PHASE TWO
ENVIRONMENTAL SITE ASSESSMENT
2571 AND 2595 LANCASTER ROAD
OTTAWA, ONTARIO

Submitted to:

Enbridge Gas Distribution
101 Honda Boulevard
Markham, ON L6C 0M6

Prepared by:

BluMetric Environmental Inc.
1682 Woodward Drive
Ottawa, ON K2C 3R8

Project Number: 210294-03

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1. EXECUTIVE SUMMARY

In March 2021, BluMetric Environmental Inc. (BluMetric™) was retained by Enbridge Gas Inc. (Enbridge) to prepare a Phase Two Environmental Site Assessment (ESA) for the property at 2571 and 2595 Lancaster Road in Ottawa, Ontario (subsequently referred to as the "Phase Two Property"). The Phase Two ESA was performed in support of a Site Plan Approval application. As per the requirements of the City of Ottawa Site Plan Approval process, the Phase Two ESA was completed in general accordance with Ontario Regulation (O. Reg.) 153/04. However, filing for a Record of Site Condition (RSC) is not required for the Phase Two Property. The Phase Two ESA investigated the areas of potential environmental concern (APECs) identified in the Phase One ESA prepared by BluMetric and dated XX May 2021.

The Phase Two Property consists of a 1.67-hectare commercial property presently with the Minto Skating Club at 2571 Lancaster Road and a 1.63-hectare section of former railway easement with a civic address of 2595 Lancaster Road. The Phase Two Property is bound by Lancaster Road to the south, and commercial properties to the north, east and west.

The Phase Two Property itself and all land immediately east, west and south are occupied by light industrial/commercial establishments. Lands immediately north are zoned heavy industrial (IH). Current zoning of the Phase Two Property is identified as Light Industrial Zone (IL). Based on site conditions and potential future property use the O. Reg. 153/04 Table 3 Full Depth Generic Site Condition Standards (SCS) in a Non Potable Ground Water Condition: Industrial/Commercial/ Community Property Use, Fine and Medium Textured Soils were considered appropriate for comparison to soil and groundwater analytical results at the Phase Two Property.

The Phase 2 ESA work program was determined based on the findings from a Phase One ESA (BluMetric. July 2021). The Phase Two ESA work program included; advancement of 9 boreholes for soil sampling; the installation of monitoring wells for groundwater sampling at two borehole locations; and groundwater sampling at two existing monitoring wells located on the 2595 Lancaster Road property.

The Phase Two Property is located in the south end of the Ottawa Drain catchment area within the Ottawa East Subwatershed. There are no permanent surface water features on the Phase Two Property. The nearest water body is Green's Creek, located approximately 800 m to the northeast of the Phase Two Property, which flows north to the Ottawa River. Storm water drains located in the parking lots surrounding the arena drain most of the surface water from the 2571 Lancaster property. Ditches running northwest-southeast border either side of the former railway easement. The ditches drain to the southeast into Ramsay Creek, located approximately 1.0 km away.

It is inferred that the predominant direction of shallow groundwater flow in the vicinity of the Phase Two Property is generally to the north, in the direction of regionally sloping surface topography and the Ottawa River. On relatively smaller scales, flow directions can be influenced by conditions such as bedding materials around underground utility lines, leaking sewers, and/or the presence of building foundations. The Phase Two Property and properties within the 150 m radius of the property line are serviced by municipal water supply and sewers. Groundwater use at the Phase Two Property, is inferred to be non-potable (i.e., not used as a raw water supply for a drinking water system).

The Phase Two Property is generally characterized by 0.5 to 1.5 m of fill material over silt and/or clay extending to bedrock at a minimum depth of approximately 3.5 m. Localized lenses of sand/gravel overlie the bedrock at some locations. The measured static groundwater table on the Phase Two Property during April/May 2021 ranged from approximately 1.0 m to 2.0 m in depth.

The APECs and PCAs assessed for the Phase Two Property were identified through a Phase One ESA (BluMetric, July 2021). The APECs and PCAs were assessed as follows:

APEC ID	Location of Area of Potential Environmental Concern on Phase One Property	PCA(s)	Contaminants of Concern (COC): Media	Phase Two ESA Investigation Locations	Media: COC Exceeding O. Reg. 153/04 Table 3 SCS* (location)
A	Former Railway Corridor at 2595 Lancaster Road. Accumulated materials / debris on 2595 Lancaster Road from snow dumping. Suspected fill material in subsurface along former railway corridor	46 Rail Yards, Tracks and Spurs 30. Importation of Fill Material of Unknown Quality	Metals and General Inorganics, PHCs, VOCs, PAHs	BH1 to BH7 (soil only) MW-1 and MW-2 (groundwater only)	Soil: **Vanadium** for two (2) native silty clay soil samples; BH4 S4 (2.3 to 2.9 mbgs) and BH5 S4 (2.3 to 2.9 mbgs) Groundwater: None identified
B	Property line across from 2600 Lancaster Road	34 – Metal Fabrication SPL – transformer oil and coolant leak spills	Metals and General Inorganics, PHCs, VOCs, PAHs	MW-5-21 and MW-6-21 (soil and groundwater)	Soil: Known **PHC F1-F2** impact to soil at depth at BH7 (>3.0 m depth) and BH12 (>4.5 depth). Groundwater: Known **PHC F1-F2, acetone, benzene, and ethylbenzene** impact to groundwater (BH7). Free phase PHC monitored off property (BH12).

Soil samples were successfully obtained and analyzed for all contaminants of concern (COCs) in the two APECs assessed in the Phase Two ESA. Groundwater samples were successfully obtained and assessed for all COCs at MW-1, MW-2, MW-5-21, and MW-6-21.

Soils

Seventeen soil samples and two blind duplicate samples were submitted for laboratory analysis. Results exceeding the comparison quality standards are summarized below.

Laboratory Results for Soil Exceeding Comparison Standards

Sample ID	Sample Depth (m)	APEC	Soil Type	Parameter	Result	O. Reg. 153/04 Table 3 Industrial/ Commercial/ Community Property Use
BH4 S4	2.3 – 2.9	A	Clay	vanadium (µg/g dry)	100	86
BH5 S4	2.3 – 2.9	A	Clay	vanadium (µg/g dry)	97	86
MW6-21 S2	0.6 - 1.2	B	Fill / Clay	EC (mS/cm)	3.44	1.4
				SAR	56.2	12
MW6-21 S5	2.4 – 3.0	B	Clay	EC (mS/cm)	1.58	1.4
				SAR	37.5	12
DUP2				EC (mS/cm)	1.5	1.4

Notes: EC - Electrical Conductivity; SAR – Sodium Adsorption Ratio

The O. Reg. 153/04 Table 3 SCS were marginally exceeded for vanadium for soil samples collected within the native clay at BH-4 and BH-5 (both between 2.3 and 2.9 m depth) and for EC and SAR for 2 soil samples collected in the fill (between 0.6 to 1.2 m depth) and clay (between 2.4 m and 3.0 m depth) at MW-6-21.

Vanadium – Two of the 18 soil samples (includes 2 blind duplicate samples) analyzed for metals exceeded the O. Reg. 153/04 Table 3 SCS for vanadium (86 µg/g). Both samples consisted entirely of native silty clay collected in the central portion of the 2595 Lancaster Road property. The SCS for vanadium was established by the province based on an assessed upper limit for Ontario Soil Background concentrations. The GeoOttawa2017 Conference Paper "Elevated Background Metals Concentrations in Champlain Sea Clay - Ottawa Region" identified vanadium concentrations ranging from 10 to 136 µg/g in Ottawa Region Champlain Sea Clay. The paper proposes a geo-regional background value for vanadium of 123 µg/g. No soil samples analyzed for the Phase Two Property exceed the proposed geo-regional standard of 123 µg/g. In BluMetric's professional opinion the primary source for vanadium exceeding the O. Reg. 153/04 O. Reg. 153/04 Table 3 SCS is the native silty clay soil.

Electrical Conductivity (EC) and Sodium Adsorption Ratio (SAR) - Borehole/monitoring well MW-6-21 is located on the south side of the Minto arena building and is approximately 20 m north and down gradient of Lancaster Road. The EC and SAR exceedances for soil are indicative of an impact from salt, inferred to be road salt used for de-icing on Lancaster Road or in the paved areas of the Subject Property. The soil component values used in determining the O. Reg. 153/04 Table 3 SCS are presented in Appendix A2 of MECP's "Rationale for the Development of Soil and Ground Water Standards for Use at Contaminated Sites in Ontario. April 15, 2011. PIBS 7386e01." The soil standards for EC and SAR are based around soil use for agriculture and the established SCS are only applicable to surface soils (i.e. soils to a depth of 1.5 m). Since MW-6-21 S5 was collected from 2.4 – 3.0 m depth, it can be argued that the measured result does not represent an O. Reg. 153/04 exceedance. Also, when filing for a record of site condition (RSC) O. Reg. 153/04 allows an exemption for EC and SAR impacts when it is the opinion of the QP that impact is derived from de-icing.

Between 0.6 to 1.37 m of sand and gravel fill material was observed for the 7 borehole locations completed within the railway corridor. No evidence of deleterious fill material was observed for boreholes BH-4 to BH-7 which cover the eastern portion and approximately 60% of the entire 2595 Lancaster Road property. However, at boreholes BH-1 to BH-3, asphalt was evident in the fill material as either asphalt fragments or as a distinct asphalt layer as observed from 0.8 to 0.9 m depth at BH-1. Also, large pieces of asphalt were observed at ground surface in the vicinity of BH-3. The completed soil sample analyses for the fill material at BH1 indicate the fill quality meets the applicable Table 3 Industrial/Commercial/Community Property Use standards. However, the presence of asphalt in the fill material will pose some restrictions on the management of excess soils during development of the railway corridor and a soil management plan for soils containing asphalt will be required.

Groundwater

Groundwater quality results exceeding the applicable O. Reg. 153/04 Table 3 SCS for All Property Uses, medium and fine textured soils were limited to a marginal exceedance for sodium and an exceedance for chloride for the April 7, 2021, groundwater sample at MW-6-21, as summarized below.

Groundwater Results Exceeding Comparison Standards

Sample ID	Sample Date	Parameter	Result (µg/L)	O. Reg. 153/04 Table 3
				All Types of Property Use ((µg/L)
MW-6-21	7-Apr-21	Sodium (µg/L)	2,360,000	2,300,000
		Chloride (µg/L)	4,570,000	2,300,000

The soil and groundwater quality impact at MW-6-21 is inferred to be anthropogenic in origin, most likely due to road salt applied for de-icing on Lancaster Road or in the paved areas of the Subject Property. Salt impact appears to be limited to the vicinity of Lancaster Road and the southern end of the Subject Property as no salt impact is evident for the groundwater samples collected at MW-5-21, MW-1 and MW-2.

Based on the field observations and the laboratory results no further subsurface investigation is deemed necessary for the Phase Two Property. If the monitoring wells are not to be maintained for future use, the wells must be properly sealed and abandoned per the requirements of O. Reg. 903.

2. INTRODUCTION

In March 2021, BluMetric Environmental Inc. (BluMetric™) was retained by Enbridge Gas Inc. (Enbridge) to prepare a Phase Two Environmental Site Assessment (ESA) for the property at 2571 and 2595 Lancaster Road in Ottawa, Ontario (subsequently referred to as the "Phase Two Property"). The Phase Two ESA was performed in support of a Site Plan Approval application. As per the requirements of the City of Ottawa Site Plan Approval process, the Phase Two ESA was completed in general accordance with Ontario Regulation (O. Reg.) 153/04. However, filing for a Record of Site Condition (RSC) is not required for the Phase Two Property. The Phase Two ESA investigated the areas of potential environmental concern (APECs) identified in the Phase One ESA prepared by BluMetric and dated July 2021. The location of the Phase Two Property is shown in Figure 1.

2.1 SITE DESCRIPTION

Municipal Address and Property Identifier

The Phase Two Property is comprised of two civic addresses described as:

2571 Lancaster Road

- Legal Description: CON 3OF PT LOT 25 PT BLK B;RP 5R272 PART 2 RP 4R341;PART 2
- PINs: 04262-0020 (LT) and 04262-0022 (LT)

2595 Lancaster Road

- Legal Description: GLOUCESTER CON 3OF PT LOTS 25; AND 26 RP 4R20395 PARTS 12; TO 21 PT PARTS 7 TO 11
- PIN: 04262-0283 (LT)

Size and Property Boundaries

The Phase Two Property consists of a 1.67-hectare commercial property presently with the Minto Skating Club at 2571 Lancaster Road and a 1.63-hectare section of former railway easement with a civic address of 2595 Lancaster Road. The Phase Two Property is bound by Lancaster Road to the south, and commercial properties to the north, east and west.

The Phase Two Property itself and all land immediately east, west, and south are occupied by light industrial/commercial establishments. Lands immediately north are zoned heavy industrial (IH). Current zoning of the Phase Two Property is identified as Light Industrial Zone (IL).

Property Description

Both parcels forming the Subject Property are roughly rectangular in shape. The front (southwest) portion of the 2571 Lancaster property grades upward from Lancaster Road, approximately peaking in elevation at the front of the building before sloping downward towards the back (i.e., northeast end) of the property. The 2595 Lancaster property and the back portion of the 2571 Lancaster property are generally flat. Drainage ditches located along the parcel boundary run northwest-southeast on either side of the former railway corridor.

The Minto arena building located on the 2571 Lancaster property has a footprint of approximately 6,513 m^2. The building was constructed in 1987. The southwest (front) portion of the lower level of the building is situated below ground surface, due to the sloped grading up to the front of the building. However, the lower floor of the building walks out to ground level along both sides and the back of the building. The remaining area on the 2571 Lancaster property is primarily asphalt covered, with parking on both the northwest and southeast side of the building. Vehicle access is also present at the rear of the arena for the loading bay. The front of the property, adjacent to Lancaster Road, is grass covered.

The former railway easement/corridor property at 2595 Lancaster Road was acquired by the ownership of 2571 Lancaster Road, in approximately 2003. The rail track along the northeastern half of the rail corridor has been removed. The rail track on the southwestern half of the rail corridor remains intact across the entire length of the 2595 Lancaster Road property.

The historical information for the Phase Two Property indicates that the 2571 Lancaster Road property was used for agriculture until at least the late 1960s. The Minto arena building is reported to have been constructed in 1987. The railway track is noted to be present on the 2595 Lancaster Road property at the time of the earliest available historical aerial photograph in 1933. The railway track is also evident in the earliest available National Topographical Survey map dated 1905.

2.2 PROPERTY OWNERSHIP

Name, Status, and Contact Information for Person who engaged the Qualified Person to Conduct the Phase Two ESA:

Mr. Asif Rashid, P.Eng., Advisor Environment, Lands, Permitting & Environment
Enbridge Gas Inc.
101 Honda Boulevard, Markham, ON L6C 0M6
T: 905-927-3176| C: 416-274-7603 asif.rashid@enbridge.com

Owner of the Phase Two Property:

The owner(s) of the Phase Two property at the time of the assessment were:

2571 Lancaster Road:
1120758 Ontario Limited
c/o Mask Management Consultants Ltd.
115 - 1101 Prince of Wales Drive
Ottawa, ON K2C 3W7

2595 Lancaster Road:
Recreational Facilities Management Inc.
c/o Mask Management Consultants Ltd.
115 - 1101 Prince of Wales Drive
Ottawa, ON K2C 3W7

2.3 CURRENT AND PROPOSED FUTURE USES

The existing arena building at 2571 Lancaster Road was reportedly constructed in 1987. It is understood that the building is to be removed and replaced by a 3-storey building with one storey of underground parking. The property at 2595 Lancaster Road is presently undeveloped except for tracks from a former railway corridor. The Phase Two Property is currently zoned by City of Ottawa as IL, Light Industrial Zone, and IH, Heavy Industrial Zone. The Phase Two Property will be used by Enbridge as a regional depot.

2.4 APPLICABLE SITE CONDITION STANDARD

Generic standards for soil and groundwater quality are prescribed through Ontario Regulation (O.Reg.) 153/04, as amended. Selection of applicable site condition standards (SCS) for comparison to soil and groundwater quality at the Phase Two Property was determined based on the following:

- The Phase Two Property is currently zoned by City of Ottawa as IL, Light Industrial Zone, and IH, Heavy Industrial Zone. 'Industrial/Commercial/Community Property Use' represents the current and proposed future use of the Phase Two Property.
- The Phase Two Property is not considered a 'Shallow Soil Property' as bedrock was encountered at greater than 2 m below ground surface (bgs) at all Phase Two Property borehole locations.
- The Phase Two Property is in a 'Non-Potable Ground Water Condition' as the Phase Two Property and neighbouring properties within 250 metres are not serviced by drinking water supply wells (subject to confirmation from the municipality).
- The Phase Two Property is not located within 30 m of a permanent water body.
- The Phase Two Property is not considered an 'environmentally sensitive area' due to pH levels in soil. All measured pH values for surface soil were in the acceptable range from 5.0 and 9.0. All measured pH values for subsurface soil were in the acceptable range from 5.0 to 11.0.
- Native clay soils were identified for all boreholes for the Phase Two Property. Soil gradation analysis completed for the geotechnical study (Malroz, June 2021) and discussed in Section 6.4 confirmed the soil texture for the native soil as 'Fine to Medium Textured'.

Based on site conditions the following standards under O.Reg. 153/04 (Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011) were considered appropriate for comparison to the laboratory analytical results for soil and groundwater quality:

- O. Reg. 153/04 Table 3 - Full Depth Generic Site Condition Standards (SCS) in a Non-Potable Ground Water Condition: Industrial/Commercial/Community Property Use, Fine to Medium Textured Soils.

3. BACKGROUND INFORMATION

3.1 PHYSICAL SETTING

Water Bodies and Areas of Natural Significance

The nearest surface water feature is the Ottawa River, located approximately 890 m north of the Phase Two Property. The BluMetric, July 2021 Phase One ESA did not identify any 'areas of natural significance' within 250 m of the property.

Topography and Surface Water Drainage Features

The front (southwest) portion of 2571 Lancaster property grades upward from Lancaster Road, approximately peaking in elevation at the front of the building and then sloping downward towards the back (northeast) of the property. The 2595 Lancaster property and the back portion of the 2571 Lancaster property are generally flat. Ditches running northwest-southeast border either side of the former railway easement. The Phase Two Property has a surface elevation of approximately 70 metres above sea level (m asl).

The Phase Two Property is located in the south end of the Ottawa Drain catchment area within the Ottawa East Subwatershed. There are no permanent surface water features on the Phase Two Property. The nearest water body is Green's Creek, located approximately 800 m to the northeast of the Phase Two Property, which flows north to the Ottawa River.

Storm water drains located in the parking lots surrounding the arena drain most of the surface water from the 2571 Lancaster property. Ditches running northwest-southeast border either side of the former railway easement. The ditches drain to the southeast into Ramsay Creek, located approximately 1.0 km away.

Geological Setting

Surficial geology maps (Ontario Geological Survey (OGS), 2010) describe the Phase Two Property as consisting of fine-textured glaciomarine deposits: massive-well laminated; clay and silt underlying erosional terraces; upper part of marine deposits removed to variable depths by fluvial erosion so in places clay is uniform blue-grey; unit includes lenses, bars and channel fills to sand and pockets of nonmarine silt that were formed during terrace (or channel) cutting. The Phase Two Property is located within the vicinity of a Bedrock divide, bedrock generally to the south of the Phase Two Property is described as Carlsbad Formation: interbedded grey-green to dark grey shale and fossiliferous calcareous siltstone to bioclastic limestone, while to the north bedrock is described as Lindsay Formation: fine- to coarse-grained, fossiliferous, commonly nodular, argillaceous limestone (OGS, 2011).

Borehole logs corresponding with monitoring wells installed in the former railway easement on the Phase I Property as part of a 2006 Phase II ESA (Pinchin, 2006) generally describe overburden material as coarse-grained sandy gravel, overlaying clay. Bedrock was encountered at depths between 3.4 m and 4.0 m below ground surface (bgs), and at two locations the borehole was terminated at 4.6 m bgs without reaching refusal on bedrock. Where encountered, bedrock was described as soft grey shale.

Hydrogeological Setting

It is inferred that the predominant direction of shallow groundwater flow in the vicinity of the Phase Two Property is generally to the north, in the direction of regionally sloping surface topography and the Ottawa River. On relatively smaller scales, flow directions can be influenced by conditions such as bedding materials around underground utility lines, leaking sewers, and/or the presence of building foundations. The Phase Two Property and properties within the 150 m radius of the property line are serviced by municipal water supply and sewers. Groundwater use at the Phase Two Property, is inferred to be non-potable (i.e., not used as a raw water supply for a drinking water system).

No water well records were found in the Water Well Information System (WWIS) database for the Phase Two Property. Three records were found in the WWIS for properties within 250 m of the Phase Two Property, two associated with the property at 2516 Lancaster Road and one additional with the property at 1250-1280 Leeds Avenue. The wells were constructed between 2014 and 2019 for monitoring purposes and were completed at depths between 4.52 m and 6.10 m. No details regarding bedrock type or depths, static water levels, or water quality information are available from the records.

3.2 PAST INVESTIGATIONS

Previous and On-going Environmental Site Investigations

Phase II Environmental Site Assessment Canadian Pacific Railway Corridor Parts of Lots 7-22 Concession 3, Ottawa, Ontario (Pinchin Environmental Ltd., January 31, 2006)

Pinchin Environmental Ltd. (Pinchin) was retained by Mask Management Consultants Limited (Mask Management) to complete a Phase II ESA of the railway property legally described as Parts of Lots 7-22 Concession 3, Ottawa, Ontario. The investigation was completed to investigate the potential presence of petroleum hydrocarbons (PHC), volatile organic compound (VOC), polycyclic aromatic hydrocarbon (PAH) and metal impacts in the soil and groundwater at the property as a result of the railway lines. The Phase II ESA investigation was a recommendation provided in the Phase I ESA completed by Pinchin on January 13, 2006 (not available for review).

Four boreholes were drilled along the railway corridor to maximum depths of 4.57 m bgs, two were terminated at inferred bedrock refusal. Two of the four boreholes (MW-2 and MW-3) are located on the 2595 Lancaster Road property while MW-1 is located several metres east of the property line. The fourth borehole, MW-4, was installed on the railway corridor lands to the west of the 2595 Lancaster Road property. Soil samples were collected throughout borehole advancement. All boreholes were completed as monitoring wells and a groundwater sample was collected from each well. Laboratory analysis indicated that all soil and groundwater samples submitted for analysis had measured concentrations of target parameters that satisfied the O. Reg. 153/04 Table 3 (non-potable groundwater conditions) Site Condition Standards prescribed at the time. It was concluded that no further investigation was warranted with respect to issues identified in Pinchin's Phase I ESA.

Phase I Environmental Site Assessment 2571 Lancaster Road, Ottawa, Ontario (Pinchin Ltd., February 11, 2016)

Pinchin was retained in January 2016 by Mask Management to conduct a Phase I ESA for the property located at 2571 Lancaster Road, Ottawa, Ontario. The Phase I ESA was generally completed in accordance with CSA standards. Based on the results of the Phase I ESA, nothing was identified as likely to result in potential subsurface impacts at the Phase I Property and no subsurface investigation work was recommended.

Phase One Environmental Site Assessment (BluMetric, June 2021)

This Phase One ESA was performed in support of a City of Ottawa Site Plan Approval application. The Phase One ESA was completed in general accordance with O. Reg. 153/04. The PCAs and APECs identified for the Phase One ESA are discussed in Section 4.3, herein.

It was the opinion of the Qualified Person (QP) that the APECs identified from the Phase One Study pose a potential environmental risk and/or liability to the Phase One Property. Consequently, a Phase Two ESA of the Phase One Property was recommended.

Confirmation of Quality of Past Investigations

The BluMetric, May 2021 Phase One ESA report was completed within the last twelve months and the information in the report was deemed adequate. The PCAs and APECs described in the Phase One ESA report were used as the basis for the Phase Two ESA investigation program.

4. SCOPE OF THE INVESTIGATION

4.1 OVERVIEW OF THE SITE INVESTIGATION

The Phase Two ESA involved soil and ground water sampling across the Phase Two Property. The following tasks were undertaken in April and May 2021:

- A Phase Two investigation work program was developed and approved by Enbridge.
- Prior to subsurface activities, all utilities were located in the investigation areas of the Phase Two Property by USL-1 of Ottawa, Ontario.
- A site-specific health and safety plan (HASP) and communications plan was prepared for Enbridge and Mask Management.
- Nine boreholes were advanced on the Phase Two Property on April 6 and 7, 2021.
- Soil samples were collected from each borehole.
- Selected soil samples were submitted for the analysis of metals, polycyclic aromatic hydrocarbons (PAHs), petroleum hydrocarbons (PHCs in the F1 to F4 fractions), volatile organic compounds (VOCs), and pH. electrical conductivity (EC) and sodium adsorption ratio (SAR) analysis.
- Borehole cuttings were collected in UN-approved drums pending disposal based on soil analytical results.
- Soil samples were submitted to Eurofins Environment Testing Canada Inc. in Ottawa on April 6 and 7, 2021.
- Groundwater monitoring wells were installed at two of the nine borehole locations.

- Purging of the two new monitoring wells (MW-5-21 and MW-6-21) and two existing site monitoring wells (MW-1 and MW-2) was completed on April 6/7, 2021.
- An elevation survey of the boreholes and monitoring wells was completed on April 15, 2021.
- Groundwater levels were measured on April 6/7, 2021, April 15, 2021, and May 21, 2021.
- Groundwater samples were collected from the four monitoring wells at the Phase Two Property (MW-1 and MW-2 on April 6, 2021, and MW-5-21 and MW-6-21 on April 7, 2021) and submitted to Eurofins Environment Testing Canada Inc. in Ottawa. Samples were analyzed for metals, PAHs, PHCs, VOCs, pH, electrical conductivity (EC), chloride and sodium.
- Groundwater samples were on April 6 and 7, 2021.
- Insitu hydraulic testing of MW-5-21 and MW-6-21 was conducted on May 21, 2010.
- The preparation of this report for Enbridge.

4.2 Media Investigated

The media investigated for this Phase Two ESA included soil and groundwater. Two new monitoring wells were installed, and two existing monitoring wells were utilized in the investigation. Selected borehole/monitoring well locations were determined based on proximity to the relevant APEC, the inferred direction for groundwater flow, drilling equipment access, and limitations posed by the presence of underground utilities. Sediment is not present on the Phase Two Property and was not included in the media sampling program.

4.3 Phase One Conceptual Site Model

A Phase One Conceptual Site Model (CSM) was completed by BluMetric (BluMetric, July 2021) and is reproduced as Figure 3 herein. The Phase One CSM shows:

- The location of buildings and structures.
- water bodies (if present) located in whole or in part on the Phase One Study Area.
- roads within the Phase One Study Area.
- uses of properties adjacent to the Phase One Property.
- areas where any PCA has occurred, and,
- identified APECs.

Some types of information that can appear in a CSM were not needed in the CSM:

- There is no figure which illustrates areas of natural significance in the Phase One Study Area because there were no areas of natural significance in the Phase One Study Area.

- There is no figure which illustrates the locations of water supply wells on the Phase One Property because there are no water supply wells on the Phase One Property.

Through records review, interviews and a site reconnaissance visit, the following Potentially Contaminating Activities (PCAs), as defined under O. Reg. 153/04, were identified at the Phase One Property:

Item	Potentially Contaminating Activity	Area Associated with Potentially Contaminating Activity
30.	Importation of Fill Material of Unknown Quality	The western portion of the 2595 Lancaster Road property is used to pile snow plowed from the arena parking lots. Granular materials and debris have accumulated in the area over multiple years of snow piling activities. Imported fill materials used for levelling of the rail corridor may also be present in the subsurface.
46.	Rail Yards, Tracks and Spurs	The 2595 Lancaster Road property was formerly the railway easement. The western rail track remains intact within the former easement, across the entire length of the Phase I Property.

Source: Table 2, Schedule D, O. Reg. 153/04

The following PCAs were identified within the Phase One Study Area:

Item	Potentially Contaminating Activity	Area Associated with Potentially Contaminating Activity
34.	Metal Fabrication	SCT and GEN records indicate the presence of manufacturing of metalwork machinery, general-purpose machinery, plastics products, industrial molds and dyes at 2600 Lancaster Road (Ottawa Mould Craft Limited).
Spl.	Spill	SPL records indicate two spill incidences occurred at 2600 Lancaster Road (Hydro Ottawa): A cooling system leak was reported in July 1995, the spill was an unknown amount of non-PCB oil to the pavement and soil. Spill was cleaned and contained. A separate discharge of <100L of transformer oil was reported within a vault in March 2005.

Source: Table 2, Schedule D, O. Reg. 153/04

The following APECs and contaminants of potential concern were identified at the Phase One Property; current/previous environmental assessment of each APEC is indicated:

Area of Potential Environmental Concern (APEC)	Location of APEC on Phase I Property	Potentially Contaminating Activity (PCA)	Location of PCA (On-site or Off-site)	Contaminants of Potential Concern	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
APEC A	Former Railway Corridor at 2595 Lancaster Road	#46 Rail Yards, Tracks and Spurs	On-site All areas along former railway corridor (2595 Lancaster Road)	Metals and General Inorganics, PHCs, VOCs, PAHs	Soil & Groundwater
	Accumulated materials / debris on 2595 Lancaster Road from snow dumping. Suspected fill material in subsurface along former railway corridor	#30 Imported Fill Material of Unknown Quality	On-site Snow dumping areas in western half of 2595 Lancaster Road parcel. Imported fill used for levelling of railway corridor.		
APEC B	Property line across from 2600 Lancaster Road	#34 – Metal Fabrication SPL – transformer oil and coolant leak spills	Off-Site 2600 Lancaster Road (30 m to the south)	Metals and General Inorganics, PHCs, BTEX	Soil & Groundwater

Source: Table 2, Schedule D, Ontario Regulation 153/04

Notes:
PHC – petroleum hydrocarbons
PAH – polycyclic aromatic hydrocarbons
VOC – volatile organic compounds
BTEX – benzene, toluene, ethylbenzene, xylene

4.4 Deviations From Sampling and Analysis Plan

The sampling and analysis plan is provided in Appendix 10.1. The followings deviations from this plan are noted:

- Former monitoring well MW-3 could not be located on the 2595 Lancaster Road property for groundwater monitoring/sampling.
- Results from the GPS survey indicate MW-1 is situated several metres off the Phase Two Property.

- Drilling activities on the railway corridor property were completed using a GP7822-AN track mount drill due to unsuitable conditions for access using the truck mount drill.
- Insufficient soil sample was available for PHC F2 to F4 fractions analysis and General inorganics analysis for BH1 S2, BH2 S2, and BH3 S1.
- Insufficient soil sample was available for Metals and PAH analysis for BH2 S2.

4.5 IMPEDIMENTS

No denial of access to the Phase Two Property was encountered during the Phase Two ESA. No physical impediments were encountered during the drilling investigation program.

5. INVESTIGATION METHOD

5.1 GENERAL

All field investigation and compliance verification sampling conducted by BluMetric followed the general protocols outlined in the Ministry of the Environment, Conservation and Park (MECP) "Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario, June 1996 and addenda" as well as the requirements of O. Reg. 153/04, as amended. Detailed descriptions of the investigation methods used are provided throughout this section.

Prior to the subsurface investigation activities all investigation areas were cleared for subsurface utilities by USL-1 Underground Service Locators Inc. of Ottawa, Ontario. Locate reports are included in Appendix 10.5.

5.2 DRILLING AND EXCAVATING

Two boreholes installed as monitoring wells (MW-5-21 and MW-6-21) were advanced on the Phase Two Property (2571 Lancaster Road portion) on April 6, 2021 by GET Drilling Limited of Napanee, Ontario (Well Contractor License No. 7085). Seven boreholes for soil sample collection only (BH1 to BH7) were advanced on the Phase Two Property (2595 Lancaster Road portion) on April 7, 2021 by Strata Drilling Limited of Richmond Hill, Ontario (Well Contractor License No. 7421). Drilling supervision was provided by BluMetric.

On April 6, 2021, borehole / monitoring wells MW-5-21 and MW-6-21 were advanced using a CME 55 truck mount drill equipped with solid stem augers. Soil samples were collected continuously in 0.6 m (2 ft) intervals for logging, sample headspace screening and sample collection. On April 7, 2021, boreholes BH1 to BH7 were advanced on the railway corridor property using a GP7822-AN track mount drill equipped with solid stem augers. Soil samples were collected in 0.8 m (2.5 ft) intervals for logging, sample headspace screening and sample collection. Decontamination/cleaning protocols were used for all drilling and sampling equipment to prevent potential cross contamination between sampling intervals. The drilling/sampling tools were scrubbed with Alconox® detergent and then rinsed prior to re-use.

The boreholes completed as monitoring wells on the Phase Two Property were drilled to the following depths:

- MW-5-21 – 4.88 m below ground surface (bgs) (auger refusal, inferred bedrock)
- MW-6-21 – 3.81 m bgs (auger refusal, shale bedrock)

Boreholes BH1 to BH7 were to be advanced to a depth of 2.90 m bgs or to refusal, whichever is less. Borehole depths are summarized as follows:

- BH1 – 1.07 m bgs (auger refusal)
- BH2 – 2.90 m bgs
- BH3 – 1.37 m bgs (auger refusal)
- BH4 – 2.90 m bgs
- BH5 – 2.90 m bgs
- BH6 – 2.90 m bgs
- BH7 – 2.90 m bgs

Borehole logs are provided in Appendix 10.2 and borehole/monitoring well locations are illustrated in Figure 4.

No excavation was completed as part of the Phase Two ESA investigation.

5.3 Soil Sampling

Throughout the soil sampling program, BluMetric maintained a continuous, descriptive geological and hydrogeological log of the soil stratigraphy, fill material identification, moisture content, colour, appearance, and odour of the soil encountered at the Phase Two Property. This data is provided in the borehole logs in Appendix 10.2.

Soil samples were collected continuously from grade to borehole termination. Drilling locations MW-5-21 and MW-6-21 are in asphalt paved areas and near surface soil samples were obtained from the auger flights. All other investigation samples were collected using standard split spoon sampling equipment. Upon recovery, the soil was removed from the spoon using a stainless-steel putty knife and placed in the appropriate sample containers and a re-sealable polyethylene bag for field screening. The putty knife was washed with dish detergent and rinsed with clean water between each sample collected. A total of 38 soil samples were collected from the boreholes for field screening.

Soil samples from each borehole location were selected for laboratory analysis based on field observations, olfactory detection of potential impacts and the results of the field combustible vapour screening. For each borehole sample interval, the soil sample was split in the field into a re-sealable plastic bag for field screening and the appropriate, laboratory supplied sample containers for possible laboratory analysis. Samples for PHC F1/BTEX analysis were collected immediately upon recovery using a disposable volumetric sampling device to extract approximately 10 mL of soil. Each sample was extruded into laboratory prepared 40 mL vials (2 per sample) containing a known weight of methanol preservative. Samples for PHCs F2 to F4 fraction analysis were collected in 250 mL glass jars (one per sample) with a Teflon lined lid. Each sample jar was labelled with the project name and number, date, collector's name, sample location identification, and type of analyses required.

The jarred samples were packed in a cooler with ice at approximately 4°C, pending analysis and shipment to the laboratory. The bagged samples were allowed to equilibrate to room temperature, prior to combustible vapour screening, described in Section 5.4.

A summary of the soil samples submitted for laboratory analysis is provided below in Table 1:

Table 1: Soil Samples Submitted for Chemical Analysis

Borehole ID	Borehole/Sample Location on Phase Two Property	Sample ID	Interval Represented (m bgs)	Description	Types of Analysis
MW5-21	Immediately north of arena building	MW5-21 S4	1.8 – 2.4	Clay - Moist, brown medium plasticity clay with some darker brown mottling, trace silt	PHC, VOCs, M, PAHs, pH, EC, SAR
		MW5-21 S7	3.7 – 4.3	Clay - Wet, brown, non-plastic clay with some silt, gravel, and sand	PHC, VOCs, M, PAHs, pH, EC, SAR

Borehole ID	Borehole/Sample Location on Phase Two Property	Sample ID	Interval Represented (m bgs)	Description	Types of Analysis
MW6-21	Immediately south of arena building	MW6-21 S2	0.6 – 1.2	Fill - Dry, brown coarse sand and gravel fill, some silt; Clay -Damp, brown, non-plastic silty clay	PHC, VOCs, M, PAHs, pH, EC, SAR
		MW6-21 S5	2.4 – 3.0	Clay - Damp, brown, non plastic silty clay, angular gravel	PHC, VOCs, M, PAHs, pH, EC, SAR
BH1	Railway Corridor – west end, snow dumping area and former track	BH1 S1	0 – 0.6	Organics - Moist, brown, silty organics with roots	PHC, VOCs, M, PAHs, pH, EC, SAR
		BH1 S2	0.8 – 1.4	Fill - Moist, brown coarse sand and gravel, some asphalt	PHC*, VOCs, M, PAHs
BH2	Railway Corridor – west end near existing track	BH2 S2	0.8 – 1.4	Fill - Moist, brown, sandy silt, trace clay, trace asphalt; Clay -Moist, grayish brown, silty clay, low plasticity	PHC*, VOCs
		BH2 S4	2.3 – 2.9	Clay - Moist, grayish brown, silty clay, low plasticity	PHC, VOCs, M, PAHs, pH, EC, SAR
BH3	Railway Corridor – east central near former track	BH3 S1	0 – 0.6	Fill - Damp, brown, silty sand with some gravel, trace asphalt	PHC*, VOCs, M, PAHs
BH4	Railway Corridor – center near existing track	BH4 S3	1.5 – 2.1	Clay - Moist, brownish gray, non-plastic silty clay	PHC, VOCs, M, PAHs, pH, EC, SAR
		BH4 S4	2.3 – 2.9	Clay - Moist, brownish gray, non-plastic silty clay	PHC, VOCs, M, PAHs, pH, EC, SAR
BH5	Railway Corridor – center near former track	BH5 S3	1.5 – 2.1	Clay - Moist, brownish gray, non-plastic silty clay, with some brown mottling	PHC, VOCs, M, PAHs, pH, EC, SAR
		BH5 S4	2.3 – 2.9	Clay - Moist, brownish gray, non-plastic silty clay, with some brown mottling	PHC, VOCs, M, PAHs, pH, EC, SAR
BH6	Railway Corridor – east end near existing track	BH6 S2	0.8 – 1.4	Clay - Moist, grayish brown, non-plastic silty clay	PHC, VOCs, M, PAHs, pH, EC, SAR
		BH6 S3	1.5 – 2.1	Clay - Moist, grayish brown, non-plastic silty clay	PHC, VOCs, M, PAHs, pH, EC, SAR
BH7	Railway Corridor – east	BH7 S2	0.8 – 1.4	Clay - Moist, grayish brown, non-plastic, silty clay, with some brown mottling	PHC, VOCs, M, PAHs, pH, EC, SAR

Borehole ID	Borehole/Sample Location on Phase Two Property	Sample ID	Interval Represented (m bgs)	Description	Types of Analysis
	end near former track	BH7 S3	1.5 – 2.3	Clay - Moist, grayish brown, non-plastic, silty clay, with some brown mottling	PHC, VOCs, M, PAHs, pH, EC, SAR

*Notes: M – metals; PHC – petroleum hydrocarbons; VOC – volatile organic compounds; PAH – polycyclic aromatic hydrocarbons; pH – pH; EC – electrical conductivity; SAR – sodium adsorption ratio; *Denotes PHC F1 only due to limited sample recovery*

5.4 Field Screening Measurements

As described above, each borehole sample was split in the field with a portion placed in a re-sealable polyethylene bag for field screening including visual or olfactory inspection for petroleum hydrocarbon impacts and headspace combustible vapour analysis. The initial visual and olfactory screening was completed at the time of collection and headspace vapour measurements were taken after the bagged soil samples were allowed to equilibrate to room temperature.

A RKI Eagle 2 combustible gas monitor was calibrated as per manufacturer specifications and used to measure the headspace vapour concentration of each sample. Vapour measurement and operation of the combustible gas monitor was conducted according to manufacturer's recommendations and the manufacturer's reported accuracy is ±5% in the range of 0 to 500 ppm. The headspace readings are included on the borehole logs (Appendix 10.2).

The results of the field screening were used in the selection of soil samples for laboratory analysis.

5.5 Groundwater Monitoring Well Installation

The two borehole locations on the 2571 Lancaster Road property were instrumented as monitoring wells (MW-5-21 and MW-6-21), constructed using new 50 mm inside diameter flush threaded schedule 40 PVC standpipe and well screen. Wells were assembled on site and included a 3.05 m long 10-slot well screen at MW-5-21 and a 2.13 m long 10-slot well screen at MW-6-21. Silica sand (#3) was placed as a filter pack around the well screen and extending approximately 0.5 m above the well screen. Bentonite clay chips (0.43 mm to 0.95 mm in diameter) were used to install a seal in the annular space above the sand pack interval.

All monitoring wells were constructed in compliance with O. Reg. 903, as amended, and a Well Record for Well Cluster was prepared by GET Drilling. Each monitoring well was completed at surface with a metal flush mount manhole cover with locking bolts.

5.6 GROUND WATER: FIELD MEASUREMENT OF WATER QUALITY PARAMETERS

For the April 15, 2021 monitoring event, static water levels along with the presence and thickness of light non-aqueous phase liquid (LNAPL) were measured and recorded for all 4 monitoring well locations using a Solinst® oil/water interface probe. Prior to use, and between well locations, the probe was decontaminated using a combination of methanol and de-ionized water.

Insitu hydraulic testing was completed on May 21, 2021, for monitoring wells MW5-21 and MW6-21. Testing was completed using a slug bar and data was analysed using the mathematical solutions by Hvorslev (1951) and Bouwer & Rice (1976) for determining the bulk insitu hydraulic conductivity (K). The insitu hydraulic testing analyses are included in Appendix 10.3

All groundwater samples were collected using dedicated tubing and using low flow sampling methods. Field measurements for DO, temperature, pH, conductivity and ORP were conducted using a flow cell to ensure parameter stabilization prior to the collection of groundwater samples. Field measurement data is included in Appendix 10.2.

5.7 GROUNDWATER: SAMPLING

Groundwater sampling was conducted on April 6, 2021 for the Pinchin, 2006 monitoring wells MW-1 and MW-2, and on April 7, 2021 for new monitoring wells MW-5-21 and MW-6-21. Sampling was carried out 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. Disposable powder-free nitrile gloves were always worn during ground water purging and sampling activities and a new pair of gloves was donned between monitoring well locations to prevent potential cross contamination. The monitoring wells were purged of sufficient volumes to ensure that groundwater at each well was representative of subsurface conditions. Dedicated ¼ inch outside diameter (OD) LDPE sample tubing was used in conjunction with a peristaltic pump and a short section of dedicated ¼ inch inside diameter (ID) silicone tubing for the pump head. The outlet from the peristaltic pump was connected to an in-line flow-through cell system for monitoring select geochemical groundwater parameters using a YSI Pro Plus multi-parameter meter. The YSI Pro Plus multi-parameter meter was calibrated prior to use.

All groundwater samples were collected in clean, laboratory supplied sample bottles and placed in a cooler at approximately 4°C for transport to the lab. Sample bottles were separated from each other using a combination of bubble wrap and plastic bags to prevent any potential cross-contamination within the cooler during transport. Samples were submitted to Eurofins for PHC F1-F4 fractions, VOC, PAH, and O. Reg. 153/04 Metals and general inorganics analyses.

A summary of the groundwater samples submitted for laboratory analysis is provided below in Table 2:

Table 2: Groundwater Samples Submitted for Chemical Analysis

Monitoring Well ID	Monitoring Well Location on Phase Two Property	Types of Analysis
MW-1	Eastern end of railway corridor	Metals, VOCs, PAHs, PHCs, Gen
MW-2	Centre of railway corridor	Metals, VOCs, PAHs, PHCs, Gen
MW-5-21	Immediately north of arena building	Metals, VOCs, PAHs, PHCs, Gen
MW-6-21	Immediately south of arena building	Metals, VOCs, PAHs, PHCs, Gen

Notes: VOCs – volatile organic compounds; PAHs – polycyclic aromatic hydrocarbons.
PHCs – petroleum hydrocarbons in the F1 to F4 fractions

5.8 SEDIMENT SAMPLING

Sediment was not present in the areas of investigation at the Phase Two Property. Therefore, the sampling and analysis of sediment at the Phase Two Property was not conducted as part of this investigation.

5.9 ANALYTICAL TESTING

Analytical soil and groundwater testing for the Phase Two ESA was completed by Eurofins Environment Testing Canada Inc. (Eurofins) of Ottawa, Ontario, a Canadian Association for Laboratory Accreditation Inc. (CALA) accredited laboratory.

5.10 RESIDUE MANAGEMENT PROCEDURES

Residues generated during the Phase Two investigation were limited to soil cuttings from drilling of the boreholes. One 200-Litre UN-approved drum was filled with excess soil cuttings from MW-5-21 and one 200-Litre UN-approved drum was filled with excess soil cuttings from MW-6-21. Based on the laboratory analytical results for soil samples from the borehole locations the retained soils were disposed onsite.

Based on the acceptable laboratory analytical results for all groundwater samples the groundwater purge water was poured on an impermeable surface (i.e., asphalt), and allowed to evaporate.

5.11 Elevation Surveying

An elevation/location survey for the monitoring wells and investigation boreholes was completed by BluMetric on April 15, 2021. GPS survey points (ground control points, site features, etc.) were surveyed using an RTK (real-time kinematic) GPS with an accuracy of 1-2 cm horizontally and 3-5 cm vertically. The RTK-GPS survey used a Hemisphere S320 model GPS in PPP correction mode. If no benchmarks were available on or near the site, then the internal GPS information is used to post-process a long-time average position of the base. BluMetric staff then applied the average correction (offset using the NRCAN online PPP algorithm tool) to the entire survey to achieve an accurate geodetic survey of points which is repeatable. Elevation survey and static groundwater elevation data is provided in Table 3.

5.12 Quality Assurance and Quality Control Measures

The quality assurance and quality control (QA/QC) program implemented for this project followed the general outline of 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, 1996). Specific attention was given to the guidance on QA/QC measures and sampling frequency. The general QA/QC procedures included, but were not limited to:

- Clean, laboratory prepared sample containers were procured from the laboratory prior to field deployment.
- Samples were placed in the appropriate sample container for the selected analyses, following specific protocols (i.e., soil sample for BTEX, PHC F1 analysis methanol preservation in pre-prepared vials);
- Immediately following collection, all jarred samples were stored in laboratory supplied coolers with the appropriate packing materials (i.e., bubble wrap) and ice packs, pending shipment to the laboratory. All samples were shipped to the laboratory in the most expedient manner possible (i.e., hand delivery or by courier).
- During sampling, equipment was dedicated to the sampling location (single use) where possible. Multi-use sampling equipment (split spoon, putty knife, etc.) was cleaned with laboratory grade detergent and distilled water between uses to avoid cross contamination; and,
- A new pair of disposable nitrile gloves was used for each sample.

All samples collected by BluMetric were given unique sample identification. BluMetric field staff maintained field notebooks and log sheets, which were used to record the location and identification of each sample collected. BluMetric personnel filled out Chain of Custody (COC) forms that travelled with all samples placed in coolers and shipped to the laboratory for analysis. Each shipment was sent with a COC with the following information: date sampled, sample matrix, number and type of containers, and requested analyses. Samples were immediately placed in a cooler containing ice to ensure the sample temperature was maintained near 4°C. Samples were submitted to Eurofins under strict chain of custody protocol, on the same day as sample collection.

Sampling QA/QC – Blind Field Duplicates

BluMetric collected blind field duplicate (BFD) samples to demonstrate that the field sampling techniques utilized by BluMetric personnel can yield reproducible results. Blind field duplicates were collected from the same location and at the same time as the original sample and submitted to the laboratory under "blind label" for the same analyses as the original sample. The number of duplicates collected was approximately 10% for each media type collected. Sampling precision was determined by calculating the relative percentage difference (RPD) for the duplicate samples as follows:

RPD (%) = [(Dup1 – Dup2)/(average of Dup1+Dup2)] x100

An RPD was calculated for duplicate samples returning contaminant concentrations greater than 5 times the reportable detection limit (RDL). Concentrations less than 5 times the RDL become increasingly imprecise, and, in these cases, the results were not considered sufficiently reliable and an RPD was not calculated. When the analytical result for one or both of a duplicate pair were less than the RDL (i.e., non-detect), an RPD cannot be calculated. BluMetric evaluated the results of the QA/QC analyses using the Recommended Alert Criteria specified in "Environmental QA/QC Interpretation Guide", Maxxam Analytics. Inc. (COR FCD-00097/5). An RPD below the Alert Criteria was considered acceptable and confirmed that the sampling methodology could produce repeatable results.

Parameter		Media	Recommended* Alert Criteria** for RPD
Metals		Soil	25%
		Water	35%
General Chemistry		Soil	25%
		Water	35%
VOCs / PHCs / PAHs		Soil	50%
		Water	40%

*Note(s): * Reference: "Environmental QA/QC Interpretation Guide", Maxxam Analytics. Inc.*
*** Where both the original and the duplicate samples results are greater than 5X RDL.*

Laboratory QA/QC

All samples were analyzed by Eurofins, is a Canadian Association for Laboratory Accreditation Inc. (CALA) accredited laboratory that uses MECP recognized methods to conduct laboratory analyses. As conveyed by the laboratory, method blanks, control standards samples, certified reference material standards, method spikes, replicates, duplicates, and instrument blanks are routinely analyzed as part of their internal QA/QC programs. As an internal quality control measure, the project laboratory routinely reports the results of laboratory prepared QA/QC analyses. The results of the laboratory QA/QC are reported in the laboratory certificates. If these criteria are not met, the laboratory is asked to either re-analyze the affected samples or qualify the results.

6. REVIEW AND EVALUATION

6.1 GEOLOGY

As described in Section 3.1, the geological setting is characterized by fine-textured glaciomarine deposits over grey-green to dark grey shale and/or limestone bedrock.

Overburden materials encountered for the two boreholes on the 2571 Lancaster Road property (MW-5-21 and MW-6-21) consisted of 0.7 to 1.2 m of sand/granular fill material overlaying clay which extended to the bedrock surface at 3.66 m depth at MW-6-21 and to a gravel layer at 4.27 m depth at MW-5-21. Auger refusal was encountered at a final depth of 3.81 m at MW-6-21. Auger refusal, inferred to be bedrock, was encountered at 4.88 m depth at MW-5-21.

Overburden encountered for the seven boreholes on the 2595 Lancaster Road property (BH-1 to BH-7) consisted of 0.1 to 0.5 m of organic topsoil over 0.6 to 1.37 m of sand and gravel fill over silt at BH-1 (final depth of 1.07 m) and over clay at BH-2 (final depth of 2.9 m) and BH-4 to BH-7 (all with a final depth of 2.9 m). Sample spoon refusal was encountered at 1.07 m depth at BH-1 and at 1.37 m depth at BH-3. Since bedrock was encountered at 4.0 m depth for Pinchin monitoring well MW-3, the spoon refusal at BH-1 and BH-3 is inferred to be boulders. Some asphalt was observed/encountered within the fill layer at BH1, BH2, and BH3. All soil sample combustible vapour headspace readings were <20 ppm. Specific observations for the subsurface samples are as follows:

- BH1 – a solid asphalt layer encountered 0.8 to 0.9 m depth (Photo 4 in Appendix C).
- BH2 – traces of asphalt mixed with fill observed from 0.75 to 1 m depth.
- BH3 – traces of asphalt mixed with fill observed up to 0.75 m depth, coarse sand mixed with asphalt observed from 0.75 to 1.37 m depth where spoon refusal was encountered (likely a large boulder.)

6.2 Ground Water: Elevations and Flow Direction

Static groundwater elevation data for April 6/7, 2021, April 15, 2021, and May 21, 2021, is provided in Table 3. Static groundwater elevations for April 15, 2021, are provided on Figure 4.

The measured static groundwater levels on April 7, 2021, were 1.05 m below ground surface (bgs) at MW-5-21 and 1.60 m bgs at MW-6-21. Despite this, a regional groundwater flow direction to the north is inferred based on the location of and direction of regionally sloping surface topography and the Ottawa River.

6.3 Ground Water: Hydraulic Conductivity and Gradients

As indicated in Appendix 10.3 a bulk hydraulic conductivity on the order of 1×10^{-7} m/s was determined at MW5-21 while a bulk hydraulic conductivity of 1.5×10^{-6} m/s was at MW6-21.

As shown on Figure 4 a distinct groundwater flow direction or gradient is not indicated for the Phase Two Property. This is attributed to localized influences on static groundwater levels from the drainage ditches along the railway corridor, the arena building footprint and municipal sewers along Lancaster Road.

6.4 Soil Texture

Soil textural analysis was conducted as part of the Malroz Engineering Inc. (Malroz) geotechnical investigation report (Malroz, July 2021). A total of four samples were submitted for hydrometer grain size analysis. Three of four samples were comprised of >90% silt and clay. The fourth sample was collected from a formation layer directly overlying bedrock and was comprised of >60% sand and gravel. Based on the completed soil texture analysis and borehole logs, the QP has determined that the native soil at the property consists of fine to medium textured soil and the SCS for 'medium/fine textured soil' applies to the Phase Two Property.

6.5 Soil: Field Screening

The borehole soil sample combustible vapour headspace readings using an RKI Eagle 2 combustible gas monitor are provided on the borehole logs in Appendix 10.2.

No visual or olfactory indications of environmental impact for soil (i.e.: no staining or odours) were noted for either borehole location. The highest soil combustible vapour headspace reading was 20 ppm. Combustible vapour readings below 100 ppm are generally not considered indicative of a soil quality impact.

6.6 Soil Quality

Soil samples were collected from boreholes on the Phase Two Property on April 6 and 7, 2021 and submitted to Eurofins. Samples were submitted for metals, PAHs, PHCs, VOCs, pH, EC and SAR analyses.

Laboratory analytical results are summarized in Table 4 (Metals, VOCs and PHCs) and Table 5 (PAHs and general inorganic). All soil quality data is compared to the O. Reg. 153/04 Table 3 SCS for Industrial/ Commercial/Community Property Use, for fine to medium textured soil conditions.

Copies of the laboratory reports are included in Appendix 10.4.

No VOCs were detected in any soil samples analyzed.

APEC A: Railway Corridor - Rail Yards, Tracks and Spurs; Imported Fill Material of Unknown Quality

BH1 to BH7: All soil sample results for metals, VOCs, PHCs and PAHs were below the respective O. Reg. 153/04 Table 3 SCS for medium to fine textured soils in an area of Industrial/Commercial/Community land use, with the exception of marginal vanadium exceedances for samples BH4 S4 and BH5 S4. Vanadium, measured at 100 µg/g (O. Reg. 153/04 Table 3 SCS of 86 µg/g) was obtained at a depth of 2.3 to 2.9 m for sample BH4 S4. This soil sample was obtained from the native silty clay unit. Vanadium, measured at 97 µg/g (O. Reg. 153/04 Table 3 SCS of 86 µg/g) was obtained at a depth of 2.3 to 2.9 m for sample BH5 S4. This soil sample was also obtained from the native silty clay unit.

PAHs were detected in only one soil sample analysed, BH-1 S1 (0 to 0.6 m depth) at measured concentrations well below the respective O. Reg. 153/04 Table 3 SCS. PHC fractions F3 (C16-C34), F4 (C34-C50) and F4 Gravimetric (>C50) were also detected for sample BH-1 S1; however measured concentrations were also well below the respective O. Reg. 153/04 Table 3 SCS. PHCs were not detected in any other samples analyzed.

APEC B: Property line across from 2600 Lancaster Road - Metal Fabrication; transformer oil and coolant leak spills

MW-6-21: At MW-6-21, located near the southeast corner of the onsite building and north of 2600 Lancaster Road, all soil sample results for metals, VOCs, PHCs and PAHs were below the respective O. Reg. 153/04 Table 3 SCS for medium to fine textured soils in an area of Industrial/Commercial/Community land use. However, Table 3 SCS exceedances were obtained for electrical conductance (EC) and sodium absorption ratio (SAR) for samples MW-6-21 S2 (0.6 – 1.2 m bgs) and MW-6-21 S5 (2.4 – 3.0 m bgs).

6.7 GROUNDWATER QUALITY

Groundwater samples for laboratory analysis were collected on April 6 and 7, 2021. Groundwater samples were submitted for metals, PAH, PHC, VOC, EC, chloride and sodium analysis.

Analytical results are summarized in Table 6 (Metals, VOCs and PHCs), and Table 7 (PAHs and general inorganics). All groundwater quality data is compared to the O. Reg. 153/04 Table 3 SCS for All Property Uses, for fine to medium textured soil conditions. One blind duplicate sample (DUP1) was collected from MW12 for metals, PAH, PHC/FVOC and general inorganic analyses.

Copies of laboratory reports are included in Appendix 10.4.

All groundwater sample results for metals, VOCs, PHCs and PAHs were below the respective O. Reg. 153/04 Table 3 SCS. The only groundwater quality exceedances were obtained at MW-6-21 where the respective SCS were exceeded for sodium and chloride. MW-6-21 is located on the south side of the arena and approximately 20 m north and down gradient of Lancaster Road.

6.8 SEDIMENT QUALITY

Sediment was not present in the areas of investigation at the Phase Two Property. Therefore, the sampling and analysis of sediment at the Phase Two Property was not conducted as part of this investigation.

6.9 QUALITY ASSURANCE AND QUALITY CONTROL RESULTS

All of the samples were handled in accordance with the Analytical Protocol with respect to the holding time, preservation method, storage requirements, and container type.

BluMetric received a certificate of analysis for each sample submitted to the laboratory. Copies of the certificates are included in Appendix 10.4.

Duplicate Samples

"Blind" duplicates are samples labelled in such a way that it is not obvious to the lab that the sample is a duplicate. For soils, blind duplicate samples were collected for MW5-21 S4 (DUP3) and MW6-21 S5 (DUP2). The blind duplicate samples were submitted for metals, VOCs, PHCs, PAH, and general inorganic analysis. For groundwater, one blind duplicate sample (DUP1) was collected for sample MW-2 and analyzed for metals, VOCs, PHCs, PAH, and general inorganic analysis.

Soil Analyses

RPD calculations for the soil duplicate samples are provided in Table 8. No PAH, PHC or VOC results met the RPD qualification criteria for further assessment. For Metals, all RPD assessment results for MW5-21 S4 / DUP3 and MW6-21 S5 / DUP2 were within the recommended Alert Criteria. For MW6-21 S5 / DUP2 the RPD Value for Sodium Adsorption Ratio (124.5 %) exceeded the Alert Criteria of 35%. The large difference in the SAR results indicated by the original and duplicate soil samples could be due to the sodium source being derived from road salt application and a large variability in sodium concentrations for infiltration water. Despite the high RPD value calculated for SAR, the reproducibility of the laboratory analytical results for soils is considered acceptable.

Groundwater Analyses

RPD calculations for the groundwater duplicate sample are provided in Table 9. All RPD assessment results are well within the recommended Alert Criteria. Consequently, the reproducibility of the laboratory analytical results for groundwater is considered acceptable.

Procedures Used in the Laboratory

Laboratories implement additional QA/QC procedures. These include analyzing selected samples twice (as described above), but also include analyzing surrogate chemicals or "spiked blanks" (to show that the analytical equipment is operating within the desired tolerances of accuracy) and analyzing method blanks (to show that analytical equipment is not contaminated). The reports received from laboratories thoroughly document these procedures as well as describe the methodology and instrumentation used for the analysis. The 'qualifier notes' provided in the lab reports for this Phase Two ESA did not raise concerns about the data quality. During this Phase Two ESA, there were no deviations from the sample holding times, preservation methods, storage requirements, or sample container types stipulated by the laboratory. Overall, the quality of the laboratory data produced by the soil and ground water quality investigations is adequate to meet the objectives of the Phase Two ESA investigation and there are no aspects of the laboratory data that have restricted decision-making or characterizing soil and ground water quality on the Phase Two Property.

6.10 PHASE TWO CONCEPTUAL SITE MODEL

Description of the Phase Two Property

The Phase Two Property occupies a total area of approximately 3.3 hectares and is bound by Lancaster Road to the south, and by industrial/commercial properties to the north, east and west. The Phase Two Property itself and all land immediately east, west, and south are occupied by light industrial/commercial establishments. Lands immediately north are zoned heavy industrial (IH). Current zoning of the Phase Two Property is identified as Light Industrial Zone (IL).

The existing arena building at 2571 Lancaster Road was reportedly constructed in 1987. It is understood that the building will be removed and replaced by a 3-storey building with one storey of underground parking. The property at 2595 Lancaster Road is presently undeveloped except for tracks from a former railway corridor.

Physical Setting of the Phase Two Property

The physical setting of the Phase Two Property is discussed throughput this report and is summarized below.

Hydrological Conditions

The Phase Two Property is located in the south end of the Ottawa Drain catchment area within the Ottawa East Subwatershed. There are no permanent surface water features on the Phase Two Property. The nearest water body is Green's Creek, located approximately 800 m to the northeast of the Phase Two Property, which flows north to the Ottawa River.

Storm water drains located in the parking lots surrounding the arena drain most of the surface water from the 2571 Lancaster property. Ditches running northwest-southeast border either side of the former railway easement. The ditches drain to the southeast into Ramsay Creek, located approximately 1.0 km away.

Hydrogeological Setting

It is inferred that the predominant direction of shallow groundwater flow in the vicinity of the Phase Two Property is generally to the north, in the direction of regionally sloping surface topography and the Ottawa River. On relatively smaller scales, flow directions can be influenced by conditions such as bedding materials around underground utility lines, leaking sewers, and/or the presence of building foundations. The Phase Two Property and properties within the 150 m radius of the property line are serviced by municipal water supply and sewers. Groundwater use at the Phase Two Property, is inferred to be non-potable (i.e., not used as a raw water supply for a drinking water system).

Two cross sections aligned south-north (A-A') and northwest-southeast (B-B') through the Phase Two ESA borehole locations are provided in Figure 5. The line of cross-sections are indicated on Figure 3. As shown in Figure 5, the Phase Two Property is generally characterized by 0.5 to 1.5 m of fill material over silt and/or clay extending to bedrock at a minimum depth of approximately 3.5 m. Localized lenses of sand/gravel overlie the bedrock at some locations. As indicated in Table 3, the measured static groundwater table on the Phase Two Property during April/May 2021 ranged from approximately 1.0 m to 2.0 m in depth.

Subsurface Structures and Utilities on Phase Two Property

The Minto Skating Rink is constructed with the southwest (front) portion of the lower level of the building situated below ground surface, as a result of sloped grading up to the front of the building. However, the lower floor of the building walks out to ground level along the majority of both sides and the back of the building.

Information from the public and private locates (Appendix 10.4) completed for the Phase Two Property indicate that the watermain, sanitary sewer and hydro from Lancaster Road runs along the west side and then the north side of the Minto Skating Rink building. Storm sewers run throughout the paved areas surrounding the building and collect storm water from catch basins located in these areas. The natural gas connection is at the southeast corner of the building.

Assessment of APECs and PCAs

The APECs and PCAs assessed for the Phase Two Property were identified through a Phase One ESA (BluMetric, July 2021). The APECs and PCAs were assessed as follows:

APEC ID	Location of Area of Potential Environmental Concern on Phase One Property	PCA(s)	Contaminants of Concern (COC): Media	Phase Two ESA Investigation Locations	Media: COC Exceeding O. Reg. 153/04 Table 3 SCS* (location)
A	Former Railway Corridor at 2595 Lancaster Road. Accumulated materials / debris on 2595 Lancaster Road from snow dumping. Suspected fill material in subsurface along former railway corridor	46 Rail Yards, Tracks and Spurs 30. Importation of Fill Material of Unknown Quality	Metals and General Inorganics, PHCs, VOCs, PAHs	BH1 to BH7 (soil only) MW-1 and MW-2 (groundwater only)	Soil: **Vanadium** for two (2) native silty clay soil samples; BH4 S4 (2.3 to 2.9 mbgs) and BH5 S4 (2.3 to 2.9 mbgs) Groundwater: None identified

APEC ID	Location of Area of Potential Environmental Concern on Phase One Property	PCA(s)	Contaminants of Concern (COC): Media	Phase Two ESA Investigation Locations	Media: COC Exceeding O. Reg. 153/04 Table 3 SCS* (location)
B	Property line across from 2600 Lancaster Road	34 – Metal Fabrication SPL – transformer oil and coolant leak spills	Metals and General Inorganics, PHCs, VOCs, PAHs	MW-5-21 and MW-6-21 (soil and groundwater)	Soil: Known **PHC F1-F2** impact to soil at depth at BH7 (>3.0 m depth) and BH12 (>4.5 depth). Groundwater: Known **PHC F1-F2, acetone, benzene, and ethylbenzene** impact to groundwater (BH7). Free phase PHC monitored off property (BH12).

Soil samples were successfully obtained and analyzed for all contaminants of concern (COCs) in the two APECs assessed in the Phase Two ESA. Groundwater samples were successfully obtained and assessed for all COCs at MW-1, MW-2, MW-5-21, and MW-6-21.

Contaminants Present on the Phase Two Property

Soils

Results of the soil analyses are described in Section 6.6. Seventeen soil samples and two blind duplicate samples were submitted for laboratory analysis. Results exceeding the comparison quality standards are summarized below in Table 10 and their locations are shown on Figure 4 and on Figure 5.

Table 10: Laboratory Results for Soil Exceeding Comparison Standards

Sample ID	Sample Depth (m)	APEC	Soil Type	Parameter	Result	O.Reg. 153/04 Table 3 Industrial/ Commercial/ Community Property Use
BH4 S4	2.3 – 2.9	A	Clay	vanadium (µg/g dry)	100	86
BH5 S4	2.3 – 2.9	A	Clay	vanadium (µg/g dry)	97	86
MW6-21 S2	0.6 - 1.2	B	Fill / Clay	EC (mS/cm)	3.44	1.4
				SAR	56.2	12
MW6-21 S5	2.4 – 3.0	B	Clay	EC (mS/cm)	1.58	1.4
				SAR	37.5	12
DUP2				EC (mS/cm)	1.5	1.4

Notes: EC - Electrical Conductivity; SAR – Sodium Adsorption Ratio

As indicated in Table 10, the O. Reg. 153/04 Table 3 SCS were marginally exceeded for vanadium for soil samples collected within the native clay at BH-4 and BH-5 (both between 2.3 and 2.9 m depth) and for EC and SAR for 2 soil samples collected in the fill (between 0.6 to 1.2 m depth) and clay (between 2.4 m and 3.0 m depth) at MW-6-21.

Vanadium – Two of the 18 soil samples (includes 2 blind duplicate samples) analyzed for metals exceeded the O. Reg. 153/04 Table 3 SCS for vanadium (86 µg/g). Both samples consisted entirely of native silty clay collected in the central portion of the 2595 Lancaster Road property. The SCS for vanadium was established by the province based on an assessed upper limit for Ontario Soil Background concentrations. The GeoOttawa2017 Conference Paper "Elevated Background Metals Concentrations in Champlain Sea Clay - Ottawa Region" identified vanadium concentrations ranging from 10 to 136 µg/g in Ottawa Region Champlain Sea Clay. The paper proposes a geo-regional background value for vanadium of 123 µg/g. No soil samples analyzed for the Phase Two Property exceed the proposed geo-regional standard of 123 µg/g. In BluMetric's professional opinion the primary source for vanadium exceeding the O. Reg. 153/04 O. Reg. 153/04 Table 3 SCS is the native silty clay soil.

Electrical Conductivity (EC) and Sodium Adsorption Ratio (SAR) - Borehole/monitoring well MW-6-21 is located on the south side of the Minto arena building and is approximately 20 m north and down gradient of Lancaster Road. The EC and SAR exceedances for soil are indicative of an impact from salt, inferred to be road salt used for de-icing on Lancaster Road or in the paved areas of the Subject Property. The soil component values used in determining the O. Reg. 153/04 Table 3 SCS are presented in Appendix A2 of MECP's "Rationale for the Development of Soil and Ground Water Standards for Use at Contaminated Sites in Ontario. April 15, 2011. PIBS 7386e01."

The soil standards for EC and SAR are based around soil use for agriculture and the established SCS are only applicable to surface soils (i.e., soils to a depth of 1.5 m). Since MW-6-21 S5 was collected from 2.4 – 3.0 m depth, it can be argued that the measured result does not represent an O. Reg. 153/04 exceedance. Also, when filing for a record of site condition (RSC) O. Reg. 153/04 allows an exemption for EC and SAR impacts when it is the opinion of the QP that impact is derived from de-icing.

Railway Corridor Fill Quality

Between 0.6 to 1.37 m of sand and gravel fill material was observed for the 7 borehole locations completed within the railway corridor. No evidence of deleterious fill material was observed for boreholes BH-4 to BH-7 which cover the eastern portion and approximately 60% of the entire 2595 Lancaster Road property. However, at boreholes BH-1 to BH-3, asphalt was evident in the fill material as either asphalt fragments or as a distinct asphalt layer as observed from 0.8 to 0.9 m depth at BH-1. Also, large pieces of asphalt were observed at ground surface in the vicinity of BH-3. The completed soil sample analyses for the fill material at BH1 indicate the fill quality meets the applicable Table 3 Industrial/Commercial/Community Property Use standards. However, the presence of asphalt in the fill material will pose some restrictions on the management of excess soils during development of the railway corridor and a soil management plan for soils containing asphalt will be required.

Groundwater

Groundwater quality results exceeding the applicable O. Reg. 153/04 Table 3 SCS for All Property Uses, medium and fine textured soils were limited to a marginal exceedance for sodium and an exceedance for chloride for the April 7, 2021, groundwater sample at MW-6-21, as summarized below in Table 11 and shown on Figure 4.

Table 11: Groundwater Results Exceeding Comparison Standards

Sample ID	Sample Date	Parameter	Result (µg/L)	O. Reg. 153/04 Table 3 All Types of Property Use ((µg/L)
MW-6-21	7-Apr-21	Sodium (µg/L)	2,360,000	2,300,000
		Chloride (µg/L)	4,570,000	2,300,000

As indicated previously herein the soil and groundwater quality impact at MW-6-21 is inferred to be anthropogenic in origin, most likely due to road salt applied for de-icing on Lancaster Road or in the paved areas of the Subject Property. Salt impact appears to be limited to the vicinity of Lancaster Road and the southern end of the Subject Property as no salt impact is evident for the groundwater samples collected at MW-5-21, MW-1 and MW-2.

Sediment

There is no sediment on the Phase Two Property and therefore, no contaminated sediment was identified.

Contaminant Release Mechanisms, Transport, and Receptor Exposure

Human receptors may be exposed to contaminants of concern through inhalation of soil particles and/or vapours, dermal contact, and/or ingestion. Ecological receptors may be exposed through inhalation of particles and/or vapours and/or soil gas, plant uptake, dermal contact and/or root uptake and/or ingestion.

The soil component values used in determining the O. Reg. 153/04 Table 3 SCS are presented in Appendix A2 of MECP's "Rationale for the Development of Soil and Ground Water Standards for Use at Contaminated Sites in Ontario. April 15, 2011. PIBS 7386e01." These component values are discussed below in relation to measured concentrations at the Phase Two Property and the indicated risk for receptor exposure.

The O. Reg. 153/04 Table 3 SCS for vanadium was established based on an assessed upper limit for Ontario Soil Background concentrations:

- The maximum measured concentration for vanadium in soil was 100 µg/g. As mentioned previously herein a proposal has been provided to MECP to increase the Soil Background concentration for vanadium to 123 µg/g for sites in Eastern Ontario. An approved increase would reduce the number of soil samples exceeding for vanadium at the Phase Two property from 2 samples to 0 samples. The MECP's derived incidental ingestion and dermal contact (S3) value for adult worker exposure is 160 µg/g for Industrial/ Commercial/Community land use. Therefore, a concern for direct worker exposure to vanadium in soils at the Phase Two property soil is not indicated.

Groundwater quality results exceeding the applicable O. Reg. 153/04 Table 3 SCS for All Property Uses, medium and fine textured soils were limited to a marginal exceedance for sodium and an exceedance for chloride for the April 7, 2021, groundwater sample at MW-6-21. Salt impact appears to be limited to the vicinity of Lancaster Road and the southern end of the Subject Property as no salt impact is evident for the groundwater samples collected at MW-5-21, MW-1 and MW-2. The O. Reg. 153/04 Table 3 SCS of 2.300,000 µg/L for both sodium and chloride are aquatic protection values (GW3). The values are also assumed to provide a sufficient degree of protection to plants, soil organisms, mammals, and birds. Receptor exposure to sodium and chloride in groundwater at the Phase Two Property is not an identified concern given there are no surface water bodies in proximity of the Phase Two Property and the location of identified impacts are in asphalt paved areas.

7. CONCLUSIONS

BluMetric Environmental Inc. (BluMetric™) was retained to complete a Phase Two ESA at 2571 – 2595 Lancaster Road, Ottawa, Ontario. The objective of the Phase Two ESA was to investigate the areas of potential environmental concern identified in the BluMetric Phase One ESA Report dated July 2021 (BluMetric, July 2021) and to document the current soil and groundwater quality conditions in comparison to the applicable Table 3 Industrial/ Commercial/Community property use standards under O. Reg. 153/04.

On April 6 and 7, 2021, nine boreholes were advanced through soil overburden across the subject property for sample collection and laboratory analysis. Two boreholes were completed to refusal and installed as monitoring wells for groundwater sample collection on the 2571 Lancaster Road property while 2 existing monitoring wells on the 2595 Lancaster Road property were utilized in the Phase Two investigation program for groundwater sampling.

Soil quality results exceeding the applicable O. Reg. 153/04 Table 3 SCS were limited to marginal exceedances for vanadium for soil samples collected within the native clay at BH-4 and BH-5 and for EC and SAR for 2 soil samples collected in the fill and clay at MW-6-21. Based on the documented range of vanadium concentrations for the Champlain Sea clay in the Ottawa Region it is BluMetric's opinion that the measured vanadium detections at the Phase Two Property are not derived from a potential contaminating activity and do not represent an environmental concern.

Salt-related impacts were identified at MW-6-21 with O. Reg. 153/04 Table 3 SCS exceedances for EC and SAR in soil and for sodium and chloride in groundwater. The identified subsurface impact is limited to the south end of the Phase Two Property and is attributed to the application of road salt for de-icing. Since the existing and intended future use of the Subject Property is not for agriculture, an adverse environmental impact is not indicated by the salt-related impact on the Phase Two Property. O. Reg. 153/04 allows an exemption for EC and SAR where it is the QP's opinion that impact is derived from de-icing activities.

Based on the field observations and the laboratory results no further subsurface investigation is deemed necessary for the Phase Two Property. If the monitoring wells are not to be maintained for future use, the wells must be properly sealed and abandoned per the requirements of O. Reg. 903.

7.1 Limiting Conditions, QP Statement, and QP Signature

This Phase Two ESA was performed in accordance with the substance and intent of the Phase Two ESA definition in O. Reg. 153/04. The findings in this report are based on observations and laboratory testing of samples collected at specific locations. The conclusions presented in this report represent our professional opinion and are based on the conditions observed on the dates set out in the report, the information available at time this report was prepared, the scope of work, and any limiting conditions noted herein.

BluMetric provides no assurances regarding changes to conditions subsequent to the time of the assessment. BluMetric makes no warranty as to the accuracy or completeness of the information provided by others or of the conclusions and recommendations predicated on the accuracy of that information.

This report has been prepared for CBN. 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.

This Phase Two ESA has been conducted in general accordance with O. Reg. 153/04 by or under the supervision of a qualified person (QP).

This report was prepared by Robert Hillier, P.Geo., QP_{ESA} of BluMetric and reviewed by David Hopper, P.Eng., QP_{ESA} of BluMetric.

Respectfully submitted,
BluMetric Environmental Inc.

Robert Hillier, B.Sc. P.Geo.
Senior Hydrogeologist

PROFESSIONAL GEOSCIENTIST
ROBERT JOHN HILLIER
PRACTISING MEMBER
0886
Jul 23/21
ONTARIO

David Hopper, M.Eng., P.Eng.
Senior Engineer

8. REFERENCES

BluMetric Environmental Inc. (BluMetric), July 2021. Phase One Environmental Site Assessment, 2571 and 2595 Lancaster Road, Ottawa Ontario. Submitted to: Enbridge Gas Distribution, 101 Honda Boulevard, Markham, ON L6C 0M6.

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Malroz Engineering Inc. (Malroz). May 28, 2021. Geotechnical Investigation Report, Proposed Enbridge Operations Centre, 2571 Lancaster Road, Ottawa ON

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Ontario Ministry of Environment (MOE, now MECP). April 15, 2011. Rationale for the Development of Soil and Ground Water Standards for Use at Contaminated Sites in Ontario. PIBS 7386e01.

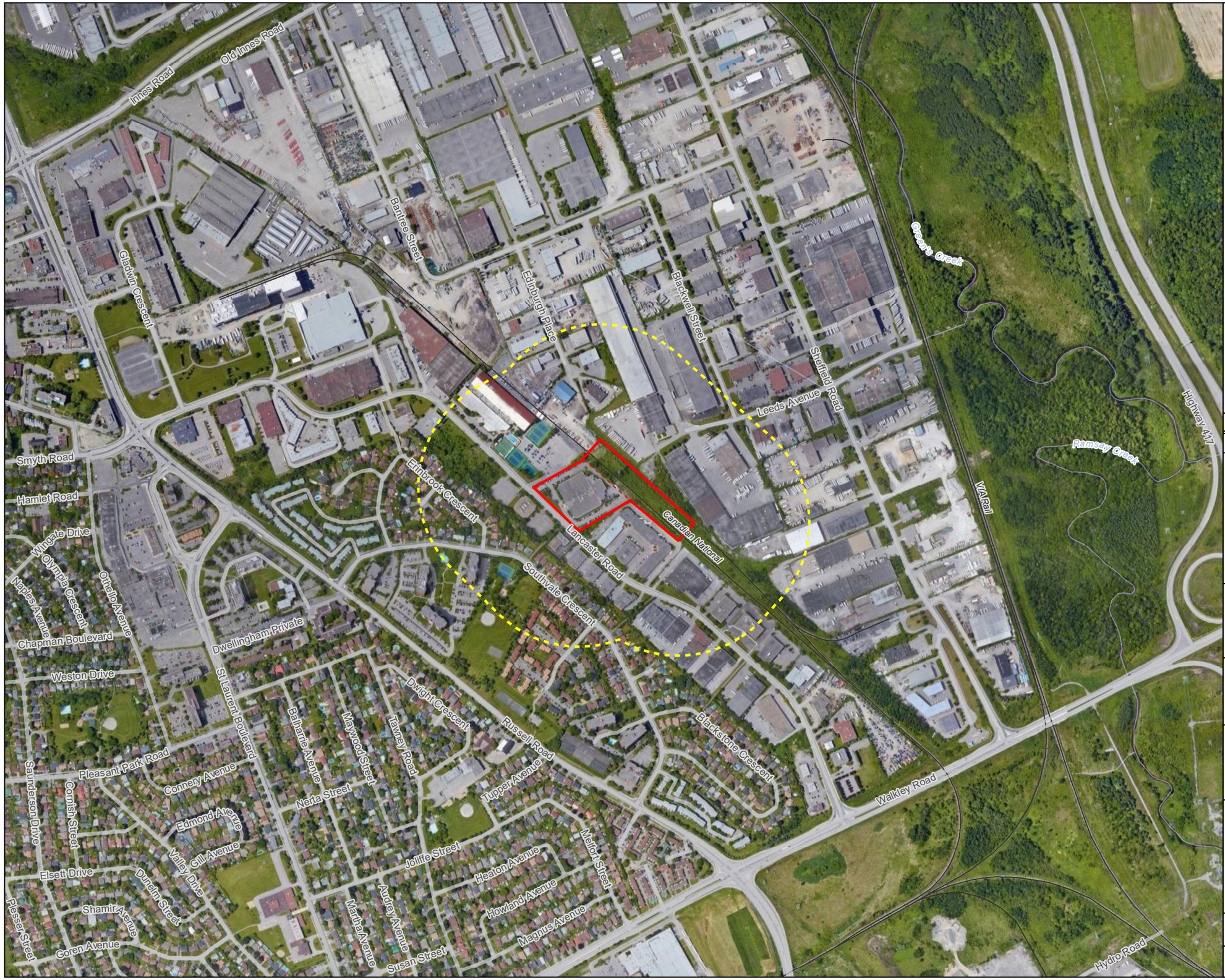
Pinchin Environmental Ltd. (Pinchin), January 31, 2006. Phase II Environmental Site Assessment Canadian Pacific Railway Corridor Parts of Lots 7-22 Concession 3, Ottawa, Ontario.

9. FIGURES AND TABLES

9.1 FIGURES

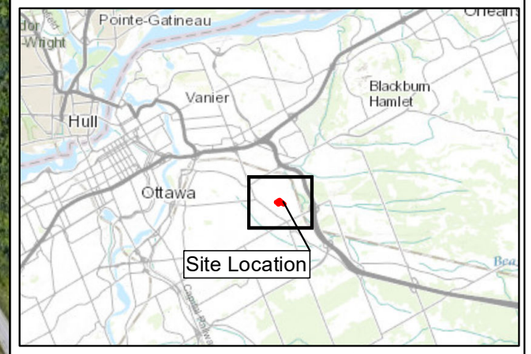
The following topics are addressed in the following figures:

Topic	Figure Number
Site Location. Areas of natural significance and water bodies within 30 m, if any.	Figure 1
Phase One ESA Conceptual Site Model	Figure 2
Phase Two Property Site Plan	Figure 3
Static groundwater data and inferred flow direction.	Figure 3
Plan(s) showing concentrations of all sampled locations for COCs in soil, exceeding comparison SCS.	Figure 4
Plan(s) showing concentrations of all sampled locations for COCs in ground water, exceeding SCS.	Figure 4
Plan(s) and cross-section showing lateral and vertical extent of COCs in soil, ground water, and sediment (include sample locations, labels, sampled depth or interval, concentration(s), applicable SCS, and stratigraphy down to the deepest aquifer or aquitard investigated).	Figure 4 and Figure 5



LEGEND

- Phase Two Property Boundary
- Phase One Study Area (BluMetric, July 2021)
- Parcel Boundary
- Railway
- Watercourse



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CLIENT

Enbridge Gas Inc.

PROJECT

Phase Two Environmental Site Assessment 2571-2595 Lancaster Road, Ottawa, ON

TITLE

Site Location Map

BluMetric™ Environmental
1682 Woodward Drive
Ottawa, ON K2C 3R8
TEL: (613) 839-3053
Email: info@blumetric.ca
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PROJECT #	*DATE*		
210294	**July 5, 2021**		
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Area of Potential Environmental Concern (APEC)	Location of APEC on Phase I Property	Potentially Contaminating Activity (PCA)
APEC A	Former Railway Easement (2595 Lancaster Road)	#30 - Fill Material
		#46 – Rail Yard, Tracks and Spurs
APEC B	Property line across from 2600 Lancaster Road	#34 – Metal Fabrication
		SPL – transformer oil and coolant leak spills

Potentially Contaminating Activities (PCAs)
#19 - Electronic and Computer Equipment Manufacturing
#28 - Gasoline and Associated Products Storage in Fixed Tanks
#31 - Ink Manufacturing, Processing and Bulk Storage
#30 - Importation of Fill of Unknown Quality
#33 - Metal Treatment, Coating, Plating, and Finishing
#34 - Metal Fabrication
#43 - Plastics (including fibreglass) Manufacturing and Processing
#46 – Rail Yards, Tracks, and Spurs
#51 - Solvent Manufacturing, Processing and Bulk Storage
#58 - Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use
S - Spills

LEGEND

(#) Potentially Contaminating Activity (PCA)

Inferred Direction of Groundwater Flow

<all other values>

Area of Potential Environmental Concern (APEC)

APEC A

APEC B

Phase One Property Boundary

Phase One Study Area

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CLIENT

Enbridge Gas Inc.

PROJECT

Phase Two Environmental Site Assessment 2571-2595 Lancaster Road, Ottawa, ON

TITLE

Phase One ESA
Conceptual Site Model - PCAs and APECs

BluMetric™ Environmental
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PROJECT #	DATE
210294	April 08, 2021

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LEGEND

- Monitoring Well/Borehole (Pinchin, 2006)
- Monitoring Well/Borehole to 3m depth (BLM, 2021)
- Monitoring Well/Borehole to 5m depth (BLM, 2021)
- Cross-Section Alignment
- Phase Two Property Boundary
- Inferred Direction of Ground Water Flow
- Parcel Boundary
- **67.13** Groundwater Elevation (Apr 15, 2021, masl)

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CLIENT

Enbridge Gas Inc.

PROJECT

Phase Two Environmental Site Assessment 2571-2595 Lancaster Road, Ottawa, ON

TITLE

Phase Two Property Site Plan

BluMetric™ Environmental
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PROJECT #	DATE
210294	June 07, 2021

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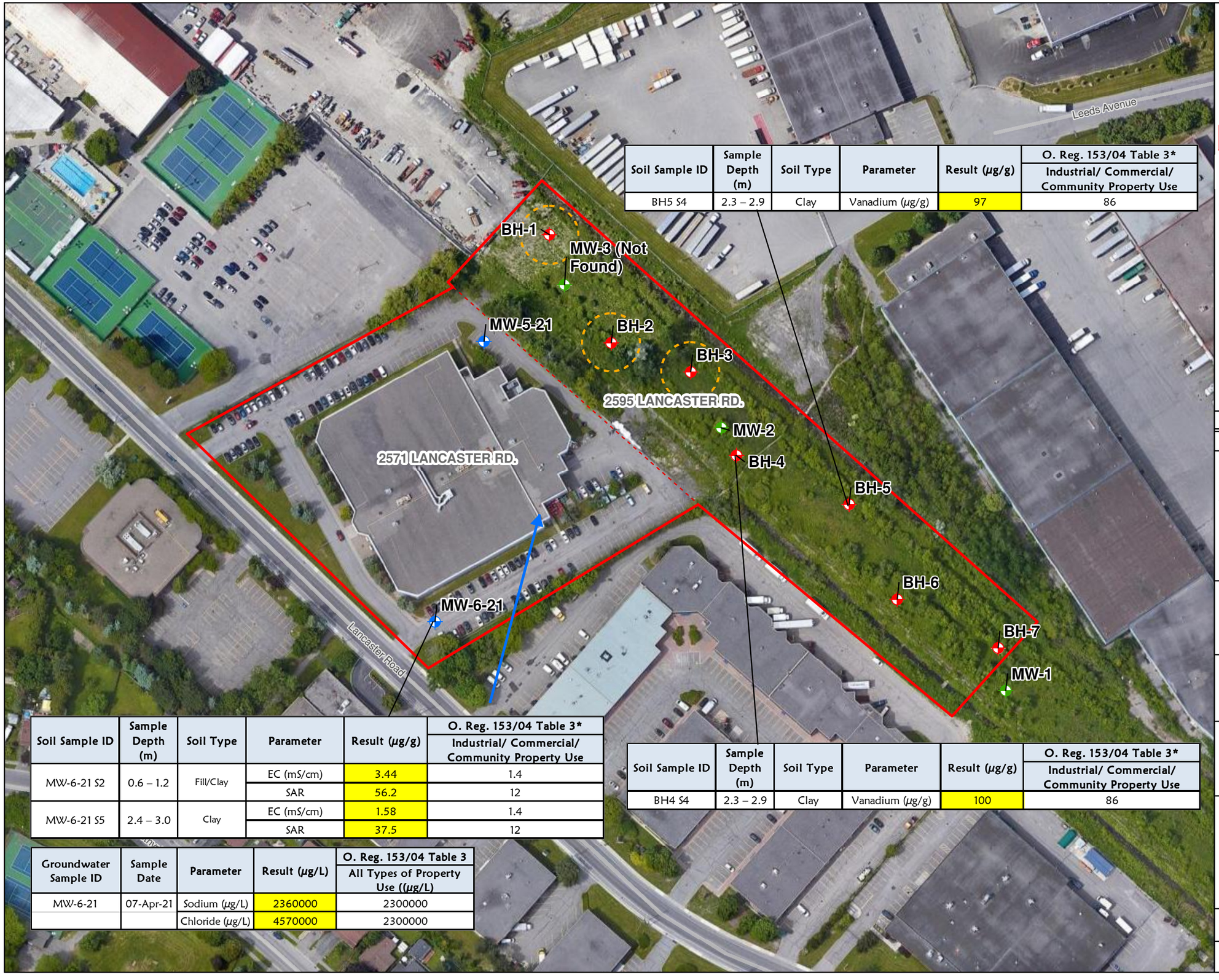

Soil Sample ID	Sample Depth (m)	Soil Type	Parameter	Result (µg/g)	O. Reg. 153/04 Table 3* Industrial/ Commercial/ Community Property Use
BH5 S4	2.3 – 2.9	Clay	Vanadium (µg/g)	97	86

Soil Sample ID	Sample Depth (m)	Soil Type	Parameter	Result (µg/g)	O. Reg. 153/04 Table 3* Industrial/ Commercial/ Community Property Use
MW-6-21 S2	0.6 – 1.2	Fill/Clay	EC (mS/cm)	3.44	1.4
			SAR	56.2	12
MW-6-21 S5	2.4 – 3.0	Clay	EC (mS/cm)	1.58	1.4
			SAR	37.5	12

Groundwater Sample ID	Sample Date	Parameter	Result (µg/L)	O. Reg. 153/04 Table 3 All Types of Property Use ((µg/L)
MW-6-21	07-Apr-21	Sodium (µg/L)	2360000	2300000
		Chloride (µg/L)	4570000	2300000

Soil Sample ID	Sample Depth (m)	Soil Type	Parameter	Result (µg/g)	O. Reg. 153/04 Table 3* Industrial/ Commercial/ Community Property Use
BH4 S4	2.3 – 2.9	Clay	Vanadium (µg/g)	100	86

LEGEND

- Monitoring Well/Borehole (Pinchin, 2006)
- Monitoring Well/Borehole to 3m depth (BLM, 2021)
- Monitoring Well/Borehole to 5m depth (BLM, 2021)
- Phase Two Property Boundary
- Asphalt Observed for Fill Material at Borehole Location
- Inferred Direction of Ground Water Flow
- Parcel Boundary

NOTES:
* Denotes O.Reg. 153/04 Site Condition Standards for medium and fine textured soils

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CLIENT

Enbridge Gas Inc.

PROJECT

Phase Two Environmental Site Assessment 2571-2595 Lancaster Road, Ottawa, ON

TITLE

Soil and Groundwater Quality Exceedances

BluMetric™ Environmental
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PROJECT #	DATE
210294	June 01, 2021

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Groundwater Sample ID	Sample Date	Parameter	Result (µg/L)	O. Reg. 153/04 Table 3 All Types of Property Use ((µg/L)
MW-6-21	07-Apr-21	Sodium (µg/L)	2360000	2300000
		Chloride (µg/L)	4570000	2300000

Soil Sample ID	Sample Depth (m)	Soil Type	Parameter	Result (µg/g)	O. Reg. 153/04 Table 3* Industrial/ Commercial/ Community Property Use
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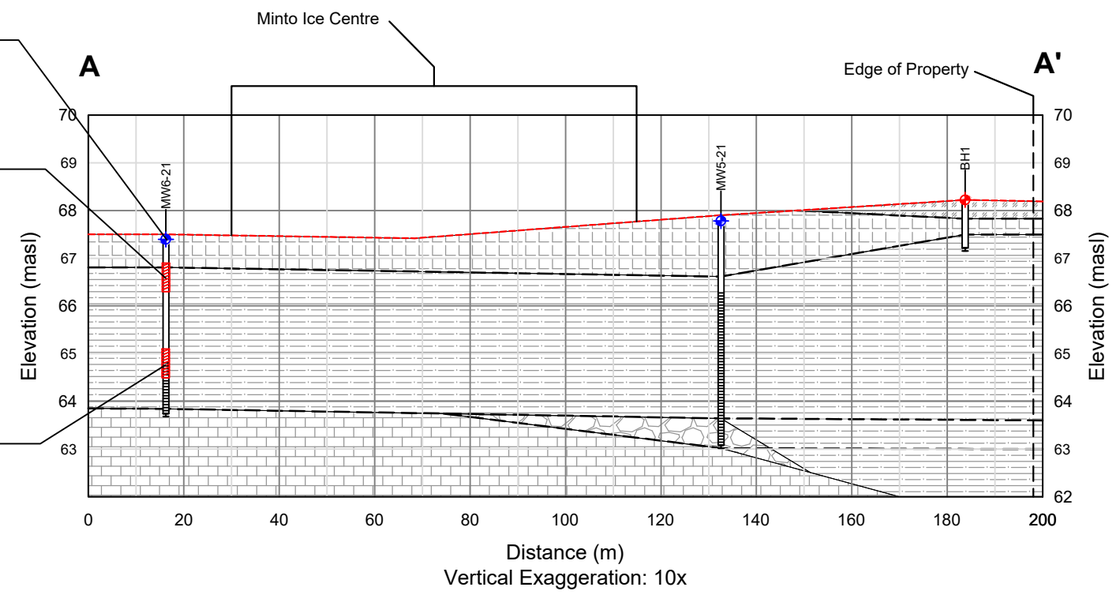
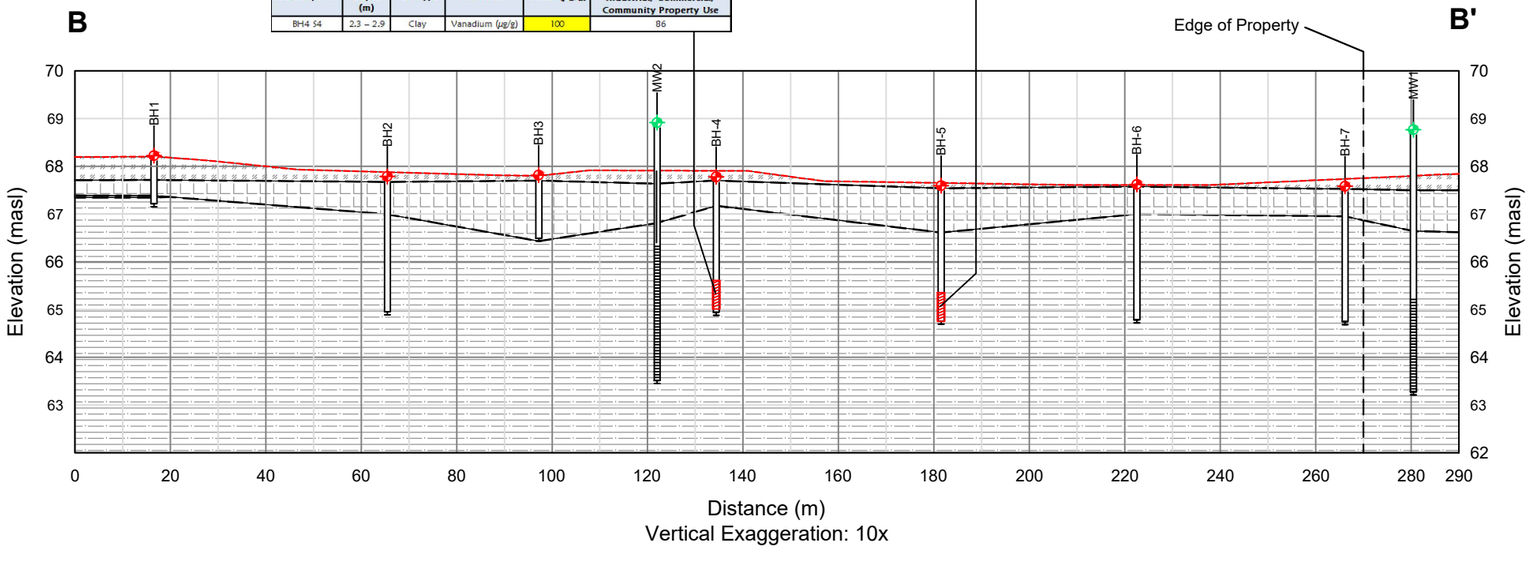
			SAR	56.2	12

Soil Sample ID	Sample Depth (m)	Soil Type	Parameter	Result (µg/g)	O. Reg. 153/04 Table 3* Industrial/ Commercial/ Community Property Use
MW-6-21 S5	2.4 – 3.0	Clay	EC (mS/cm)	1.58	1.4
			SAR	37.5	12



Soil Sample ID	Sample Depth (m)	Soil Type	Parameter	Result (µg/g)	O. Reg. 153/04 Table 3* Industrial/ Commercial/ Community Property Use
BH4 S4	2.3 – 2.9	Clay	Vanadium (µg/g)	100	86

Soil Sample ID	Sample Depth (m)	Soil Type	Parameter	Result (µg/g)	O. Reg. 153/04 Table 3* Industrial/ Commercial/ Community Property Use
BH5 S4	2.3 – 2.9	Clay	Vanadium (µg/g)	97	86



LEGEND

- Monitoring Well/Borehole (Pinchin, 2006)
- Monitoring Well/Borehole to 3m depth (BLM, 2021)
- Monitoring Well/Borehole to 5m depth (BLM, 2021)
- Organics
- Fill
- Asphalt
- Silt
- Gravel
- Shale
- Sample Location Exceeds Table 3 SCS

* Denotes O.Reg. 153/04 Site Condition Standards for medium and fine textured soils

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CLIENT

Enbridge Gas Inc.

PROJECT

Phase II Environmental Site Assessment 2571-2595 Lancaster Road, Ottawa, ON

TITLE

Cross-Sections

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PROJECT #	DATE
210094	June 7, 2021

DRAWN	CHECKED	DWG NO.	REV
GM	RH	05	0

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9.2 TABLES

The following topics are addressed in the following tables:

Topic	Table Number and Location
Soil Samples Submitted	Table 1 in Section 5.3
Groundwater Samples Submitted	Table 2 in Section 5.6
Monitoring Well Construction	Table 3
Water Levels (to the nearest cm)	Table 3
NAPL Thickness (to the nearest cm)	None was encountered at the Phase Two Property
Elevation	Table 3
Soil Data	Tables 4 to 5
Ground Water Data	Tables 6 to 7
Soil QA/QC Results	Table 8
Groundwater QA/QC Results	Table 9
Sediment Data	No Sediment on the Phase Two Property
Laboratory Results for Soil Exceeding Comparison Standards	Table 10 in Section 6.10
Laboratory Results for Groundwater Exceeding Comparison Standards	Table 11 in Section 6.10

TABLE 3: STATIC GROUNDWATER LEVEL MEASUREMENTS
Phase Two ESA - 2571-2595 Lancaster Road, Ottawa, Ontario

Well ID	Top of PVC Elev.	Ground Surface Elev.	Top of Screen Elev.	Bottom of Screen Elev.	Bedrock Elev.	Date	Water Depth	Water Level Elev.
	(masl)	(masl)	(masl)	(masl)	(masl)		(mbTPVC)	(m asl)
MW-1	68.77	67.81	66.21	63.21	N/R	06-Apr-21	1.63	67.14
						15-Apr-21	1.74	67.03
						21-May-21	1.97	66.80
MW-2	68.92	68.05	66.45	63.45	N/R	06-Apr-21	1.71	67.21
						15-Apr-21	1.79	67.13
						21-May-21	2.07	66.85
MW-5-21	67.78	67.90	66.40	63.40	63.02	07-Apr-21	0.95	66.83
						15-Apr-21	1.58	66.20
						21-May-21	1.15	66.63
MW-6-21	67.39	67.50	65.83	63.70	63.84	07-Apr-21	1.49	65.90
						15-Apr-21	1.07	66.32
						21-May-21	1.78	65.61

Notes:

Measured Elevations are to Geodetic

N/R - no auger refusal encountered

masl - metres above sea level

mbTPVC - metres below top of PVC

TABLE 4: SOIL QUALITY RESULTS
Phase Two ESA - 2571-2595 Lancaster Road, Ottawa, Ontario

210294-01 Tables 3-9

Parameter	Units	MDL	Regulation*	Sample ID (Depth)																	
				MW5-21 S4 (1.8 - 2.4)	MW5-21 S7 (3.7 - 4.3)	MW6-21 S2 (0.6 - 1.2)	MW6-21 S5 (2.4 - 3.0)		BH1 S1 (0 - 0.6)	BH1 S2 (0.8 - 1.4)	BH2 S2 (0.8 - 1.4)	BH2 S4 (2.3 - 2.9)	BH3 S1 (0 - 0.6)	BH4 S3 (1.5 - 2.1)	BH4 S4 (2.3 - 2.9)	BH5 S3 (1.5 - 2.1)	BH5 S4 (2.3 - 2.9)	BH6 S2 (0.8 - 1.4)	BH6 S3 (1.5 - 2.1)	BH7 S2 (0.8 - 1.4)	BH7 S3 (1.5 - 2.1)
Sample Date (d-m-y)			**Reg 153/04 - Table 3**	6-Apr-21	6-Apr-21	6-Apr-21	6-Apr-21		7-Apr-21	7-Apr-21	7-Apr-21	7-Apr-21	7-Apr-21	7-Apr-21	7-Apr-21	7-Apr-21	7-Apr-21	7-Apr-21	7-Apr-21	7-Apr-21	7-Apr-21
Metals					DUP3			DUP2													
Boron, total	ug/g dry	5.0	120 ug/g dry	5	5	7	5	<5	<5	<5	<5	<5	<5	5	6	7	7	<5	7	<5	<5
Antimony	ug/g dry	1.0	50 ug/g dry	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Arsenic	ug/g dry	1.0	18 ug/g dry	2	2	5	2	2	2	4	4		1	3	4	3	5	4	3	4	4	3
Barium	ug/g dry	1.0	670 ug/g dry	246	252	135	282	214	225	137	100		260	91	138	288	227	249	130	219	202	191
Beryllium	ug/g dry	1.0	10 ug/g dry	<1	<1	<1	<1	<1	<1	<1	<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cadmium	ug/g dry	0.4	1.9 ug/g dry	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	ug/g dry	1.0	160 ug/g dry	41	42	24	56	39	36	45	42		41	87	53	80	63	73	47	61	61	58
Chromium IV	ug/g dry	0.2	10 ug/g dry	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.4			<0.20		<0.20	0.31	0.23	<0.20	0.33	<0.20	0.35	0.31
Cobalt	ug/g dry	1.0	100 ug/g dry	11	12	12	15	11	10	10	8		12	7	12	20	17	21	11	18	16	12
Copper	ug/g dry	1.0	300 ug/g dry	32	31	35	43	30	35	39	21		38	19	37	49	33	46	18	34	27	25
Cyanide	ug/g dry	0.005	0.051 ug/g dry	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005			<0.005		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Lead	ug/g dry	1.0	120 ug/g dry	5	6	9	6	6	6	24	29		6	36	10	7	8	8	5	7	7	8
Mercury	ug/g dry	0.1	20 ug/g dry	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			<0.1		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Molybdenum	ug/g dry	1.0	40 ug/g dry	<1	<1	2	<1	<1	<1	2	2		<1	1	<1	<1	<1	<1	<1	<1	<1	<1
Nickel	ug/g dry	1.0	340 ug/g dry	24	25	30	33	25	23	31	26		26	47	33	46	38	46	25	38	34	31
Selenium	ug/g dry	1.0	5.5 ug/g dry	<1	<1	<1	<1	<1	<1	<1	<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Silver	ug/g dry	0.2	50 ug/g dry	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium	ug/g dry	1.0	3.3 ug/g dry	<1	<1	<1	<1	<1	<1	<1	<1		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Uranium	ug/g dry	0.5	33 ug/g dry	0.6	0.7	0.9	0.7	0.9	1.1	0.7	0.8		0.8	<0.5	0.9	0.8	0.8	0.8	0.7	0.7	0.8	0.9
Vanadium	ug/g dry	2.0	86 ug/g dry	60	58	27	79	53	54	35	34		58	28	64	100	85	97	50	78	75	66
Zinc	ug/g dry	2.0	340 ug/g dry	58	58	54	83	54	52	78	44		64	74	70	111	95	109	60	88	76	84
Volatile Organic Compounds (VOCs)																					
Acetone	ug/g dry	0.50	28 ug/g dry	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Benzene	ug/g dry	0.02	0.4 ug/g dry	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromodichloromethane	ug/g dry	0.05	18 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromoform	ug/g dry	0.05	1.7 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromomethane	ug/g dry	0.05	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g dry	0.05	1.5 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorobenzene	ug/g dry	0.05	2.7 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloroform	ug/g dry	0.05	0.18 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g dry	0.05	13 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g dry	0.05	8.5 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g dry	0.05	12 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g dry	0.05	0.84 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorodifluoromethane	ug/g dry	0.05	25 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g dry	0.05	21 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichloroethane	ug/g dry	0.05	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethylene	ug/g dry	0.05	0.48 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cis-1,2-Dichloroethylene	ug/g dry	0.05	37 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
trans-1,2-Dichloroethylene	ug/g dry	0.05	9.3 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichloropropane	ug/g dry	0.05	0.68 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene, total	ug/g dry	0.05	0.21 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g dry	0.05	19 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene dibromide (dibromoethane,	ug/g dry	0.05	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Hexane	ug/g dry	0.05	88 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl Ethyl Ketone (2-Butanone)	ug/g dry	0.50	88 ug/g dry	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	ug/g dry	0.50	210 ug/g dry	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl tert-butyl ether	ug/g dry	0.05	3.2 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g dry	0.05	2 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	ug/g dry	0.05	43 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g dry	0.05	0.11 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g dry	0.05	0.094 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethylene	ug/g dry	0.05	21 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Toluene	ug/g dry	0.20	78 ug/g dry	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	ug/g dry	0.05	12 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2-Trichloroethane	ug/g dry	0.05	0.11 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichloroethylene	ug/g dry	0.05	0.61 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g dry	0.05	5.8 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g dry	0.02	0.25 ug/g dry	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
m/p-Xylene	ug/g dry	0.05	NV	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	ug/g dry	0.05	NV	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes, total	ug/g dry	0.05	30 ug/g dry	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Petroleum Hydrocarbons (PHCs)																					
F1 PHCs (C6-C10)	ug/g dry	10	65 ug/g dry	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
F2 PHCs (C10-C16)	ug/g dry	10	250 ug/g dry	<10	<10	20	<10	<10	<10	<10			<10		<10	<10	<10	<10	<10	<10	<10	<10
F3 PHCs (C16-C34)	ug/g dry	20	2500 ug/g dry	<20	<20	<20	<20	<20	<20	300			<20		<20	<20	<20	<20	<20	<20	<20	<20
F4 PHCs (C34-C50)	ug/g dry	20	6600 ug/g dry	<20	<20	<20	<20	<20	<20	130			<20		<20	<20	<20	<20	<20	<20	<20	<20
F4G PHCs (>C50)	ug/g dry	100	6600 ug/g dry							2000												

Notes:
* - "Soil, Ground Water and and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" March 9, 2004, amended as of July 1, 2011
Table 3: Generic Site Condition Standards in a Non-Potable Ground Water Condition, Medium-Fine Texture
MDL - laboratory method detection limit
< - less than indicated laboratory method detection limit
- Denotes exceeds comparison standard
NV - No Value

TABLE 5: SOIL QUALITY RESULTS
Phase Two ESA - 2571-2595 Lancaster Road, Ottawa, Ontario

Parameter	Units	MDL	Regulation*	Sample ID (Depth in m)																	
				MW5-21 S4 (1.8 - 2.4)	MW5-21 S7 (3.7 - 4.3)	MW6-21 S2 (0.6 - 1.2)	MW6-21 S5 (2.4 - 3.0)	BH1 S1 (0 - 0.6)	BH1 S2 (0.8 - 1.4)	BH2 S2 (0.8 - 1.4)	BH2 S4 (2.3 - 2.9)	BH3 S1 (0 - 0.6)	BH4 S3 (1.5 - 2.1)	BH4 S4 (2.3 - 2.9)	BH5 S3 (1.5 - 2.1)	BH5 S4 (2.3 - 2.9)	BH6 S2 (0.8 - 1.4)	BH6 S3 (1.5 - 2.1)	BH7 S2 (0.8 - 1.4)	BH7 S3 (1.5 - 2.1)
Sample Date (d-m-y)			**Reg 153/04 Table 3**	6-Apr-21	6-Apr-21	6-Apr-21	6-Apr-21	7-Apr-21	7-Apr-21	7-Apr-21	7-Apr-21	7-Apr-21	7-Apr-21	7-Apr-21	7-Apr-21	7-Apr-21	7-Apr-21	7-Apr-21	7-Apr-21	7-Apr-21	7-Apr-21
PAHs				DUP3				DUP2													
Acenapthene	ug/g dry	5.0	96	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenapthylene	ug/g dry	1.0	0.17	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	ug/g dry	1.0	0.74	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[a]anthracene	ug/g dry	1.0	0.96	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[a]pyrene	ug/g dry	1.0	0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[b]fluoranthene	ug/g dry	0.4	0.96	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[ghi]perylene	ug/g dry	1.0	9.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[k]fluoranthene	ug/g dry	1.0	0.96	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	ug/g dry	1.0	9.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.11	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenzo[a h]anthracene	ug/g dry	1.0	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	ug/g dry	1.0	9.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	ug/g dry	1.0	69	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.11	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno[1 2 3-cd]pyrene	ug/g dry	1.0	0.95	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylnapthalene, 1-	ug/g dry	0.2	85	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylnapthalene, 2-	ug/g dry	1.0	85	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Napthalene	ug/g dry	0.5	28	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	ug/g dry	2.0	16	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	ug/g dry	2.0	96	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
General Inorganic																					
pH	pH units	0.1	5 - 9(11)	7.78	7.71	7.97	7.66	7.82	7.87	8.02			7.72		7.18	7.2	7.2	7.21	7.16	7.09	7.36	7.19
Electrical Conductivity (EC)	mS/cm	1.0	1.4	0.44	0.61	0.37	3.44	1.58	1.5	0.33			0.24		0.21	0.46	0.19	0.31	0.2	0.45	0.28	0.29
Sodium Absorption Ratio (SAR)		1.0	12	1.69	4.04	1.83	56.2	37.5	8.73	3.63			1.49		2.6	1.54	0.84	1.23	2.52	2.57	2.85	2.19

Notes:

* - "Soil, Ground Water and and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" March 9, 2004, amended as of July 1, 2011
Table 3: Generic Site Condition Standards in a Non-Potable Ground Water Condition, Medium-Fine Texture

MDL - laboratory method detection limit

< - less than indicated laboratory method detection limit

- Denotes exceeds comparison standard

NV - No Value

TABLE 6: GROUNDWATER QUALITY RESULTS
Phase Two ESA - 2571-2595 Lancaster Road, Ottawa, Ontario

Parameter	Units	MDL	Regulation*	Sample							
				MW-1		MW-2			MW-3	MW-5-21	MW-6-21
Sample Date (d-m-y)			Reg 153/04 Table 3	18-Jan-06	6-Apr-21	18-Jan-06	6-Apr-21		18-Jan-06	7-Apr-21	7-Apr-21
Metals								DUP1			
Antimony	ug/L	0.5	20000	<1	<0.5	70	<0.5	<0.5	10	0.7	<2
Arsenic	ug/L	1	1900	<10	1	<10	<1	<1	<10	<1	<5
Barium	ug/L	10	29000	60	30	130	130	130	60	60	270
Beryllium	ug/L	0.5	67	<1	<0.5	<1	<0.5	<0.5	<1	<0.5	<2
Boron (Total)	ug/L	10	45000	150	50	100	40	30	100	60	<50
Cadmium	ug/L	0.1	2.7	<1	<0.1	<1	<0.1	<0.1	<1	<0.1	<0.5
Chromium (Total)	ug/L	1	810	<50	<1	<50	<1	<1	<50	<1	<5
Chromium IV	ug/L	10	140	<10	<10	<10	<10	<10	<10	<10	<10
Cobalt	ug/L	0.2	66	55	3.3	20	0.5	0.5	10	0.4	4
Copper	ug/L	1	87	5	<1	<5	3	3	10	1	<5
Lead	ug/L	1	25	<1	<1	<1	<1	<1	<1	<1	<5
Mercury	ug/L	0.1	2.8	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Molybdenum	ug/L	5	9200	35	<5	10	<5	<5	20	11	<20
Nickel	ug/L	5	490	50	<5	30	<5	<5	15	<5	<20
Selenium	ug/L	1	63	<5	<1	<5	<1	<1	<5	<1	<5
Silver	ug/L	0.1	1.5	<1	<0.1	<1	<0.1	<0.1	<1	<0.1	<0.5
Thallium	ug/L	0.1	510	<1	<0.1	<1	<0.1	<0.1	<1	<0.1	<0.5
Uranium	ug/L	1	420		5		4	3		6	<5
Vanadium	ug/L	1	250	<10	<1	<10	<1	<1	<10	<1	<5
Zinc	ug/L	10	1100	80	<10	20	<10	<10	<20	<10	<50
Volatile Organic Compounds (VOCs)											
Acetone	ug/L	30	130000		<30		<30	<30		<30	<30
Bromodichloromethane	ug/L	0.3	85000	<0.4	<0.3	<0.4	<0.3	<0.3	<0.4	<0.3	<0.3
Bromoform	ug/L	0.4	770	<0.6	<0.4	<0.6	<0.4	<0.4	<0.6	<0.4	<0.4
Bromomethane	ug/L	0.5	56	<0.7	<0.5	<0.7	<0.5	<0.5	<0.7	<0.5	<0.5
Carbon Tetrachloride	ug/L	0.2	8.4	<0.5	<0.2	<0.5	<0.2	<0.2	<0.5	<0.2	<0.2
Chlorobenzene	ug/L	0.5	630	<0.4	<0.5	<0.4	<0.5	<0.5	<0.4	<0.5	<0.5
Chloroform	ug/L	0.5	22	<0.6	<0.5	<0.6	<0.5	<0.5	<0.6	<0.5	<0.5
Dibromochloromethane	ug/L	0.3	82000	<0.5	<0.3	<0.5	<0.3	<0.3	<0.5	<0.3	<0.3
Dichlorobenzene, 1,2-	ug/L	0.4	9600	<1	<0.4	<1	<0.4	<0.4	<1	<0.4	<0.4
Dichlorobenzene, 1,3-	ug/L	0.4	9600	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Dichlorobenzene, 1,4-	ug/L	0.4	67	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Dichlorodifluoromethane	ug/L	0.5	4400		<0.5		<0.5	<0.5		<0.5	<0.5
Dichloroethane, 1,1-	ug/L	0.4	3100	<0.5	<0.4	<0.5	<0.4	<0.4	<0.5	<0.4	<0.4
Dichloroethane, 1,2-	ug/L	0.2	12	<0.5	<0.2	<0.5	<0.2	<0.2	<0.5	<0.2	<0.2
Dichloroethylene, 1,1-	ug/L	0.5	17	<0.6	<0.5	<0.6	<0.5	<0.5	<0.6	<0.5	<0.5
Dichloroethylene, cis-1,2-	ug/L	0.4	17	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Dichloroethylene, trans-1,2-	ug/L	0.4	17	<1	<0.4	<1	<0.4	<0.4	<1	<0.4	<0.4
Dichloropropane, 1,2-	ug/L	0.5	140	<0.7	<0.5	<0.7	<0.5	<0.5	<0.7	<0.5	<0.5
Dichloropropene, 1,3-	ug/L	0.3	45	<0.5	<0.3	<0.5	<0.3	<0.3	<0.5	<0.3	<0.3
Ethylene Dibromide	ug/L	0.2	0.83	<1	<0.2	<1	<0.2	<0.2	<1	<0.2	<0.2
Hexane (n)	ug/L	5	520		<5		<5	<5		<5	<5
Methyl Ethyl Ketone	ug/L	10	1500000		<10		<10	<10		<10	<10
Methyl Isobutyl Ketone	ug/L	10	580000		<10		<10	<10		<10	<10
Methyl tert-Butyl Ether (MTBE)	ug/L	2	1400		<2		<2	<2		<2	<2
Methylene Chloride	ug/L	4	5500	<4	<4.0	<4	<4.0	<4.0	<4	<4.0	<4.0
Styrene	ug/L	0.5	9100	<0.4	<0.5	<0.4	<0.5	<0.5	<0.4	<0.5	<0.5
Tetrachloroethane, 1,1,1,2-	ug/L	0.5	28	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethane, 1,1,2,2-	ug/L	0.5	15	<0.6	<0.5	<0.6	<0.5	<0.5	<0.6	<0.5	<0.5
Tetrachloroethylene	ug/L	0.3	17	<0.5	<0.3	<0.5	<0.3	<0.3	<0.5	<0.3	<0.3
Trichloroethane, 1,1,1-	ug/L	0.4	6700	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Trichloroethane, 1,1,2-	ug/L	0.4	30	<0.6	<0.4	<0.6	<0.4	<0.4	<0.6	<0.4	<0.4
Trichloroethylene	ug/L	0.3	17	<0.4	<0.3	<0.4	<0.3	<0.3	<0.4	<0.3	<0.3
Trichlorofluoromethane	ug/L	0.5	2500	<1	<0.5	<1	<0.5	<0.5	<1	<0.5	<0.5
Vinyl Chloride	ug/L	0.2	1.7	<0.5	<0.2	<0.5	<0.2	<0.2	<0.5	<0.2	<0.2
Petroleum Hydrocarbons (PHCs)											
F1 PHCs (C6-C10)	ug/L	20	750	<200	<20	<200	<20	<20	<200	<20	<20
F2 PHCs (C10-C16)	ug/L	20	150	<100	<20	<100	<20	<20	<100	<20	<20
F3 PHCs (C16-C34)	ug/L	50	500	<100	<50	<100	<50	<50	<100	<50	<50
F4 PHCs (C34-C50)	ug/L	50	500	<100	<50	<100	<50	<50	<100	<50	<50
Benzene	ug/L	0.5	430	<1	<0.5	<1	<0.5	<0.5	<1	<0.5	<0.5
Ethylbenzene	ug/L	0.5	2300	<1	<0.5	<1	<0.5	<0.5	<1	<0.5	<0.5
Toluene	ug/L	0.5	1800	<1	<0.5	<1	<0.5	<0.5	<1	<0.5	<0.5
Xylene Mixture	ug/L	0.5	4200	<3	<0.5	<3	<0.5	<0.5	<3	<0.5	<0.5
Xylene, m/p-	ug/L	0.4	NV	<2	<0.4	<2	<0.4	<0.4	<2	<0.4	<0.4
Xylene, o-	ug/L	0.4	NV	<1	<0.4	<1	<0.4	<0.4	<1	<0.4	<0.4

Notes:

* - "Soil, Ground Water and and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" March 9, 2004, amended July 1, 2011
Table 3: Generic Site Condition Standards in a Non-Potable Ground Water Condition, Medium-Fine Texture

MDL - laboratory method detection limit (2021 samples)

< - denotes less than indicated MDL

NV - no value

- Denotes exceeds comparison standard

TABLE 7: GROUNDWATER QUALITY RESULTS
Phase Two ESA - 2571-2595 Lancaster Road, Ottawa, Ontario

Parameter	Units	MDL	Regulation*	Sample							
				MW-1		MW-2			MW-3	MW-5-21	MW-6-21
Sample Date (d-m-y)			Reg 153/04 Table 3	18-Jan-06	6-Apr-21	18-Jan-06	6-Apr-21		18-Jan-06	7-Apr-21	7-Apr-21
PAHs								DUP1			
Acenapthene	ug/L	0.1	1700	0.1	<0.1	0.1	<0.1	<0.1	<0.09	<0.1	<0.1
Acenapthylene	ug/L	0.1	1.8	<0.05	<0.1	<0.05	<0.1	<0.1	0.17	<0.1	<0.1
Anthracene	ug/L	0.1	2.4	0.01	<0.1	<0.01	<0.1	<0.1	<0.02	<0.1	<0.1
Benzo[a]anthracene	ug/L	0.1	4.7	<0.01	<0.1	<0.01	<0.1	<0.1	<0.02	<0.1	<0.1
Benzo[a]pyrene	ug/L	0.01	0.81	<0.01	<0.01	<0.01	<0.01	<0.01	<0.02	<0.01	<0.01
Benzo[b]fluoranthene	ug/L	0.05	0.75	<0.05	<0.05	<0.05	<0.05	<0.05	<0.09	<0.05	<0.05
Benzo[ghi]perylene	ug/L	0.1	0.2	<0.05	<0.1	<0.05	<0.1	<0.1	<0.09	<0.1	<0.1
Benzo[k]fluoranthene	ug/L	0.05	0.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.09	<0.05	<0.05
Chrysene	ug/L	0.05	1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.09	<0.05	<0.05
Dibenzo[a h]anthracene	ug/L	0.1	0.52	<0.05	<0.1	<0.05	<0.1	<0.1	<0.09	<0.1	<0.1
Fluoranthene	ug/L	0.1	130	0.03	<0.1	0.02	<0.1	<0.1	0.07	<0.1	<0.1
Fluorene	ug/L	0.1	400	<0.05	<0.1	0.05	<0.1	<0.1	0.09	<0.1	<0.1
Indeno[1 2 3-cd]pyrene	ug/L	0.1	0.2	<0.05	<0.1	<0.05	<0.1	<0.1	<0.09	<0.1	<0.1
Methylnapthalene, 1-	ug/L	0.1	1800	0.15	<0.1	0.65	<0.1	<0.1	0.34	<0.1	<0.1
Methylnapthalene, 2-	ug/L	0.1	1800	0.25	<0.1	0.7	<0.1	<0.1	<0.09	<0.1	<0.1
Napthalene	ug/L	0.1	6400	1.2	<0.1	1.4	<0.1	<0.1	9.4	<0.1	<0.1
Phenanthrene	ug/L	0.1	580	0.2	<0.1	0.15	<0.1	<0.1	0.17	<0.1	<0.1
Pyrene	ug/L	0.1	68	<0.01	<0.1	<0.01	<0.1	<0.1	<0.01	<0.1	<0.1
General Inorganic											
pH	pH units	1			7.02		7.3	7.33		7.89	7.4
Conductivity	mS/cm	5			1130		1190	1180		1960	14600
Chloride	ug/L	1000	2300000		46000		126000	121000		425000	4570000
Sodium	ug/L	2000	2300000	57000	65000	42000	89000	89000	55000	323000	2360000

Notes:

* - "Soil, Ground Water and and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act" March 9, 2004, amended July 1, 2011
Table 3: Generic Site Condition Standards in a Non-Potable Ground Water Condition, Medium-Fine Texture

MDL - laboratory method detection limit

< - denotes less than indicated MDL

NV - no value

- Denotes exceeds comparison standard

TABLE 8: SOIL QA/QC RESULTS
Phase Two ESA - 2571-2595 Lancaster Road, Ottawa, Ontario

210294-01 Tables 3-9

Parameter	Units	MDL	5X MDL	RPD Alert Criteria (%)[1]	MW5-21 S4 & DUP3		RPD Qualification Criteria Satisfied?[2]	RPD Value (%)	MW6-21 S5 & DUP2		RPD Qualification Criteria Satisfied?[2]	RPD Value (%)
Metals												
Boron, total	ug/g	5	25	25	5	5	No	NC	<5	<5	No	NC
Antimony	ug/g	1.0	5	25	<1	<1	No	NC	<1	<1	No	NC
Arsenic	ug/g	1.0	5	25	2	2	No	NC	2	2	No	NC
Barium	ug/g	1.0	5	25	246	252	Yes	2.4	214	225	Yes	5.0
Beryllium	ug/g	1	5	25	<1	<1	No	NC	<1	<1	No	NC
Cadmium	ug/g	0.4	2	25	<0.4	<0.4	No	NC	<0.4	<0.4	No	NC
Chromium	ug/g	1	5	25	41	42	Yes	2.4	39	36	Yes	8.0
Chromium IV	ug/g	0.2	1	25	<0.20	<0.20	No	NC	<0.20	<0.20	No	NC
Cobalt	ug/g	1.0	5	25	11	12	Yes	8.7	11	10	Yes	9.5
Copper	ug/g	1	5	25	32	31	Yes	3.2	30	35	Yes	15.4
Cyanide	ug/g	0.005	0.025	25	<0.005	<0.005	No	NC	<0.005	<0.005	No	NC
Lead	ug/g	1.0	5	25	5	6	Yes	18.2	6	6	Yes	0.0
Mercury	ug/g	0.1	0.5	25	<0.1	<0.1	No	NC	<0.1	<0.1	No	NC
Molybdenum	ug/g	1.0	5	25	<1	<1	No	NC	<1	<1	No	NC
Nickel	ug/g	1	5	25	24	25	Yes	4.1	25	23	Yes	8.3
Selenium	ug/g	1.0	5	25	<1	<1	No	NC	<1	<1	No	NC
Silver	ug/g	0.2	1	25	<0.2	<0.2	No	NC	<0.2	<0.2	No	NC
Thallium	ug/g	1.0	5	25	<1	<1	No	NC	<1	<1	No	NC
Uranium	ug/g	0.5	2.5	25	0.6	0.7	No	NC	0.9	1.1	No	NC
Vanadium	ug/g	2	10	25	60	58	Yes	3.4	53	54	Yes	1.9
Zinc	ug/g	2	10	25	58	58	Yes	0.0	54	52	Yes	3.8
PHCs - All results <MDL												
PAHs - All results <MDL												
VOCs - All results <MDL												
General Inorganic												
pH	pH units	0.1	0.5	25	7.78	7.71	Yes	0.9	7.82	7.87	Yes	0.6
Electrical Conductivity (EC)	mS/cm	1	5	25	0.44	0.61	No	NC	1.58	1.5	No	NC
Sodium Absorption Ratio (SAR)		1	5	25	1.69	4.04	No	NC	37.5	8.73	Yes	124.5

Notes:

MDL - Laboratory Method Detection Limit

RPD - Relative Percent Difference

1 - RPD qualification criteria obtained from O. Reg. 153/04 Analytical Protocol (MOECC, July 2011).

2 - The RPD qualification criteria are satisfied when the average of the regular and duplicate sample results is greater than 5X the MDL value.

NC - Not Calculated (RPD Qualification Criteria Not Satisfied)

Denotes exceeds the recommended alert criteria where the RPD qualification criteria are satisfied.

TABLE 9: GROUNDWATER QA/QC RESULTS
Phase Two ESA - 2571-2595 Lancaster Road, Ottawa, Ontario

210294-01 Tables 3-9

Parameter	Units	MDL	5X MDL	RPD Alert Criteria (%)[1]	MW-2 & DUP1		RPD Qualification Criteria Satisfied?[2]	RPD Value (%)
Metals								
Antimony	ug/L	0.5	2.5	35	<0.5	<0.5	No	NC
Arsenic	ug/L	1	5	35	<1	<1	No	NC
Barium	ug/L	10	50	35	130	130	Yes	0.0
Beryllium	ug/L	0.5	2.5	35	<0.5	<0.5	No	NC
Boron (Total)	ug/L	10	50	35	40	30	No	NC
Cadmium	ug/L	0.1	0.5	35	<0.1	<0.1	No	NC
Chromium (Total)	ug/L	1	5	35	<1	<1	No	NC
Chromium IV	ug/L	10	50	35	<10	<10	No	NC
Cobalt	ug/L	0.2	1	35	0.5	0.5	No	NC
Copper	ug/L	1	5	35	3	3	No	NC
Lead	ug/L	1	5	35	<1	<1	No	NC
Mercury	ug/L	0.1	0.5	35	<0.1	<0.1	No	NC
Molybdenum	ug/L	5	25	35	<5	<5	No	NC
Nickel	ug/L	5	25	35	<5	<5	No	NC
Selenium	ug/L	1	5	35	<1	<1	No	NC
Silver	ug/L	0.1	0.5	35	<0.1	<0.1	No	NC
Thallium	ug/L	0.1	0.5	35	<0.1	<0.1	No	NC
Uranium	ug/L	1	5	35	4	3	No	NC
Vanadium	ug/L	1	5	35	<1	<1	No	NC
Zinc	ug/L	10	50	35	<10	<10	No	NC
PHCs - All results <MDL								
PAHs - All results <MDL								
VOCs - All results <MDL								
General Inorganic								
pH	pH units	1	5	35	7.3	7.33	Yes	0.4
Conductivity	mS/cm	5	25	35	1190	1180	Yes	0.8
Chloride	ug/L	1000	5000	35	126000	121000	Yes	4.0
Sodium	ug/L	2000	10000	35	89000	89000	Yes	0.0

Notes:

MDL - Laboratory Method Detection Limit

RPD - Relative Percent Difference

1 - RPD qualification criteria obtained from O. Reg. 153/04 Analytical Protocol (MOECC, July 2011).

2 - The RPD qualification criteria are satisfied when the average of the regular and duplicate sample results is greater than 5X the MDL value.

NC - Not Calculated (RPD Qualification Criteria Not Satisfied)

Denotes exceeds the recommended alert criteria where the RPD qualification criteria are satisfied.

10. APPENDICES

10.1 GENERAL

Sampling and Analysis Plan for the Site Investigation

A soil and groundwater sampling plan was developed in March 2021. The plan was developed to investigate the contaminants of potential concern for soil and ground water in APECs A and B, as identified by the BluMetric Draft Phase One ESA. The Sampling and Analysis Plan is reproduced as follows.

TASK 1: UTILITY LOCATES AND REFINEMENT OF WORK PLAN

Proposed drilling locations are provided on the attached Figure 1, but within this Task the locations will be verified in the field for approval by the client. Utility clearances will be obtained for all drilling/sampling locations. The final deliverable for this project task will be a site plan showing all approved drilling and sampling locations, public and private locates documentation, and a site-specific Health and Safety Plan (HASP) for the drilling program.

TASK 2: DRILLING PROGRAM

The proposed field program includes the advancement of a total of nine (9) boreholes with two locations instrumented as monitoring wells. Proposed drilling locations are provided on Figure 1 and locations will be finalized in conjunction with Task 1 above. Anticipated borehole/monitoring well depths are summarized as follows:

- – 5 m (16 feet) or refusal
- BH-2/MW2 – 5 m (16 feet) or refusal
- BH1 to VH7 – 3.0 m (10 feet) or refusal

The proposed drilling program includes the advancement of a total of two (2) boreholes instrumented as monitoring wells and the completion of an additional 9 boreholes for soil sampling only. All boreholes installed will be advanced using a truck-mount drilling rig using hollow-stem and solid stem auger methods. Soil samples will be collected continuously by split-spoon sampling techniques for logging and sample headspace screening. Appropriate decontamination/cleaning protocol will be used to prepare the equipment between sampling intervals. The drilling tools will be scrubbed with a detergent and water solution. A portion of the collected soil samples will be placed in a plastic zip-lock bag and screened for combustible vapours using a RKI Eagle 2 combustible gas detector after equilibration at room temperature.

A portion of the soil sample will be placed in clean sample jar and placed in a cooler at approximately 4°C. Field preservation with methanol will be conducted for samples as required by the sampling program. Two soil samples per borehole location will be submitted for laboratory analysis. The proposed soil sample analytical program is included below in Table 1. Proposed borehole and monitoring well locations are indicated on the attached Figure. Metals and General Inorganics, PHCs, VOCs, PAHs

Table 1: Soil and Groundwater Sampling Program Summary

Borehole / Monitoring Well	APEC	# of Soil Samples for Each COC				# of Groundwater Samples for Each COC			
		O. Reg 153 Metals + General	PHCs	VOCs	PAHs	O. Reg 153 Metals + General	PHCs	VOCs	PAHs
BH1	A	2	2	2	2				
BH2	A	2	2	2	2				
BH3	A	2	2	2	2				
BH4	A	2	2	2	2				
BH5	A	2	2	2	2				
BH6	A	2	2	2	2				
BH7	A	2	2	2	2				
MW-1	A					1	1	1	1
MW-2	A					1	1	1	1
MW-3	A					1	1	1	1
MW-5-21	A, B	2	2	2	2	1	1	1	1
MW-6-21	B	2	2	2	2	1	1	1	1
Subtotals		18	18	18	18	5	5	5	5
QA/QC (10% Blind Dup)		1	1	1	1	1	1	1	1
Totals		**19**	**19**	**19**	**19**	**6**	**6**	**6**	**6**

Monitoring wells (50 mm ID PVC) will be installed in each borehole with the 3 m screened interval intersecting the water table. A silica sand pack will be placed around the outside of the well screen in the annular space of the borehole. The sand pack will be extended a minimum of 0.3 metres above the screened interval of the PVC. A minimum 0.6 m thick bentonite seal will be placed above the sand pack. Wells will be completed at surface with a flush mount manhole cover with locking bolts. Borehole cuttings from the drilling will be placed in UN-approved drums and stored at an appropriate location on site until the soil can be disposed appropriately following analytical testing. It is anticipated that up to 8 drums of soil cuttings could be produced from the drilling program and require disposal.

High resolution GPS survey methods will be used to locate the monitoring well network on a suitable base plan for the Site. The elevation of the ground surface and the top of the riser at each monitoring well will be recorded. If a geodetic benchmark is not available, BluMetric will establish a benchmark with an assumed elevation for the site. Subsurface utility locations where marked will be captured by the survey and provided on site plans.

TASK 3: GROUNDWATER MONITORING/SAMPLING EVENT

This task involves the monitoring of static water level elevations, LNAPL thickness, and combustible vapours at all locations. The monitoring event will include the sampling of all 6 new monitoring wells.

Static water levels and product thicknesses will be measured using a Solinst oil/water interface probe. The interface probe tip and tape will be cleaned between well locations using a combination of methanol and deionized water. Standpipe combustible vapour readings will be obtained with a RKI Eagle 2 combustible gas indicator.

Monitoring wells will be purged of at least three well volumes to ensure samples represent local groundwater conditions. The well volume will be determined based on the static water level, monitoring well depth and well diameter. In the event that sediment is visible in the purge water, the monitoring well will be purged until it is clear. Purge water will be collected in a barrel equipped with a cover and stored at the site pending laboratory analyses. Impacted purge water will be disposed by Veolia Ltd.

All groundwater samples will be collected using dedicated tubing and using low flow sampling methods. Field measurements for DO, temperature, pH, conductivity and ORP will be conducted using a flow cell to ensure parameter stabilization prior to the collection of groundwater samples. BluMetric field personnel will wear Nalgene® gloves that will be changed between each monitoring well sample that is collected. Sample bottles will be obtained from Paracel Laboratories of Ottawa, Ontario. All collected groundwater samples will immediately be placed in a cooler containing ice to ensure the temperature is kept near 4 °C. Samples will be submitted to Paracel within 24 hours of sample collection under strict chain of custody protocol noting the City of Ottawa standing offer. Groundwater sample analysis will be as per the program summarized in Table 1.

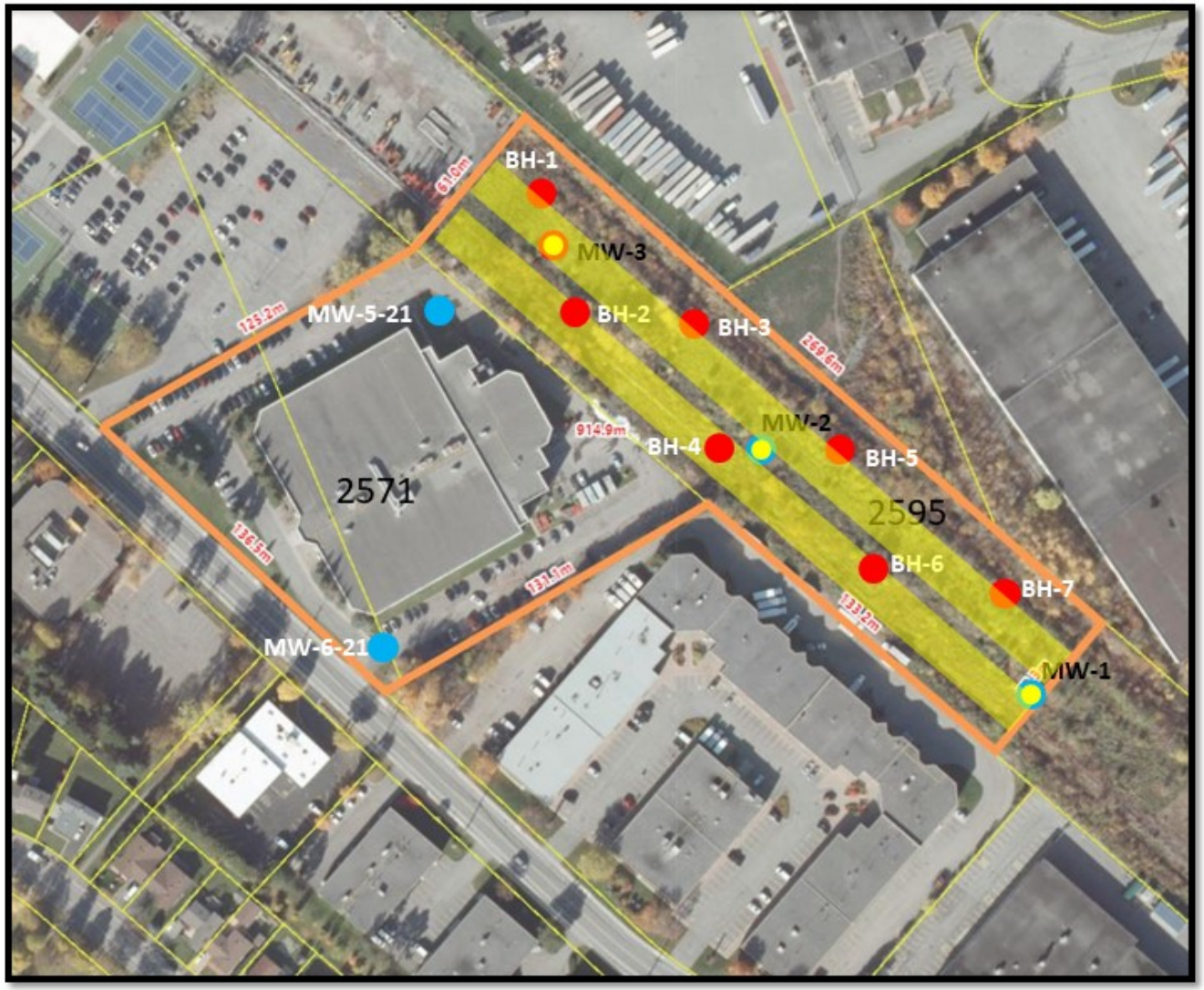


Figure 1 – Provisional Phase II ESA Investigation Plan

- Proposed Borehole – Soil Samples Only, to 3 m depth
- Proposed Borehole/Monitoring Well , to 5 m depth
- Pinchin 2005 Borehole/Monitoring Well located March 11, 2021
- Pinchin 2005 Borehole/Monitoring Well (approx.) not located

10.2 FINALIZED FIELD LOGS

The following borehole logs are included in this section:

- BH1 to BH7, MW5-21, MW6-21 constructed/installed under the supervision of BluMetric in April 2021.
- MW-1, MW-2, and MW-3 constructed/installed under the supervision of Pinchin Environmental in January 2006.

The following parameter stabilization field logs for groundwater are included in this section:

- MW-1 and MW-2, for April 6, 2021.
- MW5-21 and MW6-21, for April 7, 2021.

The following insitu hydraulic testing analyses are included in this section:

- MW5-21 and MW6-21, for May 21, 2021.

BOREHOLE ID: BH1

Project No.: 210294
Client: Enbridge Inc.
Report: Enbridge Phase II ESA- Lancaster Rd.
Site Address: 2571-2595 Lancaster Rd.
Ottawa, ON

Elevation Ground: *68.22 m*
TOP: *NA*

UTM 18 (Zone): 5027694 N
452154 E

SUBSURFACE PROFILE				SAMPLE						WELL COMPLETION	
Depth (m)	Symbol	Description	Depth (m) / Elev. (m.a.s.l.)	Sample ID	Type	Blow Counts	Recovery (%)	Lab Analysis	Headspace Vapour Level CGD (ppm) 10 100	Construction	Notes
		Organics Moist, brown, silty organics with roots		S1		1,4,7,10	75%	PHCs, PAH, VOCs, Metals	0.0		
			0.51 / 67.71								
		Fill Moist, brown, silty sand, trace clay									
			0.76 / 67.46	S2		40, 28, 50	42%	PAH, VOCs, Metals	0.0		
1		**Fill** Moist, brown coarse sand and gravel									
		Asphalt									
		Silt Moist, brown, sandy silt with asphalt									
		End of borehole at 1.07 m									
2		Refusal at 1.07 m bgs									
3											
4											
5											
6											
7											
8											
9											

Drill Date: 2021 April 7
Drilled By: Strata Drilling Group
Drilling Method: Direct Push
Hole Diameter: 0.127 m (OD)
Logged By: LJ
Checked By: RH

Notes: SPLIT SPOON

Sheet 1 of 1

BH MW OB LOGV1.0 210294- ENBRIDGE- LANCASTER RD.GPJ WESA TEMPLATE V1.2.GDT 21-4-15

BOREHOLE ID: BH2

Project No.: 210294
Client: Enbridge Inc.
Report: Enbridge Phase II ESA- Lancaster Rd.
Site Address: 2571-2595 Lancaster Rd.
Ottawa, ON

Elevation Ground: *67.79 m*
TOP: *NA*

UTM 18 (Zone): 5027649 N
452179 E

SUBSURFACE PROFILE				SAMPLE						WELL COMPLETION	
Depth (m)	Symbol	Description	Depth (m) / Elev. (m.a.s.l.)	Sample ID	Type	Blow Counts	Recovery (%)	Lab Analysis	Headspace Vapour Level CGD (ppm) 10 100	Construction	Notes
0		**Organics** Moist, brown, silty sand organics, trace gravel and roots		S1		4,8,11,14	58		5.0		
		Fill Moist, brown, sandy silt, trace clay	0.76 / 67.03								
		Trace asphalt		S2		17,8,2,1	71	VOCs	5.0		
1		**Clay** Moist, grayish brown, silty clay, low plasticity	1.01 / 66.78								
				S3		Weight of Hammer for 24"	0				
2				S4		Weight of Hammer for 18", 2	100	PHCs, PAH, VOCs, Metals	5.0		
			2.90 / 64.89								
3		End of borehole at 2.90 m									
4											
5											
6											
7											
8											
9											

Drill Date: 2021 April 7
Drilled By: Strata Drilling Group
Drilling Method: Direct Push
Logged By: LJ
Hole Diameter: 0.127 m (OD)
Checked By: RH

Notes: SPLIT SPOON

Sheet 1 of 1

BH MW OB LOGV1.0 210294- ENBRIDGE- LANCASTER RD.GPJ WESA TEMPLATE V1.2.GDT 21-4-15

BOREHOLE ID: BH3

Project No.: 210294
Client: Enbridge Inc.
Report: Enbridge Phase II ESA- Lancaster Rd.
Site Address: 2571-2595 Lancaster Rd.
Ottawa, ON

Elevation Ground: *67.81 m*
TOP: *NA*

UTM 18 (Zone): 5027638 N
452212 E

SUBSURFACE PROFILE				SAMPLE						WELL COMPLETION	
Depth (m)	Symbol	Description	Depth (m) / Elev. (m.a.s.l.)	Sample ID	Type	Blow Counts	Recovery (%)	Lab Analysis	Headspace Vapour Level CGD (ppm) 10 100	Construction	Notes
0		**Organics** Moist, brown silty organics with roots		S1		2,18,25,46	83	PAH, VOCs, Metals	0.0		
		Fill Damp, brown, silty sand with some gravel, trace asphalt	0.76 / 67.05								
1		**Fill** Coarse sand and asphalt		S2		16,30,28,50	33		0.0		
		End of borehole at 1.37 m	1.37 / 66.44								
2		Refusal at 1.37 m bgs									
3											
4											
5											
6											
7											
8											
9											

Drill Date: 2021 April 7
Drilled By: Strata Drilling Group
Drilling Method: Direct Push
Hole Diameter: 0.127 m (OD)
Logged By: LJ
Checked By: RH

Notes: SPLIT SPOON

Sheet 1 of 1

BH MW OB LOGV1.0 210294- ENBRIDGE- LANCASTER RD.GPJ WESA TEMPLATE V1.2.GDT 21-4-15

BOREHOLE ID: BH4

Project No.: 210294
Client: Enbridge Inc.
Report: Enbridge Phase II ESA- Lancaster Rd.
Site Address: 2571-2595 Lancaster Rd.
Ottawa, ON

Elevation Ground: *67.78 m*
TOP: *NA*

UTM 18 (Zone): 5027603 N
452231 E

Depth (m)	Symbol	Description	Depth (m) / Elev. (m.a.s.l.)	Sample ID	Type	Blow Counts	Recovery (%)	Lab Analysis	Headspace Vapour Level CGD (ppm)	Construction	Notes
0		**Organics** Moist, brown, silty organics with roots		S1		2,3,4,4	46		0.0		
		Fill Moist, brown, silty sand, trace angular gravel	0.61 67.17								
		Clay Moist, brown silty clay with some sand	0.89 66.89	S2		Weight of Hammer for 24"	46		0.0		
1		**Sand** Coarse sand with trace fine gravel									
		Clay Moist, brownish gray, non-plastic silty clay		S3		1,1,1,2	79	PHCs, PAH, VOCs, Metals	0.0		
2		increasing water content	2.13 65.65	S4		Weight of Hammer for 24"	100	PHCs, PAH, VOCs, Metals	0.0		
		End of borehole at 2.90 m	2.90 64.88								
3											
4											
5											
6											
7											
8											
9											

Drill Date: 2021 April 7
Drilled By: Strata Drilling Group
Drilling Method: Direct Push
Logged By: LJ
Hole Diameter: 0.127 m (OD)
Checked By: RH

Notes: SPLIT SPOON

Sheet 1 of 1

BH MW OB LOGV1.0 210294- ENBRIDGE- LANCASTER RD.GPJ WESA TEMPLATE V1.2.GDT 21-4-15

BOREHOLE ID: BH5

Project No.: 210294
Client: Enbridge Inc.
Report: Enbridge Phase II ESA- Lancaster Rd.
Site Address: 2571-2595 Lancaster Rd.
Ottawa, ON

Elevation Ground: *67.59 m*
TOP: *NA*

UTM 18 (Zone): 5027583 N
452277 E

SUBSURFACE PROFILE				SAMPLE						WELL COMPLETION	
Depth (m)	Symbol	Description	Depth (m) / Elev. (m.a.s.l.)	Sample ID	Type	Blow Counts	Recovery (%)	Lab Analysis	Headspace Vapour Level CGD (ppm) 10 100	Construction	Notes
0		**Organics** Moist, brown, silty organics with roots		S1		1,2,2,1	71		0.0		
		Fill Moist, brown, silty sand with gravel, trace clay	0.99 66.60	S2		1,4,1 for 12"	46		5.0		
1		**Clay** Moist, brownish gray, non-plastic silty clay, with some brown mottling	1.37 66.22	S3		1,1,1,1	100	PHCs, PAH, VOCs, Metals	0.0		
		increasing water conntent		S4		Weight of Hammer for 24"	100	PHCs, PAH, VOCs, Metals	0.0		
2		End of borehole at 2.90 m	2.90 64.69								
3											
4											
5											
6											
7											
8											
9											

Drill Date: 2021 April 7
Drilled By: Strata Drilling Group
Drilling Method: Direct Push
Hole Diameter: 0.127 m (OD)
Logged By: LJ
Checked By: RH

Notes: SPLIT SPOON

Sheet 1 of 1

BH MW OB LOGV1.0 210294- ENBRIDGE- LANCASTER RD.GPJ WESA TEMPLATE V1.2.GDT 21-4-15

BOREHOLE ID: BH6

Project No.: 210294
Client: Enbridge Inc.
Report: Enbridge Phase II ESA- Lancaster Rd.
Site Address: 2571-2595 Lancaster Rd.
Ottawa, ON

Elevation Ground: *67.62 m*
TOP: *NA*

UTM 18 (Zone): 5027545 N
452296 E

SUBSURFACE PROFILE				SAMPLE							WELL COMPLETION	
Depth (m)	Symbol	Description	Depth (m) / Elev. (m.a.s.l.)	Sample ID	Type	Blow Counts	Recovery (%)	Lab Analysis	Headspace Vapour Level CGD (ppm) 10 100		Construction	Notes
0		**Organics** Moist, brown silty organics, with roots		S1		1,2,5,2	63		0.0			
		Fill Moist, brown medium sand with silt and small angular gravel	0.61 67.01									
1		**Clay** Damp, graish brown, non-plastic silty clay	0.89 66.73	S2		Weight of Hammer for 6", 1,2,3	71	PHCs, PAH, VOCs, Metals	0.0			
		Clay Moist, light brown sandy clay	1.37 66.25									
		Clay Moist, graish brown, non-plastic silty clay Increasing water content		S3		2,3,3,4	96	PHCs, PAH, VOCs, Metals	0.0			
2		Slight increase in plasticity	2.13 65.49	S4		Weight of Hammer for 18",1	100		0.0			
		End of borehole at 2.90 m	2.90 64.72									
3												
4												
5												
6												
7												
8												
9												

Drill Date: 2021 April 7
Drilled By: Strata Drilling Group
Drilling Method: Direct Push
Hole Diameter: 0.127 m (OD)
Logged By: LJ
Checked By: RH

Notes: SPLIT SPOON

Sheet 1 of 1

BH MW OB LOGV1.0 210294- ENBRIDGE- LANCASTER RD.GPJ WESA TEMPLATE V1.2.GDT 21-4-15

BOREHOLE ID: BH7

Project No.: 210294
Client: Enbridge Inc.
Report: Enbridge Phase II ESA- Lancaster Rd.
Site Address: 2571-2595 Lancaster Rd.
Ottawa, ON

Elevation Ground: *67.58 m*
TOP: *NA*

UTM 18 (Zone): 5027525 N
452338 E

SUBSURFACE PROFILE				SAMPLE							WELL COMPLETION	
Depth (m)	Symbol	Description	Depth (m) / Elev. (m.a.s.l.)	Sample ID	Type	Blow Counts	Recovery (%)	Lab Analysis	Headspace Vapour Level CGD (ppm) 10 100		Construction	Notes
0		**Organics** Moist brown silty organics with roots		S1		1,5,5,4	75		0.0			
		Fill Moist, brown, sand with silt and angular gravel	0.61 66.97									
1		**Clay** Moist, grayish brown, non-plastic, silty clay, with some brown mottling		S2		Weight of Hammer for 24"	100	PHCs, PAH, VOCs, Metals	0.0			
				S3		2,2,2,3	100	PHCs, PAH, VOCs, Metals	0.0			
2		increasing water content	2.13 65.45	S4		Weight of Hammer for 12",1,1	100		0.0			
		End of borehole at 2.90 m	2.90 64.68									
3												
4												
5												
6												
7												
8												
9												

Drill Date: 2021 April 7
Drilled By: Strata Drilling Group
Drilling Method: Direct Push
Hole Diameter: 0.127 m (OD)
Logged By: LJ
Checked By: RH

Notes: SPLIT SPOON

Sheet 1 of 1

BH MW OB LOGV1.0 210294- ENBRIDGE- LANCASTER RD.GPJ WESA TEMPLATE V1.2.GDT 21-4-15

BOREHOLE ID: MW5-21

Project No.: 210294
Client: Enbridge Inc.
Report: Enbridge Phase II ESA- Lancaster Rd.
Site Address: 2571-2595 Lancaster Rd.
Ottawa, ON

Elevation Ground: *67.90 m*
TOP: *67.78 m*
MOECC Well Tag: A269395
UTM 18 (Zone): 5027650 N
452127 E

Depth (m)	Description	Depth (m) / Elev. (m.a.s.l.)	Sample ID	Type	Blow Counts	Recovery (%)	Lab Analysis	Headspace Vapour Level CGD (ppm)	Construction	Notes
	Ground Surface	0.00 / 67.90								
0	**Asphalt**									
	Fill Dry, brown, coarse sand and angular gravel fill	0.61 / 67.29	S1		14,12,22,27	46		0.0		flushmount, jplug, cement
	Fill Moist, brown, coarse sand and gravel fill with some silt	1.22 / 66.68	S2		17,50	25		0.0		3/8" Hole plug
1	**Clay** Moist, brown medium plasticity clay with some darker brown mottling, trace silt	1.83 / 66.07	S3		8,8,1,1	63		0.0		
	Turning wet		S4		1,2,2,2	100	PHCs, PAH, VOCs, Metals	0.0		
2	**Clay** Moist, brown medium plasticity clay with some darker brown mottling, trace silt and gravel	2.44 / 65.46	S5		18,6,9,6	42		0.0		
	Clay Wet, brown, non-plastic clay with some silt, gravel, and sand	3.05 / 64.85	S6		1,3,4,4	50		0.0		3.05 m x 50.8 mm slot 10 PVC screen with #3 silica sand pack
3			S7		5,7,14,24	100	PHCs, PAH, VOCs, Metals	0.0		
	Gravel Wet angular gravel with silt	4.27 / 63.63	S8		9,15,16,15	75				
4		4.88 / 63.02								
	End of borehole at 4.88 m									
5	Bedrock Refusal at 4.88 m bgs WL Taken on April 15, 2021: 1.58 m bgs									
6										
7										
8										
9										

Drill Date: 2021 April 6
Drilled By: GET Drilling Ltd.
Drilling Method: Solid Stem Auger
Logged By: LJ
Hole Diameter: 0.127 m (OD)
Checked By: RH

Notes: SPLIT SPOON

Sheet 1 of 1

BH MW OB LOGV1.0 210294- ENBRIDGE- LANCASTER RD.GPJ WESA TEMPLATE V1.2.GDT 21-4-15

BOREHOLE ID: MW6-21

Project No.: 210294
Client: Enbridge Inc.
Report: Enbridge Phase II ESA- Lancaster Rd.
Site Address: 2571-2595 Lancaster Rd.
Ottawa, ON

Elevation Ground: *67.50 m*
TOP: *67.39 m*
MOECC Well Tag: A269396
UTM 18 (Zone): 5027535 N
452107 E

SUBSURFACE PROFILE				SAMPLE						WELL COMPLETION	
Depth (m)	Symbol	Description	Depth (m) / Elev. (m.a.s.l.)	Sample ID	Type	Blow Counts	Recovery (%)	Lab Analysis	Headspace Vapour Level CGD (ppm) 10 100	Construction	Notes
		Ground Surface	0.00								
0		**Asphalt**	67.50								flushmount, jplug, cement
		Fill Dry, brown coarse sand and gravel fill, some silt		S1		10,14,2,2	38		0.0		
			0.71								
1		**Clay** Damp, brown, non plastic silty clay	66.79	S2		4,2,3,5	79	PHCs, PAH, VOCs, Metals	20.0		3/8" Hole plug
			1.22								
		getting softer	66.28	S3		1,1,1,2	100		5.0		
			1.83								
2		trace small angular gravel	65.67	S4		1,2,3,4	100				
				S5		2,2,2,7	100	PHCs, PAH, VOCs, Metals	15.0		2.13 m x 50.8 mm slot 10 PVC screen with #3 silica sand pack
3				S6		1,1,50	50				
			3.66								
		Shale	63.84								
4		End of borehole at 3.81 m Bedrock Refusal at 3.81 m bgs WL Taken on April 15, 2021: 1.07 m bgs									
5											
6											
7											
8											
9											

Drill Date: 2021 April 6
Drilled By: GET Drilling Ltd.
Drilling Method: Solid Stem Auger
Hole Diameter: 0.127 m (OD)
Logged By: LJ
Checked By: RH

Notes: SPLIT SPOON

Sheet 1 of 1

BH MW OB LOGV1.0 210294- ENBRIDGE- LANCASTER RD.GPJ WESA TEMPLATE V1.2.GDT 21-4-15

Job# 210294
BluMetric Staff: Connor M

WL Start (m) 1.63 TPUC
WL Finish (m) 1.64 TPUC

Well/Pump Depth (m)
Tubing Level (m)

BluMetric Environmental Inc.

Monitoring Location	Sample Date	Pump Rate (L/min) mL/min	Time	WL (m)	Parameter				
					Dissolved Oxygen (mg/L)	ORP (mV)	Temperature (degrees Celsius)	pH	Conductivity (µS/cm)
MW1	2021/04/06	100	12:05	1.63					
		130	12:08	1.64	23.5	89.3	12.5	6.45	894
		130	12:11	1.64	3.47	68.2	9.9	6.49	799.5
		130	12:14	1.64	4.30	61.5	10.0	6.50	793.0
		130	12:17	1.64	4.25	58.3	9.9	6.50	866
		130	12:20	1.64	2.40	54.9	9.8	6.50	865
		130	12:23	1.64	3.55	54.3	9.8	6.50	863
		130	12:26	1.64	2.55	53.4	9.8	6.50	863
		130	12:29	1.64	3.14	53.5	10.1	6.51	864
*Sampled		130	12:32	1.64	3.01	53.3	9.8	6.51	857
*Pump off			12:57	1.64					

Notes: Purged ~75 L from well prior to sampling
Sample Description (Colour, Clarity, Odour): Light grey, silty, PHC odour
Reading Time Interval: 3 minutes
Pump Used: Bladder Peristaltic Multi Meter Used: YSI 556 Horiba U22 YSI Pro Plus

Job# 210294
BluMetric Staff: Connor M

WL Start (m) 1.71 TPUC
WL Finish (m) 1.74 TPUC

Well/Pump Depth (m)
Tubing Level (m)

Monitoring Location	Sample Date	Pump Rate (L/min) mL/min	Time	WL (m)	Parameter				
					Dissolved Oxygen (mg/L)	ORP (mV)	Temperature (degrees Celsius)	pH	Conductivity (µS/cm)
Dup 1 MW2	2021/04/06	150	1:29	1.71					
		150	1:32	1.73	4.01	133.4	8.8	6.70	929
		150	1:35	1.73	2.49	130.2	8.2	6.72	916
		150	1:38	1.73	2.16	130.1	8.1	6.73	912
		150	1:41	1.74	2.20	130.4	7.6	6.73	901
		150	1:44	1.74	2.02	131.1	7.7	6.73	903
		150	1:47	1.74	2.03	131.7	7.5	6.74	898
		150	1:50	1.74	2.15	132.6	7.7	6.74	901
*Sampled		150	1:53	1.74	2.20	133.0	7.5	6.74	893
*Pump off			2:40	1.74					

Notes: Purged ~75 L from well prior to sampling
Sample Description (Colour, Clarity, Odour): Light grey, slightly silty, odourless
Reading Time Interval: 3 minutes
Pump Used: Bladder Peristaltic Multi Meter Used: YSI 556 Horiba U22 YSI Pro Plus

Job# 210294
BluMetric Staff: Connor M

WL Start (m) 0.95 TPVC 1.05 TOC
WL Finish (m)

Well/Pump Depth (m)
Tubing Level (m)

BluMetric Environmental Inc.

Monitoring Location	Sample Date	Pump Rate (L/min) mL/min	Time	WL (m)	Parameter: Dissolved Oxygen (mg/L)	ORP (mV)	Temperature (degrees Celsius)	pH	Conductivity (µS/cm)
MW5-21	2021/04/06	150	3:15	1.05					
		150	3:18	1.06	7.02	112.4	9.9	7.69	1695
		150	3:21	1.06	6.26	107.4	11.5	7.68	1708
		150	3:24	1.06	6.25	103.4	11.7	7.68	1697
		150	3:27	1.06	6.15	101.6	11.5	7.66	1603
		150	3:30	1.06	6.26	100.4	10.7	7.63	1472
		150	3:33	1.06	6.04	99.8	9.7	7.61	1377
		150	3:36	1.06	6.25	98.9	9.3	7.59	1354
		150	3:39	1.06	6.13	97.9	9.2	7.58	1327
		150	4:03	1.06					
	* Did not submit samples								

* Sampled
* Pump off

Notes: Purged well dry (~15 L) before sampling
Sample Description (Colour, Clarity, Odour): Brown, silty, odourless
Reading Time Interval: 3 minutes
Pump Used: Bladder Peristaltic Multi Meter Used: YSI 556 Horiba U22 YSI Pro Plus

Job# 210294
BluMetric Staff: Connor M

WL Start (m) 0.95 TPVC
WL Finish (m)

Well/Pump Depth (m)
Tubing Level (m)

Monitoring Location	Sample Date	Pump Rate (L/min) mL/min	Time	WL (m)	Parameter: Dissolved Oxygen (mg/L)	ORP (mV)	Temperature (degrees Celsius)	pH	Conductivity (µS/cm)
MW5-21	2021/04/07	150	8:57	0.95					
		150	9:00	0.96	5.26	127.0	7.8	7.64	1361
		150	9:03	0.96	4.55	125.7	7.5	7.61	1353
		150	9:06	0.96	4.38	125.5	7.5	7.60	1344
		150	9:09	0.96	4.23	123.5	7.5	7.62	1339
		150	9:12	0.96	4.29	121.8	7.5	7.62	1338
		150	9:15	0.96	4.20	120.0	7.6	7.63	1337
		150	9:43	0.96					

* Sampled
* Pump off

Notes:
Sample Description (Colour, Clarity, Odour): Grey, slightly silty, odourless
Reading Time Interval: 3 minutes
Pump Used: Bladder Peristaltic Multi Meter Used: YSI 556 Horiba U22 YSI Pro Plus

Low Flow Parameters
Job# 210294
BluMetric Staff: Connor M

WL Start (m) 1.49 TPUC
WL Finish (m) 1.60 TOC

Well/Pump Depth (m)
Tubing Level (m)

BluMetric Environmental Inc.

Monitoring Location	Sample Date	Pump Rate (L/min)	Time	WL (m)	Parameter				
					Dissolved Oxygen (mg/L)	ORP (mV)	Temperature (degrees Celsius)	pH	Conductivity (µS/cm)
MW6-21	2021/04/07	150	10:13	1.60					
		150	10:16	1.63	3.20	103.4	9.2	6.91	10713
		150	10:19	1.63	2.37	96.1	9.2	6.90	10726
		150	10:22	1.63	2.18	92.0	9.1	6.91	10697
		150	10:25	1.63	2.02	89.9	9.6	6.92	10857
		150	10:28	1.63	2.02	89.4	9.7	6.92	10853
*Sampled		150	10:31	1.63	2.03	90.5	9.7	6.92	10903
*Pump off		150	10:59	1.63					

Notes:

FINAL(Calculate Final- last reading and 3rd last reading)

DO (10%):	%	Time Deviation?:	
Conductivity (3%):	%	Purge Water Characteristics:	Grey, silty, odourless
Temperature (3%):	%		
pH (± 0.1 unit):		Reading Time Interval	3 minutes
ORP/Eh (± 10 millivolts):	units	Pump Used:	Bladder (Peristaltic)
The the well reach stable parameters?	YES NO	Multi Meter Used:	(YSI 556) Horiba U22
If No, Please State reason			↳ Pro Plus

PINCHIN ENVIRONMENTAL

Pinchin Environmental
515 Legget Drive, Suite 200
Kanata, Ontario

Stratigraphic and Instrumentation Log: MW-1

Project No.: 32485.001 **Logged By:** RML
Project: Phase II ESA **Entered By:** RML
Client: Mask Management **Project Manager:** SWM
Location: CNR, Lancaster Dr, Ottawa, ON **Drill Date:** January 17, 2006

Depth (ft)	Depth (m)	Symbol	Description	Depth (m)	Number	Type	Sample	N-Value	Recovery (%)	Well Completion Details	Vapour Data (% LEL)
0	0		Ground Surface								
0	0		***Grass and Topsoil*** Brown, moist, no odor, rootlets	0.0							
1	0		***Sandy Gravel*** Brown, moist, no odor, coarse grained	0.3	1	SS		12	30		40
3	1		***Sandy Clay*** Brown, moist, no odor	1.1	2	SS		4	40		32
6	2		***Clay*** Grey, moist, no odor	1.7	3	SS		7	40		39
8	2		Turning wet		4	SS		5	100		43
11	3				5	SS		2	100		43
13	4				6	SS		2	100		41
15	4		End of Borehole No Auger Refusal	4.6							
16	5										
20	6										

Vapour Data (ppm): 250, 750, 1250

Drilled By: Downing Drilling Inc **Datum:** Local
Drill Method: Hollow Stem Auger **Casing Elevation:** NA
Vapour Instrument: PID **Ground Elevation:** NA
Well Casing Size: 52mm **Sheet:** 1 of 1

PINCHIN ENVIRONMENTAL

Stratigraphic and Instrumentation Log: MW-2

Pinchin Environmental
515 Legget Drive, Suite 200
Kanata, Ontario

Project No.: 32485.001 **Logged By:** RML
Project: Phase II ESA **Entered By:** RML
Client: Mask Management **Project Manager:** SWM
Location: CNR, Lancaster Dr, Ottawa, ON **Drill Date:** January 17, 2006

SUBSURFACE PROFILE

Depth (ft)	Depth (m)	Symbol	Description	Depth (m)
0	0		Ground Surface	
0			***Grass and Topsoil*** Brown, moist, no odor, rootlets	0.0
1			***Sandy Gravel*** Black, moist, no odor, coarse grained	0.3
3	1		***Sandy Clay*** Brown, moist, no odor	1.1
6	2		***Clay*** Grey, wet, no odor	1.7
10	3		Layers of brown clay	
15	4		End of Borehole No Auger Refusal	4.6
16	5			
19	6			
20				

SAMPLE

Number	Type	Sample	N-Value	Recovery (%)
1	SS		24	60
2	SS		50	40
3	SS		4	60
4	SS		2	100
5	SS		2	100
6	SS		2	100

Well Completion Details

Vapour Data
(% LEL) 20 40 60 80
(ppm) 250 750 1250

23
17
41
40
28
32

Drilled By: Downing Drilling Inc
Drill Method: Hollow Stem Auger
Vapour Instrument: PID
Well Casing Size: 52mm

Datum: Local
Casing Elevation: NA
Ground Elevation: NA
Sheet: 1 of 1

PINCHIN ENVIRONMENTAL

Stratigraphic and Instrumentation Log: MW-3

Pinchin Environmental
515 Legget Drive, Suite 200
Kanata, Ontario

Project No.: 32485.001	**Logged By:** RML
Project: Phase II ESA	**Entered By:** RML
Client: Mask Management	**Project Manager:** SWM
Location: CNR, Lancaster Dr, Ottawa, ON	**Drill Date:** January 17, 2006

SUBSURFACE PROFILE

Depth (ft)	Depth (m)	Symbol	Description	Depth (m)
0	0		Ground Surface	
0			***Grass and Topsoil*** Brown, moist, no odor, rootlets	0.0
1			***Sandy Gravel*** Black, moist, no odor, coarse grained	0.3
3	1		***Sandy Clay*** Brown, moist, no odor	1.1
6	2		***Clay*** Grey, wet, no odor	1.7
13	4		***Shale*** Grey, Soft	4.0
15	5		End of Borehole Auger Refusal on Inferred Bedrock	4.6
20	6			

SAMPLE

Number	Type	Sample	N-Value	Recovery (%)
1	AS		NA	0
2	AS		NA	0
3	SS		2	0
4	SS		3	80
5	SS		2	100
6	SS		50	10

Well Completion Details

Vapour Data
(% LEL) 20 40 60 80
(ppm) 250 750 1250

0
0
0
26
30
24

Drilled By: Downing Drilling Inc	**Datum:** Local
Drill Method: Hollow Stem Auger	**Casing Elevation:** NA
Vapour Instrument: PID	**Ground Elevation:** NA
Well Casing Size: 52mm	**Sheet:** 1 of 1

BluMetric Environmental Inc.
3108 Carp Road
Ottawa,ON
K0A 1L0

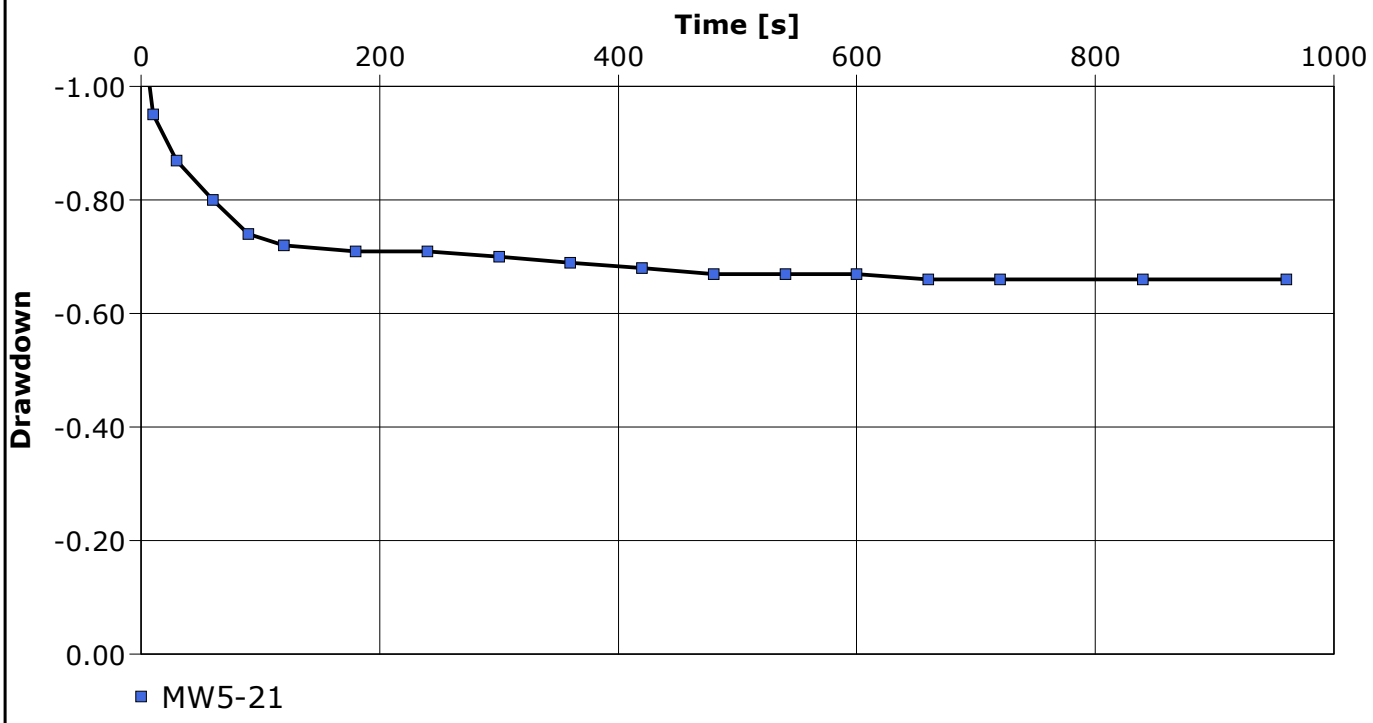
Slug Test Analysis Report

Project: Enbridge Lancaster Road Phase II

Number: 210294

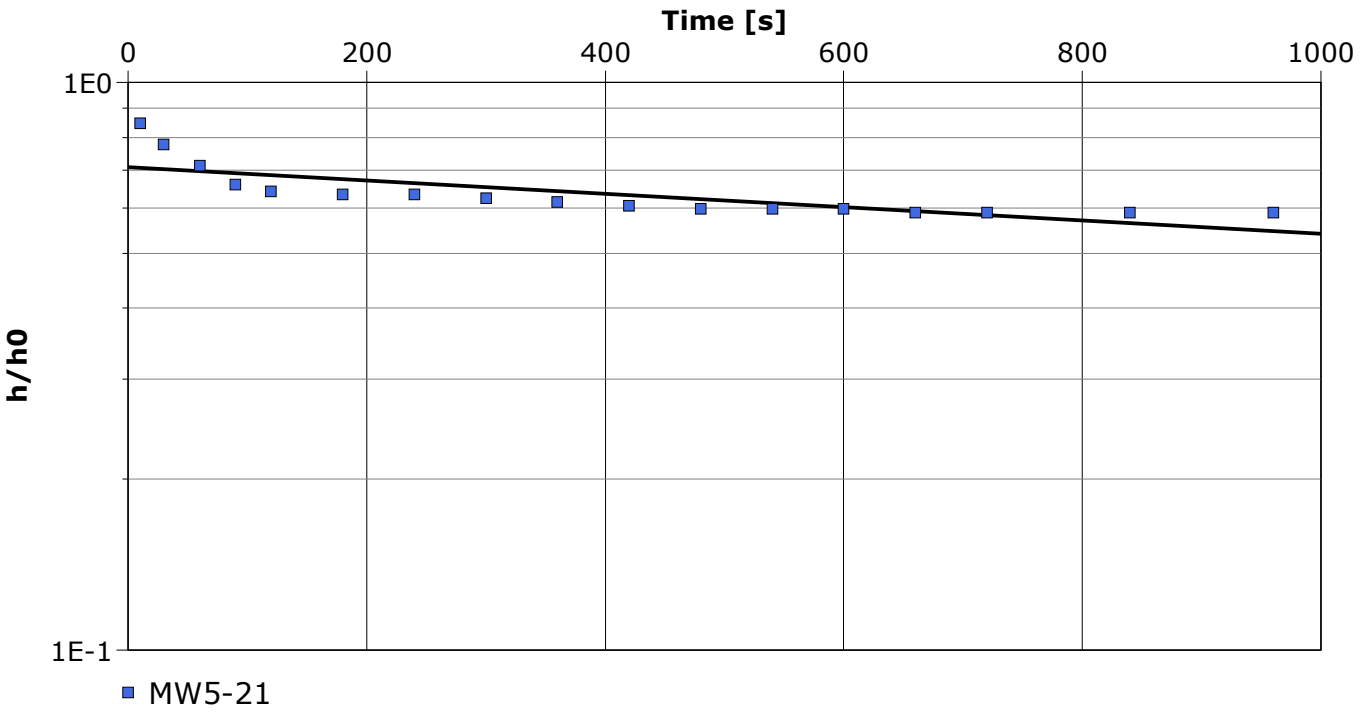
Client: Enbridge

Location: Ottawa ON	Slug Test: Slug Test	Test Well: MW5-21
Test Conducted by: Greg McKay		Test Date: 2021-05-21
Analysis Performed by: S Groulx	MW5-21 Slug Test	Analysis Date: 2021-05-27
Aquifer Thickness: 3.73 m		



BluMetric Environmental Inc. 3108 Carp Road Ottawa,ON K0A 1L0	**Slug Test Analysis Report**
	Project: Enbridge Lancaster Road Phase II
	Number: 210294
	Client: Enbridge

Location: Ottawa ON	Slug Test: Slug Test	Test Well: MW5-21
Test Conducted by: Greg McKay		Test Date: 2021-01-21
Analysis Performed by: S Groulx	MW5-21 Slug Test	Analysis Date: 2021-05-27
Aquifer Thickness: 3.73 m		

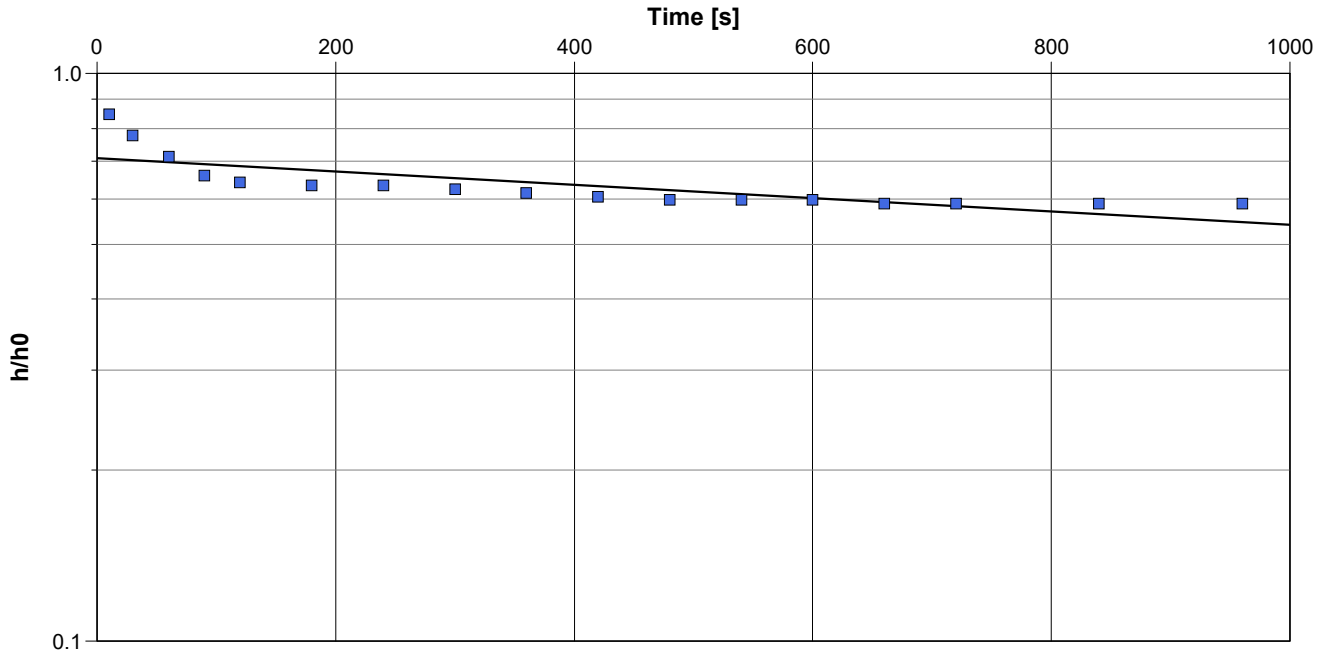


Calculation using Hvorslev

Observation Well	Hydraulic Conductivity [m/s]	
MW5-21	1.04×10^{-7}	

BluMetric Environmental Inc. 3108 Carp Road Ottawa,ON K0A 1L0	**Slug Test Analysis Report**
	Project: Enbridge Lancaster Road Phase II
	Number: 210294
	Client: Enbridge

Location: Ottawa ON	Slug Test: Slug Test	Test Well: MW5-21
Test Conducted by: Greg McKay		Test Date: 2021-01-21
Analysis Performed by: S Groulx	MW5-21 Slug Test	Analysis Date: 2021-05-27
Aquifer Thickness: 3.73 m		



Calculation using Bouwer & Rice

Observation Well	Hydraulic Conductivity [m/s]	
MW5-21	7.94×10^{-8}	

BluMetric Environmental Inc.
3108 Carp Road
Ottawa,ON
K0A 1L0

Slug Test - Analyses Report

Project: Enbridge Lancaster Road Phase II

Number: 210294

Client: Enbridge

Location: Ottawa ON	Slug Test: Slug Test	Test Well: MW5-21
Test Conducted by: Greg McKay		Test Date: 2021-01-21
Aquifer Thickness: 3.73 m		

	Analysis Name	Analysis Performed by	Analysis Date	Method name	Well	T [m²/s]	K [m/s]	S
1	MW5-21 Slug Test	S Groulx	2021-05-27	Hvorslev	MW5-21		1.04×10^{-7}	
2	MW5-21 Slug Test	S Groulx	2021-05-27	Bouwer & Rice	MW5-21		7.94×10^{-8}	

BluMetric Environmental Inc.
3108 Carp Road
Ottawa,ON
K0A 1L0

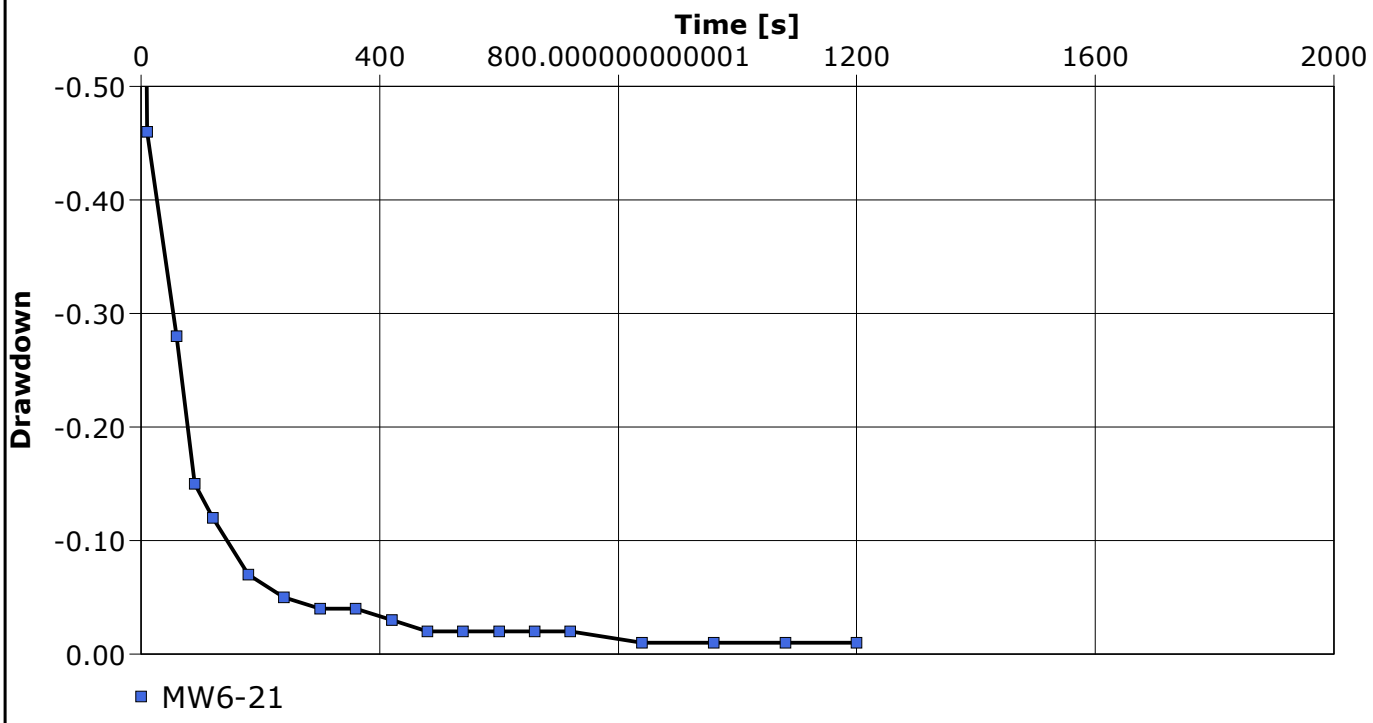
Slug Test Analysis Report

Project: Enbridge Lancaster Road Phase II

Number: 210294

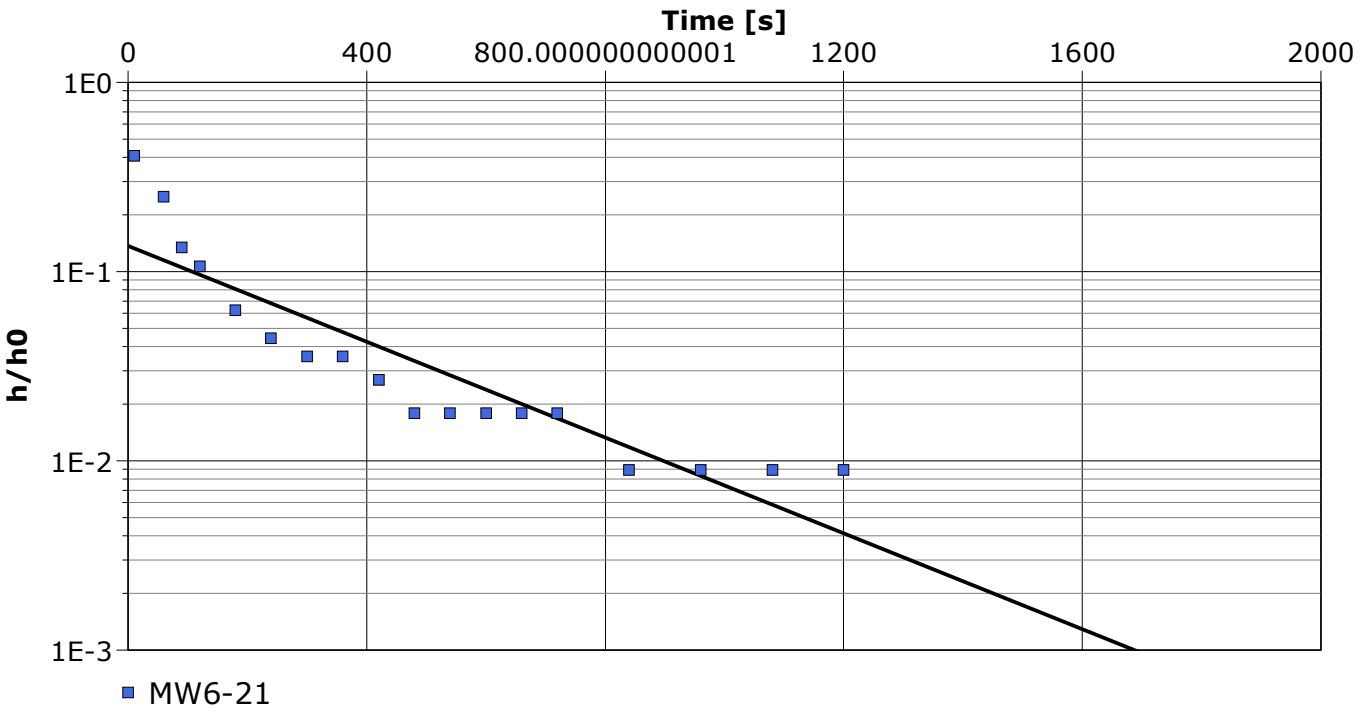
Client: Enbridge

Location: Ottawa ON	Slug Test: Slug Test	Test Well: MW6-21
Test Conducted by: Greg McKay		Test Date: 2021-05-21
Analysis Performed by: S Groulx	MW6-21 Slug Test	Analysis Date: 2021-05-27
Aquifer Thickness: 2.03 m		



BluMetric Environmental Inc. 3108 Carp Road Ottawa,ON K0A 1L0	**Slug Test Analysis Report** Project: Enbridge Lancaster Road Phase II Number: 210294 Client: Enbridge

Location: Ottawa ON	Slug Test: Slug Test	Test Well: MW6-21
Test Conducted by: Greg McKay		Test Date: 2021-01-21
Analysis Performed by: S Groulx	MW6-21 -Slug Test	Analysis Date: 2021-02-01
Aquifer Thickness: 2.03 m		



Calculation using Hvorslev

Observation Well	Hydraulic Conductivity [m/s]	
MW6-21	1.50×10^{-6}	

BluMetric Environmental Inc.
3108 Carp Road
Ottawa,ON
K0A 1L0

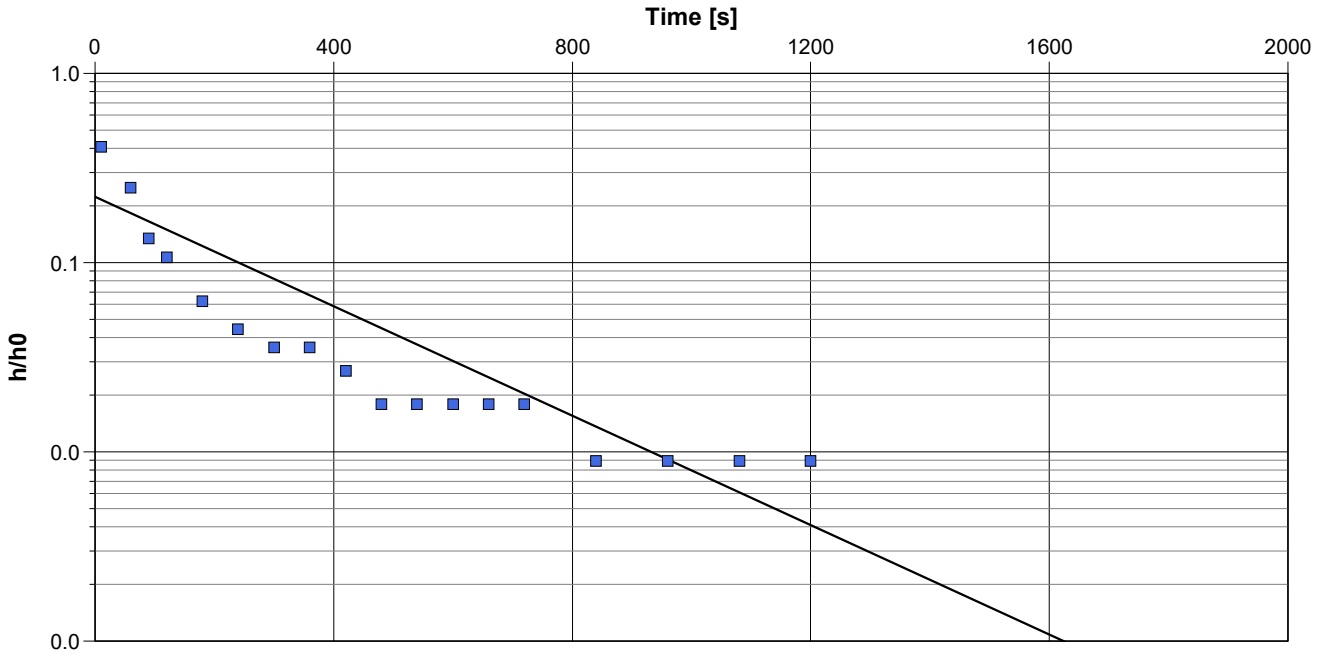
Slug Test Analysis Report

Project: Enbridge Lancaster Road Phase II

Number: 210294

Client: Enbridge

Location: Ottawa ON	Slug Test: Slug Test	Test Well: MW6-21
Test Conducted by: Greg McKay		Test Date: 2021-01-21
Analysis Performed by: S Groulx	MW6-21 Slug Test	Analysis Date: 2021-02-27
Aquifer Thickness: 2.03 m		



Calculation using Bouwer & Rice

Observation Well	Hydraulic Conductivity [m/s]	
MW6-21	1.30×10^{-6}	

BluMetric Environmental Inc.
3108 Carp Road
Ottawa,ON
K0A 1L0

Slug Test - Analyses Report

Project: Enbridge Lancaster Road Phase II

Number: 210294

Client: Enbridge

Location: Ottawa ON	Slug Test: Slug Test	Test Well: MW6-21
Test Conducted by: Greg McKay		Test Date: 2021-01-21
Aquifer Thickness: 2.03 m		

	Analysis Name	Analysis Performed by	Analysis Date	Method name	Well	T [m²/s]	K [m/s]	S
1	MW6-21 -Slug Test	S Groulx	2021-02-01	Hvorslev	MW6-21		1.50×10^{-6}	
2	MW6-21 Slug Test	S Groulx	2021-02-27	Bouwer & Rice	MW6-21		1.30×10^{-6}	

10.3 PHOTO LOG

The following provides photographs of the various investigation locations.

Photo 1: Entrance into Rail Corridor North of Arena - April 6-2021

Photo 2: Borehole Sampling at BH3 - April 7-2021

Photo 3: Asphalt near BH3 - April 7-2021

Photo 4: Spoon BH1 S2 - Asphalt Layer 0.8 to 0.9 m Depth - April 7-2021

Photo 5: Debris From Snow Dumping Near BH1 - April 7-2021

Photo 6: Asphalt Debris on ground near BH1 - April 7-2021

Photo 7: Snow Pile Debris Near BH1 - April 7-2021

Photo 8: Looking Southeast From BH1 - Former Rail Alignment -April 7-2021

10.4 CERTIFICATES OF ANALYSES

The following laboratory reports from Eurofins are provided at the end of this appendix:

- Certificate of Analysis for Eurofins Report #: 1950643. Report dated April 9, 2021, which contains the results for O. Reg. 153 Metals, General Inorganics, PAHs, VOCs and PHCs analysis for 6 soil samples collected on April 6 and April 7, 2021; and,

- Certificate of Analysis for Eurofins Report #: 1950801. Report dated April 9, 2021, which contains the results for O. Reg. 153 Metals, General Inorganics, PAHs, VOCs and PHCs analysis for 5 soil samples collected on April 7, 2021; and,

- Certificate of Analysis for Eurofins Report #: 1950700. Report dated April 9, 2021, which contains the results for O. Reg. 153 Metals, General Inorganics, PAHs, VOCs and PHCs analysis for 8 soil samples collected on April 7, 2021; and,

- Certificate of Analysis for Eurofins Report #: 1950647. Report dated April 8, 2021, which contains the results for O. Reg. 153 Metals, General Inorganics, PAHs, VOCs and PHCs analysis for 3 groundwater samples collected on April 6, 2021; and,

- Certificate of Analysis for Eurofins Report #: 1950698. Report dated April 9, 2021 which contains the results for O. Reg. 153 Metals, General Inorganics, PAHs, VOCs and PHCs analysis for 2 groundwater samples collected on April 7, 2021.

Certificate of Analysis

eurofins | Environment Testing

Client: Blumetric Environmental Inc.-Carp
1682 Woodward Drive
Carp, ON
K2C 3R8
Attention: Mr. Rob Hillier
Invoice to: Blumetric Environmental Inc.
PO#:

Report Number: 1950643
Date Submitted: 2021-04-06
Date Reported: 2021-04-09
Project: 210294
COC #: 213049
Temperature (C): 10
Custody Seal:

Dear Rob Hillier:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Sample Comment Summary

Sample ID: 1549906 MW5-21 S4 Metals spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte.

Report Comments:

Revision1: This is the amendment and supersede the report dated April 08,2021. sample ID was amended.

Charlie Long Qu 2021.04.09 13:25:16 -04'00'

Long Qu, Organics Supervisor

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated
.
Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accrteditation. The scope is available at http://www.cala.ca/scopes/2602.pdf

Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Client: Blumetric Environmental Inc.-Carp
1682 Woodward Drive
Carp, ON
K2C 3R8
Attention: Mr. Rob Hillier
PO#:
Invoice to: Blumetric Environmental Inc.

Report Number: 1950643
Date Submitted: 2021-04-06
Date Reported: 2021-04-09
Project: 210294
COC #: 213049

O.Reg 153-T3-Ind/Com-Med/Fine

Exceedence Summary

Sample I.D.	Analyte	Result	Units	Criteria
Inorganics				
DUP2	Electrical Conductivity	1.50	mS/cm	STD 1.4
MW6-21 S2	Electrical Conductivity	3.44	mS/cm	STD 1.4
MW6-21 S2	Sodium Adsorption Ratio	56.2		STD 12
MW6-21 S5	Electrical Conductivity	1.58	mS/cm	STD 1.4
MW6-21 S5	Sodium Adsorption Ratio	37.5		STD 12

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Client: Blumetric Environmental Inc.-Carp
1682 Woodward Drive
Carp, ON
K2C 3R8
Attention: Mr. Rob Hillier
PO#:
Invoice to: Blumetric Environmental Inc.

Report Number: 1950643
Date Submitted: 2021-04-06
Date Reported: 2021-04-09
Project: 210294
COC #: 213049

Guideline = O.Reg 153-T3-Ind/Com-Med/Fine

Hydrocarbons

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.				
					1549906 Soil153 2021-04-06 MW5-21 S4	1549907 Soil153 2021-04-06 MW5-21 S7	1549908 Soil153 2021-04-06 MW6-21 S2	1549909 Soil153 2021-04-06 MW6-21 S5	1549910 Soil153 2021-04-06 DUP3
PHC's F1	398390	10	ug/g	STD 65	<10	<10	<10	<10	<10
PHC's F1-BTEX	398395	10	ug/g		<10	<10	<10	<10	<10
PHC's F2	398438	10	ug/g	STD 250	<10	20	<10	<10	<10
PHC's F2-Napth	398461	10	ug/g		<10	20	<10	<10	<10
PHC's F3	398438	20	ug/g	STD 2500	<20	<20	<20	<20	<20
PHC's F3-PAH	398462	20	ug/g		<20	<20	<20	<20	<20
PHC's F4	398438	20	ug/g	STD 6600	<20	<20	<20	<20	<20

Hydrocarbons

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.
					1549911 Soil153 2021-04-06 DUP2
PHC's F1	398390	10	ug/g	STD 65	<10
PHC's F1-BTEX	398395	10	ug/g		<10
PHC's F2	398438	10	ug/g	STD 250	<10
PHC's F2-Napth	398461	10	ug/g		<10
PHC's F3	398438	20	ug/g	STD 2500	<20
PHC's F3-PAH	398462	20	ug/g		<20
PHC's F4	398438	20	ug/g	STD 6600	<20

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Certificate of Analysis

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Metals

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1549906	1549907	1549908	1549909	1549910
Sample Matrix					Soil153	Soil153	Soil153	Soil153	Soil153
Sample Type									
Sample Date					2021-04-06	2021-04-06	2021-04-06	2021-04-06	2021-04-06
Sampling Time									
Sample I.D.					MW5-21 S4	MW5-21 S7	MW6-21 S2	MW6-21 S5	DUP3
Antimony	398360	1	ug/g	STD 50	<1	<1	<1	<1	<1
Arsenic	398360	1	ug/g	STD 18	2	5	2	2	2
Barium	398360	1	ug/g	STD 670	246	135	282	214	252
Beryllium	398360	1	ug/g	STD 10	<1	<1	<1	<1	<1
Boron (Hot Water Soluble)	398445	0.5	ug/g	STD 2	<0.5	0.5	<0.5	<0.5	<0.5
Boron (total)	398360	5	ug/g	STD 120	5	7	5	<5	5
Cadmium	398360	0.4	ug/g	STD 1.9	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium Total	398360	1	ug/g	STD 160	41	24	56	39	42
Chromium VI	398350	0.20	ug/g	STD 10	<0.20	<0.20	<0.20	<0.20	<0.20
Cobalt	398360	1	ug/g	STD 100	11	12	15	11	12
Copper	398360	1	ug/g	STD 300	32	35	43	30	31
Lead	398360	1	ug/g	STD 120	5	9	6	6	6
Mercury	398360	0.1	ug/g	STD 20	<0.1	<0.1	<0.1	<0.1	<0.1
Molybdenum	398360	1	ug/g	STD 40	<1	2	<1	<1	<1
Nickel	398360	1	ug/g	STD 340	24	30	33	25	25
Selenium	398360	1	ug/g	STD 5.5	<1	<1	<1	<1	<1
Silver	398360	0.2	ug/g	STD 50	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium	398360	1	ug/g	STD 3.3	<1	<1	<1	<1	<1
Uranium	398360	0.5	ug/g	STD 33	0.6	0.9	0.7	0.9	0.7
Vanadium	398360	2	ug/g	STD 86	60	27	79	53	58
Zinc	398360	2	ug/g	STD 340	58	54	83	54	58

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Metals

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1549911 Sample Matrix Soil153 Sample Type Sample Date 2021-04-06 Sampling Time Sample I.D. DUP2
Antimony	398360	1	ug/g	STD 50	<1
Arsenic	398360	1	ug/g	STD 18	2
Barium	398360	1	ug/g	STD 670	225
Beryllium	398360	1	ug/g	STD 10	<1
Boron (Hot Water Soluble)	398445	0.5	ug/g	STD 2	<0.5
Boron (total)	398360	5	ug/g	STD 120	<5
Cadmium	398360	0.4	ug/g	STD 1.9	<0.4
Chromium Total	398360	1	ug/g	STD 160	36
Chromium VI	398350	0.20	ug/g	STD 10	<0.20
Cobalt	398360	1	ug/g	STD 100	10
Copper	398360	1	ug/g	STD 300	35
Lead	398360	1	ug/g	STD 120	6
Mercury	398360	0.1	ug/g	STD 20	<0.1
Molybdenum	398360	1	ug/g	STD 40	<1
Nickel	398360	1	ug/g	STD 340	23
Selenium	398360	1	ug/g	STD 5.5	<1
Silver	398360	0.2	ug/g	STD 50	<0.2
Thallium	398360	1	ug/g	STD 3.3	<1
Uranium	398360	0.5	ug/g	STD 33	1.1
Vanadium	398360	2	ug/g	STD 86	54
Zinc	398360	2	ug/g	STD 340	52

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PAH

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.				
					1549906 Soil153 2021-04-06 MW5-21 S4	1549907 Soil153 2021-04-06 MW5-21 S7	1549908 Soil153 2021-04-06 MW6-21 S2	1549909 Soil153 2021-04-06 MW6-21 S5	1549910 Soil153 2021-04-06 DUP3
1+2-methylnaphthalene	398442	0.05	ug/g		<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	398421	0.05	ug/g	STD 96	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	398421	0.05	ug/g	STD 0.17	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	398421	0.05	ug/g	STD 0.74	<0.05	<0.05	<0.05	<0.05	<0.05
Benz[a]anthracene	398421	0.05	ug/g	STD 0.96	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[a]pyrene	398421	0.05	ug/g	STD 0.3	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[b]fluoranthene	398421	0.05	ug/g	STD 0.96	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[ghi]perylene	398421	0.05	ug/g	STD 9.6	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[k]fluoranthene	398421	0.05	ug/g	STD 0.96	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	398421	0.05	ug/g	STD 9.6	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz[a h]anthracene	398421	0.05	ug/g	STD 0.1	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	398421	0.05	ug/g	STD 9.6	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	398421	0.05	ug/g	STD 69	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno[1 2 3-cd]pyrene	398421	0.05	ug/g	STD 0.95	<0.05	<0.05	<0.05	<0.05	<0.05
Methlynaphthalene, 1-	398421	0.05	ug/g	STD 85	<0.05	<0.05	<0.05	<0.05	<0.05
Methlynaphthalene, 2-	398421	0.05	ug/g	STD 85	<0.05	<0.05	<0.05	<0.05	<0.05
Naphthalene	398421	0.05	ug/g	STD 28	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	398421	0.05	ug/g	STD 16	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	398421	0.05	ug/g	STD 96	<0.05	<0.05	<0.05	<0.05	<0.05

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PAH

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1549911 Sample Matrix Soil153 Sample Type Sample Date 2021-04-06 Sampling Time Sample I.D. DUP2
1+2-methylnaphthalene	398442	0.05	ug/g		<0.05
Acenaphthene	398421	0.05	ug/g	STD 96	<0.05
Acenaphthylene	398421	0.05	ug/g	STD 0.17	<0.05
Anthracene	398421	0.05	ug/g	STD 0.74	<0.05
Benz[a]anthracene	398421	0.05	ug/g	STD 0.96	<0.05
Benzo[a]pyrene	398421	0.05	ug/g	STD 0.3	<0.05
Benzo[b]fluoranthene	398421	0.05	ug/g	STD 0.96	<0.05
Benzo[ghi]perylene	398421	0.05	ug/g	STD 9.6	<0.05
Benzo[k]fluoranthene	398421	0.05	ug/g	STD 0.96	<0.05
Chrysene	398421	0.05	ug/g	STD 9.6	<0.05
Dibenz[a h]anthracene	398421	0.05	ug/g	STD 0.1	<0.05
Fluoranthene	398421	0.05	ug/g	STD 9.6	<0.05
Fluorene	398421	0.05	ug/g	STD 69	<0.05
Indeno[1 2 3-cd]pyrene	398421	0.05	ug/g	STD 0.95	<0.05
Methlynaphthalene, 1-	398421	0.05	ug/g	STD 85	<0.05
Methlynaphthalene, 2-	398421	0.05	ug/g	STD 85	<0.05
Naphthalene	398421	0.05	ug/g	STD 28	<0.05
Phenanthrene	398421	0.05	ug/g	STD 16	<0.05
Pyrene	398421	0.05	ug/g	STD 96	<0.05

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Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.				
					1549906 Soil153 2021-04-06 MW5-21 S4	1549907 Soil153 2021-04-06 MW5-21 S7	1549908 Soil153 2021-04-06 MW6-21 S2	1549909 Soil153 2021-04-06 MW6-21 S5	1549910 Soil153 2021-04-06 DUP3
Acetone	398387	0.50	ug/g	STD 28	<0.50	<0.50	<0.50	<0.50	<0.50
Benzene	398387	0.02	ug/g	STD 0.4	<0.02	<0.02	<0.02	<0.02	<0.02
Bromodichloromethane	398387	0.05	ug/g	STD 18	<0.05	<0.05	<0.05	<0.05	<0.05
Bromoform	398387	0.05	ug/g	STD 1.7	<0.05	<0.05	<0.05	<0.05	<0.05
Bromomethane	398387	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	398387	0.05	ug/g	STD 1.5	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorobenzene	398387	0.05	ug/g	STD 2.7	<0.05	<0.05	<0.05	<0.05	<0.05
Chloroform	398387	0.05	ug/g	STD 0.18	<0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	398387	0.05	ug/g	STD 13	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,2-	398387	0.05	ug/g	STD 8.5	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,3-	398387	0.05	ug/g	STD 12	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,4-	398387	0.05	ug/g	STD 0.84	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorodifluoromethane	398387	0.05	ug/g	STD 25	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethane, 1,1-	398387	0.05	ug/g	STD 21	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethane, 1,2-	398387	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethylene, 1,1-	398387	0.05	ug/g	STD 0.48	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethylene, 1,2-cis-	398387	0.05	ug/g	STD 37	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethylene, 1,2-trans-	398387	0.05	ug/g	STD 9.3	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloropropane, 1,2-	398387	0.05	ug/g	STD 0.68	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloropropene,1,3-	398387	0.05	ug/g	STD 0.21	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloropropene,1,3-cis-	398387	0.05	ug/g		<0.05	<0.05	<0.05	<0.05	<0.05
Dichloropropene,1,3-trans-	398387	0.05	ug/g		<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	398387	0.05	ug/g	STD 19	<0.05	<0.05	<0.05	<0.05	<0.05

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Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.				
					1549906 Soil153 2021-04-06 MW5-21 S4	1549907 Soil153 2021-04-06 MW5-21 S7	1549908 Soil153 2021-04-06 MW6-21 S2	1549909 Soil153 2021-04-06 MW6-21 S5	1549910 Soil153 2021-04-06 DUP3
Ethylene dibromide	398387	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Hexane (n)	398387	0.05	ug/g	STD 88	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl Ethyl Ketone	398387	0.50	ug/g	STD 88	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	398387	0.50	ug/g	STD 210	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl tert-Butyl Ether (MTBE)	398387	0.05	ug/g	STD 3.2	<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	398387	0.05	ug/g	STD 2	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	398387	0.05	ug/g	STD 43	<0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethane, 1,1,1,2-	398387	0.05	ug/g	STD 0.11	<0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethane, 1,1,2,2-	398387	0.05	ug/g	STD 0.094	<0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethylene	398387	0.05	ug/g	STD 21	<0.05	<0.05	<0.05	<0.05	<0.05
Toluene	398387	0.20	ug/g	STD 78	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethane, 1,1,1-	398387	0.05	ug/g	STD 12	<0.05	<0.05	<0.05	<0.05	<0.05
Trichloroethane, 1,1,2-	398387	0.05	ug/g	STD 0.11	<0.05	<0.05	<0.05	<0.05	<0.05
Trichloroethylene	398387	0.05	ug/g	STD 0.61	<0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	398387	0.05	ug/g	STD 5.8	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	398387	0.02	ug/g	STD 0.25	<0.02	<0.02	<0.02	<0.02	<0.02
Xylene Mixture	398394	0.05	ug/g	STD 30	<0.05	<0.05	<0.05	<0.05	<0.05
Xylene, m/p-	398387	0.05	ug/g		<0.05	<0.05	<0.05	<0.05	<0.05
Xylene, o-	398387	0.05	ug/g		<0.05	<0.05	<0.05	<0.05	<0.05

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Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1549911 Sample Matrix Soil153 Sample Type Sample Date 2021-04-06 Sampling Time Sample I.D. DUP2
Acetone	398387	0.50	ug/g	STD 28	<0.50
Benzene	398387	0.02	ug/g	STD 0.4	<0.02
Bromodichloromethane	398387	0.05	ug/g	STD 18	<0.05
Bromoform	398387	0.05	ug/g	STD 1.7	<0.05
Bromomethane	398387	0.05	ug/g	STD 0.05	<0.05
Carbon Tetrachloride	398387	0.05	ug/g	STD 1.5	<0.05
Chlorobenzene	398387	0.05	ug/g	STD 2.7	<0.05
Chloroform	398387	0.05	ug/g	STD 0.18	<0.05
Dibromochloromethane	398387	0.05	ug/g	STD 13	<0.05
Dichlorobenzene, 1,2-	398387	0.05	ug/g	STD 8.5	<0.05
Dichlorobenzene, 1,3-	398387	0.05	ug/g	STD 12	<0.05
Dichlorobenzene, 1,4-	398387	0.05	ug/g	STD 0.84	<0.05
Dichlorodifluoromethane	398387	0.05	ug/g	STD 25	<0.05
Dichloroethane, 1,1-	398387	0.05	ug/g	STD 21	<0.05
Dichloroethane, 1,2-	398387	0.05	ug/g	STD 0.05	<0.05
Dichloroethylene, 1,1-	398387	0.05	ug/g	STD 0.48	<0.05
Dichloroethylene, 1,2-cis-	398387	0.05	ug/g	STD 37	<0.05
Dichloroethylene, 1,2-trans-	398387	0.05	ug/g	STD 9.3	<0.05
Dichloropropane, 1,2-	398387	0.05	ug/g	STD 0.68	<0.05
Dichloropropene,1,3-	398387	0.05	ug/g	STD 0.21	<0.05
Dichloropropene,1,3-cis-	398387	0.05	ug/g		<0.05
Dichloropropene,1,3-trans-	398387	0.05	ug/g		<0.05
Ethylbenzene	398387	0.05	ug/g	STD 19	<0.05

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Client: Blumetric Environmental Inc.-Carp
1682 Woodward Drive
Carp, ON
K2C 3R8
Attention: Mr. Rob Hillier
PO#:
Invoice to: Blumetric Environmental Inc.

Report Number: 1950643
Date Submitted: 2021-04-06
Date Reported: 2021-04-09
Project: 210294
COC #: 213049

Guideline = O.Reg 153-T3-Ind/Com-Med/Fine

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1549911 Sample Matrix Soil153 Sample Type Sample Date 2021-04-06 Sampling Time Sample I.D. DUP2
Ethylene dibromide	398387	0.05	ug/g	STD 0.05	<0.05
Hexane (n)	398387	0.05	ug/g	STD 88	<0.05
Methyl Ethyl Ketone	398387	0.50	ug/g	STD 88	<0.50
Methyl Isobutyl Ketone	398387	0.50	ug/g	STD 210	<0.50
Methyl tert-Butyl Ether (MTBE)	398387	0.05	ug/g	STD 3.2	<0.05
Methylene Chloride	398387	0.05	ug/g	STD 2	<0.05
Styrene	398387	0.05	ug/g	STD 43	<0.05
Tetrachloroethane, 1,1,1,2-	398387	0.05	ug/g	STD 0.11	<0.05
Tetrachloroethane, 1,1,2,2-	398387	0.05	ug/g	STD 0.094	<0.05
Tetrachloroethylene	398387	0.05	ug/g	STD 21	<0.05
Toluene	398387	0.20	ug/g	STD 78	<0.20
Trichloroethane, 1,1,1-	398387	0.05	ug/g	STD 12	<0.05
Trichloroethane, 1,1,2-	398387	0.05	ug/g	STD 0.11	<0.05
Trichloroethylene	398387	0.05	ug/g	STD 0.61	<0.05
Trichlorofluoromethane	398387	0.05	ug/g	STD 5.8	<0.05
Vinyl Chloride	398387	0.02	ug/g	STD 0.25	<0.02
Xylene Mixture	398394	0.05	ug/g	STD 30	<0.05
Xylene, m/p-	398387	0.05	ug/g		<0.05
Xylene, o-	398387	0.05	ug/g		<0.05

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Certificate of Analysis

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Inorganics

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.				
					1549906 Soil153 2021-04-06 MW5-21 S4	1549907 Soil153 2021-04-06 MW5-21 S7	1549908 Soil153 2021-04-06 MW6-21 S2	1549909 Soil153 2021-04-06 MW6-21 S5	1549910 Soil153 2021-04-06 DUP3
Cyanide (CN-)	398425	0.005	ug/g	STD 0.051	<0.005	<0.005	<0.005	<0.005	<0.005
Electrical Conductivity	398331	0.05	mS/cm	STD 1.4	0.44	0.37	3.44*	1.58*	0.61
pH - CaCl2	398409	2.00			7.78	7.97	7.66	7.82	7.71
Sodium Adsorption Ratio	398339	0.01		STD 12	1.69	1.83	56.2*	37.5*	4.04

Inorganics

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.
					1549911 Soil153 2021-04-06 DUP2
Cyanide (CN-)	398425	0.005	ug/g	STD 0.051	<0.005
Electrical Conductivity	398331	0.05	mS/cm	STD 1.4	1.50*
pH - CaCl2	398409	2.00			7.87
Sodium Adsorption Ratio	398339	0.01		STD 12	8.73

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Moisture

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.				
					1549906 Soil153 2021-04-06 MW5-21 S4	1549907 Soil153 2021-04-06 MW5-21 S7	1549908 Soil153 2021-04-06 MW6-21 S2	1549909 Soil153 2021-04-06 MW6-21 S5	1549910 Soil153 2021-04-06 DUP3
Moisture-Humidite	398438	0.1	%		27.2	9.2	23.5	23.3	21.6

Moisture

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.
					1549911 Soil153 2021-04-06 DUP2
Moisture-Humidite	398438	0.1	%		25.2

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PHC Surrogate

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.				
					1549906 Soil153 2021-04-06 MW5-21 S4	1549907 Soil153 2021-04-06 MW5-21 S7	1549908 Soil153 2021-04-06 MW6-21 S2	1549909 Soil153 2021-04-06 MW6-21 S5	1549910 Soil153 2021-04-06 DUP3
Alpha-androstrane	398438	0	%		71	87	73	64	70

PHC Surrogate

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.
					1549911 Soil153 2021-04-06 DUP2
Alpha-androstrane	398438	0	%		72

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VOCs Surrogates

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.				
					1549906 Soil153 2021-04-06 MW5-21 S4	1549907 Soil153 2021-04-06 MW5-21 S7	1549908 Soil153 2021-04-06 MW6-21 S2	1549909 Soil153 2021-04-06 MW6-21 S5	1549910 Soil153 2021-04-06 DUP3
1,2-dichloroethane-d4	398387	0	%		107	105	102	111	107
4-bromofluorobenzene	398387	0	%		113	115	113	115	117
Toluene-d8	398387	0	%		107	107	107	107	110

VOCs Surrogates

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.
					1549911 Soil153 2021-04-06 DUP2
1,2-dichloroethane-d4	398387	0	%		101
4-bromofluorobenzene	398387	0	%		120
Toluene-d8	398387	0	%		108

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Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
398331	Electrical Conductivity	<0.05	97	90-110			3	0-10
398339	Sodium Adsorption Ratio	<0.01					9	
398350	Chromium VI	<0.20 ug/g	101	80-120	86	70-130	0	0-35
398360	Silver	<0.2 ug/g	119	70-130	110	70-130	0	0-20
398360	Arsenic	<1 ug/g	105	70-130	98	70-130	0	0-20
398360	Boron (total)	<5 ug/g	110	70-130	118	70-130	0	0-20
398360	Barium	<1 ug/g	117	70-130	136	70-130	3	0-20
398360	Beryllium	<1 ug/g	111	70-130	97	70-130	0	0-20
398360	Cadmium	<0.4 ug/g	112	70-130	101	70-130	0	0-20
398360	Cobalt	<1 ug/g	118	70-130	100	70-130	1	0-20
398360	Chromium Total	<1 ug/g	120	70-130	117	70-130	5	0-20
398360	Copper	<1 ug/g	127	70-130	84	70-130	0	0-20
398360	Mercury	<0.1 ug/g	100	70-130	94	70-130	0	0-20
398360	Molybdenum	<1 ug/g	115	70-130	104	70-130	0	0-20
398360	Nickel	<1 ug/g	120	70-130	101	70-130	1	0-20
398360	Lead	<1 ug/g	116	70-130	103	70-130	1	0-20
398360	Antimony	<1 ug/g	97	70-130	106	70-130	0	0-20
398360	Selenium	<1 ug/g	115	70-130	103	70-130	0	0-20
398360	Thallium	<1 ug/g	114	70-130	99	70-130	0	0-20
398360	Uranium	<0.5 ug/g	110	70-130	101	70-130	0	0-20
398360	Vanadium	<2 ug/g	117	70-130	129	70-130	3	0-20
398360	Zinc	<2 ug/g	112	70-130	92	70-130	0	0-20
398387	Tetrachloroethane, 1,1,1,2-	<0.05 ug/g	99	60-130	96	50-140	0	0-50
398387	Trichloroethane, 1,1,1-	<0.05 ug/g	87	60-130	100	50-140	0	0-50
398387	Tetrachloroethane, 1,1,2,2-	<0.05 ug/g	88	60-130	92	50-140	0	0-30
398387	Trichloroethane, 1,1,2-	<0.05 ug/g	107	60-130	103	50-140	0	0-50
398387	Dichloroethane, 1,1-	<0.05 ug/g	94	60-130	107	50-140	0	0-50
398387	Dichloroethylene, 1,1-	<0.05 ug/g	83	60-130	110	50-140	0	0-50
398387	Dichlorobenzene, 1,2-	787 ug/g	98	60-130	94	50-140	0	0-50
398387	Dichloroethane, 1,2-	<0.05 ug/g	88	60-130	113	50-140	0	0-50
398387	Dichloropropane, 1,2-	6840 ug/g	100	60-130	101	50-140	0	0-50
398387	Dichlorobenzene, 1,3-	<0.05 ug/g	81	60-130	76	50-140	0	0-50
398387	Dichloropropene,1,3-							

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Client: Blumetric Environmental Inc.-Carp
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Carp, ON
K2C 3R8
Attention: Mr. Rob Hillier
PO#:
Invoice to: Blumetric Environmental Inc.

Report Number: 1950643
Date Submitted: 2021-04-06
Date Reported: 2021-04-09
Project: 210294
COC #: 213049

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
398387	Dichlorobenzene, 1,4-	<0.05 ug/g	98	60-130	92	50-140	0	0-50
398387	Acetone		94	60-130	119	50-140	0	0-50
398387	Benzene	<0.02 ug/g	85	60-130	106	50-140	0	0-50
398387	Bromodichloromethane	<0.05 ug/g	106	60-130	100	50-140	0	0-50
398387	Bromoform	<0.05 ug/g	100	60-130	102	50-140	0	0-50
398387	Bromomethane	<0.05 ug/g	80	60-130	100	50-140	0	0-50
398387	Dichloroethylene, 1,2-cis-	<0.05 ug/g	89	60-130	106	50-140	0	0-50
398387	Dichloropropene,1,3-cis-	<0.05 ug/g	108	60-130	91	50-140	0	0-50
398387	Carbon Tetrachloride	<0.05 ug/g	94	60-130	102	50-140	0	0-50
398387	Chloroform	<0.05 ug/g	84	60-130	104	50-140	0	0-50
398387	Dibromochloromethane	<0.05 ug/g	106	60-130	100	50-140	0	0-50
398387	Dichlorodifluoromethane	721 ug/g	90	60-130	75	50-140	0	0-50
398387	Methylene Chloride	<0.05 ug/g	83	60-130	109	50-140	0	0-50
398387	Ethylbenzene	<0.05 ug/g	85	60-130	95	50-140	0	0-50
398387	Ethylene dibromide	<0.05 ug/g	101	60-130		50-140		0-50
398387	Hexane (n)		82	60-130	84	50-140	0	0-50
398387	Xylene, m/p-	<0.05 ug/g	90	60-130	86	50-140	0	0-50
398387	Methyl Ethyl Ketone		90	60-130	118	50-140	0	0-50
398387	Methyl Isobutyl Ketone		85	60-130	85	50-140	0	0-50
398387	Methyl tert-Butyl Ether (MTBE)		128	60-130	104	50-140	0	0-50
398387	Chlorobenzene	<0.05 ug/g	83	60-130	98	50-140	0	0-50
398387	Xylene, o-	<0.05 ug/g	90	60-130	103	50-140	0	0-50
398387	Styrene	<0.05 ug/g	103	60-130	96	50-140	0	0-50
398387	Dichloroethylene, 1,2-trans-	<0.05 ug/g	88	60-130	105	50-140	0	0-50
398387	Dichloropropene,1,3-trans-	<0.05 ug/g	103	60-130	98	50-140	0	0-50
398387	Tetrachloroethylene	<0.05 ug/g	107	60-130	93	50-140	0	0-50
398387	Toluene	<0.20 ug/g	92	60-130	107	50-140	0	0-50
398387	Trichloroethylene	<0.05 ug/g	101	60-130	99	50-140	0	0-50
398387	Trichlorofluoromethane	<0.05 ug/g	83	60-130	80	50-140	0	0-50
398387	Vinyl Chloride	<0.02 ug/g	80	60-130	117	50-140	0	0-50
398390	PHC's F1	<10 ug/g	85	80-120	100	60-140	0	0-30
398394	Xylene Mixture							
398395	PHC's F1-BTEX							

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K2C 3R8
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COC #: 213049

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
398409	pH - CaCl2	4.98	99	90-110			0	
398421	Methlynaphthalene, 1-	<0.05 ug/g	82	50-140	68	50-140	0	0-40
398421	Methlynaphthalene, 2-	<0.05 ug/g	78	50-140	61	50-140	0	0-40
398421	Acenaphthene	<0.05 ug/g	78	50-140	63	50-140	0	0-40
398421	Acenaphthylene	<0.05 ug/g	77	50-140	60	50-140	0	0-40
398421	Anthracene	<0.05 ug/g	82	50-140	65	50-140	0	0-40
398421	Benz[a]anthracene	<0.05 ug/g	81	50-140	68	50-140	0	0-40
398421	Benzo[a]pyrene	<0.05 ug/g	68	50-140	55	50-140	0	0-40
398421	Benzo[b]fluoranthene	<0.05 ug/g	90	50-140	81	50-140	0	0-40
398421	Benzo[ghi]perylene	<0.05 ug/g	86	50-140	61	50-140	0	0-40
398421	Benzo[k]fluoranthene	<0.05 ug/g	94	50-140	81		0	0-40
398421	Chrysene	<0.05 ug/g	83	50-140	74	50-140	0	0-40
398421	Dibenz[a h]anthracene	<0.05 ug/g	87	50-140	61	50-140	0	0-40
398421	Fluoranthene	<0.05 ug/g	86	50-140	74	50-140	0	0-40
398421	Fluorene	<0.05 ug/g	82	50-140	62	50-140	0	0-40
398421	Indeno[1 2 3-cd]pyrene	<0.05 ug/g	115	50-140	62	50-140	0	0-40
398421	Naphthalene	<0.05 ug/g	73	50-140	60	50-140	0	0-40
398421	Phenanthrene	<0.05 ug/g	84	50-140	71	50-140	0	0-40
398421	Pyrene	<0.05 ug/g	85	50-140	74	50-140	0	0-40
398425	Cyanide (CN-)	<0.005 ug/g	103	75-125	103	70-130	0	0-20
398438	PHC's F2	<10 ug/g	84	80-120	100	60-140	0	0-30
398438	PHC's F3	<20 ug/g	84	80-120	100	60-140	0	0-30
398438	PHC's F4	<20 ug/g	84	80-120	100	60-140	0	0-30
398438	Moisture-Humidite		100	80-120			0	
398442	1+2-methylnaphthalene							
398445	Boron (Hot Water Soluble)	<0.5 ug/g	92	70-130	106	75-125	0	0-30
398461	PHC's F2-Napth							
398462	PHC's F3-PAH							

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Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
398331	Electrical Conductivity	Electrical Conductivity Mete	2021-04-07	2021-04-07	Z_S	Cond-Soil
398339	Sodium Adsorption Ratio	iCAP OES	2021-04-07	2021-04-07	Z_S	Ag Soil
398350	Chromium VI	FAA	2021-04-07	2021-04-07	Z_S	M US EPA 3060A
398360	Silver	ICAPQ-MS	2021-04-07	2021-04-07	SKH	EPA 200.8
398360	Arsenic	ICAPQ-MS	2021-04-07	2021-04-07	SKH	EPA 200.8
398360	Boron (total)	ICAPQ-MS	2021-04-07	2021-04-07	SKH	EPA 200.8
398360	Barium	ICAPQ-MS	2021-04-07	2021-04-07	SKH	EPA 200.8
398360	Beryllium	ICAPQ-MS	2021-04-07	2021-04-07	SKH	EPA 200.8
398360	Cadmium	ICAPQ-MS	2021-04-07	2021-04-07	SKH	EPA 200.8
398360	Cobalt	ICAPQ-MS	2021-04-07	2021-04-07	SKH	EPA 200.8
398360	Chromium Total	ICAPQ-MS	2021-04-07	2021-04-07	SKH	EPA 200.8
398360	Copper	ICAPQ-MS	2021-04-07	2021-04-07	SKH	EPA 200.8
398360	Mercury	ICAPQ-MS	2021-04-07	2021-04-07	SKH	EPA 200.8
398360	Molybdenum	ICAPQ-MS	2021-04-07	2021-04-07	SKH	EPA 200.8
398360	Nickel	ICAPQ-MS	2021-04-07	2021-04-07	SKH	EPA 200.8
398360	Lead	ICAPQ-MS	2021-04-07	2021-04-07	SKH	EPA 200.8
398360	Antimony	ICAPQ-MS	2021-04-07	2021-04-07	SKH	EPA 200.8
398360	Selenium	ICAPQ-MS	2021-04-07	2021-04-07	SKH	EPA 200.8
398360	Thallium	ICAPQ-MS	2021-04-07	2021-04-07	SKH	EPA 200.8
398360	Uranium	ICAPQ-MS	2021-04-07	2021-04-07	SKH	EPA 200.8
398360	Vanadium	ICAPQ-MS	2021-04-07	2021-04-07	SKH	EPA 200.8
398360	Zinc	ICAPQ-MS	2021-04-07	2021-04-07	SKH	EPA 200.8
398387	Tetrachloroethane, 1,1,1,2-	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Trichloroethane, 1,1,1-	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Tetrachloroethane, 1,1,2,2-	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Trichloroethane, 1,1,2-	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Dichloroethane, 1,1-	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Dichloroethylene, 1,1-	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Dichlorobenzene, 1,2-	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Dichloroethane, 1,2-	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Dichloropropane, 1,2-	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Dichlorobenzene, 1,3-	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Dichloropropene,1,3-	GC-MS	2021-04-06	2021-04-07	YH	V 8260B

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Certificate of Analysis

Client: Blumetric Environmental Inc.-Carp
1682 Woodward Drive
Carp, ON
K2C 3R8
Attention: Mr. Rob Hillier
PO#:
Invoice to: Blumetric Environmental Inc.

Report Number: 1950643
Date Submitted: 2021-04-06
Date Reported: 2021-04-09
Project: 210294
COC #: 213049

Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
398387	Dichlorobenzene, 1,4-	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Acetone	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Benzene	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Bromodichloromethane	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Bromoform	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Bromomethane	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Dichloroethylene, 1,2-cis-	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Dichloropropene,1,3-cis-	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Carbon Tetrachloride	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Chloroform	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Dibromochloromethane	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Dichlorodifluoromethane	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Methylene Chloride	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Ethylbenzene	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Ethylene dibromide	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Hexane (n)	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Xylene, m/p-	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Methyl Ethyl Ketone	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Methyl Isobutyl Ketone	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Methyl tert-Butyl Ether (MTBE)	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Chlorobenzene	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Xylene, o-	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Styrene	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Dichloroethylene, 1,2-trans-	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Dichloropropene,1,3-trans-	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Tetrachloroethylene	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Toluene	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Trichloroethylene	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Trichlorofluoromethane	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398387	Vinyl Chloride	GC-MS	2021-04-06	2021-04-08	YH	V 8260B
398390	PHC's F1	GC/FID	2021-04-06	2021-04-08	YH	CCME
398394	Xylene Mixture	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398395	PHC's F1-BTEX	GC/FID	2021-04-08	2021-04-08	YH	CCME

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Certificate of Analysis

Client: Blumetric Environmental Inc.-Carp
1682 Woodward Drive
Carp, ON
K2C 3R8
Attention: Mr. Rob Hillier
PO#:
Invoice to: Blumetric Environmental Inc.

Report Number: 1950643
Date Submitted: 2021-04-06
Date Reported: 2021-04-09
Project: 210294
COC #: 213049

Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
398409	pH - CaCl2	pH Meter	2021-04-08	2021-04-08	R_R	Ag Soil
398421	Methlynaphthalene, 1-	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Methlynaphthalene, 2-	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Acenaphthene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Acenaphthylene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Anthracene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Benz[a]anthracene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Benzo[a]pyrene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Benzo[b]fluoranthene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Benzo[ghi]perylene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Benzo[k]fluoranthene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Chrysene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Dibenz[a h]anthracene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Fluoranthene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Fluorene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Indeno[1 2 3-cd]pyrene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Naphthalene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Phenanthrene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Pyrene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398425	Cyanide (CN-)	Skalar CN Analyzer	2021-04-08	2021-04-08	Z_S	MOECC E3015
398438	PHC's F2	GC/FID	2021-04-07	2021-04-08	N_C	CCME
398438	PHC's F3	GC/FID	2021-04-07	2021-04-08	N_C	CCME
398438	PHC's F4	GC/FID	2021-04-07	2021-04-08	N_C	CCME
398438	Moisture-Humidite	Oven	2021-04-07	2021-04-08	N_C	ASTM 2216
398442	1+2-methylnaphthalene	GC-MS	2021-04-08	2021-04-08	C_M	P 8270
398445	Boron (Hot Water Soluble)	iCAP OES	2021-04-08	2021-04-08	Z_S	MOECC E3470
398461	PHC's F2-Napth	GC/FID	2021-04-08	2021-04-08	N_C	CCME
398462	PHC's F3-PAH	GC/FID	2021-04-08	2021-04-08	N_C	CCME

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Carp, ON
K2C 3R8
Attention: Mr. Rob Hillier
PO#:
Invoice to: Blumetric Environmental Inc.

Report Number: 1950643
Date Submitted: 2021-04-06
Date Reported: 2021-04-09
Project: 210294
COC #: 213049

Petroleum Hydrocarbons - CCME Checklist

Samples were analysed by Eurofins Ottawa Method AMCCME2, "Petroleum Hydrocarbons in Water and Soil, CCME/TPH", "Petroleum Hydrocarbons in Water and Soil, CCME/TPH". These methods comply with the reference method for the CCME CWS PHC and are validated for use in the laboratory. Eurofins Ottawa is accredited by CALA (ISO 17025) for all CCME F1-F4 fractions as listed in this report. Data for QC samples (blank, duplicate, spike) are available on request

Holding/Analysis Times	Yes/No	If NO, then reasons
All fractions analyzed within recommended hold times/analysis times?	Yes	
F1		
nC6 and nC10 response factors within 30% of toluene	Yes	
BTEX was subtracted from F1 fraction	Yes	
If YES, was F1-BTEX (C6-C10) reported	Yes	
F2		
nC10, nC16 and nC34 response factors within 10% of their average (F2-F4)	Yes	
Linearity within 15% (F2-F4)	Yes	
Napthalene was subtracted from F2 fraction		
If YES was F2-Napthalene reported		
F3		
PAH (selected compounds) subtracted from F3 fraction		
If YES was F3-PAH reported		
F4		
C50 response factor within 70% of nC10+nC16+nC34 average	Yes	
Chromatogram descended to baseline by retention time of C50	Yes	
if NO was F4 (C34-C50) gravimetric reported		

Note: Gravimetric heavy hydrocarbon results for soil samples is known to be highly variable. Where F4G results have been provided, the F4G result cannot be added to the gas chromatographic result.

eurofins 213049

STANDARD CHAIN-OF-CUSTODY

146 Colonnade Road, Unit #8, Ottawa, ON, K2E 7Y1 - Phone: 613-727-5692, Fax: 613-727-5222

Eurofins Workorder #: 1954643

CLIENT INFORMATION

Company: Blumetric Environmental
Contact: Rob Hillier
Address: 1662 Woodfield Dr. Ottawa, ON
Telephone: 613-296-2091 Cell:
Email: #1: rhillier@blumetric.ca
Email: #2:
Project: 210294 Quote #: 191032

INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES [X] NO [ ])

Company: Fax:
Contact: Accounts Payable Email: #1: ap@blumetric.ca
Address: Email: #2:
Telephone: PO #:

TURN-AROUND TIME (Business Days)

[ ] 1 Day* (100%) [X] 2 Day** (50%) [ ] 3-5 Days (25%) [ ] 5-7 Days (Standard)

Please contact Lab in advance to determine rush availability.
*For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%.
**For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.

REGULATION/GUIDELINE REQUIRED

[ ] Sanitary Sewer, City:
[ ] Storm Sewer, City:
[ ] ODWSOG
[ ] PWQO
[ ] O.Reg 347/558
[ ] Other:

[X] O. Reg 153 Table # 3 Coarse / Fine, Surface / subsurface. Type: Com-Ind / Res-Park / Agri / GW / All Other / Sediment
The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O.Reg. 153/04 [ ] Yes [ ] No

[ ] O.Reg 406 Excess Soils
[ ] TCLP [ ] SPLP
Table # _____ Full depth/ Strat/ Ceiling/ Leachate
Type: Com-Ind / Res-Park / Agri/All Other
Category: Surface / Subsurface

The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a $25 surcharge if required information is missing (required fields are shaded in grey).

Sample ID	Date/Time Collected	Sample Matrix	# of Containers	O.Reg.153 parameters: PHC F1 - F4	BTEX	VOCs	PAHs	PCBs	Metals + Inorganic	Metals only	RN# (Lab Use Only)
MW5-21 S4	6APR2021 AM	S	4	X		X	X		X		1549906
MW5-21 S7	AM	S	4	X		X	X		X		07
MW6-21 S2	PM	S	4	X		X	X		X		08
MW6-21 S5	PM	S	4	X		X	X		X		09
~~XXXXX~~ DUP3		S	4	X		X	X		X		10
DUP2		S	4	X		X	X		X		11

	PRINT	SIGN	DATE/TIME	TEMP (°C)
Sampled By:	L. JOHNSTON			
Relinquished By:	L. JOHNSTON		6APR 2021 4:40	
Received By:				

COMMENTS:

CUSTODY SEAL: [ ] YES [ ] NO Ice packs submitted: [ ] Yes [ ] No

401 Magnetic Drive, Unit #1, North York, ON, M3J 3H9 - Telephone: 416-661-5287 • 380 Vansickle Road, Unit #630, St. Catharines, ON, L2S 0B5 - Telephone: 905-680-8887 • 608 Norris Court, Kingston, ON, K7P 2R9 - Telephone: 613-634-9307

AFSTDCOC.6

Copies: White - Laboratory, Yellow - Sampler

Certificate of Analysis

eurofins | Environment Testing

Client: Blumetric Environmental Inc.-Carp
1682 Woodward Drive
Carp, ON
K2C 3R8
Attention: Mr. Rob Hillier
Invoice to: Blumetric Environmental Inc.
PO#:

Report Number: 1950801
Date Submitted: 2021-04-07
Date Reported: 2021-04-09
Project: 210294
COC #: 212444
Temperature (C): 13
Custody Seal:

Dear Rob Hillier:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Sample Comment Summary

Sample ID: 1550356 BH1 S1 Metals spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte.

Report Comments:

Charlie Long Qu 2021.04.09 11:51:24 -04'00'

Long Qu, Organics Supervisor

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated
.
Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accrteditation. The scope is available at http://www.cala.ca/scopes/2602.pdf

Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Certificate of Analysis

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1682 Woodward Drive
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Attention: Mr. Rob Hillier
PO#:
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Report Number: 1950801
Date Submitted: 2021-04-07
Date Reported: 2021-04-09
Project: 210294
COC #: 212444

Exceedence Summary

Sample I.D.	Analyte	Result	Units	Criteria

Results relate only to the parameters tested on the samples submitted.
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Client: Blumetric Environmental Inc.-Carp
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Attention: Mr. Rob Hillier
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Report Number: 1950801
Date Submitted: 2021-04-07
Date Reported: 2021-04-09
Project: 210294
COC #: 212444

Guideline = O.Reg 153-T3-Ind/Com-Med/Fine

Hydrocarbons

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.				
					1550356 Soil153 2021-04-07 BH1 S1	1550357 Soil153 2021-04-07 BH1 S2	1550358 Soil153 2021-04-07 BH2 S2	1550359 Soil153 2021-04-07 BH2 S4	1550360 Soil153 2021-04-07 BH3 S1
PHC's F1	398449	10	ug/g	STD 65	<10	<10	<10	<10	<10
PHC's F1-BTEX	398453	10	ug/g						<10
	398457	10	ug/g		<10	<10	<10	<10	
PHC's F2	398438	10	ug/g	STD 250	<10			<10	
PHC's F2-Napth	398494	10	ug/g		<10			<10	
PHC's F3	398438	20	ug/g	STD 2500	300			<20	
PHC's F3-PAH	398494	20	ug/g		300			<20	
PHC's F4	398438	20	ug/g	STD 6600	130			<20	
PHC's F4g	398438	100	ug/g	STD 6600	2000				

Metals

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.			
					1550356 Soil153 2021-04-07 BH1 S1	1550357 Soil153 2021-04-07 BH1 S2	1550359 Soil153 2021-04-07 BH2 S4	1550360 Soil153 2021-04-07 BH3 S1
Antimony	398419	1	ug/g	STD 50	<1	<1	<1	<1
Arsenic	398419	1	ug/g	STD 18	4	4	1	3
Barium	398419	1	ug/g	STD 670	137	100	260	91
Beryllium	398419	1	ug/g	STD 10	<1	<1	<1	<1
Boron (Hot Water Soluble)	398445	0.5	ug/g	STD 2	<0.5		<0.5	
Boron (total)	398419	5	ug/g	STD 120	<5	<5	<5	<5
Cadmium	398419	0.4	ug/g	STD 1.9	<0.4	<0.4	<0.4	<0.4
Chromium Total	398419	1	ug/g	STD 160	45	42	41	87
Chromium VI	398412	0.20	ug/g	STD 10	0.40		<0.20	
Cobalt	398419	1	ug/g	STD 100	10	8	12	7

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Project: 210294
COC #: 212444

Guideline = O.Reg 153-T3-Ind/Com-Med/Fine

Metals

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1550356	1550357	1550359	1550360
					Sample Matrix Soil153	Soil153	Soil153	Soil153
					Sample Type			
					Sample Date 2021-04-07	2021-04-07	2021-04-07	2021-04-07
					Sampling Time			
					Sample I.D. BH1 S1	BH1 S2	BH2 S4	BH3 S1
Copper	398419	1	ug/g	STD 300	39	21	38	19
Lead	398419	1	ug/g	STD 120	24	29	6	36
Mercury	398419	0.1	ug/g	STD 20	<0.1		<0.1	
Molybdenum	398419	1	ug/g	STD 40	2	2	<1	1
Nickel	398419	1	ug/g	STD 340	31	26	26	47
Selenium	398419	1	ug/g	STD 5.5	<1	<1	<1	<1
Silver	398419	0.2	ug/g	STD 50	<0.2	<0.2	<0.2	<0.2
Thallium	398419	1	ug/g	STD 3.3	<1	<1	<1	<1
Uranium	398419	0.5	ug/g	STD 33	0.7	0.8	0.8	<0.5
Vanadium	398419	2	ug/g	STD 86	35	34	58	28
Zinc	398419	2	ug/g	STD 340	78	44	64	74

PAH

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1550356	1550357	1550359	1550360
					Sample Matrix Soil153	Soil153	Soil153	Soil153
					Sample Type			
					Sample Date 2021-04-07	2021-04-07	2021-04-07	2021-04-07
					Sampling Time			
					Sample I.D. BH1 S1	BH1 S2	BH2 S4	BH3 S1
1+2-methylnaphthalene	398489	0.05	ug/g		<0.05	<0.05	<0.05	<0.05
Acenaphthene	398421	0.05	ug/g	STD 96	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	398421	0.05	ug/g	STD 0.17	<0.05	<0.05	<0.05	<0.05
Anthracene	398421	0.05	ug/g	STD 0.74	<0.05	<0.05	<0.05	<0.05
Benz[a]anthracene	398421	0.05	ug/g	STD 0.96	0.05	<0.05	<0.05	<0.05
Benzo[a]pyrene	398421	0.05	ug/g	STD 0.3	0.06	<0.05	<0.05	<0.05
Benzo[b]fluoranthene	398421	0.05	ug/g	STD 0.96	<0.05	<0.05	<0.05	<0.05
Benzo[ghi]perylene	398421	0.05	ug/g	STD 9.6	<0.05	<0.05	<0.05	<0.05

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Client: Blumetric Environmental Inc.-Carp
1682 Woodward Drive
Carp, ON
K2C 3R8
Attention: Mr. Rob Hillier
PO#:
Invoice to: Blumetric Environmental Inc.

Report Number: 1950801
Date Submitted: 2021-04-07
Date Reported: 2021-04-09
Project: 210294
COC #: 212444

Guideline = O.Reg 153-T3-Ind/Com-Med/Fine

PAH

Analyte	Batch No	MRL	Units	Guideline	1550356 Soil153 2021-04-07 BH1 S1	1550357 Soil153 2021-04-07 BH1 S2	1550359 Soil153 2021-04-07 BH2 S4	1550360 Soil153 2021-04-07 BH3 S1
Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.								
Benzo[k]fluoranthene	398421	0.05	ug/g	STD 0.96	0.11	<0.05	<0.05	<0.05
Chrysene	398421	0.05	ug/g	STD 9.6	0.08	<0.05	<0.05	<0.05
Dibenz[a h]anthracene	398421	0.05	ug/g	STD 0.1	<0.05	<0.05	<0.05	<0.05
Fluoranthene	398421	0.05	ug/g	STD 9.6	0.10	<0.05	<0.05	<0.05
Fluorene	398421	0.05	ug/g	STD 69	<0.05	<0.05	<0.05	<0.05
Indeno[1 2 3-cd]pyrene	398421	0.05	ug/g	STD 0.95	<0.05	<0.05	<0.05	<0.05
Methlynaphthalene, 1-	398421	0.05	ug/g	STD 85	<0.05	<0.05	<0.05	<0.05
Methlynaphthalene, 2-	398421	0.05	ug/g	STD 85	<0.05	<0.05	<0.05	<0.05
Naphthalene	398421	0.05	ug/g	STD 28	<0.05	<0.05	<0.05	<0.05
Phenanthrene	398421	0.05	ug/g	STD 16	<0.05	<0.05	<0.05	<0.05
Pyrene	398421	0.05	ug/g	STD 96	0.08	<0.05	<0.05	<0.05

Volatiles

Analyte	Batch No	MRL	Units	Guideline	1550356 Soil153 2021-04-07 BH1 S1	1550357 Soil153 2021-04-07 BH1 S2	1550358 Soil153 2021-04-07 BH2 S2	1550359 Soil153 2021-04-07 BH2 S4	1550360 Soil153 2021-04-07 BH3 S1
Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.									
Acetone	398447	0.50	ug/g	STD 28	<0.50	<0.50			<0.50
	398455	0.50	ug/g	STD 28			<0.50	<0.50	
Benzene	398447	0.02	ug/g	STD 0.4	<0.02	<0.02			<0.02
	398455	0.02	ug/g	STD 0.4			<0.02	<0.02	
Bromodichloromethane	398447	0.05	ug/g	STD 18	<0.05	<0.05			<0.05
	398455	0.05	ug/g	STD 18			<0.05	<0.05	
Bromoform	398447	0.05	ug/g	STD 1.7	<0.05	<0.05			<0.05
	398455	0.05	ug/g	STD 1.7			<0.05	<0.05	

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Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.				
					1550356 Soil153 2021-04-07 BH1 S1	1550357 Soil153 2021-04-07 BH1 S2	1550358 Soil153 2021-04-07 BH2 S2	1550359 Soil153 2021-04-07 BH2 S4	1550360 Soil153 2021-04-07 BH3 S1
Bromomethane	398447	0.05	ug/g	STD 0.05	<0.05	<0.05			<0.05
	398455	0.05	ug/g	STD 0.05			<0.05	<0.05	
Carbon Tetrachloride	398447	0.05	ug/g	STD 1.5	<0.05	<0.05			<0.05
	398455	0.05	ug/g	STD 1.5			<0.05	<0.05	
Chlorobenzene	398447	0.05	ug/g	STD 2.7	<0.05	<0.05			<0.05
	398455	0.05	ug/g	STD 2.7			<0.05	<0.05	
Chloroform	398447	0.05	ug/g	STD 0.18	<0.05	<0.05			<0.05
	398455	0.05	ug/g	STD 0.18			<0.05	<0.05	
Dibromochloromethane	398447	0.05	ug/g	STD 13	<0.05	<0.05			<0.05
	398455	0.05	ug/g	STD 13			<0.05	<0.05	
Dichlorobenzene, 1,2-	398447	0.05	ug/g	STD 8.5	<0.05	<0.05			<0.05
	398455	0.05	ug/g	STD 8.5			<0.05	<0.05	
Dichlorobenzene, 1,3-	398447	0.05	ug/g	STD 12	<0.05	<0.05			<0.05
	398455	0.05	ug/g	STD 12			<0.05	<0.05	
Dichlorobenzene, 1,4-	398447	0.05	ug/g	STD 0.84	<0.05	<0.05			<0.05
	398455	0.05	ug/g	STD 0.84			0.06	<0.05	
Dichlorodifluoromethane	398447	0.05	ug/g	STD 25	<0.05	<0.05			<0.05
	398455	0.05	ug/g	STD 25			<0.05	<0.05	
Dichloroethane, 1,1-	398447	0.05	ug/g	STD 21	<0.05	<0.05			<0.05
	398455	0.05	ug/g	STD 21			<0.05	<0.05	
Dichloroethane, 1,2-	398447	0.05	ug/g	STD 0.05	<0.05	<0.05			<0.05
	398455	0.05	ug/g	STD 0.05			<0.05	<0.05	
Dichloroethylene, 1,1-	398447	0.05	ug/g	STD 0.48	<0.05	<0.05			<0.05
	398455	0.05	ug/g	STD 0.48			<0.05	<0.05	

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Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.				
					1550356 Soil153 2021-04-07 BH1 S1	1550357 Soil153 2021-04-07 BH1 S2	1550358 Soil153 2021-04-07 BH2 S2	1550359 Soil153 2021-04-07 BH2 S4	1550360 Soil153 2021-04-07 BH3 S1
Dichloroethylene, 1,2-cis-	398447	0.05	ug/g	STD 37	<0.05	<0.05			<0.05
	398455	0.05	ug/g	STD 37			<0.05	<0.05	
Dichloroethylene, 1,2-trans-	398447	0.05	ug/g	STD 9.3	<0.05	<0.05			<0.05
	398455	0.05	ug/g	STD 9.3			<0.05	<0.05	
Dichloropropane, 1,2-	398447	0.05	ug/g	STD 0.68	<0.05	<0.05			<0.05
	398455	0.05	ug/g	STD 0.68			<0.05	<0.05	
Dichloropropene,1,3-	398447	0.05	ug/g	STD 0.21	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloropropene,1,3-cis-	398447	0.05	ug/g		<0.05	<0.05			<0.05
	398455	0.05	ug/g				<0.05	<0.05	
Dichloropropene,1,3-trans-	398447	0.05	ug/g		<0.05	<0.05			<0.05
	398455	0.05	ug/g				<0.05	<0.05	
Ethylbenzene	398447	0.05	ug/g	STD 19	<0.05	<0.05			<0.05
	398455	0.05	ug/g	STD 19			<0.05	<0.05	
Ethylene dibromide	398447	0.05	ug/g	STD 0.05	<0.05	<0.05			<0.05
	398455	0.05	ug/g	STD 0.05			<0.05	<0.05	
Hexane (n)	398447	0.05	ug/g	STD 88	<0.05	<0.05			<0.05
	398455	0.05	ug/g	STD 88			<0.05	<0.05	
Methyl Ethyl Ketone	398447	0.50	ug/g	STD 88	<0.50	<0.50			<0.50
	398455	0.50	ug/g	STD 88			<0.50	<0.50	
Methyl Isobutyl Ketone	398447	0.50	ug/g	STD 210	<0.50	<0.50			<0.50
	398455	0.50	ug/g	STD 210			<0.50	<0.50	
Methyl tert-Butyl Ether (MTBE)	398447	0.05	ug/g	STD 3.2	<0.05	<0.05			<0.05
	398455	0.05	ug/g	STD 3.2			<0.05	<0.05	
Methylene Chloride	398447	0.05	ug/g	STD 2	<0.05	<0.05			<0.05

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Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	1550356	1550357	1550358	1550359	1550360
					Sample Matrix	Soil153	Soil153	Soil153	Soil153	Soil153
					Sample Type					
					Sample Date	2021-04-07	2021-04-07	2021-04-07	2021-04-07	2021-04-07
					Sampling Time					
					Sample I.D.	BH1 S1	BH1 S2	BH2 S2	BH2 S4	BH3 S1
Methylene Chloride	398455	0.05	ug/g	STD 2				<0.05	<0.05	
Styrene	398447	0.05	ug/g	STD 43		<0.05	<0.05			<0.05
	398455	0.05	ug/g	STD 43				<0.05	<0.05	
Tetrachloroethane, 1,1,1,2-	398447	0.05	ug/g	STD 0.11		<0.05	<0.05			<0.05
	398455	0.05	ug/g	STD 0.11				<0.05	<0.05	
Tetrachloroethane, 1,1,2,2-	398447	0.05	ug/g	STD 0.094		<0.05	<0.05			<0.05
	398455	0.05	ug/g	STD 0.094				<0.05	<0.05	
Tetrachloroethylene	398447	0.05	ug/g	STD 21		<0.05	<0.05			<0.05
	398455	0.05	ug/g	STD 21				<0.05	<0.05	
Toluene	398447	0.20	ug/g	STD 78		<0.20	<0.20			<0.20
	398455	0.20	ug/g	STD 78				<0.20	<0.20	
Trichloroethane, 1,1,1-	398447	0.05	ug/g	STD 12		<0.05	<0.05			<0.05
	398455	0.05	ug/g	STD 12				<0.05	<0.05	
Trichloroethane, 1,1,2-	398447	0.05	ug/g	STD 0.11		<0.05	<0.05			<0.05
	398455	0.05	ug/g	STD 0.11				<0.05	<0.05	
Trichloroethylene	398447	0.05	ug/g	STD 0.61		<0.05	<0.05			<0.05
	398455	0.05	ug/g	STD 0.61				<0.05	<0.05	
Trichlorofluoromethane	398447	0.05	ug/g	STD 5.8		<0.05	<0.05			<0.05
	398455	0.05	ug/g	STD 5.8				<0.05	<0.05	
Vinyl Chloride	398447	0.02	ug/g	STD 0.25		<0.02	<0.02			<0.02
	398455	0.02	ug/g	STD 0.25				<0.02	<0.02	
Xylene Mixture	398452	0.05	ug/g	STD 30						<0.05
	398456	0.05	ug/g	STD 30		<0.05	<0.05	<0.05	<0.05	
Xylene, m/p-	398447	0.05	ug/g			<0.05	<0.05			<0.05

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Certificate of Analysis

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Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.				
					1550356 Soil153 2021-04-07 BH1 S1	1550357 Soil153 2021-04-07 BH1 S2	1550358 Soil153 2021-04-07 BH2 S2	1550359 Soil153 2021-04-07 BH2 S4	1550360 Soil153 2021-04-07 BH3 S1
Xylene, m/p-	398455	0.05	ug/g				<0.05	<0.05	
Xylene, o-	398447	0.05	ug/g		<0.05	<0.05			<0.05
	398455	0.05	ug/g				<0.05	<0.05	

Inorganics

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.	
					1550356 Soil153 2021-04-07 BH1 S1	1550359 Soil153 2021-04-07 BH2 S4
Cyanide (CN-)	398425	0.005	ug/g	STD 0.051	<0.005	<0.005
Electrical Conductivity	398415	0.05	mS/cm	STD 1.4	0.33	0.24
pH - CaCl2	398409	2.00			8.02	7.72
Sodium Adsorption Ratio	398420	0.01		STD 12	3.63	1.49

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Moisture

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1550356 Sample Matrix Soil153 Sample Type Sample Date 2021-04-07 Sampling Time Sample I.D. BH1 S1	Lab I.D. 1550359 Sample Matrix Soil153 Sample Type Sample Date 2021-04-07 Sampling Time Sample I.D. BH2 S4
Moisture-Humidite	398438	0.1	%		11.4	6.1

PHC Surrogate

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1550356 Sample Matrix Soil153 Sample Type Sample Date 2021-04-07 Sampling Time Sample I.D. BH1 S1	Lab I.D. 1550359 Sample Matrix Soil153 Sample Type Sample Date 2021-04-07 Sampling Time Sample I.D. BH2 S4
Alpha-androstrane	398438	0	%		63	75

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VOCs Surrogates

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.				
					1550356 Soil153 2021-04-07 BH1 S1	1550357 Soil153 2021-04-07 BH1 S2	1550358 Soil153 2021-04-07 BH2 S2	1550359 Soil153 2021-04-07 BH2 S4	1550360 Soil153 2021-04-07 BH3 S1
1,2-dichloroethane-d4	398447	0	%		125	121			125
	398455	0	%				139	115	
4-bromofluorobenzene	398447	0	%		101	101			101
	398455	0	%				96	100	
Toluene-d8	398447	0	%		98	100			98
	398455	0	%				75	97	

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Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
398409	pH - CaCl2	4.98	99	90-110			0	
398412	Chromium VI	<0.20 ug/g	101	80-120	86	70-130	0	0-35
398415	Electrical Conductivity	<0.05	97	90-110			2	0-10
398419	Silver	<0.2 ug/g	116	70-130	109	70-130	0	0-20
398419	Arsenic	<1 ug/g	98	70-130	96	70-130	0	0-20
398419	Boron (total)	<5 ug/g	103	70-130	105	70-130	0	0-20
398419	Barium	<1 ug/g	109	70-130	324	70-130	1	0-20
398419	Beryllium	<1 ug/g	104	70-130	97	70-130	0	0-20
398419	Cadmium	<0.4 ug/g	114	70-130	108	70-130	0	0-20
398419	Cobalt	<1 ug/g	112	70-130	103	70-130	11	0-20
398419	Chromium Total	<1 ug/g	115	70-130	148	70-130	9	0-20
398419	Copper	<1 ug/g	103	70-130	63	70-130	12	0-20
398419	Mercury	<0.1 ug/g	90	70-130	86	70-130	0	0-20
398419	Molybdenum	<1 ug/g	107	70-130	105	70-130	0	0-20
398419	Nickel	<1 ug/g	116	70-130	117	70-130	6	0-20
398419	Lead	<1 ug/g	109	70-130	101	70-130	0	0-20
398419	Antimony	<1 ug/g	103	70-130	84	70-130	0	0-20
398419	Selenium	<1 ug/g	107	70-130	95	70-130	0	0-20
398419	Thallium	<1 ug/g	107	70-130	100	70-130	0	0-20
398419	Uranium	<0.5 ug/g	106	70-130	104	70-130	0	0-20
398419	Vanadium	<2 ug/g	110	70-130	130	70-130	2	0-20
398419	Zinc	<2 ug/g	102	70-130	92	70-130	1	0-20
398420	Sodium Adsorption Ratio	<0.01					2	
398421	Methlynaphthalene, 1-	<0.05 ug/g	82	50-140	68	50-140	0	0-40
398421	Methlynaphthalene, 2-	<0.05 ug/g	78	50-140	61	50-140	0	0-40
398421	Acenaphthene	<0.05 ug/g	78	50-140	63	50-140	0	0-40
398421	Acenaphthylene	<0.05 ug/g	77	50-140	60	50-140	0	0-40
398421	Anthracene	<0.05 ug/g	82	50-140	65	50-140	0	0-40
398421	Benz[a]anthracene	<0.05 ug/g	81	50-140	68	50-140	0	0-40
398421	Benzo[a]pyrene	<0.05 ug/g	68	50-140	55	50-140	0	0-40
398421	Benzo[b]fluoranthene	<0.05 ug/g	90	50-140	81	50-140	0	0-40
398421	Benzo[ghi]perylene	<0.05 ug/g	86	50-140	61	50-140	0	0-40
398421	Benzo[k]fluoranthene	<0.05 ug/g	94	50-140	81		0	0-40

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Client: Blumetric Environmental Inc.-Carp
1682 Woodward Drive
Carp, ON
K2C 3R8
Attention: Mr. Rob Hillier
PO#:
Invoice to: Blumetric Environmental Inc.

Report Number: 1950801
Date Submitted: 2021-04-07
Date Reported: 2021-04-09
Project: 210294
COC #: 212444

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
398421	Chrysene	<0.05 ug/g	83	50-140	74	50-140	0	0-40
398421	Dibenz[a h]anthracene	<0.05 ug/g	87	50-140	61	50-140	0	0-40
398421	Fluoranthene	<0.05 ug/g	86	50-140	74	50-140	0	0-40
398421	Fluorene	<0.05 ug/g	82	50-140	62	50-140	0	0-40
398421	Indeno[1 2 3-cd]pyrene	<0.05 ug/g	115	50-140	62	50-140	0	0-40
398421	Naphthalene	<0.05 ug/g	73	50-140	60	50-140	0	0-40
398421	Phenanthrene	<0.05 ug/g	84	50-140	71	50-140	0	0-40
398421	Pyrene	<0.05 ug/g	85	50-140	74	50-140	0	0-40
398425	Cyanide (CN-)	<0.005 ug/g	103	75-125	103	70-130	0	0-20
398438	PHC's F2	<10 ug/g	84	80-120	100	60-140	0	0-30
398438	PHC's F3	<20 ug/g	84	80-120	100	60-140	0	0-30
398438	PHC's F4	<20 ug/g	84	80-120	100	60-140	0	0-30
398438	PHC's F4g	<100 ug/g		80-120		60-140		0-30
398438	Moisture-Humidite		100	80-120			0	
398445	Boron (Hot Water Soluble)	<0.5 ug/g	92	70-130	106	75-125	0	0-30
398447	Tetrachloroethane, 1,1,1,2-	<0.05 ug/g	89	60-130	110	50-140	0	0-50
398447	Trichloroethane, 1,1,1-	<0.05 ug/g	106	60-130	106	50-140	0	0-50
398447	Tetrachloroethane, 1,1,2,2-	<0.05 ug/g	93	60-130	108	50-140	0	0-30
398447	Trichloroethane, 1,1,2-	<0.05 ug/g	97	60-130	112	50-140	0	0-50
398447	Dichloroethane, 1,1-	<0.05 ug/g	111	60-130	117	50-140	0	0-50
398447	Dichloroethylene, 1,1-	<0.05 ug/g	113	60-130	110	50-140	0	0-50
398447	Dichlorobenzene, 1,2-	<0.05 ug/g	82	60-130	111	50-140	0	0-50
398447	Dichloroethane, 1,2-	<0.05 ug/g	115	60-130	120	50-140	0	0-50
398447	Dichloropropane, 1,2-	<0.05 ug/g	106	60-130	111	50-140	0	0-50
398447	Dichlorobenzene, 1,3-	<0.05 ug/g	81	60-130	108	50-140	0	0-50
398447	Dichloropropene,1,3-	<0.05 ug/g						
398447	Dichlorobenzene, 1,4-	<0.05 ug/g	81	60-130	108	50-140	0	0-50
398447	Acetone	<0.50 ug/g	107	60-130	113	50-140	0	0-50
398447	Benzene	<0.02 ug/g	100	60-130	118	50-140	0	0-50
398447	Bromodichloromethane	<0.05 ug/g	108	60-130	118	50-140	0	0-50
398447	Bromoform	<0.05 ug/g	86	60-130	108	50-140	0	0-50
398447	Bromomethane	<0.05 ug/g	116	60-130	119	50-140	0	0-50
398447	Dichloroethylene, 1,2-cis-	<0.05 ug/g	104	60-130	112	50-140	0	0-50

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Client: Blumetric Environmental Inc.-Carp
1682 Woodward Drive
Carp, ON
K2C 3R8
Attention: Mr. Rob Hillier
PO#:
Invoice to: Blumetric Environmental Inc.

Report Number: 1950801
Date Submitted: 2021-04-07
Date Reported: 2021-04-09
Project: 210294
COC #: 212444

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
398447	Dichloropropene,1,3-cis-	<0.05 ug/g	94	60-130	112	50-140	0	0-50
398447	Carbon Tetrachloride	<0.05 ug/g	99	60-130	114	50-140	0	0-50
398447	Chloroform	<0.05 ug/g	114	60-130	114	50-140	0	0-50
398447	Dibromochloromethane	<0.05 ug/g	92	60-130	120	50-140	0	0-50
398447	Dichlorodifluoromethane	<0.05 ug/g	76	60-130	92	50-140	0	0-50
398447	Methylene Chloride	<0.05 ug/g	106	60-130	116	50-140	0	0-50
398447	Ethylbenzene	<0.05 ug/g	91	60-130	108	50-140	0	0-50
398447	Ethylene dibromide	<0.05 ug/g	91	60-130	120	50-140	0	0-50
398447	Hexane (n)	<0.05 ug/g	119	60-130	115	50-140	0	0-50
398447	Xylene, m/p-	<0.05 ug/g	95	60-130	112	50-140	0	0-50
398447	Methyl Ethyl Ketone	<0.50 ug/g	110	60-130	94	50-140	0	0-50
398447	Methyl Isobutyl Ketone	<0.50 ug/g	103	60-130	117	50-140	0	0-50
398447	Methyl tert-Butyl Ether (MTBE)	<0.05 ug/g	116	60-130	115	50-140	0	0-50
398447	Chlorobenzene	<0.05 ug/g	91	60-130	109	50-140	0	0-50
398447	Xylene, o-	<0.05 ug/g	90	60-130	108	50-140	0	0-50
398447	Styrene	<0.05 ug/g	87	60-130	104	50-140	0	0-50
398447	Dichloroethylene, 1,2-trans-	<0.05 ug/g	102	60-130	116	50-140	0	0-50
398447	Dichloropropene,1,3-trans-	<0.05 ug/g	99	60-130	112	50-140	0	0-50
398447	Tetrachloroethylene	<0.05 ug/g	78	60-130	92	50-140	0	0-50
398447	Toluene	<0.20 ug/g	95	60-130	111	50-140	0	0-50
398447	Trichloroethylene	<0.05 ug/g	93	60-130	111	50-140	0	0-50
398447	Trichlorofluoromethane	<0.05 ug/g	108	60-130	114	50-140	0	0-50
398447	Vinyl Chloride	<0.02 ug/g	119	60-130	118	50-140	0	0-50
398449	PHC's F1	<10 ug/g	85	80-120	107	60-140	0	0-30
398452	Xylene Mixture							
398453	PHC's F1-BTEX							
398455	Tetrachloroethane, 1,1,1,2-	<0.05 ug/g	99	60-130	96	50-140	0	0-50
398455	Trichloroethane, 1,1,1-	<0.05 ug/g	87	60-130	100	50-140	0	0-50
398455	Tetrachloroethane, 1,1,2,2-	<0.05 ug/g	88	60-130	92	50-140	0	0-30
398455	Trichloroethane, 1,1,2-	<0.05 ug/g	107	60-130	103	50-140	0	0-50
398455	Dichloroethane, 1,1-	<0.05 ug/g	94	60-130	107	50-140	0	0-50
398455	Dichloroethylene, 1,1-	<0.05 ug/g	83	60-130	110	50-140	0	0-50
398455	Dichlorobenzene, 1,2-	787 ug/g	98	60-130	94	50-140	0	0-50

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Client: Blumetric Environmental Inc.-Carp
1682 Woodward Drive
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K2C 3R8
Attention: Mr. Rob Hillier
PO#:
Invoice to: Blumetric Environmental Inc.

Report Number: 1950801
Date Submitted: 2021-04-07
Date Reported: 2021-04-09
Project: 210294
COC #: 212444

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
398455	Dichloroethane, 1,2-	<0.05 ug/g	88	60-130	113	50-140	0	0-50
398455	Dichloropropane, 1,2-	6840 ug/g	100	60-130	101	50-140	0	0-50
398455	Dichlorobenzene, 1,3-	<0.05 ug/g	81	60-130	76	50-140	0	0-50
398455	Dichlorobenzene, 1,4-	<0.05 ug/g	98	60-130	92	50-140	0	0-50
398455	Acetone		94	60-130	119	50-140	0	0-50
398455	Benzene	<0.02 ug/g	85	60-130	106	50-140	0	0-50
398455	Bromodichloromethane	<0.05 ug/g	106	60-130	100	50-140	0	0-50
398455	Bromoform	<0.05 ug/g	100	60-130	102	50-140	0	0-50
398455	Bromomethane	<0.05 ug/g	80	60-130	100	50-140	0	0-50
398455	Dichloroethylene, 1,2-cis-	<0.05 ug/g	89	60-130	106	50-140	0	0-50
398455	Dichloropropene,1,3-cis-	<0.05 ug/g	108	60-130	91	50-140	0	0-50
398455	Carbon Tetrachloride	<0.05 ug/g	94	60-130	102	50-140	0	0-50
398455	Chloroform	<0.05 ug/g	84	60-130	104	50-140	0	0-50
398455	Dibromochloromethane	<0.05 ug/g	106	60-130	100	50-140	0	0-50
398455	Dichlorodifluoromethane	721 ug/g	90	60-130	75	50-140	0	0-50
398455	Methylene Chloride	<0.05 ug/g	83	60-130	109	50-140	0	0-50
398455	Ethylbenzene	<0.05 ug/g	85	60-130	95	50-140	0	0-50
398455	Ethylene dibromide	<0.05 ug/g	101	60-130		50-140		0-50
398455	Hexane (n)		82	60-130	84	50-140	0	0-50
398455	Xylene, m/p-	<0.05 ug/g	90	60-130	86	50-140	0	0-50
398455	Methyl Ethyl Ketone		90	60-130	118	50-140	0	0-50
398455	Methyl Isobutyl Ketone		85	60-130	85	50-140	0	0-50
398455	Methyl tert-Butyl Ether (MTBE)		128	60-130	104	50-140	0	0-50
398455	Chlorobenzene	<0.05 ug/g	83	60-130	98	50-140	0	0-50
398455	Xylene, o-	<0.05 ug/g	90	60-130	103	50-140	0	0-50
398455	Styrene	<0.05 ug/g	103	60-130	96	50-140	0	0-50
398455	Dichloroethylene, 1,2-trans-	<0.05 ug/g	88	60-130	105	50-140	0	0-50
398455	Dichloropropene,1,3-trans-	<0.05 ug/g	103	60-130	98	50-140	0	0-50
398455	Tetrachloroethylene	<0.05 ug/g	107	60-130	93	50-140	0	0-50
398455	Toluene	<0.20 ug/g	92	60-130	107	50-140	0	0-50
398455	Trichloroethylene	<0.05 ug/g	101	60-130	99	50-140	0	0-50
398455	Trichlorofluoromethane	<0.05 ug/g	83	60-130	80	50-140	0	0-50
398455	Vinyl Chloride	<0.02 ug/g	80	60-130	117	50-140	0	0-50

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PO#:
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Report Number: 1950801
Date Submitted: 2021-04-07
Date Reported: 2021-04-09
Project: 210294
COC #: 212444

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
398456	Xylene Mixture							
398457	PHC's F1-BTEX							
398489	1+2-methylnaphthalene							
398494	PHC's F2-Napth	<10 ug/g						
398494	PHC's F3-PAH	<20 ug/g						

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Certificate of Analysis

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Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
398409	pH - CaCl2	pH Meter	2021-04-08	2021-04-08	R_R	Ag Soil
398412	Chromium VI	FAA	2021-04-08	2021-04-08	Z_S	M US EPA 3060A
398415	Electrical Conductivity	Electrical Conductivity Mete	2021-04-08	2021-04-08	Z_S	Cond-Soil
398419	Silver	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Arsenic	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Boron (total)	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Barium	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Beryllium	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Cadmium	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Cobalt	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Chromium Total	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Copper	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Mercury	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Molybdenum	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Nickel	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Lead	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Antimony	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Selenium	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Thallium	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Uranium	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Vanadium	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Zinc	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398420	Sodium Adsorption Ratio	iCAP OES	2021-04-08	2021-04-08	Z_S	Ag Soil
398421	Methlynaphthalene, 1-	GC-MS	2021-04-08	2021-04-08	C_M	P 8270
398421	Methlynaphthalene, 2-	GC-MS	2021-04-08	2021-04-08	C_M	P 8270
398421	Acenaphthene	GC-MS	2021-04-08	2021-04-08	C_M	P 8270
398421	Acenaphthylene	GC-MS	2021-04-08	2021-04-08	C_M	P 8270
398421	Anthracene	GC-MS	2021-04-08	2021-04-08	C_M	P 8270
398421	Benz[a]anthracene	GC-MS	2021-04-08	2021-04-08	C_M	P 8270
398421	Benzo[a]pyrene	GC-MS	2021-04-08	2021-04-08	C_M	P 8270
398421	Benzo[b]fluoranthene	GC-MS	2021-04-08	2021-04-08	C_M	P 8270
398421	Benzo[ghi]perylene	GC-MS	2021-04-08	2021-04-08	C_M	P 8270
398421	Benzo[k]fluoranthene	GC-MS	2021-04-08	2021-04-08	C_M	P 8270

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Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
398421	Chrysene	GC-MS	2021-04-08	2021-04-08	C_M	P 8270
398421	Dibenz[a h]anthracene	GC-MS	2021-04-08	2021-04-08	C_M	P 8270
398421	Fluoranthene	GC-MS	2021-04-08	2021-04-08	C_M	P 8270
398421	Fluorene	GC-MS	2021-04-08	2021-04-08	C_M	P 8270
398421	Indeno[1 2 3-cd]pyrene	GC-MS	2021-04-08	2021-04-08	C_M	P 8270
398421	Naphthalene	GC-MS	2021-04-08	2021-04-08	C_M	P 8270
398421	Phenanthrene	GC-MS	2021-04-08	2021-04-08	C_M	P 8270
398421	Pyrene	GC-MS	2021-04-08	2021-04-08	C_M	P 8270
398425	Cyanide (CN-)	Skalar CN Analyzer	2021-04-08	2021-04-08	Z_S	MOECC E3015
398438	PHC's F2	GC/FID	2021-04-08	2021-04-08	N_C	CCME
398438	PHC's F3	GC/FID	2021-04-08	2021-04-08	N_C	CCME
398438	PHC's F4	GC/FID	2021-04-08	2021-04-08	N_C	CCME
398438	PHC's F4g	Gravimetric	2021-04-09	2021-04-09	N_C	CCME
398438	Moisture-Humidite	Oven	2021-04-08	2021-04-08	N_C	ASTM 2216
398445	Boron (Hot Water Soluble)	iCAP OES	2021-04-08	2021-04-08	Z_S	MOECC E3470
398447	Tetrachloroethane, 1,1,1,2-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Trichloroethane, 1,1,1-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Tetrachloroethane, 1,1,2,2-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Trichloroethane, 1,1,2-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Dichloroethane, 1,1-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Dichloroethylene, 1,1-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Dichlorobenzene, 1,2-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Dichloroethane, 1,2-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Dichloropropane, 1,2-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Dichlorobenzene, 1,3-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Dichloropropene,1,3-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Dichlorobenzene, 1,4-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Acetone	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Benzene	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Bromodichloromethane	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Bromoform	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Bromomethane	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Dichloroethylene, 1,2-cis-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B

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Test Summary

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398447	Dichloropropene,1,3-cis-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Carbon Tetrachloride	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Chloroform	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Dibromochloromethane	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Dichlorodifluoromethane	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Methylene Chloride	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Ethylbenzene	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Ethylene dibromide	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Hexane (n)	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Xylene, m/p-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Methyl Ethyl Ketone	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Methyl Isobutyl Ketone	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Methyl tert-Butyl Ether (MTBE)	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Chlorobenzene	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Xylene, o-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Styrene	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Dichloroethylene, 1,2-trans-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Dichloropropene,1,3-trans-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Tetrachloroethylene	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Toluene	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Trichloroethylene	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Trichlorofluoromethane	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398447	Vinyl Chloride	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398449	PHC's F1	GC/FID	2021-04-08	2021-04-08	YH	CCME
398452	Xylene Mixture	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398453	PHC's F1-BTEX	GC/FID	2021-04-08	2021-04-08	YH	CCME
398455	Tetrachloroethane, 1,1,1,2-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Trichloroethane, 1,1,1-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Tetrachloroethane, 1,1,2,2-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Trichloroethane, 1,1,2-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Dichloroethane, 1,1-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Dichloroethylene, 1,1-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Dichlorobenzene, 1,2-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B

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Certificate of Analysis

Client: Blumetric Environmental Inc.-Carp
1682 Woodward Drive
Carp, ON
K2C 3R8
Attention: Mr. Rob Hillier
PO#:
Invoice to: Blumetric Environmental Inc.

Report Number: 1950801
Date Submitted: 2021-04-07
Date Reported: 2021-04-09
Project: 210294
COC #: 212444

Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
398455	Dichloroethane, 1,2-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Dichloropropane, 1,2-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Dichlorobenzene, 1,3-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Dichlorobenzene, 1,4-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Acetone	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Benzene	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Bromodichloromethane	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Bromoform	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Bromomethane	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Dichloroethylene, 1,2-cis-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Dichloropropene,1,3-cis-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Carbon Tetrachloride	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Chloroform	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Dibromochloromethane	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Dichlorodifluoromethane	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Methylene Chloride	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Ethylbenzene	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Ethylene dibromide	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Hexane (n)	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Xylene, m/p-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Methyl Ethyl Ketone	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Methyl Isobutyl Ketone	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Methyl tert-Butyl Ether (MTBE)	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Chlorobenzene	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Xylene, o-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Styrene	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Dichloroethylene, 1,2-trans-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Dichloropropene,1,3-trans-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Tetrachloroethylene	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Toluene	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Trichloroethylene	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Trichlorofluoromethane	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398455	Vinyl Chloride	GC-MS	2021-04-08	2021-04-08	YH	V 8260B

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Certificate of Analysis

eurofins | Environment Testing

Client: Blumetric Environmental Inc.-Carp
1682 Woodward Drive
Carp, ON
K2C 3R8
Attention: Mr. Rob Hillier
PO#:
Invoice to: Blumetric Environmental Inc.

Report Number: 1950801
Date Submitted: 2021-04-07
Date Reported: 2021-04-09
Project: 210294
COC #: 212444

Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
398456	Xylene Mixture	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398457	PHC's F1-BTEX	GC/FID	2021-04-08	2021-04-08	YH	CCME
398489	1+2-methylnaphthalene	GC-MS	2021-04-09	2021-04-09	C_M	P 8270
398494	PHC's F2-Napth	GC/FID	2021-04-09	2021-04-09	QL	CCME
398494	PHC's F3-PAH	GC/FID	2021-04-09	2021-04-09	QL	CCME

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Project: 210294
COC #: 212444

Petroleum Hydrocarbons - CCME Checklist

Samples were analysed by Eurofins Ottawa Method AMCCME2, "Petroleum Hydrocarbons in Water and Soil, CCME/TPH", "Petroleum Hydrocarbons in Water and Soil, CCME/TPH". These methods comply with the reference method for the CCME CWS PHC and are validated for use in the laboratory. Eurofins Ottawa is accredited by CALA (ISO 17025) for all CCME F1-F4 fractions as listed in this report. Data for QC samples (blank, duplicate, spike) are available on request

Holding/Analysis Times	Yes/No	If NO, then reasons
All fractions analyzed within recommended hold times/analysis times?	Yes	
F1		
nC6 and nC10 response factors within 30% of toluene	Yes	
BTEX was subtracted from F1 fraction	Yes	
If YES, was F1-BTEX (C6-C10) reported	Yes	
F2		
nC10, nC16 and nC34 response factors within 10% of their average (F2-F4)	Yes	
Linearity within 15% (F2-F4)	Yes	
Napthalene was subtracted from F2 fraction		
If YES was F2-Napthalene reported		
F3		
PAH (selected compounds) subtracted from F3 fraction		
If YES was F3-PAH reported		
F4		
C50 response factor within 70% of nC10+nC16+nC34 average	Yes	
Chromatogram descended to baseline by retention time of C50	No	
if NO was F4 (C34-C50) gravimetric reported	Yes	

Note: Gravimetric heavy hydrocarbon results for soil samples is known to be highly variable. Where F4G results have been provided, the F4G result cannot be added to the gas chromatographic result.

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eurofins 212444

STANDARD CHAIN-OF-CUSTODY

146 Colonnade Road, Unit #8, Ottawa, ON, K2E 7Y1 - Phone: 613-727-5692, Fax: 613-727-5222

Eurofins Workorder #: 1950801

CLIENT INFORMATION

Company: BLUMETRIC
Contact: Rob Hiller
Address: 1682 Woodward Dr. Ottawa, ON
Telephone: 613-296-2091 Cell:
Email: #1: rhiller@blumetric.ca
Email: #2:
Project: 210294 Quote #: 19032

INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES [X] NO [ ])

Company: Fax:
Contact: Email: #1: ap@blumetric.ca
Address: Email: #2:
Telephone: PO #:

TURN-AROUND TIME (Business Days)

[X] 1 Day* (100%) [ ] 2 Day** (50%) [ ] 3-5 Days (25%) [ ] 5-7 Days (Standard)

Please contact Lab in advance to determine rush availability.
*For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%.
**For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.

REGULATION/GUIDELINE REQUIRED

[ ] Sanitary Sewer, City:
[ ] Storm Sewer, City:
[ ] ODWSOG
[ ] PWQO
[ ] O. Reg 347/558
[ ] Other:
[ ] None

[X] O. Reg 153
Table # 3 Course / Fine, Surface / subsurface.
Type: Com-Ind / Res-Park / Agri / GW / All Other / Sediment
[ ] Excess Soil, Table: Type:

The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O.Reg. 153/04
[ ] Yes [ ] No

The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a $25 surcharge if required information is missing (required fields are shaded in grey).

Sample ID	Date/Time Collected	Sample Matrix	# of Containers	O.Reg.153 parameters: PHC F1 - F4	BTEX	VOCs	PAHs	PCBs	Metals + Inorganics	Metals only		RN# (Lab Use Only)
BH 51	7 Apr 2021 PM	S	4	X		X	X		X			1950356
BH 52	↓	↓	3	X		X	X		X		-2 vials + 1 jar (Metals & PAH is priority)	57
BH2 52			2	X		X	X		X		-only 2 vials filled	58
BH2 54			4	X		X	X		X			59
BH3 51	↓	↓	3	X		X	X		X		-2 vials + 1 jar (Metals & PAH is priority analysis)	60

PRINT	SIGN	DATE/TIME	TEMP (°C)
Sampled By:			
Relinquished By: LAKE JOHNSTON		7 Apr 21 / 14:00	13.4
Received By:	DC	7/4/21 3:22pm	

COMMENTS:
- BH 52, BH 3 51 (Partial sets, Metals and PAH is priority analysis)
- BH2 52: only vials filled (PHC F1 & VOC)

CUSTODY SEAL: [ ] YES [ ] NO Ice packs submitted: [ ] Yes [ ] No

401 Magnetic Drive, Unit #1, North York, ON, M3J 3H9 - Telephone: 416-661-5287 • 380 Vansickle Road, Unit #630, St. Catharines, ON, L2S 0B5 - Telephone: 905-680-8887 • 608 Norris Court, Kingston, ON, K7P 2R9 - Telephone: 613-634-9307

Copies: White - Laboratory, Yellow - Sampler

Certificate of Analysis

eurofins | Environment Testing

Client: Blumetric Environmental Inc.-Carp
1682 Woodward Drive
Carp, ON
K2C 3R8
Attention: Mr. Rob Hillier
Invoice to: Blumetric Environmental Inc.
PO#:

Report Number:	1950700
Date Submitted:	2021-04-07
Date Reported:	2021-04-09
Project:	210294
COC #:	212441
Temperature (C):	16
Custody Seal:	

Dear Rob Hillier:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Sample Comment Summary

Sample ID: 1550114 BH7 S2 Metals spike acceptance limits apply only when the concentration of the matrix spike is greater than or equal to the concentration of the native analyte.

Report Comments:

Charlie Long Qu 2021.04.09 10:49:58 -04'00'

Long Qu, Organics Supervisor

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated
.
Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accrteditation. The scope is available at http://www.cala.ca/scopes/2602.pdf

Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Client: Blumetric Environmental Inc.-Carp
1682 Woodward Drive
Carp, ON
K2C 3R8
Attention: Mr. Rob Hillier
PO#:
Invoice to: Blumetric Environmental Inc.

Report Number: 1950700
Date Submitted: 2021-04-07
Date Reported: 2021-04-09
Project: 210294
COC #: 212441

O.Reg 153-T3-Ind/Com-Med/Fine

Exceedence Summary

Sample I.D.	Analyte	Result	Units	Criteria
Metals				
BH4 S4	Vanadium	100	ug/g	STD 86
BH5 S4	Vanadium	97	ug/g	STD 86

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Report Number: 1950700
Date Submitted: 2021-04-07
Date Reported: 2021-04-09
Project: 210294
COC #: 212441

Guideline = O.Reg 153-T3-Ind/Com-Med/Fine

Hydrocarbons

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.				
					1550114 Soil153 2021-04-07 BH7 S2	1550115 Soil153 2021-04-07 BH7 S3	1550116 Soil153 2021-04-07 BH6 S2	1550117 Soil153 2021-04-07 BH6 S3	1550118 Soil153 2021-04-07 BH5 S3
PHC's F1	398476	10	ug/g	STD 65	<10	<10	<10	<10	<10
PHC's F1-BTEX	398478	10	ug/g		<10	<10	<10	<10	<10
PHC's F2	398438	10	ug/g	STD 250	<10	<10	<10	<10	<10
PHC's F2-Napth	398461	10	ug/g		<10	<10	<10	<10	<10
PHC's F3	398438	20	ug/g	STD 2500	<20	<20	20	<20	<20
PHC's F3-PAH	398462	20	ug/g		<20	<20	20	<20	<20
PHC's F4	398438	20	ug/g	STD 6600	<20	<20	<20	<20	<20

Hydrocarbons

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.		
					1550119 Soil153 2021-04-07 BH5 S4	1550120 Soil153 2021-04-07 BH4 S3	1550121 Soil153 2021-04-07 BH4 S4
PHC's F1	398476	10	ug/g	STD 65	<10	<10	<10
PHC's F1-BTEX	398478	10	ug/g		<10	<10	<10
PHC's F2	398438	10	ug/g	STD 250	<10	<10	<10
PHC's F2-Napth	398461	10	ug/g		<10	<10	<10
PHC's F3	398438	20	ug/g	STD 2500	<20	<20	<20
PHC's F3-PAH	398462	20	ug/g		<20	<20	<20
PHC's F4	398438	20	ug/g	STD 6600	<20	<20	<20

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Certificate of Analysis

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Project: 210294
COC #: 212441

Guideline = O.Reg 153-T3-Ind/Com-Med/Fine

Metals

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1550114	1550115	1550116	1550117	1550118
Sample Matrix					Soil153	Soil153	Soil153	Soil153	Soil153
Sample Type									
Sample Date					2021-04-07	2021-04-07	2021-04-07	2021-04-07	2021-04-07
Sampling Time									
Sample I.D.					BH7 S2	BH7 S3	BH6 S2	BH6 S3	BH5 S3
Antimony	398419	1	ug/g	STD 50	<1	<1	<1	<1	<1
Arsenic	398419	1	ug/g	STD 18	4	3	3	4	5
Barium	398419	1	ug/g	STD 670	202	191	130	219	227
Beryllium	398419	1	ug/g	STD 10	<1	<1	<1	<1	<1
Boron (Hot Water Soluble)	398445	0.5	ug/g	STD 2	<0.5	<0.5	<0.5	<0.5	<0.5
Boron (total)	398419	5	ug/g	STD 120	<5	<5	<5	7	7
Cadmium	398419	0.4	ug/g	STD 1.9	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium Total	398419	1	ug/g	STD 160	61	58	47	61	63
Chromium VI	398412	0.20	ug/g	STD 10	0.35	0.31	0.33	<0.20	0.23
Cobalt	398419	1	ug/g	STD 100	16	12	11	18	17
Copper	398419	1	ug/g	STD 300	27	25	18	34	33
Lead	398419	1	ug/g	STD 120	7	8	5	7	8
Mercury	398419	0.1	ug/g	STD 20	<0.1	<0.1	<0.1	<0.1	<0.1
Molybdenum	398419	1	ug/g	STD 40	<1	<1	<1	<1	<1
Nickel	398419	1	ug/g	STD 340	34	31	25	38	38
Selenium	398419	1	ug/g	STD 5.5	<1	<1	<1	<1	<1
Silver	398419	0.2	ug/g	STD 50	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium	398419	1	ug/g	STD 3.3	<1	<1	<1	<1	<1
Uranium	398419	0.5	ug/g	STD 33	0.8	0.9	0.7	0.7	0.8
Vanadium	398419	2	ug/g	STD 86	75	66	50	78	85
Zinc	398419	2	ug/g	STD 340	76	84	60	88	95

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Guideline = O.Reg 153-T3-Ind/Com-Med/Fine

Metals

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1550119	1550120	1550121
Sample Matrix					Soil153	Soil153	Soil153
Sample Type							
Sample Date					2021-04-07	2021-04-07	2021-04-07
Sampling Time							
Sample I.D.					BH5 S4	BH4 S3	BH4 S4
Antimony	398419	1	ug/g	STD 50	<1	<1	<1
Arsenic	398419	1	ug/g	STD 18	4	4	3
Barium	398419	1	ug/g	STD 670	249	138	288
Beryllium	398419	1	ug/g	STD 10	<1	<1	<1
Boron (Hot Water Soluble)	398445	0.5	ug/g	STD 2	<0.5	<0.5	<0.5
Boron (total)	398419	5	ug/g	STD 120	7	5	6
Cadmium	398419	0.4	ug/g	STD 1.9	<0.4	<0.4	<0.4
Chromium Total	398419	1	ug/g	STD 160	73	53	80
Chromium VI	398412	0.20	ug/g	STD 10	<0.20	<0.20	0.31
Cobalt	398419	1	ug/g	STD 100	21	12	20
Copper	398419	1	ug/g	STD 300	46	37	49
Lead	398419	1	ug/g	STD 120	8	10	7
Mercury	398419	0.1	ug/g	STD 20	<0.1	<0.1	<0.1
Molybdenum	398419	1	ug/g	STD 40	<1	<1	<1
Nickel	398419	1	ug/g	STD 340	46	33	46
Selenium	398419	1	ug/g	STD 5.5	<1	<1	<1
Silver	398419	0.2	ug/g	STD 50	<0.2	<0.2	<0.2
Thallium	398419	1	ug/g	STD 3.3	<1	<1	<1
Uranium	398419	0.5	ug/g	STD 33	0.8	0.9	0.8
Vanadium	398419	2	ug/g	STD 86	97*	64	100*
Zinc	398419	2	ug/g	STD 340	109	70	111

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Client: Blumetric Environmental Inc.-Carp
1682 Woodward Drive
Carp, ON
K2C 3R8
Attention: Mr. Rob Hillier
PO#:
Invoice to: Blumetric Environmental Inc.

Report Number: 1950700
Date Submitted: 2021-04-07
Date Reported: 2021-04-09
Project: 210294
COC #: 212441

Guideline = O.Reg 153-T3-Ind/Com-Med/Fine

PAH

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.				
					1550114 Soil153 2021-04-07 BH7 S2	1550115 Soil153 2021-04-07 BH7 S3	1550116 Soil153 2021-04-07 BH6 S2	1550117 Soil153 2021-04-07 BH6 S3	1550118 Soil153 2021-04-07 BH5 S3
1+2-methylnaphthalene	398442	0.05	ug/g		<0.05	<0.05	<0.05	<0.05	
	398489	0.05	ug/g						<0.05
Acenaphthene	398421	0.05	ug/g	STD 96	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	398421	0.05	ug/g	STD 0.17	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	398421	0.05	ug/g	STD 0.74	<0.05	<0.05	<0.05	<0.05	<0.05
Benz[a]anthracene	398421	0.05	ug/g	STD 0.96	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[a]pyrene	398421	0.05	ug/g	STD 0.3	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[b]fluoranthene	398421	0.05	ug/g	STD 0.96	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[ghi]perylene	398421	0.05	ug/g	STD 9.6	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[k]fluoranthene	398421	0.05	ug/g	STD 0.96	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	398421	0.05	ug/g	STD 9.6	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz[a h]anthracene	398421	0.05	ug/g	STD 0.1	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	398421	0.05	ug/g	STD 9.6	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	398421	0.05	ug/g	STD 69	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno[1 2 3-cd]pyrene	398421	0.05	ug/g	STD 0.95	<0.05	<0.05	<0.05	<0.05	<0.05
Methlynaphthalene, 1-	398421	0.05	ug/g	STD 85	<0.05	<0.05	<0.05	<0.05	<0.05
Methlynaphthalene, 2-	398421	0.05	ug/g	STD 85	<0.05	<0.05	<0.05	<0.05	<0.05
Naphthalene	398421	0.05	ug/g	STD 28	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	398421	0.05	ug/g	STD 16	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	398421	0.05	ug/g	STD 96	<0.05	<0.05	<0.05	<0.05	<0.05

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PAH

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1550119	1550120	1550121
					Sample Matrix Soil153	Soil153	Soil153
					Sample Type		
					Sample Date 2021-04-07	2021-04-07	2021-04-07
					Sampling Time		
					Sample I.D. BH5 S4	BH4 S3	BH4 S4
1+2-methylnaphthalene	398489	0.05	ug/g		<0.05	<0.05	
	398490	0.05	ug/g				<0.05
Acenaphthene	398421	0.05	ug/g	STD 96	<0.05	<0.05	<0.05
Acenaphthylene	398421	0.05	ug/g	STD 0.17	<0.05	<0.05	<0.05
Anthracene	398421	0.05	ug/g	STD 0.74	<0.05	<0.05	<0.05
Benz[a]anthracene	398421	0.05	ug/g	STD 0.96	<0.05	<0.05	<0.05
Benzo[a]pyrene	398421	0.05	ug/g	STD 0.3	<0.05	<0.05	<0.05
Benzo[b]fluoranthene	398421	0.05	ug/g	STD 0.96	<0.05	<0.05	<0.05
Benzo[ghi]perylene	398421	0.05	ug/g	STD 9.6	<0.05	<0.05	<0.05
Benzo[k]fluoranthene	398421	0.05	ug/g	STD 0.96	<0.05	<0.05	<0.05
Chrysene	398421	0.05	ug/g	STD 9.6	<0.05	<0.05	<0.05
Dibenz[a h]anthracene	398421	0.05	ug/g	STD 0.1	<0.05	<0.05	<0.05
Fluoranthene	398421	0.05	ug/g	STD 9.6	<0.05	<0.05	<0.05
Fluorene	398421	0.05	ug/g	STD 69	<0.05	<0.05	<0.05
Indeno[1 2 3-cd]pyrene	398421	0.05	ug/g	STD 0.95	<0.05	<0.05	<0.05
Methlynaphthalene, 1-	398421	0.05	ug/g	STD 85	<0.05	<0.05	<0.05
Methlynaphthalene, 2-	398421	0.05	ug/g	STD 85	<0.05	<0.05	<0.05
Naphthalene	398421	0.05	ug/g	STD 28	<0.05	<0.05	<0.05
Phenanthrene	398421	0.05	ug/g	STD 16	<0.05	<0.05	<0.05
Pyrene	398421	0.05	ug/g	STD 96	<0.05	<0.05	<0.05

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Guideline = O.Reg 153-T3-Ind/Com-Med/Fine

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.				
					1550114 Soil153 2021-04-07 BH7 S2	1550115 Soil153 2021-04-07 BH7 S3	1550116 Soil153 2021-04-07 BH6 S2	1550117 Soil153 2021-04-07 BH6 S3	1550118 Soil153 2021-04-07 BH5 S3
Acetone	398475	0.50	ug/g	STD 28	<0.50	<0.50	<0.50	<0.50	<0.50
Benzene	398475	0.02	ug/g	STD 0.4	<0.02	<0.02	<0.02	<0.02	<0.02
Bromodichloromethane	398475	0.05	ug/g	STD 18	<0.05	<0.05	<0.05	<0.05	<0.05
Bromoform	398475	0.05	ug/g	STD 1.7	<0.05	<0.05	<0.05	<0.05	<0.05
Bromomethane	398475	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	398475	0.05	ug/g	STD 1.5	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorobenzene	398475	0.05	ug/g	STD 2.7	<0.05	<0.05	<0.05	<0.05	<0.05
Chloroform	398475	0.05	ug/g	STD 0.18	<0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	398475	0.05	ug/g	STD 13	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,2-	398475	0.05	ug/g	STD 8.5	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,3-	398475	0.05	ug/g	STD 12	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,4-	398475	0.05	ug/g	STD 0.84	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorodifluoromethane	398475	0.05	ug/g	STD 25	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethane, 1,1-	398475	0.05	ug/g	STD 21	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethane, 1,2-	398475	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethylene, 1,1-	398475	0.05	ug/g	STD 0.48	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethylene, 1,2-cis-	398475	0.05	ug/g	STD 37	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethylene, 1,2-trans-	398475	0.05	ug/g	STD 9.3	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloropropane, 1,2-	398475	0.05	ug/g	STD 0.68	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloropropene,1,3-	398475	0.05	ug/g	STD 0.21	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloropropene,1,3-cis-	398475	0.05	ug/g		<0.05	<0.05	<0.05	<0.05	<0.05
Dichloropropene,1,3-trans-	398475	0.05	ug/g		<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	398475	0.05	ug/g	STD 19	<0.05	<0.05	<0.05	<0.05	<0.05

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Client: Blumetric Environmental Inc.-Carp
1682 Woodward Drive
Carp, ON
K2C 3R8
Attention: Mr. Rob Hillier
PO#:
Invoice to: Blumetric Environmental Inc.

Report Number: 1950700
Date Submitted: 2021-04-07
Date Reported: 2021-04-09
Project: 210294
COC #: 212441

Guideline = O.Reg 153-T3-Ind/Com-Med/Fine

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1550114	1550115	1550116	1550117	1550118
					Sample Matrix Soil153	Soil153	Soil153	Soil153	Soil153
					Sample Type				
					Sample Date 2021-04-07	2021-04-07	2021-04-07	2021-04-07	2021-04-07
					Sampling Time				
					Sample I.D. BH7 S2	BH7 S3	BH6 S2	BH6 S3	BH5 S3
Ethylene dibromide	398475	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Hexane (n)	398475	0.05	ug/g	STD 88	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl Ethyl Ketone	398475	0.50	ug/g	STD 88	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	398475	0.50	ug/g	STD 210	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl tert-Butyl Ether (MTBE)	398475	0.05	ug/g	STD 3.2	<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	398475	0.05	ug/g	STD 2	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	398475	0.05	ug/g	STD 43	<0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethane, 1,1,1,2-	398475	0.05	ug/g	STD 0.11	<0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethane, 1,1,2,2-	398475	0.05	ug/g	STD 0.094	<0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethylene	398475	0.05	ug/g	STD 21	<0.05	<0.05	<0.05	<0.05	<0.05
Toluene	398475	0.20	ug/g	STD 78	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethane, 1,1,1-	398475	0.05	ug/g	STD 12	<0.05	<0.05	<0.05	<0.05	<0.05
Trichloroethane, 1,1,2-	398475	0.05	ug/g	STD 0.11	<0.05	<0.05	<0.05	<0.05	<0.05
Trichloroethylene	398475	0.05	ug/g	STD 0.61	<0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	398475	0.05	ug/g	STD 5.8	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	398475	0.02	ug/g	STD 0.25	<0.02	<0.02	<0.02	<0.02	<0.02
Xylene Mixture	398479	0.05	ug/g	STD 30	<0.05	<0.05	<0.05	<0.05	<0.05
Xylene, m/p-	398475	0.05	ug/g		<0.05	<0.05	<0.05	<0.05	<0.05
Xylene, o-	398475	0.05	ug/g		<0.05	<0.05	<0.05	<0.05	<0.05

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Project: 210294
COC #: 212441

Guideline = O.Reg 153-T3-Ind/Com-Med/Fine

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1550119	1550120	1550121
Sample Matrix					Soil153	Soil153	Soil153
Sample Type							
Sample Date					2021-04-07	2021-04-07	2021-04-07
Sampling Time							
Sample I.D.					BH5 S4	BH4 S3	BH4 S4
Acetone	398475	0.50	ug/g	STD 28	<0.50	<0.50	<0.50
Benzene	398475	0.02	ug/g	STD 0.4	<0.02	<0.02	<0.02
Bromodichloromethane	398475	0.05	ug/g	STD 18	<0.05	<0.05	<0.05
Bromoform	398475	0.05	ug/g	STD 1.7	<0.05	<0.05	<0.05
Bromomethane	398475	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	398475	0.05	ug/g	STD 1.5	<0.05	<0.05	<0.05
Chlorobenzene	398475	0.05	ug/g	STD 2.7	<0.05	<0.05	<0.05
Chloroform	398475	0.05	ug/g	STD 0.18	<0.05	<0.05	<0.05
Dibromochloromethane	398475	0.05	ug/g	STD 13	<0.05	<0.05	<0.05
Dichlorobenzene, 1,2-	398475	0.05	ug/g	STD 8.5	<0.05	<0.05	<0.05
Dichlorobenzene, 1,3-	398475	0.05	ug/g	STD 12	<0.05	<0.05	<0.05
Dichlorobenzene, 1,4-	398475	0.05	ug/g	STD 0.84	<0.05	<0.05	<0.05
Dichlorodifluoromethane	398475	0.05	ug/g	STD 25	<0.05	<0.05	<0.05
Dichloroethane, 1,1-	398475	0.05	ug/g	STD 21	<0.05	<0.05	<0.05
Dichloroethane, 1,2-	398475	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05
Dichloroethylene, 1,1-	398475	0.05	ug/g	STD 0.48	<0.05	<0.05	<0.05
Dichloroethylene, 1,2-cis-	398475	0.05	ug/g	STD 37	<0.05	<0.05	<0.05
Dichloroethylene, 1,2-trans-	398475	0.05	ug/g	STD 9.3	<0.05	<0.05	<0.05
Dichloropropane, 1,2-	398475	0.05	ug/g	STD 0.68	<0.05	<0.05	<0.05
Dichloropropene,1,3-	398475	0.05	ug/g	STD 0.21	<0.05	<0.05	<0.05
Dichloropropene,1,3-cis-	398475	0.05	ug/g		<0.05	<0.05	<0.05
Dichloropropene,1,3-trans-	398475	0.05	ug/g		<0.05	<0.05	<0.05
Ethylbenzene	398475	0.05	ug/g	STD 19	<0.05	<0.05	<0.05

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Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1550119 Sample Matrix Soil153 Sample Type Sample Date 2021-04-07 Sampling Time Sample I.D. BH5 S4	1550120 Soil153 2021-04-07 BH4 S3	1550121 Soil153 2021-04-07 BH4 S4
Ethylene dibromide	398475	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05
Hexane (n)	398475	0.05	ug/g	STD 88	<0.05	<0.05	<0.05
Methyl Ethyl Ketone	398475	0.50	ug/g	STD 88	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	398475	0.50	ug/g	STD 210	<0.50	<0.50	<0.50
Methyl tert-Butyl Ether (MTBE)	398475	0.05	ug/g	STD 3.2	<0.05	<0.05	<0.05
Methylene Chloride	398475	0.05	ug/g	STD 2	<0.05	<0.05	<0.05
Styrene	398475	0.05	ug/g	STD 43	<0.05	<0.05	<0.05
Tetrachloroethane, 1,1,1,2-	398475	0.05	ug/g	STD 0.11	<0.05	<0.05	<0.05
Tetrachloroethane, 1,1,2,2-	398475	0.05	ug/g	STD 0.094	<0.05	<0.05	<0.05
Tetrachloroethylene	398475	0.05	ug/g	STD 21	<0.05	<0.05	<0.05
Toluene	398475	0.20	ug/g	STD 78	<0.20	<0.20	<0.20
Trichloroethane, 1,1,1-	398475	0.05	ug/g	STD 12	<0.05	<0.05	<0.05
Trichloroethane, 1,1,2-	398475	0.05	ug/g	STD 0.11	<0.05	<0.05	<0.05
Trichloroethylene	398475	0.05	ug/g	STD 0.61	<0.05	<0.05	<0.05
Trichlorofluoromethane	398475	0.05	ug/g	STD 5.8	<0.05	<0.05	<0.05
Vinyl Chloride	398475	0.02	ug/g	STD 0.25	<0.02	<0.02	<0.02
Xylene Mixture	398479	0.05	ug/g	STD 30	<0.05	<0.05	<0.05
Xylene, m/p-	398475	0.05	ug/g		<0.05	<0.05	<0.05
Xylene, o-	398475	0.05	ug/g		<0.05	<0.05	<0.05

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Inorganics

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.				
					1550114 Soil153 2021-04-07 BH7 S2	1550115 Soil153 2021-04-07 BH7 S3	1550116 Soil153 2021-04-07 BH6 S2	1550117 Soil153 2021-04-07 BH6 S3	1550118 Soil153 2021-04-07 BH5 S3
Cyanide (CN-)	398425	0.005	ug/g	STD 0.051	<0.005	<0.005	<0.005	<0.005	<0.005
Electrical Conductivity	398415	0.05	mS/cm	STD 1.4	0.28	0.29	0.20	0.45	0.19
pH - CaCl2	398409	2.00			7.36	7.19	7.16	7.09	7.20
Sodium Adsorption Ratio	398420	0.01		STD 12	2.85	2.19	2.52	2.57	0.84

Inorganics

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.		
					1550119 Soil153 2021-04-07 BH5 S4	1550120 Soil153 2021-04-07 BH4 S3	1550121 Soil153 2021-04-07 BH4 S4
Cyanide (CN-)	398425	0.005	ug/g	STD 0.051	<0.005	<0.005	<0.005
Electrical Conductivity	398415	0.05	mS/cm	STD 1.4	0.31	0.21	0.46
pH - CaCl2	398409	2.00			7.21	7.18	7.20
Sodium Adsorption Ratio	398420	0.01		STD 12	1.23	2.60	1.54

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Client: Blumetric Environmental Inc.-Carp
1682 Woodward Drive
Carp, ON
K2C 3R8
Attention: Mr. Rob Hillier
PO#:
Invoice to: Blumetric Environmental Inc.

Report Number: 1950700
Date Submitted: 2021-04-07
Date Reported: 2021-04-09
Project: 210294
COC #: 212441

Guideline = O.Reg 153-T3-Ind/Com-Med/Fine

Moisture

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.				
					1550114 Soil153 2021-04-07 BH7 S2	1550115 Soil153 2021-04-07 BH7 S3	1550116 Soil153 2021-04-07 BH6 S2	1550117 Soil153 2021-04-07 BH6 S3	1550118 Soil153 2021-04-07 BH5 S3
Moisture-Humidite	398438	0.1	%		24.8	26.4	21.4	24.7	31.0

Moisture

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.		
					1550119 Soil153 2021-04-07 BH5 S4	1550120 Soil153 2021-04-07 BH4 S3	1550121 Soil153 2021-04-07 BH4 S4
Moisture-Humidite	398438	0.1	%		37.1	28.2	
			ug/L				37.7

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PHC Surrogate

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.				
					1550114 Soil153 2021-04-07 BH7 S2	1550115 Soil153 2021-04-07 BH7 S3	1550116 Soil153 2021-04-07 BH6 S2	1550117 Soil153 2021-04-07 BH6 S3	1550118 Soil153 2021-04-07 BH5 S3
Alpha-androstrane	398438	0	%		70	62	62	60	68

PHC Surrogate

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.		
					1550119 Soil153 2021-04-07 BH5 S4	1550120 Soil153 2021-04-07 BH4 S3	1550121 Soil153 2021-04-07 BH4 S4
Alpha-androstrane	398438	0	%		60	60	67

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VOCs Surrogates

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.				
					1550114 Soil153 2021-04-07 BH7 S2	1550115 Soil153 2021-04-07 BH7 S3	1550116 Soil153 2021-04-07 BH6 S2	1550117 Soil153 2021-04-07 BH6 S3	1550118 Soil153 2021-04-07 BH5 S3
1,2-dichloroethane-d4	398475	0	%		88	113	128	114	115
4-bromofluorobenzene	398475	0	%		119	118	116	126	118
Toluene-d8	398475	0	%		113	109	108	113	109

VOCs Surrogates

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.		
					1550119 Soil153 2021-04-07 BH5 S4	1550120 Soil153 2021-04-07 BH4 S3	1550121 Soil153 2021-04-07 BH4 S4
1,2-dichloroethane-d4	398475	0	%		119	115	126
4-bromofluorobenzene	398475	0	%		123	116	118
Toluene-d8	398475	0	%		105	106	106

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Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
398409	pH - CaCl2	4.98	99	90-110			0	
398412	Chromium VI	<0.20 ug/g	101	80-120	86	70-130	0	0-35
398415	Electrical Conductivity	<0.05	97	90-110			2	0-10
398419	Silver	<0.2 ug/g	116	70-130	110	70-130	0	0-20
398419	Arsenic	<1 ug/g	98	70-130	99	70-130	0	0-20
398419	Boron (total)	<5 ug/g	103	70-130	117	70-130	0	0-20
398419	Barium	<1 ug/g	109	70-130	157	70-130	3	0-20
398419	Beryllium	<1 ug/g	104	70-130	95	70-130	0	0-20
398419	Cadmium	<0.4 ug/g	114	70-130	111	70-130	0	0-20
398419	Cobalt	<1 ug/g	112	70-130	110	70-130	5	0-20
398419	Chromium Total	<1 ug/g	115	70-130	131	70-130	1	0-20
398419	Copper	<1 ug/g	103	70-130	96	70-130	4	0-20
398419	Mercury	<0.1 ug/g	90	70-130	88	70-130	0	0-20
398419	Molybdenum	<1 ug/g	107	70-130	106	70-130	0	0-20
398419	Nickel	<1 ug/g	116	70-130	108	70-130	4	0-20
398419	Lead	<1 ug/g	109	70-130	108	70-130	3	0-20
398419	Antimony	<1 ug/g	103	70-130	98	70-130	0	0-20
398419	Selenium	<1 ug/g	107	70-130	100	70-130	0	0-20
398419	Thallium	<1 ug/g	107	70-130	101	70-130	0	0-20
398419	Uranium	<0.5 ug/g	106	70-130	105	70-130	0	0-20
398419	Vanadium	<2 ug/g	110	70-130	138	70-130	1	0-20
398419	Zinc	<2 ug/g	102	70-130	88	70-130	1	0-20
398420	Sodium Adsorption Ratio	<0.01					2	
398421	Methlynaphthalene, 1-	<0.05 ug/g	82	50-140	68	50-140	0	0-40
398421	Methlynaphthalene, 2-	<0.05 ug/g	78	50-140	61	50-140	0	0-40
398421	Acenaphthene	<0.05 ug/g	78	50-140	63	50-140	0	0-40
398421	Acenaphthylene	<0.05 ug/g	77	50-140	60	50-140	0	0-40
398421	Anthracene	<0.05 ug/g	82	50-140	65	50-140	0	0-40
398421	Benz[a]anthracene	<0.05 ug/g	81	50-140	68	50-140	0	0-40
398421	Benzo[a]pyrene	<0.05 ug/g	68	50-140	55	50-140	0	0-40
398421	Benzo[b]fluoranthene	<0.05 ug/g	90	50-140	81	50-140	0	0-40
398421	Benzo[ghi]perylene	<0.05 ug/g	86	50-140	61	50-140	0	0-40
398421	Benzo[k]fluoranthene	<0.05 ug/g	94	50-140	81		0	0-40

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Certificate of Analysis

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K2C 3R8
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PO#:
Invoice to: Blumetric Environmental Inc.

Report Number: 1950700
Date Submitted: 2021-04-07
Date Reported: 2021-04-09
Project: 210294
COC #: 212441

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
398421	Chrysene	<0.05 ug/g	83	50-140	74	50-140	0	0-40
398421	Dibenz[a h]anthracene	<0.05 ug/g	87	50-140	61	50-140	0	0-40
398421	Fluoranthene	<0.05 ug/g	86	50-140	74	50-140	0	0-40
398421	Fluorene	<0.05 ug/g	82	50-140	62	50-140	0	0-40
398421	Indeno[1 2 3-cd]pyrene	<0.05 ug/g	115	50-140	62	50-140	0	0-40
398421	Naphthalene	<0.05 ug/g	73	50-140	60	50-140	0	0-40
398421	Phenanthrene	<0.05 ug/g	84	50-140	71	50-140	0	0-40
398421	Pyrene	<0.05 ug/g	85	50-140	74	50-140	0	0-40
398425	Cyanide (CN-)	<0.005 ug/g	103	75-125	103	70-130	0	0-20
398438	PHC's F2	<10 ug/g	84	80-120	100	60-140	0	0-30
398438	PHC's F3	<20 ug/g	84	80-120	100	60-140	0	0-30
398438	PHC's F4	<20 ug/g	84	80-120	100	60-140	0	0-30
398438	Moisture-Humidite		100	80-120			0	
398442	1+2-methylnaphthalene							
398445	Boron (Hot Water Soluble)	<0.5 ug/g	92	70-130	106	75-125	0	0-30
398461	PHC's F2-Napth							
398462	PHC's F3-PAH							
398475	Tetrachloroethane, 1,1,1,2-	<0.05 ug/g	99	60-130	96	50-140	0	0-50
398475	Trichloroethane, 1,1,1-	<0.05 ug/g	87	60-130	100	50-140	0	0-50
398475	Tetrachloroethane, 1,1,2,2-	<0.05 ug/g	88	60-130	92	50-140	0	0-30
398475	Trichloroethane, 1,1,2-	<0.05 ug/g	107	60-130	103	50-140	0	0-50
398475	Dichloroethane, 1,1-	<0.05 ug/g	94	60-130	107	50-140	0	0-50
398475	Dichloroethylene, 1,1-	<0.05 ug/g	83	60-130	110	50-140	0	0-50
398475	Dichlorobenzene, 1,2-	787 ug/g	98	60-130	94	50-140	0	0-50
398475	Dichloroethane, 1,2-	<0.05 ug/g	88	60-130	113	50-140	0	0-50
398475	Dichloropropane, 1,2-	6840 ug/g	100	60-130	101	50-140	0	0-50
398475	Dichlorobenzene, 1,3-	<0.05 ug/g	81	60-130	76	50-140	0	0-50
398475	Dichloropropene,1,3-	<0.05 ug/g						
398475	Dichlorobenzene, 1,4-	<0.05 ug/g	98	60-130	92	50-140	0	0-50
398475	Acetone		94	60-130	119	50-140	0	0-50
398475	Benzene	<0.02 ug/g	85	60-130	106	50-140	0	0-50
398475	Bromodichloromethane	<0.05 ug/g	106	60-130	100	50-140	0	0-50
398475	Bromoform	<0.05 ug/g	100	60-130	102	50-140	0	0-50

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1682 Woodward Drive
Carp, ON
K2C 3R8
Attention: Mr. Rob Hillier
PO#:
Invoice to: Blumetric Environmental Inc.

Report Number: 1950700
Date Submitted: 2021-04-07
Date Reported: 2021-04-09
Project: 210294
COC #: 212441

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
398475	Bromomethane	<0.05 ug/g	80	60-130	100	50-140	0	0-50
398475	Dichloroethylene, 1,2-cis-	<0.05 ug/g	89	60-130	106	50-140	0	0-50
398475	Dichloropropene,1,3-cis-	<0.05 ug/g	108	60-130	91	50-140	0	0-50
398475	Carbon Tetrachloride	<0.05 ug/g	94	60-130	102	50-140	0	0-50
398475	Chloroform	<0.05 ug/g	84	60-130	104	50-140	0	0-50
398475	Dibromochloromethane	<0.05 ug/g	106	60-130	100	50-140	0	0-50
398475	Dichlorodifluoromethane	721 ug/g	90	60-130	75	50-140	0	0-50
398475	Methylene Chloride	<0.05 ug/g	83	60-130	109	50-140	0	0-50
398475	Ethylbenzene	<0.05 ug/g	85	60-130	95	50-140	0	0-50
398475	Ethylene dibromide	<0.05 ug/g	101	60-130		50-140		0-50
398475	Hexane (n)		82	60-130	84	50-140	0	0-50
398475	Xylene, m/p-	<0.05 ug/g	90	60-130	86	50-140	0	0-50
398475	Methyl Ethyl Ketone		90	60-130	118	50-140	0	0-50
398475	Methyl Isobutyl Ketone		85	60-130	85	50-140	0	0-50
398475	Methyl tert-Butyl Ether (MTBE)		128	60-130	104	50-140	0	0-50
398475	Chlorobenzene	<0.05 ug/g	83	60-130	98	50-140	0	0-50
398475	Xylene, o-	<0.05 ug/g	90	60-130	103	50-140	0	0-50
398475	Styrene	<0.05 ug/g	103	60-130	96	50-140	0	0-50
398475	Dichloroethylene, 1,2-trans-	<0.05 ug/g	88	60-130	105	50-140	0	0-50
398475	Dichloropropene,1,3-trans-	<0.05 ug/g	103	60-130	98	50-140	0	0-50
398475	Tetrachloroethylene	<0.05 ug/g	107	60-130	93	50-140	0	0-50
398475	Toluene	<0.20 ug/g	92	60-130	107	50-140	0	0-50
398475	Trichloroethylene	<0.05 ug/g	101	60-130	99	50-140	0	0-50
398475	Trichlorofluoromethane	<0.05 ug/g	83	60-130	80	50-140	0	0-50
398475	Vinyl Chloride	<0.02 ug/g	80	60-130	117	50-140	0	0-50
398476	PHC's F1	<10 ug/g	85	80-120	107	60-140	0	0-30
398478	PHC's F1-BTEX							
398479	Xylene Mixture							
398489	1+2-methylnaphthalene							
398490	1+2-methylnaphthalene							

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Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
398409	pH - CaCl2	pH Meter	2021-04-08	2021-04-08	R_R	Ag Soil
398412	Chromium VI	FAA	2021-04-08	2021-04-08	Z_S	M US EPA 3060A
398415	Electrical Conductivity	Electrical Conductivity Mete	2021-04-08	2021-04-08	Z_S	Cond-Soil
398419	Silver	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Arsenic	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Boron (total)	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Barium	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Beryllium	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Cadmium	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Cobalt	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Chromium Total	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Copper	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Mercury	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Molybdenum	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Nickel	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Lead	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Antimony	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Selenium	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Thallium	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Uranium	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Vanadium	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398419	Zinc	ICAPQ-MS	2021-04-08	2021-04-08	SKH	EPA 200.8
398420	Sodium Adsorption Ratio	iCAP OES	2021-04-08	2021-04-08	Z_S	Ag Soil
398421	Methlynaphthalene, 1-	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Methlynaphthalene, 2-	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Acenaphthene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Acenaphthylene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Anthracene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Benz[a]anthracene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Benzo[a]pyrene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Benzo[b]fluoranthene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Benzo[ghi]perylene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Benzo[k]fluoranthene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270

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Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
398421	Chrysene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Dibenz[a h]anthracene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Fluoranthene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Fluorene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Indeno[1 2 3-cd]pyrene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Naphthalene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Phenanthrene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398421	Pyrene	GC-MS	2021-04-07	2021-04-08	C_M	P 8270
398425	Cyanide (CN-)	Skalar CN Analyzer	2021-04-08	2021-04-08	Z_S	MOECC E3015
398438	PHC's F2	GC/FID	2021-04-07	2021-04-08	N_C	CCME
398438	PHC's F3	GC/FID	2021-04-07	2021-04-08	N_C	CCME
398438	PHC's F4	GC/FID	2021-04-07	2021-04-08	N_C	CCME
398438	Moisture-Humidite	Oven	2021-04-07	2021-04-08	N_C	ASTM 2216
398442	1+2-methylnaphthalene	GC-MS	2021-04-08	2021-04-08	C_M	P 8270
398445	Boron (Hot Water Soluble)	iCAP OES	2021-04-08	2021-04-08	Z_S	MOECC E3470
398461	PHC's F2-Napth	GC/FID	2021-04-08	2021-04-08	N_C	CCME
398462	PHC's F3-PAH	GC/FID	2021-04-08	2021-04-08	N_C	CCME
398475	Tetrachloroethane, 1,1,1,2-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Trichloroethane, 1,1,1-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Tetrachloroethane, 1,1,2,2-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Trichloroethane, 1,1,2-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Dichloroethane, 1,1-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Dichloroethylene, 1,1-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Dichlorobenzene, 1,2-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Dichloroethane, 1,2-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Dichloropropane, 1,2-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Dichlorobenzene, 1,3-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Dichloropropene,1,3-	GC-MS	2021-04-08	2021-04-09	YH	V 8260B
398475	Dichlorobenzene, 1,4-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Acetone	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Benzene	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Bromodichloromethane	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Bromoform	GC-MS	2021-04-08	2021-04-08	YH	V 8260B

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Certificate of Analysis

Client: Blumetric Environmental Inc.-Carp
1682 Woodward Drive
Carp, ON
K2C 3R8
Attention: Mr. Rob Hillier
PO#:
Invoice to: Blumetric Environmental Inc.

Report Number: 1950700
Date Submitted: 2021-04-07
Date Reported: 2021-04-09
Project: 210294
COC #: 212441

Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
398475	Bromomethane	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Dichloroethylene, 1,2-cis-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Dichloropropene,1,3-cis-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Carbon Tetrachloride	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Chloroform	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Dibromochloromethane	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Dichlorodifluoromethane	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Methylene Chloride	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Ethylbenzene	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Ethylene dibromide	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Hexane (n)	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Xylene, m/p-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Methyl Ethyl Ketone	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Methyl Isobutyl Ketone	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Methyl tert-Butyl Ether (MTBE)	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Chlorobenzene	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Xylene, o-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Styrene	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Dichloroethylene, 1,2-trans-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Dichloropropene,1,3-trans-	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Tetrachloroethylene	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Toluene	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Trichloroethylene	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Trichlorofluoromethane	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398475	Vinyl Chloride	GC-MS	2021-04-08	2021-04-08	YH	V 8260B
398476	PHC's F1	GC/FID	2021-04-08	2021-04-09	YH	CCME
398478	PHC's F1-BTEX	GC/FID	2021-04-09	2021-04-09	YH	CCME
398479	Xylene Mixture	GC-MS	2021-04-09	2021-04-09	YH	V 8260B
398489	1+2-methylnaphthalene	GC-MS	2021-04-09	2021-04-09	C_M	P 8270
398490	1+2-methylnaphthalene	GC-MS	2021-04-09	2021-04-09	C_M	P 8270

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1682 Woodward Drive
Carp, ON
K2C 3R8
Attention: Mr. Rob Hillier
PO#:
Invoice to: Blumetric Environmental Inc.

Report Number: 1950700
Date Submitted: 2021-04-07
Date Reported: 2021-04-09
Project: 210294
COC #: 212441

Petroleum Hydrocarbons - CCME Checklist

Samples were analysed by Eurofins Ottawa Method AMCCME2, "Petroleum Hydrocarbons in Water and Soil, CCME/TPH", "Petroleum Hydrocarbons in Water and Soil, CCME/TPH". These methods comply with the reference method for the CCME CWS PHC and are validated for use in the laboratory. Eurofins Ottawa is accredited by CALA (ISO 17025) for all CCME F1-F4 fractions as listed in this report. Data for QC samples (blank, duplicate, spike) are available on request

Holding/Analysis Times	Yes/No	If NO, then reasons
All fractions analyzed within recommended hold times/analysis times?	Yes	
F1		
nC6 and nC10 response factors within 30% of toluene	Yes	
BTEX was subtracted from F1 fraction	Yes	
If YES, was F1-BTEX (C6-C10) reported	Yes	
F2		
nC10, nC16 and nC34 response factors within 10% of their average (F2-F4)	Yes	
Linearity within 15% (F2-F4)	Yes	
Napthalene was subtracted from F2 fraction		
If YES was F2-Napthalene reported		
F3		
PAH (selected compounds) subtracted from F3 fraction		
If YES was F3-PAH reported		
F4		
C50 response factor within 70% of nC10+nC16+nC34 average	Yes	
Chromatogram descended to baseline by retention time of C50	Yes	
if NO was F4 (C34-C50) gravimetric reported		

Note: Gravimetric heavy hydrocarbon results for soil samples is known to be highly variable. Where F4G results have been provided, the F4G result cannot be added to the gas chromatographic result.

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eurofins 212441

STANDARD CHAIN-OF-CUSTODY

146 Colonnade Road, Unit #8, Ottawa, ON, K2E 7Y1 - Phone: 613-727-5692, Fax: 613-727-5222

Eurofins Workorder #: 1950790

CLIENT INFORMATION

Company: Blumetric Environmental
Contact: Rob Hillier
Address: rhillier@blumetric.ca
Telephone: 613-296-2091 Cell:
Email: #1: B 1682 Woodward Dr. Ottawa, ON
Email: #2:
Project: 210294 Quote #: 191032

INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES ☐ NO ☐)

Company: Fax:
Contact: Email: #1: ap@blumetric.ca
Address: Email: #2:
Telephone: PO #:

TURN-AROUND TIME (Business Days)

☒ 1 Day* (100%) ☐ 2 Day** (50%) ☐ 3-5 Days (25%) ☐ 5-7 Days (Standard)

Please contact Lab in advance to determine rush availability.
*For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%.
**For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.

REGULATION/GUIDELINE REQUIRED

☐ Sanitary Sewer, City:
☐ Storm Sewer, City:
☐ ODWSOG
☐ PWQO
☐ O. Reg 347/558
☐ Other:
☐ None

☒ O. Reg 153
Table # 3, Course / Fine, Surface / subsurface.
Type: Com-Ind / Res-Park / Agri / GW / All Other / Sediment
☐ Excess Soil, Table: Type:

The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O.Reg. 153/04
☐ Yes ☐ No

The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a $25 surcharge if required information is missing (required fields are shaded in grey).

Sample ID	Date/Time Collected	Sample Matrix	# of Containers	O.Reg.153 parameters: PHC F1 - F4	BTEX	VOCs	PAHs	PCBs	Metals + Inorganics	Metals only	RN# (Lab Use Only)
BH7 SS2	2021/04/07 AM	S	4	X		X	X		X		1550914
BH7 SS3											15
BH6 SS2											16
BH6 SS3											17
BH5 SS3											18
BH5 SS4											19
BH4 SS3											20
BH4 SS4											21

	PRINT	SIGN	DATE/TIME	TEMP (°C)
Sampled By:	Luke Johnston			
Relinquished By:	Connor McCutland		2021/04/07 12:00	16
Received By:			7/4/21 @ 12:30	

COMMENTS:

CUSTODY SEAL: ☐ YES ☐ NO Ice packs submitted: ☐ Yes ☐ No

Certificate of Analysis

eurofins | Environment Testing

Client: Blumetric Environmental Inc.-Carp
1682 Woodward Drive
Carp, ON
K2C 3R8
Attention: Mr. Rob Hillier
Invoice to: Blumetric Environmental Inc.
PO#:

Report Number:	1950647
Date Submitted:	2021-04-06
Date Reported:	2021-04-08
Project:	210294
COC #:	212438
Temperature (C):	10
Custody Seal:	

Dear Rob Hillier:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Charlie Long Qu 2021.04.08 18:24:48 -04'00'

Long Qu, Organics Supervisor

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated
.
Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accrteditation. The scope is available at http://www.cala.ca/scopes/2602.pdf

Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Certificate of Analysis

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Project: 210294
COC #: 212438

Exceedence Summary

Sample I.D.	Analyte	Result	Units	Criteria

Results relate only to the parameters tested on the samples submitted.
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Date Submitted: 2021-04-06
Date Reported: 2021-04-08
Project: 210294
COC #: 212438

Guideline = O.Reg 153-T3-Non-Pot GW-Med/Fine

Hydrocarbons

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1549916	1549917	1549918
Sample Matrix					GW153	GW153	GW153
Sample Type							
Sample Date					2021-04-06 12:32	2021-04-06 13:53	2021-04-06
Sampling Time							
Sample I.D.					MW1	MW2	DUP1
PHC's F1	398429	20	ug/L	STD 750	<20	<20	<20
PHC's F1-BTEX	398431	20	ug/L		<20	<20	<20
PHC's F2	398345	20	ug/L	STD 150	<20	<20	<20
PHC's F2-Napth	398461	20	ug/L		<20	<20	<20
PHC's F3	398345	50	ug/L	STD 500	<50	<50	<50
PHC's F3-PAH	398462	50	ug/L		<50	<50	<50
PHC's F4	398345	50	ug/L	STD 500	<50	<50	<50

Metals

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1549916	1549917	1549918
Sample Matrix					GW153	GW153	GW153
Sample Type							
Sample Date					2021-04-06 12:32	2021-04-06 13:53	2021-04-06
Sampling Time							
Sample I.D.					MW1	MW2	DUP1
Antimony	398337	0.5	ug/L	STD 20000	<0.5	<0.5	<0.5
Arsenic	398337	1	ug/L	STD 1900	1	<1	<1
Barium	398337	10	ug/L	STD 29000	30	130	130
Beryllium	398337	0.5	ug/L	STD 67	<0.5	<0.5	<0.5
Boron (total)	398337	10	ug/L	STD 45000	50	40	30
Cadmium	398337	0.1	ug/L	STD 2.7	<0.1	<0.1	<0.1
Chromium Total	398337	1	ug/L	STD 810	<1	<1	<1
Chromium VI	398355	10	ug/L	STD 140	<10	<10	<10
Cobalt	398337	0.2	ug/L	STD 66	3.3	0.5	0.5
Copper	398337	1	ug/L	STD 87	<1	3	3
Lead	398337	1	ug/L	STD 25	<1	<1	<1
Mercury	398337	0.1	ug/L	STD 2.8	<0.1	<0.1	<0.1

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Project: 210294
COC #: 212438

Guideline = O.Reg 153-T3-Non-Pot GW-Med/Fine

Metals

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1549916	1549917	1549918
Sample Matrix					GW153	GW153	GW153
Sample Type							
Sample Date					2021-04-06	2021-04-06	2021-04-06
Sampling Time					12:32	13:53	
Sample I.D.					MW1	MW2	DUP1
Molybdenum	398337	5	ug/L	STD 9200	<5	<5	<5
Nickel	398337	5	ug/L	STD 490	<5	<5	<5
Selenium	398337	1	ug/L	STD 63	<1	<1	<1
Silver	398337	0.1	ug/L	STD 1.5	<0.1	<0.1	<0.1
Sodium	398323	2000	ug/L	STD 2300000	65000	89000	89000
Thallium	398337	0.1	ug/L	STD 510	<0.1	<0.1	<0.1
Uranium	398337	1	ug/L	STD 420	5	4	3
Vanadium	398337	1	ug/L	STD 250	<1	<1	<1
Zinc	398337	10	ug/L	STD 1100	<10	<10	<10

PAH

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1549916	1549917	1549918
Sample Matrix					GW153	GW153	GW153
Sample Type							
Sample Date					2021-04-06	2021-04-06	2021-04-06
Sampling Time					12:32	13:53	
Sample I.D.					MW1	MW2	DUP1
1+2-methylnaphthalene	398442	0.1	ug/L		<0.1	<0.1	<0.1
Acenaphthene	398427	0.1	ug/L	STD 1700	<0.1	<0.1	<0.1
Acenaphthylene	398427	0.1	ug/L	STD 1.8	<0.1	<0.1	<0.1
Anthracene	398427	0.1	ug/L	STD 2.4	<0.1	<0.1	<0.1
Benz[a]anthracene	398427	0.1	ug/L	STD 4.7	<0.1	<0.1	<0.1
Benzo[a]pyrene	398427	0.01	ug/L	STD 0.81	<0.01	<0.01	<0.01
Benzo[b]fluoranthene	398427	0.05	ug/L	STD 0.75	<0.05	<0.05	<0.05
Benzo[ghi]perylene	398427	0.1	ug/L	STD 0.2	<0.1	<0.1	<0.1
Benzo[k]fluoranthene	398427	0.05	ug/L	STD 0.4	<0.05	<0.05	<0.05
Chrysene	398427	0.05	ug/L	STD 1	<0.05	<0.05	<0.05

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Project: 210294
COC #: 212438

Guideline = O.Reg 153-T3-Non-Pot GW-Med/Fine

PAH

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1549916	1549917	1549918
Sample Matrix					GW153	GW153	GW153
Sample Type							
Sample Date					2021-04-06	2021-04-06	2021-04-06
Sampling Time					12:32	13:53	
Sample I.D.					MW1	MW2	DUP1
Dibenz[a h]anthracene	398427	0.1	ug/L	STD 0.52	<0.1	<0.1	<0.1
Fluoranthene	398427	0.1	ug/L	STD 130	<0.1	<0.1	<0.1
Fluorene	398427	0.1	ug/L	STD 400	<0.1	<0.1	<0.1
Indeno[1 2 3-cd]pyrene	398427	0.1	ug/L	STD 0.2	<0.1	<0.1	<0.1
Methlynaphthalene, 1-	398427	0.1	ug/L	STD 1800	<0.1	<0.1	<0.1
Methlynaphthalene, 2-	398427	0.1	ug/L	STD 1800	<0.1	<0.1	<0.1
Naphthalene	398427	0.1	ug/L	STD 6400	<0.1	<0.1	<0.1
Phenanthrene	398427	0.1	ug/L	STD 580	<0.1	<0.1	<0.1
Pyrene	398427	0.1	ug/L	STD 68	<0.1	<0.1	<0.1

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1549916	1549917	1549918
Sample Matrix					GW153	GW153	GW153
Sample Type							
Sample Date					2021-04-06	2021-04-06	2021-04-06
Sampling Time					12:32	13:53	
Sample I.D.					MW1	MW2	DUP1
Acetone	398344	30	ug/L	STD 130000	<30	<30	<30
Benzene	398344	0.5	ug/L	STD 430	<0.5	<0.5	<0.5
Bromodichloromethane	398344	0.3	ug/L	STD 85000	<0.3	<0.3	<0.3
Bromoform	398344	0.4	ug/L	STD 770	<0.4	<0.4	<0.4
Bromomethane	398344	0.5	ug/L	STD 56	<0.5	<0.5	<0.5
Carbon Tetrachloride	398344	0.2	ug/L	STD 8.4	<0.2	<0.2	<0.2
Chlorobenzene	398344	0.5	ug/L	STD 630	<0.5	<0.5	<0.5
Chloroform	398344	0.5	ug/L	STD 22	<0.5	<0.5	<0.5
Dibromochloromethane	398344	0.3	ug/L	STD 82000	<0.3	<0.3	<0.3
Dichlorobenzene, 1,2-	398344	0.4	ug/L	STD 9600	<0.4	<0.4	<0.4

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Invoice to: Blumetric Environmental Inc.

Report Number: 1950647
Date Submitted: 2021-04-06
Date Reported: 2021-04-08
Project: 210294
COC #: 212438

Guideline = O.Reg 153-T3-Non-Pot GW-Med/Fine

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1549916 Sample Matrix GW153 Sample Type Sample Date 2021-04-06 Sampling Time 12:32 Sample I.D. MW1	Lab I.D. 1549917 Sample Matrix GW153 Sample Type Sample Date 2021-04-06 Sampling Time 13:53 Sample I.D. MW2	Lab I.D. 1549918 Sample Matrix GW153 Sample Type Sample Date 2021-04-06 Sampling Time Sample I.D. DUP1
Dichlorobenzene, 1,3-	398344	0.4	ug/L	STD 9600	<0.4	<0.4	<0.4
Dichlorobenzene, 1,4-	398344	0.4	ug/L	STD 67	<0.4	<0.4	<0.4
Dichlorodifluoromethane	398344	0.5	ug/L	STD 4400	<0.5	<0.5	<0.5
Dichloroethane, 1,1-	398344	0.4	ug/L	STD 3100	<0.4	<0.4	<0.4
Dichloroethane, 1,2-	398344	0.2	ug/L	STD 12	<0.2	<0.2	<0.2
Dichloroethylene, 1,1-	398344	0.5	ug/L	STD 17	<0.5	<0.5	<0.5
Dichloroethylene, 1,2-cis-	398344	0.4	ug/L	STD 17	<0.4	<0.4	<0.4
Dichloroethylene, 1,2-trans-	398344	0.4	ug/L	STD 17	<0.4	<0.4	<0.4
Dichloropropane, 1,2-	398344	0.5	ug/L	STD 140	<0.5	<0.5	<0.5
Dichloropropene,1,3-	398344	0.3	ug/L	STD 45	<0.3	<0.3	<0.3
Dichloropropene,1,3-cis-	398344	0.2	ug/L		<0.2	<0.2	<0.2
Dichloropropene,1,3-trans-	398344	0.2	ug/L		<0.2	<0.2	<0.2
Ethylbenzene	398344	0.5	ug/L	STD 2300	<0.5	<0.5	<0.5
Ethylene dibromide	398344	0.2	ug/L	STD 0.83	<0.2	<0.2	<0.2
Hexane (n)	398344	5	ug/L	STD 520	<5	<5	<5
Methyl Ethyl Ketone	398344	10	ug/L	STD 1500000	<10	<10	<10
Methyl Isobutyl Ketone	398344	10	ug/L	STD 580000	<10	<10	<10
Methyl tert-Butyl Ether (MTBE)	398344	2	ug/L	STD 1400	<2	<2	<2
Methylene Chloride	398344	4.0	ug/L	STD 5500	<4.0	<4.0	<4.0
Styrene	398344	0.5	ug/L	STD 9100	<0.5	<0.5	<0.5
Tetrachloroethane, 1,1,1,2-	398344	0.5	ug/L	STD 28	<0.5	<0.5	<0.5
Tetrachloroethane, 1,1,2,2-	398344	0.5	ug/L	STD 15	<0.5	<0.5	<0.5
Tetrachloroethylene	398344	0.3	ug/L	STD 17	<0.3	<0.3	<0.3
Toluene	398344	0.5	ug/L	STD 18000	<0.5	<0.5	<0.5

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Client: Blumetric Environmental Inc.-Carp
1682 Woodward Drive
Carp, ON
K2C 3R8
Attention: Mr. Rob Hillier
PO#:
Invoice to: Blumetric Environmental Inc.

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Guideline = O.Reg 153-T3-Non-Pot GW-Med/Fine

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1549916	1549917	1549918
Sample Matrix					GW153	GW153	GW153
Sample Type							
Sample Date					2021-04-06	2021-04-06	2021-04-06
Sampling Time					12:32	13:53	
Sample I.D.					MW1	MW2	DUP1
Trichloroethane, 1,1,1-	398344	0.4	ug/L	STD 6700	<0.4	<0.4	<0.4
Trichloroethane, 1,1,2-	398344	0.4	ug/L	STD 30	<0.4	<0.4	<0.4
Trichloroethylene	398344	0.3	ug/L	STD 17	<0.3	<0.3	<0.3
Trichlorofluoromethane	398344	0.5	ug/L	STD 2500	<0.5	<0.5	<0.5
Vinyl Chloride	398344	0.2	ug/L	STD 1.7	<0.2	<0.2	<0.2
Xylene Mixture	398352	0.5	ug/L	STD 4200	<0.5	<0.5	<0.5
Xylene, m/p-	398344	0.4	ug/L		<0.4	<0.4	<0.4
Xylene, o-	398344	0.4	ug/L		<0.4	<0.4	<0.4

Inorganics

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1549916	1549917	1549918
Sample Matrix					GW153	GW153	GW153
Sample Type							
Sample Date					2021-04-06	2021-04-06	2021-04-06
Sampling Time					12:32	13:53	
Sample I.D.					MW1	MW2	DUP1
Chloride	398327	1000	ug/L	STD 2300000	46000		
	398413	1000	ug/L	STD 2300000		126000	121000
Conductivity	398404	5	uS/cm		1130	1190	1180
Cyanide (CN-)	398298	5	ug/L	STD 66	<5	<5	<5
pH	398404	1.00			7.02	7.30	7.33

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PHC Surrogate

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.		
					1549916 GW153 2021-04-06 12:32 MW1	1549917 GW153 2021-04-06 13:53 MW2	1549918 GW153 2021-04-06 DUP1
Alpha-androstrane	398345	0	%		101	99	98

VOCs Surrogates

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.		
					1549916 GW153 2021-04-06 12:32 MW1	1549917 GW153 2021-04-06 13:53 MW2	1549918 GW153 2021-04-06 DUP1
1,2-dichloroethane-d4	398344	0	%		119	117	115
4-bromofluorobenzene	398344	0	%		100	100	98
Toluene-d8	398344	0	%		88	89	91

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Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
398298	Cyanide (CN-)	<5 ug/L	99	75-125	97	80-120	0	0-20
398323	Sodium	<2000 ug/L	114	82-118	98	80-120	0	0-20
398327	Chloride	<1000 ug/L	100	90-110	101	80-120	1	0-20
398337	Silver	<0.1 ug/L	110	80-120	108	70-130	0	0-20
398337	Arsenic	<1 ug/L	101	80-120	106	70-130	0	0-20
398337	Boron (total)	<10 ug/L	109	80-120	142	80-120	0	0-20
398337	Barium	<10 ug/L	104	80-120	93	70-130	0	0-20
398337	Beryllium	<0.5 ug/L	108	80-120	114	70-130	0	0-20
398337	Cadmium	<0.1 ug/L	103	80-120	109	70-130	0	0-20
398337	Cobalt	<0.2 ug/L	103	80-120	103	70-130	0	0-20
398337	Chromium Total	<1 ug/L	104	80-120	105	70-130	0	0-20
398337	Copper	<1 ug/L	102	80-120	101	70-130	0	0-20
398337	Mercury	<0.1 ug/L	128	80-120	92	70-130	0	0-20
398337	Molybdenum	<5 ug/L	105	80-120	87	70-130	0	0-20
398337	Nickel	<5 ug/L	103	80-120	103	70-130	0	0-20
398337	Lead	<1 ug/L	103	80-120	100	70-130	0	0-20
398337	Antimony	<0.5 ug/L	102	80-120	98	70-130	0	0-20
398337	Selenium	<1 ug/L	97	80-120	110	70-130	0	0-20
398337	Thallium	<0.1 ug/L	104	80-120	101	70-130	0	0-20
398337	Uranium	<1 ug/L	104	80-120	100	70-130	0	0-20
398337	Vanadium	<1 ug/L	106	80-120	105	70-130	0	0-20
398337	Zinc	<10 ug/L	101	80-120	107	70-130	0	0-20
398344	Tetrachloroethane, 1,1,1,2-	<0.5 ug/L	86	60-130	95	50-140	0	0-30
398344	Trichloroethane, 1,1,1-	<0.4 ug/L	99	60-130	105	50-140	0	0-30
398344	Tetrachloroethane, 1,1,2,2-	<0.5 ug/L	100	60-130	113	50-140	0	0-30
398344	Trichloroethane, 1,1,2-	<0.4 ug/L	97	60-130	112	50-140	0	0-30
398344	Dichloroethane, 1,1-	<0.4 ug/L	100	60-130	109	50-140	0	0-30
398344	Dichloroethylene, 1,1-	<0.5 ug/L	100	60-130	91	50-140	0	0-30
398344	Dichlorobenzene, 1,2-	<0.4 ug/L	99	60-130	103	50-140	0	0-30
398344	Dichloroethane, 1,2-	<0.2 ug/L	101	60-130	114	50-140	0	0-30
398344	Dichloropropane, 1,2-	<0.5 ug/L	98	60-130	116	50-140	0	0-30
398344	Dichlorobenzene, 1,3-	<0.4 ug/L	97	60-130	100	50-140	0	0-30
398344	Dichloropropene,1,3-							

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K2C 3R8
Attention: Mr. Rob Hillier
PO#:
Invoice to: Blumetric Environmental Inc.

Report Number: 1950647
Date Submitted: 2021-04-06
Date Reported: 2021-04-08
Project: 210294
COC #: 212438

Quality Assurance Summary

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398344	Dichlorobenzene, 1,4-	<0.4 ug/L	97	60-130	100	50-140	0	0-30
398344	Acetone	<30 ug/L		60-130	118	50-140	0	0-30
398344	Benzene	<0.5 ug/L	96	60-130	104	50-140	0	0-30
398344	Bromodichloromethane	<0.3 ug/L	98	60-130	118	50-140	0	0-30
398344	Bromoform	<0.4 ug/L	92	60-130	109	50-140	0	0-30
398344	Bromomethane	<0.5 ug/L	82	60-130	85	50-140	0	0-30
398344	Dichloroethylene, 1,2-cis-	<0.4 ug/L	96	60-130	104	50-140	0	0-30
398344	Dichloropropene,1,3-cis-	<0.2 ug/L	94	60-130	109	50-140	0	0-30
398344	Carbon Tetrachloride	<0.2 ug/L	98	60-130	98	50-140	0	0-30
398344	Chloroform	<0.5 ug/L	100	60-130	113	50-140	0	0-30
398344	Dibromochloromethane	<0.3 ug/L	94	60-130	108	50-140	0	0-30
398344	Dichlorodifluoromethane	<0.5 ug/L	96	60-130	84	50-140	0	0-30
398344	Methylene Chloride	<4.0 ug/L	117	60-130	117	50-140	0	0-30
398344	Ethylbenzene	<0.5 ug/L	84	60-130	84	50-140	0	0-30
398344	Ethylene dibromide	<0.2 ug/L	96	60-130	108	50-140	0	0-30
398344	Hexane (n)	<5 ug/L	110	60-130	113	50-140	0	0-30
398344	Xylene, m/p-	<0.4 ug/L	83	60-130	85	50-140	0	0-30
398344	Methyl Ethyl Ketone	<10 ug/L	100	60-130	109	50-140	0	0-30
398344	Methyl Isobutyl Ketone	<10 ug/L		60-130	112	50-140	0	0-30
398344	Methyl tert-Butyl Ether (MTBE)	<2 ug/L	100	60-130	115	50-140	0	0-30
398344	Chlorobenzene	<0.5 ug/L	95	60-130	99	50-140	0	0-30
398344	Xylene, o-	<0.4 ug/L	82	60-130	86	50-140	0	0-30
398344	Styrene	<0.5 ug/L	81	60-130	87	50-140	0	0-30
398344	Dichloroethylene, 1,2-trans-	<0.4 ug/L	98	60-130	95	50-140	0	0-30
398344	Dichloropropene,1,3-trans-	<0.2 ug/L	94	60-130	113	50-140	0	0-30
398344	Tetrachloroethylene	<0.3 ug/L	89	60-130	95	50-140	0	0-30
398344	Toluene	<0.5 ug/L	92	60-130	105	50-140	0	0-30
398344	Trichloroethylene	<0.3 ug/L	93	60-130	103	50-140	0	0-30
398344	Trichlorofluoromethane	<0.5 ug/L	96	60-130	99	50-140	0	0-30
398344	Vinyl Chloride	<0.2 ug/L	90	60-130	86	50-140	0	0-30
398345	PHC's F2	<20 ug/L	100	60-140		60-140		0-30
398345	PHC's F3	<50 ug/L	100	60-140		60-140		0-30
398345	PHC's F4	<50 ug/L	100	60-140		60-140		0-30

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Quality Assurance Summary

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398352	Xylene Mixture							
398355	Chromium VI	<10 ug/L	94	80-120	100	70-130	0	0-35
398404	Conductivity	<5 uS/cm	99	95-105			0	0-20
398404	pH	6.62	100	90-110			0	0-5
398413	Chloride	<1000 ug/L	100	90-110	100	80-120	3	0-20
398427	Methlynaphthalene, 1-	<0.1 ug/L	76	50-140		50-140		0-30
398427	Methlynaphthalene, 2-	<0.1 ug/L	70	50-140		50-140		0-30
398427	Acenaphthene	<0.1 ug/L	72	50-140		50-140		0-30
398427	Acenaphthylene	<0.1 ug/L	68	50-140		50-140		0-30
398427	Anthracene	<0.1 ug/L	74	50-140		50-140		0-30
398427	Benz[a]anthracene	<0.1 ug/L	80	50-140		50-140		0-30
398427	Benzo[a]pyrene	<0.01 ug/L	63	50-140		50-140		0-30
398427	Benzo[b]fluoranthene	<0.05 ug/L	81	50-140		50-140		0-30
398427	Benzo[ghi]perylene	<0.1 ug/L	76	50-140		50-140		0-30
398427	Benzo[k]fluoranthene	<0.05 ug/L	96	50-140		50-140		0-30
398427	Chrysene	<0.05 ug/L	82	50-140		50-140		0-30
398427	Dibenz[a h]anthracene	<0.1 ug/L	72	50-140		50-140		0-30
398427	Fluoranthene	<0.1 ug/L	80	50-140		50-140		0-30
398427	Fluorene	<0.1 ug/L	70	50-140		50-140		0-30
398427	Indeno[1 2 3-cd]pyrene	<0.1 ug/L	76	50-140		50-140		0-30
398427	Naphthalene	<0.1 ug/L	70	50-140		50-140		0-30
398427	Phenanthrene	<0.1 ug/L	78	50-140		50-140		0-30
398427	Pyrene	<0.1 ug/L	80	50-140		50-140		0-30
398429	PHC's F1	<20 ug/L	85	60-140	107	60-140	0	0-30
398431	PHC's F1-BTEX							
398442	1+2-methylnaphthalene							
398461	PHC's F2-Napth							
398462	PHC's F3-PAH							

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Certificate of Analysis

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Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
398298	Cyanide (CN-)	Skalar CN Analyzer	2021-04-07	2021-04-07	AET	SM4500-CNC/MOE E3015
398323	Sodium	ICP-OES	2021-04-07	2021-04-07	Z_S	M SM3120B-3500C
398327	Chloride	IC	2021-04-07	2021-04-07	R_R	SM 4110
398337	Silver	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Arsenic	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Boron (total)	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Barium	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Beryllium	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Cadmium	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Cobalt	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Chromium Total	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Copper	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Mercury	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Molybdenum	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Nickel	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Lead	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Antimony	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Selenium	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Thallium	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Uranium	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Vanadium	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Zinc	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398344	Tetrachloroethane, 1,1,1,2-	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Trichloroethane, 1,1,1-	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Tetrachloroethane, 1,1,2,2-	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Trichloroethane, 1,1,2-	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Dichloroethane, 1,1-	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Dichloroethylene, 1,1-	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Dichlorobenzene, 1,2-	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Dichloroethane, 1,2-	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Dichloropropane, 1,2-	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Dichlorobenzene, 1,3-	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Dichloropropene,1,3-	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260

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Certificate of Analysis

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PO#:
Invoice to: Blumetric Environmental Inc.

Report Number: 1950647
Date Submitted: 2021-04-06
Date Reported: 2021-04-08
Project: 210294
COC #: 212438

Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
398344	Dichlorobenzene, 1,4-	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Acetone	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Benzene	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Bromodichloromethane	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Bromoform	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Bromomethane	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Dichloroethylene, 1,2-cis-	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Dichloropropene,1,3-cis-	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Carbon Tetrachloride	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Chloroform	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Dibromochloromethane	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Dichlorodifluoromethane	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Methylene Chloride	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Ethylbenzene	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Ethylene dibromide	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Hexane (n)	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Xylene, m/p-	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Methyl Ethyl Ketone	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Methyl Isobutyl Ketone	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Methyl tert-Butyl Ether (MTBE)	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Chlorobenzene	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Xylene, o-	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Styrene	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Dichloroethylene, 1,2-trans-	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Dichloropropene,1,3-trans-	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Tetrachloroethylene	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Toluene	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Trichloroethylene	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Trichlorofluoromethane	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398344	Vinyl Chloride	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398345	PHC's F2	GC/FID	2021-04-06	2021-04-07	N_C	CCME O.Reg 153/04
398345	PHC's F3	GC/FID	2021-04-06	2021-04-07	N_C	CCME O.Reg 153/04
398345	PHC's F4	GC/FID	2021-04-06	2021-04-07	N_C	CCME O.Reg 153/04

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Certificate of Analysis

Client: Blumetric Environmental Inc.-Carp
1682 Woodward Drive
Carp, ON
K2C 3R8
Attention: Mr. Rob Hillier
PO#:
Invoice to: Blumetric Environmental Inc.

Report Number: 1950647
Date Submitted: 2021-04-06
Date Reported: 2021-04-08
Project: 210294
COC #: 212438

Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
398352	Xylene Mixture	GC-MS	2021-04-07	2021-04-07	YH	EPA 8260
398355	Chromium VI		2021-04-07	2021-04-07	SKH	SM 3500-Cr B
398404	Conductivity	Auto Titrator	2021-04-08	2021-04-08	AET	C SM2510B
398404	pH	Auto Titrator	2021-04-08	2021-04-08	AET	SM2320,2510,4500H/F
398413	Chloride	IC	2021-04-08	2021-04-08	R_R	SM 4110
398427	Methlynaphthalene, 1-	GC-MS	2021-04-07	2021-04-07	C_M	P 8270
398427	Methlynaphthalene, 2-	GC-MS	2021-04-07	2021-04-07	C_M	P 8270
398427	Acenaphthene	GC-MS	2021-04-07	2021-04-07	C_M	P 8270
398427	Acenaphthylene	GC-MS	2021-04-07	2021-04-07	C_M	P 8270
398427	Anthracene	GC-MS	2021-04-07	2021-04-07	C_M	P 8270
398427	Benz[a]anthracene	GC-MS	2021-04-07	2021-04-07	C_M	P 8270
398427	Benzo[a]pyrene	GC-MS	2021-04-07	2021-04-07	C_M	P 8270
398427	Benzo[b]fluoranthene	GC-MS	2021-04-07	2021-04-07	C_M	P 8270
398427	Benzo[ghi]perylene	GC-MS	2021-04-07	2021-04-07	C_M	P 8270
398427	Benzo[k]fluoranthene	GC-MS	2021-04-07	2021-04-07	C_M	P 8270
398427	Chrysene	GC-MS	2021-04-07	2021-04-07	C_M	P 8270
398427	Dibenz[a h]anthracene	GC-MS	2021-04-07	2021-04-07	C_M	P 8270
398427	Fluoranthene	GC-MS	2021-04-07	2021-04-07	C_M	P 8270
398427	Fluorene	GC-MS	2021-04-07	2021-04-07	C_M	P 8270
398427	Indeno[1 2 3-cd]pyrene	GC-MS	2021-04-07	2021-04-07	C_M	P 8270
398427	Naphthalene	GC-MS	2021-04-07	2021-04-07	C_M	P 8270
398427	Phenanthrene	GC-MS	2021-04-07	2021-04-07	C_M	P 8270
398427	Pyrene	GC-MS	2021-04-07	2021-04-07	C_M	P 8270
398429	PHC's F1	GC/FID	2021-04-07	2021-04-07	YH	CCME O.Reg 153/04
398431	PHC's F1-BTEX	GC/FID	2021-04-08	2021-04-08	YH	CCME O.Reg 153/04
398442	1+2-methylnaphthalene	GC-MS	2021-04-08	2021-04-08	C_M	P 8270
398461	PHC's F2-Napth	GC/FID	2021-04-08	2021-04-08	N_C	CCME O.Reg 153/04
398462	PHC's F3-PAH	GC/FID	2021-04-08	2021-04-08	N_C	CCME O.Reg 153/04

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Petroleum Hydrocarbons - CCME Checklist

Samples were analysed by Eurofins Ottawa Method AMCCME2, "Petroleum Hydrocarbons in Water and Soil, CCME/TPH", "Petroleum Hydrocarbons in Water and Soil, CCME/TPH". These methods comply with the reference method for the CCME CWS PHC and are validated for use in the laboratory. Eurofins Ottawa is accredited by CALA (ISO 17025) for all CCME F1-F4 fractions as listed in this report. Data for QC samples (blank, duplicate, spike) are available on request

Holding/Analysis Times	Yes/No	If NO, then reasons
All fractions analyzed within recommended hold times/analysis times?	Yes	
F1		
nC6 and nC10 response factors within 30% of toluene	Yes	
BTEX was subtracted from F1 fraction	Yes	
If YES, was F1-BTEX (C6-C10) reported	Yes	
F2		
nC10, nC16 and nC34 response factors within 10% of their average (F2-F4)	Yes	
Linearity within 15% (F2-F4)	Yes	
Napthalene was subtracted from F2 fraction		
If YES was F2-Napthalene reported		
F3		
PAH (selected compounds) subtracted from F3 fraction		
If YES was F3-PAH reported		
F4		
C50 response factor within 70% of nC10+nC16+nC34 average	Yes	
Chromatogram descended to baseline by retention time of C50	Yes	
if NO was F4 (C34-C50) gravimetric reported		

Note: Gravimetric heavy hydrocarbon results for soil samples is known to be highly variable. Where F4G results have been provided, the F4G result cannot be added to the gas chromatographic result.

eurofins 212438

STANDARD CHAIN-OF-CUSTODY

146 Colonnade Road, Unit #8, Ottawa, ON, K2E 7Y1 - Phone: 613-727-5692, Fax: 613-727-5222

Eurofins Workorder #: 1950647

CLIENT INFORMATION

Company: Blumetric
Contact: Rob Hillier
Address: 1682 Woodward Dr. Ottawa, ON
Telephone: 613-296-2091 Cell:
Email: #1: rhillier@blumetric.ca
Email: #2:
Project: 210294 Quote #: 191032

INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES ☐ NO ☐)

Company: Blumetric
Contact: Accounts Payable
Address:
Telephone:
Fax:
Email: #1: ap@blumetric.ca
Email: #2:
PO #: 210294

TURN-AROUND TIME (Business Days)

☐ 1 Day* (100%) ☒ 2 Day** (50%) ☐ 3-5 Days (25%) ☐ 5-7 Days (Standard)

Please contact Lab in advance to determine rush availability.
*For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%.
**For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.

REGULATION/GUIDELINE REQUIRED

☐ Sanitary Sewer, City:
☐ Storm Sewer, City:
☐ ODWSOG
☐ PWQO
☐ O. Reg 347/558
☐ Other:
☐ None

☒ O. Reg 153
Table # 3, Course / Fine, Surface / subsurface.
Type: Com-Ind / Res-Park / Agri / GW / All Other / Sediment
☐ Excess Soil, Table: Type:

The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O.Reg. 153/04
☐ Yes ☐ No

The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a $25 surcharge if required information is missing (required fields are shaded in grey).

Sample ID	Date/Time Collected	Sample Matrix	# of Containers	O.Reg.153 parameters: PHC F1 - F4	BTEX	VOCs	PAHs	PCBs	Metals + Inorganics	Metals only	RN# (Lab Use Only)
MW1	6 Apr 2021 12:32	Gw	9	X		X	X		X		1549916
MW2	13:53	↓	↓	X		X	X		X		17
DUP1	↓	↓	↓	X		X	X		X		18

	PRINT	SIGN	DATE/TIME	TEMP (°C)
Sampled By:				
Relinquished By:	LAKE JOHNSTON		6 Apr 2021 4:40	
Received By:				

COMMENTS: Metals, mercury, and chromium were field filtered

CUSTODY SEAL: ☐ YES ☐ NO Ice packs submitted: ☐ Yes ☐ No

401 Magnetic Drive, Unit #1, North York, ON, M3J 3H9 - Telephone: 416-661-5287 • 380 Vansickle Road, Unit #630, St. Catharines, ON, L2S 0B5 - Telephone: 905-680-8887 • 608 Norris Court, Kingston, ON, K7P 2R9 - Telephone: 613-634-9307

Certificate of Analysis

eurofins | Environment Testing

Client: Blumetric Environmental Inc.-Carp
1682 Woodward Drive
Carp, ON
K2C 3R8
Attention: Mr. Rob Hillier
Invoice to: Blumetric Environmental Inc.
PO#:

Report Number:	1950698
Date Submitted:	2021-04-07
Date Reported:	2021-04-09
Project:	210294
COC #:	213222
Temperature (C):	16
Custody Seal:	

Dear Rob Hillier:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Sample Comment Summary

Sample ID: 1550111	MW6-21	Metals MRL elevated due to matrix interference.

Report Comments:

Charlie Long Qu 2021.04.09 13:15:50 -04'00'

Long Qu, Organics Supervisor

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated
.
Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accrteditation. The scope is available at http://www.cala.ca/scopes/2602.pdf

Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

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O.Reg 153-T3-Non-Pot GW-Med/Fine

Exceedence Summary

Sample I.D.	Analyte	Result	Units	Criteria
Inorganics				
MW6-21	Chloride	4570000	ug/L	STD 2300000
Metals				
MW6-21	Sodium	2360000	ug/L	STD 2300000

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Guideline = O.Reg 153-T3-Non-Pot GW-Med/Fine

Hydrocarbons

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.	
					1550110 GW153 2021-04-07 09:15 MW5-21	1550111 GW153 2021-04-07 10:31 MW6-21
PHC's F1	398429	20	ug/L	STD 750	<20	<20
PHC's F1-BTEX	398431	20	ug/L		<20	<20
PHC's F2	398502	20	ug/L	STD 150	<20	<20
PHC's F2-Napth	398503	20	ug/L		<20	<20
PHC's F3	398502	50	ug/L	STD 500	<50	<50
PHC's F3-PAH	398504	50	ug/L		<50	<50
PHC's F4	398502	50	ug/L	STD 500	<50	<50

Metals

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.	
					1550110 GW153 2021-04-07 09:15 MW5-21	1550111 GW153 2021-04-07 10:31 MW6-21
Antimony	398337	0.5	ug/L	STD 20000	0.7	
		2	ug/L	STD 20000		<2
Arsenic	398337	1	ug/L	STD 1900	<1	
		5	ug/L	STD 1900		<5
Barium	398337	10	ug/L	STD 29000	60	
		50	ug/L	STD 29000		270
Beryllium	398337	0.5	ug/L	STD 67	<0.5	
		2	ug/L	STD 67		<2
Boron (total)	398337	10	ug/L	STD 45000	60	
		50	ug/L	STD 45000		<50
Cadmium	398337	0.1	ug/L	STD 2.7	<0.1	
		0.5	ug/L	STD 2.7		<0.5

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Metals

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.	
					1550110 GW153 2021-04-07 09:15 MW5-21	1550111 GW153 2021-04-07 10:31 MW6-21
Chromium Total	398337	1	ug/L	STD 810	<1	
		5	ug/L	STD 810		<5
Chromium VI	398355	10	ug/L	STD 140	<10	<10
Cobalt	398337	0.2	ug/L	STD 66	0.4	
		1	ug/L	STD 66		4
Copper	398337	1	ug/L	STD 87	1	
		5	ug/L	STD 87		<5
Lead	398337	1	ug/L	STD 25	<1	
		5	ug/L	STD 25		<5
Mercury	398337	0.1	ug/L	STD 2.8	<0.1	
	398396	0.1	ug/L	STD 2.8		<0.1
Molybdenum	398337	20	ug/L	STD 9200		<20
		5	ug/L	STD 9200	11	
Nickel	398337	20	ug/L	STD 490		<20
		5	ug/L	STD 490	<5	
Selenium	398337	1	ug/L	STD 63	<1	
		5	ug/L	STD 63		<5
Silver	398337	0.1	ug/L	STD 1.5	<0.1	
		0.5	ug/L	STD 1.5		<0.5
Sodium	398385	2000	ug/L	STD 2300000	323000	2360000*
Thallium	398337	0.1	ug/L	STD 510	<0.1	
		0.5	ug/L	STD 510		<0.5
Uranium	398337	1	ug/L	STD 420	6	
		5	ug/L	STD 420		<5

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Metals

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.	
					1550110 GW153 2021-04-07 09:15 MW5-21	1550111 GW153 2021-04-07 10:31 MW6-21
Vanadium	398337	1	ug/L	STD 250	<1	
		5	ug/L	STD 250		<5
Zinc	398337	10	ug/L	STD 1100	<10	
		50	ug/L	STD 1100		<50

PAH

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.	
					1550110 GW153 2021-04-07 09:15 MW5-21	1550111 GW153 2021-04-07 10:31 MW6-21
1+2-methylnaphthalene	398487	0.1	ug/L		<0.1	<0.1
Acenaphthene	398427	0.1	ug/L	STD 1700	<0.1	<0.1
Acenaphthylene	398427	0.1	ug/L	STD 1.8	<0.1	<0.1
Anthracene	398427	0.1	ug/L	STD 2.4	<0.1	<0.1
Benz[a]anthracene	398427	0.1	ug/L	STD 4.7	<0.1	<0.1
Benzo[a]pyrene	398427	0.01	ug/L	STD 0.81	<0.01	<0.01
Benzo[b]fluoranthene	398427	0.05	ug/L	STD 0.75	<0.05	<0.05
Benzo[ghi]perylene	398427	0.1	ug/L	STD 0.2	<0.1	<0.1
Benzo[k]fluoranthene	398427	0.05	ug/L	STD 0.4	<0.05	<0.05
Chrysene	398427	0.05	ug/L	STD 1	<0.05	<0.05
Dibenz[a h]anthracene	398427	0.1	ug/L	STD 0.52	<0.1	<0.1
Fluoranthene	398427	0.1	ug/L	STD 130	<0.1	<0.1
Fluorene	398427	0.1	ug/L	STD 400	<0.1	<0.1
Indeno[1 2 3-cd]pyrene	398427	0.1	ug/L	STD 0.2	<0.1	<0.1
Methlynaphthalene, 1-	398427	0.1	ug/L	STD 1800	<0.1	<0.1

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Guideline = O.Reg 153-T3-Non-Pot GW-Med/Fine

PAH

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1550110	Lab I.D. 1550111
					Sample Matrix GW153	Sample Matrix GW153
					Sample Type	Sample Type
					Sample Date 2021-04-07 09:15	Sample Date 2021-04-07 10:31
					Sampling Time	Sampling Time
					Sample I.D. MW5-21	Sample I.D. MW6-21
Methlynaphthalene, 2-	398427	0.1	ug/L	STD 1800	<0.1	<0.1
Naphthalene	398427	0.1	ug/L	STD 6400	<0.1	<0.1
Phenanthrene	398427	0.1	ug/L	STD 580	<0.1	<0.1
Pyrene	398427	0.1	ug/L	STD 68	<0.1	<0.1

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1550110	Lab I.D. 1550111
					Sample Matrix GW153	Sample Matrix GW153
					Sample Type	Sample Type
					Sample Date 2021-04-07 09:15	Sample Date 2021-04-07 10:31
					Sampling Time	Sampling Time
					Sample I.D. MW5-21	Sample I.D. MW6-21
Acetone	398417	30	ug/L	STD 130000	<30	<30
Benzene	398417	0.5	ug/L	STD 430	<0.5	<0.5
Bromodichloromethane	398417	0.3	ug/L	STD 85000	<0.3	<0.3
Bromoform	398417	0.4	ug/L	STD 770	<0.4	<0.4
Bromomethane	398417	0.5	ug/L	STD 56	<0.5	<0.5
Carbon Tetrachloride	398417	0.2	ug/L	STD 8.4	<0.2	<0.2
Chlorobenzene	398417	0.5	ug/L	STD 630	<0.5	<0.5
Chloroform	398417	0.5	ug/L	STD 22	<0.5	<0.5
Dibromochloromethane	398417	0.3	ug/L	STD 82000	<0.3	<0.3
Dichlorobenzene, 1,2-	398417	0.4	ug/L	STD 9600	<0.4	<0.4
Dichlorobenzene, 1,3-	398417	0.4	ug/L	STD 9600	<0.4	<0.4
Dichlorobenzene, 1,4-	398417	0.4	ug/L	STD 67	<0.4	<0.4
Dichlorodifluoromethane	398417	0.5	ug/L	STD 4400	<0.5	<0.5
Dichloroethane, 1,1-	398417	0.4	ug/L	STD 3100	<0.4	<0.4
Dichloroethane, 1,2-	398417	0.2	ug/L	STD 12	<0.2	<0.2

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Client: Blumetric Environmental Inc.-Carp
1682 Woodward Drive
Carp, ON
K2C 3R8
Attention: Mr. Rob Hillier
PO#:
Invoice to: Blumetric Environmental Inc.

Report Number: 1950698
Date Submitted: 2021-04-07
Date Reported: 2021-04-09
Project: 210294
COC #: 213222

Guideline = O.Reg 153-T3-Non-Pot GW-Med/Fine

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1550110 Sample Matrix GW153 Sample Type Sample Date 2021-04-07 09:15 Sampling Time Sample I.D. MW5-21	Lab I.D. 1550111 Sample Matrix GW153 Sample Type Sample Date 2021-04-07 10:31 Sampling Time Sample I.D. MW6-21
Dichloroethylene, 1,1-	398417	0.5	ug/L	STD 17	<0.5	<0.5
Dichloroethylene, 1,2-cis-	398417	0.4	ug/L	STD 17	<0.4	<0.4
Dichloroethylene, 1,2-trans-	398417	0.4	ug/L	STD 17	<0.4	<0.4
Dichloropropane, 1,2-	398417	0.5	ug/L	STD 140	<0.5	<0.5
Dichloropropene,1,3-	398417	0.3	ug/L	STD 45	<0.3	<0.3
Dichloropropene,1,3-cis-	398417	0.2	ug/L		<0.2	<0.2
Dichloropropene,1,3-trans-	398417	0.2	ug/L		<0.2	<0.2
Ethylbenzene	398417	0.5	ug/L	STD 2300	<0.5	<0.5
Ethylene dibromide	398417	0.2	ug/L	STD 0.83	<0.2	<0.2
Hexane (n)	398417	5	ug/L	STD 520	<5	<5
Methyl Ethyl Ketone	398417	10	ug/L	STD 1500000	<10	<10
Methyl Isobutyl Ketone	398417	10	ug/L	STD 580000	<10	<10
Methyl tert-Butyl Ether (MTBE)	398417	2	ug/L	STD 1400	<2	<2
Methylene Chloride	398417	4.0	ug/L	STD 5500	<4.0	<4.0
Styrene	398417	0.5	ug/L	STD 9100	<0.5	<0.5
Tetrachloroethane, 1,1,1,2-	398417	0.5	ug/L	STD 28	<0.5	<0.5
Tetrachloroethane, 1,1,2,2-	398417	0.5	ug/L	STD 15	<0.5	<0.5
Tetrachloroethylene	398417	0.3	ug/L	STD 17	<0.3	<0.3
Toluene	398417	0.5	ug/L	STD 18000	<0.5	<0.5
Trichloroethane, 1,1,1-	398417	0.4	ug/L	STD 6700	<0.4	<0.4
Trichloroethane, 1,1,2-	398417	0.4	ug/L	STD 30	<0.4	<0.4
Trichloroethylene	398417	0.3	ug/L	STD 17	<0.3	<0.3
Trichlorofluoromethane	398417	0.5	ug/L	STD 2500	<0.5	<0.5
Vinyl Chloride	398417	0.2	ug/L	STD 1.7	<0.2	<0.2

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Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1550110 Sample Matrix GW153 Sample Type Sample Date 2021-04-07 Sampling Time 09:15 Sample I.D. MW5-21	Lab I.D. 1550111 Sample Matrix GW153 Sample Type Sample Date 2021-04-07 Sampling Time 10:31 Sample I.D. MW6-21
Xylene Mixture	398436	0.5	ug/L	STD 4200	<0.5	<0.5
Xylene, m/p-	398417	0.4	ug/L		<0.4	<0.4
Xylene, o-	398417	0.4	ug/L		<0.4	<0.4

Inorganics

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. 1550110 Sample Matrix GW153 Sample Type Sample Date 2021-04-07 Sampling Time 09:15 Sample I.D. MW5-21	Lab I.D. 1550111 Sample Matrix GW153 Sample Type Sample Date 2021-04-07 Sampling Time 10:31 Sample I.D. MW6-21
Chloride	398413	1000	ug/L	STD 2300000	425000	4570000*
Conductivity	398404	5	uS/cm		1960	14600
Cyanide (CN-)	398425	5	ug/L	STD 66	<5	<5
pH	398404	1.00			7.89	7.40

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PHC Surrogate

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.	
					1550110 GW153 2021-04-07 09:15 MW5-21	1550111 GW153 2021-04-07 10:31 MW6-21
Alpha-androstrane	398502	0	%		94	96

VOCs Surrogates

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. / Sample Matrix / Sample Type / Sample Date / Sampling Time / Sample I.D.	
					1550110 GW153 2021-04-07 09:15 MW5-21	1550111 GW153 2021-04-07 10:31 MW6-21
1,2-dichloroethane-d4	398417	0	%		119	121
4-bromofluorobenzene	398417	0	%		92	94
Toluene-d8	398417	0	%		104	101

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Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
398337	Silver	<0.1 ug/L	110	80-120	108	70-130	0	0-20
398337	Arsenic	<1 ug/L	101	80-120	106	70-130	0	0-20
398337	Boron (total)	<10 ug/L	111	80-120	116	80-120	0	0-20
398337	Barium	<10 ug/L	104	80-120	93	70-130	0	0-20
398337	Beryllium	<0.5 ug/L	108	80-120	114	70-130	0	0-20
398337	Cadmium	<0.1 ug/L	103	80-120	109	70-130	0	0-20
398337	Cobalt	<0.2 ug/L	103	80-120	103	70-130	0	0-20
398337	Chromium Total	<1 ug/L	104	80-120	105	70-130	0	0-20
398337	Copper	<1 ug/L	102	80-120	101	70-130	0	0-20
398337	Mercury	<0.1 ug/L	128	80-120	92	70-130	0	0-20
398337	Molybdenum	<5 ug/L	105	80-120	87	70-130	0	0-20
398337	Nickel	<5 ug/L	103	80-120	103	70-130	0	0-20
398337	Lead	<1 ug/L	103	80-120	100	70-130	0	0-20
398337	Antimony	<0.5 ug/L	102	80-120	98	70-130	0	0-20
398337	Selenium	<1 ug/L	97	80-120	110	70-130	0	0-20
398337	Thallium	<0.1 ug/L	104	80-120	101	70-130	0	0-20
398337	Uranium	<1 ug/L	104	80-120	100	70-130	0	0-20
398337	Vanadium	<1 ug/L	106	80-120	105	70-130	0	0-20
398337	Zinc	<10 ug/L	101	80-120	107	70-130	0	0-20
398355	Chromium VI	<10 ug/L	94	80-120	100	70-130	0	0-35
398385	Sodium	<2000 ug/L	116	82-118	102	80-120	0	0-20
398396	Mercury	<0.1 ug/L	98	76-123	88	70-130	0	0-20
398404	Conductivity	<5 uS/cm	99	95-105			0	0-20
398404	pH	6.62	100	90-110			0	0-5
398413	Chloride	<1000 ug/L	100	90-110	100	80-120	3	0-20
398417	Tetrachloroethane, 1,1,1,2-	<0.5 ug/L	86	60-130	95	50-140	0	0-30
398417	Trichloroethane, 1,1,1-	<0.4 ug/L	99	60-130	105	50-140	0	0-30
398417	Tetrachloroethane, 1,1,2,2-	<0.5 ug/L	100	60-130	113	50-140	0	0-30
398417	Trichloroethane, 1,1,2-	<0.4 ug/L	97	60-130	112	50-140	0	0-30
398417	Dichloroethane, 1,1-	<0.4 ug/L	100	60-130	109	50-140	0	0-30
398417	Dichloroethylene, 1,1-	<0.5 ug/L	100	60-130	91	50-140	0	0-30
398417	Dichlorobenzene, 1,2-	<0.4 ug/L	99	60-130	103	50-140	0	0-30
398417	Dichloroethane, 1,2-	<0.2 ug/L	101	60-130	114	50-140	0	0-30

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K2C 3R8
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PO#:
Invoice to: Blumetric Environmental Inc.

Report Number: 1950698
Date Submitted: 2021-04-07
Date Reported: 2021-04-09
Project: 210294
COC #: 213222

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
398417	Dichloropropane, 1,2-	<0.5 ug/L	98	60-130	116	50-140	0	0-30
398417	Dichlorobenzene, 1,3-	<0.4 ug/L	97	60-130	100	50-140	0	0-30
398417	Dichloropropene,1,3-							
398417	Dichlorobenzene, 1,4-	<0.4 ug/L	97	60-130	100	50-140	0	0-30
398417	Acetone	<30 ug/L		60-130	118	50-140	0	0-30
398417	Benzene	<0.5 ug/L	96	60-130	104	50-140	0	0-30
398417	Bromodichloromethane	<0.3 ug/L	98	60-130	118	50-140	0	0-30
398417	Bromoform	<0.4 ug/L	92	60-130	109	50-140	0	0-30
398417	Bromomethane	<0.5 ug/L	82	60-130	85	50-140	0	0-30
398417	Dichloroethylene, 1,2-cis-	<0.4 ug/L	96	60-130	104	50-140	0	0-30
398417	Dichloropropene,1,3-cis-	<0.2 ug/L	94	60-130	109	50-140	0	0-30
398417	Carbon Tetrachloride	<0.2 ug/L	98	60-130	98	50-140	0	0-30
398417	Chloroform	<0.5 ug/L	100	60-130	113	50-140	0	0-30
398417	Dibromochloromethane	<0.3 ug/L	94	60-130	108	50-140	0	0-30
398417	Dichlorodifluoromethane	<0.5 ug/L	96	60-130	84	50-140	0	0-30
398417	Methylene Chloride	<4.0 ug/L	117	60-130	117	50-140	0	0-30
398417	Ethylbenzene	<0.5 ug/L	84	60-130	84	50-140	0	0-30
398417	Ethylene dibromide	<0.2 ug/L	96	60-130	108	50-140	0	0-30
398417	Hexane (n)	<5 ug/L	110	60-130	113	50-140	0	0-30
398417	Xylene, m/p-	<0.4 ug/L	83	60-130	85	50-140	0	0-30
398417	Methyl Ethyl Ketone	<10 ug/L	100	60-130	109	50-140	0	0-30
398417	Methyl Isobutyl Ketone	<10 ug/L		60-130	112	50-140	0	0-30
398417	Methyl tert-Butyl Ether (MTBE)	<2 ug/L	100	60-130	115	50-140	0	0-30
398417	Chlorobenzene	<0.5 ug/L	95	60-130	99	50-140	0	0-30
398417	Xylene, o-	<0.4 ug/L	82	60-130	86	50-140	0	0-30
398417	Styrene	<0.5 ug/L	81	60-130	87	50-140	0	0-30
398417	Dichloroethylene, 1,2-trans-	<0.4 ug/L	98	60-130	95	50-140	0	0-30
398417	Dichloropropene,1,3-trans-	<0.2 ug/L	94	60-130	113	50-140	0	0-30
398417	Tetrachloroethylene	<0.3 ug/L	89	60-130	95	50-140	0	0-30
398417	Toluene	<0.5 ug/L	92	60-130	105	50-140	0	0-30
398417	Trichloroethylene	<0.3 ug/L	93	60-130	103	50-140	0	0-30
398417	Trichlorofluoromethane	<0.5 ug/L	96	60-130	99	50-140	0	0-30
398417	Vinyl Chloride	<0.2 ug/L	90	60-130	86	50-140	0	0-30

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COC #: 213222

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
398425	Cyanide (CN-)	<5 ug/L	103	75-125	103	80-120	0	0-20
398427	Methlynaphthalene, 1-	<0.1 ug/L	76	50-140		50-140		0-30
398427	Methlynaphthalene, 2-	<0.1 ug/L	70	50-140		50-140		0-30
398427	Acenaphthene	<0.1 ug/L	72	50-140		50-140		0-30
398427	Acenaphthylene	<0.1 ug/L	68	50-140		50-140		0-30
398427	Anthracene	<0.1 ug/L	74	50-140		50-140		0-30
398427	Benz[a]anthracene	<0.1 ug/L	80	50-140		50-140		0-30
398427	Benzo[a]pyrene	<0.01 ug/L	63	50-140		50-140		0-30
398427	Benzo[b]fluoranthene	<0.05 ug/L	81	50-140		50-140		0-30
398427	Benzo[ghi]perylene	<0.1 ug/L	76	50-140		50-140		0-30
398427	Benzo[k]fluoranthene	<0.05 ug/L	96	50-140		50-140		0-30
398427	Chrysene	<0.05 ug/L	82	50-140		50-140		0-30
398427	Dibenz[a h]anthracene	<0.1 ug/L	72	50-140		50-140		0-30
398427	Fluoranthene	<0.1 ug/L	80	50-140		50-140		0-30
398427	Fluorene	<0.1 ug/L	70	50-140		50-140		0-30
398427	Indeno[1 2 3-cd]pyrene	<0.1 ug/L	76	50-140		50-140		0-30
398427	Naphthalene	<0.1 ug/L	70	50-140		50-140		0-30
398427	Phenanthrene	<0.1 ug/L	78	50-140		50-140		0-30
398427	Pyrene	<0.1 ug/L	80	50-140		50-140		0-30
398429	PHC's F1	<20 ug/L	85	60-140	107	60-140	0	0-30
398431	PHC's F1-BTEX							
398436	Xylene Mixture							
398487	1+2-methylnaphthalene							
398502	PHC's F2	<20 ug/L	100	60-140		60-140		0-30
398502	PHC's F3	<50 ug/L	100	60-140		60-140		0-30
398502	PHC's F4	<50 ug/L	100	60-140		60-140		0-30
398503	PHC's F2-Napth							
398504	PHC's F3-PAH							

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Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
398337	Silver	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Arsenic	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Boron (total)	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Barium	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Beryllium	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Cadmium	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Cobalt	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Chromium Total	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Copper	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Mercury	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Molybdenum	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Nickel	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Lead	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Antimony	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Selenium	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Thallium	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Uranium	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Vanadium	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398337	Zinc	ICAPQ-MS	2021-04-07	2021-04-07	EM	EPA 200.8
398355	Chromium VI		2021-04-07	2021-04-07	SKH	SM 3500-Cr B
398385	Sodium	ICP-OES	2021-04-08	2021-04-08	Z_S	M SM3120B-3500C
398396	Mercury	CV AA	2021-04-08	2021-04-08	SKH	M SM3112B-3500B
398404	Conductivity	Auto Titrator	2021-04-08	2021-04-08	AET	C SM2510B
398404	pH	Auto Titrator	2021-04-08	2021-04-08	AET	SM2320,2510,4500H/F
398413	Chloride	IC	2021-04-08	2021-04-08	R_R	SM 4110
398417	Tetrachloroethane, 1,1,1,2-	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Trichloroethane, 1,1,1-	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Tetrachloroethane, 1,1,2,2-	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Trichloroethane, 1,1,2-	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Dichloroethane, 1,1-	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Dichloroethylene, 1,1-	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Dichlorobenzene, 1,2-	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Dichloroethane, 1,2-	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Certificate of Analysis

Client: Blumetric Environmental Inc.-Carp
1682 Woodward Drive
Carp, ON
K2C 3R8
Attention: Mr. Rob Hillier
PO#:
Invoice to: Blumetric Environmental Inc.

Report Number: 1950698
Date Submitted: 2021-04-07
Date Reported: 2021-04-09
Project: 210294
COC #: 213222

Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
398417	Dichloropropane, 1,2-	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Dichlorobenzene, 1,3-	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Dichloropropene,1,3-	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Dichlorobenzene, 1,4-	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Acetone	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Benzene	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Bromodichloromethane	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Bromoform	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Bromomethane	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Dichloroethylene, 1,2-cis-	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Dichloropropene,1,3-cis-	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Carbon Tetrachloride	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Chloroform	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Dibromochloromethane	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Dichlorodifluoromethane	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Methylene Chloride	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Ethylbenzene	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Ethylene dibromide	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Hexane (n)	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Xylene, m/p-	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Methyl Ethyl Ketone	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Methyl Isobutyl Ketone	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Methyl tert-Butyl Ether (MTBE)	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Chlorobenzene	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Xylene, o-	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Styrene	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Dichloroethylene, 1,2-trans-	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Dichloropropene,1,3-trans-	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Tetrachloroethylene	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Toluene	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Trichloroethylene	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Trichlorofluoromethane	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398417	Vinyl Chloride	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

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Certificate of Analysis

Client: Blumetric Environmental Inc.-Carp
1682 Woodward Drive
Carp, ON
K2C 3R8
Attention: Mr. Rob Hillier
PO#:
Invoice to: Blumetric Environmental Inc.

Report Number: 1950698
Date Submitted: 2021-04-07
Date Reported: 2021-04-09
Project: 210294
COC #: 213222

Test Summary

Batch No	Analyte	Instrument	Prep aration Date	Analysis Date	Analyst	Method
398425	Cyanide (CN-)	Skalar CN Analyzer	2021-04-08	2021-04-08	Z_S	SM4500-CNC/MOE E3015
398427	Methlynaphthalene, 1-	GC-MS	2021-04-08	2021-04-09	C_M	P 8270
398427	Methlynaphthalene, 2-	GC-MS	2021-04-08	2021-04-09	C_M	P 8270
398427	Acenaphthene	GC-MS	2021-04-08	2021-04-09	C_M	P 8270
398427	Acenaphthylene	GC-MS	2021-04-08	2021-04-09	C_M	P 8270
398427	Anthracene	GC-MS	2021-04-08	2021-04-09	C_M	P 8270
398427	Benz[a]anthracene	GC-MS	2021-04-08	2021-04-09	C_M	P 8270
398427	Benzo[a]pyrene	GC-MS	2021-04-08	2021-04-09	C_M	P 8270
398427	Benzo[b]fluoranthene	GC-MS	2021-04-08	2021-04-09	C_M	P 8270
398427	Benzo[ghi]perylene	GC-MS	2021-04-08	2021-04-09	C_M	P 8270
398427	Benzo[k]fluoranthene	GC-MS	2021-04-08	2021-04-09	C_M	P 8270
398427	Chrysene	GC-MS	2021-04-08	2021-04-09	C_M	P 8270
398427	Dibenz[a h]anthracene	GC-MS	2021-04-08	2021-04-09	C_M	P 8270
398427	Fluoranthene	GC-MS	2021-04-08	2021-04-09	C_M	P 8270
398427	Fluorene	GC-MS	2021-04-08	2021-04-09	C_M	P 8270
398427	Indeno[1 2 3-cd]pyrene	GC-MS	2021-04-08	2021-04-09	C_M	P 8270
398427	Naphthalene	GC-MS	2021-04-08	2021-04-09	C_M	P 8270
398427	Phenanthrene	GC-MS	2021-04-08	2021-04-09	C_M	P 8270
398427	Pyrene	GC-MS	2021-04-08	2021-04-09	C_M	P 8270
398429	PHC's F1	GC/FID	2021-04-08	2021-04-08	YH	CCME O.Reg 153/04
398431	PHC's F1-BTEX	GC/FID	2021-04-08	2021-04-08	YH	CCME O.Reg 153/04
398436	Xylene Mixture	GC-MS	2021-04-08	2021-04-08	YH	EPA 8260
398487	1+2-methylnaphthalene	GC-MS	2021-04-09	2021-04-09	C_M	P 8270
398502	PHC's F2	GC/FID	2021-04-08	2021-04-09	N_C	CCME O.Reg 153/04
398502	PHC's F3	GC/FID	2021-04-08	2021-04-09	N_C	CCME O.Reg 153/04
398502	PHC's F4	GC/FID	2021-04-08	2021-04-09	N_C	CCME O.Reg 153/04
398503	PHC's F2-Napth	GC/FID	2021-04-09	2021-04-09	N_C	CCME O.Reg 153/04
398504	PHC's F3-PAH	GC/FID	2021-04-09	2021-04-09	N_C	CCME O.Reg 153/04

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

eurofins 213222

STANDARD CHAIN-OF-CUSTODY

146 Colonnade Road, Unit #8, Ottawa, ON, K2E 7Y1 - Phone: 613-727-5692, Fax: 613-727-5222

Eurofins Workorder #: 1950648

CLIENT INFORMATION

Company: BluMetric Environmental
Contact: Rob Hillier
Address: 1682 Woodward Dr. Ottawa, ON
Telephone: 613-296-2091 Cell:
Email: #1: rhillier@blumetric.ca
Email: #2:
Project: 210294 Quote #: 191032

INVOICE INFORMATION (SAME AS CLIENT INFORMATION: YES ☒ NO ☐)

Company: Fax:
Contact: Email: #1: ap@blumetric.ca
Address: Email: #2:
Telephone: PO #:

TURN-AROUND TIME (Business Days)

☒ 1 Day* (100%) ☐ 2 Day** (50%) ☐ 3-5 Days (25%) ☐ 5-7 Days (Standard)

Please contact Lab in advance to determine rush availability.
*For results reported after rush due date, surcharges will apply: before 12:00 - 100%, after 12:00 - 50%.
**For results reported after rush due date, surcharges will apply: before 12:00 - 50%, after 12:00 - 25%.

REGULATION/GUIDELINE REQUIRED

☐ Sanitary Sewer, City:
☐ Storm Sewer, City:
☐ ODWSOG
☐ PWQO
☐ O.Reg 347/558
☐ Other:

☒ O. Reg 153 Table # 3, Coarse / Fine, Surface / subsurface. Type: Com-Ind / Res-Park / Agri / GW / All Other / Sediment

The sample results from this submission will form part of a formal Record of Site Condition (RSC) under O.Reg. 153/04 ☐ Yes ☐ No

☐ O.Reg 406 Excess Soils
☐ TCLP ☐ SPLP
Table # _____ Full depth/ Strat/ Ceiling/ Leachate
Type: Com-Ind / Res-Park / Agri/All Other
Category: Surface / Subsurface

The optimal temperature conditions during transport should be less than 10°C. Sample(s) cannot be frozen, unless otherwise indicated or agreed upon with the Laboratory. Note that this COC is not to be used for drinking water samples. The COC must be complete upon submission of the samples, there will be a $25 surcharge if required information is missing (required fields are shaded in grey).

Sample ID	Date/Time Collected	Sample Matrix	# of Containers	O.Reg.153 parameters: PHC F1 - F4	BTEX	VOCs	PAHs	PCBs	Metals + Inorganic	Metals only	RN# (Lab Use Only)
MW5-21	2021/04/07 9:15	GW	9	X		X	X		X		1950110
MW6-21	2021/04/07 10:31	GW	9	X		X	X		X		11

	PRINT	SIGN	DATE/TIME	TEMP (°C)
Sampled By:	C. McClelland		2021/04/07	
Relinquished By:	C. McClelland		2021/04/07 12:00	16.4
Received By:			7/9/21 @ 12:30.	

COMMENTS: Field Filtered metals, Mercury, Cr 6+

CUSTODY SEAL: ☐ YES ☐ NO Ice packs submitted: ☐ Yes ☐ No

401 Magnetic Drive, Unit #1, North York, ON, M3J 3H9 - Telephone: 416-661-5287 • 380 Vansickle Road, Unit #630, St. Catharines, ON, L2S 0B5 - Telephone: 905-680-8887 • 608 Norris Court, Kingston, ON, K7P 2R9 - Telephone: 613-634-9307

AFSTDCOC.6

Copies: White - Laboratory, Yellow - Sampler

10.5 LOCATE REPORTS

USL-1

UNDERGROUND SERVICE LOCATORS INC.

USL-1 UNDERGROUND SERVICE LOCATORS INC.
100 – 1704 CARLING AVE. - OTTAWA, ON - K2H 1H3
613-226-8750 - WWW.USL-1.COM

COVER SHEET

DATE: MAR. 29/21 TO: ROBERT

RE: 2571 LANCASTER RD. PAGES (INCLUDING COVER): 23

FROM: MATT MOREAU
613-218-7751 - MATTM@USL-1.COM

IF YOU DID NOT RECEIVE ALL OF THE PAGES FOR THIS REPORT, OR IF ANY PART OF IT IS UNCLEAR, PLEASE CONTACT ME. THANK YOU AND HAVE A GREAT DAY!

USL-1
UNDERGROUND SERVICE LOCATORS INC.

DATE: MAR. 29/21

CLIENT: BLUMETRIC JOB LOCATION: 2571 LANCASTER RD. WORK: BHS

PUBLIC UTILITY LOCATE REPORT

	UTILITY	LOCATED BY	MARKED / CLEAR
(1)	BELL, GAS, HYDRO	PROMARK	MARKED
(2)	WATER, SEWER	CITY	CLEAR
(3)	STREET LIGHTS	BLACK & MAC	CLEAR

NOTES:

PRIVATE UTILITY LOCATE REPORT

UTILITY	MARKED / CLEAR or N/A	UTILITY	MARKED / CLEAR or N/A
HYDRO / ELECTRICAL	MARKED	STORM SEWER	MARKED
COMMS / FOC	CLEAR	SANITARY SEWER	CLEAR
GAS / PROPANE / FUEL	CLEAR	STEAM / TUNNELS	—
WATER	MARKED	OTHER	—

NOTES:

AS-BUILT OR UTILITY PLANS PROVIDED? YES / (NO) WORK AREA MARKED? (YES) / NO

USL-1 UNDERGROUND SERVICE LOCATORS INC.
100-1704 CARLING AVE. – OTTAWA, ON – K2H1H3 – 613-226-8750 – WWW.USL-1.COM

Robert Kerr

From: solutions@on1call.com
Sent: Thursday, March 18, 2021 1:19 PM
To: Locates
Subject: Request 20211215166

LOCATE REQUEST CONFIRMATION

TICKET #: 20211215166	**REQUEST PRIORITY:** STANDARD	**REQUEST TYPE: REGULAR**	**WORK TO BEGIN DATE:** 03/25/2021
Update of Ticket #	**Project #**		**Transmit date: 03/18/2021 01:18:06 PM**

REQUESTOR'S CONTACT INFORMATION	
Contractor ID#: 202	**Company Phone #:** (613) 226-8750
Contact Name: ROBERT KERR	**Cell #:**
Alternate Contact Name: JACQUES DESJARDINS	**Fax #:** (613) 226-8677
Company name: U S L	**Email:** locates@usl-1.com
Address: 1704 Carling	**Alternate Contact #:**

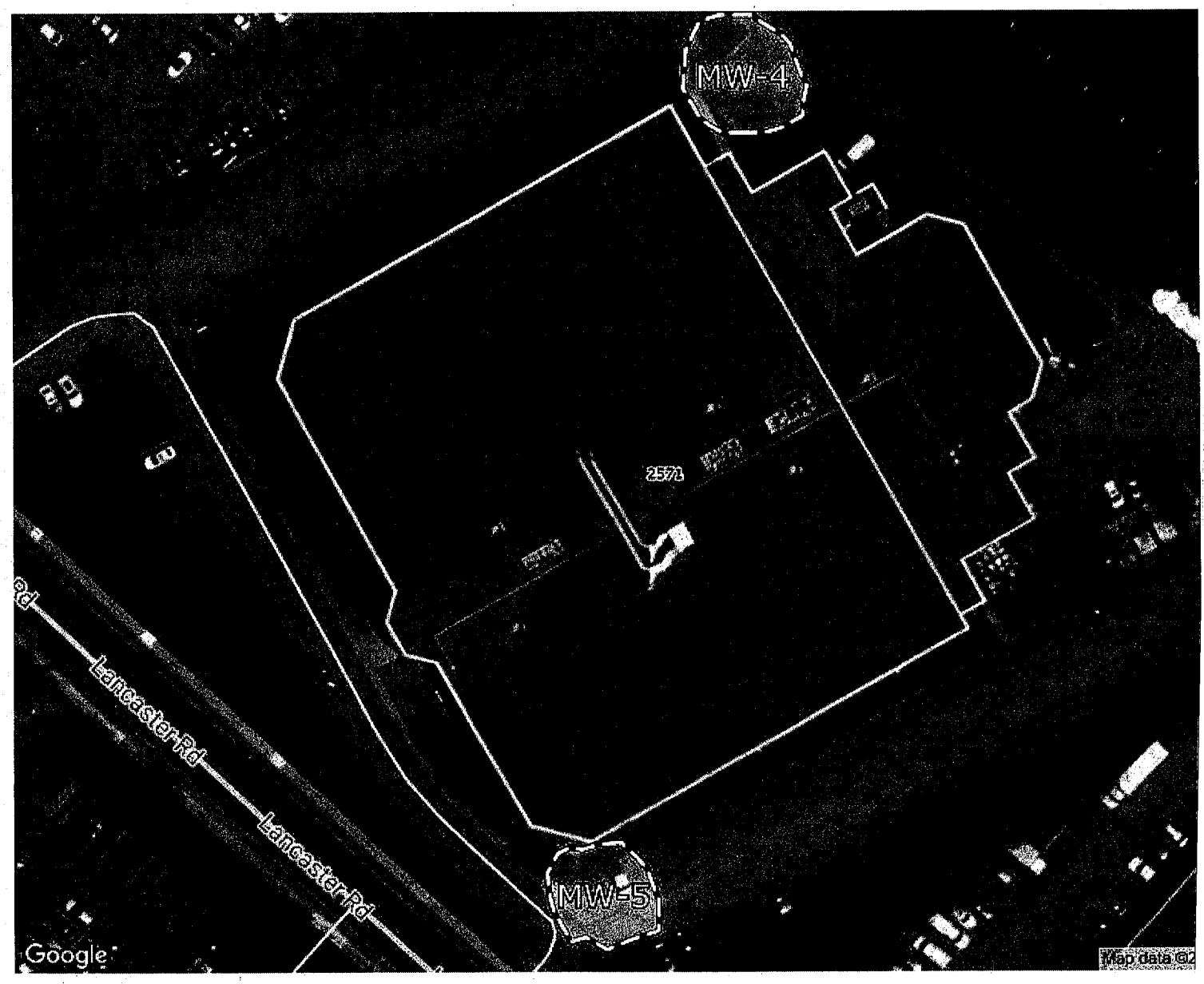
DIG INFORMATION		
Region/County: OTTAWA	**Type of work:** BORE HOLES	**Mark & Fax:** NO
Community:	**Max Depth:** 100.00 FT	**Area is not marked:** NO
City: OTTAWA	**Machine Dig:** YES	**Area is marked:** YES
Address: 2571, LANCASTER RD	**Hand Dig:** NO	**Site Meet Req.:** NO
	Directional Drilling: NO	**Work being done for:** Blumetric
Intersecting Street 1: GLADWIN CRES	**Public Property:** YES	
Intersecting Street 2: WALKLEY RD	**Private Property:** YES	

DETAILED DESCRIPTION OF WORK	REMARKS
CORLOT=U Drilling two boreholes on site marked as MW-4 and MW-5. Clear 5M in all directions as per b orehole layout plan provided.	

MEMBERS NOTIFIED: The following owners of underground infrastructure in the area of your excavation site have been notified.

Member name	Station Code	Initial Status
HYDRO OTTAWA (HOT1)	HOT1	Notification sent
PROMARK FOR ENBRIDGE GAS (ENOE01)	ENOE01	Notification sent
CITY OF OTTAWA WATER/SEWER (OTWAWS01)	OTWAWS01	Notification sent
BLACK AND MC DONALD FOR CITY OF OTTAWA STREET LIGHTS (OTWASL01)	OTWASL01	Notification sent
PROMARK FOR BELL CANADA (BCOE01)	BCOE01	Notification sent

MAP SELECTION: Map Selection provided by the excavator through Ontario One Call's map tool or through agent interpretation by



CONTRACTOR'S SKETCH: A file provided directly by the excavator, not generated by Ontario One Call:

IMPORTANT INFORMATION: Please read.

Defining "NC" - Non-Compliant

- Non-compliant members have not met their obligations under section 5 of the Ontario Underground Infrastructure Notification Act.ON1Call has notified these members to ensure they are aware of your excavation. In this circumstance, should the member not respond, the excavator should contact the member directly to obtain their locates or request a status. ON1Call will not be provided with a locate status from the member regarding this ticket and therefore, cannot provide further information at this time.For locate status contact information please refer to our website.

You have a valid locate when...

- You have reviewed your locate request information for accuracy. CONTACT Ontario One Call (ON1Call) IMMEDIATELY if changes are needed and obtain a corrected locate request confirmation.
- You have obtained locates or clearances from all ON1Call members listed in this ticket before beginning your dig.

You've met your obligations when...

- In addition to this locate request, you have DIRECTLY contacted all owners of infrastructure who ARE NOT current members of ON1Call (such as owned buried infrastructure on private property), as well as arranged for contract locates for your private lines on your private property - where applicable. For a list of locate status contacts visit www.on1call.com.
- You respect the marks and instructions provided by the locators and dig with care; the marks and locator instructions MUST MATCH.
- You have obtained any necessary permits from the municipality in whichyou are excavating.

What does "Cleared" mean in the "Initial Status" section?

1. The information that you have provided about your dig will not affect that member's underground infrastructure and they have provided you with a
clearance, if anything about your excavation changes, please ensure that you update your ticket immediately.

What are the images under "Map Selection":

1. A drawing created by an excavator directly within Ontario One Call's web ticket tool, this is expected to be an accurate rendition of the dig site, and it is the excavator's responsibility to ensure the location matches the information they provide under the 'Dig Location' section OR;

2. A drawing created by an Ontario One Call agent, this drawing is based on a verbal description by phone of the area by the excavator. Agents may create drawings that are larger than the proposed dig to minimize risk of interpretation. It is the excavator's responsibility to review these map selections for accuracy. Changes can be made by the excavator through the web ticket tool, to learn how visit www.on1call.com/contractors.

3. All drawings dictate which members are notified.

Promark telecon
Location of underground infrastructures

Primary Locate Sheet

UNION GAS EMERGENCY #
1-877-969-0999

Fax: 613-723-9277 Toll free: 1-800-371-8866 Email:

Request # **20211215166**
NORMAL

Utilities Located	Revised Excavation Date	Excavation Date	Status
● Bell ● Gas ● Hydro Ottawa ☐ Hydro One ☐ Zayo ☐ Videotron ☐ Lakefront Utilities ☐ Elexicon Energy	N/A mm/dd/yyyy	3/25/2021 12:00:00 AM mm/dd/yyyy	STANDARD Homeowner ☐ Contractor X Project ☐

Requested by:	Company:	Phone:	Fax/email:
ROBERT KERR	U S L	(613)-226-8750 ext.	(613)-226-8677 ext.

Appt Date:	Received Date:	Locate Address: 2571, LANCASTER RD
N/A mm/dd/yyyy	3/18/2021 1:23:16 PM mm/dd/yyyy	1st Inters.: GLADWIN CRES 2nd Inters.: WALKLEY RD

Type of work: BORE HOLES

City: OTTAWA

Caller's Remarks:
MACH. DIG
CORLOT=U DRILLING TWO BOREHOLES ON SITE MARKED AS MW-4 AND MW-5. CLEAR 5M IN ALL DIRECTIONS AS PER BOREHOLE LAYOUT PLAN PROVIDED.

-75.611841, 45.400214, NB_SEGMENTS::1, NO_PLAN::613 737, BCOE01, OTWASL01, OTWAWS01, ENOE01, HOT1

Bell Mark | Clear	Gas Mark | Clear	Hydro Ottawa Mark | Clear	Street Lighting Mark | Clear	Lakefront Mark | Clear	Hydro One Mark | Clear	Zayo Mark | Clear	Elexicon Energy Mark | Clear	Videotron Mark | Clear
1	1	1	N/A	N/A	N/A	N/A	N/A	N/A

LOCATED AREA: EXCAVATOR SHALL NOT WORK OUTSIDE THE LOCATED AREA WITHOUT OBTAINING ANOTHER LOCATE.

Records Reference:
_ Map X GMobile X LAC MultiViewer
_ Byers X Datapak: PMOTTP12142
Field Notes: X LAC Multiviewer GL110 & GL111
Other:
DPT Remarks: N/A

_ Third Party Notification

Danger - Do Not Proceed
Buried high voltages cables located within the area. You must send Locate through hydroottawa.com/locates
If you have questions about the online form, please call 613-738-6418. For urgent matters involving power outages and after hours emergencies, call 613-738-6404

Apply Sticker Here if Required

Excavator shall notify & receive a clearance from Utility prior to excavation for the following:
Telecon ☐ High Priority Cable ☐ Central Office Vicinity

Gas Material Type: ☐Steel(st) X Plastic(PE) ☐Copper(CO)

Method of Field Marking: X Paint ☐ Stakes X Flags ☐ Offset Flags ☐ Other (Telecom=Orange, Gas=Yellow, Hydro Ott. =Red)

Caution: Bell locate valid for life of excavation see attached document. Hydro One - Hydro Ottawa - Enbridge Gas - Lakefront Utilities - Elexicon Energy valid for 60 days, 360 valid for life of excavation. See disclaimer for Facility Owner Guidelines.

Caution: Any changes to location or nature of work require new locate. The Excavator must not work outside the Located Area without a new locate. Privately owned services within the located area have not been marked - check with service / property owner. For all Locate requests including remarks contact: Ontario One Call at 1-800-400-2255 or www.on1call.com

Locator Name: SARSFIELD JAMES	Start Time: 10:50	_ Mark & Fax _ Left on Site X Emailed
ID #: 2163	End Time : 11:50	Print: N/A
Date 03/25/2021	Total Hours: 1HR	Signature: N/A

A copy of this Primary Locate Sheet and Auxiliary Locate Sheet(s) must be on site and in the hands of the machine operator during work operations. If sketch and markings do not coincide, the Excavator must obtain a new locate.

This form revised September 2019

Promark telecon
Locates of underground infrastructure

Auxiliary Locate Sheet

Union Gas Emergency # 1-877-969-0999

Fax: 613-723-9277 Toll free: 1-800-371-8866 Email

Utilities ☐ Bell ☐ Gas ● HydroOttawa ☐ Street Lighting
Located: ☐ Blink ☐ Peel Fibre ☐ ZAYO

Date Located: mm/dd/yyyy 03/25/2021

Request # 20211215166

Number of Services marked: (Specify building/house numbers) N/A

LOCATED AREA: EXCAVATOR SHALL NOT WORK OUTSIDE THE LOCATED AREA WITHOUT OBTAINING ANOTHER LOCATE.

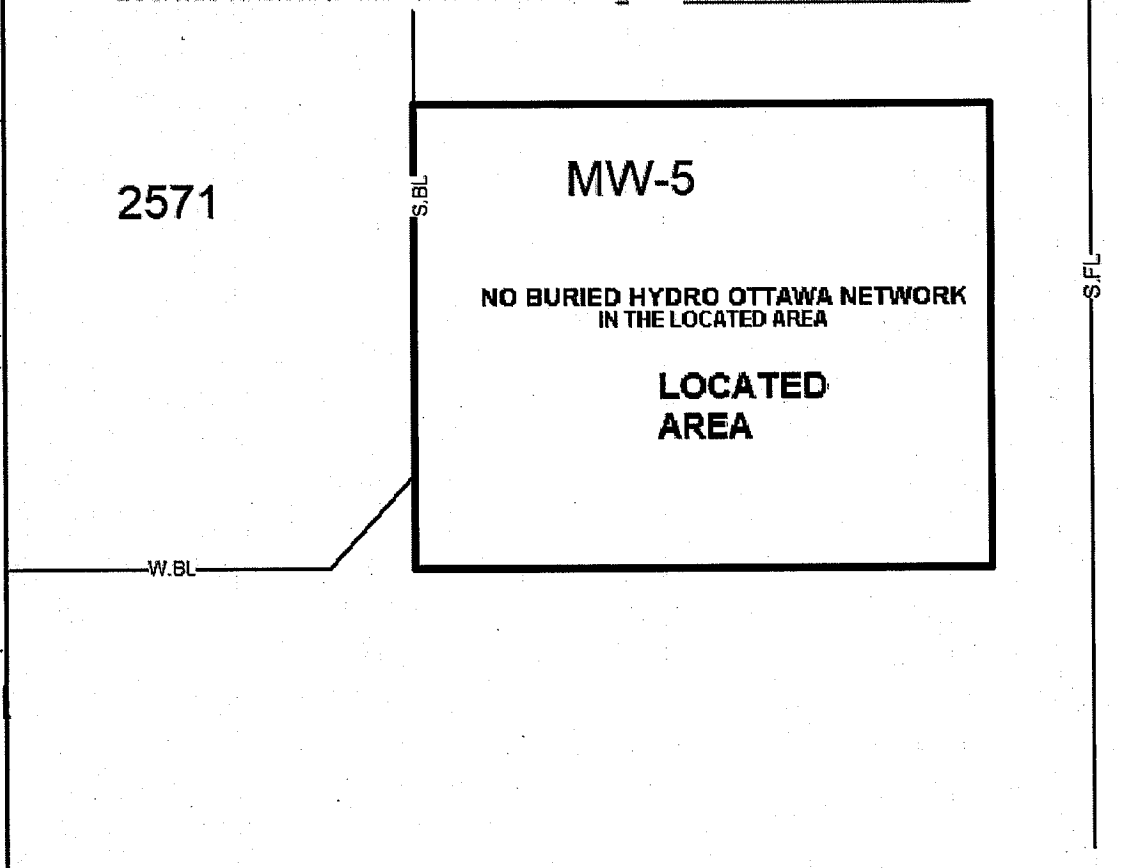
FROM: W.BL 2571 LANCASTER RD. TO: 12.0M E. OF W.BL 2571 LANCASTER RD.

FROM: S.BL 2571 LANCASTER RD. TO: 18.0M S. OF S.BL 2571 LANCASTER RD.

Legend

Building Line	--BL--
Fence Line	--FL--
Face of Curb	--FC--
ASPHALT EDGE	--AE--
Sidewalk	SW
Driveway	--DW--
Manhole	M/H
Pedestal	☒
Flush to Grade Pedestal	FTG
Buried Service Wire	--BSW--
Buried Cable	B
Conduit	C
Fiber Optic Cable	FO
Bell Hydro Service	BH
Gas Valve	
Gas Service	GS
Gas Main	--GM--
Transformer	
Demarcation	DM
Hydro	H
Hydro Primary	--HP--
Hydro Secondary	--HS--
Catch Basin	CB
Sewer Manhole	
Water Valve	
Hydrant	
Water Valve Chamber	W
Hydro / Bell Pole	
Railway	
End Cap	
Traffic Manhole	T
Street Light Cable	--SL--
Street Light	
North	N.
East	E.
West	W.
South	S.

CAUTION: Hand dig within 1.5M as measured horizontally from the field markings to avoid damaging the underground utilities. If you damage the plant, you may be held liable.
If you damage underground plant, contact the facility owner immediately.
Depth varies and MUST be verified by hand digging or vacuum excavation.
LOCATED AREA HAS BEEN ALTERED AS PER: N/A



THIS FORM VALID ONLY WITH Primary Locate Form. This sketch is not to scale.
Any privately owned services within the located area have not been marked- check with service/property owner.

A copy of this Auxiliary Locate Sheet(s) and the Primary Locate Sheet must be on site and in the hands of the machine operator during work operations. If sketch and markings do not coincide, the Excavator must obtain a new locate.

Promark telecon
Locates of underground infrastructure

Auxiliary Locate Sheet

Union Gas Emergency #
1-877-969-0999

Fax: 613-723-9277
Toll free: 1-800-371-8866
Email

Utilities Located: ☐ Bell ● Gas ☐ HydroOttawa ☐ Hydro One ☐ Videotron ☐ Peel Fibre ☐ ZAYO

Date Located: mm/dd/yyyy 03/25/2021

Request # 20211215166

Number of Services marked: (Specify building/house numbers) N/A

LOCATED AREA: EXCAVATOR SHALL NOT WORK OUTSIDE THE LOCATED AREA WITHOUT OBTAINING ANOTHER LOCATE

FROM: W.BL 2571 LANCASTER RD. TO: 12.0M E. OF W.BL 2571 LANCASTER RD.

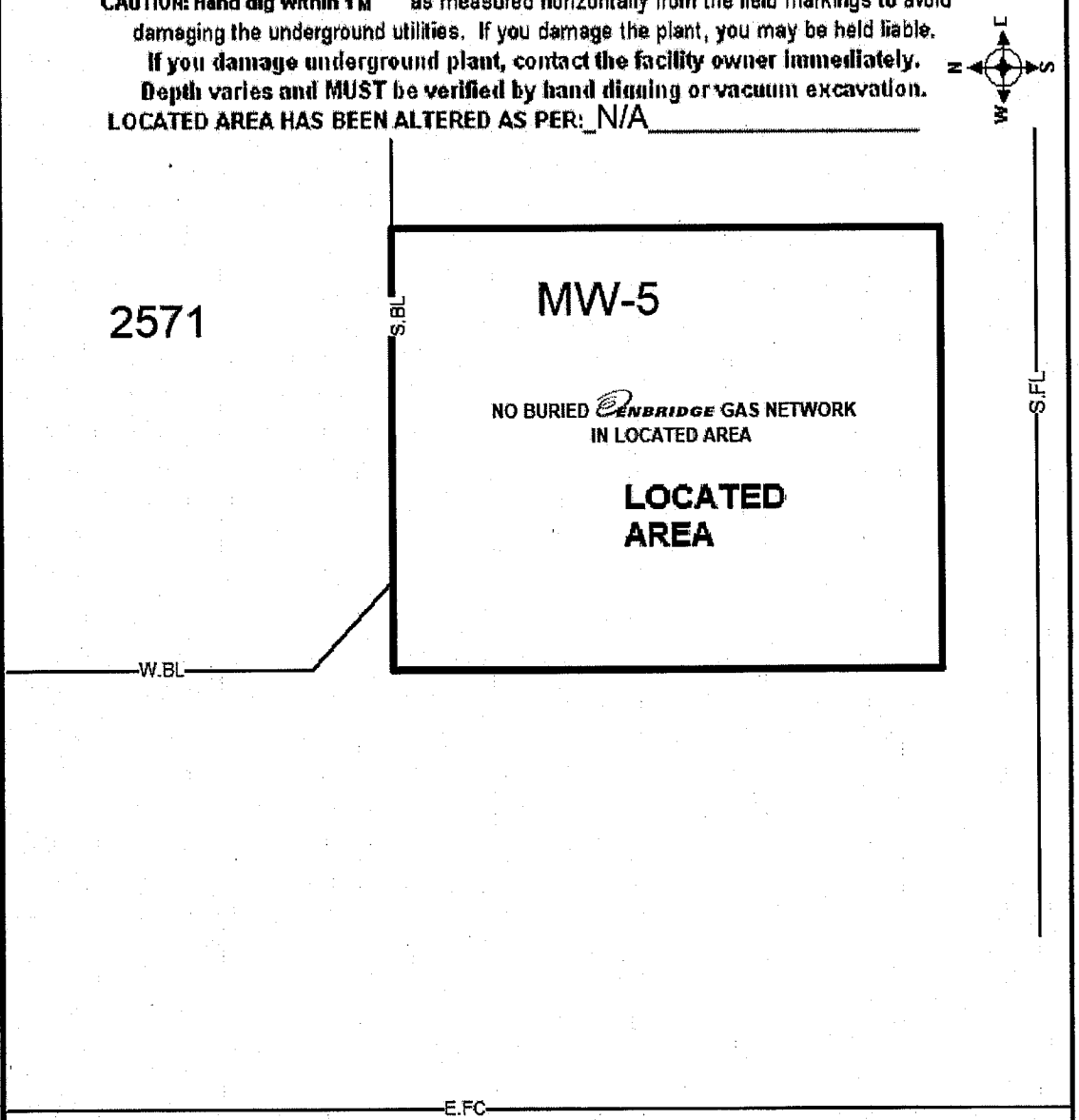
FROM: S.BL 2571 LANCASTER RD. TO: 18.0M S. OF S.BL 2571 LANCASTER RD.

Legend

Building Line	–BL–
Fence Line	–FL–
Face of Curb	–FC–
ASPHALT EDGE	–AE–
Sidewalk	SW
Driveway	–DW–
Manhole	M/H
Pedestal	☒
Flush to Grade Pedestal	FTG
Buried Service Wire	–BSW–
Buried Cable	B
Conduit	C
Fiber Optic Cable	FO
Bell Hydro Service	BH
Gas Valve	
Gas Service	–GS–
Gas Main	–GM–
Transformer	
Demarcation	DM
Hydro	H
Hydro Primary	–HP–
Hydro Secondary	–HS–
Catch Basin	CB
Sewer Manhole	
Water Valve	
Hydrant	
Water Valve Chamber	W
Hydro / Bell Pole	
Railway	
End Cap	
Traffic Manhole	T
Street Light Cable	–SL–
Street Light	
North	N.
East	E.
West	W.
South	S.

CAUTION: Hand dig within 1 M as measured horizontally from the field markings to avoid damaging the underground utilities. If you damage the plant, you may be held liable. **If you damage underground plant, contact the facility owner immediately. Depth varies and MUST be verified by hand digging or vacuum excavation.**

LOCATED AREA HAS BEEN ALTERED AS PER: N/A



THIS FORM VALID ONLY WITH Primary Locate Form. This sketch is not to scale.
Any privately owned services within the located area have not been marked- check with service/property owner.

A copy of this Auxiliary Locate Sheet(s) and the Primary Locate Sheet must be on site and in the hands of the machine operator during work operations. If sketch and markings do not coincide, the Excavator must obtain a new locate.

Promark telecon
Location of underground infrastructure

Auxiliary Locate Sheet

Union Gas Emergency # 1-877-969-0999

Fax: 613-723-9277 | Toll free: 1-800-371-8866 | Email

Utilities Located: ● Bell ☐ Gas ☐ HydroOttawa ☐ Hydro One ☐ Videotron ☐ Peel Fibre ☐ ZAYO	Date Located: mm/dd/yyyy 03/25/2021	Request # 20211215166

Number of Services marked: (Specify building/house numbers) N/A

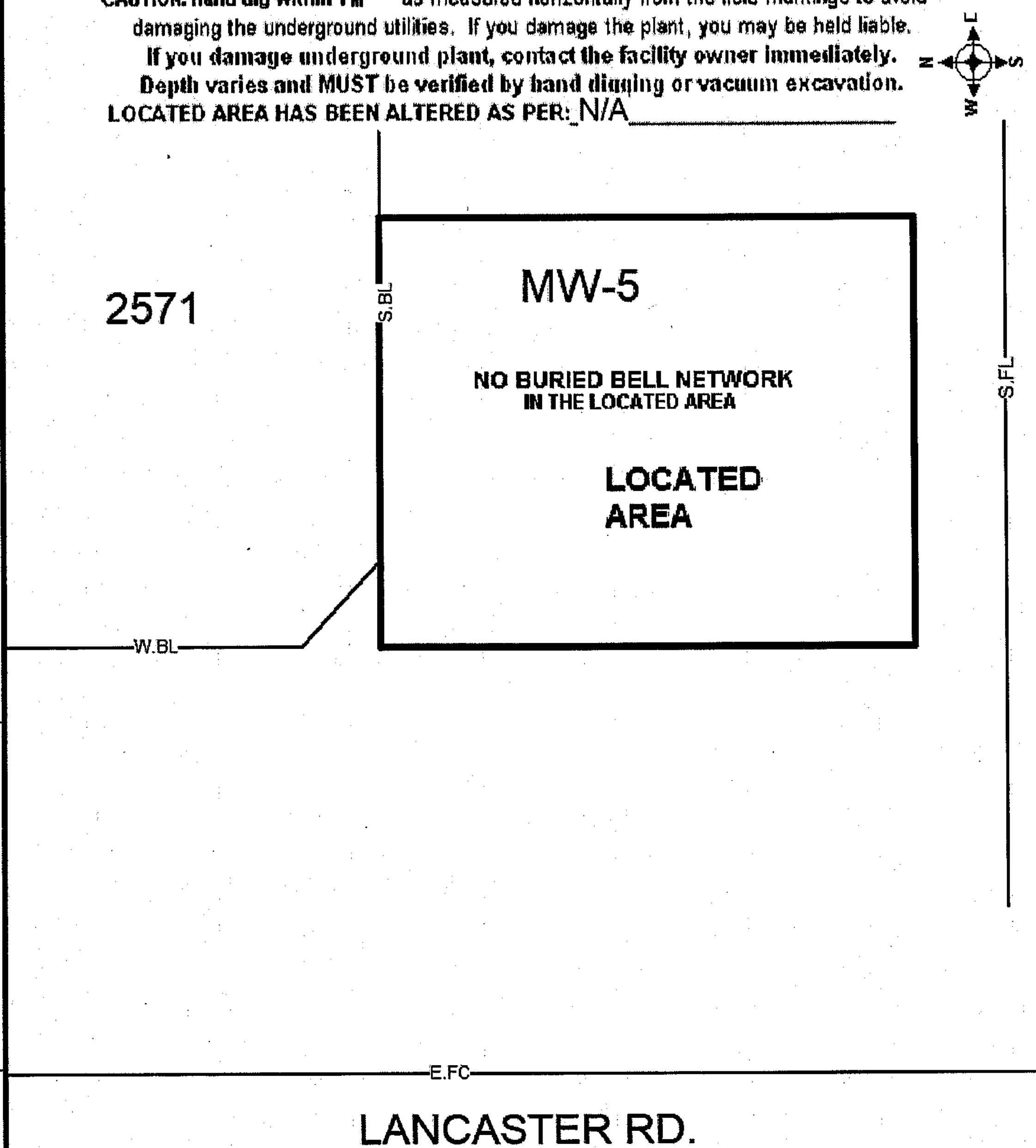
LOCATED AREA: EXCAVATOR SHALL NOT WORK OUTSIDE THE LOCATED AREA WITHOUT OBTAINING ANOTHER LOCATE

FROM: W.BL 2571 LANCASTER RD.	TO: 12.0M E. OF W.BL 2571 LANCASTER RD.
FROM: S.BL 2571 LANCASTER RD.	TO: 18.0M S. OF S.BL 2571 LANCASTER RD.

Legend

Building Line	–BL.–
Fence Line	–FL.–
Face of Curb	–FC–
ASPHALT EDGE	–AE–
Sidewalk	SW
Driveway	–DW/–
Manhole	M/H
Pedestal	☒
Flush to Grade Pedestal	FTG
Buried Service Wire	–BSW–
Buried Cable	B
Conduit	C
Fiber Optic Cable	FO –
Bell Hydro Service	BH –
Gas Valve	
Gas Service	GS–
Gas Main	–GM–
Transformer	
Demarcation	DM
Hydro	H
Hydro Primary	–HP–
Hydro Secondary	–HS–
Catch Basin	CB
Sewer Manhole	
Water Valve	
Hydrant	
Water Valve Chamber	W
Hydro / Bell Pole	O
Railway	
End Cap	
Traffic Manhole	T
Street Light Cable	–SL–
Street Light	
North	N.
East	E.
West	W.
South	S.

CAUTION: Hand dig within 1 M as measured horizontally from the field markings to avoid damaging the underground utilities. If you damage the plant, you may be held liable.
If you damage underground plant, contact the facility owner immediately.
Depth varies and MUST be verified by hand digging or vacuum excavation.
LOCATED AREA HAS BEEN ALTERED AS PER: N/A



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Promark telecon
Locates of underground infrastructure

Auxiliary Locate Sheet

Union Gas Emergency # 1-877-969-0999

Fax: 613-723-9277 | Toll free: 1-800-371-8866 | Email

Utilities ☐ Bell ☐ Gas ● HydroOttawa ☐ Street Lighting
Located: ☐ Blink ☐ Peel Fibre ☐ ZAYO

Date Located: mm/dd/yyyy 03/25/2021

Request # 20211215166

Number of Services marked: (Specify building/house numbers) N/A

LOCATED AREA: EXCAVATOR SHALL NOT WORK OUTSIDE THE LOCATED AREA WITHOUT OBTAINING ANOTHER LOCATE.

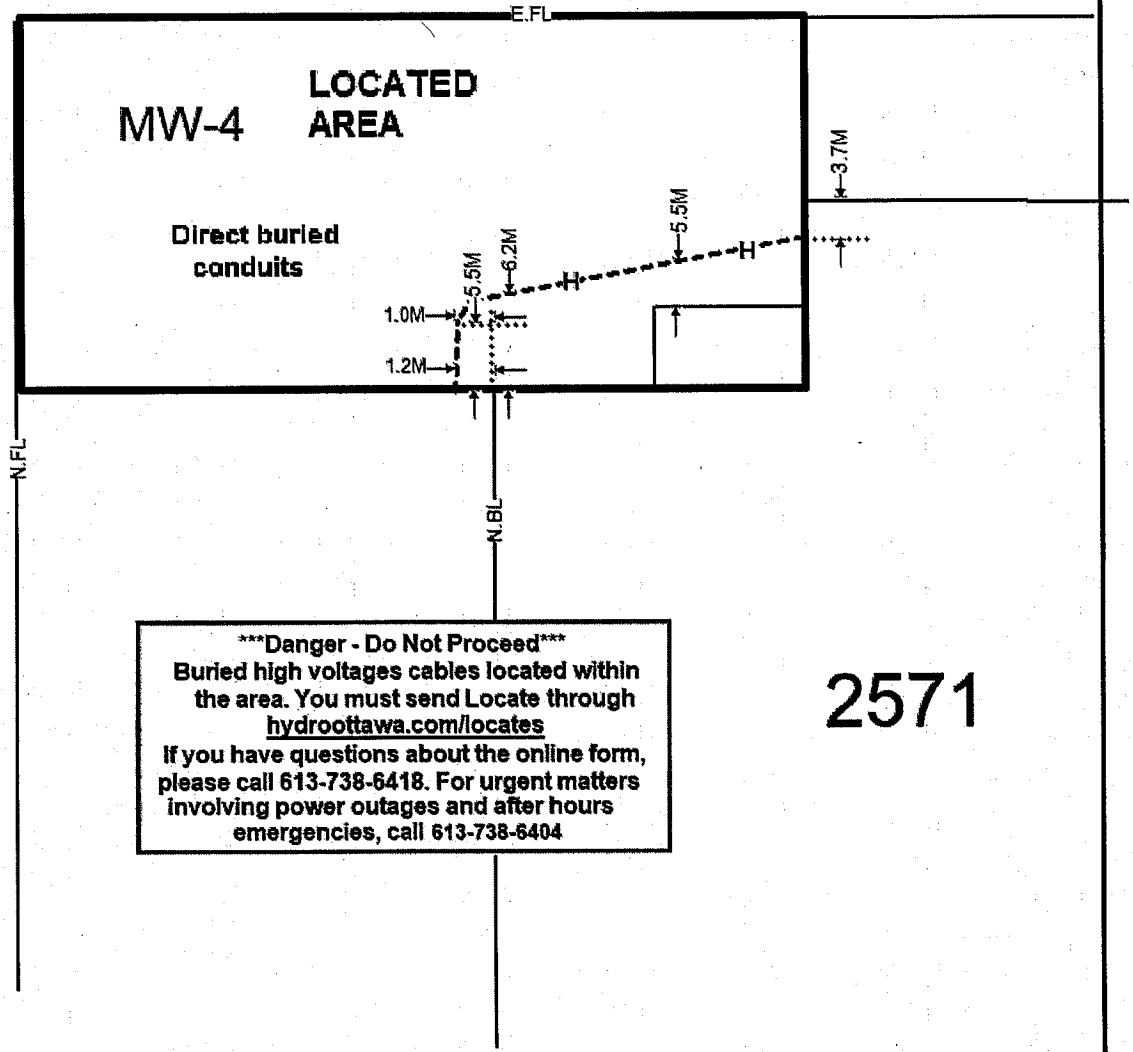
FROM: N.FL 2571 LANCASTER RD. TO: 16.0M S. OF N.BL 2571 LANCASTER RD.

FROM: E.FL 2571 LANCASTER RD. TO: 35.0M W. OF E.BL 2571 LANCASTER RD.

Legend

Building Line	–BL–
Fence Line	–FL–
Face of Curb	–FC–
ASPHALT EDGE	–AE–
Sidewalk	SW
Driveway	–DW–
Manhole	M/H
Pedestal	⊠
Flush to Grade Pedestal	FTG
Buried Service Wire	–BSW–
Buried Cable	B
Conduit	C
Fiber Optic Cable	FO
Bell Hydro Service	BH
Gas Valve	
Gas Service	GS
Gas Main	–GM–
Transformer	
Demarcation	DM
Hydro	H
Hydro Primary	–HP–
Hydro Secondary	–HS–
Catch Basin	CB
Sewer Manhole	
Water Valve	
Hydrant	
Water Valve Chamber	W
Hydro / Bell Pole	
Railway	
End Cap	
Traffic Manhole	T
Street Light Cable	–SL–
Street Light	
North	N.
East	E.
West	W.
South	S.

CAUTION: Hand dig within 1.5M as measured horizontally from the field markings to avoid damaging the underground utilities. If you damage the plant, you may be held liable.
If you damage underground plant, contact the facility owner immediately.
Depth varies and MUST be verified by hand digging or vacuum excavation.
LOCATED AREA HAS BEEN ALTERED AS PER: N/A



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Promark telecon
Location of underground infrastructure

Auxiliary Locate Sheet

Union Gas Emergency #
1-877-969-0999

Fax: 613-723-9277 | Toll free: 1-800-371-8866 | Email

Utilities Located: ☐ Bell ● Gas ☐ HydroOttawa ☐ Hydro One ☐ Videotron ☐ Peel Fibre ☐ ZAYO

Date Located: mm/dd/yyyy 03/25/2021

Request # 20211215166

Number of Services marked: (Specify building/house numbers) N/A

LOCATED AREA: EXCAVATOR SHALL NOT WORK OUTSIDE THE LOCATED AREA WITHOUT OBTAINING ANOTHER LOCATE

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FROM: E.FL 2571 LANCASTER RD. TO: 35.0M W. OF E.BL 2571 LANCASTER RD.

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LOCATED AREA HAS BEEN ALTERED AS PER: N/A

N E S W

Legend	
Building Line	-BL-
Fence Line	-FL-
Face of Curb	-FC-
ASPHALT EDGE	-AE-
Sidewalk	SW
Driveway	-DW-
Manhole	M/H
Pedestal	☒
Flush to Grade Pedestal	FTG
Buried Service Wire	-BSW-
Buried Cable	B
Conduit	C
Fiber Optic Cable	FO
Bell Hydro Service	BH
Gas Valve	⋈
Gas Service	-GS-
Gas Main	-GM-
Transformer	
Demarcation	DM
Hydro	H
Hydro Primary	-HP-
Hydro Secondary	-HS-
Catch Basin	CB
Sewer Manhole	
Water Valve	
Hydrant	
Water Valve Chamber	W
Hydro / Bell Pole	
Railway	
End Cap	
Traffic Manhole	T
Street Light Cable	-SL-
Street Light	
North	N.
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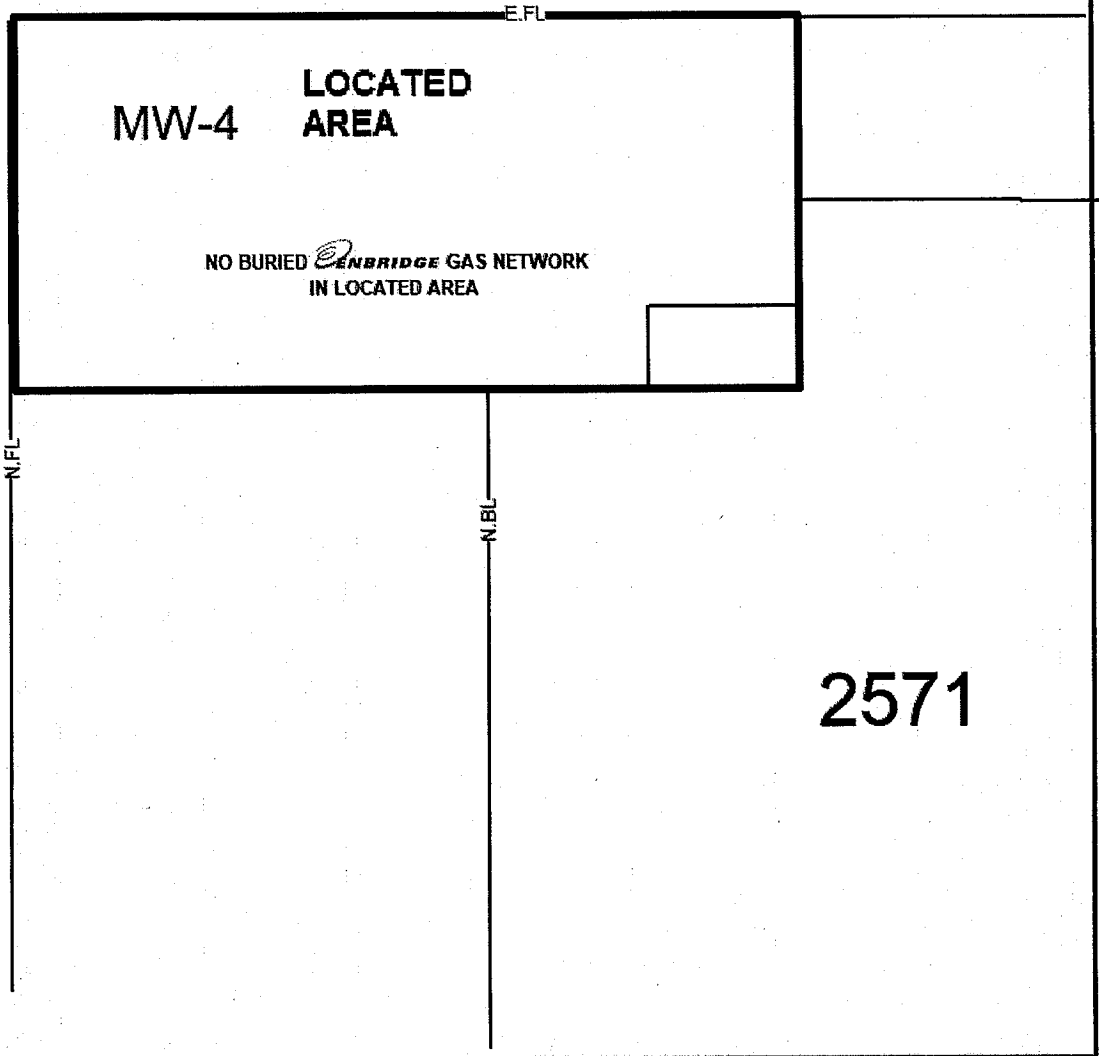
South	S.



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Promark telecon
Locators of underground infrastructure

Auxiliary Locate Sheet

Union Gas Emergency # 1-877-969-0999

Fax: 613-723-9277 Toll free: 1-800-371-8866 Email

Utilities Located: ● Bell ☐ Gas ☐ HydroOttawa ☐ Hydro One ☐ Videotron ☐ Peel Fibre ☐ ZAYO

Date Located: mm/dd/yyyy 03/25/2021

Request # 20211215166

Number of Services marked: (Specify building/house numbers) N/A

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FROM: E.FL 2571 LANCASTER RD. TO: 35.0M W. OF E.BL 2571 LANCASTER RD.

Legend

Building Line	--BL--
Fence Line	--FL--
Face of Curb	--FC--
ASPHALT EDGE	--AE--
Sidewalk	SW
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Hydro Primary	--HP--
Hydro Secondary	--HS--
Catch Basin	CB
Sewer Manhole	
Water Valve	
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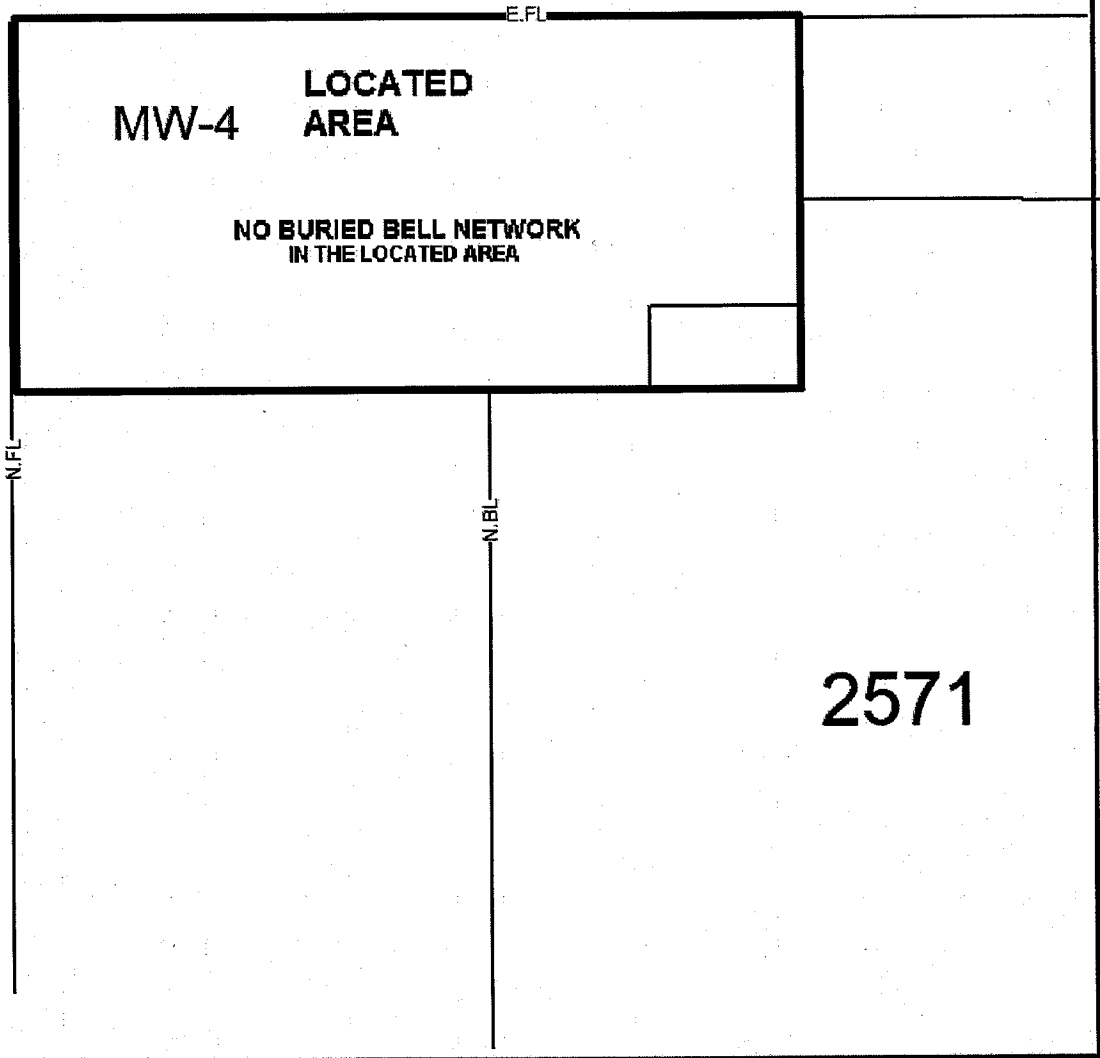

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ENBRIDGE

ENBRIDGE GAS INC.

Thank you for calling for a locate prior to starting your project.

Please note Enbridge Gas Inc has changed the locate validity period for station codes **ENOE01** and **EN2OE01** and this completed locate is valid for a period of **60 days** from the completion date on the Primary Locate Sheet.

You must adhere to the following:

- You must follow all STOP letters associated with your locate if provided in your locate package.
- You should always review the Primary and all the Auxiliary Sheets of your locate package and understand the validity period for all utilities / infrastructure owners.
- It is the responsibility of Excavators to protect and preserve the original yellow paint markings. White paint can be used to preserve/maintain the markings but should be place beside or at the top / bottom of the original markings ensuring not to replace the yellow paint.

When winter conditions exist, such as snow, pink paint and stakes or flags can be used.

Please be aware new gas services or mains can be installed after this locate was completed. Newly buried gas plant flags will be installed as visual identifier if this occurs.

If flags are present, please contact Enbridge Gas Damage Prevention at 1-866-922-3622

For station code – **ENOE01** or *Legacy Enbridge Gas Distribution* please refer to the Third Party Requirements in the Vicinity of Natural Gas Facilities must always be followed.

https://www.enbridgegas.com/~/media/Extranet-Pages/Safety/Before-you-dig/Third-Party-Requirements-in-the-Vicinity-of-Natural-Gas-Facilities

For station code **EN2OE01** or *Legacy Union Gas* please refer to

https://www.uniongas.com/about-us/safety/safe-digging-practices

Thank you

Bell

February 9 2015

To all Excavators:

Bell locates are now valid for the life of the excavation project and will not automatically be relocated every 60 days.

Please note the following for the above to apply:

a) Construction within the located area begins within 60 days of the "locate completed" date on the original ticket.

b) The construction company named on the locate remains active on the site.

Bell expects excavators will protect and preserve the paint marks put down on the original locate ticket. If markings are removed due to weather or excavation work the excavator is expected to recreate the markings based on the tie-in measurements provided on the original locate ticket.

If an excavator would like their markings freshened up they can contact Promark (the Bell Canada Locate Service Provider in this area) directly to arrange for them to place fresh markings on the ground however this will be at the excavators expense. Promark can be reached at 613-723-9888.

The locate will be considered officially expired one day after the final day of construction.

Thank you,

Bell Canada

Service Request Details

Service Request 1428124 **Lagan Case ID:** 202112151661

Source: Contractor **Created By:** Ga Maxpusr
Priority: **Reported By:**
Status: RESOLVED **Initiated:** 2021-Mar-18 1:18 PM

Location Information

Address: 2571 LANCASTER RD **Range:** **Unit:**
Between Streets: SHELBOURN LANE / DELRIDGE LANE **Municipality:** OO
Description:

Street Range:2571-
Street:LANCASTER RD
Intersect 1:GLADWIN CRES
Intersect 2:WALKLEY RD
Door Numbers:-
Municipality:

The work area is clear of underground water and sewer pipes owned by The City of Ottawa if the excavation is not in the road. The service pipes within the property are privately owned by the property owner and are not the responsibility of The City of Ottawa. Please note there are anodes in/near the work area, please dig with caution. Attached is the anode sketch.

Please note: City of Ottawa locates are valid for sixty (60) days. | S'il-vous-plaît notez: les localisations de la ville d'Ottawa sont valables pendant soixante (60) jours.

Requestor Information

Name: ROBERT KERR **Phones**
Address: 1704 CARLING AVE **Res:** **Cell:**
City: Ottawa **Bus:** 6132268750 **Ext:**
Postal Code: K2A1C7 **Unit:** **Fax:** 6132268677

Call Back & Other Assignments

Responsibilities

Service Request	Work Order #	Work Order

Request Details

Start Date: **Appointment Time:** **Service:** ESD
Finish Date: 2021-Mar-22 **Classification:** LOCATES - PROVIDE
Amount Charge to Customer: **Category:**

Structures

Structure ID	District	Description	Location	Qualifier	Unit
S1066134000		Water Service	2571 LANCASTER RD SHELBOURN LANE		

Service Request Details

Structure S1066134000

Address: 2571 LANCASTER RD
Between Streets: SHELBOURN LANE / DELRIDGE LANE

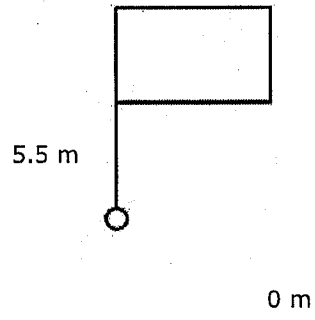
Qualifier:
Unit:
Dist:

City: OO
Ward: Ward 18
Block:

Sketch Information

Looking:	unknown	North Degree:	
Facing:	front of	The:	other
Start at the:	left corner	Move straight out:	5.5 m
Then go:	no where	For:	0 m
Other Structure:	23 FT	ID:	
Drawing Code:			

ADR:2571|



OPERATING

Ownership: PUBLIC
Frost Warning:
Order No.
Continuity?

Install Date:
Condo Corp No.
Condition Rating:

Service Characteristics

Located On:	Depth(m)	Diameter(mm)	Material
Public(At Main)	0	152	CO
Private(At Post)	0		

Insulation Type
Bedding
Length
CP Type

Soil
Backfill
CP Install Date

Joint Type
Surface

COMMENTS

A(ANODE/STATION INSTALLATION) SUPPLEMENTAL DATA SHEET

WO # 477626 APIN - A(ANODE/STATION INSTALLATION)

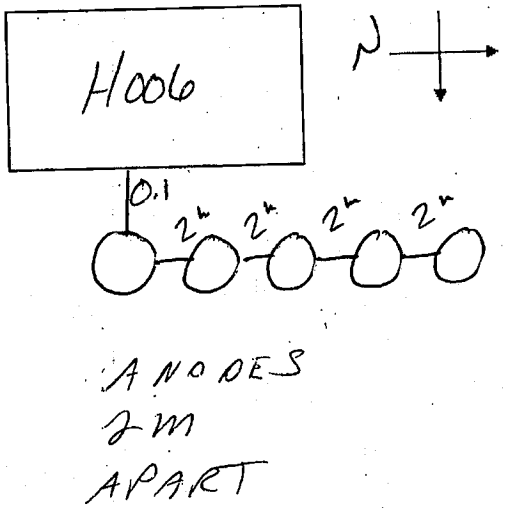
DATE OF INSTALLATION DAY 15 MONTH 09 YEAR 09

ANODE TEST STATION STRUCTURE ID TSAB09518 HYDRANT/SERVICE NUMBER 374029H006

STREET NAME 2571 LANCASTER RD

FROM GLADWIN CRES TO WALKLEY RD

HOUSE	
GARAGE	
OTHER	
HOUSE SERVICE	
HYDRANT	✓



ANODES
2M
APART

SUPPLEMENTAL DATA

ANODES INSTALLED 5

HYDRANT/SERVICE NUMBER - 374029H006

LAWN REQUIRES SOD SEED TOP SOIL

INSPECTOR [illegible]

A(ANODE/STATION INSTALLATION) SUPPLEMENTAL DATA SHEET

WO # **477626** APIN - A(ANODE/STATION INSTALLATION)

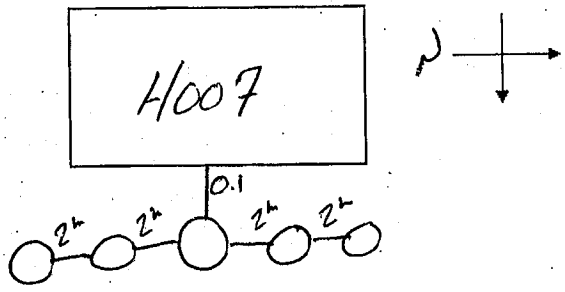
DATE OF INSTALLATION DAY 15 MONTH 09 YEAR 09

ANODE TEST STATION STRUCTURE ID TSAB09617 HYDRANT/SERVICE NUMBER 374029H007

STREET NAME 2600 LANCASTER RD

FROM DELRIDGE LANE TO SHELBOURN LANE

HOUSE	
GARAGE	
OTHER	
HOUSE SERVICE	
HYDRANT	✓



ANODES
3M
APART

SUPPLEMENTAL DATA

ANODES INSTALLED 5

HYDRANT/SERVICE NUMBER - 374029H007

LAWN REQUIRES **SOD** **SEED** **TOP SOIL**

INSPECTOR DAN ST-GERMAIN

DISCLAIMER

The excavator must have a copy of this locate on the job site during excavation.

Locate area: The excavator must not work outside the area indicated in the location of work or located area in the diagram without an updated locate. Stakes or markings may disappear or be displaced. If any delays occur in acting on the stakeout information, or if markings become unclear, a new locate must be obtained.

Locating the plant: The plant location information provided is only an estimate. Depth of underground plant varies and the exact location must be determined by hand digging prior to excavation with mechanical equipment.

Warning: Do not use mechanical equipment within one (1) metre of the estimated location of the water or sewer plant. If the plant is larger than 406mm, mechanical equipment must not be used within three (3) meters.

Digging around exposed plants: Must do any further excavation within 0.3 metres of an exposed water or sewer plant by hand.

Contractors are to perform all work in accordance with applicable City of Ottawa By-laws and any applicable federal and provincial legislation or regulations, including but not limited to the *Public Utilities Act, R.S.O. 1990, c. P.52, s. 56(1); Ontario Regulation 210/01 under the Technical Safety Standards Act, 2000 , S.O. 2000 c. 16; Ontario Regulation 213/91 under the Occupational Health and Safety Act, R.S.O. 1990, c. O.1.*

AVIS DE NON-RESPONSABILITÉ

L'opérateur de l'excavatrice doit avoir en sa possession ce rapport de localisation pendant l'excavation.

Zone de localisation : l'opérateur de l'excavatrice ne doit pas creuser en dehors de la zone indiquée sur l'ordre de travail ni à l'extérieur de la zone indiquée sur le diagramme, à moins d'avoir en sa possession un rapport de localisation actualisé. Les piquets ou les marques peuvent disparaître ou être déplacés. S'il y a un retard à intervenir sur la base des données de surveillance ou si le marquage devient imprécis, il faut obtenir un nouveau rapport de localisation.

Déterminer l'emplacement des conduites : les renseignements sur l'emplacement des conduites sont approximatifs. Pour déterminer l'emplacement et la profondeur, on doit creuser manuellement avant d'utiliser une excavatrice.

Avertissement : n'utilisez pas d'équipement mécanique [excavatrice] à moins d'un [1] mètre de l'emplacement supposé de la conduite d'eau ou d'égout. Si la conduite compte plus de 406 mm de diamètre, aucun équipement mécanique ne doit être utilisé à moins [3] de trois mètres de celle-ci.

Creuser autour des conduites exposées : toute excavation à moins de 0,3 m d'une conduite d'eau ou d'égout doit se faire manuellement.

Les entrepreneurs doivent exécuter tous les travaux conformément aux règlements de la Ville d'Ottawa et aux lois et règlements fédéraux ou provinciaux applicables, y compris, mais sans s'y limiter, la *Loi sur les services publics, L.R.O. 1990, chap. P.52, art. 56[1]*; le *Règlement 210/01 de l'Ontario* en vertu de la *Loi de 2000 sur les normes techniques et la sécurité, L.O. 2000, chap. 16*; et le *Règlement 213/91 de l'Ontario* en vertu de la *Loi sur la santé et la sécurité au travail L.R.O. 1990, chap. O.1.*

2020

Dear Excavator,

Re: Marking Preservation

Your City of Ottawa Water & Sewer locate request has been completed based on the information you provided Ontario One Call. The locate is valid for 60 days from the date indicated on the City of Ottawa Locate Report – Water and Sewer Utilities. Please be aware it's the requestors responsibility to contact Ontario One Call for a new locate if any changes are known, suspected or for a relocate if excavation continues beyond 60 days.

The City of Ottawa expects excavators to protect and preserve the paint marks and flags placed at the time of the original locate ticket. If markings are removed due to weather or excavation work, the excavator is expected to recreate the markings based on the tie-in measurements provided on the original locate ticket report. Valid locate documentation is always required to be on site.

This is in accordance with the below section from the Canadian Common Ground Alliance Best Practices handbook version 3.0 – October 2018 (p. 55)

4-16: Marking Preservation Practice Statement: *The excavator, where practical, protects and preserves the staking, marking, or other designations for underground facilities until no longer required for proper and safe excavation. The excavator stops excavating and notifies the notification service for re-marks if any facility mark is removed or no longer visible.*

If an excavator would like the City of Ottawa to refresh the markings, please contact Ontario One Call to request a Remark and reference the original locate ticket number.

Thank you,

City of Ottawa, Water and Sewer Locates

On1 Call #	20211215166
Date Requested	03/18/2021 1:18:36 PM

City of Ottawa Street Light Locate

Dispatcher: Melissa Dowdell
Phone: 613-526-1226

[redacted]
Black&McDonald
[redacted]

Company	U S L
Name	ROBERT KERR
Phone	(613)-226-8750 ext.
FAX	(613)-226-8677 ext.
Site Contact	JACQUES DESJARDINS
Phone	

Instructions
2571, LANCASTER RD
CORLOT=IJ DRILLING TWO BOREHOLES ON SITE MARKED AS MW-4 AND MW-5. CLEAR 5M IN ALL DIRECTIONS AS PER BOREHOLE LAYOUT PLAN PROVIDED. NO_PLAN:613 737

LOCATOR SKETCH

N

Clear

Private Property

No City of Ottawa street light assets in dig area

—SL— Underground Street Light Cable
Street Light
—OH— Overhead/Aerial Wires
Globe/Decorative Light
Source/Transformer
Hydro Pole

Locator Notes/Comments:

Locate is valid for 60 days. If sketch is different from markings, location or nature of work changes, a new locate must be requested. Hand dig within 1m (3.28ft) on either side of markings. Depth of buried plant varies.

Cette fiche n'est pas valide 60 jours de calendrier apres le reperage. Si les marques ne concordent pas avec celles sur le croquis, un nouveau reperage est requis. Tout changement a l'emplacement ou a la nature du travail necessite un nouveau reperage. Creuser a la main un metre (3.28 pieds) du repere. La profondeur des installation varie d'un endroit a l'autre.

Date Located	03/23/2021
Time of day	
Located by	JUSTIN VAVROS
Signature	

UNDERGROUND SERVICE LOCATORS
ONE-CALL SYSTEMS INC.
100-1704 CARLING AVE
OTTAWA, ON K2A 1C7

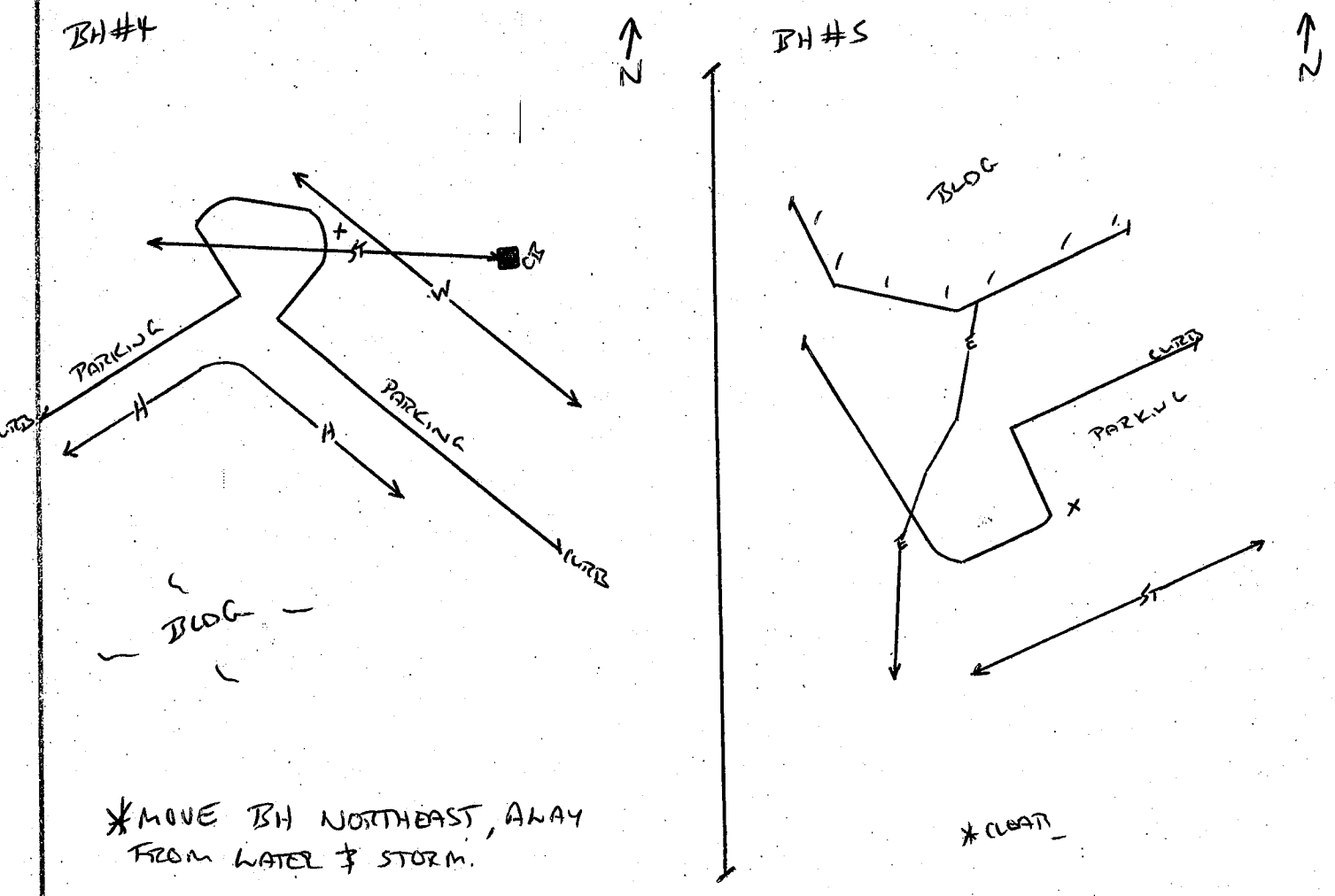
DATE: MAR. 29/21

PHONE (613) 226-8750
FAX (613) 226-8677

CUSTOMER: Bluemetric	REQUESTED BY: ROBERT HILLIER
LOCATION OF WORK: 2571 LANCASTER RD.	LIMITS OF WORK: BHS

HYDRO	-- H --	CABLE T.V.	-- T.V. --	OTHER:
GAS	-- G --	SANITARY		
BELL	-- B --	SEWER	-- S --	
WATER	-- W --	STORM	-- ST --	

LOCATES ONLY APPLICABLE TO INFO ABOVE - LOCATES VOID AFTER 30 DAYS!



SKETCH NOT TO SCALE

THIS SKETCH IS NOT A VALID PUBLIC UTILITY LOCATE. CONTRACTOR IS RESPONSIBLE TO ENSURE THEY HAVE PUBLIC LOCATES BEFORE COMMENCING WORK.

ASBUILTS OR PLANS PROVIDED:	YES	NO
LOCATORS NAME: MATT MOREAU	SIGNATURE: Matt Moreau	

CAUTION: HAND DIG WITHIN 1.5 METERS OF MARKINGS

USL-1 DISCLAIMER - FORM 101

- It is our Clients responsibility to fully read and understand this document, prior to any ground disturbance taking place. Should any questions or clarifications be required, contact USL-1 before commencing work
- Locate is VOID after 30 days from the date the locate was completed. Contact USL-1 for remarks and/or new ticket requests, with a minimum notice of 5 business days
- If the scope of work, locate area, or site information changes, contact USL-1 before continuing work. In certain instances, a new ticket request may be required
- Any work within 1.5 metres laterally of a marked utility, must be hand dug or daylighted. Utility depths vary, as does the accuracy of the locate equipment, and therefore depths are typically not provided and should not be used for excavation purposes. Depth of utilities should also be verified by hand digging or daylighting. The best information is provided at the time of the locate, however the accuracy of field markings can vary with regard to equipment accuracy and external interference
- If the paint markings or flags on site differ from that of the sketch provided, please contact USL-1 before commencing work. If possible, the issue will be clarified by USL-1 and/or a site meet may be requested with the appropriate parties
- The "Excavator" is responsible for keeping a current copy of the locates on site, with the operators and in/on the excavation equipment AT ALL TIMES
- It is the "Excavator/Contractor's" responsibility to read ALL locate sheets, both public and private, to ensure they understand what potential hazards or buried utilities exist in their work area
- Special purpose locates such as sewer sondeing, locate surveys, tunnel identification, conduit identification, ground fault detections, ground penetrating radar, well cap location, concrete scanning, or anything else that requires use of more than Radiodetection equipment, must be identified at the time of the original locate request. Should a USL-1 locator identify any special needs services during a normal Private utility locate, the client will be notified for the appropriate course of action
- Not all buried utilities can be traced. In many instances, water and sewer lines, irrigation systems, grounding cables, fibre optic cables, heating cables, protection cables, and communication cables may not be traceable. Typically, sewer lines will be painted and lined up directionally from manhole to manhole where possible. It may not be possible to detect bends in the sewer lines between manholes. If tracer wires have been buried with the utility, they will be used to locate the buried utility where possible. If a buried utility cannot be traced, it will be noted on the USL-1 report. USL-1 is not liable for damage to untraceable utilities
- Public utility locators have maps, plans and as-built diagrams for reference to work from. Private utility locators, for the most part, do not. USL-1 will attempt to locate any Private utilities on a site, using as-built plans provided to them. Building access is mandatory and must be arranged by our client. Any conduits or utilities noted entering or exiting a building will be traced if possible, as well as any other visible utilities observed on site. It is the responsibility of the contractor to provide any and all buried utility information and site contacts that they have. There is no guarantee that USL-1 can find all buried utilities if the property owner does not have records or information regarding their own buried utilities
- USL-1 cannot be held liable for damage to Private water and/or sewer laterals unless building access is granted, and the utility is locatable
- Thick snow and ice, frozen manhole lids, live traffic, parked cars, construction debris and activities etc, are all factors that can interfere with USL-1's ability to perform Private utility locates. USL-1 cannot guaranty location of all buried utilities when such factors impede the locate process. It is the contractor's responsibility to ensure that the work areas are safe and accessible for locates, prior to USL-1's arrival to site
- USL-1 as a Private utility locator, is not permitted to locate Publicly owned utilities. In some cases, Public utilities may be noted on a sketch, but are FOR REFERENCE ONLY, and under no circumstances shall be used for excavation purposes. It is the contractor's responsibility to verify any Public utilities noted on the USL-1 sketch by referring to the Public utility locate sheets for physical LOCATION AND ACCURACY. USL-1 DOES NOT ASSUME LIABILTY FOR PUBLIC LOCATE INNACCURACIES
- If the proposed work area is on Private property, it does NOT mean that all buried utilities are Private. Regardless of where you are digging, and what the proposed depth of excavation is, it is the law to notify Ontario One Call (or Info-Excavation in Quebec) to obtain Public utility locates
- NCC PROPERTY - assuming the contractor has been issued a Land Access Permit from the NCC, it is typically indicated within the permit that it is the contractor's responsibility to contact NCC for utility locates of their buried utilities

USL-1

UNDERGROUND SERVICE LOCATORS INC.

USL-1 UNDERGROUND SERVICE LOCATORS INC.
100 – 1704 CARLING AVE. - OTTAWA, ON - K2H 1H3
613-226-8750 - WWW.USL-1.COM

COVER SHEET

DATE: MAR. 29/21 TO: ROBERT –

RE: LANCASTER RD. RAIL T.O.L. PAGES (INCLUDING COVER): 15

FROM: MATT MOREAU
613-218-7751 - MATTM@USL-1.COM

IF YOU DID NOT RECEIVE ALL OF THE PAGES FOR THIS REPORT, OR IF ANY PART OF IT IS UNCLEAR, PLEASE CONTACT ME. THANK YOU AND HAVE A GREAT DAY!

USL-1
UNDERGROUND SERVICE LOCATORS INC.

DATE: MAR. 29/21

CLIENT: BLUMESTIC JOB LOCATION: LANCASTER RD. WORK: BHS

PUBLIC UTILITY LOCATE REPORT

	UTILITY	LOCATED BY	MARKED / CLEAR
(1)	BELL, GAS, HYDRO	PRO MARK	CLEAR
(2)	LATER, SEWER	CITY	↓
(3)	STREET LIGHTS	BLACK & MAC	↓
NOTES:			

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PRIVATE UTILITY LOCATE REPORT

UTILITY	MARKED / CLEAR or N/A	UTILITY	MARKED / CLEAR or N/A
HYDRO / ELECTRICAL	CLEAR	STORM SEWER	CLEAR
COMMS / FOC	↓	SANITARY SEWER	↓
GAS / PROPANE / FUEL	↓	STEAM / TUNNELS	—
WATER	↓	OTHER	—
NOTES:			

AS-BUILT OR UTILITY PLANS PROVIDED? YES / (NO) - WORK AREA MARKED? (YES) / NO

Robert Kerr

From: solutions@on1call.com
Sent: Thursday, March 18, 2021 2:50 PM
To: Locates
Subject: Request 20211215289

LOCATE REQUEST CONFIRMATION

TICKET #: 20211215289
REQUEST PRIORITY: STANDARD
REQUEST TYPE: REGULAR
WORK TO BEGIN DATE: 03/25/2021

Update of Ticket #
Project #
Transmit date: 03/18/2021 02:49:05 PM

REQUESTOR'S CONTACT INFORMATION	
Contractor ID#: 202	**Company Phone #:** (613) 226-8750
Contact Name: ROBERT KERR	**Cell #:**
Alternate Contact Name: JACQUES DESJARDINS	**Fax #:** (613) 226-8677
Company name: U S L	**Email:** locates@usl-1.com
Address: 1704 Carling	**Alternate Contact #:**

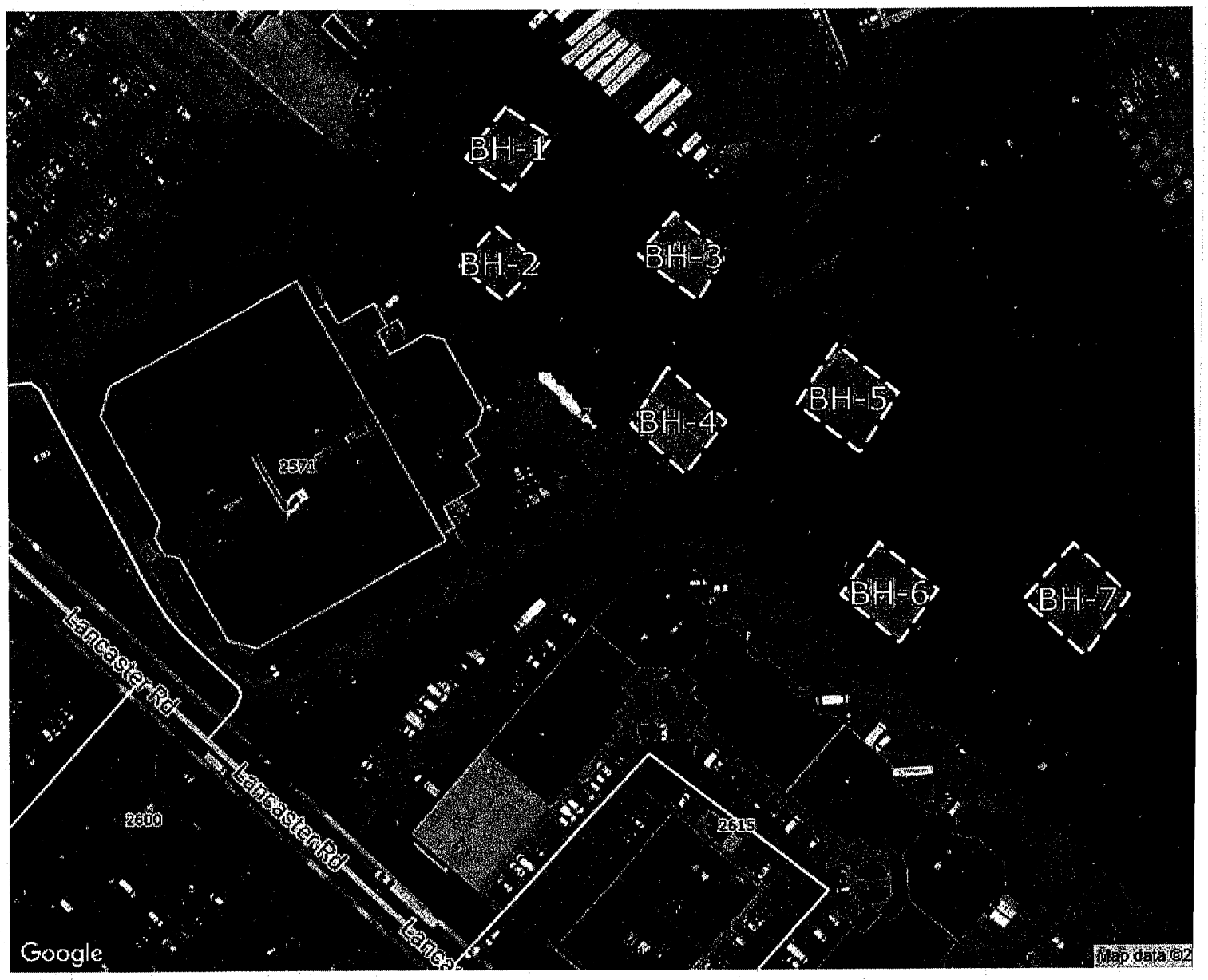
DIG INFORMATION		
Region/County: OTTAWA	**Type of work:** BORE HOLES	**Mark & Fax:** NO
Community:	**Max Depth:** 100.00 FT	**Area is not marked:** NO
City: OTTAWA	**Machine Dig:** YES	**Area is marked:** YES
Address: 2595, LANCASTER RD	**Hand Dig:** NO	**Site Meet Req.:** NO
	Directional Drilling: NO	**Work being done for:** Blumetric
Intersecting Street 1: GLADWIN CRES	**Public Property:** YES	
Intersecting Street 2: WALKLEY RD	**Private Property:** YES	

DETAILED DESCRIPTION OF WORK	REMARKS
CORLOT=U Drilling 7 boreholes marked on site. Clea r to 5M in all directions at each staked borehole, as per borehole plan attached.	

MEMBERS NOTIFIED: The following owners of underground infrastructure in the area of your excavation site have been notified.

Member name	Station Code	Initial Status
HYDRO OTTAWA (HOT1)	HOT1	Notification sent
PROMARK FOR ENBRIDGE GAS (ENOE01)	ENOE01	Notification sent
CITY OF OTTAWA WATER/SEWER (OTWAWS01)	OTWAWS01	Notification sent
BLACK AND MC DONALD FOR CITY OF OTTAWA STREET LIGHTS (OTWASL01)	OTWASL01	Notification sent
PROMARK FOR BELL CANADA (BCOE01)	BCOE01	Notification sent

MAP SELECTION: Map Selection provided by the excavator through Ontario One Call's map tool or through agent interpretation by



CONTRACTOR'S SKETCH: A file provided directly by the excavator, not generated by Ontario One Call:

IMPORTANT INFORMATION: Please read.

Defining "NC" - Non-Compliant

- Non-compliant members have not met their obligations under section 5 of the Ontario Underground Infrastructure Notification Act.ON1Call has notified these members to ensure they are aware of your excavation. In this circumstance, should the member not respond, the excavator should contact the member directly to obtain their locates or request a status. ON1Call will not be provided with a locate status from the member regarding this ticket and therefore, cannot provide further information at this time.For locate status contact information please refer to our website.

You have a valid locate when...

- You have reviewed your locate request information for accuracy. CONTACT Ontario One Call (ON1Call) IMMEDIATELY if changes are needed and obtain a corrected locate request confirmation.
- You have obtained locates or clearances from all ON1Call members listed in this ticket before beginning your dig.

You've met your obligations when...

- In addition to this locate request, you have DIRECTLY contacted all owners of infrastructure who ARE NOT current members of ON1Call (such as owned buried infrastructure on private property), as well as arranged for contract locates for your private lines on your private property - where applicable. For a list of locate status contacts visit www.on1call.com.
- You respect the marks and instructions provided by the locators and dig with care; the marks and locator instructions MUST MATCH.
- You have obtained any necessary permits from the municipality in whichyou are excavating.

What does "Cleared" mean in the "Initial Status" section?

1. The information that you have provided about your dig will not affect that member's underground infrastructure and they have provided you with a
clearance, if anything about your excavation changes, please ensure that you update your ticket immediately.

What are the images under "Map Selection":

1. A drawing created by an excavator directly within Ontario One Call's web ticket tool, this is expected to be an accurate rendition of the dig site, and it is the excavator's responsibility to ensure the location matches the information they provide under the 'Dig Location' section OR;

2. A drawing created by an Ontario One Call agent, this drawing is based on a verbal description by phone of the area by the excavator. Agents may create drawings that are larger than the proposed dig to minimize risk of interpretation. It is the excavator's responsibility to review these map selections for accuracy. Changes can be made by the excavator through the web ticket tool, to learn how visit www.on1call.com/contractors.

3. All drawings dictate which members are notified.

Promark telecon
Location of underground infrastructures

Primary Locate Sheet

UNION GAS EMERGENCY #
1-877-969-0999

Fax: 613-723-9277 Toll free: 1-800-371-8866 Email:

Request #
20211215289
NORMAL

Utilities Located: ●Bell ●Gas ●Hydro Ottawa ☐Hydro One ☐ Zayo ☐ Videotron ☐ Lakefront Utilities ☐ Elexicon Energy	Revised Excavation Date: N/A mm/dd/yyyy	Excavation Date: 3/25/2021 12:00:00 AM mm/dd/yyyy	Status: STANDARD Homeowner ☐ Contractor X Project ☐

Requested by:	Company:	Phone:	Fax/email:
ROBERT KERR	U S L	(613)-226-8750 ext.	(613)-226-8677 ext.

Appt Date: N/A mm/dd/yyyy	Received Date: 3/18/2021 2:53:16 PM mm/dd/yyyy	Locate Address: 2595, LANCASTER RD

1st Inters.: GLADWIN CRES 2nd Inters.: WALKLEY RD

Type of work: BORE HOLES

City: OTTAWA

Caller's Remarks:
MACH. DIG
CORLOT=U DRILLING 7 BOREHOLES MARKED ON SITE. CLEAR TO 5M IN ALL DIRECTIONS AT EACH STAKED BOREHOLE, AS PER BOREHOLE PLAN ATTACHED.

-75.610113, 45.400424, NB_SEGMENTS::1, NO_PLAN::, BCOE01, OTWASL01, OTWAWS01, ENOE01, HOT1

Bell Mark | Clear	Gas Mark | Clear	Hydro Ottawa Mark | Clear	Street Lighting Mark | Clear	Lakefront Mark | Clear	Hydro One Mark | Clear	Zayo Mark | Clear	Elexicon Energy Mark | Clear	Videotron Mark | Clear
1	1	1	N/A	N/A	N/A	N/A	N/A	N/A

LOCATED AREA: EXCAVATOR SHALL NOT WORK OUTSIDE THE LOCATED AREA WITHOUT OBTAINING ANOTHER LOCATE.

Records Reference:
_ Map X GMobile X LAC MultiViewer
_ Byers X Datapak: PMOTTP12142
Field Notes: X LAC Multiviewer
Other: GL110 & GL111
DPT Remarks: N/A

_ Third Party Notification

N/A

Apply Sticker Here if Required

Excavator shall notify & receive a clearance from Utility prior to excavation for the following:
Telecon ☐ High Priority Cable ☐ Central Office Vicinity

Gas Material Type: ☐Steel(st) X Plastic(PE) ☐Copper(CO)

Method of Field Marking: X Paint ☐ Stakes X Flags ☐ Offset Flags ☐ Other (Telecom=Orange, Gas=Yellow, Hydro Ott. =Red)

Caution: Bell locate valid for life of excavation see attached document. Hydro One - Hydro Ottawa - Enbridge Gas - Lakefront Utilities - Elexicon Energy valid for 60 days, 360 valid for life of excavation. See disclaimer for Facility Owner Guidelines.

Caution: Any changes to location or nature of work require new locate. The Excavator must not work outside the Located Area without a new locate. Privately owned services within the located area have not been marked - check with service / property owner. For all Locate requests including remarks contact: Ontario One Call at 1-800-400-2255 or www.on1call.com

Locator Name: SARSFIELD JAMES	Start Time: 12:00	_ Mark & Fax _ Left on Site X Emailed
ID #: 2163	End Time : 12:25	Print: N/A
Date 03/25/2021	Total Hours: 25MIN	Signature: N/A

A copy of this Primary Locate Sheet and Auxiliary Locate Sheet(s) must be on site and in the hands of the machine operator during work operations. If sketch and markings do not coincide, the Excavator must obtain a new locate.

This form revised September 2019

Promark telecon
Locators of underground infrastructure

Auxiliary Locate Sheet

Union Gas Emergency # 1-877-969-0999

Fax: 613-723-9277 | Toll free: 1-800-371-8866 | Email

Utilities Located: ● Bell ☐ Gas ☐ HydroOttawa ☐ Hydro One ☐ Videotron ☐ Peel Fibre ☐ ZAYO

Date Located: mm/dd/yyyy 03/25/2021

Request # 20211215289

Number of Services marked: (Specify building/house numbers) N/A

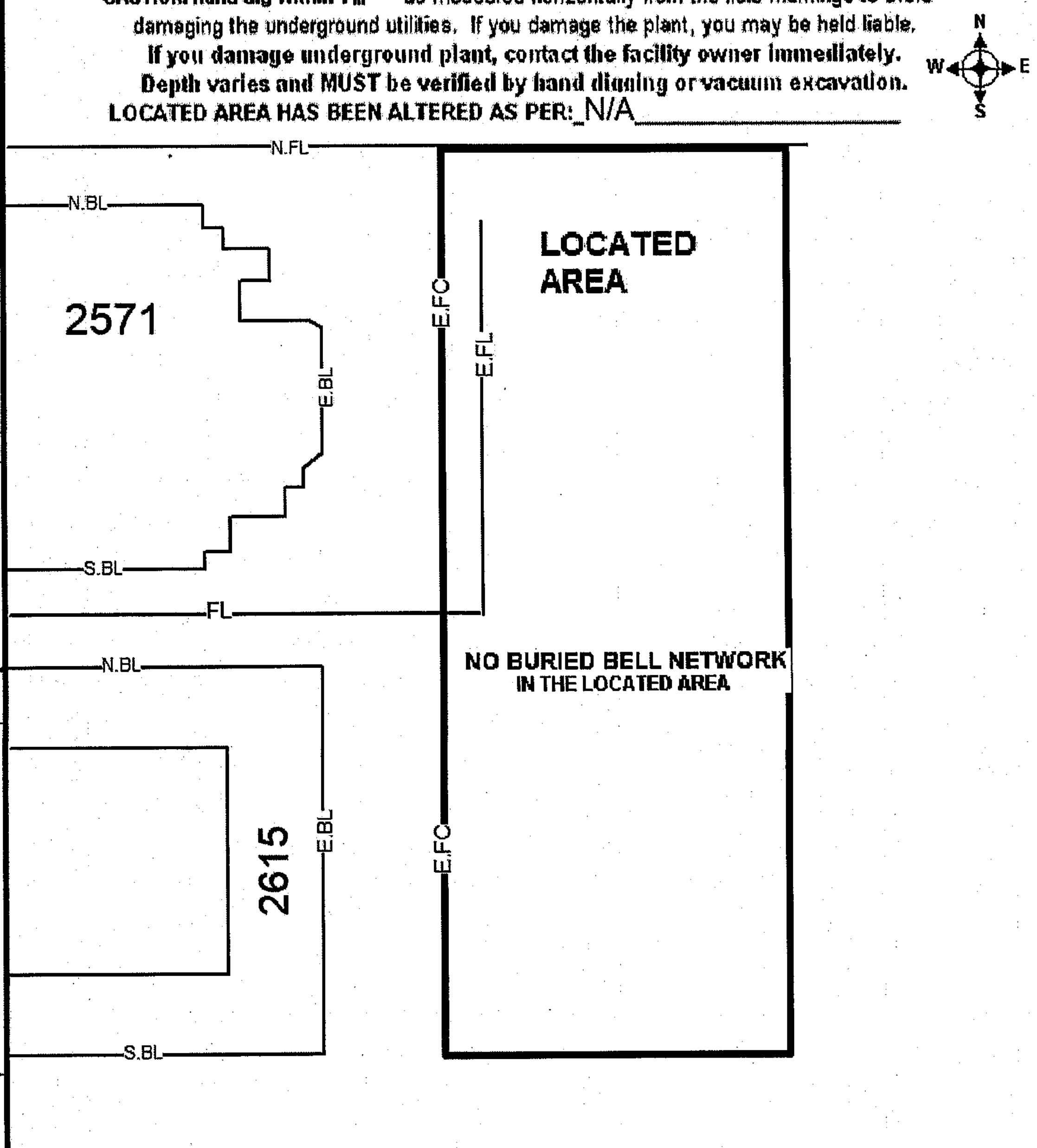
LOCATED AREA: EXCAVATOR SHALL NOT WORK OUTSIDE THE LOCATED AREA WITHOUT OBTAINING ANOTHER LOCATE

FROM: E.FC 2571 LANCASTER RD. | TO: 70.0M E. OF E.FC 2571 LANCASTER RD.

FROM: N.FL 2571 LANCASTER RD. | TO: S.BL 2615 LANCASTER RD.

Legend	
Building Line	–BL–
Fence Line	–FL–
Face of Curb	–FC–
ASPHALT EDGE	–AE–
Sidewalk	SW
Driveway	–DW–
Manhole	M/H
Pedestal	⊠
Flush to Grade Pedestal	FTG
Buried Service Wire	–BSW–
Buried Cable	B
Conduit	C
Fiber Optic Cable	FO
Bell Hydro Service	BH
Gas Valve	
Gas Service	–GS–
Gas Main	–GM–
Transformer	
Demarcation	DM
Hydro	H
Hydro Primary	–HP–
Hydro Secondary	–HS–
Catch Basin	CB
Sewer Manhole	
Water Valve	
Hydrant	
Water Valve Chamber	W
Hydro / Bell Pole	○
Railway	
End Cap	
Traffic Manhole	T
Street Light Cable	–SL–
Street Light	
North	N.
East	E.
West	W.
South	S.

CAUTION: Hand dig within 1 M as measured horizontally from the field markings to avoid damaging the underground utilities. If you damage the plant, you may be held liable.
If you damage underground plant, contact the facility owner immediately.
Depth varies and MUST be verified by hand digging or vacuum excavation.
LOCATED AREA HAS BEEN ALTERED AS PER: N/A



THIS FORM VALID ONLY WITH Primary Locate Form. This sketch is not to scale.
Any privately owned services within the located area have not been marked- check with service/property owner.

A copy of this Auxiliary Locate Sheet(s) and the Primary Locate Sheet must be on site and in the hands of the machine operator during work operations. If sketch and markings do not coincide, the Excavator must obtain a new locate.

This form revised March 2020 | White-Excavator | Yellow-Office | LAC FORM

Promark telecon
Locates of underground infrastructure

Auxiliary Locate Sheet

Union Gas Emergency #
1-877-969-0999

Fax: 613-723-9277
Toll free: 1-800-371-8866
Email

Utilities Located: ☐ Bell ● Gas ☐ HydroOttawa ☐ Hydro One ☐ Videotron ☐ Peel Fibre ☐ ZAYO

Date Located: mm/dd/yyyy 03/25/2021

Request # 20211215289

Number of Services marked: (Specify building/house numbers) N/A

LOCATED AREA: EXCAVATOR SHALL NOT WORK OUTSIDE THE LOCATED AREA WITHOUT OBTAINING ANOTHER LOCATE

FROM: E.FC 2571 LANCASTER RD. TO: 70.0M E. OF E.FC 2571 LANCASTER RD.

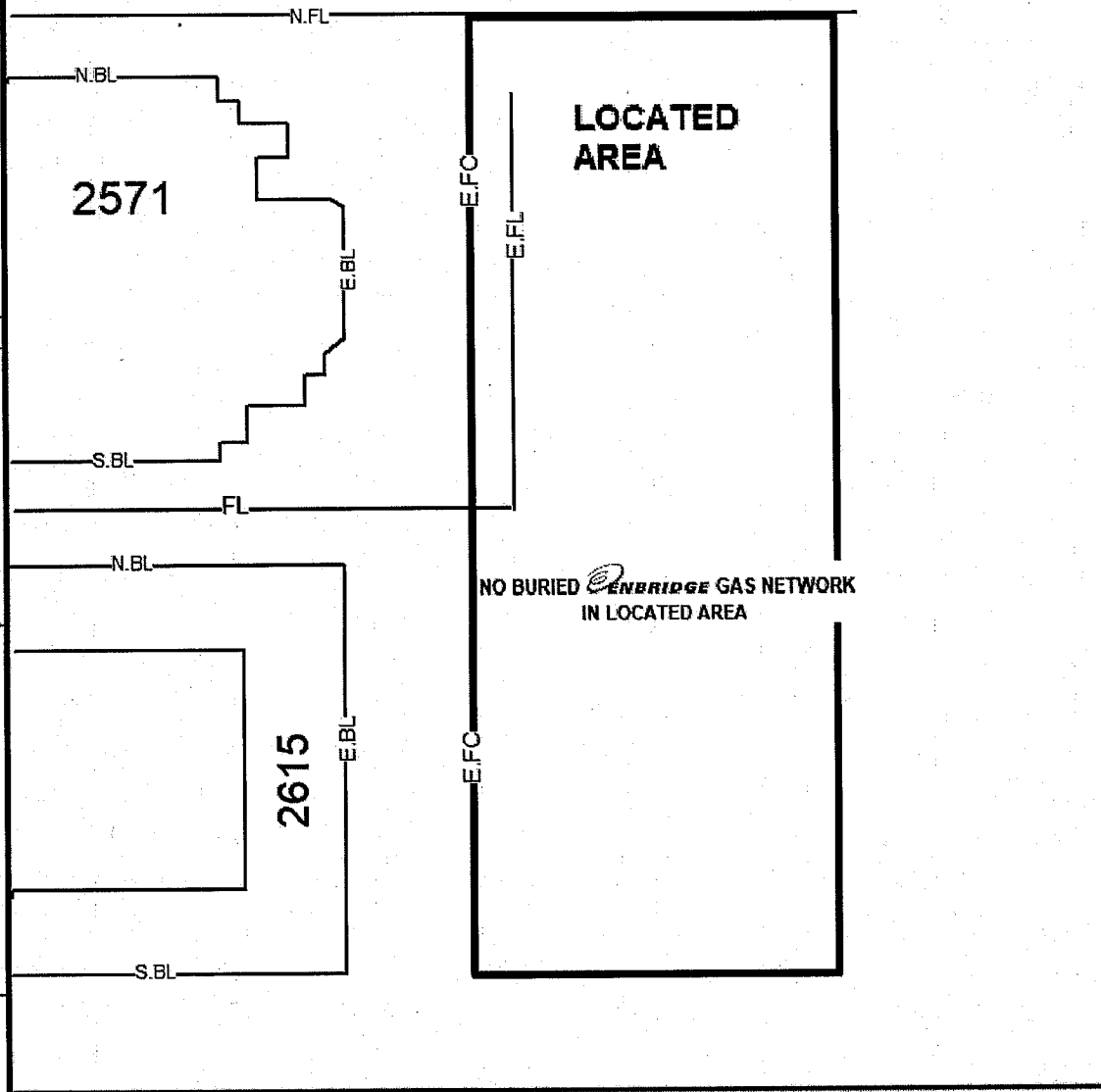
FROM: N.FL 2571 LANCASTER RD. TO: S.BL 2615 LANCASTER RD.

CAUTION: Hand dig within 1 M as measured horizontally from the field markings to avoid damaging the underground utilities. If you damage the plant, you may be held liable. If you damage underground plant, contact the facility owner immediately. Depth varies and MUST be verified by hand digging or vacuum excavation.

LOCATED AREA HAS BEEN ALTERED AS PER: N/A

Legend

Building Line	–BL–
Fence Line	–FL–
Face of Curb	–FC–
ASPHALT EDGE	–AE–
Sidewalk	SW
Driveway	–DW/–
Manhole	M/H
Pedestal	☒
Flush to Grade Pedestal	FTG
Buried Service Wire	–BSW–
Buried Cable	B
Conduit	C
Fiber Optic Cable	FO
Bell Hydro Service	BH
Gas Valve	
Gas Service	–GS–
Gas Main	–GM–
Transformer	
Demarcation	DM
Hydro	H
Hydro Primary	–HP–
Hydro Secondary	–HS–
Catch Basin	CB
Sewer Manhole	
Water Valve	
Hydrant	
Water Valve Chamber	W
Hydro / Bell Pole	
Railway	
End Cap	
Traffic Manhole	T
Street Light Cable	–SL–
Street Light	
North	N.
East	E.
West	W.
South	S.



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Promark telecon
Locates of underground infrastructures

Auxiliary Locate Sheet

Union Gas Emergency # 1-877-969-0999

Fax: 613-723-9277 Toll free: 1-800-371-8866 Email

Utilities ☐ Bell ☐ Gas ● HydroOttawa ☐ Street Lighting
Located: ☐ Blink ☐ Peel Fibre ☐ ZAYO

Date Located: mm/dd/yyyy 03/25/2021

Request # 20211215289

Number of Services marked: (Specify building/house numbers) N/A

LOCATED AREA: EXCAVATOR SHALL NOT WORK OUTSIDE THE LOCATED AREA WITHOUT OBTAINING ANOTHER LOCATE.

FROM: E.FC 2571 LANCASTER RD. TO: 70.0M E. OF E.FC 2571 LANCASTER RD.

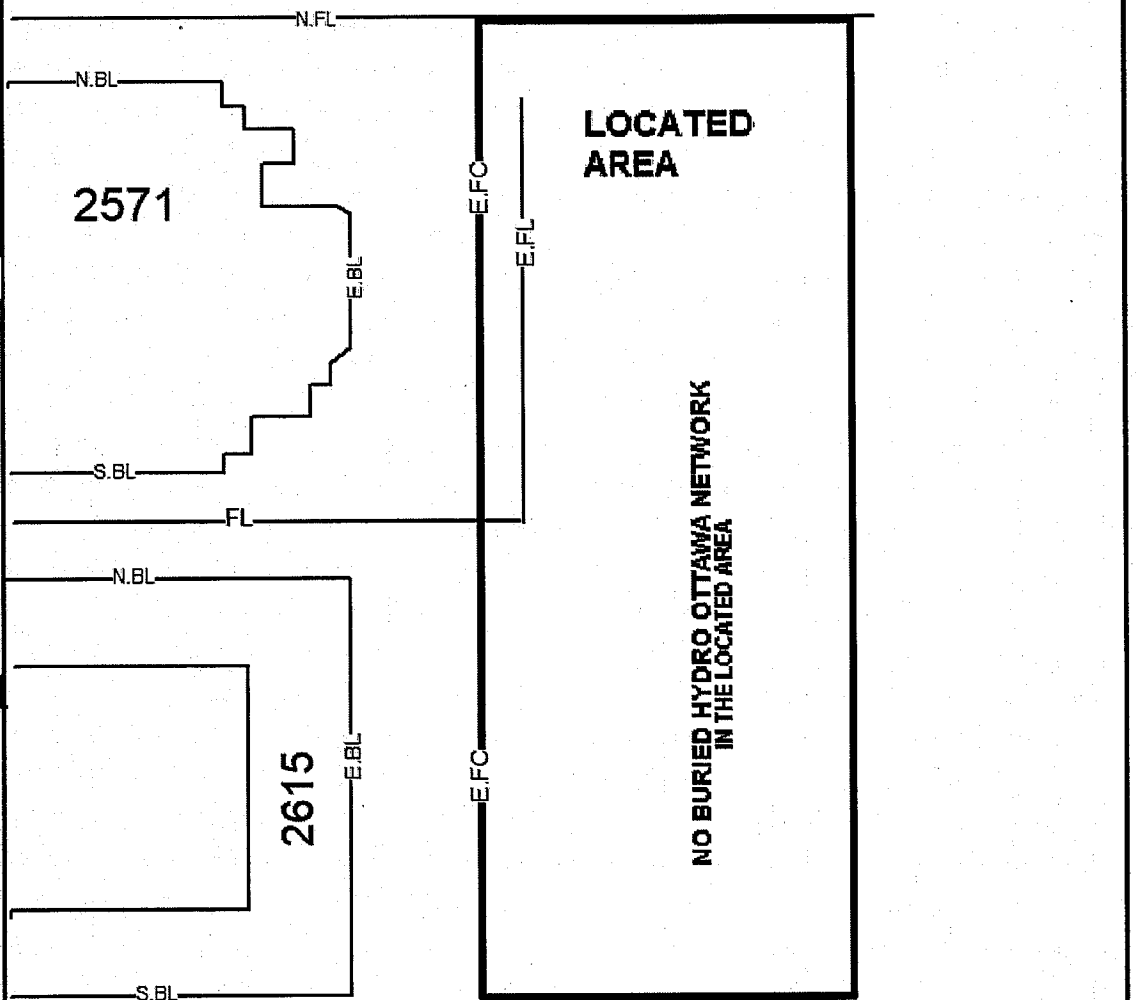
FROM: N.FL 2571 LANCASTER RD. TO: S.BL 2615 LANCASTER RD.

Legend

Building Line	-BL-
Fence Line	-FL-
Face of Curb	-FC-
ASPHALT EDGE	-AE-
Sidewalk	SW
Driveway	-DW/-
Manhole	M/H
Pedestal	
Flush to Grade Pedestal	FTG
Buried Service Wire	-BSW-
Buried Cable	'B
Conduit	C
Fiber Optic Cable	FO
Bell Hydro Service	BH
Gas Valve	
Gas Service	-GS-
Gas Main	-GM-
Transformer	
Demarcation	DM
Hydro	H
Hydro Primary	-HP-
Hydro Secondary	-HS-
Catch Basin	CB
Sewer Manhole	
Water Valve	
Hydrant	
Water Valve Chamber	W
Hydro / Bell Pole	
Railway	
End Cap	
Traffic Manhole	T
Street Light Cable	-SL-
Street Light	
North	N.
East	E.
West	W.
South	S.

CAUTION: Hand dig within 1.5M as measured horizontally from the field markings to avoid damaging the underground utilities. If you damage the plant, you may be held liable. **If you damage underground plant, contact the facility owner immediately. Depth varies and MUST be verified by hand digging or vacuum excavation.**

LOCATED AREA HAS BEEN ALTERED AS PER: N/A



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A copy of this Auxiliary Locate Sheet(s) and the Primary Locate Sheet must be on site and in the hands of the machine operator during work operations. If sketch and markings do not coincide, the Excavator must obtain a new locate.

ENBRIDGE

ENBRIDGE GAS INC.

Thank you for calling for a locate prior to starting your project.

Please note Enbridge Gas Inc has changed the locate validity period for station codes **ENOE01** and **EN2OE01** and this completed locate is valid for a period of **60 days** from the completion date on the Primary Locate Sheet.

You must adhere to the following:

- You must follow all STOP letters associated with your locate if provided in your locate package.
- You should always review the Primary and all the Auxiliary Sheets of your locate package and understand the validity period for all utilities / infrastructure owners.
- It is the responsibility of Excavators to protect and preserve the original yellow paint markings. White paint can be used to preserve/maintain the markings but should be place beside or at the top / bottom of the original markings ensuring not to replace the yellow paint.

When winter conditions exist, such as snow, pink paint and stakes or flags can be used.

Please be aware new gas services or mains can be installed after this locate was completed. Newly buried gas plant flags will be installed as visual identifier if this occurs.

If flags are present, please contact Enbridge Gas Damage Prevention at 1-866-922-3622

For station code – **ENOE01** or *Legacy Enbridge Gas Distribution* please refer to the Third Party Requirements in the Vicinity of Natural Gas Facilities must always be followed.

https://www.enbridgegas.com/~/media/Extranet-Pages/Safety/Before-you-dig/Third-Party-Requirements-in-the-Vicinity-of-Natural-Gas-Facilities

For station code **EN2OE01** or *Legacy Union Gas* please refer to

https://www.uniongas.com/about-us/safety/safe-digging-practices

Thank you

Bell

February 9 2015

To all Excavators:

Bell locates are now valid for the life of the excavation project and will not automatically be relocated every 60 days.

Please note the following for the above to apply:

a) Construction within the located area begins within 60 days of the "locate completed" date on the original ticket.

b) The construction company named on the locate remains active on the site.

Bell expects excavators will protect and preserve the paint marks put down on the original locate ticket. If markings are removed due to weather or excavation work the excavator is expected to recreate the markings based on the tie-in measurements provided on the original locate ticket.

If an excavator would like their markings freshened up they can contact Promark (the Bell Canada Locate Service Provider in this area) directly to arrange for them to place fresh markings on the ground however this will be at the excavators expense. Promark can be reached at 613-723-9888.

The locate will be considered officially expired one day after the final day of construction.

Thank you,

Bell Canada

Service Request Details

Service Request 1428169 **Lagan Case ID:** 202112152891

Source: Contractor **Created By:** Ga Maxpusr
Priority: **Reported By:**
Status: RESOLVED **Initiated:** 2021-Mar-18 2:49 PM

Location Information

Address: 2595 LANCASTER RD **Range:** **Unit:**
Between Streets: GLADWIN CRES / WALKLEY RD **Municipality:** OO
Description:

Street Range:2595-
Street:LANCASTER RD
Intersect 1:GLADWIN CRES
Intersect 2:WALKLEY RD
Door Numbers:-
Municipality:

The work area is clear of underground water and sewer pipes owned by The City of Ottawa. Any underground water and sewer pipes in the work area are privately owned.
Please note: City of Ottawa locates are valid for sixty (60) days. | S'il-vous-plaît notez: les localisations de la ville d'Ottawa sont valables pendant soixante (60) jours.

Requestor Information

Name: ROBERT KERR **Phones**
Address: 1704 CARLING AVE **Res:** **Cell:**
City: Ottawa **Bus:** 6132268750 **Ext:**
Postal Code: K2A1C7 **Unit:** **Fax:** 6132268677

Call Back & Other Assignments

Responsibilities			
Service Request	**Work Order #**	**Work Order**	

Request Details

Start Date: **Appointment Time:** **Service:** ESD
Finish Date: 2021-Mar-22 **Classification:** LOCATES - PROVIDE
Amount Charge to Customer: **Category:**

Structures

Structure ID	District	Description	Location	Qualifier	Unit

Ont Call #	20211215289
Date Requested	03/18/2021 2:49:33 PM

City of Ottawa Street Light Locate

Dispatcher: Melissa Dowdell
Phone: 613-526-1226

[redacted]
Black&McDonald
[redacted]

Company	U S L
Name	ROBERT KERR
Phone	(613)-226-8750 ext.
FAX	(613)-226-8677 ext.
Site Contact	JACQUES DESJARDINS
Phone	

Instructions
2595, LANCASTER RD
CORLOT=U DRILLING 7 BOREHOLES MARKED ON SITE. CLEAR TO 5M IN ALL DIRECTIONS AT EACH STAKED BOREHOLE, AS PER BOREHOLE PLAN ATTACHED. NO_PLAN:

LOCATOR SKETCH

N

Clear

Private Property

No City of Ottawa street light assets in dig area

—SL— Underground Street Light Cable
Street Light

—OH— Overhead/Aerial Wires
Globe/Decorative Light

Source/Transformer
Hydro Pole

Locator Notes/Comments:

Locate is valid for 60 days. If sketch is different from markings, location or nature of work changes, a new locate must be requested. Hand dig within 1m (3.28ft) on either side of markings. Depth of buried plant varies.

Cette fiche n'est pas valide 60 jours de calendrier apres le reperage. Si les marques ne concordent pas avec celles sur le croquis, un nouveau reperage est requis. Tout changement a l'emplacement ou a la nature du travail necessite un nouveau reperage. Creuser a la main un metre (3.28 pieds) du repere. La profondeur des installation varie d'un endroit a l'autre.

Date Located	03/23/2021
Time of day	
Located by	JUSTIN VAVROS
Signature	

UNDERGROUND SERVICE LOCATORS
ONE-CALL SYSTEMS INC.
100-1704 CARLING AVE
OTTAWA, ON K2A 1C7

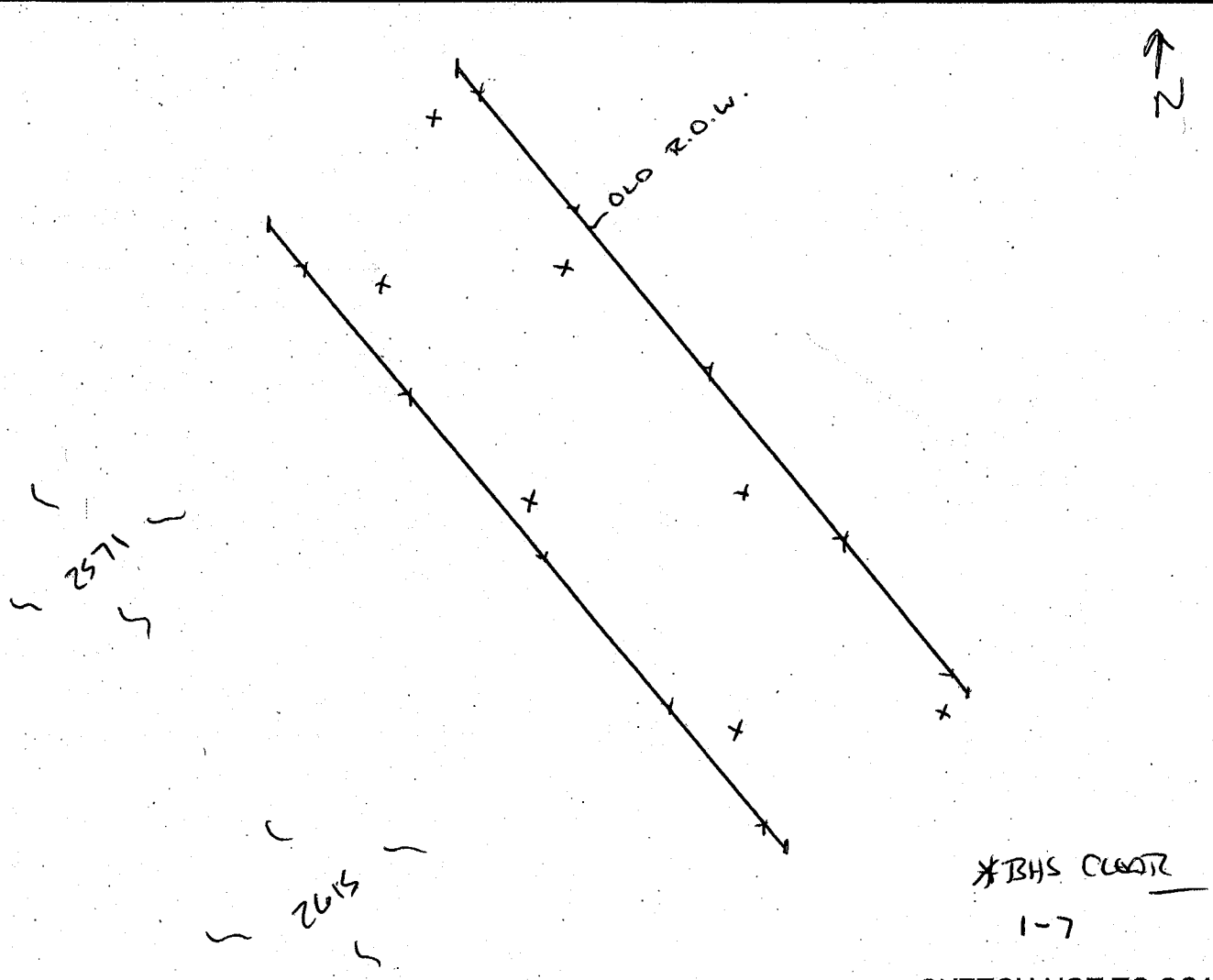
DATE: MAR. 29 / 21

PHONE (613) 226-8750
FAX (613) 226-8677

CUSTOMER: Blumetric	REQUESTED BY: Robert Hillier
LOCATION OF WORK: 2595 LANCASTER RD.	LIMITS OF WORK: BHS

HYDRO	-- H --	CABLE T.V.	-- T.V. --	OTHER:
GAS	-- G --	SANITARY		
BELL	-- B --	SEWER	-- S --	
WATER	-- W --	STORM	-- ST --	

LOCATES ONLY APPLICABLE TO INFO ABOVE - LOCATES VOID AFTER 30 DAYS!



SKETCH NOT TO SCALE

THIS SKETCH IS NOT A VALID PUBLIC UTILITY LOCATE. CONTRACTOR IS RESPONSIBLE TO ENSURE THEY HAVE PUBLIC LOCATES BEFORE COMMENCING WORK.

ASBUILTS OR PLANS PROVIDED: YES (NO)

LOCATORS NAME: MATT MOREAU SIGNATURE: Matt Moreau

CAUTION: HAND DIG WITHIN 1.5 METERS OF MARKINGS

USL-1 DISCLAIMER - FORM 101

- It is our Clients responsibility to fully read and understand this document, prior to any ground disturbance taking place. Should any questions or clarifications be required, contact USL-1 before commencing work
- Locate is VOID after 30 days from the date the locate was completed. Contact USL-1 for remarks and/or new ticket requests, with a minimum notice of 5 business days
- If the scope of work, locate area, or site information changes, contact USL-1 before continuing work. In certain instances, a new ticket request may be required
- Any work within 1.5 metres laterally of a marked utility, must be hand dug or daylighted. Utility depths vary, as does the accuracy of the locate equipment, and therefore depths are typically not provided and should not be used for excavation purposes. Depth of utilities should also be verified by hand digging or daylighting. The best information is provided at the time of the locate, however the accuracy of field markings can vary with regard to equipment accuracy and external interference
- If the paint markings or flags on site differ from that of the sketch provided, please contact USL-1 before commencing work. If possible, the issue will be clarified by USL-1 and/or a site meet may be requested with the appropriate parties
- The "Excavator" is responsible for keeping a current copy of the locates on site, with the operators and in/on the excavation equipment AT ALL TIMES
- It is the "Excavator/Contractor's" responsibility to read ALL locate sheets, both public and private, to ensure they understand what potential hazards or buried utilities exist in their work area
- Special purpose locates such as sewer sondeing, locate surveys, tunnel identification, conduit identification, ground fault detections, ground penetrating radar, well cap location, concrete scanning, or anything else that requires use of more than Radiodetection equipment, must be identified at the time of the original locate request. Should a USL-1 locator identify any special needs services during a normal Private utility locate, the client will be notified for the appropriate course of action
- Not all buried utilities can be traced. In many instances, water and sewer lines, irrigation systems, grounding cables, fibre optic cables, heating cables, protection cables, and communication cables may not be traceable. Typically, sewer lines will be painted and lined up directionally from manhole to manhole where possible. It may not be possible to detect bends in the sewer lines between manholes. If tracer wires have been buried with the utility, they will be used to locate the buried utility where possible. If a buried utility cannot be traced, it will be noted on the USL-1 report. USL-1 is not liable for damage to untraceable utilities
- Public utility locators have maps, plans and as-built diagrams for reference to work from. Private utility locators, for the most part, do not. USL-1 will attempt to locate any Private utilities on a site, using as-built plans provided to them. Building access is mandatory and must be arranged by our client. Any conduits or utilities noted entering or exiting a building will be traced if possible, as well as any other visible utilities observed on site. It is the responsibility of the contractor to provide any and all buried utility information and site contacts that they have. There is no guarantee that USL-1 can find all buried utilities if the property owner does not have records or information regarding their own buried utilities
- USL-1 cannot be held liable for damage to Private water and/or sewer laterals unless building access is granted, and the utility is locatable
- Thick snow and ice, frozen manhole lids, live traffic, parked cars, construction debris and activities etc, are all factors that can interfere with USL-1's ability to perform Private utility locates. USL-1 cannot guaranty location of all buried utilities when such factors impede the locate process. It is the contractor's responsibility to ensure that the work areas are safe and accessible for locates, prior to USL-1's arrival to site
- USL-1 as a Private utility locator, is not permitted to locate Publicly owned utilities. In some cases, Public utilities may be noted on a sketch, but are FOR REFERENCE ONLY, and under no circumstances shall be used for excavation purposes. It is the contractor's responsibility to verify any Public utilities noted on the USL-1 sketch by referring to the Public utility locate sheets for physical LOCATION AND ACCURACY. USL-1 DOES NOT ASSUME LIABILTY FOR PUBLIC LOCATE INNACCURACIES
- If the proposed work area is on Private property, it does NOT mean that all buried utilities are Private. Regardless of where you are digging, and what the proposed depth of excavation is, it is the law to notify Ontario One Call (or Info-Excavation in Quebec) to obtain Public utility locates
- NCC PROPERTY - assuming the contractor has been issued a Land Access Permit from the NCC, it is typically indicated within the permit that it is the contractor's responsibility to contact NCC for utility locates of their buried utilities

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