Phase Two Environmental Site Assessment – Pin Oak Drive, Niagara Falls, Ontario

October 16, 2023

Prepared for:
Alinea Land Corporation

Cambium Reference: 14833-002

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1.0 Executive Summary

Alinea Land Corporation (Client) retained Cambium Inc. (Cambium) to complete a Phase Two Environmental Site Assessment (ESA) at Pin Oak Drive in Niagara Falls, Ontario (Site or Phase Two Property). The Phase Two ESA was required to support a development application with the municipality and was completed to meet the requirements of Ontario Regulation (O.Reg.) 153/04. It is understood that the client intends to develop the property for residential use and based on the previous land use (agricultural/residential), filing of a Record of Site Condition with the Ontario Ministry of the Environment, Conservation, and Parks (MECP) will not be required.

The roughly 13.47 ha Site is on the west side of Pin Oak Drive and extends from Pin Oak Drive to Kalar Road. At the time of the Site visit, the Site was vacant land consisting of forests, grasslands, and wetlands. Review of historical documents indicated that the first developed land use at the Site was for agricultural and residential prior to 1960.

A Phase One ESA (Cambium Inc., 2022) identified 12 off-site potentially contaminating activities (PCAs) within the Phase One Study Area. No on-site PCAs were identified on the Phase One Property. Of the 12 PCAs, four were identified to contribute to areas of potential environmental concern (APECs) on the Site. The associated contaminants of potential concern (COPCs) were petroleum hydrocarbons (PHCs), volatile organic compounds (VOCs) including benzene, toluene, ethylbenzene, xylenes (BTEX), polycyclic aromatic hydrocarbons (PAHs), and metals. The potentially contaminated media were soil and groundwater.

A Phase Two ESA work program was developed to investigate COPCs in soil and groundwater. The Phase Two ESA included advancement of three boreholes instrumented with groundwater monitoring wells. Six soil samples and three groundwater samples were submitted for laboratory analysis of select COPCs.

The laboratory analysis results indicated that all analysed COPCs in the submitted soil and groundwater samples met the applicable regulatory standards with the exception of copper in

groundwater from monitoring well BH103 and uranium in groundwater from all three monitoring wells.

Based on a risk-based review of the analysis results, it is Cambium's opinion that, although the maximum concentrations of copper and uranium are greater than their respective Table 1 Site Condition Standard (SCS), no unacceptable risks are anticipated and thus no additional work is required.

A site plan application (SPA) can be filed based on the Phase Two ESA.

Cambium recommends the following best management practices for the site:

- When no longer required, Cambium recommends all monitoring wells should be abandoned as per the requirements of R.R.O. 1990, Regulation 903 – Wells.
- Soil cuttings are considered inert and can be disposed on the property, and in accordance with the regional sewer use by-law, and the drums recycled. Alternatively, Cambium can arrange for their removal from the site.

2.0 Introduction

The Client retained Cambium to complete a Phase Two ESA at the Site. The Phase Two ESA may be used to support development application with the Niagara Region; therefore, this Phase Two ESA was completed to meet the requirements of Ontario Regulation (O.Reg.) 153/04.

2.1 Site Description

The Site is on the west side of Pin Oak Drive and extends from Pin Oak Drive to Kalar Road. Site information and property owner information are summarized below.

The Phase Two Property location is shown on Figure 1. The Phase Two Property boundary is shown on Figure 2.

Property use surrounding the Site is as follows.

North – Commercial/Industrial (Niagara Peninsula Energy – 7447 Pin Oak Drive, Carstar Niagara Falls – 7361 Pin Oak Drive, Petro-Canada – 7950 McLeod Drive).

South – Other (Forest), with residential beyond.

East – Commercial (Costco Wholesale and Costco Gas Station – 7500 Pin Oak Drive).

West – Residential.

Site Identification Information

Municipal Address	No municipal address has been assigned to this property yet.
Historical Land Use	Agricultural use and residential use
Current Land Use	Vacant, former agricultural use and residential use
Future Land Use	Residential
PIN	64263-0072 (LT), 64263-0073 (LT), 64263-0074 (LT), 64263-0075 (LT), 64263-0076 (LT),
Universal Transverse Mercator Coordinates*	Zone 17T 652092 m E, 4769828 m N

Legal Description	**Pin Oak Drive – PIN 64263-0072 (LT), 64263-0073 (LT), 64263-0074 (LT), 64263-0075 (LT), and 64263-0076 (LT)** PCL B-1 SEC M40; BLK B PL M40 NIAGARA FALLS EXCEPT PT 1, 59R3785, S/T PT OF PT 1, 59R1578 AS IN ST25780; NIAGARA FALLS. PCL 5-1 SEC M40; LT 5 PL M40 NIAGARA FALLS S/T PT OF PT 1, 59R1578 AS IN ST25780; NIAGARA FALLS. PCL 6-1 SEC M40; LT 6 PL M40 NIAGARA FALLS S/T PT OF PT 1, 59R1578 AS IN ST25780; NIAGARA FALLS. PCL 7-1 SEC M40; LT 7 PL M40 NIAGARA FALLS S/T PT OF PT 1, 59R1578 AS IN ST25780; NIAGARA FALLS. PCL 12-1 SEC M40; LT 12 PL M40 NIAGARA FALLS S/T PT OF PT 1, 59R1578 AS IN ST25780; NIAGARA FALLS.
Site Area	≈13.47 ha (33.3 acres)

* The Universal Transverse Mercator measurements were obtained from Google Earth Pro.

2.2 Property Ownership

Property Owner	Contact Information
Mississauga Food Processors Limited c/o Alinea Lands Corporation 4480 Paletta Court Burlington, Ontario, L7L 5R2	Dave Pitblado Director, Real Estate Development Alinea Lands Corporation Phone: (905) 632- 6036 x 404 Email: dpitblado@pentaproperties.ca

2.3 Current and Proposed Future Uses

The Site is currently vacant and partially comprised of forested land. Historically, portions of the property were developed with residential homes and/or were used for agriculture. As the Client intends to develop the Site for residential use, and no commercial, industrial, or community land uses have occurred at the Site, the filing of a Record of Site Condition is not required.

2.4 Applicable Site Condition Standards

The *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* (MOE, 2011) were used to determine the applicable SCS for the Site. The following site characteristics were considered when choosing which standards should be applied:

- The proposed future use of the Site is residential use.
- A tributary of Welland River is present on the northwest quadrant of the Site; therefore, the Site is within 30 m of a water body as defined in O.Reg. 153/04. As such, Section 43.1 of O.Reg. 153/04 applies to the Site.
- For groundwater at a property to be considered non-potable, all properties within 250 m of the property must be supplied by a municipal drinking water system that does not obtain its water from a groundwater source. The Site is in an area that is supplied by a municipal water supply.
- The property is not located in an area designated in the municipal official plan as a well-head protection area or other designation identified by the municipality for the protection of groundwater.
- No properties in the Phase One Study Area have a well used or intended for use as a source of water for human consumption or agriculture.
- The stratigraphy consisted of native silty clay, clay, and clayey silt to a maximum depth of 6.4 m below ground surface (mbgs). Bedrock was not encountered during the drilling program. SCS for medium and fine-grained soil were considered appropriate based on gradation testing results.
- Two representative soil samples were submitted for grain-size analysis (BH101_0.8-1.4 and BH102_5.3-5.9). Both samples were described as Clayey silt and silty clay. SCS for fine/medium grained soils were considered appropriate.

- A Natural Heritage Areas map (MNRF, 2022) and the Official Plan for the City of Niagara Falls (City of Niagara Falls, 2022) were reviewed. The on-site creek and wetlands are identified as Environmental Protection Areas by the Official Plan. Additionally, the on-site wetlands were identified as provincially significant. The NHIC database identified the potential presence on the Site of species at risk habitat for the endangered or threatened species. As such the Site was considered an area of natural significance, as defined in Section 1 of O.Reg. 153/04.
- On-site soil pH was within the acceptable ranges for surface (≤1.5 mbgs) and sub-surface (>1.5 mbgs) soil.

Based on the above information, the applicable SCS for the Site were the Table 1 *Full Depth Background Site Condition Standards*. Residential property uses and medium to fine soil texture were selected to determine concentration exceedances for the analyzed parameters.

2.5 General Objectives

The general objectives of the Phase Two ESA were to determine the location and concentration of contaminants in the soil or water on, in or under the Phase Two Property; and subsequently determine if the SCS for contaminants on, in or under the Phase Two Property were met. These objectives were achieved by developing an understanding of the geological and hydrogeological conditions at the Phase Two Property and conducting field investigations for the identified COPCs. The Phase Two ESA included a soil and groundwater investigation.

3.0 Background Information

3.1 Physical Setting

The ground surface at the Site is relatively flat, sloping gradually towards the south, with the exception of a high-lying area in the southeast quadrant of the Site. Regional topography slopes southerly, toward Welland River, about 1,750 m to the south.

The Site is within the Haldimand Clay Plain physiographic region (Chapman & Putnam, 1984), characterized by clay plains. In the general area, the overburden is fine-textured glaciolacustrine deposits of silt and clay with minor sand and gravel (OGS, 2010). The soils overlie sandstone, shale, dolostone, and siltstone comprising the Guelph Formation (OGS, 2007).

A tributary of Welland River is present on the northwest quadrant of the Site with the Welland River about 1,750 m to the south. Based on the measured groundwater elevations, the groundwater flow direction in the Phase Two study area is southerly. A Natural Heritage Areas map (MNRF, 2022) and the Official Plan for the City of Niagara Falls (City of Niagara Falls, 2022) were reviewed. The on-site creek and wetlands are identified as Environmental Protection Areas by the Official Plan. Additionally, the on-site wetlands were identified as provincially significant. As such, the Site is considered an area of natural significance.

The study area is municipally serviced for drinking water. The study area is not within a well-head protection area. The City of Niagara Falls relies on surface water. According to the Ontario Clean Water Agency, the raw water source for the Niagara Falls Drinking Water System is Welland River.

A search of the Ministry Water Well Information System by ERIS identified one on-site water well record and twenty-seven water well records within the Phase One Study Area ranging from about 15 m to 230 m from the Site. The wells were identified as observation wells, domestic water supply wells, monitoring and test holes.

3.2 Past Investigations

The following reports were reviewed by Cambium.

Phase One Environmental Site Assessment – 0 Pin Oak Drive (Cambium Inc., 2022).
A Phase One ESA was completed on the Phase Two property consistent with O.Reg. 153/04 to support filing a Site Plan Approval application.

Twelve PCAs were identified within the Phase One Study Area, all 12 PCAs were located off-site. Based on the inferred groundwater flow direction, and the distance and/or direction from the Site, four of the off-site PCAs contributed to APECs in the western and northern portions of the Site, related to a historical auto sale, repairs, and maintenance, and a historical junkyard to the west, and above ground storage tanks (ASTs) and underground storage tanks (USTs) and vehicle maintenance to the north.

Based on the observations and information obtained during the Phase One ESA, Cambium concluded that a Phase Two ESA was required.

4.0 Scope of the Investigation

4.1 Overview of the Site Investigation

The proposed scope of work for the Phase Two ESA was based on the requirements of O.Reg. 153/04 and the findings of the Phase One ESA. Soil and groundwater samples were submitted to an analytical laboratory accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA). The Phase Two ESA was subject to a Quality Assurance/Quality Control (QA/QC) program, including analysis of blind duplicate soil and groundwater samples and trip blanks.

Cambium coordinated all subcontractors required to complete the work, including utility locators, a licensed well drilling contractor, and the laboratory. Prior to conducting field work, Cambium prepared a Health and Safety Plan (HASP) tailored to the known and possible on-site contaminants, physical site hazards, and the type of work to be conducted. Included in the HASP was a detailed map showing the transportation route to the nearest hospital, emergency contact numbers, and other pertinent information required for work on potentially contaminated sites. All persons entering the Site, as contractors or otherwise, were required to review and sign the HASP prior to their admission.

Cambium arranged for underground services to be located and marked by public and private utility companies prior to starting intrusive investigations. The proposed borehole locations were clear of utilities.

A sampling and analysis plan (SAP) was prepared to address the identified APECs and is included in Appendix A.

4.2 Media Investigated

The Phase Two ESA investigated soil and groundwater. A tributary of the Welland River traverses the northeast portion of the Site. Soil quality at the Site was investigated through drilling and soil sampling. Monitoring wells were installed in the drilled boreholes for groundwater sampling.

4.3 Phase One Conceptual Site Model

The Phase One Conceptual Site Model (CSM) is required to assist the Qualified Person (QP) in illustrating the results of the Phase One ESA and to provide a basis for further work, if required. The Phase One CSM Study Area is shown on Figure 2. The Phase One CSM Site Plan is shown on Figure 3. The following descriptions and discussion supplement the figures, and together comprise the CSM.

4.3.1 Site Description

The roughly 13.74 ha Site is on the west side of Pin Oak Drive and extends from Pin Oak Drive to Kalar Road in Niagara Falls, Ontario. The Property Identification Numbers (PIN) for the Site are 64263-0072 (LT), 64263-0073 (LT), 64263-0074 (LT), 64263-0075 (LT), and 64263-0076 (LT); and the legal description is Block B, Registered Plan M40. The Universal Transverse Mercator coordinates for the Site are Zone 17T, 652092 m E, 4769828 m N.

Property use surrounding the Site is as follows.

North – Commercial/Industrial (Niagara Peninsula Energy – 7447 Pin Oak Drive, Carstar Niagara Falls – 7361 Pin Oak Drive, Petro-Canada – 7950 McLeod Drive).

South – Other (Forest), with residential beyond.

East – Commercial (Costco Wholesale and Costco Gas Station – 7500 Pin Oak Drive).

West – Residential.

4.3.2 Existing Buildings and Structures

There are no structures on the Site.

4.3.3 Water Bodies and Areas of Natural Significance

A tributary of Welland River is present on the northwest quadrant of the Site; therefore, the Site is within 30 m of a water body, as defined in O.Reg. 153/04.

A Natural Heritage Areas map (MNRF, 2022) and the Official Plan for the City of Niagara Falls (City of Niagara Falls, 2022) were reviewed. The on-site creek and wetlands are identified as Environmental Protection Areas by the Official Plan. Additionally, the on-site wetlands were identified as provincially significant. As such, the Site is considered an area of natural significance. The Site did not include an area designated as an escarpment natural area or an escarpment protection area by the Niagara Escarpment Plan, or property within an area designated as a natural core area or natural linkage area within the area to which the Oak Ridges Moraine Conservation Plan applies.

Natural Heritage Information Centre (NHIC) data indicated the area is classified as a natural area comprising the Warren Creek and Thompson Creek Wetland Complexes. Furthermore, the Northern Bobwhite (Endangered), Deerberry (Threatened), Round-leaved Greenbrier (Threatened), and Round Hickory Nut (Endangered) have been spotted within a 2 km area that includes the Site. The following information was available on the Species at Risk in Ontario website (MECP, 2022).

- Northern Bobwhites primarily live and breed in grasslands, savannahs, around abandoned farm fields, and along bushy fencerows.
- Deerberry is typically found in close proximity to large bodies of water and in dry, open woods with sandy, well-drained soils.
- Round-leaved Greenbrier is typically found in moist to wet woodlands with sandy soils.
- Round Hickorynuts are typically found in shallow bodies of moderately fast-moving water with clay, sand, or gravel bottoms.

As the Site may be suitable for Northern Bobwhite breeding. Based primarily on the presence of a provincially significant wetland at the Site it is considered to be environmental sensitive.

4.3.4 Drinking Water Wells

The Phase One Study Area is municipally serviced for drinking water. municipally serviced for drinking water. Additionally, the city of Niagara Falls relies on surface water. No drinking water

wells were observed on the Site and no records of drinking water wells at the Site were identified by the records review. However, one domestic water supply well was identified within 100 m of the Site.

A search of the Ministry Water Well Information System by ERIS identified one on-site water well record and twenty-seven water well records within the Phase One Study Area ranging from about 15 m to 230 m from the Site. The wells were identified as observation wells, domestic water supply wells, monitoring, and test holes.

4.3.5 Potentially Contaminating Activities

Cambium reviewed information available for the Phase One Study Area to identify environmental issues normally assessed in a Phase One ESA. Twelve PCAs were identified within the Phase One Study Area, all 12 PCAs were located off-site. Refer to Table 4 for further description of the PCAs, and Figure 2 for PCA locations.

The following PCAs contribute to APECs:

PCA 1 – Off-site: Historical auto sales, repairs, and maintenance; PCA #27 Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles.

PCA 2 – Off-site: Historical auto junkyard; PCA #49 Salvage yard, including automobile wrecking.

PCA 3 – Off-site: Active fuel tanks; PCA #28 Gasoline and Associated Products Storage in Fixed Tanks.

PCA 4 – Off-site: Company vehicle fleet maintenance; PCA# 52 Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems.

The following PCAs do not contribute to APECs:

PCA 5 – Off-site: PCB storage; PCA# Not Applicable.

PCA 6 – Off-site: Transformer storage; PCA #55 Transformer Manufacturing, Processing and Use.

PCA 7 – Off-site: Active fuel tanks; PCA #28 Gasoline and Associated Products Storage in Fixed Tanks.

PCA 8 – Off-site: Automotive repair and maintenance; PCA #27 Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles.

PCA 9 – Off-site: Active fuel tanks; PCA #28 Gasoline and Associated Products Storage in Fixed Tanks.

PCA 10 – Off-site: Current and historical autobody shop; PCA #10 Commercial Autobody Shops.

PCA 11 – Off-site: Historical auto shop; PCA #10 Commercial Autobody Shops.

PCA 12 – Off-site: Historical dry cleaners; PCA #37 Operation of Dry Cleaning Equipment (where chemicals were used).

4.3.6 Areas of Potential Environmental Concern

Based on a review of potential to result in contamination at the Site, four off-site PCAs contributed to APECs. The APECs are summarized below. Refer to Table 5 for further descriptions of the APECs, and Figure 3 for APEC locations.

APEC 1 – Northwest property boundary, associated with PCA 1, off-site historical auto sales, repair, and maintenance.

APEC 2 – Northwest property boundary, associated with PCA 2, off-site historical junkyard.

APEC 3 – North-central property boundary, associated with PCA 3, off-site fuel storage ASTs and USTs.

APEC 4 – North-central property boundary, associated with PCA 4, off-site company vehicle fleet maintenance.

4.3.7 Contaminants of Potential Concern

COPCs were identified for each PCA contributing to an APEC. The COPCs specific to each APEC are summarized in Table 5. BTEX, PHCs, VOCs, PAHs, and metals were identified as COPCs related to the current and historical off-site PCAs.

4.3.8 Contaminant Distribution and Transport

No underground utilities were identified on, in, or under the Site. As such, utility corridors are not expected to act as a preferential pathway for contaminant distribution and transport.

No specific climatic or meteorological conditions were observed that may influence the distribution or migration of contaminants.

4.3.9 Geological and Hydrogeological Setting

Topographic maps (MNRF, 2022; Canada, 2021) of the study area provided information regarding the regional topography, inferred groundwater flow direction, and general development in the area surrounding the Site.

- The ground surface at the Site is relatively flat, sloping gradually towards the south, with the exception of a high-lying area in the southeast quadrant of the Site. Regional topography slopes southerly, toward Welland River, about 1,750 m to the south.
- An unnamed tributary of Welland River is located on the Site. The tributary flows southwesterly at the Site before flowing in a southeasterly direction, where it eventually discharges into Welland River. The confluence is located about 1,600 m southeast of the Site. Welland River flows easterly, eventually discharging into the Niagara River.
- Based on the topography, the inferred shallow groundwater flow direction is southerly.

The Site is within the Haldimand Clay Plain physiographic region (Chapman & Putnam, 1984), characterized by clay plains. In the general area, the overburden is fine-textured glaciolacustrine deposits of silt and clay with minor sand and gravel (OGS, 2010). The soils overlie sandstone, shale, dolostone, and siltstone comprising the Guelph Formation (OGS,

2007). A review of Ministry water well records (MECP, 2022) for boreholes within 200 m of the Site indicated that the local stratigraphy consisted of clay to silty clay to about 9.5 mbgs, followed by limestone bedrock. Limestone bedrock was encountered as shallow as 9.1 mbgs in a nearby well.

4.3.10 Uncertainty or Absence of Information

All aspects of the Phase One ESA were conducted consistent with O.Reg. 153/04, and as such, the Site was investigated thoroughly. As access to the entire Site was possible, and adequate historical information was available through the interviewee's, records review, and FOI requests uncertainty or absence of information is not expected. While the placement of historical on and off-site structures and PCAs based on aerials may be of low accuracy, investigations completed during the Phase Two ESA can account for this uncertainty.

5.0 Investigation Method

5.1 General

The following sections provide a detailed description of the subsurface investigations. The COPCs at the Site were related to off-site historical auto sales, repair, and maintenance, historical junkyard, active fuel storage ASTs and USTs and company vehicle fleet maintenance. Soil and groundwater samples were selectively analyzed for BTEX, PHCs, VOCs, PAHs, and metals.

As indicated in Section 2.4, based on the site characteristics as well as the proposed future use of the Site, the applicable standards for the Site are Table 1 SCS. Residential property uses and medium to fine soil texture were selected to identify analyzed parameters present on the Site at concentrations exceeding the SCS.

5.2 Soil: Drilling

The drilling investigation was completed on October 11, 2022. Drilltech Drilling advanced three boreholes into overburden to a maximum depth of 6.4 mbgs. Borehole locations are shown on Figure 4.

5.3 Soil: Sampling

During the drilling program, soil samples were collected continuously. Each sample was handled solely by the Cambium field technician using dedicated nitrile gloves to reduce the potential for cross-contamination.

Soil samples were logged for soil type, moisture content, presence of odour, and signs of impacts such as staining, consistent with standard geotechnical and environmental soil descriptions and nomenclature. The samples were divided on-site, a portion was placed in dedicated sample jars for submission to the laboratory, with the remainder placed in sealed plastic sample bags and used to screen for combustible and/or organic vapours present in the soil headspace. The field screening observations were used to determine which samples to submit for laboratory analysis. Samples to be submitted for analysis of volatile parameters

were collected applying the appropriate techniques, as per O.Reg. 153/04 (i.e., pre-calibrated syringe sampler and methanol preserved vial).

5.4 Field Screening Measurements

Olfactory and visual observations of the soil samples were documented immediately upon extraction for soil characteristics and potential indicators of environmental contamination. Soil samples were screened using an RKI Eagle 2 portable gas detector for concentrations of combustible soil vapour (CSV) and organic vapour (OV), calibrated to hexane and isobutylene, respectively. After agitating the sample, the peak reading was recorded by inserting the meter probe into the sample bag. Refer to the borehole logs in Appendix B for the recorded vapour readings.

5.5 Groundwater: Monitoring Well Installation

Monitoring wells were installed in all of the boreholes and were constructed using 50 mm inner diameter, flush threaded PVC well pipe with a section of screen at the base of the well. The annular space was filled with washed silica sand filter pack to 0.3 m above the top of the screen and the wells were completed with bentonite (seal) and native soil cuttings to at least 0.3 mbgs. The monitoring wells were completed with flush-mount steel protective covers. Borehole logs illustrating the monitoring well installation details are included in Appendix B. Monitoring wells were installed such that the well screen intersected the surface of the shallowest water-bearing unit identified during drilling.

Following installation of each monitoring well, a minimum of three well volumes of groundwater, if present, was purged to remove sediment from the well, stabilize and grade the filter pack, improve connectivity between the well and the formation, and restore groundwater that may have been disturbed during the drilling process.

5.6 Groundwater: Sampling

Groundwater sampling was conducted on October 12, and November 24, 2022, consistent with O.Reg. 153/04 under the supervision of a QP.

Prior to sampling, the static water level was recorded at each of the monitoring wells using an interface probe, which can accurately measure the depth to groundwater and the thickness of dense and light non-aqueous phase liquids (DNAPL & LNAPL). Each groundwater monitoring well was purged of approximately three well bore volumes or three times dry using dedicated polyethylene tubing and inertial lift foot valves, prior to sample collection. The volume of water to be purged from each well was calculated on-site during the monitoring events using the measured water levels and the well diameter.

Groundwater samples were collected using a peristaltic pump, with dedicated tubing installed in each of the monitoring wells. The peristaltic pump reduces the amount of sediment entrained in the collected groundwater samples, as agitation of the water column is kept to a minimum by lowering the pumping rate and limiting the movement of the tubing in the water column. Water quality parameters were measured using a flow-through cell and allowed to stabilize prior to sample collection, to ensure samples were representative of the surrounding groundwater aquifer. Groundwater samples submitted for analysis of metals were field-filtered.

Technicians wore nitrile gloves while collecting the groundwater samples and replaced the glove set between each sample location.

5.7 Analytical Testing

All samples potentially requiring laboratory analysis were placed in a cooler and kept at less than 10°C for transport to the laboratory.

Samples were submitted for analysis of one or more of the COPCs. The analytical results are discussed in Section 6.0 and copies of the laboratory Certificates of Analysis as received from the analytical laboratory are included in Appendix C. The following samples were submitted for analysis.

- Based on field observations and screening, the following soil samples were submitted for analysis, excluding quality control samples:
    - Three samples for BTEX/PHCs

  - One sample for VOCs
  - Three samples for PAHs
  - Three samples for metals
  - Two samples for grain-size analysis
  - Two samples for pH
- The following groundwater samples were submitted for analysis, excluding quality control samples:
  - Three samples for BTEX/PHCs
  - Three samples for VOCs
  - Three samples for PAHs
  - Three samples for metals
- Two water trip blanks were submitted for analysis of VOCs.

5.8 Residue Management Procedures

Soil cuttings from the drilling program, and purge water from well development, were placed in drums and left on-site for later disposal.

5.9 Elevation Surveying

Ground surface and top of pipe elevations were surveyed at the boreholes and monitoring wells. Elevations were determined relative to the northeast corner of a catch basin on the Site, as illustrated and described in the notes on Figure 4.

5.10 Quality Assurance and Quality Control Measures

As part of the QA/QC program, blind duplicate soil and groundwater samples were submitted at a rate of one duplicate sample for every ten samples analyzed. Blind duplicate samples were collected at the same time as the parent sample and placed into a separate container;

split sampling methodology was used to ensure that the sampling was completed using the same method for both parent and duplicate samples. Refer to Section 6.7.4 for the results of the QA/QC program.

A trip blank was prepared by the laboratory and submitted for analysis of VOCs together with the groundwater samples for each sampling event. A trip blank is a sample of laboratory grade water that has negligible or immeasurable amounts of the substance of interest, and is transported to and from the sampling location, and carried through the entire sampling and analytical process.

Equipment and tools used to obtain soil samples were cleaned with Alconox© and rinsed with distilled water before the collection of each sample. Technicians wore dedicated nitrile gloves, which were replaced for each sample.

6.0 Review and Evaluation

6.1 Geology

The physiography and geology of the Site has been discussed previously in Section 3.1 and a detailed description of the subsurface soils can be found on the borehole logs in Appendix B. These logs present detailed descriptions of the soils and their associated characteristics to the maximum depth of investigation. Borehole and monitoring well locations are shown on Figure 4.

The stratigraphy consisted of native silty clay, clay, and clayey silt. Bedrock was not encountered during the drilling program, to a maximum depth of 6.4 mbgs.

6.2 Groundwater: Elevations and Flow Direction

To determine the relative groundwater elevation, the horizontal gradient, and the groundwater flow direction, water level measurements were recorded on October 11, October 12, and November 24, 2022 as summarized in Table 1. Groundwater flow was to the south as shown on Figure 4.

6.3 Groundwater: Hydraulic Gradients and Conductivity

The horizontal hydraulic gradient was 0.03 m/m based on groundwater levels measured on October 12, 2022.

Based on the predominant soil type in the saturated zone (silt and clay) observed during the field investigation, subsurface hydraulic conductivity in the shallow water-bearing silt and clay layer likely ranges from 1×10^{-10} to 1×10^{-5} m/s (Cherry & Freeze, 1979).

6.4 Fine-Medium Soil Texture

Soil samples were collected from two soil units identified at the Site. Based on grain size distribution testing completed by Cambium, fine-medium textured soil was considered applicable. The laboratory certificates of analysis for the grain size analyses are included in Appendix C.

6.5 Soil: Field Screening

Refer to the detailed borehole logs included with this report as Appendix B for the results of field soil screening. Minor to medium measurable CSV and OV was detected in soil samples from all boreholes from select depths starting at surface to completion at 6.4 mbgs, with a maximum CSV concentration of 40 ppm at BH103 and a maximum OV concentration of 2 ppm at all three borehole locations.

6.6 Soil Quality

A general discussion of the submission and analysis of soil samples obtained during the subsurface investigation was presented Section 5.7.

Samples were submitted for analysis of one or more of the following: BTEX/PHCs, VOCs, PAHs, metals. Soil analysis results are presented in Table 2. Laboratory Certificates of Analysis are included in Appendix C. The soil sampling locations are shown on Figure 4.

6.6.1 BTEX/PHCs

Three soil samples were submitted for analysis of BTEX/PHCs. Concentrations were less than the Table 1 SCS in the analyzed soil samples as shown on Figure 5.

6.6.2 VOCs

One soil sample was submitted for analysis of VOCs. Concentration was less than the Table 1 SCS in the analyzed soil samples, as shown on Figure 6.

6.6.3 PAHs

Three soil samples were submitted for analysis of PAHs. Concentrations were less than the Table 1 SCS in the analyzed soil samples, as shown on Figure 7.

6.6.4 Metals and pH

Three soil samples were submitted for analysis of metals. Concentrations were less than the Table 1 SCS in the analyzed soil samples, as shown on Figure 8.

Two samples were analyzed for pH. On-site soil pH was within the acceptable ranges for surface (≤1.5 mbgs) and sub-surface (>1.5 mbgs) soil.

6.7 Groundwater Quality

A general discussion of the submission and analysis of groundwater samples obtained during the investigation was presented in Section 5.7.

Groundwater samples were collected from three monitoring wells. Samples were submitted for analysis of one or more of the following: BTEX/PHCs, VOCs, PAHs, metals. Groundwater analysis results are presented in Table 3. Laboratory Certificates of Analysis are included in Appendix C. The groundwater sampling locations are shown on Figure 4.

6.7.1 BTEX/PHCs

Three monitoring wells were sampled for analysis of BTEX/PHCs. Concentrations were less than the Table 1 SCS in the analyzed groundwater samples, as shown on Figure 9.

6.7.2 VOCs

Three monitoring wells were sampled for analysis of VOCs. Concentrations were less than the Table 1 SCS in the analyzed groundwater samples, as shown on Figure 10.

6.7.3 PAHs

Three monitoring wells were sampled for analysis of PAHs. Concentrations were less than the Table 1 SCS in the analyzed groundwater samples, as shown on Figure 11.

6.7.4 Metals

Three monitoring wells were sampled for analysis of metals. The laboratory analysis results indicated that metals in the submitted groundwater samples exceeded the Table 1 SCS.

Concentrations of the following parameters exceeded the Table 1 SCS in groundwater:

- Uranium in BH101

- Uranium in BH102
- Uranium and copper in BH103

Metals analysis results are shown on Figure 12 and cross section in Figure 13.

6.8 Quality Assurance and Quality Control

Duplicate soil and groundwater samples were collected for each parameter group. Where analytical parameters were detected in both the parent and the duplicate samples at more than five times the detection limits, relative percent difference (RPD) was calculated to assess the precision of the analytical data. The results were evaluated based on a data quality objectives (DQOs) of 50% for soil and 30% for water. RPD was calculated as follows:

$$RPD(\%) = \frac{|x_1 - x_2|}{x_m} \times 100\%$$

Where: x_1 = parent sample result

x_2 = duplicate sample result

x_m = arithmetic mean of initial and duplicate sample results

RPD is more sensitive to low concentrations; as such, RPDs were not calculated where the parameter concentration in the parent and/or duplicate sample was less than five times the laboratory reportable detection limit (RDL).

RPDs met the DQO for soil and groundwater. Overall, the duplicate samples match very closely with the parent samples. Accordingly, the soil and groundwater analysis results were considered acceptable and indicated that the analytical data were suitable for use in evaluating soil and groundwater quality at the Site.

The trip blank sample was submitted for analysis of VOCs with the groundwater sampling event to determine whether VOCs may have been introduced into a sample during transport to and from the laboratory. The analysis results indicated that VOCs were not present at concentrations greater than the laboratory RDLs in the trip blank.

Certificates of Analysis received for each submitted sample are included in Appendix C. All laboratory Certificates of Analysis pursuant to clause 47 (2) (b) of O.Reg. 153/04 comply with subsection 47(3) of the regulation.

6.9 Phase Two Conceptual Site Model

As per Table 1 of Schedule E of O.Reg. 153/04, a CSM is required for a Phase Two ESA to assist the QP in illustrating the results of the Phase Two ESA, demonstrating the current condition of the Phase Two Property, or where remedial actions have been undertaken, the condition of the Phase Two Property before the remedial actions were undertaken.

The following sections describe in detail the Phase Two CSM and provide the requisite narrative that assists in describing the attached figures.

6.9.1 Site Description and Ownership

The Site is on the west side of Pin Oak Drive and extends from Pin Oak Drive to Kalar Road in Niagara Falls, Ontario. No municipal address has been assigned to this property yet. The Site includes PINs 64263-0072 (LT), 64263-0073 (LT), 64263-0074 (LT), 64263-0075 (LT), 64263-0076 (LT).

Property use surrounding the Site is as follows.

North – Commercial/Industrial (Niagara Peninsula Energy – 7447 Pin Oak Drive, Carstar Niagara Falls – 7361 Pin Oak Drive, Petro-Canada – 7950 McLeod Drive).

South – Other (Forest), with residential beyond.

East – Commercial (Costco Wholesale and Costco Gas Station – 7500 Pin Oak Drive).

West – Residential.

The Site is currently vacant and partially comprised of forested land. Historically, portions of the property were developed with residential homes and/or were used for agriculture. The proposed future land use is residential.

6.9.2 Potentially Contaminating Activities

Twelve PCAs were identified within the Phase One Study Area, all twelve PCAs were located off-site. Refer to Table 4 for further description of the PCAs, and Figure 2 for PCA locations.

The following PCAs contribute to APECs:

PCA 1 – Off-site: Historical auto sales, repairs, and maintenance; PCA #27 Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles.

PCA 2 – Off-site: Historical auto junkyard; PCA #49 Salvage yard, including automobile wrecking.

PCA 3 – Off-site: Active fuel tanks; PCA #28 Gasoline and Associated Products Storage in Fixed Tanks.

PCA 4 – Off-site: Company vehicle fleet maintenance; PCA# 52 Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems.

The following PCAs do not contribute to APECs:

PCA 5 – Off-site: PCB storage; PCA# Not Applicable.

PCA 6 – Off-site: Transformer storage; PCA #55 Transformer Manufacturing, Processing and Use.

PCA 7 – Off-site: Active fuel tanks; PCA #28 Gasoline and Associated Products Storage in Fixed Tanks.

PCA 8 – Off-site: Automotive repair and maintenance; PCA #27 Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles.

PCA 9 – Off-site: Active fuel tanks; PCA #28 Gasoline and Associated Products Storage in Fixed Tanks.

PCA 10 – Off-site: Current and historical autobody shop; PCA #10 Commercial Autobody Shops.

PCA 11 – Off-site: Historical auto shop; PCA #10 Commercial Autobody Shops.

PCA 12 – Off-site: Historical dry cleaners; PCA #37 Operation of Dry Cleaning Equipment (where chemicals were used).

6.9.3 Areas of Potential Environmental Concern

Based on a review of the potential to result in contamination at the Site, four off-site PCAs contributed to APECs. All other PCAs did not contribute to an APEC at the Site. The APECs are summarized below. Refer to Table 5 for further descriptions of the APECs, and Figure 3 for APEC locations.

APEC 1 – Northwest property boundary, associated with PCA 1, related to historical auto sales, repair. COPCs are PHCs, VOCs, BTEX, PAHs, Metals.

APEC 2 – North-western property boundary, associated with PCA 2, related to the presence of historical junkyard. COPCs are PHCs, VOCs, BTEX, PAHs, Metals.

APEC 3 – North-central property boundary, associated with PCA 3, related to off-site fuel storage ASTs and USTs. COPCs are PHCs, BTEX, PAH, Metals.

APEC 4 – North-central property boundary, associated with PCA 4, related to company vehicle fleet maintenance. COPCs are PHCs, BTEX, PAH, Metals.

The sampling and analysis plan was designed to assess the APECs. The following list documents how the investigation sufficiently characterized the APECs. Samples for analysis of volatile parameters such as PHCs and VOCs were selected based primarily on soil screening results and proximity to the water table. Samples for analysis of all other parameters were selected based primarily on visual observation and depth. Monitoring wells were installed such that the screened portion of the well intersected the shallow water-bearing unit. Groundwater was analyzed for all COPCs.

Boreholes with monitoring wells, BH101, BH102, and BH103, were completed to assess the APECs.

- BH101 investigated APEC 1 and APEC 2;

- BH102 and BH103 investigated APEC 3 and APEC 4;

Refer to Figure 4 for borehole and monitoring well locations.

6.9.4 Subsurface Structures and Utilities

No subsurface structures or utilities were observed or reported on the Site.

6.9.5 Stratigraphy

The stratigraphy consisted of native silty clay, clay, and clayey silt to a maximum depth of 6.4 mbgs. Bedrock was not encountered during the drilling program.

6.9.6 Hydrogeological Characteristics and Groundwater Elevations

An unnamed tributary of Welland River is located on the Site. The tributary flows southwesterly at the Site before flowing in a southeasterly direction, where it eventually discharges into Welland River. The confluence is located about 1,600 m southeast of the Site. Welland River flows easterly, eventually discharging into the Niagara River.

To determine the relative groundwater elevation, the horizontal gradient, and the groundwater flow direction, water level measurements were recorded on October 12, and November 24, 2022. The horizontal hydraulic gradient was 0.033 m/m and the depth to groundwater ranged from 4.31 to 6.29 mbgs on October 12, 2022, and from 1.08 to 3.85 mbgs on November 24, 2022. Groundwater flow was to the south. The relative groundwater elevation data and flow direction are presented on Figure 4.

6.9.7 Applicable Site Condition Standards

The *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* (MOE, 2011) were used to determine the applicable SCS for the Site. The following site characteristics were considered when choosing which standards should be applied:

- The proposed future use of the Site is residential use.

- A tributary of Welland River is present on the northwest quadrant of the Site; therefore, the Site is within 30 m of a water body as defined in O.Reg. 153/04. As such, Section 43.1 of O.Reg. 153/04 applies to the Site.
- For groundwater at a property to be considered non-potable, all properties within 250 m of the property must be supplied by a municipal drinking water system that does not obtain its water from a groundwater source. The Site is in an area that is supplied by a municipal water supply.
- The property is not located in an area designated in the municipal official plan as a well-head protection area or other designation identified by the municipality for the protection of groundwater.
- No properties in the Phase One Study Area have a well used or intended for use as a source of water for human consumption or agriculture.
- The stratigraphy consisted of native silty clay, clay, and clayey silt to a maximum depth of 6.4 mbgs. Bedrock was not encountered during the drilling program. SCS for medium and fine-grained soil were considered appropriate.
- Two representative soil samples were submitted for grainsize analysis (BH101_0.8-1.4 and BH102_5.3-5.9). Both samples were described as Clayey silt and silty clay. SCS for fine/medium grained soils were considered appropriate.
- A Natural Heritage Areas map (MNRF, 2022) and the Official Plan for the City of Niagara Falls (City of Niagara Falls, 2022) were reviewed. The on-site creek and wetlands are identified as Environmental Protection Areas by the Official Plan. Additionally, the on-site wetlands were identified as provincially significant. The NHIC database identified the potential presence on the Site of species at risk habitat for the endangered or threatened species. As such the Site was considered an area of natural significance, as defined in Section 1 of O.Reg. 153/04.
- On-site soil pH was within the acceptable ranges for surface (≤1.5 mbgs) and sub-surface (>1.5 mbgs) soil.

Based on the above information, the applicable SCS for the Site were the Table 1 *Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition*. Residential property use and medium to fine soil texture were selected to determine concentration exceedances for the analyzed parameters.

6.9.8 Contaminant Identification and Distribution

Site features/sampling locations, and the interpreted groundwater flow direction are shown on Figure 4. Samples were submitted for analysis of one or more of the following parameters: BTEX/PHCs, VOCs, PAHs, and metals. The results are shown on Figure 5 to Figure 8 for soil and on Figure 9 to Figure 12 for groundwater.

6.9.8.1 Soil

Six soil samples from three boreholes were submitted for analysis of one or more of the following parameters: BTEX/PHCs, VOCs, PAHs, and metals. Concentrations were less than the Table 1 SCS, as shown on Figure 5 to Figure 8.

6.9.8.2 Groundwater

Three monitoring wells were sampled for analysis of one or more of the following parameters: BTEX/PHCs, VOCs, PAHs, and metals. Concentrations were less than the Table 1 SCS in the analyzed groundwater samples with the exception of copper in BH103 groundwater sample and uranium in all three monitoring well groundwater samples. Groundwater results are shown on Figure 9 to Figure 12.

6.9.9 Contaminant Migration and Transport

Concentrations of all COPCs were less than the Table 1 SCS in the analyzed soil and groundwater samples with the exception of copper in BH103 groundwater sample and uranium in all three monitoring well groundwater samples. Given the presence of copper and uranium in groundwater, there is potential for migration of these parameters into the on-site creek surface water and sediment. No preferential pathways for migration are present.

No specific climatic or meteorological conditions were observed that may influence the distribution and migration of contaminants.

6.9.10 Exposure Pathways and Receptors

Concentrations of all COPCs were less than the Table 1 SCS in the analyzed soil and groundwater samples with the exception of copper in BH103 groundwater sample and uranium in all three monitoring well groundwater samples. Refer to section 6.10 for details discussion on exposure pathways and receptors under risk-based evaluation.

Potential exposure pathways for human health and contaminants identified in groundwater at the Site include:

- Incidental Ingestion.
- Dermal Contact.

Since both copper and uranium are non-volatile, no exposure pathways related to inhalation of vapours in air are considered complete.

Potential on-site human receptors include:

- Residential habitants.
- Construction workers.

Potential exposure pathways for ecological receptors include the following:

- Direct and indirect contact with groundwater for terrestrial plants, invertebrates, mammals, and birds.
- Direct and indirect contact with surface water and sediment for semi-aquatic plants, invertebrates, mammals, and birds.
- Ingestion of impacted food for invertebrates, mammals, and birds.

The human health and ecological conceptual site models are provided in Figure 14 and Figure 15, respectively.

6.9.11 Location of Buildings and Structures

No buildings or structures were observed or reported on the Site.

The proposed redevelopment of the property includes a block of residential townhouses throughout the Site; however, plans for exact location are unavailable.

6.9.12 Areas of Contamination on the Property

Concentrations of one or more metals exceeded the Table 1 SCS in the following areas of groundwater samples:

- Northwest Portion: Uranium in BH101.
- Northcentral Portion: Uranium in BH102; uranium and copper in BH103.

No other exceedances of Table 1 SCS were identified for COPCs in either soil or groundwater.

The metal exceedances were addressed through a risk-based review, as discussed below.

6.10 Risk-Based Review of Results

As part of the Phase Two ESA work, contaminants of concern (COCs) were identified by comparing the maximum on-site concentrations in soil and groundwater to applicable Table 1 SCS provided by the MECP. As described in Section 6.7 above, the COCs retained for the risk-based review include copper and uranium in groundwater. Their maximum measured groundwater concentrations are 14 µg/L and 15 µg/L, respectively.

The rationale for the selection of Table 1 SCS was based on three reasons: (1) the presence of Environmental Protection Areas, as per the Official Plan, (2) the presence of a provincially significant wetland on-site, and (3) the potential presence of one or more threatened and endangered species, including the Northern Bobwhite (bird), Deerberry (plant), Round-leaved Greenbrier (plant), and Round Hickory Nut (freshwater mussel).

In the absence of the conditions for a Table 1 Site, as described above, applicable SCS for this Site would be Ministry Table 2 Full-Depth Generic Site Condition Standards in a Potable Ground Water Condition, for medium/fine textured soil and residential/parkland/institutional

(RPI) land use (Table 2 SCS) (MOE, 2011). In the development of generic SCS, the Ministry considered multiple receptors (both human and ecological) and exposure pathways associated with a given property use. The final SCS were determined as the lowest of the calculated component values associated with appropriate receptors and exposure pathways assessed by the Ministry (MOE, 2011). These component values can subsequently be used to support a screening level assessment for human and ecological receptors. Thus, the Table 2 SCS can be considered for screening in the risk-based review if it can be demonstrated that the on-site triggers for Table 1 SCS are not applicable for these COCs in groundwater.

As previously stated, the Site may be suitable for Northern Bobwhite breeding. However, it is unlikely that this endangered bird would be exposed to groundwater with copper and uranium concentrations in exceedance of Table 1 SCS, given that this is not typically a burrowing animal. Based on their typical habitat (as described in Section 4.3.3), the Deerberry, the Round-leaved Greenbrier, and the Round Hickory Nut are not expected to be present on-site.

The Ministry has developed Aquatic Protection Values (APVs) that are “designed to provide a scientifically defensible and reasonably conservative level of protection for most aquatic organisms from the migration of contaminated groundwater to surface water resources” (MOE, 2011). These APVs are subsequently used to develop SCS protective of sites where permanent surface water is either on or in proximity to a Site. A comparison of the maximum concentration of uranium (15 µg/L) against its APV (33 µg/L) shows that no risks would be anticipated for aquatic organisms in the creek and/or wetlands in the east and south portions of the Site as a result of uranium migration into the surface water. Although the maximum concentration of copper (14 µg/L) is greater that its APV (6.9 µg/L), no unacceptable risks are anticipated for aquatic organisms since natural mixing of impacted groundwater with unimpacted surface water results in a modified APV (applying a 10x multiplier) of 69 µg/L (MOE, 2011).

Given the arguments provided above, it is Cambium’s opinion that, although the maximum concentrations of copper and uranium are greater than their respective Table 1 SCS, no unacceptable risks are anticipated and thus no additional work is required.

7.0 Conclusions

Conclusions regarding the current environmental conditions at the Site are based solely on the results of the Phase One ESA and this Phase Two ESA.

7.1 Environmental Conditions

A Phase Two ESA work program was developed to investigate COPCs (BTEX/PHCs, VOCs, PAHs, metals) in soil and groundwater. The Phase Two ESA included three boreholes, all of which were completed as groundwater monitoring wells.

Concentrations of all COPCs were less than the Table 1 SCS in all soil and groundwater samples with the exception of copper in BH103 groundwater sample and uranium in all three monitoring well groundwater samples. On-site soil pH was within the acceptable ranges for surface (≤1.5 mbgs) and sub-surface (>1.5 mbgs) soil.

It is Cambium's opinion that, although the maximum concentrations of copper and uranium are greater than their respective Table 1 SCS, no unacceptable risks are anticipated and thus no additional work is required.

When no longer required, Cambium recommends all monitoring wells should be abandoned as per the requirements of R.R.O. 1990, Regulation 903 – Wells.

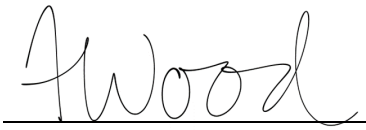
7.2 Signatures

This Phase Two ESA was completed by Mr. Sharif Nawyaz, M.Eng., P.Eng., and supervised by Alex Wood, P.Eng., QP_{ESA} and Mark Beasy, M.Sc., QP_{RA} as per O.Reg. 153/04, as amended. Information presented in this report is true and accurate to the best of the assessors' knowledge.

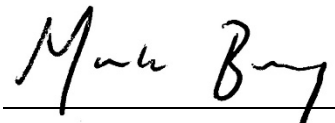
Respectfully submitted,

Cambium Inc.

Sharif Nawyaz, M.Eng. P.Eng.,
Project Manager



Alex Wood, P. Eng., QP
Project Manager



Mark Beasy, M.Sc. QP_{RA}
Senior Risk Assessor

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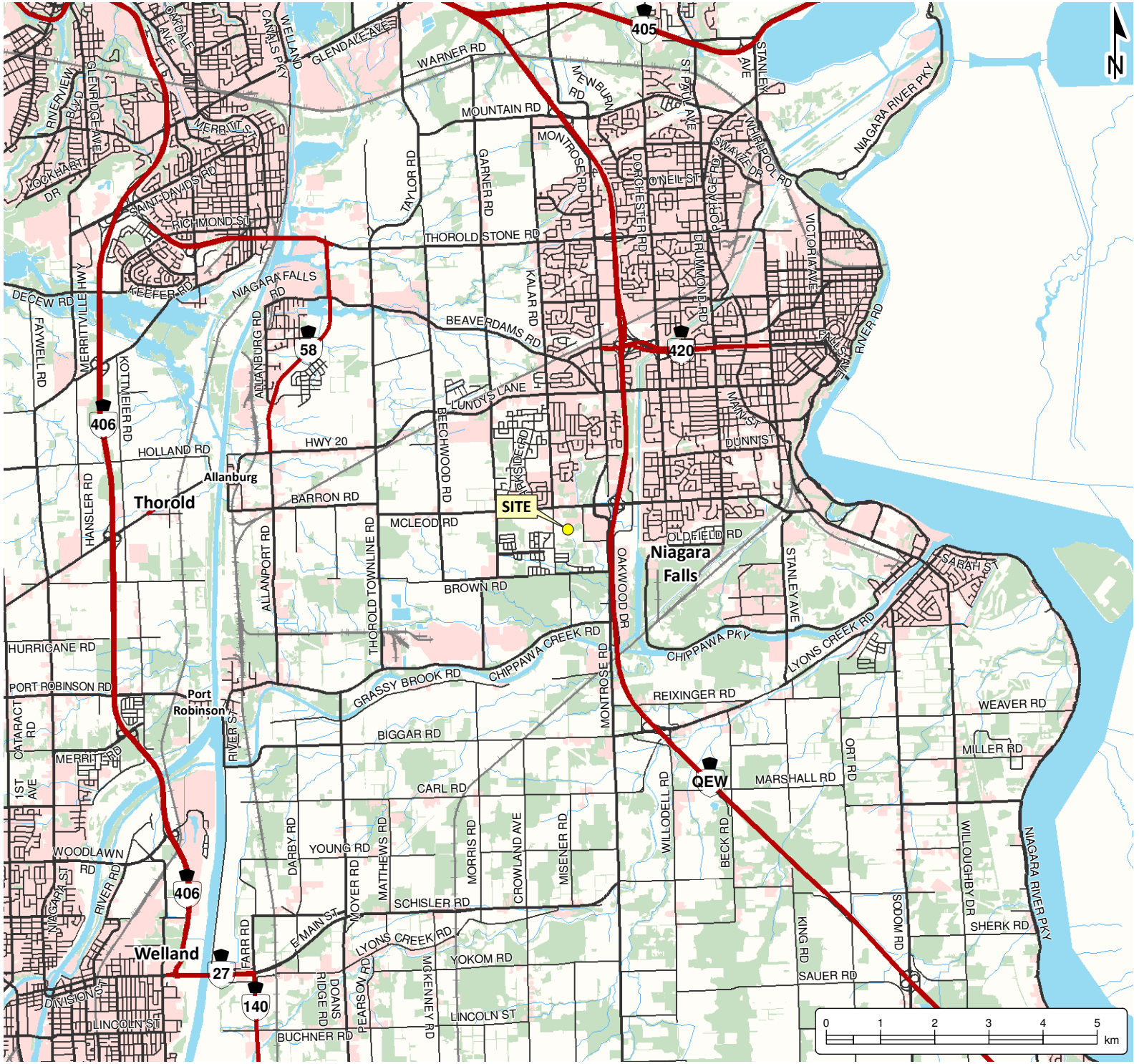
Appended Figures

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

ALINEA LAND CORPORATION
Pin Oak Drive
Niagara Falls, Ontario



LEGEND

- Highway
- Major Road
- Minor Road
- Railroad
- Watercourse
- Water Area
- Wooded Area
- Built Up Area

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SITE LOCATION PLAN

Project No.: 14833-002		Date: October 2023 Rev.:	
Scale: 1:100,000		Projection: NAD 1983 UTM Zone 17N	
Created by: SJV	Checked by: SN	Figure:	1

O:\GIS\MXDs\1:4800-14899\14833-001 Penta Properties Inc. - Phase One & Two ESA, RSC 0 Pin Oak Drive, Niagara Falls\2022-11-07 P2 FIG 1 - Site Location Map.mxd

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

ALINEA LAND CORPORATION
Pin Oak Drive
Niagara Falls, Ontario

LEGEND

- 250 m Study Area
- Site (approximate)

Potenitally Contaminating Activity:

- Does not Contribute to an APEC
- Contributes to an APEC

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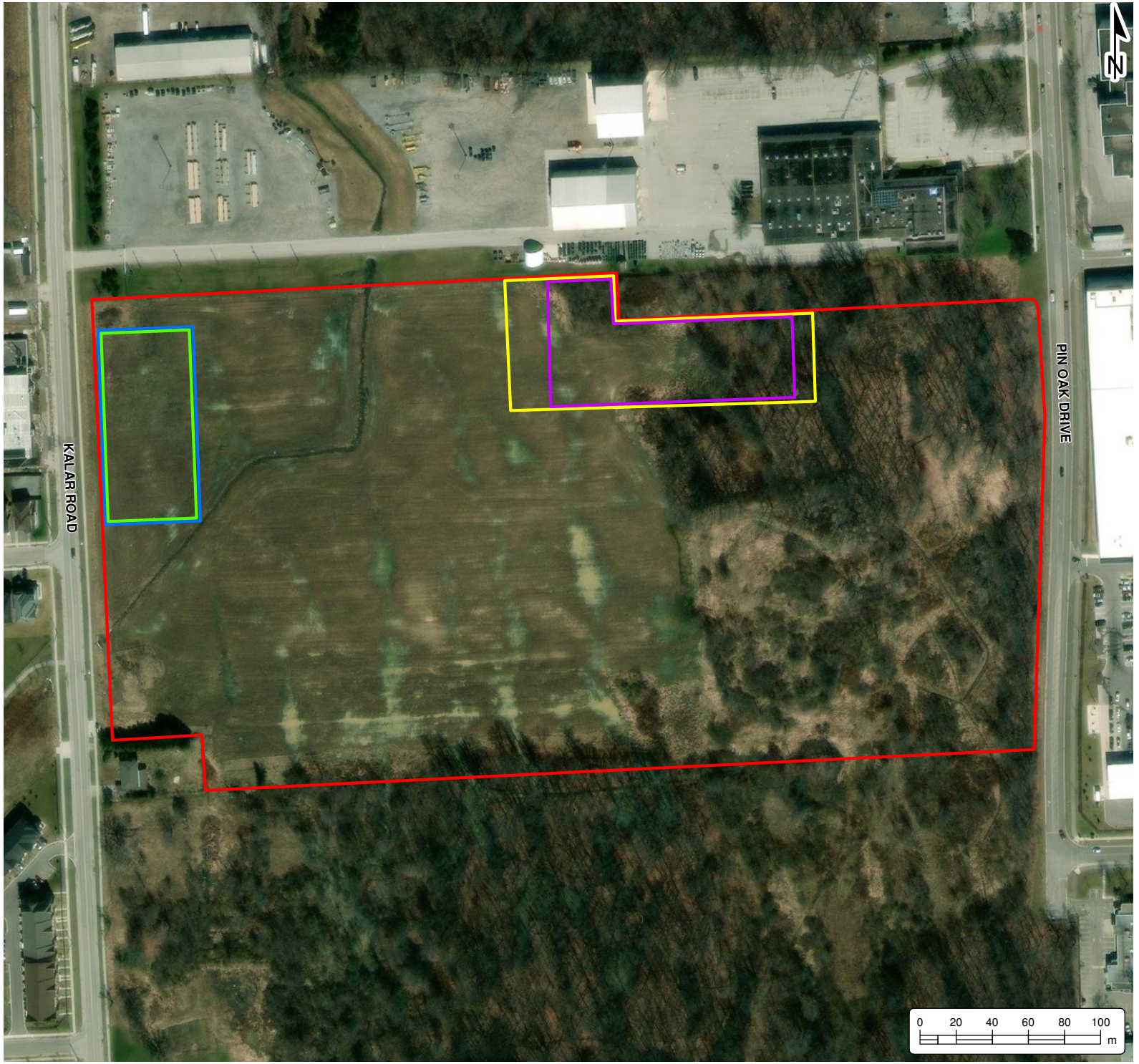
CONCEPTUAL SITE MODEL PHASE TWO STUDY AREA

Project No.: 14833-002		Date: October 2023 Rev.:	
Scale: 1:6,000		Projection: NAD 1983 UTM Zone 17N	
Created by: SJV	Checked by: SN	Figure:	2

O:\GIS\MXDs\14800-14899\14833-001 Penta Properties Inc. - Phase One & Two ESA, RSC 0 Pin Oak Drive, Niagara Falls\2022-11-07 P2 FIG 2 - CSM - Study Area.mxd

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

ALINEA LAND CORPORATION
Pin Oak Drive
Niagara Falls, Ontario



LEGEND

- Site (approximate)

Area of Potential Environmental Concern:

- APEC 1
- APEC 2
- APEC 3
- APEC 4

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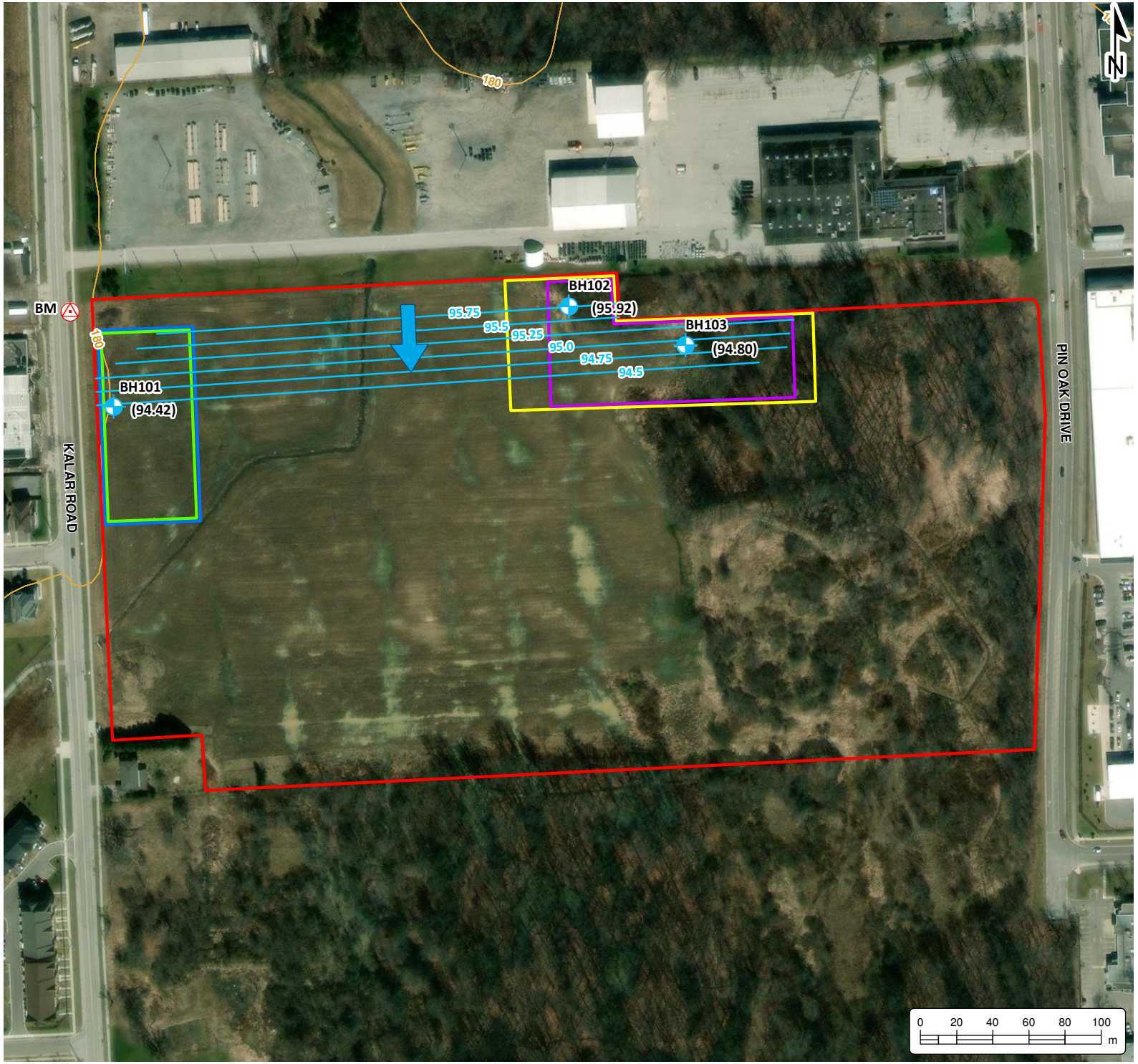
CONCEPTUAL SITE MODEL
PHASE TWO SITE PLAN

Project No.: 14833-002		Date: October 2023	Rev.:
Scale: 1:3,000		Projection: NAD 1983 UTM Zone 17N	
Created by: SJV	Checked by: SN	Figure: 3	

O:\GIS\MXDs\14800-14899\14833-001 Penta Properties Inc. - Phase One & Two ESA, RSC 0 Pin Oak Drive, Niagara Falls\2022-11-07 P2 FIG 3 - CSM - Site Plan.mxd

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

ALINEA LAND CORPORATION
Pin Oak Drive
Niagara Falls, Ontario



LEGEND

- Benchmark
- Monitoring Well
- Groundwater Contour (0.25m intervals)
- Contour 5m Interval (Minor)
- Site (approximate)

Area of Potential Environmental Concern:

- APEC 1
- APEC 2
- APEC 3
- APEC 4

- Groundwater Flow Direction
- **(94.80)** Groundwater Elevation (masl) (Nov 2, 2022)

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BOREHOLE AND MONITORING WELL LOCATIONS

Project No.: 14833-002		Date: October 2023	Rev.:
Scale: 1:3,000		Projection: NAD 1983 UTM Zone 17N	
Created by: SJV	Checked by: SN	Figure: 4	

O:\GIS\MXDs\1:4800-14899\14833-001 Penta Properties Inc. - Phase One & Two ESA, RSC 0 Pin Oak Drive, Niagara Falls\2022-11-07 P2 FIG 4 - Borehole and Monitoring Well Locations.mxd

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

ALINEA LAND CORPORATION
Pin Oak Drive
Niagara Falls, Ontario

LEGEND

- Benchmark
- Monitoring Well
- Meets Table 1, RPIICC
- Exceeds Table 1, RPIICC
- Site (approximate)

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SOIL QUALITY (BTEX/PHCs)

Project No.: 14833-002		Date: October 2023 Rev.:	
Scale: 1:3,000		Projection: NAD 1983 UTM Zone 17N	
Created by: SJV	Checked by: SN	Figure:	5

O:\GIS\MXDs\1:4800-14899\14833-001 Penta Properties Inc. - Phase One & Two ESA, RSC 0 Pin Oak Drive, Niagara Falls\2022-11-07 P2 FIG 5 - Soil Quality - BTEX_PHC.mxd

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

ALINEA LAND CORPORATION
Pin Oak Drive
Niagara Falls, Ontario

LEGEND

- Benchmark
- Monitoring Well
- Meets Table 1, RPIICC
- Exceeds Table 1, RPIICC
- Site (approximate)

Notes:
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SOIL QUALITY (VOCs)

Project No.: 14833-002		Date: October 2023 Rev.:	
Scale: 1:3,000		Projection: NAD 1983 UTM Zone 17N	
Created by: SJV	Checked by: SN	Figure:	6

O:\GIS\MXDs\14800-14899\14833-001 Penta Properties Inc. - Phase One & Two ESA, RSC 0 Pin Oak Drive, Niagara Falls\2022-11-07 P2 FIG 6 - Soil Quality - VOC.mxd

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

ALINEA LAND CORPORATION
Pin Oak Drive
Niagara Falls, Ontario

LEGEND

- Benchmark
- Monitoring Well
- Meets Table 1, RPIICC
- Exceeds Table 1, RPIICC
- Site (approximate)

Notes:
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SOIL QUALITY (PAHs)

Project No.: 14833-002		Date: October 2023 Rev.:	
Scale: 1:3,000		Projection: NAD 1983 UTM Zone 17N	
Created by: SJV	Checked by: SN	Figure:	7

O:\GIS\MXDs\14800-14899\14833-001 Penta Properties Inc. - Phase One & Two ESA, RSC 0 Pin Oak Drive, Niagara Falls\2022-11-07 P2 FIG 7 - Soil Quality - PAH.mxd

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

ALINEA LAND CORPORATION
Pin Oak Drive
Niagara Falls, Ontario

LEGEND

- Benchmark
- Monitoring Well
- Meets Table 1, RPIICC
- Exceeds Table 1, RPIICC
- Site (approximate)

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SOIL QUALITY (METALS)

Project No.: 14833-002		Date: October 2023 Rev.:	
Scale: 1:3,000		Projection: NAD 1983 UTM Zone 17N	
Created by: SJV	Checked by: SN	Figure:	8

O:\GIS\MXDs\14800-14899\14833-001 Penta Properties Inc. - Phase One & Two ESA, RSC 0 Pin Oak Drive, Niagara Falls\2022-11-07 P2 FIG 8 - Soil Quality - Metals.mxd

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

ALINEA LAND CORPORATION
Pin Oak Drive
Niagara Falls, Ontario

LEGEND

- Benchmark
- Monitoring Well
- Meets Table 1, RPIICC
- Exceeds Table 1, RPIICC
- Site (approximate)

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GROUNDWATER QUALITY (BTEX/PHCs)

Project No.: 14833-002		Date: October 2023	Rev.:
Scale: 1:3,000		Projection: NAD 1983 UTM Zone 17N	
Created by: SJV	Checked by: SN	Figure: 9	

O:\GIS\MXDs\14800-14899\14833-001 Penta Properties Inc. - Phase One & Two ESA, RSC o Pin Oak Drive, Niagara Falls\2022-11-07 P2 FIG 9 - Groundwater Quality - BTEX_PHC.mxd

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

ALINEA LAND CORPORATION
Pin Oak Drive
Niagara Falls, Ontario

LEGEND

- Benchmark
- Monitoring Well
- Meets Table 1, RPIICC
- Exceeds Table 1, RPIICC
- Site (approximate)

Notes:
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GROUNDWATER QUALITY (VOCs)

Project No.: 14833-002		Date: October 2023	Rev.:
Scale: 1:3,000		Projection: NAD 1983 UTM Zone 17N	
Created by: SJV	Checked by: SN	Figure: 10	

O:\GIS\MXDs\14800-14899\14833-001 Penta Properties Inc. - Phase One & Two ESA, RSC 0 Pin Oak Drive, Niagara Falls\2022-11-07 P2 FIG 10 - Groundwater Quality - VOCs.mxd

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

ALINEA LAND CORPORATION
Pin Oak Drive
Niagara Falls, Ontario

LEGEND

- Benchmark
- Monitoring Well
- Meets Table 1, RPIICC
- Exceeds Table 1, RPIICC
- Site (approximate)

Notes:
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GROUNDWATER QUALITY (PAHs)

Project No.: 14833-002		Date: October 2023	Rev.:
Scale: 1:3,000		Projection: NAD 1983 UTM Zone 17N	
Created by: SJV	Checked by: SN	Figure: 11	

O:\GIS\MXDs\14800-14899\14833-001 Penta Properties Inc. - Phase One & Two ESA, RSC 0 Pin Oak Drive, Niagara Falls\2022-11-07 P2 FIG 11 - Groundwater Quality - PAHs.mxd

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

ALINEA LAND CORPORATION
Pin Oak Drive
Niagara Falls, Ontario

LEGEND

- Benchmark
- Monitoring Well
- Meets Table 1, RPIICC
- Exceeds Table 1, RPIICC
- Site (approximate)

Contaminant	Table 1 RPI
Copper	5
Uranium	8.9

Table 1 (RPI Property Use, medium/fine Texture)

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GROUNDWATER QUALITY (METALS)

Project No.: 14833-002		Date: October 2023	Rev.:
Scale: 1:3,000		Projection: NAD 1983 UTM Zone 17N	
Created by: SJV	Checked by: SN	Figure: 12	

O:\GIS\MXDs\14800-14899\14833-001 Penta Properties Inc. - Phase One & Two ESA, RSC 0 Pin Oak Drive, Niagara Falls\2022-11-07 P2 FIG 12 - Groundwater Quality - Metals.mxd

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

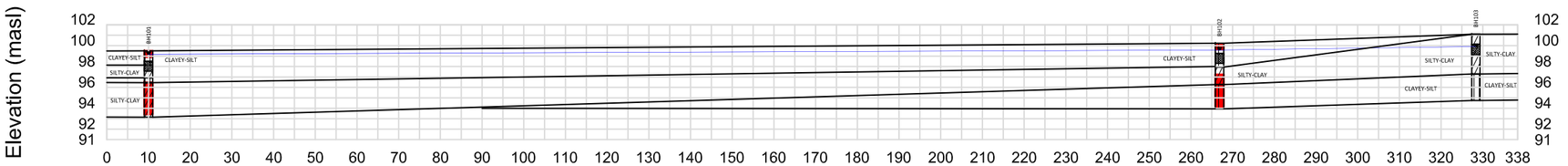
ALINEA LAND CORPORATION
Pin Oak Drive,
Niagara Falls, Ontario

N

LEGEND

- Water Level
- Water Elevation
- Silty Clay
- Clayey Silt
- Meets Table 1, RPIICC
- Exceeds Table 1, RPIICC
- Well Screen

Cross Section A-A'



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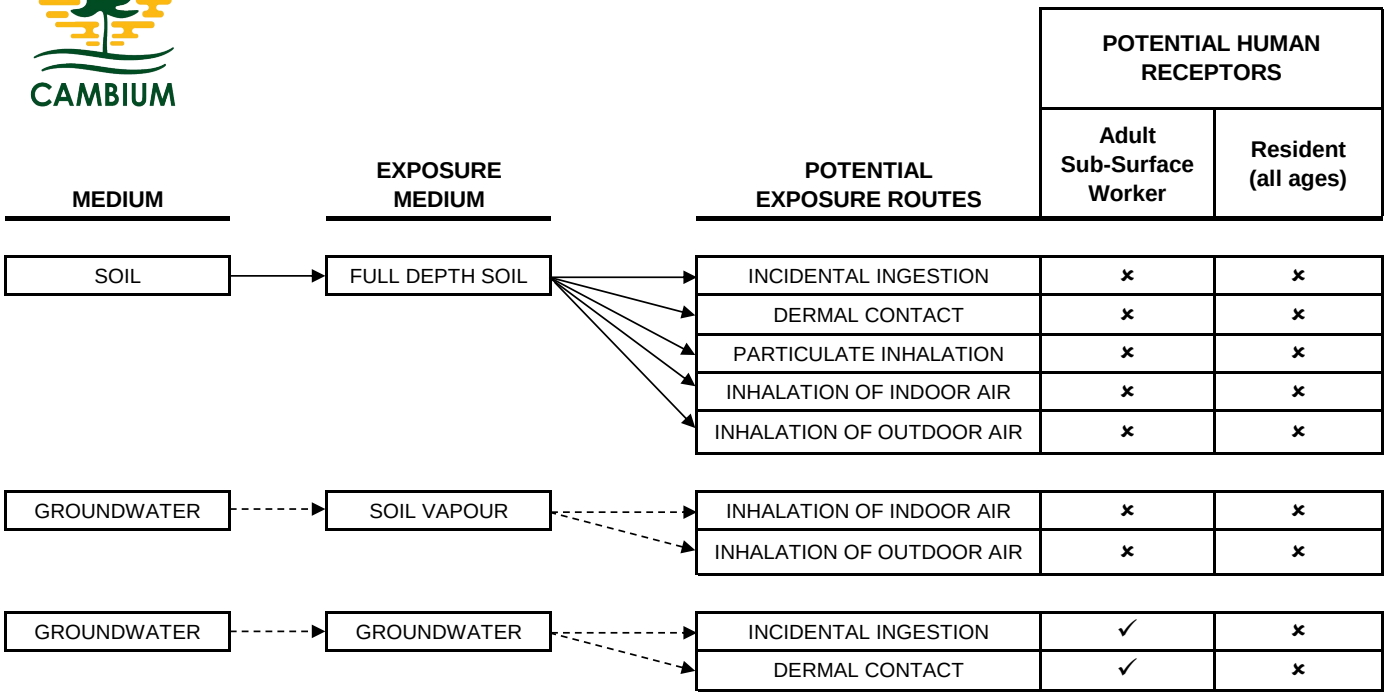
CROSS-SECTIONS A-A'

Project No.:	Date:
14833-002	September 2023
	Rev.:
Horizontal Scale:	Vertical Scale:
1:1,000	N/A
Drawn By:	Checked By:
DBB	SN

Figure: 13

FIGURE 14
HUMAN HEALTH CONCEPTUAL SITE MODEL



Notes:

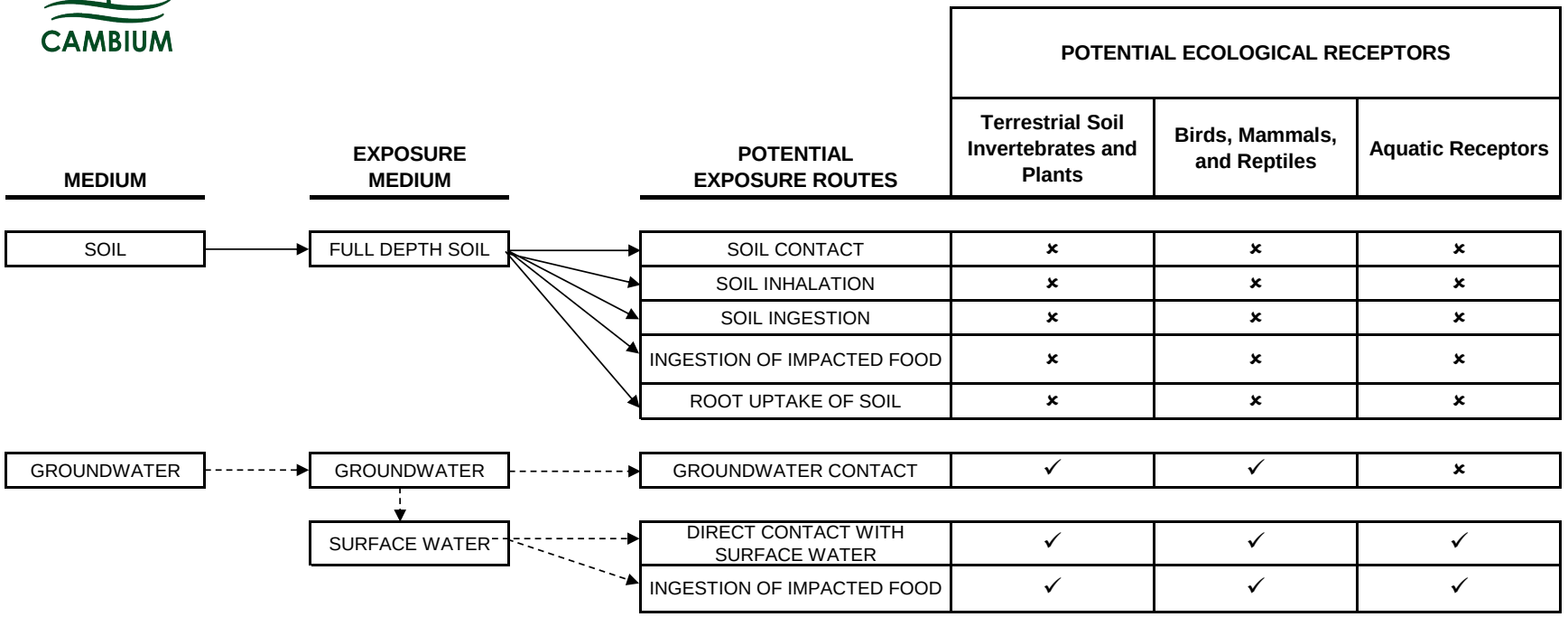
✓ - Indicates a potential exposure of contaminant of concern to receptor.

x - Indicates no exposure of contaminant of concern to receptor.

——→ Indicates pathway potentially complete

- - - - - - - - → Indicates pathway incomplete

FIGURE 15
ECOLOGICAL CONCEPTUAL SITE MODEL



Notes:

✓ - Indicates a potential exposure of contaminant of concern to receptor.

x - Indicates no exposure of contaminant of concern to receptor.

——→ Indicates pathway potentially complete

- - - - - - - - → Indicates pathway incomplete

Appended Tables

Table 1 - Groundwater Elevations - 0 Pin Oak Drive, Niagara Falls

Location	UTM Coordinates		Measured Ground Surface Relative Elevation (m)	Calculated Top of Pipe Relative Elevation (m)	Stick-up Measured (m)	Measured Depth of Well (mbtop)	Calculated Depth of Well (mbgs)	GW Depth (mbtop)	GW Depth (mbgs)	GW Elevation (m)	GW Depth (mbtop)	GW Depth (mbgs)	GW Elevation (m)	GW Depth (mbtop)	GW Depth (mbgs)	GW Elevation (m)
								11-Oct-2022			12-Oct-2022			24-Nov-2022		
BH101	17T	N: 4769888 E: 651847	99.501	100.371	0.87	7.23	6.36	6.98	6.11	93.39	5.95	5.08	94.42	1.95	1.08	98.42
BH102	17T	N: 4769943 E: 652098	100.230	101.090	0.86	7.15	6.29	Dry	Dry	-	5.17	4.31	95.92	2.97	2.11	98.12
BH103*	17T	N: 4769921 E: 652163	101.092	101.942	0.85	7.20	6.35	Dry	Dry	-	7.14	6.29	94.80	4.70	3.85	97.24
BM (NW corner of Catch Basin)	17T	N: 4769940 E: 651823	100.00	-	-	-	-	-	-	-	-	-	-			-

UTM - Universal Transverse Mercator
mbtop - metres below top of pipe
mbgs - metres below ground surface

Oct 11: Purge Same Day as Drilling

Oct 12: GW Sampling (BH101 and BH102)
Nov 24: GW Sampling (BH103)

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Table 2 - Soil Quality

			Location Code	BH101	BH101	BH101	BH102	BH102	BH103	BH103	BH103
			Date	11 Oct 2022	11 Oct 2022	11 Oct 2022	11 Oct 2022	11 Oct 2022	11 Oct 2022	11 Oct 2022	11 Oct 2022
			Depth	0 - 0.6	3.8 - 4.4	3.8 - 4.4	0.1 - 0.6	4.6 - 5.2	0.2 - 0.6	0.2 - 0.6	3.8 - 4.4
			Sample Type	Normal	Normal	QAQC	Normal	Normal	Normal	QAQC	Normal
	Unit	EQL	**Table 1 - RPIICC**								
BTEX											
Benzene	ug/g	0.006	**0.02**	-	<0.0060	<0.0060	-	<0.020	-	-	<0.020
Toluene	ug/g	0.02	**0.2**	-	<0.020	<0.020	-	<0.020	-	-	<0.020
Ethylbenzene	ug/g	0.01	**0.05**	-	<0.010	<0.010	-	<0.020	-	-	<0.020
Xylene Total	ug/g	0.02	**0.05**[#1]	-	<0.020	<0.020	-	<0.040	-	-	<0.040
PHCs											
F1	ug/g	10	**25**[#2]	-	<10	<10	-	<10	-	-	<10
F1 minus BTEX	ug/g	10	**25**[#2]	-	<10	<10	-	<10	-	-	<10
F2	ug/g	10	**10**[#3]	-	<10	<10	-	<10	-	-	<10
F3	ug/g	50	**240**[#4]	-	<50	<50	-	<50	-	-	<50
F4	ug/g	50	**120**	-	<50	<50	-	<50	-	-	<50
Reached Baseline at C50	-			-	0[#8]	0[#8]	-	0[#8]	-	-	0[#8]
VOCs											
Acetone	ug/g	0.49	**0.5**	-	<0.49	<0.49	-	-	-	-	-
Bromoform	ug/g	0.04	**0.05**	-	<0.040	<0.040	-	-	-	-	-
Bromomethane	ug/g	0.04	**0.05**	-	<0.040	<0.040	-	-	-	-	-
Bromodichloromethane	ug/g	0.04	**0.05**	-	<0.040	<0.040	-	-	-	-	-
Carbon tetrachloride	ug/g	0.04	**0.05**	-	<0.040	<0.040	-	-	-	-	-
Chlorobenzene	ug/g	0.04	**0.05**	-	<0.040	<0.040	-	-	-	-	-
Chloroform	ug/g	0.04	**0.05**	-	<0.040	<0.040	-	-	-	-	-
Dibromochloromethane	ug/g	0.04	**0.05**	-	<0.040	<0.040	-	-	-	-	-
Dibromoethane,1,2-	ug/g	0.04	**0.05**	-	<0.040	<0.040	-	-	-	-	-
Dichlorobenzene, 1,2-	ug/g	0.04	**0.05**	-	<0.040	<0.040	-	-	-	-	-
Dichlorobenzene, 1,3-	ug/g	0.04	**0.05**	-	<0.040	<0.040	-	-	-	-	-
Dichlorobenzene, 1,4-	ug/g	0.04	**0.05**	-	<0.040	<0.040	-	-	-	-	-
Dichlorodifluoromethane	ug/g	0.04	**0.05**	-	<0.040	<0.040	-	-	-	-	-
Dichloroethane, 1,1-	ug/g	0.04	**0.05**	-	<0.040	<0.040	-	-	-	-	-
Dichloroethane, 1,2-	ug/g	0.049	**0.05**	-	<0.049	<0.049	-	-	-	-	-
Dichloroethene, 1,1-	ug/g	0.04	**0.05**	-	<0.040	<0.040	-	-	-	-	-
Dichloroethene, 1,2-cis-	ug/g	0.04	**0.05**	-	<0.040	<0.040	-	-	-	-	-
Dichloroethene, 1,2-trans-	ug/g	0.04	**0.05**	-	<0.040	<0.040	-	-	-	-	-
Dichloromethane	ug/g	0.049	**0.05**	-	<0.049	<0.049	-	-	-	-	-
Dichloropropane, 1,2-	ug/g	0.04	**0.05**	-	<0.040	<0.040	-	-	-	-	-
Dichloropropene, 1,3- cis & trans	ug/g	0.05	**0.05**[#5]	-	<0.050	<0.050	-	-	-	-	-
Dichloropropene, 1,3- cis	ug/g	0.03		-	<0.030	<0.030	-	-	-	-	-
Dichloropropene, 1,3- trans	ug/g	0.04		-	<0.040	<0.040	-	-	-	-	-
Hexane	ug/g	0.04	**0.05**	-	<0.040	<0.040	-	-	-	-	-
Methyl Ethyl Ketone	ug/g	0.4	**0.5**	-	<0.40	<0.40	-	-	-	-	-
Methyl Iso-Butyl Ketone	ug/g	0.4	**0.5**	-	<0.40	<0.40	-	-	-	-	-
MTBE	ug/g	0.04	**0.05**	-	<0.040	<0.040	-	-	-	-	-
Styrene	ug/g	0.04	**0.05**	-	<0.040	<0.040	-	-	-	-	-
Tetrachloroethene	ug/g	0.04	**0.05**	-	<0.040	<0.040	-	-	-	-	-
Tetrachloroethane, 1,1,1,2-	ug/g	0.04	**0.05**	-	<0.040	<0.040	-	-	-	-	-
Tetrachloroethane, 1,1,2,2-	ug/g	0.04	**0.05**	-	<0.040	<0.040	-	-	-	-	-
Trichloroethene	ug/g	0.01	**0.05**	-	<0.010	<0.010	-	-	-	-	-
Trichloroethane, 1,1,1-	ug/g	0.04	**0.05**	-	<0.040	<0.040	-	-	-	-	-
Trichloroethane, 1,1,2-	ug/g	0.04	**0.05**	-	<0.040	<0.040	-	-	-	-	-
Trichlorofluoromethane	ug/g	0.04	**0.25**	-	<0.040	<0.040	-	-	-	-	-
Vinyl chloride	ug/g	0.019	**0.02**	-	<0.019	<0.019	-	-	-	-	-
PAH											
1 & 2 Methylnaphthalene	ug/g	0.0071	**0.59**[#6]	<0.0071	-	-	<0.0071	-	<0.0071	<0.0071	-
1-Methylnaphthalene	ug/g	0.005	**0.59**[#6]	<0.0050	-	-	<0.0050	-	<0.0050	<0.0050	-
2-methylnaphthalene	ug/g	0.005	**0.59**[#6]	<0.0050	-	-	<0.0050	-	<0.0050	<0.0050	-
Acenaphthene	ug/g	0.005	**0.072**	<0.0050	-	-	<0.0050	-	<0.0050	<0.0050	-
Acenaphthylene	ug/g	0.005	**0.093**	<0.0050	-	-	<0.0050	-	<0.0050	<0.0050	-
Anthracene	ug/g	0.005	**0.16**	<0.0050	-	-	<0.0050	-	<0.0050	<0.0050	-
Benz(a)anthracene	ug/g	0.005	**0.36**	<0.0050	-	-	<0.0050	-	<0.0050	<0.0050	-
Benzo(a)pyrene	ug/g	0.005	**0.3**	<0.0050	-	-	<0.0050	-	<0.0050	<0.0050	-
Benzo(g,h,i)perylene	ug/g	0.005	**0.68**	<0.0050	-	-	<0.0050	-	<0.0050	<0.0050	-
Benzo(b+k)fluoranthene	ug/g	0.005		<0.0050	-	-	0.008	-	<0.0050	<0.0050	-
Benzo(k)fluoranthene	ug/g	0.005	**0.48**	<0.0050	-	-	<0.0050	-	<0.0050	<0.0050	-
Chrysene	ug/g	0.005	**2.8**	<0.0050	-	-	<0.0050	-	<0.0050	<0.0050	-
Dibenz(a,h)anthracene	ug/g	0.005	**0.1**	<0.0050	-	-	<0.0050	-	<0.0050	<0.0050	-
Fluoranthene	ug/g	0.005	**0.56**	<0.0050	-	-	0.007	-	<0.0050	<0.0050	-
Fluorene	ug/g	0.005	**0.12**	<0.0050	-	-	<0.0050	-	<0.0050	<0.0050	-
Indeno(1,2,3-c,d)pyrene	ug/g	0.005	**0.23**	<0.0050	-	-	<0.0050	-	<0.0050	<0.0050	-
Naphthalene	ug/g	0.005	**0.09**	<0.0050	-	-	<0.0050	-	<0.0050	<0.0050	-
Phenanthrene	ug/g	0.005	**0.69**	<0.0050	-	-	<0.0050	-	<0.0050	<0.0050	-
Pyrene	ug/g	0.005	**1**	<0.0050	-	-	0.0056	-	<0.0050	<0.0050	-
Metals											
Antimony	ug/g	0.2	**1.3**	0.22	-	-	<0.20	-	<0.20	<0.20	-
Arsenic	ug/g	1	**18**	4.5	-	-	5.4	-	2.9	4.9	-
Barium	ug/g	0.5	**220**	120	-	-	210	-	110	130	-
Beryllium	ug/g	0.2	**2.5**	0.99	-	-	1.6	-	0.78	1.4	-
Boron	ug/g	5	**36**	8.6	-	-	11	-	<5.0	<5.0	-
Cadmium	ug/g	0.1	**1.2**	0.16	-	-	<0.10	-	<0.10	<0.10	-
Chromium (III+VI)	ug/g	1	**70**	27	-	-	41	-	23	25	-
Cobalt	ug/g	0.1	**21**	12	-	-	20	-	9.1	9.5	-
Copper	ug/g	0.5	**92**	22	-	-	31	-	14	17	-
Lead	ug/g	1	**120**	16	-	-	15	-	12	11	-
Molybdenum	ug/g	0.5	**2**	0.53	-	-	<0.50	-	0.53	0.56	-
Nickel	ug/g	0.5	**82**	29	-	-	46	-	21	25	-
Selenium	ug/g	0.5	**1.5**	<0.50	-	-	<0.50	-	<0.50	<0.50	-
Silver	ug/g	0.2	**0.5**	<0.20	-	-	<0.20	-	<0.20	<0.20	-
Thallium	ug/g	0.05	**1**	0.17	-	-	0.23	-	0.18	0.12	-
Uranium	ug/g	0.05	**2.5**	0.68	-	-	1	-	0.71	0.74	-
Vanadium	ug/g	5	**86**	38	-	-	56	-	30	39	-
Zinc	ug/g	5	**290**	72	-	-	82	-	42	52	-
Inorganics											
Moisture	%	1		20	20	17	18	21	23	25	24
pH (Lab)	-		**5-9**	7.59	-	-	-	7.8	-	-	-

Comments

#1 Standard is applicable to total xylenes; m & p-xylenes and o-xylenes should be summed for comparison.
#2 Standard is applicable to PHC in the F1 range minus BTEX.
#3 Standard is applicable to PHC F2 minus naphthalene. If naphthalene is not analyzed, the standard is applied to F2.
#4 Standard is applicable to PHC F3 minus PAHs (other than naphthalene). If PAHs have not been measured, the standard is applied to F3.
#5 Standard is applicable to 1,3-Dichloropropene. Individual isomers (cis + trans) should be added for comparison.
#6 Standard is applicable to Methylnaphthalene, 1- and Methylnaphthalene, 2-. If both are detected, the sum of the two must not exceed the standard.
#7 Total Boron standard is for sub-surface soil (>1.5 m).
#8 YES

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Table 3 - Groundwater Quality

			Location Code			BH101	BH102	BH102	BH103
			Date	12 Oct 2022	24 Nov 2022	12 Oct 2022	12 Oct 2022	12 Oct 2022	24 Nov 2022
			Sample Type	Trip_Blank	Trip_Blank	Normal	Normal	QAQC	Normal
	Unit	EQL	**Table 1 - All Types of Property Use**						
BTEX									
Benzene	µg/L	0.17	**0.5**	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Toluene	µg/L	0.2	**0.8**	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Ethylbenzene	µg/L	0.2	**0.5**	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Xylene Total	µg/L	0.2	**72**[#1]	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
PHCs									
F1	µg/L	25	**420**[#2]	<25	<25	<25	<25	<25	<25
F1 minus BTEX	µg/L	25	**420**[#2]	<25	<25	<25	<25	<25	<25
F2	µg/L	100	**150**[#3]	-	-	<100	<100	<100	<100
F3	µg/L	200	**500**[#4]	-	-	<200	<200	<200	<200
F4	µg/L	200	**500**	-	-	<200	<200	<200	<200
Reached Baseline at C50	ug/L			-	-	1[#6]	1[#6]	1[#6]	1[#6]
VOCs									
Acetone	µg/L	10	**2,700**	<10	<10	<10	<10	<10	<10
Bromoform	µg/L	1	**5**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Bromomethane	µg/L	0.5	**0.89**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Bromodichloromethane	µg/L	0.5	**2**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Carbon tetrachloride	µg/L	0.2	**0.2**	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chlorobenzene	µg/L	0.2	**0.5**	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chloroform	µg/L	0.2	**2**	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	0.5	**2**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dibromoethane,1,2-	µg/L	0.2	**0.2**	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dichlorobenzene, 1,2-	µg/L	0.5	**0.5**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorobenzene, 1,3-	µg/L	0.5	**0.5**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorobenzene, 1,4-	µg/L	0.5	**0.5**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichlorodifluoromethane	µg/L	1	**590**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dichloroethane, 1,1-	µg/L	0.2	**0.5**	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloroethane, 1,2-	µg/L	0.5	**0.5**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethene, 1,1-	µg/L	0.2	**0.5**	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloroethene, 1,2-cis-	µg/L	0.5	**1.6**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichloroethene, 1,2-trans-	µg/L	0.5	**1.6**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichloromethane	µg/L	2	**5**	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dichloropropane, 1,2-	µg/L	0.2	**0.5**	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dichloropropene, 1,3- cis & trans	µg/L	0.5	**0.5**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dichloropropene, 1,3- cis	µg/L	0.3		<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Dichloropropene, 1,3- trans	µg/L	0.4		<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Hexane	µg/L	1	**5**	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl Ethyl Ketone	µg/L	10	**400**	<10	<10	<10	<10	<10	<10
Methyl Iso-Butyl Ketone	µg/L	5	**640**	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
MTBE	µg/L	0.5	**15**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Styrene	µg/L	0.5	**0.5**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethene	µg/L	0.2	**0.5**	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Tetrachloroethane, 1,1,1,2-	µg/L	0.5	**1.1**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Tetrachloroethane, 1,1,2,2-	µg/L	0.5	**0.5**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trichloroethene	µg/L	0.2	**0.5**	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethane, 1,1,1-	µg/L	0.2	**0.5**	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethane, 1,1,2-	µg/L	0.5	**0.5**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Trichlorofluoromethane	µg/L	0.5	**150**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Vinyl chloride	µg/L	0.2	**0.5**	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
PAH									
1 & 2 Methylnaphthalene	µg/L	0.071	**2**[#5]	-	-	<0.071	<0.071	<0.071	<0.071
1-Methylnaphthalene	µg/L	0.05	**2**[#5]	-	-	<0.050	<0.050	<0.050	<0.050
2-methylnaphthalene	µg/L	0.05	**2**[#5]	-	-	<0.050	<0.050	<0.050	<0.050
Acenaphthene	µg/L	0.05	**4.1**	-	-	<0.050	<0.050	<0.050	<0.050
Acenaphthylene	µg/L	0.05	**1**	-	-	<0.050	<0.050	<0.050	<0.050
Anthracene	µg/L	0.05	**0.1**	-	-	<0.050	<0.050	<0.050	<0.050
Benz(a)anthracene	µg/L	0.05	**0.2**	-	-	<0.050	<0.050	<0.050	<0.050
Benzo(a)pyrene	µg/L	0.009	**0.01**	-	-	<0.0090	<0.0090	<0.0090	<0.0090
Benzo(g,h,i)perylene	µg/L	0.05	**0.2**	-	-	<0.050	<0.050	<0.050	<0.050
Benzo(b+k)fluoranthene	µg/L	0.05		-	-	<0.050	<0.050	<0.050	<0.050
Benzo(k)fluoranthene	µg/L	0.05	**0.1**	-	-	<0.050	<0.050	<0.050	<0.050
Chrysene	µg/L	0.05	**0.1**	-	-	<0.050	<0.050	<0.050	<0.050
Dibenz(a,h)anthracene	µg/L	0.05	**0.2**	-	-	<0.050	<0.050	<0.050	<0.050
Fluoranthene	µg/L	0.05	**0.4**	-	-	<0.050	<0.050	<0.050	<0.050
Fluorene	µg/L	0.05	**120**	-	-	<0.050	<0.050	<0.050	<0.050
Indeno(1,2,3-c,d)pyrene	µg/L	0.05	**0.2**	-	-	<0.050	<0.050	<0.050	<0.050
Naphthalene	µg/L	0.05	**7**	-	-	<0.050	<0.050	<0.050	<0.050
Phenanthrene	µg/L	0.03	**0.1**	-	-	<0.030	<0.030	<0.030	<0.030
Pyrene	µg/L	0.05	**0.2**	-	-	<0.050	<0.050	<0.050	<0.050
Perylene	µg/L	0.05		-	-	<0.050	<0.050	<0.050	<0.050
Metals									
Antimony (filtered)	ug/L	0.5	**1.5**	-	-	<0.50	<0.50	<0.50	<0.50
Arsenic (filtered)	ug/L	1	**13**	-	-	<1.0	<1.0	<1.0	1.5
Barium (filtered)	ug/L	2	**610**	-	-	36	39	42	47
Beryllium (filtered)	ug/L	0.4	**0.5**	-	-	<0.40	<0.40	<0.40	<0.40
Boron (filtered)	ug/L	10	**1,700**	-	-	130	120	130	140
Cadmium (filtered)	ug/L	0.09	**0.5**	-	-	<0.090	<0.090	<0.090	<0.090
Chromium (III+VI) (filtered)	ug/L	5	**11**	-	-	<5.0	<5.0	<5.0	<5.0
Cobalt (filtered)	ug/L	0.5	**3.8**	-	-	0.63	0.52	<0.50	0.84
Copper (filtered)	ug/L	0.9	**5**	-	-	<0.90	1.1	1.7	**15**
Lead (filtered)	ug/L	0.5	**1.9**	-	-	<0.50	<0.50	<0.50	<0.50
Molybdenum (filtered)	ug/L	0.5	**23**	-	-	3.3	4.1	4.1	3.2
Nickel (filtered)	ug/L	1	**14**	-	-	1.4	1.3	1.4	3.3
Selenium (filtered)	ug/L	2	**5**	-	-	<2.0	<2.0	<2.0	<2.0
Silver (filtered)	ug/L	0.09	**0.3**	-	-	<0.090	<0.090	<0.090	<0.090
Sodium (filtered)	ug/L	100	**490,000**	-	-	59,000	58,000	60,000	54,000
Thallium (filtered)	ug/L	0.05	**0.5**	-	-	<0.050	<0.050	<0.050	<0.050
Uranium (filtered)	µg/L	0.1	**8.9**	-	-	**9**	**11**	**11**	**14**
Vanadium (filtered)	ug/L	0.5	**3.9**	-	-	<0.50	<0.50	<0.50	<0.50
Zinc (filtered)	ug/L	5	**160**	-	-	<5.0	<5.0	<5.0	9

Comments

#1 Standard is applicable to total xylenes; m & p-xylenes and o-xylenes should be summed for comparison.

#2 Standard is applicable to PHC in the F1 range minus BTEX.

#3 Standard is applicable to PHC F2 minus naphthalene. If naphthalene is not analyzed, the standard is applied to F2.

#4 Standard is applicable to PHC F3 minus PAHs (other than naphthalene). If PAHs have not been measured, the standard is applied to F3.

#5 Standard is applicable to Methylnaphthalene, 1- and Methylnaphthalene, 2-. If both are detected, the sum of the two must not exceed the standard.

#6 YES

Table 4: Potential Contaminating Activities

	Potentially Contaminating Activity (PCA)	Location of PCA	PCA Description	Contaminants of Potential Environmental Concern	Impacted (Groundwater or Soil)	APEC (Yes/No)
1	PCA #27 Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles	Off-site to the west (7549 Kalar Road)	Historical auto sales, repairs and maintenance	PHCs, VOCs, BTEX, PAHs, Metals	Soil and Groundwater	Yes
2	PCA #49 Salvage yard, including automobile wrecking	Off-site to the west (7549 Kalar Road)	Historical auto junkyard	PHCs, VOCs, BTEX, PAHs, Metals	Soil and Groundwater	Yes
3	PCA #28 Gasoline and Associated Products Storage in Fixed Tanks	Off-site to the north (7447 Pin Oak Drive)	Active fuel tanks	PHCs, BTEX, PAH, Metals	Soil and Groundwater	Yes
4	PCA# 52 Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	Off-site to the north (7447 Pin Oak Drive)	Company vehicle fleet maintenance, repair garage	PHCs, BTEX, PAH, Metals	Soil and Groundwater	Yes
5	Not Applicable - PCB Storage	Off-site to the north (7447 Pin Oak Drive)	PCB storage	PCBs	Soil and Groundwater	No
6	PCA #55 Transformer Manufacturing, Processing and Use	Off-site to the north 7447 Pin Oak Drive)	Transformer storage	Metals, PCBs	Soil and Groundwater	No
7	PCA #28 Gasoline and Associated Products Storage in Fixed Tanks	Off-site to the north-northwest (7302 Kalar Road)	Active fuel tanks	PHCs, BTEX, PAH, Metals	Soil and Groundwater	No
8	PCA #27 Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles	Off-site to the north-northwest (7302 Kalar Road)	Automotive repair and maintenance	PHCs, VOCs, BTEX, PAHs, Metals	Soil and Groundwater	No
9	PCA #28 Gasoline and Associated Products Storage in Fixed Tanks	Off-site to the east-southeast (7500 Pin Oak Drive)	Active fuel tanks	PHCs, BTEX, PAH, Metals	Groundwater	No
10	PCA #10 Commercial Autobody Shops	Off-site to the north-northeast (7361 Pin Oak Drive)	Current and historical autobody shop	PHCs, VOCs, BTEX, PAHs, Metals	Groundwater	No
11	PCA #10 Commercial Autobody Shops	Off-site to the east (7555 Montrose Drive)	Historical auto shop	PHCs, VOCs, BTEX, PAHs, Metals	Groundwater	No
12	PCA #37 Operation of Dry Cleaning Equipment (where chemicals were used)	Off-site to the east (7555 Montrose Drive)	Historical dry cleaners	PHCs and VOCs including BTEX	Groundwater	No

Notes:

1. Potentially Contaminating Activity means a use or activity set out in Column A of Table 2 of Schedule D that is occurring or has occurred in the phase one study area.

Table 5: Areas of Potential Environmental Concern

Area of Potential Environmental Concern (APEC)[1]	Location of APEC on the Phase One Property	Potentially Contaminating Activity[2]	Location of PCA (on-site or off-site)	Contaminants of Potential Concern[3]	Media Potentially Impacted (Groundwater, soil, and/or sediment)	PCA#
APEC 1	Off-site to the west (7549 Kalar Road)	PCA #27 Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles	Off-site	PHCs, VOCs, BTEX, PAHs, Metals	Soil and Groundwater	1
APEC 2	Off-site to the west (7549 Kalar Road)	PCA #49 Salvage yard, including automobile wrecking	Off-site	PHCs, VOCs, BTEX, PAHs, Metals	Soil and Groundwater	2
APEC 3	Off-site to the north (7447 Pin Oak Drive)	PCA #28 Gasoline and Associated Products Storage in Fixed Tanks	Off-site	PHCs, BTEX, PAH, Metals	Soil and Groundwater	3
APEC 4	Off-site to the north (7447 Pin Oak Drive)	PCA# 52 Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems	Off-site	PHCs, BTEX, PAH, Metals	Soil and Groundwater	4

Notes:

1. Area of Potential Environmental Concern means the area on, in, or under a phase one property where one or more contaminants are potentially present, as determined through the phase one environmental site assessment.
2. Potentially Contaminating Activity means a use or activity set out in Column A of Table 2 of Schedule D that is occurring or has occurred in a phase one study area.
3. Method groups as defined in Protocol for in the Assessment of Properties under Part XV.1 of the Environmental Protection Act, March 9, 2004, amended as of July 1, 2011.

Appendix A

Sampling and Analysis Plan

Sampling and Analysis Plan - Pin Oak Drive, Niagara Falls, Ontario

October 6, 2022

Prepared for:
Alinea Land Corporation

Cambium Reference: 14833-002

CAMBIUM INC.

866.217.7900

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Table of Contents

1.0 Introduction

This document outlines the Sampling and Analysis Plan (SAP) for the field work proposed for the Phase Two Environmental Site Assessment (ESA) being completed at Pin Oak Drive in Niagara Falls, Ontario (hereinafter referred to as the 'Site'). This SAP establishes a quality assurance and quality control (QA/QC) program, data quality objectives, standard operating procedures, and a description of potential physical impediments that may limit the ability to conduct sampling and analysis.

1.1 Objectives

Penta Properties Inc. (Client) retained Cambium Inc. (Cambium) to complete a Phase Two Environmental Site Assessment (ESA) at Pin Oak Drive, in Niagara Falls, Ontario ('Site' or 'Phase Two Property').

The purpose of the Phase Two ESA will be to investigate soil and groundwater quality in the identified APECs through the drilling of boreholes, installation of monitoring wells, and the collection of soil and groundwater samples.

Contaminants of potential concern (COPCs) include: petroleum hydrocarbon fractions 1 to 4 (PHC F1-F4), volatile organic compounds (VOCs) including benzene, toluene, ethylbenzene, xylenes (BTEX), polycyclic aromatic hydrocarbons (PAHs) and metals. Potentially contaminated media was soil and groundwater.

The overall objective of the Phase Two work program is to identify areas of contamination at the Phase Two property, if any, to support a development application with the municipality and was completed to meet the requirements of Ontario Regulation (O.Reg.) 153/04.

2.0 Work Proposed

Proposed boreholes and monitoring well locations and rationale are included in the following table:

Borehole / Monitoring Well ID	Rationale
BH101	Investigate soil and groundwater quality for the COPCs related to APEC 1 and 2 and determine groundwater flow.
BH102	Investigate soil and groundwater quality for the COPCs related to APEC 3 and 4 and determine groundwater flow.
BH103	Investigate soil and groundwater quality for the COPCs related to APEC 3 and 4 and determine groundwater flow.

To meet the objectives outlined above, the Phase Two ESA work program will generally consist of the following:

- Advance three boreholes (BH101 to 103) at least to the depth of the water table.
- Collect soil samples at regular intervals (0.61 metres) using a split spoon sampling system;
- Instrument three boreholes (BH101 to 103) with a monitoring well; and,
- Collect groundwater samples using a low-flow sampling method.

2.1 Quality Assurance

Cambium will maintain the following quality control measures throughout the Phase Two work program:

- Non-dedicated sampling and monitoring equipment will be decontaminated following each use and between each sampling location.
- A minimum of one (1) duplicate sample will be collected for every ten samples collected, for both soil and groundwater.
- Groundwater trip blanks will be submitted for analysis of VOCs with every groundwater VOC sample submission.

An analytical laboratory accredited by the Canadian Association of Laboratory Accreditation (CALA) will be utilized, and the laboratory will complete additional quality control measures (i.e. duplicates, method spikes) as required by its accreditation.

All laboratory certificates of analysis will be reviewed by Cambium for data integrity and quality control. If anomalies in the reported data are identified, Cambium will resample or collect additional samples, where possible and as required.

2.2 Sampling Methods

Boreholes will be advanced using a truck-mounted or track-mounted drill rig. Retrieved soil samples will be inspected for visible and olfactory evidence of contamination. Soil samples will be divided, with half or more of the sample placed in a dedicated polyethylene sample bag and sealed for field screening, and the remaining sample placed in dedicated sample jars or vials for analytical submission. Samples to be submitted for analysis of PHC F1 and/or VOCs will be collected using a pre-calibrated syringe sampler and methanol preserved vial.

Two-inch monitoring wells will be installed by a licensed well contractor. Monitoring wells will generally consist of a 3.1 m length of PVC screen with riser to the top of the well. Wells will be completed with either a flush-mount casing or a protective steel monument casing.

Groundwater samples will be collected following development of the well to ensure representative formation waters. Samples from each well will be collected using a low-flow peristaltic pump, with dedicated tubing installed in each of the monitoring wells. Groundwater samples requiring filtration will be field filtered using an in-line filter attached to the end of the polyethylene tubing.

Each sample will be handled by a Cambium field technician using dedicated nitrile gloves to minimize the potential for cross-contamination.

2.2.1 Sample Handling and Custody

Samples will be collected in laboratory-supplied sample containers, with preservative as necessary. All samples requiring laboratory analysis will be placed in a cooler and maintained at less than 10°C prior to and during transport to the laboratory.

Samples will be labelled with a unique sample ID, sampling date, and project number. All samples will be shipped to the laboratory under chain of custody protocols.

2.2.2 Instrumentation

The Phase Two work program will require the use of the following non-dedicated instrumentation and equipment: field water quality kit, peristaltic pump, and interface probe. Equipment will be inspected daily for damage or defects, and appropriate measures will be taken if necessary, prior to commencing field work. The interface probe will be decontaminated between monitoring wells using an Alconox wash, and rinsed with distilled water.

2.3 Quality Control

2.3.1 Verification and Validation Methods

To validate the integrity of the laboratory analytical data as well as sampling methods, Cambium will determine the relative percent difference (RPD) of QA/QC duplicate samples and the corresponding numbered samples. Cambium will also review the analysis of trip blanks and laboratory completed matrix spikes.

RPD is calculated using the following formula:

$$RPD = \frac{|S - D|}{1/2(S + D)} * 100$$

Where S = numbered sample value

D = duplicate value

Low concentrations are more sensitive to RPD values; as such, RPDs will not be calculated where the parameter concentration in the sample and/or duplicate is less than five (5) times the laboratory RDL.

RPD values will be evaluated based on a target variance of 50% or less for soil and 30% or less for groundwater (CCME, 2016).

If an RPD is calculated above the allowable limits, Cambium will attempt to determine the source of the variance and will assess whether the elevated RPD affects the integrity and usability of the data.

If detectable contaminant concentrations are identified in the trip blank, Cambium will assess the chain of custody protocols and sample transport procedures and determine if there are impacts to the integrity of the data.

Appendix B

Borehole Logs

Client: Penta Properties Inc. **Project Name:** Phase Two Environmental Site Assessment **Log of Borehole:** BH101

Contractor: Drilltech Drilling Ltd. **Method:** Track Mounted Solid Stem Auger Page: 1 of 1

Location: 0 Pin Oak Drive, Niagara Falls **Elevation:** 99.5 m Rel. **Date Completed:** October 11, 2022

Project No.: 14833-002 **UTM:** 17T **N:** 4769888 **E:** 651847

SUBSURFACE PROFILE				SAMPLE						
Elevation (m) / Depth	Lithology	Description	Elevation / Depth	Number	Type	% Recovery	CSV (ppm)	OV (ppm)	Well Installation	Log Notes
99.5 / 0		**(ML) CLAYEY SILT:** brown, moist, trace rootlets and gravel		1	SS	50	0	0	Cap	PAH, Metals, pH
99 / 0.5		- no rootlets								
98.5 / 1				2	SS	90	0	0		Groundwater level measured at 1.08 mbgs on November 24, 2022
			98.13							
98 / 1.5		**(CL) SILTY CLAY:** brown, mottled, moist	1.37	3	SS	90	0	0	Bentonite Plug / Riser	
97.5 / 2										
97 / 2.5			96.91	4	SS	100	0	0		
		(ML) CLAYEY SILT: red-brown, moist	2.59							
96.5 / 3			96.45							
		(CL) SILTY CLAY: red-brown, moist to wet	3.05	5	SS	80	0	2		
96 / 3.5										PHC, BTEX, VOC
95.5 / 4				6	SS	100	20	0		
95 / 4.5									Sand Pack / PVC Screen	
		- wet		7	SS	100	10	0		
94.5 / 5										
94 / 5.5				8	SS	100	0	0		
93.5 / 6				9	SS	100	0	0		
			93.14							
93 / 6.5		Borehole terminated @ 6.4m due to Target Depth Reached	6.36						Cap	
92.5										

GRAINSIZE DISTRIBUTION: SAMPLE | GRAVEL | SAND | SILT | CLAY

1m = 26 units

Logged By: MH **Input By:** MH

Peterborough, Barrie, Oshawa, Kingston, Ottawa

Client: Penta Properties Inc. **Project Name:** Phase Two Environmental Site Assessment **Log of Borehole:** BH102

Contractor: Drilltech Drilling Ltd. **Method:** Track Mounted Solid Stem Auger Page: 1 of 1

Location: 0 Pin Oak Drive, Niagara Falls **Elevation:** 100.23 m Rel. **Date Completed:** October 11, 2022

Project No.: 14833-002 **UTM:** 17T **N:** 4769943.7 **E:** 652098.9

SUBSURFACE PROFILE				SAMPLE						
Elevation (m)	Depth	Lithology	Description	Elevation / Depth	Number	Type	% Recovery	CSV (ppm)	OV (ppm)	Well Installation	Log Notes
100.2	0		**(ML) SILT:** TOPSOIL to 0.10 mbgs, [NATIVE], brown, some clay, trace rootlets, moist		1	SS	70	0	0	Cap	PAH, Metals
99.7	0.5				2	SS	70	0	0		
99.2	1				3	SS	60	0	0		
98.7	1.5									Bentonite Plug	
98.2	2		- red-brown in colour		4	SS	80	0	0	Riser	Groundwater level measured at 2.11 mbgs on November 24, 2022
				97.94							
97.7	2.5		**(CL) SILTY CLAY:** red-brown, moist	2.29	5	SS	100	0	0		
97.2	3		- increase in moisture content		6	SS	90	0	0		
96.7	3.5			96.27	7	SS	100	0	0		
96.2	4		**(ML) CLAYEY SILT:** red-brown, wet	3.96	8	SS	100	0	0		
95.7	4.5									Sand Pack	PHC, BTEX, pH
95.2	5		- grey in colour		9	SS	80	0	2	PVC Screen	
94.7	5.5				10	SS	90	0	2		
94.2	6				11	SS	60	0	2		
				93.94							
93.7	6.5		Borehole terminated @ 6.3m due to Target Depth Reached	6.29						Cap	
93.3											

GRAINSIZE DISTRIBUTION SAMPLE | GRAVEL | SAND | SILT | CLAY

1m = 26 units

Logged By: MH **Input By:** MH

Peterborough, Barrie, Oshawa, Kingston, Ottawa

Client: Penta Properties Inc. **Project Name:** Phase Two Environmental Site Assessment **Log of Borehole:** BH103

Contractor: Drilltech Drilling Ltd. **Method:** Track Mounted Solid Stem Auger Page: 1 of 1

Location: 0 Pin Oak Drive, Niagara Falls **Elevation:** 101.09 m Rel. **Date Completed:** October 11, 2022

Project No.: 14833-002 **UTM:** 17T **N:** 4769921.9 **E:** 652163.6

SUBSURFACE PROFILE				SAMPLE						
Elevation (m) / Depth	Lithology	Description	Elevation / Depth	Number	Type	% Recovery	CSV (ppm)	OV (ppm)	Well Installation	Log Notes
101.1 / 0		**(CL) SILTY CLAY:** TOPSOIL to 0.13 mbgs, [NATIVE], brown, moist, trace gravel		1	SS	80	0	0	Cap	PAH, Metals
100.6 / 0.5		- mottled, trace oxidation and sand		2	SS	80	0	0		
100.1 / 1				3	SS	90	5	0		
99.6 / 1.5		- red-brown in colour							Bentonite Plug	
				4	SS	90	10	0	Riser	
99.1 / 2										
98.6 / 2.5				5	SS	90	5	0		
98.1 / 3										
97.6 / 3.5		- increase in moisture content		6	SS	100	15	2		Groundwater level measured at 3.85 mbgs on November 24, 2022
			97.28 / 3.81							
97.1 / 4		**(ML) CLAYEY SILT:** red-brown, moist to wet		7	SS	100	40	0		PHC, BTEX
96.6 / 4.5		- wet							Sand Pack	
				8	SS	80	15	2	PVC Screen	
96.1 / 5										
95.6 / 5.5				9	SS	100	25	0		
95.1 / 6		- grey in colour								
			94.74	10	SS	100	25	0	Cap	
94.6 / 6.5		Borehole terminated @ 6.4m due to Target Depth Reached	6.35							
94.1										

GRAINSIZE DISTRIBUTION: SAMPLE | GRAVEL | SAND | SILT | CLAY

1m = 26 units

Logged By: MH **Input By:** MH

Peterborough, Barrie, Oshawa, Kingston, Ottawa

Appendix C

Laboratory Certificates of Analysis

Your Project #: 14833-002
Site Location: PIN OAK DR, NIAGARA
Your C.O.C. #: 900799-01-01

Attention: Sharif Nawyaz

Cambium Environmental Inc
194 Sophia Street
PO Box 325
Peterborough, ON
CANADA K9H 1E5

Report Date: 2022/10/24
Report #: R7355064
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C2T7872
Received: 2022/10/13, 14:14

Sample Matrix: Soil
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Methylnaphthalene Sum	1	N/A	2022/10/20	CAM SOP-00301	EPA 8270D m
Methylnaphthalene Sum	3	N/A	2022/10/22	CAM SOP-00301	EPA 8270D m
1,3-Dichloropropene Sum	2	N/A	2022/10/18		EPA 8260C m
Petroleum Hydro. CCME F1 & BTEX in Soil (1)	2	N/A	2022/10/17	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (2)	4	2022/10/19	2022/10/20	CAM SOP-00316	CCME CWS m
Acid Extractable Metals by ICPMS	4	2022/10/17	2022/10/17	CAM SOP-00447	EPA 6020B m
Moisture	8	N/A	2022/10/15	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM)	1	2022/10/19	2022/10/20	CAM SOP-00318	EPA 8270D m
PAH Compounds in Soil by GC/MS (SIM)	3	2022/10/21	2022/10/21	CAM SOP-00318	EPA 8270D m
pH CaCl2 EXTRACT	2	2022/10/18	2022/10/18	CAM SOP-00413	EPA 9045 D m
Volatile Organic Compounds and F1 PHCs	2	N/A	2022/10/17	CAM SOP-00230	EPA 8260C m

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Your Project #: 14833-002
Site Location: PIN OAK DR, NIAGARA
Your C.O.C. #: 900799-01-01

Attention: Sharif Nawyaz

Cambium Environmental Inc
194 Sophia Street
PO Box 325
Peterborough, ON
CANADA K9H 1E5

Report Date: 2022/10/24
Report #: R7355064
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C2T7872

Received: 2022/10/13, 14:14

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

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

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

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Gemarie Balatico, Project Manager
Email: Gemarie.Balatico@bureauveritas.com
Phone# (905)817-5787

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

Bureau Veritas Job #: C2T7872
Report Date: 2022/10/24

Cambium Environmental Inc
Client Project #: 14833-002
Site Location: PIN OAK DR, NIAGARA
Sampler Initials: MH

O.REG 153 ICPMS METALS (SOIL)

Bureau Veritas ID			TZQ281	TZQ284	TZQ287	TZQ291		
Sampling Date			2022/10/11	2022/10/11	2022/10/11	2022/10/11		
COC Number			900799-01-01	900799-01-01	900799-01-01	900799-01-01		
	UNITS	Criteria	BH101_0.0-0.6	BH102_0.1-0.6	BH103_0.2-0.6	QAQC2_SS	RDL	QC Batch
Metals								
Acid Extractable Antimony (Sb)	ug/g	7.5	0.22	<0.20	<0.20	<0.20	0.20	8287194
Acid Extractable Arsenic (As)	ug/g	18	4.5	5.4	2.9	4.9	1.0	8287194
Acid Extractable Barium (Ba)	ug/g	390	120	210	110	130	0.50	8287194
Acid Extractable Beryllium (Be)	ug/g	5	0.99	1.6	0.78	1.4	0.20	8287194
Acid Extractable Boron (B)	ug/g	120	8.6	11	<5.0	<5.0	5.0	8287194
Acid Extractable Cadmium (Cd)	ug/g	1.2	0.16	<0.10	<0.10	<0.10	0.10	8287194
Acid Extractable Chromium (Cr)	ug/g	160	27	41	23	25	1.0	8287194
Acid Extractable Cobalt (Co)	ug/g	22	12	20	9.1	9.5	0.10	8287194
Acid Extractable Copper (Cu)	ug/g	180	22	31	14	17	0.50	8287194
Acid Extractable Lead (Pb)	ug/g	120	16	15	12	11	1.0	8287194
Acid Extractable Molybdenum (Mo)	ug/g	6.9	0.53	<0.50	0.53	0.56	0.50	8287194
Acid Extractable Nickel (Ni)	ug/g	130	29	46	21	25	0.50	8287194
Acid Extractable Selenium (Se)	ug/g	2.4	<0.50	<0.50	<0.50	<0.50	0.50	8287194
Acid Extractable Silver (Ag)	ug/g	25	<0.20	<0.20	<0.20	<0.20	0.20	8287194
Acid Extractable Thallium (Tl)	ug/g	1	0.17	0.23	0.18	0.12	0.050	8287194
Acid Extractable Uranium (U)	ug/g	23	0.68	1.0	0.71	0.74	0.050	8287194
Acid Extractable Vanadium (V)	ug/g	86	38	56	30	39	5.0	8287194
Acid Extractable Zinc (Zn)	ug/g	340	72	82	42	52	5.0	8287194

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soil

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Bureau Veritas Job #: C2T7872
Report Date: 2022/10/24

Cambium Environmental Inc
Client Project #: 14833-002
Site Location: PIN OAK DR, NIAGARA
Sampler Initials: MH

O.REG 153 PAHS (SOIL)

Bureau Veritas ID			TZQ281			TZQ281			TZQ284		
Sampling Date			2022/10/11			2022/10/11			2022/10/11		
COC Number			900799-01-01			900799-01-01			900799-01-01		
	UNITS	Criteria	BH101_0.0-0.6	RDL	QC Batch	BH101_0.0-0.6 Lab-Dup	RDL	QC Batch	BH102_0.1-0.6	RDL	QC Batch
Inorganics											
Moisture	%	-	20	1.0	8285500				18	1.0	8285500
Calculated Parameters											
Methylnaphthalene, 2-(1-)	ug/g	-	<0.0071	0.0071	8282111				<0.0071	0.0071	8282111
Polyaromatic Hydrocarbons											
Acenaphthene	ug/g	29	<0.0050	0.0050	8294257	<0.0050	0.0050	8294257	<0.0050	0.0050	8297285
Acenaphthylene	ug/g	0.17	<0.0050	0.0050	8294257	<0.0050	0.0050	8294257	<0.0050	0.0050	8297285
Anthracene	ug/g	0.74	<0.0050	0.0050	8294257	<0.0050	0.0050	8294257	<0.0050	0.0050	8297285
Benzo(a)anthracene	ug/g	0.63	<0.0050	0.0050	8294257	<0.0050	0.0050	8294257	<0.0050	0.0050	8297285
Benzo(a)pyrene	ug/g	0.3	<0.0050	0.0050	8294257	<0.0050	0.0050	8294257	<0.0050	0.0050	8297285
Benzo(b/j)fluoranthene	ug/g	0.78	<0.0050	0.0050	8294257	<0.0050	0.0050	8294257	0.0080	0.0050	8297285
Benzo(g,h,i)perylene	ug/g	7.8	<0.0050	0.0050	8294257	<0.0050	0.0050	8294257	<0.0050	0.0050	8297285
Benzo(k)fluoranthene	ug/g	0.78	<0.0050	0.0050	8294257	<0.0050	0.0050	8294257	<0.0050	0.0050	8297285
Chrysene	ug/g	7.8	<0.0050	0.0050	8294257	<0.0050	0.0050	8294257	<0.0050	0.0050	8297285
Dibenzo(a,h)anthracene	ug/g	0.1	<0.0050	0.0050	8294257	<0.0050	0.0050	8294257	<0.0050	0.0050	8297285
Fluoranthene	ug/g	0.69	<0.0050	0.0050	8294257	<0.0050	0.0050	8294257	0.0070	0.0050	8297285
Fluorene	ug/g	69	<0.0050	0.0050	8294257	<0.0050	0.0050	8294257	<0.0050	0.0050	8297285
Indeno(1,2,3-cd)pyrene	ug/g	0.48	<0.0050	0.0050	8294257	<0.0050	0.0050	8294257	<0.0050	0.0050	8297285
1-Methylnaphthalene	ug/g	3.4	<0.0050	0.0050	8294257	<0.0050	0.0050	8294257	<0.0050	0.0050	8297285
2-Methylnaphthalene	ug/g	3.4	<0.0050	0.0050	8294257	<0.0050	0.0050	8294257	<0.0050	0.0050	8297285
Naphthalene	ug/g	0.75	<0.0050	0.0050	8294257	<0.0050	0.0050	8294257	<0.0050	0.0050	8297285
Phenanthrene	ug/g	7.8	<0.0050	0.0050	8294257	<0.0050	0.0050	8294257	<0.0050	0.0050	8297285
Pyrene	ug/g	78	<0.0050	0.0050	8294257	<0.0050	0.0050	8294257	0.0056	0.0050	8297285
Surrogate Recovery (%)											
D10-Anthracene	%	-	99		8294257	98		8294257	92		8297285
D14-Terphenyl (FS)	%	-	103		8294257	107		8294257	87		8297285
D8-Acenaphthylene	%	-	98		8294257	98		8294257	90		8297285

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soil

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Bureau Veritas Job #: C2T7872
Report Date: 2022/10/24

Cambium Environmental Inc
Client Project #: 14833-002
Site Location: PIN OAK DR, NIAGARA
Sampler Initials: MH

O.REG 153 PAHS (SOIL)

Bureau Veritas ID			TZQ287	TZQ291		
Sampling Date			2022/10/11	2022/10/11		
COC Number			900799-01-01	900799-01-01		
	UNITS	Criteria	BH103_0.2-0.6	QAQC2_SS	RDL	QC Batch
Inorganics						
Moisture	%	-	23	25	1.0	8285500
Calculated Parameters						
Methylnaphthalene, 2-(1-)	ug/g	-	<0.0071	<0.0071	0.0071	8282111
Polyaromatic Hydrocarbons						
Acenaphthene	ug/g	29	<0.0050	<0.0050	0.0050	8297285
Acenaphthylene	ug/g	0.17	<0.0050	<0.0050	0.0050	8297285
Anthracene	ug/g	0.74	<0.0050	<0.0050	0.0050	8297285
Benzo(a)anthracene	ug/g	0.63	<0.0050	<0.0050	0.0050	8297285
Benzo(a)pyrene	ug/g	0.3	<0.0050	<0.0050	0.0050	8297285
Benzo(b/j)fluoranthene	ug/g	0.78	<0.0050	<0.0050	0.0050	8297285
Benzo(g,h,i)perylene	ug/g	7.8	<0.0050	<0.0050	0.0050	8297285
Benzo(k)fluoranthene	ug/g	0.78	<0.0050	<0.0050	0.0050	8297285
Chrysene	ug/g	7.8	<0.0050	<0.0050	0.0050	8297285
Dibenzo(a,h)anthracene	ug/g	0.1	<0.0050	<0.0050	0.0050	8297285
Fluoranthene	ug/g	0.69	<0.0050	<0.0050	0.0050	8297285
Fluorene	ug/g	69	<0.0050	<0.0050	0.0050	8297285
Indeno(1,2,3-cd)pyrene	ug/g	0.48	<0.0050	<0.0050	0.0050	8297285
1-Methylnaphthalene	ug/g	3.4	<0.0050	<0.0050	0.0050	8297285
2-Methylnaphthalene	ug/g	3.4	<0.0050	<0.0050	0.0050	8297285
Naphthalene	ug/g	0.75	<0.0050	<0.0050	0.0050	8297285
Phenanthrene	ug/g	7.8	<0.0050	<0.0050	0.0050	8297285
Pyrene	ug/g	78	<0.0050	<0.0050	0.0050	8297285
Surrogate Recovery (%)						
D10-Anthracene	%	-	94	85		8297285
D14-Terphenyl (FS)	%	-	84	85		8297285
D8-Acenaphthylene	%	-	88	77		8297285

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soil

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Bureau Veritas Job #: C2T7872
Report Date: 2022/10/24

Cambium Environmental Inc
Client Project #: 14833-002
Site Location: PIN OAK DR, NIAGARA
Sampler Initials: MH

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

Bureau Veritas ID			TZQ285			TZQ285			TZQ288		
Sampling Date			2022/10/11			2022/10/11			2022/10/11		
COC Number			900799-01-01			900799-01-01			900799-01-01		
	UNITS	Criteria	BH102_4.6-5.2	RDL	QC Batch	BH102_4.6-5.2 Lab-Dup	RDL	QC Batch	BH103_3.8-4.4	RDL	QC Batch
Inorganics											
Moisture	%	-	21	1.0	8285500	22	1.0	8285500	24	1.0	8285500
BTEX & F1 Hydrocarbons											
Benzene	ug/g	0.17	<0.020	0.020	8286548				<0.020	0.020	8286548
Toluene	ug/g	6	<0.020	0.020	8286548				<0.020	0.020	8286548
Ethylbenzene	ug/g	1.6	<0.020	0.020	8286548				<0.020	0.020	8286548
o-Xylene	ug/g	-	<0.020	0.020	8286548				<0.020	0.020	8286548
p+m-Xylene	ug/g	-	<0.040	0.040	8286548				<0.040	0.040	8286548
Total Xylenes	ug/g	25	<0.040	0.040	8286548				<0.040	0.040	8286548
F1 (C6-C10)	ug/g	65	<10	10	8286548				<10	10	8286548
F1 (C6-C10) - BTEX	ug/g	65	<10	10	8286548				<10	10	8286548
F2-F4 Hydrocarbons											
F2 (C10-C16 Hydrocarbons)	ug/g	150	<10	10	8294293				<10	10	8294293
F3 (C16-C34 Hydrocarbons)	ug/g	1300	<50	50	8294293				<50	50	8294293
F4 (C34-C50 Hydrocarbons)	ug/g	5600	<50	50	8294293				<50	50	8294293
Reached Baseline at C50	ug/g	-	Yes		8294293				Yes		8294293
Surrogate Recovery (%)											
1,4-Difluorobenzene	%	-	99		8286548				95		8286548
4-Bromofluorobenzene	%	-	102		8286548				99		8286548
D10-o-Xylene	%	-	104		8286548				108		8286548
D4-1,2-Dichloroethane	%	-	99		8286548				96		8286548
o-Terphenyl	%	-	91		8294293				90		8294293

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soil

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Bureau Veritas ID			TZQ282	TZQ290		
Sampling Date			2022/10/11	2022/10/11		
COC Number			900799-01-01	900799-01-01		
	UNITS	Criteria	BH101_3.8-4.4	QAQC1_SS	RDL	QC Batch
Inorganics						
Moisture	%	-	20	17	1.0	8285500
Calculated Parameters						
1,3-Dichloropropene (cis+trans)	ug/g	0.081	<0.050	<0.050	0.050	8282479
Volatile Organics						
Acetone (2-Propanone)	ug/g	28	<0.49	<0.49	0.49	8284083
Benzene	ug/g	0.17	<0.0060	<0.0060	0.0060	8284083
Bromodichloromethane	ug/g	1.9	<0.040	<0.040	0.040	8284083
Bromoform	ug/g	0.26	<0.040	<0.040	0.040	8284083
Bromomethane	ug/g	0.05	<0.040	<0.040	0.040	8284083
Carbon Tetrachloride	ug/g	0.12	<0.040	<0.040	0.040	8284083
Chlorobenzene	ug/g	2.7	<0.040	<0.040	0.040	8284083
Chloroform	ug/g	0.17	<0.040	<0.040	0.040	8284083
Dibromochloromethane	ug/g	2.9	<0.040	<0.040	0.040	8284083
1,2-Dichlorobenzene	ug/g	1.7	<0.040	<0.040	0.040	8284083
1,3-Dichlorobenzene	ug/g	6	<0.040	<0.040	0.040	8284083
1,4-Dichlorobenzene	ug/g	0.097	<0.040	<0.040	0.040	8284083
Dichlorodifluoromethane (FREON 12)	ug/g	25	<0.040	<0.040	0.040	8284083
1,1-Dichloroethane	ug/g	0.6	<0.040	<0.040	0.040	8284083
1,2-Dichloroethane	ug/g	0.05	<0.049	<0.049	0.049	8284083
1,1-Dichloroethylene	ug/g	0.05	<0.040	<0.040	0.040	8284083
cis-1,2-Dichloroethylene	ug/g	2.5	<0.040	<0.040	0.040	8284083
trans-1,2-Dichloroethylene	ug/g	0.75	<0.040	<0.040	0.040	8284083
1,2-Dichloropropane	ug/g	0.085	<0.040	<0.040	0.040	8284083
cis-1,3-Dichloropropene	ug/g	0.081	<0.030	<0.030	0.030	8284083
trans-1,3-Dichloropropene	ug/g	0.081	<0.040	<0.040	0.040	8284083
Ethylbenzene	ug/g	1.6	<0.010	<0.010	0.010	8284083
Ethylene Dibromide	ug/g	0.05	<0.040	<0.040	0.040	8284083
Hexane	ug/g	34	<0.040	<0.040	0.040	8284083
Methylene Chloride(Dichloromethane)	ug/g	0.96	<0.049	<0.049	0.049	8284083

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soil

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O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Bureau Veritas ID			TZQ282	TZQ290		
Sampling Date			2022/10/11	2022/10/11		
COC Number			900799-01-01	900799-01-01		
	UNITS	Criteria	BH101_3.8-4.4	QAQC1_SS	RDL	QC Batch
Methyl Ethyl Ketone (2-Butanone)	ug/g	44	<0.40	<0.40	0.40	8284083
Methyl Isobutyl Ketone	ug/g	4.3	<0.40	<0.40	0.40	8284083
Methyl t-butyl ether (MTBE)	ug/g	1.4	<0.040	<0.040	0.040	8284083
Styrene	ug/g	2.2	<0.040	<0.040	0.040	8284083
1,1,1,2-Tetrachloroethane	ug/g	0.05	<0.040	<0.040	0.040	8284083
1,1,2,2-Tetrachloroethane	ug/g	0.05	<0.040	<0.040	0.040	8284083
Tetrachloroethylene	ug/g	2.3	<0.040	<0.040	0.040	8284083
Toluene	ug/g	6	<0.020	<0.020	0.020	8284083
1,1,1-Trichloroethane	ug/g	3.4	<0.040	<0.040	0.040	8284083
1,1,2-Trichloroethane	ug/g	0.05	<0.040	<0.040	0.040	8284083
Trichloroethylene	ug/g	0.52	<0.010	<0.010	0.010	8284083
Trichlorofluoromethane (FREON 11)	ug/g	5.8	<0.040	<0.040	0.040	8284083
Vinyl Chloride	ug/g	0.022	<0.019	<0.019	0.019	8284083
p+m-Xylene	ug/g	-	<0.020	<0.020	0.020	8284083
o-Xylene	ug/g	-	<0.020	<0.020	0.020	8284083
Total Xylenes	ug/g	25	<0.020	<0.020	0.020	8284083
F1 (C6-C10)	ug/g	65	<10	<10	10	8284083
F1 (C6-C10) - BTEX	ug/g	65	<10	<10	10	8284083
F2-F4 Hydrocarbons						
F2 (C10-C16 Hydrocarbons)	ug/g	150	<10	<10	10	8294293
F3 (C16-C34 Hydrocarbons)	ug/g	1300	<50	<50	50	8294293
F4 (C34-C50 Hydrocarbons)	ug/g	5600	<50	<50	50	8294293
Reached Baseline at C50	ug/g	-	Yes	Yes		8294293
Surrogate Recovery (%)						
o-Terphenyl	%	-	99	89		8294293
4-Bromofluorobenzene	%	-	87	86		8284083
D10-o-Xylene	%	-	92	94		8284083
D4-1,2-Dichloroethane	%	-	91	91		8284083
D8-Toluene	%	-	101	101		8284083

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soil

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Bureau Veritas Job #: C2T7872
Report Date: 2022/10/24

Cambium Environmental Inc
Client Project #: 14833-002
Site Location: PIN OAK DR, NIAGARA
Sampler Initials: MH

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		TZQ281	TZQ285	
Sampling Date		2022/10/11	2022/10/11	
COC Number		900799-01-01	900799-01-01	
	UNITS	**BH101_0.0-0.6**	**BH102_4.6-5.2**	**QC Batch**
Inorganics				
Available (CaCl2) pH	pH	7.59	7.80	8289184
QC Batch = Quality Control Batch				

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Bureau Veritas Job #: C2T7872
Report Date: 2022/10/24

Cambium Environmental Inc
Client Project #: 14833-002
Site Location: PIN OAK DR, NIAGARA
Sampler Initials: MH

TEST SUMMARY

Bureau Veritas ID: TZQ281 **Collected:** 2022/10/11
Sample ID: BH101_0.0-0.6 **Shipped:**
Matrix: Soil **Received:** 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8282111	N/A	2022/10/20	Automated Statchk
Acid Extractable Metals by ICPMS	ICP/MS	8287194	2022/10/17	2022/10/17	Daniel Teclu
Moisture	BAL	8285500	N/A	2022/10/15	Min Yang
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8294257	2022/10/19	2022/10/20	Mitesh Raj
pH CaCl2 EXTRACT	AT	8289184	2022/10/18	2022/10/18	Taslima Aktar

Bureau Veritas ID: TZQ281 Dup **Collected:** 2022/10/11
Sample ID: BH101_0.0-0.6 **Shipped:**
Matrix: Soil **Received:** 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8294257	2022/10/19	2022/10/20	Mitesh Raj

Bureau Veritas ID: TZQ282 **Collected:** 2022/10/11
Sample ID: BH101_3.8-4.4 **Shipped:**
Matrix: Soil **Received:** 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8282479	N/A	2022/10/18	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8294293	2022/10/19	2022/10/20	Suleeqa Nurr
Moisture	BAL	8285500	N/A	2022/10/15	Min Yang
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8284083	N/A	2022/10/17	Jett Wu

Bureau Veritas ID: TZQ284 **Collected:** 2022/10/11
Sample ID: BH102_0.1-0.6 **Shipped:**
Matrix: Soil **Received:** 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8282111	N/A	2022/10/22	Automated Statchk
Acid Extractable Metals by ICPMS	ICP/MS	8287194	2022/10/17	2022/10/17	Daniel Teclu
Moisture	BAL	8285500	N/A	2022/10/15	Min Yang
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8297285	2022/10/21	2022/10/21	Mitesh Raj

Bureau Veritas ID: TZQ285 **Collected:** 2022/10/11
Sample ID: BH102_4.6-5.2 **Shipped:**
Matrix: Soil **Received:** 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8286548	N/A	2022/10/17	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8294293	2022/10/19	2022/10/20	Suleeqa Nurr
Moisture	BAL	8285500	N/A	2022/10/15	Min Yang
pH CaCl2 EXTRACT	AT	8289184	2022/10/18	2022/10/18	Taslima Aktar

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TEST SUMMARY

Bureau Veritas ID: TZQ285 Dup
Sample ID: BH102_4.6-5.2
Matrix: Soil
Collected: 2022/10/11
Shipped:
Received: 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	8285500	N/A	2022/10/15	Min Yang

Bureau Veritas ID: TZQ287
Sample ID: BH103_0.2-0.6
Matrix: Soil
Collected: 2022/10/11
Shipped:
Received: 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8282111	N/A	2022/10/22	Automated Statchk
Acid Extractable Metals by ICPMS	ICP/MS	8287194	2022/10/17	2022/10/17	Daniel Teclu
Moisture	BAL	8285500	N/A	2022/10/15	Min Yang
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8297285	2022/10/21	2022/10/21	Mitesh Raj

Bureau Veritas ID: TZQ288
Sample ID: BH103_3.8-4.4
Matrix: Soil
Collected: 2022/10/11
Shipped:
Received: 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8286548	N/A	2022/10/17	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8294293	2022/10/19	2022/10/20	Suleeqa Nurr
Moisture	BAL	8285500	N/A	2022/10/15	Min Yang

Bureau Veritas ID: TZQ290
Sample ID: QAQC1_SS
Matrix: Soil
Collected: 2022/10/11
Shipped:
Received: 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8282479	N/A	2022/10/18	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8294293	2022/10/19	2022/10/20	Suleeqa Nurr
Moisture	BAL	8285500	N/A	2022/10/15	Min Yang
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8284083	N/A	2022/10/17	Jett Wu

Bureau Veritas ID: TZQ291
Sample ID: QAQC2_SS
Matrix: Soil
Collected: 2022/10/11
Shipped:
Received: 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8282111	N/A	2022/10/22	Automated Statchk
Acid Extractable Metals by ICPMS	ICP/MS	8287194	2022/10/17	2022/10/17	Daniel Teclu
Moisture	BAL	8285500	N/A	2022/10/15	Min Yang
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8297285	2022/10/21	2022/10/21	Mitesh Raj

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GENERAL COMMENTS

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

Package 1	7.0°C

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8284083	4-Bromofluorobenzene	2022/10/17	95	60 - 140	96	60 - 140	87	%		
8284083	D10-o-Xylene	2022/10/17	113	60 - 130	96	60 - 130	95	%		
8284083	D4-1,2-Dichloroethane	2022/10/17	93	60 - 140	91	60 - 140	92	%		
8284083	D8-Toluene	2022/10/17	102	60 - 140	103	60 - 140	102	%		
8286548	1,4-Difluorobenzene	2022/10/17	97	60 - 140	96	60 - 140	101	%		
8286548	4-Bromofluorobenzene	2022/10/17	112	60 - 140	112	60 - 140	90	%		
8286548	D10-o-Xylene	2022/10/17	104	60 - 140	110	60 - 140	104	%		
8286548	D4-1,2-Dichloroethane	2022/10/17	97	60 - 140	95	60 - 140	101	%		
8294257	D10-Anthracene	2022/10/20	102	50 - 130	112	50 - 130	100	%		
8294257	D14-Terphenyl (FS)	2022/10/20	102	50 - 130	111	50 - 130	98	%		
8294257	D8-Acenaphthylene	2022/10/20	99	50 - 130	110	50 - 130	101	%		
8294293	o-Terphenyl	2022/10/20	89	60 - 130	82	60 - 130	88	%		
8297285	D10-Anthracene	2022/10/21	95	50 - 130	97	50 - 130	91	%		
8297285	D14-Terphenyl (FS)	2022/10/21	90	50 - 130	82	50 - 130	91	%		
8297285	D8-Acenaphthylene	2022/10/21	86	50 - 130	93	50 - 130	86	%		
8284083	1,1,1,2-Tetrachloroethane	2022/10/17	91	60 - 140	94	60 - 130	<0.040	ug/g	NC	50
8284083	1,1,1-Trichloroethane	2022/10/17	93	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
8284083	1,1,2,2-Tetrachloroethane	2022/10/17	88	60 - 140	88	60 - 130	<0.040	ug/g	NC	50
8284083	1,1,2-Trichloroethane	2022/10/17	88	60 - 140	87	60 - 130	<0.040	ug/g	NC	50
8284083	1,1-Dichloroethane	2022/10/17	90	60 - 140	90	60 - 130	<0.040	ug/g	NC	50
8284083	1,1-Dichloroethylene	2022/10/17	98	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
8284083	1,2-Dichlorobenzene	2022/10/17	95	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
8284083	1,2-Dichloroethane	2022/10/17	83	60 - 140	81	60 - 130	<0.049	ug/g	NC	50
8284083	1,2-Dichloropropane	2022/10/17	87	60 - 140	86	60 - 130	<0.040	ug/g	NC	50
8284083	1,3-Dichlorobenzene	2022/10/17	100	60 - 140	103	60 - 130	<0.040	ug/g	NC	50
8284083	1,4-Dichlorobenzene	2022/10/17	108	60 - 140	110	60 - 130	<0.040	ug/g	NC	50
8284083	Acetone (2-Propanone)	2022/10/17	85	60 - 140	82	60 - 140	<0.49	ug/g	NC	50
8284083	Benzene	2022/10/17	87	60 - 140	88	60 - 130	<0.0060	ug/g	NC	50
8284083	Bromodichloromethane	2022/10/17	95	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
8284083	Bromoform	2022/10/17	90	60 - 140	91	60 - 130	<0.040	ug/g	NC	50
8284083	Bromomethane	2022/10/17	104	60 - 140	103	60 - 140	<0.040	ug/g	NC	50

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8284083	Carbon Tetrachloride	2022/10/17	91	60 - 140	93	60 - 130	<0.040	ug/g	NC	50
8284083	Chlorobenzene	2022/10/17	90	60 - 140	93	60 - 130	<0.040	ug/g	NC	50
8284083	Chloroform	2022/10/17	92	60 - 140	92	60 - 130	<0.040	ug/g	NC	50
8284083	cis-1,2-Dichloroethylene	2022/10/17	98	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
8284083	cis-1,3-Dichloropropene	2022/10/17	87	60 - 140	86	60 - 130	<0.030	ug/g	NC	50
8284083	Dibromochloromethane	2022/10/17	93	60 - 140	94	60 - 130	<0.040	ug/g	NC	50
8284083	Dichlorodifluoromethane (FREON 12)	2022/10/17	107	60 - 140	110	60 - 140	<0.040	ug/g	NC	50
8284083	Ethylbenzene	2022/10/17	87	60 - 140	90	60 - 130	<0.010	ug/g	NC	50
8284083	Ethylene Dibromide	2022/10/17	88	60 - 140	88	60 - 130	<0.040	ug/g	NC	50
8284083	F1 (C6-C10) - BTEX	2022/10/17					<10	ug/g	NC	30
8284083	F1 (C6-C10)	2022/10/17	93	60 - 140	83	80 - 120	<10	ug/g	NC	30
8284083	Hexane	2022/10/17	95	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
8284083	Methyl Ethyl Ketone (2-Butanone)	2022/10/17	84	60 - 140	81	60 - 140	<0.40	ug/g	NC	50
8284083	Methyl Isobutyl Ketone	2022/10/17	69	60 - 140	68	60 - 130	<0.40	ug/g	NC	50
8284083	Methyl t-butyl ether (MTBE)	2022/10/17	87	60 - 140	87	60 - 130	<0.040	ug/g	NC	50
8284083	Methylene Chloride(Dichloromethane)	2022/10/17	103	60 - 140	102	60 - 130	<0.049	ug/g	NC	50
8284083	o-Xylene	2022/10/17	86	60 - 140	89	60 - 130	<0.020	ug/g	NC	50
8284083	p+m-Xylene	2022/10/17	91	60 - 140	94	60 - 130	<0.020	ug/g	NC	50
8284083	Styrene	2022/10/17	95	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
8284083	Tetrachloroethylene	2022/10/17	87	60 - 140	91	60 - 130	<0.040	ug/g	NC	50
8284083	Toluene	2022/10/17	86	60 - 140	89	60 - 130	<0.020	ug/g	NC	50
8284083	Total Xylenes	2022/10/17					<0.020	ug/g	NC	50
8284083	trans-1,2-Dichloroethylene	2022/10/17	97	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
8284083	trans-1,3-Dichloropropene	2022/10/17	87	60 - 140	88	60 - 130	<0.040	ug/g	NC	50
8284083	Trichloroethylene	2022/10/17	97	60 - 140	98	60 - 130	<0.010	ug/g	NC	50
8284083	Trichlorofluoromethane (FREON 11)	2022/10/17	99	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
8284083	Vinyl Chloride	2022/10/17	80	60 - 140	81	60 - 130	<0.019	ug/g	NC	50
8285500	Moisture	2022/10/15							2.3	20
8286548	Benzene	2022/10/17	95	50 - 140	91	50 - 140	<0.020	ug/g	NC	50
8286548	Ethylbenzene	2022/10/17	107	50 - 140	102	50 - 140	<0.020	ug/g	NC	50
8286548	F1 (C6-C10) - BTEX	2022/10/17					<10	ug/g	NC	30

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8286548	F1 (C6-C10)	2022/10/17	98	60 - 140	99	80 - 120	<10	ug/g	NC	30
8286548	o-Xylene	2022/10/17	106	50 - 140	101	50 - 140	<0.020	ug/g	NC	50
8286548	p+m-Xylene	2022/10/17	110	50 - 140	105	50 - 140	<0.040	ug/g	NC	50
8286548	Toluene	2022/10/17	96	50 - 140	90	50 - 140	<0.020	ug/g	NC	50
8286548	Total Xylenes	2022/10/17					<0.040	ug/g	NC	50
8287194	Acid Extractable Antimony (Sb)	2022/10/18	101	75 - 125	96	80 - 120	<0.20	ug/g	8.1	30
8287194	Acid Extractable Arsenic (As)	2022/10/18	95	75 - 125	96	80 - 120	<1.0	ug/g	3.3	30
8287194	Acid Extractable Barium (Ba)	2022/10/18	NC	75 - 125	91	80 - 120	<0.50	ug/g	0.87	30
8287194	Acid Extractable Beryllium (Be)	2022/10/18	99	75 - 125	93	80 - 120	<0.20	ug/g	3.5	30
8287194	Acid Extractable Boron (B)	2022/10/18	92	75 - 125	91	80 - 120	<5.0	ug/g	4.3	30
8287194	Acid Extractable Cadmium (Cd)	2022/10/18	101	75 - 125	95	80 - 120	<0.10	ug/g	4.9	30
8287194	Acid Extractable Chromium (Cr)	2022/10/18	NC	75 - 125	97	80 - 120	<1.0	ug/g	3.4	30
8287194	Acid Extractable Cobalt (Co)	2022/10/18	97	75 - 125	97	80 - 120	<0.10	ug/g	3.8	30
8287194	Acid Extractable Copper (Cu)	2022/10/18	NC	75 - 125	95	80 - 120	<0.50	ug/g	3.4	30
8287194	Acid Extractable Lead (Pb)	2022/10/18	NC	75 - 125	99	80 - 120	<1.0	ug/g	0.97	30
8287194	Acid Extractable Molybdenum (Mo)	2022/10/18	102	75 - 125	93	80 - 120	<0.50	ug/g	4.8	30
8287194	Acid Extractable Nickel (Ni)	2022/10/18	NC	75 - 125	97	80 - 120	<0.50	ug/g	5.0	30
8287194	Acid Extractable Selenium (Se)	2022/10/18	95	75 - 125	97	80 - 120	<0.50	ug/g	5.9	30
8287194	Acid Extractable Silver (Ag)	2022/10/18	NC	75 - 125	96	80 - 120	<0.20	ug/g	4.6	30
8287194	Acid Extractable Thallium (Tl)	2022/10/18	102	75 - 125	99	80 - 120	<0.050	ug/g	0.16	30
8287194	Acid Extractable Uranium (U)	2022/10/18	102	75 - 125	100	80 - 120	<0.050	ug/g	0.72	30
8287194	Acid Extractable Vanadium (V)	2022/10/18	NC	75 - 125	94	80 - 120	<5.0	ug/g	3.1	30
8287194	Acid Extractable Zinc (Zn)	2022/10/18	NC	75 - 125	99	80 - 120	<5.0	ug/g	3.2	30
8289184	Available (CaCl2) pH	2022/10/18			100	97 - 103			0.29	N/A
8294257	1-Methylnaphthalene	2022/10/20	104	50 - 130	111	50 - 130	<0.0050	ug/g	NC	40
8294257	2-Methylnaphthalene	2022/10/20	96	50 - 130	103	50 - 130	<0.0050	ug/g	NC	40
8294257	Acenaphthene	2022/10/20	101	50 - 130	108	50 - 130	<0.0050	ug/g	NC	40
8294257	Acenaphthylene	2022/10/20	111	50 - 130	116	50 - 130	<0.0050	ug/g	NC	40
8294257	Anthracene	2022/10/20	108	50 - 130	116	50 - 130	<0.0050	ug/g	NC	40
8294257	Benzo(a)anthracene	2022/10/20	114	50 - 130	120	50 - 130	<0.0050	ug/g	NC	40
8294257	Benzo(a)pyrene	2022/10/20	95	50 - 130	106	50 - 130	<0.0050	ug/g	NC	40

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8294257	Benzo(b/j)fluoranthene	2022/10/20	102	50 - 130	116	50 - 130	<0.0050	ug/g	NC	40
8294257	Benzo(g,h,i)perylene	2022/10/20	78	50 - 130	85	50 - 130	<0.0050	ug/g	NC	40
8294257	Benzo(k)fluoranthene	2022/10/20	103	50 - 130	114	50 - 130	<0.0050	ug/g	NC	40
8294257	Chrysene	2022/10/20	109	50 - 130	115	50 - 130	<0.0050	ug/g	NC	40
8294257	Dibenzo(a,h)anthracene	2022/10/20	78	50 - 130	83	50 - 130	<0.0050	ug/g	NC	40
8294257	Fluoranthene	2022/10/20	113	50 - 130	120	50 - 130	<0.0050	ug/g	NC	40
8294257	Fluorene	2022/10/20	107	50 - 130	115	50 - 130	<0.0050	ug/g	NC	40
8294257	Indeno(1,2,3-cd)pyrene	2022/10/20	81	50 - 130	90	50 - 130	<0.0050	ug/g	NC	40
8294257	Naphthalene	2022/10/20	97	50 - 130	106	50 - 130	<0.0050	ug/g	NC	40
8294257	Phenanthrene	2022/10/20	104	50 - 130	111	50 - 130	<0.0050	ug/g	NC	40
8294257	Pyrene	2022/10/20	114	50 - 130	122	50 - 130	<0.0050	ug/g	NC	40
8294293	F2 (C10-C16 Hydrocarbons)	2022/10/20	97	60 - 130	91	80 - 120	<10	ug/g	NC	30
8294293	F3 (C16-C34 Hydrocarbons)	2022/10/20	94	60 - 130	90	80 - 120	<50	ug/g	NC	30
8294293	F4 (C34-C50 Hydrocarbons)	2022/10/20	NC	60 - 130	89	80 - 120	<50	ug/g	48 (1)	30
8297285	1-Methylnaphthalene	2022/10/21	64	50 - 130	82	50 - 130	<0.0050	ug/g	NC	40
8297285	2-Methylnaphthalene	2022/10/21	67	50 - 130	88	50 - 130	<0.0050	ug/g	NC	40
8297285	Acenaphthene	2022/10/21	92	50 - 130	97	50 - 130	<0.0050	ug/g	NC	40
8297285	Acenaphthylene	2022/10/21	89	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40
8297285	Anthracene	2022/10/21	97	50 - 130	95	50 - 130	<0.0050	ug/g	NC	40
8297285	Benzo(a)anthracene	2022/10/21	100	50 - 130	103	50 - 130	<0.0050	ug/g	NC	40
8297285	Benzo(a)pyrene	2022/10/21	98	50 - 130	94	50 - 130	<0.0050	ug/g	NC	40
8297285	Benzo(b/j)fluoranthene	2022/10/21	103	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40
8297285	Benzo(g,h,i)perylene	2022/10/21	97	50 - 130	97	50 - 130	<0.0050	ug/g	NC	40
8297285	Benzo(k)fluoranthene	2022/10/21	94	50 - 130	95	50 - 130	<0.0050	ug/g	NC	40
8297285	Chrysene	2022/10/21	99	50 - 130	101	50 - 130	<0.0050	ug/g	NC	40
8297285	Dibenzo(a,h)anthracene	2022/10/21	90	50 - 130	100	50 - 130	<0.0050	ug/g	NC	40
8297285	Fluoranthene	2022/10/21	96	50 - 130	89	50 - 130	<0.0050	ug/g	NC	40
8297285	Fluorene	2022/10/21	98	50 - 130	100	50 - 130	<0.0050	ug/g	NC	40
8297285	Indeno(1,2,3-cd)pyrene	2022/10/21	97	50 - 130	107	50 - 130	<0.0050	ug/g	NC	40
8297285	Naphthalene	2022/10/21	72	50 - 130	93	50 - 130	<0.0050	ug/g	NC	40
8297285	Phenanthrene	2022/10/21	97	50 - 130	97	50 - 130	<0.0050	ug/g	NC	40

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8297285	Pyrene	2022/10/21	96	50 - 130	86	50 - 130	<0.0050	ug/g	NC	40

N/A = Not Applicable

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

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

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

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

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

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

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

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

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Bureau Veritas Job #: C2T7872
Report Date: 2022/10/24

Cambium Environmental Inc
Client Project #: 14833-002
Site Location: PIN OAK DR, NIAGARA
Sampler Initials: MH

VALIDATION SIGNATURE PAGE

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

Cristina Carriere

Cristina Carriere, Senior Scientific Specialist

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

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13-Oct-22 14:14
Gemarie Balatico
C2T7872
SPJ ENV-1696
C#900799-01-01

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name:	#17950 Cambium Environmental Inc	Company Name:		Quotation #:	C21984
Attention:	ACCOUNTS PAYABLE	Attention:	Sharif Nawyaz	P.O. #:	
Address:	194 Sophia Street PO Box 325 Peterborough ON K9H 1E5	Address:		Project:	14833-002
Tel:	(705) 742-7900 Fax: (705) 742-7907	Tel:	(866) 217-7900 Fax:	Project Name:	
Email:	accounting@cambium-inc.com; Evan.Black@cambium-	Email:	Sharif.Nawyaz@cambium-inc.com	Site #:	
				Sampled By:	M. HALIGOWSKI

Bottle Order #: 900799
Project Manager: Gemarie Balatico

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011): ☐ Table 1 ☒ Res/Park ☒ Medium/Fine ☒ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☐ For RSC ☐ Table ___

Other Regulations: ☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558 ☐ Storm Sewer Bylaw ☐ MISA Municipality ☐ PWQO ☐ Reg 406 Table ☐ Other

Special Instructions: EDDs Required.

Include Criteria on Certificate of Analysis (Y/N)? ___

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects
Regular (Standard) TAT: ☒
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.
Job Specific Rush TAT (if applies to entire submission)
Date Required: ___ Time Required: ___ ☐
Rush Confirmation Number: ___ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	O. Reg 153 VOCs by HS & F1-F4 (Soil)	O. Reg 153 PAHs (Soil)	O. Reg 153 Metals & ~~Inorganics~~ Pkg (Soil)	pH	PHC F1-F4 + BTEX						# of Bottles	Comments
1		BH101_0.0-0.6	11-Oct-22		SOIL			X	X	X							2	
2		~~BH01_3.0-3.7~~			SOIL		X										~~4~~	SN
3		BH101_3.8-4.4			SOIL		X										4	
4		BH101_5.9-6.1			SOIL		X	X	X								5	HOLD
5		BH102_0.1-0.6			SOIL			X	X								2	
6		BH102_4.6-5.2								X	X						3	
7		BH102_5.9-6.1						X	X		X						3	HOLD
8		BH103_0.2-0.6						X	X								2	
9		BH103_3.8-4.4									X						2	
10		~~BH103_4.6-5.2~~									X						~~2~~	SN

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
M. Haligowski	22/10/13			22/10/13	14:14	

Laboratory Use Only
Time Sensitive
Temperature (°C) on Recei: 8/6/7
Custody Seal: Present ☐ Intact ☐ — Yes ☐ No ☐

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.
* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.
** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT WWW.BVNA.COM/RESOURCES/CHAIN-OF-CUSTODY-FORMS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

White: Bureau Veritas Yellow: Client
On Ice

Bureau Veritas Canada (2019) Inc.

Bureau Veritas
6740 Campobello Road, Mississauga, Ontario Canada L5N 2L8 Tel:(905) 817-5700 Toll-free:800-563-6266 Fax:(905) 817-5777 www.bvna.com

Page 22

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#17950 Cambium Environmental Inc	Company Name:		Quotation #:	C21984	Bureau Veritas Job #:	Bottle Order #:
Attention:	ACCOUNTS PAYABLE	Attention:	~~Steven Elford~~ SHARIF NAWYAZ	P.O. #:			901126
Address:	194 Sophia Street PO Box 325	Address:	Sharif.Nawyaz@cambium-inc.com	Project:	~~16407-001~~ 14833-002	COC #:	Project Manager:
	Peterborough ON K9H 1E5			Project Name:		C#901126-01-01	Gemarie Balatico
Tel:	(705) 742-7900 Fax: (705) 742-7907	Tel:	Fax:	Site #:			
Email:	accounting@cambium-inc.com; Evan.Black@cambium-	Email:	~~steven.elford@cambium-inc.com~~	Sampled By:			

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)
- ☐ Table 1 ☒ Res/Park ☒ Medium/Fine
- ☒ Table 2 ☐ Ind/Comm ☐ Coarse
- ☐ Table 3 ☐ Agri/Other ☐ For RSC
- ☐ Table ___

Other Regulations
- ☐ CCME ☐ Sanitary Sewer Bylaw
- ☐ Reg 558 ☐ Storm Sewer Bylaw
- ☐ MISA Municipality _____
- ☐ PWQO ☐ Reg 406 Table _____
- ☐ Other _____

Special Instructions

Include Criteria on Certificate of Analysis (Y/N)? _____

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

Regular (Standard) TAT: ☒
(will be applied if Rush TAT is not specified)
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: _____ Time Required: _____ ☐
Rush Confirmation Number: _____ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	O.Reg 153 VOCs by HS & F1-F4 (Soil)	O.Reg 153 PAHs (Soil)	O.Reg 153 Metals & ~~Inorganics~~ Pkg (Soil)	O.Reg 153 PCBs (Soil)	O.Reg 558 TCLP Metals	O.Reg 558 TCLP PCBs	O.Reg 558 TCLP VOCs by HS	PHC F1-F4 + BTEX			# of Bottles	Comments
1		BH103_5.9-6.1	11-Oct-22		SOIL			X	X					X			3	HOLD
2		QAQC1_SS	"		SOIL		X										4	
3		QAQC2_SS	"		SOIL			X	X								2	
4																		
5																		
6																		
7																		
8																		
9																		
10																		

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only				
M Hollingsworth	22/10/13		See Page 1				Time Sensitive	Temperature (°C) on Recei	Custody Seal	Yes	No
									Present		
									Intact		

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT WWW.BVNA.COM/RESOURCES/CHAIN-OF-CUSTODY-FORMS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

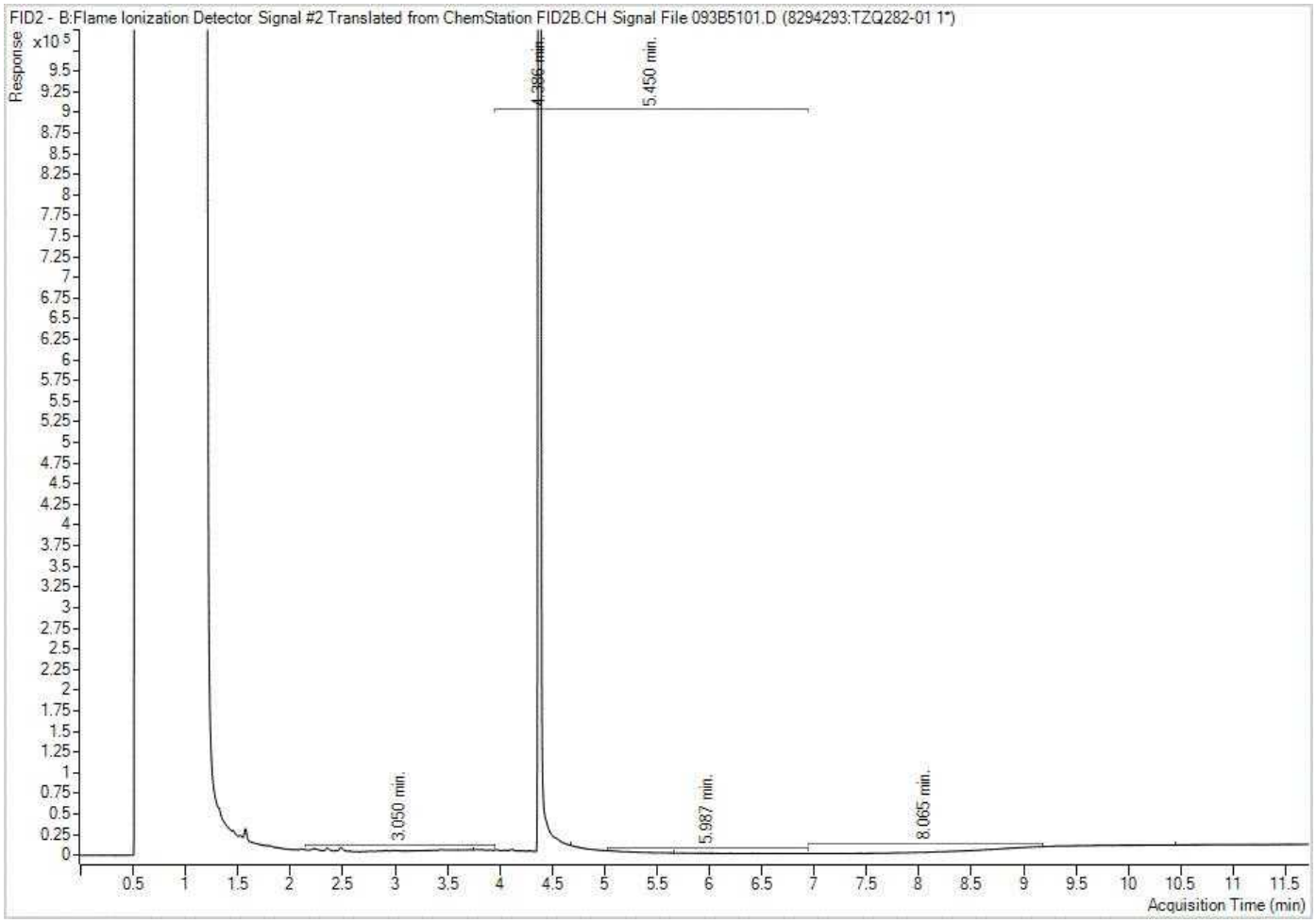
White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

Bureau Veritas Job #: C2T7872
Report Date: 2022/10/24
Bureau Veritas Sample: TZQ282

Cambium Environmental Inc
Client Project #: 14833-002
Project name: PIN OAK DR, NIAGARA
Client ID: BH101_3.8-4.4

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

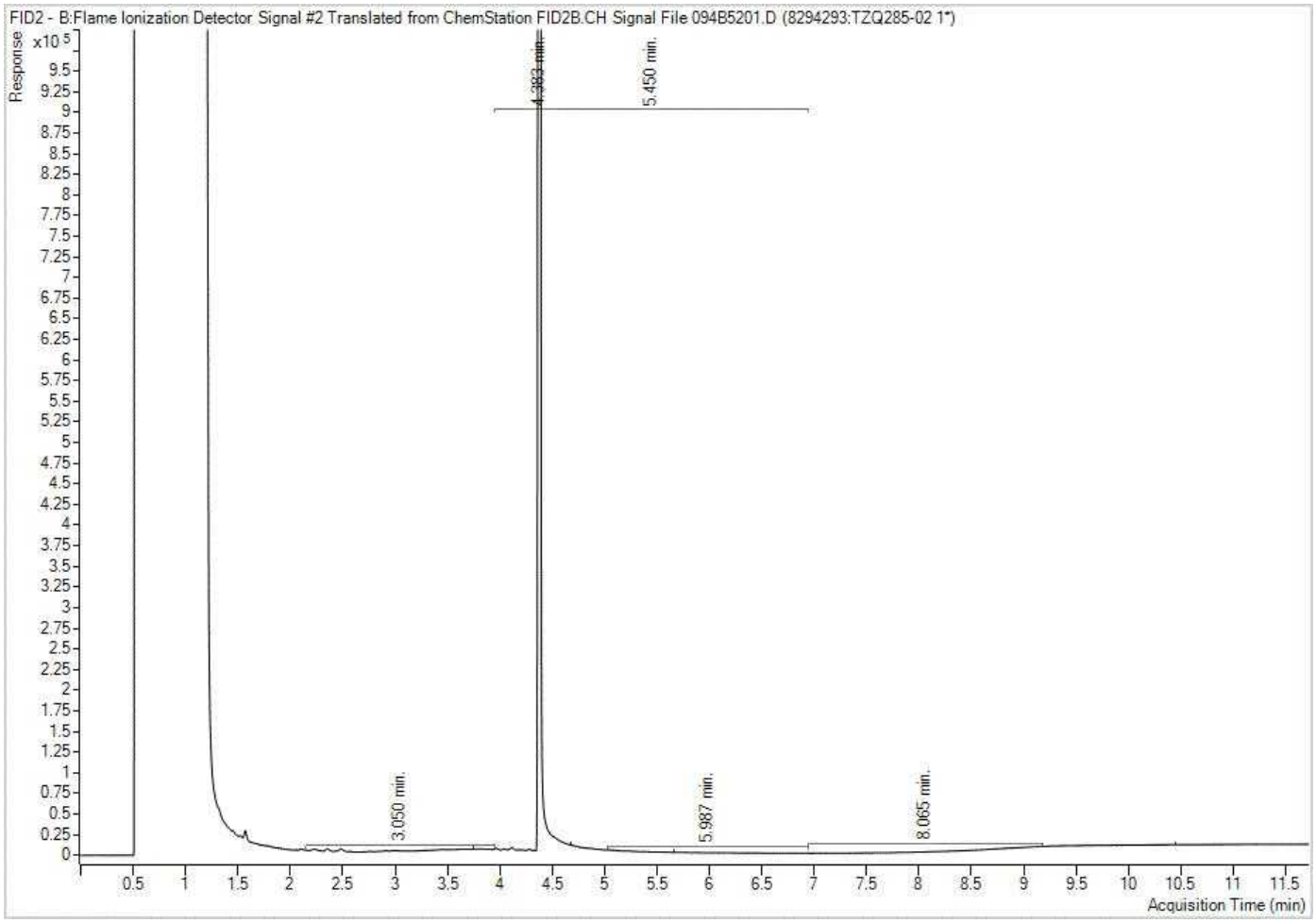


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C2T7872
Report Date: 2022/10/24
Bureau Veritas Sample: TZQ285

Cambium Environmental Inc
Client Project #: 14833-002
Project name: PIN OAK DR, NIAGARA
Client ID: BH102_4.6-5.2

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

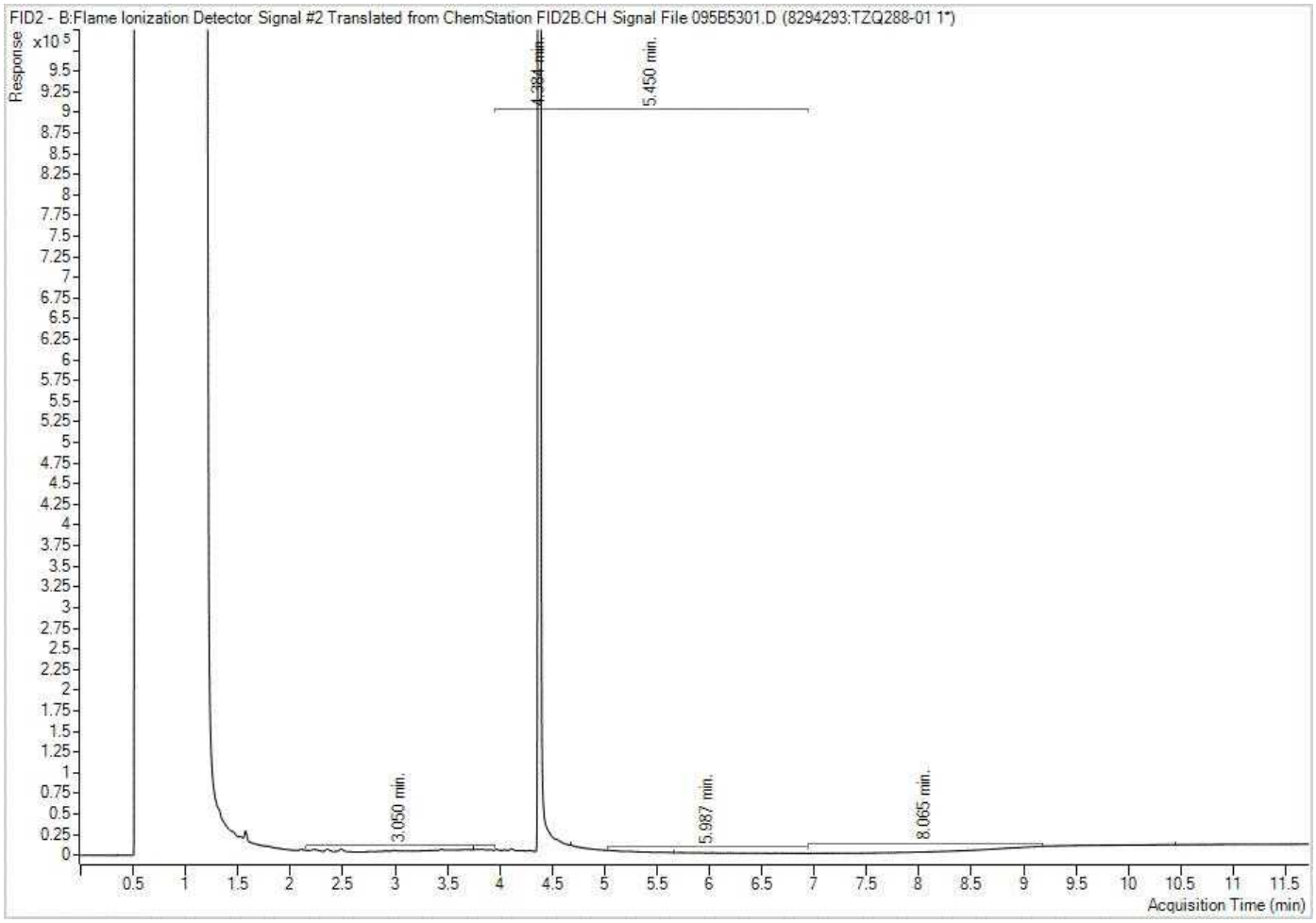


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C2T7872
Report Date: 2022/10/24
Bureau Veritas Sample: TZQ288

Cambium Environmental Inc
Client Project #: 14833-002
Project name: PIN OAK DR, NIAGARA
Client ID: BH103_3.8-4.4

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram

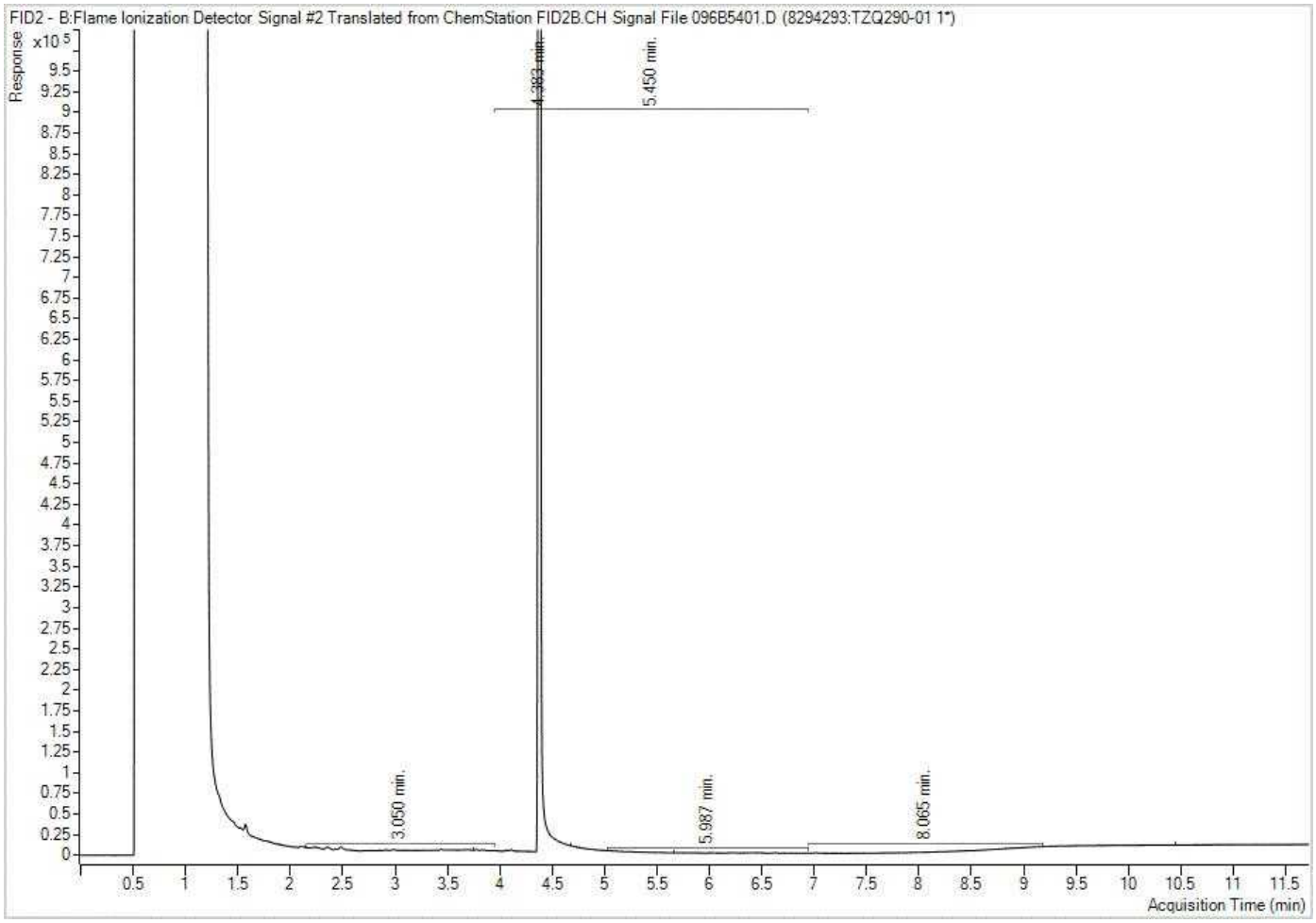


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C2T7872
Report Date: 2022/10/24
Bureau Veritas Sample: TZQ290

Cambium Environmental Inc
Client Project #: 14833-002
Project name: PIN OAK DR, NIAGARA
Client ID: QAQC1_SS

Petroleum Hydrocarbons F2-F4 in Soil Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Exceedance Summary Table – Reg153/04 T2-Soil/Res-F/M

Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
No Exceedances						

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

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Your Project #: 14833-002
Site Location: Pin Oak Dr, Niagara
Your C.O.C. #: 900796-01-01

Attention: Sharif Nawyaz

Cambium Environmental Inc
194 Sophia Street
PO Box 325
Peterborough, ON
CANADA K9H 1E5

Report Date: 2022/10/21
Report #: R7352299
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C2T7892
Received: 2022/10/13, 14:14

Sample Matrix: Water
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Methylnaphthalene Sum	3	N/A	2022/10/21	CAM SOP-00301	EPA 8270D m
1,3-Dichloropropene Sum	4	N/A	2022/10/20		EPA 8260C m
Petroleum Hydrocarbons F2-F4 in Water (1)	3	2022/10/20	2022/10/20	CAM SOP-00316	CCME PHC-CWS m
Dissolved Metals by ICPMS	1	N/A	2022/10/18	CAM SOP-00447	EPA 6020B m
Dissolved Metals by ICPMS	2	N/A	2022/10/19	CAM SOP-00447	EPA 6020B m
PAH Compounds in Water by GC/MS (SIM)	2	2022/10/20	2022/10/20	CAM SOP-00318	EPA 8270D m
PAH Compounds in Water by GC/MS (SIM)	1	2022/10/20	2022/10/21	CAM SOP-00318	EPA 8270D m
Volatile Organic Compounds and F1 PHCs	4	N/A	2022/10/19	CAM SOP-00230	EPA 8260C m

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following “Alberta Environment’s

Your Project #: 14833-002
Site Location: Pin Oak Dr, Niagara
Your C.O.C. #: 900796-01-01

Attention: Sharif Nawyaz

Cambium Environmental Inc
194 Sophia Street
PO Box 325
Peterborough, ON
CANADA K9H 1E5

Report Date: 2022/10/21
Report #: R7352299
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C2T7892

Received: 2022/10/13, 14:14

Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Gemarie Balatico, Project Manager
Email: Gemarie.Balatico@bureauveritas.com
Phone# (905)817-5787

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This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports.
For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas Job #: C2T7892
Report Date: 2022/10/21

Cambium Environmental Inc
Client Project #: 14833-002
Site Location: Pin Oak Dr, Niagara
Sampler Initials: MH

O.REG 153 DISSOLVED ICPMS METALS (WATER)

Bureau Veritas ID			TZQ358	TZQ359		TZQ360		
Sampling Date			2022/10/12	2022/10/12		2022/10/12		
COC Number			900796-01-01	900796-01-01		900796-01-01		
	UNITS	Criteria	BH101	BH102	QC Batch	QAQC1_GW	RDL	QC Batch
Metals								
Dissolved Antimony (Sb)	ug/L	6.0	<0.50	<0.50	8289393	<0.50	0.50	8284017
Dissolved Arsenic (As)	ug/L	25	<1.0	<1.0	8289393	<1.0	1.0	8284017
Dissolved Barium (Ba)	ug/L	1000	36	39	8289393	42	2.0	8284017
Dissolved Beryllium (Be)	ug/L	4.0	<0.40	<0.40	8289393	<0.40	0.40	8284017
Dissolved Boron (B)	ug/L	5000	130	120	8289393	130	10	8284017
Dissolved Cadmium (Cd)	ug/L	2.7	<0.090	<0.090	8289393	<0.090	0.090	8284017
Dissolved Chromium (Cr)	ug/L	50	<5.0	<5.0	8289393	<5.0	5.0	8284017
Dissolved Cobalt (Co)	ug/L	3.8	0.63	0.52	8289393	<0.50	0.50	8284017
Dissolved Copper (Cu)	ug/L	87	<0.90	1.1	8289393	1.7	0.90	8284017
Dissolved Lead (Pb)	ug/L	10	<0.50	<0.50	8289393	<0.50	0.50	8284017
Dissolved Molybdenum (Mo)	ug/L	70	3.3	4.1	8289393	4.1	0.50	8284017
Dissolved Nickel (Ni)	ug/L	100	1.4	1.3	8289393	1.4	1.0	8284017
Dissolved Selenium (Se)	ug/L	10	<2.0	<2.0	8289393	<2.0	2.0	8284017
Dissolved Silver (Ag)	ug/L	1.5	<0.090	<0.090	8289393	<0.090	0.090	8284017
Dissolved Sodium (Na)	ug/L	490000	59000	58000	8289393	60000	100	8284017
Dissolved Thallium (Tl)	ug/L	2.0	<0.050	<0.050	8289393	<0.050	0.050	8284017
Dissolved Uranium (U)	ug/L	20	9.0	11	8289393	11	0.10	8284017
Dissolved Vanadium (V)	ug/L	6.2	<0.50	<0.50	8289393	<0.50	0.50	8284017
Dissolved Zinc (Zn)	ug/L	1100	<5.0	<5.0	8289393	<5.0	5.0	8284017

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Potable Ground Water- All Types of Property Uses - Medium and Fine Textured Soil

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Bureau Veritas Job #: C2T7892
Report Date: 2022/10/21

Cambium Environmental Inc
Client Project #: 14833-002
Site Location: Pin Oak Dr, Niagara
Sampler Initials: MH

O.REG 153 PAHS (WATER)

Bureau Veritas ID			TZQ358	TZQ359	TZQ360			TZQ360		
Sampling Date			2022/10/12	2022/10/12	2022/10/12			2022/10/12		
COC Number			900796-01-01	900796-01-01	900796-01-01			900796-01-01		
	UNITS	Criteria	BH101	BH102	QAQC1_GW	RDL	QC Batch	QAQC1_GW Lab-Dup	RDL	QC Batch
Calculated Parameters										
Methylnaphthalene, 2-(1-)	ug/L	3.2	<0.071	<0.071	<0.071	0.071	8282580			
Polyaromatic Hydrocarbons										
Benzo(e)pyrene	ug/L	-	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Acenaphthene	ug/L	4.1	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Acenaphthylene	ug/L	1	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Anthracene	ug/L	2.4	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Benzo(a)anthracene	ug/L	1.0	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Benzo(a)pyrene	ug/L	0.01	<0.0090	<0.0090	<0.0090	0.0090	8294404	<0.0090	0.0090	8294404
Benzo(b/j)fluoranthene	ug/L	0.1	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Benzo(g,h,i)perylene	ug/L	0.2	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Benzo(k)fluoranthene	ug/L	0.1	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Chrysene	ug/L	0.1	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Dibenzo(a,h)anthracene	ug/L	0.2	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Fluoranthene	ug/L	0.41	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Fluorene	ug/L	120	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Indeno(1,2,3-cd)pyrene	ug/L	0.2	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
1-Methylnaphthalene	ug/L	3.2	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
2-Methylnaphthalene	ug/L	3.2	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Naphthalene	ug/L	11	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Phenanthrene	ug/L	1	<0.030	<0.030	<0.030	0.030	8294404	<0.030	0.030	8294404
Pyrene	ug/L	4.1	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Perylene	ug/L	-	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Surrogate Recovery (%)										
D10-Anthracene	%	-	113	115	93		8294404	119		8294404
D14-Terphenyl (FS)	%	-	105	107	95		8294404	115		8294404
D8-Acenaphthylene	%	-	89	108	80		8294404	96		8294404

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Potable Ground Water- All Types of Property Uses - Medium and Fine Textured Soil

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Bureau Veritas Job #: C2T7892
Report Date: 2022/10/21

Cambium Environmental Inc
Client Project #: 14833-002
Site Location: Pin Oak Dr, Niagara
Sampler Initials: MH

O.REG 153 VOCS BY HS & F1-F4 (WATER)

Bureau Veritas ID			TZQ358	TZQ359	TZQ360			TZQ360		
Sampling Date			2022/10/12	2022/10/12	2022/10/12			2022/10/12		
COC Number			900796-01-01	900796-01-01	900796-01-01			900796-01-01		
	UNITS	Criteria	BH101	BH102	QAQC1_GW	RDL	QC Batch	QAQC1_GW Lab-Dup	RDL	QC Batch
Calculated Parameters										
1,3-Dichloropropene (cis+trans)	ug/L	0.5	<0.50	<0.50	<0.50	0.50	8282499			
Volatile Organics										
Acetone (2-Propanone)	ug/L	2700	<10	<10	<10	10	8284392			
Benzene	ug/L	5.0	<0.17	<0.17	<0.17	0.17	8284392			
Bromodichloromethane	ug/L	16.0	<0.50	<0.50	<0.50	0.50	8284392			
Bromoform	ug/L	25.0	<1.0	<1.0	<1.0	1.0	8284392			
Bromomethane	ug/L	0.89	<0.50	<0.50	<0.50	0.50	8284392			
Carbon Tetrachloride	ug/L	5.0	<0.20	<0.20	<0.20	0.20	8284392			
Chlorobenzene	ug/L	30	<0.20	<0.20	<0.20	0.20	8284392			
Chloroform	ug/L	22	<0.20	<0.20	<0.20	0.20	8284392			
Dibromochloromethane	ug/L	25.0	<0.50	<0.50	<0.50	0.50	8284392			
1,2-Dichlorobenzene	ug/L	3.0	<0.50	<0.50	<0.50	0.50	8284392			
1,3-Dichlorobenzene	ug/L	59	<0.50	<0.50	<0.50	0.50	8284392			
1,4-Dichlorobenzene	ug/L	1.0	<0.50	<0.50	<0.50	0.50	8284392			
Dichlorodifluoromethane (FREON 12)	ug/L	590	<1.0	<1.0	<1.0	1.0	8284392			
1,1-Dichloroethane	ug/L	5	<0.20	<0.20	<0.20	0.20	8284392			
1,2-Dichloroethane	ug/L	5	<0.50	<0.50	<0.50	0.50	8284392			
1,1-Dichloroethylene	ug/L	14	<0.20	<0.20	<0.20	0.20	8284392			
cis-1,2-Dichloroethylene	ug/L	17	<0.50	<0.50	<0.50	0.50	8284392			
trans-1,2-Dichloroethylene	ug/L	17	<0.50	<0.50	<0.50	0.50	8284392			
1,2-Dichloropropane	ug/L	5.0	<0.20	<0.20	<0.20	0.20	8284392			
cis-1,3-Dichloropropene	ug/L	0.5	<0.30	<0.30	<0.30	0.30	8284392			
trans-1,3-Dichloropropene	ug/L	0.5	<0.40	<0.40	<0.40	0.40	8284392			
Ethylbenzene	ug/L	2.4	<0.20	<0.20	<0.20	0.20	8284392			
Ethylene Dibromide	ug/L	0.2	<0.20	<0.20	<0.20	0.20	8284392			
Hexane	ug/L	520	<1.0	<1.0	<1.0	1.0	8284392			
Methylene Chloride(Dichloromethane)	ug/L	50	<2.0	<2.0	<2.0	2.0	8284392			
Methyl Ethyl Ketone (2-Butanone)	ug/L	1800	<10	<10	<10	10	8284392			

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Potable Ground Water- All Types of Property Uses - Medium and Fine Textured Soil

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Bureau Veritas Job #: C2T7892
Report Date: 2022/10/21

Cambium Environmental Inc
Client Project #: 14833-002
Site Location: Pin Oak Dr, Niagara
Sampler Initials: MH

O.REG 153 VOCS BY HS & F1-F4 (WATER)

Bureau Veritas ID			TZQ358	TZQ359	TZQ360			TZQ360		
Sampling Date			2022/10/12	2022/10/12	2022/10/12			2022/10/12		
COC Number			900796-01-01	900796-01-01	900796-01-01			900796-01-01		
	UNITS	Criteria	BH101	BH102	QAQC1_GW	RDL	QC Batch	QAQC1_GW Lab-Dup	RDL	QC Batch
Methyl Isobutyl Ketone	ug/L	640	<5.0	<5.0	<5.0	5.0	8284392			
Methyl t-butyl ether (MTBE)	ug/L	15	<0.50	<0.50	<0.50	0.50	8284392			
Styrene	ug/L	5.4	<0.50	<0.50	<0.50	0.50	8284392			
1,1,1,2-Tetrachloroethane	ug/L	1.1	<0.50	<0.50	<0.50	0.50	8284392			
1,1,2,2-Tetrachloroethane	ug/L	1.0	<0.50	<0.50	<0.50	0.50	8284392			
Tetrachloroethylene	ug/L	17	<0.20	<0.20	<0.20	0.20	8284392			
Toluene	ug/L	24	<0.20	<0.20	<0.20	0.20	8284392			
1,1,1-Trichloroethane	ug/L	200	<0.20	<0.20	<0.20	0.20	8284392			
1,1,2-Trichloroethane	ug/L	5	<0.50	<0.50	<0.50	0.50	8284392			
Trichloroethylene	ug/L	5	<0.20	<0.20	<0.20	0.20	8284392			
Trichlorofluoromethane (FREON 11)	ug/L	150	<0.50	<0.50	<0.50	0.50	8284392			
Vinyl Chloride	ug/L	1.7	<0.20	<0.20	<0.20	0.20	8284392			
p+m-Xylene	ug/L	-	<0.20	<0.20	<0.20	0.20	8284392			
o-Xylene	ug/L	-	<0.20	<0.20	<0.20	0.20	8284392			
Total Xylenes	ug/L	300	<0.20	<0.20	<0.20	0.20	8284392			
F1 (C6-C10)	ug/L	750	<25	<25	<25	25	8284392			
F1 (C6-C10) - BTEX	ug/L	750	<25	<25	<25	25	8284392			
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/L	150	<100	<100	<100	100	8294405	<100	100	8294405
F3 (C16-C34 Hydrocarbons)	ug/L	500	<200	<200	<200	200	8294405	<200	200	8294405
F4 (C34-C50 Hydrocarbons)	ug/L	500	<200	<200	<200	200	8294405	<200	200	8294405
Reached Baseline at C50	ug/L	-	Yes	Yes	Yes		8294405	Yes		8294405
Surrogate Recovery (%)										
o-Terphenyl	%	-	98	99	98		8294405	100		8294405
4-Bromofluorobenzene	%	-	97	98	97		8284392			
D4-1,2-Dichloroethane	%	-	100	100	100		8284392			
D8-Toluene	%	-	101	101	100		8284392			

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Potable Ground Water- All Types of Property Uses - Medium and Fine Textured Soil

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Bureau Veritas Job #: C2T7892
Report Date: 2022/10/21

Cambium Environmental Inc
Client Project #: 14833-002
Site Location: Pin Oak Dr, Niagara
Sampler Initials: MH

O.REG 153 VOCS BY HS & F1-F4 (WATER)

Bureau Veritas ID			TZQ361		
Sampling Date			2022/10/12		
COC Number			900796-01-01		
	UNITS	Criteria	TRIP BLANK	RDL	QC Batch
Calculated Parameters					
1,3-Dichloropropene (cis+trans)	ug/L	0.5	<0.50	0.50	8282499
Volatile Organics					
Acetone (2-Propanone)	ug/L	2700	<10	10	8284392
Benzene	ug/L	5.0	<0.17	0.17	8284392
Bromodichloromethane	ug/L	16.0	<0.50	0.50	8284392
Bromoform	ug/L	25.0	<1.0	1.0	8284392
Bromomethane	ug/L	0.89	<0.50	0.50	8284392
Carbon Tetrachloride	ug/L	5.0	<0.20	0.20	8284392
Chlorobenzene	ug/L	30	<0.20	0.20	8284392
Chloroform	ug/L	22	<0.20	0.20	8284392
Dibromochloromethane	ug/L	25.0	<0.50	0.50	8284392
1,2-Dichlorobenzene	ug/L	3.0	<0.50	0.50	8284392
1,3-Dichlorobenzene	ug/L	59	<0.50	0.50	8284392
1,4-Dichlorobenzene	ug/L	1.0	<0.50	0.50	8284392
Dichlorodifluoromethane (FREON 12)	ug/L	590	<1.0	1.0	8284392
1,1-Dichloroethane	ug/L	5	<0.20	0.20	8284392
1,2-Dichloroethane	ug/L	5	<0.50	0.50	8284392
1,1-Dichloroethylene	ug/L	14	<0.20	0.20	8284392
cis-1,2-Dichloroethylene	ug/L	17	<0.50	0.50	8284392
trans-1,2-Dichloroethylene	ug/L	17	<0.50	0.50	8284392
1,2-Dichloropropane	ug/L	5.0	<0.20	0.20	8284392
cis-1,3-Dichloropropene	ug/L	0.5	<0.30	0.30	8284392
trans-1,3-Dichloropropene	ug/L	0.5	<0.40	0.40	8284392
Ethylbenzene	ug/L	2.4	<0.20	0.20	8284392
Ethylene Dibromide	ug/L	0.2	<0.20	0.20	8284392
Hexane	ug/L	520	<1.0	1.0	8284392
Methylene Chloride(Dichloromethane)	ug/L	50	<2.0	2.0	8284392

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Potable Ground Water- All Types of Property Uses - Medium and Fine Textured Soil

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O.REG 153 VOCS BY HS & F1-F4 (WATER)

Bureau Veritas ID			TZQ361		
Sampling Date			2022/10/12		
COC Number			900796-01-01		
	UNITS	Criteria	TRIP BLANK	RDL	QC Batch
Methyl Ethyl Ketone (2-Butanone)	ug/L	1800	<10	10	8284392
Methyl Isobutyl Ketone	ug/L	640	<5.0	5.0	8284392
Methyl t-butyl ether (MTBE)	ug/L	15	<0.50	0.50	8284392
Styrene	ug/L	5.4	<0.50	0.50	8284392
1,1,1,2-Tetrachloroethane	ug/L	1.1	<0.50	0.50	8284392
1,1,2,2-Tetrachloroethane	ug/L	1.0	<0.50	0.50	8284392
Tetrachloroethylene	ug/L	17	<0.20	0.20	8284392
Toluene	ug/L	24	<0.20	0.20	8284392
1,1,1-Trichloroethane	ug/L	200	<0.20	0.20	8284392
1,1,2-Trichloroethane	ug/L	5	<0.50	0.50	8284392
Trichloroethylene	ug/L	5	<0.20	0.20	8284392
Trichlorofluoromethane (FREON 11)	ug/L	150	<0.50	0.50	8284392
Vinyl Chloride	ug/L	1.7	<0.20	0.20	8284392
p+m-Xylene	ug/L	-	<0.20	0.20	8284392
o-Xylene	ug/L	-	<0.20	0.20	8284392
Total Xylenes	ug/L	300	<0.20	0.20	8284392
F1 (C6-C10)	ug/L	750	<25	25	8284392
F1 (C6-C10) - BTEX	ug/L	750	<25	25	8284392
Surrogate Recovery (%)					
4-Bromofluorobenzene	%	-	98		8284392
D4-1,2-Dichloroethane	%	-	99		8284392
D8-Toluene	%	-	101		8284392

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Potable Ground Water- All Types of Property Uses - Medium and Fine Textured Soil

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Bureau Veritas Job #: C2T7892
Report Date: 2022/10/21

Cambium Environmental Inc
Client Project #: 14833-002
Site Location: Pin Oak Dr, Niagara
Sampler Initials: MH

TEST SUMMARY

Bureau Veritas ID: TZQ358 **Collected:** 2022/10/12
Sample ID: BH101 **Shipped:**
Matrix: Water **Received:** 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8282580	N/A	2022/10/21	Automated Statchk
1,3-Dichloropropene Sum	CALC	8282499	N/A	2022/10/20	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8294405	2022/10/20	2022/10/20	Agnieszka Brzuzy-Snopko
Dissolved Metals by ICPMS	ICP/MS	8289393	N/A	2022/10/19	Arefa Dabhad
PAH Compounds in Water by GC/MS (SIM)	GC/MS	8294404	2022/10/20	2022/10/20	Mitesh Raj
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8284392	N/A	2022/10/19	Xueming Jiang

Bureau Veritas ID: TZQ359 **Collected:** 2022/10/12
Sample ID: BH102 **Shipped:**
Matrix: Water **Received:** 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8282580	N/A	2022/10/21	Automated Statchk
1,3-Dichloropropene Sum	CALC	8282499	N/A	2022/10/20	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8294405	2022/10/20	2022/10/20	Agnieszka Brzuzy-Snopko
Dissolved Metals by ICPMS	ICP/MS	8289393	N/A	2022/10/19	Arefa Dabhad
PAH Compounds in Water by GC/MS (SIM)	GC/MS	8294404	2022/10/20	2022/10/21	Mitesh Raj
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8284392	N/A	2022/10/19	Xueming Jiang

Bureau Veritas ID: TZQ360 **Collected:** 2022/10/12
Sample ID: QAQC1_GW **Shipped:**
Matrix: Water **Received:** 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8282580	N/A	2022/10/21	Automated Statchk
1,3-Dichloropropene Sum	CALC	8282499	N/A	2022/10/20	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8294405	2022/10/20	2022/10/20	Agnieszka Brzuzy-Snopko
Dissolved Metals by ICPMS	ICP/MS	8284017	N/A	2022/10/18	Arefa Dabhad
PAH Compounds in Water by GC/MS (SIM)	GC/MS	8294404	2022/10/20	2022/10/20	Mitesh Raj
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8284392	N/A	2022/10/19	Xueming Jiang

Bureau Veritas ID: TZQ360 Dup **Collected:** 2022/10/12
Sample ID: QAQC1_GW **Shipped:**
Matrix: Water **Received:** 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8294405	2022/10/20	2022/10/20	Agnieszka Brzuzy-Snopko
PAH Compounds in Water by GC/MS (SIM)	GC/MS	8294404	2022/10/20	2022/10/20	Mitesh Raj

Bureau Veritas ID: TZQ361 **Collected:** 2022/10/12
Sample ID: TRIP BLANK **Shipped:**
Matrix: Water **Received:** 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8282499	N/A	2022/10/20	Automated Statchk

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Bureau Veritas Job #: C2T7892
Report Date: 2022/10/21

Cambium Environmental Inc
Client Project #: 14833-002
Site Location: Pin Oak Dr, Niagara
Sampler Initials: MH

TEST SUMMARY

Bureau Veritas ID: TZQ361
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2022/10/12
Shipped:
Received: 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8284392	N/A	2022/10/19	Xueming Jiang

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Bureau Veritas Job #: C2T7892
Report Date: 2022/10/21

Cambium Environmental Inc
Client Project #: 14833-002
Site Location: Pin Oak Dr, Niagara
Sampler Initials: MH

GENERAL COMMENTS

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

Package 1	7.0°C

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8284392	4-Bromofluorobenzene	2022/10/19	99	70 - 130	98	70 - 130	97	%		
8284392	D4-1,2-Dichloroethane	2022/10/19	101	70 - 130	98	70 - 130	97	%		
8284392	D8-Toluene	2022/10/19	101	70 - 130	103	70 - 130	101	%		
8294404	D10-Anthracene	2022/10/20	81	50 - 130	114	50 - 130	120	%		
8294404	D14-Terphenyl (FS)	2022/10/20	70	50 - 130	109	50 - 130	119	%		
8294404	D8-Acenaphthylene	2022/10/20	64	50 - 130	85	50 - 130	96	%		
8294405	o-Terphenyl	2022/10/20	101	60 - 130	100	60 - 130	96	%		
8284017	Dissolved Antimony (Sb)	2022/10/18	104	80 - 120	103	80 - 120	<0.50	ug/L	NC	20
8284017	Dissolved Arsenic (As)	2022/10/18	96	80 - 120	100	80 - 120	<1.0	ug/L	5.9	20
8284017	Dissolved Barium (Ba)	2022/10/18	99	80 - 120	98	80 - 120	<2.0	ug/L	0.42	20
8284017	Dissolved Beryllium (Be)	2022/10/18	102	80 - 120	101	80 - 120	<0.40	ug/L	NC	20
8284017	Dissolved Boron (B)	2022/10/18	NC	80 - 120	98	80 - 120	<10	ug/L	2.3	20
8284017	Dissolved Cadmium (Cd)	2022/10/18	101	80 - 120	101	80 - 120	<0.090	ug/L	NC	20
8284017	Dissolved Chromium (Cr)	2022/10/18	93	80 - 120	96	80 - 120	<5.0	ug/L	NC	20
8284017	Dissolved Cobalt (Co)	2022/10/18	97	80 - 120	98	80 - 120	<0.50	ug/L	NC	20
8284017	Dissolved Copper (Cu)	2022/10/18	101	80 - 120	101	80 - 120	<0.90	ug/L	5.3	20
8284017	Dissolved Lead (Pb)	2022/10/18	96	80 - 120	100	80 - 120	<0.50	ug/L	NC	20
8284017	Dissolved Molybdenum (Mo)	2022/10/18	105	80 - 120	103	80 - 120	<0.50	ug/L	0.51	20
8284017	Dissolved Nickel (Ni)	2022/10/18	94	80 - 120	98	80 - 120	<1.0	ug/L	8.3	20
8284017	Dissolved Selenium (Se)	2022/10/18	97	80 - 120	98	80 - 120	<2.0	ug/L	NC	20
8284017	Dissolved Silver (Ag)	2022/10/18	93	80 - 120	99	80 - 120	<0.090	ug/L	NC	20
8284017	Dissolved Sodium (Na)	2022/10/18	99	80 - 120	103	80 - 120	<100	ug/L		
8284017	Dissolved Thallium (Tl)	2022/10/18	99	80 - 120	101	80 - 120	<0.050	ug/L	NC	20
8284017	Dissolved Uranium (U)	2022/10/18	98	80 - 120	101	80 - 120	<0.10	ug/L	12	20
8284017	Dissolved Vanadium (V)	2022/10/18	95	80 - 120	96	80 - 120	<0.50	ug/L	0.86	20
8284017	Dissolved Zinc (Zn)	2022/10/18	93	80 - 120	98	80 - 120	<5.0	ug/L	3.1	20
8284392	1,1,1,2-Tetrachloroethane	2022/10/19	93	70 - 130	95	70 - 130	<0.50	ug/L	NC	30
8284392	1,1,1-Trichloroethane	2022/10/19	75	70 - 130	80	70 - 130	<0.20	ug/L	NC	30
8284392	1,1,2,2-Tetrachloroethane	2022/10/19	110	70 - 130	108	70 - 130	<0.50	ug/L	NC	30
8284392	1,1,2-Trichloroethane	2022/10/19	107	70 - 130	104	70 - 130	<0.50	ug/L	NC	30
8284392	1,1-Dichloroethane	2022/10/19	84	70 - 130	88	70 - 130	<0.20	ug/L	NC	30

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8284392	1,1-Dichloroethylene	2022/10/19	78	70 - 130	84	70 - 130	<0.20	ug/L	NC	30
8284392	1,2-Dichlorobenzene	2022/10/19	97	70 - 130	100	70 - 130	<0.50	ug/L	NC	30
8284392	1,2-Dichloroethane	2022/10/19	86	70 - 130	86	70 - 130	<0.50	ug/L	NC	30
8284392	1,2-Dichloropropane	2022/10/19	98	70 - 130	101	70 - 130	<0.20	ug/L	NC	30
8284392	1,3-Dichlorobenzene	2022/10/19	95	70 - 130	98	70 - 130	<0.50	ug/L	NC	30
8284392	1,4-Dichlorobenzene	2022/10/19	112	70 - 130	114	70 - 130	<0.50	ug/L	NC	30
8284392	Acetone (2-Propanone)	2022/10/19	101	60 - 140	96	60 - 140	<10	ug/L	NC	30
8284392	Benzene	2022/10/19	83	70 - 130	87	70 - 130	<0.17	ug/L	2.3	30
8284392	Bromodichloromethane	2022/10/19	94	70 - 130	96	70 - 130	<0.50	ug/L	NC	30
8284392	Bromoform	2022/10/19	96	70 - 130	94	70 - 130	<1.0	ug/L	NC	30
8284392	Bromomethane	2022/10/19	75	60 - 140	80	60 - 140	<0.50	ug/L	NC	30
8284392	Carbon Tetrachloride	2022/10/19	71	70 - 130	76	70 - 130	<0.20	ug/L	NC	30
8284392	Chlorobenzene	2022/10/19	96	70 - 130	98	70 - 130	<0.20	ug/L	NC	30
8284392	Chloroform	2022/10/19	85	70 - 130	88	70 - 130	<0.20	ug/L	NC	30
8284392	cis-1,2-Dichloroethylene	2022/10/19	85	70 - 130	88	70 - 130	<0.50	ug/L	NC	30
8284392	cis-1,3-Dichloropropene	2022/10/19	93	70 - 130	93	70 - 130	<0.30	ug/L	NC	30
8284392	Dibromochloromethane	2022/10/19	93	70 - 130	92	70 - 130	<0.50	ug/L	NC	30
8284392	Dichlorodifluoromethane (FREON 12)	2022/10/19	80	60 - 140	89	60 - 140	<1.0	ug/L	NC	30
8284392	Ethylbenzene	2022/10/19	88	70 - 130	92	70 - 130	<0.20	ug/L	NC	30
8284392	Ethylene Dibromide	2022/10/19	98	70 - 130	95	70 - 130	<0.20	ug/L	NC	30
8284392	F1 (C6-C10) - BTEX	2022/10/19					<25	ug/L	NC	30
8284392	F1 (C6-C10)	2022/10/19	93	60 - 140	94	60 - 140	<25	ug/L	NC	30
8284392	Hexane	2022/10/19	84	70 - 130	92	70 - 130	<1.0	ug/L	NC	30
8284392	Methyl Ethyl Ketone (2-Butanone)	2022/10/19	128	60 - 140	123	60 - 140	<10	ug/L	NC	30
8284392	Methyl Isobutyl Ketone	2022/10/19	120	70 - 130	117	70 - 130	<5.0	ug/L	NC	30
8284392	Methyl t-butyl ether (MTBE)	2022/10/19	85	70 - 130	86	70 - 130	<0.50	ug/L	NC	30
8284392	Methylene Chloride(Dichloromethane)	2022/10/19	88	70 - 130	90	70 - 130	<2.0	ug/L	NC	30
8284392	o-Xylene	2022/10/19	91	70 - 130	94	70 - 130	<0.20	ug/L	NC	30
8284392	p+m-Xylene	2022/10/19	93	70 - 130	97	70 - 130	<0.20	ug/L	NC	30
8284392	Styrene	2022/10/19	101	70 - 130	104	70 - 130	<0.50	ug/L	NC	30
8284392	Tetrachloroethylene	2022/10/19	79	70 - 130	83	70 - 130	<0.20	ug/L	NC	30

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8284392	Toluene	2022/10/19	85	70 - 130	88	70 - 130	<0.20	ug/L	NC	30
8284392	Total Xylenes	2022/10/19					<0.20	ug/L	NC	30
8284392	trans-1,2-Dichloroethylene	2022/10/19	81	70 - 130	86	70 - 130	<0.50	ug/L	NC	30
8284392	trans-1,3-Dichloropropene	2022/10/19	101	70 - 130	97	70 - 130	<0.40	ug/L	NC	30
8284392	Trichloroethylene	2022/10/19	86	70 - 130	91	70 - 130	<0.20	ug/L	NC	30
8284392	Trichlorofluoromethane (FREON 11)	2022/10/19	69 (1)	70 - 130	75	70 - 130	<0.50	ug/L	NC	30
8284392	Vinyl Chloride	2022/10/19	77	70 - 130	84	70 - 130	<0.20	ug/L	NC	30
8289393	Dissolved Antimony (Sb)	2022/10/19	106	80 - 120	103	80 - 120	<0.50	ug/L	NC	20
8289393	Dissolved Arsenic (As)	2022/10/19	100	80 - 120	101	80 - 120	<1.0	ug/L	3.7	20
8289393	Dissolved Barium (Ba)	2022/10/19	98	80 - 120	100	80 - 120	<2.0	ug/L	1.8	20
8289393	Dissolved Beryllium (Be)	2022/10/19	101	80 - 120	98	80 - 120	<0.40	ug/L	NC	20
8289393	Dissolved Boron (B)	2022/10/19	NC	80 - 120	92	80 - 120	<10	ug/L	1.5	20
8289393	Dissolved Cadmium (Cd)	2022/10/19	98	80 - 120	100	80 - 120	<0.090	ug/L	NC	20
8289393	Dissolved Chromium (Cr)	2022/10/19	95	80 - 120	95	80 - 120	<5.0	ug/L	NC	20
8289393	Dissolved Cobalt (Co)	2022/10/19	98	80 - 120	99	80 - 120	<0.50	ug/L	3.8	20
8289393	Dissolved Copper (Cu)	2022/10/19	99	80 - 120	98	80 - 120	<0.90	ug/L	NC	20
8289393	Dissolved Lead (Pb)	2022/10/19	94	80 - 120	102	80 - 120	<0.50	ug/L	NC	20
8289393	Dissolved Molybdenum (Mo)	2022/10/19	102	80 - 120	99	80 - 120	<0.50	ug/L	0.64	20
8289393	Dissolved Nickel (Ni)	2022/10/19	94	80 - 120	99	80 - 120	<1.0	ug/L	12	20
8289393	Dissolved Selenium (Se)	2022/10/19	90	80 - 120	100	80 - 120	<2.0	ug/L	NC	20
8289393	Dissolved Silver (Ag)	2022/10/19	38 (2)	80 - 120	99	80 - 120	<0.090	ug/L	NC	20
8289393	Dissolved Sodium (Na)	2022/10/19	NC	80 - 120	100	80 - 120	<100	ug/L	4.3	20
8289393	Dissolved Thallium (Tl)	2022/10/19	95	80 - 120	98	80 - 120	<0.050	ug/L	NC	20
8289393	Dissolved Uranium (U)	2022/10/19	97	80 - 120	101	80 - 120	<0.10	ug/L	2.4	20
8289393	Dissolved Vanadium (V)	2022/10/19	98	80 - 120	96	80 - 120	<0.50	ug/L	NC	20
8289393	Dissolved Zinc (Zn)	2022/10/19	94	80 - 120	100	80 - 120	<5.0	ug/L	NC	20
8294404	1-Methylnaphthalene	2022/10/20	91	50 - 130	83	50 - 130	<0.050	ug/L	NC	30
8294404	2-Methylnaphthalene	2022/10/20	94	50 - 130	84	50 - 130	<0.050	ug/L	NC	30
8294404	Acenaphthene	2022/10/20	105	50 - 130	99	50 - 130	<0.050	ug/L	NC	30
8294404	Acenaphthylene	2022/10/20	101	50 - 130	94	50 - 130	<0.050	ug/L	NC	30
8294404	Anthracene	2022/10/20	110	50 - 130	107	50 - 130	<0.050	ug/L	NC	30

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8294404	Benzo(a)anthracene	2022/10/20	106	50 - 130	101	50 - 130	<0.050	ug/L	NC	30
8294404	Benzo(a)pyrene	2022/10/20	106	50 - 130	100	50 - 130	<0.0090	ug/L	NC	30
8294404	Benzo(b/j)fluoranthene	2022/10/20	107	50 - 130	105	50 - 130	<0.050	ug/L	NC	30
8294404	Benzo(e)pyrene	2022/10/20	109	50 - 130	106	50 - 130	<0.050	ug/L	NC	30
8294404	Benzo(g,h,i)perylene	2022/10/20	106	50 - 130	104	50 - 130	<0.050	ug/L	NC	30
8294404	Benzo(k)fluoranthene	2022/10/20	107	50 - 130	104	50 - 130	<0.050	ug/L	NC	30
8294404	Chrysene	2022/10/20	110	50 - 130	107	50 - 130	<0.050	ug/L	NC	30
8294404	Dibenzo(a,h)anthracene	2022/10/20	99	50 - 130	101	50 - 130	<0.050	ug/L	NC	30
8294404	Fluoranthene	2022/10/20	118	50 - 130	114	50 - 130	<0.050	ug/L	NC	30
8294404	Fluorene	2022/10/20	112	50 - 130	105	50 - 130	<0.050	ug/L	NC	30
8294404	Indeno(1,2,3-cd)pyrene	2022/10/20	109	50 - 130	107	50 - 130	<0.050	ug/L	NC	30
8294404	Naphthalene	2022/10/20	99	50 - 130	91	50 - 130	<0.050	ug/L	NC	30
8294404	Perylene	2022/10/20	105	50 - 130	105	50 - 130	<0.050	ug/L	NC	40
8294404	Phenanthrene	2022/10/20	111	50 - 130	106	50 - 130	<0.030	ug/L	NC	30
8294404	Pyrene	2022/10/20	115	50 - 130	111	50 - 130	<0.050	ug/L	NC	30
8294405	F2 (C10-C16 Hydrocarbons)	2022/10/20	106	60 - 130	104	60 - 130	<100	ug/L	NC	30
8294405	F3 (C16-C34 Hydrocarbons)	2022/10/20	106	60 - 130	107	60 - 130	<200	ug/L	NC	30
8294405	F4 (C34-C50 Hydrocarbons)	2022/10/20	107	60 - 130	106	60 - 130	<200	ug/L	NC	30

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

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

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

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

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

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

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

(1) The recovery was below the lower control limit. This may represent a low bias in some results for this specific analyte.

(2) Metal Analysis:Matrix Spike exceeds acceptance limits, probable matrix interference

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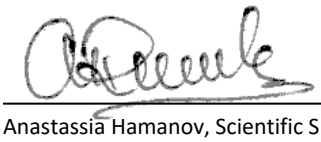
Bureau Veritas Job #: C2T7892
Report Date: 2022/10/21

Cambium Environmental Inc
Client Project #: 14833-002
Site Location: Pin Oak Dr, Niagara
Sampler Initials: MH

VALIDATION SIGNATURE PAGE

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



Anastassia Hamanov, Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Bureau Veritas
6740 Campobello Road, Mississauga, Ontario Canada L5N 2L8 Tel:(905) 817-5700 Toll-free:800-563-6266 Fax:(905) 817-5777 www.bvna.com

13-Oct-22 14:14
Gemarie Balatico
C2T7892

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		
Company Name:	#17950 Cambium Environmental Inc	Company Name:		Quotation #:	C21984	Bottle Order #:
Attention:	ACCOUNTS PAYABLE	Attention:	Sharif Nawyaz	P.O. #:		900796
Address:	194 Sophia Street PO Box 325 Peterborough ON K9H 1E5	Address:		Project:	14833-002	Project Manager:
Tel:	(705) 742-7900 Fax: (705) 742-7907	Tel:	(866) 217-7900 Fax:	Project Name:	SPJ ENV-1133	
Email:	accounting@cambium-inc.com; Evan.Black@cambium-	Email:	Sharif.Nawyaz@cambium-inc.com	Site #:	C#900796-01-01	Gemarie Balatico
				Sampled By:	M.HALIGOWSKI	

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)
- ☐ Table 1 ☒ Res/Park ☒ Medium/Fine
- ☒ Table 2 ☐ Ind/Comm ☐ Coarse
- ☐ Table 3 ☐ Agri/Other ☐ For RSC
- ☐ Table ___

Other Regulations
- ☐ CCME ☐ Sanitary Sewer Bylaw
- ☐ Reg 558 ☐ Storm Sewer Bylaw
- ☐ MISA Municipality ___
- ☐ PWQO ☐ Reg 406 Table ___
- ☐ Other ___

Special Instructions: EDDS Req'd.

Include Criteria on Certificate of Analysis (Y/N)? ___

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

Regular (Standard) TAT: ☒
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: ___ Time Required: ___ ☐
Rush Confirmation Number: ___ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	O.Reg 153 VOCs by HS & F1-F4	O.Reg 153 PAHs	O.Reg 153 Metals & Inorganics Pkg (Wtr)	# of Bottles	Comments
1		BH101	12-Oct-22		GW	Y	X	X	X	9	
2		BH102	12-Oct-22		GW	Y	X	X	X	9	
3		QAQC1_GW	12-Oct-22		GW	Y	X	X	X	9	
4		TRIP BLANK			GW		X			1	
5					GW						
6											
7											
8											
9											
10											

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
M.HALIGOWSKI	22/10/13			22/10/13	15 14	

Laboratory Use Only
Time Sensitive | Temperature (°C) on Recei: 8/6/7 | Custody Seal Present / Intact | Yes ✓ | No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT WWW.BVNA.COM/RESOURCES/CHAIN-OF-CUSTODY-FORMS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

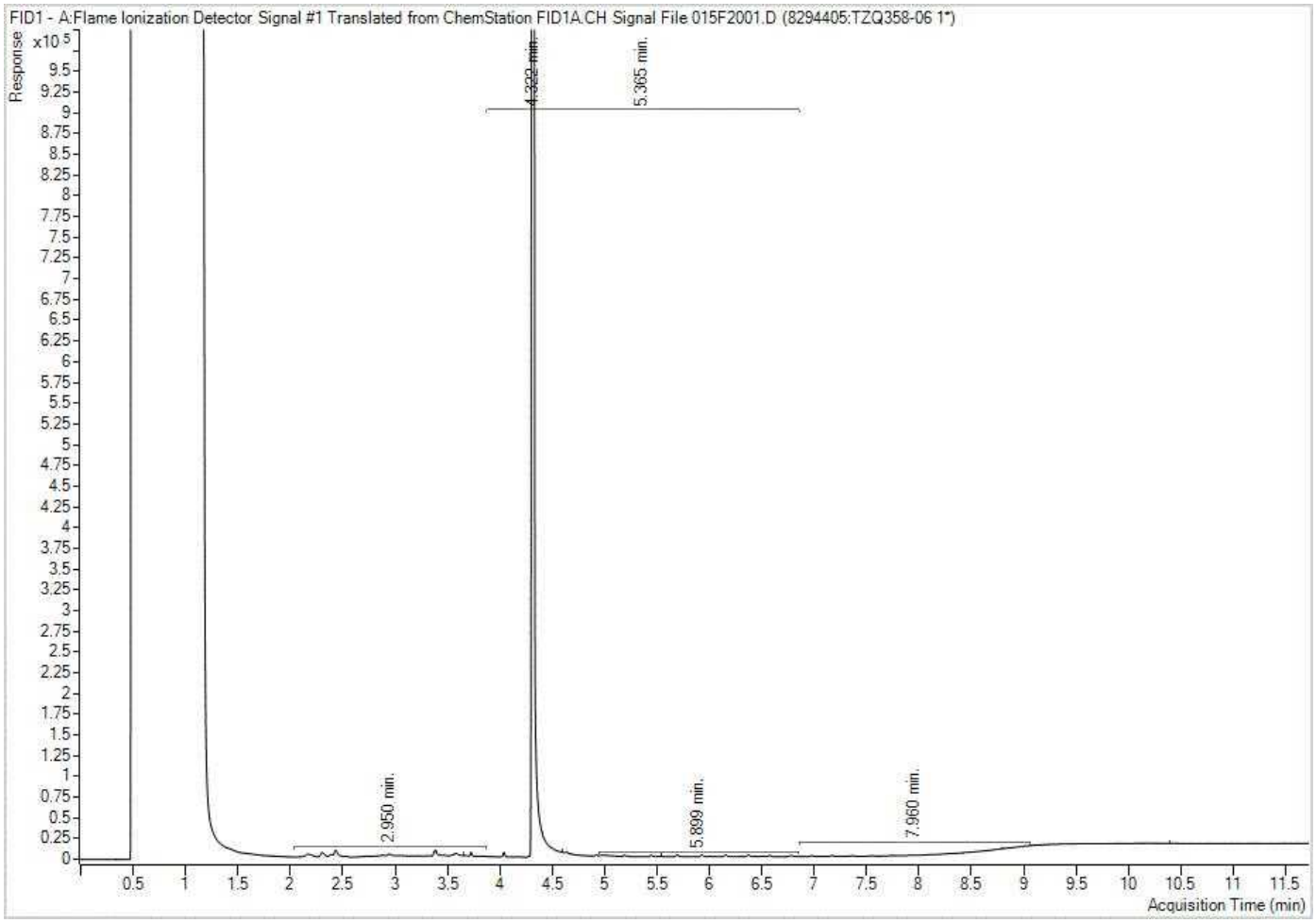
White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

Bureau Veritas Job #: C2T7892
Report Date: 2022/10/21
Bureau Veritas Sample: TZQ358

Cambium Environmental Inc
Client Project #: 14833-002
Project name: Pin Oak Dr, Niagara
Client ID: BH101

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

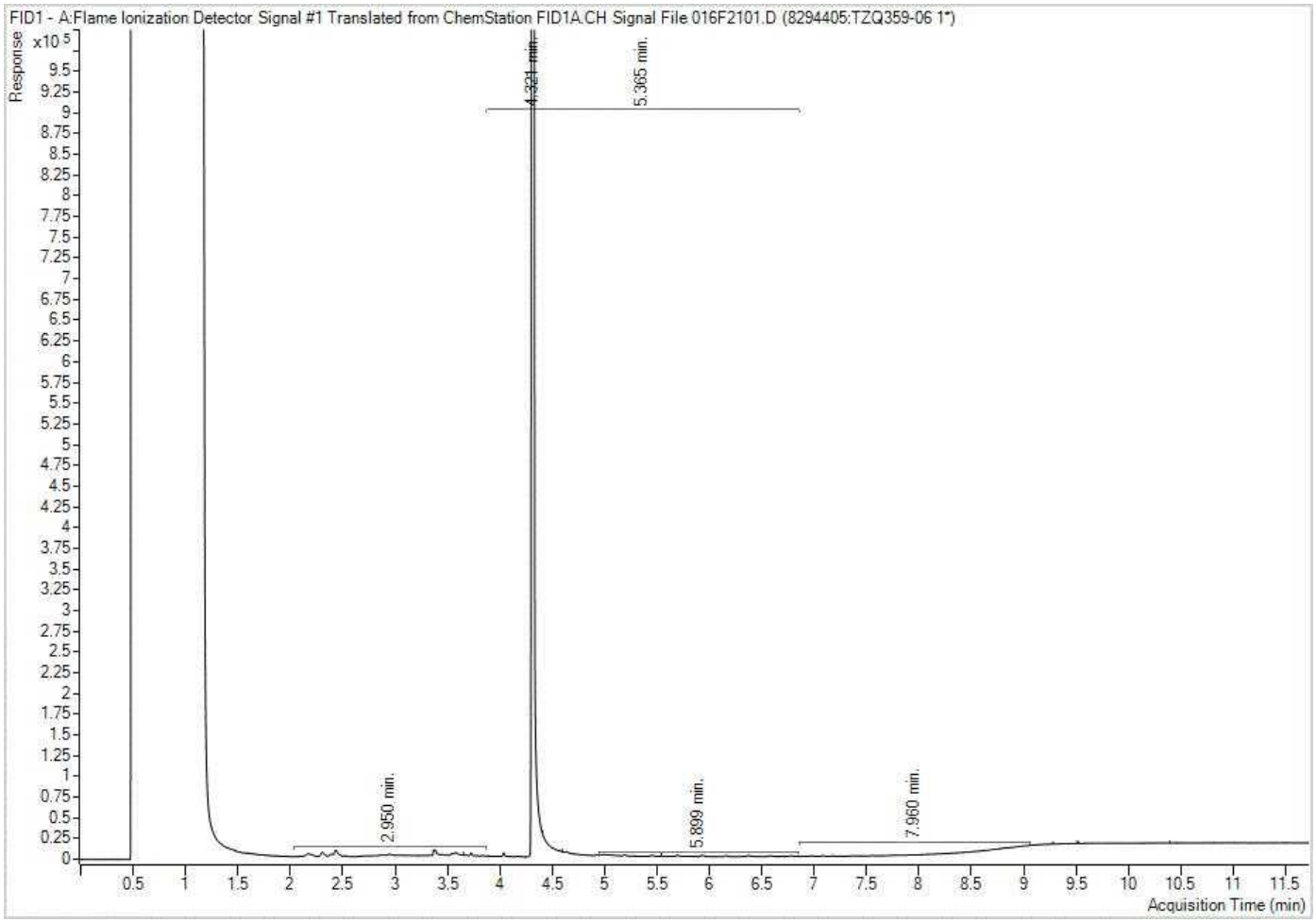


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C2T7892
Report Date: 2022/10/21
Bureau Veritas Sample: TZQ359

Cambium Environmental Inc
Client Project #: 14833-002
Project name: Pin Oak Dr, Niagara
Client ID: BH102

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

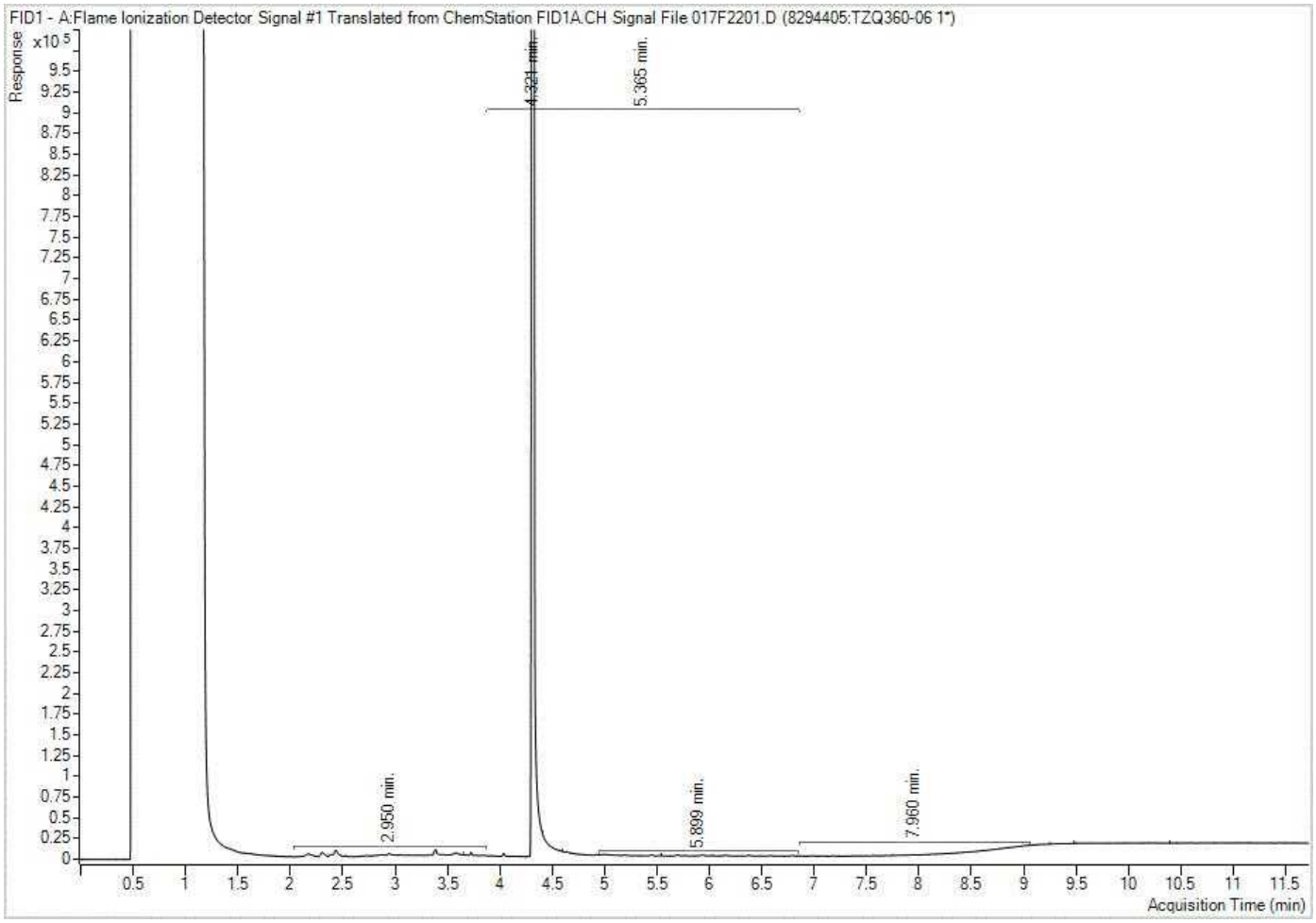


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C2T7892
Report Date: 2022/10/21
Bureau Veritas Sample: TZQ360

Cambium Environmental Inc
Client Project #: 14833-002
Project name: Pin Oak Dr, Niagara
Client ID: QAQC1_GW

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

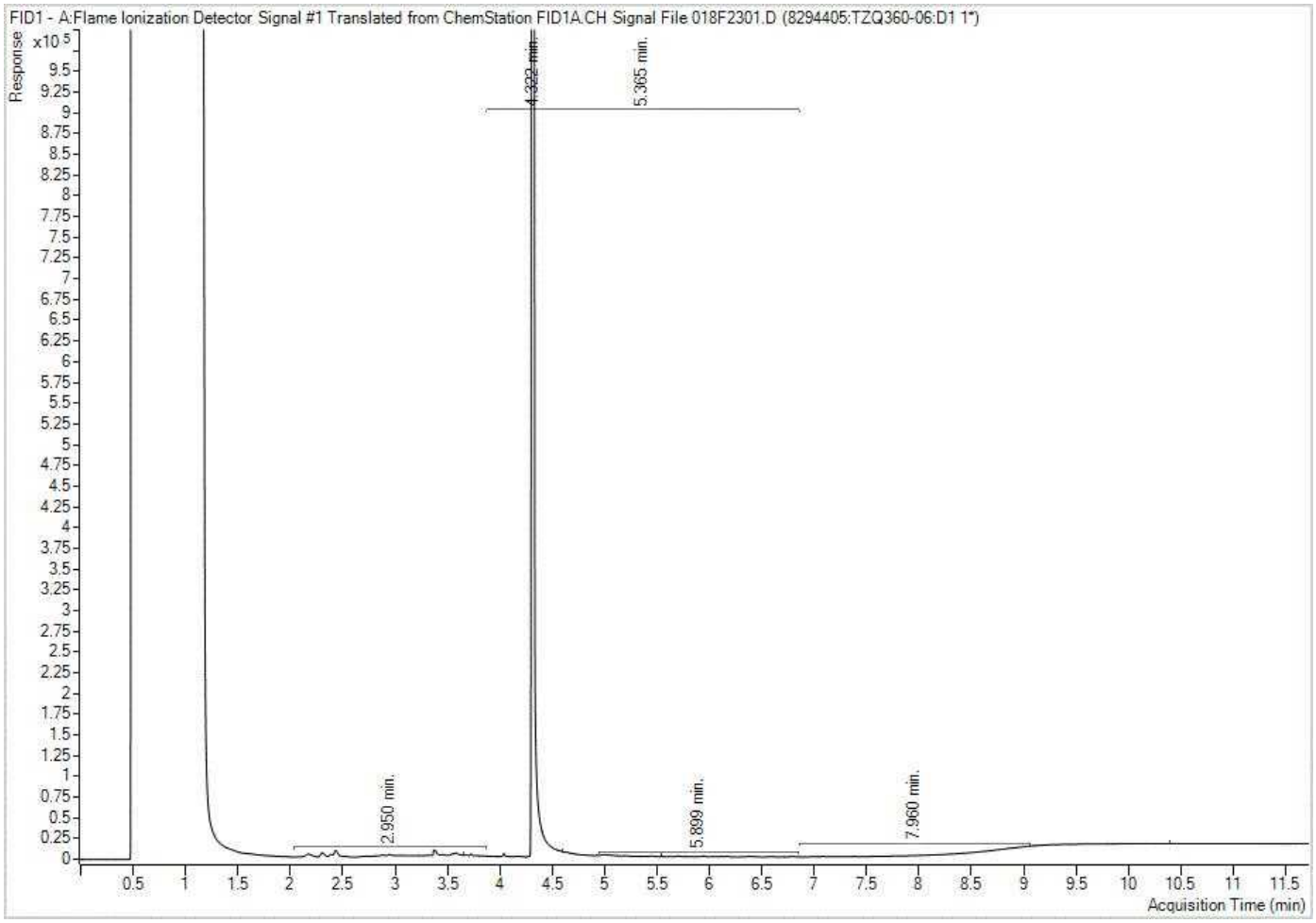


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C2T7892
Report Date: 2022/10/21
Bureau Veritas Sample: TZQ360 Lab-Dup

Cambium Environmental Inc
Client Project #: 14833-002
Project name: Pin Oak Dr, Niagara
Client ID: QAQC1_GW

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Exceedance Summary Table – Reg153/04 T2-GW-F/M

Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
No Exceedances						

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

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Your Project #: 14833-002
Site Location: Pin Oak Dr, Niagara
Your C.O.C. #: 900796-01-01

Attention: Sharif Nawyaz

Cambium Environmental Inc
194 Sophia Street
PO Box 325
Peterborough, ON
CANADA K9H 1E5

Report Date: 2022/10/21
Report #: R7352299
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C2T7892
Received: 2022/10/13, 14:14

Sample Matrix: Water
Samples Received: 4

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Methylnaphthalene Sum	3	N/A	2022/10/21	CAM SOP-00301	EPA 8270D m
1,3-Dichloropropene Sum	4	N/A	2022/10/20		EPA 8260C m
Petroleum Hydrocarbons F2-F4 in Water (1)	3	2022/10/20	2022/10/20	CAM SOP-00316	CCME PHC-CWS m
Dissolved Metals by ICPMS	1	N/A	2022/10/18	CAM SOP-00447	EPA 6020B m
Dissolved Metals by ICPMS	2	N/A	2022/10/19	CAM SOP-00447	EPA 6020B m
PAH Compounds in Water by GC/MS (SIM)	2	2022/10/20	2022/10/20	CAM SOP-00318	EPA 8270D m
PAH Compounds in Water by GC/MS (SIM)	1	2022/10/20	2022/10/21	CAM SOP-00318	EPA 8270D m
Volatile Organic Compounds and F1 PHCs	4	N/A	2022/10/19	CAM SOP-00230	EPA 8260C m

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following “Alberta Environment’s

Your Project #: 14833-002
Site Location: Pin Oak Dr, Niagara
Your C.O.C. #: 900796-01-01

Attention: Sharif Nawyaz

Cambium Environmental Inc
194 Sophia Street
PO Box 325
Peterborough, ON
CANADA K9H 1E5

Report Date: 2022/10/21
Report #: R7352299
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C2T7892

Received: 2022/10/13, 14:14

Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Gemarie Balatico, Project Manager
Email: Gemarie.Balatico@bureauveritas.com
Phone# (905)817-5787

==========

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Bureau Veritas Job #: C2T7892
Report Date: 2022/10/21

Cambium Environmental Inc
Client Project #: 14833-002
Site Location: Pin Oak Dr, Niagara
Sampler Initials: MH

O.REG 153 DISSOLVED ICPMS METALS (WATER)

Bureau Veritas ID			TZQ358	TZQ359		TZQ360		
Sampling Date			2022/10/12	2022/10/12		2022/10/12		
COC Number			900796-01-01	900796-01-01		900796-01-01		
	UNITS	Criteria	BH101	BH102	QC Batch	QAQC1_GW	RDL	QC Batch
Metals								
Dissolved Antimony (Sb)	ug/L	6.0	<0.50	<0.50	8289393	<0.50	0.50	8284017
Dissolved Arsenic (As)	ug/L	25	<1.0	<1.0	8289393	<1.0	1.0	8284017
Dissolved Barium (Ba)	ug/L	1000	36	39	8289393	42	2.0	8284017
Dissolved Beryllium (Be)	ug/L	4.0	<0.40	<0.40	8289393	<0.40	0.40	8284017
Dissolved Boron (B)	ug/L	5000	130	120	8289393	130	10	8284017
Dissolved Cadmium (Cd)	ug/L	2.7	<0.090	<0.090	8289393	<0.090	0.090	8284017
Dissolved Chromium (Cr)	ug/L	50	<5.0	<5.0	8289393	<5.0	5.0	8284017
Dissolved Cobalt (Co)	ug/L	3.8	0.63	0.52	8289393	<0.50	0.50	8284017
Dissolved Copper (Cu)	ug/L	87	<0.90	1.1	8289393	1.7	0.90	8284017
Dissolved Lead (Pb)	ug/L	10	<0.50	<0.50	8289393	<0.50	0.50	8284017
Dissolved Molybdenum (Mo)	ug/L	70	3.3	4.1	8289393	4.1	0.50	8284017
Dissolved Nickel (Ni)	ug/L	100	1.4	1.3	8289393	1.4	1.0	8284017
Dissolved Selenium (Se)	ug/L	10	<2.0	<2.0	8289393	<2.0	2.0	8284017
Dissolved Silver (Ag)	ug/L	1.5	<0.090	<0.090	8289393	<0.090	0.090	8284017
Dissolved Sodium (Na)	ug/L	490000	59000	58000	8289393	60000	100	8284017
Dissolved Thallium (Tl)	ug/L	2.0	<0.050	<0.050	8289393	<0.050	0.050	8284017
Dissolved Uranium (U)	ug/L	20	9.0	11	8289393	11	0.10	8284017
Dissolved Vanadium (V)	ug/L	6.2	<0.50	<0.50	8289393	<0.50	0.50	8284017
Dissolved Zinc (Zn)	ug/L	1100	<5.0	<5.0	8289393	<5.0	5.0	8284017

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Potable Ground Water- All Types of Property Uses - Medium and Fine Textured Soil

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Bureau Veritas Job #: C2T7892
Report Date: 2022/10/21

Cambium Environmental Inc
Client Project #: 14833-002
Site Location: Pin Oak Dr, Niagara
Sampler Initials: MH

O.REG 153 PAHS (WATER)

Bureau Veritas ID			TZQ358	TZQ359	TZQ360			TZQ360		
Sampling Date			2022/10/12	2022/10/12	2022/10/12			2022/10/12		
COC Number			900796-01-01	900796-01-01	900796-01-01			900796-01-01		
	UNITS	Criteria	BH101	BH102	QAQC1_GW	RDL	QC Batch	QAQC1_GW Lab-Dup	RDL	QC Batch
Calculated Parameters										
Methylnaphthalene, 2-(1-)	ug/L	3.2	<0.071	<0.071	<0.071	0.071	8282580			
Polyaromatic Hydrocarbons										
Benzo(e)pyrene	ug/L	-	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Acenaphthene	ug/L	4.1	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Acenaphthylene	ug/L	1	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Anthracene	ug/L	2.4	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Benzo(a)anthracene	ug/L	1.0	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Benzo(a)pyrene	ug/L	0.01	<0.0090	<0.0090	<0.0090	0.0090	8294404	<0.0090	0.0090	8294404
Benzo(b/j)fluoranthene	ug/L	0.1	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Benzo(g,h,i)perylene	ug/L	0.2	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Benzo(k)fluoranthene	ug/L	0.1	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Chrysene	ug/L	0.1	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Dibenzo(a,h)anthracene	ug/L	0.2	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Fluoranthene	ug/L	0.41	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Fluorene	ug/L	120	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Indeno(1,2,3-cd)pyrene	ug/L	0.2	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
1-Methylnaphthalene	ug/L	3.2	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
2-Methylnaphthalene	ug/L	3.2	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Naphthalene	ug/L	11	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Phenanthrene	ug/L	1	<0.030	<0.030	<0.030	0.030	8294404	<0.030	0.030	8294404
Pyrene	ug/L	4.1	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Perylene	ug/L	-	<0.050	<0.050	<0.050	0.050	8294404	<0.050	0.050	8294404
Surrogate Recovery (%)										
D10-Anthracene	%	-	113	115	93		8294404	119		8294404
D14-Terphenyl (FS)	%	-	105	107	95		8294404	115		8294404
D8-Acenaphthylene	%	-	89	108	80		8294404	96		8294404

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Potable Ground Water- All Types of Property Uses - Medium and Fine Textured Soil

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Bureau Veritas Job #: C2T7892
Report Date: 2022/10/21

Cambium Environmental Inc
Client Project #: 14833-002
Site Location: Pin Oak Dr, Niagara
Sampler Initials: MH

O.REG 153 VOCS BY HS & F1-F4 (WATER)

Bureau Veritas ID			TZQ358	TZQ359	TZQ360			TZQ360		
Sampling Date			2022/10/12	2022/10/12	2022/10/12			2022/10/12		
COC Number			900796-01-01	900796-01-01	900796-01-01			900796-01-01		
	UNITS	Criteria	BH101	BH102	QAQC1_GW	RDL	QC Batch	QAQC1_GW Lab-Dup	RDL	QC Batch
Calculated Parameters										
1,3-Dichloropropene (cis+trans)	ug/L	0.5	<0.50	<0.50	<0.50	0.50	8282499			
Volatile Organics										
Acetone (2-Propanone)	ug/L	2700	<10	<10	<10	10	8284392			
Benzene	ug/L	5.0	<0.17	<0.17	<0.17	0.17	8284392			
Bromodichloromethane	ug/L	16.0	<0.50	<0.50	<0.50	0.50	8284392			
Bromoform	ug/L	25.0	<1.0	<1.0	<1.0	1.0	8284392			
Bromomethane	ug/L	0.89	<0.50	<0.50	<0.50	0.50	8284392			
Carbon Tetrachloride	ug/L	5.0	<0.20	<0.20	<0.20	0.20	8284392			
Chlorobenzene	ug/L	30	<0.20	<0.20	<0.20	0.20	8284392			
Chloroform	ug/L	22	<0.20	<0.20	<0.20	0.20	8284392			
Dibromochloromethane	ug/L	25.0	<0.50	<0.50	<0.50	0.50	8284392			
1,2-Dichlorobenzene	ug/L	3.0	<0.50	<0.50	<0.50	0.50	8284392			
1,3-Dichlorobenzene	ug/L	59	<0.50	<0.50	<0.50	0.50	8284392			
1,4-Dichlorobenzene	ug/L	1.0	<0.50	<0.50	<0.50	0.50	8284392			
Dichlorodifluoromethane (FREON 12)	ug/L	590	<1.0	<1.0	<1.0	1.0	8284392			
1,1-Dichloroethane	ug/L	5	<0.20	<0.20	<0.20	0.20	8284392			
1,2-Dichloroethane	ug/L	5	<0.50	<0.50	<0.50	0.50	8284392			
1,1-Dichloroethylene	ug/L	14	<0.20	<0.20	<0.20	0.20	8284392			
cis-1,2-Dichloroethylene	ug/L	17	<0.50	<0.50	<0.50	0.50	8284392			
trans-1,2-Dichloroethylene	ug/L	17	<0.50	<0.50	<0.50	0.50	8284392			
1,2-Dichloropropane	ug/L	5.0	<0.20	<0.20	<0.20	0.20	8284392			
cis-1,3-Dichloropropene	ug/L	0.5	<0.30	<0.30	<0.30	0.30	8284392			
trans-1,3-Dichloropropene	ug/L	0.5	<0.40	<0.40	<0.40	0.40	8284392			
Ethylbenzene	ug/L	2.4	<0.20	<0.20	<0.20	0.20	8284392			
Ethylene Dibromide	ug/L	0.2	<0.20	<0.20	<0.20	0.20	8284392			
Hexane	ug/L	520	<1.0	<1.0	<1.0	1.0	8284392			
Methylene Chloride(Dichloromethane)	ug/L	50	<2.0	<2.0	<2.0	2.0	8284392			
Methyl Ethyl Ketone (2-Butanone)	ug/L	1800	<10	<10	<10	10	8284392			

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Potable Ground Water- All Types of Property Uses - Medium and Fine Textured Soil

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Bureau Veritas Job #: C2T7892
Report Date: 2022/10/21

Cambium Environmental Inc
Client Project #: 14833-002
Site Location: Pin Oak Dr, Niagara
Sampler Initials: MH

O.REG 153 VOCS BY HS & F1-F4 (WATER)

Bureau Veritas ID			TZQ358	TZQ359	TZQ360			TZQ360		
Sampling Date			2022/10/12	2022/10/12	2022/10/12			2022/10/12		
COC Number			900796-01-01	900796-01-01	900796-01-01			900796-01-01		
	UNITS	Criteria	BH101	BH102	QAQC1_GW	RDL	QC Batch	QAQC1_GW Lab-Dup	RDL	QC Batch
Methyl Isobutyl Ketone	ug/L	640	<5.0	<5.0	<5.0	5.0	8284392			
Methyl t-butyl ether (MTBE)	ug/L	15	<0.50	<0.50	<0.50	0.50	8284392			
Styrene	ug/L	5.4	<0.50	<0.50	<0.50	0.50	8284392			
1,1,1,2-Tetrachloroethane	ug/L	1.1	<0.50	<0.50	<0.50	0.50	8284392			
1,1,2,2-Tetrachloroethane	ug/L	1.0	<0.50	<0.50	<0.50	0.50	8284392			
Tetrachloroethylene	ug/L	17	<0.20	<0.20	<0.20	0.20	8284392			
Toluene	ug/L	24	<0.20	<0.20	<0.20	0.20	8284392			
1,1,1-Trichloroethane	ug/L	200	<0.20	<0.20	<0.20	0.20	8284392			
1,1,2-Trichloroethane	ug/L	5	<0.50	<0.50	<0.50	0.50	8284392			
Trichloroethylene	ug/L	5	<0.20	<0.20	<0.20	0.20	8284392			
Trichlorofluoromethane (FREON 11)	ug/L	150	<0.50	<0.50	<0.50	0.50	8284392			
Vinyl Chloride	ug/L	1.7	<0.20	<0.20	<0.20	0.20	8284392			
p+m-Xylene	ug/L	-	<0.20	<0.20	<0.20	0.20	8284392			
o-Xylene	ug/L	-	<0.20	<0.20	<0.20	0.20	8284392			
Total Xylenes	ug/L	300	<0.20	<0.20	<0.20	0.20	8284392			
F1 (C6-C10)	ug/L	750	<25	<25	<25	25	8284392			
F1 (C6-C10) - BTEX	ug/L	750	<25	<25	<25	25	8284392			
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/L	150	<100	<100	<100	100	8294405	<100	100	8294405
F3 (C16-C34 Hydrocarbons)	ug/L	500	<200	<200	<200	200	8294405	<200	200	8294405
F4 (C34-C50 Hydrocarbons)	ug/L	500	<200	<200	<200	200	8294405	<200	200	8294405
Reached Baseline at C50	ug/L	-	Yes	Yes	Yes		8294405	Yes		8294405
Surrogate Recovery (%)										
o-Terphenyl	%	-	98	99	98		8294405	100		8294405
4-Bromofluorobenzene	%	-	97	98	97		8284392			
D4-1,2-Dichloroethane	%	-	100	100	100		8284392			
D8-Toluene	%	-	101	101	100		8284392			

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
Potable Ground Water- All Types of Property Uses - Medium and Fine Textured Soil

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Bureau Veritas Job #: C2T7892
Report Date: 2022/10/21

Cambium Environmental Inc
Client Project #: 14833-002
Site Location: Pin Oak Dr, Niagara
Sampler Initials: MH

O.REG 153 VOCS BY HS & F1-F4 (WATER)

Bureau Veritas ID			TZQ361		
Sampling Date			2022/10/12		
COC Number			900796-01-01		
	UNITS	Criteria	TRIP BLANK	RDL	QC Batch
Calculated Parameters					
1,3-Dichloropropene (cis+trans)	ug/L	0.5	<0.50	0.50	8282499
Volatile Organics					
Acetone (2-Propanone)	ug/L	2700	<10	10	8284392
Benzene	ug/L	5.0	<0.17	0.17	8284392
Bromodichloromethane	ug/L	16.0	<0.50	0.50	8284392
Bromoform	ug/L	25.0	<1.0	1.0	8284392
Bromomethane	ug/L	0.89	<0.50	0.50	8284392
Carbon Tetrachloride	ug/L	5.0	<0.20	0.20	8284392
Chlorobenzene	ug/L	30	<0.20	0.20	8284392
Chloroform	ug/L	22	<0.20	0.20	8284392
Dibromochloromethane	ug/L	25.0	<0.50	0.50	8284392
1,2-Dichlorobenzene	ug/L	3.0	<0.50	0.50	8284392
1,3-Dichlorobenzene	ug/L	59	<0.50	0.50	8284392
1,4-Dichlorobenzene	ug/L	1.0	<0.50	0.50	8284392
Dichlorodifluoromethane (FREON 12)	ug/L	590	<1.0	1.0	8284392
1,1-Dichloroethane	ug/L	5	<0.20	0.20	8284392
1,2-Dichloroethane	ug/L	5	<0.50	0.50	8284392
1,1-Dichloroethylene	ug/L	14	<0.20	0.20	8284392
cis-1,2-Dichloroethylene	ug/L	17	<0.50	0.50	8284392
trans-1,2-Dichloroethylene	ug/L	17	<0.50	0.50	8284392
1,2-Dichloropropane	ug/L	5.0	<0.20	0.20	8284392
cis-1,3-Dichloropropene	ug/L	0.5	<0.30	0.30	8284392
trans-1,3-Dichloropropene	ug/L	0.5	<0.40	0.40	8284392
Ethylbenzene	ug/L	2.4	<0.20	0.20	8284392
Ethylene Dibromide	ug/L	0.2	<0.20	0.20	8284392
Hexane	ug/L	520	<1.0	1.0	8284392
Methylene Chloride(Dichloromethane)	ug/L	50	<2.0	2.0	8284392

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
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O.REG 153 VOCS BY HS & F1-F4 (WATER)

Bureau Veritas ID			TZQ361		
Sampling Date			2022/10/12		
COC Number			900796-01-01		
	UNITS	Criteria	TRIP BLANK	RDL	QC Batch
Methyl Ethyl Ketone (2-Butanone)	ug/L	1800	<10	10	8284392
Methyl Isobutyl Ketone	ug/L	640	<5.0	5.0	8284392
Methyl t-butyl ether (MTBE)	ug/L	15	<0.50	0.50	8284392
Styrene	ug/L	5.4	<0.50	0.50	8284392
1,1,1,2-Tetrachloroethane	ug/L	1.1	<0.50	0.50	8284392
1,1,2,2-Tetrachloroethane	ug/L	1.0	<0.50	0.50	8284392
Tetrachloroethylene	ug/L	17	<0.20	0.20	8284392
Toluene	ug/L	24	<0.20	0.20	8284392
1,1,1-Trichloroethane	ug/L	200	<0.20	0.20	8284392
1,1,2-Trichloroethane	ug/L	5	<0.50	0.50	8284392
Trichloroethylene	ug/L	5	<0.20	0.20	8284392
Trichlorofluoromethane (FREON 11)	ug/L	150	<0.50	0.50	8284392
Vinyl Chloride	ug/L	1.7	<0.20	0.20	8284392
p+m-Xylene	ug/L	-	<0.20	0.20	8284392
o-Xylene	ug/L	-	<0.20	0.20	8284392
Total Xylenes	ug/L	300	<0.20	0.20	8284392
F1 (C6-C10)	ug/L	750	<25	25	8284392
F1 (C6-C10) - BTEX	ug/L	750	<25	25	8284392
Surrogate Recovery (%)					
4-Bromofluorobenzene	%	-	98		8284392
D4-1,2-Dichloroethane	%	-	99		8284392
D8-Toluene	%	-	101		8284392

No Fill	No Exceedance
Grey	Exceeds 1 criteria policy/level
Black	Exceeds both criteria/levels

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Criteria: Ontario Reg. 153/04 (Amended April 15, 2011)
Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition
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Bureau Veritas Job #: C2T7892
Report Date: 2022/10/21

Cambium Environmental Inc
Client Project #: 14833-002
Site Location: Pin Oak Dr, Niagara
Sampler Initials: MH

TEST SUMMARY

Bureau Veritas ID: TZQ358 **Collected:** 2022/10/12
Sample ID: BH101 **Shipped:**
Matrix: Water **Received:** 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8282580	N/A	2022/10/21	Automated Statchk
1,3-Dichloropropene Sum	CALC	8282499	N/A	2022/10/20	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8294405	2022/10/20	2022/10/20	Agnieszka Brzuzy-Snopko
Dissolved Metals by ICPMS	ICP/MS	8289393	N/A	2022/10/19	Arefa Dabhad
PAH Compounds in Water by GC/MS (SIM)	GC/MS	8294404	2022/10/20	2022/10/20	Mitesh Raj
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8284392	N/A	2022/10/19	Xueming Jiang

Bureau Veritas ID: TZQ359 **Collected:** 2022/10/12
Sample ID: BH102 **Shipped:**
Matrix: Water **Received:** 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8282580	N/A	2022/10/21	Automated Statchk
1,3-Dichloropropene Sum	CALC	8282499	N/A	2022/10/20	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8294405	2022/10/20	2022/10/20	Agnieszka Brzuzy-Snopko
Dissolved Metals by ICPMS	ICP/MS	8289393	N/A	2022/10/19	Arefa Dabhad
PAH Compounds in Water by GC/MS (SIM)	GC/MS	8294404	2022/10/20	2022/10/21	Mitesh Raj
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8284392	N/A	2022/10/19	Xueming Jiang

Bureau Veritas ID: TZQ360 **Collected:** 2022/10/12
Sample ID: QAQC1_GW **Shipped:**
Matrix: Water **Received:** 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8282580	N/A	2022/10/21	Automated Statchk
1,3-Dichloropropene Sum	CALC	8282499	N/A	2022/10/20	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8294405	2022/10/20	2022/10/20	Agnieszka Brzuzy-Snopko
Dissolved Metals by ICPMS	ICP/MS	8284017	N/A	2022/10/18	Arefa Dabhad
PAH Compounds in Water by GC/MS (SIM)	GC/MS	8294404	2022/10/20	2022/10/20	Mitesh Raj
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8284392	N/A	2022/10/19	Xueming Jiang

Bureau Veritas ID: TZQ360 Dup **Collected:** 2022/10/12
Sample ID: QAQC1_GW **Shipped:**
Matrix: Water **Received:** 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8294405	2022/10/20	2022/10/20	Agnieszka Brzuzy-Snopko
PAH Compounds in Water by GC/MS (SIM)	GC/MS	8294404	2022/10/20	2022/10/20	Mitesh Raj

Bureau Veritas ID: TZQ361 **Collected:** 2022/10/12
Sample ID: TRIP BLANK **Shipped:**
Matrix: Water **Received:** 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8282499	N/A	2022/10/20	Automated Statchk

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Bureau Veritas Job #: C2T7892
Report Date: 2022/10/21

Cambium Environmental Inc
Client Project #: 14833-002
Site Location: Pin Oak Dr, Niagara
Sampler Initials: MH

TEST SUMMARY

Bureau Veritas ID: TZQ361
Sample ID: TRIP BLANK
Matrix: Water

Collected: 2022/10/12
Shipped:
Received: 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8284392	N/A	2022/10/19	Xueming Jiang

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Bureau Veritas Job #: C2T7892
Report Date: 2022/10/21

Cambium Environmental Inc
Client Project #: 14833-002
Site Location: Pin Oak Dr, Niagara
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GENERAL COMMENTS

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

Package 1	7.0°C

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8284392	4-Bromofluorobenzene	2022/10/19	99	70 - 130	98	70 - 130	97	%		
8284392	D4-1,2-Dichloroethane	2022/10/19	101	70 - 130	98	70 - 130	97	%		
8284392	D8-Toluene	2022/10/19	101	70 - 130	103	70 - 130	101	%		
8294404	D10-Anthracene	2022/10/20	81	50 - 130	114	50 - 130	120	%		
8294404	D14-Terphenyl (FS)	2022/10/20	70	50 - 130	109	50 - 130	119	%		
8294404	D8-Acenaphthylene	2022/10/20	64	50 - 130	85	50 - 130	96	%		
8294405	o-Terphenyl	2022/10/20	101	60 - 130	100	60 - 130	96	%		
8284017	Dissolved Antimony (Sb)	2022/10/18	104	80 - 120	103	80 - 120	<0.50	ug/L	NC	20
8284017	Dissolved Arsenic (As)	2022/10/18	96	80 - 120	100	80 - 120	<1.0	ug/L	5.9	20
8284017	Dissolved Barium (Ba)	2022/10/18	99	80 - 120	98	80 - 120	<2.0	ug/L	0.42	20
8284017	Dissolved Beryllium (Be)	2022/10/18	102	80 - 120	101	80 - 120	<0.40	ug/L	NC	20
8284017	Dissolved Boron (B)	2022/10/18	NC	80 - 120	98	80 - 120	<10	ug/L	2.3	20
8284017	Dissolved Cadmium (Cd)	2022/10/18	101	80 - 120	101	80 - 120	<0.090	ug/L	NC	20
8284017	Dissolved Chromium (Cr)	2022/10/18	93	80 - 120	96	80 - 120	<5.0	ug/L	NC	20
8284017	Dissolved Cobalt (Co)	2022/10/18	97	80 - 120	98	80 - 120	<0.50	ug/L	NC	20
8284017	Dissolved Copper (Cu)	2022/10/18	101	80 - 120	101	80 - 120	<0.90	ug/L	5.3	20
8284017	Dissolved Lead (Pb)	2022/10/18	96	80 - 120	100	80 - 120	<0.50	ug/L	NC	20
8284017	Dissolved Molybdenum (Mo)	2022/10/18	105	80 - 120	103	80 - 120	<0.50	ug/L	0.51	20
8284017	Dissolved Nickel (Ni)	2022/10/18	94	80 - 120	98	80 - 120	<1.0	ug/L	8.3	20
8284017	Dissolved Selenium (Se)	2022/10/18	97	80 - 120	98	80 - 120	<2.0	ug/L	NC	20
8284017	Dissolved Silver (Ag)	2022/10/18	93	80 - 120	99	80 - 120	<0.090	ug/L	NC	20
8284017	Dissolved Sodium (Na)	2022/10/18	99	80 - 120	103	80 - 120	<100	ug/L		
8284017	Dissolved Thallium (Tl)	2022/10/18	99	80 - 120	101	80 - 120	<0.050	ug/L	NC	20
8284017	Dissolved Uranium (U)	2022/10/18	98	80 - 120	101	80 - 120	<0.10	ug/L	12	20
8284017	Dissolved Vanadium (V)	2022/10/18	95	80 - 120	96	80 - 120	<0.50	ug/L	0.86	20
8284017	Dissolved Zinc (Zn)	2022/10/18	93	80 - 120	98	80 - 120	<5.0	ug/L	3.1	20
8284392	1,1,1,2-Tetrachloroethane	2022/10/19	93	70 - 130	95	70 - 130	<0.50	ug/L	NC	30
8284392	1,1,1-Trichloroethane	2022/10/19	75	70 - 130	80	70 - 130	<0.20	ug/L	NC	30
8284392	1,1,2,2-Tetrachloroethane	2022/10/19	110	70 - 130	108	70 - 130	<0.50	ug/L	NC	30
8284392	1,1,2-Trichloroethane	2022/10/19	107	70 - 130	104	70 - 130	<0.50	ug/L	NC	30
8284392	1,1-Dichloroethane	2022/10/19	84	70 - 130	88	70 - 130	<0.20	ug/L	NC	30

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8284392	1,1-Dichloroethylene	2022/10/19	78	70 - 130	84	70 - 130	<0.20	ug/L	NC	30
8284392	1,2-Dichlorobenzene	2022/10/19	97	70 - 130	100	70 - 130	<0.50	ug/L	NC	30
8284392	1,2-Dichloroethane	2022/10/19	86	70 - 130	86	70 - 130	<0.50	ug/L	NC	30
8284392	1,2-Dichloropropane	2022/10/19	98	70 - 130	101	70 - 130	<0.20	ug/L	NC	30
8284392	1,3-Dichlorobenzene	2022/10/19	95	70 - 130	98	70 - 130	<0.50	ug/L	NC	30
8284392	1,4-Dichlorobenzene	2022/10/19	112	70 - 130	114	70 - 130	<0.50	ug/L	NC	30
8284392	Acetone (2-Propanone)	2022/10/19	101	60 - 140	96	60 - 140	<10	ug/L	NC	30
8284392	Benzene	2022/10/19	83	70 - 130	87	70 - 130	<0.17	ug/L	2.3	30
8284392	Bromodichloromethane	2022/10/19	94	70 - 130	96	70 - 130	<0.50	ug/L	NC	30
8284392	Bromoform	2022/10/19	96	70 - 130	94	70 - 130	<1.0	ug/L	NC	30
8284392	Bromomethane	2022/10/19	75	60 - 140	80	60 - 140	<0.50	ug/L	NC	30
8284392	Carbon Tetrachloride	2022/10/19	71	70 - 130	76	70 - 130	<0.20	ug/L	NC	30
8284392	Chlorobenzene	2022/10/19	96	70 - 130	98	70 - 130	<0.20	ug/L	NC	30
8284392	Chloroform	2022/10/19	85	70 - 130	88	70 - 130	<0.20	ug/L	NC	30
8284392	cis-1,2-Dichloroethylene	2022/10/19	85	70 - 130	88	70 - 130	<0.50	ug/L	NC	30
8284392	cis-1,3-Dichloropropene	2022/10/19	93	70 - 130	93	70 - 130	<0.30	ug/L	NC	30
8284392	Dibromochloromethane	2022/10/19	93	70 - 130	92	70 - 130	<0.50	ug/L	NC	30
8284392	Dichlorodifluoromethane (FREON 12)	2022/10/19	80	60 - 140	89	60 - 140	<1.0	ug/L	NC	30
8284392	Ethylbenzene	2022/10/19	88	70 - 130	92	70 - 130	<0.20	ug/L	NC	30
8284392	Ethylene Dibromide	2022/10/19	98	70 - 130	95	70 - 130	<0.20	ug/L	NC	30
8284392	F1 (C6-C10) - BTEX	2022/10/19					<25	ug/L	NC	30
8284392	F1 (C6-C10)	2022/10/19	93	60 - 140	94	60 - 140	<25	ug/L	NC	30
8284392	Hexane	2022/10/19	84	70 - 130	92	70 - 130	<1.0	ug/L	NC	30
8284392	Methyl Ethyl Ketone (2-Butanone)	2022/10/19	128	60 - 140	123	60 - 140	<10	ug/L	NC	30
8284392	Methyl Isobutyl Ketone	2022/10/19	120	70 - 130	117	70 - 130	<5.0	ug/L	NC	30
8284392	Methyl t-butyl ether (MTBE)	2022/10/19	85	70 - 130	86	70 - 130	<0.50	ug/L	NC	30
8284392	Methylene Chloride(Dichloromethane)	2022/10/19	88	70 - 130	90	70 - 130	<2.0	ug/L	NC	30
8284392	o-Xylene	2022/10/19	91	70 - 130	94	70 - 130	<0.20	ug/L	NC	30
8284392	p+m-Xylene	2022/10/19	93	70 - 130	97	70 - 130	<0.20	ug/L	NC	30
8284392	Styrene	2022/10/19	101	70 - 130	104	70 - 130	<0.50	ug/L	NC	30
8284392	Tetrachloroethylene	2022/10/19	79	70 - 130	83	70 - 130	<0.20	ug/L	NC	30

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8284392	Toluene	2022/10/19	85	70 - 130	88	70 - 130	<0.20	ug/L	NC	30
8284392	Total Xylenes	2022/10/19					<0.20	ug/L	NC	30
8284392	trans-1,2-Dichloroethylene	2022/10/19	81	70 - 130	86	70 - 130	<0.50	ug/L	NC	30
8284392	trans-1,3-Dichloropropene	2022/10/19	101	70 - 130	97	70 - 130	<0.40	ug/L	NC	30
8284392	Trichloroethylene	2022/10/19	86	70 - 130	91	70 - 130	<0.20	ug/L	NC	30
8284392	Trichlorofluoromethane (FREON 11)	2022/10/19	69 (1)	70 - 130	75	70 - 130	<0.50	ug/L	NC	30
8284392	Vinyl Chloride	2022/10/19	77	70 - 130	84	70 - 130	<0.20	ug/L	NC	30
8289393	Dissolved Antimony (Sb)	2022/10/19	106	80 - 120	103	80 - 120	<0.50	ug/L	NC	20
8289393	Dissolved Arsenic (As)	2022/10/19	100	80 - 120	101	80 - 120	<1.0	ug/L	3.7	20
8289393	Dissolved Barium (Ba)	2022/10/19	98	80 - 120	100	80 - 120	<2.0	ug/L	1.8	20
8289393	Dissolved Beryllium (Be)	2022/10/19	101	80 - 120	98	80 - 120	<0.40	ug/L	NC	20
8289393	Dissolved Boron (B)	2022/10/19	NC	80 - 120	92	80 - 120	<10	ug/L	1.5	20
8289393	Dissolved Cadmium (Cd)	2022/10/19	98	80 - 120	100	80 - 120	<0.090	ug/L	NC	20
8289393	Dissolved Chromium (Cr)	2022/10/19	95	80 - 120	95	80 - 120	<5.0	ug/L	NC	20
8289393	Dissolved Cobalt (Co)	2022/10/19	98	80 - 120	99	80 - 120	<0.50	ug/L	3.8	20
8289393	Dissolved Copper (Cu)	2022/10/19	99	80 - 120	98	80 - 120	<0.90	ug/L	NC	20
8289393	Dissolved Lead (Pb)	2022/10/19	94	80 - 120	102	80 - 120	<0.50	ug/L	NC	20
8289393	Dissolved Molybdenum (Mo)	2022/10/19	102	80 - 120	99	80 - 120	<0.50	ug/L	0.64	20
8289393	Dissolved Nickel (Ni)	2022/10/19	94	80 - 120	99	80 - 120	<1.0	ug/L	12	20
8289393	Dissolved Selenium (Se)	2022/10/19	90	80 - 120	100	80 - 120	<2.0	ug/L	NC	20
8289393	Dissolved Silver (Ag)	2022/10/19	38 (2)	80 - 120	99	80 - 120	<0.090	ug/L	NC	20
8289393	Dissolved Sodium (Na)	2022/10/19	NC	80 - 120	100	80 - 120	<100	ug/L	4.3	20
8289393	Dissolved Thallium (Tl)	2022/10/19	95	80 - 120	98	80 - 120	<0.050	ug/L	NC	20
8289393	Dissolved Uranium (U)	2022/10/19	97	80 - 120	101	80 - 120	<0.10	ug/L	2.4	20
8289393	Dissolved Vanadium (V)	2022/10/19	98	80 - 120	96	80 - 120	<0.50	ug/L	NC	20
8289393	Dissolved Zinc (Zn)	2022/10/19	94	80 - 120	100	80 - 120	<5.0	ug/L	NC	20
8294404	1-Methylnaphthalene	2022/10/20	91	50 - 130	83	50 - 130	<0.050	ug/L	NC	30
8294404	2-Methylnaphthalene	2022/10/20	94	50 - 130	84	50 - 130	<0.050	ug/L	NC	30
8294404	Acenaphthene	2022/10/20	105	50 - 130	99	50 - 130	<0.050	ug/L	NC	30
8294404	Acenaphthylene	2022/10/20	101	50 - 130	94	50 - 130	<0.050	ug/L	NC	30
8294404	Anthracene	2022/10/20	110	50 - 130	107	50 - 130	<0.050	ug/L	NC	30

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8294404	Benzo(a)anthracene	2022/10/20	106	50 - 130	101	50 - 130	<0.050	ug/L	NC	30
8294404	Benzo(a)pyrene	2022/10/20	106	50 - 130	100	50 - 130	<0.0090	ug/L	NC	30
8294404	Benzo(b/j)fluoranthene	2022/10/20	107	50 - 130	105	50 - 130	<0.050	ug/L	NC	30
8294404	Benzo(e)pyrene	2022/10/20	109	50 - 130	106	50 - 130	<0.050	ug/L	NC	30
8294404	Benzo(g,h,i)perylene	2022/10/20	106	50 - 130	104	50 - 130	<0.050	ug/L	NC	30
8294404	Benzo(k)fluoranthene	2022/10/20	107	50 - 130	104	50 - 130	<0.050	ug/L	NC	30
8294404	Chrysene	2022/10/20	110	50 - 130	107	50 - 130	<0.050	ug/L	NC	30
8294404	Dibenzo(a,h)anthracene	2022/10/20	99	50 - 130	101	50 - 130	<0.050	ug/L	NC	30
8294404	Fluoranthene	2022/10/20	118	50 - 130	114	50 - 130	<0.050	ug/L	NC	30
8294404	Fluorene	2022/10/20	112	50 - 130	105	50 - 130	<0.050	ug/L	NC	30
8294404	Indeno(1,2,3-cd)pyrene	2022/10/20	109	50 - 130	107	50 - 130	<0.050	ug/L	NC	30
8294404	Naphthalene	2022/10/20	99	50 - 130	91	50 - 130	<0.050	ug/L	NC	30
8294404	Perylene	2022/10/20	105	50 - 130	105	50 - 130	<0.050	ug/L	NC	40
8294404	Phenanthrene	2022/10/20	111	50 - 130	106	50 - 130	<0.030	ug/L	NC	30
8294404	Pyrene	2022/10/20	115	50 - 130	111	50 - 130	<0.050	ug/L	NC	30
8294405	F2 (C10-C16 Hydrocarbons)	2022/10/20	106	60 - 130	104	60 - 130	<100	ug/L	NC	30
8294405	F3 (C16-C34 Hydrocarbons)	2022/10/20	106	60 - 130	107	60 - 130	<200	ug/L	NC	30
8294405	F4 (C34-C50 Hydrocarbons)	2022/10/20	107	60 - 130	106	60 - 130	<200	ug/L	NC	30

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

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

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

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

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

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

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

(1) The recovery was below the lower control limit. This may represent a low bias in some results for this specific analyte.

(2) Metal Analysis:Matrix Spike exceeds acceptance limits, probable matrix interference

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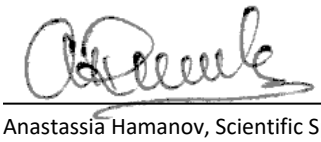
Bureau Veritas Job #: C2T7892
Report Date: 2022/10/21

Cambium Environmental Inc
Client Project #: 14833-002
Site Location: Pin Oak Dr, Niagara
Sampler Initials: MH

VALIDATION SIGNATURE PAGE

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



Anastassia Hamanov, Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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13-Oct-22 14:14
Gemarie Balatico
C2T7892

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		
Company Name:	#17950 Cambium Environmental Inc	Company Name:		Quotation #:	C21984	Bottle Order #:
Attention:	ACCOUNTS PAYABLE	Attention:	Sharif Nawyaz	P.O. #:		900796
Address:	194 Sophia Street PO Box 325 Peterborough ON K9H 1E5	Address:		Project:	14833-002	Project Manager:
Tel:	(705) 742-7900 Fax: (705) 742-7907	Tel:	(866) 217-7900 Fax:	Project Name:	SPJ ENV-1133	
Email:	accounting@cambium-inc.com; Evan.Black@cambium-	Email:	Sharif.Nawyaz@cambium-inc.com	Site #:	C#900796-01-01	Gemarie Balatico
				Sampled By:	M.HALIGOWSKI	

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)
- ☐ Table 1 ☒ Res/Park ☒ Medium/Fine
- ☒ Table 2 ☐ Ind/Comm ☐ Coarse
- ☐ Table 3 ☐ Agri/Other ☐ For RSC
- ☐ Table ___

Other Regulations
- ☐ CCME ☐ Sanitary Sewer Bylaw
- ☐ Reg 558 ☐ Storm Sewer Bylaw
- ☐ MISA Municipality ___
- ☐ PWQO ☐ Reg 406 Table ___
- ☐ Other ___

Special Instructions: EDDS Req'd.

Include Criteria on Certificate of Analysis (Y/N)? ___

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

Regular (Standard) TAT: ☒
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: ___ Time Required: ___ ☐
Rush Confirmation Number: ___ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	O.Reg 153 VOCs by HS & F1-F4	O.Reg 153 PAHs	O.Reg 153 Metals & Inorganics Pkg (Wtr)	# of Bottles	Comments
1		BH101	12-Oct-22		GW	Y	X	X	X	9	
2		BH102	12-Oct-22		GW	Y	X	X	X	9	
3		QAQC1_GW	12-Oct-22		GW	Y	X	X	X	9	
4		TRIP BLANK			GW		X			1	
5					GW						
6											
7											
8											
9											
10											

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
M.HALIGOWSKI	22/10/13			22/10/13	15 14	

Laboratory Use Only
Time Sensitive | Temperature (°C) on Recei: 8/6/7 | Custody Seal Present / Intact | Yes ✓ | No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT WWW.BVNA.COM/RESOURCES/CHAIN-OF-CUSTODY-FORMS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

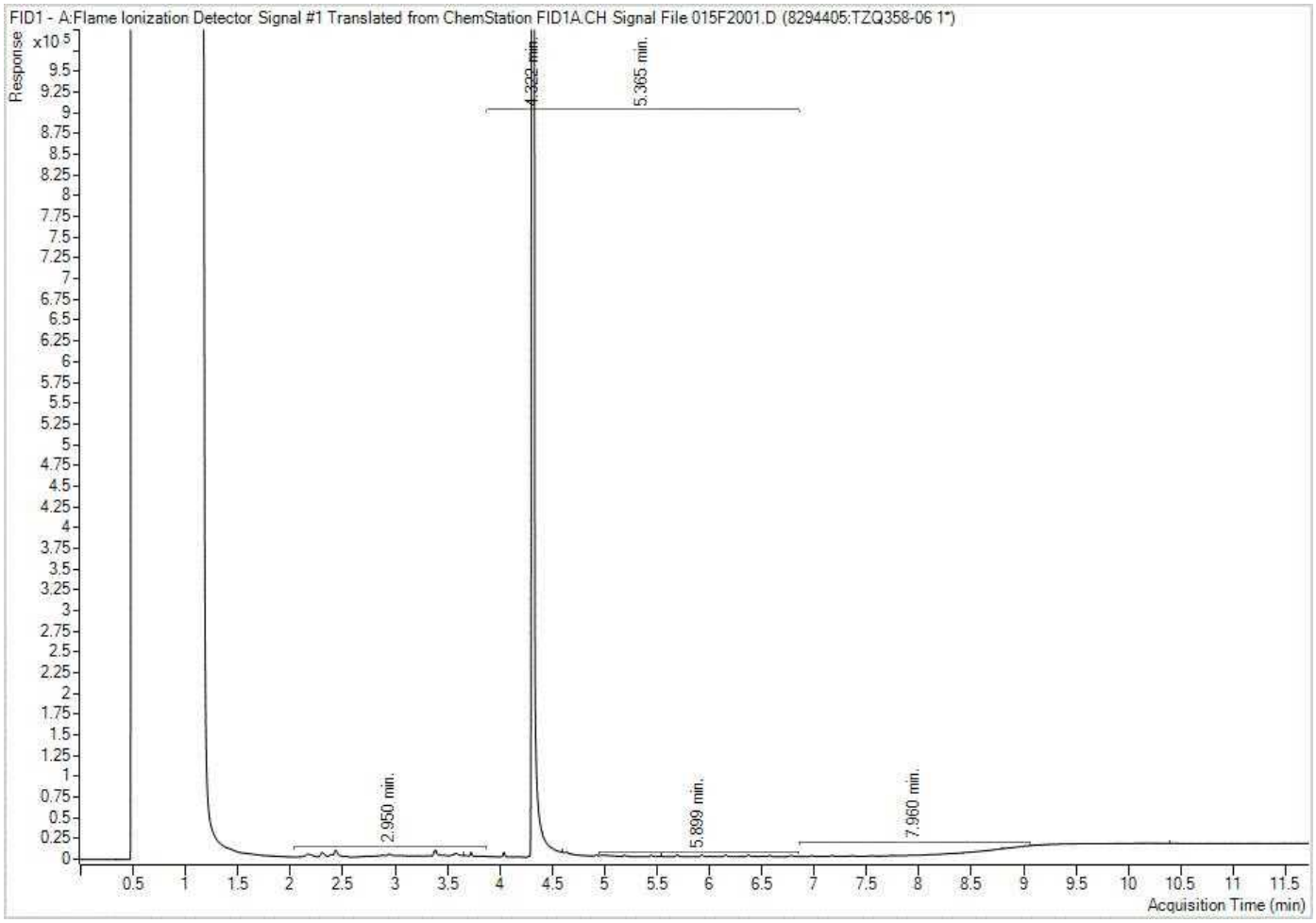
White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

Bureau Veritas Job #: C2T7892
Report Date: 2022/10/21
Bureau Veritas Sample: TZQ358

Cambium Environmental Inc
Client Project #: 14833-002
Project name: Pin Oak Dr, Niagara
Client ID: BH101

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

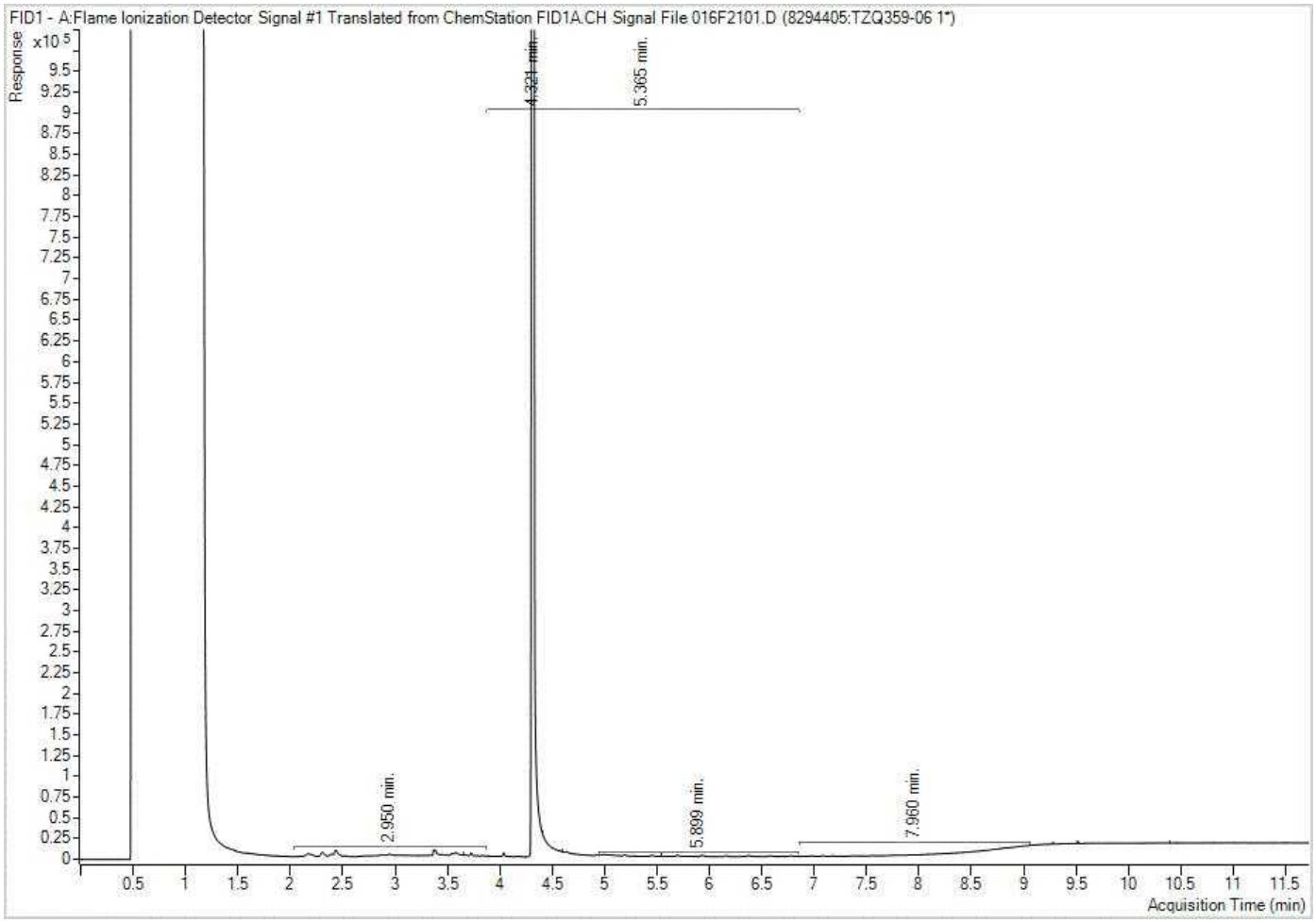


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C2T7892
Report Date: 2022/10/21
Bureau Veritas Sample: TZQ359

Cambium Environmental Inc
Client Project #: 14833-002
Project name: Pin Oak Dr, Niagara
Client ID: BH102

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

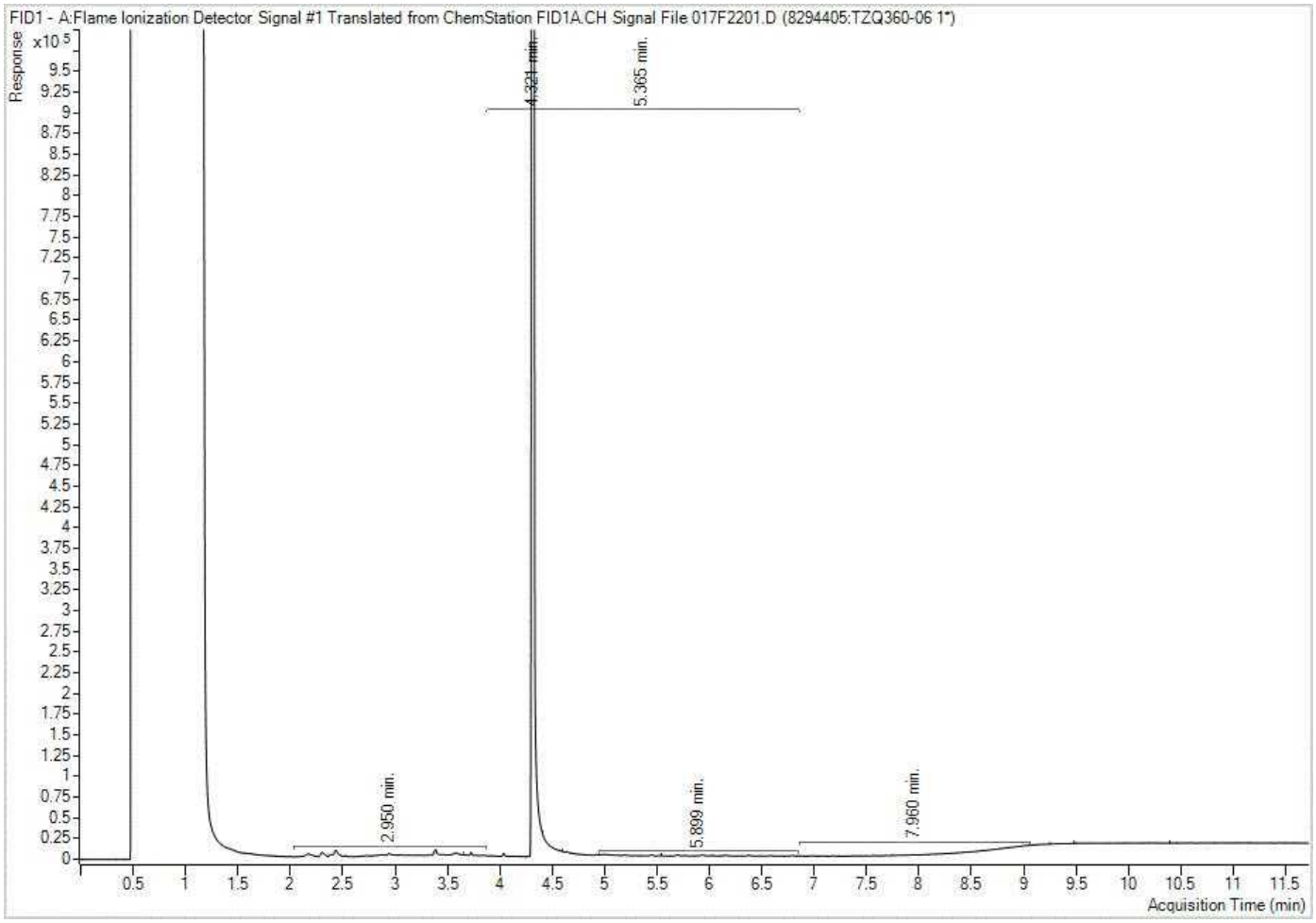


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C2T7892
Report Date: 2022/10/21
Bureau Veritas Sample: TZQ360

Cambium Environmental Inc
Client Project #: 14833-002
Project name: Pin Oak Dr, Niagara
Client ID: QAQC1_GW

Petroleum Hydrocarbons F2-F4 in Water Chromatogram

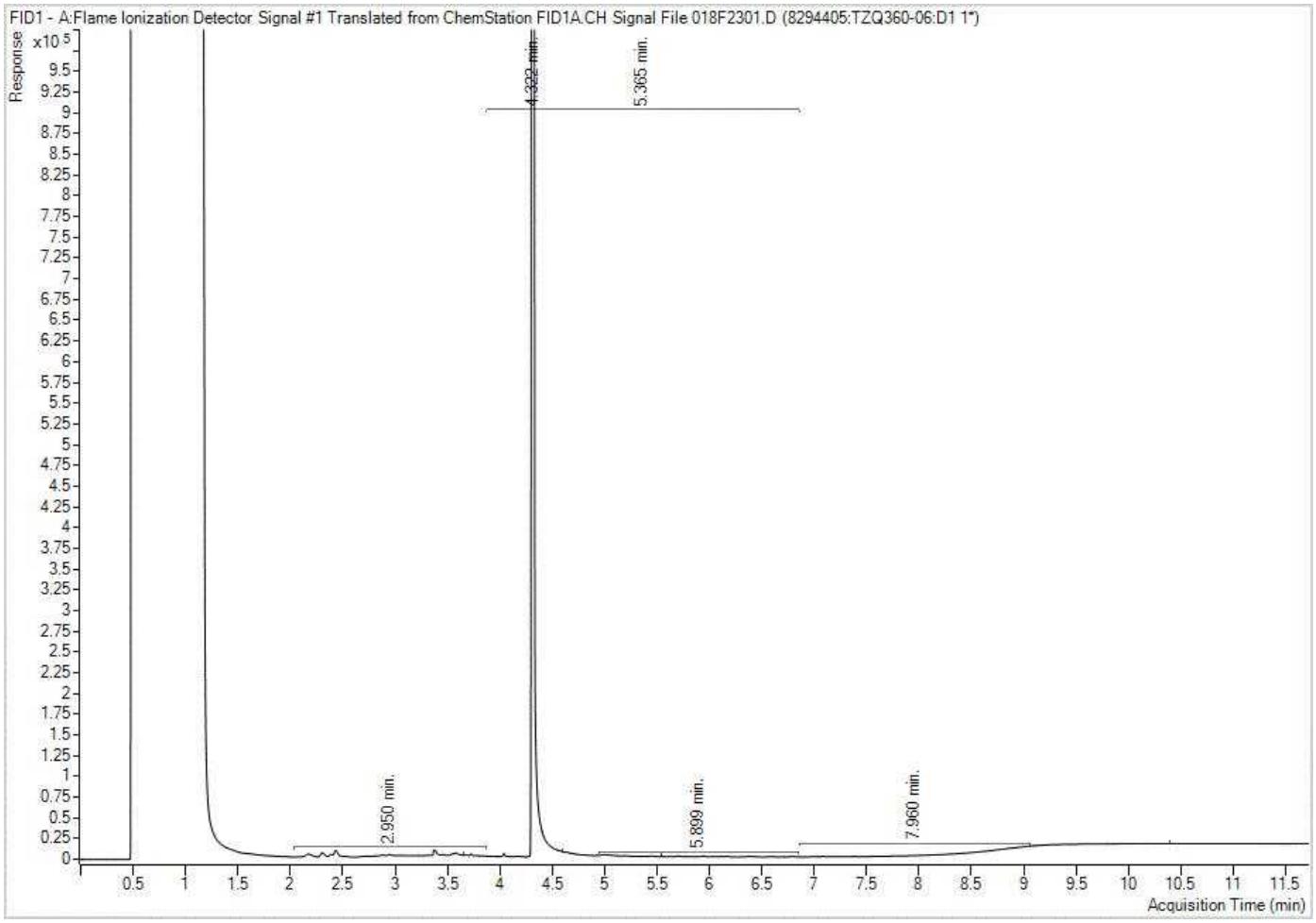


Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Bureau Veritas Job #: C2T7892
Report Date: 2022/10/21
Bureau Veritas Sample: TZQ360 Lab-Dup

Cambium Environmental Inc
Client Project #: 14833-002
Project name: Pin Oak Dr, Niagara
Client ID: QAQC1_GW

Petroleum Hydrocarbons F2-F4 in Water Chromatogram



Note: This information is provided for reference purposes only. Should detailed chemist interpretation or fingerprinting be required, please contact the laboratory.

Exceedance Summary Table – Reg153/04 T2-GW-F/M

Result Exceedances

Sample ID	Bureau Veritas ID	Parameter	Criteria	Result	DL	UNITS
No Exceedances						

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

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Grain Size Distribution Chart

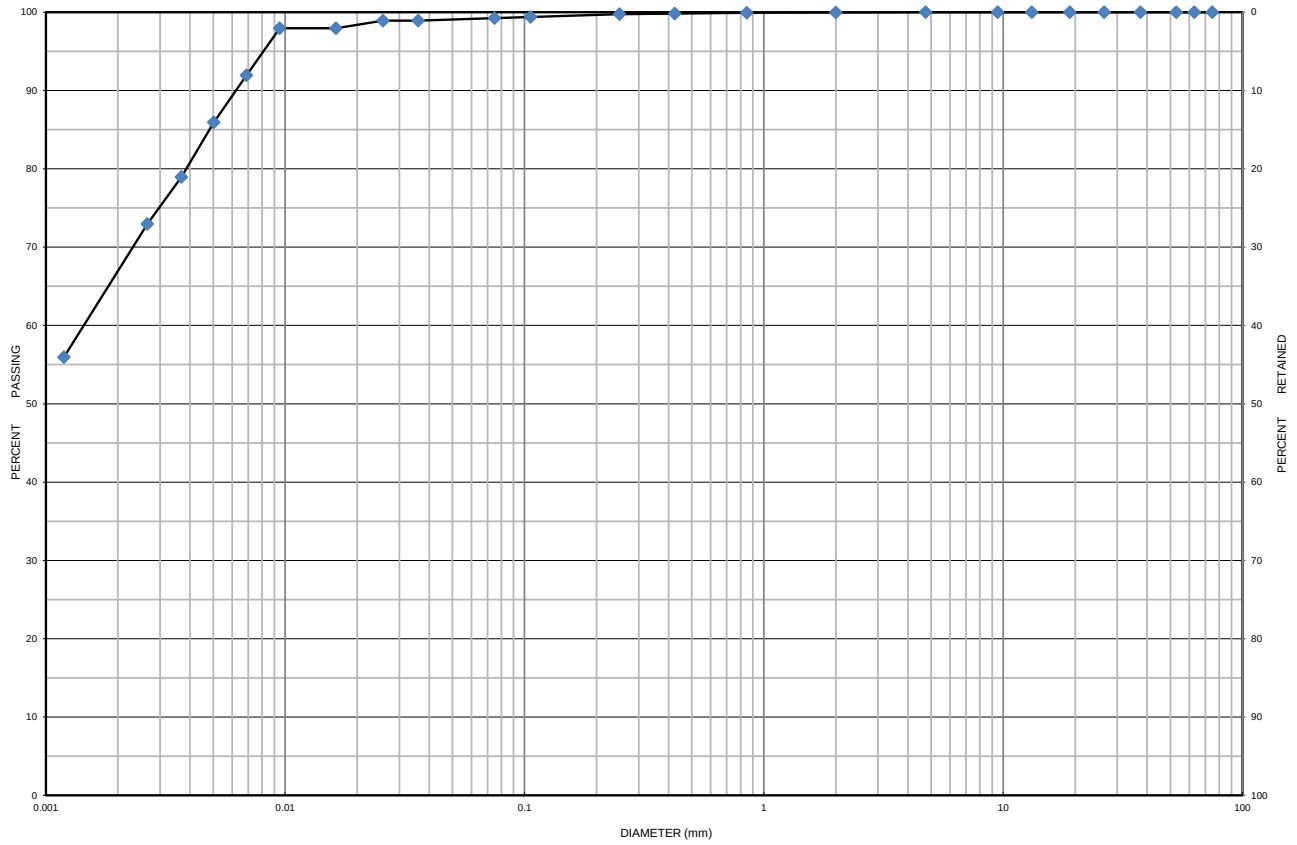
Project Number: *14833-002* **Client:** *Penta Properties Inc*

Project Name: *Phase Two ESA - 0 Pin Oak Dr, Niagara Drive*

Sample Date: *October 11, 2022* **Sampled By:** *Meaghan Haligowski - Cambium Inc.*

Location: *BH 101-22* **Depth:** *0.8 m to 1.4 m* **Lab Sample No:** *S-22-1520*

UNIFIED SOIL CLASSIFICATION SYSTEM					
CLAY & SILT (<0.075 mm)	SAND (<4.75 mm to 0.075 mm)			GRAVEL (>4.75 mm)	
	FINE	MEDIUM	COARSE	FINE	COARSE



MIT SOIL CLASSIFICATION SYSTEM								
CLAY	SILT	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	BOULDERS
		SAND			GRAVEL			

Borehole No.	Sample No.	Depth	Gravel	Sand	Silt	Clay	Moisture
BH 101-22		0.8 m to 1.4 m	0	1	32	67	22.2

Description	Classification	D_{60}	D_{30}	D_{10}	C_u	C_c
Silty Clay trace Sand	CL	0.0015	-	-	-	-

Additional information available upon request

Issued By: _____ *Date Issued:* *October 28, 2022*

(Senior Project Manager)

Cambium Inc. (Laboratory)
866.217.7900 | cambium-inc.com
194 Sophia St. | Peterborough | ON | K9H 1E5

Grain Size Distribution Chart

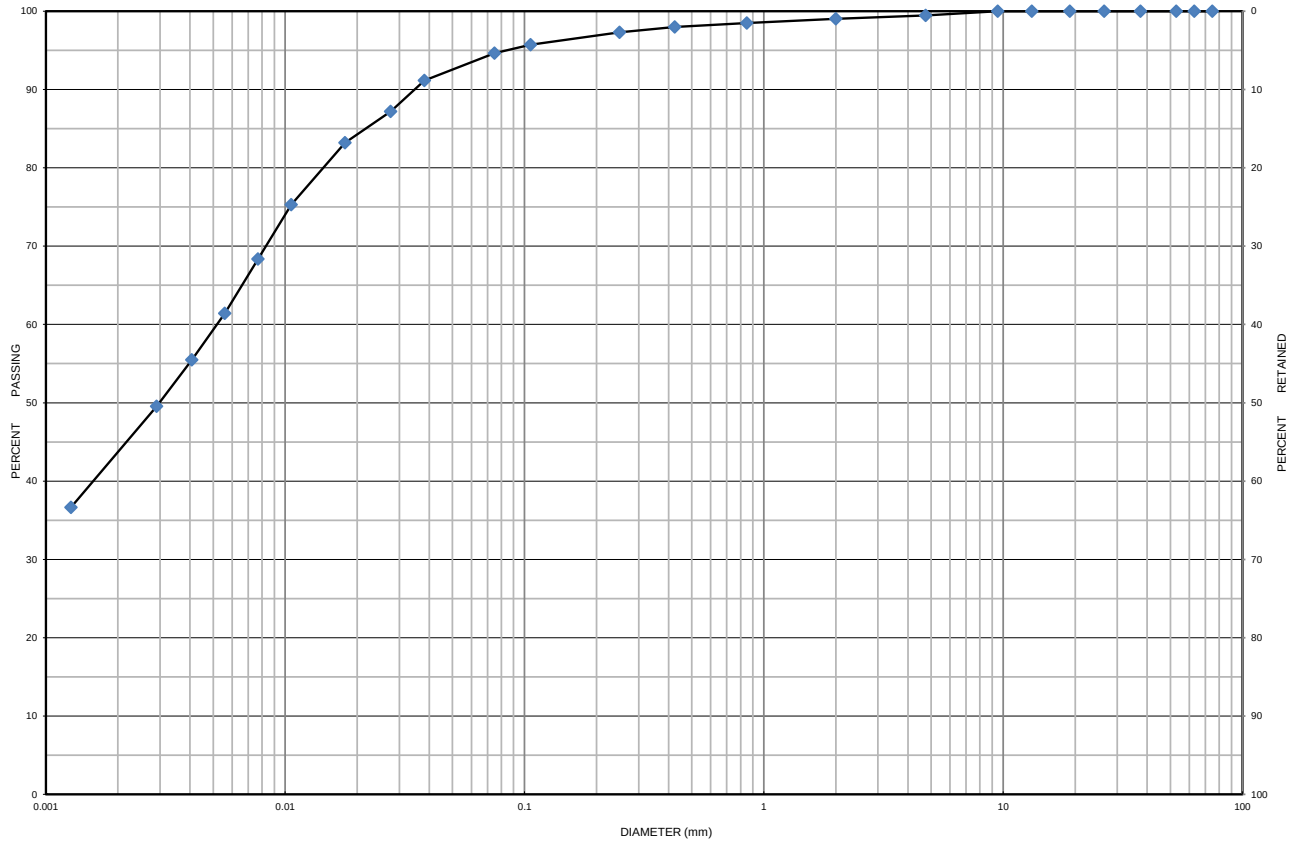
Project Number: *14833-002* **Client:** *Penta Properties Inc*

Project Name: *Phase Two ESA - 0 Pin Oak Dr, Niagara Drive*

Sample Date: *October 11, 2022* **Sampled By:** *Meaghan Haligowski - Cambium Inc.*

Location: *BH 102-22* **Depth:** *5.3 m to 5.9 m* **Lab Sample No:** *S-22-1521*

UNIFIED SOIL CLASSIFICATION SYSTEM					
CLAY & SILT (<0.075 mm)	SAND (<4.75 mm to 0.075 mm)			GRAVEL (>4.75 mm)	
	FINE	MEDIUM	COARSE	FINE	COARSE



MIT SOIL CLASSIFICATION SYSTEM								
CLAY	SILT	FINE	MEDIUM	COARSE	FINE	MEDIUM	COARSE	BOULDERS
		SAND			GRAVEL			

Borehole No.	Sample No.	Depth	Gravel	Sand	Silt	Clay	Moisture
BH 102-22		5.3 m to 5.9 m	1	5	50	44	19.7

Description	Classification	D_{60}	D_{30}	D_{10}	C_u	C_c
Silt and Clay trace Sand trace Gravel	ML	0.0052	-	-	-	-

Additional information available upon request

Issued By: _____ *Date Issued:* *October 28, 2022*

(Senior Project Manager)

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