, Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by {0}, {1} responsible for {2} {3} laboratory operations.



BUREAU
VERITAS

Bureau Veritas Job #: C3B7320

Report Date: 2023/05/01

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD,OAKVILLE

Sampler Initials: MM

Exceedance Summary Table – Reg153/04 T2-Soil/Res-C
Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
No Exceedances						
The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.						



Your Project #: BIGC-ENV-554E
 Site Location: 590 ARGUS ROAD, OAKVILLE
 Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
 12-5500 Tomken Road
 Mississauga, ON
 CANADA L4W 2Z4

Report Date: 2023/05/01
 Report #: R7609806
 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3B7322

Received: 2023/04/26, 13:57

Sample Matrix: Soil
 # Samples Received: 1

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Acid Extractable Metals by ICPMS	1	2023/04/29	2023/05/01	CAM SOP-00447	EPA 6020B m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.



Your Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD, OAKVILLE
Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
12-5500 Tomken Road
Mississauga, ON
CANADA L4W 2Z4

Report Date: 2023/05/01
Report #: R7609806
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3B7322

Received: 2023/04/26, 13:57

Encryption Key



Bureau Veritas
01 May 2023 15:03:20

Please direct all questions regarding this Certificate of Analysis to:
Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843

=====

This report has been generated and distributed using a secure automated process. Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



O.REG 153 ICPMS METALS (SOIL)

Bureau Veritas ID			VQP127		
Sampling Date			2023/04/20 10:10		
COC Number			n/a		
	UNITS	Criteria	DUP20601	RDL	QC Batch
Metals					
Acid Extractable Antimony (Sb)	ug/g	7.5	0.26	0.20	8637058
Acid Extractable Arsenic (As)	ug/g	18	6.6	1.0	8637058
Acid Extractable Barium (Ba)	ug/g	390	42	0.50	8637058
Acid Extractable Beryllium (Be)	ug/g	4	0.21	0.20	8637058
Acid Extractable Boron (B)	ug/g	120	9.6	5.0	8637058
Acid Extractable Cadmium (Cd)	ug/g	1.2	0.82	0.10	8637058
Acid Extractable Chromium (Cr)	ug/g	160	6.3	1.0	8637058
Acid Extractable Cobalt (Co)	ug/g	22	4.3	0.10	8637058
Acid Extractable Copper (Cu)	ug/g	140	22	0.50	8637058
Acid Extractable Lead (Pb)	ug/g	120	23	1.0	8637058
Acid Extractable Molybdenum (Mo)	ug/g	6.9	0.96	0.50	8637058
Acid Extractable Nickel (Ni)	ug/g	100	8.9	0.50	8637058
Acid Extractable Selenium (Se)	ug/g	2.4	ND	0.50	8637058
Acid Extractable Silver (Ag)	ug/g	20	ND	0.20	8637058
Acid Extractable Thallium (Tl)	ug/g	1	0.080	0.050	8637058
Acid Extractable Uranium (U)	ug/g	23	0.42	0.050	8637058
Acid Extractable Vanadium (V)	ug/g	86	14	5.0	8637058
Acid Extractable Zinc (Zn)	ug/g	340	180	5.0	8637058
No Fill	No Exceedance				
Grey	Exceeds 1 criteria policy/level				
Black	Exceeds both criteria/levels				
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)					
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition					
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil					
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.					



BUREAU
VERITAS

Bureau Veritas Job #: C3B7322

Report Date: 2023/05/01

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.3°C
-----------	-------

Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C3B7322

Report Date: 2023/05/01

QUALITY ASSURANCE REPORT

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8637058	Acid Extractable Antimony (Sb)	2023/05/01	93	75 - 125	100	80 - 120	ND, RDL=0.20	ug/g	2.2	30
8637058	Acid Extractable Arsenic (As)	2023/05/01	100	75 - 125	103	80 - 120	ND, RDL=1.0	ug/g	1.9	30
8637058	Acid Extractable Barium (Ba)	2023/05/01	NC	75 - 125	100	80 - 120	ND, RDL=0.50	ug/g	2.1	30
8637058	Acid Extractable Beryllium (Be)	2023/05/01	97	75 - 125	98	80 - 120	ND, RDL=0.20	ug/g	1.1	30
8637058	Acid Extractable Boron (B)	2023/05/01	88	75 - 125	97	80 - 120	ND, RDL=5.0	ug/g	3.1	30
8637058	Acid Extractable Cadmium (Cd)	2023/05/01	94	75 - 125	96	80 - 120	ND, RDL=0.10	ug/g	1.3	30
8637058	Acid Extractable Chromium (Cr)	2023/05/01	NC	75 - 125	99	80 - 120	ND, RDL=1.0	ug/g	6.7	30
8637058	Acid Extractable Cobalt (Co)	2023/05/01	96	75 - 125	99	80 - 120	ND, RDL=0.10	ug/g	3.9	30
8637058	Acid Extractable Copper (Cu)	2023/05/01	NC	75 - 125	100	80 - 120	ND, RDL=0.50	ug/g	0.71	30
8637058	Acid Extractable Lead (Pb)	2023/05/01	NC	75 - 125	100	80 - 120	ND, RDL=1.0	ug/g	0.53	30
8637058	Acid Extractable Molybdenum (Mo)	2023/05/01	99	75 - 125	98	80 - 120	ND, RDL=0.50	ug/g	2.0	30
8637058	Acid Extractable Nickel (Ni)	2023/05/01	94	75 - 125	101	80 - 120	ND, RDL=0.50	ug/g	5.2	30
8637058	Acid Extractable Selenium (Se)	2023/05/01	94	75 - 125	99	80 - 120	ND, RDL=0.50	ug/g	3.2	30
8637058	Acid Extractable Silver (Ag)	2023/05/01	97	75 - 125	96	80 - 120	ND, RDL=0.20	ug/g	1.7	30
8637058	Acid Extractable Thallium (Tl)	2023/05/01	94	75 - 125	102	80 - 120	ND, RDL=0.050	ug/g	0.60	30
8637058	Acid Extractable Uranium (U)	2023/05/01	95	75 - 125	96	80 - 120	ND, RDL=0.050	ug/g	2.5	30
8637058	Acid Extractable Vanadium (V)	2023/05/01	NC	75 - 125	97	80 - 120	ND, RDL=5.0	ug/g	1.9	30
8637058	Acid Extractable Zinc (Zn)	2023/05/01	NC	75 - 125	97	80 - 120	ND, RDL=5.0	ug/g	3.1	30

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)



Bureau Veritas Job #: C3B7322
Report Date: 2023/05/01

B.I.G Consulting Inc.
Client Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD, OAKVILLE
Sampler Initials: MM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

A handwritten signature in black ink that reads "Cristina Carriere".

Cristina Carriere, Senior Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by {0}, {1} responsible for {2} {3} laboratory operations.



BUREAU
VERITAS

Bureau Veritas Job #: C3B7322

Report Date: 2023/05/01

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

Exceedance Summary Table – Reg153/04 T2-Soil/Res-C
Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
No Exceedances						
The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.						



Your Project #: BIGC-ENV-554E
 Site Location: 590 ARGUS ROAD, OAKVILLE
 Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
 12-5500 Tomken Road
 Mississauga, ON
 CANADA L4W 2Z4

Report Date: 2023/05/01
 Report #: R7609805
 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3B7324

Received: 2023/04/26, 13:57

Sample Matrix: Soil
 # Samples Received: 1

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Acid Extractable Metals by ICPMS	1	2023/04/29	2023/05/01	CAM SOP-00447	EPA 6020B m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.



Your Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD, OAKVILLE
Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
12-5500 Tomken Road
Mississauga, ON
CANADA L4W 2Z4

Report Date: 2023/05/01
Report #: R7609805
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3B7324

Received: 2023/04/26, 13:57

Encryption Key



Bureau Veritas
01 May 2023 15:03:04

Please direct all questions regarding this Certificate of Analysis to:
Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843

=====
This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



O.REG 153 ICPMS METALS (SOIL)

Bureau Veritas ID			VQP137		
Sampling Date			2023/04/20 10:10		
COC Number			n/a		
	UNITS	Criteria	BH206-SS1	RDL	QC Batch
Metals					
Acid Extractable Antimony (Sb)	ug/g	7.5	0.42	0.20	8637058
Acid Extractable Arsenic (As)	ug/g	18	7.8	1.0	8637058
Acid Extractable Barium (Ba)	ug/g	390	100	0.50	8637058
Acid Extractable Beryllium (Be)	ug/g	4	0.59	0.20	8637058
Acid Extractable Boron (B)	ug/g	120	12	5.0	8637058
Acid Extractable Cadmium (Cd)	ug/g	1.2	0.32	0.10	8637058
Acid Extractable Chromium (Cr)	ug/g	160	16	1.0	8637058
Acid Extractable Cobalt (Co)	ug/g	22	9.5	0.10	8637058
Acid Extractable Copper (Cu)	ug/g	140	33	0.50	8637058
Acid Extractable Lead (Pb)	ug/g	120	25	1.0	8637058
Acid Extractable Molybdenum (Mo)	ug/g	6.9	1.1	0.50	8637058
Acid Extractable Nickel (Ni)	ug/g	100	21	0.50	8637058
Acid Extractable Selenium (Se)	ug/g	2.4	ND	0.50	8637058
Acid Extractable Silver (Ag)	ug/g	20	ND	0.20	8637058
Acid Extractable Thallium (Tl)	ug/g	1	0.11	0.050	8637058
Acid Extractable Uranium (U)	ug/g	23	0.59	0.050	8637058
Acid Extractable Vanadium (V)	ug/g	86	25	5.0	8637058
Acid Extractable Zinc (Zn)	ug/g	340	130	5.0	8637058
No Fill	No Exceedance				
Grey	Exceeds 1 criteria policy/level				
Black	Exceeds both criteria/levels				
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)					
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition					
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil					
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.					



BUREAU
VERITAS

Bureau Veritas Job #: C3B7324

Report Date: 2023/05/01

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.3°C
-----------	-------

Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C3B7324

Report Date: 2023/05/01

QUALITY ASSURANCE REPORT

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8637058	Acid Extractable Antimony (Sb)	2023/05/01	93	75 - 125	100	80 - 120	ND, RDL=0.20	ug/g	2.2	30
8637058	Acid Extractable Arsenic (As)	2023/05/01	100	75 - 125	103	80 - 120	ND, RDL=1.0	ug/g	1.9	30
8637058	Acid Extractable Barium (Ba)	2023/05/01	NC	75 - 125	100	80 - 120	ND, RDL=0.50	ug/g	2.1	30
8637058	Acid Extractable Beryllium (Be)	2023/05/01	97	75 - 125	98	80 - 120	ND, RDL=0.20	ug/g	1.1	30
8637058	Acid Extractable Boron (B)	2023/05/01	88	75 - 125	97	80 - 120	ND, RDL=5.0	ug/g	3.1	30
8637058	Acid Extractable Cadmium (Cd)	2023/05/01	94	75 - 125	96	80 - 120	ND, RDL=0.10	ug/g	1.3	30
8637058	Acid Extractable Chromium (Cr)	2023/05/01	NC	75 - 125	99	80 - 120	ND, RDL=1.0	ug/g	6.7	30
8637058	Acid Extractable Cobalt (Co)	2023/05/01	96	75 - 125	99	80 - 120	ND, RDL=0.10	ug/g	3.9	30
8637058	Acid Extractable Copper (Cu)	2023/05/01	NC	75 - 125	100	80 - 120	ND, RDL=0.50	ug/g	0.71	30
8637058	Acid Extractable Lead (Pb)	2023/05/01	NC	75 - 125	100	80 - 120	ND, RDL=1.0	ug/g	0.53	30
8637058	Acid Extractable Molybdenum (Mo)	2023/05/01	99	75 - 125	98	80 - 120	ND, RDL=0.50	ug/g	2.0	30
8637058	Acid Extractable Nickel (Ni)	2023/05/01	94	75 - 125	101	80 - 120	ND, RDL=0.50	ug/g	5.2	30
8637058	Acid Extractable Selenium (Se)	2023/05/01	94	75 - 125	99	80 - 120	ND, RDL=0.50	ug/g	3.2	30
8637058	Acid Extractable Silver (Ag)	2023/05/01	97	75 - 125	96	80 - 120	ND, RDL=0.20	ug/g	1.7	30
8637058	Acid Extractable Thallium (Tl)	2023/05/01	94	75 - 125	102	80 - 120	ND, RDL=0.050	ug/g	0.60	30
8637058	Acid Extractable Uranium (U)	2023/05/01	95	75 - 125	96	80 - 120	ND, RDL=0.050	ug/g	2.5	30
8637058	Acid Extractable Vanadium (V)	2023/05/01	NC	75 - 125	97	80 - 120	ND, RDL=5.0	ug/g	1.9	30
8637058	Acid Extractable Zinc (Zn)	2023/05/01	NC	75 - 125	97	80 - 120	ND, RDL=5.0	ug/g	3.1	30

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)



BUREAU
VERITAS

Bureau Veritas Job #: C3B7324

Report Date: 2023/05/01

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Cristina Carriere

Cristina Carriere, Senior Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by {0}, {1} responsible for {2} {3} laboratory operations.



BUREAU
VERITAS

Bureau Veritas Job #: C3B7324

Report Date: 2023/05/01

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

Exceedance Summary Table – Reg153/04 T2-Soil/Res-C
Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
No Exceedances						
The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.						



Your Project #: BIGC-ENV-554E
 Site Location: 590 ARGUS ROAD,OAKVILLE
 Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
 12-5500 Tomken Road
 Mississauga, ON
 CANADA L4W 2Z4

Report Date: 2023/05/01
 Report #: R7610531
 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3B7329

Received: 2023/04/26, 13:57

Sample Matrix: Soil
 # Samples Received: 1

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Methylnaphthalene Sum	1	N/A	2023/05/01	CAM SOP-00301	EPA 8270D m
Moisture	1	N/A	2023/04/27	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM)	1	2023/04/29	2023/04/30	CAM SOP-00318	EPA 8270E

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.



Your Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD,OAKVILLE
Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
12-5500 Tomken Road
Mississauga, ON
CANADA L4W 2Z4

Report Date: 2023/05/01
Report #: R7610531
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3B7329

Received: 2023/04/26, 13:57

Encryption Key



Bureau Veritas
01 May 2023 18:53:03

Please direct all questions regarding this Certificate of Analysis to:
Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843

=====
This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



O.REG 153 PAHS (SOIL)

Bureau Veritas ID			VQP168		
Sampling Date			2023/04/20 09:45		
COC Number			n/a		
	UNITS	Criteria	BH204-SS1	RDL	QC Batch
Calculated Parameters					
Methylnaphthalene, 2-(1-)	ug/g	-	ND	0.071	8630529
Polyaromatic Hydrocarbons					
Acenaphthene	ug/g	7.9	ND	0.050	8636718
Acenaphthylene	ug/g	0.15	ND	0.050	8636718
Anthracene	ug/g	0.67	ND	0.050	8636718
Benzo(a)anthracene	ug/g	0.5	0.076	0.050	8636718
Benzo(a)pyrene	ug/g	0.3	0.083	0.050	8636718
Benzo(b,j)fluoranthene	ug/g	0.78	0.11	0.050	8636718
Benzo(g,h,i)perylene	ug/g	6.6	0.070	0.050	8636718
Benzo(k)fluoranthene	ug/g	0.78	ND	0.050	8636718
Chrysene	ug/g	7	0.089	0.050	8636718
Dibenzo(a,h)anthracene	ug/g	0.1	ND	0.050	8636718
Fluoranthene	ug/g	0.69	0.28	0.050	8636718
Fluorene	ug/g	62	ND	0.050	8636718
Indeno(1,2,3-cd)pyrene	ug/g	0.38	0.058	0.050	8636718
1-Methylnaphthalene	ug/g	0.99	ND	0.050	8636718
2-Methylnaphthalene	ug/g	0.99	ND	0.050	8636718
Naphthalene	ug/g	0.6	ND	0.050	8636718
Phenanthrene	ug/g	6.2	0.13	0.050	8636718
Pyrene	ug/g	78	0.22	0.050	8636718
Surrogate Recovery (%)					
D10-Anthracene	%	-	113		8636718
D14-Terphenyl (FS)	%	-	106		8636718
D8-Acenaphthylene	%	-	96		8636718
No Fill	No Exceedance				
Grey	Exceeds 1 criteria policy/level				
Black	Exceeds both criteria/levels				
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)					
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition					
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil					
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.					



Bureau Veritas Job #: C3B7329
 Report Date: 2023/05/01

B.I.G Consulting Inc.
 Client Project #: BIGC-ENV-554E
 Site Location: 590 ARGUS ROAD,OAKVILLE
 Sampler Initials: MM

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		VQP168		
Sampling Date		2023/04/20 09:45		
COC Number		n/a		
	UNITS	BH204-SS1	RDL	QC Batch
Inorganics				
Moisture	%	11	1.0	8633649
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				



Bureau Veritas Job #: C3B7329
Report Date: 2023/05/01

B.I.G Consulting Inc.
Client Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD,OAKVILLE
Sampler Initials: MM

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.3°C
-----------	-------

Sample VQP168 [BH204-SS1] : PAH Analysis: Due to the sample matrix, sample required dilution. Detection limits were adjusted accordingly.

Results relate only to the items tested.



Your Project #: BIGC-ENV-554E
 Site Location: 590 ARGUS ROAD,OAKVILLE
 Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
 12-5500 Tomken Road
 Mississauga, ON
 CANADA L4W 2Z4

Report Date: 2023/05/02
 Report #: R7611310
 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3B7331

Received: 2023/04/26, 13:57

Sample Matrix: Soil
 # Samples Received: 1

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Acid Extractable Metals by ICPMS	1	2023/04/29	2023/05/01	CAM SOP-00447	EPA 6020B m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.



Your Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD,OAKVILLE
Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
12-5500 Tomken Road
Mississauga, ON
CANADA L4W 2Z4

Report Date: 2023/05/02
Report #: R7611310
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3B7331

Received: 2023/04/26, 13:57

Encryption Key



Bureau Veritas
02 May 2023 12:33:01

Please direct all questions regarding this Certificate of Analysis to:
Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843

=====
This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



O.REG 153 ICPMS METALS (SOIL)

Bureau Veritas ID			VQP178		
Sampling Date			2023/04/20 10:00		
COC Number			n/a		
	UNITS	Criteria	BH205-SS1	RDL	QC Batch
Metals					
Acid Extractable Antimony (Sb)	ug/g	7.5	0.23	0.20	8637943
Acid Extractable Arsenic (As)	ug/g	18	6.4	1.0	8637943
Acid Extractable Barium (Ba)	ug/g	390	50	0.50	8637943
Acid Extractable Beryllium (Be)	ug/g	4	0.90	0.20	8637943
Acid Extractable Boron (B)	ug/g	120	14	5.0	8637943
Acid Extractable Cadmium (Cd)	ug/g	1.2	ND	0.10	8637943
Acid Extractable Chromium (Cr)	ug/g	160	24	1.0	8637943
Acid Extractable Cobalt (Co)	ug/g	22	15	0.10	8637943
Acid Extractable Copper (Cu)	ug/g	140	220	0.50	8637943
Acid Extractable Lead (Pb)	ug/g	120	10	1.0	8637943
Acid Extractable Molybdenum (Mo)	ug/g	6.9	0.94	0.50	8637943
Acid Extractable Nickel (Ni)	ug/g	100	32	0.50	8637943
Acid Extractable Selenium (Se)	ug/g	2.4	ND	0.50	8637943
Acid Extractable Silver (Ag)	ug/g	20	ND	0.20	8637943
Acid Extractable Thallium (Tl)	ug/g	1	0.12	0.050	8637943
Acid Extractable Uranium (U)	ug/g	23	0.94	0.050	8637943
Acid Extractable Vanadium (V)	ug/g	86	32	5.0	8637943
Acid Extractable Zinc (Zn)	ug/g	340	77	5.0	8637943
No Fill	No Exceedance				
Grey	Exceeds 1 criteria policy/level				
Black	Exceeds both criteria/levels				
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)					
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition					
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil					
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.					



BUREAU
VERITAS

Bureau Veritas Job #: C3B7331

Report Date: 2023/05/02

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.3°C
-----------	-------

Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C3B7331

Report Date: 2023/05/02

QUALITY ASSURANCE REPORT

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8637943	Acid Extractable Antimony (Sb)	2023/05/01	84	75 - 125	96	80 - 120	ND, RDL=0.20	ug/g	NC	30
8637943	Acid Extractable Arsenic (As)	2023/05/01	104	75 - 125	100	80 - 120	ND, RDL=1.0	ug/g	1.2	30
8637943	Acid Extractable Barium (Ba)	2023/05/01	NC	75 - 125	95	80 - 120	ND, RDL=0.50	ug/g	1.5	30
8637943	Acid Extractable Beryllium (Be)	2023/05/01	104	75 - 125	96	80 - 120	ND, RDL=0.20	ug/g	0.46	30
8637943	Acid Extractable Boron (B)	2023/05/01	99	75 - 125	94	80 - 120	ND, RDL=5.0	ug/g	5.9	30
8637943	Acid Extractable Cadmium (Cd)	2023/05/01	103	75 - 125	97	80 - 120	ND, RDL=0.10	ug/g	23	30
8637943	Acid Extractable Chromium (Cr)	2023/05/01	NC	75 - 125	97	80 - 120	ND, RDL=1.0	ug/g	3.0	30
8637943	Acid Extractable Cobalt (Co)	2023/05/01	108	75 - 125	97	80 - 120	ND, RDL=0.10	ug/g	0.58	30
8637943	Acid Extractable Copper (Cu)	2023/05/01	102	75 - 125	98	80 - 120	ND, RDL=0.50	ug/g	1.3	30
8637943	Acid Extractable Lead (Pb)	2023/05/01	106	75 - 125	97	80 - 120	ND, RDL=1.0	ug/g	7.0	30
8637943	Acid Extractable Molybdenum (Mo)	2023/05/01	106	75 - 125	100	80 - 120	ND, RDL=0.50	ug/g	NC	30
8637943	Acid Extractable Nickel (Ni)	2023/05/01	103	75 - 125	99	80 - 120	ND, RDL=0.50	ug/g	0.37	30
8637943	Acid Extractable Selenium (Se)	2023/05/01	106	75 - 125	100	80 - 120	ND, RDL=0.50	ug/g	NC	30
8637943	Acid Extractable Silver (Ag)	2023/05/01	104	75 - 125	99	80 - 120	ND, RDL=0.20	ug/g	NC	30
8637943	Acid Extractable Thallium (Tl)	2023/05/01	104	75 - 125	98	80 - 120	ND, RDL=0.050	ug/g	8.2	30
8637943	Acid Extractable Uranium (U)	2023/05/01	103	75 - 125	95	80 - 120	ND, RDL=0.050	ug/g	8.0	30
8637943	Acid Extractable Vanadium (V)	2023/05/01	NC	75 - 125	97	80 - 120	ND, RDL=5.0	ug/g	1.2	30
8637943	Acid Extractable Zinc (Zn)	2023/05/01	NC	75 - 125	98	80 - 120	ND, RDL=5.0	ug/g	1.1	30

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).



BUREAU
VERITAS

Bureau Veritas Job #: C3B7331

Report Date: 2023/05/02

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Cristina Carriere

Cristina Carriere, Senior Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by {0}, {1} responsible for {2} {3} laboratory operations.



BUREAU
VERITAS

Bureau Veritas Job #: C3B7331

Report Date: 2023/05/02

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD,OAKVILLE

Sampler Initials: MM

Exceedance Summary Table – Reg153/04 T2-Soil/Res-C
Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
BH205-SS1	VQP178-01	Acid Extractable Copper (Cu)	140	220	0.50	ug/g
The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.						



Your Project #: BIGC-ENV-554E
 Site Location: 590 ARGUS ROAD,OAKVILLE
 Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
 12-5500 Tomken Road
 Mississauga, ON
 CANADA L4W 2Z4

Report Date: 2023/05/01
 Report #: R7609648
 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3B7335

Received: 2023/04/26, 13:57

Sample Matrix: Soil
 # Samples Received: 1

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Methylnaphthalene Sum	1	N/A	2023/05/01	CAM SOP-00301	EPA 8270D m
Moisture	1	N/A	2023/04/28	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM)	1	2023/04/28	2023/04/29	CAM SOP-00318	EPA 8270E

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.



Your Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD,OAKVILLE
Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
12-5500 Tomken Road
Mississauga, ON
CANADA L4W 2Z4

Report Date: 2023/05/01
Report #: R7609648
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3B7335

Received: 2023/04/26, 13:57

Encryption Key



Bureau Veritas
01 May 2023 13:51:33

Please direct all questions regarding this Certificate of Analysis to:
Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843

=====

This report has been generated and distributed using a secure automated process. Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



BUREAU
VERITAS

Bureau Veritas Job #: C3B7335
Report Date: 2023/05/01

B.I.G Consulting Inc.
Client Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD, OAKVILLE
Sampler Initials: MM

O.REG 153 PAHS (SOIL)

Bureau Veritas ID			VQP195		
Sampling Date			2023/04/20 09:30		
COC Number			n/a		
	UNITS	Criteria	BH203-SS1	RDL	QC Batch
Calculated Parameters					
Methylnaphthalene, 2-(1-)	ug/g	-	0.028	0.0071	8629172
Polyaromatic Hydrocarbons					
Acenaphthene	ug/g	7.9	ND	0.0050	8634280
Acenaphthylene	ug/g	0.15	ND	0.0050	8634280
Anthracene	ug/g	0.67	ND	0.0050	8634280
Benzo(a)anthracene	ug/g	0.5	ND	0.0050	8634280
Benzo(a)pyrene	ug/g	0.3	ND	0.0050	8634280
Benzo(b/j)fluoranthene	ug/g	0.78	ND	0.0050	8634280
Benzo(g,h,i)perylene	ug/g	6.6	ND	0.0050	8634280
Benzo(k)fluoranthene	ug/g	0.78	ND	0.0050	8634280
Chrysene	ug/g	7	ND	0.0050	8634280
Dibenzo(a,h)anthracene	ug/g	0.1	ND	0.0050	8634280
Fluoranthene	ug/g	0.69	0.0080	0.0050	8634280
Fluorene	ug/g	62	0.0062	0.0050	8634280
Indeno(1,2,3-cd)pyrene	ug/g	0.38	ND	0.0050	8634280
1-Methylnaphthalene	ug/g	0.99	0.028	0.0050	8634280
2-Methylnaphthalene	ug/g	0.99	ND	0.0050	8634280
Naphthalene	ug/g	0.6	ND	0.0050	8634280
Phenanthrene	ug/g	6.2	0.013	0.0050	8634280
Pyrene	ug/g	78	0.0076	0.0050	8634280
Surrogate Recovery (%)					
D10-Anthracene	%	-	93		8634280
D14-Terphenyl (FS)	%	-	92		8634280
D8-Acenaphthylene	%	-	92		8634280
No Fill	No Exceedance				
Grey	Exceeds 1 criteria policy/level				
Black	Exceeds both criteria/levels				
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)					
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition					
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil					
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.					



Bureau Veritas Job #: C3B7335
 Report Date: 2023/05/01

B.I.G Consulting Inc.
 Client Project #: BIGC-ENV-554E
 Site Location: 590 ARGUS ROAD,OAKVILLE
 Sampler Initials: MM

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		VQP195		
Sampling Date		2023/04/20 09:30		
COC Number		n/a		
	UNITS	BH203-SS1	RDL	QC Batch
Inorganics				
Moisture	%	14	1.0	8634506
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				



BUREAU
VERITAS

Bureau Veritas Job #: C3B7335

Report Date: 2023/05/01

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.3°C
-----------	-------

Results relate only to the items tested.



Your Project #: BIGC-ENV-554E
 Site Location: 590 ARGUS ROAD,OAKVILLE
 Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
 12-5500 Tomken Road
 Mississauga, ON
 CANADA L4W 2Z4

Report Date: 2023/05/02
 Report #: R7611378
 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3B7338

Received: 2023/04/26, 13:57

Sample Matrix: Soil
 # Samples Received: 1

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Methylnaphthalene Sum	1	N/A	2023/05/02	CAM SOP-00301	EPA 8270D m
Moisture	1	N/A	2023/04/28	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM)	1	2023/04/29	2023/04/29	CAM SOP-00318	EPA 8270E

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.



Your Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD,OAKVILLE
Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
12-5500 Tomken Road
Mississauga, ON
CANADA L4W 2Z4

Report Date: 2023/05/02
Report #: R7611378
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3B7338

Received: 2023/04/26, 13:57

Encryption Key



Bureau Veritas
02 May 2023 13:05:00

Please direct all questions regarding this Certificate of Analysis to:
Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843

=====
This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



O.REG 153 PAHS (SOIL)

Bureau Veritas ID			VQP203		
Sampling Date			2023/04/21		
COC Number			n/a		
	UNITS	Criteria	BH202-SS1	RDL	QC Batch
Calculated Parameters					
Methylnaphthalene, 2-(1-)	ug/g	-	ND	0.071	8633339
Polyaromatic Hydrocarbons					
Acenaphthene	ug/g	7.9	ND	0.050	8636705
Acenaphthylene	ug/g	0.15	ND	0.050	8636705
Anthracene	ug/g	0.67	ND	0.050	8636705
Benzo(a)anthracene	ug/g	0.5	0.056	0.050	8636705
Benzo(a)pyrene	ug/g	0.3	0.075	0.050	8636705
Benzo(b/j)fluoranthene	ug/g	0.78	0.12	0.050	8636705
Benzo(g,h,i)perylene	ug/g	6.6	0.086	0.050	8636705
Benzo(k)fluoranthene	ug/g	0.78	ND	0.050	8636705
Chrysene	ug/g	7	0.071	0.050	8636705
Dibenzo(a,h)anthracene	ug/g	0.1	ND	0.050	8636705
Fluoranthene	ug/g	0.69	0.16	0.050	8636705
Fluorene	ug/g	62	ND	0.050	8636705
Indeno(1,2,3-cd)pyrene	ug/g	0.38	0.063	0.050	8636705
1-Methylnaphthalene	ug/g	0.99	ND	0.050	8636705
2-Methylnaphthalene	ug/g	0.99	ND	0.050	8636705
Naphthalene	ug/g	0.6	ND	0.050	8636705
Phenanthrene	ug/g	6.2	ND	0.050	8636705
Pyrene	ug/g	78	0.17	0.050	8636705
Surrogate Recovery (%)					
D10-Anthracene	%	-	113		8636705
D14-Terphenyl (FS)	%	-	97		8636705
D8-Acenaphthylene	%	-	99		8636705
No Fill	No Exceedance				
Grey	Exceeds 1 criteria policy/level				
Black	Exceeds both criteria/levels				
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)					
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition					
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil					
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.					



Bureau Veritas Job #: C3B7338
 Report Date: 2023/05/02

B.I.G Consulting Inc.
 Client Project #: BIGC-ENV-554E
 Site Location: 590 ARGUS ROAD,OAKVILLE
 Sampler Initials: MM

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		VQP203		
Sampling Date		2023/04/21		
COC Number		n/a		
	UNITS	BH202-SS1	RDL	QC Batch
Inorganics				
Moisture	%	9.3	1.0	8634506
RDL = Reportable Detection Limit				
QC Batch = Quality Control Batch				



BUREAU
VERITAS

Bureau Veritas Job #: C3B7338

Report Date: 2023/05/02

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	1.3°C
-----------	-------

Sample VQP203 [BH202-SS1] : PAH ANALYSIS: Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.

Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C3B7338

Report Date: 2023/05/02

QUALITY ASSURANCE REPORT

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8636705	D10-Anthracene	2023/04/29	103	50 - 130	103	50 - 130	104	%		
8636705	D14-Terphenyl (FS)	2023/04/29	101	50 - 130	102	50 - 130	96	%		
8636705	D8-Acenaphthylene	2023/04/29	102	50 - 130	102	50 - 130	98	%		
8634506	Moisture	2023/04/28							9.9	20
8636705	1-Methylnaphthalene	2023/04/29	115	50 - 130	111	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8636705	2-Methylnaphthalene	2023/04/29	106	50 - 130	104	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8636705	Acenaphthene	2023/04/29	106	50 - 130	103	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8636705	Acenaphthylene	2023/04/29	111	50 - 130	105	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8636705	Anthracene	2023/04/29	111	50 - 130	107	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8636705	Benzo(a)anthracene	2023/04/29	107	50 - 130	100	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8636705	Benzo(a)pyrene	2023/04/29	103	50 - 130	98	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8636705	Benzo(b/j)fluoranthene	2023/04/29	104	50 - 130	108	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8636705	Benzo(g,h,i)perylene	2023/04/29	113	50 - 130	108	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8636705	Benzo(k)fluoranthene	2023/04/29	108	50 - 130	107	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8636705	Chrysene	2023/04/29	108	50 - 130	104	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8636705	Dibenzo(a,h)anthracene	2023/04/29	116	50 - 130	97	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8636705	Fluoranthene	2023/04/29	111	50 - 130	106	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8636705	Fluorene	2023/04/29	110	50 - 130	105	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8636705	Indeno(1,2,3-cd)pyrene	2023/04/29	112	50 - 130	104	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8636705	Naphthalene	2023/04/29	103	50 - 130	100	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8636705	Phenanthrene	2023/04/29	105	50 - 130	102	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8636705	Pyrene	2023/04/29	112	50 - 130	107	50 - 130	ND, RDL=0.0050	ug/g	NC	40

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).



BUREAU
VERITAS

Bureau Veritas Job #: C3B7338

Report Date: 2023/05/02

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Anastassia Hamanov, Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by {0}, {1} responsible for {2} {3} laboratory operations.



BUREAU
VERITAS

Bureau Veritas Job #: C3B7338

Report Date: 2023/05/02

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD,OAKVILLE

Sampler Initials: MM

Exceedance Summary Table – Reg153/04 T2-Soil/Res-C
Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
No Exceedances						
The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.						



Your Project #: BIGC-ENV-554E
 Site Location: 590 ARGUS ROAD,OAKVILLE
 Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
 12-5500 Tomken Road
 Mississauga, ON
 CANADA L4W 2Z4

Report Date: 2023/05/02
 Report #: R7611826
 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3C0429

Received: 2023/04/28, 14:55

Sample Matrix: Soil
 # Samples Received: 3

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Petroleum Hydro. CCME F1 & BTEX in Soil (1)	3	N/A	2023/05/02	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (2)	3	2023/05/01	2023/05/02	CAM SOP-00316	CCME CWS m
Moisture	3	N/A	2023/04/28	CAM SOP-00445	Carter 2nd ed 51.2 m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

- (1) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.
- (2) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.



Your Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD,OAKVILLE
Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
12-5500 Tomken Road
Mississauga, ON
CANADA L4W 2Z4

Report Date: 2023/05/02
Report #: R7611826
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3C0429

Received: 2023/04/28, 14:55

Encryption Key



Bureau Veritas
02 May 2023 16:54:06

Please direct all questions regarding this Certificate of Analysis to:
Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843

=====
This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

Bureau Veritas ID			VRF356	VRF357	VRF358		
Sampling Date			2023/04/20 09:00	2023/04/20 09:30	2023/04/20 10:00		
COC Number			n/a	n/a	n/a		
	UNITS	Criteria	BH201-SS2	BH202-SS2	BH203-SS2	RDL	QC Batch
BTEX & F1 Hydrocarbons							
Benzene	ug/g	0.21	ND	ND	ND	0.020	8639723
Toluene	ug/g	2.3	ND	ND	ND	0.020	8639723
Ethylbenzene	ug/g	1.1	ND	ND	ND	0.020	8639723
o-Xylene	ug/g	-	ND	ND	ND	0.020	8639723
p+m-Xylene	ug/g	-	ND	ND	ND	0.040	8639723
Total Xylenes	ug/g	3.1	ND	ND	ND	0.040	8639723
F1 (C6-C10)	ug/g	55	ND	ND	19	10	8639723
F1 (C6-C10) - BTEX	ug/g	55	ND	ND	19	10	8639723
F2-F4 Hydrocarbons							
F2 (C10-C16 Hydrocarbons)	ug/g	98	ND	ND	1400	10	8637726
F3 (C16-C34 Hydrocarbons)	ug/g	300	ND	ND	1000	50	8637726
F4 (C34-C50 Hydrocarbons)	ug/g	2800	ND	ND	ND	50	8637726
Reached Baseline at C50	ug/g	-	Yes	Yes	Yes		8637726
Surrogate Recovery (%)							
1,4-Difluorobenzene	%	-	103	102	99		8639723
4-Bromofluorobenzene	%	-	98	100	108		8639723
D10-o-Xylene	%	-	95	96	98		8639723
D4-1,2-Dichloroethane	%	-	112	110	104		8639723
o-Terphenyl	%	-	98	96	98		8637726
No Fill	No Exceedance						
Grey	Exceeds 1 criteria policy/level						
Black	Exceeds both criteria/levels						
RDL = Reportable Detection Limit							
QC Batch = Quality Control Batch							
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)							
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition							
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil							
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.							



Bureau Veritas Job #: C3C0429
 Report Date: 2023/05/02

B.I.G Consulting Inc.
 Client Project #: BIGC-ENV-554E
 Site Location: 590 ARGUS ROAD,OAKVILLE
 Sampler Initials: MM

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		VRF356	VRF357	VRF358		
Sampling Date		2023/04/20 09:00	2023/04/20 09:30	2023/04/20 10:00		
COC Number		n/a	n/a	n/a		
	UNITS	BH201-SS2	BH202-SS2	BH203-SS2	RDL	QC Batch
Inorganics						
Moisture	%	13	20	14	1.0	8636355
RDL = Reportable Detection Limit						
QC Batch = Quality Control Batch						



BUREAU
VERITAS

Bureau Veritas Job #: C3C0429

Report Date: 2023/05/02

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	2.7°C
-----------	-------

F1/BTEX Analysis: Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency.

Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C3C0429

Report Date: 2023/05/02

QUALITY ASSURANCE REPORT

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8637726	o-Terphenyl	2023/05/01	97	60 - 130	95	60 - 130	98	%		
8639723	1,4-Difluorobenzene	2023/05/01	97	60 - 140	102	60 - 140	101	%		
8639723	4-Bromofluorobenzene	2023/05/01	111	60 - 140	102	60 - 140	99	%		
8639723	D10-o-Xylene	2023/05/01	93	60 - 140	95	60 - 140	94	%		
8639723	D4-1,2-Dichloroethane	2023/05/01	102	60 - 140	103	60 - 140	108	%		
8636355	Moisture	2023/04/28							0	20
8637726	F2 (C10-C16 Hydrocarbons)	2023/05/01	107	60 - 130	105	80 - 120	ND, RDL=10	ug/g	NC	30
8637726	F3 (C16-C34 Hydrocarbons)	2023/05/01	108	60 - 130	105	80 - 120	ND, RDL=50	ug/g	NC	30
8637726	F4 (C34-C50 Hydrocarbons)	2023/05/01	111	60 - 130	108	80 - 120	ND, RDL=50	ug/g	NC	30
8639723	Benzene	2023/05/02	NC	50 - 140	78	50 - 140	ND, RDL=0.020	ug/g	7.0	50
8639723	Ethylbenzene	2023/05/02	NC	50 - 140	91	50 - 140	ND, RDL=0.020	ug/g	5.7	50
8639723	F1 (C6-C10) - BTEX	2023/05/02					ND, RDL=10	ug/g	1.7	30
8639723	F1 (C6-C10)	2023/05/02	NC	60 - 140	88	80 - 120	ND, RDL=10	ug/g	5.0	30
8639723	o-Xylene	2023/05/02	NC	50 - 140	90	50 - 140	ND, RDL=0.020	ug/g	5.2	50
8639723	p+m-Xylene	2023/05/02	NC	50 - 140	85	50 - 140	ND, RDL=0.040	ug/g	6.5	50
8639723	Toluene	2023/05/02	NC	50 - 140	78	50 - 140	ND, RDL=0.020	ug/g	9.5	50
8639723	Total Xylenes	2023/05/02					ND, RDL=0.040	ug/g	6.2	50

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).



BUREAU
VERITAS

Bureau Veritas Job #: C3C0429

Report Date: 2023/05/02

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Anastassia Hamanov, Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by {0}, {1} responsible for {2} {3} laboratory operations.



**BUREAU
VERITAS**

Bureau Veritas Job #: C3C0429

Report Date: 2023/05/02

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD,OAKVILLE

Sampler Initials: MM

**Exceedance Summary Table – Reg153/04 T2-Soil/Res-C
Result Exceedances**

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
BH203-SS2	VRF358-01	F2 (C10-C16 Hydrocarbons)	98	1400	10	ug/g
BH203-SS2	VRF358-01	F3 (C16-C34 Hydrocarbons)	300	1000	50	ug/g

The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.



Your Project #: BIGC-ENV-554E
 Site Location: 590 ARGUS ROAD, OAKVILLE
 Your C.O.C. #: N/A

Attention: Rebecca Morrison

B.I.G Consulting Inc.
 12-5500 Tomken Road
 Mississauga, ON
 CANADA L4W 2Z4

Report Date: 2023/05/09
 Report #: R7621223
 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3C5014

Received: 2023/05/03, 14:26

Sample Matrix: Soil
 # Samples Received: 2

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Methylnaphthalene Sum	2	N/A	2023/05/09	CAM SOP-00301	EPA 8270D m
Moisture	2	N/A	2023/05/04	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM)	2	2023/05/05	2023/05/06	CAM SOP-00318	EPA 8270E

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.



Your Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD, OAKVILLE
Your C.O.C. #: N/A

Attention: Rebecca Morrison

B.I.G Consulting Inc.
12-5500 Tomken Road
Mississauga, ON
CANADA L4W 2Z4

Report Date: 2023/05/09
Report #: R7621223
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3C5014

Received: 2023/05/03, 14:26

Encryption Key



Bureau Veritas
09 May 2023 11:48:19

Please direct all questions regarding this Certificate of Analysis to:
Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843

=====

This report has been generated and distributed using a secure automated process. Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



O.REG 153 PAHS (SOIL)

Bureau Veritas ID			VSD622	VSD623		
Sampling Date			2023/04/20	2023/04/20		
COC Number			N/A	N/A		
	UNITS	Criteria	BH202-SS2	BH204-SS2	RDL	QC Batch
Calculated Parameters						
Methylnaphthalene, 2-(1-)	ug/g	-	ND	ND	0.0071	8645348
Polyaromatic Hydrocarbons						
Acenaphthene	ug/g	7.9	ND	ND	0.0050	8649627
Acenaphthylene	ug/g	0.15	ND	ND	0.0050	8649627
Anthracene	ug/g	0.67	ND	ND	0.0050	8649627
Benzo(a)anthracene	ug/g	0.5	ND	ND	0.0050	8649627
Benzo(a)pyrene	ug/g	0.3	ND	ND	0.0050	8649627
Benzo(b/j)fluoranthene	ug/g	0.78	ND	ND	0.0050	8649627
Benzo(g,h,i)perylene	ug/g	6.6	ND	ND	0.0050	8649627
Benzo(k)fluoranthene	ug/g	0.78	ND	ND	0.0050	8649627
Chrysene	ug/g	7	ND	ND	0.0050	8649627
Dibenzo(a,h)anthracene	ug/g	0.1	ND	ND	0.0050	8649627
Fluoranthene	ug/g	0.69	ND	ND	0.0050	8649627
Fluorene	ug/g	62	ND	ND	0.0050	8649627
Indeno(1,2,3-cd)pyrene	ug/g	0.38	ND	ND	0.0050	8649627
1-Methylnaphthalene	ug/g	0.99	ND	ND	0.0050	8649627
2-Methylnaphthalene	ug/g	0.99	ND	ND	0.0050	8649627
Naphthalene	ug/g	0.6	ND	ND	0.0050	8649627
Phenanthrene	ug/g	6.2	ND	ND	0.0050	8649627
Pyrene	ug/g	78	ND	ND	0.0050	8649627
Surrogate Recovery (%)						
D10-Anthracene	%	-	88	88		8649627
D14-Terphenyl (FS)	%	-	92	91		8649627
D8-Acenaphthylene	%	-	83	83		8649627
No Fill	No Exceedance					
Grey	Exceeds 1 criteria policy/level					
Black	Exceeds both criteria/levels					
RDL = Reportable Detection Limit						
QC Batch = Quality Control Batch						
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)						
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition						
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil						
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.						



Bureau Veritas Job #: C3C5014
 Report Date: 2023/05/09

B.I.G Consulting Inc.
 Client Project #: BIGC-ENV-554E
 Site Location: 590 ARGUS ROAD, OAKVILLE
 Sampler Initials: CD

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		VSD622	VSD623		
Sampling Date		2023/04/20	2023/04/20		
COC Number		N/A	N/A		
	UNITS	BH202-SS2	BH204-SS2	RDL	QC Batch
Inorganics					
Moisture	%	16	18	1.0	8645648
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					



Bureau Veritas Job #: C3C5014
Report Date: 2023/05/09

B.I.G Consulting Inc.
Client Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD, OAKVILLE
Sampler Initials: CD

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	3.0°C
-----------	-------

Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C3C5014

Report Date: 2023/05/09

QUALITY ASSURANCE REPORT

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: CD

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8649627	D10-Anthracene	2023/05/05	87	50 - 130	96	50 - 130	95	%		
8649627	D14-Terphenyl (FS)	2023/05/05	90	50 - 130	95	50 - 130	94	%		
8649627	D8-Acenaphthylene	2023/05/05	81	50 - 130	93	50 - 130	92	%		
8645648	Moisture	2023/05/04							3.3	20
8649627	1-Methylnaphthalene	2023/05/05	100	50 - 130	105	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8649627	2-Methylnaphthalene	2023/05/05	92	50 - 130	96	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8649627	Acenaphthene	2023/05/05	92	50 - 130	96	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8649627	Acenaphthylene	2023/05/05	89	50 - 130	95	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8649627	Anthracene	2023/05/05	91	50 - 130	97	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8649627	Benzo(a)anthracene	2023/05/05	97	50 - 130	99	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8649627	Benzo(a)pyrene	2023/05/05	90	50 - 130	94	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8649627	Benzo(b/j)fluoranthene	2023/05/05	93	50 - 130	96	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8649627	Benzo(g,h,i)perylene	2023/05/05	98	50 - 130	103	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8649627	Benzo(k)fluoranthene	2023/05/05	91	50 - 130	97	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8649627	Chrysene	2023/05/05	94	50 - 130	100	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8649627	Dibenzo(a,h)anthracene	2023/05/05	93	50 - 130	95	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8649627	Fluoranthene	2023/05/05	99	50 - 130	101	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8649627	Fluorene	2023/05/05	92	50 - 130	96	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8649627	Indeno(1,2,3-cd)pyrene	2023/05/05	94	50 - 130	98	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8649627	Naphthalene	2023/05/05	88	50 - 130	93	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8649627	Phenanthrene	2023/05/05	95	50 - 130	99	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8649627	Pyrene	2023/05/05	98	50 - 130	100	50 - 130	ND, RDL=0.0050	ug/g	NC	40

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).



BUREAU
VERITAS

Bureau Veritas Job #: C3C5014

Report Date: 2023/05/09

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: CD

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Cristina Carriere

Cristina Carriere, Senior Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by {0}, {1} responsible for {2} {3} laboratory operations.



BUREAU
VERITAS

Bureau Veritas Job #: C3C5014

Report Date: 2023/05/09

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: CD

Exceedance Summary Table – Reg153/04 T2-Soil/Res-C
Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
No Exceedances						
The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.						



Your Project #: BIGC-ENV-554E
 Site Location: 590 ARGUS ROAD, OAKVILLE
 Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
 12-5500 Tomken Road
 Mississauga, ON
 CANADA L4W 2Z4

Report Date: 2023/05/19
 Report #: R7636612
 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3D9622

Received: 2023/05/16, 17:21

Sample Matrix: Water
 # Samples Received: 1

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Petroleum Hydro. CCME F1 & BTEX in Water	1	N/A	2023/05/18	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1)	1	2023/05/18	2023/05/18	CAM SOP-00316	CCME PHC-CWS m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested. This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.



Your Project #: BIGC-ENV-554E
Site Location: 590 ARGUS ROAD, OAKVILLE
Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
12-5500 Tomken Road
Mississauga, ON
CANADA L4W 2Z4

Report Date: 2023/05/19
Report #: R7636612
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3D9622

Received: 2023/05/16, 17:21

Encryption Key



Bureau Veritas
19 May 2023 16:10:56

Please direct all questions regarding this Certificate of Analysis to:
Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843

=====
This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



O.REG 153 PHCS, BTEX/F1-F4 (WATER)

Bureau Veritas ID			VVE520		VVE520			
Sampling Date			2023/05/16 09:45		2023/05/16 09:45			
COC Number			n/a		n/a			
	UNITS	Criteria	BH/MW112	RDL	QC Batch	BH/MW112 Lab-Dup	RDL	QC Batch
BTEX & F1 Hydrocarbons								
Benzene	ug/L	5.0	ND	0.20	8671418	ND	0.20	8671418
Toluene	ug/L	24	ND	0.20	8671418	ND	0.20	8671418
Ethylbenzene	ug/L	2.4	ND	0.20	8671418	ND	0.20	8671418
o-Xylene	ug/L	-	ND	0.20	8671418	ND	0.20	8671418
p+m-Xylene	ug/L	-	ND	0.40	8671418	ND	0.40	8671418
Total Xylenes	ug/L	300	ND	0.40	8671418	ND	0.40	8671418
F1 (C6-C10)	ug/L	750	ND	25	8671418	ND	25	8671418
F1 (C6-C10) - BTEX	ug/L	750	ND	25	8671418	ND	25	8671418
F2-F4 Hydrocarbons								
F2 (C10-C16 Hydrocarbons)	ug/L	150	ND	100	8671684			
F3 (C16-C34 Hydrocarbons)	ug/L	500	ND	200	8671684			
F4 (C34-C50 Hydrocarbons)	ug/L	500	ND	200	8671684			
Reached Baseline at C50	ug/L	-	Yes		8671684			
Surrogate Recovery (%)								
1,4-Difluorobenzene	%	-	95		8671418	94		8671418
4-Bromofluorobenzene	%	-	99		8671418	99		8671418
D10-o-Xylene	%	-	94		8671418	92		8671418
D4-1,2-Dichloroethane	%	-	135 (1)		8671418	137 (2)		8671418
o-Terphenyl	%	-	96		8671684			
No Fill	No Exceedance							
Grey	Exceeds 1 criteria policy/level							
Black	Exceeds both criteria/levels							
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate Criteria: Ontario Reg. 153/04 (Amended April 15, 2011) Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition Potable Ground Water- All Types of Property Uses - Coarse Textured Soil ND = Not Detected at a concentration equal or greater than the indicated Detection Limit. (1) The recovery of the instrument surrogate 1,2 -dichloroethane-D4 is outside the acceptance limits. However this has no significant effect on the results since the recoveries of the other instrument surrogates are within acceptable limits. (2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.								



BUREAU
VERITAS

Bureau Veritas Job #: C3D9622

Report Date: 2023/05/19

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	10.0°C
-----------	--------

Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C3D9622

Report Date: 2023/05/19

QUALITY ASSURANCE REPORT

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8671418	1,4-Difluorobenzene	2023/05/18	93	70 - 130	98	70 - 130	98	%		
8671418	4-Bromofluorobenzene	2023/05/18	102	70 - 130	106	70 - 130	98	%		
8671418	D10-o-Xylene	2023/05/18	92	70 - 130	110	70 - 130	100	%		
8671418	D4-1,2-Dichloroethane	2023/05/18	130	70 - 130	126	70 - 130	128	%		
8671684	o-Terphenyl	2023/05/18	102	60 - 130	100	60 - 130	96	%		
8671418	Benzene	2023/05/18	105	50 - 140	102	50 - 140	ND, RDL=0.20	ug/L	NC	30
8671418	Ethylbenzene	2023/05/18	106	50 - 140	108	50 - 140	ND, RDL=0.20	ug/L	NC	30
8671418	F1 (C6-C10) - BTEX	2023/05/18					ND, RDL=25	ug/L	NC	30
8671418	F1 (C6-C10)	2023/05/18	105	60 - 140	103	60 - 140	ND, RDL=25	ug/L	NC	30
8671418	o-Xylene	2023/05/18	106	50 - 140	105	50 - 140	ND, RDL=0.20	ug/L	NC	30
8671418	p+m-Xylene	2023/05/18	100	50 - 140	102	50 - 140	ND, RDL=0.40	ug/L	NC	30
8671418	Toluene	2023/05/18	97	50 - 140	96	50 - 140	ND, RDL=0.20	ug/L	NC	30
8671418	Total Xylenes	2023/05/18					ND, RDL=0.40	ug/L	NC	30
8671684	F2 (C10-C16 Hydrocarbons)	2023/05/18	104	60 - 130	101	60 - 130	ND, RDL=100	ug/L	NC	30
8671684	F3 (C16-C34 Hydrocarbons)	2023/05/18	105	60 - 130	104	60 - 130	ND, RDL=200	ug/L	NC	30
8671684	F4 (C34-C50 Hydrocarbons)	2023/05/18	105	60 - 130	104	60 - 130	ND, RDL=200	ug/L	NC	30

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).



BUREAU
VERITAS

Bureau Veritas Job #: C3D9622

Report Date: 2023/05/19

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Anastassia Hamanov, Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by {0}, {1} responsible for {2} {3} laboratory operations.



BUREAU
VERITAS

Bureau Veritas Job #: C3D9622

Report Date: 2023/05/19

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554E

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: MM

Exceedance Summary Table – Reg153/04 T2-GW-C

Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
No Exceedances						
The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.						



Your Project #: BIGC-ENV-554D
 Site Location: 590 ARGUS ROAD, OAKVILLE
 Your C.O.C. #: 946149-01-01

Attention: Rebecca Morrison

B.I.G Consulting Inc.
 12-5500 Tomken Road
 Mississauga, ON
 CANADA L4W 2Z4

Report Date: 2023/08/03
 Report #: R7749455
 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3M5407

Received: 2023/07/27, 13:23

Sample Matrix: Water
 # Samples Received: 5

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Methylnaphthalene Sum	2	N/A	2023/08/02	CAM SOP-00301	EPA 8270D m
1,3-Dichloropropene Sum	2	N/A	2023/08/01		EPA 8260C m
Chloride by Automated Colourimetry	2	N/A	2023/08/01	CAM SOP-00463	SM 23 4500-Cl E m
Chromium (VI) in Water	2	N/A	2023/08/01	CAM SOP-00436	EPA 7199 m
Free (WAD) Cyanide	2	N/A	2023/08/02	CAM SOP-00457	OMOE E3015 m
Petroleum Hydro. CCME F1 & BTEX in Water	1	N/A	2023/07/30	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1)	1	2023/07/31	2023/07/31	CAM SOP-00316	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1)	2	2023/07/31	2023/08/01	CAM SOP-00316	CCME PHC-CWS m
Mercury	1	2023/07/31	2023/08/01	CAM SOP-00453	EPA 7470A m
Mercury	1	2023/08/01	2023/08/01	CAM SOP-00453	EPA 7470A m
Dissolved Metals by ICPMS	1	N/A	2023/08/02	CAM SOP-00447	EPA 6020B m
Dissolved Metals by ICPMS	1	N/A	2023/08/03	CAM SOP-00447	EPA 6020B m
PAH Compounds in Water by GC/MS (SIM)	2	2023/07/31	2023/07/31	CAM SOP-00318	EPA 8270E
Volatile Organic Compounds and F1 PHCs	2	N/A	2023/08/01	CAM SOP-00230	EPA 8260C m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCCFP, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.



Your Project #: BIGC-ENV-554D
Site Location: 590 ARGUS ROAD, OAKVILLE
Your C.O.C. #: 946149-01-01

Attention: Rebecca Morrison

B.I.G Consulting Inc.
12-5500 Tomken Road
Mississauga, ON
CANADA L4W 2Z4

Report Date: 2023/08/03
Report #: R7749455
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3M5407

Received: 2023/07/27, 13:23

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key



Bureau Veritas
03 Aug 2023 19:07:00

Please direct all questions regarding this Certificate of Analysis to:

Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843

=====
This report has been generated and distributed using a secure automated process.

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



O.REG 153 METALS & INORGANICS PKG (WTR)

Bureau Veritas ID			WNE974		WNE978		
Sampling Date			2023/07/27 11:30		2023/07/27 11:45		
COC Number			946149-01-01		946149-01-01		
	UNITS	Criteria	BH / MW3	QC Batch	BH/ MW 108	RDL	QC Batch
Inorganics							
WAD Cyanide (Free)	ug/L	66	ND	8828250	ND	1	8828121
Dissolved Chloride (Cl-)	mg/L	790	1400	8821336	1500	10	8821336
Metals							
Chromium (VI)	ug/L	25	ND	8819706	ND	0.50	8819706
Mercury (Hg)	ug/L	0.29	ND	8824802	ND	0.10	8823486
Dissolved Antimony (Sb)	ug/L	6.0	ND	8822704	ND	0.50	8822704
Dissolved Arsenic (As)	ug/L	25	ND	8822704	ND	1.0	8822704
Dissolved Barium (Ba)	ug/L	1000	140	8822704	57	2.0	8822704
Dissolved Beryllium (Be)	ug/L	4.0	ND	8822704	ND	0.40	8822704
Dissolved Boron (B)	ug/L	5000	400	8822704	1100	10	8822704
Dissolved Cadmium (Cd)	ug/L	2.7	ND	8822704	ND	0.090	8822704
Dissolved Chromium (Cr)	ug/L	50	ND	8822704	ND	5.0	8822704
Dissolved Cobalt (Co)	ug/L	3.8	ND	8822704	ND	0.50	8822704
Dissolved Copper (Cu)	ug/L	87	2.3	8822704	1.6	0.90	8822704
Dissolved Lead (Pb)	ug/L	10	ND	8822704	ND	0.50	8822704
Dissolved Molybdenum (Mo)	ug/L	70	3.2	8822704	7.0	0.50	8822704
Dissolved Nickel (Ni)	ug/L	100	ND	8822704	ND	1.0	8822704
Dissolved Selenium (Se)	ug/L	10	ND	8822704	ND	2.0	8822704
Dissolved Silver (Ag)	ug/L	1.5	ND	8822704	ND	0.090	8822704
Dissolved Sodium (Na)	ug/L	490000	750000	8822704	730000	500	8822704
Dissolved Thallium (Tl)	ug/L	2.0	ND	8822704	ND	0.050	8822704
Dissolved Uranium (U)	ug/L	20	4.3	8822704	2.2	0.10	8822704
Dissolved Vanadium (V)	ug/L	6.2	ND	8822704	ND	0.50	8822704
Dissolved Zinc (Zn)	ug/L	1100	ND	8822704	ND	5.0	8822704
No Fill	No Exceedance						
Grey	Exceeds 1 criteria policy/level						
Black	Exceeds both criteria/levels						
RDL = Reportable Detection Limit							
QC Batch = Quality Control Batch							
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)							
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition							
Potable Ground Water- All Types of Property Uses - Coarse Textured Soil							
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.							



O.REG 153 PAHS (WATER)

Bureau Veritas ID			WNE972	WNE973			WNE973		
Sampling Date			2023/07/27 12:00	2023/07/27 12:00			2023/07/27 12:00		
COC Number			946149-01-01	946149-01-01			946149-01-01		
	UNITS	Criteria	BH/MW 203	DUP2030	RDL	QC Batch	DUP2030 Lab-Dup	RDL	QC Batch
Calculated Parameters									
Methylnaphthalene, 2-(1-)	ug/L	3.2	ND	ND	0.071	8817734			
Polyaromatic Hydrocarbons									
Acenaphthene	ug/L	4.1	ND	ND	0.050	8823025	ND	0.050	8823025
Acenaphthylene	ug/L	1	ND	ND	0.050	8823025	ND	0.050	8823025
Anthracene	ug/L	2.4	ND	ND	0.050	8823025	ND	0.050	8823025
Benzo(a)anthracene	ug/L	1.0	ND	ND	0.050	8823025	ND	0.050	8823025
Benzo(a)pyrene	ug/L	0.01	ND	ND	0.0090	8823025	ND	0.0090	8823025
Benzo(b/j)fluoranthene	ug/L	0.1	ND	ND	0.050	8823025	ND	0.050	8823025
Benzo(g,h,i)perylene	ug/L	0.2	ND	ND	0.050	8823025	ND	0.050	8823025
Benzo(k)fluoranthene	ug/L	0.1	ND	ND	0.050	8823025	ND	0.050	8823025
Chrysene	ug/L	0.1	ND	ND	0.050	8823025	ND	0.050	8823025
Dibenzo(a,h)anthracene	ug/L	0.2	ND	ND	0.050	8823025	ND	0.050	8823025
Fluoranthene	ug/L	0.41	ND	ND	0.050	8823025	ND	0.050	8823025
Fluorene	ug/L	120	ND	ND	0.050	8823025	ND	0.050	8823025
Indeno(1,2,3-cd)pyrene	ug/L	0.2	ND	ND	0.050	8823025	ND	0.050	8823025
1-Methylnaphthalene	ug/L	3.2	ND	ND	0.050	8823025	ND	0.050	8823025
2-Methylnaphthalene	ug/L	3.2	ND	ND	0.050	8823025	ND	0.050	8823025
Naphthalene	ug/L	11	ND	ND	0.050	8823025	ND	0.050	8823025
Phenanthrene	ug/L	1	ND	ND	0.030	8823025	ND	0.030	8823025
Pyrene	ug/L	4.1	ND	ND	0.050	8823025	ND	0.050	8823025
Surrogate Recovery (%)									
D10-Anthracene	%	-	114	109		8823025	112		8823025
D14-Terphenyl (FS)	%	-	107	110		8823025	110		8823025
D8-Acenaphthylene	%	-	97	92		8823025	96		8823025
No Fill	No Exceedance								
Grey	Exceeds 1 criteria policy/level								
Black	Exceeds both criteria/levels								
RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch									
Lab-Dup = Laboratory Initiated Duplicate									
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)									
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition									
Potable Ground Water- All Types of Property Uses - Coarse Textured Soil									
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.									



O.REG 153 PHCS, BTEX/F1-F4 (WATER)

Bureau Veritas ID			WNE980		
Sampling Date			2023/07/27 13:00		
COC Number			946149-01-01		
	UNITS	Criteria	TRIP BLANK	RDL	QC Batch
BTEX & F1 Hydrocarbons					
Benzene	ug/L	5.0	ND	0.20	8820921
Toluene	ug/L	24	ND	0.20	8820921
Ethylbenzene	ug/L	2.4	ND	0.20	8820921
o-Xylene	ug/L	-	ND	0.20	8820921
p+m-Xylene	ug/L	-	ND	0.40	8820921
Total Xylenes	ug/L	300	ND	0.40	8820921
F1 (C6-C10)	ug/L	750	ND	25	8820921
F1 (C6-C10) - BTEX	ug/L	750	ND	25	8820921
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/L	150	ND	100	8822511
F3 (C16-C34 Hydrocarbons)	ug/L	500	ND	200	8822511
F4 (C34-C50 Hydrocarbons)	ug/L	500	ND	200	8822511
Reached Baseline at C50	ug/L	-	Yes		8822511
Surrogate Recovery (%)					
1,4-Difluorobenzene	%	-	97		8820921
4-Bromofluorobenzene	%	-	108		8820921
D10-o-Xylene	%	-	93		8820921
D4-1,2-Dichloroethane	%	-	88		8820921
o-Terphenyl	%	-	96		8822511
No Fill	No Exceedance				
Grey	Exceeds 1 criteria policy/level				
Black	Exceeds both criteria/levels				
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)					
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition					
Potable Ground Water- All Types of Property Uses - Coarse Textured Soil					
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.					



BUREAU
VERITAS

Bureau Veritas Job #: C3M5407
Report Date: 2023/08/03

B.I.G Consulting Inc.
Client Project #: BIGC-ENV-554D
Site Location: 590 ARGUS ROAD, OAKVILLE
Sampler Initials: ST

O.REG 153 VOCS BY HS & F1-F4 (WATER)

Bureau Veritas ID			WNE972	WNE973			WNE973		
Sampling Date			2023/07/27 12:00	2023/07/27 12:00			2023/07/27 12:00		
COC Number			946149-01-01	946149-01-01			946149-01-01		
	UNITS	Criteria	BH/MW 203	DUP2030	RDL	QC Batch	DUP2030 Lab-Dup	RDL	QC Batch
Calculated Parameters									
1,3-Dichloropropene (cis+trans)	ug/L	0.5	ND	ND	0.50	8818008			
Volatile Organics									
Acetone (2-Propanone)	ug/L	2700	ND	ND	10	8818788			
Benzene	ug/L	5.0	ND	ND	0.17	8818788			
Bromodichloromethane	ug/L	16.0	ND	ND	0.50	8818788			
Bromoform	ug/L	25.0	ND	ND	1.0	8818788			
Bromomethane	ug/L	0.89	ND	ND	0.50	8818788			
Carbon Tetrachloride	ug/L	0.79	ND	ND	0.20	8818788			
Chlorobenzene	ug/L	30	ND	ND	0.20	8818788			
Chloroform	ug/L	2.4	ND	ND	0.20	8818788			
Dibromochloromethane	ug/L	25.0	ND	ND	0.50	8818788			
1,2-Dichlorobenzene	ug/L	3.0	ND	ND	0.50	8818788			
1,3-Dichlorobenzene	ug/L	59	ND	ND	0.50	8818788			
1,4-Dichlorobenzene	ug/L	1.0	ND	ND	0.50	8818788			
Dichlorodifluoromethane (FREON 12)	ug/L	590	ND	ND	1.0	8818788			
1,1-Dichloroethane	ug/L	5	ND	ND	0.20	8818788			
1,2-Dichloroethane	ug/L	1.6	ND	ND	0.50	8818788			
1,1-Dichloroethylene	ug/L	1.6	ND	ND	0.20	8818788			
cis-1,2-Dichloroethylene	ug/L	1.6	ND	ND	0.50	8818788			
trans-1,2-Dichloroethylene	ug/L	1.6	ND	ND	0.50	8818788			
1,2-Dichloropropane	ug/L	5.0	ND	ND	0.20	8818788			
cis-1,3-Dichloropropene	ug/L	0.5	ND	ND	0.30	8818788			
trans-1,3-Dichloropropene	ug/L	0.5	ND	ND	0.40	8818788			
Ethylbenzene	ug/L	2.4	ND	ND	0.20	8818788			
Ethylene Dibromide	ug/L	0.2	ND	ND	0.20	8818788			
Hexane	ug/L	51	ND	ND	1.0	8818788			
No Fill	No Exceedance								
Grey	Exceeds 1 criteria policy/level								
Black	Exceeds both criteria/levels								
RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch									
Lab-Dup = Laboratory Initiated Duplicate									
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)									
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition									
Potable Ground Water- All Types of Property Uses - Coarse Textured Soil									
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.									



O.REG 153 VOCS BY HS & F1-F4 (WATER)

Bureau Veritas ID			WNE972	WNE973			WNE973		
Sampling Date			2023/07/27 12:00	2023/07/27 12:00			2023/07/27 12:00		
COC Number			946149-01-01	946149-01-01			946149-01-01		
	UNITS	Criteria	BH/MW 203	DUP2030	RDL	QC Batch	DUP2030 Lab-Dup	RDL	QC Batch
Methylene Chloride(Dichloromethane)	ug/L	50	ND	ND	2.0	8818788			
Methyl Ethyl Ketone (2-Butanone)	ug/L	1800	ND	ND	10	8818788			
Methyl Isobutyl Ketone	ug/L	640	ND	ND	5.0	8818788			
Methyl t-butyl ether (MTBE)	ug/L	15	ND	ND	0.50	8818788			
Styrene	ug/L	5.4	ND	ND	0.50	8818788			
1,1,1,2-Tetrachloroethane	ug/L	1.1	ND	ND	0.50	8818788			
1,1,2,2-Tetrachloroethane	ug/L	1.0	ND	ND	0.50	8818788			
Tetrachloroethylene	ug/L	1.6	ND	ND	0.20	8818788			
Toluene	ug/L	24	ND	ND	0.20	8818788			
1,1,1-Trichloroethane	ug/L	200	ND	ND	0.20	8818788			
1,1,2-Trichloroethane	ug/L	4.7	ND	ND	0.50	8818788			
Trichloroethylene	ug/L	1.6	ND	ND	0.20	8818788			
Trichlorofluoromethane (FREON 11)	ug/L	150	ND	ND	0.50	8818788			
Vinyl Chloride	ug/L	0.5	ND	ND	0.20	8818788			
p+m-Xylene	ug/L	-	ND	ND	0.20	8818788			
o-Xylene	ug/L	-	ND	ND	0.20	8818788			
Total Xylenes	ug/L	300	ND	ND	0.20	8818788			
F1 (C6-C10)	ug/L	750	ND	ND	25	8818788			
F1 (C6-C10) - BTEX	ug/L	750	ND	ND	25	8818788			
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/L	150	ND	ND	100	8823020	ND	100	8823020
F3 (C16-C34 Hydrocarbons)	ug/L	500	ND	ND	200	8823020	ND	200	8823020
F4 (C34-C50 Hydrocarbons)	ug/L	500	ND	ND	200	8823020	ND	200	8823020
Reached Baseline at C50	ug/L	-	Yes	Yes		8823020	Yes		8823020
Surrogate Recovery (%)									
o-Terphenyl	%	-	92	94		8823020	94		8823020
4-Bromofluorobenzene	%	-	90	91		8818788			
No Fill	No Exceedance								
Grey	Exceeds 1 criteria policy/level								
Black	Exceeds both criteria/levels								
RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch									
Lab-Dup = Laboratory Initiated Duplicate									
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)									
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition									
Potable Ground Water- All Types of Property Uses - Coarse Textured Soil									
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.									



BUREAU
VERITAS

Bureau Veritas Job #: C3M5407
Report Date: 2023/08/03

B.I.G Consulting Inc.
Client Project #: BIGC-ENV-554D
Site Location: 590 ARGUS ROAD, OAKVILLE
Sampler Initials: ST

O.REG 153 VOCS BY HS & F1-F4 (WATER)

Bureau Veritas ID			WNE972	WNE973			WNE973		
Sampling Date			2023/07/27 12:00	2023/07/27 12:00			2023/07/27 12:00		
COC Number			946149-01-01	946149-01-01			946149-01-01		
	UNITS	Criteria	BH/MW 203	DUP2030	RDL	QC Batch	DUP2030 Lab-Dup	RDL	QC Batch
D4-1,2-Dichloroethane	%	-	93	94		8818788			
D8-Toluene	%	-	96	98		8818788			
No Fill	No Exceedance								
Grey	Exceeds 1 criteria policy/level								
Black	Exceeds both criteria/levels								
RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch									
Lab-Dup = Laboratory Initiated Duplicate									
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)									
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition									
Potable Ground Water- All Types of Property Uses - Coarse Textured Soil									



Bureau Veritas Job #: C3M5407
Report Date: 2023/08/03

B.I.G Consulting Inc.
Client Project #: BIGC-ENV-554D
Site Location: 590 ARGUS ROAD, OAKVILLE
Sampler Initials: ST

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	24.7°C
-----------	--------

Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C3M5407

Report Date: 2023/08/03

QUALITY ASSURANCE REPORT

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554D

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: ST

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8818788	4-Bromofluorobenzene	2023/08/01	96	70 - 130	98	70 - 130	93	%		
8818788	D4-1,2-Dichloroethane	2023/08/01	93	70 - 130	88	70 - 130	88	%		
8818788	D8-Toluene	2023/08/01	103	70 - 130	103	70 - 130	99	%		
8820921	1,4-Difluorobenzene	2023/07/30	95	70 - 130	96	70 - 130	97	%		
8820921	4-Bromofluorobenzene	2023/07/30	104	70 - 130	104	70 - 130	101	%		
8820921	D10-o-Xylene	2023/07/30	98	70 - 130	94	70 - 130	93	%		
8820921	D4-1,2-Dichloroethane	2023/07/30	89	70 - 130	88	70 - 130	90	%		
8822511	o-Terphenyl	2023/08/01	100	60 - 130	99	60 - 130	97	%		
8823020	o-Terphenyl	2023/08/01	97	60 - 130	96	60 - 130	91	%		
8823025	D10-Anthracene	2023/07/31	108	50 - 130	108	50 - 130	110	%		
8823025	D14-Terphenyl (FS)	2023/07/31	111	50 - 130	111	50 - 130	112	%		
8823025	D8-Acenaphthylene	2023/07/31	96	50 - 130	98	50 - 130	87	%		
8818788	1,1,1,2-Tetrachloroethane	2023/08/01	95	70 - 130	92	70 - 130	ND, RDL=0.50	ug/L	NC	30
8818788	1,1,1-Trichloroethane	2023/08/01	93	70 - 130	91	70 - 130	ND, RDL=0.20	ug/L	NC	30
8818788	1,1,2,2-Tetrachloroethane	2023/08/01	97	70 - 130	91	70 - 130	ND, RDL=0.50	ug/L	NC	30
8818788	1,1,2-Trichloroethane	2023/08/01	98	70 - 130	92	70 - 130	ND, RDL=0.50	ug/L	NC	30
8818788	1,1-Dichloroethane	2023/08/01	102	70 - 130	99	70 - 130	ND, RDL=0.20	ug/L	NC	30
8818788	1,1-Dichloroethylene	2023/08/01	103	70 - 130	102	70 - 130	ND, RDL=0.20	ug/L	NC	30
8818788	1,2-Dichlorobenzene	2023/08/01	95	70 - 130	93	70 - 130	ND, RDL=0.50	ug/L	NC	30
8818788	1,2-Dichloroethane	2023/08/01	90	70 - 130	85	70 - 130	ND, RDL=0.50	ug/L	NC	30
8818788	1,2-Dichloropropane	2023/08/01	104	70 - 130	99	70 - 130	ND, RDL=0.20	ug/L	NC	30
8818788	1,3-Dichlorobenzene	2023/08/01	90	70 - 130	91	70 - 130	ND, RDL=0.50	ug/L	NC	30
8818788	1,4-Dichlorobenzene	2023/08/01	103	70 - 130	104	70 - 130	ND, RDL=0.50	ug/L	NC	30
8818788	Acetone (2-Propanone)	2023/08/01	108	60 - 140	99	60 - 140	ND, RDL=10	ug/L	NC	30
8818788	Benzene	2023/08/01	99	70 - 130	97	70 - 130	ND, RDL=0.17	ug/L	NC	30
8818788	Bromodichloromethane	2023/08/01	95	70 - 130	91	70 - 130	ND, RDL=0.50	ug/L	NC	30
8818788	Bromoform	2023/08/01	95	70 - 130	90	70 - 130	ND, RDL=1.0	ug/L	NC	30
8818788	Bromomethane	2023/08/01	104	60 - 140	100	60 - 140	ND, RDL=0.50	ug/L	NC	30
8818788	Carbon Tetrachloride	2023/08/01	88	70 - 130	87	70 - 130	ND, RDL=0.20	ug/L	NC	30
8818788	Chlorobenzene	2023/08/01	100	70 - 130	98	70 - 130	ND, RDL=0.20	ug/L	NC	30
8818788	Chloroform	2023/08/01	95	70 - 130	91	70 - 130	ND, RDL=0.20	ug/L	NC	30



BUREAU
VERITAS

Bureau Veritas Job #: C3M5407

Report Date: 2023/08/03

QUALITY ASSURANCE REPORT(CONT'D)

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554D

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: ST

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8818788	cis-1,2-Dichloroethylene	2023/08/01	100	70 - 130	97	70 - 130	ND, RDL=0.50	ug/L	NC	30
8818788	cis-1,3-Dichloropropene	2023/08/01	101	70 - 130	99	70 - 130	ND, RDL=0.30	ug/L	NC	30
8818788	Dibromochloromethane	2023/08/01	93	70 - 130	89	70 - 130	ND, RDL=0.50	ug/L	NC	30
8818788	Dichlorodifluoromethane (FREON 12)	2023/08/01	117	60 - 140	114	60 - 140	ND, RDL=1.0	ug/L	NC	30
8818788	Ethylbenzene	2023/08/01	89	70 - 130	90	70 - 130	ND, RDL=0.20	ug/L	NC	30
8818788	Ethylene Dibromide	2023/08/01	98	70 - 130	92	70 - 130	ND, RDL=0.20	ug/L	NC	30
8818788	F1 (C6-C10) - BTEX	2023/08/01					ND, RDL=25	ug/L	NC	30
8818788	F1 (C6-C10)	2023/08/01	98	60 - 140	100	60 - 140	ND, RDL=25	ug/L	NC	30
8818788	Hexane	2023/08/01	116	70 - 130	115	70 - 130	ND, RDL=1.0	ug/L	NC	30
8818788	Methyl Ethyl Ketone (2-Butanone)	2023/08/01	115	60 - 140	107	60 - 140	ND, RDL=10	ug/L	NC	30
8818788	Methyl Isobutyl Ketone	2023/08/01	106	70 - 130	100	70 - 130	ND, RDL=5.0	ug/L	NC	30
8818788	Methyl t-butyl ether (MTBE)	2023/08/01	98	70 - 130	94	70 - 130	ND, RDL=0.50	ug/L	NC	30
8818788	Methylene Chloride(Dichloromethane)	2023/08/01	106	70 - 130	101	70 - 130	ND, RDL=2.0	ug/L	NC	30
8818788	o-Xylene	2023/08/01	89	70 - 130	90	70 - 130	ND, RDL=0.20	ug/L	NC	30
8818788	p+m-Xylene	2023/08/01	89	70 - 130	92	70 - 130	ND, RDL=0.20	ug/L	NC	30
8818788	Styrene	2023/08/01	99	70 - 130	100	70 - 130	ND, RDL=0.50	ug/L	NC	30
8818788	Tetrachloroethylene	2023/08/01	86	70 - 130	85	70 - 130	ND, RDL=0.20	ug/L	NC	30
8818788	Toluene	2023/08/01	101	70 - 130	100	70 - 130	ND, RDL=0.20	ug/L	NC	30
8818788	Total Xylenes	2023/08/01					ND, RDL=0.20	ug/L	NC	30
8818788	trans-1,2-Dichloroethylene	2023/08/01	94	70 - 130	94	70 - 130	ND, RDL=0.50	ug/L	NC	30
8818788	trans-1,3-Dichloropropene	2023/08/01	105	70 - 130	102	70 - 130	ND, RDL=0.40	ug/L	NC	30
8818788	Trichloroethylene	2023/08/01	99	70 - 130	99	70 - 130	ND, RDL=0.20	ug/L	NC	30
8818788	Trichlorofluoromethane (FREON 11)	2023/08/01	91	70 - 130	89	70 - 130	ND, RDL=0.50	ug/L	NC	30
8818788	Vinyl Chloride	2023/08/01	123	70 - 130	120	70 - 130	ND, RDL=0.20	ug/L	NC	30
8819706	Chromium (VI)	2023/07/31	90	80 - 120	99	80 - 120	ND, RDL=0.50	ug/L	0.48	20
8820921	Benzene	2023/07/30	89	50 - 140	86	50 - 140	ND, RDL=0.20	ug/L	NC	30
8820921	Ethylbenzene	2023/07/30	99	50 - 140	97	50 - 140	ND, RDL=0.20	ug/L	NC	30
8820921	F1 (C6-C10) - BTEX	2023/07/30					ND, RDL=25	ug/L	NC	30
8820921	F1 (C6-C10)	2023/07/30	103	60 - 140	98	60 - 140	ND, RDL=25	ug/L	NC	30
8820921	o-Xylene	2023/07/30	93	50 - 140	91	50 - 140	ND, RDL=0.20	ug/L	NC	30
8820921	p+m-Xylene	2023/07/30	97	50 - 140	98	50 - 140	ND, RDL=0.40	ug/L	NC	30



BUREAU
VERITAS

Bureau Veritas Job #: C3M5407

Report Date: 2023/08/03

QUALITY ASSURANCE REPORT(CONT'D)

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554D

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: ST

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8820921	Toluene	2023/07/30	86	50 - 140	83	50 - 140	ND, RDL=0.20	ug/L	NC	30
8820921	Total Xylenes	2023/07/30					ND, RDL=0.40	ug/L	NC	30
8821336	Dissolved Chloride (Cl-)	2023/08/01	98	80 - 120	94	80 - 120	ND, RDL=1.0	mg/L	NC	20
8822511	F2 (C10-C16 Hydrocarbons)	2023/07/31	108	60 - 130	104	60 - 130	ND, RDL=100	ug/L	NC	30
8822511	F3 (C16-C34 Hydrocarbons)	2023/07/31	105	60 - 130	105	60 - 130	ND, RDL=200	ug/L	NC	30
8822511	F4 (C34-C50 Hydrocarbons)	2023/07/31	105	60 - 130	104	60 - 130	ND, RDL=200	ug/L	NC	30
8822704	Dissolved Antimony (Sb)	2023/08/02	108	80 - 120	102	80 - 120	ND, RDL=0.50	ug/L	NC	20
8822704	Dissolved Arsenic (As)	2023/08/02	103	80 - 120	101	80 - 120	ND, RDL=1.0	ug/L	1.4	20
8822704	Dissolved Barium (Ba)	2023/08/02	105	80 - 120	103	80 - 120	ND, RDL=2.0	ug/L	0.95	20
8822704	Dissolved Beryllium (Be)	2023/08/02	101	80 - 120	98	80 - 120	ND, RDL=0.40	ug/L	NC	20
8822704	Dissolved Boron (B)	2023/08/02	98	80 - 120	94	80 - 120	ND, RDL=10	ug/L	3.2	20
8822704	Dissolved Cadmium (Cd)	2023/08/02	104	80 - 120	100	80 - 120	ND, RDL=0.090	ug/L	NC	20
8822704	Dissolved Chromium (Cr)	2023/08/02	104	80 - 120	101	80 - 120	ND, RDL=5.0	ug/L	NC	20
8822704	Dissolved Cobalt (Co)	2023/08/02	99	80 - 120	101	80 - 120	ND, RDL=0.50	ug/L	1.3	20
8822704	Dissolved Copper (Cu)	2023/08/02	105	80 - 120	99	80 - 120	ND, RDL=0.90	ug/L	NC	20
8822704	Dissolved Lead (Pb)	2023/08/02	98	80 - 120	100	80 - 120	ND, RDL=0.50	ug/L	NC	20
8822704	Dissolved Molybdenum (Mo)	2023/08/02	110	80 - 120	99	80 - 120	ND, RDL=0.50	ug/L	1.1	20
8822704	Dissolved Nickel (Ni)	2023/08/02	97	80 - 120	99	80 - 120	ND, RDL=1.0	ug/L	10	20
8822704	Dissolved Selenium (Se)	2023/08/02	104	80 - 120	101	80 - 120	ND, RDL=2.0	ug/L	NC	20
8822704	Dissolved Silver (Ag)	2023/08/02	52 (1)	80 - 120	100	80 - 120	ND, RDL=0.090	ug/L	NC	20
8822704	Dissolved Sodium (Na)	2023/08/02	NC	80 - 120	101	80 - 120	ND, RDL=100	ug/L	0.40	20
8822704	Dissolved Thallium (Tl)	2023/08/02	98	80 - 120	99	80 - 120	ND, RDL=0.050	ug/L	NC	20
8822704	Dissolved Uranium (U)	2023/08/02	101	80 - 120	99	80 - 120	ND, RDL=0.10	ug/L	1.7	20
8822704	Dissolved Vanadium (V)	2023/08/02	103	80 - 120	100	80 - 120	ND, RDL=0.50	ug/L	NC	20
8822704	Dissolved Zinc (Zn)	2023/08/02	100	80 - 120	101	80 - 120	ND, RDL=5.0	ug/L	NC	20
8823020	F2 (C10-C16 Hydrocarbons)	2023/08/01	99	60 - 130	102	60 - 130	ND, RDL=100	ug/L	NC	30
8823020	F3 (C16-C34 Hydrocarbons)	2023/08/01	93	60 - 130	96	60 - 130	ND, RDL=200	ug/L	NC	30
8823020	F4 (C34-C50 Hydrocarbons)	2023/08/01	91	60 - 130	92	60 - 130	ND, RDL=200	ug/L	NC	30
8823025	1-Methylnaphthalene	2023/07/31	101	50 - 130	105	50 - 130	ND, RDL=0.050	ug/L	NC	30
8823025	2-Methylnaphthalene	2023/07/31	99	50 - 130	104	50 - 130	ND, RDL=0.050	ug/L	NC	30
8823025	Acenaphthene	2023/07/31	101	50 - 130	102	50 - 130	ND, RDL=0.050	ug/L	NC	30



BUREAU
VERITAS

Bureau Veritas Job #: C3M5407

Report Date: 2023/08/03

QUALITY ASSURANCE REPORT(CONT'D)

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554D

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: ST

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8823025	Acenaphthylene	2023/07/31	107	50 - 130	106	50 - 130	ND, RDL=0.050	ug/L	NC	30
8823025	Anthracene	2023/07/31	111	50 - 130	110	50 - 130	ND, RDL=0.050	ug/L	NC	30
8823025	Benzo(a)anthracene	2023/07/31	104	50 - 130	106	50 - 130	ND, RDL=0.050	ug/L	NC	30
8823025	Benzo(a)pyrene	2023/07/31	96	50 - 130	101	50 - 130	ND, RDL=0.0090	ug/L	NC	30
8823025	Benzo(b,j)fluoranthene	2023/07/31	93	50 - 130	98	50 - 130	ND, RDL=0.050	ug/L	NC	30
8823025	Benzo(g,h,i)perylene	2023/07/31	91	50 - 130	97	50 - 130	ND, RDL=0.050	ug/L	NC	30
8823025	Benzo(k)fluoranthene	2023/07/31	98	50 - 130	104	50 - 130	ND, RDL=0.050	ug/L	NC	30
8823025	Chrysene	2023/07/31	93	50 - 130	98	50 - 130	ND, RDL=0.050	ug/L	NC	30
8823025	Dibenzo(a,h)anthracene	2023/07/31	97	50 - 130	103	50 - 130	ND, RDL=0.050	ug/L	NC	30
8823025	Fluoranthene	2023/07/31	99	50 - 130	98	50 - 130	ND, RDL=0.050	ug/L	NC	30
8823025	Fluorene	2023/07/31	102	50 - 130	102	50 - 130	ND, RDL=0.050	ug/L	NC	30
8823025	Indeno(1,2,3-cd)pyrene	2023/07/31	93	50 - 130	98	50 - 130	ND, RDL=0.050	ug/L	NC	30
8823025	Naphthalene	2023/07/31	102	50 - 130	106	50 - 130	ND, RDL=0.050	ug/L	NC	30
8823025	Phenanthrene	2023/07/31	103	50 - 130	103	50 - 130	ND, RDL=0.030	ug/L	NC	30
8823025	Pyrene	2023/07/31	97	50 - 130	97	50 - 130	ND, RDL=0.050	ug/L	NC	30
8823486	Mercury (Hg)	2023/08/01	88	75 - 125	91	80 - 120	ND, RDL=0.10	ug/L	NC	20
8824802	Mercury (Hg)	2023/08/01	102	75 - 125	96	80 - 120	ND, RDL=0.10	ug/L	NC	20
8828121	WAD Cyanide (Free)	2023/08/02	106	80 - 120	102	80 - 120	ND,RDL=1	ug/L	3.3	20
8828250	WAD Cyanide (Free)	2023/08/02	92	80 - 120	101	80 - 120	ND,RDL=1	ug/L	4.8	20

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Matrix Spike exceeds acceptance limits, probable matrix interference



Bureau Veritas Job #: C3M5407
Report Date: 2023/08/03

B.I.G Consulting Inc.
Client Project #: BIGC-ENV-554D
Site Location: 590 ARGUS ROAD, OAKVILLE
Sampler Initials: ST

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

A handwritten signature in black ink that reads "Cristina Carriere".

Cristina Carriere, Senior Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by {0}, {1} responsible for {2} {3} laboratory operations.



BUREAU
VERITAS

Bureau Veritas Job #: C3M5407

Report Date: 2023/08/03

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554D

Site Location: 590 ARGUS ROAD, OAKVILLE

Sampler Initials: ST

Exceedance Summary Table – Reg153/04 T2-GW-C
Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
BH / MW3	WNE974-01	Dissolved Chloride (Cl-)	790	1400	10	mg/L
BH / MW3	WNE974-02	Dissolved Sodium (Na)	490000	750000	500	ug/L
BH/ MW 108	WNE978-01	Dissolved Chloride (Cl-)	790	1500	10	mg/L
BH/ MW 108	WNE978-02	Dissolved Sodium (Na)	490000	730000	500	ug/L

The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.



Your Project #: BIGC-ENV-554D
 Site Location: 590 ARGUS ROAD
 Your C.O.C. #: N/A

Attention: Rebecca Morrison

Brownfield Investment Group Inc
 12-5500 Tomken Rd
 Mississauga, ON
 CANADA L4W 2Z4

Report Date: 2023/09/19
 Report #: R7820593
 Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C352962

Received: 2023/02/23, 15:07

Sample Matrix: Soil
 # Samples Received: 3

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
1,3-Dichloropropene Sum	3	N/A	2023/02/25		EPA 8260C m
Moisture	3	N/A	2023/02/23	CAM SOP-00445	Carter 2nd ed 51.2 m
Volatile Organic Compounds in Soil	3	N/A	2023/02/24	CAM SOP-00228	EPA 8260D

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCCFP, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.



Your Project #: BIGC-ENV-554D
Site Location: 590 ARGUS ROAD
Your C.O.C. #: N/A

Attention: Rebecca Morrison

Brownfield Investment Group Inc
12-5500 Tomken Rd
Mississauga, ON
CANADA L4W 2Z4

Report Date: 2023/09/19
Report #: R7820593
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C352962

Received: 2023/02/23, 15:07

Encryption Key

Neroshun Govinthathas
Project Manager Assistant
19 Sep 2023 12:43:36

Please direct all questions regarding this Certificate of Analysis to:
Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843

=====

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



Bureau Veritas Job #: C352962
 Report Date: 2023/09/19

Brownfield Investment Group Inc
 Client Project #: BIGC-ENV-554D
 Site Location: 590 ARGUS ROAD
 Sampler Initials: PS

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		VDC590	VDC591	VDC592		
Sampling Date		2023/02/17	2023/02/10	2023/02/21		
COC Number		N/A	N/A	N/A		
	UNITS	BH104-SS2	BH110-SS3	BH113-SS2	RDL	QC Batch
Inorganics						
Moisture	%	16	8.8	17	1.0	8519039
RDL = Reportable Detection Limit						
QC Batch = Quality Control Batch						



VOLATILE ORGANICS BY GC/MS (SOIL)

Bureau Veritas ID		VDC590	VDC591	VDC592		
Sampling Date		2023/02/17	2023/02/10	2023/02/21		
COC Number		N/A	N/A	N/A		
	UNITS	BH104-SS2	BH110-SS3	BH113-SS2	RDL	QC Batch
Calculated Parameters						
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	<0.050	<0.050	0.050	8518225
Volatile Organics						
Acetone (2-Propanone)	ug/g	<0.49	<0.49	<0.49	0.49	8520341
Benzene	ug/g	<0.0060	<0.0060	<0.0060	0.0060	8520341
Bromodichloromethane	ug/g	<0.040	<0.040	<0.040	0.040	8520341
Bromoform	ug/g	<0.040	<0.040	<0.040	0.040	8520341
Bromomethane	ug/g	<0.040	<0.040	<0.040	0.040	8520341
Carbon Tetrachloride	ug/g	<0.040	<0.040	<0.040	0.040	8520341
Chlorobenzene	ug/g	<0.040	<0.040	<0.040	0.040	8520341
Chloroform	ug/g	<0.040	<0.040	<0.040	0.040	8520341
Dibromochloromethane	ug/g	<0.040	<0.040	<0.040	0.040	8520341
1,2-Dichlorobenzene	ug/g	<0.040	<0.040	<0.040	0.040	8520341
1,3-Dichlorobenzene	ug/g	<0.040	<0.040	<0.040	0.040	8520341
1,4-Dichlorobenzene	ug/g	<0.040	<0.040	<0.040	0.040	8520341
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	<0.040	<0.040	0.040	8520341
1,1-Dichloroethane	ug/g	<0.040	<0.040	<0.040	0.040	8520341
1,2-Dichloroethane	ug/g	<0.049	<0.049	<0.049	0.049	8520341
1,1-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	0.040	8520341
cis-1,2-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	0.040	8520341
trans-1,2-Dichloroethylene	ug/g	<0.040	<0.040	<0.040	0.040	8520341
1,2-Dichloropropane	ug/g	<0.040	<0.040	<0.040	0.040	8520341
cis-1,3-Dichloropropene	ug/g	<0.030	<0.030	<0.030	0.030	8520341
trans-1,3-Dichloropropene	ug/g	<0.040	<0.040	<0.040	0.040	8520341
Ethylbenzene	ug/g	<0.010	<0.010	<0.010	0.010	8520341
Ethylene Dibromide	ug/g	<0.040	<0.040	<0.040	0.040	8520341
Hexane	ug/g	<0.040	<0.040	<0.040	0.040	8520341
Methylene Chloride(Dichloromethane)	ug/g	<0.049	<0.049	<0.049	0.049	8520341
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	<0.40	<0.40	0.40	8520341
Methyl Isobutyl Ketone	ug/g	<0.40	<0.40	<0.40	0.40	8520341
Methyl t-butyl ether (MTBE)	ug/g	<0.040	<0.040	<0.040	0.040	8520341
Styrene	ug/g	<0.040	<0.040	<0.040	0.040	8520341
1,1,1,2-Tetrachloroethane	ug/g	<0.040	<0.040	<0.040	0.040	8520341
RDL = Reportable Detection Limit						
QC Batch = Quality Control Batch						



VOLATILE ORGANICS BY GC/MS (SOIL)

Bureau Veritas ID		VDC590	VDC591	VDC592		
Sampling Date		2023/02/17	2023/02/10	2023/02/21		
COC Number		N/A	N/A	N/A		
	UNITS	BH104-SS2	BH110-SS3	BH113-SS2	RDL	QC Batch
1,1,2,2-Tetrachloroethane	ug/g	<0.040	<0.040	<0.040	0.040	8520341
Tetrachloroethylene	ug/g	<0.040	<0.040	<0.040	0.040	8520341
Toluene	ug/g	<0.020	<0.020	<0.020	0.020	8520341
1,1,1-Trichloroethane	ug/g	<0.040	<0.040	<0.040	0.040	8520341
1,1,2-Trichloroethane	ug/g	<0.040	<0.040	<0.040	0.040	8520341
Trichloroethylene	ug/g	<0.010	<0.010	<0.010	0.010	8520341
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	<0.040	<0.040	0.040	8520341
Vinyl Chloride	ug/g	<0.019	<0.019	<0.019	0.019	8520341
p+m-Xylene	ug/g	<0.020	<0.020	<0.020	0.020	8520341
o-Xylene	ug/g	<0.020	<0.020	<0.020	0.020	8520341
Total Xylenes	ug/g	<0.020	<0.020	<0.020	0.020	8520341
Surrogate Recovery (%)						
4-Bromofluorobenzene	%	98	98	99		8520341
D10-o-Xylene	%	101	98	94		8520341
D4-1,2-Dichloroethane	%	99	97	101		8520341
D8-Toluene	%	97	99	98		8520341
RDL = Reportable Detection Limit QC Batch = Quality Control Batch						



BUREAU
VERITAS

Bureau Veritas Job #: C352962

Report Date: 2023/09/19

Brownfield Investment Group Inc

Client Project #: BIGC-ENV-554D

Site Location: 590 ARGUS ROAD

Sampler Initials: PS

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.3°C
-----------	-------

Revised Report [2023/09/19]: Updated criteria to Table 2 as per client request.

Revised report[2023/02/28] - Project number updated as per client request.

Sample VDC591 [BH110-SS3] : VOC Analysis: The sample extract was transferred from the soil before 14 days. Analysis was completed within the 40 day specified hold time.

Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C352962

Report Date: 2023/09/19

QUALITY ASSURANCE REPORT

Brownfield Investment Group Inc

Client Project #: BIGC-ENV-554D

Site Location: 590 ARGUS ROAD

Sampler Initials: PS

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8520341	4-Bromofluorobenzene	2023/02/24	100	60 - 140	100	60 - 140	99	%		
8520341	D10-o-Xylene	2023/02/24	98	60 - 130	98	60 - 130	98	%		
8520341	D4-1,2-Dichloroethane	2023/02/24	99	60 - 140	102	60 - 140	99	%		
8520341	D8-Toluene	2023/02/24	101	60 - 140	99	60 - 140	99	%		
8519039	Moisture	2023/02/23							2.8	20
8520341	1,1,1,2-Tetrachloroethane	2023/02/24	92	60 - 140	94	60 - 130	<0.040	ug/g	NC	50
8520341	1,1,1-Trichloroethane	2023/02/24	96	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
8520341	1,1,2,2-Tetrachloroethane	2023/02/24	86	60 - 140	92	60 - 130	<0.040	ug/g	NC	50
8520341	1,1,2-Trichloroethane	2023/02/24	91	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
8520341	1,1-Dichloroethane	2023/02/24	88	60 - 140	90	60 - 130	<0.040	ug/g	NC	50
8520341	1,1-Dichloroethylene	2023/02/24	95	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
8520341	1,2-Dichlorobenzene	2023/02/24	91	60 - 140	91	60 - 130	<0.040	ug/g	NC	50
8520341	1,2-Dichloroethane	2023/02/24	88	60 - 140	92	60 - 130	<0.049	ug/g	NC	50
8520341	1,2-Dichloropropane	2023/02/24	90	60 - 140	93	60 - 130	<0.040	ug/g	NC	50
8520341	1,3-Dichlorobenzene	2023/02/24	92	60 - 140	91	60 - 130	<0.040	ug/g	NC	50
8520341	1,4-Dichlorobenzene	2023/02/24	104	60 - 140	103	60 - 130	<0.040	ug/g	NC	50
8520341	Acetone (2-Propanone)	2023/02/24	106	60 - 140	111	60 - 140	<0.49	ug/g	NC	50
8520341	Benzene	2023/02/24	84	60 - 140	86	60 - 130	<0.0060	ug/g	NC	50
8520341	Bromodichloromethane	2023/02/24	91	60 - 140	94	60 - 130	<0.040	ug/g	NC	50
8520341	Bromoform	2023/02/24	88	60 - 140	94	60 - 130	<0.040	ug/g	NC	50
8520341	Bromomethane	2023/02/24	92	60 - 140	94	60 - 140	<0.040	ug/g	NC	50
8520341	Carbon Tetrachloride	2023/02/24	92	60 - 140	93	60 - 130	<0.040	ug/g	NC	50
8520341	Chlorobenzene	2023/02/24	92	60 - 140	93	60 - 130	<0.040	ug/g	NC	50
8520341	Chloroform	2023/02/24	90	60 - 140	92	60 - 130	<0.040	ug/g	NC	50
8520341	cis-1,2-Dichloroethylene	2023/02/24	92	60 - 140	94	60 - 130	<0.040	ug/g	NC	50
8520341	cis-1,3-Dichloropropene	2023/02/24	89	60 - 140	93	60 - 130	<0.030	ug/g	NC	50
8520341	Dibromochloromethane	2023/02/24	87	60 - 140	92	60 - 130	<0.040	ug/g	NC	50
8520341	Dichlorodifluoromethane (FREON 12)	2023/02/24	116	60 - 140	115	60 - 140	<0.040	ug/g	NC	50
8520341	Ethylbenzene	2023/02/24	89	60 - 140	87	60 - 130	<0.010	ug/g	NC	50
8520341	Ethylene Dibromide	2023/02/24	86	60 - 140	90	60 - 130	<0.040	ug/g	NC	50
8520341	Hexane	2023/02/24	93	60 - 140	92	60 - 130	<0.040	ug/g	NC	50



BUREAU
VERITAS

Bureau Veritas Job #: C352962

Report Date: 2023/09/19

QUALITY ASSURANCE REPORT(CONT'D)

Brownfield Investment Group Inc

Client Project #: BIGC-ENV-554D

Site Location: 590 ARGUS ROAD

Sampler Initials: PS

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8520341	Methyl Ethyl Ketone (2-Butanone)	2023/02/24	109	60 - 140	117	60 - 140	<0.40	ug/g	NC	50
8520341	Methyl Isobutyl Ketone	2023/02/24	93	60 - 140	101	60 - 130	<0.40	ug/g	NC	50
8520341	Methyl t-butyl ether (MTBE)	2023/02/24	87	60 - 140	90	60 - 130	<0.040	ug/g	NC	50
8520341	Methylene Chloride(Dichloromethane)	2023/02/24	90	60 - 140	93	60 - 130	<0.049	ug/g	NC	50
8520341	o-Xylene	2023/02/24	88	60 - 140	88	60 - 130	<0.020	ug/g	NC	50
8520341	p+m-Xylene	2023/02/24	93	60 - 140	92	60 - 130	<0.020	ug/g	NC	50
8520341	Styrene	2023/02/24	97	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
8520341	Tetrachloroethylene	2023/02/24	88	60 - 140	86	60 - 130	<0.040	ug/g	NC	50
8520341	Toluene	2023/02/24	90	60 - 140	89	60 - 130	<0.020	ug/g	NC	50
8520341	Total Xylenes	2023/02/24					<0.020	ug/g	NC	50
8520341	trans-1,2-Dichloroethylene	2023/02/24	95	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
8520341	trans-1,3-Dichloropropene	2023/02/24	101	60 - 140	105	60 - 130	<0.040	ug/g	NC	50
8520341	Trichloroethylene	2023/02/24	97	60 - 140	97	60 - 130	<0.010	ug/g	NC	50
8520341	Trichlorofluoromethane (FREON 11)	2023/02/24	95	60 - 140	94	60 - 130	<0.040	ug/g	NC	50
8520341	Vinyl Chloride	2023/02/24	89	60 - 140	89	60 - 130	<0.019	ug/g	NC	50

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).



Bureau Veritas Job #: C352962
Report Date: 2023/09/19

Brownfield Investment Group Inc
Client Project #: BIGC-ENV-554D
Site Location: 590 ARGUS ROAD
Sampler Initials: PS

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

A handwritten signature in black ink that reads "Cristina Carriere".

Cristina Carriere, Senior Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



BUREAU
VERITAS

Bureau Veritas Job #: C352962

Report Date: 2023/09/19

Brownfield Investment Group Inc

Client Project #: BIGC-ENV-554D

Site Location: 590 ARGUS ROAD

Sampler Initials: PS

Exceedance Summary Table – Reg153/04 T2-GW-C

Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
No Exceedances						
The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.						



Your Project #: BIG-ENV-542D
 Site Location: 590 ARGUS ROAD
 Your C.O.C. #: N/A

Attention: Rebecca Morrison

Brownfield Investment Group Inc
 12-5500 Tomken Rd
 Mississauga, ON
 CANADA L4W 2Z4

Report Date: 2023/02/28
 Report #: R7527007
 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C352983

Received: 2023/02/23, 15:07

Sample Matrix: Soil
 # Samples Received: 14

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Methylnaphthalene Sum	6	N/A	2023/02/28	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	4	2023/02/27	2023/02/28	CAM SOP-00408	R153 Ana. Prot. 2011
Free (WAD) Cyanide	2	2023/02/24	2023/02/24	CAM SOP-00457	OMOE E3015 m
Free (WAD) Cyanide	2	2023/02/27	2023/02/27	CAM SOP-00457	OMOE E3015 m
Conductivity	4	2023/02/27	2023/02/27	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1)	4	2023/02/27	2023/02/27	CAM SOP-00436	EPA 3060/7199 m
Acid Extractable Metals by ICPMS	2	2023/02/27	2023/02/28	CAM SOP-00447	EPA 6020B m
Acid Extractable Metals by ICPMS	10	2023/02/28	2023/02/28	CAM SOP-00447	EPA 6020B m
Moisture	2	N/A	2023/02/23	CAM SOP-00445	Carter 2nd ed 51.2 m
Moisture	3	N/A	2023/02/25	CAM SOP-00445	Carter 2nd ed 51.2 m
Moisture	1	N/A	2023/02/27	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM)	6	2023/02/26	2023/02/27	CAM SOP-00318	EPA 8270E
pH CaCl2 EXTRACT	4	2023/02/27	2023/02/27	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	4	N/A	2023/02/28	CAM SOP-00102	EPA 6010C

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.



Your Project #: BIG-ENV-542D
Site Location: 590 ARGUS ROAD
Your C.O.C. #: N/A

Attention: Rebecca Morrison

Brownfield Investment Group Inc
12-5500 Tomken Rd
Mississauga, ON
CANADA L4W 2Z4

Report Date: 2023/02/28
Report #: R7527007
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C352983

Received: 2023/02/23, 15:07

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) Soils are reported on a dry weight basis unless otherwise specified.

Encryption Key



Bureau Veritas
28 Feb 2023 18:32:29

Please direct all questions regarding this Certificate of Analysis to:

Deepthi Shaji, Project Manager

Email: Deepthi.Shaji@bureauveritas.com

Phone# (905)817-5700 Ext:7065843

=====
This report has been generated and distributed using a secure automated process.

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



BUREAU
VERITAS

Bureau Veritas Job #: C352983
Report Date: 2023/02/28

Brownfield Investment Group Inc
Client Project #: BIG-ENV-542D
Site Location: 590 ARGUS ROAD
Sampler Initials: PS

O.REG 153 ICPMS METALS (SOIL)

Bureau Veritas ID			VDC680	VDC681	VDC682	VDC683	VDC684	VDC685		
Sampling Date			2023/02/17	2023/02/17	2023/02/17	2023/02/17	2023/02/17	2023/02/17		
COC Number			N/A	N/A	N/A	N/A	N/A	N/A		
	UNITS	Criteria	BH101-SS1	BH102-SS1	BH102-SS2	BH103-SS1	BH104-SS1	BH104-SS2	RDL	QC Batch

Metals										
Acid Extractable Antimony (Sb)	ug/g	7.5	0.36	0.41	0.31	0.30	0.24	0.23	0.20	8525647
Acid Extractable Arsenic (As)	ug/g	18	3.6	4.3	5.2	4.6	3.9	2.6	1.0	8525647
Acid Extractable Barium (Ba)	ug/g	390	59	97	83	57	76	64	0.50	8525647
Acid Extractable Beryllium (Be)	ug/g	4	0.82	1.2	0.75	0.52	0.65	0.50	0.20	8525647
Acid Extractable Boron (B)	ug/g	120	9.7	15	8.0	7.2	8.2	<5.0	5.0	8525647
Acid Extractable Cadmium (Cd)	ug/g	1.2	<0.10	<0.10	<0.10	0.20	<0.10	<0.10	0.10	8525647
Acid Extractable Chromium (Cr)	ug/g	160	20	28	19	14	17	14	1.0	8525647
Acid Extractable Cobalt (Co)	ug/g	22	11	15	9.4	6.0	8.9	5.1	0.10	8525647
Acid Extractable Copper (Cu)	ug/g	140	360	39	24	40	130	37	0.50	8525647
Acid Extractable Lead (Pb)	ug/g	120	12	10	9.4	29	10	10	1.0	8525647
Acid Extractable Molybdenum (Mo)	ug/g	6.9	1.3	2.0	1.7	0.86	0.75	0.52	0.50	8525647
Acid Extractable Nickel (Ni)	ug/g	100	24	36	19	13	19	11	0.50	8525647
Acid Extractable Selenium (Se)	ug/g	2.4	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.50	8525647
Acid Extractable Silver (Ag)	ug/g	20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.20	8525647
Acid Extractable Thallium (Tl)	ug/g	1	0.11	0.12	0.099	0.091	0.11	0.074	0.050	8525647
Acid Extractable Uranium (U)	ug/g	23	0.88	1.3	1.6	0.87	0.48	0.42	0.050	8525647
Acid Extractable Vanadium (V)	ug/g	86	29	42	34	23	29	25	5.0	8525647
Acid Extractable Zinc (Zn)	ug/g	340	59	68	42	65	43	28	5.0	8525647

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 6: Generic Site Condition Standards for Shallow Soils in a Potable Ground Water Condition
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil



BUREAU
VERITAS

Bureau Veritas Job #: C352983
Report Date: 2023/02/28

Brownfield Investment Group Inc
Client Project #: BIG-ENV-542D
Site Location: 590 ARGUS ROAD
Sampler Initials: PS

O.REG 153 ICPCMS METALS (SOIL)

Bureau Veritas ID			VDC690	VDC691		
Sampling Date			2023/02/17	2023/02/17		
COC Number			N/A	N/A		
	UNITS	Criteria	DUP10101	DUP10202	RDL	QC Batch
Metals						
Acid Extractable Antimony (Sb)	ug/g	7.5	0.43	0.36	0.20	8525647
Acid Extractable Arsenic (As)	ug/g	18	4.0	6.2	1.0	8525647
Acid Extractable Barium (Ba)	ug/g	390	67	110	0.50	8525647
Acid Extractable Beryllium (Be)	ug/g	4	0.67	0.85	0.20	8525647
Acid Extractable Boron (B)	ug/g	120	8.6	8.9	5.0	8525647
Acid Extractable Cadmium (Cd)	ug/g	1.2	0.15	<0.10	0.10	8525647
Acid Extractable Chromium (Cr)	ug/g	160	17	23	1.0	8525647
Acid Extractable Cobalt (Co)	ug/g	22	8.7	11	0.10	8525647
Acid Extractable Copper (Cu)	ug/g	140	74	51	0.50	8525647
Acid Extractable Lead (Pb)	ug/g	120	12	9.3	1.0	8525647
Acid Extractable Molybdenum (Mo)	ug/g	6.9	1.4	2.4	0.50	8525647
Acid Extractable Nickel (Ni)	ug/g	100	19	24	0.50	8525647
Acid Extractable Selenium (Se)	ug/g	2.4	<0.50	0.51	0.50	8525647
Acid Extractable Silver (Ag)	ug/g	20	<0.20	<0.20	0.20	8525647
Acid Extractable Thallium (Tl)	ug/g	1	0.11	0.11	0.050	8525647
Acid Extractable Uranium (U)	ug/g	23	1.0	3.9	0.050	8525647
Acid Extractable Vanadium (V)	ug/g	86	27	41	5.0	8525647
Acid Extractable Zinc (Zn)	ug/g	340	54	44	5.0	8525647
No Fill	No Exceedance					
Grey	Exceeds 1 criteria policy/level					
Black	Exceeds both criteria/levels					
RDL = Reportable Detection Limit						
QC Batch = Quality Control Batch						
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)						
Table 6: Generic Site Condition Standards for Shallow Soils in a Potable Ground Water Condition						
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil						



BUREAU
VERITAS

Bureau Veritas Job #: C352983
Report Date: 2023/02/28

Brownfield Investment Group Inc
Client Project #: BIG-ENV-542D
Site Location: 590 ARGUS ROAD
Sampler Initials: PS

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID			VDC686			VDC686			VDC687		
Sampling Date			2023/02/17			2023/02/17			2023/02/15		
COC Number			N/A			N/A			N/A		
	UNITS	Criteria	BH107-SS1	RDL	QC Batch	BH107-SS1 Lab-Dup	RDL	QC Batch	BH109-SS1	RDL	QC Batch

Calculated Parameters											
Sodium Adsorption Ratio	N/A	5.0	6.2		8518273				12		8518273

Inorganics											
Conductivity	mS/cm	0.7	0.74	0.002	8523495				1.4	0.002	8523495
Available (CaCl2) pH	pH	-	7.17		8523820				6.93		8523820
WAD Cyanide (Free)	ug/g	0.051	<0.01	0.01	8523621				0.01	0.01	8523621
Chromium (VI)	ug/g	8	<0.18	0.18	8523719	<0.18	0.18	8523719	<0.18	0.18	8523719

Metals											
Hot Water Ext. Boron (B)	ug/g	1.5	1.3	0.050	8523819				0.59	0.050	8523819
Acid Extractable Antimony (Sb)	ug/g	7.5	0.37	0.20	8523973				0.28	0.20	8523973
Acid Extractable Arsenic (As)	ug/g	18	2.7	1.0	8523973				5.3	1.0	8523973
Acid Extractable Barium (Ba)	ug/g	390	25	0.50	8523973				69	0.50	8523973
Acid Extractable Beryllium (Be)	ug/g	4	0.26	0.20	8523973				0.65	0.20	8523973
Acid Extractable Boron (B)	ug/g	120	5.3	5.0	8523973				8.3	5.0	8523973
Acid Extractable Cadmium (Cd)	ug/g	1.2	0.15	0.10	8523973				0.18	0.10	8523973
Acid Extractable Chromium (Cr)	ug/g	160	7.5	1.0	8523973				16	1.0	8523973
Acid Extractable Cobalt (Co)	ug/g	22	2.9	0.10	8523973				7.7	0.10	8523973
Acid Extractable Copper (Cu)	ug/g	140	23	0.50	8523973				37	0.50	8523973
Acid Extractable Lead (Pb)	ug/g	120	14	1.0	8523973				15	1.0	8523973
Acid Extractable Molybdenum (Mo)	ug/g	6.9	0.54	0.50	8523973				2.0	0.50	8523973
Acid Extractable Nickel (Ni)	ug/g	100	6.2	0.50	8523973				15	0.50	8523973
Acid Extractable Selenium (Se)	ug/g	2.4	<0.50	0.50	8523973				0.52	0.50	8523973
Acid Extractable Silver (Ag)	ug/g	20	<0.20	0.20	8523973				<0.20	0.20	8523973
Acid Extractable Thallium (Tl)	ug/g	1	0.066	0.050	8523973				0.099	0.050	8523973
Acid Extractable Uranium (U)	ug/g	23	0.33	0.050	8523973				1.6	0.050	8523973
Acid Extractable Vanadium (V)	ug/g	86	15	5.0	8523973				29	5.0	8523973
Acid Extractable Zinc (Zn)	ug/g	340	35	5.0	8523973				60	5.0	8523973
Acid Extractable Mercury (Hg)	ug/g	0.27	0.076	0.050	8523973				<0.050	0.050	8523973

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels
RDL = Reportable Detection Limit	
QC Batch = Quality Control Batch	
Lab-Dup = Laboratory Initiated Duplicate	
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)	
Table 6: Generic Site Condition Standards for Shallow Soils in a Potable Ground Water Condition	
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil	



BUREAU
VERITAS

Bureau Veritas Job #: C352983
Report Date: 2023/02/28

Brownfield Investment Group Inc
Client Project #: BIG-ENV-542D
Site Location: 590 ARGUS ROAD
Sampler Initials: PS

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID			VDC688			VDC688			VDC689		
Sampling Date			2023/02/10			2023/02/10			2023/02/10		
COC Number			N/A			N/A			N/A		
	UNITS	Criteria	BH110-SS1	RDL	QC Batch	BH110-SS1 Lab-Dup	RDL	QC Batch	BH111-SS1	RDL	QC Batch

Calculated Parameters											
Sodium Adsorption Ratio	N/A	5.0	2.6		8518273				8.5		8518273

Inorganics											
Conductivity	mS/cm	0.7	0.62	0.002	8523495				1.1	0.002	8523495
Available (CaCl2) pH	pH	-	7.91		8523803	8.02		8523803	7.74		8523803
WAD Cyanide (Free)	ug/g	0.051	<0.01	0.01	8520137				<0.01	0.01	8520137
Chromium (VI)	ug/g	8	<0.18	0.18	8523856	<0.18	0.18	8523856	<0.18	0.18	8523856

Metals											
Hot Water Ext. Boron (B)	ug/g	1.5	0.31	0.050	8523388				0.44	0.050	8523388
Acid Extractable Antimony (Sb)	ug/g	7.5	0.52	0.20	8525647				0.46	0.20	8525647
Acid Extractable Arsenic (As)	ug/g	18	4.6	1.0	8525647				4.9	1.0	8525647
Acid Extractable Barium (Ba)	ug/g	390	32	0.50	8525647				140	0.50	8525647
Acid Extractable Beryllium (Be)	ug/g	4	0.50	0.20	8525647				0.86	0.20	8525647
Acid Extractable Boron (B)	ug/g	120	13	5.0	8525647				16	5.0	8525647
Acid Extractable Cadmium (Cd)	ug/g	1.2	0.21	0.10	8525647				<0.10	0.10	8525647
Acid Extractable Chromium (Cr)	ug/g	160	13	1.0	8525647				24	1.0	8525647
Acid Extractable Cobalt (Co)	ug/g	22	7.8	0.10	8525647				14	0.10	8525647
Acid Extractable Copper (Cu)	ug/g	140	14	0.50	8525647				36	0.50	8525647
Acid Extractable Lead (Pb)	ug/g	120	18	1.0	8525647				13	1.0	8525647
Acid Extractable Molybdenum (Mo)	ug/g	6.9	1.3	0.50	8525647				1.5	0.50	8525647
Acid Extractable Nickel (Ni)	ug/g	100	17	0.50	8525647				30	0.50	8525647
Acid Extractable Selenium (Se)	ug/g	2.4	<0.50	0.50	8525647				<0.50	0.50	8525647
Acid Extractable Silver (Ag)	ug/g	20	<0.20	0.20	8525647				<0.20	0.20	8525647
Acid Extractable Thallium (Tl)	ug/g	1	0.089	0.050	8525647				0.096	0.050	8525647
Acid Extractable Uranium (U)	ug/g	23	0.91	0.050	8525647				0.77	0.050	8525647
Acid Extractable Vanadium (V)	ug/g	86	18	5.0	8525647				33	5.0	8525647
Acid Extractable Zinc (Zn)	ug/g	340	250	5.0	8525647				69	5.0	8525647
Acid Extractable Mercury (Hg)	ug/g	0.27	<0.050	0.050	8525647				<0.050	0.050	8525647

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels
RDL = Reportable Detection Limit	
QC Batch = Quality Control Batch	
Lab-Dup = Laboratory Initiated Duplicate	
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)	
Table 6: Generic Site Condition Standards for Shallow Soils in a Potable Ground Water Condition	
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil	



BUREAU
VERITAS

Bureau Veritas Job #: C352983
Report Date: 2023/02/28

Brownfield Investment Group Inc
Client Project #: BIG-ENV-542D
Site Location: 590 ARGUS ROAD
Sampler Initials: PS

O.REG 153 PAHS (SOIL)

Bureau Veritas ID			VDC686		VDC687	VDC688	VDC689		VDC692		
Sampling Date			2023/02/17		2023/02/15	2023/02/10	2023/02/10		2023/02/17		
COC Number			N/A		N/A	N/A	N/A		N/A		
	UNITS	Criteria	BH107-SS1	RDL	BH109-SS1	BH110-SS1	BH111-SS1	RDL	DUP10701	RDL	QC Batch

Calculated Parameters

Methylnaphthalene, 2-(1-)	ug/g	-	<0.071	0.071	<0.0071	<0.0071	<0.0071	0.0071	<0.071	0.071	8518988
---------------------------	------	---	--------	-------	---------	---------	---------	--------	--------	-------	---------

Polyaromatic Hydrocarbons

Acenaphthene	ug/g	7.9	<0.050	0.050	<0.0050	<0.0050	<0.0050	0.0050	<0.050	0.050	8523139
Acenaphthylene	ug/g	0.15	<0.050	0.050	<0.0050	<0.0050	<0.0050	0.0050	<0.050	0.050	8523139
Anthracene	ug/g	0.67	<0.050	0.050	<0.0050	<0.0050	<0.0050	0.0050	<0.050	0.050	8523139
Benzo(a)anthracene	ug/g	0.5	<0.050	0.050	<0.0050	<0.0050	<0.0050	0.0050	<0.050	0.050	8523139
Benzo(a)pyrene	ug/g	0.3	<0.050	0.050	<0.0050	<0.0050	<0.0050	0.0050	<0.050	0.050	8523139
Benzo(b/j)fluoranthene	ug/g	0.78	<0.050	0.050	<0.0050	<0.0050	<0.0050	0.0050	<0.050	0.050	8523139
Benzo(g,h,i)perylene	ug/g	6.6	<0.050	0.050	<0.0050	<0.0050	<0.0050	0.0050	<0.050	0.050	8523139
Benzo(k)fluoranthene	ug/g	0.78	<0.050	0.050	<0.0050	<0.0050	<0.0050	0.0050	<0.050	0.050	8523139
Chrysene	ug/g	7	<0.050	0.050	<0.0050	<0.0050	<0.0050	0.0050	<0.050	0.050	8523139
Dibenzo(a,h)anthracene	ug/g	0.1	<0.050	0.050	<0.0050	<0.0050	<0.0050	0.0050	<0.050	0.050	8523139
Fluoranthene	ug/g	0.69	<0.050	0.050	<0.0050	<0.0050	<0.0050	0.0050	<0.050	0.050	8523139
Fluorene	ug/g	62	<0.050	0.050	<0.0050	<0.0050	<0.0050	0.0050	<0.050	0.050	8523139
Indeno(1,2,3-cd)pyrene	ug/g	0.38	<0.050	0.050	<0.0050	<0.0050	<0.0050	0.0050	<0.050	0.050	8523139
1-Methylnaphthalene	ug/g	0.99	<0.050	0.050	<0.0050	<0.0050	<0.0050	0.0050	<0.050	0.050	8523139
2-Methylnaphthalene	ug/g	0.99	<0.050	0.050	<0.0050	<0.0050	<0.0050	0.0050	<0.050	0.050	8523139
Naphthalene	ug/g	0.6	<0.050	0.050	<0.0050	<0.0050	<0.0050	0.0050	<0.050	0.050	8523139
Phenanthrene	ug/g	6.2	<0.050	0.050	<0.0050	<0.0050	<0.0050	0.0050	<0.050	0.050	8523139
Pyrene	ug/g	78	<0.050	0.050	<0.0050	<0.0050	<0.0050	0.0050	<0.050	0.050	8523139

Surrogate Recovery (%)

D10-Anthracene	%	-	109		99	98	100		119		8523139
D14-Terphenyl (FS)	%	-	85		95	93	94		97		8523139
D8-Acenaphthylene	%	-	79		84	82	85		90		8523139

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)

Table 6: Generic Site Condition Standards for Shallow Soils in a Potable Ground Water Condition

Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil



BUREAU
VERITAS

Bureau Veritas Job #: C352983
Report Date: 2023/02/28

Brownfield Investment Group Inc
Client Project #: BIG-ENV-542D
Site Location: 590 ARGUS ROAD
Sampler Initials: PS

O.REG 153 PAHS (SOIL)

Bureau Veritas ID			VDC693		
Sampling Date			2023/02/15		
COC Number			N/A		
	UNITS	Criteria	DUP10901	RDL	QC Batch
Calculated Parameters					
Methylnaphthalene, 2-(1-)	ug/g	-	<0.0071	0.0071	8518988
Polyaromatic Hydrocarbons					
Acenaphthene	ug/g	7.9	<0.0050	0.0050	8523139
Acenaphthylene	ug/g	0.15	<0.0050	0.0050	8523139
Anthracene	ug/g	0.67	<0.0050	0.0050	8523139
Benzo(a)anthracene	ug/g	0.5	<0.0050	0.0050	8523139
Benzo(a)pyrene	ug/g	0.3	<0.0050	0.0050	8523139
Benzo(b/j)fluoranthene	ug/g	0.78	<0.0050	0.0050	8523139
Benzo(g,h,i)perylene	ug/g	6.6	<0.0050	0.0050	8523139
Benzo(k)fluoranthene	ug/g	0.78	<0.0050	0.0050	8523139
Chrysene	ug/g	7	<0.0050	0.0050	8523139
Dibenzo(a,h)anthracene	ug/g	0.1	<0.0050	0.0050	8523139
Fluoranthene	ug/g	0.69	<0.0050	0.0050	8523139
Fluorene	ug/g	62	<0.0050	0.0050	8523139
Indeno(1,2,3-cd)pyrene	ug/g	0.38	<0.0050	0.0050	8523139
1-Methylnaphthalene	ug/g	0.99	<0.0050	0.0050	8523139
2-Methylnaphthalene	ug/g	0.99	<0.0050	0.0050	8523139
Naphthalene	ug/g	0.6	<0.0050	0.0050	8523139
Phenanthrene	ug/g	6.2	<0.0050	0.0050	8523139
Pyrene	ug/g	78	<0.0050	0.0050	8523139
Surrogate Recovery (%)					
D10-Anthracene	%	-	98		8523139
D14-Terphenyl (FS)	%	-	93		8523139
D8-Acenaphthylene	%	-	86		8523139
No Fill	No Exceedance				
Grey	Exceeds 1 criteria policy/level				
Black	Exceeds both criteria/levels				
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)					
Table 6: Generic Site Condition Standards for Shallow Soils in a Potable Ground Water Condition					
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil					



BUREAU
VERITAS

Bureau Veritas Job #: C352983
Report Date: 2023/02/28

Brownfield Investment Group Inc
Client Project #: BIG-ENV-542D
Site Location: 590 ARGUS ROAD
Sampler Initials: PS

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		VDC686	VDC687		VDC688	VDC689		VDC692		
Sampling Date		2023/02/17	2023/02/15		2023/02/10	2023/02/10		2023/02/17		
COC Number		N/A	N/A		N/A	N/A		N/A		
	UNITS	BH107-SS1	BH109-SS1	QC Batch	BH110-SS1	BH111-SS1	QC Batch	DUP10701	RDL	QC Batch
Inorganics										
Moisture	%	18	14	8522498	24	15	8519787	16	1.0	8522498
RDL = Reportable Detection Limit QC Batch = Quality Control Batch										

Bureau Veritas ID		VDC693		
Sampling Date		2023/02/15		
COC Number		N/A		
	UNITS	DUP10901	RDL	QC Batch
Inorganics				
Moisture	%	17	1.0	8523880
RDL = Reportable Detection Limit QC Batch = Quality Control Batch				



GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.3°C
-----------	-------

Sample VDC686 [BH107-SS1] : PAH Analysis: Due to the sample matrix, sample required dilution. Detection limits were adjusted accordingly.

Sample VDC692 [DUP10701] : PAH Analysis: Due to the sample matrix, sample required dilution. Detection limits were adjusted accordingly.

Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C352983

Report Date: 2023/02/28

QUALITY ASSURANCE REPORT

Brownfield Investment Group Inc

Client Project #: BIG-ENV-542D

Site Location: 590 ARGUS ROAD

Sampler Initials: PS

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8523139	D10-Anthracene	2023/02/27	104	50 - 130	105	50 - 130	104	%		
8523139	D14-Terphenyl (FS)	2023/02/27	101	50 - 130	99	50 - 130	96	%		
8523139	D8-Acenaphthylene	2023/02/27	93	50 - 130	89	50 - 130	88	%		
8519787	Moisture	2023/02/23							1.3	20
8520137	WAD Cyanide (Free)	2023/02/24	90	75 - 125	101	80 - 120	<0.01	ug/g	NC	35
8522498	Moisture	2023/02/25							0	20
8523139	1-Methylnaphthalene	2023/02/27	99	50 - 130	103	50 - 130	<0.0050	ug/g	NC	40
8523139	2-Methylnaphthalene	2023/02/27	90	50 - 130	94	50 - 130	<0.0050	ug/g	NC	40
8523139	Acenaphthene	2023/02/27	95	50 - 130	97	50 - 130	<0.0050	ug/g	NC	40
8523139	Acenaphthylene	2023/02/27	95	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40
8523139	Anthracene	2023/02/27	101	50 - 130	102	50 - 130	<0.0050	ug/g	NC	40
8523139	Benzo(a)anthracene	2023/02/27	99	50 - 130	95	50 - 130	<0.0050	ug/g	NC	40
8523139	Benzo(a)pyrene	2023/02/27	92	50 - 130	94	50 - 130	<0.0050	ug/g	NC	40
8523139	Benzo(b/j)fluoranthene	2023/02/27	92	50 - 130	97	50 - 130	<0.0050	ug/g	NC	40
8523139	Benzo(g,h,i)perylene	2023/02/27	90	50 - 130	95	50 - 130	<0.0050	ug/g	NC	40
8523139	Benzo(k)fluoranthene	2023/02/27	91	50 - 130	94	50 - 130	<0.0050	ug/g	NC	40
8523139	Chrysene	2023/02/27	97	50 - 130	99	50 - 130	<0.0050	ug/g	NC	40
8523139	Dibenzo(a,h)anthracene	2023/02/27	86	50 - 130	88	50 - 130	<0.0050	ug/g	NC	40
8523139	Fluoranthene	2023/02/27	102	50 - 130	103	50 - 130	<0.0050	ug/g	NC	40
8523139	Fluorene	2023/02/27	95	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40
8523139	Indeno(1,2,3-cd)pyrene	2023/02/27	90	50 - 130	95	50 - 130	<0.0050	ug/g	NC	40
8523139	Naphthalene	2023/02/27	86	50 - 130	93	50 - 130	<0.0050	ug/g	NC	40
8523139	Phenanthrene	2023/02/27	94	50 - 130	98	50 - 130	<0.0050	ug/g	NC	40
8523139	Pyrene	2023/02/27	102	50 - 130	103	50 - 130	<0.0050	ug/g	NC	40
8523388	Hot Water Ext. Boron (B)	2023/02/28	110	75 - 125	112	75 - 125	<0.050	ug/g	2.4	40
8523495	Conductivity	2023/02/27			104	90 - 110	<0.002	mS/cm	9.8	10
8523621	WAD Cyanide (Free)	2023/02/27	90	75 - 125	101	80 - 120	<0.01	ug/g	NC	35
8523719	Chromium (VI)	2023/02/27	0.18 (1)	70 - 130	91	80 - 120	<0.18	ug/g	NC	35
8523803	Available (CaCl2) pH	2023/02/27			100	97 - 103			1.3	N/A
8523819	Hot Water Ext. Boron (B)	2023/02/28	108	75 - 125	110	75 - 125	<0.050	ug/g	11	40
8523820	Available (CaCl2) pH	2023/02/27			100	97 - 103			0.97	N/A



BUREAU
VERITAS

Bureau Veritas Job #: C352983

Report Date: 2023/02/28

QUALITY ASSURANCE REPORT(CONT'D)

Brownfield Investment Group Inc

Client Project #: BIG-ENV-542D

Site Location: 590 ARGUS ROAD

Sampler Initials: PS

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8523856	Chromium (VI)	2023/02/27	91	70 - 130	94	80 - 120	<0.18	ug/g	NC	35
8523880	Moisture	2023/02/27							0.51	20
8523973	Acid Extractable Antimony (Sb)	2023/02/28	95	75 - 125	107	80 - 120	<0.20	ug/g	NC	30
8523973	Acid Extractable Arsenic (As)	2023/02/28	99	75 - 125	101	80 - 120	<1.0	ug/g	6.1	30
8523973	Acid Extractable Barium (Ba)	2023/02/28	NC	75 - 125	104	80 - 120	<0.50	ug/g	5.2	30
8523973	Acid Extractable Beryllium (Be)	2023/02/28	99	75 - 125	101	80 - 120	<0.20	ug/g	4.0	30
8523973	Acid Extractable Boron (B)	2023/02/28	87	75 - 125	98	80 - 120	<5.0	ug/g	NC	30
8523973	Acid Extractable Cadmium (Cd)	2023/02/28	93	75 - 125	100	80 - 120	<0.10	ug/g	21	30
8523973	Acid Extractable Chromium (Cr)	2023/02/28	103	75 - 125	101	80 - 120	<1.0	ug/g	4.6	30
8523973	Acid Extractable Cobalt (Co)	2023/02/28	97	75 - 125	99	80 - 120	<0.10	ug/g	6.5	30
8523973	Acid Extractable Copper (Cu)	2023/02/28	97	75 - 125	106	80 - 120	<0.50	ug/g	4.9	30
8523973	Acid Extractable Lead (Pb)	2023/02/28	101	75 - 125	104	80 - 120	<1.0	ug/g	9.7	30
8523973	Acid Extractable Mercury (Hg)	2023/02/28	98	75 - 125	101	80 - 120	<0.050	ug/g	1.3	30
8523973	Acid Extractable Molybdenum (Mo)	2023/02/28	98	75 - 125	103	80 - 120	<0.50	ug/g	NC	30
8523973	Acid Extractable Nickel (Ni)	2023/02/28	102	75 - 125	100	80 - 120	<0.50	ug/g	4.8	30
8523973	Acid Extractable Selenium (Se)	2023/02/28	94	75 - 125	99	80 - 120	<0.50	ug/g	NC	30
8523973	Acid Extractable Silver (Ag)	2023/02/28	100	75 - 125	103	80 - 120	<0.20	ug/g	NC	30
8523973	Acid Extractable Thallium (Tl)	2023/02/28	99	75 - 125	105	80 - 120	<0.050	ug/g	16	30
8523973	Acid Extractable Uranium (U)	2023/02/28	101	75 - 125	104	80 - 120	<0.050	ug/g	18	30
8523973	Acid Extractable Vanadium (V)	2023/02/28	NC	75 - 125	101	80 - 120	<5.0	ug/g	7.5	30
8523973	Acid Extractable Zinc (Zn)	2023/02/28	NC	75 - 125	98	80 - 120	<5.0	ug/g	8.5	30
8525647	Acid Extractable Antimony (Sb)	2023/02/28	81	75 - 125	102	80 - 120	<0.20	ug/g	6.6	30
8525647	Acid Extractable Arsenic (As)	2023/02/28	96	75 - 125	101	80 - 120	<1.0	ug/g	2.6	30
8525647	Acid Extractable Barium (Ba)	2023/02/28	NC	75 - 125	101	80 - 120	<0.50	ug/g	1.8	30
8525647	Acid Extractable Beryllium (Be)	2023/02/28	97	75 - 125	100	80 - 120	<0.20	ug/g	2.2	30
8525647	Acid Extractable Boron (B)	2023/02/28	86	75 - 125	97	80 - 120	<5.0	ug/g	3.7	30
8525647	Acid Extractable Cadmium (Cd)	2023/02/28	94	75 - 125	96	80 - 120	<0.10	ug/g	NC	30
8525647	Acid Extractable Chromium (Cr)	2023/02/28	NC	75 - 125	99	80 - 120	<1.0	ug/g	1.7	30
8525647	Acid Extractable Cobalt (Co)	2023/02/28	95	75 - 125	99	80 - 120	<0.10	ug/g	1.4	30
8525647	Acid Extractable Copper (Cu)	2023/02/28	96	75 - 125	100	80 - 120	<0.50	ug/g	11	30
8525647	Acid Extractable Lead (Pb)	2023/02/28	92	75 - 125	102	80 - 120	<1.0	ug/g	34 (2)	30



BUREAU
VERITAS

Bureau Veritas Job #: C352983

Report Date: 2023/02/28

QUALITY ASSURANCE REPORT(CONT'D)

Brownfield Investment Group Inc

Client Project #: BIG-ENV-542D

Site Location: 590 ARGUS ROAD

Sampler Initials: PS

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8525647	Acid Extractable Mercury (Hg)	2023/02/28	96	75 - 125	100	80 - 120	<0.050	ug/g	NC	30
8525647	Acid Extractable Molybdenum (Mo)	2023/02/28	97	75 - 125	100	80 - 120	<0.50	ug/g	NC	30
8525647	Acid Extractable Nickel (Ni)	2023/02/28	NC	75 - 125	98	80 - 120	<0.50	ug/g	0.37	30
8525647	Acid Extractable Selenium (Se)	2023/02/28	97	75 - 125	100	80 - 120	<0.50	ug/g	NC	30
8525647	Acid Extractable Silver (Ag)	2023/02/28	99	75 - 125	102	80 - 120	<0.20	ug/g	NC	30
8525647	Acid Extractable Thallium (Tl)	2023/02/28	96	75 - 125	101	80 - 120	<0.050	ug/g	3.4	30
8525647	Acid Extractable Uranium (U)	2023/02/28	99	75 - 125	102	80 - 120	<0.050	ug/g	1.4	30
8525647	Acid Extractable Vanadium (V)	2023/02/28	NC	75 - 125	98	80 - 120	<5.0	ug/g	2.1	30
8525647	Acid Extractable Zinc (Zn)	2023/02/28	NC	75 - 125	100	80 - 120	<5.0	ug/g	0.94	30

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) The matrix spike recovery was below the lower control limit. This may be due to the sample matrix. The sample was re-analyzed with the same results

(2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.



Bureau Veritas Job #: C352983
Report Date: 2023/02/28

Brownfield Investment Group Inc
Client Project #: BIG-ENV-542D
Site Location: 590 ARGUS ROAD
Sampler Initials: PS

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Anastassia Hamanov, Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by {0}, {1} responsible for {2} {3} laboratory operations.



BUREAU
VERITAS

Bureau Veritas Job #: C352983

Report Date: 2023/02/28

Brownfield Investment Group Inc

Client Project #: BIG-ENV-542D

Site Location: 590 ARGUS ROAD

Sampler Initials: PS

Exceedance Summary Table – Reg153/04 T6-Soil/Res-C
Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
BH101-SS1	VDC680-01	Acid Extractable Copper (Cu)	140	360	0.50	ug/g
BH107-SS1	VDC686-02	Conductivity	0.7	0.74	0.002	mS/cm
BH107-SS1	VDC686-02	Sodium Adsorption Ratio	5.0	6.2		N/A
BH109-SS1	VDC687-02	Conductivity	0.7	1.4	0.002	mS/cm
BH109-SS1	VDC687-02	Sodium Adsorption Ratio	5.0	12		N/A
BH111-SS1	VDC689-02	Conductivity	0.7	1.1	0.002	mS/cm
BH111-SS1	VDC689-02	Sodium Adsorption Ratio	5.0	8.5		N/A

The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.



Your Project #: BIG-ENV-554D
 Site#: OAKVILLE, ON
 Site Location: 590 ARGUS ROAD
 Your C.O.C. #: n/a

Attention: Rebecca Morrison

Brownfield Investment Group Inc
 12-5500 Tomken Rd
 Mississauga, ON
 CANADA L4W 2Z4

Report Date: 2023/03/09
 Report #: R7540041
 Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C361624

Received: 2023/03/03, 13:51

Sample Matrix: Soil
 # Samples Received: 9

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Methylnaphthalene Sum	4	N/A	2023/03/08	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	3	2023/03/07	2023/03/07	CAM SOP-00408	R153 Ana. Prot. 2011
Hot Water Extractable Boron	1	2023/03/08	2023/03/08	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum	4	N/A	2023/03/08		EPA 8260C m
Free (WAD) Cyanide	1	2023/03/06	2023/03/06	CAM SOP-00457	OMOE E3015 m
Free (WAD) Cyanide	2	2023/03/07	2023/03/07	CAM SOP-00457	OMOE E3015 m
Free (WAD) Cyanide	1	2023/03/08	2023/03/08	CAM SOP-00457	OMOE E3015 m
Conductivity	4	2023/03/08	2023/03/08	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1)	3	2023/03/07	2023/03/07	CAM SOP-00436	EPA 3060/7199 m
Hexavalent Chromium in Soil by IC (1)	1	2023/03/08	2023/03/08	CAM SOP-00436	EPA 3060/7199 m
Acid Extractable Metals by ICPMS	1	2023/03/07	2023/03/08	CAM SOP-00447	EPA 6020B m
Acid Extractable Metals by ICPMS	3	2023/03/08	2023/03/08	CAM SOP-00447	EPA 6020B m
Moisture	4	N/A	2023/03/06	CAM SOP-00445	Carter 2nd ed 51.2 m
Moisture	5	N/A	2023/03/07	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM)	4	2023/03/07	2023/03/07	CAM SOP-00318	EPA 8270E
pH CaCl2 EXTRACT	1	2023/03/06	2023/03/06	CAM SOP-00413	EPA 9045 D m
pH CaCl2 EXTRACT	2	2023/03/07	2023/03/07	CAM SOP-00413	EPA 9045 D m
pH CaCl2 EXTRACT	1	2023/03/08	2023/03/08	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	3	N/A	2023/03/08	CAM SOP-00102	EPA 6010C
Sodium Adsorption Ratio (SAR)	1	N/A	2023/03/09	CAM SOP-00102	EPA 6010C
Volatile Organic Compounds in Soil	4	N/A	2023/03/07	CAM SOP-00228	EPA 8260D

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.



Your Project #: BIG-ENV-554D
Site#: OAKVILLE,ON
Site Location: 590 ARGUS ROAD
Your C.O.C. #: n/a

Attention: Rebecca Morrison

Brownfield Investment Group Inc
12-5500 Tomken Rd
Mississauga, ON
CANADA L4W 2Z4

Report Date: 2023/03/09
Report #: R7540041
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C361624

Received: 2023/03/03, 13:51

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) Soils are reported on a dry weight basis unless otherwise specified.

Encryption Key



Bureau Veritas
09 Mar 2023 15:58:03

Please direct all questions regarding this Certificate of Analysis to:

Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843

=====
This report has been generated and distributed using a secure automated process.

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



BUREAU VERITAS

Bureau Veritas Job #: C361624
Report Date: 2023/03/09

Brownfield Investment Group Inc
Client Project #: BIG-ENV-554D
Site Location: 590 ARGUS ROAD
Sampler Initials: PS

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID			VEV742		VEV744		VEV747		VEV749		
Sampling Date			2023/03/01		2023/02/27		2023/02/22		2023/02/21		
COC Number			n/a		n/a		n/a		n/a		
	UNITS	Criteria	BH105-SS1	QC Batch	BH108-SS1	QC Batch	BH112-SS2	QC Batch	BH113-SS1	RDL	QC Batch

Calculated Parameters											
Sodium Adsorption Ratio	N/A	5.0	17	8533688	10	8533688	33	8533688	13		8533688

Inorganics											
Conductivity	mS/cm	0.7	1.0	8540095	0.84	8540095	1.5	8540095	1.1	0.002	8540083
Available (CaCl2) pH	pH	-	7.62	8537937	7.12	8537937	7.93	8541082	7.19		8536577
WAD Cyanide (Free)	ug/g	0.051	<0.01	8537484	0.01	8538172	<0.01	8540061	0.01	0.01	8536383
Chromium (VI)	ug/g	8	<0.18	8537709	<0.18	8537709	<0.18	8540220	<0.18	0.18	8537694

Metals											
Hot Water Ext. Boron (B)	ug/g	1.5	0.43	8540127	1.5	8539233	0.19	8539233	0.86	0.050	8539233
Acid Extractable Antimony (Sb)	ug/g	7.5	0.38	8540184	0.36	8540184	0.30	8540184	0.30	0.20	8539226
Acid Extractable Arsenic (As)	ug/g	18	5.6	8540184	4.2	8540184	4.0	8540184	6.3	1.0	8539226
Acid Extractable Barium (Ba)	ug/g	390	81	8540184	83	8540184	53	8540184	110	0.50	8539226
Acid Extractable Beryllium (Be)	ug/g	4	0.73	8540184	0.52	8540184	0.66	8540184	0.64	0.20	8539226
Acid Extractable Boron (B)	ug/g	120	10	8540184	5.5	8540184	7.2	8540184	7.4	5.0	8539226
Acid Extractable Cadmium (Cd)	ug/g	1.2	0.34	8540184	0.16	8540184	<0.10	8540184	0.36	0.10	8539226
Acid Extractable Chromium (Cr)	ug/g	160	20	8540184	22	8540184	18	8540184	17	1.0	8539226
Acid Extractable Cobalt (Co)	ug/g	22	9.4	8540184	5.1	8540184	8.6	8540184	8.9	0.10	8539226
Acid Extractable Copper (Cu)	ug/g	140	120	8540184	39	8540184	84	8540184	71	0.50	8539226
Acid Extractable Lead (Pb)	ug/g	120	22	8540184	29	8540184	7.2	8540184	23	1.0	8539226
Acid Extractable Molybdenum (Mo)	ug/g	6.9	1.3	8540184	0.90	8540184	1.6	8540184	1.6	0.50	8539226
Acid Extractable Nickel (Ni)	ug/g	100	21	8540184	11	8540184	21	8540184	19	0.50	8539226
Acid Extractable Selenium (Se)	ug/g	2.4	<0.50	8540184	<0.50	8540184	<0.50	8540184	<0.50	0.50	8539226
Acid Extractable Silver (Ag)	ug/g	20	<0.20	8540184	<0.20	8540184	<0.20	8540184	<0.20	0.20	8539226
Acid Extractable Thallium (Tl)	ug/g	1	0.11	8540184	0.10	8540184	0.063	8540184	0.11	0.050	8539226
Acid Extractable Uranium (U)	ug/g	23	0.90	8540184	1.1	8540184	0.69	8540184	1.2	0.050	8539226
Acid Extractable Vanadium (V)	ug/g	86	31	8540184	24	8540184	29	8540184	32	5.0	8539226
Acid Extractable Zinc (Zn)	ug/g	340	98	8540184	60	8540184	42	8540184	69	5.0	8539226
Acid Extractable Mercury (Hg)	ug/g	0.27	<0.050	8540184	0.063	8540184	<0.050	8540184	<0.050	0.050	8539226

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels
RDL = Reportable Detection Limit	
QC Batch = Quality Control Batch	
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)	
Table 6: Generic Site Condition Standards for Shallow Soils in a Potable Ground Water Condition	
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil	



O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID			VEV749	
Sampling Date			2023/02/21	
COC Number			n/a	
	UNITS	Criteria	BH113-SS1 Lab-Dup	QC Batch
Inorganics				
Available (CaCl2) pH	pH	-	7.29	8536577
No Fill	No Exceedance			
Grey	Exceeds 1 criteria policy/level			
Black	Exceeds both criteria/levels			
QC Batch = Quality Control Batch				
Lab-Dup = Laboratory Initiated Duplicate				
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)				
Table 6: Generic Site Condition Standards for Shallow Soils in a Potable Ground Water Condition				
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil				



BUREAU
VERITAS

Bureau Veritas Job #: C361624
Report Date: 2023/03/09

Brownfield Investment Group Inc
Client Project #: BIG-ENV-554D
Site Location: 590 ARGUS ROAD
Sampler Initials: PS

O.REG 153 PAHS (SOIL)

Bureau Veritas ID			VEV742	VEV744		VEV746			VEV746		
Sampling Date			2023/03/01	2023/02/27		2023/02/22			2023/02/22		
COC Number			n/a	n/a		n/a			n/a		
	UNITS	Criteria	BH105-SS1	BH108-SS1	RDL	BH112-SS1	RDL	QC Batch	BH112-SS1 Lab-Dup	RDL	QC Batch

Calculated Parameters

Methylnaphthalene, 2-(1-)	ug/g	-	<0.0071	<0.0071	0.0071	<0.071	0.071	8533913			
---------------------------	------	---	---------	---------	--------	--------	-------	---------	--	--	--

Polyaromatic Hydrocarbons

Acenaphthene	ug/g	7.9	<0.0050	<0.0050	0.0050	<0.050	0.050	8538171	<0.050	0.050	8538171
Acenaphthylene	ug/g	0.15	<0.0050	0.010	0.0050	<0.050	0.050	8538171	<0.050	0.050	8538171
Anthracene	ug/g	0.67	<0.0050	0.0075	0.0050	0.065	0.050	8538171	0.069	0.050	8538171
Benzo(a)anthracene	ug/g	0.5	<0.0050	0.049	0.0050	0.50	0.050	8538171	0.50	0.050	8538171
Benzo(a)pyrene	ug/g	0.3	<0.0050	0.061	0.0050	0.52	0.050	8538171	0.51	0.050	8538171
Benzo(b,j)fluoranthene	ug/g	0.78	0.0055	0.088	0.0050	0.77	0.050	8538171	0.77	0.050	8538171
Benzo(g,h,i)perylene	ug/g	6.6	<0.0050	0.043	0.0050	0.46	0.050	8538171	0.44	0.050	8538171
Benzo(k)fluoranthene	ug/g	0.78	<0.0050	0.029	0.0050	0.26	0.050	8538171	0.25	0.050	8538171
Chrysene	ug/g	7	<0.0050	0.046	0.0050	0.58	0.050	8538171	0.56	0.050	8538171
Dibenzo(a,h)anthracene	ug/g	0.1	<0.0050	0.0096	0.0050	0.071	0.050	8538171	0.073	0.050	8538171
Fluoranthene	ug/g	0.69	0.0060	0.083	0.0050	1.6	0.050	8538171	1.6	0.050	8538171
Fluorene	ug/g	62	<0.0050	<0.0050	0.0050	<0.050	0.050	8538171	<0.050	0.050	8538171
Indeno(1,2,3-cd)pyrene	ug/g	0.38	<0.0050	0.044	0.0050	0.38	0.050	8538171	0.38	0.050	8538171
1-Methylnaphthalene	ug/g	0.99	<0.0050	<0.0050	0.0050	<0.050	0.050	8538171	<0.050	0.050	8538171
2-Methylnaphthalene	ug/g	0.99	<0.0050	<0.0050	0.0050	<0.050	0.050	8538171	<0.050	0.050	8538171
Naphthalene	ug/g	0.6	<0.0050	<0.0050	0.0050	<0.050	0.050	8538171	<0.050	0.050	8538171
Phenanthrene	ug/g	6.2	<0.0050	0.026	0.0050	0.39	0.050	8538171	0.37	0.050	8538171
Pyrene	ug/g	78	0.0051	0.073	0.0050	1.3	0.050	8538171	1.3	0.050	8538171

Surrogate Recovery (%)

D10-Anthracene	%	-	109	102		123		8538171	116		8538171
D14-Terphenyl (FS)	%	-	100	95		100		8538171	96		8538171
D8-Acenaphthylene	%	-	96	91		97		8538171	94		8538171

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
 QC Batch = Quality Control Batch
 Lab-Dup = Laboratory Initiated Duplicate
 Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
 Table 6: Generic Site Condition Standards for Shallow Soils in a Potable Ground Water Condition
 Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil



O.REG 153 PAHS (SOIL)

Bureau Veritas ID			VEV749		
Sampling Date			2023/02/21		
COC Number			n/a		
	UNITS	Criteria	BH113-SS1	RDL	QC Batch
Calculated Parameters					
Methylnaphthalene, 2-(1-)	ug/g	-	<0.0071	0.0071	8533913
Polyaromatic Hydrocarbons					
Acenaphthene	ug/g	7.9	<0.0050	0.0050	8538171
Acenaphthylene	ug/g	0.15	<0.0050	0.0050	8538171
Anthracene	ug/g	0.67	<0.0050	0.0050	8538171
Benzo(a)anthracene	ug/g	0.5	0.018	0.0050	8538171
Benzo(a)pyrene	ug/g	0.3	0.017	0.0050	8538171
Benzo(b/j)fluoranthene	ug/g	0.78	0.023	0.0050	8538171
Benzo(g,h,i)perylene	ug/g	6.6	0.011	0.0050	8538171
Benzo(k)fluoranthene	ug/g	0.78	0.0078	0.0050	8538171
Chrysene	ug/g	7	0.015	0.0050	8538171
Dibenzo(a,h)anthracene	ug/g	0.1	<0.0050	0.0050	8538171
Fluoranthene	ug/g	0.69	0.034	0.0050	8538171
Fluorene	ug/g	62	<0.0050	0.0050	8538171
Indeno(1,2,3-cd)pyrene	ug/g	0.38	0.011	0.0050	8538171
1-Methylnaphthalene	ug/g	0.99	<0.0050	0.0050	8538171
2-Methylnaphthalene	ug/g	0.99	<0.0050	0.0050	8538171
Naphthalene	ug/g	0.6	<0.0050	0.0050	8538171
Phenanthrene	ug/g	6.2	0.013	0.0050	8538171
Pyrene	ug/g	78	0.029	0.0050	8538171
Surrogate Recovery (%)					
D10-Anthracene	%	-	102		8538171
D14-Terphenyl (FS)	%	-	94		8538171
D8-Acenaphthylene	%	-	91		8538171
No Fill	No Exceedance				
Grey	Exceeds 1 criteria policy/level				
Black	Exceeds both criteria/levels				
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)					
Table 6: Generic Site Condition Standards for Shallow Soils in a Potable Ground Water Condition					
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil					



O.REG 153 VOCs BY HS (SOIL)

Bureau Veritas ID			VEV743	VEV745	VEV748	VEV750		
Sampling Date			2023/03/01	2023/02/27	2023/02/22	2023/03/01		
COC Number			n/a	n/a	n/a	n/a		
	UNITS	Criteria	BH105-SS3	BH108-SS2	BH112-SS3	DUP10503	RDL	QC Batch
Calculated Parameters								
1,3-Dichloropropene (cis+trans)	ug/g	0.05	<0.050	<0.050	<0.050	<0.050	0.050	8533662
Volatile Organics								
Acetone (2-Propanone)	ug/g	16	<0.49	<0.49	<0.49	<0.49	0.49	8537210
Benzene	ug/g	0.21	<0.0060	<0.0060	<0.0060	<0.0060	0.0060	8537210
Bromodichloromethane	ug/g	1.5	<0.040	<0.040	<0.040	<0.040	0.040	8537210
Bromoform	ug/g	0.27	<0.040	<0.040	<0.040	<0.040	0.040	8537210
Bromomethane	ug/g	0.05	<0.040	<0.040	<0.040	<0.040	0.040	8537210
Carbon Tetrachloride	ug/g	0.05	<0.040	<0.040	<0.040	<0.040	0.040	8537210
Chlorobenzene	ug/g	2.4	<0.040	<0.040	<0.040	<0.040	0.040	8537210
Chloroform	ug/g	0.05	<0.040	<0.040	<0.040	<0.040	0.040	8537210
Dibromochloromethane	ug/g	2.3	<0.040	<0.040	<0.040	<0.040	0.040	8537210
1,2-Dichlorobenzene	ug/g	1.2	<0.040	<0.040	<0.040	<0.040	0.040	8537210
1,3-Dichlorobenzene	ug/g	4.8	<0.040	<0.040	<0.040	<0.040	0.040	8537210
1,4-Dichlorobenzene	ug/g	0.083	<0.040	<0.040	<0.040	<0.040	0.040	8537210
Dichlorodifluoromethane (FREON 12)	ug/g	16	<0.040	<0.040	<0.040	<0.040	0.040	8537210
1,1-Dichloroethane	ug/g	0.47	<0.040	<0.040	<0.040	<0.040	0.040	8537210
1,2-Dichloroethane	ug/g	0.05	<0.049	<0.049	<0.049	<0.049	0.049	8537210
1,1-Dichloroethylene	ug/g	0.05	<0.040	<0.040	<0.040	<0.040	0.040	8537210
cis-1,2-Dichloroethylene	ug/g	1.9	<0.040	<0.040	<0.040	<0.040	0.040	8537210
trans-1,2-Dichloroethylene	ug/g	0.084	<0.040	<0.040	<0.040	<0.040	0.040	8537210
1,2-Dichloropropane	ug/g	0.05	<0.040	<0.040	<0.040	<0.040	0.040	8537210
cis-1,3-Dichloropropene	ug/g	0.05	<0.030	<0.030	<0.030	<0.030	0.030	8537210
trans-1,3-Dichloropropene	ug/g	0.05	<0.040	<0.040	<0.040	<0.040	0.040	8537210
Ethylbenzene	ug/g	1.1	<0.010	<0.010	<0.010	<0.010	0.010	8537210
Ethylene Dibromide	ug/g	0.05	<0.040	<0.040	<0.040	<0.040	0.040	8537210
Hexane	ug/g	2.8	<0.040	<0.040	<0.040	<0.040	0.040	8537210
Methylene Chloride(Dichloromethane)	ug/g	0.1	<0.049	<0.049	<0.049	<0.049	0.049	8537210
Methyl Ethyl Ketone (2-Butanone)	ug/g	16	<0.40	<0.40	<0.40	<0.40	0.40	8537210
Methyl Isobutyl Ketone	ug/g	1.7	<0.40	<0.40	<0.40	<0.40	0.40	8537210
No Fill	No Exceedance							
Grey	Exceeds 1 criteria policy/level							
Black	Exceeds both criteria/levels							
RDL = Reportable Detection Limit								
QC Batch = Quality Control Batch								
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)								
Table 6: Generic Site Condition Standards for Shallow Soils in a Potable Ground Water Condition								
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil								



O.REG 153 VOCs BY HS (SOIL)

Bureau Veritas ID			VEV743	VEV745	VEV748	VEV750		
Sampling Date			2023/03/01	2023/02/27	2023/02/22	2023/03/01		
COC Number			n/a	n/a	n/a	n/a		
	UNITS	Criteria	BH105-SS3	BH108-SS2	BH112-SS3	DUP10503	RDL	QC Batch
Methyl t-butyl ether (MTBE)	ug/g	0.75	<0.040	<0.040	<0.040	<0.040	0.040	8537210
Styrene	ug/g	0.7	<0.040	<0.040	<0.040	<0.040	0.040	8537210
1,1,1,2-Tetrachloroethane	ug/g	0.058	<0.040	<0.040	<0.040	<0.040	0.040	8537210
1,1,2,2-Tetrachloroethane	ug/g	0.05	<0.040	<0.040	<0.040	<0.040	0.040	8537210
Tetrachloroethylene	ug/g	0.28	<0.040	<0.040	<0.040	<0.040	0.040	8537210
Toluene	ug/g	2.3	<0.020	<0.020	<0.020	<0.020	0.020	8537210
1,1,1-Trichloroethane	ug/g	0.38	<0.040	<0.040	<0.040	<0.040	0.040	8537210
1,1,2-Trichloroethane	ug/g	0.05	<0.040	<0.040	<0.040	<0.040	0.040	8537210
Trichloroethylene	ug/g	0.061	<0.010	<0.010	<0.010	<0.010	0.010	8537210
Trichlorofluoromethane (FREON 11)	ug/g	4	<0.040	<0.040	<0.040	<0.040	0.040	8537210
Vinyl Chloride	ug/g	0.02	<0.019	<0.019	<0.019	<0.019	0.019	8537210
p+m-Xylene	ug/g	-	<0.020	<0.020	<0.020	<0.020	0.020	8537210
o-Xylene	ug/g	-	<0.020	<0.020	<0.020	<0.020	0.020	8537210
Total Xylenes	ug/g	3.1	<0.020	<0.020	<0.020	<0.020	0.020	8537210
Surrogate Recovery (%)								
4-Bromofluorobenzene	%	-	93	92	91	92		8537210
D10-o-Xylene	%	-	87	84	86	81		8537210
D4-1,2-Dichloroethane	%	-	105	107	108	107		8537210
D8-Toluene	%	-	97	97	99	98		8537210
No Fill	No Exceedance							
Grey	Exceeds 1 criteria policy/level							
Black	Exceeds both criteria/levels							
RDL = Reportable Detection Limit								
QC Batch = Quality Control Batch								
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)								
Table 6: Generic Site Condition Standards for Shallow Soils in a Potable Ground Water Condition								
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil								



RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		VEV742		VEV743		VEV744		VEV745		
Sampling Date		2023/03/01		2023/03/01		2023/02/27		2023/02/27		
COC Number		n/a		n/a		n/a		n/a		
	UNITS	BH105-SS1	QC Batch	BH105-SS3	QC Batch	BH108-SS1	QC Batch	BH108-SS2	RDL	QC Batch
Inorganics										
Moisture	%	15	8537732	14	8537019	17	8537732	18	1.0	8537019
RDL = Reportable Detection Limit QC Batch = Quality Control Batch										

Bureau Veritas ID		VEV746		VEV747	VEV747		VEV748		VEV749		
Sampling Date		2023/02/22		2023/02/22	2023/02/22		2023/02/22		2023/02/21		
COC Number		n/a		n/a	n/a		n/a		n/a		
	UNITS	BH112-SS1	QC Batch	BH112-SS2	BH112-SS2 Lab-Dup	QC Batch	BH112-SS3	QC Batch	BH113-SS1	RDL	QC Batch
Inorganics											
Moisture	%	14	8537732	17	16	8537679	13	8537019	14	1.0	8537732
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate											

Bureau Veritas ID		VEV750		
Sampling Date		2023/03/01		
COC Number		n/a		
	UNITS	DUP10503	RDL	QC Batch
Inorganics				
Moisture	%	15	1.0	8537019
RDL = Reportable Detection Limit QC Batch = Quality Control Batch				



Bureau Veritas Job #: C361624
Report Date: 2023/03/09

Brownfield Investment Group Inc
Client Project #: BIG-ENV-554D
Site Location: 590 ARGUS ROAD
Sampler Initials: PS

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	7.3°C
-----------	-------

Sample VEV746 [BH112-SS1] : PAH ANALYSIS: Due to the sample matrix, sample required dilution. Detection limits were adjusted accordingly.

Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C361624

Report Date: 2023/03/09

QUALITY ASSURANCE REPORT

Brownfield Investment Group Inc

Client Project #: BIG-ENV-554D

Site Location: 590 ARGUS ROAD

Sampler Initials: PS

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8537210	4-Bromofluorobenzene	2023/03/07	94	60 - 140	96	60 - 140	96	%		
8537210	D10-o-Xylene	2023/03/07	96	60 - 130	95	60 - 130	86	%		
8537210	D4-1,2-Dichloroethane	2023/03/07	104	60 - 140	109	60 - 140	109	%		
8537210	D8-Toluene	2023/03/07	105	60 - 140	103	60 - 140	95	%		
8538171	D10-Anthracene	2023/03/07	121	50 - 130	108	50 - 130	103	%		
8538171	D14-Terphenyl (FS)	2023/03/07	98	50 - 130	99	50 - 130	93	%		
8538171	D8-Acenaphthylene	2023/03/07	97	50 - 130	97	50 - 130	91	%		
8536383	WAD Cyanide (Free)	2023/03/06	100	75 - 125	104	80 - 120	<0.01	ug/g	NC	35
8536577	Available (CaCl2) pH	2023/03/06			100	97 - 103			1.4	N/A
8537019	Moisture	2023/03/06							4.6	20
8537210	1,1,1,2-Tetrachloroethane	2023/03/07	91	60 - 140	91	60 - 130	<0.040	ug/g	NC	50
8537210	1,1,1-Trichloroethane	2023/03/07	90	60 - 140	89	60 - 130	<0.040	ug/g	NC	50
8537210	1,1,2,2-Tetrachloroethane	2023/03/07	94	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
8537210	1,1,2-Trichloroethane	2023/03/07	99	60 - 140	105	60 - 130	<0.040	ug/g	NC	50
8537210	1,1-Dichloroethane	2023/03/07	92	60 - 140	92	60 - 130	<0.040	ug/g	NC	50
8537210	1,1-Dichloroethylene	2023/03/07	95	60 - 140	93	60 - 130	<0.040	ug/g	NC	50
8537210	1,2-Dichlorobenzene	2023/03/07	88	60 - 140	89	60 - 130	<0.040	ug/g	NC	50
8537210	1,2-Dichloroethane	2023/03/07	91	60 - 140	95	60 - 130	<0.049	ug/g	NC	50
8537210	1,2-Dichloropropane	2023/03/07	94	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
8537210	1,3-Dichlorobenzene	2023/03/07	89	60 - 140	86	60 - 130	<0.040	ug/g	NC	50
8537210	1,4-Dichlorobenzene	2023/03/07	101	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
8537210	Acetone (2-Propanone)	2023/03/07	116	60 - 140	122	60 - 140	<0.49	ug/g	5.4	50
8537210	Benzene	2023/03/07	86	60 - 140	86	60 - 130	<0.0060	ug/g	NC	50
8537210	Bromodichloromethane	2023/03/07	91	60 - 140	94	60 - 130	<0.040	ug/g	NC	50
8537210	Bromoform	2023/03/07	89	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
8537210	Bromomethane	2023/03/07	93	60 - 140	91	60 - 140	<0.040	ug/g	NC	50
8537210	Carbon Tetrachloride	2023/03/07	85	60 - 140	85	60 - 130	<0.040	ug/g	NC	50
8537210	Chlorobenzene	2023/03/07	92	60 - 140	92	60 - 130	<0.040	ug/g	NC	50
8537210	Chloroform	2023/03/07	89	60 - 140	91	60 - 130	<0.040	ug/g	NC	50
8537210	cis-1,2-Dichloroethylene	2023/03/07	96	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
8537210	cis-1,3-Dichloropropene	2023/03/07	90	60 - 140	90	60 - 130	<0.030	ug/g	NC	50



BUREAU
VERITAS

Bureau Veritas Job #: C361624

Report Date: 2023/03/09

QUALITY ASSURANCE REPORT(CONT'D)

Brownfield Investment Group Inc

Client Project #: BIG-ENV-554D

Site Location: 590 ARGUS ROAD

Sampler Initials: PS

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8537210	Dibromochloromethane	2023/03/07	89	60 - 140	92	60 - 130	<0.040	ug/g	NC	50
8537210	Dichlorodifluoromethane (FREON 12)	2023/03/07	103	60 - 140	100	60 - 140	<0.040	ug/g	NC	50
8537210	Ethylbenzene	2023/03/07	85	60 - 140	83	60 - 130	<0.010	ug/g	NC	50
8537210	Ethylene Dibromide	2023/03/07	88	60 - 140	92	60 - 130	<0.040	ug/g	NC	50
8537210	Hexane	2023/03/07	95	60 - 140	91	60 - 130	<0.040	ug/g	2.0	50
8537210	Methyl Ethyl Ketone (2-Butanone)	2023/03/07	117	60 - 140	129	60 - 140	<0.40	ug/g	NC	50
8537210	Methyl Isobutyl Ketone	2023/03/07	97	60 - 140	109	60 - 130	<0.40	ug/g	NC	50
8537210	Methyl t-butyl ether (MTBE)	2023/03/07	84	60 - 140	87	60 - 130	<0.040	ug/g	NC	50
8537210	Methylene Chloride(Dichloromethane)	2023/03/07	93	60 - 140	95	60 - 130	<0.049	ug/g	NC	50
8537210	o-Xylene	2023/03/07	86	60 - 140	85	60 - 130	<0.020	ug/g	NC	50
8537210	p+m-Xylene	2023/03/07	89	60 - 140	87	60 - 130	<0.020	ug/g	NC	50
8537210	Styrene	2023/03/07	95	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
8537210	Tetrachloroethylene	2023/03/07	84	60 - 140	82	60 - 130	<0.040	ug/g	NC	50
8537210	Toluene	2023/03/07	91	60 - 140	89	60 - 130	<0.020	ug/g	NC	50
8537210	Total Xylenes	2023/03/07					<0.020	ug/g	NC	50
8537210	trans-1,2-Dichloroethylene	2023/03/07	98	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
8537210	trans-1,3-Dichloropropene	2023/03/07	108	60 - 140	106	60 - 130	<0.040	ug/g	NC	50
8537210	Trichloroethylene	2023/03/07	91	60 - 140	90	60 - 130	<0.010	ug/g	NC	50
8537210	Trichlorofluoromethane (FREON 11)	2023/03/07	87	60 - 140	85	60 - 130	<0.040	ug/g	NC	50
8537210	Vinyl Chloride	2023/03/07	89	60 - 140	87	60 - 130	<0.019	ug/g	NC	50
8537484	WAD Cyanide (Free)	2023/03/07	101	75 - 125	106	80 - 120	<0.01	ug/g	NC	35
8537679	Moisture	2023/03/07							6.7	20
8537694	Chromium (VI)	2023/03/07	90	70 - 130	93	80 - 120	<0.18	ug/g	NC	35
8537709	Chromium (VI)	2023/03/07	89	70 - 130	93	80 - 120	<0.18	ug/g	NC	35
8537732	Moisture	2023/03/07							0.46	20
8537937	Available (CaCl2) pH	2023/03/07			100	97 - 103			0.12	N/A
8538171	1-Methylnaphthalene	2023/03/07	116	50 - 130	110	50 - 130	<0.0050	ug/g	NC	40
8538171	2-Methylnaphthalene	2023/03/07	105	50 - 130	103	50 - 130	<0.0050	ug/g	NC	40
8538171	Acenaphthene	2023/03/07	102	50 - 130	105	50 - 130	<0.0050	ug/g	NC	40
8538171	Acenaphthylene	2023/03/07	105	50 - 130	104	50 - 130	<0.0050	ug/g	NC	40
8538171	Anthracene	2023/03/07	107	50 - 130	108	50 - 130	<0.0050	ug/g	6.3	40



BUREAU
VERITAS

Bureau Veritas Job #: C361624

Report Date: 2023/03/09

QUALITY ASSURANCE REPORT(CONT'D)

Brownfield Investment Group Inc

Client Project #: BIG-ENV-554D

Site Location: 590 ARGUS ROAD

Sampler Initials: PS

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8538171	Benzo(a)anthracene	2023/03/07	92	50 - 130	104	50 - 130	<0.0050	ug/g	0.22	40
8538171	Benzo(a)pyrene	2023/03/07	80	50 - 130	102	50 - 130	<0.0050	ug/g	1.5	40
8538171	Benzo(b/j)fluoranthene	2023/03/07	81	50 - 130	102	50 - 130	<0.0050	ug/g	0.64	40
8538171	Benzo(g,h,i)perylene	2023/03/07	81	50 - 130	99	50 - 130	<0.0050	ug/g	5.6	40
8538171	Benzo(k)fluoranthene	2023/03/07	88	50 - 130	101	50 - 130	<0.0050	ug/g	1.5	40
8538171	Chrysene	2023/03/07	86	50 - 130	107	50 - 130	<0.0050	ug/g	2.9	40
8538171	Dibenzo(a,h)anthracene	2023/03/07	88	50 - 130	93	50 - 130	<0.0050	ug/g	2.1	40
8538171	Fluoranthene	2023/03/07	80	50 - 130	109	50 - 130	<0.0050	ug/g	3.5	40
8538171	Fluorene	2023/03/07	104	50 - 130	103	50 - 130	<0.0050	ug/g	NC	40
8538171	Indeno(1,2,3-cd)pyrene	2023/03/07	88	50 - 130	100	50 - 130	<0.0050	ug/g	0.75	40
8538171	Naphthalene	2023/03/07	104	50 - 130	104	50 - 130	<0.0050	ug/g	NC	40
8538171	Phenanthrene	2023/03/07	89	50 - 130	105	50 - 130	<0.0050	ug/g	4.4	40
8538171	Pyrene	2023/03/07	87	50 - 130	109	50 - 130	<0.0050	ug/g	3.6	40
8538172	WAD Cyanide (Free)	2023/03/07	104	75 - 125	107	80 - 120	<0.01	ug/g	NC	35
8539226	Acid Extractable Antimony (Sb)	2023/03/08	92	75 - 125	102	80 - 120	<0.20	ug/g		
8539226	Acid Extractable Arsenic (As)	2023/03/08	89	75 - 125	99	80 - 120	<1.0	ug/g		
8539226	Acid Extractable Barium (Ba)	2023/03/08	NC	75 - 125	100	80 - 120	<0.50	ug/g		
8539226	Acid Extractable Beryllium (Be)	2023/03/08	92	75 - 125	96	80 - 120	<0.20	ug/g		
8539226	Acid Extractable Boron (B)	2023/03/08	87	75 - 125	97	80 - 120	<5.0	ug/g		
8539226	Acid Extractable Cadmium (Cd)	2023/03/08	88	75 - 125	96	80 - 120	<0.10	ug/g		
8539226	Acid Extractable Chromium (Cr)	2023/03/08	78	75 - 125	99	80 - 120	<1.0	ug/g		
8539226	Acid Extractable Cobalt (Co)	2023/03/08	89	75 - 125	99	80 - 120	<0.10	ug/g		
8539226	Acid Extractable Copper (Cu)	2023/03/08	NC	75 - 125	100	80 - 120	<0.50	ug/g		
8539226	Acid Extractable Lead (Pb)	2023/03/08	NC	75 - 125	99	80 - 120	<1.0	ug/g	2.2	30
8539226	Acid Extractable Mercury (Hg)	2023/03/08	89	75 - 125	102	80 - 120	<0.050	ug/g		
8539226	Acid Extractable Molybdenum (Mo)	2023/03/08	94	75 - 125	99	80 - 120	<0.50	ug/g		
8539226	Acid Extractable Nickel (Ni)	2023/03/08	77	75 - 125	100	80 - 120	<0.50	ug/g		
8539226	Acid Extractable Selenium (Se)	2023/03/08	92	75 - 125	99	80 - 120	<0.50	ug/g		
8539226	Acid Extractable Silver (Ag)	2023/03/08	90	75 - 125	100	80 - 120	<0.20	ug/g		
8539226	Acid Extractable Thallium (Tl)	2023/03/08	91	75 - 125	99	80 - 120	<0.050	ug/g		
8539226	Acid Extractable Uranium (U)	2023/03/08	91	75 - 125	99	80 - 120	<0.050	ug/g		



BUREAU
VERITAS

Bureau Veritas Job #: C361624

Report Date: 2023/03/09

QUALITY ASSURANCE REPORT(CONT'D)

Brownfield Investment Group Inc

Client Project #: BIG-ENV-554D

Site Location: 590 ARGUS ROAD

Sampler Initials: PS

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8539226	Acid Extractable Vanadium (V)	2023/03/08	90	75 - 125	99	80 - 120	<5.0	ug/g		
8539226	Acid Extractable Zinc (Zn)	2023/03/08	NC	75 - 125	97	80 - 120	<5.0	ug/g		
8539233	Hot Water Ext. Boron (B)	2023/03/07	97	75 - 125	104	75 - 125	<0.050	ug/g	1.9	40
8540061	WAD Cyanide (Free)	2023/03/08	103	75 - 125	103	80 - 120	<0.01	ug/g	NC	35
8540083	Conductivity	2023/03/08			106	90 - 110	<0.002	mS/cm	1.3	10
8540095	Conductivity	2023/03/08			103	90 - 110	<0.002	mS/cm	1.8	10
8540127	Hot Water Ext. Boron (B)	2023/03/08	94	75 - 125	94	75 - 125	<0.050	ug/g	16	40
8540184	Acid Extractable Antimony (Sb)	2023/03/08	109	75 - 125	99	80 - 120	<0.20	ug/g	NC	30
8540184	Acid Extractable Arsenic (As)	2023/03/08	107	75 - 125	94	80 - 120	<1.0	ug/g	NC	30
8540184	Acid Extractable Barium (Ba)	2023/03/08	105	75 - 125	97	80 - 120	<0.50	ug/g	1.7	30
8540184	Acid Extractable Beryllium (Be)	2023/03/08	111	75 - 125	100	80 - 120	<0.20	ug/g	NC	30
8540184	Acid Extractable Boron (B)	2023/03/08	114	75 - 125	102	80 - 120	<5.0	ug/g	NC	30
8540184	Acid Extractable Cadmium (Cd)	2023/03/08	105	75 - 125	94	80 - 120	<0.10	ug/g	NC	30
8540184	Acid Extractable Chromium (Cr)	2023/03/08	111	75 - 125	98	80 - 120	<1.0	ug/g	9.6	30
8540184	Acid Extractable Cobalt (Co)	2023/03/08	107	75 - 125	95	80 - 120	<0.10	ug/g	6.9	30
8540184	Acid Extractable Copper (Cu)	2023/03/08	106	75 - 125	98	80 - 120	<0.50	ug/g	3.4	30
8540184	Acid Extractable Lead (Pb)	2023/03/08	102	75 - 125	95	80 - 120	<1.0	ug/g	5.4	30
8540184	Acid Extractable Mercury (Hg)	2023/03/08	104	75 - 125	98	80 - 120	<0.050	ug/g	NC	30
8540184	Acid Extractable Molybdenum (Mo)	2023/03/08	108	75 - 125	97	80 - 120	<0.50	ug/g	NC	30
8540184	Acid Extractable Nickel (Ni)	2023/03/08	107	75 - 125	99	80 - 120	<0.50	ug/g	5.5	30
8540184	Acid Extractable Selenium (Se)	2023/03/08	109	75 - 125	100	80 - 120	<0.50	ug/g	NC	30
8540184	Acid Extractable Silver (Ag)	2023/03/08	108	75 - 125	96	80 - 120	<0.20	ug/g	NC	30
8540184	Acid Extractable Thallium (Tl)	2023/03/08	102	75 - 125	96	80 - 120	<0.050	ug/g	2.7	30
8540184	Acid Extractable Uranium (U)	2023/03/08	110	75 - 125	101	80 - 120	<0.050	ug/g	4.0	30
8540184	Acid Extractable Vanadium (V)	2023/03/08	119	75 - 125	98	80 - 120	<5.0	ug/g	18	30
8540184	Acid Extractable Zinc (Zn)	2023/03/08	99	75 - 125	93	80 - 120	<5.0	ug/g	7.2	30
8540220	Chromium (VI)	2023/03/08	86	70 - 130	93	80 - 120	<0.18	ug/g	NC	35



BUREAU
VERITAS

Bureau Veritas Job #: C361624

Report Date: 2023/03/09

QUALITY ASSURANCE REPORT(CONT'D)

Brownfield Investment Group Inc

Client Project #: BIG-ENV-554D

Site Location: 590 ARGUS ROAD

Sampler Initials: PS

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8541082	Available (CaCl2) pH	2023/03/08			100	97 - 103			0.82	N/A

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).




Bureau Veritas Job #: C361624
Report Date: 2023/03/09

Brownfield Investment Group Inc
Client Project #: BIG-ENV-554D
Site Location: 590 ARGUS ROAD
Sampler Initials: PS

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Ewa Pranjic


Ewa Pranjic, M.Sc., C.Chem, Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by {0}, {1} responsible for {2} {3} laboratory operations.



BUREAU
VERITAS

Bureau Veritas Job #: C361624

Report Date: 2023/03/09

Brownfield Investment Group Inc

Client Project #: BIG-ENV-554D

Site Location: 590 ARGUS ROAD

Sampler Initials: PS

Exceedance Summary Table – Reg153/04 T6-Soil/Res-C
Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
BH105-SS1	VEV742-02	Conductivity	0.7	1.0	0.002	mS/cm
BH105-SS1	VEV742-02	Sodium Adsorption Ratio	5.0	17		N/A
BH108-SS1	VEV744-02	Conductivity	0.7	0.84	0.002	mS/cm
BH108-SS1	VEV744-02	Sodium Adsorption Ratio	5.0	10		N/A
BH112-SS1	VEV746-01-Lab Dup	Benzo(a)pyrene	0.3	0.51	0.050	ug/g
BH112-SS1	VEV746-01	Benzo(a)pyrene	0.3	0.52	0.050	ug/g
BH112-SS1	VEV746-01-Lab Dup	Fluoranthene	0.69	1.6	0.050	ug/g
BH112-SS1	VEV746-01	Fluoranthene	0.69	1.6	0.050	ug/g
BH112-SS2	VEV747-01	Conductivity	0.7	1.5	0.002	mS/cm
BH112-SS2	VEV747-01	Sodium Adsorption Ratio	5.0	33		N/A
BH113-SS1	VEV749-02	Conductivity	0.7	1.1	0.002	mS/cm
BH113-SS1	VEV749-02	Sodium Adsorption Ratio	5.0	13		N/A

The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.



Your Project #: BIGC-ENV-554D
 Site Location: 590 ARGUS ROAD
 Your C.O.C. #: 908291-03-01

Attention: Rebecca Morrison

B.I.G Consulting Inc.
 12-5500 Tomken Road
 Mississauga, ON
 CANADA L4W 2Z4

Report Date: 2023/08/31
 Report #: R7792269
 Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C361664

Received: 2023/03/03, 14:40

Sample Matrix: Water
 # Samples Received: 2

Analyses	Quantity	Date		Laboratory Method	Analytical Method
		Extracted	Analyzed		
Chloride by Automated Colourimetry	2	N/A	2023/03/08	CAM SOP-00463	SM 23 4500-Cl E m
Chromium (VI) in Water	2	N/A	2023/03/06	CAM SOP-00436	EPA 7199 m
Free (WAD) Cyanide	2	N/A	2023/03/06	CAM SOP-00457	OMOE E3015 m
Mercury	2	2023/03/06	2023/03/06	CAM SOP-00453	EPA 7470A m
Dissolved Metals by ICPMS	2	N/A	2023/03/07	CAM SOP-00447	EPA 6020B m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCCFP, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.



Your Project #: BIGC-ENV-554D
Site Location: 590 ARGUS ROAD
Your C.O.C. #: 908291-03-01

Attention: Rebecca Morrison

B.I.G Consulting Inc.
12-5500 Tomken Road
Mississauga, ON
CANADA L4W 2Z4

Report Date: 2023/08/31
Report #: R7792269
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C361664

Received: 2023/03/03, 14:40

Encryption Key

Neroshun Govinthathas
Project Manager Assistant
31 Aug 2023 19:20:32

Please direct all questions regarding this Certificate of Analysis to:
Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843

=====

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



RESULTS OF ANALYSES OF WATER

Bureau Veritas ID			VEV995	VEV996		
Sampling Date			2023/03/03 10:50	2023/03/03 10:55		
COC Number			908291-03-01	908291-03-01		
	UNITS	Criteria	BH/MW 102	DUP 1020	RDL	QC Batch
Inorganics						
WAD Cyanide (Free)	ug/L	66	ND	ND	1	8535584
Dissolved Chloride (Cl-)	mg/L	790	2800	2700	25	8535383
No Fill	No Exceedance					
Grey	Exceeds 1 criteria policy/level					
Black	Exceeds both criteria/levels					
RDL = Reportable Detection Limit						
QC Batch = Quality Control Batch						
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)						
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition						
Potable Ground Water- All Types of Property Uses - Coarse Textured Soil						
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.						



ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID			VEV995	VEV996			VEV996		
Sampling Date			2023/03/03 10:50	2023/03/03 10:55			2023/03/03 10:55		
COC Number			908291-03-01	908291-03-01			908291-03-01		
	UNITS	Criteria	BH/MW 102	DUP 1020	RDL	QC Batch	DUP 1020 Lab-Dup	RDL	QC Batch
Metals									
Chromium (VI)	ug/L	25	ND	ND	0.50	8535767			
Mercury (Hg)	ug/L	0.29	ND	ND	0.10	8536124	ND	0.10	8536124
Dissolved Antimony (Sb)	ug/L	6.0	ND	ND	0.50	8535762			
Dissolved Arsenic (As)	ug/L	25	ND	ND	1.0	8535762			
Dissolved Barium (Ba)	ug/L	1000	100	100	2.0	8535762			
Dissolved Beryllium (Be)	ug/L	4.0	ND	ND	0.40	8535762			
Dissolved Boron (B)	ug/L	5000	440	480	10	8535762			
Dissolved Cadmium (Cd)	ug/L	2.7	ND	ND	0.090	8535762			
Dissolved Chromium (Cr)	ug/L	50	ND	ND	5.0	8535762			
Dissolved Cobalt (Co)	ug/L	3.8	0.85	1.3	0.50	8535762			
Dissolved Copper (Cu)	ug/L	87	3.3	6.9	0.90	8535762			
Dissolved Lead (Pb)	ug/L	10	ND	ND	0.50	8535762			
Dissolved Molybdenum (Mo)	ug/L	70	3.4	2.9	0.50	8535762			
Dissolved Nickel (Ni)	ug/L	100	1.2	1.9	1.0	8535762			
Dissolved Selenium (Se)	ug/L	10	ND	ND	2.0	8535762			
Dissolved Silver (Ag)	ug/L	1.5	ND	ND	0.090	8535762			
Dissolved Sodium (Na)	ug/L	490000	1500000	1500000	500	8535762			
Dissolved Thallium (Tl)	ug/L	2.0	ND	ND	0.050	8535762			
Dissolved Uranium (U)	ug/L	20	2.9	2.6	0.10	8535762			
Dissolved Vanadium (V)	ug/L	6.2	ND	0.91	0.50	8535762			
Dissolved Zinc (Zn)	ug/L	1100	66	ND	5.0	8535762			
No Fill	No Exceedance								
Grey	Exceeds 1 criteria policy/level								
Black	Exceeds both criteria/levels								
RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch									
Lab-Dup = Laboratory Initiated Duplicate									
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)									
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition									
Potable Ground Water- All Types of Property Uses - Coarse Textured Soil									
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.									



BUREAU
VERITAS

Bureau Veritas Job #: C361664

Report Date: 2023/08/31

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554D

Site Location: 590 ARGUS ROAD

Sampler Initials: CD

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	7.0°C
-----------	-------

Revised Report [2023/08/31]: Criteria updated from Table 6 to Table 2 as per client request.

Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C361664

Report Date: 2023/08/31

QUALITY ASSURANCE REPORT

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554D

Site Location: 590 ARGUS ROAD

Sampler Initials: CD

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8535383	Dissolved Chloride (Cl-)	2023/03/08	NC	80 - 120	96	80 - 120	ND, RDL=1.0	mg/L	3.1	20
8535584	WAD Cyanide (Free)	2023/03/06	102	80 - 120	102	80 - 120	ND, RDL=1	ug/L	NC	20
8535762	Dissolved Antimony (Sb)	2023/03/07	112	80 - 120	101	80 - 120	ND, RDL=0.50	ug/L	NC	20
8535762	Dissolved Arsenic (As)	2023/03/07	107	80 - 120	98	80 - 120	ND, RDL=1.0	ug/L	NC	20
8535762	Dissolved Barium (Ba)	2023/03/07	105	80 - 120	98	80 - 120	ND, RDL=2.0	ug/L	0.31	20
8535762	Dissolved Beryllium (Be)	2023/03/07	110	80 - 120	101	80 - 120	ND, RDL=0.40	ug/L	NC	20
8535762	Dissolved Boron (B)	2023/03/07	107	80 - 120	100	80 - 120	ND, RDL=10	ug/L	3.4	20
8535762	Dissolved Cadmium (Cd)	2023/03/07	107	80 - 120	98	80 - 120	ND, RDL=0.090	ug/L	NC	20
8535762	Dissolved Chromium (Cr)	2023/03/07	105	80 - 120	96	80 - 120	ND, RDL=5.0	ug/L	NC	20
8535762	Dissolved Cobalt (Co)	2023/03/07	103	80 - 120	97	80 - 120	ND, RDL=0.50	ug/L	NC	20
8535762	Dissolved Copper (Cu)	2023/03/07	106	80 - 120	98	80 - 120	ND, RDL=0.90	ug/L	NC	20
8535762	Dissolved Lead (Pb)	2023/03/07	105	80 - 120	99	80 - 120	ND, RDL=0.50	ug/L	NC	20
8535762	Dissolved Molybdenum (Mo)	2023/03/07	116	80 - 120	103	80 - 120	ND, RDL=0.50	ug/L	8.0	20
8535762	Dissolved Nickel (Ni)	2023/03/07	100	80 - 120	95	80 - 120	ND, RDL=1.0	ug/L	7.6	20
8535762	Dissolved Selenium (Se)	2023/03/07	106	80 - 120	98	80 - 120	ND, RDL=2.0	ug/L	NC	20
8535762	Dissolved Silver (Ag)	2023/03/07	97	80 - 120	102	80 - 120	ND, RDL=0.090	ug/L	NC	20
8535762	Dissolved Sodium (Na)	2023/03/07	NC	80 - 120	96	80 - 120	ND, RDL=100	ug/L	0.74	20
8535762	Dissolved Thallium (Tl)	2023/03/07	109	80 - 120	101	80 - 120	ND, RDL=0.050	ug/L	NC	20
8535762	Dissolved Uranium (U)	2023/03/07	108	80 - 120	99	80 - 120	ND, RDL=0.10	ug/L	0.67	20
8535762	Dissolved Vanadium (V)	2023/03/07	105	80 - 120	95	80 - 120	ND, RDL=0.50	ug/L	NC	20
8535762	Dissolved Zinc (Zn)	2023/03/07	104	80 - 120	97	80 - 120	ND, RDL=5.0	ug/L	4.6	20
8535767	Chromium (VI)	2023/03/06	101	80 - 120	100	80 - 120	ND, RDL=0.50	ug/L	NC	20
8536124	Mercury (Hg)	2023/03/06	99	75 - 125	106	80 - 120	ND, RDL=0.10	ug/L	NC	20

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).




Bureau Veritas Job #: C361664
Report Date: 2023/08/31

B.I.G Consulting Inc.
Client Project #: BIGC-ENV-554D
Site Location: 590 ARGUS ROAD
Sampler Initials: CD

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Ewa Pranjic


Ewa Pranjic, M.Sc., C.Chem, Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by {0}, {1} responsible for {2} {3} laboratory operations.



BUREAU
VERITAS

Bureau Veritas Job #: C361664

Report Date: 2023/08/31

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554D

Site Location: 590 ARGUS ROAD

Sampler Initials: CD

Exceedance Summary Table – Reg153/04 T2-GW-C

Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
BH/MW 102	VEV995-01	Dissolved Chloride (Cl-)	790	2800	25	mg/L
BH/MW 102	VEV995-02	Dissolved Sodium (Na)	490000	1500000	500	ug/L
DUP 1020	VEV996-01	Dissolved Chloride (Cl-)	790	2700	25	mg/L
DUP 1020	VEV996-02	Dissolved Sodium (Na)	490000	1500000	500	ug/L

The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.



Your Project #: BIGC-ENV-554D
 Site Location: 590 ARGUS ROAD
 Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
 12-5500 Tomken Road
 Mississauga, ON
 CANADA L4W 2Z4

Report Date: 2023/08/31
 Report #: R7792275
 Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C372941

Received: 2023/03/15, 13:16

Sample Matrix: Soil
 # Samples Received: 4

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Methylnaphthalene Sum	3	N/A	2023/03/21	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	2	2023/03/20	2023/03/20	CAM SOP-00408	R153 Ana. Prot. 2011
Free (WAD) Cyanide	2	2023/03/17	2023/03/17	CAM SOP-00457	OMOE E3015 m
Conductivity	2	2023/03/21	2023/03/21	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1)	1	2023/03/17	2023/03/17	CAM SOP-00436	EPA 3060/7199 m
Hexavalent Chromium in Soil by IC (1)	1	2023/03/17	2023/03/20	CAM SOP-00436	EPA 3060/7199 m
Acid Extractable Metals by ICPMS	2	2023/03/20	2023/03/20	CAM SOP-00447	EPA 6020B m
Moisture	4	N/A	2023/03/17	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM)	3	2023/03/17	2023/03/18	CAM SOP-00318	EPA 8270E
pH CaCl2 EXTRACT	2	2023/03/20	2023/03/20	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	2	N/A	2023/03/21	CAM SOP-00102	EPA 6010C

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCCFP, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.



Your Project #: BIGC-ENV-554D
Site Location: 590 ARGUS ROAD
Your C.O.C. #: n/a

Attention: Rebecca Morrison

B.I.G Consulting Inc.
12-5500 Tomken Road
Mississauga, ON
CANADA L4W 2Z4

Report Date: 2023/08/31
Report #: R7792275
Version: 2 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C372941

Received: 2023/03/15, 13:16

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Soils are reported on a dry weight basis unless otherwise specified.

Encryption Key

Neroshun Govinthathas
Project Manager Assistant
31 Aug 2023 19:20:57

Please direct all questions regarding this Certificate of Analysis to:
Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843

=====

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID			VHG526			VHG527	VHG528		
Sampling Date			2023/03/01			2023/02/17	2023/03/01		
COC Number			n/a			n/a	n/a		
	UNITS	Criteria	BH/MW 106-SS1	RDL	QC Batch	BH/MW 112-SS2	DUP10601	RDL	QC Batch
Calculated Parameters									
Sodium Adsorption Ratio	N/A	5.0	13		8554949				
Inorganics									
Conductivity	mS/cm	0.7	1.0	0.002	8564078				
Moisture	%	-	17	1.0	8558331	16	8.8	1.0	8558331
Available (CaCl ₂) pH	pH	-	7.37		8561793				
WAD Cyanide (Free)	ug/g	0.051	ND	0.01	8558101				
No Fill	No Exceedance								
Grey	Exceeds 1 criteria policy/level								
Black	Exceeds both criteria/levels								
RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch									
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)									
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition									
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil									
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.									

Bureau Veritas ID			VHG529		
Sampling Date			2023/02/17		
COC Number			n/a		
	UNITS	Criteria	DUP10201	RDL	QC Batch
Calculated Parameters					
Sodium Adsorption Ratio	N/A	5.0	6.5		8554949
Inorganics					
Conductivity	mS/cm	0.7	0.96	0.002	8564078
Moisture	%	-	21	1.0	8558032
Available (CaCl ₂) pH	pH	-	7.46		8561793
WAD Cyanide (Free)	ug/g	0.051	ND	0.01	8558101
No Fill	No Exceedance				
Grey	Exceeds 1 criteria policy/level				
Black	Exceeds both criteria/levels				
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)					
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition					
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil					
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.					



BUREAU
VERITAS

Bureau Veritas Job #: C372941

Report Date: 2023/08/31

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554D

Site Location: 590 ARGUS ROAD

Sampler Initials: PS

ELEMENTS BY ATOMIC SPECTROSCOPY (SOIL)

Bureau Veritas ID			VHG526		VHG529		
Sampling Date			2023/03/01		2023/02/17		
COC Number			n/a		n/a		
	UNITS	Criteria	BH/MW 106-SS1	QC Batch	DUP10201	RDL	QC Batch
Inorganics							
Chromium (VI)	ug/g	8	ND	8558148	ND	0.18	8558158
Metals							
Hot Water Ext. Boron (B)	ug/g	1.5	0.28	8561462	0.35	0.050	8561462
Acid Extractable Antimony (Sb)	ug/g	7.5	ND	8561464	0.30	0.20	8561464
Acid Extractable Arsenic (As)	ug/g	18	6.1	8561464	4.1	1.0	8561464
Acid Extractable Barium (Ba)	ug/g	390	84	8561464	73	0.50	8561464
Acid Extractable Beryllium (Be)	ug/g	4	0.58	8561464	0.74	0.20	8561464
Acid Extractable Boron (B)	ug/g	120	ND	8561464	9.9	5.0	8561464
Acid Extractable Cadmium (Cd)	ug/g	1.2	0.16	8561464	ND	0.10	8561464
Acid Extractable Chromium (Cr)	ug/g	160	16	8561464	19	1.0	8561464
Acid Extractable Cobalt (Co)	ug/g	22	8.8	8561464	9.0	0.10	8561464
Acid Extractable Copper (Cu)	ug/g	140	50	8561464	88	0.50	8561464
Acid Extractable Lead (Pb)	ug/g	120	8.6	8561464	11	1.0	8561464
Acid Extractable Molybdenum (Mo)	ug/g	6.9	1.9	8561464	1.5	0.50	8561464
Acid Extractable Nickel (Ni)	ug/g	100	18	8561464	21	0.50	8561464
Acid Extractable Selenium (Se)	ug/g	2.4	ND	8561464	ND	0.50	8561464
Acid Extractable Silver (Ag)	ug/g	20	ND	8561464	ND	0.20	8561464
Acid Extractable Thallium (Tl)	ug/g	1	0.084	8561464	0.088	0.050	8561464
Acid Extractable Uranium (U)	ug/g	23	0.91	8561464	1.4	0.050	8561464
Acid Extractable Vanadium (V)	ug/g	86	29	8561464	30	5.0	8561464
Acid Extractable Zinc (Zn)	ug/g	340	39	8561464	51	5.0	8561464
Acid Extractable Mercury (Hg)	ug/g	0.27	ND	8561464	ND	0.050	8561464
No Fill	No Exceedance						
Grey	Exceeds 1 criteria policy/level						
Black	Exceeds both criteria/levels						
RDL = Reportable Detection Limit							
QC Batch = Quality Control Batch							
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)							
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition							
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil							
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.							



BUREAU VERITAS

Bureau Veritas Job #: C372941

Report Date: 2023/08/31

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554D

Site Location: 590 ARGUS ROAD

Sampler Initials: PS

SEMI-VOLATILE ORGANICS BY GC-MS (SOIL)

Bureau Veritas ID			VHG526	VHG527			VHG527		
Sampling Date			2023/03/01	2023/02/17			2023/02/17		
COC Number			n/a	n/a			n/a		
	UNITS	Criteria	BH/MW 106-SS1	BH/MW 112-SS2	RDL	QC Batch	BH/MW 112-SS2 Lab-Dup	RDL	QC Batch
Calculated Parameters									
Methylnaphthalene, 2-(1-)	ug/g	-	ND	ND	0.0071	8554854			
Polyaromatic Hydrocarbons									
Acenaphthene	ug/g	7.9	ND	ND	0.0050	8558843	ND	0.0050	8558843
Acenaphthylene	ug/g	0.15	ND	ND	0.0050	8558843	ND	0.0050	8558843
Anthracene	ug/g	0.67	ND	ND	0.0050	8558843	ND	0.0050	8558843
Benzo(a)anthracene	ug/g	0.5	ND	ND	0.0050	8558843	ND	0.0050	8558843
Benzo(a)pyrene	ug/g	0.3	ND	ND	0.0050	8558843	ND	0.0050	8558843
Benzo(b/j)fluoranthene	ug/g	0.78	ND	ND	0.0050	8558843	ND	0.0050	8558843
Benzo(g,h,i)perylene	ug/g	6.6	ND	ND	0.0050	8558843	0.0079	0.0050	8558843
Benzo(k)fluoranthene	ug/g	0.78	ND	ND	0.0050	8558843	ND	0.0050	8558843
Chrysene	ug/g	7	ND	ND	0.0050	8558843	ND	0.0050	8558843
Dibenzo(a,h)anthracene	ug/g	0.1	ND	ND	0.0050	8558843	ND	0.0050	8558843
Fluoranthene	ug/g	0.69	ND	ND	0.0050	8558843	ND	0.0050	8558843
Fluorene	ug/g	62	ND	ND	0.0050	8558843	ND	0.0050	8558843
Indeno(1,2,3-cd)pyrene	ug/g	0.38	ND	ND	0.0050	8558843	ND	0.0050	8558843
1-Methylnaphthalene	ug/g	0.99	ND	ND	0.0050	8558843	ND	0.0050	8558843
2-Methylnaphthalene	ug/g	0.99	ND	ND	0.0050	8558843	ND	0.0050	8558843
Naphthalene	ug/g	0.6	ND	ND	0.0050	8558843	ND	0.0050	8558843
Phenanthrene	ug/g	6.2	ND	ND	0.0050	8558843	ND	0.0050	8558843
Pyrene	ug/g	78	ND	ND	0.0050	8558843	ND	0.0050	8558843
Surrogate Recovery (%)									
D10-Anthracene	%	-	102	100		8558843	98		8558843
D14-Terphenyl (FS)	%	-	104	98		8558843	98		8558843
D8-Acenaphthylene	%	-	97	91		8558843	93		8558843
No Fill	No Exceedance								
Grey	Exceeds 1 criteria policy/level								
Black	Exceeds both criteria/levels								
RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch									
Lab-Dup = Laboratory Initiated Duplicate									
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)									
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition									
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil									
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.									



SEMI-VOLATILE ORGANICS BY GC-MS (SOIL)

Bureau Veritas ID			VHG528		
Sampling Date			2023/03/01		
COC Number			n/a		
	UNITS	Criteria	DUP10601	RDL	QC Batch
Calculated Parameters					
Methylnaphthalene, 2-(1-)	ug/g	-	ND	0.0071	8554854
Polyaromatic Hydrocarbons					
Acenaphthene	ug/g	7.9	ND	0.0050	8558843
Acenaphthylene	ug/g	0.15	ND	0.0050	8558843
Anthracene	ug/g	0.67	ND	0.0050	8558843
Benzo(a)anthracene	ug/g	0.5	ND	0.0050	8558843
Benzo(a)pyrene	ug/g	0.3	ND	0.0050	8558843
Benzo(b/j)fluoranthene	ug/g	0.78	ND	0.0050	8558843
Benzo(g,h,i)perylene	ug/g	6.6	ND	0.0050	8558843
Benzo(k)fluoranthene	ug/g	0.78	ND	0.0050	8558843
Chrysene	ug/g	7	ND	0.0050	8558843
Dibenzo(a,h)anthracene	ug/g	0.1	ND	0.0050	8558843
Fluoranthene	ug/g	0.69	0.0076	0.0050	8558843
Fluorene	ug/g	62	ND	0.0050	8558843
Indeno(1,2,3-cd)pyrene	ug/g	0.38	ND	0.0050	8558843
1-Methylnaphthalene	ug/g	0.99	ND	0.0050	8558843
2-Methylnaphthalene	ug/g	0.99	ND	0.0050	8558843
Naphthalene	ug/g	0.6	ND	0.0050	8558843
Phenanthrene	ug/g	6.2	ND	0.0050	8558843
Pyrene	ug/g	78	0.0071	0.0050	8558843
Surrogate Recovery (%)					
D10-Anthracene	%	-	99		8558843
D14-Terphenyl (FS)	%	-	99		8558843
No Fill	No Exceedance				
Grey	Exceeds 1 criteria policy/level				
Black	Exceeds both criteria/levels				
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)					
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition					
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil					
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.					



BUREAU
VERITAS

Bureau Veritas Job #: C372941

Report Date: 2023/08/31

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554D

Site Location: 590 ARGUS ROAD

Sampler Initials: PS

SEMI-VOLATILE ORGANICS BY GC-MS (SOIL)

Bureau Veritas ID			VHG528		
Sampling Date			2023/03/01		
COC Number			n/a		
	UNITS	Criteria	DUP10601	RDL	QC Batch
D8-Acenaphthylene	%	-	95		8558843
No Fill	No Exceedance				
Grey	Exceeds 1 criteria policy/level				
Black	Exceeds both criteria/levels				
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)					
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition					
Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soil					



Bureau Veritas Job #: C372941
Report Date: 2023/08/31

B.I.G Consulting Inc.
Client Project #: BIGC-ENV-554D
Site Location: 590 ARGUS ROAD
Sampler Initials: PS

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	8.3°C
-----------	-------

Revised Report [2023/08/31]: Updated criteria from Table 6 to Table 2 as per client request.

Results relate only to the items tested.



BUREAU
VERITAS

Bureau Veritas Job #: C372941

Report Date: 2023/08/31

QUALITY ASSURANCE REPORT

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554D

Site Location: 590 ARGUS ROAD

Sampler Initials: PS

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8558843	D10-Anthracene	2023/03/18	94	50 - 130	107	50 - 130	98	%		
8558843	D14-Terphenyl (FS)	2023/03/18	93	50 - 130	108	50 - 130	93	%		
8558843	D8-Acenaphthylene	2023/03/18	89	50 - 130	106	50 - 130	93	%		
8558032	Moisture	2023/03/17							0.39	20
8558101	WAD Cyanide (Free)	2023/03/17	95	75 - 125	98	80 - 120	ND, RDL=0.01	ug/g	NC	35
8558148	Chromium (VI)	2023/03/20	49 (1)	70 - 130	94	80 - 120	ND, RDL=0.18	ug/g	NC	35
8558158	Chromium (VI)	2023/03/17	78	70 - 130	92	80 - 120	ND, RDL=0.18	ug/g	NC	35
8558331	Moisture	2023/03/17							3.8	20
8558843	1-Methylnaphthalene	2023/03/18	110	50 - 130	116	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8558843	2-Methylnaphthalene	2023/03/18	100	50 - 130	105	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8558843	Acenaphthene	2023/03/18	102	50 - 130	105	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8558843	Acenaphthylene	2023/03/18	103	50 - 130	107	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8558843	Anthracene	2023/03/18	106	50 - 130	108	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8558843	Benzo(a)anthracene	2023/03/18	116	50 - 130	116	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8558843	Benzo(a)pyrene	2023/03/18	100	50 - 130	102	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8558843	Benzo(b/j)fluoranthene	2023/03/18	97	50 - 130	101	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8558843	Benzo(g,h,i)perylene	2023/03/18	108	50 - 130	110	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8558843	Benzo(k)fluoranthene	2023/03/18	96	50 - 130	99	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8558843	Chrysene	2023/03/18	105	50 - 130	108	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8558843	Dibenzo(a,h)anthracene	2023/03/18	100	50 - 130	98	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8558843	Fluoranthene	2023/03/18	112	50 - 130	116	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8558843	Fluorene	2023/03/18	102	50 - 130	105	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8558843	Indeno(1,2,3-cd)pyrene	2023/03/18	108	50 - 130	109	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8558843	Naphthalene	2023/03/18	92	50 - 130	102	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8558843	Phenanthrene	2023/03/18	101	50 - 130	104	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8558843	Pyrene	2023/03/18	110	50 - 130	114	50 - 130	ND, RDL=0.0050	ug/g	NC	40
8561462	Hot Water Ext. Boron (B)	2023/03/20	110	75 - 125	104	75 - 125	ND, RDL=0.050	ug/g	2.3	40
8561464	Acid Extractable Antimony (Sb)	2023/03/20	107	75 - 125	98	80 - 120	ND, RDL=0.20	ug/g	NC	30
8561464	Acid Extractable Arsenic (As)	2023/03/20	105	75 - 125	99	80 - 120	ND, RDL=1.0	ug/g	7.5	30
8561464	Acid Extractable Barium (Ba)	2023/03/20	NC	75 - 125	96	80 - 120	ND, RDL=0.50	ug/g	1.5	30
8561464	Acid Extractable Beryllium (Be)	2023/03/20	111	75 - 125	102	80 - 120	ND, RDL=0.20	ug/g	1.7	30



BUREAU
VERITAS

Bureau Veritas Job #: C372941

Report Date: 2023/08/31

QUALITY ASSURANCE REPORT(CONT'D)

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554D

Site Location: 590 ARGUS ROAD

Sampler Initials: PS

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8561464	Acid Extractable Boron (B)	2023/03/20	110	75 - 125	102	80 - 120	ND, RDL=5.0	ug/g	NC	30
8561464	Acid Extractable Cadmium (Cd)	2023/03/20	106	75 - 125	96	80 - 120	ND, RDL=0.10	ug/g	NC	30
8561464	Acid Extractable Chromium (Cr)	2023/03/20	106	75 - 125	100	80 - 120	ND, RDL=1.0	ug/g	0.19	30
8561464	Acid Extractable Cobalt (Co)	2023/03/20	104	75 - 125	96	80 - 120	ND, RDL=0.10	ug/g	2.2	30
8561464	Acid Extractable Copper (Cu)	2023/03/20	103	75 - 125	98	80 - 120	ND, RDL=0.50	ug/g	3.8	30
8561464	Acid Extractable Lead (Pb)	2023/03/20	101	75 - 125	98	80 - 120	ND, RDL=1.0	ug/g	3.9	30
8561464	Acid Extractable Mercury (Hg)	2023/03/20	106	75 - 125	107	80 - 120	ND, RDL=0.050	ug/g	NC	30
8561464	Acid Extractable Molybdenum (Mo)	2023/03/20	109	75 - 125	97	80 - 120	ND, RDL=0.50	ug/g	NC	30
8561464	Acid Extractable Nickel (Ni)	2023/03/20	105	75 - 125	98	80 - 120	ND, RDL=0.50	ug/g	2.3	30
8561464	Acid Extractable Selenium (Se)	2023/03/20	105	75 - 125	99	80 - 120	ND, RDL=0.50	ug/g	NC	30
8561464	Acid Extractable Silver (Ag)	2023/03/20	105	75 - 125	98	80 - 120	ND, RDL=0.20	ug/g	NC	30
8561464	Acid Extractable Thallium (Tl)	2023/03/20	101	75 - 125	98	80 - 120	ND, RDL=0.050	ug/g	2.1	30
8561464	Acid Extractable Uranium (U)	2023/03/20	106	75 - 125	100	80 - 120	ND, RDL=0.050	ug/g	1.4	30
8561464	Acid Extractable Vanadium (V)	2023/03/20	104	75 - 125	98	80 - 120	ND, RDL=5.0	ug/g	2.8	30
8561464	Acid Extractable Zinc (Zn)	2023/03/20	100	75 - 125	96	80 - 120	ND, RDL=5.0	ug/g	5.1	30
8561793	Available (CaCl ₂) pH	2023/03/20			99	97 - 103			0.57	N/A
8564078	Conductivity	2023/03/21			107	90 - 110	ND, RDL=0.002	mS/cm	2.2	10

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) The matrix spike recovery was below the lower control limit. This may be due in part to the reducing environment of the sample. The sample was re-analyzed with the same results




Bureau Veritas Job #: C372941
Report Date: 2023/08/31

B.I.G Consulting Inc.
Client Project #: BIGC-ENV-554D
Site Location: 590 ARGUS ROAD
Sampler Initials: PS

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Eva Pranjic


Ewa Pranjic, M.Sc., C.Chem, Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by {0}, {1} responsible for {2} {3} laboratory operations.



BUREAU
VERITAS

Bureau Veritas Job #: C372941

Report Date: 2023/08/31

B.I.G Consulting Inc.

Client Project #: BIGC-ENV-554D

Site Location: 590 ARGUS ROAD

Sampler Initials: PS

Exceedance Summary Table – Reg153/04 T2-Soil/Res-C
Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
BH/MW 106-SS1	VHG526-01	Conductivity	0.7	1.0	0.002	mS/cm
BH/MW 106-SS1	VHG526-01	Sodium Adsorption Ratio	5.0	13		N/A
DUP10201	VHG529-01	Conductivity	0.7	0.96	0.002	mS/cm
DUP10201	VHG529-01	Sodium Adsorption Ratio	5.0	6.5		N/A

The exceedance summary table is for information purposes only and should not be considered a comprehensive listing or statement of conformance to applicable regulatory guidelines.