



**PHASE TWO  
ENVIRONMENTAL SITE ASSESSMENT  
84 CANNIFTON ROAD NORTH, BELLEVILLE, ONTARIO**

Prepared for:

**2267178 Ontario Inc.**  
1117 Casey Road  
Belleville, ON K8N 4Z6

Prepared by:

**BluMetric Environmental Inc.**  
The Tower, The Woolen Mill  
4 Cataraqui Street  
Kingston, ON K7K 1Z7

Project Number: 220456  
12 June 2023

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## EXECUTIVE SUMMARY

In August 2022, BluMetric Environmental Inc. (subsequently referred to as “BluMetric®”) was retained by 2267178 Ontario Inc. to complete a Phase Two Environmental Site Assessment (ESA) for the commercial property located at 84 Cannifton Road North, in Belleville, Ontario (subsequently referred to as the “Phase Two Property”). Refer to Figure 1 for the site location.

It is our understanding that this Phase Two ESA report is required for rezoning the land for residential purposes. This report was therefore prepared in the spirit of the requirements of Ontario Regulation 153/04 referred to herein as O. Reg. 153/04. The objective of the Phase Two ESA was to identify and delineate any impact to soil and ground water. This report describes the results of the Phase Two ESA.

The Phase Two Property is located on the east side of Cannifton Road North and west side of Lywood Street, approximately 115 m north of Black Diamond Road and 50 m east of the Moira River, in Belleville, Ontario. The Phase One Property is approximately 0.45 hectares in size and consists of two 2-storey buildings, a dwelling (having a basement) reportedly built in the early 1900s, and a workshop building built in the 1960s, both with municipal addresses of 84 Cannifton Road North. Refer to Figure 2 for the Site layout and key features.

The Phase Two property is flanked a mix of residential, commercial, and industrial land uses. West of the Phase Two Property is Cannifton Road North. East of the Phase Two Property is Lywood Street. Adjacent to the north of the site are residential dwellings. Further north of site is MacPherson Motors Car Dealer at 115 Cannifton Road North and THF Auto Centre at 108 Cannifton Road North. Adjacent to the south of the site is residential dwellings and a workshop building. Further south of the site is McCaffrey’s Garage & Towing Ltd. at 46-54 Cannifton Road North.

In the 1977, Vincent and Vernon Golden of ‘Golden’s Trucking’ acquired the Phase One Property. No observations or historical records showed any evidence of any automotive operations on the Phase One Property. Vincent Golden subsequently took over ownership of the Phase One Property in 1987, and the workshop building was subsequently occupied by St. Lawrence Pools.

In 2016, the current owner, 2267178 Ontario Inc., acquired the property. The Phase One Property has since been occupied by Main Event Tent Rentals and is also currently occupied by a small woodwork shop (tenant). The dwelling has remained used for residential purposes and is currently leased. The remainder of the Phase One Property consists of grassy areas and a gravel-covered and asphalt-paved parking lot and driveways. A truck trailer and a storage container are also located adjacent to the workshop building on the west side of the property, both used for storage of equipment and materials.



## Phase One Investigation

A Phase One ESA was completed by BluMetric in May 2022 for the commercial property at 84 Cannifton Road North. BluMetric's findings were as follows:

- The Phase One Property was first developed in the early 1900's, and a workshop building built in the 1960's, both with the municipal address of 84 Cannifton Road North, for commercial purposes.
- In the 1977, Vincent and Vernon Golden of 'Golden's Trucking' acquired the Phase One Property. No observations or historical records showed any evidence of any automotive operations on the Phase One Property. Vincent Golden subsequently took over ownership of the Phase One Property in 1987, and the workshop building was subsequently occupied by St. Lawrence Pools. In 2016, the current owner, 2267178 Ontario Inc., acquired the property. The Phase One Property has since been occupied by Main Event Tent Rentals and is also currently occupied by a small woodwork shop (tenant). The dwelling has remained used for residential purposes and is currently leased.
- Surrounding land uses include mixed residential, commercial, and industrial land uses.
- Potentially contaminating activities (PCAs) were identified at the Phase One Property and in the Phase One Study Area.
- Areas of Potential Environmental Concern (APECs) were identified in the Phase One ESA.

A Phase Two ESA was recommended to investigate these impacts in soil and ground water. Table 1 in Section 4.1 provides a summary of the APECs that were assessed in the current Phase Two ESA.

## Applicable Site Condition Standards

Investigations of the Phase Two Property have confirmed that overburden thickness across the property ranges from 0.15 to 1.4 metres (m), with at least one third of the property less than 2.0 m, therefore the property meets the definition of a shallow soil property as per O.Reg 153/04, as amended.

The Phase Two Property is not located within or adjacent to an Area of Natural Significance and there is no evidence to suggest pH is less than 5 or greater than 9, therefore the Phase Two Property is not considered to be a "Sensitive Site".

The Phase Two Property and properties within 250 m of the site are serviced with municipal water. However, there are two historical drinking water wells indicated to be on the Phase Two Property and many within 250 m of the property boundaries, thus the property is considered to be potable ground water conditions.



Agricultural or other use is NOT an intended land use for the Phase Two Property. The Phase Two Property is not located within a designated well-head protection area or other designation identified by the municipality for the protection of ground water.

The Moira River flows southward to the west of the Phase Two Property, but the Phase Two Property is more than 30 m from the water.

Soil grain size analyses was assumed based on field observation of overburden samples during drilling across the Phase Two Property. Soils were observed to consist primarily of coarse grained materials (50% by mass  $>75 \mu\text{m}$ ) and were described as gravel, sandy gravel/gravelly sand, sand, and sandy clay, with minor amounts of silty clay and clay. Where applicable, the coarse-grained soil SCS were used.

Based on the aforementioned environmental setting and site conditions, the Phase Two Property was assessed using the Table 6: coarse-grained Generic Site Condition Standards for Shallow Soils in a Potable Groundwater Condition for residential/parkland/institutional uses from the Ministry of Environment document "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the *Environmental Protection Act*", dated April 15, 2011.

### Phase Two Investigations

The BluMetric team carried out the field program of the Phase Two ESA at the Phase Two Property between 8 October 2022, and 15 May 2023. Field activities included identification and quantification of potentially environmentally impacted areas and the sampling of potentially contaminated environmental media. All monitoring well, borehole and test pit locations were selected based upon investigating the APECs identified from the Phase One investigations and considerations were also given based on locations of known sub-surface utility corridors.

The environmental sampling program for the Phase Two Property consisted of soil and ground water investigations. Sediment and surface water were not present on the Phase Two Property and samples were not collected. The intrusive investigation for the Phase Two Property included the advancement of four monitoring wells (MW1 to MW4, with a maximum drilling depth of 6.20 mbgs completed to investigate bedrock characteristics affecting contaminant migration. Borehole samples were retrieved from four of these locations. Additionally, one additional borehole was advanced, and one test pit was excavated, and soil samples were retrieved from these locations.



## Phase Two Property Overview

As shown in Figure 6a, numerous APECs (designated APEC A through E) have been identified on the Phase Two Property. The contaminants of potential concern include:

- metals,
- hydride-forming metals (As, Sb, Se),
- other regulated parameters (ORPs): mercury, hot water soluble boron (HWS-B), cyanide (CN-), chromium (VI), pH, electrical conductivity (EC), sodium absorption ratio (SAR), sodium, chloride.
- trihalomethanes (THMs),
- polycyclic aromatic hydrocarbons (PAHs),
- polychlorinated biphenyls (PCBs),
- petroleum hydrocarbons (PHCs),
- benzene, ethylbenzene, toluene and xylenes (BTEX),
- volatile organic compounds (VOCs).

Soil and ground water were sampled in the APECs at follows:

### APEC A

- Soil test pits – TP1
- Soil boreholes – BH/MW1, BH/MW2, BH/MW3, BH/MW4
- Monitoring wells – BH/MW1, BH/MW2, BH/MW3

### APEC B

- Soil test pits – TP1
- Soil boreholes – BH/MW1, BH/MW2, BH/MW3, BH/MW4
- Monitoring wells – BH/MW1, BH/MW2, BH/MW3, BH/MW4

### APEC C

- Soil boreholes – BH/MW3
- Monitoring wells – BH/MW3

### APEC D

- Soil boreholes – BH/MW2, BH5
- Monitoring wells – BH/MW2



#### APEC E

- Soil test pits – TP1
- Monitoring wells – BH/MW4

The ground water sampling program included all four monitoring wells advanced on the Phase Two Property (MW1 to MW4). Soil and ground water samples were submitted for analyses and results were used in the Phase Two ESA for the Table 6 guidelines. There are no surface water features on the property, so surface water and sediment were not investigated.

The ground water flow direction appears to be in a westerly direction towards the Moira River, which is consistent with the Phase One CSM.

The investigations described in this Phase Two ESA Report have determined no impacts. Ground water testing across the property did not identify any impacts and there is not currently a concern for contaminant migration by that pathway.

It is BluMetric's current understanding that the Phase Two Property is to be rezoned to residential land use and redeveloped into multiple residential townhomes. Therefore, future receptors could include the people who will be living within these residences.



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## 1 INTRODUCTION

### 1.1 SITE DESCRIPTION

The Phase Two Property is located at 84 Cannifton Road North, in Belleville, Ontario. The Phase Two property consists of a rectangular parcel of land approximately 0.45 hectares (4,515 square metres [m<sup>2</sup>]) in area with dimensions of approximately 75 metres (m) and 60 m. The Phase Two Property consists of two 2-storey buildings, an occupied dwelling (having a basement) and a workshop building, both with municipal addresses of 84 Cannifton Road North. The workshop building is occupied by Main Event Tent Rentals and a small woodworking shop. There is a truck trailer and a storage container located adjacent to the workshop building on the west side of the Phase Two Property, both used for storage of equipment and materials. The remainder of the Phase Two Property consists of grassy areas and a gravel-covered and asphalt-paved parking lot and driveways. The Phase Two Property is currently zoned C3, general commercial on the City of Belleville interactive zoning map. Refer to Figures 1 and 2 for the 'Phase Two Property Location' and 'Phase Two Property Features', respectively.

The Phase Two property is bounded to the West by Cannifton Road North followed by residential dwellings and to the east Lywood Street followed by residential dwellings. Adjacent to the north of the Phase Two Property is residential dwellings, and further north is MacPherson Motors Car Dealer at 115 Cannifton Road North and THF Auto Centre at 108 Cannifton Road North. Adjacent to the south of the Phase Two Property are residential dwellings and a workshop building, and further south is McCaffrey's Garage & Towing Ltd. at 46-54 Cannifton Road North.

The topography of the Phase Two Property is generally flat with an average geodetic ground surface elevation of 97 m above sea level (asl). The grade of the Phase Two Property is similar to the adjacent properties.

The Phase Two Property is assumed to have been first developed in the early 1900's with a residential dwelling. The Phase Two property was purchased in 1977 by Vincent and Vernon Golde, who used the Phase One Property to operate 'Golden's Trucking' until 1987. Vincent Golden subsequently took over ownership of the property. St. Lawrence Pools occupied the workshop building until approximately 2016, when the Phase Two Property was transferred to the current owner, 2267178 Ontario Inc. The Phase Two Property has since been occupied by Main Event Tent Rentals and a small woodwork shop. The dwelling has also remained on the property and is leased for residential use.

The Phase One Property refers to the entire 84 Cannifton Road North Property.



The Phase One Study Area (“surrounding area”) covers land uses within a 250 m radius of the Property, as shown in Figure 1.

One previous investigation was found to have been completed on the Property. A Phase One ESA (BluMetric, 2022) that identified several potentially contaminating activities (PCA) on the Phase Two Property and within 250 m of the Property highlighted six APECs.

The Phase One Conceptual Site Model (CSM) is shown in Figures 6a and 6b.

Legal Description:

- Lots 6 & 7, east side of Front Street; Lot 5 and Part of Lot 6, west side of Centre Street; Plan 36 Thurlow; Belleville, County of Hastings

Property Identification Number:

- 40433-0018 (LT)

## 1.2 PROPERTY OWNERSHIP

The Phase Two Property is owned by 2267178 Ontario Inc. The contact information is as follows:

2267178 Ontario Inc.  
1117 Casey Rd.  
Belleville, ON K8N 4Z6  
Phone: (613) 827-7355  
Email: [wescawker@icloud.com](mailto:wescawker@icloud.com)

## 1.3 CURRENT AND PROPOSED FUTURE USES

The Phase Two Property is currently occupied and has been occupied by Main Event Tent Rentals and a small woodwork shop since approximately 2016, when ownership was transferred to 2267178 Ontario Inc. The residential dwelling has also remained on the property and is leased for residential use. The proposed future use of the Phase Two Property is to be rezoned to residential land use and redeveloped into multiple residential townhomes.

It is intended that a Record of Site Condition (RSC) will be filed for the Phase Two Property, thus the prohibition set forth in section 168.3.1 of the Act would not apply to the proposed new use.



#### 1.4 SECTIONS 35, 41 OR 43.1 OF THE REGULATION & APPLICABLE SITE CONDITION STANDARDS

Investigations of the Phase Two Property have confirmed that overburden thickness across the property ranges from 0.15 to 1.4 metres (m), with at least one third of the property less than 2.0 m, therefore the property meets the definition of a shallow soil property as per O.Reg. 153/04, as amended.

The Phase Two Property is not located within or adjacent to an Area of Natural Significance and there is no evidence to suggest pH is less than 5 or greater than 9, therefore the Phase Two Property is not considered to be a “Sensitive Site”.

The Phase Two Property and properties within 250 m of the Phase Two Property are serviced with municipal water. However, there are two historical drinking water wells indicated to be on the Phase Two Property and many within 250 m of the property boundaries, thus the property is considered to be potable ground water conditions.

Agricultural or other use is NOT an intended land use for the Phase Two Property. The Phase Two Property is not located within a designated well-head protection area or other designation identified by the municipality for the protection of ground water.

The Moira River flows southward to the west of the Phase Two Property, but the Phase Two Property is more than 30 m from the water.

Soil grain size analyses was assumed based on field observation of overburden samples during drilling across the Phase Two Property. Soils were observed to consist primarily of coarse grained materials (50% by mass  $>75 \mu\text{m}$ ) and were described as gravel, sandy gravel/gravelly sand, sand, and sandy clay, with minor amounts of silty clay and clay. Where applicable, the coarse-grained soil SCS were used.

Based on the aforementioned environmental setting and site conditions, the Phase Two Property was assessed using the Table 6: Coarse-grained Generic Site Condition Standards for Shallow Soils in a Potable Groundwater Condition for residential/parkland/institutional uses from the Ministry of Environment document “Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the *Environmental Protection Act*”, dated April 15, 2011.



## 2 Background Information

### 2.1 PHYSICAL SETTING

#### 2.1.1 Water Bodies and Areas of Natural Significance

As seen in Figure 4, there are no water bodies on the Phase One Property. No permanent streams, rivers or similar watercourses, ponds, or lakes were observed on the Phase Two Property. The Moira River is located approximately 50 m west of the Phase Two Property. There are no areas of natural significance at, adjacent to, or within 250 m of the Phase Two Property.

#### 2.1.2 Topography and Surface Water Drainage Features

The topography of the Phase Two Property is generally flat with an average geodetic ground surface elevation of approximately 97 m asl. The grade of the Phase Two Property is similar to the adjacent properties.

### 2.2 PAST INVESTIGATIONS

The following environmental site assessment report was available for review:

**BluMetric Environmental Inc. 2022. Phase I Environmental Site Assessment, 84 Cannifton Road North, Belleville, Ontario**

Based on the findings of the historical records reviews, site reconnaissance, and personal interviews with site representatives, BluMetric's 2022 Phase One ESA identified several PCAs within the property and in the Phase One Study area, considered to have potentially affected the soils and/or groundwater beneath the Phase One Property (see the summary table below). The locations of all the PCAs pertaining to the Phase One Property are shown in Figures 6a and 6b.

Through the review of the historical records at the Phase One Property, BluMetric has identified Potentially Contaminating Activities (PCAs) on the Phase One Property and in the Phase One Study Area (Table 1).



**Table 1: Potentially Contaminating Activities (PCAs)**

PCA	Description and Location
<b>PCAs on the Phase One Property</b>	
<u>PCA 1</u> Other: Application of de-icing agent for the purpose of pedestrian and vehicular safety under conditions of snow or ice	The Phase One Property consists of gravel-covered and asphalt-paved parking areas and driveway. The east and west portions of the Phase One Property are also bordered by pedestrian sidewalks and public roadways. It is anticipated that de-icing agents will likely have been applied to these surfaces for purposes of pedestrian and vehicular safety under conditions of snow or ice. Applicable to the exterior portions of the Phase One Property.
<u>PCA 2</u> 30. Importation of Fill material of unknown quality	Fill material (and gravel) is expected to have been brought on-site and distributed throughout the site for grading purposes. Applicable to the entire Phase One Property.
<u>PCA 3</u> 28. Gasoline and Associated Products Storage in fixed Tanks	Based on the age of the building, a concrete pedestal found in the basement, and a vent pipe observed along the northwest wall of the building, it is suspected that the dwelling on the Phase One Property was likely formerly heated using an oil-fired heating system.
<u>PCA 4</u> Other: Paint Spray Booth	There is a paint spray booth used in the workshop building. Observations on-site included pails and cans of wood finishing lacquers, stains, and thinners stored in the paint spray area, and significant staining and debris on the floors.
<u>PCA 5</u> 55. Transformer Manufacturing, Processing and Use	A pole-mounted transformer was noted along the periphery of the Phase One Property, at the northeast side of the site along Lywood Street.
<u>PCA 6</u> 55. Transformer Manufacturing, Processing and Use	A pole-mounted transformers were also noted along the periphery of the Phase One Property, along the west side of the site along Cannifton Road North.
<u>PCA 7</u> 27. Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles	THF Auto Centre at 108 Cannifton Road North
<u>PCA 8</u> 27. Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles	MacPherson Motors Car Dealer at 115 Cannifton Road North.
<u>PCA 9</u> 27. Garages and Maintenance and Repair of Railcars, Marine Vehicles, and Aviation Vehicles	McCaffrey's Garage & Towing Ltd. at 46-54 Cannifton Road North.
<u>PCA 10</u> 28. Gasoline and Associated Products Storage in Fixed Tanks	An aboveground storage tank was observed along the west wall of the building at 46-54 Cannifton Road North.
<u>PCA 11</u> Other: Subject Waste Generator	GEN records for McCaffrey's Garage & Towing Ltd. for light fuels in 2019 to 2022, as well as Aliphatic solvents and residues, Waste crankcase oils and lubricants in 2021 and 2022.
<u>PCA 12</u> Other: Subject Waste Generator	GEN records for Pinchin Ltd. for Light fuels in 2020 and 2021.
<u>PCA 13</u> Other: Subject Waste Generator	GEN records for Black Diamond Cheese for acid waste - other metals, PCB's, waste oils & lubricants in 1992 to 1999.
<u>PCA 14</u> Other: Spill Incident	SPL record detailing gasoline found while blasting the sewer main line in 1989.
<u>PCA 15</u> Other: Spill Incident	SPL record for Hydro One Inc. for a spill of 75 L of transformer oil in 2015 onto the land due to human error. PCBs were suspected.
<u>PCA 16</u> Other: Subject Waste Generator	GEN records for McInroy-Maines Construction Ltd. for aliphatic solvents and residue, and waste oils & lubricants between 1992 and 2022.





PCA	Description and Location
<b>PCAs on the Phase One Property</b>	
<u>PCA 17</u> 28. Gasoline and Associated Products Storage in Fixed Tanks	FSTH and FST records for Penske Truck Leasing Canada Inc. for four fuel oil USTs (steel) with capacities of 50,000 L (2) and 25,000 L (2), installed in 1988. EXP and DTNK records Penske Truck Leasing Canada Inc. and Rentway Canada Ltd. for an expired gasoline station.  PRT records for Rentway Canada Ltd. for a retail fuel supply license with a capacity of 32,996 L.
<u>PCA 18</u> Other: Subject Waste Generator	GEN records for Rentway Canada Ltd. for waste oils & lubricants, detergents/soaps, aliphatic solvents, petroleum distillates, oil skimmings & sludges between 1988 and 2001. GEN records for Penske Truck Leasing Canada Inc. for waste oils & lubricants, detergents/soaps, aliphatic solvents, petroleum distillates, oil skimmings & sludges between 2000 and 2022.
<u>PCA 19</u> 27. Garages and Maintenance and Repair of Railcars, Marine Vehicles, and Aviation Vehicles	EASR record for Davidson's Blasting & Painting related to approvals for an Automotive Refinishing Facility.

### 2.2.1 Steps Taken to Confirm Information and Data Quality

The Phase One ESA report recently prepared by BluMetric in 2022 meets the requirements in O. Reg. 153/04.

The sampling program for this Phase Two ESA addresses all APECs. Delineation of contamination on the property was not required as contamination was not found on the Phase Two Property.



### 3 SCOPE OF THE INVESTIGATION

#### 3.1 OVERVIEW OF SITE INVESTIGATION

Information for the PCAs was combined with information about location (including distance and direction from the property in the case of PCAs outside the property), local geology, hydrogeology, and other information assembled during the 2022 Phase One ESA to determine which PCAs are areas of potential environmental concern (APECs). The APECs for the Phase Two Property are listed below. The locations of the APECs pertaining to the Phase Two Property are shown in Figure 6a.

Not carried forward as APECs are the off-site activities such as garages, fuel storage tanks, waste generation and historical spills. (PCA locations # 6 through 19; Figure 6b). Based on the distance and inferred direction of ground water flow (to the west), those activities are not identified as APECs for the Phase Two Property. In particular, PCA location #6 (a pole-mounted transformer located near the western property line) was excluded as an APEC as the transformer appeared to be newer, in good condition, no leaks or staining was observed, and it is located downgradient from the property.

The following table provides a summary of the APECs that were assessed (Table 2). The BluMetric team carried out the field program of the Phase Two ESA at the Phase Two Property between 8 and 27 October 2022 and 15 May 2023. Field activities included identification and quantification of potentially environmentally impacted areas and the sampling of potentially contaminated environmental media.

**Table 2: Areas of Potential Environmental Concern on the Phase Two Property**

Area of Potential Environmental Concern	Potentially Contaminating Activity	Contaminants of Potential Concern*	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
A	<b>PCA 1: #Other – Application of De-Icing Agent for purpose of Pedestrian &amp; Vehicular Safety under Conditions of Snow or Ice**</b> <i>The Phase One Property consists of gravel-covered and asphalt-paved parking areas and driveway. The east and west portions of the Phase One Property are also bordered by pedestrian sidewalks and public roadways. It is anticipated that de-icing agents will likely have been applied to these surfaces for purposes of pedestrian and vehicular safety under conditions of snow or ice.</i>	EC, SAR	Soil
		Na, Cl-	Ground Water
B	<b>PCA 2: #30 – Importation of Fill Material of Unknown Quality</b> <i>Fill material (and gravel) is expected to have been brought on-site and distributed throughout the site for grading purposes.</i>	PHC, PAH, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN-	Soil and Ground Water



Area of Potential Environmental Concern	Potentially Contaminating Activity	Contaminants of Potential Concern*	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
C	<b>PCA 3: #28 – Gasoline and Associated Products Storage in Fixed Tanks</b> <i>Based on the age of the building, a concrete pedestal found in the basement, and a vent pipe observed along the northwest wall of the building, it is suspected that the dwelling on the Phase One Property was likely formerly heated using an oil-fired heating system.</i>	PHCs, PAHs, BTEX, Metals	Soil and Ground Water
D	<b>PCA 4: #Other – Paint Spray Booth</b> <i>There is a paint spray booth used in the workshop building. Observations on-site included pails and cans of wood finishing lacquers, stains, and thinners stored in the paint spray area, and significant staining and debris on the floors.</i>	PHCs, PAHs, Metals (lead), VOCs, THMs	Soil and Ground Water
E	<b>PCA 5: #55 – Transformer Manufacturing, Processing and Use</b> <i>Pole-mounted transformer noted along the periphery of the Phase One Property, at the northeast side of the site along Lywood Street.</i>	PHCs, PAHs, Metals (lead), VOCs	Soil and Ground Water

\*When completing this column, identify all contaminants of potential concern using the Method Groups as identified in the "Protocol for in the Assessment of Properties under Part XV.1 of the Environmental Protection Act, March 9, 2004, amended as of July 1, 2011, as specified below:

**List of Method Groups:**

ABNs	PCBs	Metals	Electrical Conductivity
CPs	PAHs	As, Sb, Se	Cr (VI)
1,4-Dioxane	THMs	Na	Hg
Dioxins/Furans, PCDDs/PCDFs	VOCs	B-HWS	Methyl Mercury
OCs	BTEX	Cl-	Low or high pH
PHCs	Ca, Mg	CN-	SAR

\*\* Section 49.1 paragraph 1 of Ontario Regulation 153/04 has been relied upon and the site condition standards are deemed to have been met for contaminants associated with applications of substances to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both. Further consideration of this PCA/APEC through sampling and analyses is not required as part of a Phase Two ESA.

## 3.2 MEDIA INVESTIGATED

### 3.2.1 Rationale

Based on a review of the above-mentioned work and the 2022 Phase One ESA report prepared by BluMetric, BluMetric designed and conducted site characterization activities between 8 and 27 October 2022 and 15 May 2023 to identify contaminants of concern (COCs) at the Phase Two Property. The locations of all monitoring wells, boreholes, and test pits were selected with the goals of investigating all the APECs and around potential sub-surface utility corridors. The locations are shown in Figure 7.



### 3.2.2 Overview of the Field Investigation

The site characterization work focused on soil and ground water quality. Sediment and surface water are not present on the Phase Two Property and those types of samples were not collected.

Boreholes were drilled at five locations on the Phase Two Property. Four of the boreholes were completed as ground water monitoring wells. In addition, one test pit was dug adjacent to one of the monitoring wells due to poor soil recovery during drilling. The monitoring wells reached depths from 4.77 to 6.20 m bgs to investigate ground water quality in the underlying limestone bedrock (Ottawa Group).

#### Phase Two Property Overview

As shown in Figures 6a and 7, numerous APECs (designated APEC A through E) have been identified on the Phase Two Property. The contaminants of potential concern include:

- metals,
- hydride-forming metals (As, Sb, Se),
- other regulated parameters (ORPs): mercury, hot water-soluble boron (HWS-B), cyanide (CN-), chromium (VI), pH, electrical conductivity (EC), sodium absorption ratio (SAR), sodium, chloride.
- trihalomethanes (THMs),
- polycyclic aromatic hydrocarbons (PAHs),
- polychlorinated biphenyls (PCBs),
- petroleum hydrocarbons (PHCs),
- benzene, ethylbenzene, toluene, and xylenes (BTEX),
- volatile organic compounds (VOCs).

Soil and ground water were sampled in the APECs at follows:

#### APEC A

- Soil test pits – TP1
- Soil boreholes – BH/MW1, BH/MW2, BH/MW3, BH/MW4
- Monitoring wells – BH/MW1, BH/MW2, BH/MW3, BH/MW4

#### APEC B

- Soil test pits – TP1
- Soil boreholes – BH/MW1, BH/MW2, BH/MW3, BH/MW4
- Monitoring wells – BH/MW1, BH/MW2, BH/MW3, BH/MW4



APEC C

- Soil boreholes – BH/MW3
- Monitoring wells – BH/MW3

APEC D

- Soil boreholes – BH/MW2, BH5
- Monitoring wells – BH/MW2

APEC E

- Soil test pits – TP1
- Monitoring wells – BH/MW4

Table 3 and Table 4 below provide a summary of soil and ground water sample analysis used for characterizing soil quality at the Phase Two Property.

**Table 3: Summary of Analyses in Soil**

Soil Sample	Sample Depth	Metals	Hg	HFM	VOC	THM	PHC	PAH	BTEX	PCB	ORP
	(m bgs)										
BH/MW1	0.0 – 0.6	X	X	X	X	X	X	X	X	X	X
BH/MW2	0.0 – 0.6	X	X	X	X	X	X	X	X	X	X
BH/MW3	0.7 – 0.9	X	X	X	X	X	X	X	X	X	X
TP1 (adjacent to BH/MW4*)	0.0 – 0.15	X	X	X	X	X	X	X	X	X	X
BH5	0 – 0.41	X	X	X	X	X	X	X	X	X	X

HFM includes: Antimony, Arsenic and Selenium

ORP includes: Boron (Hot Water Soluble), Chromium VI, Cyanide (CN-), Electrical conductivity (EC), Sodium Adsorption Ratio (SAR), pH

\*Soil at BH/MW4 was very shallow and recovery was poor, TP1 was dug adjacent to BH/MW4 to collect a shallow soil sample at APEC B

**Table 4: Summary of Analyses in Ground Water**

Groundwater Sample ID	Sample Date	Screen Depth	Metals	Hg	HFM	VOC	PHC	PAH	BTEX	PCB	ORP
		(m bgs)									
BH/MW1	27-Oct-22	1.72 – 4.77	X	X	X	X	X	X	X	X	X
BH/MW2	18-Oct-22	1.75 – 4.80	X	X	X	X	X	X	X	X	X
BH/MW3	18-Oct-22	1.83 – 4.88	X	X	X	X	X	X	X	X	X
BH/MW4	18-Oct-22	3.15 – 6.20	X	X	X	X	X	X	X	X	X

The ground water sampling program included all four monitoring wells advanced on the Phase Two Property. Soil and ground water samples were submitted for analyses and results were used in the Phase Two ESA. There are no surface water features on the property, therefore surface water and sediment were not investigated.



### 3.3 PHASE ONE CONCEPTUAL SITE MODEL

The Phase One ESA Conceptual Site Model is presented on Figures 6a and 6b. There are no bodies of water present on or within 30 m of the Phase Two Property. The Phase Two Property boundary is indicated on Figure 1. The Phase Two Property is bounded to the north by residential properties, to the south by residential properties and a workshop building, to the east by Lywood Street followed by residential properties, and to the west by Cannifton Road North followed by residential properties.

Adjacent properties are residential in nature, with one residential property adjacent to the south containing a workshop.

A total of five APECs were identified on the Phase Two Property from the extensive records review. These are illustrated on Figures 6a and 7 and a description of area use, history, and PCAs are provided in Section 4.1 and Table 2 above. The Phase Two ESA Sampling and Analysis Plan (SAP) is included in Section 4.2 above.

### 3.4 DEVIATIONS FROM SAMPLING AND ANALYSIS PLAN

BluMetric completed the SAP between 8 and 27 October 2022 and 15 May 2023. The five APECs outlined above in Section 4.1 were investigated. Table 5 provides a summary of the sampling effort. Sampling locations for each media type are presented on Figure 7. The SAP was completed as anticipated with the number of sample locations shown in Table 6. Borehole and test pit locations were modified slightly while in the field to account for topographic variation and to ensure that appropriate coverage was achieved and based on site access and equipment limitations.

**Table 5: Summary of Intrusive Work Completed as Part of the Phase Two ESA**

	Proposed	Completed
Boreholes (soil)	4	5*
Monitoring Wells (ground water)	4	4
Test Pits	0	1**

Notes:

\*A borehole was added to the program within the building at the Ministry of Environment, Conservation and Parks request

\*\*A test pit was added to the program adjacent to MW4 due to poor sample recovery near surface.

Table 6 provides a summary of chemical analyses completed for samples collected at the Phase Two Property.



**Table 6: Summary of Numbers of Samples Tested<sup>1</sup>**

	Soil	Ground water
Metals	5	4
PHC (F1 – F4)	5	4
VOCs	5	4
BTEX	5	4
PAHs	5	4
PCBs	5	4
ORPs	5	4

Note:

<sup>1</sup> These numbers do not include the duplicate samples that were analyzed as part of the QA/QC program.

### 3.5 IMPEDIMENTS

No physical impediments were encountered on the Phase Two Property.



## 4 INVESTIGATION METHOD

### 4.1 GENERAL

The investigation methods used during this Phase Two ESA consisted primarily of drilling boreholes, collecting soil samples from each borehole, submitting selected soil samples for chemical analysis, completing each borehole as a ground water monitoring well, developing each well (by purging), and submitting ground water samples for chemical analysis.

All borehole, monitoring well, and test pit locations are shown in Figure 7. Borehole logs and test pit records, and a photographic record of field activities are provided in Appendices A and C, respectively.

Standard sampling procedures were followed throughout the investigation. Detailed descriptions are provided below.

### 4.2 DRILLING AND EXCAVATING

Private locators were contracted by BluMetric to clear drilling locations prior to the commencement of fieldwork.

BluMetric Phase Two ESA drilling activities were completed on 8 October 2022 and 15 May 2023. In total, the Phase Two investigation included the advancement of five boreholes, four of which were installed as monitoring wells, to a maximum depth of 6.2 mbgs and labelled as MW1 to MW4. One test pit was dug by hand to a depth of 0.15 mbgs on 18 October 2022, and labelled as TP1, and one borehole was advanced on 15 May 2023 and labelled as BH5.

G.E.T. Drilling was retained by BluMetric for the drilling of all boreholes and monitoring well installations on-site. To complete the drilling, the contractor used truck-mounted CME 55 – this drill rig has auger and air hammer capabilities. A concrete corer and electric jackhammer with a spoon sampler were used to complete BH5.

In order to minimize any cross-contamination between drilling locations, and throughout the drilling of each borehole, any portion of the drilling equipment exposed to the soils being investigated were cleaned using a detergent and water mixture, then rinsed using fresh water. Whenever possible, composite soil samples were collected every 0.61 m (two feet) using split spoon soil samplers in accordance with ASTM D1586-08a. This sampling frequency was modified, where necessary, if subsurface conditions (i.e., concrete or rock) prevented their use. Boreholes were advanced into weathered bedrock by auger.





### 4.3 SOIL SAMPLING

As indicated in Section 5.2, soil samples were generally collected every 0.61 m using split spoon samplers during the drilling process. Soil was transferred by hand from the split spoons to laboratory-provided clean sample amber glass jars, or to a 40 ml glass vial pre-charged with methanol via Terra Core sampling tubes where laboratory analysis for volatiles was required. Clean, disposable, powder-free nitrile gloves were worn at all times during soil transfer, and new gloves were worn for each sample. Standard QA/QC protocols were followed, as outlined by the SAP and Ministry of the Environment, Conservation and Parks (MECP) guidance documents. Soil samples submitted for analysis are outlined in Table 7 below.

Section 6.1 presents geological information pertaining to soil samples collected on the Phase Two Property. Borehole logs are presented in Appendix A for detailed information from each borehole.

**Table 7: Summary of Soil Samples Submitted for Analysis in Phase Two ESA Investigations**

Sample Name	Location	Sampling Date	Drilling Depth (m)	Rationale	Analysis
BH/MW1	BH/MW1	10/08/2022	0 – 0.6	As per SAP	Metals & Inorganics, PAHs, VOCs, PHCs, BTEX, PCBs & ORP
BH/MW2	BH/MW2	10/08/2022	0 – 0.6	As per SAP	Metals & Inorganics, PAHs, VOCs, PHCs, BTEX, PCBs & ORP
BH/MW3	BH/MW3	10/08/2022	0.7 – 0.9	As per SAP	Metals & Inorganics, PAHs, VOCs, PHCs, BTEX, PCBs & ORP
BH/MW4	BH/MW4	10/08/2022	N/A	As per SAP	N/A (bedrock)
BH5	BH5	05/15/2023	0 – 0.41	As per SAP	Metals & Inorganics, PAHs, VOCs, PHCs, BTEX, PCBs & ORP
TP1	TP1	10/08/2022	0 – 0.15	As per SAP	Metals & Inorganics, PAHs, VOCs, PHCs, BTEX, PCBs & ORP

### 4.4 FIELD SCREENING MEASUREMENTS

Field screening for soil vapours was conducted using an RKI Eagle Portable Multi-Gas Detector. Specifications for the equipment are listed in Table 11 in Section 6.2.

Given that the suggested response time (to 90%) for the RKI Eagle is 30 seconds, in order to obtain precise readings of the soil vapour within each sample, a minimum of 30 seconds was allotted for reading stabilization.



The calibration reference standard used was Hexane (400 ppm). The meter was calibrated prior to the initiation of the investigation. If the check indicated that the equipment was reading > 10% higher or lower than the calibration gas, it was calibrated according to the supplier's instruction manual.

**Table 8: RKI Eagle Portable Multi-Gas Detector Specifications**

	Combustible Gas (%LEL)	Combustible Gas (PPM)	Oxygen	Hydrogen Sulphide	Carbon Monoxide
Range	0 to 100% LEL	Depends of target gas <sup>1</sup>	0 to 40% O <sub>2</sub>	0 to 100 ppm	0 to 500 ppm
Accuracy	± 5%	± 5%	± 5%	± 5%	± 5%
Response Time (to 90%)	30 seconds	30 seconds	30 seconds	30 seconds	30 seconds

Note:

<sup>1</sup> The PPM range represents the same range as 0 to 100% LEL for that gas. For example, 100% LEL for methane = 5% by volume = 50,000 PPM. Therefore, the PPM range for methane is 0 to 50,000.

The RKI Eagle field measurements were valuable in selecting samples for analysis from those areas of the Phase Two Property where volatile contaminants were present. Sample selection for laboratory analysis was based on the highest vapour readings collected in situations where there were no other indications of potential impact (absence of staining, odours). Headspace vapour measurements are reported for each soil sample in the respective borehole logs in Appendix A.

#### 4.5 GROUND WATER: MONITORING WELL INSTALLATION

G.E.T. Drilling was the contractor used for ground water monitoring well installation on the Phase Two Property. To complete the drilling necessary for the monitoring well installation, the contractor used a truck-mounted CME 55 drill rig.

In order to minimize any cross-contamination between drilling/monitoring well locations, and throughout the drilling of each borehole, any portion of the drilling equipment exposed to the soils/ground water being investigated was cleaned using a detergent and water mixture, then rinsed using fresh water.

Boreholes were drilled at five locations on the Phase Two Property. Four of the boreholes were completed as ground water monitoring wells. The monitoring wells reached depths of 4.77 to 6.22 m bgs to investigate ground water quality in the underlying Ottawa Group formation.

A 10 cm diameter drill was used to advance the four boreholes completed as monitoring wells. The monitoring wells were constructed of 5 cm PVC tubing. Screened sections were not more than 3 m long. Number three silica sand was used as a filter pack around the well screens. Bentonite chips were used to seal the annular space above the well screen. Depending on the location of a



well and the potential for vehicle movement at the location, the well head was completed above ground or flush to the ground. A lockable, steel protective casing was installed for each monitoring well completed above ground and a steel protective cover was installed for wells completed at grade.

Monitoring wells were developed using a purge method. Post-construction, BluMetric staff installed dedicated sampling tubing and inertial lift devices in all monitoring wells. Each well was purged using the dedicated tubing to remove a minimum of ten well volumes of water from each monitoring well. Wells were then allowed to recover for at least 48 hours prior to sampling.

#### **4.6 GROUND WATER: FIELD MEASUREMENT OF WATER QUALITY PARAMETERS**

Field temperature, pH, turbidity, and conductivity measurements were recorded at the time of sampling. Field parameters were measured using a YSI 556 Multi-parameter system calibrated as per the manufacturer's instruction. Once laboratory-supplied sample bottles were filled at the well head, a sample of ground water was collected in the sample cup supplied with the multimeter. The multimeter probe was then inserted into the sample cup and field measurements were collected once the parameters stabilized.

#### **4.7 GROUND WATER: SAMPLING**

Ground water sampling was performed across the Phase Two Property to characterize ground water quality at the site. Ground water samples were collected from four monitoring wells on the Phase Two Property using the U.S. EPA Region 1 Low Stress (Low Flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells (revised September 19, 2017) to minimize sediment disturbance during sample collection and laboratory analysis. Water level measurements were collected using a Model 122 Solinst electronic oil/water interface meter prior to purging activity. Prior to sampling, the ground water monitoring wells were purged using a Solinst 12V peristaltic pump set to between 100 ml/min and 400 ml/min. The pump rate was set so that well drawdown stabilized and did not exceed 0.1 m. Purging continued with monitoring of flow rates and field parameters through a flow-through cell until the following limits were met:

- Turbidity (10% for values greater than 1 NTU)
- DO (10%)
- Specific conductance (3%)
- Temperature (3%)
- pH ( $\pm 0.1$  unit)
- ORP/Eh ( $\pm 10$  millivolts)



Field parameters were measured and recorded every 3 – 5 minutes. Once ground water was deemed to be stable a sample was collected through a by-pass assembly. During sampling, an inline sediment filter was used while filling sample bottles required for metals analysis. Clean, disposable, powder-free nitrile gloves were worn at all times during purging and sampling, and new gloves were worn for each sample. Tubing and sampling equipment was decontaminated with methanol and deionized (DI) water between samples.

Refer to Appendix A for the monitoring well installation details.

#### **4.8 SEDIMENT SAMPLING**

No surface water features were found on the Phase Two Property. No sediment sampling was undertaken for this Phase Two ESA.

#### **4.9 ANALYTICAL TESTING**

AGAT Laboratories Ltd. was utilized for the analysis of all samples collected at the Phase Two Property. Laboratory Certificates of Analysis are included in Appendix C.

#### **4.10 RESIDUE MANAGEMENT PROCEDURES**

Drill cuttings, purge water, and wash water were disposed of at the site.

#### **4.11 ELEVATION SURVEYING**

The Phase Two Property was surveyed using an Ashtech ProMark 500, Real-Time Kinematic (RTK) GPS unit with dual radio frequency that allows for 1-2 cm accuracy of horizontal and vertical coordinates. Survey data is recorded in UTM Zone 18, NAD83. BluMetric established a reference benchmark on the south-central portion of the property, marked visibly by a nail and flagging tape flush to the ground surface.

Monitoring wells and water table elevations are presented on Figure 9a. Site bedrock elevations are presented on Figure 9b.



## 4.12 QUALITY ASSURANCE AND QUALITY CONTROL MEASURES

### 4.12.1 Sample Storage Requirements

Sample containers and storage requirements are summarized in Tables 9 and 10 below. Sample containers were provided by the laboratory prior to field deployment. All containers were sterile.

**Table 9: Summary of Storage Requirements for Soil and Sediment Samples**

Contaminant	Container	Preservation	Means of Sampling	Storage
PHCs F2-F4	120 mL glass jar (Teflon lined lid)	None	Stainless steel scoop or gloved hand	Cool
PHCs F1 BTEX/VOCs	40 mL glass vial	Methanol (vial pre-charged by lab)	Terra Core sampling tube (5 g sample)	Cool
Metals	250 mL glass jar	None	Stainless steel scoop or gloved hand	Cool
PCBs	250 mL glass jar	None	Stainless steel scoop or gloved hand	Cool
PAHs	250 mL glass jar	None	Stainless steel scoop or gloved hand	Cool
Grain size analysis	250 mL glass jar	None	Stainless steel scoop or gloved hand	Cool

**Table 10: Summary of Storage Requirements for Water Samples**

Contaminant	Containers/Amounts	Special Treatment	Storage
PHCs F1-F4 plus BTEX	Two 500 mL amber glass plus three 40 mL clear glass vials	No headspace in vials	Cool
VOCs	Three 40 mL clear glass vials	No headspace	Cool
Metals	One 120 mL plastic for Cr(VI), One 500 mL plastic for hardness and pH, One 125 mL clear glass for Hg One 250 mL preserved plastic for general metals	Ground water – filtered	Cool
PCBs	Two 500 mL amber glass	None	Cool
PAHs	Two 1 L amber glass	None	Cool

### 4.12.2 Sample Handling and Custody (Sample Management)

The information presented in this section describes the maintenance of sample integrity from the time of collection through analysis. All samples collected by BluMetric were registered and tracked by a unique number during the collection and movement of samples between BluMetric and the laboratory. All samples were given sequential, numerical codes before submission to the analytical laboratory; these codes mask any information concerning geographic site location, sample type, or possible concentration of the sample. The relevant documentation such as Chain of Custody Forms (COCs), requests, and results documentation will be filed and stored by BluMetric. BluMetric field staff-maintained field notebooks and log sheets, which were used to record the location and



number of each sample collected. Samples collected in jars were kept as cool as possible. Water samples were kept cool but not frozen.

Samples collected in the appropriate containers were transported off-site in coolers with the appropriate packing materials (i.e., bubble wrap) and ice packs. All samples were shipped to the laboratory in the most expedient manner possible (i.e., hand delivery or by local courier).

COC forms were filled-out and checked for each sample before coolers were shipped to the laboratory. Each shipment of samples was sent with a COC and with the following information:

- Date sampled
- Sample matrix
- Number and type of containers
- Analytical parameters

#### **4.12.3 Equipment Decontamination**

All drilling and sampling equipment that came into contact with the environmental media to be collected, including augers, split spoons, scoops, and shovels were decontaminated between each sample. Decontamination consisted of a wash and scrub with a coarse brush and soapy water, followed by a rinse in clean water.

Ground water sampling equipment and tubing was decontaminated by flushing with methanol and then with DI water between samples.

#### **4.12.4 Quality Control**

The quality control program implemented for this project is compliant with subsection 3 (3) of O.Reg. 153/04, as amended. In preparing the QA/QC program, BluMetric also followed the Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario (MOE [now MECP], 1996). Specific attention was given to the guidance on QA/QC measures and sampling frequency.

#### **4.12.5 Sampling QC**

##### **4.12.5.1 Field Duplicate (All Environmental Media)**

The number of duplicates collected was approximately 10% for each media type collected. The media sampled on the Phase Two Property were soil and ground water. The field duplicates were



considered “Blind” duplicates. “Blind” duplicates are samples labelled in such a way that it is not obvious to the lab that the sample is a duplicate. Precision is measured by calculating the relative percentage difference (RPD) for the duplicate samples. If the contaminant concentrations are greater than five times the reportable detection limit (RDL), an RPD is calculated. Concentration results less than five times the RDL become increasingly imprecise. Common standards for evaluating the repeatability of duplicate samples are described in CCME, 1993, and MOE (now MECP), 2004. These guidance documents suggest the use of 30% and 40% RPD for liquids and solids, respectively. RPD is calculated as follows:

$$\text{RPD (\%)} = [ | \text{Dup}_1 - \text{Dup}_2 | / (\text{average of Dup}_1 + \text{Dup}_2) ] * 100$$

It must be noted that these references are directed to duplicates (or replicates) prepared in an analytical laboratory. Field duplicates are not true duplicates in this sense, since the level of in-situ homogenization is relatively crude compared to the duplicate preparation methods employed in an analytical laboratory.

#### 4.12.5.2 Calibration Checks on Field Instruments

Field instrument calibration checks, and quality objectives are described in Section 5.4. These were done prior to each use and as specified by the manufacturer’s instructions.



## 5 REVIEW AND EVALUATION

### 5.1 GEOLOGY

**Overburden** primarily consists of Paleozoic bedrock that is either exposed or has less than 1 m of drift cover, consisting of clay, silt, sand, gravel, and diamicton deposits (OGS, 2010). There has been little disturbance of the overburden across the Phase Two Property as the original buildings are still present. As a result, the overburden stratigraphy is relatively uniform, with little fill encountered. The thickness of the overburden ranges from 0.15 to 1.4 m, with an average of less than 1.0 m. The overburden is generally thickest in the southern portion of the Phase Two Property, and thinnest in the northeast portion of the property. Description of the locations, depths, and textural properties of the principle overburden stratigraphic units encountered across the Phase Two Property are provided below.

**Fill** was not encountered in any of the boreholes or test pits at the Phase Two Property. This is consistent with borehole logs from two historical domestic supply records reported in the MECP database on the Phase Two Property.

**Bedrock** consists of limestone of the Middle Ordovician “Ottawa Group” (consisting of limestone, dolostone, shale, arkose, and sandstone [OGS, 2011]). The elevation of the upper surface of the bedrock on the Phase Two Property ranges between 95.0 and 97.7 m asl.

### 5.2 GROUND WATER ELEVATIONS AND FLOW DIRECTION

The majority of the boreholes and test pits that were advanced across the Phase Two Property encountered ground water within bedrock. The four monitoring wells were advanced to depths of up to 6.2 m below ground surface (bgs) into competent bedrock.

Ground water was encountered in the bedrock at an average depth of 2.93 m bgs. The overburden material would not be considered an aquifer in that it did not contain water to support water supply wells.

Ground water elevations were measured on 27 October 2022. Depth to shallow ground water on the Phase Two Property ranged from 2.49 to 3.43 m bgs. Ground water contours for ground water elevations measured on 27 October 2022 are presented on Figure 9a. The ground water equipotential lines indicate that ground water is flowing to the southwest across the Phase Two Property toward the Moira River, which is consistent with the Phase One CSM. Ground water elevations for the four monitoring wells installed across the Phase Two Property are summarized in Table 11 below.





**Table 11: Ground Water Elevations**

Monitoring Well	Top of PVC Elevation (m asl)	Water Level October 2022 (mbgs)
MW1	96.53	2.73
MW2	96.63	2.49
MW3	96.87	3.07
MW4	97.89	3.34

Note:  
NA – Not applicable

### 5.3 GROUND WATER: HYDRAULIC GRADIENTS

Ground water elevations were measured on 27 October 2022. Depth to shallow ground water on the Phase Two Property ranged from 2.49 to 3.43 m bgs. Ground water contours for ground water elevations measured on 27 October 2022 are presented on Figure 9a. The ground water equipotential lines indicate that ground water is flowing to the southwest across the Phase Two Property toward the Moira River, which is consistent with the Phase One CSM.

Measurements and observations at two wells on the Phase Two Property (BH/MW-2 and BH/MW-3) are combined to assign values to two hydraulic parameters. Conductivity values range between  $3.65 \times 10^{-6}$  and  $4.37 \times 10^{-6}$  m/s with a geometric mean of  $3.99 \times 10^{-6}$  m/s.

Geologic units, parameters and hydraulic conductivity estimates for each well are shown in Table 12, below.

**Table 12: Summary of Ground Water Flow Data for Geologic Units**

Parameter	BH/MW-2	BH/MW-3
Date	27 October 2022	27 October 2022
Depth of Well (mbgs)	4.80	4.88
PVC Stickup	-0.07	-0.115
Static Water Level (mPVC)	2.12	2.63
Screened interval (mbgs)	1.75 – 4.80	1.85 – 4.88
Screen Length	3.05	3.03
Sandpack Interval	1.45 – 4.80	1.5 – 4.88
Screened Unit	Bedrock	Bedrock
Purged Water Volume	3 L	2 L
Calculated Hydraulic Conductivity - <i>K</i> (m/s)	$3.65 \times 10^{-6}$	$4.37 \times 10^{-6}$

The average linear ground water velocity is estimated to be 1.76 m/year based on the results from rising head tests that were conducted and the shallow ground water gradient that has been measured. All four wells are screened in the bedrock.



The bedrock is considered to be the main ground water flow pathway based upon where groundwater was encountered, and the absence of ground water observed in the overburden.

#### 5.4 FINE – MEDIUM SOIL TEXTURE

Fine – medium soil texture is defined within the Regulation as soil that contains more than 50 percent by mass of particles that are 0.075 mm or smaller in mean diameter. Soil grain size analyses was assumed based on field observation of overburden samples during drilling across the Phase Two Property. Soils were observed to consist primarily of coarse grained materials (50% by mass  $>75 \mu\text{m}$ ) and were described as gravel, sandy gravel/gravelly sand, sand, and sandy clay, with minor amounts of silty clay and clay.

Based on the average of the results from the soil particle size analyses the soils on the Phase Two Property are classified as coarse texture. Thus, the coarse soil texture criteria have been applied where applicable for comparison to soil chemistry results.

#### 5.5 SOIL: FIELD SCREENING

Soil samples collected throughout the property were field screened for vapour, visual, and olfactory indications of contaminant impacts. Generally, vapour screening of soil samples did not yield high values. RKI Eagle vapour readings were typically less than 200 ppm. Vapour readings are presented on borehole logs in Appendix A. Visual screening of soil samples generally mimicked vapour screening, whereby those samples with highest vapour readings were generally discoloured or contained some other form of visual indication of contamination. Visual indications of impacts within the onsite historical waste disposal areas or in the vicinity of former buildings and infrastructure included debris, metal objects, wood, etc. or discoloured soil.

#### 5.6 SOIL QUALITY

The following section summarizes the soil quality results for the Phase Two Property. Laboratory Certificates of Analysis are provided in Appendix B. COCs in soil were not found to exceed the Table 6 SCS. Figure 10a shows soil chemistry results compared to the applicable Table 6 SCS. The vertical distribution of the COCs is shown in two cross sections, A-A' and B-B'. Figure 7 shows where the two cross-sections are located on the property, and Figures 10b and 10c show the vertical distributions of the COCs in the two cross-sections.

#### Overall Extent of Soil Impacts

Impacts were not found to be present in soil on the Phase Two Property.



### **5.6.1 Metals and Hydride-Forming Metals**

Five samples (plus 2 duplicates) were submitted for analysis of Metals and HFM. The results were used to characterize soil across the Phase Two Property. Metals and HFM were below the Table 6 SCS in all of the samples.

### **5.6.2 Benzene, Toluene, Ethylbenzene and Xylenes (BTEX) and Petroleum Hydrocarbon (PHC) Impacts**

Five samples (plus 2 duplicates) were submitted for analysis of BTEX and PHCs. The results were used to characterize soil across the Phase Two Property. BTEX and PHCs were below the Table 6 SCS in all of the samples.

### **5.6.3 Polycyclic Aromatic Hydrocarbons (PAHs)**

Five samples (plus 2 duplicates) were submitted for analysis of PAHs. The results were used to characterize soil across the Phase Two Property. PAHs were below the Table 6 SCS in all of the samples.

### **5.6.4 Polychlorinated Biphenyl (PCBs)**

Five samples (plus 2 duplicates) have been analysed for PCBs. PCBs were not detected in any of the samples.

### **5.6.5 Volatile Organic Compounds (VOCs) and Trihalomethanes (THMs)**

Five samples (plus 2 duplicates) were submitted for analysis of VOCs and THMs. The results were used to characterize soil across the Phase Two Property. VOCs and THMs were not detected in any of the samples.

### **5.6.6 Other Regulated Parameters (ORPs)**

Five samples (plus 2 duplicates) were submitted for analysis of ORPs. The results were used to characterize soil across the Phase Two Property. ORPs were below the Table 6 SCS in all of the samples.



## 5.7 GROUND WATER QUALITY

The following section summarizes the groundwater quality results for the Phase Two Property. Laboratory Certificates of Analysis are provided in Appendix B. COCs in ground water were not found to exceed the Table 6 SCS. Figure 11a summarizes the ground water quality results for the Phase Two Property. The vertical distribution of the COCs is shown in two cross sections, A-A' and B-B'. Figure 7 shows where the two cross-sections are located on the Phase Two ESA, and Figures 11b and 11c show the vertical distributions of the COCs in the two cross-sections.

### 5.7.1 Metals and Hydride-Forming Metals (HFM)s

Four ground water samples (plus one duplicate) were analysed for metals and inorganics from all four monitoring wells (MW1 to MW4).

None of the results exceeded Table 6 SCS for these parameters in the ground water samples submitted for analysis.

### 5.7.2 BTEX and PHCs

Four ground water samples (plus one duplicate) were analysed for BTEX and PHCs from all four monitoring wells (MW1 to MW4).

None of the results exceeded Table 6 SCS for these parameters in the ground water samples submitted for analysis.

### 5.7.3 PAHs

Four ground water samples (plus one duplicate) were analysed for PAHs from all four monitoring wells (MW1 to MW4).

None of the results exceeded Table 6 SCS for these parameters in the ground water samples submitted for analysis.

### 5.7.4 PCBs

Four ground water samples (plus one duplicate) were analysed for PCBs from all four monitoring wells (MW1 to MW4).



None of the results exceeded Table 6 SCS for these parameters in the ground water samples submitted for analysis.

#### **5.7.5 VOCs and THMs**

Four ground water samples (plus one duplicate) were analysed for VOCs and THMs from all four monitoring wells (MW1 to MW4).

None of the results exceeded Table 6 SCS for these parameters in the ground water samples submitted for analysis.

#### **5.7.6 Other Regulated Parameters**

Four ground water samples (plus one duplicate) were analysed for ORPs from all four monitoring wells (MW1 to MW4).

None of the results exceeded Table 6 SCS for these parameters in the ground water samples submitted for analysis.

### **5.8 SEDIMENT QUALITY**

No sediment samples were collected or submitted for chemical analysis during this Phase Two ESA report.

### **5.9 SURFACE WATER QUALITY**

No surface water samples were collected or submitted for chemical analysis during this Phase Two ESA report.

### **5.10 QUALITY ASSURANCE AND QUALITY CONTROL RESULTS**

#### **5.10.1 Field Duplicates**

As required by O.Reg. 153/04, as amended, the collection of field duplicate samples was carried out by BluMetric at the Phase Two Property. The purpose of the duplicate sampling program was to evaluate the repeatability of the sampling procedures and the heterogeneity of the samples, and to determine whether the data are representative of conditions at the sampling locations. The number of duplicates analyzed was approximately 10% of the overall number of samples



tested during the field program. Specifics regarding the total number of samples analyzed for each media type are summarized in Table 13 below.

**Table 13: BluMetric Field Program Field Duplicate Summary**

Medium	Number of Samples Tested	Number of Duplicates Tested	Duplicate Percentage
Soil	5	2	40%
Ground water	4	1	25%

The relative percent difference (RPD) between the original sample and the duplicate sample can quantify precision, which is a measure of the reproducibility of analytical results. RPDs were calculated for the duplicate samples if the contaminant concentrations were greater than five times the reportable detection limit (RDL). The RPD acceptance criteria for this Phase Two ESA is 30% and 40% for ground water and soil, respectively. Further discussion about the RPD and its equation is provided in Section 5.12.5. The RPD between field duplicates analyzed from the Phase Two Property is presented in Tables 4 for soil and Table 5 for groundwater (following the text).

One duplicate of a soil sample collected at TPI was analyzed. Due to the heterogeneous nature of the sampled material, concentrations of some parameters varied by as much as a factor of ten when the original sample is compared to the duplicate and the RPD for Boron (hot water soluble) was 36%. As a result, to be conservative, the higher of the concentration measured in the original and measured in the duplicate is carried forward as the concentration of the parameter for that sampled location and depth.

One duplicate of a soil sample collected at BH5 was analyzed. Similar to above, due to the heterogeneous nature of the sampled material, the duplicate and the RPD for sodium adsorption ratio (SAR) was 129%. Both sample and duplicate were an order of magnitude below the standard and were similar to concentrations elsewhere at the site, therefore the RPD result doesn't change the classification of the sample. As a result, to be conservative, the higher of the concentration measured in the original and measured in the duplicate is carried forward as the concentration of the parameter for that sampled location and depth.

One duplicate of ground water collected at MW3 was analyzed. An RPD could not be calculated for almost all parameters analyzed because their concentrations were either below the RDL or less than 5 times greater than the RPD. RPDs could be calculated for barium, boron, copper, nickel, vanadium, electrical conductivity, sodium, chloride, toluene, and were less than 30%.



### 5.10.2 Laboratory Duplicates

In addition to the field duplicates collected by BluMetric, the laboratory also ran duplicate samples for some parameters as part of their own internal QA/QC program. These “lab duplicates” are not included in the total duplicate numbers reported above. Laboratory QA/QC data were reviewed, and no discrepancies were noted.

### 5.10.3 Laboratory Method Blanks

Method blanks (reagents processed through the extraction/digestion and analysis procedures) are prepared by the laboratory and were used at a frequency of at least one blank per analysis suite per batch of samples. Method blanks give a measure of the quantity of any contaminant (analyte) that may be added during the analysis to the overall result. Method blanks are not expected to produce detectable results. All method blanks reported as part of the laboratory QA/QC measures for this project were below the detection limit.

### 5.10.4 Reportable Detection Limits Exceeding Applicable Criteria

There were no instances where the laboratory detection limits exceeded the applicable site condition standards.

### 5.10.5 Summary

QA/QC procedures set out in the regulation and described in the Methodology section of this report were followed during the field investigation at the Phase Two Property. The required sampling containers were used and hold times were met for analysis. Methanol field preservation was carried out for all samples to be submitted for analysis of volatile compounds. Samples were stored and transported in cooler with ice or frozen ice packs. Travel blanks were not submitted; however, volatiles were not present at the Site at concentrations above the standards, and laboratory QA/QC procedures did not indicate any issues with the analytical results. Certificates of analysis are provided in Appendix B.

Overall, the data quality objectives have been met and it is felt that decision-making processes are not affected.



## 5.11 PHASE TWO CONCEPTUAL SITE MODEL AT 84 CANNIFTON ROAD NORTH, BELLEVILLE, ONTARIO

### Phase Two Conceptual Site Model 84 Cannifton Road North Belleville, Ontario

BluMetric was retained to complete a Phase One Environmental Site Assessment (ESA) and a Phase Two ESA for the property located at 84 Cannifton Road North, Belleville, Ontario, as shown in Figure 1.

The Phase One Property refers to the entire 84 Cannifton Road North Property. It is assessed using the Ministry Table 6 Site Condition Standards (SCS) which are intended to be used to assess sites for “shallow soils” in a potable ground water condition.

This Phase Two Conceptual Site Model (CSM) for the property summarizes the findings of the Phase Two ESA regarding the understanding of current conditions for the property including: stratigraphy, hydrogeology, and contamination. The Phase Two CSM for the property was informed by the Phase One CSM (BluMetric, 2023).

#### **The Phase Two Property & Physical Setting**

The Phase One and Phase Two and RSC Property is currently owned by 2267178 Ontario Inc. It is comprised of lands identified by the solid, bold, red line on the legal survey submitted as part of this RSC, and has the following legal description and municipal address:

Lot 5 and Part of Lot 6 West of Centre Street, Lot 6 and Part of Lot 7 East of Front Street; Registered Plan 36; Village of Cannifton; Township of Thurlow; County of Hastings; PIN 40433-0018 (LT). The municipal address for the property is 84 Cannifton Road North.

The Phase Two Property is 0.45 hectares in size, rectangular in shape, and is currently occupied by Main Event Tent Rentals, a small woodwork shop, and a residential dwelling. All of the property is more than 30 m from the Moira River located approximately 50 m to the west of the property. It is bounded on the north by residential properties, on the east by Lywood Street followed by residential properties, on the south by residential properties and a workshop building, and to the west by Cannifton Road North followed by residential properties. Figures 1 and 2 show the general location of the property and various surrounding land uses.





The topography of the Phase Two Property is generally flat, similar to the surrounding properties. Regional topography slopes west-southwest towards the Moira River channel approximately 50 m to the west. The elevation of the property is approximately 97 metres (m) above sea level (ASL).

The Phase Two Property was first developed in the early 1900s with a residential dwelling and was then purchased in 1977 by Vincent and Vernon Golde who operated “Golden’s Trucking” until 1987. Vincent Golden subsequently took over ownership of the Phase Two Property. St. Lawrence Pools occupied the workshop building until approximately 2016 when the Phase Two Property ownership was transferred to the current owner, 2267178 Ontario Inc. Since the transfer of ownership to the current owner, the Phase Two Property has been occupied by Main Event Tent Rentals and a small woodwork shop. The residential dwelling has also remained on the property and is leased for residential use.

The Phase One Study Area (“surrounding area”) covers land uses within a 250 m radius of the Property, as shown in Figures 1 and 2.

The Phase Two Property is not considered an “enhanced investigation property” as defined by O. Reg. 153/04 no current or historical industrial activities were indicated to have taken place.

### **Summary Of Phased Esas Pertaining to The Phase Two Property**

No previous environmental site assessments have been completed at the Phase Two Property.

### **Potentially Contaminating Activities (Pcas)**

Based on the findings of the historical records reviews, site reconnaissance, and personal interviews with site representatives, BluMetric’s 2023 Phase One ESA identified several PCAs within the property and in the Phase One Study area, considered to have potentially affected the soil and/or ground water beneath the Phase One Property (see the summary table below). The locations of all the PCAs pertaining to the Phase Two Property are shown in Figures 6a.

**Table 1: Potentially Contaminating Activities (PCAs)**

PCA	Description and Location
<b>PCAs on the Phase One Property</b>	
<u>PCA 1</u> Other: Application of de-icing agent for the purpose of pedestrian and vehicular safety under conditions of snow or ice	The Phase One Property consists of gravel-covered and asphalt-paved parking areas and driveway. The east and west portions of the Phase One Property are also bordered by pedestrian sidewalks and public roadways. It is anticipated that de-icing agents will likely have been applied to these surfaces for purposes of pedestrian and vehicular safety under conditions of snow or ice. Applicable to the exterior portions of the Phase One Property.



PCA	Description and Location
<b>PCAs on the Phase One Property</b>	
<u>PCA 2</u> 30. Importation of Fill material of unknown quality	Fill material (and gravel) is expected to have been brought on-site and distributed throughout the site for grading purposes. Applicable to the entire Phase One Property.
<u>PCA 3</u> 28. Gasoline and Associated Products Storage in fixed Tanks	Based on the age of the building, a concrete pedestal found in the basement, and a vent pipe observed along the northwest wall of the building, it is suspected that the dwelling on the Phase One Property was likely formerly heated using an oil-fired heating system.
<u>PCA 4</u> Other: Paint Spray Booth	There is a paint spray booth used in the workshop building. Observations on-site included pails and cans of wood finishing lacquers, stains, and thinners stored in the paint spray area, and significant staining and debris on the floors.
<u>PCA 5</u> 55. Transformer Manufacturing, Processing and Use	A pole-mounted transformer was noted along the periphery of the Phase One Property, at the northeast side of the site along Lywood Street.
<u>PCA 6</u> 55. Transformer Manufacturing, Processing and Use	A pole-mounted transformers were also noted along the periphery of the Phase One Property, along the west side of the site along Cannifton Road North.
<u>PCA 7</u> 27. Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles	THF Auto Centre at 108 Cannifton Road North
<u>PCA 8</u> 27. Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles	MacPherson Motors Car Dealer at 115 Cannifton Road North.
<u>PCA 9</u> 27. Garages and Maintenance and Repair of Railcars, Marine Vehicles, and Aviation Vehicles	McCaffrey's Garage & Towing Ltd. at 46-54 Cannifton Road North.
<u>PCA 10</u> 28. Gasoline and Associated Products Storage in Fixed Tanks	An aboveground storage tank was observed along the west wall of the building at 46-54 Cannifton Road North.
<u>PCA 11</u> Other: Subject Waste Generator	GEN records for McCaffrey's Garage & Towing Ltd. for light fuels in 2019 to 2022, as well as Aliphatic solvents and residues, Waste crankcase oils and lubricants in 2021 and 2022.
<u>PCA 12</u> Other: Subject Waste Generator	GEN records for Pinchin Ltd. for Light fuels in 2020 and 2021.
<u>PCA 13</u> Other: Subject Waste Generator	GEN records for Black Diamond Cheese for acid waste - other metals, PCB's, waste oils & lubricants in 1992 to 1999.
<u>PCA 14</u> Other: Spill Incident	SPL record detailing gasoline found while blasting the sewer main line in 1989.
<u>PCA 15</u> Other: Spill Incident	SPL record for Hydro One Inc. for a spill of 75 L of transformer oil in 2015 onto the land due to human error. PCBs were suspected.
<u>PCA 16</u> Other: Subject Waste Generator	GEN records for McInroy-Maines Construction Ltd. for aliphatic solvents and residue, and waste oils & lubricants between 1992 and 2022.
<u>PCA 17</u> 28. Gasoline and Associated Products Storage in Fixed Tanks	FSTH and FST records for Penske Truck Leasing Canada Inc. for four fuel oil USTs (steel) with capacities of 50,000 L (2) and 25,000 L (2), installed in 1988. EXP and DTNK records Penske Truck Leasing Canada Inc. and Rentway Canada Ltd. for an expired gasoline station.  PRT records for Rentway Canada Ltd. for a retail fuel supply license with a capacity of 32,996 L.



PCA	Description and Location
<b>PCAs on the Phase One Property</b>	
<u>PCA 18</u> Other: Subject Waste Generator	GEN records for Rentway Canada Ltd. for waste oils & lubricants, detergents/soaps, aliphatic solvents, petroleum distillates, oil skimmings & sludges between 1988 and 2001. GEN records for Penske Truck Leasing Canada Inc. for waste oils & lubricants, detergents/soaps, aliphatic solvents, petroleum distillates, oil skimmings & sludges between 2000 and 2022.
<u>PCA 19</u> 27. Garages and Maintenance and Repair of Railcars, Marine Vehicles, and Aviation Vehicles	EASR record for Davidson's Blasting & Painting related to approvals for an Automotive Refinishing Facility.

### Areas Of Potential Environmental Concern (Apecs)

Information for the PCAs was combined with information about location (including distance and direction from the property in the case of PCAs outside the property), local geology, hydrogeology, and other information assembled during the Phase One ESA to determine which PCAs are areas of potential environmental concern (APECs). The APECs for the Phase Two Property are listed below and are shown on Figure 6a.

Not carried forward as APECs are PCA locations 6 through 19. Based on the distance and or surface topography and inferred direction of ground water flow (toward the west), those activities are not identified as an APEC for the 84 Cannifton Road North property.

**Table 2: Areas of Potential Environmental Concern on the Phase One Property**

Area of Potential Environmental Concern	Potentially Contaminating Activity	Contaminants of Potential Concern*	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
A	<b>PCA 1: #Other – Application of De-Icing Agent for purpose of Pedestrian &amp; Vehicular Safety under Conditions of Snow or Ice**</b> <i>The Phase One Property consists of gravel-covered and asphalt-paved parking areas and driveway. The east and west portions of the Phase One Property are also bordered by pedestrian sidewalks and public roadways. It is anticipated that de-icing agents will likely have been applied to these surfaces for purposes of pedestrian and vehicular safety under conditions of snow or ice.</i>	EC, SAR	Soil
		Na, Cl-	Ground Water
B	<b>PCA 2: #30 – Importation of Fill Material of Unknown Quality</b> <i>Fill material (and gravel) is expected to have been brought on-site and distributed throughout the site for grading purposes.</i>	PHC, PAH, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN-	Soil and Ground Water



Area of Potential Environmental Concern	Potentially Contaminating Activity	Contaminants of Potential Concern*	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
C	<b>PCA 3: #28 – Gasoline and Associated Products Storage in Fixed Tanks</b> <i>Based on the age of the building, a concrete pedestal found in the basement, and a vent pipe observed along the northwest wall of the building, it is suspected that the dwelling on the Phase One Property was likely formerly heated using an oil-fired heating system.</i>	PHCs, PAHs, BTEX, Metals	Soil and Ground Water
D	<b>PCA 4: #Other – Paint Spray Booth</b> <i>There is a paint spray booth used in the workshop building. Observations on-site included pails and cans of wood finishing lacquers, stains, and thinners stored in the paint spray area, and significant staining and debris on the floors.</i>	PHCs, PAHs, Metals (lead), VOCs, THMs	Soil and Ground Water
E	<b>PCA 5: #55 – Transformer Manufacturing, Processing and Use</b> <i>Pole-mounted transformer noted along the periphery of the Phase One Property, at the northeast side of the site along Lywood Street.</i>	PHCs, PAHs, Metals (lead), VOCs	Soil and Ground Water

\*When completing this column, identify all contaminants of potential concern using the Method Groups as identified in the "Protocol for in the Assessment of Properties under Part XV.1 of the Environmental Protection Act, March 9, 2004, amended as of July 1, 2011, as specified below:

**List of Method Groups:**

ABNs	PCBs	Metals	Electrical Conductivity
CPs	PAHs	As, Sb, Se	Cr (VI)
1,4-Dioxane	THMs	Na	Hg
Dioxins/Furans, PCDDs/PCDFs	VOCs	B-HWS	Methyl Mercury
OCs	BTEX	Cl-	Low or high pH
PHCs	Ca, Mg	CN-	SAR

\*\* Section 49.1 paragraph 1 of Ontario Regulation 153/04 has been relied upon and the site condition standards are deemed to have been met for contaminants associated with applications of substances to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both. Further consideration of this PCA/APEC through sampling and analyses is not required as part of a Phase Two ESA.

**Subsurface Structures and Utilities**

Subsurface gas lines enter the Phase Two Property from Cannifton Road and connect to both buildings at the northwest corner. Both buildings were reportedly connected to the municipal water supply lines coming from the roadways. No specific details are available regarding the exact locations of buried municipal services on the Phase Two Property. The interior of the basement of the residential dwelling had two sumps (which were dry at the time of observation – 22 July 2022) and an old cistern that was reportedly used to store water. These could influence ground water movement on the Phase Two Property; however, since no impacts in ground water have been identified this is not addressed further. See Figure 2.



## Summary of Geology and Hydrogeology

**Overburden** primarily consists of Paleozoic bedrock that is either exposed or has less than 1 m of drift cover, consisting of clay, silt, sand, gravel, and diamicton deposits (OGS, 2010). There has been little disturbance of the overburden across the Phase Two Property as the original buildings are still present. As a result, the overburden stratigraphy is relatively uniform, with little fill encountered. The thickness of the overburden ranges from 0.15 to 1.4 m, with an average of less than 1.0 m. The overburden is generally thickest in the southern portion of the Phase Two Property, and thinnest in the northeast portion of the property. Description of the locations, depths, and textural properties of the principle overburden stratigraphic units encountered across the Phase Two Property are provided below.

**Fill** was not encountered in any of the boreholes or test pit at the Phase Two Property. This is consistent with borehole logs from two historical domestic supply records reported in the MECF database on the Phase Two Property.

**Bedrock** consists of limestone of the Middle Ordovician “Ottawa Group” (consisting of limestone, dolostone, shale, arkose, and sandstone [OGS, 2011]). The elevation of the upper surface of the bedrock on the Phase Two Property ranges between 95.0 and 97.7 m asl.

## Hydrogeological Characteristics

The boreholes that were advanced across the Phase Two Property that were completed as monitoring wells encountered ground water within bedrock. The four monitoring wells were advanced to depths of up to 6.2 m below ground surface (bgs) into competent bedrock. The test pit advanced at the property ended within the overburden and did not encounter ground water. The shallow borehole within the building advanced to refusal at the inferred bedrock surface and did not encounter ground water.

Ground water was encountered in the bedrock at an average depth of 2.93 m bgs. The overburden material would not be considered an aquifer in that it did not contain water to support water supply wells.

Ground water elevations were measured on 27 October 2022. Depth to shallow ground water on the Phase Two Property ranged from 2.49 to 3.43 m bgs. Ground water contours for ground water elevations measured on 27 October 2022 are presented on Figure 9a. The ground water equipotential lines indicate that ground water is flowing to the southwest across the Phase Two Property toward the Moira River, which is consistent with the Phase One CSM.



Measurements and observations at two wells on the Phase Two Property (BH/MW-2 and BH/MW-3) are combined to assign values to two hydraulic parameters. Conductivity values range between  $3.65 \times 10^{-6}$  and  $4.37 \times 10^{-6}$  m/s with a geometric mean of  $3.99 \times 10^{-6}$  m/s.

The average linear ground water velocity is estimated to be 1.76 m/year based on the results from rising head tests that were conducted and the shallow ground water gradient that has been measured. All four wells are screened in the bedrock.

The bedrock is considered to be the main ground water flow pathway based upon where ground water was encountered, and the absence of ground water observed in the overburden.

### **Sections 35, 41 Or 43.1 of the Regulation & Applicable Site Condition Standards**

Investigations have confirmed that overburden thickness across the Phase Two Property ranges from 0.15 to 1.4 m, with at least one third of the property less than 2 m, therefore this is a “shallow soil property” as defined by O.Reg. 153/04.

The Phase Two Property is not located within or adjacent to an area of natural significance (See Figure 4). The pH results for surface soils (collected from the top 1.0 m) ranged from 6.86 to 7.63 and are within the range of 5 to 9 recommended by the Ministry. Therefore, the Phase Two Property is not considered to be a “sensitive site”.

The Phase Two property and the properties within 250 m of the property are serviced with municipal water. There were two historical drinking water wells reported in the MECP database for the Phase Two Property and many within 250 m of the property boundaries (see Figure 5).

Agricultural or other use is NOT an intended land use for the Phase Two Property. The Phase Two Property is not located within a designated well-head protection area or other designation identified by the municipality for the protection of ground water.

The Moira River flows southward to the west of the Phase Two Property, but the Phase Two Property is more than 30 m from the water.

Soil grain size analyses was assumed based on field observation of overburden samples during drilling across the Phase Two Property. Soils were observed to consist primarily of coarse grained materials (50% by mass  $>75 \mu\text{m}$ ) and were described as gravel, sandy gravel/gravelly sand, sand, and sandy clay, with minor amounts of silty clay and clay.



Based on the aforementioned environmental setting and site conditions, the Phase Two Property was assessed using the Table 6: coarse-grained Generic Site Condition Standards for Shallow Soils in a Potable Ground Water Condition for residential/parkland/institutional uses from the Ministry of Environment document “Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the *Environmental Protection Act*”, dated April 15, 2011.

### **Areas Where Soil Has Been Brought to The Phase Two Property**

Fill material was not encountered in boreholes or test pits during Phase Two ESA activities. There was no fill material imported to the Phase Two Property during the Phase Two ESA activities. No soil was brought to the Phase Two Property during the Phase Two ESA activities.

### **Summary of Phase Two ESA Activities**

Based on a review of the above-mentioned work and the 2023 Phase One ESA report prepared by BluMetric, BluMetric designed and conducted site characterization activities in October 2022 and May 2023 to identify contaminants of potential concern (COPCs). The locations of all monitoring wells, boreholes, and test pits were selected with the goals of investigating all the APECs. The locations are shown on Figure 7.

The site characterization work focused on soil and ground water quality. Sediment and surface water are not present on the Phase Two Property and those types of samples were not collected.

Boreholes have been drilled at five locations on the Phase Two Property. Four of the boreholes have been completed as ground water monitoring wells. In addition, one test pit (TP1) was hand-dug adjacent to one of the boreholes (BH/MW4) as soil was very shallow and a sample could not be collected with the drill rig due to poor recovery. Monitoring wells reach depths of 4.77 to 6.20 m bgs to investigate ground water quality in the underlying limestone bedrock.

A 10 cm diameter drill was used to advance the boreholes. The monitoring wells are constructed of 5 cm PVC tubing. Screened sections are not more than 3 m long. Number three silica sand was used as a filter pack around the well screens. Bentonite chips were used to seal the annular space above the well screen. The well heads were completed flush to the ground and steel protective cover was installed for each of the wells.

As shown in CMS Figures 6a and 6b, numerous APECs (designated APEC A through E) have been identified on the Phase Two Property. The contaminants of potential concern include:

- metals,



- hydride-forming metals (As, Sb, Se),
- other regulated parameters (ORPs): mercury, hot water-soluble boron (HWS-B), cyanide (CN<sup>-</sup>), chromium (VI), pH, electrical conductivity (EC), sodium absorption ratio (SAR), sodium, chloride.
- trihalomethanes (THMs),
- polycyclic aromatic hydrocarbons (PAHs),
- polychlorinated biphenyls (PCBs),
- petroleum hydrocarbons (PHCs),
- benzene, ethylbenzene, toluene, and xylenes (BTEX),
- volatile organic compounds (VOCs).

Soil and ground water were sampled in the APECs at follows:

#### APEC A

- Soil test pits – TP1
- Soil boreholes – BH/MW1, BH/MW2, BH/MW3, BH/MW4
- Monitoring wells – BH/MW1, BH/MW2, BH/MW3, BH/MW4

#### APEC B

- Soil test pits – TP1
- Soil boreholes – BH/MW1, BH/MW2, BH/MW3, BH/MW4
- Monitoring wells – BH/MW1, BH/MW2, BH/MW3, BH/MW4

#### APEC C

- Soil boreholes – BH/MW3
- Monitoring wells – BH/MW3

#### APEC D

- Soil boreholes – BH/MW2, BH5
- Monitoring wells – BH/MW2

#### APEC E

- Soil test pits – TP1
- Monitoring wells – BH/MW4

Table 3 and 4 below provide a summary of soil and ground water sample analysis used for characterizing soil at the Phase Two Property.





**Table 3: Summary of Analyses in Soil**

Soil Sample	Sample Depth	Metals	Hg	HFM	VOC	THM	PHC	PAH	BTEX	PCB	ORP
	(m bgs)										
BH/MW1	0.0 – 0.6	X	X	X	X	X	X	X	X	X	X
BH/MW2	0.0 – 0.6	X	X	X	X	X	X	X	X	X	X
BH/MW3	0.7 – 0.9	X	X	X	X	X	X	X	X	X	X
TP1 (adjacent to BH/MW4*)	0.0 – 0.15	X	X	X	X	X	X	X	X	X	X
BH5	0 – 0.41	X	X	X	X	X	X	X	X	X	X

Notes:

HFM includes: Antimony, Arsenic and Selenium

ORP includes: Boron (Hot Water Soluble), Chromium VI, Cyanide (CN-), Electrical conductivity (EC), Sodium Adsorption Ratio (SAR), pH

\*Soil at BH/MW4 was very shallow and recovery was poor, TP1 was dug adjacent to BH/MW4 to collect a shallow soil sample at APEC B

**Table 4: Summary of Analyses in Ground Water**

Ground Water Sample ID	Sample Date	Screen Depth	Metals	Hg	HFM	THM	VOC	PHC	PAH	BTEX	PCB	ORP
		(m bgs)										
BH/MW1	27-Oct-22	1.72 – 4.77	X	X	X	X	X	X	X	X	X	X
BH/MW2	18-Oct-22	1.75 – 4.80	X	X	X	X	X	X	X	X	X	X
BH/MW3	18-Oct-22	1.83 – 4.88	X	X	X	X	X	X	X	X	X	X
BH/MW4	18-Oct-22	3.15 – 6.20	X	X	X	X	X	X	X	X	X	X

Notes:

HFM includes: Antimony, Arsenic and Selenium

ORP includes: Electrical Conductivity (EC), pH, Sodium (total), Chloride (total), Cyanide (CN-), Chromium VI

### Soil Stratigraphy

The soil stratigraphy on the Phase Two Property generally consists of interbedded layers of native till, consisting of gravel, sand and gravel, and silty and sandy clay. The thickness of the overburden ranges from 0.15 to 1.4 m, with an average of less than 1.0 m. Stratigraphy is presented on cross sections in Figure 8a and 8b.

### Soil Quality

CSM Figure 10a shows soil chemistry results compared to the applicable Table 6 SCS.

The vertical distribution of the COPCs is shown in two cross sections, A-A' and B-B'. CSM Figure 7 shows where the two cross-sections are located on the property, and Figures 10b and 10c show the vertical distributions of the COPCs in the two cross-sections.

COPCs in soil were not found to exceed the Table 6 SCS.



### Overall Extent of Soil Impacts

Impacts were not found to be present in soil on the Phase Two Property.

### Ground Water Levels and Flow Direction

All of the boreholes encountered ground water within the bedrock. The shallow borehole BH5 completed to 0.41 m did not encounter ground water. Ground water elevations were measured in October 2022. Depth to ground water on the Phase Two Property ranged from 2.49 to 3.43 m bgs. Ground water was not encountered in the overburden.

Water levels measured on 27 October 2022 are used to determine the contours and infer the ground water flow direction shown in Figure 9a. The inferred flow direction is to the southwest toward the Moira River. This is consistent with speculations in the 2023 Phase One ESA report by BluMetric.

### Ground Water Quality

Figure 11a summarizes the ground water quality results for the Phase Two Property. The vertical distribution of the COPCs is shown in two cross sections, A-A' and B-B'. Figure 7 shows where the two cross-sections are located on the Phase Two ESA, and Figures 11b and 11c show the vertical distributions of the COPCs in the two cross-sections.

COPCs in ground water were not found to exceed the Table 6 SCS.

### Free Phase Product

Non-aqueous free phase liquids were not observed in any of the monitoring wells on the Phase Two Property.

### Climatic Or Meteorological Conditions That May Influence Contaminant Distribution

Climatic or meteorological conditions could influence the distribution and migration of any identified contaminants by raising or lowering the ground water table. Fluctuations in ground water level due to climatic or meteorological conditions are likely to have occurred over time, however no contaminants were identified in soil or ground water at the Phase Two Property.



### **Vapour Intrusion Risk**

The potential for subsurface migration of vapour gas is not a concern at the Phase Two Property as analytical results for volatile parameters were below the Table 6 SCS. No impacts to soil or ground water arising from the identified PCAs were identified on the Phase Two Property.

### **Release Mechanisms, Pathways and Routes of Exposure**

No impacts to soil or ground water arising from the identified PCAs were identified on the Phase Two Property, therefore no release mechanisms, contaminant transport pathways or receptors were identified for the Phase Two Property or surrounding area. There are no impacts to soil or ground water and as such there are no completed exposure routes for these media.

### **Findings and Recommendations**

Soil and ground water impacts were not identified for the Phase Two Property. There are no contaminants of concern (COCs) in soil or ground water. There is no concern for contaminant migration via soil or ground water.

It is proposed to redevelop the Phase Two Property into a multi-residential property. No remediation or risk management strategy is recommended for the property.

### **Justification Of the Sampling Program**

The sampling plan was conducted in 2022 and 2023 and was undertaken with the goal of investigating all the APECs. The APECs investigated on the Phase Two Property include APEC A to E.

Soil sampling was conducted in each APEC and at specific locations where potential contaminating activities may have occurred to assess potential impacts. Soil Samples were collected by advancing boreholes and test pits to provide adequate coverage across the Phase Two Property. Numerous chemical parameters were analysed in soil samples (metals, HFM, PAHs, THMs, PCBs, PHCs, BTEX, ORPs, and VOCs). All measured concentrations of chemical parameters were below Table 6 SCS.

Ground water samples were collected in 2022 to determine if impacts were present at the APECs on the Phase Two Property.



Ground water was sampled using low-flow techniques to minimize the presence of suspended particles that could bias the results. The wells have been constructed to intersect the water table to ensure that any floating contaminants would be sampled. Numerous groups of chemical parameters were analysed (metals, HFM, PAHs, PCBs, PHCs, BTEX, THMs, ORPs, and VOCs). All measured concentrations of chemical parameters were below Table 6 SCS.

### **Sufficiency of the Sampling Program for An RA**

A risk assessment is not required for this site.

### **Implications For Hydrogeological and Geological Interpretations**

The field work undertaken in 2022 and 2023 investigated the geological conditions suspected to be present. Fill material was not encountered at any of the test pits and boreholes advanced on the Phase Two Property.

The thickness of the overburden ranges from 0.15 to 1.4 m, with an average of less than 1.0 m, and this supports using the Ministry Table 6 SCSs for the Phase Two Property.

The field work also confirmed hydrogeological conditions at the Phase Two Property. The boreholes that were advanced typically encountered ground water within the bedrock. Ground water elevations determined that the dominant flow direction is southwest across the property toward the Moira River. The average linear ground water velocity across the Phase Two Property is estimated to be 1.76 m/year based on the results from rising head tests that were conducted and the shallow ground water gradient. The shallow bedrock is considered to be the main ground water flow pathway based upon where ground water was encountered, and the absence of ground water observed in the overburden.



## 6 CONCLUSIONS

Soil and ground water impacts were not identified for the Phase Two Property. There are no COCs in soil or ground water. There is no concern for contaminant migration via soil or ground water.

It is proposed to redevelop the Phase Two Property into a multi-residential property. No remediation or risk management strategy is recommended for the property.

### 6.1 STATEMENT OF LIMITATIONS

This Phase Two ESA was performed in accordance with the substance and intent of the Phase II ESA document produced by the Canadian Standards Association (CSA Z769), the *Guideline for Professional Engineers Providing Services in Environmental Site Assessment, Remediation and Management* published by Professional Engineers Ontario (PEO), and the definition of Phase Two ESA in O. Reg. 153/04, as amended.

The conclusions presented in this report represent our professional opinion and are based upon the work described in this report and any limiting conditions in the terms of reference, scope of work, or conditions noted herein.

The findings presented in this report are based on conditions observed at the specified dates and locations, and on the analysis of samples for the specified parameters. Unless otherwise stated, the findings cannot be extended to previous or future site conditions, portions of the site that were not investigated directly, or types of analysis not performed.

BluMetric makes no warranty as to the accuracy or completeness of the information provided by others, or of conclusions and recommendations predicated on the accuracy of that information.

Nothing in this report is intended to constitute or provide a legal opinion. BluMetric makes no representation as to compliance with environmental laws, rules, regulations, or policies established by regulatory agencies.

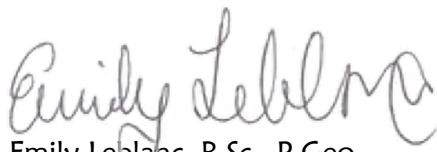
This report has been prepared for 2267178 Ontario Inc. Any use a third party makes of this report, any reliance on the report, or decisions based upon the report, are the responsibility of those third parties unless authorization is received from BluMetric in writing. BluMetric accepts no responsibility for any loss or damages suffered by any unauthorized third party as a result of decisions made or actions taken based on this report.



## 6.2 STATEMENT AND SIGNATURE OF THE QUALIFIED PERSON

This Phase Two Environmental Site Assessment of the Phase Two Property includes the evaluation of information gathered from a Phase One Environmental Site Assessment and intrusive field investigation. It has been conducted by BluMetric staff in accordance with O. Reg. 153/04 by or under the supervision of a qualified person.

Respectfully Submitted,  
**BluMetric Environmental Inc.**

  
Emily Leblanc, B.Sc., P.Geo  
Geoscientist

  
Jaclyn Kalesnikoff, P.Geo., QP<sub>ESA</sub>  
Senior Hydrogeologist



## 7 REFERENCES

BluMetric Environmental Inc. 2022. Phase One Environmental Site Assessment, 84 Cannifton Road North, Belleville, Ontario.

Ontario Ministry of the Environment and Climate Change (MOECC), 2011. *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*. PIBS 7382e01. April.

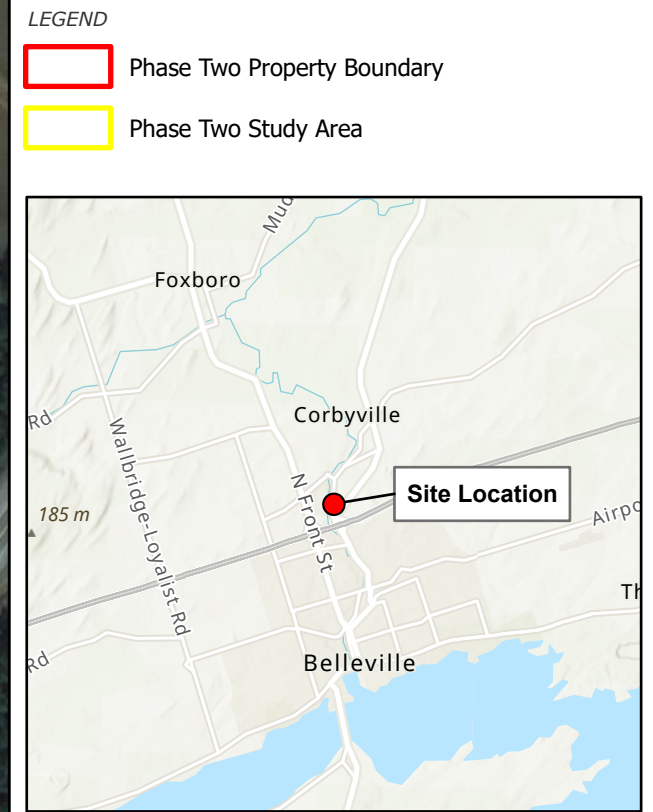
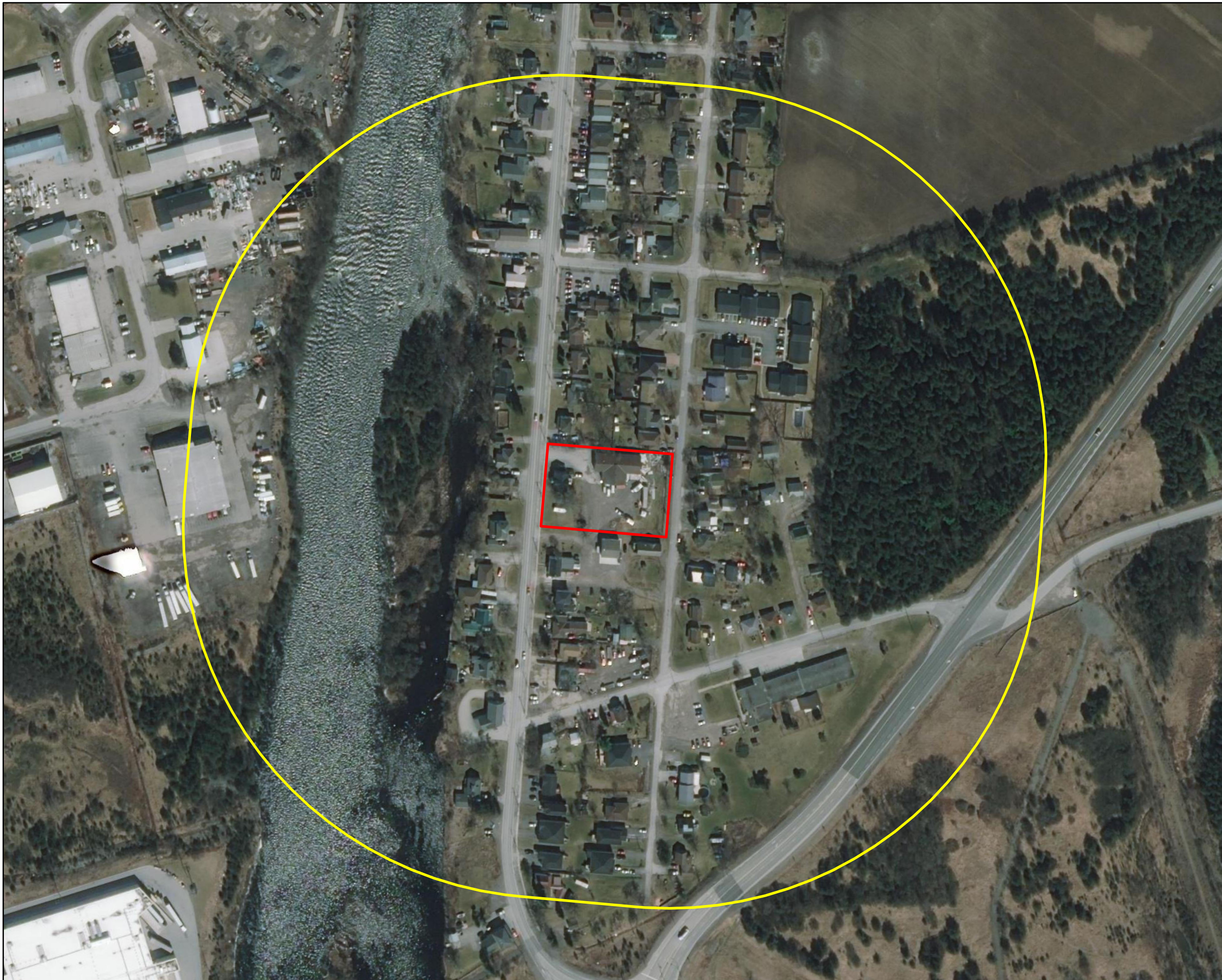
Ontario Geological Survey, 2010, *Surficial geology of Southern Ontario; Geological Survey*. Miscellaneous Release - Data 128-REV ISBN 978-1-4435-2483-4 [DVD] ISBN 9787 1-4435-2482-7 [zip file].



## FIGURES







1				
REV.	DESCRIPTION	YY/MM/DD	BY	CHK

**REFERENCES**  
 PROPRIETARY INFORMATION MAY NOT BE REPRODUCED OR DIVULGED WITHOUT PRIOR WRITTEN CONSENT OF BLUMETRIC ENVIRONMENTAL INC. DO NOT SCALE DRAWING. THIS DRAWING MAY HAVE BEEN REDUCED. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS.

**CLIENT**  
 2267178 Ontario Inc.

**PROJECT**  
 Phase Two Environmental Site Assessment  
 84 Cannifton Road

**TITLE**  
 Phase Two Property Location

825 Milner Avenue  
 Scarborough ON M1B 3C3  
 Tel: 416-383-0957  
 Fax: 416-383-0956  
 Email: info@blumetric.ca  
 Web: http://www.blumetric.ca

<b>PROJECT #</b> 220456		<b>DATE</b> February 01, 2023	
<b>DRAWN</b> MB	<b>CHECKED</b> JK	<b>FIG NO.</b> 01	<b>REV</b> 0



**LEGEND**

- Phase Two Property Boundary
- Workshop Building (Existing Footprint)
- Dwelling (circa early 1900s)
- Workshop Building (1960s)

1				
REV.	DESCRIPTION	YY/MM/DD	BY	CHK

**REFERENCES**  
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**PROJECT**

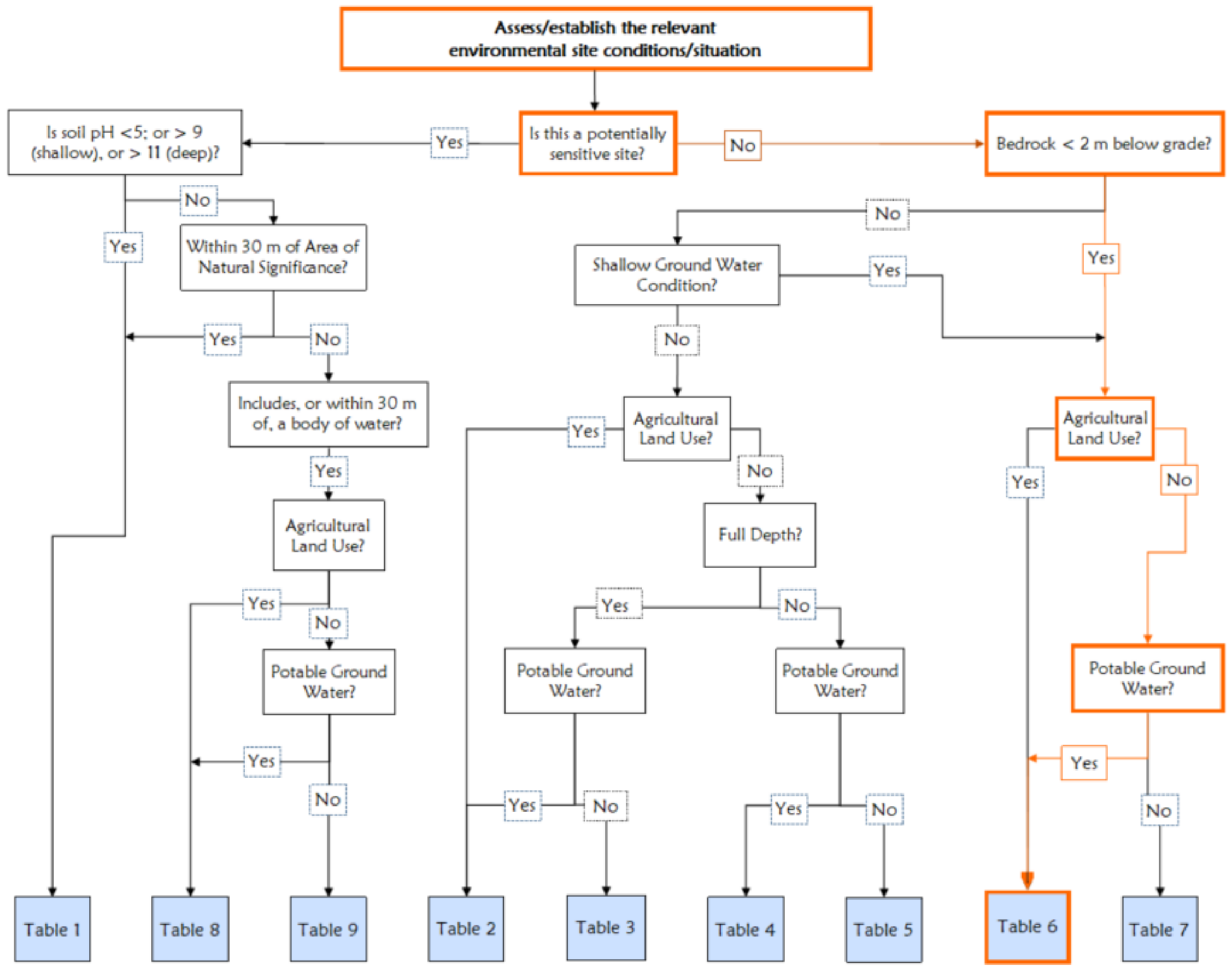
**Phase Two Environmental Site Assessment  
84 Cannifton Road**

**TITLE**

**Phase Two Property Features**

825 Milner Avenue  
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 Tel: 416-383-0957  
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<b>DRAWN</b> MB	<b>CHECKED</b> JK	<b>FIG NO.</b> 02	<b>REV</b> 1



LEGEND

→ SCS Decision Path →

1				
REV.	DESCRIPTION	YY/MM/DD	BY	CHK

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PROJECT

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84 Cannifton Road**

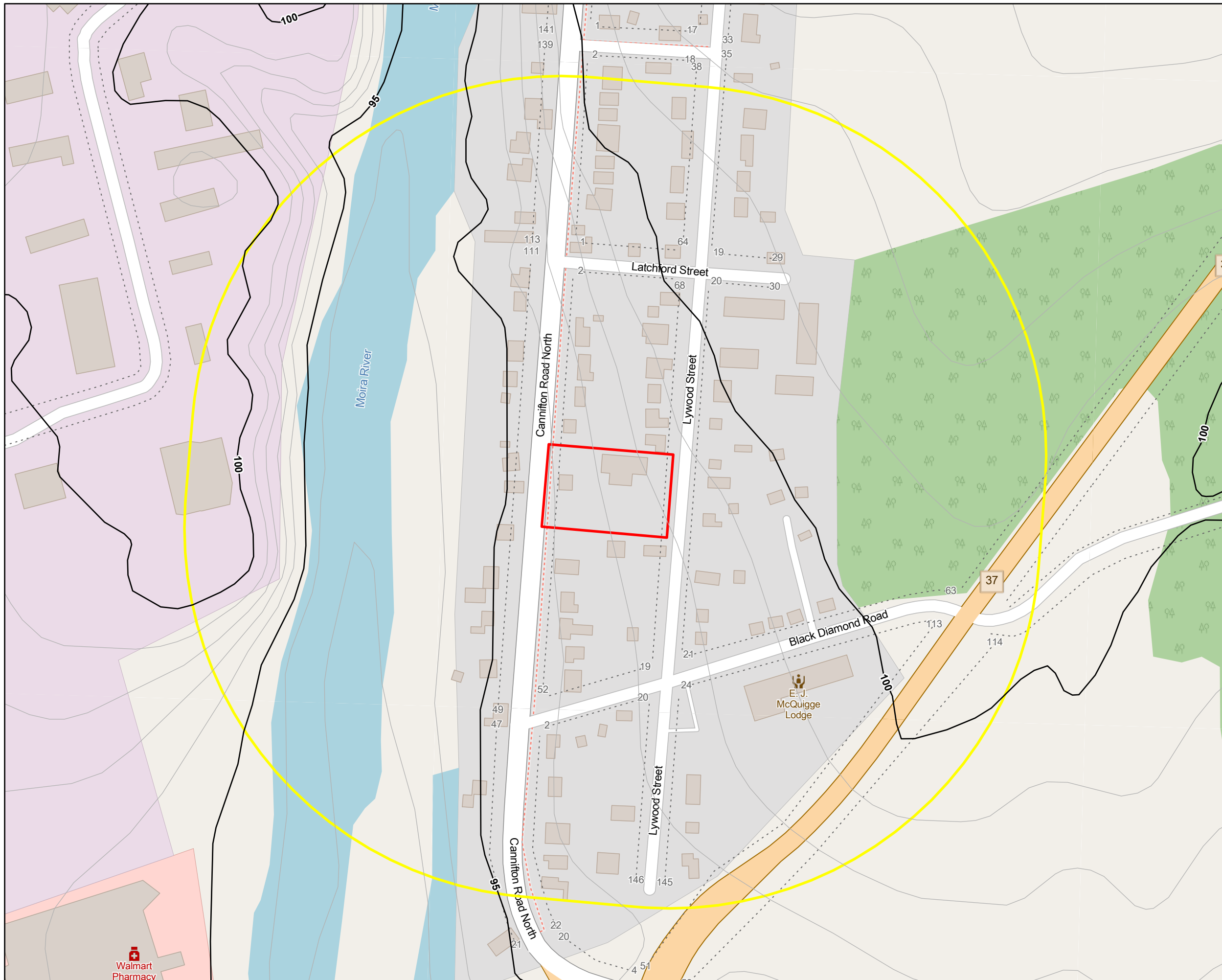
TITLE

**Applicable Site Condition Standard -  
Table 6 Parcel**

825 Milner Avenue  
 Scarborough ON M1B 3C3  
 Tel: 416-383-0957  
 Fax: 416-383-0956  
 Email: info@blumetric.ca  
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PROJECT #	DATE		
<b>220456</b>	<b>February 02, 2023</b>		
DRAWN	CHECKED	FIG NO.	REV
<b>MB</b>	<b>JK</b>	<b>03</b>	<b>0</b>



**LEGEND**

	Phase Two Property Boundary		Intermediate Contour (masl)
	Phase Two Study Area		Major Contour (masl)
	Forestry		Industrial Development
	Waterbody		Residential Development

**NOTES:**

- Base map extracted from Toporama (NRCAN, 2019).
- There are no Areas of Natural Significance within the Study Area

The following resources were consulted:

- Ontario Ministry of Natural Resources and Forestry, Make-a-Map: Natural Heritage Areas (Queen's Printer for Ontario, 2014)
- Provincial Parks and Conservation Reserves Act 2006 (Land Information Ontario)
- Environmentally Significant Area designated in Upper and/or Lower Tier Municipality Official Plans
- Provincially Significant Wetlands and Areas of Natural and Scientific Interest (Land Information Ontario)
- Natural or Protection Area identified in Niagara Escarpment Plan (Niagara Escarpment Planning and Development Act)(Land Information Ontario)
- Oak Ridges Moraine Conservation Plan (Oak Ridges Moraine Conservation Act, 2001)(Land Information Ontario)
- Wilderness Areas Act (Land Information Ontario)

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REV.	DESCRIPTION	YY/MM/DD	BY	CHK

**REFERENCES**

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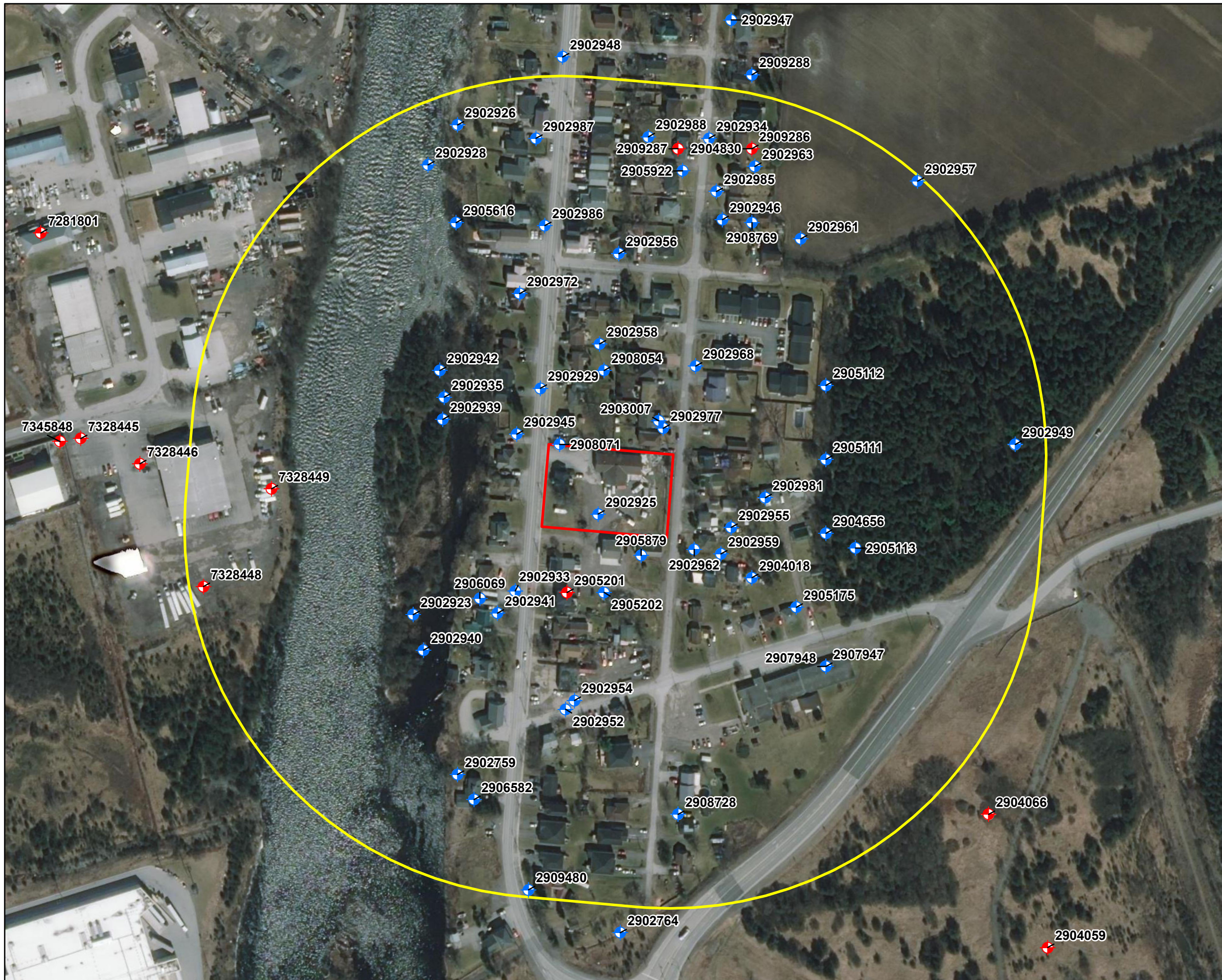
**Phase Two Environmental Site Assessment  
84 Cannifton Road**

**TITLE**

**Topographic Map, Areas of Natural  
Scientific Interest, & Water Bodies**

825 Milner Avenue  
Scarborough ON M1B 3C3  
Tel: 416-383-0957  
Fax: 416-383-0956  
Email: info@blumetric.ca  
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<b>PROJECT #</b> 220456		<b>DATE</b> February 01, 2023	
<b>DRAWN</b> MB	<b>CHECKED</b> JK	<b>FIG NO.</b> 04	<b>REV</b> 01



**LEGEND**

- Phase Two Property Boundary
- Phase Two Study Area

**WWIS Well Record (MECP)**

- Well of Other Status
- Potable Water or Agricultural Supply Well

**NOTES:**  
There are no wellhead protection areas within the study area

1				
REV.	DESCRIPTION	YY/MM/DD	BY	CHK

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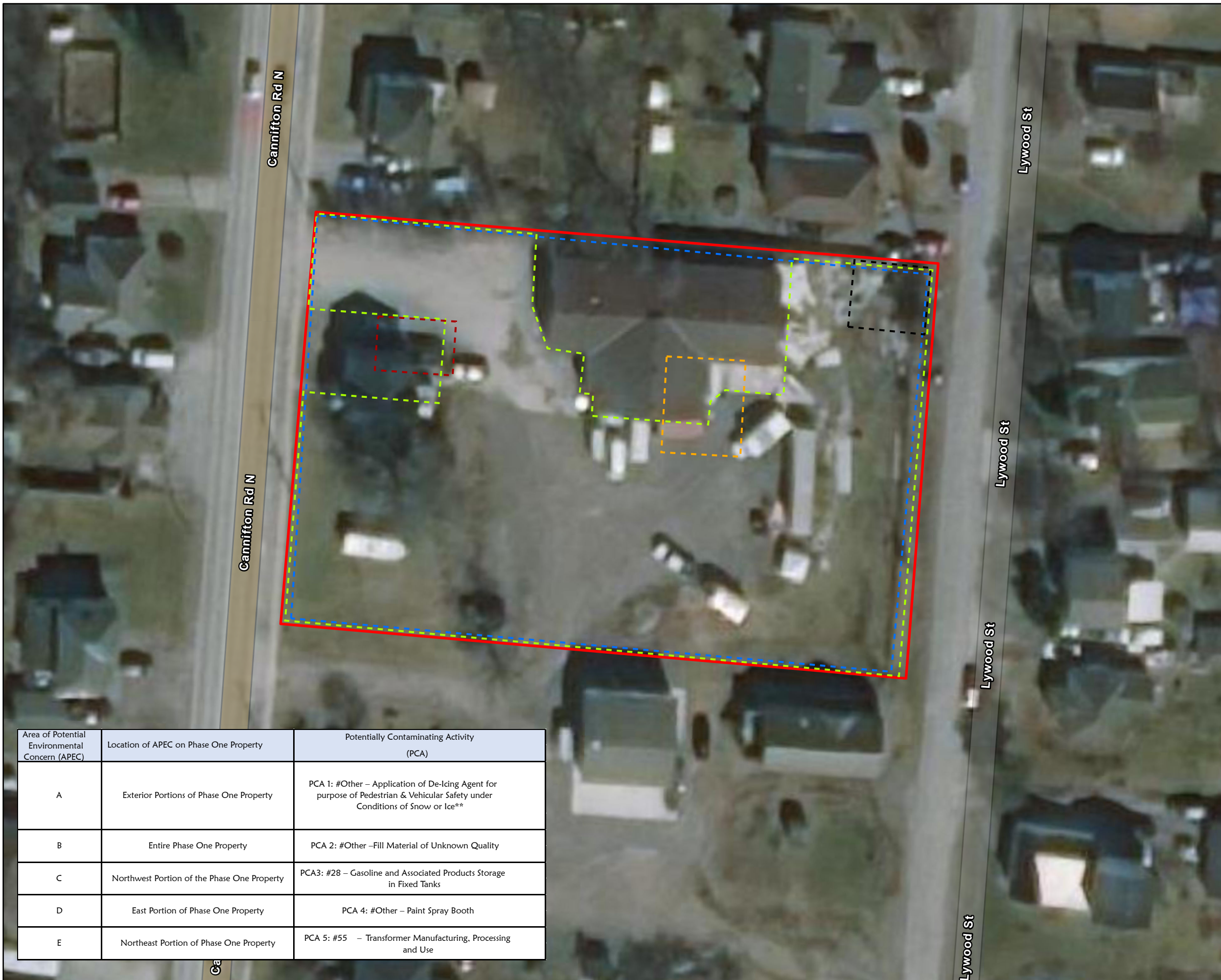
**CLIENT**  
**2267178 Ontario Inc.**

**PROJECT**  
**Phase Two Environmental Site Assessment  
84 Cannifton Road**

**TITLE**  
**MECP Well Records**

**BluMetric Environmental**  
 825 Milner Avenue  
 Scarborough ON M1B 3C3  
 Tel: 416-383-0957  
 Fax: 416-383-0956  
 Email: info@blumetric.ca  
 Web: http://www.blumetric.ca

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<b>DRAWN</b> MB	<b>CHECKED</b> JK	<b>FIG NO.</b> 05	<b>REV</b> 1



**LEGEND**

Phase One Property Boundary

**Area of Potential Environmental Concern (APEC)**

- APEC A
- APEC B
- APEC C
- APEC D
- APEC E

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REV.	DESCRIPTION	YY/MM/DD	BY	CHK

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0 10 20 Metres

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**Phase Two Environmental Site Assessment  
84 Cannifton Road**

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**Conceptual Site Model:  
Phase One Property**

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<b>PROJECT #</b> 220456	<b>DATE</b> February 10, 2023
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<b>DRAWN</b> MB	<b>CHECKED</b> JK	<b>FIG NO.</b> 06a	<b>REV</b> 2
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Area of Potential Environmental Concern (APEC)	Location of APEC on Phase One Property	Potentially Contaminating Activity (PCA)
A	Exterior Portions of Phase One Property	PCA 1: #Other – Application of De-Icing Agent for purpose of Pedestrian & Vehicular Safety under Conditions of Snow or Ice**
B	Entire Phase One Property	PCA 2: #Other – Fill Material of Unknown Quality
C	Northwest Portion of the Phase One Property	PCA3: #28 – Gasoline and Associated Products Storage in Fixed Tanks
D	East Portion of Phase One Property	PCA 4: #Other – Paint Spray Booth
E	Northeast Portion of Phase One Property	PCA 5: #55 – Transformer Manufacturing, Processing and Use



**LEGEND**

**Potential Contaminating Activity (PCA)**

- 27 - Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles
- 28 - Gasoline and Associated Products Storage in Fixed Tanks
- 55 - Transformer Manufacturing, Processing and Use
- Other - Application of De-Icing Agent for purpose of Pedestrian & Vehicular Safety under Conditions of Snow or Ice
- Other - Fill material of unknown quality
- Other - Paint Spray Booth
- Other - Spill Incident
- Other - Subject Waste Generator
- Phase One Property Boundary
- Phase One Study Area

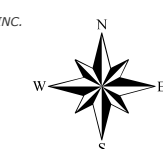
**Land Use**

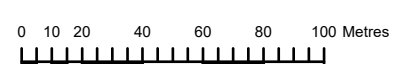
- Agricultural or Other Use
- Commercial Use
- Industrial Use
- Moira River
- Residential Use
- Woodlands

1				
REV.	DESCRIPTION	YY/MM/DD	BY	CHK

**REFERENCES**

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84 Cannifton Road**

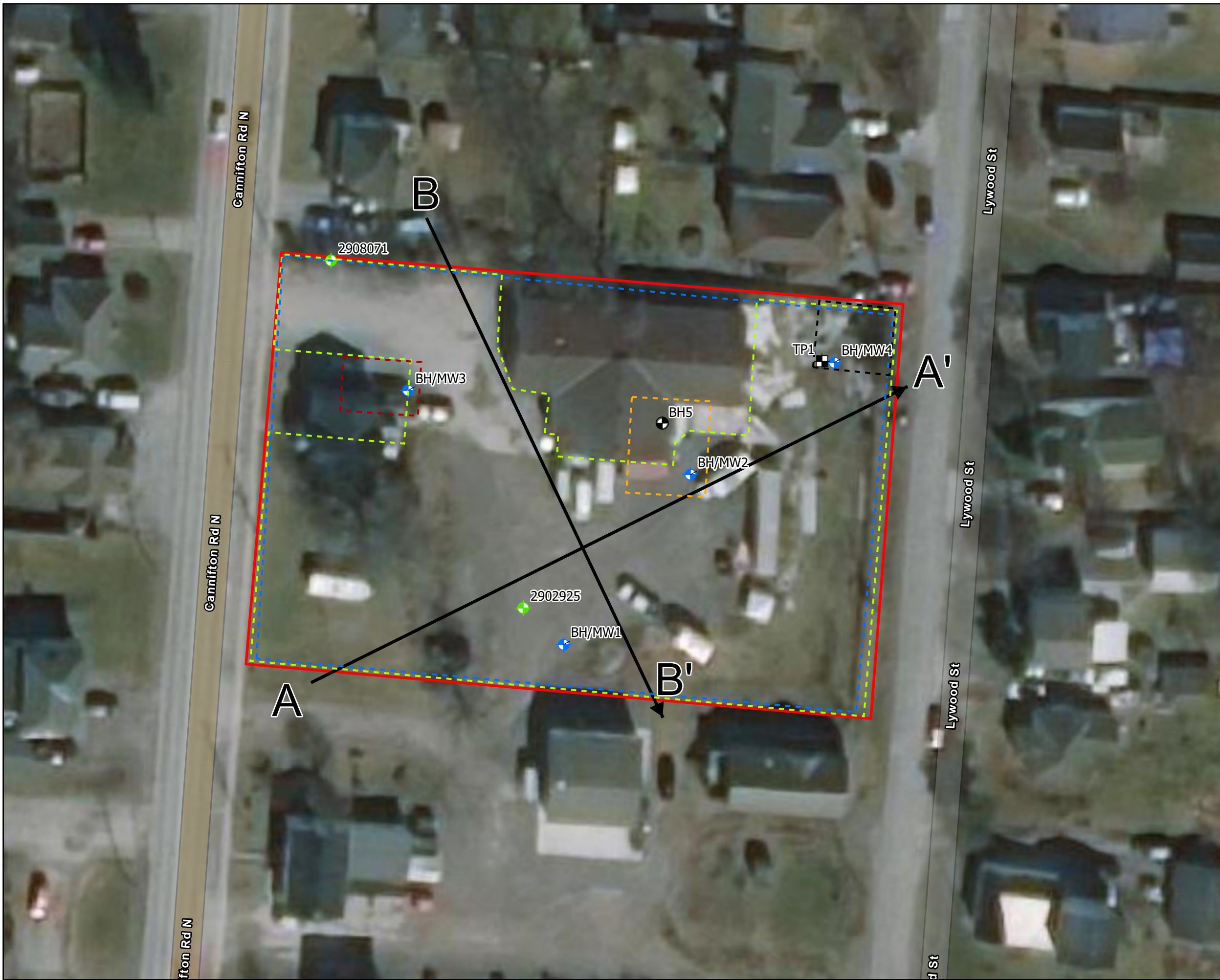
**TITLE**

**Conceptual Site Model:  
Phase One Study Area**



825 Milner Avenue  
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Tel: 416-383-0957  
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<b>PROJECT #</b> 220456		<b>DATE</b> February 01, 2023	
<b>DRAWN</b> MB	<b>CHECKED</b> JK	<b>FIG NO.</b> 06b	<b>REV</b> 1



**LEGEND**

- Borehole (BluMetric, 2023)
- Borehole with Monitoring Well (BluMetric, 2022)
- Potable Water or Agricultural Supply Well (MECP)
- Test Pit (BluMetric, 2022)
- Cross Section
- Phase Two Property Boundary
- APEC A
- APEC B
- APEC C
- APEC D
- APEC E

1				
REV.	DESCRIPTION	YY/MM/DD	BY	CHK

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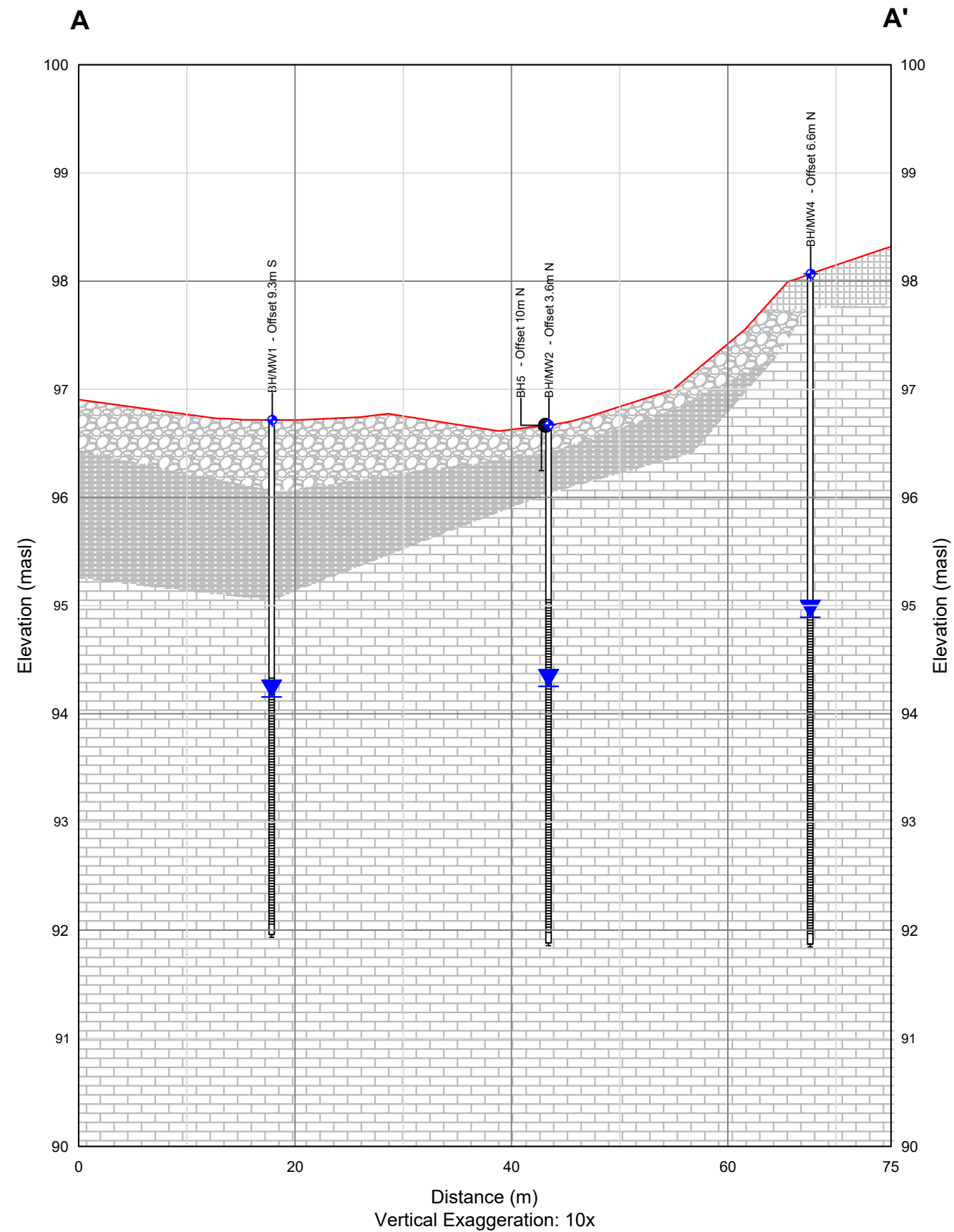
**PROJECT**  
 Phase Two Environmental Site Assessment  
 84 Cannifton Road

**TITLE**  
 Borehole and Profile Locations

825 Milner Avenue  
 Scarborough ON M1B 3C3  
 Tel: 416-383-0957  
 Fax: 416-383-0956  
 Email: info@blumetric.ca  
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<b>PROJECT #</b> 220456		<b>DATE</b> June 05, 2023	
<b>DRAWN</b> ZS	<b>CHECKED</b> JK	<b>FIG NO.</b> 07	<b>REV</b> 2

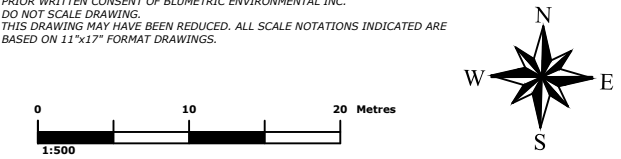




- LEGEND**
- ◆ Borehole with Monitoring Well (BluMetric, 2022)
  - Borehole (BluMetric, 2023)
  - ▼ Water Level
  - Topsoil
  - Clay
  - Gravel
  - Limestone Bedrock

1				
REV.	DESCRIPTION	YY/MM/DD	BY	CHK

**REFERENCES**  
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**2267178 Ontario Inc.**

**PROJECT**

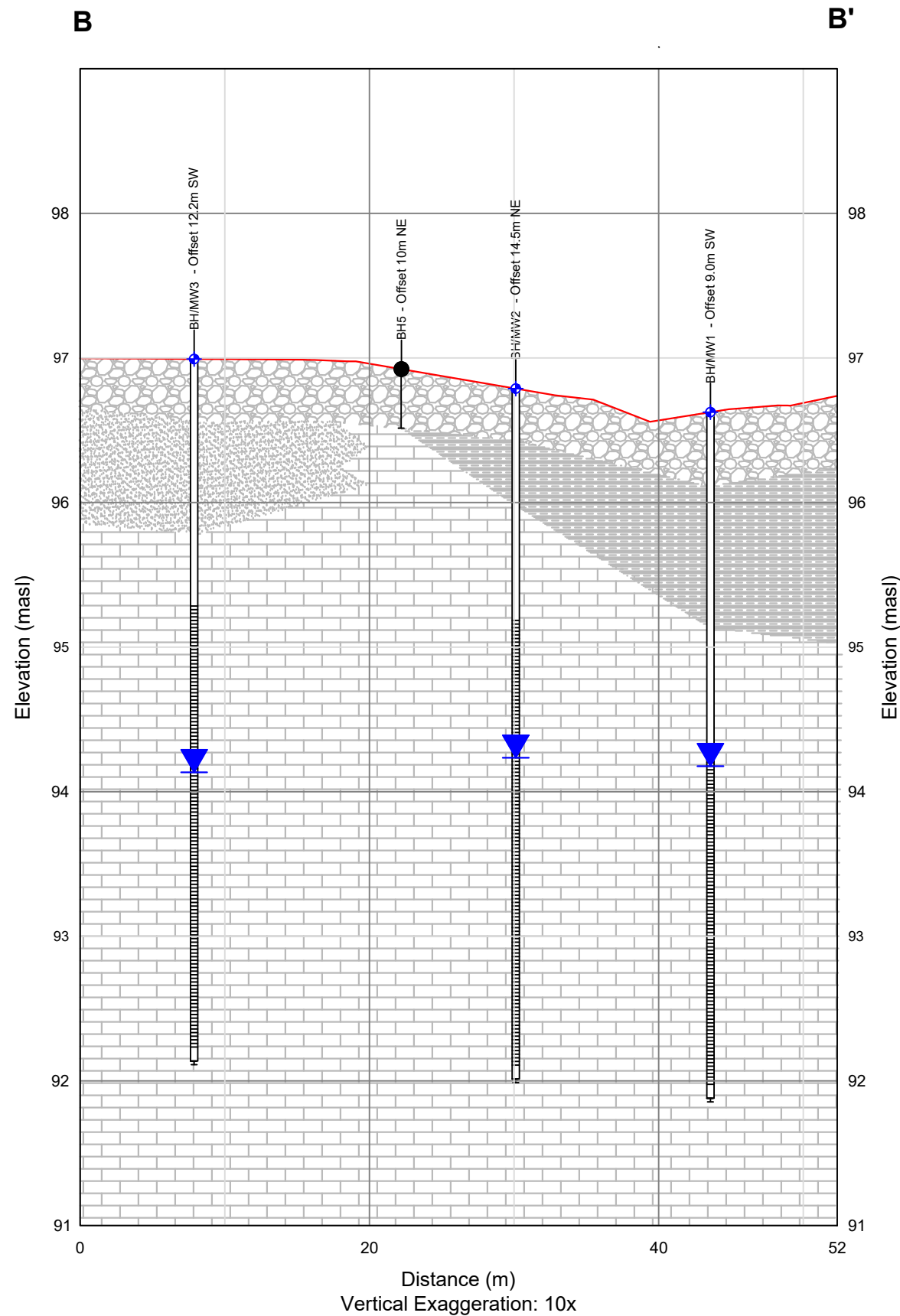
**Phase Two Environmental Site Assessment  
84 Cannifton Road**

**TITLE**

**General Stratigraphy  
Cross-Section A-A'**

825 Milner Avenue  
 Scarborough, Ontario, M1B 3C3  
 TEL: (887) 487-8436 or (416) 383-0720  
 Email: info@blumetric.ca  
 Web: http://www.blumetric.ca

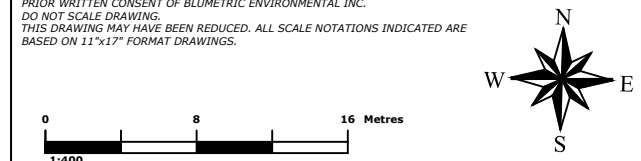
<b>PROJECT #</b> 220456		<b>DATE</b> June 5, 2023		
<b>DRAWN</b> ZS	<b>CHECKED</b> JK	<b>DWG NO.</b> 08a	<b>REV</b> 2	



- LEGEND**
- Borehole with Monitoring Well (BluMetric, 2022)
  - Borehole (BluMetric, 2023)
  - Water Level
  - Topsoil
  - Clay
  - Gravel
  - Limestone Bedrock

REV.	DESCRIPTION	YY/MM/DD	BY	CHK
1				

**REFERENCES**  
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**PROJECT**

**Phase Two Environmental Site Assessment  
84 Cannifton Road**

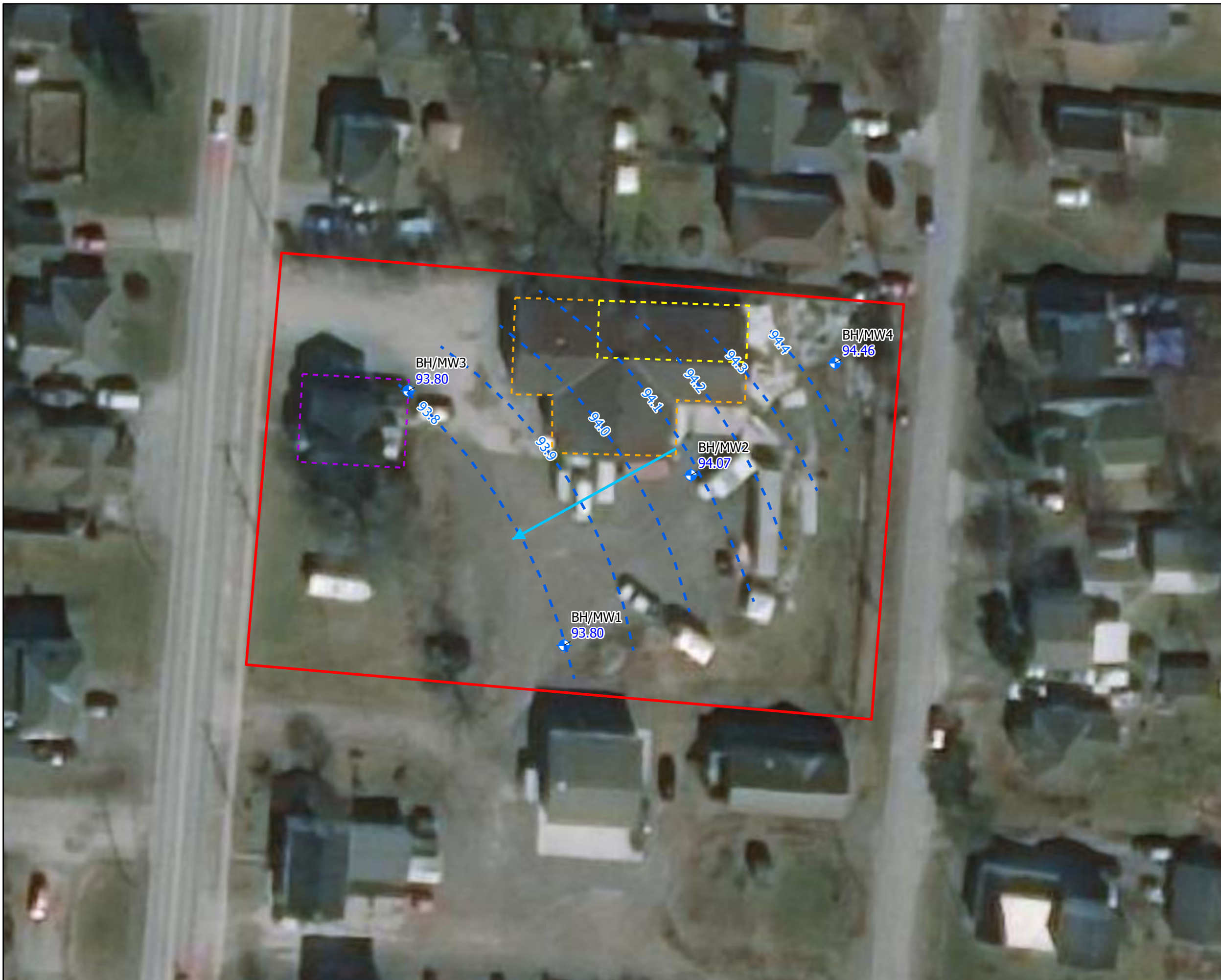
**TITLE**








**General Stratigraphy  
Cross-Section B-B'**

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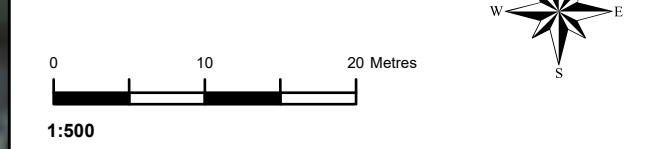
<b>PROJECT #</b> 220456		<b>DATE</b> June 5, 2023	
<b>DRAWN</b> ZS	<b>CHECKED</b> JK	<b>DWG NO.</b> 08b	<b>REV</b> 2



- LEGEND**
-  Borehole with Monitoring Well (BluMetric, 2022)
  -  Inferred Groundwater Contour
  -  Inferred Direction of Groundwater Flow
  -  Phase Two Property Boundary
  -  Workshop Building (Existing Footprint)
  -  Dwelling (circa early 1900s)
  -  Workshop Building (1960s)
  - 94.46** Water Level Elevation (October 27, 2022)

1				
REV.	DESCRIPTION	YY/MM/DD	BY	CHK

**REFERENCES**  
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**PROJECT**  
**Phase Two Environmental Site Assessment  
 84 Cannifton Road**

**TITLE**  
**Groundwater Elevations and Flow Model  
 (October 27, 2022)**

 825 Milner Avenue  
 Scarborough ON M1B 3C3  
 Tel: 416-383-0957  
 Fax: 416-383-0956  
 Email: info@blumetric.ca  
 Web: http://www.blumetric.ca

<b>PROJECT #</b> 220456		<b>DATE</b> February 13, 2023	
<b>DRAWN</b> MB	<b>CHECKED</b> JK	<b>FIG NO.</b> 09a	<b>REV</b> 2



**LEGEND**

- Borehole (BluMetric, 2023)
- Borehole with Monitoring Well (BluMetric, 2022)
- Inferred Bedrock Elevation Contour
- Phase Two Property Boundary
- Workshop Building (Existing Footprint)
- Dwelling (circa early 1900s)
- Workshop Building (1960s)

1				
REV.	DESCRIPTION	YY/MM/DD	BY	CHK

**REFERENCES**  
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**PROJECT**

**Phase Two Environmental Site Assessment  
84 Cannifton Road**

**TITLE**

**Bedrock Elevations**

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 Fax: 416-383-0956  
 Email: info@blumetric.ca  
 Web: http://www.blumetric.ca

<b>PROJECT #</b> 220456		<b>DATE</b> June 05, 2023	
<b>DRAWN</b> ZS	<b>CHECKED</b> JK	<b>FIG NO.</b> 09b	<b>REV</b> 2



**LEGEND**

- Borehole (BluMetric, 2023)
- Borehole with Monitoring Well (BluMetric, 2022)
- Test Pit (BluMetric, 2022)
- Measured Concentration Below Applicable SCS
- Measured Concentration Above Applicable SCS
- Phase Two Property Boundary

**Area of Potential Environmental Concern (APEC)**

- APEC A
- APEC B
- APEC C
- APEC D
- APEC E

1				
REV.	DESCRIPTION	YY/MM/DD	BY	CHK

**REFERENCES**  
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0 10 20 Metres

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**CLIENT**

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**PROJECT**

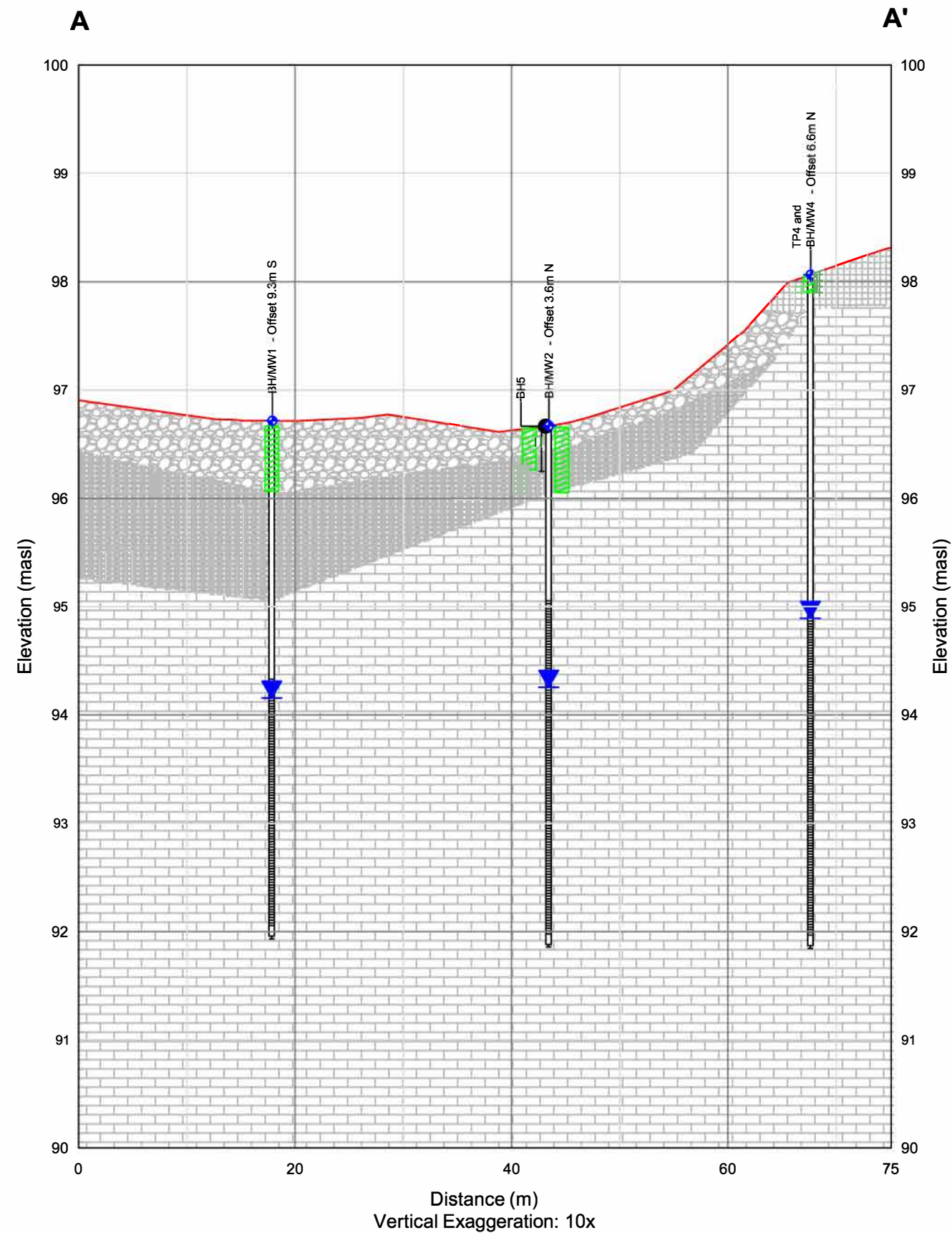
**Phase Two Environmental Site Assessment  
84 Cannifton Road**

**TITLE**

**Summary of Impacts in Soil - Metals and Hydride-Forming Metals; ORPs (B(HWS)CrVI, CN, Cl<sup>-</sup>, Hg, EC, pH, SAR, ); PHC; BTEX; PAH; VOC and THM; and PCB**

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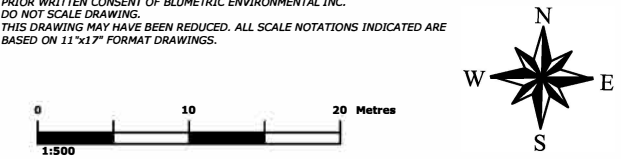
<b>PROJECT #</b> 220456		<b>DATE</b> June 08, 2023	
<b>DRAWN</b> ZS	<b>CHECKED</b> JK	<b>FIG NO.</b> 10a	<b>REV</b> 2



- LEGEND**
- Borehole with Monitoring Well (BluMetric, 2022)
  - Borehole (BluMetric, 2023)
  - Water Level
  - Topsoil
  - Clay
  - Sand
  - Gravel
  - Limestone Bedrock
  - Measured Concentration Below Applicable SCS

REV.	DESCRIPTION	YY/MM/DD	BY	CHK

**REFERENCES**  
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**PROJECT**

**Phase Two Environmental Site Assessment  
84 Cannifton Road**

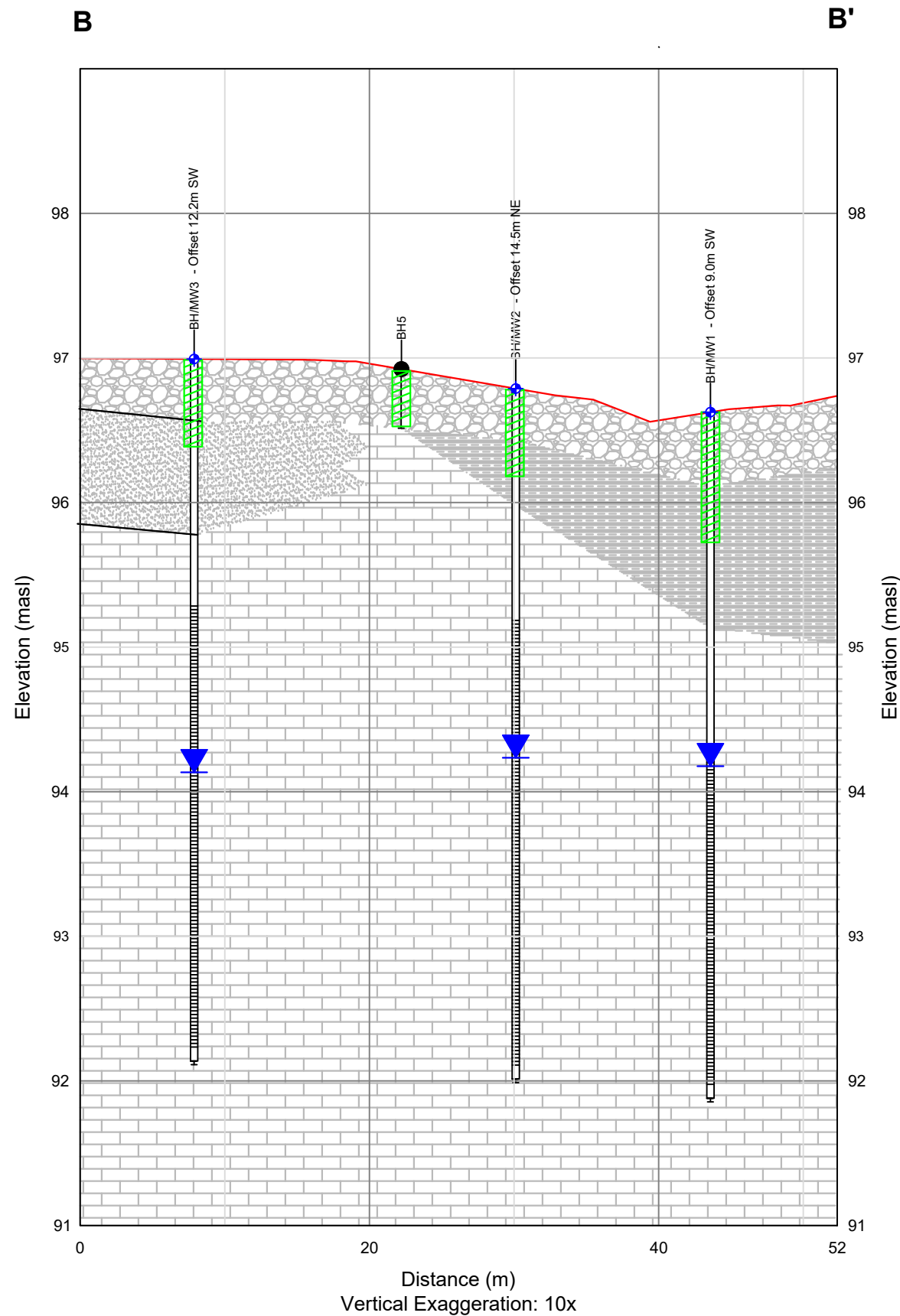
**TITLE**

Cross-Section A-A' - Lateral & Vertical Distribution of Contaminants in Soil - Metals and Hydride Forming Metals; ORPs ( B(HWS), CrVI, CN, Cl-, Hg, EC, pH, SAR); PHC; BTEX; PAH; VOC and THM; and PCB

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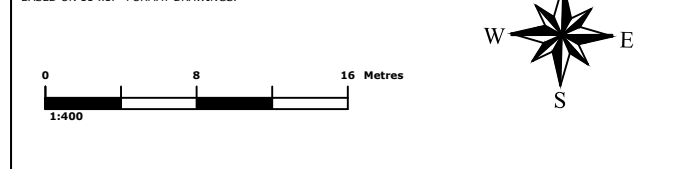
<b>PROJECT #</b> 220456		<b>DATE</b> June 5, 2023	
<b>DRAWN</b> ZS	<b>CHECKED</b> JK	<b>DWG NO.</b> 10b	<b>REV</b> 2



- LEGEND**
- Borehole with Monitoring Well (BluMetric, 2022)
  - Borehole (BluMetric, 2023)
  - Water Level
  - Topsoil
  - Clay
  - Sand
  - Gravel
  - Limestone Bedrock
  - Measured Concentration Below Applicable SCS

1				
REV.	DESCRIPTION	YY/MM/DD	BY	CHK

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**PROJECT**

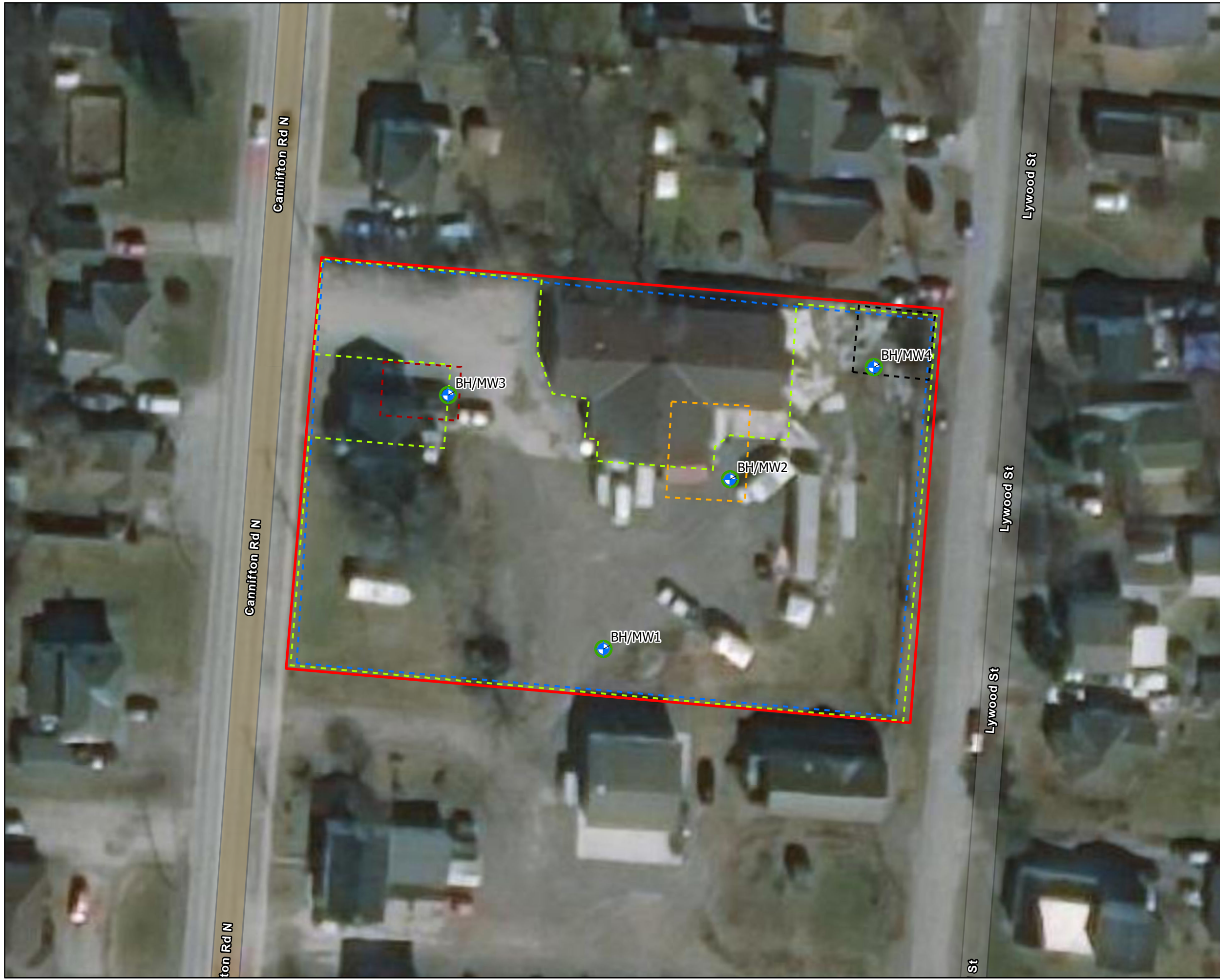
**Phase Two Environmental Site Assessment  
84 Cannifton Road**

**TITLE**

Cross-Section A-A' - Lateral & Vertical Distribution of Contaminants in Soil - Metals and Hydride Forming Metals; ORPs (B(HWS), CrVI, CN, Cl-, Hg, EC, pH, SAR); PHC; BTEX; PAH; VOC and THM; and PCB

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<b>PROJECT #</b> 220456		<b>DATE</b> June 5, 2023	
<b>DRAWN</b> ZS	<b>CHECKED</b> JK	<b>DWG NO.</b> 10c	<b>REV</b> 2



**LEGEND**

- Borehole with Monitoring Well (BluMetric, 2022)
- Measured Concentration Below Applicable SCS
- Measured Concentration Above Applicable SCS
- Phase Two Property Boundary

**Area of Potential Environmental Concern (APEC)**

- APEC A
- APEC B
- APEC C
- APEC D
- APEC E

1				
REV.	DESCRIPTION	YY/MM/DD	BY	CHK

**REFERENCES**  
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**Phase Two Environmental Site Assessment  
84 Cannifton Road**

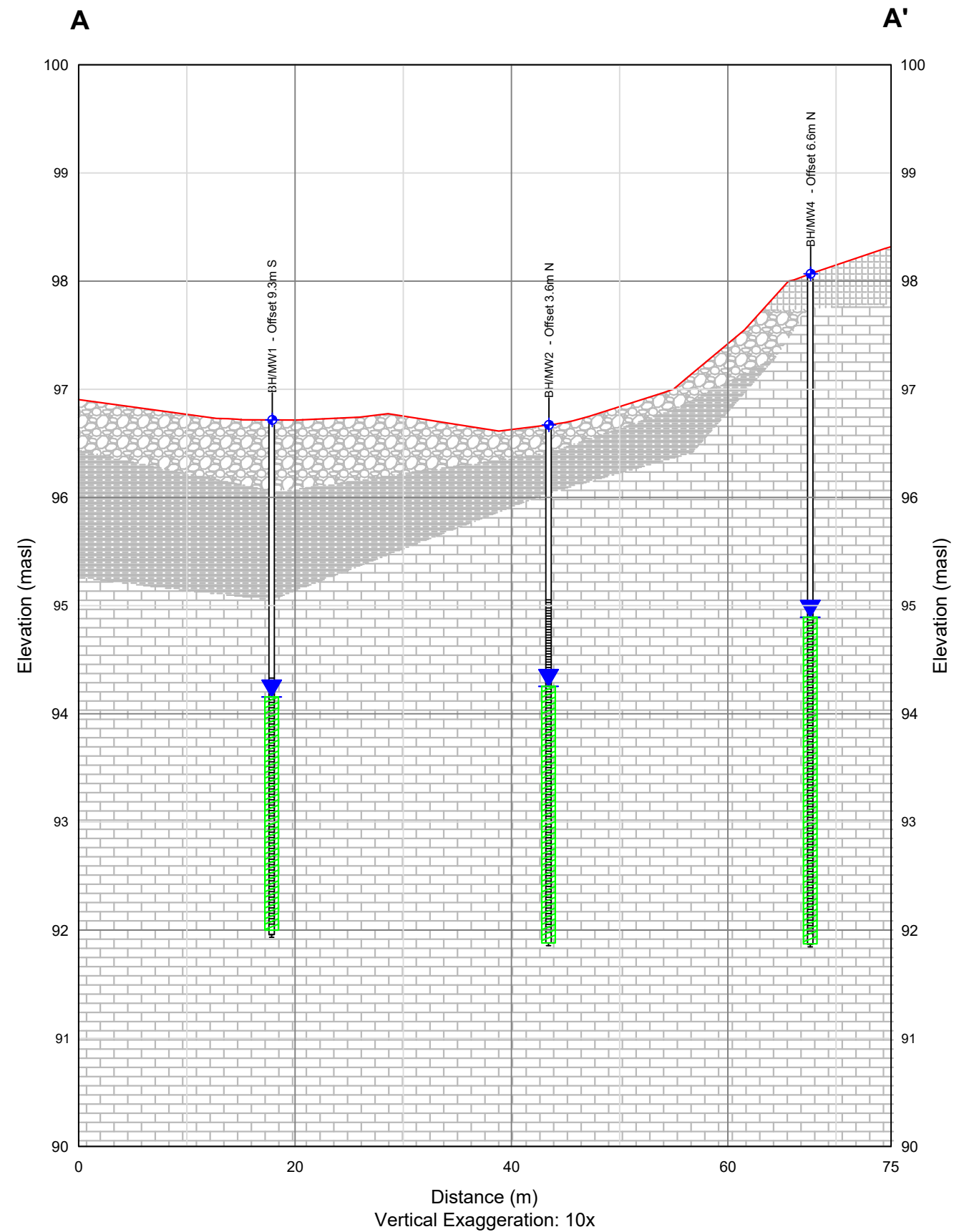
**TITLE**

**Summary of Impacts in Groundwater - Metals and Hydride-Forming Metals; ORPs (CrVI, CN, Cl<sup>-</sup>, Hg, EC, pH, Na); PHC; BTEX; PAH; VOC and THM; and PCB**

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<b>PROJECT #</b> 220456		<b>DATE</b> February 10, 2023	
<b>DRAWN</b> MB	<b>CHECKED</b> JK	<b>FIG NO.</b> 11a	<b>REV</b> 1

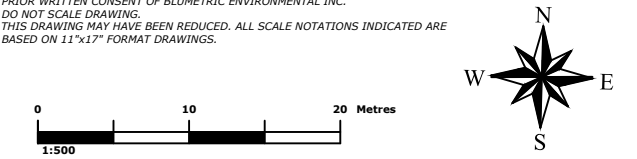




- LEGEND**
- Borehole with Monitoring Well (BluMetric, 2022)
  - Water Level
  - Topsoil
  - Clay
  - Gravel
  - Limestone Bedrock
  - Measured Concentration Below Applicable SCS

1				
REV.	DESCRIPTION	YY/MM/DD	BY	CHK

**REFERENCES**  
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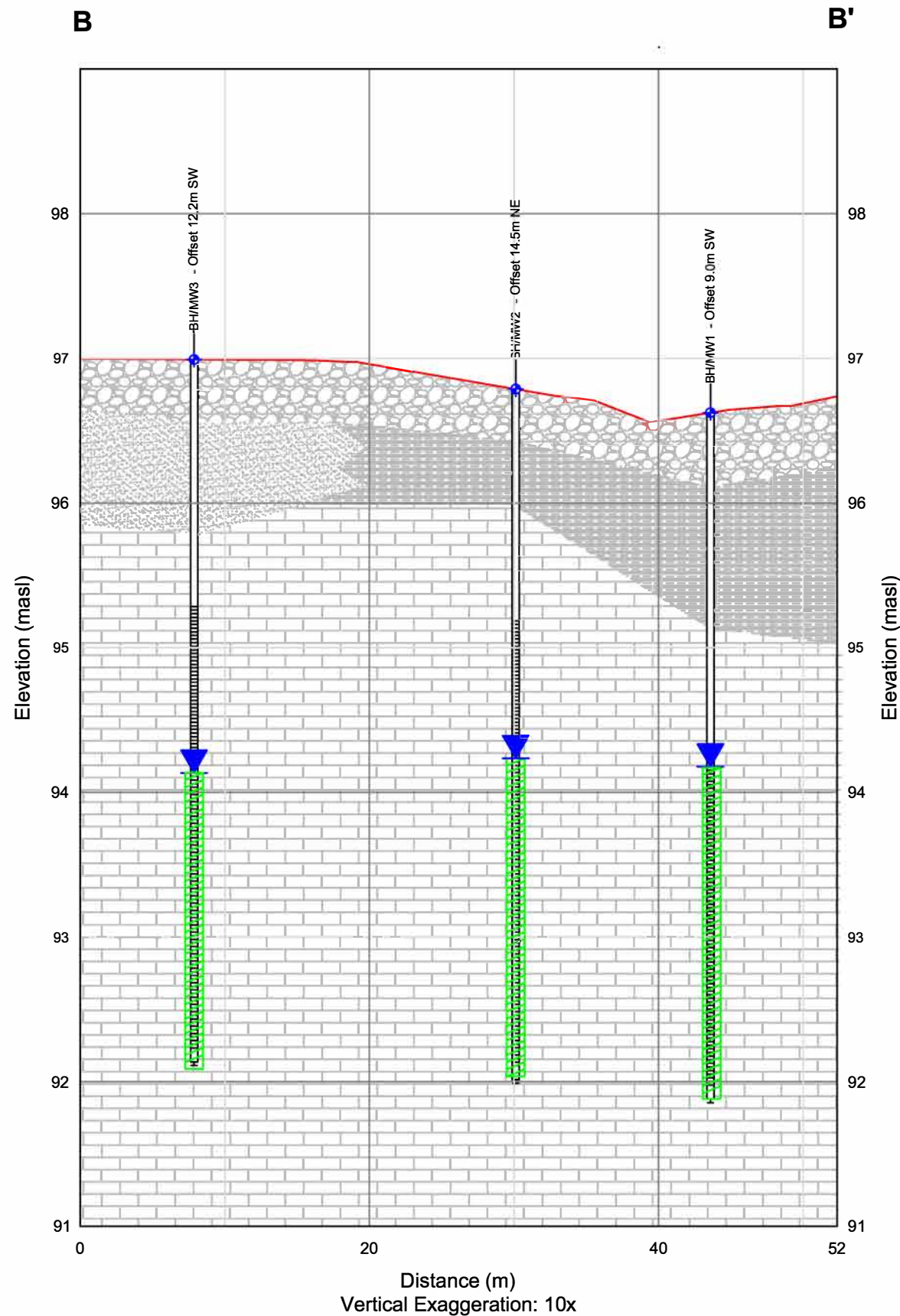
**Phase Two Environmental Site Assessment  
84 Cannifton Road**

**TITLE**

Cross-Section A-A' - Lateral & Vertical Distribution of Contaminants in Soil - Metals and Hydride Forming Metals; ORPs (CrVI, CN, Cl-, Hg, EC, pH, SAR); PHC; BTEX; PAH; VOC and THM; and **PCB**

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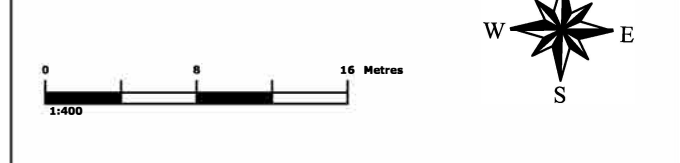
<b>PROJECT #</b> 220456		<b>DATE</b> February 10, 2023	
<b>DRAWN</b> MB	<b>CHECKED</b> JK	<b>DWG NO.</b> 11b	<b>REV</b> 2



- LEGEND**
- Borehole with Monitoring Well (BluMetric, 2022)
  - Water Level
  - Topsoil
  - Clay
  - Sand
  - Gravel
  - Limestone Bedrock
  - Measured Concentration Below Applicable SCS

REV.	DESCRIPTION	YY/MM/DD	BY	CHK

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**PROJECT**

**Phase Two Environmental Site Assessment  
84 Cannifton Road**

**TITLE**

Cross-Section B-B' - Lateral & Vertical Distribution of Contaminants in Groundwater - Metals and Hydride Forming Metals; ORPs (CrVI, CN, Cl-, Hg, EC, pH, SAR); BTEX; PAH; VOC and THM; and PCB

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<b>PROJECT #</b> 220456		<b>DATE</b> February 10, 2023	
<b>DRAWN</b> MB	<b>CHECKED</b> JK	<b>DWG NO.</b> 11c	<b>REV</b> 2

## TABLES



**TABLE 1: Static Groundwater Level Measurements**  
**Phase Two ESA - 84 Cannifton Road, Belleville**

Well ID	Top of PVC Elev.	Ground Surface Elev.	Top of Screen Elev.	Bottom of Screen Elev.	Bedrock Refusal Elev.	Date	Water Depth	Water Level Elev.
	(masl)	(masl)	(masl)	(masl)	(masl)		(mbTPVC)	(masl)
BH/MW1	96.440	96.525	94.775	91.725	95.025	27-Oct-22	2.640	93.800
BH/MW2	96.568	96.633	94.883	91.833	96.033	27-Oct-22	2.495	94.073
BH/MW3	96.770	96.873	95.023	91.973	95.973	27-Oct-22	2.970	93.800
BH/MW4	97.782	98.889	95.739	92.689	98.739	27-Oct-22	3.320	94.462

Notes:

Benchmark Elevation - 100.00 m

N/A - not applicable/not measured

masl - metres above sea level

mbTPVC - metres below top of PVC

HSVL - headspace vapour level measured using RKI Eagle 2 Portable Gas Detector calibrated to Hexane standard

**TABLE 2: Soil Quality Results**  
**Phase Two ESA - 84 Cannifton Road North, Belleville, ON**

Parameter	Regulation*	Sample ID (Depth in metres)						
		BH/MW1 (0.0 - 0.6)	BH/MW2 (0.0 - 0.6)	BH/MW3 (0.7 - 0.9)	TP1 (at MW4) (0.0 - 0.15)	Dup 1 (TP1) (0.0 - 0.15)	BH5 (0.0 - 0.41)	QAQC 1 (BH5) (0.0 - 0.41)
Sample Date (m/d/y)	Reg 153/04 (2011) Table 6 Residential, coarse	6-Oct-22	6-Oct-22	6-Oct-22	18-Oct-22	18-Oct-22	15-May-23	15-May-23
<b>Metals</b>								
Barium	390	207	118	99.2	96.9	98.6	53.8	71.8
Beryllium	4	1	0.6	0.7	0.7	0.8	<0.5	<0.5
Boron	120	21	16	21	13	15	<5	<5
Cadmium	1.2	<0.5	<0.5	<0.5	0.5	0.6	<0.5	<0.5
Chromium	160	42	29	29	29	31	12	16
Cobalt	22	11.3	7.8	7	7.3	7.3	10.3	13.4
Copper	140	23.7	25.4	16.1	27.1	26.8	9.5	11.6
Lead	120	25	46	47	65	64	3	5
Molybdenum	6.9	0.8	0.9	<0.5	<0.5	<0.5	<0.5	<0.5
Nickel	100	28	17	14	15	16	9	11
Silver	20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	23	0.7	<0.50	<0.50	<0.50	0.55	<0.50	0.61
Vanadium	86	42.2	29.9	24.8	24.5	24.9	22	26.7
Zinc	340	84	174	72	124	125	22	29
<b>Hydride-Forming Metals</b>								
Antimony	7.5	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	18	12	4	4	3	3	1	2
Selenium	2.4	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
<b>Other Regulated Parameters</b>								
Boron (Hot Water Soluble)	1.5	1.15	1.5	0.61	0.32	0.46	0.1	0.15
Cyanide, WAD	0.051	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Chromium, Hexavalent	8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Mercury	0.27	0.11	0.11	0.14	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	0.7	0.311	0.264	0.229	0.191	0.209	0.101	0.153
Sodium Adsorption Ratio (2:1) (Calc.)	5	0.893	0.261	0.291	0.09	0.084	0.145	0.67
pH, 2:1 CaCl2 Extraction	N/A	7.42	7.54	7.63	6.88	6.86	7.61	7.69
<b>PHCs</b>								
F1 (C6 - C10)	55	11	<5	<5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	NG	11	<5	<5	<5	<5	<5	<5
F2 (C10 to C16)	98	<10	<10	<10	<10	<10	<10	<10
F2 (C10 to C16) minus Naphthalene	NG	<10	<10	<10	<10	<10	<10	<10
F3 (C16 to C34)	300	<50	<50	<50	<50	<50	<50	<50
F3 (C16 to C34) minus PAHs	NG	<50	<50	<50	<50	<50	<50	<50
F4 (C34 to C50)	2800	<50	<50	<50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	2800	NA	NA	NA	NA	NA	NA	NA
<b>BTEX</b>								
Benzene	0.21	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Toluene	2.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	1.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
m & p-Xylene	N/A	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	N/A	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylene Mixture	3.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
<b>PAH</b>								
Naphthalene	0.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

**TABLE 2: Soil Quality Results**  
**Phase Two ESA - 84 Cannifton Road North, Belleville, ON**

Parameter	Regulation*	Sample ID (Depth in metres)						
		BH/MW1 (0.0 - 0.6)	BH/MW2 (0.0 - 0.6)	BH/MW3 (0.7 - 0.9)	TP1 (at MW4) (0.0 - 0.15)	Dup 1 (TP1) (0.0 - 0.15)	BH5 (0.0 - 0.41)	QAQC 1 (BH5) (0.0 - 0.41)
Sample Date (m/d/y)	Reg 153/04 (2011) Table 6 Residential, coarse	6-Oct-22	6-Oct-22	6-Oct-22	18-Oct-22	18-Oct-22	15-May-23	15-May-23
Acenaphthylene	0.15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	7.9	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	62	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	6.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	0.67	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	0.69	0.14	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	78	0.12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benz(a)anthracene	0.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	0.78	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	0.78	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	0.38	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	6.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1 and 2 Methylnaphthalene	0.99	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
<b>VOCs</b>								
Acetone	16	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromomethane	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorobenzene	2.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloroform	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
1,2-Dichlorobenzene	1.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	4.8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	0.083	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorodifluoromethane	16	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	0.47	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloroethane	0.05	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
1,1-Dichloroethylene	0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Cis- 1,2-Dichloroethylene	1.9	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Trans- 1,2-Dichloroethylene	0.084	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichloropropane	0.05	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
1,3-Dichloropropene (Cis + Trans)	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
n-Hexane	2.8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl Ethyl Ketone	16	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	1.7	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl tert-butyl Ether	0.75	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	0.7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	0.058	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
1,1,2,2-Tetrachloroethane	0.058	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethylene	0.28	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1-Trichloroethane	0.38	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2-Trichloroethane	0.05	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Trichloroethylene	0.061	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03

**TABLE 2: Soil Quality Results**  
**Phase Two ESA - 84 Cannifton Road North, Belleville, ON**

Parameter	Regulation*	Sample ID (Depth in metres)						
		BH/MW1 (0.0 - 0.6)	BH/MW2 (0.0 - 0.6)	BH/MW3 (0.7 - 0.9)	TP1 (at MW4) (0.0 - 0.15)	Dup 1 (TP1) (0.0 - 0.15)	BH5 (0.0 - 0.41)	QAQC 1 (BH5) (0.0 - 0.41)
Sample Date (m/d/y)	Reg 153/04 (2011) Table 6 Residential, coarse	6-Oct-22	6-Oct-22	6-Oct-22	18-Oct-22	18-Oct-22	15-May-23	15-May-23
Trichlorofluoromethane	4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
<b>Trihalomethanes</b>								
Bromodichloromethane	1.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	2.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromoform	0.27	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
<b>PCBs (total)</b>								
Polychlorinated Biphenyls	0.35	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

Notes:

Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act April 15, 2011

Denotes exceeds O. Reg. 153/04 Table 6 Generic Site Condition Standards for Shallow Soils in a Potable Ground Water Condition, Residential/Parkland/Institutional Property Use, coarse textured soils

**TABLE 3: Groundwater Quality Analytical Results**  
**Phase Two ESA - 84 Cannifton Road North, Belleville, ON**

Parameter	Units	MDL	Regulation*	Sample ID (Depth in metres)				
				MW1	MW2	MW3	Dup 2 (MW3)	MW4
Sample Date (m/d/y)			Reg 153/04 (2011)- Table 6 Potable Ground Water (µg/L)	27-Oct-22	18-Oct-22	18-Oct-22	18-Oct-22	18-Oct-22
<b>Metals</b>								
Dissolved Barium	µg/L	2.0	1000	49.3	99.5	39.5	34.3	309
Dissolved Beryllium	µg/L	0.50	4	<0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Boron	µg/L	10.0	5000	143	166	94.3	97.8	221
Dissolved Cadmium	µg/L	0.20	2.1	<0.20	<0.20	<0.20	<0.20	<0.20
Dissolved Chromium	µg/L	2.0	50	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Cobalt	µg/L	0.50	3.8	<0.50	<0.50	<0.50	<0.50	0.54
Dissolved Copper	µg/L	1.0	69	1.2	1.3	2.5	2	3.5
Dissolved Lead	µg/L	0.50	10	<0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Molybdenum	µg/L	0.50	70	1.31	2.51	0.66	0.57	0.77
Dissolved Nickel	µg/L	1.0	100	<1.0	3.8	1.1	1.1	4.6
Dissolved Silver	µg/L	0.20	1.2	<0.20	<0.20	<0.20	<0.20	<0.20
Dissolved Thallium	µg/L	0.30	2	<0.30	<0.30	<0.30	<0.30	<0.30
Dissolved Uranium	µg/L	0.50	20	0.58	2.52	<0.50	<0.50	1.17
Dissolved Vanadium	µg/L	0.40	6.2	<0.40	1.8	0.65	0.61	<0.40
Dissolved Zinc	µg/L	5.0	890	<5.0	<5.0	<5.0	<5.0	5.6
<b>Hydride-Forming Metals</b>								
Dissolved Antimony	µg/L	1.0	6	<1.0	<1.0	<1.0	<1.0	<1.0
Dissolved Arsenic	µg/L	1.0	25	<1.0	4	<1.0	<1.0	<1.0
Dissolved Selenium	µg/L	1.0	10	<1.0	<1.0	1.8	1.3	1.7
<b>Other Regulated Parameters</b>								
Chromium VI	µg/L	2.000	25	<2.000	<2.000	<2.000	<2.000	<2.000
Cyanide, WAD	µg/L	2	52	<2	<2	<2	<2	<2
Chloride	µg/L	100	790000	37000	92700	19400	19600	235000
Mercury	µg/L	0.02	0.1	<0.02	<0.02	<0.02	<0.02	<0.02
Electrical Conductivity	µS/cm	2	NG	726	919	715	718	1550
pH	pH Units	NA	NG	7.69	7.73	7.68	7.73	7.83
Dissolved Sodium	µg/L	50	490000	24100	35700	17200	17600	109000
<b>PHCs</b>								
F1 (C6 - C10)	µg/L	25	420	<25	<25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	25	NG	<25	<25	<25	<25	<25
F2 (C10 to C16)	µg/L	100	150	<100	<100	<100	<100	<100
F2 (C10 to C16) minus Naphthalene	µg/L	100	NG	<100	<100	<100	<100	<100
F3 (C16 to C34)	µg/L	100	500	<100	<100	<100	<100	<100
F3 (C16 to C34) minus PAHs	µg/L	100	NG	<100	<100	<100	<100	<100
F4 (C34 to C50)	µg/L	100	500	<100	<100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L	500	NG	NA	NA	NA	NA	NA
<b>BTEX</b>								
Benzene	µg/L	0.20	0.5	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	0.20	24	0.32	<0.20	<0.20	<0.20	0.63
Ethylbenzene	µg/L	0.10	2.4	<0.10	<0.10	<0.10	<0.10	<0.10
m & p-Xylene	µg/L	0.20	NG	<0.20	<0.20	<0.20	<0.20	<0.20
o-Xylene	µg/L	0.10	NG	<0.10	<0.10	<0.10	<0.10	0.52
Xylenes (Total)	µg/L	0.20	72	<0.20	<0.20	<0.20	<0.20	0.52
<b>PAHs</b>								
Naphthalene	µg/L	0.05	7	<0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthylene	µg/L	0.05	1	<0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthene	µg/L	0.05	4.1	<0.20	<0.20	<0.20	<0.20	<0.20
Fluorene	µg/L	0.05	120	<0.20	<0.20	<0.20	<0.20	<0.20
Phenanthrene	µg/L	0.05	500	<0.10	<0.10	<0.10	<0.10	<0.10
Anthracene	µg/L	0.05	1	<0.10	<0.10	<0.10	<0.10	<0.10
Fluoranthene	µg/L	0.05	0.41	<0.20	<0.20	<0.20	<0.20	<0.20
Pyrene	µg/L	0.05	4.1	<0.20	<0.20	<0.20	<0.20	<0.20
Benzo(a)anthracene	µg/L	0.05	1	<0.20	<0.20	<0.20	<0.20	<0.20
Chrysene	µg/L	0.05	0.1	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(b)fluoranthene	µg/L	0.05	0.1	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.05	0.1	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(a)pyrene	µg/L	0.05	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.05	0.2	<0.20	<0.20	<0.20	<0.20	<0.20
Dibenz(a,h)anthracene	µg/L	0.05	0.2	<0.20	<0.20	<0.20	<0.20	<0.20
Benzo(g,h,i)perylene	µg/L	0.05	0.2	<0.20	<0.20	<0.20	<0.20	<0.20
1 and 2 Methylanthracene	µg/L	0.05	3.2	<0.20	<0.20	<0.20	<0.20	<0.20



**TABLE 3: Groundwater Quality Analytical Results**  
**Phase Two ESA - 84 Cannifton Road North, Belleville, ON**

Parameter	Units	MDL	Regulation*	Sample ID (Depth in metres)				
				MW1	MW2	MW3	Dup 2 (MW3)	MW4
Sample Date (m/d/y)			Reg 153/04 (2011)- Table 6 Potable Ground Water (µg/L)	27-Oct-22	18-Oct-22	18-Oct-22	18-Oct-22	18-Oct-22
<b>VOCs</b>								
Acetone	µg/L	1.0	2700	<1.0	<1.0	<1.0	<1.0	<1.0
Bromomethane	µg/L	0.20	0.89	<0.20	<0.20	<0.20	<0.20	<0.20
Carbon Tetrachloride	µg/L	0.20	0.2	<0.20	<0.20	<0.20	<0.20	<0.20
Chlorobenzene	µg/L	0.10	30	<0.10	<0.10	<0.10	<0.10	<0.10
Chloroform	µg/L	0.20	2	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichlorobenzene	µg/L	0.10	3	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	0.10	59	<0.10	<0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.10	0.5	<0.10	<0.10	<0.10	<0.10	<0.10
1,1-Dichloroethane	µg/L	0.30	5	<0.30	<0.30	<0.30	<0.30	<0.30
1,2-Dichloroethane	µg/L	0.20	0.5	<0.20	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethylene	µg/L	0.30	0.5	<0.30	<0.30	<0.30	<0.30	<0.30
cis- 1,2-Dichloroethylene	µg/L	0.20	1.6	<0.20	<0.20	<0.20	<0.20	<0.20
trans- 1,2-Dichloroethylene	µg/L	0.20	1.6	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	0.20	0.58	<0.20	<0.20	<0.20	<0.20	<0.20
1,3-Dichloropropane	µg/L	0.30	0.5	<0.30	<0.30	<0.30	<0.30	<0.30
Ethylene Dibromide	µg/L	0.10	0.2	<0.10	<0.10	<0.10	<0.10	<0.10
n-Hexane	µg/L	0.20	5	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl Ethyl Ketone	µg/L	1.0	1800	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl Isobutyl Ketone	µg/L	1.0	640	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl tert-butyl ether	µg/L	0.20	15	<0.20	<0.20	<0.20	<0.20	<0.20
Methylene Chloride	µg/L	0.30	26	<0.30	<0.30	<0.30	<0.30	<0.30
Styrene	µg/L	0.10	5.4	<0.10	<0.10	<0.10	<0.10	<0.10
1,1,1,2-Tetrachloroethane	µg/L	0.10	1.1	<0.10	<0.10	<0.10	<0.10	<0.10
1,1,1,2,2-Tetrachloroethane	µg/L	0.10	0.5	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.20	0.5	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	0.30	23	<0.30	<0.30	<0.30	<0.30	<0.30
1,1,1,2-Trichloroethane	µg/L	0.20	0.5	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.20	0.5	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	0.40	150	<0.40	<0.40	<0.40	<0.40	<0.40
Dichlorodifluoromethane	µg/L	0.40	590	<0.40	<0.40	<0.40	<0.40	<0.40
Vinyl Chloride	µg/L	0.17	0.5	<0.17	<0.17	<0.17	<0.17	<0.17
<b>Trihalomethanes</b>								
Bromodichloromethane	µg/L	0.20	16	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	0.10	25	<0.10	<0.10	<0.10	<0.10	<0.10
Bromoform	µg/L	0.10	16	<0.10	<0.10	<0.10	<0.10	<0.10
<b>PCBs</b>								
Polychlorinated Biphenyls	µg/L	0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1

**Notes:**

\* - "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" April 15, 2011

NG - No Guideline value

MDL - denotes laboratory method detection limit

< - Denotes less than indicated laboratory method detection limit

Denotes exceeds O. Reg. 153/04 Table 6 Generic Site Condition Standards for Shallow Soils in a Potable Ground Water Condition, Residential/Parkland/Institutional Property Use, coarse textured soils

**TABLE 4: Quality Assurance/Quality Control Results - Soil**  
**Phase Two ESA - 84 Cannifton Road North, Belleville, ON**

Parameter	Units	MDL	Regulation*	Sample ID (Depth in metres)			Sample ID (Depth in metres)		
				TP1 / DUP 1 (0.0 - 0.15)		RPD	BH5/ QAQC 1 (0.0 - 0.41)		RPD
Sample Date (m/d/y)			Reg 153/04 (2011)- Table 6 Residential, coarse	18-Oct-22				15-May-23	
<b>Metals</b>									
Barium	µg/g	2.0	390	96.9	98.6	2	53.8	71.8	29
Beryllium	µg/g	0.4	4	0.7	0.8	13	<0.5	<0.5	nc
Boron	µg/g	5	120	13	15	14	<5	<5	nc
Cadmium	µg/g	0.5	1.2	0.5	0.6	18	<0.5	<0.5	nc
Chromium	µg/g	5	160	29	31	7	12	16	29
Cobalt	µg/g	0.5	22	7.3	7.3	0	10.3	13.4	26
Copper	µg/g	1.0	140	27.1	26.8	1	9.5	11.6	-20
Lead	µg/g	1	120	65	64	2	3	5	-50
Molybdenum	µg/g	0.5	6.9	<0.5	<0.5	nc	<0.5	<0.5	nc
Nickel	µg/g	1	100	15	16	6	9	11	20
Selenium	µg/g	0.8	2.4	<0.8	<0.8	nc	<0.8	<0.8	nc
Silver	µg/g	0.5	20	<0.5	<0.5	nc	<0.5	<0.5	nc
Thallium	µg/g	0.5	1	<0.5	<0.5	nc	<0.5	<0.5	nc
Uranium	µg/g	0.50	23	<0.50	0.55	nc	<0.50	0.61	nc
Vanadium	µg/g	0.4	86	24.5	24.9	2	22	26.7	19
Zinc	µg/g	5	340	124	125	1	22	29	27
Chromium, Hexavalent	µg/g	0.2	8	<0.2	<0.2	nc	<0.2	<0.2	nc
<b>Hydride-Forming Metals</b>									
Antimony	µg/g	0.8	7.5	<0.8	<0.8	nc	<0.8	<0.8	nc
Arsenic	µg/g	1	18	3	3	0	1	2	67
<b>Other Regulated Parameters</b>									
Boron (Hot Water Soluble)	µg/g	0.10	1.5	0.32	0.46	36	0.1	0.15	40
Cyanide, WAD	µg/g	0.040	0.051	<0.040	<0.040	nc	<0.040	<0.040	nc
Mercury	µg/g	0.10	0.27	<0.10	<0.10	nc	<0.10	<0.10	nc
Electrical Conductivity (2:1)	mS/cm	0.005	0.7	0.191	0.209	9	0.101	0.153	41
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	N/A	5	0.09	0.084	7	0.145	0.67	129
<b>PHCs</b>									
F1 (C6 - C10)	µg/g	5	55	<5	<5	nc	<5	<5	nc
F1 (C6 to C10) minus BTEX	µg/g	5	NG	<5	<5	nc	<5	<5	nc
Toluene-d8	%	1		96	91	5	100	102	-2
F2 (C10 to C16)	µg/g	10	98	<10	<10	nc	<10	<10	nc
F2 (C10 to C16) minus Naphthalene	µg/g	10	NG	<10	<10	nc	<10	<10	nc
F3 (C16 to C34)	µg/g	50	300	<50	<50	nc	<50	<50	nc
F3 (C16 to C34) minus PAHs	µg/g	50	NG	<50	<50	nc	<50	<50	nc
F4 (C34 to C50)	µg/g	50	2800	<50	<50	nc	<50	<50	nc
Gravimetric Heavy Hydrocarbons	µg/g	50	2800	NA	NA	nc	NA	NA	nc
<b>BTEX</b>									
Benzene	µg/g	0.02	0.21	<0.02	<0.02	nc	<0.02	<0.02	nc
Toluene	µg/g	0.05	2.3	<0.05	<0.05	nc	<0.05	<0.05	nc
Ethylbenzene	µg/g	0.05	1.1	<0.05	<0.05	nc	<0.05	<0.05	nc
m & p-Xylene	µg/g	0.05	N/A	<0.05	<0.05	nc	<0.05	<0.05	nc
o-Xylene	µg/g	0.05	N/A	<0.05	<0.05	nc	<0.05	<0.05	nc
Xylene Mixture	µg/g	0.05	3.1	<0.05	<0.05	nc	<0.05	<0.05	nc
<b>PAH</b>									
Naphthalene	µg/g	0.05	0.6	<0.05	<0.05	nc	<0.05	<0.05	nc
Acenaphthylene	µg/g	0.05	0.15	<0.05	<0.05	nc	<0.05	<0.05	nc
Acenaphthene	µg/g	0.05	7.9	<0.05	<0.05	nc	<0.05	<0.05	nc
Fluorene	µg/g	0.05	62	<0.05	<0.05	nc	<0.05	<0.05	nc
Phenanthrene	µg/g	0.05	6.2	<0.05	<0.05	nc	<0.05	<0.05	nc
Anthracene	µg/g	0.05	0.67	<0.05	<0.05	nc	<0.05	<0.05	nc
Fluoranthene	µg/g	0.05	0.69	<0.05	<0.05	nc	<0.05	<0.05	nc
Pyrene	µg/g	0.05	78	<0.05	<0.05	nc	<0.05	<0.05	nc
Benz(a)anthracene	µg/g	0.05	0.5	<0.05	<0.05	nc	<0.05	<0.05	nc
Chrysene	µg/g	0.05	7	<0.05	<0.05	nc	<0.05	<0.05	nc
Benzo(b)fluoranthene	µg/g	0.05	0.78	<0.05	<0.05	nc	<0.05	<0.05	nc
Benzo(k)fluoranthene	µg/g	0.05	0.78	<0.05	<0.05	nc	<0.05	<0.05	nc
Benzo(a)pyrene	µg/g	0.05	0.3	<0.05	<0.05	nc	<0.05	<0.05	nc
Indeno(1,2,3-cd)pyrene	µg/g	0.05	0.38	<0.05	<0.05	nc	<0.05	<0.05	nc
Dibenz(a,h)anthracene	µg/g	0.05	0.1	<0.05	<0.05	nc	<0.05	<0.05	nc
Benzo(g,h,i)perylene	µg/g	0.05	6.6	<0.05	<0.05	nc	<0.05	<0.05	nc

**TABLE 4: Quality Assurance/Quality Control Results - Soil**  
**Phase Two ESA - 84 Cannifton Road North, Belleville, ON**

Parameter	Units	MDL	Regulation*	Sample ID (Depth in metres)			Sample ID (Depth in metres)		
				TP1 / DUP 1 (0.0 - 0.15)		RPD	BH5/ QAQC 1 (0.0 - 0.41)		RPD
Sample Date (m/d/y)			Reg 153/04 (2011)- Table 6 Residential, coarse	18-Oct-22				15-May-23	
1 and 2 Methylnaphthalene	µg/g	0.05	0.99	<0.05	<0.05	nc	<0.05	<0.05	nc
<b>VOCs</b>									
Acetone	µg/g	0.50	16	<0.50	<0.50	nc	<0.50	<0.50	nc
Bromomethane	µg/g	0.05	N/A	<0.05	<0.05	nc	<0.05	<0.05	nc
Carbon Tetrachloride	µg/g	0.05	0.05	<0.05	<0.05	nc	<0.05	<0.05	nc
Chlorobenzene	µg/g	0.05	2.4	<0.05	<0.05	nc	<0.05	<0.05	nc
Chloroform	µg/g	0.04	0.05	<0.04	<0.04	nc	<0.04	<0.04	nc
1,2-Dichlorobenzene	µg/g	0.05	1.2	<0.05	<0.05	nc	<0.05	<0.05	nc
1,3-Dichlorobenzene	µg/g	0.05	4.8	<0.05	<0.05	nc	<0.05	<0.05	nc
1,4-Dichlorobenzene	µg/g	0.05	0.083	<0.05	<0.05	nc	<0.05	<0.05	nc
Dichlorodifluoromethane	µg/g	0.05	16	<0.05	<0.05	nc	<0.05	<0.05	nc
1,1-Dichloroethane	µg/g	0.02	0.47	<0.02	<0.02	nc	<0.02	<0.02	nc
1,2-Dichloroethane	µg/g	0.03	0.05	<0.03	<0.03	nc	<0.03	<0.03	nc
1,1-Dichloroethylene	µg/g	0.05	0.01	<0.05	<0.05	nc	<0.05	<0.05	nc
Cis- 1,2-Dichloroethylene	µg/g	0.02	1.9	<0.02	<0.02	nc	<0.02	<0.02	nc
Trans- 1,2-Dichloroethylene	µg/g	0.05	0.084	<0.05	<0.05	nc	<0.05	<0.05	nc
1,2-Dichloropropane	µg/g	0.03	0.05	<0.03	<0.03	nc	<0.03	<0.03	nc
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05	0.05	<0.05	<0.05	nc	<0.05	<0.05	nc
Ethylene Dibromide	µg/g	0.04	N/A	<0.04	<0.04	nc	<0.04	<0.04	nc
n-Hexane	µg/g	0.05	2.8	<0.05	<0.05	nc	<0.05	<0.05	nc
Methyl Ethyl Ketone	µg/g	0.50	16	<0.50	<0.50	nc	<0.50	<0.50	nc
Methyl Isobutyl Ketone	µg/g	0.50	1.7	<0.50	<0.50	nc	<0.50	<0.50	nc
Methyl tert-butyl Ether	µg/g	0.05	0.75	<0.05	<0.05	nc	<0.05	<0.05	nc
Methylene Chloride	µg/g	0.05	0.1	<0.05	<0.05	nc	<0.05	<0.05	nc
Styrene	µg/g	0.05	0.7	<0.05	<0.05	nc	<0.05	<0.05	nc
1,1,1,2-Tetrachloroethane	µg/g	0.04	0.058	<0.04	<0.04	nc	<0.04	<0.04	nc
1,1,2,2-Tetrachloroethane	µg/g	0.05	0.058	<0.05	<0.05	nc	<0.05	<0.05	nc
Tetrachloroethylene	µg/g	0.05	0.28	<0.05	<0.05	nc	<0.05	<0.05	nc
1,1,1-Trichloroethane	µg/g	0.05	0.38	<0.05	<0.05	nc	<0.05	<0.05	nc
1,1,2-Trichloroethane	µg/g	0.04	0.05	<0.04	<0.04	nc	<0.04	<0.04	nc
Trichloroethylene	µg/g	0.03	0.061	<0.03	<0.03	nc	<0.03	<0.03	nc
Trichlorofluoromethane	µg/g	0.05	4	<0.05	<0.05	nc	<0.05	<0.05	nc
Vinyl Chloride	µg/g	0.02	0.02	<0.02	<0.02	nc	<0.02	<0.02	nc
<b>Trihalomethanes</b>									
Bromodichloromethane	µg/g	0.05	1.5	<0.05	<0.05	nc	<0.05	<0.05	nc
Dibromochloromethane	µg/g	0.05	2.3	<0.05	<0.05	nc	<0.05	<0.05	nc
Bromoform	µg/g	0.05	0.27	<0.05	<0.05	nc	<0.05	<0.05	nc
<b>PCBs (total)</b>									
Polychlorinated Biphenyls	µg/g	0.1	0.35	<0.1	<0.1	nc	<0.1	<0.1	nc

**TABLE 5: Quality Assurance/Quality Control Results - Groundwater  
Phast Two ESA - 84 Cannifton Road North, Belleville, ON**

Parameter	Units	MDL	Regulation*	Sample ID (Depth in metres)		
				MW3 / DUP 2		RPD
Sample Date (m/d/y)			Reg 153/04 (2011)- Table 6 Residential, coarse	18-Oct-22		
<b>Metals</b>						
Dissolved Barium	µg/L	2.0	1000	39.5	34.3	-14
Dissolved Beryllium	µg/L	0.50	4	<0.50	<0.50	nc
Dissolved Boron	µg/L	10.0	5000	94.3	97.8	4
Dissolved Cadmium	µg/L	0.20	2.1	<0.20	<0.20	nc
Dissolved Chromium	µg/L	2.0	50	<2.0	<2.0	nc
Dissolved Cobalt	µg/L	0.50	3.8	<0.50	<0.50	nc
Dissolved Copper	µg/L	1.0	69	2.5	2	22
Dissolved Lead	µg/L	0.50	10	<0.50	<0.50	nc
Dissolved Molybdenum	µg/L	0.50	70	0.66	0.57	nc
Dissolved Nickel	µg/L	1.0	100	1.1	1.1	0
Dissolved Selenium	µg/L	1.0	10	1.8	1.3	nc
Dissolved Silver	µg/L	0.20	1.2	<0.20	<0.20	nc
Dissolved Thallium	µg/L	0.30	2	<0.30	<0.30	nc
Dissolved Uranium	µg/L	0.50	20	<0.50	<0.50	nc
Dissolved Vanadium	µg/L	0.40	6.2	0.65	0.61	-6
Dissolved Zinc	µg/L	5.0	890	<5.0	<5.0	nc
Dissolved Sodium	µg/L	50	490000	17200	17600	nc
<b>Hydride-Forming Metals</b>						
Dissolved Antimony	µg/L	1.0	6	<1.0	<1.0	nc
Dissolved Arsenic	µg/L	1.0	25	<1.0	<1.0	nc
<b>Other Regulated Parameters</b>						
Chromium VI	µg/L	2.000	25	<2.000	<2.000	nc
Cyanide, WAD	µg/L	2	52	<2	<2	nc
Chloride	µg/L	100	790000	19400	19600	1
Mercury	µg/L	0.02	0.1	<0.02	<0.02	nc
Electrical Conductivity	µS/cm	2	NG	715	718	0
pH	pH Units	NA	NG	7.68	7.73	1
<b>PHCs</b>						
F1 (C6 - C10)	µg/L	25	420	<25	<25	nc
F1 (C6 to C10) minus BTEX	µg/L	25	NG	<25	<25	nc
Toluene-d8	%	1	NG	108	102	6
F2 (C10 to C16)	µg/L	100	150	<100	<100	nc
F2 (C10 to C16) minus Naphthalene	µg/L	100	NG	<100	<100	nc
F3 (C16 to C34)	µg/L	100	500	<100	<100	nc
F3 (C16 to C34) minus PAHs	µg/L	100	NG	<100	<100	nc
F4 (C34 to C50)	µg/L	100	500	<100	<100	nc
Gravimetric Heavy Hydrocarbons	µg/L	500	NG	NA	NA	nc
<b>BTEX</b>						
Benzene	µg/L	0.20	0.5	<0.20	<0.20	nc
Toluene	µg/L	0.20	24	<0.20	<0.20	nc
Ethylbenzene	µg/L	0.10	2.4	<0.10	<0.10	nc
m & p-Xylene	µg/L	0.20	NG	<0.20	<0.20	nc
o-Xylene	µg/L	0.10	NG	<0.10	<0.10	nc
Xylenes (Total)	µg/L	0.20	72	<0.20	<0.20	nc

**TABLE 5: Quality Assurance/Quality Control Results - Groundwater**  
**Phast Two ESA - 84 Cannifton Road North, Belleville, ON**

Parameter	Units	MDL	Regulation*	Sample ID (Depth in metres)		
				MW3 / DUP 2		RPD
Sample Date (m/d/y)			Reg 153/04 (2011)- Table 6 Residential, coarse	18-Oct-22		
<b>PAHs</b>						
Naphthalene	µg/L	0.05	7	<0.20	<0.20	nc
Acenaphthylene	µg/L	0.05	1	<0.20	<0.20	nc
Acenaphthene	µg/L	0.05	4.1	<0.20	<0.20	nc
Fluorene	µg/L	0.05	120	<0.20	<0.20	nc
Phenanthrene	µg/L	0.05	500	<0.10	<0.10	nc
Anthracene	µg/L	0.05	1	<0.10	<0.10	nc
Fluoranthene	µg/L	0.05	0.41	<0.20	<0.20	nc
Pyrene	µg/L	0.05	4.1	<0.20	<0.20	nc
Benz(a)anthracene	µg/L	0.05	1	<0.20	<0.20	nc
Chrysene	µg/L	0.05	0.1	<0.10	<0.10	nc
Benzo(b)fluoranthene	µg/L	0.05	0.1	<0.10	<0.10	nc
Benzo(k)fluoranthene	µg/L	0.05	0.1	<0.10	<0.10	nc
Benzo(a)pyrene	µg/L	0.05	0.01	<0.01	<0.01	nc
Indeno(1,2,3-cd)pyrene	µg/L	0.05	0.2	<0.20	<0.20	nc
Dibenz(a,h)anthracene	µg/L	0.05	0.2	<0.20	<0.20	nc
Benzo(g,h,i)perylene	µg/L	0.05	0.2	<0.20	<0.20	nc
1 and 2 Methylnaphthalene	µg/L	0.05	3.2	<0.20	<0.20	nc
<b>VOCs</b>						
Acetone	µg/L	1.0	2700	<1.0	<1.0	nc
Bromomethane	µg/L	0.20	0.89	<0.20	<0.20	nc
Carbon Tetrachloride	µg/L	0.20	0.2	<0.20	<0.20	nc
Chlorobenzene	µg/L	0.10	30	<0.10	<0.10	nc
Chloroform	µg/L	0.20	2	<0.20	<0.20	nc
1,2-Dichlorobenzene	µg/L	0.10	3	<0.10	<0.10	nc
1,3-Dichlorobenzene	µg/L	0.10	59	<0.10	<0.10	nc
1,4-Dichlorobenzene	µg/L	0.10	0.5	<0.10	<0.10	nc
1,1-Dichloroethane	µg/L	0.30	5	<0.30	<0.30	nc
1,2-Dichloroethane	µg/L	0.20	0.5	<0.20	<0.20	nc
1,1-Dichloroethylene	µg/L	0.30	0.5	<0.30	<0.30	nc
cis- 1,2-Dichloroethylene	µg/L	0.20	1.6	<0.20	<0.20	nc
trans- 1,2-Dichloroethylene	µg/L	0.20	1.6	<0.20	<0.20	nc
1,2-Dichloropropane	µg/L	0.20	0.58	<0.20	<0.20	nc
1,3-Dichloropropene	µg/L	0.30	0.5	<0.30	<0.30	nc
Ethylene Dibromide	µg/L	0.10	0.2	<0.10	<0.10	nc
n-Hexane	µg/L	0.20	5	<0.20	<0.20	nc
Methyl Ethyl Ketone	µg/L	1.0	1800	<1.0	<1.0	nc
Methyl Isobutyl Ketone	µg/L	1.0	640	<1.0	<1.0	nc
Methyl tert-butyl ether	µg/L	0.20	15	<0.20	<0.20	nc
Methylene Chloride	µg/L	0.30	26	<0.30	<0.30	nc
Styrene	µg/L	0.10	5.4	<0.10	<0.10	nc
1,1,1,2-Tetrachloroethane	µg/L	0.10	1.1	<0.10	<0.10	nc
1,1,2,2-Tetrachloroethane	µg/L	0.10	0.5	<0.10	<0.10	nc
Tetrachloroethylene	µg/L	0.20	0.5	<0.20	<0.20	nc
1,1,1-Trichloroethane	µg/L	0.30	23	<0.30	<0.30	nc
1,1,2-Trichloroethane	µg/L	0.20	0.5	<0.20	<0.20	nc
Trichloroethylene	µg/L	0.20	0.5	<0.20	<0.20	nc

**TABLE 5: Quality Assurance/Quality Control Results - Groundwater**  
**Phast Two ESA - 84 Cannifton Road North, Belleville, ON**

Parameter	Units	MDL	Regulation*	Sample ID (Depth in metres)		
				MW3 / DUP 2		RPD
Sample Date (m/d/y)			Reg 153/04 (2011)- Table 6 Residential, coarse	18-Oct-22		
Trichlorofluoromethane	µg/L	0.40	150	<0.40	<0.40	nc
Dichlorodifluoromethane	µg/L	0.40	590	<0.40	<0.40	nc
Vinyl Chloride	µg/L	0.17	0.5	<0.17	<0.17	nc
<b>Trihalomethanes</b>						
Bromodichloromethane	µg/L	0.20	16	<0.20	<0.20	nc
Dibromochloromethane	µg/L	0.10	25	<0.10	<0.10	nc
Bromoform	µg/L	0.10	16	<0.10	<0.10	nc
<b>PCBs</b>						
Polychlorinated Biphenyls	µg/L	0.1	0.2	<0.1	<0.1	nc

## APPENDIX A

### Borehole and Test Pit Logs



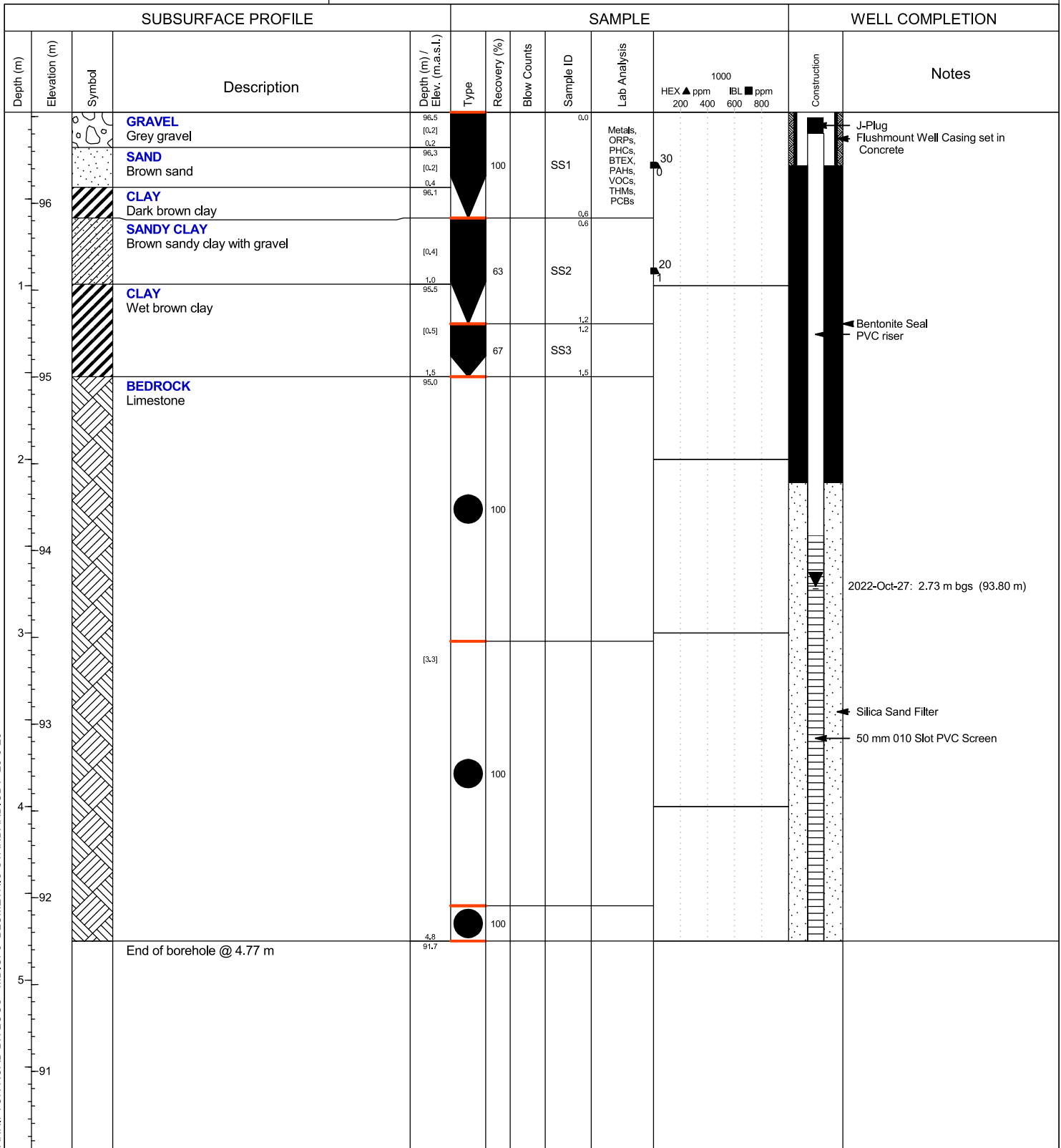


# Monitoring Well ID: BH/MW-1

**Project No.:** 220456-01  
**Client:** 2267178 Ontario Inc.  
**Report:** Phase Two ESA  
**Site Address:** 84 Cannifton Road  
 Belleville, Ontario

**Elevation Ground:** 96.53 m  
**TOP:** 96.53 m

**UTM NAD 83 (Zone 18):** 4896770.907 N  
 308883.914 E



BH MW OB LOG CANNIFTON ROAD BH LOGS - MD.GPJ BLUMETRIC STANDARD.GDT 23-5-25

**Drill Date:** 2022 October 8  
**Drilled By:** G.E.T. Drilling  
**Drilling Method:** Air hammer

**Hole Diameter (OD):** 0.04 m  
**Logged By:** MD  
**Checked By:** PB

- SPT TEST
- CYCLONE RETURN (HAMMER)
- Perched Groundwater Strike / Unstabilized Groundwater Level
- True Groundwater Strike / Stabilized Groundwater Level





# Monitoring Well ID: BH/MW-2

**Project No.:** 220456-01  
**Client:** 2267178 Ontario Inc.  
**Report:** Phase Two ESA  
**Site Address:** 84 Cannifton Road  
 Belleville, Ontario

**Elevation Ground:** 96.63 m  
**TOP:** 96.63 m

**UTM NAD 83 (Zone 18):** 4896793.121 N  
 308898.713 E

SUBSURFACE PROFILE				SAMPLE					WELL COMPLETION		
Depth (m)	Elevation (m)	Symbol	Description	Depth (m) / Elev. (m.a.s.l.)	Type	Recovery (%)	Blow Counts	Sample ID	Lab Analysis	Construction	Notes
	96.6		<b>SANDY GRAVEL</b> Brown sandy gravel	[0,2]				0.0	Metals, ORPs, PHCS, BTEX, PAHs, VOCs, THMs, PCBs		
	96.4		<b>SILTY CLAY</b> Brown silty sandy clay	[0,4]		67		SS1			
	96.0		<b>BEDROCK</b> Limestone	96.0				0.6			
1											
	95.0										
2											
	94.0			[4,2]							2022-Oct-27: 2.49 m bgs (94.14 m)
3											
	93.0										
4											
	92.0										
5			End of borehole @ 4.80 m	4.8 / 91.8							
	91.0										

BH MW OB LOG CANNIFTON ROAD BH LOGS - MD.GPJ BLUMETRIC STANDARD.GDT 23-5-25

**Drill Date:** 2022 October 8  
**Drilled By:** G.E.T. Drilling  
**Drilling Method:** Air hammer

**Hole Diameter (OD):** 0.04 m  
**Logged By:** MD  
**Checked By:** PB

- SPT TEST
- CYCLONE RETURN (HAMMER)
- Perched Groundwater Strike / Unstabilized Groundwater Level
- True Groundwater Strike / Stabilized Groundwater Level





# Monitoring Well ID: BH/MW-4

**Project No.:** 220456-01  
**Client:** 2267178 Ontario Inc.  
**Report:** Phase Two ESA  
**Site Address:** 84 Cannifton Road  
 Belleville, Ontario

**Elevation Ground:** 97.89 m  
**TOP:** 97.89 m

**UTM NAD 83 (Zone 18):** 4896806.367 N  
 308918.966 E

SUBSURFACE PROFILE				SAMPLE						WELL COMPLETION		
Depth (m)	Elevation (m)	Symbol	Description	Depth (m) / Elev. (m.a.s.l.)	Type	Recovery (%)	Blow Counts	Sample ID	Lab Analysis	1000 HEX ▲ ppm	Construction	Notes
			<b>TOPSOIL</b> Topsoil with roots and grass	97.9		100						J-Plug Flushmount Well Casing set in Concrete
			<b>BEDROCK</b> Limestone									
1	97					100						
2	96					100						Bentonite Seal PVC riser
3	95			[6.0]		100						2022-Oct-27: 3.43 m bgs (94.46 m)
4	94					100						Silica Sand Filter 50 mm 010 Slot PVC Screen
5	93					100						
6	92			6.2		100						
			End of borehole @ 6.20 m	91.7								
7	91											
	90											

BH MW OB LOG CANNIFTON ROAD BH LOGS - MD.GPJ BLUMETRIC STANDARD.GDT 23-5-25

**Drill Date:** 2022 October 8  
**Drilled By:** G.E.T. Drilling  
**Drilling Method:** Air hammer

**Hole Diameter (OD):** 0.04 m  
**Logged By:** MD  
**Checked By:** PB

- SPT TEST
- CYCLONE RETURN (HAMMER)
- Perched Groundwater Strike / Unstabilized Groundwater Level
- True Groundwater Strike / Stabilized Groundwater Level



**Project No.:** 220456-01  
**Client:** 2267178 Ontario Inc.  
**Report:** Phase Two ESA  
**Site Address:** 84 Cannifton Road  
 Belleville, Ontario

# Borehole ID: BH-5

**Elevation** Ground: 97.02 m  
 TOP: 97.02 m

**UTM NAD 83 (Zone 18):** 4896798.000 N  
 308894.000 E

SUBSURFACE PROFILE				SAMPLE						WELL COMPLETION		
Depth (m)	Elevation (m)	Symbol	Description	Depth (m) / Elev. (m.a.s.l.)	Type	Recovery (%)	Blow Counts	Sample ID	Lab Analysis	1000 HEX ▲ ppm	Construction	Notes
			<b>CONCRETE</b> Concrete floor									Concrete Surface Reinstatement
			<b>SAND</b> Damp, brown sand									
			<b>GRAVELLY SAND</b> Damp									
			<b>GRAVEL</b> Damp, grey, sub-angular to sub-rounded gravel									
			<b>SILTY CLAY</b> Damp, grey, silty, gravelly, clay			98			Metals, ORPs, PHCs, BTEX, PAHs, VOCs, THMs, PCBs			Bentonite Seal Backfill
			End of borehole @ 0.41 m									

BH MW OB LOG CANNIFTON ROAD BH LOGS - MD.GPJ BLUMETRIC STANDARD.GDT 23-5-25

**Drill Date:** 2023 May 15  
**Drilled By:** Canadian Environmental  
**Drilling Method:** Core through concrete, split spoon

**Hole Diameter (OD):**  
**Logged By:** MD  
**Checked By:** LC

- CORE SAMPLE
- SPLIT SPOON
- Perched Groundwater Strike / Unstabilized Groundwater Level
- True Groundwater Strike / Stabilized Groundwater Level

**Test Pit ID:** TP-1  
**Excavated by:** Stephen Anderson  
**Method:** Spade Shovel

**Date:** 18-Oct-22  
**Easting:**  
**Northing:**

Interval Depth (mbgs)	Stratigraphy	Sample		
		Sample	Sample depth (mbgs)	Analyses
0 - 0.02	Organic rich top soil	N	NA	-
0.02 - 0.15	Damp brown sandy clay with gravel	TP-1, Dup-1	0.15	PHC's, BTEX, PAH, M&I

**Comments:**  
 No surface staining, no odour.

**Photos:**



## APPENDIX B

### Laboratory Certificates of Analysis





CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.  
4 Cataraqui Street  
Kingston, ON K7K1Z7  
(613) 531-2725

ATTENTION TO: Paul Bandler

PROJECT: 220456

AGAT WORK ORDER: 22P954885

SOIL ANALYSIS REVIEWED BY: Jacky Zhu, Spectroscopy Technician

TRACE ORGANICS REVIEWED BY: Pinkal Patel, Report Reviewer

DATE REPORTED: Oct 17, 2022

PAGES (INCLUDING COVER): 16

VERSION\*: 1

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

\*Notes

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## Certificate of Analysis

AGAT WORK ORDER: 22P954885

PROJECT: 220456

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

CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

SAMPLING SITE: Cannifton Belleville

ATTENTION TO: Paul Bandler

SAMPLED BY: Matt DeGeer

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

DATE RECEIVED: 2022-10-07

DATE REPORTED: 2022-10-17

Parameter	Unit	SAMPLE DESCRIPTION:				
		G / S	RDL	BH/MW-1	BH/MW-2	BH/MW-3
				Soil	Soil	Soil
				2022-10-06	2022-10-06	2022-10-06
				10:00	11:00	12:30
				4391862	4391863	4391864
Antimony	µg/g	0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	1	12	4	4	4
Barium	µg/g	2.0	207	118	99.2	99.2
Beryllium	µg/g	0.4	1.0	0.6	0.7	0.7
Boron	µg/g	5	21	16	21	21
Boron (Hot Water Soluble)	µg/g	0.10	1.15	1.50	0.61	0.61
Cadmium	µg/g	0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	5	42	29	29	29
Cobalt	µg/g	0.5	11.3	7.8	7.0	7.0
Copper	µg/g	1.0	23.7	25.4	16.1	16.1
Lead	µg/g	1	25	46	47	47
Molybdenum	µg/g	0.5	0.8	0.9	<0.5	<0.5
Nickel	µg/g	1	28	17	14	14
Selenium	µg/g	0.8	<0.8	<0.8	<0.8	<0.8
Silver	µg/g	0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g	0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g	0.50	0.70	<0.50	<0.50	<0.50
Vanadium	µg/g	0.4	42.2	29.9	24.8	24.8
Zinc	µg/g	5	84	174	72	72
Chromium, Hexavalent	µg/g	0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, WAD	µg/g	0.040	<0.040	<0.040	<0.040	<0.040
Mercury	µg/g	0.10	0.11	0.11	0.14	0.14
Electrical Conductivity (2:1)	mS/cm	0.005	0.311	0.264	0.229	0.229
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	N/A	0.893	0.261	0.291	0.291
pH, 2:1 CaCl2 Extraction	pH Units	NA	7.42	7.54	7.63	7.63

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CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

SAMPLING SITE: Cannifton Belleville

ATTENTION TO: Paul Bandler

SAMPLED BY: Matt DeGeer

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

DATE RECEIVED: 2022-10-07

DATE REPORTED: 2022-10-17

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

4391862-4391864 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl<sub>2</sub> extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by \*)

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SAMPLED BY: Matt DeGeer

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

DATE RECEIVED: 2022-10-07

DATE REPORTED: 2022-10-17

Parameter	Unit	G / S	SAMPLE DESCRIPTION:			
			RDL	BH/MW-1	BH/MW-2	BH/MW-3
				Soil	Soil	Soil
				2022-10-06	2022-10-06	2022-10-06
				10:00	11:00	12:30
				4391862	4391863	4391864
Naphthalene	µg/g		0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g		0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g		0.05	<0.05	<0.05	<0.05
Fluorene	µg/g		0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g		0.05	<0.05	<0.05	<0.05
Anthracene	µg/g		0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g		0.05	0.14	<0.05	<0.05
Pyrene	µg/g		0.05	0.12	<0.05	<0.05
Benz(a)anthracene	µg/g		0.05	<0.05	<0.05	<0.05
Chrysene	µg/g		0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g		0.05	0.08	<0.05	<0.05
Benzo(k)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g		0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g		0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g		0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g		0.05	<0.05	<0.05	<0.05
1 and 2 Methyl naphthalene	µg/g		0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	20.6	5.0	5.8
Surrogate	Unit	Acceptable Limits				
Naphthalene-d8	%	50-140		110	105	95
Acridine-d9	%	50-140		80	100	110
Terphenyl-d14	%	50-140		110	100	105

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

4391862-4391864 Results are based on the dry weight of the soil.

Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.  
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by \*)

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PROJECT: 220456

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CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

ATTENTION TO: Paul Bandler

SAMPLING SITE: Cannifton Belleville

SAMPLED BY: Matt DeGeer

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

DATE RECEIVED: 2022-10-07

DATE REPORTED: 2022-10-17

		SAMPLE DESCRIPTION:				
		BH/MW-1	BH/MW-2	BH/MW-3		
		Soil	Soil	Soil		
		2022-10-06	2022-10-06	2022-10-06		
		10:00	11:00	12:30		
Parameter	Unit	G / S	RDL	4391862	4391863	4391864
Polychlorinated Biphenyls	µg/g		0.1	<0.1	<0.1	<0.1
Moisture Content	%		0.1	20.6	5.0	5.8
Surrogate	Unit	Acceptable Limits				
Decachlorobiphenyl	%	50-140	80	76	72	

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

4391862-4391864 Results are based on the dry weight of soil extracted.

PCB total is a calculated parameter. The calculated value is the sum of Aroclor 1242, Aroclor 1248, Aroclor 1254 and Aroclor 1260.

The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

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CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

ATTENTION TO: Paul Bandler

SAMPLING SITE: Cannifton Belleville

SAMPLED BY: Matt DeGeer

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

DATE RECEIVED: 2022-10-07

DATE REPORTED: 2022-10-17

Parameter	Unit	SAMPLE DESCRIPTION:				
		G / S	RDL	BH/MW-1	BH/MW-2	BH/MW-3
				Soil	Soil	Soil
				2022-10-06	2022-10-06	2022-10-06
				10:00	11:00	12:30
				4391862	4391863	4391864
F1 (C6 - C10)	µg/g	5	11	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	5	11	<5	<5	<5
F2 (C10 to C16)	µg/g	10	<10	<10	<10	<10
F2 (C10 to C16) minus Naphthalene	µg/g	10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	50	<50	<50	<50	<50
F3 (C16 to C34) minus PAHs	µg/g	50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	50	NA	NA	NA	NA
Moisture Content	%	0.1	20.6	5.0	5.8	
Surrogate	Unit	Acceptable Limits				
Toluene-d8	%	50-140	107	108	104	
Terphenyl	%	60-140	73	95	80	

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

4391862-4391864 Results are based on sample dry weight.  
 The C6-C10 fraction is calculated using toluene response factor.  
 C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
 The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
 Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present. The chromatogram has returned to baseline by the retention time of nC50.  
 Total C6 - C50 results are corrected for BTEX and PAH contributions.  
 C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.  
 C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).  
 This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
 nC10, nC16 and nC34 response factors are within 10% of their average.  
 C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
 Linearity is within 15%.  
 Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by \*)

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CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

SAMPLING SITE: Cannifton Belleville

ATTENTION TO: Paul Bandler

SAMPLED BY: Matt DeGeer

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

DATE RECEIVED: 2022-10-07

DATE REPORTED: 2022-10-17

Parameter	Unit	SAMPLE DESCRIPTION:				
		G / S	RDL	BH/MW-1	BH/MW-2	BH/MW-3
				Soil	Soil	Soil
				2022-10-06	2022-10-06	2022-10-06
				10:00	11:00	12:30
				4391862	4391863	4391864
Dichlorodifluoromethane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.02	<0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	0.05	<0.05	<0.05	<0.05	<0.05
Acetone	ug/g	0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.05	<0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.05	<0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	0.02	<0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	0.50	<0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	0.02	<0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.04	<0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.03	<0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	<0.05	<0.05	<0.05	<0.05
Benzene	ug/g	0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.03	<0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.03	<0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	0.05	<0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.04	<0.04	<0.04	<0.04	<0.04
Toluene	ug/g	0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g	0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.04	<0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.04	<0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g	0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	0.05	<0.05	<0.05	<0.05	<0.05

Certified By:

*Prinkal Jata*



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ATTENTION TO: Paul Bandler

SAMPLING SITE: Cannifton Belleville

SAMPLED BY: Matt DeGeer

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

DATE RECEIVED: 2022-10-07

DATE REPORTED: 2022-10-17

Parameter	Unit	SAMPLE DESCRIPTION:				
		G / S	RDL	BH/MW-1	BH/MW-2	BH/MW-3
				Soil	Soil	Soil
				2022-10-06	2022-10-06	2022-10-06
				10:00	11:00	12:30
				4391862	4391863	4391864
m & p-Xylene	ug/g		0.05	<0.05	<0.05	<0.05
Bromoform	ug/g		0.05	<0.05	<0.05	<0.05
Styrene	ug/g		0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g		0.05	<0.05	<0.05	<0.05
o-Xylene	ug/g		0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g		0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g		0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g		0.05	<0.05	<0.05	<0.05
Xylenes (Total)	ug/g		0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g		0.05	<0.05	<0.05	<0.05
n-Hexane	µg/g		0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	20.6	5.0	5.8
Surrogate	Unit	Acceptable Limits				
Toluene-d8	% Recovery	50-140		107	108	104
4-Bromofluorobenzene	% Recovery	50-140		96	100	101

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

4391862-4391864 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.

Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.

1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.

The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:

## Quality Assurance

CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

AGAT WORK ORDER: 22P954885

PROJECT: 220456

ATTENTION TO: Paul Bandler

SAMPLING SITE: Cannifton Belleville

SAMPLED BY: Matt DeGeer

Soil Analysis															
RPT Date: Oct 17, 2022			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Soil)															
Antimony	4401830		<0.8	<0.8	NA	< 0.8	104%	70%	130%	85%	80%	120%	74%	70%	130%
Arsenic	4401830		2	2	NA	< 1	128%	70%	130%	113%	80%	120%	120%	70%	130%
Barium	4401830		22.7	22.5	0.9%	< 2.0	100%	70%	130%	108%	80%	120%	105%	70%	130%
Beryllium	4401830		<0.4	<0.4	NA	< 0.4	108%	70%	130%	94%	80%	120%	108%	70%	130%
Boron	4401830		<5	<5	NA	< 5	94%	70%	130%	105%	80%	120%	105%	70%	130%
Boron (Hot Water Soluble)	4401830		0.11	0.13	NA	< 0.10	94%	60%	140%	98%	70%	130%	102%	60%	140%
Cadmium	4401830		<0.5	<0.5	NA	< 0.5	95%	70%	130%	106%	80%	120%	106%	70%	130%
Chromium	4401830		8	8	NA	< 5	114%	70%	130%	109%	80%	120%	111%	70%	130%
Cobalt	4401830		3.4	3.5	2.9%	< 0.5	113%	70%	130%	107%	80%	120%	110%	70%	130%
Copper	4401830		7.4	7.5	1.3%	< 1.0	104%	70%	130%	108%	80%	120%	104%	70%	130%
Lead	4401830		6	5	18.2%	< 1	104%	70%	130%	109%	80%	120%	98%	70%	130%
Molybdenum	4401830		<0.5	<0.5	NA	< 0.5	108%	70%	130%	100%	80%	120%	105%	70%	130%
Nickel	4401830		5	5	0.0%	< 1	112%	70%	130%	107%	80%	120%	106%	70%	130%
Selenium	4401830		<0.8	<0.8	NA	< 0.8	76%	70%	130%	109%	80%	120%	116%	70%	130%
Silver	4401830		<0.5	<0.5	NA	< 0.5	111%	70%	130%	103%	80%	120%	99%	70%	130%
Thallium	4401830		<0.5	<0.5	NA	< 0.5	105%	70%	130%	110%	80%	120%	99%	70%	130%
Uranium	4401830		<0.50	<0.50	NA	< 0.50	112%	70%	130%	107%	80%	120%	106%	70%	130%
Vanadium	4401830		16.3	16.3	0.0%	< 0.4	129%	70%	130%	104%	80%	120%	111%	70%	130%
Zinc	4401830		22	22	NA	< 5	119%	70%	130%	110%	80%	120%	121%	70%	130%
Chromium, Hexavalent	4391410		<0.2	<0.2	NA	< 0.2	103%	70%	130%	96%	80%	120%	109%	70%	130%
Cyanide, WAD	4402810		<0.040	<0.040	NA	< 0.040	106%	70%	130%	107%	80%	120%	98%	70%	130%
Mercury	4401830		<0.10	<0.10	NA	< 0.10	103%	70%	130%	108%	80%	120%	99%	70%	130%
Electrical Conductivity (2:1)	4391865		0.118	0.115	2.6%	< 0.005	113%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	4391408		2.19	2.39	8.7%	NA									
pH, 2:1 CaCl2 Extraction	4402810		8.12	7.97	1.9%	NA	102%	80%	120%						

Comments: NA signifies Not Applicable.

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

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

Certified By:



## Quality Assurance

CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

AGAT WORK ORDER: 22P954885

PROJECT: 220456

ATTENTION TO: Paul Bandler

SAMPLING SITE: Cannifton Belleville

SAMPLED BY: Matt DeGeer

### Trace Organics Analysis

RPT Date: Oct 17, 2022			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

F1 (C6 - C10)	4391864	4391864	<5	<5	NA	< 5	78%	60%	140%	107%	60%	140%	96%	60%	140%
F2 (C10 to C16)	4391867		172	170	1.0%	< 10	104%	60%	140%	74%	60%	140%	95%	60%	140%
F3 (C16 to C34)	4391867		9160	8380	8.9%	< 50	106%	60%	140%	67%	60%	140%	66%	60%	140%
F4 (C34 to C50)	4391867		<50	<50	NA	< 50	93%	60%	140%	87%	60%	140%	123%	60%	140%

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

Dichlorodifluoromethane	4391864	4391864	<0.05	<0.05	NA	< 0.05	86%	50%	140%	78%	50%	140%	82%	50%	140%
Vinyl Chloride	4391864	4391864	<0.02	<0.02	NA	< 0.02	102%	50%	140%	108%	50%	140%	110%	50%	140%
Bromomethane	4391864	4391864	<0.05	<0.05	NA	< 0.05	136%	50%	140%	88%	50%	140%	124%	50%	140%
Trichlorofluoromethane	4391864	4391864	<0.05	<0.05	NA	< 0.05	96%	50%	140%	95%	50%	140%	124%	50%	140%
Acetone	4391864	4391864	<0.50	<0.50	NA	< 0.50	115%	50%	140%	97%	50%	140%	105%	50%	140%
1,1-Dichloroethylene	4391864	4391864	<0.05	<0.05	NA	< 0.05	89%	50%	140%	85%	60%	130%	89%	50%	140%
Methylene Chloride	4391864	4391864	<0.05	<0.05	NA	< 0.05	119%	50%	140%	104%	60%	130%	107%	50%	140%
Trans- 1,2-Dichloroethylene	4391864	4391864	<0.05	<0.05	NA	< 0.05	89%	50%	140%	82%	60%	130%	101%	50%	140%
Methyl tert-butyl Ether	4391864	4391864	<0.05	<0.05	NA	< 0.05	80%	50%	140%	93%	60%	130%	78%	50%	140%
1,1-Dichloroethane	4391864	4391864	<0.02	<0.02	NA	< 0.02	91%	50%	140%	88%	60%	130%	98%	50%	140%
Methyl Ethyl Ketone	4391864	4391864	<0.50	<0.50	NA	< 0.50	113%	50%	140%	110%	50%	140%	91%	50%	140%
Cis- 1,2-Dichloroethylene	4391864	4391864	<0.02	<0.02	NA	< 0.02	81%	50%	140%	95%	60%	130%	96%	50%	140%
Chloroform	4391864	4391864	<0.04	<0.04	NA	< 0.04	111%	50%	140%	104%	60%	130%	107%	50%	140%
1,2-Dichloroethane	4391864	4391864	<0.03	<0.03	NA	< 0.03	91%	50%	140%	101%	60%	130%	96%	50%	140%
1,1,1-Trichloroethane	4391864	4391864	<0.05	<0.05	NA	< 0.05	80%	50%	140%	85%	60%	130%	86%	50%	140%
Carbon Tetrachloride	4391864	4391864	<0.05	<0.05	NA	< 0.05	87%	50%	140%	80%	60%	130%	81%	50%	140%
Benzene	4391864	4391864	<0.02	<0.02	NA	< 0.02	75%	50%	140%	105%	60%	130%	94%	50%	140%
1,2-Dichloropropane	4391864	4391864	<0.03	<0.03	NA	< 0.03	89%	50%	140%	102%	60%	130%	85%	50%	140%
Trichloroethylene	4391864	4391864	<0.03	<0.03	NA	< 0.03	97%	50%	140%	102%	60%	130%	102%	50%	140%
Bromodichloromethane	4391864	4391864	<0.05	<0.05	NA	< 0.05	106%	50%	140%	88%	60%	130%	87%	50%	140%
Methyl Isobutyl Ketone	4391864	4391864	<0.50	<0.50	NA	< 0.50	119%	50%	140%	109%	50%	140%	89%	50%	140%
1,1,2-Trichloroethane	4391864	4391864	<0.04	<0.04	NA	< 0.04	110%	50%	140%	116%	60%	130%	94%	50%	140%
Toluene	4391864	4391864	<0.05	<0.05	NA	< 0.05	111%	50%	140%	103%	60%	130%	98%	50%	140%
Dibromochloromethane	4391864	4391864	<0.05	<0.05	NA	< 0.05	105%	50%	140%	109%	60%	130%	85%	50%	140%
Ethylene Dibromide	4391864	4391864	<0.04	<0.04	NA	< 0.04	106%	50%	140%	114%	60%	130%	93%	50%	140%
Tetrachloroethylene	4391864	4391864	<0.05	<0.05	NA	< 0.05	108%	50%	140%	95%	60%	130%	98%	50%	140%
1,1,1,2-Tetrachloroethane	4391864	4391864	<0.04	<0.04	NA	< 0.04	109%	50%	140%	96%	60%	130%	99%	50%	140%
Chlorobenzene	4391864	4391864	<0.05	<0.05	NA	< 0.05	110%	50%	140%	104%	60%	130%	94%	50%	140%
Ethylbenzene	4391864	4391864	<0.05	<0.05	NA	< 0.05	106%	50%	140%	97%	60%	130%	92%	50%	140%
m & p-Xylene	4391864	4391864	<0.05	<0.05	NA	< 0.05	110%	50%	140%	102%	60%	130%	97%	50%	140%
Bromoform	4391864	4391864	<0.05	<0.05	NA	< 0.05	94%	50%	140%	98%	60%	130%	75%	50%	140%
Styrene	4391864	4391864	<0.05	<0.05	NA	< 0.05	96%	50%	140%	93%	60%	130%	85%	50%	140%
1,1,2,2-Tetrachloroethane	4391864	4391864	<0.05	<0.05	NA	< 0.05	111%	50%	140%	114%	60%	130%	92%	50%	140%
o-Xylene	4391864	4391864	<0.05	<0.05	NA	< 0.05	111%	50%	140%	105%	60%	130%	95%	50%	140%



## Quality Assurance

CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.  
 PROJECT: 220456  
 SAMPLING SITE: Cannifton Belleville

AGAT WORK ORDER: 22P954885  
 ATTENTION TO: Paul Bandler  
 SAMPLED BY: Matt DeGeer

### Trace Organics Analysis (Continued)

RPT Date: Oct 17, 2022			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	
1,3-Dichlorobenzene	4391864	4391864	<0.05	<0.05	NA	< 0.05	109%	50%	140%	105%	60%	130%	94%	50%	140%	
1,4-Dichlorobenzene	4391864	4391864	<0.05	<0.05	NA	< 0.05	108%	50%	140%	106%	60%	130%	96%	50%	140%	
1,2-Dichlorobenzene	4391864	4391864	<0.05	<0.05	NA	< 0.05	107%	50%	140%	105%	60%	130%	94%	50%	140%	
n-Hexane	4391864	4391864	<0.05	<0.05	NA	< 0.05	83%	50%	140%	76%	60%	130%	71%	50%	140%	
O. Reg. 153(511) - PAHs (Soil)																
Naphthalene	4391643		<0.05	<0.05	NA	< 0.05	109%	50%	140%	87%	50%	140%	108%	50%	140%	
Acenaphthylene	4391643		<0.05	<0.05	NA	< 0.05	117%	50%	140%	88%	50%	140%	98%	50%	140%	
Acenaphthene	4391643		<0.05	<0.05	NA	< 0.05	107%	50%	140%	85%	50%	140%	108%	50%	140%	
Fluorene	4391643		<0.05	<0.05	NA	< 0.05	106%	50%	140%	81%	50%	140%	100%	50%	140%	
Phenanthrene	4391643		<0.05	<0.05	NA	< 0.05	109%	50%	140%	91%	50%	140%	88%	50%	140%	
Anthracene	4391643		<0.05	<0.05	NA	< 0.05	109%	50%	140%	76%	50%	140%	105%	50%	140%	
Fluoranthene	4391643		<0.05	<0.05	NA	< 0.05	108%	50%	140%	81%	50%	140%	83%	50%	140%	
Pyrene	4391643		<0.05	<0.05	NA	< 0.05	119%	50%	140%	95%	50%	140%	76%	50%	140%	
Benz(a)anthracene	4391643		<0.05	<0.05	NA	< 0.05	100%	50%	140%	70%	50%	140%	98%	50%	140%	
Chrysene	4391643		<0.05	<0.05	NA	< 0.05	69%	50%	140%	66%	50%	140%	88%	50%	140%	
Benzo(b)fluoranthene	4391643		<0.05	<0.05	NA	< 0.05	105%	50%	140%	95%	50%	140%	73%	50%	140%	
Benzo(k)fluoranthene	4391643		<0.05	<0.05	NA	< 0.05	96%	50%	140%	72%	50%	140%	80%	50%	140%	
Benzo(a)pyrene	4391643		<0.05	<0.05	NA	< 0.05	110%	50%	140%	86%	50%	140%	75%	50%	140%	
Indeno(1,2,3-cd)pyrene	4391643		<0.05	<0.05	NA	< 0.05	91%	50%	140%	81%	50%	140%	83%	50%	140%	
Dibenz(a,h)anthracene	4391643		<0.05	<0.05	NA	< 0.05	66%	50%	140%	83%	50%	140%	80%	50%	140%	
Benzo(g,h,i)perylene	4391643		<0.05	<0.05	NA	< 0.05	107%	50%	140%	91%	50%	140%	73%	50%	140%	
O. Reg. 153(511) - PCBs (Soil)																
Polychlorinated Biphenyls	4399017		< 0.1	< 0.1	NA	< 0.1	107%	50%	140%	98%	50%	140%	101%	50%	140%	

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

  
 Certified By: \_\_\_\_\_



## Method Summary

CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

AGAT WORK ORDER: 22P954885

PROJECT: 220456

ATTENTION TO: Paul Bandler

SAMPLING SITE: Cannifton Belleville

SAMPLED BY: Matt DeGeer

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, WAD	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6075	modified from MSA PART 3, CH 14 and SM 2510 B	PC TITRATE
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl <sub>2</sub> Extraction	INOR-93-6075	modified from EPA 9045D, MCKEAGUE 3.11 E3137	PC TITRATE



## Method Summary

CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

AGAT WORK ORDER: 22P954885

PROJECT: 220456

ATTENTION TO: Paul Bandler

SAMPLING SITE: Cannifton Belleville

SAMPLED BY: Matt DeGeer

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
1 and 2 Methylnaphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Polychlorinated Biphenyls	ORG-91-5113	modified from EPA SW-846 3570 & 8082A	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA SW-846 3541 & 8082A	GC/ECD
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID



## Method Summary

CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.  
 PROJECT: 220456  
 SAMPLING SITE: Cannifton Belleville

AGAT WORK ORDER: 22P954885  
 ATTENTION TO: Paul Bandler  
 SAMPLED BY: Matt DeGeer

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

## Method Summary

CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

AGAT WORK ORDER: 22P954885

PROJECT: 220456

ATTENTION TO: Paul Bandler

SAMPLING SITE: Cannifton Belleville

SAMPLED BY: Matt DeGeer

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



# AGAT Laboratories

5835 Coopers Avenue  
Mississauga, Ontario L4Z 1Y2  
Ph: 905.712.5100 Fax: 905.712.5122  
web@earth.agatlabs.com

### Laboratory Use Only

Work Order #: 22P954885  
Cooler Quantity: 1 large  
Arrival Temperatures: 6.7 | 7.2 | 6.8  
L.T. -> 1.6 | 1.9 | 2.0  
Custody Seal Intact:  Yes  No  N/A  
Notes: ice bags

## Chain of Custody Record

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

### Report Information:

Company: BluMetric Environmental  
Contact: Paul Bandler  
Address: 4 Cataragui St  
Kingston ON  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Reports to be sent to:  
1. Email: pbandler@blumetric.ca  
2. Email: Mclejzer@blumetric.ca

### Regulatory Requirements:

(Please check all applicable boxes)

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

### Project Information:

Project: 220456  
Site Location: Cannifton Belleville  
Sampled By: Matt DeGraz  
AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_  
Please note: If quotation number is not provided, client will be billed full price for analysis.

### Is this submission for a Record of Site Condition?

Yes  No

### Report Guideline on Certificate of Analysis

Yes  No

### Turnaround Time (TAT) Required:

- Regular TAT**  5 to 7 Business Days  
**Rush TAT** (Rush Surcharges Apply)  
 3 Business Days  2 Business Days  Next Business Day  
**OR** Date Required (Rush Surcharges May Apply):  
Please provide prior notification for rush TAT  
\*TAT is exclusive of weekends and statutory holidays

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

### Invoice Information:

Bill To Same: Yes  No

Company: BluMetric Environmental Inc.  
Contact: Accounts Payable  
Address: AP@Home 7682 Woodward dr  
Ottawa, ON K2C 3R8  
Email: AP@blumetric.ca

### Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Field Filtered - Metals, Hg, CrVI, DOC							Anions	Landfill Disposal Characterization TCLP: TCLP: <input type="checkbox"/> M&I <input type="checkbox"/> VOCs <input type="checkbox"/> ABNs <input type="checkbox"/> BiE/P <input type="checkbox"/> PCBs	Excess Soils SPLP Rainwater Leach SPLP: <input type="checkbox"/> Metals <input type="checkbox"/> VOCs <input type="checkbox"/> SVOCs	Excess Soils Characterization Package pH, ICP/MS Metals, BTEX, FL-F4	Corrosivity: Include Moisture <input type="checkbox"/> Sulphide <input type="checkbox"/>	Potentially Hazardous or High Concentration (Y/N)
							Metals & Inorganics	Metals - <input type="checkbox"/> CrVI, <input type="checkbox"/> Hg, <input type="checkbox"/> HWSB	BTEX, FL-F4 PHCs	PAHs	PCBs	VOC							
BH/MW-1	06-10-22	10:00 PM	4	Soil			✓		✓	✓	✓								
BH/MW-2	06-10-22	11:00 PM	4	Soil			✓		✓	✓	✓								
BH/MW-3	06-10-22	12:30 AM	4	Soil			✓		✓	✓	✓								

Samples Relinquished By (Print Name and Sign): <u>Matt DeGraz</u> <i>Md</i>	Date: <u>08/10/22</u>	Time: <u>9:00</u>	Samples Received By (Print Name and Sign): <u>Kathy Jones</u> <i>KJ</i>	Date: <u>08/10/22</u>	Time: <u>9:30am</u>
Samples Relinquished By (Print Name and Sign): <u>[Signature]</u>	Date: <u>08/17/22</u>	Time: <u>1:00</u>	Samples Received By (Print Name and Sign): <u>[Signature]</u>	Date:	Time:
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign):	Date:	Time:

No: **T-137135**



CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.  
4 Cataraqui Street  
Kingston, ON K7K1Z7  
(613) 531-2725

ATTENTION TO: Paul Bandler

PROJECT: 220456

AGAT WORK ORDER: 22P959214

SOIL ANALYSIS REVIEWED BY: Jacky Zhu, Spectroscopy Technician

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

WATER ANALYSIS REVIEWED BY: Amanjot Bhela, Inorganic Lab Manager

DATE REPORTED: Oct 27, 2022

PAGES (INCLUDING COVER): 28

VERSION\*: 1

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

\*Notes

**Disclaimer:**

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



## Certificate of Analysis

AGAT WORK ORDER: 22P959214

PROJECT: 220456

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

CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

SAMPLING SITE: Cannifton Belleville

ATTENTION TO: Paul Bandler

SAMPLED BY: Steve Anderson

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

DATE RECEIVED: 2022-10-18

DATE REPORTED: 2022-10-27

Parameter	Unit	SAMPLE DESCRIPTION:		TP1	DUP-1
		G / S	RDL	4439008	4439012
Antimony	µg/g		0.8	<0.8	<0.8
Arsenic	µg/g		1	3	3
Barium	µg/g		2.0	96.9	98.6
Beryllium	µg/g		0.4	0.7	0.8
Boron	µg/g		5	13	15
Boron (Hot Water Soluble)	µg/g		0.10	0.32	0.46
Cadmium	µg/g		0.5	0.5	0.6
Chromium	µg/g		5	29	31
Cobalt	µg/g		0.5	7.3	7.3
Copper	µg/g		1.0	27.1	26.8
Lead	µg/g		1	65	64
Molybdenum	µg/g		0.5	<0.5	<0.5
Nickel	µg/g		1	15	16
Selenium	µg/g		0.8	<0.8	<0.8
Silver	µg/g		0.5	<0.5	<0.5
Thallium	µg/g		0.5	<0.5	<0.5
Uranium	µg/g		0.50	<0.50	0.55
Vanadium	µg/g		0.4	24.5	24.9
Zinc	µg/g		5	124	125
Chromium, Hexavalent	µg/g		0.2	<0.2	<0.2
Cyanide, WAD	µg/g		0.040	<0.040	<0.040
Mercury	µg/g		0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm		0.005	0.191	0.209
Sodium Adsorption Ratio (2:1) (Calc.)	N/A		N/A	0.090	0.084
pH, 2:1 CaCl2 Extraction	pH Units		NA	6.88	6.86

Certified By:







**AGAT** Laboratories

# Certificate of Analysis

AGAT WORK ORDER: 22P959214

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CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

SAMPLING SITE: Cannifton Belleville

ATTENTION TO: Paul Bandler

SAMPLED BY: Steve Anderson

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

DATE RECEIVED: 2022-10-18

DATE REPORTED: 2022-10-27

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

4439008-4439012 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 22P959214

PROJECT: 220456

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CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

ATTENTION TO: Paul Bandler

SAMPLING SITE: Cannifton Belleville

SAMPLED BY: Steve Anderson

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

DATE RECEIVED: 2022-10-18

DATE REPORTED: 2022-10-27

Parameter	Unit	G / S	SAMPLE DESCRIPTION:		TP1	DUP-1
			RDL	4439008	4439012	
Naphthalene	µg/g		0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g		0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g		0.05	<0.05	<0.05	<0.05
Fluorene	µg/g		0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g		0.05	<0.05	<0.05	<0.05
Anthracene	µg/g		0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05
Pyrene	µg/g		0.05	<0.05	<0.05	<0.05
Benz(a)anthracene	µg/g		0.05	<0.05	<0.05	<0.05
Chrysene	µg/g		0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g		0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g		0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g		0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g		0.05	<0.05	<0.05	<0.05
1 and 2 Methyl naphthalene	µg/g		0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	22.9	25.8	
Surrogate	Unit	Acceptable Limits				
Naphthalene-d8	%	50-140		70	80	
Acridine-d9	%	50-140		105	75	
Terphenyl-d14	%	50-140		90	75	

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

4439008-4439012 Results are based on the dry weight of the soil.

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

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

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 22P959214

PROJECT: 220456

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CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

SAMPLING SITE: Cannifton Belleville

ATTENTION TO: Paul Bandler

SAMPLED BY: Steve Anderson

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

DATE RECEIVED: 2022-10-18

DATE REPORTED: 2022-10-27

Parameter	Unit	G / S	RDL	SAMPLE DESCRIPTION:			
				MW2	MW3	MW4	DUP-2
				Water	Water	Water	Water
				2022-10-18 10:42	2022-10-18 13:06	2022-10-18 14:08	2022-10-18 13:06
				4439013	4439024	4439025	4439026
Naphthalene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthylene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20
Fluorene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20
Phenanthrene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10
Anthracene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10
Fluoranthene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20
Pyrene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20
Benzo(a)anthracene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20
Chrysene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10
Benzo(b)fluoranthene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10
Benzo(a)pyrene	µg/L		0.01	<0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20
Dibenz(a,h)anthracene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20
Benzo(g,h,i)perylene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20
2-and 1-methyl Naphthalene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20
Sediment				NO	NO	NO	NO
Surrogate	Unit	Acceptable Limits					
Naphthalene-d8	%	50-140	63	62	73	73	
Acridine-d9	%	50-140	110	114	118	90	
Terphenyl-d14	%	50-140	73	63	64	77	

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

4439013-4439026 Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amount

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

2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 22P959214

PROJECT: 220456

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CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

ATTENTION TO: Paul Bandler

SAMPLING SITE: Cannifton Belleville

SAMPLED BY: Steve Anderson

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

DATE RECEIVED: 2022-10-18

DATE REPORTED: 2022-10-27

		SAMPLE DESCRIPTION:		TP1	DUP-1
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2022-10-18 12:20	2022-10-18
Parameter	Unit	G / S	RDL	4439008	4439012
Polychlorinated Biphenyls	µg/g		0.1	<0.1	<0.1
Moisture Content	%		0.1	22.9	25.8
Surrogate	Unit	Acceptable Limits			
Decachlorobiphenyl	%	50-140	92	88	

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

4439008-4439012 Results are based on the dry weight of soil extracted.

PCB total is a calculated parameter. The calculated value is the sum of Aroclor 1242, Aroclor 1248, Aroclor 1254 and Aroclor 1260.

The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 22P959214

PROJECT: 220456

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CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

ATTENTION TO: Paul Bandler

SAMPLING SITE: Cannifton Belleville

SAMPLED BY: Steve Anderson

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

DATE RECEIVED: 2022-10-18

DATE REPORTED: 2022-10-27

		SAMPLE DESCRIPTION:		MW2	MW3	MW4	DUP-2
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		2022-10-18 10:42	2022-10-18 13:06	2022-10-18 14:08	2022-10-18 13:06
Parameter	Unit	G / S	RDL	4439013	4439024	4439025	4439026
Polychlorinated Biphenyls	µg/L		0.1	<0.1	<0.1	<0.1	<0.1
Surrogate	Unit	Acceptable Limits					
Decachlorobiphenyl	%	60-140		79	70	87	92

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

4439013-4439026 PCB total is a calculated parameter. The calculated value is the sum of Aroclor 1242, Aroclor 1248, Aroclor 1254 and Aroclor 1260. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 22P959214

PROJECT: 220456

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CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

ATTENTION TO: Paul Bandler

SAMPLING SITE: Cannifton Belleville

SAMPLED BY: Steve Anderson

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

DATE RECEIVED: 2022-10-18

DATE REPORTED: 2022-10-27

Parameter	Unit	G / S	SAMPLE DESCRIPTION:		
			TP1	DUP-1	
				Soil	Soil
			DATE SAMPLED:	2022-10-18	2022-10-18
				12:20	
			4439008	4439012	
F1 (C6 - C10)	µg/g		5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g		5	<5	<5
F2 (C10 to C16)	µg/g		10	<10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10	<10	<10
F3 (C16 to C34)	µg/g		50	<50	<50
F3 (C16 to C34) minus PAHs	µg/g		50	<50	<50
F4 (C34 to C50)	µg/g		50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g		50	NA	NA
Moisture Content	%		0.1	22.9	25.8
Surrogate	Unit	Acceptable Limits			
Toluene-d8	%	50-140	96	91	
Terphenyl	%	60-140	95	99	

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

4439008-4439012 Results are based on sample dry weight.

The C6-C10 fraction is calculated using toluene response factor.

C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.

The chromatogram has returned to baseline by the retention time of nC50.

Total C6 - C50 results are corrected for BTEX and PAH contributions.

C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.

C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 22P959214

PROJECT: 220456

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<http://www.agatlabs.com>

CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

ATTENTION TO: Paul Bandler

SAMPLING SITE: Cannifton Belleville

SAMPLED BY: Steve Anderson

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

DATE RECEIVED: 2022-10-18

DATE REPORTED: 2022-10-27

Parameter	Unit	G / S	RDL	SAMPLE DESCRIPTION:	MW2	MW3	MW4	DUP-2
				SAMPLE TYPE:	Water	Water	Water	Water
DATE SAMPLED:				2022-10-18	2022-10-18	2022-10-18	2022-10-18	2022-10-18
				10:42	13:06	14:08	13:06	
				4439013	4439024	4439025	4439026	
F1 (C6-C10)	µg/L		25	<25	<25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L		25	<25	<25	<25	<25	<25
F2 (C10 to C16)	µg/L		100	<100	<100	<100	<100	<100
F2 (C10 to C16) minus Naphthalene	µg/L		100	<100	<100	<100	<100	<100
F3 (C16 to C34)	µg/L		100	<100	<100	<100	<100	<100
F3 (C16 to C34) minus PAHs	µg/L		100	<100	<100	<100	<100	<100
F4 (C34 to C50)	µg/L		100	<100	<100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	NA	NA	NA	NA
Sediment				NO	NO	NO	NO	NO
Surrogate	Unit	Acceptable Limits						
Toluene-d8	%	50-140		102	108	103	102	
Terphenyl	% Recovery	60-140		66	65	69	69	

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

4439013-4439026 The C6-C10 fraction is calculated using toluene response factor.

C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.

Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.

The chromatogram has returned to baseline by the retention time of nC50.

Total C6 - C50 results are corrected for BTEX and PAH contributions.

C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.

C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene,

Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC10, nC16 and nC34 response factors are within 10% of their average.

C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

Extraction and holding times were met for this sample.

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

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 22P959214

PROJECT: 220456

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CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

ATTENTION TO: Paul Bandler

SAMPLING SITE: Cannifton Belleville

SAMPLED BY: Steve Anderson

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

DATE RECEIVED: 2022-10-18

DATE REPORTED: 2022-10-27

Parameter	Unit	SAMPLE DESCRIPTION:		TP1	DUP-1
		G / S	RDL	Soil	Soil
		DATE SAMPLED:		2022-10-18 12:20	2022-10-18
		G / S	RDL	4439008	4439012
Dichlorodifluoromethane	µg/g		0.05	<0.05	<0.05
Vinyl Chloride	ug/g		0.02	<0.02	<0.02
Bromomethane	ug/g		0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g		0.05	<0.05	<0.05
Acetone	ug/g		0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g		0.05	<0.05	<0.05
Methylene Chloride	ug/g		0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g		0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g		0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g		0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g		0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g		0.02	<0.02	<0.02
Chloroform	ug/g		0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g		0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g		0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g		0.05	<0.05	<0.05
Benzene	ug/g		0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g		0.03	<0.03	<0.03
Trichloroethylene	ug/g		0.03	<0.03	<0.03
Bromodichloromethane	ug/g		0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g		0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g		0.04	<0.04	<0.04
Toluene	ug/g		0.05	<0.05	<0.05
Dibromochloromethane	ug/g		0.05	<0.05	<0.05
Ethylene Dibromide	ug/g		0.04	<0.04	<0.04
Tetrachloroethylene	ug/g		0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g		0.04	<0.04	<0.04
Chlorobenzene	ug/g		0.05	<0.05	<0.05
Ethylbenzene	ug/g		0.05	<0.05	<0.05

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PROJECT: 220456

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CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

ATTENTION TO: Paul Bandler

SAMPLING SITE: Cannifton Belleville

SAMPLED BY: Steve Anderson

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

DATE RECEIVED: 2022-10-18

DATE REPORTED: 2022-10-27

Parameter	Unit	SAMPLE DESCRIPTION:		G / S	RDL	TP1	DUP-1
		SAMPLE TYPE:				4439008	4439012
		Soil					
		DATE SAMPLED:				2022-10-18	2022-10-18
		12:20					
m & p-Xylene	ug/g		0.05		<0.05	<0.05	<0.05
Bromoform	ug/g		0.05		<0.05	<0.05	<0.05
Styrene	ug/g		0.05		<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g		0.05		<0.05	<0.05	<0.05
o-Xylene	ug/g		0.05		<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g		0.05		<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g		0.05		<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g		0.05		<0.05	<0.05	<0.05
Xylenes (Total)	ug/g		0.05		<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g		0.05		<0.05	<0.05	<0.05
n-Hexane	µg/g		0.05		<0.05	<0.05	<0.05
Moisture Content	%		0.1		22.9	25.8	
Surrogate	Unit	Acceptable Limits					
Toluene-d8	% Recovery	50-140			96	91	
4-Bromofluorobenzene	% Recovery	50-140			88	68	

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

4439008-4439012 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.

Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.

1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.

The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 22P959214

PROJECT: 220456

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CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.  
SAMPLING SITE: Cannifton Belleville

ATTENTION TO: Paul Bandler  
SAMPLED BY: Steve Anderson

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

DATE RECEIVED: 2022-10-18

DATE REPORTED: 2022-10-27

Parameter	Unit	G / S	RDL	SAMPLE DESCRIPTION:			
				MW2	MW3	MW4	DUP-2
				Water	Water	Water	Water
				2022-10-18 10:42	2022-10-18 13:06	2022-10-18 14:08	2022-10-18 13:06
				4439013	4439024	4439025	4439026
Dichlorodifluoromethane	µg/L		0.40	<0.40	<0.40	<0.40	<0.40
Vinyl Chloride	µg/L		0.17	<0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L		0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L		0.40	<0.40	<0.40	<0.40	<0.40
Acetone	µg/L		1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L		0.30	<0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L		0.30	<0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L		0.20	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L		0.30	<0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L		1.0	<1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20
Chloroform	µg/L		0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L		0.20	<0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L		0.30	<0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L		0.20	<0.20	<0.20	<0.20	<0.20
Benzene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L		0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L		0.20	<0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L		1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L		0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L		0.20	<0.20	<0.20	0.63	<0.20
Dibromochloromethane	µg/L		0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L		0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L		0.10	<0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10
Ethylbenzene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10

Certified By:



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AGAT WORK ORDER: 22P959214

PROJECT: 220456

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CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

ATTENTION TO: Paul Bandler

SAMPLING SITE: Cannifton Belleville

SAMPLED BY: Steve Anderson

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

DATE RECEIVED: 2022-10-18

DATE REPORTED: 2022-10-27

Parameter	Unit	G / S	RDL	SAMPLE DESCRIPTION:			
				MW2	MW3	MW4	DUP-2
				Water	Water	Water	Water
				2022-10-18 10:42	2022-10-18 13:06	2022-10-18 14:08	2022-10-18 13:06
				4439013	4439024	4439025	4439026
m & p-Xylene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20
Bromoform	µg/L		0.10	<0.10	<0.10	<0.10	<0.10
Styrene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L		0.10	<0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10	0.52	<0.10
1,3-Dichlorobenzene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L		0.30	<0.30	<0.30	<0.30	<0.30
Xylenes (Total)	µg/L		0.20	<0.20	<0.20	0.52	<0.20
n-Hexane	µg/L		0.20	<0.20	<0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits					
Toluene-d8	% Recovery	50-140	102	108	103	102	
4-Bromofluorobenzene	% Recovery	50-140	92	97	96	91	

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

4439013-4439026 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.

1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.

The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 22P959214

PROJECT: 220456

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CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

SAMPLING SITE: Cannifton Belleville

ATTENTION TO: Paul Bandler

SAMPLED BY: Steve Anderson

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

DATE RECEIVED: 2022-10-18

DATE REPORTED: 2022-10-27

Parameter	Unit	G / S	RDL	SAMPLE DESCRIPTION:			
				MW2	MW3	MW4	DUP-2
				Water	Water	Water	Water
				2022-10-18	2022-10-18	2022-10-18	2022-10-18
				10:42	13:06	14:08	13:06
				4439013	4439024	4439025	4439026
Dissolved Antimony	µg/L		1.0	<1.0	<1.0	<1.0	<1.0
Dissolved Arsenic	µg/L		1.0	4.0	<1.0	<1.0	<1.0
Dissolved Barium	µg/L		2.0	99.5	39.5	309	34.3
Dissolved Beryllium	µg/L		0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Boron	µg/L		10.0	166	94.3	221	97.8
Dissolved Cadmium	µg/L		0.20	<0.20	<0.20	<0.20	<0.20
Dissolved Chromium	µg/L		2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Cobalt	µg/L		0.50	<0.50	<0.50	0.54	<0.50
Dissolved Copper	µg/L		1.0	1.3	2.5	3.5	2.0
Dissolved Lead	µg/L		0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Molybdenum	µg/L		0.50	2.51	0.66	0.77	0.57
Dissolved Nickel	µg/L		1.0	3.8	1.1	4.6	1.1
Dissolved Selenium	µg/L		1.0	<1.0	1.8	1.7	1.3
Dissolved Silver	µg/L		0.20	<0.20	<0.20	<0.20	<0.20
Dissolved Thallium	µg/L		0.30	<0.30	<0.30	<0.30	<0.30
Dissolved Uranium	µg/L		0.50	2.52	<0.50	1.17	<0.50
Dissolved Vanadium	µg/L		0.40	1.80	0.65	<0.40	0.61
Dissolved Zinc	µg/L		5.0	<5.0	<5.0	5.6	<5.0
Mercury	µg/L		0.02	<0.02	<0.02	<0.02	<0.02
Chromium VI	µg/L		2.000	<2.000	<2.000	<2.000	<2.000
Cyanide, WAD	µg/L		2	<2	<2	<2	<2
Dissolved Sodium	µg/L		50	35700	17200	109000	17600
Chloride	µg/L		100	92700	19400	235000	19600
Electrical Conductivity	uS/cm		2	919	715	1550	718
pH	pH Units		NA	7.73	7.68	7.83	7.73

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

4439013-4439026 Metals analysis completed on a filtered sample.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:

*Anamjot Bhela*  


## Quality Assurance

CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.  
 PROJECT: 220456  
 SAMPLING SITE: Cannifton Belleville

AGAT WORK ORDER: 22P959214  
 ATTENTION TO: Paul Bandler  
 SAMPLED BY: Steve Anderson

Soil Analysis															
RPT Date: Oct 27, 2022			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Antimony	4445358		<0.8	<0.8	NA	< 0.8	101%	70%	130%	82%	80%	120%	87%	70%	130%
Arsenic	4445358		2	2	NA	< 1	116%	70%	130%	94%	80%	120%	101%	70%	130%
Barium	4445358		38.0	39.2	3.1%	< 2.0	114%	70%	130%	102%	80%	120%	111%	70%	130%
Beryllium	4445358		<0.4	<0.4	NA	< 0.4	111%	70%	130%	96%	80%	120%	101%	70%	130%
Boron	4445358		12	13	NA	< 5	99%	70%	130%	107%	80%	120%	117%	70%	130%
Boron (Hot Water Soluble)	4445312		<0.10	<0.10	NA	< 0.10	95%	60%	140%	106%	70%	130%	98%	60%	140%
Cadmium	4445358		<0.5	<0.5	NA	< 0.5	89%	70%	130%	102%	80%	120%	101%	70%	130%
Chromium	4445358		13	13	NA	< 5	128%	70%	130%	111%	80%	120%	128%	70%	130%
Cobalt	4445358		5.0	5.0	0.0%	< 0.5	124%	70%	130%	113%	80%	120%	117%	70%	130%
Copper	4445358		8.4	8.5	1.2%	< 1.0	112%	70%	130%	117%	80%	120%	108%	70%	130%
Lead	4445358		5	5	0.0%	< 1	115%	70%	130%	109%	80%	120%	104%	70%	130%
Molybdenum	4445358		<0.5	<0.5	NA	< 0.5	105%	70%	130%	109%	80%	120%	119%	70%	130%
Nickel	4445358		9	9	0.0%	< 1	121%	70%	130%	112%	80%	120%	112%	70%	130%
Selenium	4445358		<0.8	<0.8	NA	< 0.8	95%	70%	130%	94%	80%	120%	96%	70%	130%
Silver	4445358		<0.5	<0.5	NA	< 0.5	111%	70%	130%	102%	80%	120%	97%	70%	130%
Thallium	4445358		<0.5	<0.5	NA	< 0.5	119%	70%	130%	102%	80%	120%	103%	70%	130%
Uranium	4445358		<0.50	<0.50	NA	< 0.50	124%	70%	130%	105%	80%	120%	108%	70%	130%
Vanadium	4445358		17.4	18.5	6.1%	< 0.4	124%	70%	130%	111%	80%	120%	127%	70%	130%
Zinc	4445358		18	19	NA	< 5	116%	70%	130%	105%	80%	120%	102%	70%	130%
Chromium, Hexavalent	4445342		<0.2	<0.2	NA	< 0.2	100%	70%	130%	95%	80%	120%	103%	70%	130%
Cyanide, WAD	4445362		<0.040	<0.040	NA	< 0.040	100%	70%	130%	103%	80%	120%	109%	70%	130%
Mercury	4445358		<0.10	<0.10	NA	< 0.10	116%	70%	130%	102%	80%	120%	103%	70%	130%
Electrical Conductivity (2:1)	4445312		0.185	0.185	0.0%	< 0.005	108%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	4445312		0.233	0.226	3.1%	NA									
pH, 2:1 CaCl2 Extraction	4445362		6.28	6.41	2.0%	NA	101%	80%	120%						

Comments: NA signifies Not Applicable.

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

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

Certified By: \_\_\_\_\_





## Quality Assurance

CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.  
 PROJECT: 220456  
 SAMPLING SITE: Cannifton Belleville

AGAT WORK ORDER: 22P959214  
 ATTENTION TO: Paul Bandler  
 SAMPLED BY: Steve Anderson

### Trace Organics Analysis

RPT Date: Oct 27, 2022			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)															
F1 (C6 - C10)	4428250		<5	<5	NA	< 5	80%	60%	140%	97%	60%	140%	85%	60%	140%
F2 (C10 to C16)	4429420		<10	<10	NA	< 10	108%	60%	140%	73%	60%	140%	65%	60%	140%
F3 (C16 to C34)	4429420		<50	<50	NA	< 50	114%	60%	140%	69%	60%	140%	62%	60%	140%
F4 (C34 to C50)	4429420		<50	<50	NA	< 50	99%	60%	140%	87%	60%	140%	87%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Soil)															
Dichlorodifluoromethane	4428250		<0.05	<0.05	NA	< 0.05	75%	50%	140%	87%	50%	140%	98%	50%	140%
Vinyl Chloride	4428250		<0.02	<0.02	NA	< 0.02	125%	50%	140%	131%	50%	140%	116%	50%	140%
Bromomethane	4428250		<0.05	<0.05	NA	< 0.05	79%	50%	140%	130%	50%	140%	115%	50%	140%
Trichlorofluoromethane	4428250		<0.05	<0.05	NA	< 0.05	120%	50%	140%	109%	50%	140%	110%	50%	140%
Acetone	4428250		<0.50	<0.50	NA	< 0.50	101%	50%	140%	90%	50%	140%	105%	50%	140%
1,1-Dichloroethylene	4428250		<0.05	<0.05	NA	< 0.05	87%	50%	140%	90%	60%	130%	85%	50%	140%
Methylene Chloride	4428250		<0.05	<0.05	NA	< 0.05	115%	50%	140%	97%	60%	130%	112%	50%	140%
Trans- 1,2-Dichloroethylene	4428250		<0.05	<0.05	NA	< 0.05	75%	50%	140%	80%	60%	130%	93%	50%	140%
Methyl tert-butyl Ether	4428250		<0.05	<0.05	NA	< 0.05	110%	50%	140%	94%	60%	130%	88%	50%	140%
1,1-Dichloroethane	4428250		<0.02	<0.02	NA	< 0.02	85%	50%	140%	79%	60%	130%	94%	50%	140%
Methyl Ethyl Ketone	4428250		<0.50	<0.50	NA	< 0.50	124%	50%	140%	91%	50%	140%	106%	50%	140%
Cis- 1,2-Dichloroethylene	4428250		<0.02	<0.02	NA	< 0.02	88%	50%	140%	83%	60%	130%	90%	50%	140%
Chloroform	4428250		<0.04	<0.04	NA	< 0.04	115%	50%	140%	94%	60%	130%	102%	50%	140%
1,2-Dichloroethane	4428250		<0.03	<0.03	NA	< 0.03	88%	50%	140%	73%	60%	130%	75%	50%	140%
1,1,1-Trichloroethane	4428250		<0.05	<0.05	NA	< 0.05	76%	50%	140%	81%	60%	130%	85%	50%	140%
Carbon Tetrachloride	4428250		<0.05	<0.05	NA	< 0.05	75%	50%	140%	89%	60%	130%	83%	50%	140%
Benzene	4428250		<0.02	<0.02	NA	< 0.02	71%	50%	140%	75%	60%	130%	94%	50%	140%
1,2-Dichloropropane	4428250		<0.03	<0.03	NA	< 0.03	82%	50%	140%	75%	60%	130%	84%	50%	140%
Trichloroethylene	4428250		<0.03	<0.03	NA	< 0.03	96%	50%	140%	81%	60%	130%	77%	50%	140%
Bromodichloromethane	4428250		<0.05	<0.05	NA	< 0.05	74%	50%	140%	115%	60%	130%	87%	50%	140%
Methyl Isobutyl Ketone	4428250		<0.50	<0.50	NA	< 0.50	91%	50%	140%	100%	50%	140%	105%	50%	140%
1,1,2-Trichloroethane	4428250		<0.04	<0.04	NA	< 0.04	120%	50%	140%	97%	60%	130%	111%	50%	140%
Toluene	4428250		<0.05	<0.05	NA	< 0.05	98%	50%	140%	83%	60%	130%	102%	50%	140%
Dibromochloromethane	4428250		<0.05	<0.05	NA	< 0.05	104%	50%	140%	82%	60%	130%	96%	50%	140%
Ethylene Dibromide	4428250		<0.04	<0.04	NA	< 0.04	103%	50%	140%	88%	60%	130%	102%	50%	140%
Tetrachloroethylene	4428250		<0.05	<0.05	NA	< 0.05	85%	50%	140%	97%	60%	130%	90%	50%	140%
1,1,1,2-Tetrachloroethane	4428250		<0.04	<0.04	NA	< 0.04	86%	50%	140%	70%	60%	130%	118%	50%	140%
Chlorobenzene	4428250		<0.05	<0.05	NA	< 0.05	94%	50%	140%	80%	60%	130%	111%	50%	140%
Ethylbenzene	4428250		<0.05	<0.05	NA	< 0.05	85%	50%	140%	88%	60%	130%	93%	50%	140%
m & p-Xylene	4428250		<0.05	<0.05	NA	< 0.05	96%	50%	140%	105%	60%	130%	112%	50%	140%
Bromoform	4428250		<0.05	<0.05	NA	< 0.05	116%	50%	140%	88%	60%	130%	101%	50%	140%
Styrene	4428250		<0.05	<0.05	NA	< 0.05	77%	50%	140%	71%	60%	130%	72%	50%	140%
1,1,2,2-Tetrachloroethane	4428250		<0.05	<0.05	NA	< 0.05	118%	50%	140%	105%	60%	130%	96%	50%	140%
o-Xylene	4428250		<0.05	<0.05	NA	< 0.05	104%	50%	140%	81%	60%	130%	94%	50%	140%

## Quality Assurance

 CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.  
 PROJECT: 220456  
 SAMPLING SITE: Cannifton Belleville

 AGAT WORK ORDER: 22P959214  
 ATTENTION TO: Paul Bandler  
 SAMPLED BY: Steve Anderson

### Trace Organics Analysis (Continued)

RPT Date: Oct 27, 2022			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	4428250		<0.05	<0.05	NA	< 0.05	112%	50%	140%	111%	60%	130%	112%	50%	140%
1,4-Dichlorobenzene	4428250		<0.05	<0.05	NA	< 0.05	103%	50%	140%	109%	60%	130%	88%	50%	140%
1,2-Dichlorobenzene	4428250		<0.05	<0.05	NA	< 0.05	106%	50%	140%	100%	60%	130%	114%	50%	140%
n-Hexane	4428250		<0.05	<0.05	NA	< 0.05	87%	50%	140%	105%	60%	130%	90%	50%	140%
O. Reg. 153(511) - PAHs (Soil)															
Naphthalene	4433780		<0.05	<0.05	NA	< 0.05	97%	50%	140%	88%	50%	140%	78%	50%	140%
Acenaphthylene	4433780		<0.05	<0.05	NA	< 0.05	112%	50%	140%	90%	50%	140%	80%	50%	140%
Acenaphthene	4433780		<0.05	<0.05	NA	< 0.05	116%	50%	140%	75%	50%	140%	83%	50%	140%
Fluorene	4433780		<0.05	<0.05	NA	< 0.05	109%	50%	140%	93%	50%	140%	75%	50%	140%
Phenanthrene	4433780		<0.05	<0.05	NA	< 0.05	93%	50%	140%	100%	50%	140%	115%	50%	140%
Anthracene	4433780		<0.05	<0.05	NA	< 0.05	108%	50%	140%	93%	50%	140%	83%	50%	140%
Fluoranthene	4433780		<0.05	<0.05	NA	< 0.05	116%	50%	140%	75%	50%	140%	78%	50%	140%
Pyrene	4433780		<0.05	<0.05	NA	< 0.05	116%	50%	140%	83%	50%	140%	73%	50%	140%
Benz(a)anthracene	4433780		<0.05	<0.05	NA	< 0.05	100%	50%	140%	73%	50%	140%	78%	50%	140%
Chrysene	4433780		<0.05	<0.05	NA	< 0.05	98%	50%	140%	113%	50%	140%	83%	50%	140%
Benzo(b)fluoranthene	4433780		<0.05	<0.05	NA	< 0.05	96%	50%	140%	93%	50%	140%	78%	50%	140%
Benzo(k)fluoranthene	4433780		<0.05	<0.05	NA	< 0.05	77%	50%	140%	85%	50%	140%	113%	50%	140%
Benzo(a)pyrene	4433780		<0.05	<0.05	NA	< 0.05	78%	50%	140%	75%	50%	140%	75%	50%	140%
Indeno(1,2,3-cd)pyrene	4433780		<0.05	<0.05	NA	< 0.05	78%	50%	140%	85%	50%	140%	98%	50%	140%
Dibenz(a,h)anthracene	4433780		<0.05	<0.05	NA	< 0.05	67%	50%	140%	100%	50%	140%	78%	50%	140%
Benzo(g,h,i)perylene	4433780		<0.05	<0.05	NA	< 0.05	81%	50%	140%	108%	50%	140%	95%	50%	140%
O. Reg. 153(511) - PCBs (Soil)															
Polychlorinated Biphenyls	4435912		< 0.1	< 0.1	NA	< 0.1	103%	50%	140%	103%	50%	140%	70%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)															
F1 (C6-C10)	4440464		<25	<25	NA	< 25	85%	60%	140%	66%	60%	140%	81%	60%	140%
F2 (C10 to C16)	4442666		<100	<100	NA	< 100	114%	60%	140%	69%	60%	140%	68%	60%	140%
F3 (C16 to C34)	4442666		<100	<100	NA	< 100	118%	60%	140%	82%	60%	140%	80%	60%	140%
F4 (C34 to C50)	4442666		<100	<100	NA	< 100	90%	60%	140%	67%	60%	140%	71%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Water)															
Dichlorodifluoromethane	4440464		<0.40	<0.40	NA	< 0.40	70%	50%	140%	100%	50%	140%	103%	50%	140%
Vinyl Chloride	4440464		<0.17	<0.17	NA	< 0.17	117%	50%	140%	80%	50%	140%	93%	50%	140%
Bromomethane	4440464		<0.20	<0.20	NA	< 0.20	82%	50%	140%	82%	50%	140%	113%	50%	140%
Trichlorofluoromethane	4440464		<0.40	<0.40	NA	< 0.40	74%	50%	140%	106%	50%	140%	105%	50%	140%
Acetone	4440464		<1.0	<1.0	NA	< 1.0	82%	50%	140%	110%	50%	140%	95%	50%	140%
1,1-Dichloroethylene	4440464		<0.30	<0.30	NA	< 0.30	75%	50%	140%	96%	60%	130%	92%	50%	140%
Methylene Chloride	4440464		<0.30	<0.30	NA	< 0.30	116%	50%	140%	105%	60%	130%	109%	50%	140%
trans- 1,2-Dichloroethylene	4440464		<0.20	<0.20	NA	< 0.20	71%	50%	140%	102%	60%	130%	103%	50%	140%
Methyl tert-butyl ether	4440464		<0.20	<0.20	NA	< 0.20	99%	50%	140%	100%	60%	130%	75%	50%	140%

## Quality Assurance

CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.  
 PROJECT: 220456  
 SAMPLING SITE: Cannifton Belleville

AGAT WORK ORDER: 22P959214  
 ATTENTION TO: Paul Bandler  
 SAMPLED BY: Steve Anderson

### Trace Organics Analysis (Continued)

RPT Date: Oct 27, 2022			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,1-Dichloroethane	4439013		<0.20	<0.20	NA	< 0.30	76%	50%	140%	104%	60%	130%	100%	50%	140%
Methyl Ethyl Ketone	4440464		<1.0	<1.0	NA	< 1.0	99%	50%	140%	84%	50%	140%	97%	50%	140%
cis- 1,2-Dichloroethylene	4440464		<0.20	<0.20	NA	< 0.20	74%	50%	140%	95%	60%	130%	88%	50%	140%
Chloroform	4440464		<0.20	<0.20	NA	< 0.20	99%	50%	140%	111%	60%	130%	114%	50%	140%
1,2-Dichloroethane	4440464		<0.20	<0.20	NA	< 0.20	86%	50%	140%	96%	60%	130%	95%	50%	140%
1,1,1-Trichloroethane	4440464		<0.30	<0.30	NA	< 0.30	79%	50%	140%	87%	60%	130%	78%	50%	140%
Carbon Tetrachloride	4440464		<0.20	<0.20	NA	< 0.20	79%	50%	140%	106%	60%	130%	83%	50%	140%
Benzene	4440464		0.32	0.32	NA	< 0.20	79%	50%	140%	85%	60%	130%	81%	50%	140%
1,2-Dichloropropane	4440464		<0.20	<0.20	NA	< 0.20	73%	50%	140%	78%	60%	130%	77%	50%	140%
Trichloroethylene	4440464		<0.20	<0.20	NA	< 0.20	118%	50%	140%	95%	60%	130%	119%	50%	140%
Bromodichloromethane	4440464		<0.20	<0.20	NA	< 0.20	88%	50%	140%	99%	60%	130%	98%	50%	140%
Methyl Isobutyl Ketone	4440464		<1.0	<1.0	NA	< 1.0	80%	50%	140%	91%	50%	140%	109%	50%	140%
1,1,2-Trichloroethane	4440464		<0.20	<0.20	NA	< 0.20	98%	50%	140%	105%	60%	130%	99%	50%	140%
Toluene	4440464		0.86	0.90	NA	< 0.20	70%	50%	140%	91%	60%	130%	82%	50%	140%
Dibromochloromethane	4440464		<0.10	<0.10	NA	< 0.10	106%	50%	140%	115%	60%	130%	105%	50%	140%
Ethylene Dibromide	4440464		<0.10	<0.10	NA	< 0.10	103%	50%	140%	107%	60%	130%	101%	50%	140%
Tetrachloroethylene	4440464		<0.20	<0.20	NA	< 0.20	76%	50%	140%	107%	60%	130%	94%	50%	140%
1,1,1,2-Tetrachloroethane	4440464		<0.10	<0.10	NA	< 0.10	96%	50%	140%	100%	60%	130%	88%	50%	140%
Chlorobenzene	4440464		<0.10	<0.10	NA	< 0.10	81%	50%	140%	98%	60%	130%	88%	50%	140%
Ethylbenzene	4440464		<0.10	<0.10	NA	< 0.10	77%	50%	140%	86%	60%	130%	77%	50%	140%
m & p-Xylene	4440464		0.96	0.95	NA	< 0.20	108%	50%	140%	91%	60%	130%	82%	50%	140%
Bromoform	4440464		<0.10	<0.10	NA	< 0.10	117%	50%	140%	118%	60%	130%	111%	50%	140%
Styrene	4440464		<0.10	<0.10	NA	< 0.10	78%	50%	140%	83%	60%	130%	76%	50%	140%
1,1,1,2,2-Tetrachloroethane	4440464		<0.10	<0.10	NA	< 0.10	108%	50%	140%	108%	60%	130%	87%	50%	140%
o-Xylene	4440464		<0.10	<0.10	NA	< 0.10	73%	50%	140%	92%	60%	130%	83%	50%	140%
1,3-Dichlorobenzene	4440464		<0.10	<0.10	NA	< 0.10	89%	50%	140%	107%	60%	130%	101%	50%	140%
1,4-Dichlorobenzene	4440464		<0.10	<0.10	NA	< 0.10	92%	50%	140%	108%	60%	130%	101%	50%	140%
1,2-Dichlorobenzene	4440464		<0.10	<0.10	NA	< 0.10	101%	50%	140%	105%	60%	130%	102%	50%	140%
n-Hexane	4440464		<0.20	<0.20	NA	< 0.20	82%	50%	140%	86%	60%	130%	75%	50%	140%
O. Reg. 153(511) - PAHs (Water)															
Naphthalene	4439026	4439026	<0.20	<0.20	NA	< 0.20	109%	50%	140%	121%	50%	140%	75%	50%	140%
Acenaphthylene	4439026	4439026	<0.20	<0.20	NA	< 0.20	103%	50%	140%	111%	50%	140%	73%	50%	140%
Acenaphthene	4439026	4439026	<0.20	<0.20	NA	< 0.20	110%	50%	140%	94%	50%	140%	86%	50%	140%
Fluorene	4439026	4439026	<0.20	<0.20	NA	< 0.20	107%	50%	140%	95%	50%	140%	74%	50%	140%
Phenanthrene	4439026	4439026	<0.10	<0.10	NA	< 0.10	94%	50%	140%	88%	50%	140%	95%	50%	140%
Anthracene	4439026	4439026	<0.10	<0.10	NA	< 0.10	116%	50%	140%	97%	50%	140%	87%	50%	140%
Fluoranthene	4439026	4439026	<0.20	<0.20	NA	< 0.20	100%	50%	140%	94%	50%	140%	72%	50%	140%
Pyrene	4439026	4439026	<0.20	<0.20	NA	< 0.20	100%	50%	140%	93%	50%	140%	77%	50%	140%
Benzo(a)anthracene	4439026	4439026	<0.20	<0.20	NA	< 0.20	72%	50%	140%	97%	50%	140%	105%	50%	140%



## Quality Assurance

 CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.  
 PROJECT: 220456  
 SAMPLING SITE: Cannifton Belleville

 AGAT WORK ORDER: 22P959214  
 ATTENTION TO: Paul Bandler  
 SAMPLED BY: Steve Anderson

### Trace Organics Analysis (Continued)

RPT Date: Oct 27, 2022			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	
Chrysene	4439026	4439026	<0.10	<0.10	NA	< 0.10	71%	50%	140%	83%	50%	140%	93%	50%	140%	
Benzo(b)fluoranthene	4439026	4439026	<0.10	<0.10	NA	< 0.10	75%	50%	140%	85%	50%	140%	91%	50%	140%	
Benzo(k)fluoranthene	4439026	4439026	<0.10	<0.10	NA	< 0.10	107%	50%	140%	98%	50%	140%	97%	50%	140%	
Benzo(a)pyrene	4439026	4439026	<0.01	<0.01	NA	< 0.01	68%	50%	140%	98%	50%	140%	82%	50%	140%	
Indeno(1,2,3-cd)pyrene	4439026	4439026	<0.20	<0.20	NA	< 0.20	71%	50%	140%	72%	50%	140%	95%	50%	140%	
Dibenz(a,h)anthracene	4439026	4439026	<0.20	<0.20	NA	< 0.20	62%	50%	140%	82%	50%	140%	80%	50%	140%	
Benzo(g,h,i)perylene	4439026	4439026	<0.20	<0.20	NA	< 0.20	99%	50%	140%	111%	50%	140%	90%	50%	140%	
O. Reg. 153(511) - PCBs (Water)																
Polychlorinated Biphenyls	4439013	4439013	< 0.1	< 0.1	NA	< 0.1	101%	50%	140%	100%	50%	140%	90%	50%	140%	

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

Certified By:



## Quality Assurance

CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.  
 PROJECT: 220456  
 SAMPLING SITE: Cannifton Belleville

AGAT WORK ORDER: 22P959214  
 ATTENTION TO: Paul Bandler  
 SAMPLED BY: Steve Anderson

Water Analysis															
RPT Date: Oct 27, 2022			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE			
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Dissolved Antimony	4445726		<1.0	<1.0	NA	< 1.0	101%	70%	130%	99%	80%	120%	97%	70%	130%
Dissolved Arsenic	4445726		<1.0	<1.0	NA	< 1.0	107%	70%	130%	106%	80%	120%	114%	70%	130%
Dissolved Barium	4445726		31.0	31.2	0.6%	< 2.0	103%	70%	130%	100%	80%	120%	107%	70%	130%
Dissolved Beryllium	4445726		<0.50	<0.50	NA	< 0.50	94%	70%	130%	98%	80%	120%	99%	70%	130%
Dissolved Boron	4445726		<10.0	<10.0	NA	< 10.0	96%	70%	130%	100%	80%	120%	97%	70%	130%
Dissolved Cadmium	4445726		<0.20	<0.20	NA	< 0.20	99%	70%	130%	101%	80%	120%	101%	70%	130%
Dissolved Chromium	4445726		<2.0	<2.0	NA	< 2.0	98%	70%	130%	100%	80%	120%	105%	70%	130%
Dissolved Cobalt	4445726		<0.50	<0.50	NA	< 0.50	101%	70%	130%	101%	80%	120%	105%	70%	130%
Dissolved Copper	4445726		1.9	1.5	NA	< 1.0	100%	70%	130%	100%	80%	120%	98%	70%	130%
Dissolved Lead	4445726		<0.50	<0.50	NA	< 0.50	99%	70%	130%	92%	80%	120%	99%	70%	130%
Dissolved Molybdenum	4445726		0.56	0.52	NA	< 0.50	102%	70%	130%	99%	80%	120%	108%	70%	130%
Dissolved Nickel	4445726		<1.0	<1.0	NA	< 1.0	101%	70%	130%	98%	80%	120%	101%	70%	130%
Dissolved Selenium	4445726		1.2	<1.0	NA	< 1.0	106%	70%	130%	106%	80%	120%	112%	70%	130%
Dissolved Silver	4445726		<0.20	<0.20	NA	< 0.20	99%	70%	130%	99%	80%	120%	98%	70%	130%
Dissolved Thallium	4445726		<0.30	<0.30	NA	< 0.30	103%	70%	130%	101%	80%	120%	104%	70%	130%
Dissolved Uranium	4445726		0.56	0.54	NA	< 0.50	107%	70%	130%	102%	80%	120%	108%	70%	130%
Dissolved Vanadium	4445726		1.65	1.60	NA	< 0.40	103%	70%	130%	106%	80%	120%	110%	70%	130%
Dissolved Zinc	4445726		<5.0	<5.0	NA	< 5.0	100%	70%	130%	98%	80%	120%	105%	70%	130%
Mercury	4439013	4439013	<0.02	<0.02	NA	< 0.02	99%	70%	130%	99%	80%	120%	95%	70%	130%
Chromium VI	4448096		<2.000	<2.000	NA	< 2	102%	70%	130%	94%	80%	120%	106%	70%	130%
Cyanide, WAD	4440190		<2	<2	NA	< 2	92%	70%	130%	108%	80%	120%	89%	70%	130%
Dissolved Sodium	4445726		9180	8960	2.4%	< 50	98%	70%	130%	100%	80%	120%	92%	70%	130%
Chloride	4439013	4439013	92700	92000	0.8%	< 100	101%	70%	130%	100%	80%	120%	101%	70%	130%
Electrical Conductivity	4441095		8	8	NA	< 2	100%	90%	110%	NA			NA		
pH	4441095		6.58	6.14	6.9%	NA	100%	90%	110%	NA			NA		

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

Certified By:






## Method Summary

CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

AGAT WORK ORDER: 22P959214

PROJECT: 220456

ATTENTION TO: Paul Bandler

SAMPLING SITE: Cannifton Belleville

SAMPLED BY: Steve Anderson

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, WAD	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6075	modified from MSA PART 3, CH 14 and SM 2510 B	PC TITRATE
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl <sub>2</sub> Extraction	INOR-93-6075	modified from EPA 9045D, MCKEAGUE 3.11 E3137	PC TITRATE

## Method Summary

CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

AGAT WORK ORDER: 22P959214

PROJECT: 220456

ATTENTION TO: Paul Bandler

SAMPLING SITE: Cannifton Belleville

SAMPLED BY: Steve Anderson

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
1 and 2 Methylnaphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluorene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS

## Method Summary

CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

AGAT WORK ORDER: 22P959214

PROJECT: 220456

ATTENTION TO: Paul Bandler

SAMPLING SITE: Cannifton Belleville

SAMPLED BY: Steve Anderson

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Chrysene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Sediment			N/A
Polychlorinated Biphenyls	ORG-91-5113	modified from EPA SW-846 3570 & 8082A	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA SW-846 3541 & 8082A	GC/ECD
Polychlorinated Biphenyls	ORG-91-5112	modified from EPA SW-846 3510 & 8082A	GC/ECD
Decachlorobiphenyl	ORG-91-5112	modified from EPA SW-846 3510 & 8082A	GC/ECD
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F1 (C6-C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	P&T GC/FID
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE

## Method Summary

CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

AGAT WORK ORDER: 22P959214

PROJECT: 220456

ATTENTION TO: Paul Bandler

SAMPLING SITE: Cannifton Belleville

SAMPLED BY: Steve Anderson

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

## Method Summary

CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

AGAT WORK ORDER: 22P959214

PROJECT: 220456

ATTENTION TO: Paul Bandler

SAMPLING SITE: Cannifton Belleville

SAMPLED BY: Steve Anderson

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

## Method Summary

CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

AGAT WORK ORDER: 22P959214

PROJECT: 220456

ATTENTION TO: Paul Bandler

SAMPLING SITE: Cannifton Belleville

SAMPLED BY: Steve Anderson

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS





## Method Summary

CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.  
 PROJECT: 220456  
 SAMPLING SITE: Cannifton Belleville

AGAT WORK ORDER: 22P959214  
 ATTENTION TO: Paul Bandler  
 SAMPLED BY: Steve Anderson

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Water Analysis			
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Mercury	MET-93-6100	modified from EPA 245.2 and SM 3112 B	CVAAS
Chromium VI	INOR-93-6073	modified from SM 3500-CR B	LACHAT FIA
Cyanide, WAD	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Dissolved Sodium Chloride	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP/MS
Electrical Conductivity	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
pH	INOR-93-6000	SM 2510 B	PC TITRATE
	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE



# AGAT

## Laboratories

1. 4.9/3.7/3.5  
LT changed ice  
2. 4.3/3.6/3.2

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

### Chain of Custody Record

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

#### Report Information:

Company: Blumetric Environmental  
Contact: Paul Bandler  
Address: 4 Cataract St  
Kingston ON  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Reports to be sent to:  
1. Email: pbandler@blumetric.ca  
2. Email: mdegeer@blumetric.ca

#### Regulatory Requirements:

(Please check all applicable boxes)

Regulation 153/04  Excess Soils R406  Sewer Use  
 Sanitary  Storm  
Table \_\_\_\_\_ Indicate One  
 Ind/Corn  Res/Park  Agriculture  Regulation 558  Prov. Water Quality Objectives (PWQO)  
 CCME  Other  
Soil Texture (Check One)  Coarse  Fine  
Region \_\_\_\_\_ Indicate One

Is this submission for a Record of Site Condition?

Yes  No

Report Guideline on Certificate of Analysis

Yes  No

#### Project Information:

Project: 220456  
Site Location: Laniflon Belleville  
Sampled By: Steve Anderson  
AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_  
Please note: If quotation number is not provided, client will be billed full price for analysis.

#### Invoice Information:

Bill To Same: Yes  No

Company: Blumetric Environmental Inc  
Contact: Accounts payable  
Address: 1682 woodward dr, Ottawa, ON K2C3R8  
Email: ap@blumetric.ca

#### Sample Matrix Legend

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

#### Laboratory Use Only

Work Order #: 22P959214  
Cooler Quantity: 2  
Arrival Temperatures: 9.6 | 9.8 | 9.4  
Custody Seal Intact:  Yes  No  N/A  
Notes: ice bag

#### Turnaround Time (TAT) Required:

Regular TAT  5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

3 Business Days  2 Business Days  Next Business Day

OR Date Required (Rush Surcharges May Apply): \_\_\_\_\_

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

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered	Metals & Inorganics	Metals - <input type="checkbox"/> Cd <input type="checkbox"/> CrVI <input type="checkbox"/> Hg <input type="checkbox"/> HWSB	BTEX, FL-F4 PHCs	Analyze F4G if required <input type="checkbox"/> Yes <input type="checkbox"/> No	PAHs	PCBs	VOC	Landfill Disposal Characterization TCLP: <input type="checkbox"/> Mn <input type="checkbox"/> Ni <input type="checkbox"/> V <input type="checkbox"/> Pb <input type="checkbox"/> Cu <input type="checkbox"/> Zn <input type="checkbox"/> As <input type="checkbox"/> Se <input type="checkbox"/> Mo <input type="checkbox"/> Cr <input type="checkbox"/> Co <input type="checkbox"/> Ni <input type="checkbox"/> Mn <input type="checkbox"/> Pb <input type="checkbox"/> Cu <input type="checkbox"/> Zn <input type="checkbox"/> As <input type="checkbox"/> Se <input type="checkbox"/> Mo	Excess Soils SPLP Rainwater Leach	SPLP: <input type="checkbox"/> Metals <input type="checkbox"/> VOCs <input type="checkbox"/> SVOCs	Excess Soils Characterization Package pH, ICP/MS Metals, BTEX, FL-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)	
TP1	10/18/22	12:20	4	Soil																
Dup-1	10/18/22		4	Soil																
MW 2	10/18/22	10:42	15	GW																
MW 3	10/18/22	13:06	15	GW																
MW 4	10/18/22	14:08	15	GW																
Dup-2	10/18/22	13:06	15	GW																

Samples Relinquished By (Print Name and Sign): <u>Steve Anderson</u>	Date: <u>10/18/22</u>	Time: <u>16:00</u>	Samples Received By (Print Name and Sign): <u>Karoly Jones</u>	Date: <u>Oct 18/22</u>	Time: <u>16:00</u>
Complex Relinquished By (Print Name and Sign): <u>[Signature]</u>	Date: <u>Oct 19/22</u>	Time: <u>16:00</u>	Complex Received By (Print Name and Sign): <u>[Signature]</u>	Date: <u>Oct. 20/22</u>	Time: <u>10:20 AM</u>
Complex Relinquished By (Print Name and Sign): <u>[Signature]</u>	Date: <u>Oct 19/22</u>	Time: <u>16:00</u>	Complex Received By (Print Name and Sign): <u>[Signature]</u>	Date: <u>Oct. 20/22</u>	Time: <u>10:20 AM</u>

Page 1 of 1  
No: **T 133608**



CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.  
4 Cataraqui Street  
Kingston, ON K7K1Z7  
(613) 531-2725

ATTENTION TO: Jaclyn Kalesnikoff

PROJECT: 220456-00

AGAT WORK ORDER: 22P963419

TRACE ORGANICS REVIEWED BY: Pinkal Patel, Report Reviewer

WATER ANALYSIS REVIEWED BY: Yris Verastegui, Report Reviewer

DATE REPORTED: Nov 07, 2022

PAGES (INCLUDING COVER): 17

VERSION\*: 1

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

\*Notes

**Disclaimer:**

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



## Certificate of Analysis

AGAT WORK ORDER: 22P963419

PROJECT: 220456-00

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

CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

ATTENTION TO: Jaclyn Kalesnikoff

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2022-10-28

DATE REPORTED: 2022-11-07

SAMPLE DESCRIPTION: MW1  
 SAMPLE TYPE: Water  
 DATE SAMPLED: 2022-10-27  
 14:26  
 4469819

Parameter	Unit	G / S	RDL	
Naphthalene	µg/L	7	0.20	<0.20
Acenaphthylene	µg/L	1	0.20	<0.20
Acenaphthene	µg/L	17	0.20	<0.20
Fluorene	µg/L	290	0.20	<0.20
Phenanthrene	µg/L	380	0.10	<0.10
Anthracene	µg/L	1	0.10	<0.10
Fluoranthene	µg/L	44	0.20	<0.20
Pyrene	µg/L	5.7	0.20	<0.20
Benzo(a)anthracene	µg/L	1.8	0.20	<0.20
Chrysene	µg/L	0.7	0.10	<0.10
Benzo(b)fluoranthene	µg/L	0.75	0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.4	0.10	<0.10
Benzo(a)pyrene	µg/L	0.81	0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.20	<0.20
Dibenz(a,h)anthracene	µg/L	0.4	0.20	<0.20
Benzo(g,h,i)perylene	µg/L	0.2	0.20	<0.20
2-and 1-methyl Naphthalene	µg/L	1500	0.20	<0.20
Sediment				NO

Surrogate	Unit	Acceptable Limits	
Naphthalene-d8	%	50-140	69
Acridine-d9	%	50-140	83
Terphenyl-d14	%	50-140	111

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## Certificate of Analysis

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<http://www.agatlabs.com>

CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

ATTENTION TO: Jaclyn Kalesnikoff

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2022-10-28

DATE REPORTED: 2022-11-07

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

4469819 Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amount

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

2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 22P963419

PROJECT: 220456-00

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<http://www.agatlabs.com>

CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

ATTENTION TO: Jaclyn Kalesnikoff

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2022-10-28

DATE REPORTED: 2022-11-07

SAMPLE DESCRIPTION: MW1  
 SAMPLE TYPE: Water  
 DATE SAMPLED: 2022-10-27  
 14:26  
 4469819

Parameter	Unit	G / S	RDL	4469819
Polychlorinated Biphenyls	µg/L	0.2	0.1	<0.1
Surrogate	Unit	Acceptable Limits		
Decachlorobiphenyl	%	60-140		70

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils  
 Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

4469819 PCB total is a calculated parameter. The calculated value is the sum of Aroclor 1242, Aroclor 1248, Aroclor 1254 and Aroclor 1260.  
 The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

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CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

ATTENTION TO: Jaclyn Kalesnikoff

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2022-10-28

DATE REPORTED: 2022-11-07

SAMPLE DESCRIPTION: MW1				
SAMPLE TYPE: Water				
DATE SAMPLED: 2022-10-27 14:26				
Parameter	Unit	G / S	RDL	4469819
F1 (C6-C10)	µg/L		25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25	<25
F2 (C10 to C16)	µg/L	150	100	<100
F2 (C10 to C16) minus Naphthalene	µg/L		100	<100
F3 (C16 to C34)	µg/L	500	100	<100
F3 (C16 to C34) minus PAHs	µg/L		100	<100
F4 (C34 to C50)	µg/L	500	100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA
Sediment				1
Surrogate	Unit	Acceptable Limits		
Toluene-d8	%	50-140	110	
Terphenyl	% Recovery	60-140	78	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils  
 Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

4469819 The C6-C10 fraction is calculated using toluene response factor.  
 C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
 The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
 Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present. The chromatogram has returned to baseline by the retention time of nC50.  
 Total C6 - C50 results are corrected for BTEX and PAH contributions.  
 C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.  
 C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).  
 This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
 nC10, nC16 and nC34 response factors are within 10% of their average.  
 C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
 Linearity is within 15%.  
 Extraction and holding times were met for this sample.

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

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 22P963419

PROJECT: 220456-00

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

CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

ATTENTION TO: Jaclyn Kalesnikoff

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2022-10-28

DATE REPORTED: 2022-11-07

Parameter	Unit	SAMPLE DESCRIPTION:			4469819
		G / S	RDL	MW1	
				Water	
				2022-10-27	
				14:26	
Dichlorodifluoromethane	µg/L	3500	0.40	<0.40	
Vinyl Chloride	µg/L	0.5	0.17	<0.17	
Bromomethane	µg/L	0.89	0.20	<0.20	
Trichlorofluoromethane	µg/L	2000	0.40	<0.40	
Acetone	µg/L	100000	1.0	<1.0	
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	
Methylene Chloride	µg/L	26	0.30	<0.30	
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	
1,1-Dichloroethane	µg/L	11	0.30	<0.30	
Methyl Ethyl Ketone	µg/L	21000	1.0	<1.0	
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	
Chloroform	µg/L	2	0.20	<0.20	
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20	
1,1,1-Trichloroethane	µg/L	23	0.30	<0.30	
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	
Benzene	µg/L	0.5	0.20	<0.20	
1,2-Dichloropropane	µg/L	0.58	0.20	<0.20	
Trichloroethylene	µg/L	0.5	0.20	<0.20	
Bromodichloromethane	µg/L	67000	0.20	<0.20	
Methyl Isobutyl Ketone	µg/L	5200	1.0	<1.0	
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	
Toluene	µg/L	320	0.20	0.32	
Dibromochloromethane	µg/L	65000	0.10	<0.10	
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	
Chlorobenzene	µg/L	140	0.10	<0.10	
Ethylbenzene	µg/L	54	0.10	<0.10	

Certified By:





## Certificate of Analysis

AGAT WORK ORDER: 22P963419

PROJECT: 220456-00

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

CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

ATTENTION TO: Jaclyn Kalesnikoff

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2022-10-28

DATE REPORTED: 2022-11-07

SAMPLE DESCRIPTION: MW1  
SAMPLE TYPE: Water  
DATE SAMPLED: 2022-10-27  
14:26  
4469819

Parameter	Unit	G / S	RDL	4469819
m & p-Xylene	µg/L		0.20	<0.20
Bromoform	µg/L	5	0.10	<0.10
Styrene	µg/L	43	0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10	<0.10
o-Xylene	µg/L		0.10	<0.10
1,3-Dichlorobenzene	µg/L	7600	0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10	<0.10
1,2-Dichlorobenzene	µg/L	150	0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30
Xylenes (Total)	µg/L	72	0.20	<0.20
n-Hexane	µg/L	5	0.20	<0.20
Surrogate	Unit	Acceptable Limits		
Toluene-d8	% Recovery	50-140	110	
4-Bromofluorobenzene	% Recovery	50-140	97	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

4469819 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.  
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.  
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



## Certificate of Analysis

AGAT WORK ORDER: 22P963419

PROJECT: 220456-00

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<http://www.agatlabs.com>

CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

ATTENTION TO: Jaclyn Kalesnikoff

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2022-10-28

DATE REPORTED: 2022-11-07

SAMPLE DESCRIPTION: MW1  
 SAMPLE TYPE: Water  
 DATE SAMPLED: 2022-10-27  
 14:26  
 4469819

Parameter	Unit	G / S	RDL	4469819
Dissolved Antimony	µg/L	16000	1.0	<1.0
Dissolved Arsenic	µg/L	1500	1.0	<1.0
Dissolved Barium	µg/L	23000	2.0	49.3
Dissolved Beryllium	µg/L	53	0.50	<0.50
Dissolved Boron	µg/L	36000	10.0	143
Dissolved Cadmium	µg/L	2.1	0.20	<0.20
Dissolved Chromium	µg/L	640	2.0	<2.0
Dissolved Cobalt	µg/L	52	0.50	<0.50
Dissolved Copper	µg/L	69	1.0	1.2
Dissolved Lead	µg/L	20	0.50	<0.50
Dissolved Molybdenum	µg/L	7300	0.50	1.31
Dissolved Nickel	µg/L	390	1.0	<1.0
Dissolved Selenium	µg/L	50	1.0	<1.0
Dissolved Silver	µg/L	1.2	0.20	<0.20
Dissolved Thallium	µg/L	400	0.30	<0.30
Dissolved Uranium	µg/L	330	0.50	0.58
Dissolved Vanadium	µg/L	200	0.40	<0.40
Dissolved Zinc	µg/L	890	5.0	<5.0
Mercury	µg/L	0.1	0.02	<0.02
Chromium VI	µg/L	110	2.000	<2.000
Cyanide, WAD	µg/L	52	2	<2
Dissolved Sodium	µg/L	1800000	50	24100
Chloride	µg/L	1800000	100	37000
Electrical Conductivity	uS/cm	NA	2	726
pH	pH Units		NA	7.69

Certified By:

*Jris Vera'stegui*



**AGAT** Laboratories

# Certificate of Analysis

AGAT WORK ORDER: 22P963419

PROJECT: 220456-00

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CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

ATTENTION TO: Jaclyn Kalesnikoff

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2022-10-28

DATE REPORTED: 2022-11-07

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 7: Generic Site Condition Standards for Shallow Soils in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Coarse Textured Soils

Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

4469819 Metals analysis completed on a filtered sample.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:

## Quality Assurance

CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

AGAT WORK ORDER: 22P963419

PROJECT: 220456-00

ATTENTION TO: Jaclyn Kalesnikoff

SAMPLING SITE:

SAMPLED BY:

### Trace Organics Analysis

RPT Date: Nov 07, 2022			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	

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

F1 (C6-C10)	4471735	<25	<25	NA	< 25	88%	60%	140%	79%	60%	140%	82%	60%	140%
F2 (C10 to C16)	4467530	208	189	NA	< 100	93%	60%	140%	82%	60%	140%	69%	60%	140%
F3 (C16 to C34)	4467530	<100	<100	NA	< 100	97%	60%	140%	78%	60%	140%	70%	60%	140%
F4 (C34 to C50)	4467530	<100	<100	NA	< 100	98%	60%	140%	81%	60%	140%	70%	60%	140%

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

Naphthalene	4465315	<0.20	<0.20	NA	< 0.20	75%	50%	140%	88%	50%	140%	98%	50%	140%
Acenaphthylene	4465315	<0.20	<0.20	NA	< 0.20	61%	50%	140%	91%	50%	140%	72%	50%	140%
Acenaphthene	4465315	<0.20	<0.20	NA	< 0.20	86%	50%	140%	80%	50%	140%	93%	50%	140%
Fluorene	4465315	<0.20	<0.20	NA	< 0.20	91%	50%	140%	94%	50%	140%	72%	50%	140%
Phenanthrene	4465315	<0.10	<0.10	NA	< 0.10	114%	50%	140%	95%	50%	140%	89%	50%	140%
Anthracene	4465315	<0.10	<0.10	NA	< 0.10	110%	50%	140%	88%	50%	140%	83%	50%	140%
Fluoranthene	4465315	<0.20	<0.20	NA	< 0.20	113%	50%	140%	95%	50%	140%	92%	50%	140%
Pyrene	4465315	<0.20	<0.20	NA	< 0.20	117%	50%	140%	73%	50%	140%	100%	50%	140%
Benzo(a)anthracene	4465315	<0.20	<0.20	NA	< 0.20	108%	50%	140%	66%	50%	140%	103%	50%	140%
Chrysene	4465315	<0.10	<0.10	NA	< 0.10	78%	50%	140%	73%	50%	140%	56%	50%	140%
Benzo(b)fluoranthene	4465315	<0.10	<0.10	NA	< 0.10	72%	50%	140%	67%	50%	140%	103%	50%	140%
Benzo(k)fluoranthene	4465315	<0.10	<0.10	NA	< 0.10	101%	50%	140%	80%	50%	140%	86%	50%	140%
Benzo(a)pyrene	4465315	<0.01	<0.01	NA	< 0.01	75%	50%	140%	91%	50%	140%	88%	50%	140%
Indeno(1,2,3-cd)pyrene	4465315	<0.20	<0.20	NA	< 0.20	72%	50%	140%	94%	50%	140%	92%	50%	140%
Dibenz(a,h)anthracene	4465315	<0.20	<0.20	NA	< 0.20	65%	50%	140%	88%	50%	140%	91%	50%	140%
Benzo(g,h,i)perylene	4465315	<0.20	<0.20	NA	< 0.20	69%	50%	140%	73%	50%	140%	110%	50%	140%

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

Polychlorinated Biphenyls	4461704	< 0.1	< 0.1	NA	< 0.1	99%	50%	140%	90%	50%	140%	81%	50%	140%
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O. Reg. 153(511) - VOCs (with PHC) (Water)

Dichlorodifluoromethane	4471735	<0.40	<0.40	NA	< 0.40	103%	50%	140%	98%	50%	140%	93%	50%	140%
Vinyl Chloride	4471735	<0.17	<0.17	NA	< 0.17	119%	50%	140%	97%	50%	140%	103%	50%	140%
Bromomethane	4471735	<0.20	<0.20	NA	< 0.20	95%	50%	140%	109%	50%	140%	116%	50%	140%
Trichlorofluoromethane	4471735	<0.40	<0.40	NA	< 0.40	113%	50%	140%	101%	50%	140%	93%	50%	140%
Acetone	4471735	<1.0	<1.0	NA	< 1.0	74%	50%	140%	82%	50%	140%	95%	50%	140%
1,1-Dichloroethylene	4471735	<0.30	<0.30	NA	< 0.30	92%	50%	140%	105%	60%	130%	107%	50%	140%
Methylene Chloride	4471735	<0.30	<0.30	NA	< 0.30	108%	50%	140%	106%	60%	130%	101%	50%	140%
trans- 1,2-Dichloroethylene	4471735	<0.20	<0.20	NA	< 0.20	71%	50%	140%	116%	60%	130%	110%	50%	140%
Methyl tert-butyl ether	4471735	<0.20	<0.20	NA	< 0.20	89%	50%	140%	77%	60%	130%	73%	50%	140%
1,1-Dichloroethane	4471735	<0.30	<0.30	NA	< 0.30	111%	50%	140%	106%	60%	130%	105%	50%	140%
Methyl Ethyl Ketone	4471735	<1.0	<1.0	NA	< 1.0	93%	50%	140%	88%	50%	140%	84%	50%	140%
cis- 1,2-Dichloroethylene	4471735	<0.20	<0.20	NA	< 0.20	97%	50%	140%	104%	60%	130%	93%	50%	140%
Chloroform	4471735	<0.20	<0.20	NA	< 0.20	99%	50%	140%	108%	60%	130%	106%	50%	140%
1,2-Dichloroethane	4471735	<0.20	<0.20	NA	< 0.20	104%	50%	140%	86%	60%	130%	81%	50%	140%

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

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

## Quality Assurance

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 PROJECT: 220456-00  
 SAMPLING SITE:

 AGAT WORK ORDER: 22P963419  
 ATTENTION TO: Jaclyn Kalesnikoff  
 SAMPLED BY:

### Trace Organics Analysis (Continued)

RPT Date: Nov 07, 2022			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,1,1-Trichloroethane	4471735		<0.30	<0.30	NA	< 0.30	101%	50%	140%	85%	60%	130%	89%	50%	140%
Carbon Tetrachloride	4471735		<0.20	<0.20	NA	< 0.20	100%	50%	140%	101%	60%	130%	101%	50%	140%
Benzene	4471735		<0.20	<0.20	NA	< 0.20	110%	50%	140%	88%	60%	130%	87%	50%	140%
1,2-Dichloropropane	4471735		<0.20	<0.20	NA	< 0.20	102%	50%	140%	85%	60%	130%	76%	50%	140%
Trichloroethylene	4471735		<0.20	<0.20	NA	< 0.20	95%	50%	140%	104%	60%	130%	110%	50%	140%
Bromodichloromethane	4471735		<0.20	<0.20	NA	< 0.20	110%	50%	140%	92%	60%	130%	88%	50%	140%
Methyl Isobutyl Ketone	4471735		<1.0	<1.0	NA	< 1.0	74%	50%	140%	100%	50%	140%	87%	50%	140%
1,1,2-Trichloroethane	4471735		<0.20	<0.20	NA	< 0.20	111%	50%	140%	108%	60%	130%	104%	50%	140%
Toluene	4471735		<0.20	<0.20	NA	< 0.20	116%	50%	140%	106%	60%	130%	101%	50%	140%
Dibromochloromethane	4471735		<0.10	<0.10	NA	< 0.10	100%	50%	140%	116%	60%	130%	101%	50%	140%
Ethylene Dibromide	4471735		<0.10	<0.10	NA	< 0.10	112%	50%	140%	105%	60%	130%	115%	50%	140%
Tetrachloroethylene	4471735		<0.20	<0.20	NA	< 0.20	110%	50%	140%	108%	60%	130%	102%	50%	140%
1,1,1,2-Tetrachloroethane	4471735		<0.10	<0.10	NA	< 0.10	109%	50%	140%	117%	60%	130%	103%	50%	140%
Chlorobenzene	4471735		<0.10	<0.10	NA	< 0.10	112%	50%	140%	89%	60%	130%	100%	50%	140%
Ethylbenzene	4471735		<0.10	<0.10	NA	< 0.10	105%	50%	140%	95%	60%	130%	114%	50%	140%
m & p-Xylene	4471735		<0.20	<0.20	NA	< 0.20	113%	50%	140%	102%	60%	130%	89%	50%	140%
Bromoform	4471735		<0.10	<0.10	NA	< 0.10	100%	50%	140%	106%	60%	130%	102%	50%	140%
Styrene	4471735		<0.10	<0.10	NA	< 0.10	99%	50%	140%	112%	60%	130%	108%	50%	140%
1,1,2,2-Tetrachloroethane	4471735		<0.10	<0.10	NA	< 0.10	87%	50%	140%	101%	60%	130%	85%	50%	140%
o-Xylene	4471735		<0.10	<0.10	NA	< 0.10	96%	50%	140%	92%	60%	130%	114%	50%	140%
1,3-Dichlorobenzene	4471735		<0.10	<0.10	NA	< 0.10	113%	50%	140%	112%	60%	130%	114%	50%	140%
1,4-Dichlorobenzene	4471735		<0.10	<0.10	NA	< 0.10	94%	50%	140%	108%	60%	130%	112%	50%	140%
1,2-Dichlorobenzene	4471735		<0.10	<0.10	NA	< 0.10	117%	50%	140%	105%	60%	130%	113%	50%	140%
n-Hexane	4471735		<0.20	<0.20	NA	< 0.20	88%	50%	140%	108%	60%	130%	103%	50%	140%

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

Certified By:



## Quality Assurance

 CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.  
 PROJECT: 220456-00  
 SAMPLING SITE:

 AGAT WORK ORDER: 22P963419  
 ATTENTION TO: Jaclyn Kalesnikoff  
 SAMPLED BY:

Water Analysis															
RPT Date: Nov 07, 2022			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

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

Dissolved Antimony	4469220		<1.0	<1.0	NA	< 1.0	100%	70%	130%	102%	80%	120%	101%	70%	130%
Dissolved Arsenic	4469220		<1.0	1.7	NA	< 1.0	102%	70%	130%	98%	80%	120%	101%	70%	130%
Dissolved Barium	4469220		49.7	51.1	2.8%	< 2.0	102%	70%	130%	100%	80%	120%	102%	70%	130%
Dissolved Beryllium	4469220		<0.50	<0.50	NA	< 0.50	101%	70%	130%	94%	80%	120%	93%	70%	130%
Dissolved Boron	4469220		26.4	29.2	NA	< 10.0	99%	70%	130%	94%	80%	120%	88%	70%	130%
Dissolved Cadmium	4469220		<0.20	<0.20	NA	< 0.20	101%	70%	130%	100%	80%	120%	101%	70%	130%
Dissolved Chromium	4469220		<2.0	<2.0	NA	< 2.0	101%	70%	130%	101%	80%	120%	103%	70%	130%
Dissolved Cobalt	4469220		0.98	1.10	NA	< 0.50	125%	70%	130%	100%	80%	120%	101%	70%	130%
Dissolved Copper	4469220		3.5	4.6	NA	< 1.0	100%	70%	130%	102%	80%	120%	98%	70%	130%
Dissolved Lead	4469220		<0.50	<0.50	NA	< 0.50	104%	70%	130%	97%	80%	120%	97%	70%	130%
Dissolved Molybdenum	4469220		<0.50	<0.50	NA	< 0.50	104%	70%	130%	104%	80%	120%	105%	70%	130%
Dissolved Nickel	4469220		<1.0	<1.0	NA	< 1.0	123%	70%	130%	101%	80%	120%	99%	70%	130%
Dissolved Selenium	4469220		<1.0	<1.0	NA	< 1.0	100%	70%	130%	100%	80%	120%	104%	70%	130%
Dissolved Silver	4469220		<0.20	<0.20	NA	< 0.20	115%	70%	130%	99%	80%	120%	97%	70%	130%
Dissolved Thallium	4469220		<0.30	<0.30	NA	< 0.30	108%	70%	130%	99%	80%	120%	101%	70%	130%
Dissolved Uranium	4469220		<0.50	<0.50	NA	< 0.50	103%	70%	130%	99%	80%	120%	96%	70%	130%
Dissolved Vanadium	4469220		<0.40	0.44	NA	< 0.40	124%	70%	130%	103%	80%	120%	103%	70%	130%
Dissolved Zinc	4469220		<5.0	<5.0	NA	< 5.0	102%	70%	130%	104%	80%	120%	102%	70%	130%
Mercury	4469220		<0.02	<0.02	NA	< 0.02	101%	70%	130%	104%	80%	120%	96%	70%	130%
Chromium VI	4462913		<2.000	<2.000	NA	< 2	103%	70%	130%	110%	80%	120%	105%	70%	130%
Cyanide, WAD	4469819	4469819	<2	<2	NA	< 2	104%	70%	130%	92%	80%	120%	117%	70%	130%
Dissolved Sodium	4469220		14000	14500	3.5%	< 50	97%	70%	130%	91%	80%	120%	94%	70%	130%
Chloride	4469186		109000	109000	0.0%	< 100	99%	70%	130%	98%	80%	120%	103%	70%	130%
Electrical Conductivity	4469448		49	49	0.0%	< 2	103%	90%	110%						
pH	4469448		6.72	6.71	0.1%	NA	101%	90%	110%						

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

Certified By:



## Method Summary

CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

AGAT WORK ORDER: 22P963419

PROJECT: 220456-00

ATTENTION TO: Jaclyn Kalesnikoff

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluorene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Chrysene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Sediment			N/A
Polychlorinated Biphenyls	ORG-91-5112	modified from EPA SW-846 3510 & 8082A	GC/ECD
Decachlorobiphenyl	ORG-91-5112	modified from EPA SW-846 3510 & 8082A	GC/ECD
F1 (C6-C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	P&T GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID

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



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

## Method Summary

CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

AGAT WORK ORDER: 22P963419

PROJECT: 220456-00

ATTENTION TO: Jaclyn Kalesnikoff

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Mercury	MET-93-6100	modified from EPA 245.2 and SM 3112 B	CVAAS
Chromium VI	INOR-93-6073	modified from SM 3500-CR B	LACHAT FIA
Cyanide, WAD	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Dissolved Sodium Chloride	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP/MS
Electrical Conductivity	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
pH	INOR-93-6000	SM 2510 B	PC TITRATE
	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE



**CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.**

**4 Cataraqui Street  
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(613) 531-2725**

**ATTENTION TO: Jaclyn Kalesnikoff**

**PROJECT: 220456**

**AGAT WORK ORDER: 23P024828**

**SOIL ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer**

**TRACE ORGANICS REVIEWED BY: Radhika Chakraberty, Trace Organics Lab Manager**

**DATE REPORTED: May 23, 2023**

**PAGES (INCLUDING COVER): 17**

**VERSION\*: 1**

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

\*Notes

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## Certificate of Analysis

AGAT WORK ORDER: 23P024828

PROJECT: 220456

5835 COOPERS AVENUE  
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CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

SAMPLING SITE: 84 Cannifton Rd, Belleville

ATTENTION TO: Jaclyn Kalesnikoff

SAMPLED BY: MD/LC

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

DATE RECEIVED: 2023-05-15

DATE REPORTED: 2023-05-23

Parameter	Unit	SAMPLE DESCRIPTION:		BH-5	QAQC-1
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2023-05-15	2023-05-15
		G / S	RDL	4992120	4992126
Antimony	µg/g	7.5	0.8	<0.8	<0.8
Arsenic	µg/g	18	1	1	2
Barium	µg/g	390	2.0	53.8	71.8
Beryllium	µg/g	4	0.5	<0.5	<0.5
Boron	µg/g	120	5	<5	<5
Boron (Hot Water Soluble)	µg/g	1.5	0.10	0.10	0.15
Cadmium	µg/g	1.2	0.5	<0.5	<0.5
Chromium	µg/g	160	5	12	16
Cobalt	µg/g	22	0.8	10.3	13.4
Copper	µg/g	140	1.0	9.5	11.6
Lead	µg/g	120	1	3	5
Molybdenum	µg/g	6.9	0.5	<0.5	<0.5
Nickel	µg/g	100	1	9	11
Selenium	µg/g	2.4	0.8	<0.8	<0.8
Silver	µg/g	20	0.5	<0.5	<0.5
Thallium	µg/g	1	0.5	<0.5	<0.5
Uranium	µg/g	23	0.50	<0.50	0.61
Vanadium	µg/g	86	2.0	22.0	26.7
Zinc	µg/g	340	5	22	29
Chromium, Hexavalent	µg/g	8	0.2	<0.2	<0.2
Cyanide, WAD	µg/g	0.051	0.040	<0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.7	0.005	0.101	0.153
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	N/A	0.145	0.670
pH, 2:1 CaCl <sub>2</sub> Extraction	pH Units		NA	7.61	7.69

Certified By:



*Nvine Basly*



**AGAT** Laboratories

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AGAT WORK ORDER: 23P024828

PROJECT: 220456

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CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

SAMPLING SITE: 84 Cannifton Rd, Belleville

ATTENTION TO: Jaclyn Kalesnikoff

SAMPLED BY: MD/LC

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

DATE RECEIVED: 2023-05-15

DATE REPORTED: 2023-05-23

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 6: Generic Site Condition Standards for Shallow Soils in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**4992120-4992126** EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl<sub>2</sub> extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:



*Mylene Basik*



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AGAT WORK ORDER: 23P024828

PROJECT: 220456

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CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

SAMPLING SITE: 84 Cannifton Rd, Belleville

ATTENTION TO: Jaclyn Kalesnikoff

SAMPLED BY: MD/LC

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

DATE RECEIVED: 2023-05-15

DATE REPORTED: 2023-05-23

Parameter	Unit	SAMPLE DESCRIPTION:		BH-5	QAQC-1
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2023-05-15	2023-05-15
		G / S	RDL	4992120	4992126
Naphthalene	µg/g	0.6	0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.15	0.05	<0.05	<0.05
Acenaphthene	µg/g	7.9	0.05	<0.05	<0.05
Fluorene	µg/g	62	0.05	<0.05	<0.05
Phenanthrene	µg/g	6.2	0.05	<0.05	<0.05
Anthracene	µg/g	0.67	0.05	<0.05	<0.05
Fluoranthene	µg/g	0.69	0.05	<0.05	<0.05
Pyrene	µg/g	78	0.05	<0.05	<0.05
Benz(a)anthracene	µg/g	0.5	0.05	<0.05	<0.05
Chrysene	µg/g	7	0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.78	0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.78	0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.38	0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	6.6	0.05	<0.05	<0.05
1 and 2 Methylnaphthalene	µg/g	0.99	0.05	<0.05	<0.05
Moisture Content	%		0.1	23.4	23.3
Surrogate	Unit	Acceptable Limits			
Naphthalene-d8	%	50-140		100	85
Acridine-d9	%	50-140		105	75
Terphenyl-d14	%	50-140		90	70

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 6: Generic Site Condition Standards for Shallow Soils in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**4992120-4992126** Results are based on the dry weight of the soil.  
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.  
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:

*R. Chakraborty*



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AGAT WORK ORDER: 23P024828

PROJECT: 220456

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CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

ATTENTION TO: Jaclyn Kalesnikoff

SAMPLING SITE: 84 Cannifton Rd, Belleville

SAMPLED BY: MD/LC

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

DATE RECEIVED: 2023-05-15

DATE REPORTED: 2023-05-23

Parameter	Unit	SAMPLE DESCRIPTION:		BH-5	QAQC-1
		G / S	RDL	4992120	4992126
Polychlorinated Biphenyls	µg/g	0.35	0.1	<0.1	<0.1
Moisture Content	%		0.1	23.4	23.3
Surrogate	Unit	Acceptable Limits			
Decachlorobiphenyl	%	50-140		108	116

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 6: Generic Site Condition Standards for Shallow Soils in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils  
 Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**4992120-4992126** Results are based on the dry weight of soil extracted.  
 PCB total is a calculated parameter. The calculated value is the sum of Aroclor 1242, Aroclor 1248, Aroclor 1254 and Aroclor 1260.  
 The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:

*R. Chakraborty*





## Certificate of Analysis

AGAT WORK ORDER: 23P024828

PROJECT: 220456

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CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

ATTENTION TO: Jaclyn Kalesnikoff

SAMPLING SITE: 84 Cannifton Rd, Belleville

SAMPLED BY: MD/LC

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

DATE RECEIVED: 2023-05-15

DATE REPORTED: 2023-05-23

Parameter	Unit	SAMPLE DESCRIPTION:		BH-5	QAQC-1
		G / S	RDL	Soil	Soil
		DATE SAMPLED:		2023-05-15	2023-05-15
		4992120	4992126		
F1 (C6 - C10)	µg/g		5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5	<5	<5
F2 (C10 to C16)	µg/g	98	10	<10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10	<10	<10
F3 (C16 to C34)	µg/g	300	50	<50	<50
F3 (C16 to C34) minus PAHs	µg/g		50	<50	<50
F4 (C34 to C50)	µg/g	2800	50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	2800	50	NA	NA
Moisture Content	%		0.1	23.4	23.3
Surrogate	Unit	Acceptable Limits			
Toluene-d8	%	50-140		100	102
Terphenyl	%	60-140		90	64

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 6: Generic Site Condition Standards for Shallow Soils in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils  
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**4992120-4992126** Results are based on sample dry weight.  
The C6-C10 fraction is calculated using toluene response factor.  
C6-C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.  
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.  
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present. The chromatogram has returned to baseline by the retention time of nC50.  
Total C6 - C50 results are corrected for BTEX and PAH contributions.  
C>10 - C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.  
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).  
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.  
nC10, nC16 and nC34 response factors are within 10% of their average.  
C50 response factor is within 70% of nC10 + nC16 + nC34 average.  
Linearity is within 15%.  
Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:

*R. Chakraborty*



## Certificate of Analysis

AGAT WORK ORDER: 23P024828

PROJECT: 220456

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CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

SAMPLING SITE: 84 Cannifton Rd, Belleville

ATTENTION TO: Jaclyn Kalesnikoff

SAMPLED BY: MD/LC

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

DATE RECEIVED: 2023-05-15

DATE REPORTED: 2023-05-23

Parameter	Unit	SAMPLE DESCRIPTION:		BH-5	QAQC-1
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2023-05-15	2023-05-15
		G / S	RDL	4992120	4992126
Dichlorodifluoromethane	µg/g	16	0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.02	0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	4	0.05	<0.05	<0.05
Acetone	ug/g	16	0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.1	0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.084	0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.75	0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	0.47	0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	16	0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	1.9	0.02	<0.02	<0.02
Chloroform	ug/g	0.05	0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	0.38	0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	0.05	<0.05	<0.05
Benzene	ug/g	0.21	0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.05	0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.061	0.03	<0.03	<0.03
Bromodichloromethane	ug/g	1.5	0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	1.7	0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04
Toluene	ug/g	2.3	0.05	<0.05	<0.05
Dibromochloromethane	ug/g	2.3	0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	0.28	0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.058	0.04	<0.04	<0.04
Chlorobenzene	ug/g	2.4	0.05	<0.05	<0.05
Ethylbenzene	ug/g	1.1	0.05	<0.05	<0.05
m & p-Xylene	ug/g		0.05	<0.05	<0.05

Certified By:

*R. Chakraborty*



## Certificate of Analysis

AGAT WORK ORDER: 23P024828

PROJECT: 220456

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ATTENTION TO: Jaclyn Kalesnikoff

SAMPLING SITE: 84 Cannifton Rd, Belleville

SAMPLED BY: MD/LC

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

DATE RECEIVED: 2023-05-15

DATE REPORTED: 2023-05-23

Parameter	Unit	SAMPLE DESCRIPTION:		BH-5	QAQC-1
		G / S	RDL	Soil	Soil
		DATE SAMPLED:		2023-05-15	2023-05-15
				4992120	4992126
Bromoform	ug/g	0.27	0.05	<0.05	<0.05
Styrene	ug/g	0.7	0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.05	<0.05
o-Xylene	ug/g		0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	4.8	0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.083	0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	1.2	0.05	<0.05	<0.05
Xylenes (Total)	ug/g	3.1	0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05	0.05	<0.05	<0.05
n-Hexane	µg/g	2.8	0.05	<0.05	<0.05
Moisture Content	%		0.1	23.4	23.3
Surrogate	Unit	Acceptable Limits			
Toluene-d8	% Recovery	50-140		100	102
4-Bromofluorobenzene	% Recovery	50-140		79	78

**Comments:** RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 6: Generic Site Condition Standards for Shallow Soils in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils  
 Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

**4992120-4992126** The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.

Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.

1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.

The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by \*)

Certified By:

*R. Chakraborty*

## Quality Assurance

**CLIENT NAME:** BLUMETRIC ENVIRONMENTAL INC.  
**PROJECT:** 220456  
**SAMPLING SITE:** 84 Cannifton Rd, Belleville

**AGAT WORK ORDER:** 23P024828  
**ATTENTION TO:** Jaclyn Kalesnikoff  
**SAMPLED BY:** MD/LC

### Soil Analysis

RPT Date: May 23, 2023			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE		MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
<b>O. Reg. 153(511) - Metals &amp; Inorganics (Soil)</b>															
Antimony	4995317		<0.8	<0.8	NA	< 0.8	131%	70%	130%	102%	80%	120%	75%	70%	130%
Arsenic	4995317		5	5	0.0%	< 1	128%	70%	130%	101%	80%	120%	104%	70%	130%
Barium	4995317		83.1	81.6	1.8%	< 2.0	118%	70%	130%	104%	80%	120%	100%	70%	130%
Beryllium	4995317		0.6	0.7	NA	< 0.5	94%	70%	130%	94%	80%	120%	92%	70%	130%
Boron	4995317		9	9	NA	< 5	87%	70%	130%	103%	80%	120%	88%	70%	130%
Boron (Hot Water Soluble)	4996403		0.35	0.38	NA	< 0.10	90%	60%	140%	106%	70%	130%	101%	60%	140%
Cadmium	4995317		<0.5	<0.5	NA	< 0.5	90%	70%	130%	100%	80%	120%	102%	70%	130%
Chromium	4995317		21	21	NA	< 5	103%	70%	130%	96%	80%	120%	97%	70%	130%
Cobalt	4995317		10.7	10.6	0.9%	< 0.8	111%	70%	130%	101%	80%	120%	100%	70%	130%
Copper	4995317		22.6	22.6	0.0%	< 1.0	101%	70%	130%	102%	80%	120%	92%	70%	130%
Lead	4995317		12	12	0.0%	< 1	116%	70%	130%	111%	80%	120%	106%	70%	130%
Molybdenum	4995317		<0.5	<0.5	NA	< 0.5	124%	70%	130%	111%	80%	120%	113%	70%	130%
Nickel	4995317		22	22	0.0%	< 1	113%	70%	130%	101%	80%	120%	98%	70%	130%
Selenium	4995317		<0.8	<0.8	NA	< 0.8	126%	70%	130%	105%	80%	120%	109%	70%	130%
Silver	4995317		<0.5	<0.5	NA	< 0.5	102%	70%	130%	102%	80%	120%	93%	70%	130%
Thallium	4995317		<0.5	<0.5	NA	< 0.5	121%	70%	130%	103%	80%	120%	99%	70%	130%
Uranium	4995317		0.68	0.68	NA	< 0.50	119%	70%	130%	106%	80%	120%	108%	70%	130%
Vanadium	4995317		32.4	32.0	1.2%	< 2.0	118%	70%	130%	101%	80%	120%	98%	70%	130%
Zinc	4995317		73	61	17.9%	< 5	115%	70%	130%	102%	80%	120%	77%	70%	130%
Chromium, Hexavalent	4992120 4992120		<0.2	<0.2	NA	< 0.2	102%	70%	130%	89%	80%	120%	84%	70%	130%
Cyanide, WAD	4996403		<0.040	<0.040	NA	< 0.040	102%	70%	130%	103%	80%	120%	105%	70%	130%
Mercury	4995317		<0.10	<0.10	NA	< 0.10	128%	70%	130%	102%	80%	120%	103%	70%	130%
Electrical Conductivity (2:1)	4995317		0.995	0.982	1.3%	< 0.005	110%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	4993910		2.26	2.26	0.0%	NA									
pH, 2:1 CaCl2 Extraction	4993969		6.54	6.76	3.3%	NA	101%	80%	120%						

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

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

Certified By: \_\_\_\_\_



## Quality Assurance

**CLIENT NAME:** BLUMETRIC ENVIRONMENTAL INC.

**AGAT WORK ORDER:** 23P024828

**PROJECT:** 220456

**ATTENTION TO:** Jaclyn Kalesnikoff

**SAMPLING SITE:** 84 Cannifton Rd, Belleville

**SAMPLED BY:** MD/LC

### Trace Organics Analysis

RPT Date: May 23, 2023			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	

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

F1 (C6 - C10)	4995572	<5	<5	NA	< 5	90%	60%	140%	122%	60%	140%	88%	60%	140%
F2 (C10 to C16)	4990646	639	595	7.1%	< 10	125%	60%	140%	86%	60%	140%	114%	60%	140%
F3 (C16 to C34)	4990646	275	261	5.2%	< 50	127%	60%	140%	84%	60%	140%	102%	60%	140%
F4 (C34 to C50)	4990646	< 50	< 50	0.0%	< 50	97%	60%	140%	123%	60%	140%	119%	60%	140%

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

Naphthalene	4992050	<0.05	<0.05	NA	< 0.05	73%	50%	140%	90%	50%	140%	88%	50%	140%
Acenaphthylene	4992050	<0.05	<0.05	NA	< 0.05	67%	50%	140%	78%	50%	140%	75%	50%	140%
Acenaphthene	4992050	<0.05	0.05	NA	< 0.05	77%	50%	140%	110%	50%	140%	73%	50%	140%
Fluorene	4992050	<0.05	<0.05	NA	< 0.05	97%	50%	140%	75%	50%	140%	98%	50%	140%
Phenanthrene	4992050	0.21	0.15	NA	< 0.05	87%	50%	140%	115%	50%	140%	82%	50%	140%
Anthracene	4992050	<0.05	<0.05	NA	< 0.05	67%	50%	140%	105%	50%	140%	103%	50%	140%
Fluoranthene	4992050	0.31	0.28	11.9%	< 0.05	106%	50%	140%	80%	50%	140%	86%	50%	140%
Pyrene	4992050	0.29	0.29	0.5%	< 0.05	68%	50%	140%	105%	50%	140%	100%	50%	140%
Benz(a)anthracene	4992050	0.08	0.09	NA	< 0.05	77%	50%	140%	80%	50%	140%	83%	50%	140%
Chrysene	4992050	0.08	0.08	NA	< 0.05	117%	50%	140%	100%	50%	140%	83%	50%	140%
Benzo(b)fluoranthene	4992050	<0.05	<0.05	NA	< 0.05	116%	50%	140%	113%	50%	140%	103%	50%	140%
Benzo(k)fluoranthene	4992050	<0.05	<0.05	NA	< 0.05	113%	50%	140%	103%	50%	140%	68%	50%	140%
Benzo(a)pyrene	4992050	<0.05	<0.05	NA	< 0.05	102%	50%	140%	100%	50%	140%	83%	50%	140%
Indeno(1,2,3-cd)pyrene	4992050	<0.05	0.05	NA	< 0.05	102%	50%	140%	98%	50%	140%	65%	50%	140%
Dibenz(a,h)anthracene	4992050	<0.05	<0.05	NA	< 0.05	119%	50%	140%	98%	50%	140%	95%	50%	140%
Benzo(g,h,i)perylene	4992050	<0.05	0.05	NA	< 0.05	98%	50%	140%	80%	50%	140%	63%	50%	140%

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

Polychlorinated Biphenyls	4993930	< 0.1	< 0.1	NA	< 0.1	96%	50%	140%	92%	50%	140%	95%	50%	140%
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**O. Reg. 153(511) - VOCs (with PHC) (Soil)**

Dichlorodifluoromethane	4995572	<0.05	<0.05	NA	< 0.05	98%	50%	140%	72%	50%	140%	113%	50%	140%
Vinyl Chloride	4995572	<0.02	<0.02	NA	< 0.02	74%	50%	140%	89%	50%	140%	111%	50%	140%
Bromomethane	4995572	<0.05	<0.05	NA	< 0.05	98%	50%	140%	79%	50%	140%	90%	50%	140%
Trichlorofluoromethane	4995572	<0.05	<0.05	NA	< 0.05	83%	50%	140%	88%	50%	140%	112%	50%	140%
Acetone	4995572	<0.50	<0.50	NA	< 0.50	82%	50%	140%	92%	50%	140%	94%	50%	140%
1,1-Dichloroethylene	4995572	<0.05	<0.05	NA	< 0.05	83%	50%	140%	83%	60%	130%	113%	50%	140%
Methylene Chloride	4995572	<0.05	<0.05	NA	< 0.05	85%	50%	140%	89%	60%	130%	105%	50%	140%
Trans- 1,2-Dichloroethylene	4995572	<0.05	<0.05	NA	< 0.05	103%	50%	140%	89%	60%	130%	92%	50%	140%
Methyl tert-butyl Ether	4995572	<0.05	<0.05	NA	< 0.05	82%	50%	140%	99%	60%	130%	100%	50%	140%
1,1-Dichloroethane	4995572	<0.02	<0.02	NA	< 0.02	99%	50%	140%	98%	60%	130%	120%	50%	140%
Methyl Ethyl Ketone	4995572	<0.50	<0.50	NA	< 0.50	87%	50%	140%	99%	50%	140%	110%	50%	140%
Cis- 1,2-Dichloroethylene	4995572	<0.02	<0.02	NA	< 0.02	76%	50%	140%	96%	60%	130%	115%	50%	140%
Chloroform	4995572	<0.04	<0.04	NA	< 0.04	78%	50%	140%	102%	60%	130%	116%	50%	140%
1,2-Dichloroethane	4995572	<0.03	<0.03	NA	< 0.03	100%	50%	140%	98%	60%	130%	113%	50%	140%

## Quality Assurance

**CLIENT NAME:** BLUMETRIC ENVIRONMENTAL INC.  
**PROJECT:** 220456  
**SAMPLING SITE:** 84 Cannifton Rd, Belleville

**AGAT WORK ORDER:** 23P024828  
**ATTENTION TO:** Jaclyn Kalesnikoff  
**SAMPLED BY:** MD/LC

### Trace Organics Analysis (Continued)

RPT Date: May 23, 2023			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	
1,1,1-Trichloroethane	4995572		<0.05	<0.05	NA	< 0.05	76%	50%	140%	85%	60%	130%	102%	50%	140%	
Carbon Tetrachloride	4995572		<0.05	<0.05	NA	< 0.05	97%	50%	140%	81%	60%	130%	99%	50%	140%	
Benzene	4995572		<0.02	<0.02	NA	< 0.02	86%	50%	140%	99%	60%	130%	119%	50%	140%	
1,2-Dichloropropane	4995572		<0.03	<0.03	NA	< 0.03	81%	50%	140%	96%	60%	130%	113%	50%	140%	
Trichloroethylene	4995572		<0.03	<0.03	NA	< 0.03	71%	50%	140%	98%	60%	130%	107%	50%	140%	
Bromodichloromethane	4995572		<0.05	<0.05	NA	< 0.05	86%	50%	140%	85%	60%	130%	93%	50%	140%	
Methyl Isobutyl Ketone	4995572		<0.50	<0.50	NA	< 0.50	66%	50%	140%	97%	50%	140%	92%	50%	140%	
1,1,2-Trichloroethane	4995572		<0.04	<0.04	NA	< 0.04	83%	50%	140%	111%	60%	130%	116%	50%	140%	
Toluene	4995572		<0.05	<0.05	NA	< 0.05	83%	50%	140%	112%	60%	130%	116%	50%	140%	
Dibromochloromethane	4995572		<0.05	<0.05	NA	< 0.05	75%	50%	140%	90%	60%	130%	91%	50%	140%	
Ethylene Dibromide	4995572		<0.04	<0.04	NA	< 0.04	72%	50%	140%	102%	60%	130%	106%	50%	140%	
Tetrachloroethylene	4995572		<0.05	<0.05	NA	< 0.05	82%	50%	140%	102%	60%	130%	113%	50%	140%	
1,1,1,2-Tetrachloroethane	4995572		<0.04	<0.04	NA	< 0.04	73%	50%	140%	94%	60%	130%	102%	50%	140%	
Chlorobenzene	4995572		<0.05	<0.05	NA	< 0.05	83%	50%	140%	111%	60%	130%	110%	50%	140%	
Ethylbenzene	4995572		<0.05	<0.05	NA	< 0.05	72%	50%	140%	94%	60%	130%	119%	50%	140%	
m & p-Xylene	4995572		<0.05	<0.05	NA	< 0.05	109%	50%	140%	100%	60%	130%	109%	50%	140%	
Bromoform	4995572		<0.05	<0.05	NA	< 0.05	71%	50%	140%	88%	60%	130%	84%	50%	140%	
Styrene	4995572		<0.05	<0.05	NA	< 0.05	72%	50%	140%	85%	60%	130%	101%	50%	140%	
1,1,2,2-Tetrachloroethane	4995572		<0.05	<0.05	NA	< 0.05	87%	50%	140%	102%	60%	130%	104%	50%	140%	
o-Xylene	4995572		<0.05	<0.05	NA	< 0.05	71%	50%	140%	104%	60%	130%	113%	50%	140%	
1,3-Dichlorobenzene	4995572		<0.05	<0.05	NA	< 0.05	87%	50%	140%	111%	60%	130%	98%	50%	140%	
1,4-Dichlorobenzene	4995572		<0.05	<0.05	NA	< 0.05	87%	50%	140%	113%	60%	130%	97%	50%	140%	
1,2-Dichlorobenzene	4995572		<0.05	<0.05	NA	< 0.05	85%	50%	140%	110%	60%	130%	96%	50%	140%	
n-Hexane	4995572		<0.05	<0.05	NA	< 0.05	93%	50%	140%	81%	60%	130%	78%	50%	140%	

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

Certified By: \_\_\_\_\_

*R. Chakraborty*

## QC Exceedance

**CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.**
**AGAT WORK ORDER: 23P024828**
**PROJECT: 220456**
**ATTENTION TO: Jaclyn Kalesnikoff**

RPT Date: May 23, 2023												
<b>PARAMETER</b>				<b>Sample Id</b>		<b>REFERENCE MATERIAL</b>			<b>METHOD BLANK SPIKE</b>		<b>MATRIX SPIKE</b>	
						<b>Measured Value</b>			<b>Recovery</b>		<b>Recovery</b>	
						<b>Acceptable Limits</b>			<b>Acceptable Limits</b>		<b>Acceptable Limits</b>	
						<b>Lower Upper</b>			<b>Lower Upper</b>		<b>Lower Upper</b>	

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

Antimony	131%	70%	130%	102%	80%	120%	75%	70%	130%
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Comments: NA signifies Not Applicable.

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

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

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



## Method Summary

CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.

AGAT WORK ORDER: 23P024828

PROJECT: 220456

ATTENTION TO: Jaclyn Kalesnikoff

SAMPLING SITE: 84 Cannifton Rd, Belleville

SAMPLED BY: MD/LC

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
<b>Soil Analysis</b>			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, WAD	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	SEGMENTED FLOW ANALYSIS
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6075	modified from MSA PART 3, CH 14 and SM 2510 B	PC TITRATE
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl <sub>2</sub> Extraction	INOR-93-6075	modified from EPA 9045D, MCKEAGUE 3.11 E3137	PC TITRATE



## Method Summary

**CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.**
**AGAT WORK ORDER: 23P024828**
**PROJECT: 220456**
**ATTENTION TO: Jaclyn Kalesnikoff**
**SAMPLING SITE: 84 Cannifton Rd, Belleville**
**SAMPLED BY: MD/LC**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
<b>Trace Organics Analysis</b>			
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
1 and 2 Methylnaphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Polychlorinated Biphenyls	ORG-91-5113	modified from EPA SW-846 3570 & 8082A	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA SW-846 3541 & 8082A	GC/ECD
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID

## Method Summary

**CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.**
**AGAT WORK ORDER: 23P024828**
**PROJECT: 220456**
**ATTENTION TO: Jaclyn Kalesnikoff**
**SAMPLING SITE: 84 Cannifton Rd, Belleville**
**SAMPLED BY: MD/LC**

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

## Method Summary

**CLIENT NAME: BLUMETRIC ENVIRONMENTAL INC.**
**AGAT WORK ORDER: 23P024828**
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**ATTENTION TO: Jaclyn Kalesnikoff**
**SAMPLING SITE: 84 Cannifton Rd, Belleville**
**SAMPLED BY: MD/LC**

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

Have feedback?  
Scan here for a quick survey!



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

### Laboratory Use Only

Work Order #: 23P024828  
Cooler Quantity: 1 case  
Arrival Temperatures: 8.9 | 8.2 | 8.4  
7.4 | 7.9 | 8.0  
Custody Seal Intact:  Yes  No  N/A  
Notes: ice bagged

## Chain of Custody Record

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

### Report Information:

Company: Blumetric Environmental  
Contact: Jaclyn Kalesnikoff  
Address: 4 Cabarrugi St Kingston ON  
Phone: \_\_\_\_\_ Fax: \_\_\_\_\_  
Reports to be sent to:  
1. Email: jkalesnikoff@blumetric.ca  
2. Email: \_\_\_\_\_

### Regulatory Requirements:

(Please check all applicable boxes)

Regulation 153/04  Regulation 406  Sewer Use  
 Sanitary  Storm  
Table Indicate One Table Indicate One Region \_\_\_\_\_  
 Ind/Com  Res/Park  Agriculture  Regulation 558  Prov. Water Quality Objectives (PWQO)  
Soil Texture (Check One)  CCME  Other  
 Coarse  Fine Indicate One

### Turnaround Time (TAT) Required:

Regular TAT  5 to 7 Business Days  
Rush TAT (Rush Surcharges Apply)  
 3 Business Days  2 Business Days  Next Business Day  
OR Date Required (Rush Surcharges May Apply): \_\_\_\_\_

### Project Information:

Project: 220456  
Site Location: 84 Conifera rd Belleville  
Sampled By: MD/LC  
AGAT Quote #: \_\_\_\_\_ PO: \_\_\_\_\_  
Please note: If quotation number is not provided, client will be billed full price for analysis.

### Is this submission for a Report of Site Condition?

Yes  No

### Report Guideline on Certificate of Analysis

Yes  No

### Sample Matrix Legend

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

### Invoice Information:

Bill To Same: Yes  No

Company: Blumetric Environmental  
Contact: Jaclyn Kalesnikoff  
Address: 1682 Woodward dr Ottawa  
Email: jkalesnikoff@blumetric.ca

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Field Filtered - Metals, Hg, CrVI, DOC										Potentially Hazardous or High Concentration (Y/N)						
							Metals & Inorganics	Metals - <input checked="" type="checkbox"/> CrVI <input type="checkbox"/> Hg <input type="checkbox"/> HWSB	BTEX, F1-F4 PHCs	VOC	PAHS	PCBS	PCBS: Atoclor <input type="checkbox"/>	O. Reg 558 Landfill Disposal Characterization TCLP: <input type="checkbox"/> M&I <input type="checkbox"/> VOCs <input type="checkbox"/> ABNs <input type="checkbox"/> B(a)P <input type="checkbox"/> PCBs	O. Reg 406 Regulation 406 SPLP Rainwater Leach SPLP: <input type="checkbox"/> Metals <input type="checkbox"/> VOCs <input type="checkbox"/> SVOCs	Regulation 406 Characterization Package pH, ICPMS Metals, BTEX, F1-F4		Corrosivity: <input type="checkbox"/> Moisture <input type="checkbox"/> Sulphide					
1. BH-5	15/05/23	AM	4	S	If not enough soil		✓	✓	✓	✓	✓												
2. ATAC-1	15/05/23	AM	4	S	Please call to prioritize analysis		✓	✓	✓	✓	✓												
3.		AM																					
4.		AM																					
5.		AM																					
6.		AM																					
7.		AM																					
8.		AM																					
9.		AM																					
10.		AM																					
11.		AM																					

Samples Relinquished By (Print Name and Sign): <u>Matt Debeer</u>	Date: <u>15/05/23</u>	Time: <u>13:00</u>	Samples Received By (Print Name and Sign): <u>Karly Jones</u>	Date: <u>May 15/23</u>	Time: <u>13:15</u>
Samples Relinquished By (Print Name and Sign): <u>[Signature]</u>	Date: <u>May 15/23</u>	Time: <u>11:00</u>	Samples Received By (Print Name and Sign): <u>[Signature]</u>	Date: <u>May 16</u>	Time: <u>8:55 AM</u>
Samples Relinquished By (Print Name and Sign): <u>[Signature]</u>	Date: _____	Time: _____	Samples Received By (Print Name and Sign): _____	Date: _____	Time: _____

Page 1 of 1  
Nº: **T-143246**

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

## APPENDIX C

### Site Photographs



Photographs taken 18 October 2022



BH/MW-2

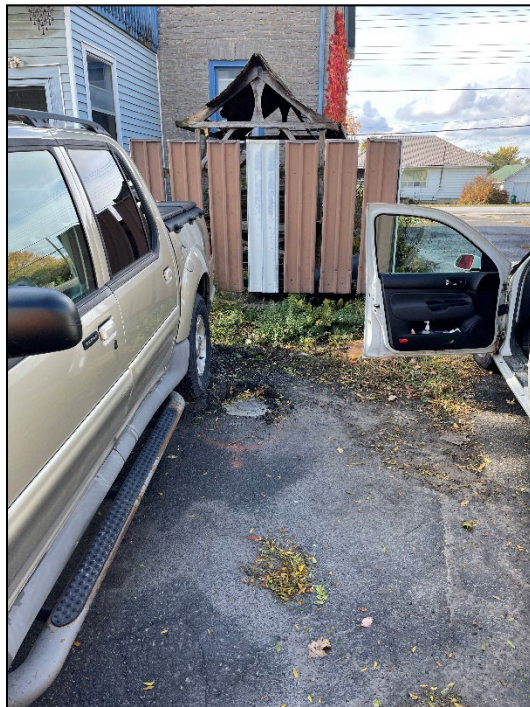


BH/MW-2 facing north from the centre of the property.





BH/MW-4 and TP1 facing northeast.



BH/MW-3 facing west.



## BluMetric Environmental Inc.

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