



Phase Two Environmental Site Assessment - Lower Beverley Lake Park Road, Delta, Ontario

July 25, 2024

Prepared for:
Township of Rideau Lakes

Cambium Reference: 17181-001

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1.0 Executive Summary

The Township of Rideau Lakes (Client) retained Cambium Inc. (Cambium) to complete a Phase Two Environmental Site Assessment (ESA) at Lower Beverley Lake Park Road, Delta, Ontario (Site, or Phase Two Property). The development plans for the Site are currently unknown; at the time of this report, the Phase Two ESA will not be used to support filing a Record of Site Condition (RSC); however, it was completed to meet the requirements of Ontario Regulation (O.Reg.) 153/04.

The roughly 0.87 ha Site is on the northwest corner of Lower Beverley Lake Road and King Street, adjacent to and behind the Old Town Hall in Delta, Ontario. The first developed land use at the site was for industrial purposes in 1941. The Site reportedly operated as a maple syrup factory until the late 1980s, and also manufactured canoes approximately between the 1950s to the 1960s.

The Phase One ESA identified ten potentially contaminating activities (PCAs), five on-site and five off-site, within the phase one study area. The five on-site PCAs as well as one of the off-site PCAs contribute to areas of potential environmental concern (APECs) at the Site. The related contaminants of potential environmental concern (COPCs) were benzene, toluene, ethylbenzene, xylenes (BTEX), petroleum hydrocarbons (PHCs), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), metals, hydride-forming metals, and other regulated parameters (ORPs) including: hot water-soluble boron (HWS B), hexavalent chromium (CrVI), mercury (Hg), cyanide (CN), electrical conductivity (EC), sodium adsorption ratio (SAR), and sodium (Na). Potentially contaminated media were soil and groundwater.

A Phase Two ESA work program was developed to investigate COPCs in soil and groundwater, and a Species of Conservation Concern (Leeds and Grenville) habitat survey. The Phase Two ESA included nineteen boreholes, five of which were completed as groundwater monitoring wells. Soil and groundwater sample collection was completed as an initial investigation in October 2023 (100-series boreholes), with a groundwater resampling



event in December 2023 (BH107). A soil delineation and groundwater sampling event was then completed in May 2024 (200-series boreholes).

Concentrations of select COPCs were greater than the applicable Table 8 Site Condition Standards (SCS) in the analyzed soil samples (BH102, BH103, BH104, BH107, BH109, BH201, BH203, BH204, BH208, and BH209).

Based on the exceedances identified, Cambium recommended proceeding with a screening level risk assessment (SLRA) approach to address soil impacts. The SLRA is included under a separate cover. The SLRA was completed using a screening level approach, in general accordance with Ontario Regulation (O.Reg.) 153/04, as an RSC with the Ontario Ministry of the Environment, Conservation and Parks (Ministry) under O.Reg. 153/04 is not required at this time. It is noted that the SLRA will not be suitable for submission to the Ministry for the purpose of filing an RSC, if an RSC is required for future property use.



2.0 Introduction

The Client retained Cambium to complete a Phase Two ESA at Lower Beverley Lake Park Road, Delta, Ontario (Figure 1). At the time of this report, the Phase Two ESA will not be used to support filing a Record of Site Condition (RSC) under Section 168.3.1 of Part XV.1 of the *Environmental Protection Act*. However, the development plans for the Site are currently unknown (anticipated to include either commercial or community use) and the Phase Two ESA was, therefore, completed to meet the requirements of O.Reg. 153/04. The accompanying SLRA is not sufficient to file the RSC and future work may be required should an RSC be required.

2.1 Site Description

The Site is on the northwest corner of Lower Beverley Lake Park Road and King Street, adjacent to and behind the Old Town Hall in Delta Ontario. Cowans Creek (also known as Foundry Creek) is adjacent along the northwest border of the Site. Site information and property owner information are summarized below.

The Site location is shown on Figure 1. The Site boundary is shown on Figure 2. Photographs of the Site are included in Appendix C.



Site Identification Information

Municipal Address	(No municipal address) Lower Beverley Lake Park Road, Delta, Ontario
Historical Land Use	Industrial
Current Land Use	Industrial (vacant)
Future Land Use	Anticipated to be Commercial or Community
PIN	44115-0293 (R)
Roll No.	083183105614400
Universal Transverse Mercator Coordinates*	Zone 18T 410905 m E, 4940361 m N
Legal Description	LT 8 BLK RUSSELL PL 153; PT LT 5-7, 9-10 BLK RUSSELL PL 153; PT LT 1 BLK H PL 153; PT ALLEY LYING BTN LT 2 TO LT 8 AND LT 10 AND LT 9 RUSSELL BLK PL 153 S/T & T/W LR206150; RIDEAU LAKES
Site Area	≈0.87 ha (2.15 acres)

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

2.2 Property Ownership

Property Owner	Contact Information
The Township of Rideau Lakes 1439 County Road 8, Delta, Ontario K0E 1G0	Steve Holmes, RPP Manager of Facilities and Parks Phone: (613) 928-2251 x245 Email: parksmanager@rideaulakes.ca

2.3 Current and Proposed Future Uses

The Phase Two Property currently consists of a vacant building, historically used for commercial and industrial purposes as a maple syrup refining factory, and for metal canoe manufacturing.

The intended use of the Site has not been finalized; however, the Client has indicated no change to a more sensitive land use is planned at this time; therefore, an RSC is not required at this time.



2.4 Applicable Site Condition Standards

The *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* (MOECC, 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 not finalized; however, the Client has indicated it will be repurposed for commercial or community use.
- The area being investigated 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 does apply 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. It should be noted that properties within the Study Area are privately serviced for drinking water. In addition, based on Cambium's regulatory review associated with the Phase One ESA (i.e., ERIS), 56 well records for domestic water supply wells were identified by the records within the phase one study area ranging from about 5 m to 250 m from the Site. Therefore, not all properties within the Phase One Study Area are serviced by the municipal drinking water system, and as such potable standards apply to the Site.
- 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.
- The stratigraphy consisted of some fill material but was primarily underlain by silty clay. Bedrock was encountered at 1.5 m below ground surface (bgs) at BH109, 2.4 mbgs at BH107, and not at the other borehole locations within the maximum drilled depth of 6.1 mbgs.
- On-site soil pH was within the acceptable ranges for surface (≤ 1.5 mbgs) and sub-surface (> 1.5 mbgs) soil.



- Two soil samples from BH101 at a depth of 0.01 to 0.6 mbgs and 1.52 to 2.43 mbgs were submitted for grain size analysis. Analysis indicates the soil consists of medium/fine soil. It is noted that fill material was underlain by the silty clay, as such, SCS for coarse texture soil was conservatively selected to account for the potential presence of coarse grained fill material.
- No area of natural significance, as defined in Section 1 of O.Reg. 153/04, is in whole or in part within the Phase Two study area, however The Natural Heritage Information Centre (NHIC) identified habitat potential for endangered or threatened species within the 1 km grid overlapping the Site (MNR, 2023). As noted in Section 4.3.3, Cambium completed a supplemental review for SAR habitat and the Site was not found to provide protected habitat for any SAR. As such, the Site is not considered environmentally sensitive as per Section 41 of O.Reg. 153/04.

Based on the above information, the applicable SCS for the Site is the Table 8 *Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Groundwater Condition* for Residential/Parkland/Institutional/Industrial/Commercial/Community (RPIICC) Property Use. Table 8 SCS is used when the site is within 30 m of a surface water body. These standards were developed to protect surface water bodies from the movement of soil directly into the surface water becoming sediment. Table 8 is not based on a soil texture group and is based on land use; agricultural or Residential/Parkland/Institutional/Industrial/Commercial/Community.

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 groundwater on, in or under the Site; and subsequently determine if the SCS for contaminants on, in or under the Site were met. These objectives were achieved by developing an understanding of the geological and hydrogeological conditions at the Site and conducting field investigations for the identified COPCs. The Phase Two ESA included a soil and groundwater investigation, as well a Species of Conservation Concern.



3.0 Background Information

3.1 Physical Setting

The surface elevation at the Site is generally similar to the surrounding adjacent properties with some natural undulations due to the shallow bedrock in the area. Based on the Site reconnaissance, the paved driveway slopes up to the north (towards the centre of the Site) from Lower Beverley Lake Park Road, and a slight decrease in elevation was observed north to northwest of the building. The Site consists of a large industrial building with multiple phases of construction, asphalt driveway and loading bays, and vegetated areas with grasses and small shrubs. The topography slopes down towards Cowans Creek (partially on-site to the Site to the north to southwest) and Delta Creek, 40 m south of the Site.

The Site is within the Smiths Falls Limestone Plains physiographic region (OGS, 2007), characterized by limestone plains. In the general area, the overburden is fine-textured glaciolacustrine deposits of silt and clay, minor sand and gravel (OGS, 2010). The soils overlie Precambrian, crystalline basement and Nepean, sandstone bedrock (OGS, 2007). A review of Ministry water well records (MECP, 2023) for boreholes within 200 m of the Site indicated that the local stratigraphy consisted of topsoil overlying grey silt and sand or blue/grey clay over sandstone.

Cowans Creek is partially on-site on the northwest boundary of Site; therefore, the Site is within 30 m of a water body, as defined in O.Reg. 153/04. The Site is zoned commercial in the Delta settlement area in the Township of Rideau Lakes (Rideau Lakes, 2023); however, portions of the Upper Beverley Lake wetland (about 40 m east) were identified in the Official Plan as an Environmental Protection Area/ Natural Heritage "A" (PSW) zone. This ANSI is over 30 m from the Site, and therefore as per Section 41 of O.Reg. 153/04, the Site is not considered environmentally sensitive.

As noted in Section 4.3.3, Cambium completed a supplemental review for SAR habitat and the Site was not found to provide protected habitat for any SAR. As such, the Site is not considered environmentally sensitive as per Section 41 of O.Reg. 153/04.



The study area is privately serviced for drinking water and has private water wells. 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. The Site had water holding tanks. The study area is not within a well-head protection area.

A search of the Ministry Water Well Information System by ERIS identified no records for on-site wells, and 56 records for wells within the study area. These wells records within the phase one study area ranging from about 5 m to 250 m from the Site. The wells were identified as domestic or commercial water supply, observation wells, and monitoring and test holes from about 40 m to 250 m from Site. The stratigraphy, depth to bedrock, and depth to water table were reviewed and incorporated throughout the report.

Stratigraphy in the off-site wells within 100 m of the Site was grey/blue clay and/or silt overlying granite, limestone or sandstone bedrock at varying depths from 0.9 to about 5 mbgs on properties adjacent to the Site.

3.2 Past Investigations

Phase One Environmental Site Assessment – Lower Beverley Lake Park Road, Delta, Ontario (Cambium Inc, 2023).

Cambium completed a Phase One ESA for the Site consistent with O.Reg. 153/04.

A review of aerial photographs, city directories, fire insurance plans, and property ownership information was completed to determine the first developed land use for the Site. The first developed land use at the site was for industrial purposes in 1941. The Site reportedly operated as a maple syrup factory until the late 1980s, and also produced metal canoes between about the 1950s to the 1960s. Review of the aerial photographs indicated that the Site was developed for industrial usage sometime between 1925 and 1959. Prior to 1925 the southwest and north portions of the Site was agricultural land use. There was a large addition constructed to the north portion of the site building by 1964. The Site was closed in the 1990s, and the building has been non-operational and vacant since.



Ten PCAs were identified within the Phase One Study Area, consisting of five on-site and five off-site. The five on-site PCAs and one of the off-site PCAs contributed to APECs. The APECs are related to fill of unknown quality, salt use for de-icing purposes, aboveground storage tanks (ASTs), aluminum canoe cutting, assembling and painting, observed black staining, and an adjacent off-site historic brickyard with possible coal fired heating.

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 ground penetrating radar (GPR) scan was also completed around the building to reduce uncertainty regarding the presence of possible historical underground storage tanks (USTs). The GPR survey area around the building footprint included the asphalt driveway, the central section (including the loading bay), near the north loading bay, along the northwest and west boundaries of the site building. The GPR survey did not identify any anomalies indicating the presence of an UST surrounding the building. An anomaly was noted near BH106 associated with an underground concrete drainage pipe that daylights north of the observed anomaly, and the septic tanks were also located west of BH104.



4.2 Media Investigated

The Phase Two ESA investigated soil and groundwater. Cowans Creek is partially on-site on the northwest boundary of Site; however, based on the sampling plan, surface water and sediment sampling were not applicable. Cambium completed a species of conservation concern at the Site and found potential suitable habitat for species at risk only on adjacent lands and not on-site. Soil quality at the Site was investigated through drilling and soil sampling. Monitoring wells were installed in five of the drilled boreholes for groundwater sampling. The location of all boreholes and monitoring wells are shown on Figure 4.

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 with identified PCAs is shown on Figure 2. The Phase One CSM Site Plan with identified APECs is shown on Figure 3. The following descriptions and discussion supplement the figures, and together comprise the CSM.

4.3.1 Site Description

The Site is irregular in shape, on the northwest corner of Lower Beverley Lake Park Road and King Street, adjacent to and behind the Old Town Hall in Delta Ontario. Cowans Creek (Foundry Creek) is adjacent along the northwest border of the Site. The legal description of the Site is LT 8 BLK RUSSELL PL 153; PT LT 5-7, 9-10 BLK RUSSELL PL 153; PT LT 1 BLK H PL 153; PT ALLEY LYING BTN LT 2 TO LT 8 AND LT 10 AND LT 9 RUSSELL BLK PL 153 S/T & T/W LR206150; RIDEAU LAKES. The Property Identification Number (PIN) is 44115-0293 (R). The Universal Transverse Mercator (UTM) coordinates for the centroid for the Site are Zone 18 T, 410905 m east, 4940361 m north. The roughly 0.87 ha Site is bound by the following:



North – Cowan's Creek (Foundry Creek) partially on-site, adjacent to the north and northwest, residential, and commercial (dog agility training)

South – Residential, commercial (The Town Hall, Old Stone Mill National Historic Site, and Delta Creek)

East – Residential, institutional (Delta United Church), commercial (LCBO, and Delta Foodland with a retail fuel outlet)

West – Residential

4.3.2 Existing Buildings and Structures

The Site is developed with a large industrial building with multiple phases of construction. The front portion of the building was developed between 1925 and the 1940s, and the north warehouse addition was developed between 1959 and 1964 based on aerial images and interview information. The building is comprised of concrete blocks, wood framing, concrete slab flooring, with steel or metal roofing. The building was in poor condition at the time of the site reconnaissance, with structural damage to the roof of the north warehouse portion and the former boiler room.

4.3.3 Water Bodies and Areas of Natural Significance

Cowans Creek is partially on-site, adjacent on the north and northwest boundary of Site; therefore, the Site is within 30 m of a water body, as defined in O.Reg. 153/04. The Site is zoned commercial in the Delta settlement area in the Township of Rideau Lakes (Rideau Lakes, 2023); however, portions of the Upper Beverley Lake wetland (about 40 m east) was identified in the Official Plan as an Environmental Protection Area/ Natural Heritage "A" (PSW) zone. This ANSI is over 30 m from the Site, and therefore as per Section 41 of O.Reg. 153/04, the Site is not considered environmentally sensitive.

The Natural Heritage Information Centre (NHIC) identified habitat potential for endangered or threatened species within the 1 km grid overlapping the Site (MNR, 2023). As defined in Section 1 and 41 of O.Reg. 153/04, if were habitat for endangered or threatened species are



identified within, adjacent to, or within 30 m from the phase one site, it is considered environmentally sensitive; therefore, a review of the Site by an ecologist was completed.

A field investigation was conducted, Cambium staff, on May 3, 2024, to inspect the Site and surrounding properties for natural heritage features and potential SAR habitat. Suitable habitat was observed adjacent to Site for the following special concern or threaten species; Grass Pickeral, Blanding's Turtle, Northern Map Turtle, Snapping Turtle; no individuals were observed at the time of the survey.

Provincial natural heritage feature mapping (MNRF, 2022); according to provincial mapping, no natural heritage features are present within 30 m of the Site. Additionally, the Site is located well beyond the boundaries of the Niagara Escarpment Plan area and the Oak Ridges Moraine Conservation Plan area; associated policies do not apply to the Site.

The Natural Heritage Information Centre (NHIC) database includes records of five provincial species at risk (SAR): American Eel (*Anguilla rostrata*; endangered), Gray Ratsnake (Frontenac Axis population) (*Pantherophis spiloides pop. 1*; threatened), Loggerhead Shrike (*Lanius ludovicianus*; endangered) and, Eastern Meadowlark (*Sturnella magna*; threatened), that overlap the 1 km square that includes the Site (18VQ1040 and 18VQ1140 which is about 60m to the east).

The Site was confirmed at that time to consist of a vacant building in the south portion of the Site, formerly operating as a maple syrup factory, with the north portion of the Site consisting of forest. Cowans Creek flows along the northwest property line. Review of Aquatic Species at Risk mapping provided by the Department of Fisheries and Oceans (DFO), indicates the American Eel is not present in Cowans Creek or the surrounding waterbodies (DFO, 2024). Likely basking areas were searched for Grey Ratsnake with none being observed at this time. The property does not provide suitable habitat for Eastern Meadowlark and Loggerhead Shrike. Butternut (*Juglans cinerea*) and Black Ash (*Fraxinus nigra*) were confirmed to be absent on-site. Specimens of ash trees on-site were documented and reviewed by senior ecologists which confirmed the ash species on Site were Green Ash (*Fraxinus pennsylvanica*). The on-site building is not in use and is considered condemned by building inspectors.



Previously, Cambium staff completed an interior inspection of the building, upon reviewing site photographs and correspondence with the inspection team, no bats or signs of bat activity were observed. Overall, at the time of the site inspection the Site was not found to provide protected habitat for any SAR.

4.3.4 Drinking Water Wells

A search of the Ministry Water Well Information System by ERIS identified 56 water well records within the phase one study area ranging from about 5 m to 250 m from the Site. The wells were identified as domestic or commercial water supply, observation wells, and monitoring and test holes.

Stratigraphy in the off-site wells within 100 m of the Site was grey/blue clay and/or silt overlying granite, limestone or sandstone bedrock at varying depths from 0.9 to about 5 mbgs on properties adjacent to the Site.

4.3.5 Potentially Contaminating Activities

Based on the records review, site reconnaissance, and interviews, ten PCAs (five on-site and five off-site) were identified within the phase one study area. Refer to Table 5 for further description of the identified PCAs and Figure 3 for locations of the identified PCAs.

The following PCAs contribute to APECs:

PCA 1 – On-site - Based on site observations, and review of aerial images, the importation of fill material is likely; *#30 - Importation of fill material of unknown quality*

PCA 2 – On-site - Salt was likely applied for safety in the winter months; *Other - Salt application for pedestrian and vehicle safety*

PCA 3 – On-site - Boiler and two steel ASTs were observed; *#28 - Gasoline and associated product storage in fixed tanks*

PCA 4 – On-site - aluminum was cut and assembled into canoes, and a dedicated paint area was present to paint canoes (1950s to 1960s); *#34 - Metal fabrication*



PCA 5 – On-site - Large areas of black staining were observed in the loading bay area between original building and warehouse addition; *Other - Staining*

PCA 6 - Off-site (34 King Street [Highway/County Road 42], adjacent to northeast, up-gradient) - related to a historical brickyard, where coal fired heating was possibly present to fire bricks; *Other - Coal-fired heating*

The following PCAs do not contribute to APECs:

PCA 7 - Off-site (former 351 and 362 Dick Street, 80 m east, cross-gradient) related to a foundry with a wood working shop was noted in the 1897 FIP; *#32 - Iron and steel manufacturing and processing*

PCA 8 - Off-site (former 602 Main Street, 260 m southwest, down-gradient) related to a Tannery noted in the 1897 FIP; *#53 - Tannery*

PCA 9 - Off-site (41 King Street [Highway/County Road 42], 78 m east, cross to down-gradient) related to ERIS report identified an RFO with two double-walled fiberglass gasoline USTs; *#28 - Gasoline and associated product storage in fixed tanks*

PCA 10 - Off-site (55 King Street [Highway/County Road 42], 75 m south, down-gradient) related to the manufacturing for design services, established in 1979 (which can include clothing and textile design, floats, theatrical designs); *#54 - Textile manufacturing and processing*

The qualified person has determined that a substance has been applied to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice at the Site. As such, the exemption set out in paragraph 1 of section 49.1 of O.Reg. 153/04 will be relied upon. The exemptions set out in paragraphs 1.1, 2 and 3 of section 49.1 of O.Reg. 153/04 will not be relied upon.



4.3.6 Areas of Potential Environmental Concern

As required by O.Reg. 153/04, all on-site PCAs contributed to an APEC. Based on a review of potential to result in contamination at the Site, one off-site PCA contributes to an APEC. Refer to Table 5 for APEC details and Figure 3 for APEC locations.

APEC 1 - Driveways and former parking areas, associated with PCA 1, #30 - *Importation of fill material of unknown quality*. COPCs include PHCs, VOCs, PAHs, metals, hydride-forming metals, ORPs (HWS B, CrVI, Hg, CN, EC, SAR) in soil

APEC 2 - Driveways, walkways, and former parking areas, associated with PCA 2, *Other - Salt application for pedestrian and vehicle safety*. COPCs include EC, and SAR in soil

APEC 3 - Central-east portion of the building, adjacent to the boiler, associated with PCA 3, #28 - *Gasoline and associated product storage in fixed tanks*. COPCs include BTEX, PHCs, PAHs, metals, and hydride-forming metals in soil and groundwater

APEC 4 - Central portion of the building, associated with PCA 4, #34 - *Metal fabrication*. COPCs include VOCs, metals, hydride-forming metals, CrVI in soil and groundwater

APEC 5 - Central-east portion of the building, associated with PCA 5, *Other - Staining*. COPCs include BTEX, PHCs, PAHs, metals, and hydride-forming metals in soil and groundwater

APEC 6 - Northeast portion of the Site, adjacent to 34 King Street (Highway/County Road 42), associated with PCA 6, *Other – Coal-fired heating*. COPCs include BTEX, PHCs, PAHs, metals, hydride-forming metals, and Hg in groundwater.

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 6. COPCs related to the current and historical on- and off-site PCAs are BTEX, PHCs, VOCs, PAHs, metals and hydride-forming metals, and ORPs (HWS B, CrVI, Hg, CN, EC, SAR, Na, pH). Media potentially impacted include soil and or groundwater.



4.3.8 Contaminant Distribution and Transport

No underground utilities were identified on, in, or under the Site. Contaminant distribution and transport may be influenced by the presence of utility trenches that were historically present on the Site.

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

4.3.9 Geological and Hydrogeological Setting

A topographic map of the Site was not available for review. Based on a review of the Site, the Site is around 95 to 100 m above sea level (asl) (Canada, 2023). Cowans Creek (Foundry Creek), is partially on-site, adjacent on the north to northwest Site boundary, and Delta Creek is present about 40 m south of the Site. Both waterways flow to the south (Canada, 2023). Based on the Site reconnaissance, the paved driveway slopes up to the north (towards the centre of the Site) from Lower Beverley Lake Park Road, and a slight decrease in elevation was observed north to northwest of the building.

The Site is within the Smiths Falls Limestone Plains physiographic region (OGS, 2007), characterized by limestone plains. In the general area, the overburden is fine-textured glaciolacustrine deposits of silt and clay, minor sand and gravel (OGS, 2010). The soils overlie Precambrian, crystalline basement and Nepean, sandstone bedrock (OGS, 2007). A review of Ministry water well records (MECP, 2023) for boreholes within 200 m of the Site indicated that the local stratigraphy consisted of topsoil overlying grey silt and sand or blue/grey clay over sandstone.

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. Access to the entire Site was possible, except for the north warehouse where the roof had caved in, due to structural and safety concerns. Historical operating records were not available for review and little information was available



for review in the records review, therefore historical operating information was predominantly available through the interviewees to reduce uncertainty or absence of information. While the placement of historical on and off-site structures and PCAs based on interviews may be of low accuracy, investigations completed during the Phase Two ESA can account for this uncertainty.



5.0 Investigation Method

5.1.1 General

The following sections provide a detailed description of the subsurface investigations. Soil and groundwater samples were analyzed for one or more of BTEX, PHCs, VOCs, PAHs, metals and hydride-forming metals, and ORPs (HWS B, CrVI, Hg, CN, EC, SAR, Na, pH).

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 8 SCS. RPIICC property use was selected to identify analyzed parameters present on the Site at concentrations exceeding the SCS.

5.1.2 Soil: Drilling

The initial drilling investigation (100-series boreholes) was completed on October 2 and 10, 2023. Strata Drilling Group (Strata) advanced seven boreholes into overburden to a maximum depth of 6.1 mbgs, one borehole into bedrock to a maximum depth of 6.7 mbgs, and Cambium staff hand-augured one borehole to 0.9 mbgs (BH108). The delineation drilling investigation (200-series boreholes) was completed on May 3, 2024. Strata advanced seven boreholes into overburden to a maximum depth of 4.6 mbgs, and Cambium staff hand-augured three boreholes to 0.9 mbgs (BH202, BH203 and BH204). Borehole locations are shown on Figure 4.

5.2 Soil: Sampling

During the drilling programs, 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).

5.3 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 A for the recorded vapour readings.

5.4 Groundwater: Monitoring Well Installation

Monitoring wells were installed in five of the boreholes (i.e. BH101, BH104, BH107, BH109, and BH201) 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 (BH107) and monument (BH101, BH104, BH109, and BH201) steel protective covers. Four monitoring wells (BH101, BH104, BH107, BH201) were installed in the overburden, and one monitoring well (BH109) was installed in the bedrock. Borehole logs illustrating the monitoring well installation details are included in Appendix A. 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. Each groundwater monitoring well was purged using dedicated polyethylene tubing and an inertial lift foot valve. 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.

5.5 Groundwater: Sampling

Groundwater sampling was conducted on October 11, 13 and 16, 2023, December 12, 2023, and May 6, 2024, 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).

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.

5.6 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 B. The following samples were submitted for analysis.

- Based on field observations, screening and delineation, the following soil samples quantities were submitted for analysis:
 - Six samples plus one duplicate sample for VOCs
 - Fourteen samples plus three duplicate samples for BTEX and PHCs; and one additional sample was submitted for analysis of BTEX (as part of the VOCs analyte package); and one sample was submitted for analysis of PHC F2 to F4.
 - Seventeen samples plus two duplicate samples for PAHs
 - Twelve samples plus two duplicate samples for metals and hydride-forming metals
 - Three samples for pH, five samples plus one duplicate sample for HWS B, six samples plus one duplicate sample for CrVI, nine samples plus one duplicate sample for Hg, and five samples for CN, EC, and SAR
 - One samples for sieve (0.75 um) texture analysis.
- The following groundwater samples were submitted for analysis:
 - Two samples plus one duplicate sample for VOCs
 - Three samples plus one duplicate sample for BTEX and PHCs
 - Four samples plus two duplicate samples for PAHs
 - Five samples plus one duplicate sample for metals, hydride-forming metals, ORPs
 - One sample plus one duplicate sample for each of CrVI and Hg, and four samples plus one duplicate sample for Na.
- One water trip blank was submitted for analysis of VOCs.



5.7 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.

5.8 Elevation Surveying

Ground surface and top of pipe elevations were surveyed at the boreholes and monitoring wells. Elevations were determined relative to the concrete lid of the water holding tank south of the site building along Lower Beverley Lake Park Road.

5.9 Quality Assurance and Quality Control Measures

As part of the QA/QC program, a blind duplicate groundwater sample was submitted at a rate of one duplicate sample for every ten samples analyzed. The 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. 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 A. 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.

Stratigraphy consisted of topsoil or fill, overlying silty clay and clay between 0.6-1.5 mbgs. There was a thin layer of topsoil observed at BH101 to BH104, an asphalt surface at BH105 to BH107, and BH109, and a concrete surface at BH108. Silty sand overlaid the native silty clay and clay at BH102. Bedrock was encountered at BH107 at 2.4 mbgs, and BH109 at 1.5 mbgs, bedrock was not encountered at the other boreholes to a maximum depth of 6.1 mbgs. Cross-section locations are shown on Figure 4 and the stratigraphy is presented on cross-sections on Figure 7, Figure 9, Figure 11, Figure 13, and Figure 18.

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 16, 2023, as summarized in Table 1. Groundwater depth ranged from 1.68 mbgs to 5.61 mbgs, and from 93.24 m above sea level (asl) to 94.70 masl on October 11, 2023; and depth ranged from 1.16 mbgs to 3.92 mbgs, and from 93.67 m above sea level (asl) to 95.54 masl on May 9, 2024. Groundwater flow was to the southeast (October 2023) and east (May 2024). The May groundwater flow direction is shown on Figure 4. Groundwater can be affected seasonally by fluctuating levels as well as by the topography of the area. Based on bedrock being shallow and variable across the Site, is likely the groundwater flow direction is influenced by these factors.



6.3 Groundwater: Hydraulic Gradients and Conductivity

The horizontal hydraulic gradient was 0.0008 m/m based on groundwater levels between BH104 and BH107 measured on October 16, 2023.

Based on the predominant soil type in the saturated zone (silt and silty clay) observed during the field investigation, subsurface hydraulic conductivity in the silt and silty clay likely ranges from 1×10^{-9} to 1×10^{-5} m/s (Cherry & Freeze, 1979).

6.4 Fine Soil Texture

Soil samples were collected from the overburden at the Site and passed through a 75µm sieve. Analysis indicates the Site consists of medium/fine soil. The laboratory certificates of analysis for the sieve texture analyses are included in Appendix B. However, soil analysis was compared to Table 8 RPIICC, which is not based on texture.

6.5 Soil: Field Screening

Refer to the detailed borehole logs included with this report as Appendix A for the results of field soil screening. Minor measurable OV was detected in soil samples from BH103 (0.025 to 0.60 mbgs), and BH109 (0.12 to 1.5 mbgs). The maximum vapour concentrations were 3 ppm for CSV and non-detect for OV. Brick fragments and were observed at BH101, BH102, BH106, BH109, BH205, BH206, and BH207 within the shallow fill layer. Coal fragments were observed in the shallow fill material at BH109 and BH209. Discolouration and hydrocarbon odours were not observed within the soil samples.

6.6 Soil Quality

A general discussion of the submission and analysis of soil samples obtained during the subsurface investigation was presented Section 5.6.

Samples were submitted for analysis of one or more of the following: BTEX, PHCs, VOCs, PAHs, metals and hydride-forming metals, and ORPs (HWS B, CrVI, Hg, CN, EC, SAR). Soil



analysis results are presented in Table 2. Laboratory Certificates of Analysis are included in Appendix B. The soil sampling locations are shown on Figure 4.

6.6.1 VOCs

Six soil samples were submitted for analysis of VOCs. Concentrations were less than the Table 8 SCS in the analyzed soil samples, as shown on Figure 5.

6.6.2 BTEX and PHCs

Fourteen samples were submitted for analysis of BTEX and PHCs, with one additional sample submitted for analysis of BTEX only (as part of the VOCs analyte package), and one sample submitted for analysis of PHC F2 to F4 only. Concentrations were less than the Table 8 SCS in the analyzed soil samples as shown on Figure 6 and Figure 7, except for:

- BH103 from 0.025 to 0.6 mbgs for PHC F4. A vertical delineation sample was submitted at BH103 from 1.52 to 3.04 mbgs which met the Table 8 SCS. The sample exceeded the applicable laboratory hold time before analysis was complete and therefore should be considered a preliminary result of vertical delineation; however, if an RSC is required, a delineation sample should be recollected to confirm results.
- BH109 from 0.12 to 1.5 mbgs for PHC F4. This location is vertically delineated by bedrock at 1.52 mbgs
- BH107 from 0.025 to 0.1 mbgs met the Tables 8 SCS; however, the duplicate sample analyzed at this location exceeded for PHC F4 and F4G and is therefore considered an exceedance. This location is vertically delineated by a second sample analyzed for PHCs from 1.52 to 2.42 mbgs, which met the Table 8 SCS.
- BH208 from 0 to 0.1 mbgs for xylenes and PHC F4. A vertical delineation sample was submitted at BH208 from 0.6 to 0.9 mbgs which met the Table 8 SCS

Horizontal delineation extends to the property boundary to the northwest, BH106/the property boundary to the east, and the west and south property boundaries.



6.6.3 PAHs

Seventeen soil samples were submitted for analysis of PAHs. Concentrations were less than the Table 8 SCS in the analyzed soil samples, as shown on Figure 8 and Figure 9, except for

- BH102 from 0.01 to 0.60 mbgs for acenaphthylene, benzo(a)pyrene, and indeno(1,2,3-c,d)pyrene. This location is vertically delineated by a second sample analyzed for PAHs from 1.52 to 3.04 mbgs, which met the Table 8 SCS.
- BH201 from 0.1 to 0.8 mbgs for acenaphthylene. This location is vertically delineated by a second sample analyzed for PAHs from 1.52 to 3.04 mbgs, which met the Table 8 SCS.
- BH203 and BH204 from 0.1 to 0.8 and 0.8 to 1.0 mbgs for various PAHs. This location was not vertically delineated

Horizontal delineation extends to the north and east property boundaries, BH202 to the west, and BH106 to the south.

6.6.4 Metals

Twelve soil samples were submitted for analysis of metals and hydride-forming metals.

Concentrations were less than the Table 8 SCS in the analyzed soil samples, as shown on Figure 10 and Figure 11, except for:

- BH104 from 3.04 to 4.57 mbgs for barium. No sample was available for analysis for vertical delineation.
- BH109 from 0.12-1.5 mbgs for arsenic, lead, and zinc. However, as allowed by O.Reg. 153/04 (Section 48 (2)), averaging was applied to arsenic, lead, and zinc concentrations reported at BH109 (0.12 to 1.5 mbgs) using an additional sample collected on May 3, 2024, from BH210 at a depth of 0.12 to 1.5 mbgs. It is noted that BH210 is within 1 m of BH109, and soil samples used for averaging were collected within the same stratum as the BH109 (0.12 to 1.5 mbgs) exceedance. The averaging of these samples met the Table 8 SCS for lead, and zinc, however the average arsenic concentration still exceeded the Table 8 SCS. Average soil concentrations of arsenic, lead, and zinc at BH109 and BH210 are shown on



Figure 10 and Figure 11, and values are provided in Table 3. Arsenic at BH109 is vertically delineated by bedrock at 1.52 mbgs.

- Figure 14. A deeper sample from BH102 (1.52 to 2.74 mbgs) met the Table 7 SCS.
- BH209 from 0.12 to 1.52 mbgs for barium and molybdenum. This location is vertically delineated by a second sample analyzed for metals from 1.52 to 1.82 mbgs, which met the Table 8 SCS

Horizontal delineation extends to BH108 and BH103 to the north, and the east, west, and south property boundaries.

6.6.5 Other Regulated Parameters

Three soil samples were submitted for analysis of pH, five samples for analysis of HWS B, CN, EC, and SAR, and nine samples for analysis of CrVI and Hg. Concentrations were less than the Table 8 SCS in the analyzed soil samples, as shown on Figure 12 and Figure 13, except for BH109 from 0.12 to 1.5 mbgs for mercury. As allowed by O.Reg. 153/04 (Section 48 (2)), averaging was applied to mercury concentrations reported at BH109 (0.12 to 1.5 mbgs) using an additional sample collected on May 3, 2024, from BH210 at a depth of 0.12 to 1.5 mbgs. It is noted that BH210 is within 1 m of BH109, and soil samples used for averaging were collected within the same stratum as the BH109 (0.12 to 1.5 mbgs) exceedance. The averaging of these samples met the Table 8 SCS for mercury. Average soil concentrations of mercury at BH109 and BH210 are shown on Figure 12 and Figure 13, and the average is provided in Table 3.

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 5.6.



Groundwater samples were collected from four monitoring wells. Samples were submitted for analysis of one or more of the following: PHC, BTEX, VOCs, PAHs, metals, hydride-forming metals, CrVI, Hg, and Na. Groundwater analysis results are presented in Table 3. Laboratory Certificates of Analysis are included in Appendix B. The groundwater sampling locations are shown on Figure 4.

6.7.1 VOCs

Two monitoring wells were sampled for analysis of VOCs. Concentrations were less than the Table 8 SCS in the analyzed groundwater samples, as shown on Figure 14.

6.7.2 BTEX and PHCs

Three monitoring wells were sampled for analysis of BTEX and PHCs. Concentrations were less than the Table 8 SCS in the analyzed groundwater samples, as shown on Figure 15.

6.7.3 PAHs

Three monitoring wells were sampled for analysis of PAHs. Concentrations were less than the Table 8 ICC SCS in the analyzed groundwater samples, as shown on Figure 16.

6.7.4 Metals

Four monitoring wells were sampled for analysis of metals and hydride-forming metals. Concentrations were less than the Table 8 SCS in the analyzed groundwater samples, as shown on Figure 17 and Figure 18, except for BH107 for cobalt (exceeds Table 8 SCS). The available water column during groundwater sampling in October 2023 was limited in BH107 (i.e. 0.3 m) and some fine soil particulates may have been entrained in the sample and biased the results. As such, a second groundwater sample was collected at this location in December 2023 to reduce entrained fine particulates to confirm the presence of the exceedance. The resampling met the Table 8 SCS, therefore the results from October 2023 are considered biased, and based on the resampling no exceedance in groundwater is present.



6.7.5 Other Regulated Parameters

One sample was sampled for analysis for each of CrVI and Hg, and four samples submitted for Na. Concentrations were less than the Table 8 SCS in the analyzed groundwater samples, as shown on Figure 18.

6.8 Quality Assurance and Quality Control

Duplicate soil and groundwater samples were collected for each parameter group.

Soil

- QAQC1, is a duplicate of BTEX and PHC at BH107 (0.025-0.10 mbgs)
- QAQC2, is a duplicate of PAH at BH107 (0.025-0.10 mbgs)
- QAQC3, is a duplicate of VOC at BH104 (0.025-0.45 mbgs)
- QAQC4, is a duplicate of BTEX and PHC at BH102 (0.01-0.60 mbgs)
- QAQC5, is a duplicate of metals, HWS B, CrVI, and Hg at BH102 (0.01-0.60 mbgs)
- QAQC6, is a duplicate of PAHs at BH102 (0.1-0.8 mbgs)
- QAQC7, is a duplicate of PHCs and BTEX at BH205 (0-0.06 mbgs)
- QAQC8, is a duplicate of metals and Hg at BH209 (0.12-1.52 mbgs)

Groundwater

- QAQC-GW1, is a duplicate of BTEX and PHC, PAHs, and metals at BH101
- QAQC2-GW2, is a duplicate of VOCs at BH104
- QAQC3-GW3, is a duplicate of CrVI at BH104
- QAQC-GW4, is a duplicate of Hg at BH101
- QAQC-GW4, is a duplicate of PAHs at BH201

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 identified in the applicable laboratory protocol (MECP, 2021). 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 with the exception of:

Soil

- QAQC1 at BH107 (0.025 to 0.10 mbgs): The RPD was 93% for PHC F4. The duplicate did not meet the Table 8 SCS and is therefore considered an exceedance as discussed in Section 6.6.2.
- QAQC4 at BH102 (0.01 to 0.60 mbgs): The RPD was 62% for PHC F3. However, both samples met Tables 1 and 8 SCS. The elevated RPD is attributed to the heterogeneity of fill material.

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 B. All laboratory Certificates of Analysis pursuant to clause 47 (2) (b) of O.Reg. 153/04 comply with subsection 47(3) of the regulation.

Based on the results of the QA/QC program, the analytical results discussed herein can be interpreted with confidence.

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 irregular in shape on the northwest corner of Lower Beverley Lake Park Road and King Street, adjacent to and behind the Old Town Hall in Delta Ontario. Cowans Creek (Foundry Creek) is adjacent along the northwest border of the Site. The legal description of the Site is LT 8 BLK RUSSELL PL 153; PT LT 5-7, 9-10 BLK RUSSELL PL 153; PT LT 1 BLK H PL 153; PT ALLEY LYING BTN LT 2 TO LT 8 AND LT 10 AND LT 9 RUSSELL BLK PL 153 S/T & T/W LR206150; RIDEAU LAKES. The Property Identification Number (PIN) is 44115-0293 (R). The Universal Transverse Mercator (UTM) coordinates for the centroid for the Site are Zone 18 T, 410905 m east, 4940361 m north. The roughly 0.87 ha Site is bound by the following:

North – Cowan's Creek (Foundry Creek) partially on-site, adjacent to the north and northwest, residential, and commercial (dog agility training)

South – Residential, commercial (The Town Hall, Old Stone Mill National Historic Site, and Delta Creek)



East – Residential, institutional (Delta United Church), commercial (LCBO, and Delta Foodland with a retail fuel outlet)

West – Residential

The Site is currently a vacant industrial building and is owned by The Township of Rideau Lakes. The Site includes PIN 44115-0293 (R). The intended use of the Site has not been finalized; however, the Client may repurpose a portion of the existing building for commercial and/or community use.

6.9.2 Potentially Contaminating Activities

Based on the records review, site reconnaissance, and interviews, ten PCAs (five on-site and five off-site) were identified within the phase one study area. Refer to Table 5 for further description of the identified PCAs and Figure 3 for locations of the identified PCAs.

The following PCAs contribute to APECs:

PCA 1 – On-site – Based on site observations, and review of aerial images, the importation of fill material is likely; *#30 – Importation of fill material of unknown quality*

PCA 2 – On-site – Salt was likely applied for safety in the winter months; *Other – Salt application for pedestrian and vehicle safety*

PCA 3 – On-site – Boiler and two steel ASTs were observed; *#28 – Gasoline and associated product storage in fixed tanks*

PCA 4 – On-site – aluminum was cut and assembled into canoes, and a dedicated paint area was present to paint canoes (1950s to 1960s); *#34 – Metal fabrication*

PCA 5 – On-site – Large areas of black staining were observed in the loading bay area between original building and warehouse addition; *Other – Staining*

PCA 6 – Off-site (34 King Street [Highway/County Road 42], adjacent to northeast, up-gradient) – related to a historical brickyard, where coal fired heating was possibly present to fire bricks; *Other – Coal-fired heating*



The following PCAs do not contribute to APECs:

PCA 7 – Off-site (former 351 and 362 Dick Street, 80 m east, cross-gradient) related to a foundry with a wood working shop was noted in the 1897 FIP; **#32 – *Iron and steel manufacturing and processing***

PCA 8 – Off-site (former 602 Main Street, 260 m southwest, down-gradient) related to a Tannery noted in the 1897 FIP; **#53 – *Tannery***

PCA 9 – Off-site (41 King Street [Highway/County Road 42], 78 m east, cross to down-gradient) related to ERIS report identified an RFO with two double-walled fiberglass gasoline USTs; **#28 – *Gasoline and associated product storage in fixed tanks***

PCA 10 – Off-site (55 King Street [Highway/County Road 42], 75 m south, down-gradient) related to the manufacturing for design services, established in 1979 (which can include clothing and textile design, floats, theatrical designs); **#54 – *Textile manufacturing and processing***

The qualified person has determined that a substance has been applied to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice at the Site. As such, the exemption set out in paragraph 1 of section 49.1 of O.Reg. 153/04 will be relied upon.

6.9.3 Areas of Potential Environmental Concern

As required by O.Reg. 153/04, all on-site PCAs contributed to an APEC. Based on a review of potential to result in contamination at the Site, one off-site PCA contributes to an APEC. Refer to Table 6 for APEC details and Figure 3 for APEC locations.

APEC 1 – Driveways and former parking areas, associated with PCA 1, **#30 – *Importation of fill material of unknown quality***. COPCs include PHCs, VOCs, PAHs, metals, hydride-forming metals, HWS B, CrVI, Hg, CN, EC, and SAR in soil

APEC 2 – Driveways, walkways, and former parking areas, associated with PCA 2, ***Other – Salt application for pedestrian and vehicle safety***. COPCs include EC and SAR in soil



APEC 3 – Central-east portion of the building, adjacent to the boiler, associated with PCA 3, #28 – *Gasoline and associated product storage in fixed tanks*. COPCs include BTEX, PHCs, PAHs, metals, and hydride-forming metals in soil and groundwater

APEC 4 – Central portion of the building, associated with PCA 4, #34 – *Metal fabrication*. COPCs include VOCs, metals, hydride-forming metals, and CrVI in soil and groundwater

APEC 5 – Central-east portion of the building, associated with PCA 5, *Other – Staining*. COPCs include BTEX, PHCs, PAHs, metals, and hydride-forming metals in soil and groundwater

APEC 6 – Northeast portion of the Site, adjacent to 34 King Street (Highway/County Road 42), associated with PCA 6, *Other – Coal-fired heating*. COPCs include BTEX, PHCs, PAHs, metals, hydride-forming metals, and Hg in groundwater

Boreholes (BH101 to BH109) were advanced to investigate the soil within the APECs, and monitoring wells (BH101, BH104, BH107 and BH109) were installed to assess groundwater within the APECs.

- BH101 investigated APEC 6 (groundwater only)
- BH102 investigated APECs 1, and 2 (soil only)
- BH103 investigated APECs 1 and 2 (soil only)
- BH104 investigated APEC 4
- BH105 investigated APECs 1, 2 and 5 (soil only)
- BH106 investigated APECs 1 and 2 (soil only)
- BH107 investigated APECs 1, 2, 3, and 5.
- BH108 investigated APEC 3 (soil only)
- BH109 investigated APECs 1, 2 and 3

Boreholes BH201 to BH210 and monitoring well BH201 were advanced to further delineate the soil and groundwater in support of an SLRA.



- BH201 to BH204 delineated BH102 for PAHs (soil), and BH201 was installed to confirm groundwater quality in the area
- BH205 to BH207 delineated BH103 for PHCs (soil) down-gradient towards the creek
- BH208 delineated BH107 for PHCs (soil)
- BH209 and BH210 delineated BH109 for metals and Hg (soil)

Refer to Figure 4 for borehole and monitoring well locations.

6.9.4 Subsurface Structures and Utilities

The on-site building has separate, un-joined, basements in the front and north-central portions of the building. Additionally, depth to bedrock was variable at the Site, with some areas of shallow bedrock noted at BH107 (2.4 mbgs) and BH109 (1.5 mbgs), whereas bedrock was not encountered at BH101 – BH106, BH108, or BH201 – BH210.

No underground utilities were identified on, in, or under the Site. A hydro utility overhead pole runs west-east along the southern boundary of the Site. A water holding tank is located south of the building. The GPR survey did not identify any anomalies indicating the presence of an UST surrounding the building. An anomaly was noted near BH106 associated with an underground concrete drainage pipe that daylights north of the observed anomaly, and the septic tanks were also located west of BH104. No other subsurface utilities were found or observed on-site.

6.9.5 Stratigraphy

Stratigraphy consisted of topsoil or fill, overlying silty clay and clay between 0.6-1.5 mbgs. There was a thin layer of topsoil observed at BH101 to BH104, an asphalt surface at BH105 to BH107, and BH109, and a concrete surface at BH108. Silty sand overlaid the native silty clay and clay at BH102. Bedrock was not encountered at BH101-BH106, BH108 and BH201-210; however, bedrock was encountered between 1.5 mbgs – 2.4 mbgs at BH107 and BH109.



The Site is within the Smiths Falls Limestone Plains physiographic region (OGS, 2007), characterized by limestone plains. In the general area, the overburden is fine-textured glaciolacustrine deposits of silt and clay, minor sand and gravel (OGS, 2010). The soils overlie Precambrian, crystalline basement and Nepean, sandstone bedrock (OGS, 2007).

A review of Ministry water well records (MECP, 2023) for boreholes within 200 m of the Site indicated that the local stratigraphy consisted grey/blue clay and/or overlying granite, limestone, or sandstone bedrock.

6.9.6 Hydrogeological Characteristics and Groundwater Elevations

The closest water body is the Cowans Creek, partially on-site, adjacent to the northwest boundary (within 30 m of the Site), which flows in a southerly direction.

To determine the relative groundwater elevation, the horizontal gradient, and the groundwater flow direction, water level measurements were recorded on October 16, 2023 and May 9, 2024. The horizontal hydraulic gradient between BH104 and BH107 as of October 16, 2023, was 0.0008 m/m and the depth to groundwater ranged from 1.68 mbgs to 5.61 mbgs, and from 93.24 masl to 94.70 masl. Groundwater depth ranged from 1.16 mbgs to 3.92 mbgs, and from 93.67 masl to 95.54 masl on May 9, 2024. Groundwater flow was to the southeast (October 2023) to east (May 2024). The relative groundwater elevation data and flow direction on May 9, 2024 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* (MOECC, 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 not finalized; however, the Client has indicated it will be repurposed for community or commercial.



- The area being investigated 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 does apply 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. It should be noted that properties within the Study Area are privately serviced for drinking water. In addition, based on Cambium's regulatory review associated with the Phase One ESA (i.e., ERIS), 56 well records for domestic water supply wells were identified by the records within the phase one study area ranging from about 5 m to 250 m from the Site. Therefore, not all properties within the Phase One Study Area are serviced by the municipal drinking water system, and as such potable standards apply to the Site.
- 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.
- The stratigraphy consisted of some fill material but was primarily underlain by silty clay. Bedrock was encountered at 1.5 m below ground surface (bgs) at BH109, 2.4 mbgs at BH107 and not at the other borehole locations within the maximum drilled depth of 6.1 mbgs.
- On-site soil pH was within the acceptable ranges for surface (≤ 1.5 mbgs) and sub-surface (> 1.5 mbgs) soil.
- Two soil samples from BH101 at a depth of 0.01 to 0.6 mbgs and 1.52 to 2.43 mbgs were submitted for grain size analysis. Analysis indicates the soil consists of medium/fine soil. It is noted that fill material was underlain by the silty clay, as such, SCS for coarse texture soil was conservatively selected to account for the potential presence of coarse grained fill material.
- No area of natural significance, as defined in Section 1 of O.Reg. 153/04, is in whole or in part within the Phase Two study area, however The Natural Heritage Information Centre



(NHIC) identified habitat potential for endangered or threatened species within the 1 km grid overlapping the Site (MNR, 2023). As noted in Section 4.3.3, Cambium completed a supplemental review for SAR habitat and the Site was not found to provide protected habitat for any SAR. As such, the Site is not considered environmentally sensitive as per Section 41 of O.Reg. 153/04.

Based on the above information, the applicable SCS for the Site is the Table 8 *Generic Site Condition Standards for Use within 30 m of a Water Body in a Potable Groundwater Condition* for Residential/Parkland/Institutional/ Industrial/Commercial/Community (RPIICC) Property Use. Table 8 SCS is used when the site is within 30 m of a surface water body. These standards were developed to protect surface water bodies from the movement of soil directly into the surface water becoming sediment. Table 8 is not based on soil texture group and is based on land use; agricultural or Residential/Parkland/Institutional/Industrial/Commercial/Community.

6.9.8 Contaminant Identification and Distribution

Site features/sampling locations, cross-section locations, and the interpreted groundwater flow direction are shown on Figure 4. Stratigraphy is shown on Figure 7, Figure 9, Figure 11, and Figure 13.

Concentrations of all COPCs were less than both Table 8 SCS in the analyzed soil and groundwater samples with the following exceptions:

Soil PHCs

- BH103 from 0.025 to 0.6 mbgs for PHC F4. A vertical delineation sample was submitted at BH103 from 1.52 to 3.04 mbgs which met the Table 8 SCS. The sample exceeded the applicable laboratory hold time before analysis was complete and therefore should be considered a preliminary result of vertical delineation; however, if an RSC is required, a delineation sample should be recollected to confirm results.
- BH109 from 0.12 to 1.5 mbgs for PHC F4. This location is vertically delineated by bedrock at 1.52 mbgs



- BH107 from 0.025 to 0.1 mbgs met the Tables 8 SCS; however, the duplicate sample analyzed at this location exceeded for PHC F4 and F4G and is therefore considered an exceedance. This location is vertically delineated by a second sample analyzed for PHCs from 1.52 to 2.42 mbgs, which met the Table 8 SCS.
- BH208 from 0 to 0.1 mbgs for xylenes and PHC F4. A vertical delineation sample was submitted at BH208 from 0.6 to 0.9 mbgs which met the Table 8 SCS

Horizontal delineation extends to the property boundary to the northwest, BH106/the property boundary to the east, and the west and south property boundaries.

Soil PAHs

- BH102 from 0.01 to 0.60 mbgs for acenaphthylene, benzo(a)pyrene, and indeno(1,2,3-c,d)pyrene. This location is vertically delineated by a second sample analyzed for PAHs from 1.52 to 3.04 mbgs, which met the Table 8 SCS.
- BH201 from 0.1 to 0.8 mbgs for acenaphthylene. This location is vertically delineated by a second sample analyzed for PAHs from 1.52 to 3.04 mbgs, which met the Table 8 SCS.
- BH203 and BH204 from 0.1 to 0.8 and 0.8 to 1.0 mbgs for various PAHs. This location was not vertically delineated

Horizontal delineation extends to the north, and east property boundaries, BH202 to the west, and BH106 to the south.

Soil Metals

- BH104 from 3.04 to 4.57 mbgs for barium. No sample was available for analysis for vertical delineation.
- BH109 from 0.12-1.5 mbgs for arsenic. This location is vertically delineated by bedrock at 1.52 mbgs



- BH209 from 0.12 to 1.52 mbgs for barium and molybdenum. This location is vertically delineated by a second sample analyzed for metals from 1.52 to 1.82 mbgs, which met the Table 8 SCS

Horizontal delineation extends to BH108 and BH103 to the north, and the east, west, and south property boundaries.

As allowed by O.Reg. 153/04 (Section 48 (2)), averaging was applied to arsenic, lead, and zinc concentrations reported at BH109 (0.12 to 1.5 mbgs) using an additional sample collected on May 3, 2024, from BH210 at a depth of 0.12 to 1.5 mbgs. It is noted that BH210 is within 1 m of BH109, and soil samples used for averaging were collected within the same stratum as the BH109 (0.12 to 1.5 mbgs) exceedance. The averaging of these samples met the Table 8 SCS for lead, and zinc; however, as noted, the average arsenic concentration still exceeded the Table 8 SCS. Average soil concentrations of arsenic, lead, and zinc at BH109 and BH210 are shown on Figure 10 and Figure 11, and values are provided in Table 3.

Soil ORPs

Concentrations were less than the Table 8 SCS in the analyzed soil samples, as shown on Figure 12 and Figure 13, except for BH109 from 0.12 to 1.5 mbgs for mercury. As allowed by O.Reg. 153/04 (Section 48 (2)), averaging was applied to mercury concentrations reported at BH109 (0.12 to 1.5 mbgs) using an additional sample collected on May 3, 2024, from BH210 at a depth of 0.12 to 1.5 mbgs. It is noted that BH210 is within 1 m of BH109, and soil samples used for averaging were collected within the same stratum as the BH109 (0.12 to 1.5 mbgs) exceedance. The averaging of these samples met the Table 8 SCS for mercury. Average soil concentrations of mercury at BH109 and BH210 are shown on Figure 12 and Figure 13, and the average is provided in Table 3.

Groundwater Metals

BH107 exceeded for cobalt (exceeds Table 8 SCS) in October 2023. The available water column during groundwater sampling in October 2023 was limited in BH107 (i.e. 0.3 m) and some fine soil particulates may have been entrained in the sample and biased the results. As



such, a second groundwater sample was collected at this location in December 2023 to reduce entrained fine particulates to confirm the presence of an exceedance. The resampling met the Table 8 SCS, therefore the results from October 2023 are considered biased, and based on the resampling no exceedance in groundwater is present.

6.9.9 Contaminant Migration and Transport

No underground utilities were identified on, in, or under the Site; however separate, un-joined, basements, and variable bedrock depth was noted at the Site. Contaminant distribution and transport may be influenced by the presence of utility trenches that were historically present on the Site. The basements and bedrock are expected to affect (i.e., limit or constrain) contaminant distribution and transport. Additionally, bedrock acts as a potential barrier and aquitard to vertical contaminant migration and transport. Based on the groundwater results, the contaminants exceeding in soil are not migrating to the groundwater in concentrations that exceed the groundwater SCS.

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

6.9.10 Exposure Pathways and Receptors

Concentrations of one or more COPCs including, PHC F4, xylenes, various PAHs, barium, arsenic, lead, zinc, and mercury were greater than the Table 8 SCS in the analyzed shallow soil samples at BH102, BH103, BH102, BH107, BH109, BH201, BH203, BH204, BH208, and BH209. Concentrations of cobalt were greater than the Table 8 SCS in the analyzed groundwater sample at BH107 in October 2023; however, based on follow-up groundwater sampling results in December 2023, groundwater was considered to meet the Table 8 SCS.

Based on the soil impacts identified at the Site, the following human health exposure pathways are considered applicable for current and future on-site receptors for commercial/community property use:

- Direct contact with soil



- Incidental ingestion of soil
- Inhalation of soil particulate
- Inhalation of indoor air sourced from vapours originating from soil
- Inhalation of outdoor air sourced from vapours originating from soil

Based on the future residential land use for the Site, possible receptors at the Site are:

- Site visitor/trespasser (all age groups)
- Subsurface worker (adult)
- Indoor worker (adult)
- Outdoor worker (adult)

Ecological receptors at the Site are assumed to have direct contact with surface soil. Based on the soil impacts identified at the Site, the following exposure pathways are considered applicable for the potential on-site ecological receptors:

- Direct contact with soil
- Ingestion of soil
- Inhalation of soil
- Ingestion of impacted food
- Root uptake

Based on the future mixed land use for the Site, possible ecological receptors are:

- Terrestrial soil invertebrates and plants
- Birds and mammals
- Aquatic receptor (off-site only)



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 and Recommendations

A Phase Two ESA work program was developed to investigate COPCs in soil and groundwater. The Phase Two ESA included nineteen boreholes, five of which were completed as groundwater monitoring wells.

Following the completion of the Phase Two ESA it was determined concentrations of select COPCs were greater than the Table 8 Site Condition Standards (SCS) in soil (BH102, BH103, BH104, BH107, BH109, BH201, BH203, BH204, BH208, and BH209).

Based on the exceedances identified, Cambium recommended proceeding with a screening level risk assessment (SLRA) approach to address soil impacts. The SLRA is included under a separate cover. The SLRA was completed using a screening level approach, in general accordance with Ontario Regulation (O.Reg.) 153/04. As such, an RSC with the Ontario Ministry of the Environment, Conservation and Parks (Ministry) under O.Reg. 153/04 is not required at this time. It is noted that the SLRA will not be suitable for submission to the Ministry for the purpose of filing an RSC, if an RSC is required for future property use.



7.2 Signatures

This Phase Two ESA was completed by Laura Fitzgerald, M.Sc. under the supervision of Mr. Alex Wood, P.Eng (QP_{ESA}), 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.

DocuSigned by:

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Arlie Flynn
Technologist

DocuSigned by:

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Laura Fitzgerald, M.Sc.
Project Manager

DocuSigned by:

7FE8E2C6268E499...

Alex Wood, P.Eng, QP_{ESA}
Project Manager

Signed by:



2024-10-09

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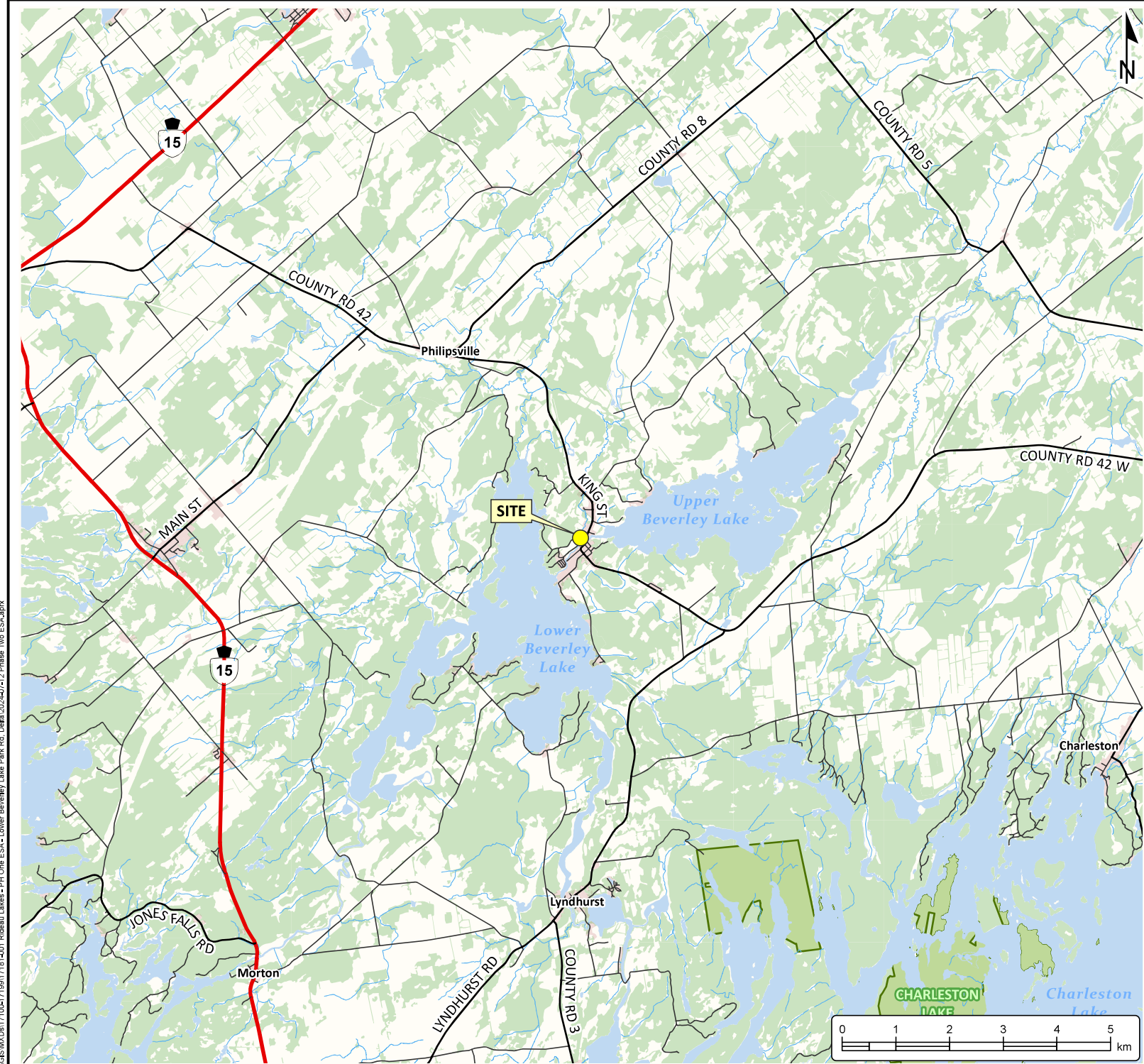
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Appended Figures



**PHASE TWO
ENVIRONMENTAL SITE
ASSESSMENT**
TOWNSHIP OF RIDEAU LAKES
Lower Beverley Lake Park Road
Delta, Ontario

LEGEND

- Highway
- Major Road
- Minor Road
- Railway
- Watercourse
- Water Area
- Provincial Park
- Wooded Area
- Built Up Area

Notes:
- Site boundaries are approximate.
- Base mapping features are © King's Printer of Ontario, 2022 (this does not constitute an endorsement by the Ministry of Natural Resources or the Ontario Government).
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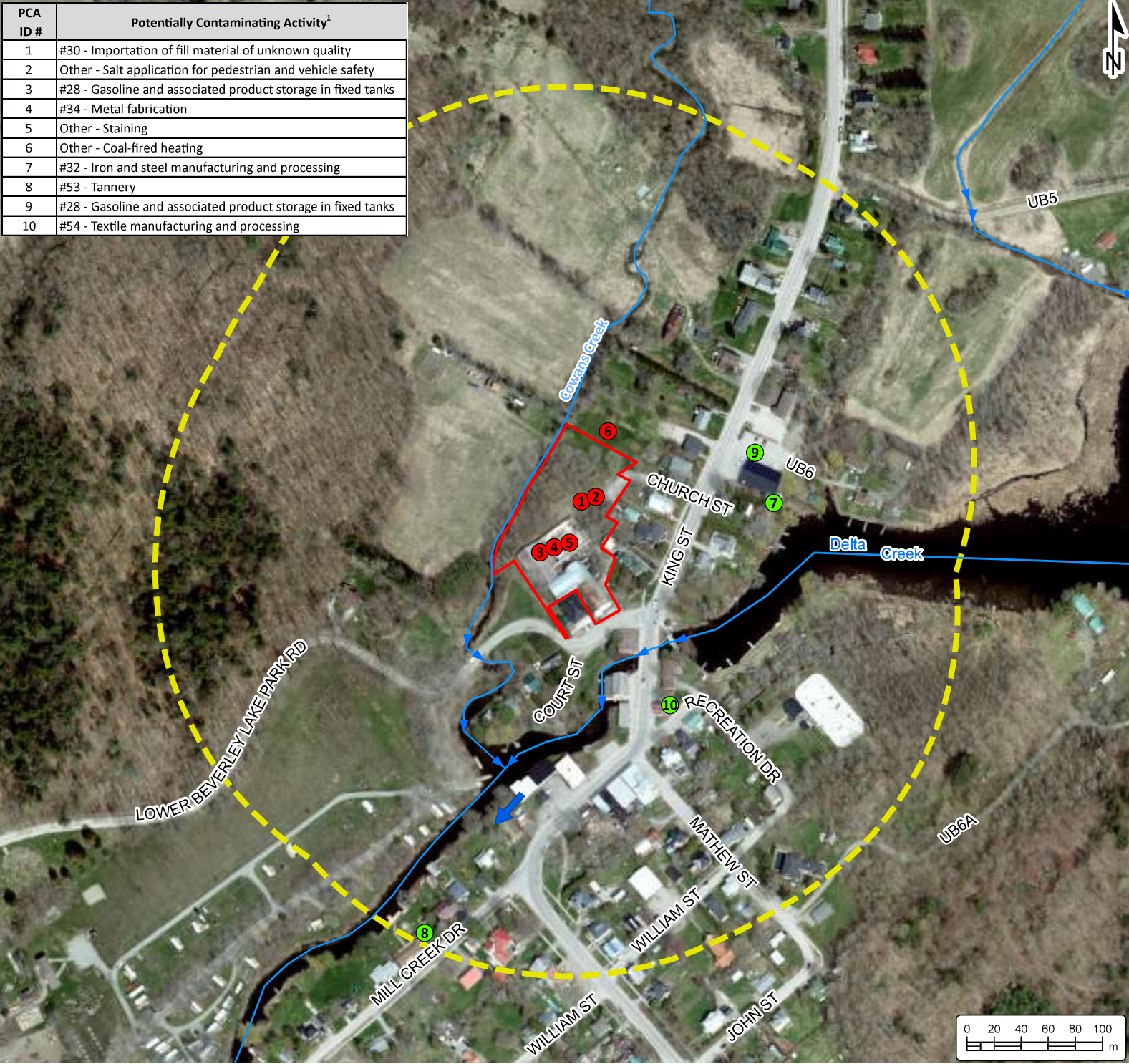


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SITE LOCATION PLAN

Project No.: 17181-001	Date: November 2023
Scale: 1:100,000	Rev.: Projection: NAD 1983 UTM Zone 18N
Created by: TLC	Checked by: LEF
Figure: 1	

PCA ID #	Potentially Contaminating Activity ¹
1	#30 - Importation of fill material of unknown quality
2	Other - Salt application for pedestrian and vehicle safety
3	#28 - Gasoline and associated product storage in fixed tanks
4	#34 - Metal fabrication
5	Other - Staining
6	Other - Coal-fired heating
7	#32 - Iron and steel manufacturing and processing
8	#53 - Tannery
9	#28 - Gasoline and associated product storage in fixed tanks
10	#54 - Textile manufacturing and processing



**PHASE TWO
ENVIRONMENTAL SITE
ASSESSMENT**
TOWNSHIP OF RIDEAU LAKES
Lower Beverley Lake Park Road
Delta, Ontario

LEGEND

Watercourse, Permanent

Study Area (250m)

Site (approximate)

Potentially Contaminating Activity:

Does Not Contribute to APEC

Contributes to APEC

Surface Water
Flow Direction

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**CONCEPTUAL SITE MODEL
STUDY AREA**

Project No.: 17181-001		Date: November 2023 Rev.:	
Scale: 1:4,000		Projection: NAD 1983 UTM Zone 18N	
Created by: TLC	Checked by: LEF	Figure: 2	



PHASE TWO ENVIRONMENTAL SITE ASSESSMENT TOWNSHIP OF RIDEAU LAKES Lower Beverley Lake Park Road Delta, Ontario

LEGEND

Site (approximate)

Area of Potential Environmental Concern:

APEC 1 & 2

APEC 3

APEC 4

APEC 5

APEC 6

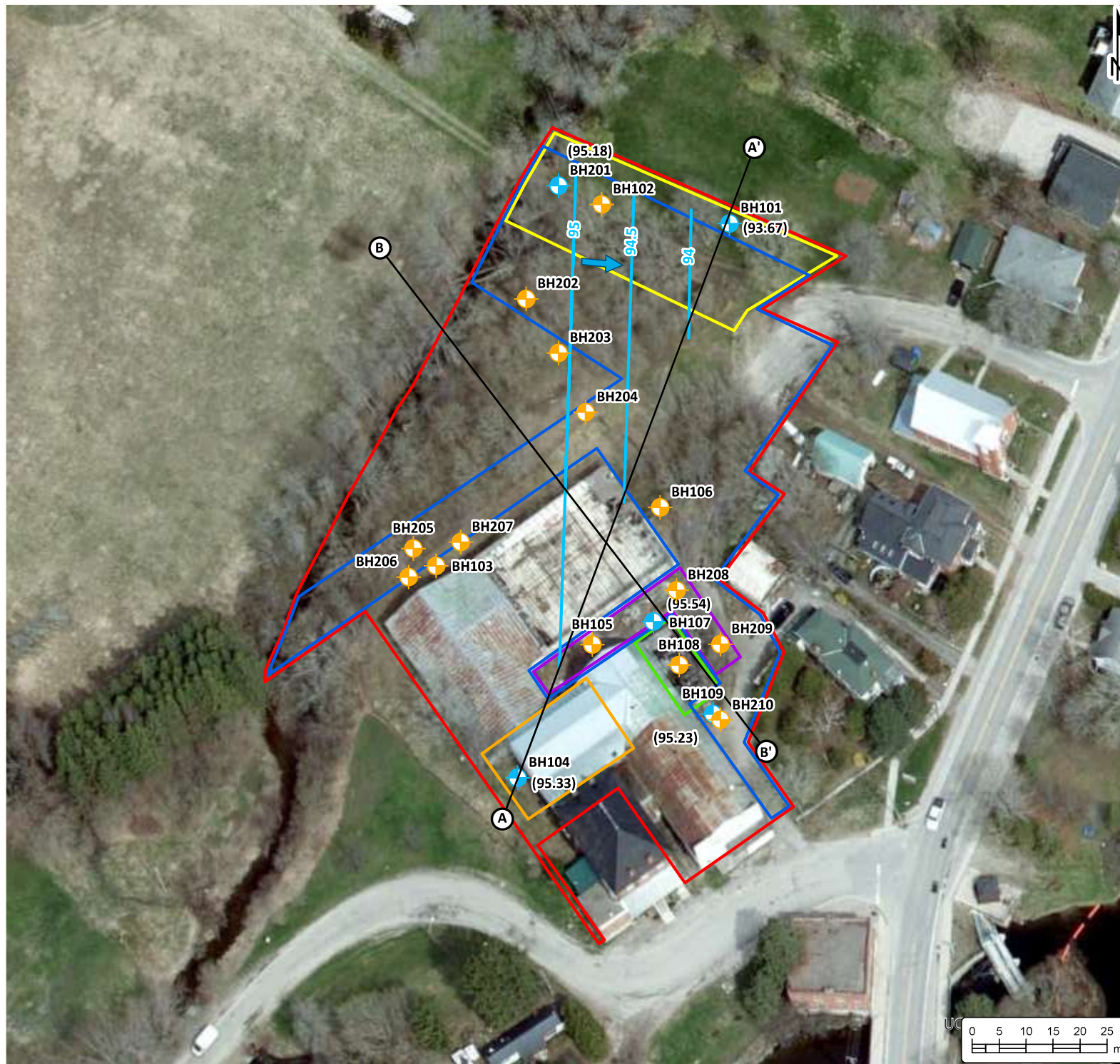
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CONCEPTUAL SITE MODEL SITE PLAN

Project No.: 17181-001	Date: November 2023
Scale: 1:1,000	Rev.: Rev.
Created by: TLC	Checked by: LEF
Figure: 3	



PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

TOWNSHIP OF RIDEAU LAKES
Lower Beverley Lake Park Road
Delta, Ontario

LEGEND

(92.86) Groundwater Elevation
May 9, 2024



Borehole



Monitoring Well

Site (approximate)

Area of Potential Environmental Concern:

APEC 1 & 2

APEC 3

APEC 4

APEC 5

APEC 6

Groundwater Contour
(May 9, 2024)

Groundwater Flow Direction
May 9, 2024

Notes:

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INVESTIGATION LOCATIONS

Project No.: 17181-001	Date: November 2023
Scale: 1:1,000	Rev.: June 2024
Created by: TLC	Checked by: LEF
Figure: 4	

Location	BH102	BH103	BH104	BH105	BH106	BH109
Date	02 Oct 2023	02 Oct 2023	02 Oct 2023	02 Oct 2023	02 Oct 2023	10 Oct 2023
Depth (m)	0.01 - 0.6	0.025 - 0.06	3.04 - 4.57	0.025 - 0.12	0.25 - 0.06	0.12 - 1.5
VOCs	✓	✓	✓	✓	✓	✓



**PHASE TWO
ENVIRONMENTAL SITE
ASSESSMENT**
TOWNSHIP OF RIDEAU LAKES
Lower Beverley Lake Park Road
Delta, Ontario

LEGEND

- Borehole
- Monitoring Well
- Meets Table 8 RPIIC
- Exceeds Table 8 RPIIC
- Site (approximate)

Notes:
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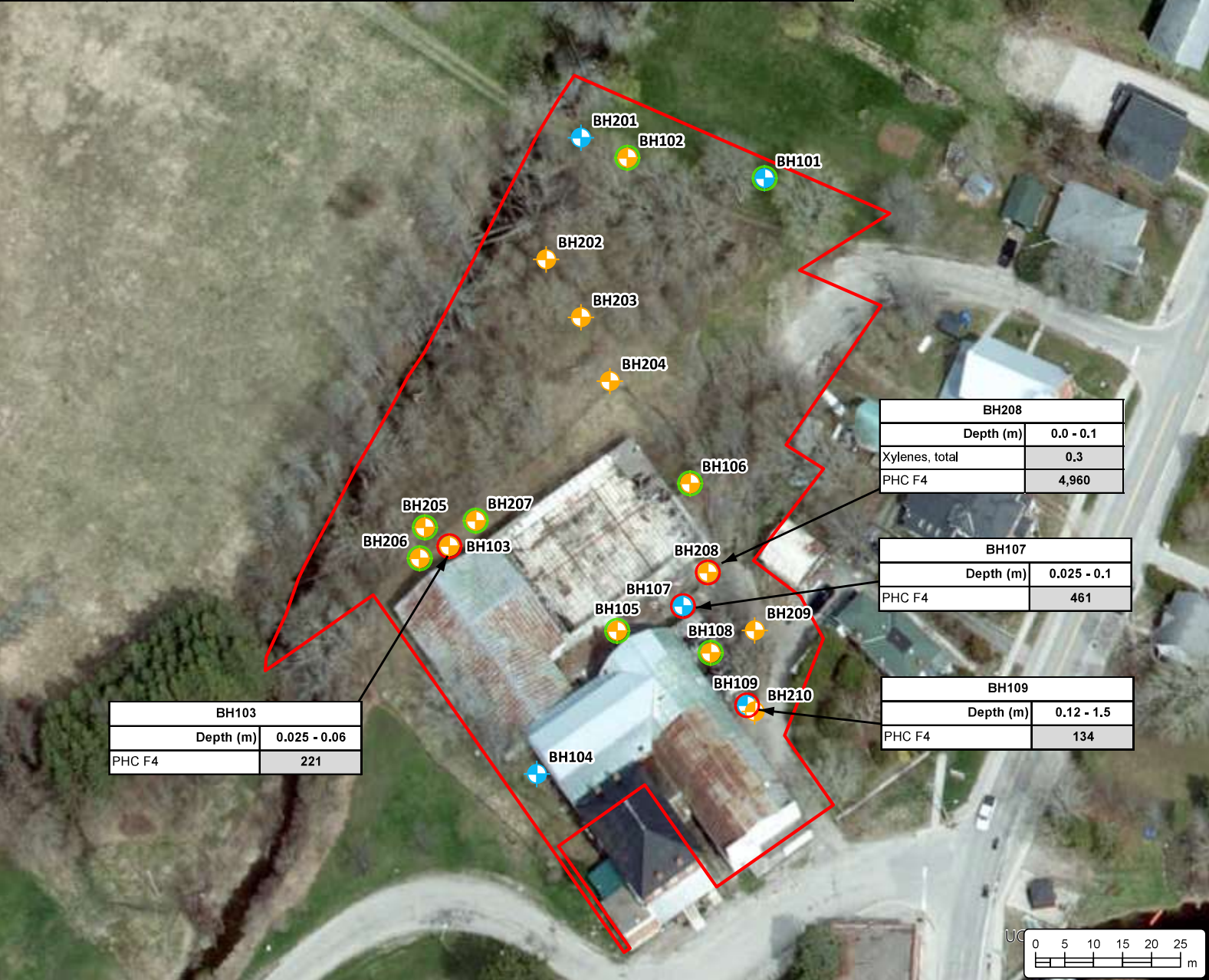


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**SOIL QUALITY
VOCs**

Project No.: 17181-001	Date: November 2023
Scale: 1:1,000	Rev.: June 2024
Created by: TLC	Checked by: LEF
Figure: 5	

Location	BH101	BH102	BH103	BH103	BH105	BH106	BH107	BH107 (QAQC1)
Date	02 Oct 2023	02 Oct 2023	02 Oct 2023	02 Oct 2023	02 Oct 2023	02 Oct 2023	02 Oct 2023	02 Oct 2023
Depth (m)	0,01 - 0,6	0,01 - 0,6	0,025 - 0,06	1,52 - 3,04	0,025 - 0,12	0,25 - 0,06	0,025 - 0,1	0,025 - 0,1
PHCs/BTEX	✓	✓	✗	✓	✓	✓	✓	✗
Location	BH107	BH108	BH109	BH205	BH206	BH207	BH208	BH208
Date	02 Oct 2023	10 Oct 2023	10 Oct 2023	03 May 2024	03 May 2024	03 May 2024	03 May 2024	03 May 2024
Depth (m)	1,52 - 2,42	0,18 - 0,5	0,12 - 1,5	0 - 0,06	0 - 0,06	0 - 0,06	0 - 0,1	0,6 - 0,9
PHCs/BTEX	✓	✓	✗	✓	✓	✓	✗	✓



PHASE TWO
ENVIRONMENTAL SITE
ASSESSMENT
TOWNSHIP OF RIDEAU LAKES
Lower Beverley Lake Park Road
Delta, Ontario

LEGEND

- Borehole
- Monitoring Well
- Meets Table 8 RPIIC
- Exceeds Table 8 RPIIC
- Site (approximate)

Contaminant	Standard
Xylenes, total	0
PHC F4	120

Standard - Table 8 (RPIIC, potable water)

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SOIL QUALITY
PHCs AND BTEX

Project No.: 17181-001	Date: November 2023
Scale: 1:1,000	Rev.: June 2024
Created by: TLC	Checked by: LEF
Figure: 6	

Location	BH101	BH102	BH103	BH103	BH105	BH106	BH107	BH107 (QAQC1)
Date	02 Oct 2023	02 Oct 2023	02 Oct 2023	02 Oct 2023	02 Oct 2023	02 Oct 2023	02 Oct 2023	02 Oct 2023
Depth (m)	0.01 - 0.6	0.01 - 0.6	0.025 - 0.06	1.52 - 3.04	0.025 - 0.12	0.25 - 0.06	0.025 - 0.1	0.025 - 0.1
PHCs/BTEX	✓	✓	✗	✓	✓	✓	✓	✗
Location	BH107	BH108	BH109	BH205	BH206	BH207	BH208	BH208
Date	02 Oct 2023	10 Oct 2023	10 Oct 2023	03 May 2024	03 May 2024	03 May 2024	03 May 2024	03 May 2024
Depth (m)	1.52 - 2.42	0.18 - 0.5	0.12 - 1.5	0 - 0.06	0 - 0.06	0 - 0.06	0 - 0.1	0.6 - 0.9
PHCs/BTEX	✓	✓	✗	✓	✓	✓	✗	✓

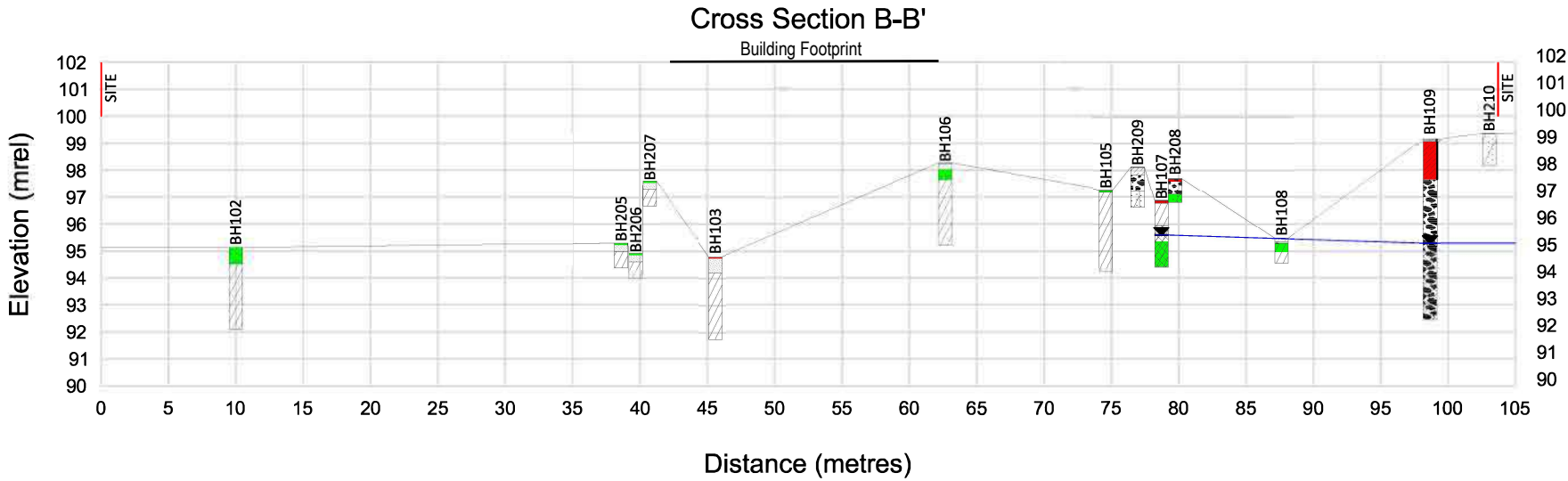
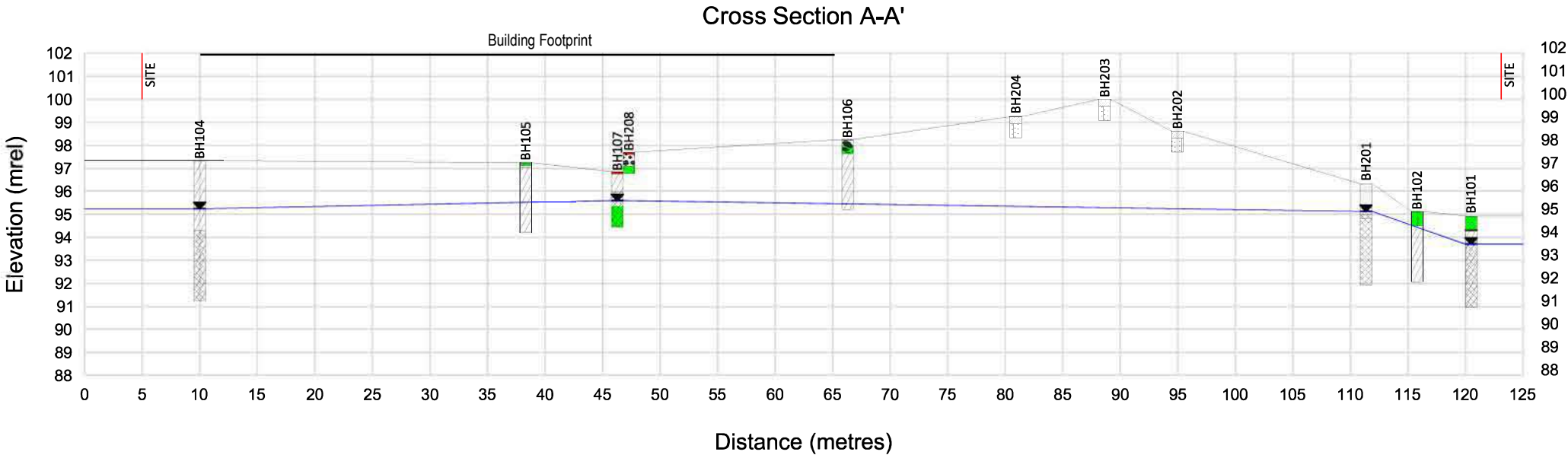
Contaminant	Standard
Xylenes, total	0
PHC F4	120

Standard - Table 8 (RPIICC, potable water)

PHASE TWO
ENVIRONMENTAL
SITE ASSESSMENT
TOWNSHIP OF RIDEAU LAKES
Lower Beverly Lake Park Road
Delta, Ontario

LEGEND

-  Groundwater Elevation
May 9, 2024
-  Asphalt
-  Concrete
-  Fill
-  Topsoil
-  Clay/Silty Clay
-  Silty Sand/Sand
-  Gravel/Silty Gravel
-  Bedrock
-  Well Casing
-  Meets Table 8 RPIICC
-  Exceeds Table 8 RPIICC
-  Well Screen



BH103	
Depth (m)	0.025 - 0.06
PHC F4	221

BH107	
Depth (m)	0.025 - 0.1
PHC F4	461

BH109	
Depth (m)	0.12 - 1.5
PHC F4	134

BH208	
Depth (m)	0.0 - 0.1
Xylenes, total	0.3
PHC F4	4,960

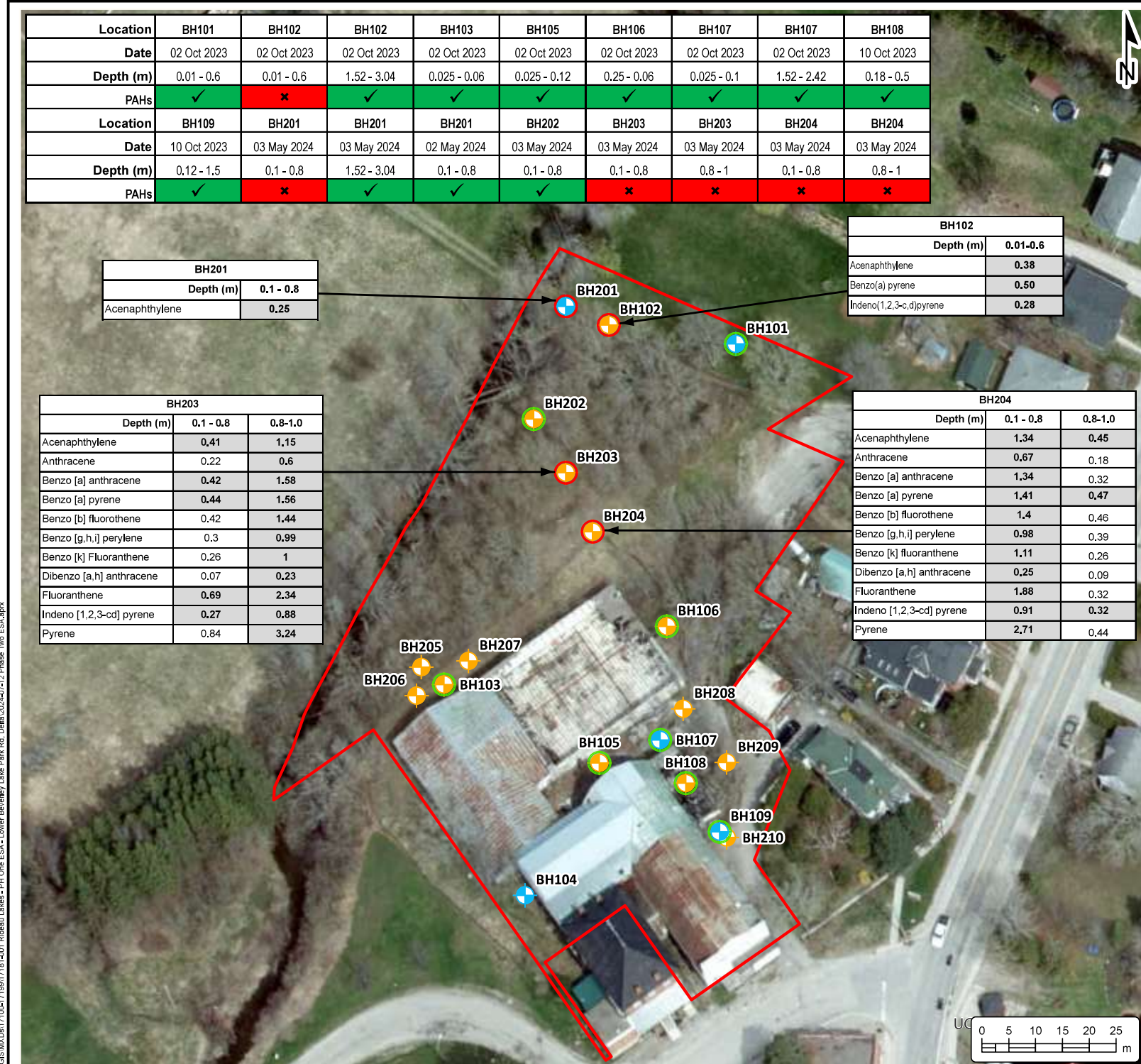
Notes:
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CROSS SECTIONS
PHCs AND BTEX IN SOIL

Project No.:	17181-001	Date:	November 2023
Horizontal Scale:	1:500	Rev.:	June 2024
Vertical Scale:	1:250 (2x)	Figure:	7
Drawn By:	TLC	Checked By:	LEF



PHASE TWO
ENVIRONMENTAL SITE
ASSESSMENT
TOWNSHIP OF RIDEAU LAKES
Lower Beverley Lake Park Road
Delta, Ontario

LEGEND

- Borehole
- Monitoring Well
- Meets Table 8 RPIIC
- Exceeds Table 8 RPIIC
- Site (approximate)

Contaminant	Standard
Acenaphthylene	0.093
Anthracene	0.22
Benzo [a] anthracene	0.36
Benzo [a] pyrene	0.3
Benzo [b] fluoranthene	0.47
Benzo [g,h,i] perylene	0.68
Benzo [k] fluoranthene	0.48
Fluoranthene	0.56
Indeno [1,2,3-cd] pyrene	0.23
Dibenzo [a,h] anthracene	0.1
Pyrene	1

Standard - Table 8 (RPIIC, potable water)

Notes:
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SOIL QUALITY
PAHs

Project No.: 17181-001	Date: November 2023
Scale: 1:1,000	Rev.: June 2024
Created by: TLC	Checked by: LEF
Figure: 8	

Location	BH101	BH102	BH102	BH103	BH105	BH106	BH107	BH107	BH108
Date	02 Oct 2023	02 Oct 2023	02 Oct 2023	02 Oct 2023	02 Oct 2023	02 Oct 2023	02 Oct 2023	02 Oct 2023	10 Oct 2023
Depth (m)	0.01 - 0.6	0.01 - 0.6	1.52 - 3.04	0.025 - 0.06	0.025 - 0.12	0.25 - 0.06	0.025 - 0.1	1.52 - 2.42	0.18 - 0.5
PAHs	✓	✗	✓	✓	✓	✓	✓	✓	✓
Location	BH109	BH201	BH201	BH201	BH202	BH203	BH203	BH204	BH204
Date	10 Oct 2023	03 May 2024	03 May 2024	02 May 2024	03 May 2024	03 May 2024	03 May 2024	03 May 2024	03 May 2024
Depth (m)	0.12 - 1.5	0.1 - 0.8	1.52 - 3.04	0.1 - 0.8	0.1 - 0.8	0.1 - 0.8	0.8 - 1	0.1 - 0.8	0.8 - 1
PAHs	✓	✗	✓	✓	✓	✗	✗	✗	✗

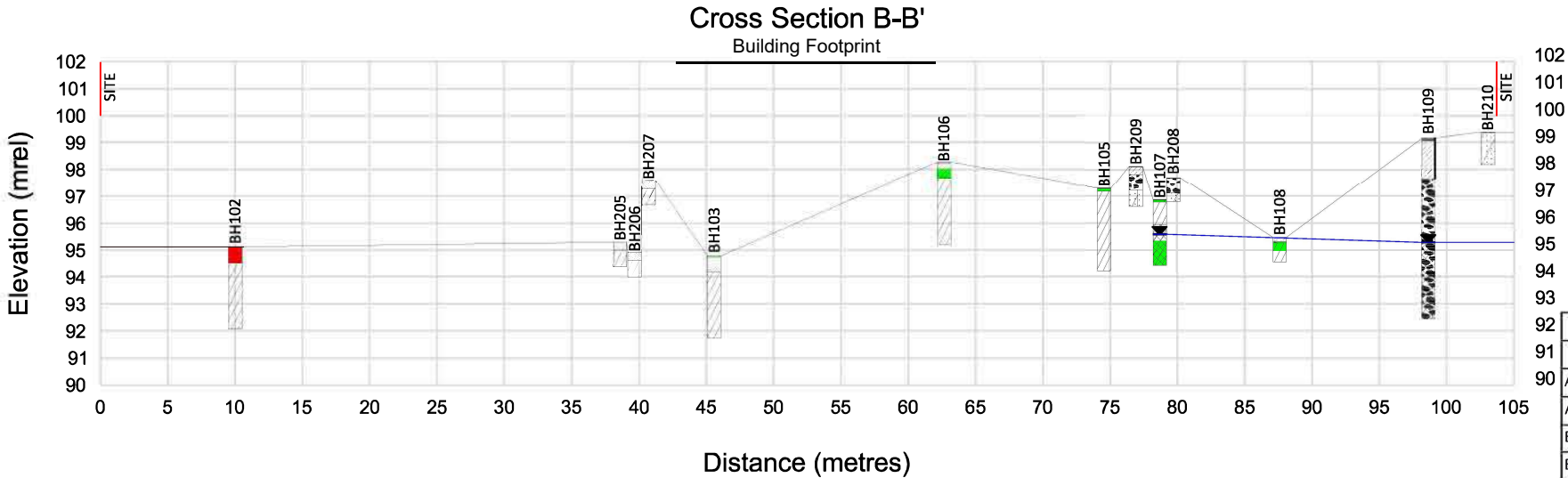
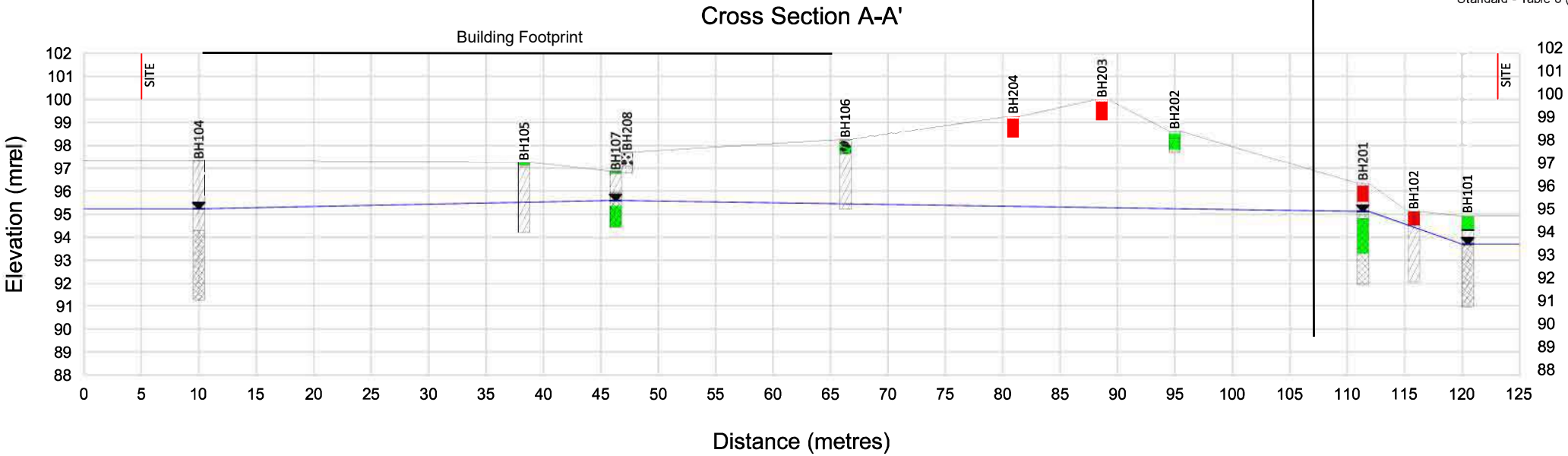
Contaminant	Standard
Acenaphthylene	0.093
Anthracene	0.22
Benzo [a] anthracene	0.36
Benzo [a] pyrene	0.3
Benzo [b] fluoranthene	0.47
Benzo [g,h,i] perylene	0.68
Benzo [k] fluoranthene	0.48
Fluoranthene	0.56
Indeno [1,2,3-cd] pyrene	0.23
Dibenzo [a,h] anthracene	0.1
Pyrene	1

Standard - Table 8 (RPIICC, potable water)

PHASE TWO
ENVIRONMENTAL
SITE ASSESSMENT
TOWNSHIP OF RIDEAU LAKES
Lower Beverly Lake Park Road
Delta, Ontario

LEGEND

-  Groundwater Elevation
May 9, 2024
-  Asphalt
-  Concrete
-  Fill
-  Topsoil
-  Clay/Silty Clay
-  Silty Sand/Sand
-  Gravel/Silty Gravel
-  Bedrock
-  Well Casing
-  Meets Table 8 RPIICC
-  Exceeds Table 8 RPIICC
-  Well Screen



BH203		
Depth (m)	0.1 - 0.8	0.8-1.0
Acenaphthylene	0.41	1.15
Anthracene	0.22	0.6
Benzo [a] anthracene	0.42	1.58
Benzo [a] pyrene	0.44	1.56
Benzo [b] fluorothene	0.42	1.44
Benzo [g,h,i] perylene	0.3	0.99
Benzo [k] Fluoranthene	0.26	1
Dibenzo [a,h] anthracene	0.07	0.23
Fluoranthene	0.69	2.34
Indeno [1,2,3-cd] pyrene	0.27	0.88
Pyrene	0.84	3.24

BH102	
Depth (m)	0.01-0.6
Acenaphthylene	0.38
Benzo(a) pyrene	0.50
Indeno(1,2,3-c,d)pyrene	0.28

BH201	
Depth (m)	0.1 - 0.8
Acenaphthylene	0.25

BH204		
Depth (m)	0.1 - 0.8	0.8-1.0
Acenaphthylene	1.34	0.45
Anthracene	0.67	0.18
Benzo [a] anthracene	1.34	0.32
Benzo [a] pyrene	1.41	0.47
Benzo [b] fluorothene	1.4	0.46
Benzo [g,h,i] perylene	0.98	0.39
Benzo [k] fluoranthene	1.11	0.26
Dibenzo [a,h] anthracene	0.25	0.09
Fluoranthene	1.88	0.32
Indeno [1,2,3-cd] pyrene	0.91	0.32
Pyrene	2.71	0.44

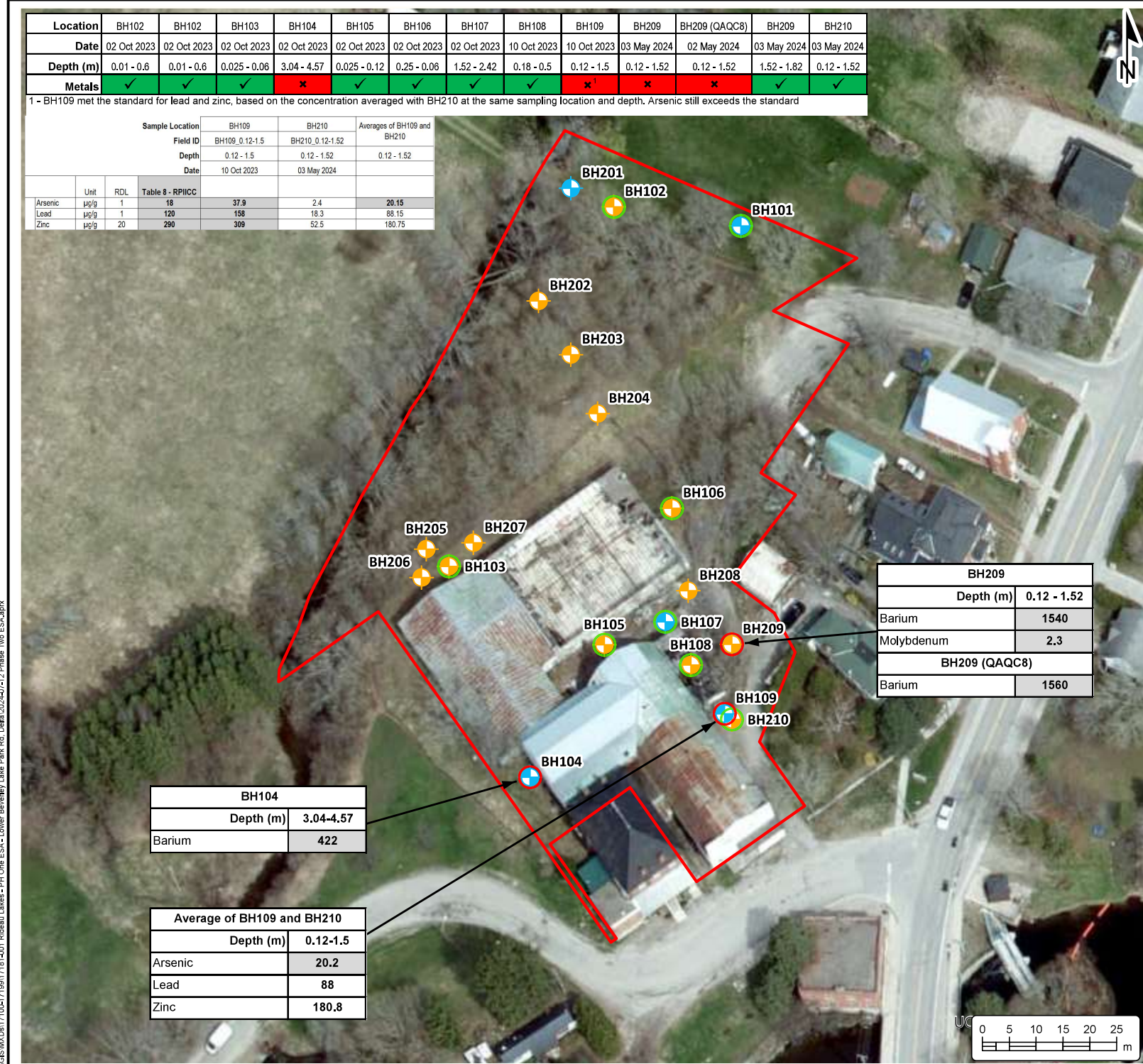
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CROSS SECTIONS
PAHs IN SOIL

Project No.:	17181-001	Date:	November 2023
Horizontal Scale:	1:500	Rev.:	June 2024
Vertical Scale:	1:250 (2x)	Figure:	9
Drawn By:	TLC	Checked By:	LEF



**PHASE TWO
ENVIRONMENTAL SITE
ASSESSMENT**
TOWNSHIP OF RIDEAU LAKES
Lower Beverley Lake Park Road
Delta, Ontario

LEGEND

- Borehole
- Monitoring Well
- Meets Table 8 RPIICC
- Exceeds Table 8 RPIICC
- Site (approximate)

Contaminant	Standard
Arsenic	18
Barium	220
Lead	120
Zinc	290
Molybdenum	2

Standard - Table 8 (RPIICC, potable water)

Notes:
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**SOIL QUALITY
METALS**

Project No.: 17181-001	Date: November 2023
Scale: 1:1,000	Rev.: June 2024
Created by: TLC	Checked by: LEF
Figure: 10	

Location	BH102	BH102	BH103	BH104	BH105	BH106	BH107	BH108	BH109	BH209	BH209 (QAQC8)	BH209	BH210
Date	02 Oct 2023	02 Oct 2023	02 Oct 2023	02 Oct 2023	02 Oct 2023	02 Oct 2023	02 Oct 2023	10 Oct 2023	10 Oct 2023	03 May 2024	02 May 2024	03 May 2024	03 May 2024
Depth (m)	0.01 - 0.6	0.01 - 0.6	0.025 - 0.06	3.04 - 4.57	0.025 - 0.12	0.25 - 0.06	1.52 - 2.42	0.18 - 0.5	0.12 - 1.5	0.12 - 1.52	0.12 - 1.52	1.52 - 1.82	0.12 - 1.52
Metals	✓	✓	✓	✗	✓	✓	✓	✓	✗ ¹	✗	✗	✓	✓

1 - BH109 met the standard for lead and zinc, based on the concentration averaged with BH210 at the same sampling location and depth. Arsenic still exceeds the standard

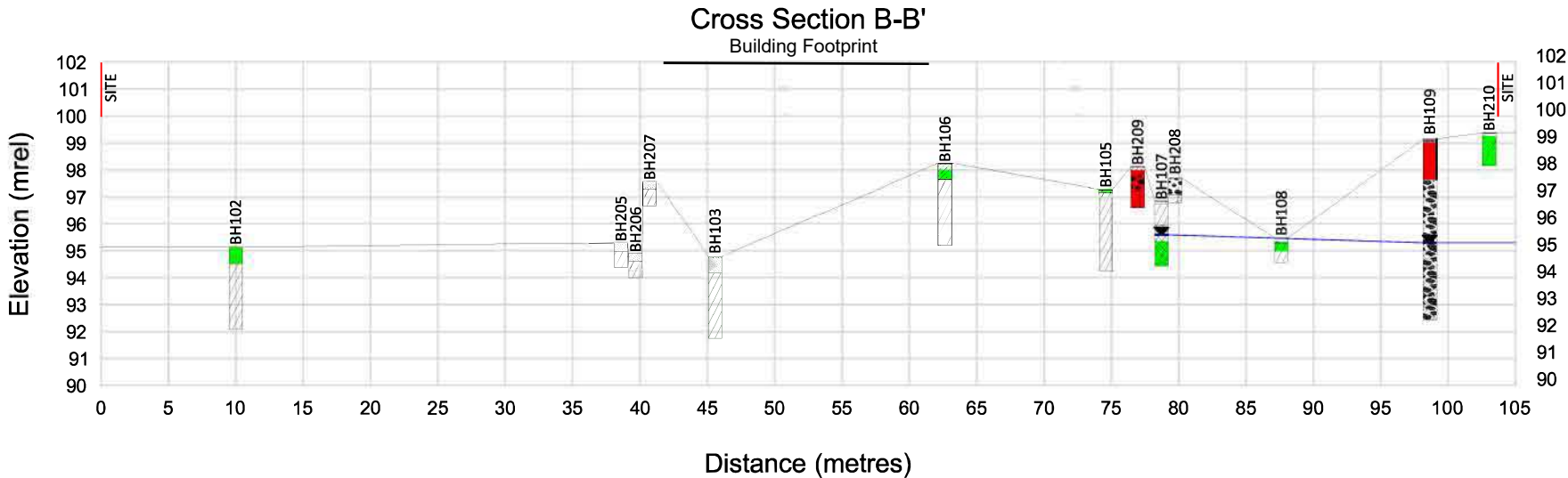
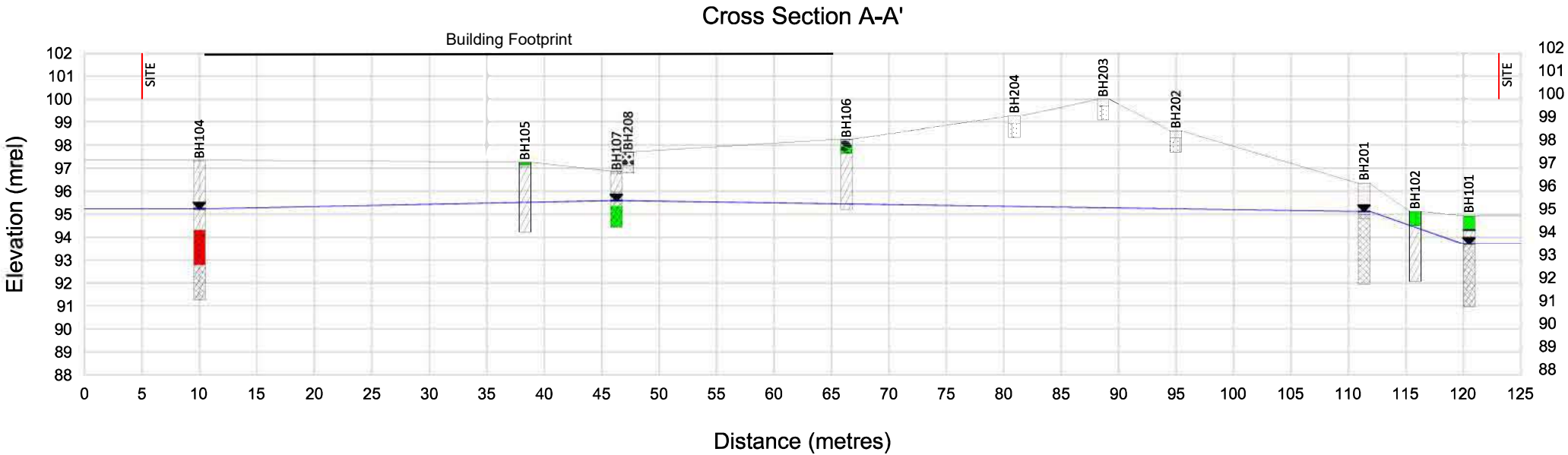
Contaminant	Standard
Arsenic	18
Barium	220
Lead	120
Zinc	290
Molybdenum	2

Standard - Table 8 (RPIICC, potable water)

PHASE TWO
ENVIRONMENTAL
SITE ASSESSMENT
TOWNSHIP OF RIDEAU LAKES
Lower Beverly Lake Park Road
Delta, Ontario

LEGEND

-  Groundwater Elevation
May 9, 2024
-  Asphalt
-  Concrete
-  Fill
-  Topsoil
-  Clay/Silty Clay
-  Silty Sand/Sand
-  Gravel/Silty Gravel
-  Bedrock
-  Well Casing
-  Meets Table 8 RPIICC
-  Exceeds Table 8 RPIICC
-  Well Screen



BH104	
Depth (m)	3.04-4.57
Barium	422

Average of BH109 and BH210	
Depth (m)	0.12-1.5
Arsenic	20.2
Lead	88
Zinc	180.8

BH209	
Depth (m)	0.12 - 1.52
Barium	1540
Molybdenum	2.3
BH209 (QAQC8)	
Barium	1560

Notes:
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CROSS SECTIONS
METALS IN SOIL

Project No.:	17181-001	Date:	November 2023
Horizontal Scale:	1:500	Rev.:	June 2024
Vertical Scale:	1:250 (2x)	Figure:	11
Drawn By:	TLC	Checked By:	LEF

Location	BH101	BH101	BH102	BH103	BH104	BH105	BH106	BH109	BH209	BH209 (QAQC8)	BH210
Date	2023-10-02	2023-10-02	2023-10-02	2023-10-02	2023-10-02	2023-10-02	2023-10-02	2023-10-10	2023-10-10	2023-10-10	2023-10-10
Depth (m)	0.01 - 0.6	1.52-2.43	0.01 - 0.6	0.025 - 0.06	3.04 - 4.57	0.025 - 0.12	0.25 - 0.6	0.12 - 1.5	0.12 - 1.5	0.12 - 1.5	0.12 - 1.5
HWS B	-	-	✓	✓	-	✓	✓	✓	-	-	-
CrVI	-	-	✓	✓	✓	✓	✓	✓	-	-	-
CN	-	-	✓	✓	-	✓	✓	✓	-	-	-
EC	-	-	✓	✓	-	✓	✓	✓	-	-	-
Hg	✓	-	✓	✓	-	✓	✓	✓ ¹	✓	✓	✓
pH	✓	✓	-	-	✓	-	-	-	-	-	-
SAR	-	-	✓	✓	-	✓	✓	✓	-	-	-

1 - BH109 met the standard, based on the concentration averaged with BH210 at the same sampling location and depth

Sample Location		BH109	BH210	Averages of BH109 and BH210
Field ID		BH109_0.12-1.5	BH210_0.12-1.52	
Depth		0.12 - 1.5	0.12 - 1.52	0.12 - 1.52
Date		10 Oct 2023	03 May 2024	
Table 8 - RPIICC				
Mercury	Unit: µg/g	RDL: 0.1	0.27	0.3
				<0.1
				0.2



PHASE TWO
ENVIRONMENTAL SITE
ASSESSMENT
TOWNSHIP OF RIDEAU LAKES
Lower Beverley Lake Park Road
Delta, Ontario

LEGEND

- Borehole
- Monitoring Well
- Meets Table 8 RPIICC
- Exceeds Table 8 RPIICC
- Site (approximate)

Contaminant	Standard
Mercury	0.27

Standard - Table 8 (RPIICC, potable water)

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SOIL QUALITY
ORPs

Project No.: 17181-001	Date: November 2023
Scale: 1:1,000	Rev.: June 2024
Created by: TLC	Checked by: LEF
Figure: 12	

Location	BH101	BH101	BH102	BH103	BH104	BH105	BH106	BH109	BH209	BH209 (QAQC8)	BH210
Date	2023-10-02	2023-10-02	2023-10-02	2023-10-02	2023-10-02	2023-10-02	2023-10-02	2023-10-10	2023-10-10	2023-10-10	2023-10-10
Depth (m)	0.01 - 0.6	1.52-2.43	0.01 - 0.6	0.025 - 0.06	3.04 - 4.57	0.025 - 0.12	0.25 - 0.6	0.12 - 1.5	0.12 - 1.5	0.12 - 1.5	0.12 - 1.5
HWS B	-	-	✓	✓	-	✓	✓	✓	-	-	-
CrVI	-	-	✓	✓	✓	✓	✓	✓	-	-	-
CN	-	-	✓	✓	-	✓	✓	✓	-	-	-
EC	-	-	✓	✓	-	✓	✓	✓	-	-	-
Hg	✓	-	✓	✓	-	✓	✓	✓ ¹	✓	✓	✓
pH	✓	✓	-	-	✓	-	-	-	-	-	-
SAR	-	-	✓	✓	-	✓	✓	✓	-	-	-

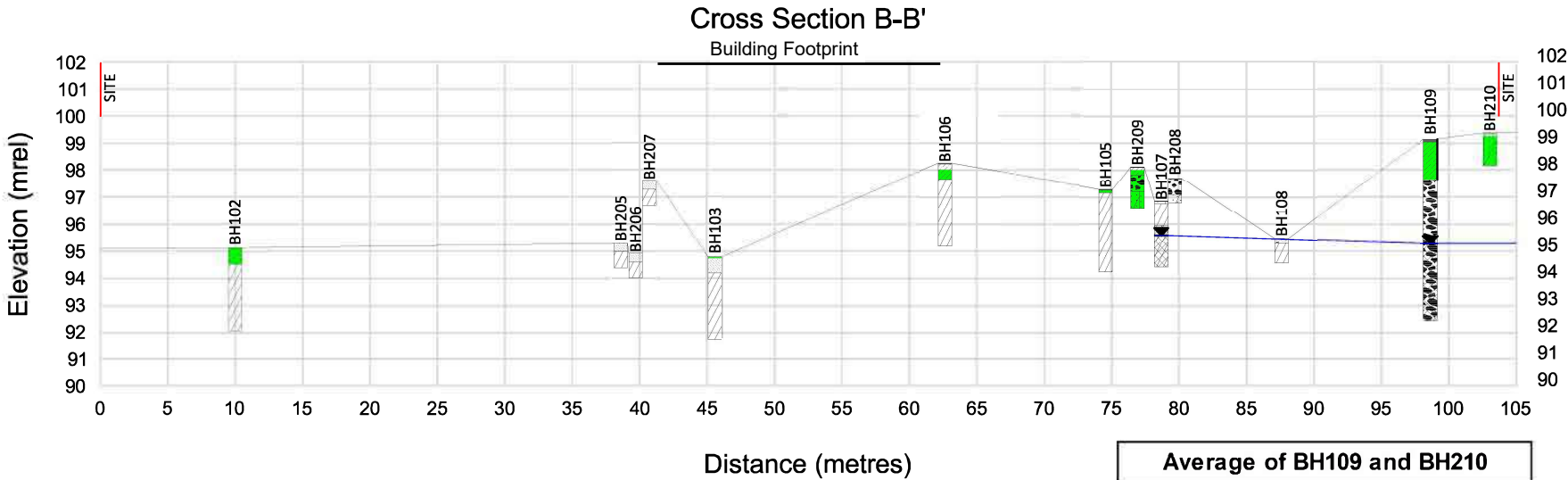
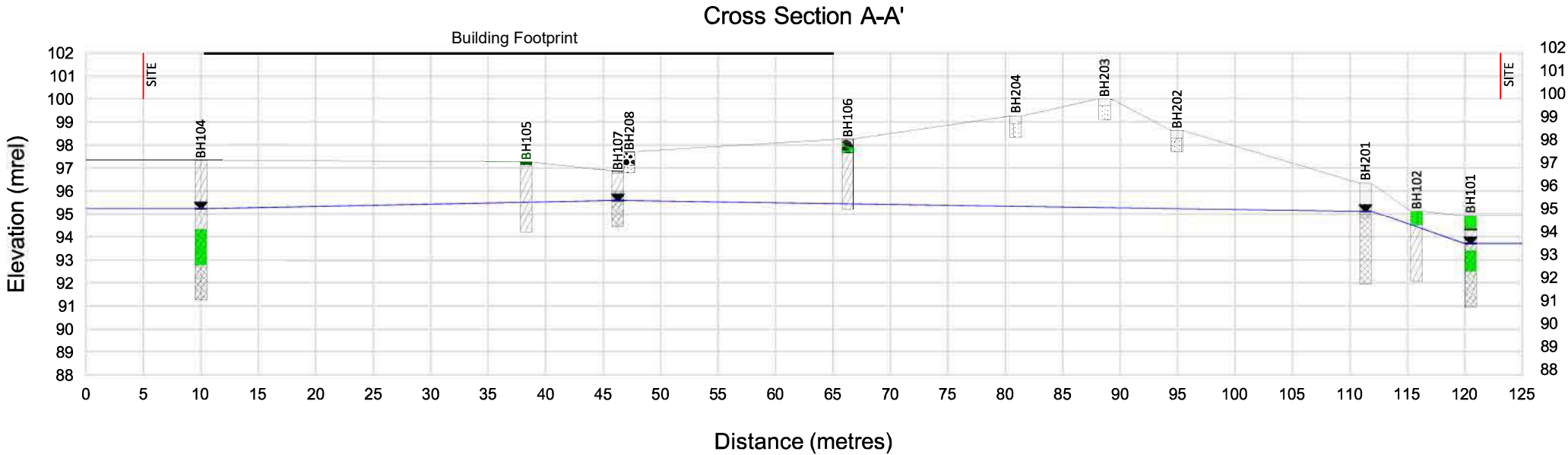
1 - BH109 met the standard, based on the concentration averaged with BH210 at the same sampling location and depth

Contaminant	Standard
Mercury	0.27
Standard - Table 8 (RPIICC, potable water)	

PHASE TWO
ENVIRONMENTAL
SITE ASSESSMENT
TOWNSHIP OF RIDEAU LAKES
Lower Beverly Lake Park Road
Delta, Ontario

LEGEND

-  Groundwater Elevation
October 16, 2023
-  Asphalt
-  Concrete
-  Fill
-  Topsoil
-  Clay/Silty Clay/Silty Sand/Sand
-  Gravel/Silty Gravel
-  Bedrock
-  Well Casing
-  Meets Table 8 RPIICC
-  Exceeds Table 8 RPIICC
-  Well Screen



Average of BH109 and BH210	
Depth (m)	0.12-1.5
Mercury	0.2

Sample Location		BH109	BH210	Averages of BH109 and BH210
Field ID		BH109_0.12-1.5	BH210_0.12-1.52	BH210
Depth		0.12 - 1.5	0.12 - 1.52	0.12 - 1.52
Date		10 Oct 2023	03 May 2024	
Unit		µg/g		
RDL		0.1		
Table 8 - RPIICC		0.3	<0.1	0.2

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CROSS SECTIONS
ORPs IN SOIL

Project No.:	17181-001	Date:	November 2023
Horizontal Scale:	1:500	Rev.:	June 2024
Vertical Scale:	1:250 (2x)	Figure:	13
Drawn By:	TLC	Checked By:	LEF

Location	BH104	BH107
Date	11 Oct 2023	11 Oct 2023
VOCs	✓	✓

WELL ID	TOP OF SCREEN (mrel)	BOTTOM OF SCREEN (mrel)
BH101	94.89	91.84
BH104	95.15	92.1
BH107	95.85	94.35
BH109	95.38	92.33
BH201	95.71	92.66



PHASE TWO
ENVIRONMENTAL SITE
ASSESSMENT
TOWNSHIP OF RIDEAU LAKES
Lower Beverley Lake Park Road
Delta, Ontario

LEGEND

- Borehole
- Monitoring Well
- Exceeds Table 8 RPIICC
- Exceeds Table 8 RPIICC
- Site (approximate)

Contaminant	Standard
Cobalt	3.8

Standard - Table 8 (RPIICC, potable water)

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GROUNDWATER QUALITY
VOCs

Project No.: 17181-001	Date: November 2023
Scale: 1:1,000	Rev.: June 2024
Created by: TLC	Checked by: LEF
Figure: 14	

Location	BH101	BH107	BH109
Date	11 Oct 2023	11 Oct 2023	16 Oct 2023
PHCs/BTEX	✓	✓	✓



WELL ID	TOP OF SCREEN (mrel)	BOTTOM OF SCREEN (mrel)
BH101	94.89	91.84
BH104	95.15	92.1
BH107	95.85	94.35
BH109	95.38	92.33
BH201	95.71	92.66

**PHASE TWO
ENVIRONMENTAL SITE
ASSESSMENT**
TOWNSHIP OF RIDEAU LAKES
Lower Beverley Lake Park Road
Delta, Ontario

LEGEND

- Borehole
- Monitoring Well
- Meets Table 8 RPIIC
- Exceeds Table 8 RPIIC
- Site (approximate)

Contaminant	Standard
Cobalt	3.8

Standard - Table 8 (RPIIC, potable water)

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**GROUNDWATER QUALITY
PHCs AND BTEX**

Project No.: 17181-001	Date: November 2023
Scale: 1:1,000	Rev.: June 2024
Created by: TLC	Checked by: LEF
Figure: 15	

Location	BH101	BH107	BH109	BH201
Date	11 Oct 2023	11 Oct 2023	16 Oct 2023	06 May 2024
PAHs	✓	✓	✓	✓



WELL ID	TOP OF SCREEN (mrel)	BOTTOM OF SCREEN (mrel)
BH101	94.89	91.84
BH104	95.15	92.1
BH107	95.85	94.35
BH109	95.38	92.33
BH201	95.71	92.66

**PHASE TWO
ENVIRONMENTAL SITE
ASSESSMENT**
TOWNSHIP OF RIDEAU LAKES
Lower Beverley Lake Park Road,
Delta, Ontario

LEGEND

- Borehole
- Monitoring Well
- Meets Table 8 RPIIC
- Exceeds Table 8 RPIIC
- Site (approximate)

Contaminant	Standard
Cobalt	3.8

Standard - Table 8 (RPIIC, potable water)

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**GROUNDWATER QUALITY
PAHs**

Project No.: 17181-001	Date: November 2023
Scale: 1:1,000	Rev.: June 2024
Created by: TLC	Checked by: LEF
Figure: 16	



Location	BH101	BH104	BH107	BH109
Date	11 Oct 2023	11 Oct 2023	12 Dec 2023	16 Oct 2023
Metals	✓	✓	✓	✓

WELL ID	TOP OF SCREEN (mrel)	BOTTOM OF SCREEN (mrel)
BH101	94.89	91.84
BH104	95.15	92.1
BH107	95.85	94.35
BH109	95.38	92.33
BH201	95.71	92.66

PHASE TWO
ENVIRONMENTAL SITE
ASSESSMENT
TOWNSHIP OF RIDEAU LAKES
Lower Beverley Lake Park Road,
Delta, Ontario

LEGEND

- Borehole
- Monitoring Well
- Meets Table 8 RPIIC
- Exceeds Table 8 RPIIC
- Site (approximate)

Contaminant	Standard
Cobalt	3.8

Standard - Table 8 (RPIIC, potable water)

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GROUNDWATER QUALITY
METALS

Project No.: 17181-001	Date: November 2023
Scale: 1:1,000	Rev.: June 2024
Created by: TLC	Checked by: LEF
Figure: 17	



**PHASE TWO
ENVIRONMENTAL SITE
ASSESSMENT**
TOWNSHIP OF RIDEAU LAKES
Lower Beverley Lake Park Road,
Delta, Ontario

LEGEND

- Borehole
- Monitoring Well
- Meets Table 8 RPIIC
- Exceeds Table 8 RPIIC
- Site (approximate)

Contaminant	Standard
Cobalt	3.8

Standard - Table 8 (RPIIC, potable water)

Notes:

- Site boundaries are approximate.
- Base mapping features are © King's Printer of Ontario, 2022 (this does not constitute an endorsement by the Ministry of Natural Resources or the Ontario Government).
- Distances on this plan are in metres and can be converted to feet by dividing by 0.3048.
- Cambium Inc. makes every effort to ensure this map is free from errors but cannot be held responsible for any damages due to error or omissions. This map should not be used for navigation or legal purposes. It is intended for general reference use only.



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**GROUNDWATER QUALITY
ORPs**

Project No.: 17181-001	Date: November 2023
Scale: 1:1,000	Rev.: June 2024
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Figure: 18	



Appended Tables



Table 1 - Groundwater Elevations – October 16, 2023

Location	Ground Surface Elevation (m.Rel)	Top of Pipe Elevation (m.Rel)	Screen Depth - Top (mbgs)	Screen Depth - Bottom (mbgs)	Screen elevation (top)	Screen Elevation (Bottom)	GW Depth (mbtop)	GW Depth (mbgs)	GW Elevation (m.Rel)	GW Depth (mbtop)	GW Depth (mbgs)	GW Elevation (m.Rel)
							October 11, 2023			May 9, 2024		
BH101	94.92	95.84	0.03	3.08	94.89	91.84	2.60	1.68	93.24	2.17	1.25	93.67
BH102	95.12											
BH103	94.8											
BH104	97.35	98.20	2.20	5.25	95.15	92.10	3.50	2.65	94.70	2.87	2.02	95.33
BH105	97.26											
BH106	98.26											
BH107	96.87	96.75	1.02	2.52	95.85	94.35	2.08	2.20	94.67	1.21	1.33	95.54
BH108	95.48											
BH109	99.15	99.03	3.77	6.82	95.38	92.33	5.61	5.73	93.42	3.80	3.92	95.23
BH201	96.34	97.26	0.63	3.68	95.71	92.66	-	-	-	2.08	1.16	95.18
BH202	98.62											
BH203	100											
BH204	99.25											
BH205	95.3											
BH206	94.92											
BH207	97.51											
BH208	97.71											
BH209	98.13											
BH210	99.38											

m.Rel - Relative meters

UTM - Universal Transverse Mercator

mbtop - metres below top of pipe

mbgs - metres below ground surface



Table 2 - Soil Quality

Sample Location Field ID Depth Date				BH101	BH101	BH102		BH102		BH103	BH103
				BH101_0.010-0.6	BH101_1.52-2.43	BH102_0.010-0.60	QAQC4	QAQC5	BH102_1.52-3.04	BH103_0.025-0.06	BH103_1.52-3.04
				0.01 - 0.6	1.52 - 2.43	0.01 - 0.6	0.01 - 0.6	0.01 - 0.6	1.52 - 3.04	0.025 - 0.06	1.52 - 3.04
				02 Oct 2023	02 Oct 2023	02 Oct 2023	02 Oct 2023	02 Oct 2023	02 Oct 2023	02 Oct 2023	02 Oct 2023
	Unit	EQL	Table 8 - RPIICC								
BTEX											
Benzene	µg/g	0.02	0.02	<0.02	-	<0.02	<0.02	-	-	<0.02	-
Toluene	µg/g	0.05	0.2	<0.05	-	<0.05	<0.05	-	-	<0.05	-
Ethylbenzene	µg/g	0.05	0.05	<0.05	-	<0.05	<0.05	-	-	<0.05	-
Xylene Total	µg/g	0.05	0.05 ^{#1}	<0.05	-	<0.05	<0.05	-	-	<0.05	-
PHCs											
F1	µg/g	7	25 ^{#2}	<7	-	<7	<7	-	-	<7	-
F2	µg/g	4	10 ^{#3}	<4	-	<4	<4	-	-	<4	<4
F3	µg/g	8	240 ^{#4}	<8	-	72	38	-	-	78	<8
F4	µg/g	6	120	<6	-	112	76	-	-	141	<6
F4G-SG (GHH-Silica)	µg/g	50	120	-	-	106	-	-	-	221	-
PAHs											
Acenaphthene	µg/g	0.02	0.072	<0.02	-	<0.02	-	-	<0.02	<0.02	-
Acenaphthylene	µg/g	0.02	0.093	<0.02	-	0.38	-	-	<0.02	<0.02	-
Anthracene	µg/g	0.02	0.22	<0.02	-	0.12	-	-	<0.02	<0.02	-
Benz(a)anthracene	µg/g	0.02	0.36	<0.02	-	0.3	-	-	<0.02	0.03	-
Benzo(a)pyrene	µg/g	0.02	0.3	<0.02	-	0.5	-	-	<0.02	0.03	-
Benzo(g,h,i)perylene	µg/g	0.02	0.68	<0.02	-	0.38	-	-	<0.02	0.04	-
Benzo(k)fluoranthene	µg/g	0.02	0.48	<0.02	-	0.24	-	-	<0.02	0.02	-
Benzo(b)fluoranthene	µg/g	0.02	0.47 ^{#5}	<0.02	-	0.41	-	-	<0.02	0.04	-
Chrysene	µg/g	0.02	2.8	<0.02	-	0.27	-	-	<0.02	0.03	-
Dibenz(a,h)anthracene	µg/g	0.02	0.1	<0.02	-	0.07	-	-	<0.02	<0.02	-
Fluoranthene	µg/g	0.02	0.69	<0.02	-	0.23	-	-	<0.02	0.08	-
Fluorene	µg/g	0.02	0.19	<0.02	-	<0.02	-	-	<0.02	<0.02	-
Indeno(1,2,3-c,d)pyrene	µg/g	0.02	0.23	<0.02	-	0.28	-	-	<0.02	0.02	-
Methylnaphthalene 1 & 2	µg/g	0.04	0.59 ^{#6}	<0.04	-	<0.04	-	-	<0.04	<0.04	-
Naphthalene	µg/g	0.01	0.09	<0.01	-	0.01	-	-	<0.01	<0.01	-
Phenanthrene	µg/g	0.02	0.69	<0.02	-	0.04	-	-	<0.02	0.07	-
Pyrene	µg/g	0.02	1	<0.02	-	0.37	-	-	<0.02	0.06	-
VOCs											
Acetone	µg/g	0.5	0.5	-	-	<0.50	-	-	-	<0.50	-
Bromomethane	µg/g	0.05	0.05	-	-	<0.05	-	-	-	<0.05	-
Bromoform	µg/g	0.05	0.05	-	-	<0.05	-	-	-	<0.05	-
Bromodichloromethane	µg/g	0.05	0.05	-	-	<0.05	-	-	-	<0.05	-
Carbon tetrachloride	µg/g	0.05	0.05	-	-	<0.05	-	-	-	<0.05	-
Chlorobenzene	µg/g	0.05	0.05	-	-	<0.05	-	-	-	<0.05	-
Chloroform	µg/g	0.05	0.05	-	-	<0.05	-	-	-	<0.05	-
Dibromoethane, 1,2-	µg/g	0.05	0.05	-	-	<0.05	-	-	-	<0.05	-
Dichlorobenzene, 1,2-	µg/g	0.05	0.05	-	-	<0.05	-	-	-	<0.05	-
Dichlorobenzene, 1,3-	µg/g	0.05	0.05	-	-	<0.05	-	-	-	<0.05	-
Dichlorobenzene, 1,4-	µg/g	0.05	0.05	-	-	<0.05	-	-	-	<0.05	-
Dichlorodifluoromethane	µg/g	0.05	0.05	-	-	<0.05	-	-	-	<0.05	-
Dichloroethane, 1,1-	µg/g	0.05	0.05	-	-	<0.05	-	-	-	<0.05	-
Dichloroethane, 1,2-	µg/g	0.05	0.05	-	-	<0.05	-	-	-	<0.05	-
Dichloroethylene, 1,1-	µg/g	0.05	0.05	-	-	<0.05	-	-	-	<0.05	-
Dichloroethylene, 1,2-trans-	µg/g	0.05	0.05	-	-	<0.05	-	-	-	<0.05	-
Dichloroethylene, 1,2-cis-	µg/g	0.05	0.05	-	-	<0.05	-	-	-	<0.05	-
Dichloromethane	µg/g	0.05	0.05	-	-	<0.05	-	-	-	<0.05	-
Dichloropropane, 1,2-	µg/g	0.05	0.05	-	-	<0.05	-	-	-	<0.05	-
Dichloropropene, 1,3- cis & trans	µg/g	0.05	0.05 ^{#7}	-	-	<0.05	-	-	-	<0.05	-
Dibromochloromethane	µg/g	0.05	0.05	-	-	<0.05	-	-	-	<0.05	-
Hexane	µg/g	0.05	0.05	-	-	<0.05	-	-	-	<0.05	-
Methyl Ethyl Ketone	µg/g	0.5	0.5	-	-	<0.50	-	-	-	<0.50	-
Methyl Iso-Butyl Ketone	µg/g	0.5	0.5	-	-	<0.50	-	-	-	<0.50	-
MTBE	µg/g	0.05	0.05	-	-	<0.05	-	-	-	<0.05	-
Styrene	µg/g	0.05	0.05	-	-	<0.05	-	-	-	<0.05	-
Tetrachloroethylene	µg/g	0.05	0.05	-	-	<0.05	-	-	-	<0.05	-
Tetrachloroethane, 1,1,1,2-	µg/g	0.05	0.05	-	-	<0.05	-	-	-	<0.05	-
Tetrachloroethane, 1,1,2,2-	µg/g	0.05	0.05	-	-	<0.05	-	-	-	<0.05	-
Trichloroethane, 1,1,1-	µg/g	0.05	0.05	-	-	<0.05	-	-	-	<0.05	-
Trichloroethane, 1,1,2-	µg/g	0.05	0.05	-	-	<0.05	-	-	-	<0.05	-
Trichloroethylene	µg/g	0.05	0.05	-	-	<0.05	-	-	-	<0.05	-
Trichlorofluoromethane	µg/g	0.05	0.25	-	-	<0.05	-	-	-	<0.05	-
Vinyl chloride	µg/g	0.02	0.02	-	-	<0.02	-	-	-	<0.02	-
Metals											
Antimony	µg/g	1	1.3	<1.0	-	<1.0	-	<1.0	-	<1.0	-
Arsenic	µg/g	1	18	2.7	-	3.3	-	2.9	-	3	-
Barium	µg/g	1	220	181	-	78	-	80.5	-	105	-
Beryllium	µg/g	0.5	2.5	0.5	-	<0.5	-	<0.5	-	<0.5	-
Boron	µg/g	5	36 ^{#8}	10.6	-	6.2	-	6.2	-	8.7	-
Cadmium	µg/g	0.5	1.2	<0.5	-	<0.5	-	<0.5	-	<0.5	-
Chromium (III+VI)	µg/g	5	70	25.8	-	15.2	-	15.8	-	27.3	-
Cobalt	µg/g	1	22	7.2	-	6	-	5.9	-	6.8	-
Copper	µg/g	5	92	19.1	-	12.3	-	12.5	-	13.9	-
Lead	µg/g	1	120	68.1	-	64	-	80	-	74.9	-
Molybdenum	µg/g	1	2	<1.0	-	<1.0	-	<1.0	-	1	-
Nickel	µg/g	5	82	14.9	-	9.6	-	9.5	-	11.6	-
Selenium	µg/g	1	1.5	<1.0	-	<1.0	-	<1.0	-	<1.0	-
Silver	µg/g	0.3	0.5	<0.3	-	<0.3	-	<0.3	-	<0.3	-
Thallium	µg/g	1	1	<1.0	-	<1.0	-	<1.0	-	<1.0	-
Uranium	µg/g	1	2.5	<1.0	-	<1.0	-	<1.0	-	<1.0	-
Vanadium	µg/g	10	86	36.5	-	22.9	-	23.7	-	32.7	-
Zinc	µg/g	20	290	86.6	-	44.9	-	47.7	-	207	-
ORPs											
Boron (hot water soluble)	µg/g	0.5	1.5 ^{#9}	-	-	<0.5	-	<0.5	-	<0.5	-
Chromium (hexavalent)	µg/g	0.2	0.66	-	-	<0.2	-	<0.2	-	<0.2	-
Cyanide (Free)	ug/g	0.03		-	-	<0.03	-	-	-	<0.03	-
Electrical Conductivity (Lab)	µS/cm	5	700	-	-	130	-	-	-	220	-
Mercury	µg/g	0.1	0.27	<0.1	-	<0.1	-	<0.1	-	<0.1	-
pH (Lab)	-	0.05	5-9	7.77	7.85	-	-	-	-	-	-
Sodium Adsorption Ratio	-	0.01	5	-	-	0.09	-	-	-	0.08	-

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 for benzo(b)fluoranthene; however, the laboratory can not distinguish between benzo(b)fluoranthene and benzo(j)fluoranthene.

#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 Standard is applicable to 1,3-Dichloropropene. Individual isomers (cis + trans) should be added for comparison.

#8 Total Boron standard is for sub-surface soil (>1.5 m).

#9 HWS Boron standard is for surface soil (<1.5 m).



Table 2 - Soil Quality

Sample Location				BH104		BH105	BH106	BH107		BH107	
				Field ID		BH105	BH106	QAQC1		QAQC2	BH107
				Depth		3.04 - 4.57	0.025 - 0.12	0.25 - 0.06	0.025 - 0.1	0.025 - 0.1	1.52 - 2.42
				Date		02 Oct 2023	10 Oct 2023	02 Oct 2023	02 Oct 2023	02 Oct 2023	02 Oct 2023
	Unit	EQL	Table 8 - RPIICC								
BTEX											
Benzene	µg/g	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	-	<0.02	
Toluene	µg/g	0.05	0.2	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	
Ethylbenzene	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	
Xylene Total	µg/g	0.05	0.05 ^{#1}	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	
PHCs											
F1	µg/g	7	25 ^{#2}	-	-	<7	<7	<7	-	<7	
F2	µg/g	4	10 ^{#3}	-	-	<4	<4	<4	-	<4	
F3	µg/g	8	240 ^{#4}	-	-	<8	18	12	39	<8	
F4	µg/g	6	120	-	-	<6	22	117	319	<6	
F4G-SG (GHH-Silica)	µg/g	50	120	-	-	-	-	-	461	-	
PAHs											
Acenaphthene	µg/g	0.02	0.072	-	-	<0.02	<0.02	<0.02	-	<0.02	
Acenaphthylene	µg/g	0.02	0.093	-	-	<0.02	<0.02	<0.02	-	<0.02	
Anthracene	µg/g	0.02	0.22	-	-	<0.02	<0.02	<0.02	-	<0.02	
Benzo(a)anthracene	µg/g	0.02	0.36	-	-	<0.02	<0.02	<0.02	-	<0.02	
Benzo(a)pyrene	µg/g	0.02	0.3	-	-	<0.02	<0.02	<0.02	-	<0.02	
Benzo(g,h,i)perylene	µg/g	0.02	0.68	-	-	<0.02	<0.02	<0.02	-	<0.02	
Benzo(k)fluoranthene	µg/g	0.02	0.48	-	-	<0.02	<0.02	<0.02	-	<0.02	
Benzo(b,j)fluoranthene	µg/g	0.02	0.47 ^{#5}	-	-	<0.02	<0.02	<0.02	-	<0.02	
Chrysene	µg/g	0.02	2.8	-	-	<0.02	<0.02	<0.02	-	<0.02	
Dibenz(a,h)anthracene	µg/g	0.02	0.1	-	-	<0.02	<0.02	<0.02	-	<0.02	
Fluoranthene	µg/g	0.02	0.69	-	-	<0.02	<0.02	<0.02	-	<0.02	
Fluorene	µg/g	0.02	0.19	-	-	<0.02	<0.02	<0.02	-	<0.02	
Indeno(1,2,3-c,d)pyrene	µg/g	0.02	0.23	-	-	<0.02	<0.02	<0.02	-	<0.02	
Methylnaphthalene 1 & 2	µg/g	0.04	0.59 ^{#6}	-	-	<0.04	<0.04	<0.04	-	<0.04	
Naphthalene	µg/g	0.01	0.09	-	-	<0.01	<0.01	<0.01	-	<0.01	
Phenanthrene	µg/g	0.02	0.69	-	-	<0.02	<0.02	<0.02	-	<0.02	
Pyrene	µg/g	0.02	1	-	-	<0.02	<0.02	<0.02	-	<0.02	
VOCs											
Acetone	µg/g	0.5	0.5	<0.50	<0.50	<0.50	<0.50	-	-	-	
Bromomethane	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	
Bromoform	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	
Bromodichloromethane	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	
Carbon tetrachloride	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	
Chlorobenzene	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	
Chloroform	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	
Dibromoethane, 1,2-	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	
Dichlorobenzene, 1,2-	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	
Dichlorobenzene, 1,3-	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	
Dichlorobenzene, 1,4-	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	
Dichlorodifluoromethane	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	
Dichloroethane, 1,1-	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	
Dichloroethane, 1,2-	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	
Dichloroethylene, 1,1-	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	
Dichloroethylene, 1,2-trans-	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	
Dichloroethylene, 1,2-cis-	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	
Dichloromethane	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	
Dichloropropane, 1,2-	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	
Dichloropropene, 1,3- cis & trans	µg/g	0.05	0.05 ^{#7}	<0.05	<0.05	<0.05	<0.05	-	-	-	
Dibromochloromethane	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	
Hexane	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	
Methyl Ethyl Ketone	µg/g	0.5	0.5	<0.50	<0.50	<0.50	<0.50	-	-	-	
Methyl Iso-Butyl Ketone	µg/g	0.5	0.5	<0.50	<0.50	<0.50	<0.50	-	-	-	
MTBE	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	
Styrene	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	
Tetrachloroethylene	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	
Tetrachloroethane, 1,1,1,2-	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	
Tetrachloroethane, 1,1,2,2-	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	
Trichloroethane, 1,1,1-	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	
Trichloroethane, 1,1,2-	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	
Trichloroethylene	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	
Trichlorofluoromethane	µg/g	0.05	0.25	<0.05	<0.05	<0.05	<0.05	-	-	-	
Vinyl chloride	µg/g	0.02	0.02	<0.02	<0.02	<0.02	<0.02	-	-	-	
Metals											
Antimony	µg/g	1	1.3	<1.0	-	<1.0	<1.0	-	-	<1.0	
Arsenic	µg/g	1	18	3.2	-	4.2	2.7	-	-	1.8	
Barium	µg/g	1	220	422	-	143	57.3	-	-	78	
Beryllium	µg/g	0.5	2.5	1	-	0.6	<0.5	-	-	<0.5	
Boron	µg/g	5	36 ^{#8}	11.4	-	7.4	9.6	-	-	<5.0	
Cadmium	µg/g	0.5	1.2	<0.5	-	<0.5	<0.5	-	-	<0.5	
Chromium (III+VI)	µg/g	5	70	58.2	-	31.5	21	-	-	18.4	
Cobalt	µg/g	1	22	18.6	-	8.8	3.7	-	-	6.2	
Copper	µg/g	5	92	33.9	-	29.9	12.1	-	-	12.5	
Lead	µg/g	1	120	9	-	33	20.6	-	-	3.4	
Molybdenum	µg/g	1	2	<1.0	-	1.7	1.3	-	-	<1.0	
Nickel	µg/g	5	82	38.4	-	17.6	10.8	-	-	10.4	
Selenium	µg/g	1	1.5	<1.0	-	<1.0	<1.0	-	-	<1.0	
Silver	µg/g	0.3	0.5	<0.3	-	<0.3	<0.3	-	-	<0.3	
Thallium	µg/g	1	1	<1.0	-	<1.0	<1.0	-	-	<1.0	
Uranium	µg/g	1	2.5	<1.0	-	<1.0	<1.0	-	-	<1.0	
Vanadium	µg/g	10	86	69.3	-	45.4	30.1	-	-	31.4	
Zinc	µg/g	20	290	95.5	-	142	26.9	-	-	24.4	
ORPs											
Boron (hot water soluble)	µg/g	0.5	1.5 ^{#9}	-	-	<0.5	<0.5	-	-	-	
Chromium (hexavalent)	µg/g	0.2	0.66	0.3	-	0.4	<0.2	-	-	-	
Cyanide (Free)	ug/g	0.03		-	-	<0.03	<0.03	-	-	-	
Electrical Conductivity (Lab)	µS/cm	5	700	-	-	187	169	-	-	-	
Mercury	µg/g	0.1	0.27	-	-	<0.1	<0.1	-	-	-	
pH (Lab)	-	0.05	5-9	7.58	-	-	-	-	-	-	
Sodium Adsorption Ratio	-	0.01	5	-	-	0.09	0.09	-	-	-	

Comments

#1 Standard is applicable to total xylenes; m & p-xylenes and o-xylenes should be sun

#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 analyze

#4 Standard is applicable to PHC F3 minus PAHs (other than naphthalene). If PAHs h

#5 Standard is for benzo(b)fluoranthene; however, the laboratory can not distinguish b

#6 Standard is applicable to Methylnaphthalene, 1- and Methylnaphthalene, 2-. If both

#7 Standard is applicable to 1,3-Dichloropropene. Individual isomers (cis + trans) shou

#8 Total Boron standard is for sub-surface soil (>1.5 m).

#9 HWS Boron standard is for surface soil (<1.5 m).



Table 2 - Soil Quality

Sample Location				BH108	BH109	BH201		BH201	BH202	BH203	BH203
Field ID				BH108_0.18-0.50	BH109_0.12-1.5	BH201_0.1-0.8	QAQC6	BH201_1.52-3.04	BH202_0.1-0.8	BH203_0.1-0.8	BH203_0.8-1.0
Depth				0.18 - 0.5	0.12 - 1.5	0.1 - 0.8	0.1 - 0.8	1.52 - 3.04	0.1 - 0.8	0.1 - 0.8	0.8 - 1
Date				10 Oct 2023	10 Oct 2023	03 May 2024	02 May 2024	03 May 2024	03 May 2024	03 May 2024	03 May 2024
	Unit	EQL	Table 8 - RPIICC								
BTEX											
Benzene	µg/g	0.02	0.02	<0.02	<0.02	-	-	-	-	-	-
Toluene	µg/g	0.05	0.2	<0.05	<0.05	-	-	-	-	-	-
Ethylbenzene	µg/g	0.05	0.05	<0.05	<0.05	-	-	-	-	-	-
Xylene Total	µg/g	0.05	0.05 ^{#1}	<0.05	<0.05	-	-	-	-	-	-
PHCs											
F1	µg/g	7	25 ^{#2}	<7	<7	-	-	-	-	-	-
F2	µg/g	4	10 ^{#3}	<4	<4	-	-	-	-	-	-
F3	µg/g	8	240 ^{#4}	<8	39	-	-	-	-	-	-
F4	µg/g	6	120	<6	134	-	-	-	-	-	-
F4G-SG (GHH-Silica)	µg/g	50	120	-	-	-	-	-	-	-	-
PAHs											
Acenaphthene	µg/g	0.02	0.072	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.03
Acenaphthylene	µg/g	0.02	0.093	<0.02	<0.02	0.25	<0.02	<0.02	0.03	0.41	1.15
Anthracene	µg/g	0.02	0.22	<0.02	<0.02	0.11	<0.02	<0.02	<0.02	0.22	0.6
Benz(a)anthracene	µg/g	0.02	0.36	<0.02	<0.02	0.12	<0.02	<0.02	0.02	0.42	1.58
Benzo(a)pyrene	µg/g	0.02	0.3	<0.02	<0.02	0.2	<0.02	<0.02	0.03	0.44	1.56
Benzo(g,h,i)perylene	µg/g	0.02	0.68	<0.02	0.04	0.2	<0.02	<0.02	0.03	0.3	0.99
Benzo(k)fluoranthene	µg/g	0.02	0.48	<0.02	<0.02	0.13	<0.02	<0.02	0.03	0.26	1
Benzo(b)fluoranthene	µg/g	0.02	0.47 ^{#5}	<0.02	0.03	0.27	<0.02	<0.02	0.05	0.42	1.44
Chrysene	µg/g	0.02	2.8	<0.02	0.03	0.1	<0.02	<0.02	0.02	0.33	1.22
Dibenz(a,h)anthracene	µg/g	0.02	0.1	<0.02	<0.02	0.04	<0.02	<0.02	<0.02	0.07	0.23
Fluoranthene	µg/g	0.02	0.69	<0.02	0.03	0.15	<0.02	<0.02	0.03	0.69	2.34
Fluorene	µg/g	0.02	0.19	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.03
Indeno(1,2,3-c,d)pyrene	µg/g	0.02	0.23	<0.02	<0.02	0.16	<0.02	<0.02	0.02	0.27	0.88
Methylnaphthalene 1 & 2	µg/g	0.04	0.59 ^{#6}	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Naphthalene	µg/g	0.01	0.09	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	0.02	0.03
Phenanthrene	µg/g	0.02	0.69	<0.02	<0.02	0.04	<0.02	<0.02	<0.02	0.12	0.33
Pyrene	µg/g	0.02	1	<0.02	0.03	0.22	<0.02	<0.02	0.04	0.84	3.24
VOCs											
Acetone	µg/g	0.5	0.5	-	<0.50	-	-	-	-	-	-
Bromomethane	µg/g	0.05	0.05	-	<0.05	-	-	-	-	-	-
Bromoform	µg/g	0.05	0.05	-	<0.05	-	-	-	-	-	-
Bromodichloromethane	µg/g	0.05	0.05	-	<0.05	-	-	-	-	-	-
Carbon tetrachloride	µg/g	0.05	0.05	-	<0.05	-	-	-	-	-	-
Chlorobenzene	µg/g	0.05	0.05	-	<0.05	-	-	-	-	-	-
Chloroform	µg/g	0.05	0.05	-	<0.05	-	-	-	-	-	-
Dibromoethane, 1,2-	µg/g	0.05	0.05	-	<0.05	-	-	-	-	-	-
Dichlorobenzene, 1,2-	µg/g	0.05	0.05	-	<0.05	-	-	-	-	-	-
Dichlorobenzene, 1,3-	µg/g	0.05	0.05	-	<0.05	-	-	-	-	-	-
Dichlorobenzene, 1,4-	µg/g	0.05	0.05	-	<0.05	-	-	-	-	-	-
Dichlorodifluoromethane	µg/g	0.05	0.05	-	<0.05	-	-	-	-	-	-
Dichloroethane, 1,1-	µg/g	0.05	0.05	-	<0.05	-	-	-	-	-	-
Dichloroethane, 1,2-	µg/g	0.05	0.05	-	<0.05	-	-	-	-	-	-
Dichloroethylene, 1,1-	µg/g	0.05	0.05	-	<0.05	-	-	-	-	-	-
Dichloroethylene, 1,2-trans-	µg/g	0.05	0.05	-	<0.05	-	-	-	-	-	-
Dichloroethylene, 1,2-cis-	µg/g	0.05	0.05	-	<0.05	-	-	-	-	-	-
Dichloromethane	µg/g	0.05	0.05	-	<0.05	-	-	-	-	-	-
Dichloropropane, 1,2-	µg/g	0.05	0.05	-	<0.05	-	-	-	-	-	-
Dichloropropene, 1,3- cis & trans	µg/g	0.05	0.05 ^{#7}	-	<0.05	-	-	-	-	-	-
Dibromochloromethane	µg/g	0.05	0.05	-	<0.05	-	-	-	-	-	-
Hexane	µg/g	0.05	0.05	-	<0.05	-	-	-	-	-	-
Methyl Ethyl Ketone	µg/g	0.5	0.5	-	<0.50	-	-	-	-	-	-
Methyl Iso-Butyl Ketone	µg/g	0.5	0.5	-	<0.50	-	-	-	-	-	-
MTBE	µg/g	0.05	0.05	-	<0.05	-	-	-	-	-	-
Styrene	µg/g	0.05	0.05	-	<0.05	-	-	-	-	-	-
Tetrachloroethylene	µg/g	0.05	0.05	-	<0.05	-	-	-	-	-	-
Tetrachloroethane, 1,1,1,2-	µg/g	0.05	0.05	-	<0.05	-	-	-	-	-	-
Tetrachloroethane, 1,1,2,2-	µg/g	0.05	0.05	-	<0.05	-	-	-	-	-	-
Trichloroethane, 1,1,1-	µg/g	0.05	0.05	-	<0.05	-	-	-	-	-	-
Trichloroethane, 1,1,2-	µg/g	0.05	0.05	-	<0.05	-	-	-	-	-	-
Trichloroethylene	µg/g	0.05	0.05	-	<0.05	-	-	-	-	-	-
Trichlorofluoromethane	µg/g	0.05	0.25	-	<0.05	-	-	-	-	-	-
Vinyl chloride	µg/g	0.02	0.02	-	<0.02	-	-	-	-	-	-
Metals											
Antimony	µg/g	1	1.3	<1.0	<1.0	-	-	-	-	-	-
Arsenic	µg/g	1	18	2.1	37.9	-	-	-	-	-	-
Barium	µg/g	1	220	28.9	215	-	-	-	-	-	-
Beryllium	µg/g	0.5	2.5	1.5	0.8	-	-	-	-	-	-
Boron	µg/g	5	36 ^{#8}	<5.0	14.5	-	-	-	-	-	-
Cadmium	µg/g	0.5	1.2	<0.5	1	-	-	-	-	-	-
Chromium (III+VI)	µg/g	5	70	10.9	19.1	-	-	-	-	-	-
Cobalt	µg/g	1	22	4.7	17.8	-	-	-	-	-	-
Copper	µg/g	5	92	10.3	65.7	-	-	-	-	-	-
Lead	µg/g	1	120	3.8	158	-	-	-	-	-	-
Molybdenum	µg/g	1	2	<1.0	1.3	-	-	-	-	-	-
Nickel	µg/g	5	82	6.2	20.9	-	-	-	-	-	-
Selenium	µg/g	1	1.5	1.5	<1.0	-	-	-	-	-	-
Silver	µg/g	0.3	0.5	<0.3	<0.3	-	-	-	-	-	-
Thallium	µg/g	1	1	<1.0	<1.0	-	-	-	-	-	-
Uranium	µg/g	1	2.5	<1.0	<1.0	-	-	-	-	-	-
Vanadium	µg/g	10	86	26.7	28.5	-	-	-	-	-	-
Zinc	µg/g	20	290	<20.0	309	-	-	-	-	-	-
ORPs											
Boron (hot water soluble)	µg/g	0.5	1.5 ^{#9}	-	<0.5	-	-	-	-	-	-
Chromium (hexavalent)	µg/g	0.2	0.66	-	<0.2	-	-	-	-	-	-
Cyanide (Free)	ug/g	0.03		-	<0.03	-	-	-	-	-	-
Electrical Conductivity (Lab)	µS/cm	5	700	-	185	-	-	-	-	-	-
Mercury	µg/g	0.1	0.27	-	0.3	-	-	-	-	-	-
pH (Lab)	-	0.05	5-9	-	-	-	-	-	-	-	-
Sodium Adsorption Ratio	-	0.01	5	-	0.11	-	-	-	-	-	-

Comments

- #1 Standard is applicable to total xylenes; m & p-xylenes and o-xylenes should be sun
- #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 analyze
- #4 Standard is applicable to PHC F3 minus PAHs (other than naphthalene). If PAHs h
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- #7 Standard is applicable to 1,3-Dichloropropene. Individual isomers (cis + trans) shou
- #8 Total Boron standard is for sub-surface soil (>1.5 m).
- #9 HWS Boron standard is for surface soil (<1.5 m).



Table 2 - Soil Quality

Sample Location Field ID Depth Date				BH204	BH204	BH205		BH206	BH207	BH208	BH208
				BH204_0.1-0.8	BH204_0.8-1.0	BH205_0.0-0.06	QAQC7	BH206_0.0-0.06	BH207_0.0-0.06	BH208_0.0-0.1	BH208_0.61-0.91
				0.1 - 0.8	0.8 - 1	0 - 0.06	0 - 0.06	0 - 0.06	0 - 0.06	0 - 0.1	0.6 - 0.9
				03 May 2024	03 May 2024	03 May 2024	02 May 2024	03 May 2024	03 May 2024	03 May 2024	03 May 2024
	Unit	EQL	Table 8 - RPIICC								
BTEX											
Benzene	µg/g	0.02	0.02	-	-	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Toluene	µg/g	0.05	0.2	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	µg/g	0.05	0.05	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylene Total	µg/g	0.05	0.05 ^{#1}	-	-	<0.05	<0.05	<0.05	<0.05	0.3	<0.05
PHCs											
F1	µg/g	7	25 ^{#2}	-	-	<7	<7	<7	<7	12	<7
F2	µg/g	4	10 ^{#3}	-	-	<4	<4	<4	<4	<80	<4
F3	µg/g	8	240 ^{#4}	-	-	<8	<8	<8	10	191	16
F4	µg/g	6	120	-	-	<6	<6	<6	34	3,630	31
F4G-SG (GHH-Silica)	µg/g	50	120	-	-	-	-	-	-	4,960	-
PAHs											
Acenaphthene	µg/g	0.02	0.072	0.04	<0.02	-	-	-	-	-	-
Acenaphthylene	µg/g	0.02	0.093	1.34	0.45	-	-	-	-	-	-
Anthracene	µg/g	0.02	0.22	0.67	0.18	-	-	-	-	-	-
Benz(a)anthracene	µg/g	0.02	0.36	1.34	0.32	-	-	-	-	-	-
Benzo(a)pyrene	µg/g	0.02	0.3	1.41	0.47	-	-	-	-	-	-
Benzo(g,h,i)perylene	µg/g	0.02	0.68	0.98	0.39	-	-	-	-	-	-
Benzo(k)fluoranthene	µg/g	0.02	0.48	1.11	0.26	-	-	-	-	-	-
Benzo(b)fluoranthene	µg/g	0.02	0.47 ^{#5}	1.4	0.46	-	-	-	-	-	-
Chrysene	µg/g	0.02	2.8	1.01	0.27	-	-	-	-	-	-
Dibenz(a,h)anthracene	µg/g	0.02	0.1	0.25	0.09	-	-	-	-	-	-
Fluoranthene	µg/g	0.02	0.69	1.88	0.32	-	-	-	-	-	-
Fluorene	µg/g	0.02	0.19	<0.02	<0.02	-	-	-	-	-	-
Indeno(1,2,3-c,d)pyrene	µg/g	0.02	0.23	0.91	0.32	-	-	-	-	-	-
Methylnaphthalene 1 & 2	µg/g	0.04	0.59 ^{#6}	<0.04	<0.04	-	-	-	-	-	-
Naphthalene	µg/g	0.01	0.09	0.05	<0.01	-	-	-	-	-	-
Phenanthrene	µg/g	0.02	0.69	0.39	0.03	-	-	-	-	-	-
Pyrene	µg/g	0.02	1	2.71	0.44	-	-	-	-	-	-
VOCs											
Acetone	µg/g	0.5	0.5	-	-	-	-	-	-	-	-
Bromomethane	µg/g	0.05	0.05	-	-	-	-	-	-	-	-
Bromoform	µg/g	0.05	0.05	-	-	-	-	-	-	-	-
Bromodichloromethane	µg/g	0.05	0.05	-	-	-	-	-	-	-	-
Carbon tetrachloride	µg/g	0.05	0.05	-	-	-	-	-	-	-	-
Chlorobenzene	µg/g	0.05	0.05	-	-	-	-	-	-	-	-
Chloroform	µg/g	0.05	0.05	-	-	-	-	-	-	-	-
Dibromoethane, 1,2-	µg/g	0.05	0.05	-	-	-	-	-	-	-	-
Dichlorobenzene, 1,2-	µg/g	0.05	0.05	-	-	-	-	-	-	-	-
Dichlorobenzene, 1,3-	µg/g	0.05	0.05	-	-	-	-	-	-	-	-
Dichlorobenzene, 1,4-	µg/g	0.05	0.05	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	µg/g	0.05	0.05	-	-	-	-	-	-	-	-
Dichloroethane, 1,1-	µg/g	0.05	0.05	-	-	-	-	-	-	-	-
Dichloroethane, 1,2-	µg/g	0.05	0.05	-	-	-	-	-	-	-	-
Dichloroethylene, 1,1-	µg/g	0.05	0.05	-	-	-	-	-	-	-	-
Dichloroethylene, 1,2-trans-	µg/g	0.05	0.05	-	-	-	-	-	-	-	-
Dichloroethylene, 1,2-cis-	µg/g	0.05	0.05	-	-	-	-	-	-	-	-
Dichloromethane	µg/g	0.05	0.05	-	-	-	-	-	-	-	-
Dichloropropane, 1,2-	µg/g	0.05	0.05	-	-	-	-	-	-	-	-
Dichloropropene, 1,3- cis & trans	µg/g	0.05	0.05 ^{#7}	-	-	-	-	-	-	-	-
Dibromochloromethane	µg/g	0.05	0.05	-	-	-	-	-	-	-	-
Hexane	µg/g	0.05	0.05	-	-	-	-	-	-	-	-
Methyl Ethyl Ketone	µg/g	0.5	0.5	-	-	-	-	-	-	-	-
Methyl Iso-Butyl Ketone	µg/g	0.5	0.5	-	-	-	-	-	-	-	-
MTBE	µg/g	0.05	0.05	-	-	-	-	-	-	-	-
Styrene	µg/g	0.05	0.05	-	-	-	-	-	-	-	-
Tetrachloroethylene	µg/g	0.05	0.05	-	-	-	-	-	-	-	-
Tetrachloroethane, 1,1,1,2-	µg/g	0.05	0.05	-	-	-	-	-	-	-	-
Tetrachloroethane, 1,1,2,2-	µg/g	0.05	0.05	-	-	-	-	-	-	-	-
Trichloroethane, 1,1,1-	µg/g	0.05	0.05	-	-	-	-	-	-	-	-
Trichloroethane, 1,1,2-	µg/g	0.05	0.05	-	-	-	-	-	-	-	-
Trichloroethylene	µg/g	0.05	0.05	-	-	-	-	-	-	-	-
Trichlorofluoromethane	µg/g	0.05	0.25	-	-	-	-	-	-	-	-
Vinyl chloride	µg/g	0.02	0.02	-	-	-	-	-	-	-	-
Metals											
Antimony	µg/g	1	1.3	-	-	-	-	-	-	-	-
Arsenic	µg/g	1	18	-	-	-	-	-	-	-	-
Barium	µg/g	1	220	-	-	-	-	-	-	-	-
Beryllium	µg/g	0.5	2.5	-	-	-	-	-	-	-	-
Boron	µg/g	5	36 ^{#8}	-	-	-	-	-	-	-	-
Cadmium	µg/g	0.5	1.2	-	-	-	-	-	-	-	-
Chromium (III+VI)	µg/g	5	70	-	-	-	-	-	-	-	-
Cobalt	µg/g	1	22	-	-	-	-	-	-	-	-
Copper	µg/g	5	92	-	-	-	-	-	-	-	-
Lead	µg/g	1	120	-	-	-	-	-	-	-	-
Molybdenum	µg/g	1	2	-	-	-	-	-	-	-	-
Nickel	µg/g	5	82	-	-	-	-	-	-	-	-
Selenium	µg/g	1	1.5	-	-	-	-	-	-	-	-
Silver	µg/g	0.3	0.5	-	-	-	-	-	-	-	-
Thallium	µg/g	1	1	-	-	-	-	-	-	-	-
Uranium	µg/g	1	2.5	-	-	-	-	-	-	-	-
Vanadium	µg/g	10	86	-	-	-	-	-	-	-	-
Zinc	µg/g	20	290	-	-	-	-	-	-	-	-
ORPs											
Boron (hot water soluble)	µg/g	0.5	1.5 ^{#9}	-	-	-	-	-	-	-	-
Chromium (hexavalent)	µg/g	0.2	0.66	-	-	-	-	-	-	-	-
Cyanide (Free)	ug/g	0.03		-	-	-	-	-	-	-	-
Electrical Conductivity (Lab)	µS/cm	5	700	-	-	-	-	-	-	-	-
Mercury	µg/g	0.1	0.27	-	-	-	-	-	-	-	-
pH (Lab)	-	0.05	5-9	-	-	-	-	-	-	-	-
Sodium Adsorption Ratio	-	0.01	5	-	-	-	-	-	-	-	-

Comments

- #1 Standard is applicable to total xylenes; m & p-xylenes and o-xylenes should be sun
- #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 analyze
- #4 Standard is applicable to PHC F3 minus PAHs (other than naphthalene). If PAHs h
- #5 Standard is for benzo(b)fluoranthene; however, the laboratory can not distinguish b
- #6 Standard is applicable to Methylnaphthalene, 1- and Methylnaphthalene, 2-. If both
- #7 Standard is applicable to 1,3-Dichloropropene. Individual isomers (cis + trans) shou
- #8 Total Boron standard is for sub-surface soil (>1.5 m).
- #9 HWS Boron standard is for surface soil (<1.5 m).



Table 2 - Soil Quality

Sample Location				BH209		BH209	BH210
				BH209_0.12-1.52	QAQC8	BH209_1.52-1.82	BH210_0.12-1.52
				0.12 - 1.52	0.12 - 1.52	1.52 - 1.82	0.12 - 1.52
				03 May 2024	02 May 2024	03 May 2024	03 May 2024
	Unit	EQL	Table 8 - RPIICC				
BTEX							
Benzene	µg/g	0.02	0.02	-	-	-	-
Toluene	µg/g	0.05	0.2	-	-	-	-
Ethylbenzene	µg/g	0.05	0.05	-	-	-	-
Xylene Total	µg/g	0.05	0.05 ^{#1}	-	-	-	-
PHCs							
F1	µg/g	7	25 ^{#2}	-	-	-	-
F2	µg/g	4	10 ^{#3}	-	-	-	-
F3	µg/g	8	240 ^{#4}	-	-	-	-
F4	µg/g	6	120	-	-	-	-
F4G-SG (GHH-Silica)	µg/g	50	120	-	-	-	-
PAHs							
Acenaphthene	µg/g	0.02	0.072	-	-	-	-
Acenaphthylene	µg/g	0.02	0.093	-	-	-	-
Anthracene	µg/g	0.02	0.22	-	-	-	-
Benz(a)anthracene	µg/g	0.02	0.36	-	-	-	-
Benzo(a)pyrene	µg/g	0.02	0.3	-	-	-	-
Benzo(g,h,i)perylene	µg/g	0.02	0.68	-	-	-	-
Benzo(k)fluoranthene	µg/g	0.02	0.48	-	-	-	-
Benzo(b)fluoranthene	µg/g	0.02	0.47 ^{#5}	-	-	-	-
Chrysene	µg/g	0.02	2.8	-	-	-	-
Dibenz(a,h)anthracene	µg/g	0.02	0.1	-	-	-	-
Fluoranthene	µg/g	0.02	0.69	-	-	-	-
Fluorene	µg/g	0.02	0.19	-	-	-	-
Indeno(1,2,3-c,d)pyrene	µg/g	0.02	0.23	-	-	-	-
Methylnaphthalene 1 & 2	µg/g	0.04	0.59 ^{#6}	-	-	-	-
Naphthalene	µg/g	0.01	0.09	-	-	-	-
Phenanthrene	µg/g	0.02	0.69	-	-	-	-
Pyrene	µg/g	0.02	1	-	-	-	-
VOCs							
Acetone	µg/g	0.5	0.5	-	-	-	-
Bromomethane	µg/g	0.05	0.05	-	-	-	-
Bromoform	µg/g	0.05	0.05	-	-	-	-
Bromodichloromethane	µg/g	0.05	0.05	-	-	-	-
Carbon tetrachloride	µg/g	0.05	0.05	-	-	-	-
Chlorobenzene	µg/g	0.05	0.05	-	-	-	-
Chloroform	µg/g	0.05	0.05	-	-	-	-
Dibromoethane, 1,2-	µg/g	0.05	0.05	-	-	-	-
Dichlorobenzene, 1,2-	µg/g	0.05	0.05	-	-	-	-
Dichlorobenzene, 1,3-	µg/g	0.05	0.05	-	-	-	-
Dichlorobenzene, 1,4-	µg/g	0.05	0.05	-	-	-	-
Dichlorodifluoromethane	µg/g	0.05	0.05	-	-	-	-
Dichloroethane, 1,1-	µg/g	0.05	0.05	-	-	-	-
Dichloroethane, 1,2-	µg/g	0.05	0.05	-	-	-	-
Dichloroethylene, 1,1-	µg/g	0.05	0.05	-	-	-	-
Dichloroethylene, 1,2-trans-	µg/g	0.05	0.05	-	-	-	-
Dichloroethylene, 1,2-cis-	µg/g	0.05	0.05	-	-	-	-
Dichloromethane	µg/g	0.05	0.05	-	-	-	-
Dichloropropane, 1,2-	µg/g	0.05	0.05	-	-	-	-
Dichloropropene, 1,3- cis & trans	µg/g	0.05	0.05 ^{#7}	-	-	-	-
Dibromochloromethane	µg/g	0.05	0.05	-	-	-	-
Hexane	µg/g	0.05	0.05	-	-	-	-
Methyl Ethyl Ketone	µg/g	0.5	0.5	-	-	-	-
Methyl Iso-Butyl Ketone	µg/g	0.5	0.5	-	-	-	-
MTBE	µg/g	0.05	0.05	-	-	-	-
Styrene	µg/g	0.05	0.05	-	-	-	-
Tetrachloroethylene	µg/g	0.05	0.05	-	-	-	-
Tetrachloroethane, 1,1,1,2-	µg/g	0.05	0.05	-	-	-	-
Tetrachloroethane, 1,1,2,2-	µg/g	0.05	0.05	-	-	-	-
Trichloroethane, 1,1,1-	µg/g	0.05	0.05	-	-	-	-
Trichloroethane, 1,1,2-	µg/g	0.05	0.05	-	-	-	-
Trichloroethylene	µg/g	0.05	0.05	-	-	-	-
Trichlorofluoromethane	µg/g	0.05	0.25	-	-	-	-
Vinyl chloride	µg/g	0.02	0.02	-	-	-	-
Metals							
Antimony	µg/g	1	1.3	<1.0	<1.0	<1.0	<1.0
Arsenic	µg/g	1	18	2.4	3.4	2.4	2.4
Barium	µg/g	1	220	1,540	1,560	66.1	74.3
Beryllium	µg/g	0.5	2.5	<0.5	<0.5	0.5	<0.5
Boron	µg/g	5	36 ^{#8}	<5.0	5.1	<5.0	6.3
Cadmium	µg/g	0.5	1.2	<0.5	<0.5	<0.5	<0.5
Chromium (III+VI)	µg/g	5	70	10.3	10.3	20.9	10.2
Cobalt	µg/g	1	22	2	2.7	6.8	3.2
Copper	µg/g	5	92	9.1	9.5	9.1	12.4
Lead	µg/g	1	120	26.6	42.4	12.3	18.3
Molybdenum	µg/g	1	2	2.3	1.3	<1.0	<1.0
Nickel	µg/g	5	82	<5.0	5.3	9.6	6.1
Selenium	µg/g	1	1.5	<1.0	<1.0	<1.0	<1.0
Silver	µg/g	0.3	0.5	<0.3	<0.3	<0.3	<0.3
Thallium	µg/g	1	1	<1.0	<1.0	<1.0	<1.0
Uranium	µg/g	1	2.5	<1.0	<1.0	<1.0	<1.0
Vanadium	µg/g	10	86	<10.0	13.4	36.1	17.5
Zinc	µg/g	20	290	44.7	57.2	45.2	52.5
ORPs							
Boron (hot water soluble)	µg/g	0.5	1.5 ^{#9}	-	-	-	-
Chromium (hexavalent)	µg/g	0.2	0.66	-	-	-	-
Cyanide (Free)	ug/g	0.03		-	-	-	-
Electrical Conductivity (Lab)	µS/cm	5	700	-	-	-	-
Mercury	µg/g	0.1	0.27	<0.1	<0.1	-	<0.1
pH (Lab)	-	0.05	5-9	-	-	-	-
Sodium Adsorption Ratio	-	0.01	5	-	-	-	-

Comments

- #1 Standard is applicable to total xylenes; m & p-xylenes and o-xylenes should be sun
- #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 analyze
- #4 Standard is applicable to PHC F3 minus PAHs (other than naphthalene). If PAHs h
- #5 Standard is for benzo(b)fluoranthene; however, the laboratory can not distinguish b
- #6 Standard is applicable to Methylnaphthalene, 1- and Methylnaphthalene, 2-. If both
- #7 Standard is applicable to 1,3-Dichloropropene. Individual isomers (cis + trans) shou
- #8 Total Boron standard is for sub-surface soil (>1.5 m).
- #9 HWS Boron standard is for surface soil (<1.5 m).



Table 3 - Soil Quality Averaging

Sample Location				BH109	BH210	Averages of BH109 and BH210
Field ID				BH109_0.12-1.5	BH210_0.12-1.52	
Depth				0.12 - 1.5	0.12 - 1.52	0.12 - 1.52
Date				10 Oct 2023	03 May 2024	
	Unit	RDL	Table 8 - RPIICC			
Arsenic	µg/g	1	18	37.9	2.4	20.15
Lead	µg/g	1	120	158	18.3	88.15
Zinc	µg/g	20	290	309	52.5	180.75
Mercury	µg/g	0.1	0.27	0.3	<0.1	0.2



Table 4 - Groundwater Quality

			Sample Location		BH101	BH101	BH101	BH101	BH104	BH104	BH104
			Field ID		BH101	BH101	QAQC-GW1	QAQC-GW4	BH104	QAQC-GW2	QAQC-GW3
			Date		20 Sep 2023	11 Oct 2023	13 Oct 2023	11 Oct 2023	13 Oct 2023	11 Oct 2023	11 Oct 2023
	Unit	EQL	Table 8 - within 30 m of a Water Body								
BTEX											
Benzene	µg/L	0.5	5		<0.5	<0.5	-	<0.5	-	<0.5	<0.5
Toluene	µg/L	0.5	22		<0.5	<0.5	-	<0.5	-	<0.5	<0.5
Ethylbenzene	µg/L	0.5	2.4		<0.5	<0.5	-	<0.5	-	<0.5	<0.5
Xylene Total	µg/L	0.5	300 ^{#1}		<0.5	<0.5	-	<0.5	-	<0.5	<0.5
PHCs											
F1	µg/L	25	420 ^{#2}		-	<25	-	<25	-	-	-
F2	µg/L	100	150 ^{#3}		-	<100	-	<100	-	-	-
F3	µg/L	100	500 ^{#4}		-	<100	-	<100	-	-	-
F4	µg/L	100	500		-	<100	-	<100	-	-	-
PAHs											
Acenaphthene	µg/L	0.05	4.1		-	<0.05	-	<0.05	-	-	-
Acenaphthylene	µg/L	0.05	1		-	<0.05	-	<0.05	-	-	-
Anthracene	µg/L	0.01	1		-	<0.01	-	<0.01	-	-	-
Benz(a)anthracene	µg/L	0.01	1		-	<0.01	-	<0.01	-	-	-
Benzo(a)pyrene	µg/L	0.01	0.01		-	<0.01	-	<0.01	-	-	-
Benzo(g,h,i)perylene	µg/L	0.05	0.2		-	<0.05	-	<0.05	-	-	-
Benzo(k)fluoranthene	µg/L	0.05	0.1		-	<0.05	-	<0.05	-	-	-
Benzo(b,j)fluoranthene	µg/L	0.05	0.1 ^{#5}		-	<0.05	-	<0.05	-	-	-
Chrysene	µg/L	0.05	0.1		-	<0.05	-	<0.05	-	-	-
Dibenz(a,h)anthracene	µg/L	0.05	0.2		-	<0.05	-	<0.05	-	-	-
Fluoranthene	µg/L	0.01	0.41		-	<0.01	-	<0.01	-	-	-
Fluorene	µg/L	0.05	120		-	<0.05	-	<0.05	-	-	-
Indeno(1,2,3-c,d)pyrene	µg/L	0.05	0.2		-	<0.05	-	<0.05	-	-	-
Methylnaphthalene 1 & 2	µg/L	0.1	3.2 ^{#6}		-	<0.10	-	<0.10	-	-	-
Naphthalene	µg/L	0.05	11		-	<0.05	-	<0.05	-	-	-
Phenanthrene	µg/L	0.05	1		-	<0.05	-	<0.05	-	-	-
Pyrene	µg/L	0.01	4.1		-	<0.01	-	<0.01	-	-	-
VOCs											
Acetone	µg/L	5	2,700		<5.0	-	-	-	<5.0	<5.0	-
Bromomethane	µg/L	0.5	0.89		<0.5	-	-	-	<0.5	<0.5	-
Bromoform	µg/L	0.5	25		<0.5	-	-	-	<0.5	<0.5	-
Bromodichloromethane	µg/L	0.5	16		<0.5	-	-	-	<0.5	<0.5	-
Carbon tetrachloride	µg/L	0.2	0.79		<0.2	-	-	-	<0.2	<0.2	-
Chlorobenzene	µg/L	0.5	30		<0.5	-	-	-	<0.5	<0.5	-
Chloroform	µg/L	0.5	2.4		<0.5	-	-	-	<0.5	<0.5	-
Dibromoethane, 1,2-	µg/L	0.2	0.2		<0.2	-	-	-	<0.2	<0.2	-
Dichlorobenzene, 1,2-	µg/L	0.5	3		<0.5	-	-	-	<0.5	<0.5	-
Dichlorobenzene, 1,3-	µg/L	0.5	59		<0.5	-	-	-	<0.5	<0.5	-
Dichlorobenzene, 1,4-	µg/L	0.5	1		<0.5	-	-	-	<0.5	<0.5	-
Dichlorodifluoromethane	µg/L	1	590		<1.0	-	-	-	<1.0	<1.0	-
Dichloroethane, 1,1-	µg/L	0.5	5		<0.5	-	-	-	<0.5	<0.5	-
Dichloroethane, 1,2-	µg/L	0.5	1.6		<0.5	-	-	-	<0.5	<0.5	-
Dichloroethylene, 1,1-	µg/L	0.5	1.6		<0.5	-	-	-	<0.5	<0.5	-
Dichloroethylene, 1,2-trans-	µg/L	0.5	1.6		<0.5	-	-	-	<0.5	<0.5	-
Dichloroethylene, 1,2-cis-	µg/L	0.5	1.6		<0.5	-	-	-	<0.5	<0.5	-
Dichloromethane	µg/L	5	50		<5.0	-	-	-	<5.0	<5.0	-
Dichloropropane, 1,2-	µg/L	0.5	5		<0.5	-	-	-	<0.5	<0.5	-
Dichloropropene, 1,3- cis & trans	µg/L	0.5	0.5		<0.5	-	-	-	<0.5	<0.5	-
Dibromochloromethane	µg/L	0.5	25		<0.5	-	-	-	<0.5	<0.5	-
Hexane	µg/L	1	51		<1.0	-	-	-	<1.0	<1.0	-
Methyl Ethyl Ketone	µg/L	5	1,800		<5.0	-	-	-	<5.0	<5.0	-
Methyl Iso-Butyl Ketone	µg/L	5	640		<5.0	-	-	-	<5.0	<5.0	-
MTBE	µg/L	2	15		<2.0	-	-	-	<2.0	<2.0	-
Styrene	µg/L	0.5	5.4		<0.5	-	-	-	<0.5	<0.5	-
Tetrachloroethylene	µg/L	0.5	1.6		<0.5	-	-	-	<0.5	<0.5	-
Tetrachloroethane, 1,1,1,2-	µg/L	0.5	1.1		<0.5	-	-	-	<0.5	<0.5	-
Tetrachloroethane, 1,1,2,2-	µg/L	0.5	1		<0.5	-	-	-	<0.5	<0.5	-
Trichloroethane, 1,1,1-	µg/L	0.5	200		<0.5	-	-	-	<0.5	<0.5	-
Trichloroethane, 1,1,2-	µg/L	0.5	4.7		<0.5	-	-	-	<0.5	<0.5	-
Trichloroethylene	µg/L	0.5	1.6		<0.5	-	-	-	<0.5	<0.5	-
Trichlorofluoromethane	µg/L	1	150		<1.0	-	-	-	<1.0	<1.0	-
Vinyl chloride	µg/L	0.5	0.5		<0.5	-	-	-	<0.5	<0.5	-
Metals											
Antimony	µg/L	0.5	6		-	<0.5	-	<0.5	-	<0.5	-
Arsenic	µg/L	1	25		-	<1	-	<1	-	<1	-
Barium	µg/L	1	1,000		-	160	-	160	-	281	-
Beryllium	µg/L	0.5	4		-	<0.5	-	<0.5	-	<0.5	-
Boron	µg/L	10	5,000		-	31	-	32	-	26	-
Cadmium	µg/L	0.1	2.1		-	<0.1	-	<0.1	-	<0.1	-
Chromium (III+VI)	µg/L	1	50		-	<1	-	<1	-	<1	-
Cobalt	µg/L	0.5	3.8		-	<0.5	-	<0.5	-	<0.5	-
Copper	µg/L	0.5	69		-	0.6	-	0.8	-	0.8	-
Lead	µg/L	0.1	10		-	<0.1	-	<0.1	-	<0.1	-
Molybdenum	µg/L	0.5	70		-	0.8	-	<0.5	-	1.5	-
Nickel	µg/L	1	100		-	<1	-	<1	-	<1	-
Selenium	µg/L	1	10		-	<1	-	<1	-	<1	-
Silver	µg/L	0.1	1.2		-	<0.1	-	<0.1	-	<0.1	-
Thallium	µg/L	0.1	2		-	<0.1	-	<0.1	-	<0.1	-
Uranium	µg/L	0.1	20		-	1.3	-	1.3	-	0.5	-
Vanadium	µg/L	0.5	6.2		-	<0.5	-	<0.5	-	<0.5	-
Zinc	µg/L	5	890		-	<5	-	<5	-	<5	-
ORPs											
Chromium (hexavalent)	µg/L	10	25		-	-	-	-	<10	-	<10
Mercury	µg/L	0.1	0.29		-	-	<0.1	-	<0.1	-	-
Sodium	ug/L	200	490,000		-	42,800	-	42,900	-	14,800	-

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 for benzo(b)fluoranthene; however, the laboratory can not distinguish between benzo(b)fluoranthene and benzo(j)fluoranthene.
#6 Standard is applicable to Methylnaphthalene, 1- and Methylnaphthalene, 2-. If both are detected, the sum of the two must not exceed the standard.



Table 4 - Groundwater Quality

			Sample Location	BH107	BH107	BH109	BH201	BH201
			Field ID	BH107	BH107	BH109	BH201	QAQC-GW4
			Date	11 Oct 2023	12 Dec 2023	16 Oct 2023	06 May 2024	06 May 2024
	Unit	EQL	Table 8 - within 30 m of a Water Body					
BTEX								
Benzene	µg/L	0.5	5	<0.5	-	<0.5	-	-
Toluene	µg/L	0.5	22	<0.5	-	<0.5	-	-
Ethylbenzene	µg/L	0.5	2.4	<0.5	-	<0.5	-	-
Xylene Total	µg/L	0.5	300 ^{#1}	<0.5	-	<0.5	-	-
PHCs								
F1	µg/L	25	420 ^{#2}	<25	-	<25	-	-
F2	µg/L	100	150 ^{#3}	<100	-	<100	-	-
F3	µg/L	100	500 ^{#4}	<100	-	<100	-	-
F4	µg/L	100	500	<100	-	<100	-	-
PAHs								
Acenaphthene	µg/L	0.05	4.1	<0.05	-	<0.05	<0.05	<0.05
Acenaphthylene	µg/L	0.05	1	<0.05	-	<0.05	<0.05	<0.05
Anthracene	µg/L	0.01	1	<0.01	-	<0.01	<0.01	<0.01
Benz(a)anthracene	µg/L	0.01	1	<0.01	-	<0.01	<0.01	<0.01
Benzo(a)pyrene	µg/L	0.01	0.01	<0.01	-	<0.01	<0.01	<0.01
Benzo(g,h,i)perylene	µg/L	0.05	0.2	<0.05	-	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/L	0.05	0.1	<0.05	-	<0.05	<0.05	<0.05
Benzo(b,j)fluoranthene	µg/L	0.05	0.1 ^{#5}	<0.05	-	<0.05	<0.05	<0.05
Chrysene	µg/L	0.05	0.1	<0.05	-	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/L	0.05	0.2	<0.05	-	<0.05	<0.05	<0.05
Fluoranthene	µg/L	0.01	0.41	<0.01	-	<0.01	<0.01	<0.01
Fluorene	µg/L	0.05	120	<0.05	-	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	µg/L	0.05	0.2	<0.05	-	<0.05	<0.05	<0.05
Methylnaphthalene 1 & 2	µg/L	0.1	3.2 ^{#6}	<0.10	-	<0.10	<0.10	<0.10
Naphthalene	µg/L	0.05	11	<0.05	-	0.07	<0.05	<0.05
Phenanthrene	µg/L	0.05	1	<0.05	-	<0.05	<0.05	<0.05
Pyrene	µg/L	0.01	4.1	<0.01	-	0.05	<0.01	<0.01
VOCs								
Acetone	µg/L	5	2,700	<5.0	-	-	-	-
Bromomethane	µg/L	0.5	0.89	<0.5	-	-	-	-
Bromoform	µg/L	0.5	25	<0.5	-	-	-	-
Bromodichloromethane	µg/L	0.5	16	<0.5	-	-	-	-
Carbon tetrachloride	µg/L	0.2	0.79	<0.2	-	-	-	-
Chlorobenzene	µg/L	0.5	30	<0.5	-	-	-	-
Chloroform	µg/L	0.5	2.4	<0.5	-	-	-	-
Dibromoethane, 1,2-	µg/L	0.2	0.2	<0.2	-	-	-	-
Dichlorobenzene, 1,2-	µg/L	0.5	3	<0.5	-	-	-	-
Dichlorobenzene, 1,3-	µg/L	0.5	59	<0.5	-	-	-	-
Dichlorobenzene, 1,4-	µg/L	0.5	1	<0.5	-	-	-	-
Dichlorodifluoromethane	µg/L	1	590	<1.0	-	-	-	-
Dichloroethane, 1,1-	µg/L	0.5	5	<0.5	-	-	-	-
Dichloroethane, 1,2-	µg/L	0.5	1.6	<0.5	-	-	-	-
Dichloroethylene, 1,1-	µg/L	0.5	1.6	<0.5	-	-	-	-
Dichloroethylene, 1,2-trans-	µg/L	0.5	1.6	<0.5	-	-	-	-
Dichloroethylene, 1,2-cis-	µg/L	0.5	1.6	<0.5	-	-	-	-
Dichloromethane	µg/L	5	50	<5.0	-	-	-	-
Dichloropropane, 1,2-	µg/L	0.5	5	<0.5	-	-	-	-
Dichloropropene, 1,3- cis & trans	µg/L	0.5	0.5	<0.5	-	-	-	-
Dibromochloromethane	µg/L	0.5	25	<0.5	-	-	-	-
Hexane	µg/L	1	51	<1.0	-	-	-	-
Methyl Ethyl Ketone	µg/L	5	1,800	<5.0	-	-	-	-
Methyl Iso-Butyl Ketone	µg/L	5	640	<5.0	-	-	-	-
MTBE	µg/L	2	15	<2.0	-	-	-	-
Styrene	µg/L	0.5	5.4	<0.5	-	-	-	-
Tetrachloroethylene	µg/L	0.5	1.6	<0.5	-	-	-	-
Tetrachloroethane, 1,1,1,2-	µg/L	0.5	1.1	<0.5	-	-	-	-
Tetrachloroethane, 1,1,2,2-	µg/L	0.5	1	<0.5	-	-	-	-
Trichloroethane, 1,1,1-	µg/L	0.5	200	<0.5	-	-	-	-
Trichloroethane, 1,1,2-	µg/L	0.5	4.7	<0.5	-	-	-	-
Trichloroethylene	µg/L	0.5	1.6	<0.5	-	-	-	-
Trichlorofluoromethane	µg/L	1	150	<1.0	-	-	-	-
Vinyl chloride	µg/L	0.5	0.5	<0.5	-	-	-	-
Metals								
Antimony	µg/L	0.5	6	<0.5	<0.5	<0.5	-	-
Arsenic	µg/L	1	25	<1	<1	1	-	-
Barium	µg/L	1	1,000	190	192	240	-	-
Beryllium	µg/L	0.5	4	<0.5	<0.5	<0.5	-	-
Boron	µg/L	10	5,000	131	132	119	-	-
Cadmium	µg/L	0.1	2.1	0.1	<0.1	<0.1	-	-
Chromium (III+VI)	µg/L	1	50	<1	1	1	-	-
Cobalt	µg/L	0.5	3.8	6	0.6	0.9	-	-
Copper	µg/L	0.5	69	5.3	7.3	2.1	-	-
Lead	µg/L	0.1	10	0.3	<0.1	0.1	-	-
Molybdenum	µg/L	0.5	70	45.4	9.7	2	-	-
Nickel	µg/L	1	100	10	3	2	-	-
Selenium	µg/L	1	10	<1	<1	2	-	-
Silver	µg/L	0.1	1.2	<0.1	<0.1	<0.1	-	-
Thallium	µg/L	0.1	2	0.1	<0.1	<0.1	-	-
Uranium	µg/L	0.1	20	0.9	0.8	0.8	-	-
Vanadium	µg/L	0.5	6.2	0.5	<0.5	0.6	-	-
Zinc	µg/L	5	890	10	<5	5	-	-
ORPs								
Chromium (hexavalent)	µg/L	10	25	-	-	-	-	-
Mercury	µg/L	0.1	0.29	-	-	-	-	-
Sodium	ug/L	200	490,000	30,600	24,400	32,900	-	-

Comments

- #1 Standard is applicable to total xylenes; m & p-xylenes and o-xylenes should be summed for com
#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 standai
#4 Standard is applicable to PHC F3 minus PAHs (other than naphthalene). If PAHs have not been
#5 Standard is for benzo(b)fluoranthene; however, the laboratory can not distinguish between benzc
#6 Standard is applicable to Methylnaphthalene, 1- and Methylnaphthalene, 2-. If both are detected,



Table 5 - Potentially Contaminating Activities

PCA ID #	Potentially Contaminating Activity ¹	Location of PCA	PCA Description	APEC ² (Yes/No)
1	#30 - Importation of fill material of unknown quality	Onsite - driveways, walkways, and former parking areas	Based on site observations, and review of aerial images, the importation of fill material is likely	Yes
2	Other - Salt application for pedestrian and vehicle safety	Onsite - driveways, walkways, and former parking areas	Salt was likely applied for safety in the winter months	Yes
3	#28 - Gasoline and associated product storage in fixed tanks	Onsite - central-east portion of the building, adjacent to the boiler	Boiler and two steel ATs were observed in the central-east portion of the building	Yes
4	#34 - Metal fabrication	Onsite - central east portion of the building	From about the 1950s to 1960s, aluminum was cut and assembled into canoes, and a dedicated paint area was present to paint canoes	Yes
5	Other - Staining	Onsite - central section in loading bay area between original building and warehouse addition	Large areas of black staining were observed in the loading bay area between original building and warehouse addition	Yes
6	Other - Coal-fired heating	Off-site - behind 34 King Street (Highway/County Road 42) (adjacent to northeast, upgradient)	Based on a review of historical information available, a brickyard was present adjacent to the northeast of the Site, coal-fired heating was possibly present to fire bricks	Yes
7	#32 - Iron and steel manufacturing and processing	Off-site - Former 351 and 362 Dick Street (80 m east, cross-gradient)	A foundry with a wood working shop was noted in the 1897 FIP	No
8	#53 - Tannery	Off-site - Former 602 Main Street (260 m southwest, downgradient)	A Tannery (silent) was noted in the 1897 FIP	No
9	#28 - Gasoline and associated product storage in fixed tanks	Off-site - 41 King Street (Highway/County Road 42) (78 m east, cross to down-gradient)	ERIS report identified an RFO with two double-walled fiberglass gasoline USTs	No
10	#54 - Textile manufacturing and processing	Off-site - 55 King Street (Highway/County Road 42), (75 m south, downgradient)	Registered for the manufacturing for design services, established in 1979 (which can include clothing and textile design, floats, theatrical designs)	No

Notes:

1. Potentially Contaminating Activity (PCA) 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.

2. Area of Potential Environmental Concern (APEC) means the area on, in, or under a phase one property where one or more contaminants are potentially present.

**Table 6 - Areas of Potential Environmental Concern**

APEC ¹	Location of APEC on Phase One Property	PCA ²		Location of PCA	Contaminants of Potential Concern ³	Media Potentially Impacted
1	driveways, walkways, and former parking areas	1	#30 - Importation of fill material of unknown quality	Onsite - driveways, walkways, and former parking areas	PHCs, VOCs, PAHs, metals, hydride-forming metals, HWS B, CrVI, Hg, CN, EC, SAR	Soil
2	driveways, walkways, and former parking areas	2	Other - Salt application for pedestrian and vehicle safety	Onsite - driveways, walkways, and former parking areas	EC, SAR	Soil
3	central-east portion of the building, adjacent to the boiler	3	#28 - Gasoline and associated product storage in fixed tanks	Onsite - central-east portion of the building, adjacent to the boiler	BTEX, PHCs, PAHs, metals, hydride-forming metals	Soil and Groundwater
4	central portion of the building	4	#34 - Metal fabrication	Onsite - central east portion of the building	VOCs, metals, hydride-forming metals, CrVI	Soil and Groundwater
5	central section in loading bay area between original building and warehouse addition	5	Other - Staining	Onsite - central section in loading bay area between original building and warehouse addition	BTEX, PHCs, PAHs, metals, hydride-forming metals	Soil and Groundwater
6	Northeast portion of the Site	6	Other - Coal-fired heating	Off-site - behind 34 King Street (Highway/County Road 42)	BTEX, PHCs, PAHs, metals, hydride-forming metals, and Hg	Groundwater

Notes:

1. Area of Potential Environmental Concern (APEC) means the area on, in, or under a phase one property where one or more contaminants are potentially present.
2. Potentially Contaminating Activity (PCA) 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.
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
Borehole Logs



Township of Rideau
Lakes
Contractor: Strata Drilling
Project No.: 17181-001
Location: Lower Beverley Lake
Park Road, Delta

Project Name: Ph I ESA - Lower Beverley Lake Park Rd
Method: Track Mounted Hollow Stem Auger
Elevation: 94.92 mREL
UTM: 18T N: 4940429 E: 410921

Log of Borehole: BH101
Page: 1 of 1
Date Completed: October 2, 2023

SUBSURFACE PROFILE					SAMPLE														
Elevation (m)	Depth	Lithology	Description	Elevation Depth	Number	Type	CSV (ppm)	OV (ppm)	% Recovery	SPT (N)/DCPT	Atterberg Limits (%)			Shear Strength Cu, kPa			Well Installation	Log Notes	
											LL PL PI			nat V. rem V. ⊕					
											25	50	75	20	40	60			80
											% Moisture			SPT (N) / DCPT					
											25	50	75	20	40	60	80		
94.9	0		TOPSOIL: Grassy Topsoil	94.91	1	DT	ND	ND	50									Soil sample: BH101_0.010-0.60. Groundwater sample: BH101.	
			FILL: Red/brown, dry, loose, no odour, brick debris throughout, no staining.	0.01															
94.4	0.5		(CL) SILTY CLAY: Brown, compact, plastic, moist, no odour, no debris, no staining.	94.31	2	DT	ND	ND	50									Groundwater measured @ 2.56mbgs on October 16, 2023.	
				0.61															
93.9	1																		
93.4	1.5		Soil becomes wet		3	DT	ND	ND	100										
92.9	2																		
92.4	2.5																		
92.4	2.5		Red/orange lines throughout	92.48	4	DT	ND	ND	100										
				2.44															
91.9	3			(CL) SILTY CLAY: Blue/grey, fully saturated, plastic, compact, no odour, no debris, no staining.															
91.4	3.5				5	DT	ND	ND	100										
90.9	4																		
90.9	4		Borehole terminated @ 4 mbgs Target Depth Achieved	90.96															
					3.96														
90.4	4.5																		
89.9	5																		
89.4	5.5																		
88.9	6																		
88.4	6.5																		
87.9	7																		
87.4																			
											GRAINSIZE DISTRIBUTION			SAMPLE GRAVEL SAND SILT CLAY					

Logged By: KD

Input By: KD

Peterborough, Barrie, Oshawa, Kingston, Whitby



Township of Rideau
Client: Lakes
Contractor: Strata Drilling
Project No.: 17181-001
Location: Lower Beverley Lake
Park Road, Delta

Project Name: Ph I ESA - Lower Beverley Lake Park Rd
Method: Track Mounted Hollow Stem Auger
Elevation: 95.12 mREL
UTM: 18T **N:** 4940433 **E:** 410897

Log of Borehole: BH102
Page: 1 of 1
Date Completed: October 2, 2023

SUBSURFACE PROFILE					SAMPLE																
Elevation (m)	Depth	Lithology	Description	Elevation Depth	Number	Type	CSV (ppm)	OV (ppm)	% Recovery	SPT (N)/DCPT	Atterberg Limits (%)			Shear Strength Cu, kPa			Well Installation	Log Notes			
											LL PL PI			nat V. rem V. ⊕							
											25	50	75	20	40	60			80		
											% Moisture			SPT (N) / DCPT							
											25	50	75	20	40	60	80				
95.1	0		FILL: Brown silty sand, loose, no odour, brick fragments, and black debris (coal), no staining.	94.51	1	DT	ND	ND	80								Soil Sample: BH102_0.010-0.60.				
94.6	0.5			0.61																	
94.1	1		(CL) SILTY CLAY: Brown, compact, no odour, brick fragments, no staining.		2	DT	ND	ND	80												
93.6	1.5			93.60																	
93.1	2		(CL) SILTY CLAY: Brown/Grey, compact, plastic, no odour, no debris, no staining.	1.52																	
92.6	2.5																				
92.1	3		Borehole terminated @ 3 mbgs Target Depth Achieved	92.07																	
				3.05																	
91.6	3.5																				
91.1	4																				
90.6	4.5																				
90.1	5																				
89.6	5.5																				
89.1	6																				
88.6	6.5																				
88.1	7																				
87.6																					
											GRAINSIZE DISTRIBUTION										
											SAMPLE GRAVEL SAND SILT CLAY										

Logged By: KD

Input By: KD

Peterborough, Barrie, Oshawa, Kingston, Whitby



Client: Township of Rideau Lakes
Contractor: Strata Drilling
Project No.: 17181-001
Location: Lower Beverley Lake Park Road, Delta

Project Name: Ph I ESA - Lower Beverley Lake Park Rd
Method: Track Mounted Hollow Stem Auger
Elevation: 94.8 mREL
UTM: 18T **N:** 4940366 **E:** 410866

Log of Borehole: BH103
Page: 1 of 1
Date Completed: October 2, 2023

SUBSURFACE PROFILE					SAMPLE																
Elevation (m)	Depth	Lithology	Description	Elevation Depth	Number	Type	CSV (ppm)	OV (ppm)	% Recovery	SPT (N)/DCPT	Atterberg Limits (%)			Shear Strength Cu, kPa			Well Installation	Log Notes			
											LL PL PI			nat V. rem V. ⊕							
											25	50	75	20	40	60			80		
											% Moisture			SPT (N) / DCPT							
											25	50	75	20	40	60	80				
94.8	0		TOPSOIL: Brown, sandy, trace gravel, moist, loose, no odour, no debris, no staining.		1	DT	ND	1	60								Soil Sample: BH103_0.025-0.60.				
94.3	0.5			94.19																	
			(CL) CLAY: Blue, saturated, plastic, compact, no odour, no debris, no staining.	0.61																	
93.8	1				2	DT	ND	ND	60												
93.3	1.5																				
92.8	2																				
92.3	2.5				3	DT	ND	ND	100												
91.8	3				91.75																
			Borehole terminated @ 3 mbgs Target Depth Achieved	3.05																	
91.3	3.5																				
90.8	4																				
90.3	4.5																				
89.8	5																				
89.3	5.5																				
88.8	6																				
88.3	6.5																				
87.8	7																				
87.3																					
											GRAINSIZE DISTRIBUTION										
											SAMPLE GRAVEL SAND SILT CLAY										

Logged By: KD

Input By: KD

Peterborough, Barrie, Oshawa, Kingston, Whitby



Township of Rideau
Client: Lakes
Contractor: Strata Drilling
Project No.: 17181-001
Location: Lower Beverley Lake
Park Road, Delta

Project Name: Ph I ESA - Lower Beverley Lake Park Rd
Method: Track Mounted Hollow Stem Auger
Elevation: 97.35 mREL
UTM: 18T **N:** 4940326 **E:** 410881

Log of Borehole: BH104
Page: 1 of 1
Date Completed: October 2, 2023

SUBSURFACE PROFILE					SAMPLE																										
Elevation (m)	Depth	Lithology	Description	Elevation Depth	Number	Type	CSV (ppm)	OV (ppm)	% Recovery	SPT (N)/DCPT	Atterberg Limits (%)			Shear Strength Cu, kPa			Well Installation	Log Notes													
											LL PL PI			nat V. rem V. Ø																	
											25 50 75			20 40 60 80																	
																						% Moisture			SPT (N) / DCPT						
																						25 50 75			20 40 60 80						
97.4	0		TOPSOIL: Brown, sandy, dry, loose, no odour, no debris, no staining.	97.32														Soil Sample: BH104_3.04-4.57. Groundwater sample: BH104 Groundwater measured @ 3.34mbgs on October 16, 2023.													
96.8	0.5		(CL) sandy CLAY: Brown/grey, trace silt, very dense, moist, no odour, no debris, no staining.	0.03	1	DT	ND	ND	100																						
96.4	1																														
95.8	1.5				2	DT	ND	ND	100																						
95.4	2			95.22																											
94.8	2.5		(CL) CLAY: Blue/grey, trace silt, saturated, plastic, compact, septic odour, no debris, slight brown staining.	2.13	3	DT	ND	ND	100																						
94.4	3			94.30																											
93.8	3.5		(CL) CLAY: Blue/grey, trace silt, saturated, plastic, compact, no odour, no debris, no staining.	3.05	4	DT	ND	ND	100																						
93.4	4																														
92.8	4.5		Very saturated																												
92.4	5																														
91.8	5.5				5	DT	ND	ND	100																						
91.4	6			91.25																											
90.8	6.5		Borehole terminated @ 6.1 mbgs Target Depth Achieved	6.10																											
90.4	7																														
89.8																															
GRAINSIZE DISTRIBUTION																															
SAMPLE GRAVEL SAND SILT CLAY																															

Logged By: KD

Input By: KD

Peterborough, Barrie, Oshawa, Kingston, Whitby



Township of Rideau
Client: Lakes
Contractor: Strata Drilling
Project No.: 17181-001
Location: Lower Beverley Lake
Park Road, Delta

Project Name: Ph I ESA - Lower Beverley Lake Park Rd
Method: Track Mounted Hollow Stem Auger
Elevation: 97.26 mREL
UTM: 18T **N:** 4940351 **E:** 410895

Log of Borehole: BH105
Page: 1 of 1
Date Completed: October 2, 2023

SUBSURFACE PROFILE					SAMPLE														
Elevation (m)	Depth	Lithology	Description	Elevation Depth	Number	Type	CSV (ppm)	OV (ppm)	% Recovery	SPT (N)/DCPT	Atterberg Limits (%)			Shear Strength Cu, kPa			Well Installation	Log Notes	
											LL PL PI			nat V. rem V. ⊕					
											25	50	75	20	40	60			80
											% Moisture			SPT (N) / DCPT					
											25	50	75	20	40	60	80		
97.3	0		ASPHALT: Previous loading area.	97.23	1	DT	ND	ND	100								Soil Sample: BH105_0.025-0.12.		
			FILL: Brown, some gravel, trace silt, moist, loose, no odour, no debris, no staining.	0.03	2	DT	ND	ND	100										
96.8	0.5																		
			(CL) SILTY CLAY: Brown/Grey, compact, plastic, no odour, no debris, no staining.	0.13	3	DT	ND	ND	100										
96.3	1																		
95.8	1.5		Wet																
95.3	2																		
94.8	2.5		Sand seam		4	DT	ND	ND	100										
94.3	3			94.21															
			Borehole terminated @ 3 mbgs Target Depth Achieved	3.05															
93.8	3.5																		
93.3	4																		
92.8	4.5																		
92.3	5																		
91.8	5.5																		
91.3	6																		
90.8	6.5																		
90.3	7																		
89.8																			
											GRAINSIZE DISTRIBUTION			SAMPLE GRAVEL SAND SILT CLAY					



Township of Rideau
Client: Lakes
Contractor: Strata Drilling
Project No.: 17181-001
Location: Lower Beverley Lake
Park Road, Delta

Project Name: Ph I ESA - Lower Beverley Lake Park Rd
Method: Track Mounted Hollow Stem Auger
Elevation: 98.26 mREL
UTM: 18T **N:** 4940376 **E:** 410908

Log of Borehole: BH106
Page: 1 of 1
Date Completed: October 2, 2023

SUBSURFACE PROFILE					SAMPLE															
Elevation (m)	Depth	Lithology	Description	Elevation Depth	Number	Type	CSV (ppm)	OV (ppm)	% Recovery	SPT (N)/DCPT	Atterberg Limits (%)			Shear Strength Cu, kPa			Well Installation	Log Notes		
											LL	PL	PI	nat V. rem V.						
											25	50	75	20	40	60			80	
											% Moisture			SPT (N) / DCPT						
											25	50	75	20	40	60	80			
98.3	0		ASPHALT: Loading bay area.	98.23																
			FILL: Brown silty gravel, moist, compact, trace clay, no odour, brick fragments, no staining	0.03	1	DT	ND	ND	60											
97.8	0.5		(CL) SILTY CLAY: Brown, trace sand, saturated, compact, plastic, no odour, no debris, no staining.	0.61	2	DT	ND	ND	60											
97.3	1				3	DT	ND	ND	60											
96.8	1.5		Sand seams throughout	96.74																
96.3	2		(CL) SILTY CLAY: Brown/grey, saturated, compact, plastic, no odour, no debris, no staining.	1.52																
95.8	2.5				4	DT	ND	ND	100											
95.3	3			95.21																
			Borehole terminated @ 3 mbgs Target Depth Achieved	3.05																
94.8	3.5																			
94.3	4																			
93.8	4.5																			
93.3	5																			
92.8	5.5																			
92.3	6																			
91.8	6.5																			
91.3	7																			
90.8																				
											GRAINSIZE DISTRIBUTION									
											SAMPLE GRAVEL SAND SILT CLAY									

Logged By: KD

Input By: KD

Peterborough, Barrie, Oshawa, Kingston, Whitby



Township of Rideau
Client: Lakes
Contractor: Strata Drilling
Project No.: 17181-001
Location: Lower Beverley Lake
Park Road, Delta

Project Name: Ph I ESA - Lower Beverley Lake Park Rd
Method: Track Mounted Hollow Stem Auger
Elevation: 96.87 mREL
UTM: 18T **N:** 4940355 **E:** 410907

Log of Borehole: BH107
Page: 1 of 1
Date Completed: October 2, 2023

SUBSURFACE PROFILE					SAMPLE														
Elevation (m)	Depth	Lithology	Description	Elevation Depth	Number	Type	CSV (ppm)	OV (ppm)	% Recovery	SPT (N)/DCPT	Atterberg Limits (%)			Shear Strength Cu, kPa			Well Installation	Log Notes	
											LL PL PI			nat V. rem V. ⊕					
											25	50	75	20	40	60			80
											% Moisture			SPT (N) / DCPT					
											25	50	75	20	40	60	80		
96.9	0		ASPHALT: Loading bay area	96.84	1	DT	ND	ND	80									Soil Sample: BH107_0.025-0.10. Groundwater sample: BH107	
			(SM) SILTY SAND: Brown, trace clay, compact, moist, no odour, no debris, no staining.	96.77															
96.4	0.5		(CL) SILTY CLAY: Brown/light brown, moist, plastic, compact, no odour, no debris, no staining.	96.10	2	DT	ND	ND	80										
95.9	1																Sand Pack PVC Screen	Groundwater measured @ 2.17mbgs on October 16th, 2023.	
95.4	1.5		(CL) SILTY CLAY: Light brown, trace sand, saturated, plastic, compact, no odour, no debris, red/orange colour throughout. Rust coloured seam.	95.35															
94.9	2			1.52	3	DT	ND	ND	100										
94.4	2.5		Bedrock refusal @ 8ft.	94.43													Cap		
			Borehole terminated @ 2.4 mbgs Target Depth Achieved	2.44															
93.9	3																		
93.4	3.5																		
92.9	4																		
92.4	4.5																		
91.9	5																		
91.4	5.5																		
90.9	6																		
90.4	6.5																		
89.9	7																		
89.4																			
											GRAINSIZE DISTRIBUTION			SAMPLE GRAVEL SAND SILT CLAY					

Logged By: KD

Input By: KD

Peterborough, Barrie, Oshawa, Kingston, Whitby



Township of Rideau
Client: Lakes
Contractor: Strata
Project No.: 17181-001
Location: Lower Beverley Lake
Park Road, Delta

Project Name: Ph I ESA - Lower Beverley Lake Park Rd
Method: Hand Auger/Coring Machine
Elevation: 95.48 mREL
UTM: 18T **N:** 4940347.1 **E:** 410911.4

Log of Borehole: BH108
Page: 1 of 1
Date Completed: October 10, 2023

SUBSURFACE PROFILE				SAMPLE																												
Elevation (m)	Depth	Lithology	Description	Elevation Depth	Number	Type	CSV (ppm)	OV (ppm)	% Recovery	SPT (N)/DCPT	Atterberg Limits (%)			Shear Strength Cu, kPa				Well Installation	Log Notes													
											LL PL PI			nat V. rem V. ↑ ⊗																		
											25 50 75			20 40 60 80																		
											% Moisture			SPT (N) / DCPT																		
											25 50 75			20 40 60 80																		
95.5	0		CONCRETE: Floor	95.33																												
			(GW) GRAVEL: Brown, trace silt, trace sand, no odour, no debris, no staining.	95.28	1	GB	ND	ND																								
			(GW) GRAVEL: Brown, trace silt, trace sand, no odour, no debris, no staining.	95.28																												
			(CL) gravelly SILTY CLAY: Brown, trace sand, moist, no odour, no debris, no staining.	95.00	2	GB	ND	ND																								
			(CL) SILTY CLAY: Brown/grey, trace sand, moist, no odour, no debris, no staining.	94.57	3	GB	ND	ND																								
94.5	1		Borehole terminated @ 0.9 mbgs Target Depth Achieved	0.91																												

Soil Samples:
BH108_0.18-0.50.

Logged By: KD

Input By: KD

Peterborough, Barrie, Oshawa, Kingston, Whitby



Township of Rideau
Client: Lakes
Contractor: Strata
Project No.: 17181-001
Location: Lower Beverley Lake
Park Road, Delta

Project Name: Ph I ESA - Lower Beverley Lake Park Rd
Method: Track Mounted Hollow Stem Auger
Elevation: 99.15 mREL
UTM: 18T **N:** 4940338.1 **E:** 410917.7

Log of Borehole: BH109
Page: 1 of 1
Date Completed: October 10, 2023

SUBSURFACE PROFILE				SAMPLE										Well Installation		Log Notes																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
Elevation (m)	Depth	Lithology	Description	Elevation Depth	Number	Type	CSV (ppm)	OV (ppm)	% Recovery	SPT (N)/DCPT	Atterberg Limits (%)						Shear Strength Cu, kPa																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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99.2	0		ASPHALT: Loading bay	99.05																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														

Cap
Concrete
Seal

Bentonite
Plug
Riser

Sand
Pack
PVC
Screen

Cap

Soil Sample:
BH109_0.12-1.50
(QAQC3).
Groundwater Sample:
BH109

Groundwater
measured @
5.16mbgs on October
16, 2023.



Township of Rideau
Client: Lakes
Contractor: Strata Drilling Group
Project No.: 17181-001
Location: Lower Beverley Lake
Park Road, Delta

Project Name: Ph I ESA - Lower Beverley Lake Park Rd
Method: Track Mounted Hollow Stem Auger
Elevation: 96.34 mREL
UTM: 18T **N:** 4940432 **E:** 410887

Log of Borehole: BH201
Page: 1 of 1
Date Completed: May 3, 2024

SUBSURFACE PROFILE					SAMPLE															
Elevation (m)	Depth	Lithology	Description	Elevation Depth	Number	Type	CSV (ppm)	OV (ppm)	% Recovery	SPT (N)/DCPT	Atterberg Limits (%)			Shear Strength Cu, kPa			Well Installation	Log Notes		
											LL PL PI			nat V. rem V. Ø						
											25	50	75	20	40	60			80	
												% Moisture			SPT (N) / DCPT					
												25	50	75	20	40	60	80		
96.3	0		sandy TOPSOIL: Brown, brick and coal debris, no odour, no staining.															Soil Sample: BH201_0.1-0.8 (QAQC6) Groundwater sampled: BH201 Groundwater measured @ 2.23 mbgs on May 6, 2024. Soil Sample: BH201_1.52-3.04		
95.8	0.5				1	DT	ND	ND	20											
95.3	1																			
94.8	1.5		(CL) SILTY CLAY: Brown/grey, saturated, no debris, no staining, no odour.	94.82														Soil Sample: BH201_0.1-0.8 (QAQC6) Groundwater sampled: BH201 Groundwater measured @ 2.23 mbgs on May 6, 2024. Soil Sample: BH201_1.52-3.04		
94.3	2			1.52																
93.8	2.5				2	DT	ND	ND	100											
93.3	3		(CL) SILTY CLAY: Brown/grey, saturated, no debris, no staining, no odour.															Soil Sample: BH201_0.1-0.8 (QAQC6) Groundwater sampled: BH201 Groundwater measured @ 2.23 mbgs on May 6, 2024. Soil Sample: BH201_1.52-3.04		
92.8	3.5																			
92.3	4				3	DT	ND	ND	100											
91.8	4.5		Borehole terminated @ 4.6 mbgs due to target depth achieved.	91.77														Soil Sample: BH201_0.1-0.8 (QAQC6) Groundwater sampled: BH201 Groundwater measured @ 2.23 mbgs on May 6, 2024. Soil Sample: BH201_1.52-3.04		
91.3	5			4.57																
90.8	5.5																			
90.3	6		Borehole terminated @ 4.6 mbgs due to target depth achieved.															Soil Sample: BH201_0.1-0.8 (QAQC6) Groundwater sampled: BH201 Groundwater measured @ 2.23 mbgs on May 6, 2024. Soil Sample: BH201_1.52-3.04		
89.8	6.5																			
89.3	7																			
88.8			Borehole terminated @ 4.6 mbgs due to target depth achieved.															Soil Sample: BH201_0.1-0.8 (QAQC6) Groundwater sampled: BH201 Groundwater measured @ 2.23 mbgs on May 6, 2024. Soil Sample: BH201_1.52-3.04		
											GRAINSIZE DISTRIBUTION			SAMPLE GRAVEL SAND SILT CLAY						

Logged By: KD

Input By: KD

Peterborough, Barrie, Oshawa, Kingston, Whitby



Township of Rideau
Client: Lakes
Contractor:
Project No.: 17181-001
Location: Lower Beverley Lake
Park Road, Delta

Project Name: Ph I ESA - Lower Beverley Lake Park Rd
Method: Hand Auger
Elevation: 98.62 mREL
UTM: 18T **N:** 4940416 **E:** 410883

Log of Borehole: BH202
Page: 1 of 1
Date Completed: May 3, 2024

SUBSURFACE PROFILE					SAMPLE															
Elevation (m)	Depth	Lithology	Description	Elevation Depth	Number	Type	CSV (ppm)	OV (ppm)	% Recovery	SPT (N)/DCPT	Atterberg Limits (%)			Shear Strength Cu, kPa				Well Installation	Log Notes	
											LL	PL	PI	nat V. rem V. 						
											25	50	75	20	40	60	80			
											% Moisture			SPT (N) / DCPT						
											25	50	75	20	40	60	80			
98.6	0		sandy TOPSOIL: Brown, moist, boulders, no staining, no odour, no debris.	98.32	1	DT	ND	ND	100									Soil Sample: BH202_0.1-0.8.		
			FILL: Brown silty sand, moist, boulders, no staining, no odour, no debris.	0.30	2	DT	ND	ND	100											
98.1	0.5				3	DT	ND	ND	100											
				97.71																
97.6	1		Borehole terminated @ 0.9 mbgs due to target depth achieved.	0.91																
97.1	1.5																			
96.6	2																			
96.1	2.5																			
95.6	3																			
95.1	3.5																			
94.6	4																			
											GRAINSIZE DISTRIBUTION									
											SAMPLE GRAVEL SAND SILT CLAY									



Township of Rideau
Client: Lakes
Contractor:
Project No.: 17181-001
Location: Lower Beverley Lake
Park Road, Delta

Project Name: Ph I ESA - Lower Beverley Lake Park Rd
Method: Hand Auger
Elevation: 100 mREL
UTM: 18T **N:** 4940407 **E:** 410889

Log of Borehole: BH203
Page: 1 of 1
Date Completed: May 3, 2024

SUBSURFACE PROFILE					SAMPLE																	
Elevation (m)	Depth	Lithology	Description	Elevation Depth	Number	Type	CSV (ppm)	OV (ppm)	% Recovery	SPT (N)/DCPT	Atterberg Limits (%)			Shear Strength Cu, kPa								
											LL	PL	PI	nat V.			rem V.	↑	⊗			
												25	50	75	20	40	60	80	SPT (N) / DCPT		Well Installation	Log Notes
												% Moisture										
												25	50	75	20	40	60	80				
100	0		sandy TOPSOIL: Brown, moist, no staining, no odour, no debris.	99.70	1	DT	ND	ND	100										Soil Sample: BH203_0.1-0.8.			
99.5	0.5		FILL: Brown silty sand, moist, boulders, no staining, no odour, no debris.	0.30	2	DT	ND	ND	100													
					3	DT	ND	ND	100													
99	1		Borehole terminated @ 0.9 mbgs due to target depth achieved.	0.91																		
98.5	1.5																					
98	2																					
97.5	2.5																					
97	3																					
96.5	3.5																					
96	4																					
												GRAINSIZE DISTRIBUTION										
												SAMPLE GRAVEL SAND SILT CLAY										

Logged By: KD

Input By: KD

Peterborough, Barrie, Oshawa, Kingston, Whitby



Township of Rideau
Client: Lakes
Contractor:
Project No.: 17181-001
Location: Lower Beverley Lake
Park Road, Delta

Project Name: Ph I ESA - Lower Beverley Lake Park Rd
Method: Hand Auger
Elevation: 99.25 mREL
UTM: 18T **N:** 4940398 **E:** 410891

Log of Borehole: BH204
Page: 1 of 1
Date Completed: May 3, 2024

SUBSURFACE PROFILE				SAMPLE																
Elevation (m)	Depth	Lithology	Description	Elevation Depth	Number	Type	CSV (ppm)	OV (ppm)	% Recovery	SPT (N)/DCPT	Atterberg Limits (%)			Shear Strength Cu, kPa				Well Installation	Log Notes	
											LL	PL	PI	nat V.	rem V.	σ _v	σ _h			σ _v / σ _h
											% Moisture			SPT (N) / DCPT						
											25	50	75	20	40	60	80			
99.2	0		sandy TOPSOIL: Brown, moist, boulders, no staining, no odour, no debris.	98.95	1	DT	ND	ND	100									Soil Sample: BH204_0.1-0.8.		
98.8	0.5		FILL: Brown silty sand, moist, boulders, no staining, no odour, no debris.	0.30	2	DT	ND	ND	100											
						3	DT	ND	ND	100										
98.2	1		Borehole terminated @ 0.9 mbgs due to target depth achieved.	0.91														Soil Sample: BH204_0.8-1.0.		
97.8	1.5																			
97.2	2																			
96.8	2.5																			
96.2	3																			
95.8	3.5																			
95.2	4																			
											GRAINSIZE DISTRIBUTION									
											SAMPLE GRAVEL SAND SILT CLAY									

Logged By: KD

Input By: KD

Peterborough, Barrie, Oshawa, Kingston, Whitby



Township of Rideau
Client: Lakes
Contractor: Strata Drilling Group
Project No.: 17181-001
Location: Lower Beverley Lake
Park Road, Delta

Project Name: Ph I ESA - Lower Beverley Lake Park Rd
Method: Track Mounted Hollow Stem Auger
Elevation: 95.3 mREL
UTM: 18T **N:** 4940362 **E:** 410851

Log of Borehole: BH205
Page: 1 of 1
Date Completed: May 3, 2024

SUBSURFACE PROFILE					SAMPLE															
Elevation (m)	Depth	Lithology	Description	Elevation Depth	Number	Type	CSV (ppm)	OV (ppm)	% Recovery	SPT (N)/DCPT	Atterberg Limits (%)			Shear Strength Cu, kPa				Well Installation	Log Notes	
											LL	PL	PI	nat V. rem V. 						
											25	50	75	20	40	60	80			
											% Moisture			SPT (N) / DCPT						
											25	50	75	20	40	60	80			
95.3	0		sandy TOPSOIL: Brown, moist, no staining, no odour, brick debris.	95.00	1	DT	ND	ND	100									Soil Sample: BH205_0.0-0.06 (QAQC7)		
			(CL) SILTY CLAY: Brown, moist, no staining, no odour, brick debris.	0.30	2	DT	ND	ND	100											
94.8	0.5																			
					3	DT	ND	ND	100											
				94.39																
94.3	1		Borehole terminated @ 0.9 mbgs due to target depth achieved.	0.91																
93.8	1.5																			
93.3	2																			
92.8	2.5																			
92.3	3																			
91.8	3.5																			
91.3	4																			
											GRAINSIZE DISTRIBUTION									
											SAMPLE GRAVEL SAND SILT CLAY									



Township of Rideau
Client: Lakes
Contractor: Strata Drilling Group
Project No.: 17181-001
Location: Lower Beverley Lake
Park Road, Delta

Project Name: Ph I ESA - Lower Beverley Lake Park Rd
Method: Track Mounted Hollow Stem Auger
Elevation: 94.92 mREL
UTM: 18T **N:** 4940367 **E:** 410857

Log of Borehole: BH206
Page: 1 of 1
Date Completed: May 3, 2024

SUBSURFACE PROFILE					SAMPLE																	
Elevation (m)	Depth	Lithology	Description	Elevation Depth	Number	Type	CSV (ppm)	OV (ppm)	% Recovery	SPT (N)/DCPT	Atterberg Limits (%)			Shear Strength Cu, kPa			Well Installation	Log Notes				
											LL PL PI			nat V. rem V. ⊕								
											25	50	75	20	40	60			80			
											% Moisture			SPT (N) / DCPT								
											25	50	75	20	40	60	80					
94.9	0		TOPSOIL: Brown, sand, moist, no staining, no odour, brick debris.	94.62	1	DT	ND	ND	100									Soil Sample: BH206_0.0-0.06.				
94.4	0.5		(CL) SILTY CLAY: Brown, trace sand, moist, trace sand, no staining, no odour, brick debris.	0.30	2	DT	ND	ND	100													
				94.01	3	DT	ND	ND	100													
93.9	1		Borehole terminated @ 0.9 mbgs due to target depth achieved.	0.91														Soil Sample: BH206_0.61-0.91.				
93.4	1.5																					
92.9	2																					
92.4	2.5																					
91.9	3																					
91.4	3.5																					
90.9	4																					
90.4	4.5																					
89.9	5																					
89.4	5.5																					
88.9	6																					
88.4	6.5																					
87.9	7																					
87.4																						
GRAINSIZE DISTRIBUTION																		SAMPLE	GRAVEL	SAND	SILT	CLAY



Township of Rideau
Client: Lakes
Contractor: Strata Drilling Group
Project No.: 17181-001
Location: Lower Beverley Lake
Park Road, Delta

Project Name: Ph I ESA - Lower Beverley Lake Park Rd
Method: Track Mounted Hollow Stem Auger
Elevation: 97.51 mREL
UTM: 18T **N:** 4940365 **E:** 410853

Log of Borehole: BH207
Page: 1 of 1
Date Completed: May 3, 2024

SUBSURFACE PROFILE					SAMPLE														
Elevation (m)	Depth	Lithology	Description	Elevation Depth	Number	Type	CSV (ppm)	OV (ppm)	% Recovery	SPT (N)/DCPT	Atterberg Limits (%)			Shear Strength Cu, kPa			Well Installation	Log Notes	
											LL	PL	PI	nat V. rem V. 					
											25	50	75	20	40	60			80
											% Moisture			SPT (N) / DCPT					
											25	50	75	20	40	60	80		
97.5	0		TOPSOIL: Brown, moist, no staining, no odour, brick debris. 97.21		1	DT	ND	ND	100									Soil Sample: BH207_0.0-0.06.	
97	0.5		(CL) SILTY CLAY: Brown, trace sand, no staining, no odour, brick debris. 0.30		2	DT	ND	ND	100										
					3	DT	ND	ND	100										
96.5	1		Borehole terminated @ 0.9 mbgs due to target depth achieved. 0.91															Soil Sample: BH207_0.61-0.91.	
96	1.5																		
95.5	2																		
95	2.5																		
94.5	3																		
94	3.5																		
93.5	4																		
93	4.5																		
92.5	5																		
92	5.5																		
91.5	6																		
91	6.5																		
90.5	7																		
90																			
											GRAINSIZE DISTRIBUTION								
											SAMPLE GRAVEL SAND SILT CLAY								



Township of Rideau
Client: Lakes
Contractor: Strata Drilling Group
Project No.: 17181-001
Location: Lower Beverley Lake
Park Road, Delta

Project Name: Ph I ESA - Lower Beverley Lake Park Rd
Method: Track Mounted Hollow Stem Auger
Elevation: 97.71 mREL
UTM: 18T **N:** 4940355 **E:** 410908

Log of Borehole: BH208
Page: 1 of 1
Date Completed: May 3, 2024

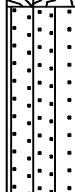
SUBSURFACE PROFILE					SAMPLE														
Elevation (m)	Depth	Lithology	Description	Elevation Depth	Number	Type	CSV (ppm)	OV (ppm)	% Recovery	SPT (N)/DCPT	Atterberg Limits (%)			Shear Strength Cu, kPa			Well Installation	Log Notes	
											LL	PL	PI	nat V.	rem V.	+			⊕
											25	50	75	20	40	60			80
											% Moisture			SPT (N) / DCPT					
											25	50	75	20	40	60	80		
97.7	0		ASPHALT: Parking lot	97.68	1	DT	ND	ND	100									Soil Sample: BH208_0.0-0.1.	
			(GW) GRAVEL: Grey, dry, no staining, no odour, brick debris.	0.03	2	DT	ND	ND	100										
97.2	0.5		(SM) SILTY SAND: Brown, wet, no staining, no odour, no debris.	0.61	3	DT	ND	ND	100										
				97.10															
				96.80															
96.7	1		Borehole terminated @ 0.9 mbgs due to target depth achieved.	0.91															
96.2	1.5																		
95.7	2																		
95.2	2.5																		
94.7	3																		
94.2	3.5																		
93.7	4																		
93.2	4.5																		
92.7	5																		
92.2	5.5																		
91.7	6																		
91.2	6.5																		
90.7	7																		
90.2																			
											GRAINSIZE DISTRIBUTION								
											SAMPLE GRAVEL SAND SILT CLAY								



Township of Rideau
Client: Lakes
Contractor: Strata Drilling Group
Project No.: 17181-001
Location: Lower Beverley Lake
Park Road, Delta

Project Name: Ph I ESA - Lower Beverley Lake Park Rd
Method: Track Mounted Hollow Stem Auger
Elevation: 98.13 mREL
UTM: 18T **N:** 4940358 **E:** 410908

Log of Borehole: BH209
Page: 1 of 1
Date Completed: May 3, 2024

SUBSURFACE PROFILE					SAMPLE														
Elevation (m)	Depth	Lithology	Description	Elevation Depth	Number	Type	CSV (ppm)	OV (ppm)	% Recovery	SPT (N)/DCPT	Atterberg Limits (%)			Shear Strength Cu, kPa			Well Installation	Log Notes	
											LL PL PI			nat V. rem V. ⊕					
											25	50	75	20	40	60			80
											% Moisture			SPT (N) / DCPT					
											25	50	75	20	40	60	80		
98.1	0		ASPHALT: Parking lot	98.10														Soil Sample: BH209_0.12-1.52 (QAQC8).	
			FILL: Brown/black sand and gravel, moist, no staining, no odour, coal debris.	0.03 97.83	1	DT	ND	ND	100										
			(GM) SILTY GRAVEL: White, sandstone, dry, no staining, no odour, no debris.	0.30 97.22	2	DT	ND	ND	100										
					3	DT	ND	ND	100										
97.6	0.5																	Soil Sample: BH209_1.52-1.82.	
			(SM) SILTY SAND: Brown, wet, no staining, no odour, no debris.	0.91 96.61	4	DT	ND	ND	100										
					5	DT	ND	ND	100										
97.1	1																		
			Borehole terminated @ 1.5 mbgs due to target depth achieved.	1.52															
96.6	1.5																		
96.1	2																		
95.6	2.5																		
95.1	3																		
94.6	3.5																		



Township of Rideau
Client: Lakes
Contractor: Strata Drilling Group
Project No.: 17181-001
Location: Lower Beverley Lake
Park Road, Delta

Project Name: Ph I ESA - Lower Beverley Lake Park Rd
Method: Track Mounted Hollow Stem Auger
Elevation: 99.38 mREL
UTM: 18T **N:** 4940332 **E:** 410917

Log of Borehole: BH210
Page: 1 of 1
Date Completed: May 3, 2024

SUBSURFACE PROFILE					SAMPLE														
Elevation (m)	Depth	Lithology	Description	Elevation Depth	Number	Type	CSV (ppm)	OV (ppm)	% Recovery	SPT (N)/DCPT	Atterberg Limits (%)			Shear Strength Cu, kPa			Well Installation	Log Notes	
											LL PL PI			nat V. rem V. ⊕					
											25	50	75	20	40	60			80
											% Moisture			SPT (N) / DCPT					
											25	50	75	20	40	60	80		
99.4	0		ASPHALT: Parking lot	99.35														Soil Sample: BH210_0.12-1.5.	
			(SW) SAND: Brown, moist, no staining, no odour, no debris.	0.03	1	DT	ND	ND	100										
					2	DT	ND	ND	100										
98.9	0.5			98.77															
			(SW) SAND: White sandstone, dry	0.61	3	DT	ND	ND	100										
				98.47															
98.4	1		(SW) SAND: Brown, moist, no staining, no odour, no debris.	0.91	4	DT	ND	ND	100										
				98.16															
			Borehole terminated @ 1.2 mbgs due to target depth achieved.	1.22															
97.9	1.5																		
97.4	2																		
96.9	2.5																		
96.4	3																		
95.9	3.5																		
95.4	4																		
											GRAINSIZE DISTRIBUTION			SAMPLE GRAVEL SAND SILT CLAY					



Phase Two Environmental Site Assessment - Lower Beverley Lake Park Road, Delta, Ontario
Township of Rideau Lakes
Cambium Reference: 17181-001
July 25, 2024

Appendix B

Laboratory Certificates of Analysis



300 - 2319 St. Laurent Blvd
Ottawa, ON, K1G 4J8
1-800-749-1947
www.paracellabs.com

Certificate of Analysis

Cambium Inc. (Kingston)
625 Fortune Cres
Kingston, ON K7P 0L5
Attn: Laura Fitzgerald

Client PO:
Project: 17181-001
Custody: 142100

Report Date: 16-Oct-2023
Order Date: 10-Oct-2023

Order #: 2341072

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2341072-01	BH108_0.18-0.50
2341072-03	BH109_0.12-1.5
2341072-04	QAQC3

Approved By:

A blue ink signature, likely of Dale Robertson, is shown on a light purple background.

Dale Robertson, BSc
Laboratory Director



Order #: 2341072

Certificate of Analysis

Report Date: 16-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 10-Oct-2023

Client PO:

Project Description: 17181-001

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Boron, available	MOE (HWE), EPA 200.8 - ICP-MS	12-Oct-23	12-Oct-23
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	11-Oct-23	12-Oct-23
Chromium, hexavalent - soil	MOE E3056 - Extraction, colourimetric	13-Oct-23	16-Oct-23
Conductivity	MOE E3138 - probe @25 °C, water ext	13-Oct-23	13-Oct-23
Cyanide, free	MOE E3015 - Auto Colour, water extraction	16-Oct-23	16-Oct-23
Mercury by CVAA	EPA 7471B - CVAA, digestion	13-Oct-23	16-Oct-23
PHC F1	CWS Tier 1 - P&T GC-FID	11-Oct-23	12-Oct-23
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	12-Oct-23	12-Oct-23
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	13-Oct-23	13-Oct-23
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	11-Oct-23	13-Oct-23
REG 153: VOCs by P&T GC/MS	EPA 8260 - P&T GC-MS	11-Oct-23	12-Oct-23
SAR	Calculated	13-Oct-23	13-Oct-23
Solids, %	CWS Tier 1 - Gravimetric	11-Oct-23	12-Oct-23

Certificate of Analysis

Report Date: 16-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 10-Oct-2023

Client PO:

Project Description: 17181-001

Client ID:	BH108_0.18-0.50	BH109_0.12-1.5	QAQC3	-	
Sample Date:	10-Oct-23 12:00	10-Oct-23 11:00	10-Oct-23 09:00	-	-
Sample ID:	2341072-01	2341072-03	2341072-04	-	
Matrix:	Soil	Soil	Soil	-	
MDL/Units					

Physical Characteristics

% Solids	0.1 % by Wt.	85.9	88.7	88.7	-	-
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General Inorganics

SAR	0.01 N/A	-	0.11	-	-	-
Conductivity	5 uS/cm	-	185	-	-	-
Cyanide, free	0.03 ug/g	-	<0.03	-	-	-

Metals

Antimony	1.0 ug/g	<1.0	<1.0	-	-	-
Arsenic	1.0 ug/g	2.1	37.9	-	-	-
Barium	1.0 ug/g	28.9	215	-	-	-
Beryllium	0.5 ug/g	1.5	0.8	-	-	-
Boron, available	0.5 ug/g	-	<0.5	-	-	-
Boron	5.0 ug/g	<5.0	14.5	-	-	-
Cadmium	0.5 ug/g	<0.5	1.0	-	-	-
Chromium (VI)	0.2 ug/g	-	<0.2	-	-	-
Chromium	5.0 ug/g	10.9	19.1	-	-	-
Cobalt	1.0 ug/g	4.7	17.8	-	-	-
Copper	5.0 ug/g	10.3	65.7	-	-	-
Lead	1.0 ug/g	3.8	158	-	-	-
Mercury	0.1 ug/g	-	0.3	-	-	-
Molybdenum	1.0 ug/g	<1.0	1.3	-	-	-
Nickel	5.0 ug/g	6.2	20.9	-	-	-
Selenium	1.0 ug/g	1.5	<1.0	-	-	-
Silver	0.3 ug/g	<0.3	<0.3	-	-	-
Thallium	1.0 ug/g	<1.0	<1.0	-	-	-
Uranium	1.0 ug/g	<1.0	<1.0	-	-	-

Certificate of Analysis

Report Date: 16-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 10-Oct-2023

Client PO:

Project Description: 17181-001

Client ID:	BH108_0.18-0.50	BH109_0.12-1.5	QAQC3	-	
Sample Date:	10-Oct-23 12:00	10-Oct-23 11:00	10-Oct-23 09:00	-	-
Sample ID:	2341072-01	2341072-03	2341072-04	-	
Matrix:	Soil	Soil	Soil	-	
MDL/Units					

Metals

Vanadium	10.0 ug/g	26.7	28.5	-	-	-
Zinc	20.0 ug/g	<20.0	309	-	-	-

Volatiles

Acetone	0.50 ug/g	-	<0.50	<0.50	-	-
Benzene	0.02 ug/g	-	<0.02	<0.02	-	-
Bromodichloromethane	0.05 ug/g	-	<0.05	<0.05	-	-
Bromoform	0.05 ug/g	-	<0.05	<0.05	-	-
Bromomethane	0.05 ug/g	-	<0.05	<0.05	-	-
Carbon Tetrachloride	0.05 ug/g	-	<0.05	<0.05	-	-
Chlorobenzene	0.05 ug/g	-	<0.05	<0.05	-	-
Chloroform	0.05 ug/g	-	<0.05	<0.05	-	-
Dibromochloromethane	0.05 ug/g	-	<0.05	<0.05	-	-
Dichlorodifluoromethane	0.05 ug/g	-	<0.05	<0.05	-	-
1,2-Dichlorobenzene	0.05 ug/g	-	<0.05	<0.05	-	-
1,3-Dichlorobenzene	0.05 ug/g	-	<0.05	<0.05	-	-
1,4-Dichlorobenzene	0.05 ug/g	-	<0.05	<0.05	-	-
1,1-Dichloroethane	0.05 ug/g	-	<0.05	<0.05	-	-
1,2-Dichloroethane	0.05 ug/g	-	<0.05	<0.05	-	-
1,1-Dichloroethylene	0.05 ug/g	-	<0.05	<0.05	-	-
cis-1,2-Dichloroethylene	0.05 ug/g	-	<0.05	<0.05	-	-
trans-1,2-Dichloroethylene	0.05 ug/g	-	<0.05	<0.05	-	-
1,2-Dichloropropane	0.05 ug/g	-	<0.05	<0.05	-	-
cis-1,3-Dichloropropylene	0.05 ug/g	-	<0.05	<0.05	-	-
trans-1,3-Dichloropropylene	0.05 ug/g	-	<0.05	<0.05	-	-
1,3-Dichloropropene, total	0.05 ug/g	-	<0.05	<0.05	-	-



Order #: 2341072

Certificate of Analysis

Report Date: 16-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 10-Oct-2023

Client PO:

Project Description: 17181-001

Client ID:	BH108_0.18-0.50	BH109_0.12-1.5	QAQC3	-	
Sample Date:	10-Oct-23 12:00	10-Oct-23 11:00	10-Oct-23 09:00	-	-
Sample ID:	2341072-01	2341072-03	2341072-04	-	
Matrix:	Soil	Soil	Soil	-	
MDL/Units					

Volatiles

Ethylbenzene	0.05 ug/g	-	<0.05	<0.05	-	-
Ethylene dibromide (dibromoethane,	0.05 ug/g	-	<0.05	<0.05	-	-
Hexane	0.05 ug/g	-	<0.05	<0.05	-	-
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g	-	<0.50	<0.50	-	-
Methyl Isobutyl Ketone	0.50 ug/g	-	<0.50	<0.50	-	-
Methyl tert-butyl ether	0.05 ug/g	-	<0.05	<0.05	-	-
Methylene Chloride	0.05 ug/g	-	<0.05	<0.05	-	-
Styrene	0.05 ug/g	-	<0.05	<0.05	-	-
1,1,1,2-Tetrachloroethane	0.05 ug/g	-	<0.05	<0.05	-	-
1,1,2,2-Tetrachloroethane	0.05 ug/g	-	<0.05	<0.05	-	-
Tetrachloroethylene	0.05 ug/g	-	<0.05	<0.05	-	-
Toluene	0.05 ug/g	-	<0.05	<0.05	-	-
1,1,1-Trichloroethane	0.05 ug/g	-	<0.05	<0.05	-	-
1,1,2-Trichloroethane	0.05 ug/g	-	<0.05	<0.05	-	-
Trichloroethylene	0.05 ug/g	-	<0.05	<0.05	-	-
Trichlorofluoromethane	0.05 ug/g	-	<0.05	<0.05	-	-
Vinyl chloride	0.02 ug/g	-	<0.02	<0.02	-	-
m,p-Xylenes	0.05 ug/g	-	<0.05	<0.05	-	-
o-Xylene	0.05 ug/g	-	<0.05	<0.05	-	-
Xylenes, total	0.05 ug/g	-	<0.05	<0.05	-	-
Dibromofluoromethane	Surrogate	-	81.0%	82.2%	-	-
Toluene-d8	Surrogate	-	99.6%	99.4%	-	-
4-Bromofluorobenzene	Surrogate	-	113%	107%	-	-
Benzene	0.02 ug/g	<0.02	-	-	-	-
Ethylbenzene	0.05 ug/g	<0.05	-	-	-	-

Certificate of Analysis

Report Date: 16-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 10-Oct-2023

Client PO:

Project Description: 17181-001

Client ID:	BH108_0.18-0.50	BH109_0.12-1.5	QAQC3	-	
Sample Date:	10-Oct-23 12:00	10-Oct-23 11:00	10-Oct-23 09:00	-	-
Sample ID:	2341072-01	2341072-03	2341072-04	-	
Matrix:	Soil	Soil	Soil	-	
MDL/Units					

Volatiles

Toluene	0.05 ug/g	<0.05	-	-	-	-
m,p-Xylenes	0.05 ug/g	<0.05	-	-	-	-
o-Xylene	0.05 ug/g	<0.05	-	-	-	-
Xylenes, total	0.05 ug/g	<0.05	-	-	-	-
Toluene-d8	Surrogate	104%	-	-	-	-

Hydrocarbons

F1 PHCs (C6-C10)	7 ug/g	<7	<7	-	-	-
F2 PHCs (C10-C16)	4 ug/g	<4	<4	-	-	-
F3 PHCs (C16-C34)	8 ug/g	<8	39	-	-	-
F4 PHCs (C34-C50)	6 ug/g	<6	134	-	-	-

Semi-Volatiles

Acenaphthene	0.02 ug/g	<0.02	<0.02	-	-	-
Acenaphthylene	0.02 ug/g	<0.02	<0.02	-	-	-
Anthracene	0.02 ug/g	<0.02	<0.02	-	-	-
Benzo [a] anthracene	0.02 ug/g	<0.02	<0.02	-	-	-
Benzo [a] pyrene	0.02 ug/g	<0.02	<0.02	-	-	-
Benzo [b] fluoranthene	0.02 ug/g	<0.02	0.03	-	-	-
Benzo [g,h,i] perylene	0.02 ug/g	<0.02	0.04	-	-	-
Benzo [k] fluoranthene	0.02 ug/g	<0.02	<0.02	-	-	-
Chrysene	0.02 ug/g	<0.02	0.03	-	-	-
Dibenzo [a,h] anthracene	0.02 ug/g	<0.02	<0.02	-	-	-
Fluoranthene	0.02 ug/g	<0.02	0.03	-	-	-
Fluorene	0.02 ug/g	<0.02	<0.02	-	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g	<0.02	<0.02	-	-	-
1-Methylnaphthalene	0.02 ug/g	<0.02	<0.02	-	-	-



Order #: 2341072

Certificate of Analysis

Report Date: 16-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 10-Oct-2023

Client PO:

Project Description: 17181-001

Client ID:	BH108_0.18-0.50	BH109_0.12-1.5	QAQC3	-	
Sample Date:	10-Oct-23 12:00	10-Oct-23 11:00	10-Oct-23 09:00	-	-
Sample ID:	2341072-01	2341072-03	2341072-04	-	
Matrix:	Soil	Soil	Soil	-	
MDL/Units					

Semi-Volatiles

2-Methylnaphthalene	0.02 ug/g	<0.02	<0.02	-	-	-
Methylnaphthalene (1&2)	0.04 ug/g	<0.04	<0.04	-	-	-
Naphthalene	0.01 ug/g	<0.01	<0.01	-	-	-
Phenanthrene	0.02 ug/g	<0.02	<0.02	-	-	-
Pyrene	0.02 ug/g	<0.02	0.03	-	-	-
2-Fluorobiphenyl	Surrogate	52.6%	55.9%	-	-	-
Terphenyl-d14	Surrogate	54.3%	57.4%	-	-	-

Certificate of Analysis

Report Date: 16-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 10-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics								
Conductivity	ND	5	uS/cm					
Cyanide, free	ND	0.03	ug/g					
Hydrocarbons								
F1 PHCs (C6-C10)	ND	7	ug/g					
F2 PHCs (C10-C16)	ND	4	ug/g					
F3 PHCs (C16-C34)	ND	8	ug/g					
F4 PHCs (C34-C50)	ND	6	ug/g					
Metals								
Antimony	ND	1.0	ug/g					
Arsenic	ND	1.0	ug/g					
Barium	ND	1.0	ug/g					
Beryllium	ND	0.5	ug/g					
Boron, available	ND	0.5	ug/g					
Boron	ND	5.0	ug/g					
Cadmium	ND	0.5	ug/g					
Chromium (VI)	ND	0.2	ug/g					
Chromium	ND	5.0	ug/g					
Cobalt	ND	1.0	ug/g					
Copper	ND	5.0	ug/g					
Lead	ND	1.0	ug/g					
Mercury	ND	0.1	ug/g					
Molybdenum	ND	1.0	ug/g					
Nickel	ND	5.0	ug/g					
Selenium	ND	1.0	ug/g					
Silver	ND	0.3	ug/g					
Thallium	ND	1.0	ug/g					
Uranium	ND	1.0	ug/g					
Vanadium	ND	10.0	ug/g					
Zinc	ND	20.0	ug/g					
Semi-Volatiles								
Acenaphthene	ND	0.02	ug/g					
Acenaphthylene	ND	0.02	ug/g					

Certificate of Analysis

Report Date: 16-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 10-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Anthracene	ND	0.02	ug/g					
Benzo [a] anthracene	ND	0.02	ug/g					
Benzo [a] pyrene	ND	0.02	ug/g					
Benzo [b] fluoranthene	ND	0.02	ug/g					
Benzo [g,h,i] perylene	ND	0.02	ug/g					
Benzo [k] fluoranthene	ND	0.02	ug/g					
Chrysene	ND	0.02	ug/g					
Dibenzo [a,h] anthracene	ND	0.02	ug/g					
Fluoranthene	ND	0.02	ug/g					
Fluorene	ND	0.02	ug/g					
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g					
1-Methylnaphthalene	ND	0.02	ug/g					
2-Methylnaphthalene	ND	0.02	ug/g					
Methylnaphthalene (1&2)	ND	0.04	ug/g					
Naphthalene	ND	0.01	ug/g					
Phenanthrene	ND	0.02	ug/g					
Pyrene	ND	0.02	ug/g					
Surrogate: 2-Fluorobiphenyl	0.728		%	54.6	50-140			
Surrogate: Terphenyl-d14	0.735		%	55.1	50-140			
Volatiles								
Acetone	ND	0.50	ug/g					
Benzene	ND	0.02	ug/g					
Bromodichloromethane	ND	0.05	ug/g					
Bromoform	ND	0.05	ug/g					
Bromomethane	ND	0.05	ug/g					
Carbon Tetrachloride	ND	0.05	ug/g					
Chlorobenzene	ND	0.05	ug/g					
Chloroform	ND	0.05	ug/g					
Dibromochloromethane	ND	0.05	ug/g					
Dichlorodifluoromethane	ND	0.05	ug/g					
1,2-Dichlorobenzene	ND	0.05	ug/g					
1,3-Dichlorobenzene	ND	0.05	ug/g					

Certificate of Analysis

Report Date: 16-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 10-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
1,4-Dichlorobenzene	ND	0.05	ug/g					
1,1-Dichloroethane	ND	0.05	ug/g					
1,2-Dichloroethane	ND	0.05	ug/g					
1,1-Dichloroethylene	ND	0.05	ug/g					
cis-1,2-Dichloroethylene	ND	0.05	ug/g					
trans-1,2-Dichloroethylene	ND	0.05	ug/g					
1,2-Dichloropropane	ND	0.05	ug/g					
cis-1,3-Dichloropropylene	ND	0.05	ug/g					
trans-1,3-Dichloropropylene	ND	0.05	ug/g					
1,3-Dichloropropene, total	ND	0.05	ug/g					
Ethylbenzene	ND	0.05	ug/g					
Ethylene dibromide (dibromoethane, 1,2-)	ND	0.05	ug/g					
Hexane	ND	0.05	ug/g					
Methyl Ethyl Ketone (2-Butanone)	ND	0.50	ug/g					
Methyl Isobutyl Ketone	ND	0.50	ug/g					
Methyl tert-butyl ether	ND	0.05	ug/g					
Methylene Chloride	ND	0.05	ug/g					
Styrene	ND	0.05	ug/g					
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g					
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g					
Tetrachloroethylene	ND	0.05	ug/g					
Toluene	ND	0.05	ug/g					
1,1,1-Trichloroethane	ND	0.05	ug/g					
1,1,2-Trichloroethane	ND	0.05	ug/g					
Trichloroethylene	ND	0.05	ug/g					
Trichlorofluoromethane	ND	0.05	ug/g					
Vinyl chloride	ND	0.02	ug/g					
m,p-Xylenes	ND	0.05	ug/g					
o-Xylene	ND	0.05	ug/g					
Xylenes, total	ND	0.05	ug/g					
Surrogate: 4-Bromofluorobenzene	3.03		%	94.6	50-140			
Surrogate: Dibromofluoromethane	2.48		%	77.5	50-140			



Order #: 2341072

Certificate of Analysis

Report Date: 16-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 10-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: Toluene-d8	3.13		%	97.7	50-140			
Benzene	ND	0.02	ug/g					
Ethylbenzene	ND	0.05	ug/g					
Toluene	ND	0.05	ug/g					
m,p-Xylenes	ND	0.05	ug/g					
o-Xylene	ND	0.05	ug/g					
Xylenes, total	ND	0.05	ug/g					
Surrogate: Toluene-d8	3.13		%	97.7	50-140			

Certificate of Analysis

Report Date: 16-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 10-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
SAR	0.11	0.01	N/A	0.11			0.0	30	
Conductivity	313	5	uS/cm	278			11.9	5	QR-04
Cyanide, free	ND	0.03	ug/g	ND			NC	35	
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g	ND			NC	40	
F2 PHCs (C10-C16)	66	4	ug/g	37			NC	30	
F3 PHCs (C16-C34)	804	8	ug/g	693			14.9	30	
F4 PHCs (C34-C50)	103	6	ug/g	98			5.3	30	
Metals									
Antimony	ND	1.0	ug/g	ND			NC	30	
Arsenic	4.2	1.0	ug/g	4.4			4.2	30	
Barium	42.1	1.0	ug/g	39.2			7.2	30	
Beryllium	0.9	0.5	ug/g	ND			NC	30	
Boron, available	ND	0.5	ug/g	ND			NC	35	
Boron	7.5	5.0	ug/g	6.5			14.0	30	
Cadmium	ND	0.5	ug/g	ND			NC	30	
Chromium (VI)	ND	0.2	ug/g	ND			NC	35	
Chromium	14.8	5.0	ug/g	14.6			1.4	30	
Cobalt	5.6	1.0	ug/g	5.1			8.4	30	
Copper	22.2	5.0	ug/g	21.0			5.6	30	
Lead	23.3	1.0	ug/g	22.3			4.3	30	
Mercury	ND	0.1	ug/g	ND			NC	30	
Molybdenum	2.1	1.0	ug/g	1.9			12.7	30	
Nickel	11.4	5.0	ug/g	11.3			0.9	30	
Selenium	ND	1.0	ug/g	ND			NC	30	
Silver	0.3	0.3	ug/g	ND			NC	30	
Thallium	ND	1.0	ug/g	ND			NC	30	
Uranium	ND	1.0	ug/g	ND			NC	30	
Vanadium	23.8	10.0	ug/g	23.8			0.0	30	
Zinc	37.5	20.0	ug/g	35.4			5.5	30	

Certificate of Analysis

Report Date: 16-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 10-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Physical Characteristics									
% Solids	87.2	0.1	% by Wt.	85.2			2.3	25	
Semi-Volatiles									
Acenaphthene	ND	0.02	ug/g	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g	ND			NC	40	
Anthracene	ND	0.02	ug/g	ND			NC	40	
Benzo [a] anthracene	ND	0.02	ug/g	ND			NC	40	
Benzo [a] pyrene	ND	0.02	ug/g	ND			NC	40	
Benzo [b] fluoranthene	ND	0.02	ug/g	ND			NC	40	
Benzo [g,h,i] perylene	ND	0.02	ug/g	ND			NC	40	
Benzo [k] fluoranthene	ND	0.02	ug/g	ND			NC	40	
Chrysene	ND	0.02	ug/g	ND			NC	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g	ND			NC	40	
Fluoranthene	ND	0.02	ug/g	ND			NC	40	
Fluorene	ND	0.02	ug/g	ND			NC	40	
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g	ND			NC	40	
1-Methylnaphthalene	ND	0.02	ug/g	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g	ND			NC	40	
Naphthalene	ND	0.01	ug/g	ND			NC	40	
Phenanthrene	ND	0.02	ug/g	ND			NC	40	
Pyrene	ND	0.02	ug/g	ND			NC	40	
Surrogate: 2-Fluorobiphenyl	0.819		%		52.7	50-140			
Surrogate: Terphenyl-d14	0.937		%		60.4	50-140			
Volatiles									
Acetone	ND	0.50	ug/g	ND			NC	50	
Benzene	ND	0.02	ug/g	ND			NC	50	
Bromodichloromethane	ND	0.05	ug/g	ND			NC	50	
Bromoform	ND	0.05	ug/g	ND			NC	50	
Bromomethane	ND	0.05	ug/g	ND			NC	50	
Carbon Tetrachloride	ND	0.05	ug/g	ND			NC	50	
Chlorobenzene	ND	0.05	ug/g	ND			NC	50	

Certificate of Analysis

Report Date: 16-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 10-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Chloroform	ND	0.05	ug/g	ND			NC	50	
Dibromochloromethane	ND	0.05	ug/g	ND			NC	50	
Dichlorodifluoromethane	ND	0.05	ug/g	ND			NC	50	
1,2-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,3-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,4-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,1-Dichloroethane	ND	0.05	ug/g	ND			NC	50	
1,2-Dichloroethane	ND	0.05	ug/g	ND			NC	50	
1,1-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
cis-1,2-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
trans-1,2-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
1,2-Dichloropropane	ND	0.05	ug/g	ND			NC	50	
cis-1,3-Dichloropropylene	ND	0.05	ug/g	ND			NC	50	
trans-1,3-Dichloropropylene	ND	0.05	ug/g	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g	ND			NC	50	
Ethylene dibromide (dibromoethane, 1,2-)	ND	0.05	ug/g	ND			NC	50	
Hexane	ND	0.05	ug/g	ND			NC	50	
Methyl Ethyl Ketone (2-Butanone)	ND	0.50	ug/g	ND			NC	50	
Methyl Isobutyl Ketone	ND	0.50	ug/g	ND			NC	50	
Methyl tert-butyl ether	ND	0.05	ug/g	ND			NC	50	
Methylene Chloride	ND	0.05	ug/g	ND			NC	50	
Styrene	ND	0.05	ug/g	ND			NC	50	
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g	ND			NC	50	
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g	ND			NC	50	
Tetrachloroethylene	ND	0.05	ug/g	ND			NC	50	
Toluene	ND	0.05	ug/g	ND			NC	50	
1,1,1-Trichloroethane	ND	0.05	ug/g	ND			NC	50	
1,1,2-Trichloroethane	ND	0.05	ug/g	ND			NC	50	
Trichloroethylene	ND	0.05	ug/g	ND			NC	50	
Trichlorofluoromethane	ND	0.05	ug/g	ND			NC	50	
Vinyl chloride	ND	0.02	ug/g	ND			NC	50	



Order #: 2341072

Certificate of Analysis

Report Date: 16-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 10-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
m,p-Xylenes	ND	0.05	ug/g	ND			NC	50	
o-Xylene	ND	0.05	ug/g	ND			NC	50	
Surrogate: 4-Bromofluorobenzene	3.51		%		106	50-140			
Surrogate: Dibromofluoromethane	2.60		%		79.0	50-140			
Surrogate: Toluene-d8	3.46		%		105	50-140			
Benzene	ND	0.02	ug/g	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g	ND			NC	50	
Toluene	ND	0.05	ug/g	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g	ND			NC	50	
o-Xylene	ND	0.05	ug/g	ND			NC	50	
Surrogate: Toluene-d8	3.46		%		105	50-140			

Certificate of Analysis

Report Date: 16-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 10-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
Cyanide, free	0.280	0.03	ug/g	ND	82.7	50-150			
Hydrocarbons									
F1 PHCs (C6-C10)	171	7	ug/g	ND	85.4	85-115			
F2 PHCs (C10-C16)	108	4	ug/g	37	85.5	60-140			
F3 PHCs (C16-C34)	794	8	ug/g	693	49.6	60-140			QM-06
F4 PHCs (C34-C50)	219	6	ug/g	98	94.2	60-140			
Metals									
Antimony	35.5	1.0	ug/g	ND	70.6	70-130			
Arsenic	52.0	1.0	ug/g	1.8	100	70-130			
Barium	64.2	1.0	ug/g	15.7	97.0	70-130			
Beryllium	50.7	0.5	ug/g	ND	101	70-130			
Boron, available	4.05	0.5	ug/g	ND	81.0	70-122			
Boron	49.2	5.0	ug/g	ND	93.2	70-130			
Cadmium	47.7	0.5	ug/g	ND	95.3	70-130			
Chromium (VI)	0.1	0.2	ug/g	ND	61.0	70-130			QM-05
Chromium	58.1	5.0	ug/g	5.8	105	70-130			
Cobalt	52.2	1.0	ug/g	2.0	100	70-130			
Copper	56.9	5.0	ug/g	8.4	96.9	70-130			
Lead	54.1	1.0	ug/g	8.9	90.4	70-130			
Mercury	1.35	0.1	ug/g	ND	89.8	70-130			
Molybdenum	49.8	1.0	ug/g	ND	98.2	70-130			
Nickel	53.6	5.0	ug/g	ND	98.1	70-130			
Selenium	47.4	1.0	ug/g	ND	94.6	70-130			
Silver	45.5	0.3	ug/g	ND	90.9	70-130			
Thallium	47.5	1.0	ug/g	ND	94.8	70-130			
Uranium	50.2	1.0	ug/g	ND	99.8	70-130			
Vanadium	62.4	10.0	ug/g	ND	106	70-130			
Zinc	61.1	20.0	ug/g	ND	93.8	70-130			
Semi-Volatiles									
Acenaphthene	0.162	0.02	ug/g	ND	83.7	50-140			

Certificate of Analysis

Report Date: 16-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 10-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Acenaphthylene	0.156	0.02	ug/g	ND	80.2	50-140			
Anthracene	0.158	0.02	ug/g	ND	81.2	50-140			
Benzo [a] anthracene	0.197	0.02	ug/g	ND	102	50-140			
Benzo [a] pyrene	0.207	0.02	ug/g	ND	107	50-140			
Benzo [b] fluoranthene	0.160	0.02	ug/g	ND	82.2	50-140			
Benzo [g,h,i] perylene	0.181	0.02	ug/g	ND	93.3	50-140			
Benzo [k] fluoranthene	0.197	0.02	ug/g	ND	102	50-140			
Chrysene	0.212	0.02	ug/g	ND	109	50-140			
Dibenzo [a,h] anthracene	0.186	0.02	ug/g	ND	96.1	50-140			
Fluoranthene	0.169	0.02	ug/g	ND	87.3	50-140			
Fluorene	0.191	0.02	ug/g	ND	98.5	50-140			
Indeno [1,2,3-cd] pyrene	0.186	0.02	ug/g	ND	95.7	50-140			
1-Methylnaphthalene	0.165	0.02	ug/g	ND	84.9	50-140			
2-Methylnaphthalene	0.176	0.02	ug/g	ND	90.6	50-140			
Naphthalene	0.157	0.01	ug/g	ND	81.1	50-140			
Phenanthrene	0.163	0.02	ug/g	ND	84.1	50-140			
Pyrene	0.190	0.02	ug/g	ND	97.9	50-140			
Surrogate: 2-Fluorobiphenyl	0.896		%		57.7	50-140			
Surrogate: Terphenyl-d14	1.07		%		68.8	50-140			
Volatiles									
Acetone	12.9	0.50	ug/g	ND	129	50-140			
Benzene	4.91	0.02	ug/g	ND	123	60-130			
Bromodichloromethane	4.90	0.05	ug/g	ND	122	60-130			
Bromoform	4.81	0.05	ug/g	ND	120	60-130			
Bromomethane	4.51	0.05	ug/g	ND	113	50-140			
Carbon Tetrachloride	4.88	0.05	ug/g	ND	122	60-130			
Chlorobenzene	4.66	0.05	ug/g	ND	117	60-130			
Chloroform	4.83	0.05	ug/g	ND	121	60-130			
Dibromochloromethane	4.35	0.05	ug/g	ND	109	60-130			
Dichlorodifluoromethane	4.41	0.05	ug/g	ND	110	50-140			
1,2-Dichlorobenzene	4.03	0.05	ug/g	ND	101	60-130			

Certificate of Analysis

Report Date: 16-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 10-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
1,3-Dichlorobenzene	3.80	0.05	ug/g	ND	95.0	60-130			
1,4-Dichlorobenzene	4.25	0.05	ug/g	ND	106	60-130			
1,1-Dichloroethane	4.84	0.05	ug/g	ND	121	60-130			
1,2-Dichloroethane	4.54	0.05	ug/g	ND	114	60-130			
1,1-Dichloroethylene	4.80	0.05	ug/g	ND	120	60-130			
cis-1,2-Dichloroethylene	4.12	0.05	ug/g	ND	103	60-130			
trans-1,2-Dichloroethylene	4.63	0.05	ug/g	ND	116	60-130			
1,2-Dichloropropane	4.63	0.05	ug/g	ND	116	60-130			
cis-1,3-Dichloropropylene	4.35	0.05	ug/g	ND	109	60-130			
trans-1,3-Dichloropropylene	4.37	0.05	ug/g	ND	109	60-130			
Ethylbenzene	4.20	0.05	ug/g	ND	105	60-130			
Ethylene dibromide (dibromoethane, 1,2-)	4.62	0.05	ug/g	ND	116	60-130			
Hexane	4.16	0.05	ug/g	ND	104	60-130			
Methyl Ethyl Ketone (2-Butanone)	12.6	0.50	ug/g	ND	126	50-140			
Methyl Isobutyl Ketone	11.3	0.50	ug/g	ND	113	50-140			
Methyl tert-butyl ether	13.7	0.05	ug/g	ND	137	50-140			
Methylene Chloride	4.47	0.05	ug/g	ND	112	60-130			
Styrene	3.79	0.05	ug/g	ND	94.9	60-130			
1,1,1,2-Tetrachloroethane	4.20	0.05	ug/g	ND	105	60-130			
1,1,2,2-Tetrachloroethane	4.91	0.05	ug/g	ND	123	60-130			
Tetrachloroethylene	4.58	0.05	ug/g	ND	114	60-130			
Toluene	4.89	0.05	ug/g	ND	122	60-130			
1,1,1-Trichloroethane	4.67	0.05	ug/g	ND	117	60-130			
1,1,2-Trichloroethane	4.99	0.05	ug/g	ND	125	60-130			
Trichloroethylene	4.77	0.05	ug/g	ND	119	60-130			
Trichlorofluoromethane	4.93	0.05	ug/g	ND	123	50-140			
Vinyl chloride	4.93	0.02	ug/g	ND	123	50-140			
m,p-Xylenes	9.82	0.05	ug/g	ND	123	60-130			
o-Xylene	4.93	0.05	ug/g	ND	123	60-130			
Surrogate: 4-Bromofluorobenzene	1.62		%		50.7	50-140			
Surrogate: Dibromofluoromethane	2.58		%		80.5	50-140			



Order #: 2341072

Certificate of Analysis

Report Date: 16-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 10-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: Toluene-d8	2.97		%		92.8	50-140			
Benzene	4.91	0.02	ug/g	ND	123	60-130			
Ethylbenzene	4.20	0.05	ug/g	ND	105	60-130			
Toluene	4.89	0.05	ug/g	ND	122	60-130			
m,p-Xylenes	9.82	0.05	ug/g	ND	123	60-130			
o-Xylene	4.93	0.05	ug/g	ND	123	60-130			
Surrogate: Toluene-d8	2.97		%		92.8	50-140			

Certificate of Analysis

Report Date: 16-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 10-Oct-2023

Client PO:

Project Description: 17181-001

Qualifier Notes:

Sample Qualifiers :

5: Soil jar not provided for sample "QAQC". Data for the sample 'BH109_0.12-1.5' used for %Solids.

QC Qualifiers:

QM-05 The spike recovery was outside acceptance limits for the matrix spike due to matrix interference.
QM-06 Due to noted non-homogeneity of the QC sample matrix, the spike recoveries were out side the accepted range. Batch data accepted based on other QC.
QR-04 Duplicate results exceeds RPD limits due to non-homogeneous matrix.

Sample Data Revisions:

None



Order #: 2341072

Certificate of Analysis

Client: Cambium Inc. (Kingston)

Client PO:

Report Date: 16-Oct-2023

Order Date: 10-Oct-2023

Project Description: 17181-001

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis unless otherwise noted.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.

Any use of these results implies your agreement that our total liability in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.



Paracel ID: 2341072

Paracel Order Number
(Lab Use Only)

2341072

Chain Of Custody
(Lab Use Only)

Nº 142100

Client Name: Cambium	Project Ref: 17181-001	Page 1 of 1
Contact Name: Laura Fitzgerald	Quote #:	Turnaround Time ☐ 1 day ☐ 3 day ☐ 2 day ☒ Regular
Address: 625 Fortune cres. Kingston Unit 1	PO #:	
Telephone: 866-217-7900	E-mail: Laura.Fitzgerald@Cambium-inc.com Kelsi.Doughty@Cambium-inc.com	
Date Required:		

☒ REG 153/04 ☐ REG 406/19 Other Regulation:		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)		Required Analysis												
☐ Table 1 ☐ Res/Park ☐ Med/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☐ Table _____ For RSC: ☒ Yes ☐ No		☐ REG 558 ☐ PWQO ☐ CCME ☐ MISA ☐ SU - Sani ☐ SU - Storm Mun: _____ ☐ Other: _____		Sample Taken Date Time		PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	LD	EC	SAR	40LN
Sample ID/Location Name		Matrix	Air Volume	# of Containers	Date	Time										
1 BH108-0.18-0.50		S		2	10/10/23	12:00	X	X	X							
2 BH108-0.50-1.0		S		2	12:05											
3 BH109-0.12-1.50		S		3	11:00		X	X	X	X	X	X	X	X	X	
4																
5 QAQC3		S		1	10/10/23		X									
6																
7																
8																
9																
10																

Comments: **3 jars from 109, due to gravelly material!**

Method of Delivery:

Drop Box

Relinquished By (Sign): Kelsi Doughty	Received By (Sign): Quinn Payne	Received At Lab: Drop Box	Verified By: [Signature]
Relinquished By (Print): Kelsi Doughty	Date/Time: October 10, 2023 14:25	Date/Time: Oct 11, 2023 10:30	Date/Time: Oct 11, 2023 10:34
Date/Time: 14:06 / 10/10/23	Temperature: 16.3 °C	Temperature: 4.3 °C	pH Verified: ☐ By: _____

Chain of Custody (Env).xlsx

Revision 4.0



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Certificate of Analysis

Cambium Inc. (Kingston)

625 Fortune Cres
Kingston, ON K7P 0L5
Attn: Laura Fitzgerald

Client PO:
Project: 17181-001
Custody: 142076, 078

Report Date: 30-Oct-2023

Order Date: 25-Oct-2023

Order #: 2343265

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2343265-01	BH103_1.52-3.04

Approved By:

A handwritten signature in blue ink, appearing to read 'Dale Robertson', on a light blue background.

Dale Robertson, BSc

Laboratory Director



Order #: 2343265

Certificate of Analysis

Report Date: 30-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 25-Oct-2023

Client PO:

Project Description: 17181-001

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	25-Oct-23	28-Oct-23
Solids, %	CWS Tier 1 - Gravimetric	26-Oct-23	27-Oct-23



Order #: 2343265

Certificate of Analysis

Report Date: 30-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 25-Oct-2023

Client PO:

Project Description: 17181-001

Client ID:	BH103_1.52-3.04	-	-	-	
Sample Date:	02-Oct-23 12:55	-	-	-	- -
Sample ID:	2343265-01	-	-	-	
Matrix:	Soil	-	-	-	
MDL/Units					

Physical Characteristics

% Solids	0.1 % by Wt.	64.0	-	-	-	- -
----------	--------------	------	---	---	---	-----

Hydrocarbons

F2 PHCs (C10-C16)	4 ug/g	<4 [1]	-	-	-	- -
F3 PHCs (C16-C34)	8 ug/g	<8 [1]	-	-	-	- -
F4 PHCs (C34-C50)	6 ug/g	<6 [1]	-	-	-	- -



Order #: 2343265

Certificate of Analysis

Report Date: 30-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 25-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons								
F2 PHCs (C10-C16)	ND	4	ug/g					
F3 PHCs (C16-C34)	ND	8	ug/g					
F4 PHCs (C34-C50)	ND	6	ug/g					



Order #: 2343265

Certificate of Analysis

Report Date: 30-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 25-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F2 PHCs (C10-C16)	ND	4	ug/g	ND			NC	30	
F3 PHCs (C16-C34)	ND	8	ug/g	ND			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g	ND			NC	30	
Physical Characteristics									
% Solids	86.9	0.1	% by Wt.	86.3			0.7	25	



Order #: 2343265

Certificate of Analysis

Report Date: 30-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 25-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F2 PHCs (C10-C16)	113	4	ug/g	ND	112	60-140			
F3 PHCs (C16-C34)	336	8	ug/g	ND	137	60-140			
F4 PHCs (C34-C50)	188	6	ug/g	ND	121	60-140			



Order #: 2343265

Certificate of Analysis

Report Date: 30-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 25-Oct-2023

Client PO:

Project Description: 17181-001

Qualifier Notes:

Sample Qualifiers :

- 1: Holding time had been exceeded upon receipt of the sample at the laboratory or prior to the analysis being requested.

Sample Data Revisions:

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis unless otherwise noted.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.

Any use of these results implies your agreement that our total liability in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.

PARACI
LABORATORIES L

Parcel ID: 2343265



Parcel Order Number

(Lab Use Only)

2343265

2346141

Chain Of Custody

(Lab Use Only)

No 142076

Client Name: Cambium Inc.
Contact Name: Laura Fitzgerald
Address: 625 Fortune Cres, Kingston
Unit 7
Telephone: 866-217-7900
Project Ref: 17181-001
Quote #:
PO #:
E-mail: Laura.Fitzgerald@cambium-inc.com
Kelsi.Daugherty@cambium-inc.com

Page 1 of 2

Turnaround Time

☐ 1 day ☐ 3 day
☐ 2 day ☒ Regular

Date Required: _____

☒ REG 153/04 ☐ REG 406/19
☐ Table 1 ☐ Res/Park ☐ Med/Fine ☐ REG 558 ☐ PWQO
☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ CCME ☐ MISA
☐ Table 3 ☐ Agri/Other ☐ SU - San ☐ SU - Storm
☐ Table _____
For RSC: ☒ Yes ☐ No ☐ Other: _____

Matrix Type: S (Soil/Sed.) GW (Ground Water)
SW (Surface Water) SS (Storm/Sanitary Sewer)
P (Paint) A (Air) O (Other)

Required Analysis

Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken		PHOS F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	153 metals	PH	Texture	CN	EC	SAR	HOLD
				Date	Time													
1 BH101-0.010-0.60	S		3	02/10/23	14:50	X		X	X	X			X	X				
2 BH101-1.52-2.43	S		3	02/10/23	14:55								X	X				
3 BH102-0.010-0.60	S		2	02/10/23	15:40	X	X	X	X			X			X	X		X
4 BH102-1.52-3.04	S		2	02/10/23	15:45													
5 BH103-0.025-0.60	S		2	02/10/23	15:50	X	X	X				X			X	X		X
6 BH103-1.52-3.04	S		2	02/10/23	15:50	X	X	X				X			X	X		X
7 BH104-0.025-0.45	S		2	02/10/23	15:55													
8 BH104-3.04-4.57	S		2	02/10/23	15:55	X		X		X		X						
9 BH105-0.025-0.12	S		2	02/10/23	16:00	X	X	X				X			X	X		X
10 BH105-0.20-3.04	S		2	02/10/23	16:25													

Comments:

HOLD All Extra Soil

Method of Delivery:

Drop Box

Relinquished By (Sign): Kelsi Daugherty
Relinquished By (Print): Kelsi Daugherty
Date/Time: 03/10/23 @ 10:49
Received By Driver/Spot: [Signature]
Date/Time: October 03, 2023 11:05
Temperature: 21 °C
Received at Lab: [Signature]
Date/Time: OCT 04, 2023 09:12
Temperature: 12.1 °C
Verified By: Katelyn Cooper
Date/Time: Oct 03 13:31
pH Verified: ☐ By: _____

Revision 4.0



300 - 2319 St. Laurent Blvd
Ottawa, ON, K1G 4J8
1-800-749-1947
www.paracellabs.com

Certificate of Analysis

Cambium Inc. (Kingston)
625 Fortune Cres
Kingston, ON K7P 0L5
Attn: Laura Fitzgerald

Client PO:
Project: 17181-001
Custody: 142076, 078

Report Date: 31-Oct-2023
Order Date: 3-Oct-2023

Revised Report

Order #: 2340141

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID	Paracel ID	Client ID
2340141-01	BH101_0.010-0.6		
2340141-02	BH101_1.52-2.43		
2340141-03	BH102_0.010-0.60		
2340141-04	BH102_1.52-3.04		
2340141-05	BH103_0.025-0.06		
2340141-07	BH104_3.04-4.57		
2340141-08	BH105_0.025-0.12		
2340141-10	BH106_0.25-0.06		
2340141-12	BH107_0.025-0.10		
2340141-13	BH107_1.52-2.42		
2340141-14	QAQC1		
2340141-15	QAQC2		
2340141-16	QAQC4		
2340141-17	QAQC5		

Approved By: 

Dale Robertson, BSc
Laboratory Director

Certificate of Analysis

Report Date: 31-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 3-Oct-2023

Client PO:

Project Description: 17181-001

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Boron, available	MOE (HWE), EPA 200.8 - ICP-MS	6-Oct-23	10-Oct-23
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	6-Oct-23	6-Oct-23
Chromium, hexavalent - soil	MOE E3056 - Extraction, colourimetric	5-Oct-23	10-Oct-23
Conductivity	MOE E3138 - probe @25 °C, water ext	10-Oct-23	10-Oct-23
Cyanide, free	MOE E3015 - Auto Colour, water extraction	5-Oct-23	5-Oct-23
Mercury by CVAA	EPA 7471B - CVAA, digestion	6-Oct-23	10-Oct-23
pH, soil	EPA 150.1 - pH probe @ 25 °C, CaCl buffered ext.	7-Oct-23	7-Oct-23
PHC F1	CWS Tier 1 - P&T GC-FID	6-Oct-23	6-Oct-23
PHC F4G (gravimetric)	CWS Tier 1 - Extraction Gravimetric	10-Oct-23	12-Oct-23
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	5-Oct-23	6-Oct-23
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	6-Oct-23	10-Oct-23
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	5-Oct-23	5-Oct-23
REG 153: VOCs by P&T GC/MS	EPA 8260 - P&T GC-MS	6-Oct-23	6-Oct-23
SAR	Calculated	10-Oct-23	10-Oct-23
Solids, %	CWS Tier 1 - Gravimetric	5-Oct-23	5-Oct-23
Texture - Coarse Med/Fine	Based on ASTM D2487	5-Oct-23	10-Oct-23

Certificate of Analysis

Report Date: 31-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 3-Oct-2023

Client PO:

Project Description: 17181-001

Client ID:	BH101_0.010-0.6	BH101_1.52-2.43	BH102_0.010-0.60	BH102_1.52-3.04	-	-
Sample Date:	02-Oct-23 14:50	02-Oct-23 14:55	02-Oct-23 15:40	02-Oct-23 15:45	-	-
Sample ID:	2340141-01	2340141-02	2340141-03	2340141-04	-	-
Matrix:	Soil	Soil	Soil	Soil	-	-
MDL/Units						

Physical Characteristics

% Solids	0.1 % by Wt.	79.1	77.7	94.5	70.1	-	-
>75 um	0.1 %	29.4	1.9	-	-	-	-
<75 um	0.1 %	70.6	98.1	-	-	-	-
Texture	0.1 %	Med/Fine	Med/Fine	-	-	-	-

General Inorganics

SAR	0.01 N/A	-	-	0.09	-	-	-
Conductivity	5 uS/cm	-	-	130	-	-	-
Cyanide, free	0.03 ug/g	-	-	<0.03	-	-	-
pH	0.05 pH Units	7.77	7.85	-	-	-	-

Metals

Antimony	1.0 ug/g	<1.0	-	<1.0	-	-	-
Arsenic	1.0 ug/g	2.7	-	3.3	-	-	-
Barium	1.0 ug/g	181	-	78.0	-	-	-
Beryllium	0.5 ug/g	0.5	-	<0.5	-	-	-
Boron, available	0.5 ug/g	-	-	<0.5	-	-	-
Boron	5.0 ug/g	10.6	-	6.2	-	-	-
Cadmium	0.5 ug/g	<0.5	-	<0.5	-	-	-
Chromium (VI)	0.2 ug/g	-	-	<0.2	-	-	-
Chromium	5.0 ug/g	25.8	-	15.2	-	-	-
Cobalt	1.0 ug/g	7.2	-	6.0	-	-	-
Copper	5.0 ug/g	19.1	-	12.3	-	-	-
Lead	1.0 ug/g	68.1	-	64.0	-	-	-
Mercury	0.1 ug/g	<0.1	-	<0.1	-	-	-
Molybdenum	1.0 ug/g	<1.0	-	<1.0	-	-	-
Nickel	5.0 ug/g	14.9	-	9.6	-	-	-



Order #: 2340141

Certificate of Analysis

Report Date: 31-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 3-Oct-2023

Client PO:

Project Description: 17181-001

Client ID:	BH101_0.010-0.6	BH101_1.52-2.43	BH102_0.010-0.60	BH102_1.52-3.04	-	-
Sample Date:	02-Oct-23 14:50	02-Oct-23 14:55	02-Oct-23 15:40	02-Oct-23 15:45	-	-
Sample ID:	2340141-01	2340141-02	2340141-03	2340141-04	-	-
Matrix:	Soil	Soil	Soil	Soil	-	-
MDL/Units						

Metals

Selenium	1.0 ug/g	<1.0	-	<1.0	-	-
Silver	0.3 ug/g	<0.3	-	<0.3	-	-
Thallium	1.0 ug/g	<1.0	-	<1.0	-	-
Uranium	1.0 ug/g	<1.0	-	<1.0	-	-
Vanadium	10.0 ug/g	36.5	-	22.9	-	-
Zinc	20.0 ug/g	86.6	-	44.9	-	-

Volatiles

Acetone	0.50 ug/g	-	-	<0.50	-	-
Benzene	0.02 ug/g	-	-	<0.02	-	-
Bromodichloromethane	0.05 ug/g	-	-	<0.05	-	-
Bromoform	0.05 ug/g	-	-	<0.05	-	-
Bromomethane	0.05 ug/g	-	-	<0.05	-	-
Carbon Tetrachloride	0.05 ug/g	-	-	<0.05	-	-
Chlorobenzene	0.05 ug/g	-	-	<0.05	-	-
Chloroform	0.05 ug/g	-	-	<0.05	-	-
Dibromochloromethane	0.05 ug/g	-	-	<0.05	-	-
Dichlorodifluoromethane	0.05 ug/g	-	-	<0.05	-	-
1,2-Dichlorobenzene	0.05 ug/g	-	-	<0.05	-	-
1,3-Dichlorobenzene	0.05 ug/g	-	-	<0.05	-	-
1,4-Dichlorobenzene	0.05 ug/g	-	-	<0.05	-	-
1,1-Dichloroethane	0.05 ug/g	-	-	<0.05	-	-
1,2-Dichloroethane	0.05 ug/g	-	-	<0.05	-	-
1,1-Dichloroethylene	0.05 ug/g	-	-	<0.05	-	-
cis-1,2-Dichloroethylene	0.05 ug/g	-	-	<0.05	-	-
trans-1,2-Dichloroethylene	0.05 ug/g	-	-	<0.05	-	-

Certificate of Analysis

Report Date: 31-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 3-Oct-2023

Client PO:

Project Description: 17181-001

Client ID:	BH101_0.010-0.6	BH101_1.52-2.43	BH102_0.010-0.60	BH102_1.52-3.04	-	-
Sample Date:	02-Oct-23 14:50	02-Oct-23 14:55	02-Oct-23 15:40	02-Oct-23 15:45	-	-
Sample ID:	2340141-01	2340141-02	2340141-03	2340141-04	-	-
Matrix:	Soil	Soil	Soil	Soil	-	-
MDL/Units						

Volatiles

1,2-Dichloropropane	0.05 ug/g	-	-	<0.05	-	-
cis-1,3-Dichloropropylene	0.05 ug/g	-	-	<0.05	-	-
trans-1,3-Dichloropropylene	0.05 ug/g	-	-	<0.05	-	-
1,3-Dichloropropene, total	0.05 ug/g	-	-	<0.05	-	-
Ethylene dibromide (dibromoethane,	0.05 ug/g	-	-	<0.05	-	-
Ethylbenzene	0.05 ug/g	-	-	<0.05	-	-
Hexane	0.05 ug/g	-	-	<0.05	-	-
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g	-	-	<0.50	-	-
Methyl Isobutyl Ketone	0.50 ug/g	-	-	<0.50	-	-
Methyl tert-butyl ether	0.05 ug/g	-	-	<0.05	-	-
Methylene Chloride	0.05 ug/g	-	-	<0.05	-	-
Styrene	0.05 ug/g	-	-	<0.05	-	-
1,1,1,2-Tetrachloroethane	0.05 ug/g	-	-	<0.05	-	-
1,1,2,2-Tetrachloroethane	0.05 ug/g	-	-	<0.05	-	-
Tetrachloroethylene	0.05 ug/g	-	-	<0.05	-	-
Toluene	0.05 ug/g	-	-	<0.05	-	-
1,1,1-Trichloroethane	0.05 ug/g	-	-	<0.05	-	-
1,1,2-Trichloroethane	0.05 ug/g	-	-	<0.05	-	-
Trichloroethylene	0.05 ug/g	-	-	<0.05	-	-
Trichlorofluoromethane	0.05 ug/g	-	-	<0.05	-	-
Vinyl chloride	0.02 ug/g	-	-	<0.02	-	-
m,p-Xylenes	0.05 ug/g	-	-	<0.05	-	-
o-Xylene	0.05 ug/g	-	-	<0.05	-	-
Xylenes, total	0.05 ug/g	-	-	<0.05	-	-
4-Bromofluorobenzene	Surrogate	-	-	94.1%	-	-

Certificate of Analysis

Report Date: 31-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 3-Oct-2023

Client PO:

Project Description: 17181-001

Client ID:	BH101_0.010-0.6	BH101_1.52-2.43	BH102_0.010-0.60	BH102_1.52-3.04	-	-
Sample Date:	02-Oct-23 14:50	02-Oct-23 14:55	02-Oct-23 15:40	02-Oct-23 15:45	-	-
Sample ID:	2340141-01	2340141-02	2340141-03	2340141-04	-	-
Matrix:	Soil	Soil	Soil	Soil	-	-
MDL/Units						

Volatiles

Toluene-d8	Surrogate	-	-	100%	-	-
Dibromofluoromethane	Surrogate	-	-	104%	-	-
Benzene	0.02 ug/g	<0.02	-	-	-	-
Ethylbenzene	0.05 ug/g	<0.05	-	-	-	-
Toluene	0.05 ug/g	<0.05	-	-	-	-
m,p-Xylenes	0.05 ug/g	<0.05	-	-	-	-
o-Xylene	0.05 ug/g	<0.05	-	-	-	-
Xylenes, total	0.05 ug/g	<0.05	-	-	-	-
Toluene-d8	Surrogate	106%	-	-	-	-

Hydrocarbons

F1 PHCs (C6-C10)	7 ug/g	<7	-	<7	-	-
F2 PHCs (C10-C16)	4 ug/g	<4	-	<4	-	-
F3 PHCs (C16-C34)	8 ug/g	<8	-	72	-	-
F4 PHCs (C34-C50)	6 ug/g	<6	-	112 [1]	-	-
F4G PHCs (gravimetric)	50 ug/g	-	-	106	-	-

Semi-Volatiles

Acenaphthene	0.02 ug/g	<0.02	-	<0.02	<0.02	-
Acenaphthylene	0.02 ug/g	<0.02	-	0.38	<0.02	-
Anthracene	0.02 ug/g	<0.02	-	0.12	<0.02	-
Benzo [a] anthracene	0.02 ug/g	<0.02	-	0.30	<0.02	-
Benzo [a] pyrene	0.02 ug/g	<0.02	-	0.50	<0.02	-
Benzo [b] fluoranthene	0.02 ug/g	<0.02	-	0.41	<0.02	-
Benzo [g,h,i] perylene	0.02 ug/g	<0.02	-	0.38	<0.02	-
Benzo [k] fluoranthene	0.02 ug/g	<0.02	-	0.24	<0.02	-
Chrysene	0.02 ug/g	<0.02	-	0.27	<0.02	-



Order #: 2340141

Certificate of Analysis

Report Date: 31-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 3-Oct-2023

Client PO:

Project Description: 17181-001

Client ID:	BH101_0.010-0.6	BH101_1.52-2.43	BH102_0.010-0.60	BH102_1.52-3.04	-	-
Sample Date:	02-Oct-23 14:50	02-Oct-23 14:55	02-Oct-23 15:40	02-Oct-23 15:45		
Sample ID:	2340141-01	2340141-02	2340141-03	2340141-04		
Matrix:	Soil	Soil	Soil	Soil		
MDL/Units						

Semi-Volatiles

Dibenzo [a,h] anthracene	0.02 ug/g	<0.02	-	0.07	<0.02	-	-
Fluoranthene	0.02 ug/g	<0.02	-	0.23	<0.02	-	-
Fluorene	0.02 ug/g	<0.02	-	<0.02	<0.02	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g	<0.02	-	0.28	<0.02	-	-
1-Methylnaphthalene	0.02 ug/g	<0.02	-	<0.02	<0.02	-	-
2-Methylnaphthalene	0.02 ug/g	<0.02	-	<0.02	<0.02	-	-
Methylnaphthalene (1&2)	0.04 ug/g	<0.04	-	<0.04	<0.04	-	-
Naphthalene	0.01 ug/g	<0.01	-	0.01	<0.01	-	-
Phenanthrene	0.02 ug/g	<0.02	-	0.04	<0.02	-	-
Pyrene	0.02 ug/g	<0.02	-	0.37	<0.02	-	-
2-Fluorobiphenyl	Surrogate	63.8%	-	65.0%	63.0%	-	-
Terphenyl-d14	Surrogate	57.8%	-	67.3%	59.3%	-	-



Order #: 2340141

Certificate of Analysis

Report Date: 31-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 3-Oct-2023

Client PO:

Project Description: 17181-001

Client ID:	BH103_0.025-0.06	BH104_3.04-4.57	BH105_0.025-0.12	BH106_0.25-0.06	-	-
Sample Date:	02-Oct-23 12:50	02-Oct-23 13:55	02-Oct-23 10:20	02-Oct-23 12:00	-	-
Sample ID:	2340141-05	2340141-07	2340141-08	2340141-10	-	-
Matrix:	Soil	Soil	Soil	Soil	-	-
MDL/Units						

Physical Characteristics

% Solids	0.1 % by Wt.	85.9	62.5	80.8	94.9	-	-
----------	--------------	------	------	------	------	---	---

General Inorganics

SAR	0.01 N/A	0.08	-	0.09	0.09	-	-
Conductivity	5 uS/cm	220	-	187	169	-	-
Cyanide, free	0.03 ug/g	<0.03	-	<0.03	<0.03	-	-
pH	0.05 pH Units	-	7.58	-	-	-	-

Metals

Antimony	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Arsenic	1.0 ug/g	3.0	3.2	4.2	2.7	-	-
Barium	1.0 ug/g	105	422	143	57.3	-	-
Beryllium	0.5 ug/g	<0.5	1.0	0.6	<0.5	-	-
Boron	5.0 ug/g	8.7	11.4	7.4	9.6	-	-
Boron, available	0.5 ug/g	<0.5	-	<0.5	<0.5	-	-
Cadmium	0.5 ug/g	<0.5	<0.5	<0.5	<0.5	-	-
Chromium (VI)	0.2 ug/g	<0.2	0.3	0.4	<0.2	-	-
Chromium	5.0 ug/g	27.3	58.2	31.5	21.0	-	-
Cobalt	1.0 ug/g	6.8	18.6	8.8	3.7	-	-
Copper	5.0 ug/g	13.9	33.9	29.9	12.1	-	-
Lead	1.0 ug/g	74.9	9.0	33.0	20.6	-	-
Mercury	0.1 ug/g	<0.1	-	<0.1	<0.1	-	-
Molybdenum	1.0 ug/g	1.0	<1.0	1.7	1.3	-	-
Nickel	5.0 ug/g	11.6	38.4	17.6	10.8	-	-
Selenium	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Silver	0.3 ug/g	<0.3	<0.3	<0.3	<0.3	-	-
Thallium	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-

Order #: 2340141

Certificate of Analysis

Report Date: 31-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 3-Oct-2023

Client PO:

Project Description: 17181-001

Client ID:	BH103_0.025-0.06	BH104_3.04-4.57	BH105_0.025-0.12	BH106_0.25-0.06	-	-
Sample Date:	02-Oct-23 12:50	02-Oct-23 13:55	02-Oct-23 10:20	02-Oct-23 12:00	-	-
Sample ID:	2340141-05	2340141-07	2340141-08	2340141-10	-	-
Matrix:	Soil	Soil	Soil	Soil	-	-
MDL/Units						

Metals

Uranium	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Vanadium	10.0 ug/g	32.7	69.3	45.4	30.1	-	-
Zinc	20.0 ug/g	207	95.5	142	26.9	-	-

Volatiles

Acetone	0.50 ug/g	<0.50	<0.50	<0.50	<0.50	-	-
Benzene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	-	-
Bromodichloromethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Bromoform	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Bromomethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Carbon Tetrachloride	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Chlorobenzene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Chloroform	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Dibromochloromethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Dichlorodifluoromethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,2-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,3-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,4-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,1-Dichloroethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,2-Dichloroethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,1-Dichloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
cis-1,2-Dichloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
trans-1,2-Dichloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,2-Dichloropropane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
cis-1,3-Dichloropropylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
trans-1,3-Dichloropropylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-

Certificate of Analysis

Report Date: 31-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 3-Oct-2023

Client PO:

Project Description: 17181-001

Client ID:	BH103_0.025-0.06	BH104_3.04-4.57	BH105_0.025-0.12	BH106_0.25-0.06	-	-
Sample Date:	02-Oct-23 12:50	02-Oct-23 13:55	02-Oct-23 10:20	02-Oct-23 12:00	-	-
Sample ID:	2340141-05	2340141-07	2340141-08	2340141-10	-	-
Matrix:	Soil	Soil	Soil	Soil	-	-
MDL/Units						

Volatiles

1,3-Dichloropropene, total	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Ethylbenzene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Ethylene dibromide (dibromoethane,	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Hexane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g	<0.50	<0.50	<0.50	<0.50	-	-
Methyl Isobutyl Ketone	0.50 ug/g	<0.50	<0.50	<0.50	<0.50	-	-
Methyl tert-butyl ether	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Methylene Chloride	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Styrene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,1,1,2-Tetrachloroethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,1,2,2-Tetrachloroethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Tetrachloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Toluene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,1,1-Trichloroethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,1,2-Trichloroethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Trichloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Trichlorofluoromethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Vinyl chloride	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	-	-
m,p-Xylenes	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
o-Xylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Xylenes, total	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Dibromofluoromethane	Surrogate	112%	120%	112%	104%	-	-
Toluene-d8	Surrogate	105%	115%	107%	101%	-	-
4-Bromofluorobenzene	Surrogate	91.3%	114%	115%	109%	-	-

Hydrocarbons



Order #: 2340141

Certificate of Analysis

Report Date: 31-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 3-Oct-2023

Client PO:

Project Description: 17181-001

Client ID:	BH103_0.025-0.06	BH104_3.04-4.57	BH105_0.025-0.12	BH106_0.25-0.06	-	-
Sample Date:	02-Oct-23 12:50	02-Oct-23 13:55	02-Oct-23 10:20	02-Oct-23 12:00	-	-
Sample ID:	2340141-05	2340141-07	2340141-08	2340141-10	-	-
Matrix:	Soil	Soil	Soil	Soil	-	-
MDL/Units						

Hydrocarbons

F1 PHCs (C6-C10)	7 ug/g	<7	-	<7	<7	-	-
F2 PHCs (C10-C16)	4 ug/g	<4	-	<4	<4	-	-
F3 PHCs (C16-C34)	8 ug/g	78	-	<8	18	-	-
F4 PHCs (C34-C50)	6 ug/g	141 [1]	-	<6	22	-	-
F4G PHCs (gravimetric)	50 ug/g	221	-	-	-	-	-

Semi-Volatiles

Acenaphthene	0.02 ug/g	<0.02	-	<0.02	<0.02	-	-
Acenaphthylene	0.02 ug/g	<0.02	-	<0.02	<0.02	-	-
Anthracene	0.02 ug/g	<0.02	-	<0.02	<0.02	-	-
Benzo [a] anthracene	0.02 ug/g	0.03	-	<0.02	<0.02	-	-
Benzo [a] pyrene	0.02 ug/g	0.03	-	<0.02	<0.02	-	-
Benzo [b] fluoranthene	0.02 ug/g	0.04	-	<0.02	<0.02	-	-
Benzo [g,h,i] perylene	0.02 ug/g	0.04	-	<0.02	<0.02	-	-
Benzo [k] fluoranthene	0.02 ug/g	0.02	-	<0.02	<0.02	-	-
Chrysene	0.02 ug/g	0.03	-	<0.02	<0.02	-	-
Dibenzo [a,h] anthracene	0.02 ug/g	<0.02	-	<0.02	<0.02	-	-
Fluoranthene	0.02 ug/g	0.08	-	<0.02	<0.02	-	-
Fluorene	0.02 ug/g	<0.02	-	<0.02	<0.02	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g	0.02	-	<0.02	<0.02	-	-
1-Methylnaphthalene	0.02 ug/g	<0.02	-	<0.02	<0.02	-	-
2-Methylnaphthalene	0.02 ug/g	<0.02	-	<0.02	<0.02	-	-
Methylnaphthalene (1&2)	0.04 ug/g	<0.04	-	<0.04	<0.04	-	-
Naphthalene	0.01 ug/g	<0.01	-	<0.01	<0.01	-	-
Phenanthrene	0.02 ug/g	0.07	-	<0.02	<0.02	-	-
Pyrene	0.02 ug/g	0.06	-	<0.02	<0.02	-	-



Order #: 2340141

Certificate of Analysis

Report Date: 31-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 3-Oct-2023

Client PO:

Project Description: 17181-001

Client ID:	BH103_0.025-0.06	BH104_3.04-4.57	BH105_0.025-0.12	BH106_0.25-0.06		
Sample Date:	02-Oct-23 12:50	02-Oct-23 13:55	02-Oct-23 10:20	02-Oct-23 12:00	-	-
Sample ID:	2340141-05	2340141-07	2340141-08	2340141-10		
Matrix:	Soil	Soil	Soil	Soil		
MDL/Units						

Semi-Volatiles

2-Fluorobiphenyl	Surrogate	71.1%	-	60.2%	71.0%	-	-
Terphenyl-d14	Surrogate	73.6%	-	62.8%	66.5%	-	-

Order #: 2340141

Certificate of Analysis

Report Date: 31-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 3-Oct-2023

Client PO:

Project Description: 17181-001

Client ID:	BH107_0.025-0.10	BH107_1.52-2.42	QAQC1	QAQC2		
Sample Date:	02-Oct-23 11:05	02-Oct-23 11:10	02-Oct-23 09:00	02-Oct-23 09:00	-	-
Sample ID:	2340141-12	2340141-13	2340141-14	2340141-15		
Matrix:	Soil	Soil	Soil	Soil		
MDL/Units						

Physical Characteristics

% Solids	0.1 % by Wt.	84.3	79.5	91.1	83.9	-	-
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Metals

Antimony	1.0 ug/g	-	<1.0	-	-	-	-
Arsenic	1.0 ug/g	-	1.8	-	-	-	-
Barium	1.0 ug/g	-	78.0	-	-	-	-
Beryllium	0.5 ug/g	-	<0.5	-	-	-	-
Boron	5.0 ug/g	-	<5.0	-	-	-	-
Cadmium	0.5 ug/g	-	<0.5	-	-	-	-
Chromium	5.0 ug/g	-	18.4	-	-	-	-
Cobalt	1.0 ug/g	-	6.2	-	-	-	-
Copper	5.0 ug/g	-	12.5	-	-	-	-
Lead	1.0 ug/g	-	3.4	-	-	-	-
Molybdenum	1.0 ug/g	-	<1.0	-	-	-	-
Nickel	5.0 ug/g	-	10.4	-	-	-	-
Selenium	1.0 ug/g	-	<1.0	-	-	-	-
Silver	0.3 ug/g	-	<0.3	-	-	-	-
Thallium	1.0 ug/g	-	<1.0	-	-	-	-
Uranium	1.0 ug/g	-	<1.0	-	-	-	-
Vanadium	10.0 ug/g	-	31.4	-	-	-	-
Zinc	20.0 ug/g	-	24.4	-	-	-	-

Volatiles

Benzene	0.02 ug/g	<0.02	<0.02	<0.02	-	-	-
Ethylbenzene	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
Toluene	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
m,p-Xylenes	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-

Certificate of Analysis

Report Date: 31-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 3-Oct-2023

Client PO:

Project Description: 17181-001

Client ID:	BH107_0.025-0.10	BH107_1.52-2.42	QAQC1	QAQC2		
Sample Date:	02-Oct-23 11:05	02-Oct-23 11:10	02-Oct-23 09:00	02-Oct-23 09:00	-	-
Sample ID:	2340141-12	2340141-13	2340141-14	2340141-15		
Matrix:	Soil	Soil	Soil	Soil		
MDL/Units						

Volatiles

o-Xylene	0.05 ug/g	<0.05	<0.05	<0.05	-	-
Xylenes, total	0.05 ug/g	<0.05	<0.05	<0.05	-	-
Toluene-d8	Surrogate	107%	109%	100%	-	-

Hydrocarbons

F1 PHCs (C6-C10)	7 ug/g	<7	<7	<7	-	-
F2 PHCs (C10-C16)	4 ug/g	<4	<4	<4	-	-
F3 PHCs (C16-C34)	8 ug/g	12	<8	39	-	-
F4 PHCs (C34-C50)	6 ug/g	117	<6	319 [1]	-	-
F4G PHCs (gravimetric)	50 ug/g	-	-	461	-	-

Semi-Volatiles

Acenaphthene	0.02 ug/g	<0.02	<0.02	-	<0.02	-
Acenaphthylene	0.02 ug/g	<0.02	<0.02	-	<0.02	-
Anthracene	0.02 ug/g	<0.02	<0.02	-	<0.02	-
Benzo [a] anthracene	0.02 ug/g	<0.02	<0.02	-	<0.02	-
Benzo [a] pyrene	0.02 ug/g	<0.02	<0.02	-	<0.02	-
Benzo [b] fluoranthene	0.02 ug/g	<0.02	<0.02	-	<0.02	-
Benzo [g,h,i] perylene	0.02 ug/g	<0.02	<0.02	-	<0.02	-
Benzo [k] fluoranthene	0.02 ug/g	<0.02	<0.02	-	<0.02	-
Chrysene	0.02 ug/g	<0.02	<0.02	-	<0.02	-
Dibenzo [a,h] anthracene	0.02 ug/g	<0.02	<0.02	-	<0.02	-
Fluoranthene	0.02 ug/g	<0.02	<0.02	-	<0.02	-
Fluorene	0.02 ug/g	<0.02	<0.02	-	<0.02	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g	<0.02	<0.02	-	<0.02	-
1-Methylnaphthalene	0.02 ug/g	<0.02	<0.02	-	<0.02	-
2-Methylnaphthalene	0.02 ug/g	<0.02	<0.02	-	<0.02	-



Order #: 2340141

Certificate of Analysis

Report Date: 31-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 3-Oct-2023

Client PO:

Project Description: 17181-001

Client ID:	BH107_0.025-0.10	BH107_1.52-2.42	QAQC1	QAQC2		
Sample Date:	02-Oct-23 11:05	02-Oct-23 11:10	02-Oct-23 09:00	02-Oct-23 09:00	-	-
Sample ID:	2340141-12	2340141-13	2340141-14	2340141-15		
Matrix:	Soil	Soil	Soil	Soil		
MDL/Units						

Semi-Volatiles

Methylnaphthalene (1&2)	0.04 ug/g	<0.04	<0.04	-	<0.04	-	-
Naphthalene	0.01 ug/g	<0.01	<0.01	-	<0.01	-	-
Phenanthrene	0.02 ug/g	<0.02	<0.02	-	<0.02	-	-
Pyrene	0.02 ug/g	<0.02	<0.02	-	<0.02	-	-
2-Fluorobiphenyl	Surrogate	69.9%	60.9%	-	55.2%	-	-
Terphenyl-d14	Surrogate	61.9%	58.9%	-	53.9%	-	-

Certificate of Analysis

Report Date: 31-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 3-Oct-2023

Client PO:

Project Description: 17181-001

Client ID:	QAQC4	QAQC5			
Sample Date:	02-Oct-23 09:00	02-Oct-23 09:00			-
Sample ID:	2340141-16	2340141-17			-
Matrix:	Soil	Soil			
MDL/Units					

Physical Characteristics

% Solids	0.1 % by Wt.	94.9	94.6	-	-	-	-
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Metals

Antimony	1.0 ug/g	-	<1.0	-	-	-	-
Arsenic	1.0 ug/g	-	2.9	-	-	-	-
Barium	1.0 ug/g	-	80.5	-	-	-	-
Beryllium	0.5 ug/g	-	<0.5	-	-	-	-
Boron	5.0 ug/g	-	6.2	-	-	-	-
Boron, available	0.5 ug/g	-	<0.5	-	-	-	-
Cadmium	0.5 ug/g	-	<0.5	-	-	-	-
Chromium	5.0 ug/g	-	15.8	-	-	-	-
Chromium (VI)	0.2 ug/g	-	<0.2	-	-	-	-
Cobalt	1.0 ug/g	-	5.9	-	-	-	-
Copper	5.0 ug/g	-	12.5	-	-	-	-
Lead	1.0 ug/g	-	80.0	-	-	-	-
Mercury	0.1 ug/g	-	<0.1	-	-	-	-
Molybdenum	1.0 ug/g	-	<1.0	-	-	-	-
Nickel	5.0 ug/g	-	9.5	-	-	-	-
Selenium	1.0 ug/g	-	<1.0	-	-	-	-
Silver	0.3 ug/g	-	<0.3	-	-	-	-
Thallium	1.0 ug/g	-	<1.0	-	-	-	-
Uranium	1.0 ug/g	-	<1.0	-	-	-	-
Vanadium	10.0 ug/g	-	23.7	-	-	-	-
Zinc	20.0 ug/g	-	47.7	-	-	-	-

Volatiles

Benzene	0.02 ug/g	<0.02	-	-	-	-	-
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Order #: 2340141

Certificate of Analysis

Report Date: 31-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 3-Oct-2023

Client PO:

Project Description: 17181-001

Client ID:	QAQC4	QAQC5			
Sample Date:	02-Oct-23 09:00	02-Oct-23 09:00			- -
Sample ID:	2340141-16	2340141-17			
Matrix:	Soil	Soil			
MDL/Units					

Volatiles

Ethylbenzene	0.05 ug/g	<0.05	-	-	-	-
Toluene	0.05 ug/g	<0.05	-	-	-	-
m,p-Xylenes	0.05 ug/g	<0.05	-	-	-	-
o-Xylene	0.05 ug/g	<0.05	-	-	-	-
Xylenes, total	0.05 ug/g	<0.05	-	-	-	-
Toluene-d8	Surrogate	99.9%	-	-	-	-

Hydrocarbons

F1 PHCs (C6-C10)	7 ug/g	<7	-	-	-	-
F2 PHCs (C10-C16)	4 ug/g	<4	-	-	-	-
F3 PHCs (C16-C34)	8 ug/g	38	-	-	-	-
F4 PHCs (C34-C50)	6 ug/g	76	-	-	-	-

Certificate of Analysis

Report Date: 31-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 3-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics								
Conductivity	ND	5	uS/cm					
Cyanide, free	ND	0.03	ug/g					
Hydrocarbons								
F1 PHCs (C6-C10)	ND	7	ug/g					
F2 PHCs (C10-C16)	ND	4	ug/g					
F3 PHCs (C16-C34)	ND	8	ug/g					
F4 PHCs (C34-C50)	ND	6	ug/g					
F4G PHCs (gravimetric)	ND	50	ug/g					
Metals								
Antimony	ND	1.0	ug/g					
Arsenic	ND	1.0	ug/g					
Barium	ND	1.0	ug/g					
Beryllium	ND	0.5	ug/g					
Boron, available	ND	0.5	ug/g					
Boron	ND	5.0	ug/g					
Cadmium	ND	0.5	ug/g					
Chromium (VI)	ND	0.2	ug/g					
Chromium	ND	5.0	ug/g					
Cobalt	ND	1.0	ug/g					
Copper	ND	5.0	ug/g					
Lead	ND	1.0	ug/g					
Mercury	ND	0.1	ug/g					
Molybdenum	ND	1.0	ug/g					
Nickel	ND	5.0	ug/g					
Selenium	ND	1.0	ug/g					
Silver	ND	0.3	ug/g					
Thallium	ND	1.0	ug/g					
Uranium	ND	1.0	ug/g					
Vanadium	ND	10.0	ug/g					
Zinc	ND	20.0	ug/g					
Semi-Volatiles								
Acenaphthene	ND	0.02	ug/g					

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Client: Cambium Inc. (Kingston)

Order Date: 3-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Acenaphthylene	ND	0.02	ug/g					
Anthracene	ND	0.02	ug/g					
Benzo [a] anthracene	ND	0.02	ug/g					
Benzo [a] pyrene	ND	0.02	ug/g					
Benzo [b] fluoranthene	ND	0.02	ug/g					
Benzo [g,h,i] perylene	ND	0.02	ug/g					
Benzo [k] fluoranthene	ND	0.02	ug/g					
Chrysene	ND	0.02	ug/g					
Dibenzo [a,h] anthracene	ND	0.02	ug/g					
Fluoranthene	ND	0.02	ug/g					
Fluorene	ND	0.02	ug/g					
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g					
1-Methylnaphthalene	ND	0.02	ug/g					
2-Methylnaphthalene	ND	0.02	ug/g					
Methylnaphthalene (1&2)	ND	0.04	ug/g					
Naphthalene	ND	0.01	ug/g					
Phenanthrene	ND	0.02	ug/g					
Pyrene	ND	0.02	ug/g					
Surrogate: 2-Fluorobiphenyl	0.990		%	74.3	50-140			
Surrogate: Terphenyl-d14	0.897		%	67.3	50-140			
Volatiles								
Acetone	ND	0.50	ug/g					
Benzene	ND	0.02	ug/g					
Bromodichloromethane	ND	0.05	ug/g					
Bromoform	ND	0.05	ug/g					
Bromomethane	ND	0.05	ug/g					
Carbon Tetrachloride	ND	0.05	ug/g					
Chlorobenzene	ND	0.05	ug/g					
Chloroform	ND	0.05	ug/g					
Dibromochloromethane	ND	0.05	ug/g					
Dichlorodifluoromethane	ND	0.05	ug/g					
1,2-Dichlorobenzene	ND	0.05	ug/g					

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Client: Cambium Inc. (Kingston)

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Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
1,3-Dichlorobenzene	ND	0.05	ug/g					
1,4-Dichlorobenzene	ND	0.05	ug/g					
1,1-Dichloroethane	ND	0.05	ug/g					
1,2-Dichloroethane	ND	0.05	ug/g					
1,1-Dichloroethylene	ND	0.05	ug/g					
cis-1,2-Dichloroethylene	ND	0.05	ug/g					
trans-1,2-Dichloroethylene	ND	0.05	ug/g					
1,2-Dichloropropane	ND	0.05	ug/g					
cis-1,3-Dichloropropylene	ND	0.05	ug/g					
trans-1,3-Dichloropropylene	ND	0.05	ug/g					
1,3-Dichloropropene, total	ND	0.05	ug/g					
Ethylbenzene	ND	0.05	ug/g					
Ethylene dibromide (dibromoethane, 1,2-)	ND	0.05	ug/g					
Hexane	ND	0.05	ug/g					
Methyl Ethyl Ketone (2-Butanone)	ND	0.50	ug/g					
Methyl Isobutyl Ketone	ND	0.50	ug/g					
Methyl tert-butyl ether	ND	0.05	ug/g					
Methylene Chloride	ND	0.05	ug/g					
Styrene	ND	0.05	ug/g					
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g					
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g					
Tetrachloroethylene	ND	0.05	ug/g					
Toluene	ND	0.05	ug/g					
1,1,1-Trichloroethane	ND	0.05	ug/g					
1,1,2-Trichloroethane	ND	0.05	ug/g					
Trichloroethylene	ND	0.05	ug/g					
Trichlorofluoromethane	ND	0.05	ug/g					
Vinyl chloride	ND	0.02	ug/g					
m,p-Xylenes	ND	0.05	ug/g					
o-Xylene	ND	0.05	ug/g					
Xylenes, total	ND	0.05	ug/g					
Surrogate: 4-Bromofluorobenzene	8.27		%	103	50-140			



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Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: Dibromofluoromethane	8.18		%	102	50-140			
Surrogate: Toluene-d8	7.91		%	98.9	50-140			
Benzene	ND	0.02	ug/g					
Ethylbenzene	ND	0.05	ug/g					
Toluene	ND	0.05	ug/g					
m,p-Xylenes	ND	0.05	ug/g					
o-Xylene	ND	0.05	ug/g					
Xylenes, total	ND	0.05	ug/g					
Surrogate: Toluene-d8	7.91		%	98.9	50-140			

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Client: Cambium Inc. (Kingston)

Order Date: 3-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
SAR	0.32	0.01	N/A	0.36			11.8	30	
Conductivity	210	5	uS/cm	216			3.1	5	
Cyanide, free	ND	0.03	ug/g	ND			NC	35	
pH	8.01	0.05	pH Units	7.91			1.3	2.3	
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g	ND			NC	30	
F3 PHCs (C16-C34)	ND	8	ug/g	ND			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g	ND			NC	30	
Metals									
Antimony	ND	1.0	ug/g	ND			NC	30	
Arsenic	4.4	1.0	ug/g	4.4			1.4	30	
Barium	61.3	1.0	ug/g	60.9			0.6	30	
Beryllium	0.6	0.5	ug/g	0.6			0.7	30	
Boron, available	ND	0.5	ug/g	ND			NC	35	
Boron	16.8	5.0	ug/g	17.4			3.7	30	
Cadmium	ND	0.5	ug/g	ND			NC	30	
Chromium (VI)	ND	0.2	ug/g	ND			NC	35	
Chromium	24.8	5.0	ug/g	23.7			4.7	30	
Cobalt	9.4	1.0	ug/g	8.8			6.0	30	
Copper	18.5	5.0	ug/g	17.6			5.2	30	
Lead	7.9	1.0	ug/g	7.4			7.2	30	
Mercury	ND	0.1	ug/g	ND			NC	30	
Molybdenum	1.6	1.0	ug/g	1.5			2.6	30	
Nickel	26.9	5.0	ug/g	25.5			5.3	30	
Selenium	ND	1.0	ug/g	ND			NC	30	
Silver	ND	0.3	ug/g	ND			NC	30	
Thallium	ND	1.0	ug/g	ND			NC	30	
Uranium	1.1	1.0	ug/g	1.1			2.3	30	
Vanadium	25.2	10.0	ug/g	24.9			1.3	30	

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Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Zinc	40.6	20.0	ug/g	37.8			7.0	30	
Physical Characteristics									
% Solids	98.5	0.1	% by Wt.	98.5			0.0	25	
Semi-Volatiles									
Acenaphthene	ND	0.02	ug/g	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g	ND			NC	40	
Anthracene	ND	0.02	ug/g	ND			NC	40	
Benzo [a] anthracene	ND	0.02	ug/g	ND			NC	40	
Benzo [a] pyrene	ND	0.02	ug/g	ND			NC	40	
Benzo [b] fluoranthene	ND	0.02	ug/g	ND			NC	40	
Benzo [g,h,i] perylene	ND	0.02	ug/g	ND			NC	40	
Benzo [k] fluoranthene	ND	0.02	ug/g	ND			NC	40	
Chrysene	ND	0.02	ug/g	ND			NC	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g	ND			NC	40	
Fluoranthene	ND	0.02	ug/g	ND			NC	40	
Fluorene	ND	0.02	ug/g	ND			NC	40	
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g	ND			NC	40	
1-Methylnaphthalene	ND	0.02	ug/g	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g	ND			NC	40	
Naphthalene	ND	0.01	ug/g	ND			NC	40	
Phenanthrene	ND	0.02	ug/g	ND			NC	40	
Pyrene	ND	0.02	ug/g	ND			NC	40	
Surrogate: 2-Fluorobiphenyl	0.926		%		64.4	50-140			
Surrogate: Terphenyl-d14	0.853		%		59.4	50-140			
Volatiles									
Acetone	ND	0.50	ug/g	ND			NC	50	
Benzene	ND	0.02	ug/g	ND			NC	50	
Bromodichloromethane	ND	0.05	ug/g	ND			NC	50	
Bromoform	ND	0.05	ug/g	ND			NC	50	
Bromomethane	ND	0.05	ug/g	ND			NC	50	
Carbon Tetrachloride	ND	0.05	ug/g	ND			NC	50	

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Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Chlorobenzene	ND	0.05	ug/g	ND			NC	50	
Chloroform	ND	0.05	ug/g	ND			NC	50	
Dibromochloromethane	ND	0.05	ug/g	ND			NC	50	
Dichlorodifluoromethane	ND	0.05	ug/g	ND			NC	50	
1,2-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,3-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,4-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,1-Dichloroethane	ND	0.05	ug/g	ND			NC	50	
1,2-Dichloroethane	ND	0.05	ug/g	ND			NC	50	
1,1-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
cis-1,2-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
trans-1,2-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
1,2-Dichloropropane	ND	0.05	ug/g	ND			NC	50	
cis-1,3-Dichloropropylene	ND	0.05	ug/g	ND			NC	50	
trans-1,3-Dichloropropylene	ND	0.05	ug/g	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g	ND			NC	50	
Ethylene dibromide (dibromoethane, 1,2-)	ND	0.05	ug/g	ND			NC	50	
Hexane	ND	0.05	ug/g	ND			NC	50	
Methyl Ethyl Ketone (2-Butanone)	ND	0.50	ug/g	ND			NC	50	
Methyl Isobutyl Ketone	ND	0.50	ug/g	ND			NC	50	
Methyl tert-butyl ether	ND	0.05	ug/g	ND			NC	50	
Methylene Chloride	ND	0.05	ug/g	ND			NC	50	
Styrene	ND	0.05	ug/g	ND			NC	50	
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g	ND			NC	50	
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g	ND			NC	50	
Tetrachloroethylene	ND	0.05	ug/g	ND			NC	50	
Toluene	ND	0.05	ug/g	ND			NC	50	
1,1,1-Trichloroethane	ND	0.05	ug/g	ND			NC	50	
1,1,2-Trichloroethane	ND	0.05	ug/g	ND			NC	50	
Trichloroethylene	ND	0.05	ug/g	ND			NC	50	
Trichlorofluoromethane	ND	0.05	ug/g	ND			NC	50	



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Client: Cambium Inc. (Kingston)

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Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Vinyl chloride	ND	0.02	ug/g	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g	ND			NC	50	
o-Xylene	ND	0.05	ug/g	ND			NC	50	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>8.68</i>		%		<i>97.0</i>	<i>50-140</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>9.55</i>		%		<i>107</i>	<i>50-140</i>			
<i>Surrogate: Toluene-d8</i>	<i>9.20</i>		%		<i>103</i>	<i>50-140</i>			
Benzene	ND	0.02	ug/g	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g	ND			NC	50	
Toluene	ND	0.05	ug/g	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g	ND			NC	50	
o-Xylene	ND	0.05	ug/g	ND			NC	50	
<i>Surrogate: Toluene-d8</i>	<i>9.20</i>		%		<i>103</i>	<i>50-140</i>			

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Report Date: 31-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 3-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
Cyanide, free	0.147	0.03	ug/g	ND	48.0	50-150			QM-01
Hydrocarbons									
F1 PHCs (C6-C10)	169	7	ug/g	ND	98.3	85-115			
F2 PHCs (C10-C16)	102	4	ug/g	ND	111	60-140			
F3 PHCs (C16-C34)	296	8	ug/g	ND	132	60-140			
F4 PHCs (C34-C50)	172	6	ug/g	ND	121	60-140			
F4G PHCs (gravimetric)	840	50	ug/g	ND	84.0	80-120			
Metals									
Arsenic	48.4	1.0	ug/g	1.7	93.3	70-130			
Barium	71.1	1.0	ug/g	24.4	93.4	70-130			
Beryllium	44.8	0.5	ug/g	ND	89.1	70-130			
Boron, available	4.11	0.5	ug/g	ND	82.3	70-122			
Boron	47.5	5.0	ug/g	7.0	81.0	70-130			
Cadmium	45.1	0.5	ug/g	ND	90.2	70-130			
Chromium (VI)	5.6	0.2	ug/g	ND	98.0	70-130			
Chromium	56.4	5.0	ug/g	9.5	93.8	70-130			
Cobalt	49.5	1.0	ug/g	3.5	91.8	70-130			
Copper	49.9	5.0	ug/g	7.0	85.7	70-130			
Lead	46.5	1.0	ug/g	3.0	87.2	70-130			
Mercury	1.46	0.1	ug/g	ND	97.4	70-130			
Molybdenum	45.8	1.0	ug/g	ND	90.4	70-130			
Nickel	55.8	5.0	ug/g	10.2	91.2	70-130			
Selenium	40.1	1.0	ug/g	ND	79.8	70-130			
Silver	45.9	0.3	ug/g	ND	91.8	70-130			
Thallium	44.0	1.0	ug/g	ND	87.9	70-130			
Uranium	47.1	1.0	ug/g	ND	93.4	70-130			
Vanadium	56.8	10.0	ug/g	10.0	93.6	70-130			
Zinc	57.5	20.0	ug/g	ND	84.7	70-130			
Semi-Volatiles									
Acenaphthene	0.161	0.02	ug/g	ND	89.5	50-140			

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Client: Cambium Inc. (Kingston)

Order Date: 3-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Acenaphthylene	0.172	0.02	ug/g	ND	95.8	50-140			
Anthracene	0.164	0.02	ug/g	ND	91.2	50-140			
Benzo [a] anthracene	0.130	0.02	ug/g	ND	72.6	50-140			
Benzo [a] pyrene	0.129	0.02	ug/g	ND	72.1	50-140			
Benzo [b] fluoranthene	0.106	0.02	ug/g	ND	59.3	50-140			
Benzo [g,h,i] perylene	0.119	0.02	ug/g	ND	66.5	50-140			
Benzo [k] fluoranthene	0.113	0.02	ug/g	ND	63.1	50-140			
Chrysene	0.150	0.02	ug/g	ND	83.5	50-140			
Dibenzo [a,h] anthracene	0.126	0.02	ug/g	ND	69.9	50-140			
Fluoranthene	0.167	0.02	ug/g	ND	93.1	50-140			
Fluorene	0.149	0.02	ug/g	ND	82.8	50-140			
Indeno [1,2,3-cd] pyrene	0.120	0.02	ug/g	ND	67.1	50-140			
1-Methylnaphthalene	0.126	0.02	ug/g	ND	70.3	50-140			
2-Methylnaphthalene	0.146	0.02	ug/g	ND	81.0	50-140			
Naphthalene	0.153	0.01	ug/g	ND	84.9	50-140			
Phenanthrene	0.170	0.02	ug/g	ND	94.9	50-140			
Pyrene	0.173	0.02	ug/g	ND	96.2	50-140			
Surrogate: 2-Fluorobiphenyl	0.866		%		60.2	50-140			
Surrogate: Terphenyl-d14	0.809		%		56.3	50-140			
Volatiles									
Acetone	8.56	0.50	ug/g	ND	85.6	50-140			
Benzene	3.18	0.02	ug/g	ND	79.5	60-130			
Bromodichloromethane	3.19	0.05	ug/g	ND	79.7	60-130			
Bromoform	2.85	0.05	ug/g	ND	71.3	60-130			
Bromomethane	2.93	0.05	ug/g	ND	73.3	50-140			
Carbon Tetrachloride	2.85	0.05	ug/g	ND	71.2	60-130			
Chlorobenzene	2.82	0.05	ug/g	ND	70.5	60-130			
Chloroform	2.90	0.05	ug/g	ND	72.5	60-130			
Dibromochloromethane	2.65	0.05	ug/g	ND	66.2	60-130			
Dichlorodifluoromethane	3.45	0.05	ug/g	ND	86.3	50-140			
1,2-Dichlorobenzene	3.53	0.05	ug/g	ND	88.2	60-130			

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Client: Cambium Inc. (Kingston)

Order Date: 3-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
1,3-Dichlorobenzene	3.86	0.05	ug/g	ND	96.6	60-130			
1,4-Dichlorobenzene	3.88	0.05	ug/g	ND	97.0	60-130			
1,1-Dichloroethane	2.65	0.05	ug/g	ND	66.1	60-130			
1,2-Dichloroethane	4.06	0.05	ug/g	ND	101	60-130			
1,1-Dichloroethylene	3.58	0.05	ug/g	ND	89.5	60-130			
cis-1,2-Dichloroethylene	2.85	0.05	ug/g	ND	71.2	60-130			
trans-1,2-Dichloroethylene	3.79	0.05	ug/g	ND	94.7	60-130			
1,2-Dichloropropane	3.25	0.05	ug/g	ND	81.3	60-130			
cis-1,3-Dichloropropylene	3.83	0.05	ug/g	ND	95.7	60-130			
trans-1,3-Dichloropropylene	2.90	0.05	ug/g	ND	72.5	60-130			
Ethylbenzene	3.33	0.05	ug/g	ND	83.4	60-130			
Ethylene dibromide (dibromoethane, 1,2-)	4.44	0.05	ug/g	ND	111	60-130			
Hexane	3.75	0.05	ug/g	ND	93.9	60-130			
Methyl Ethyl Ketone (2-Butanone)	6.26	0.50	ug/g	ND	62.6	50-140			
Methyl Isobutyl Ketone	8.99	0.50	ug/g	ND	89.9	50-140			
Methyl tert-butyl ether	6.08	0.05	ug/g	ND	60.8	50-140			
Methylene Chloride	3.33	0.05	ug/g	ND	83.2	60-130			
Styrene	2.84	0.05	ug/g	ND	71.0	60-130			
1,1,1,2-Tetrachloroethane	2.81	0.05	ug/g	ND	70.2	60-130			
1,1,2,2-Tetrachloroethane	2.95	0.05	ug/g	ND	73.9	60-130			
Tetrachloroethylene	2.92	0.05	ug/g	ND	72.9	60-130			
Toluene	2.72	0.05	ug/g	ND	68.0	60-130			
1,1,1-Trichloroethane	2.92	0.05	ug/g	ND	73.0	60-130			
1,1,2-Trichloroethane	3.30	0.05	ug/g	ND	82.4	60-130			
Trichloroethylene	2.69	0.05	ug/g	ND	67.3	60-130			
Trichlorofluoromethane	3.39	0.05	ug/g	ND	84.9	50-140			
Vinyl chloride	3.68	0.02	ug/g	ND	92.1	50-140			
m,p-Xylenes	7.15	0.05	ug/g	ND	89.3	60-130			
o-Xylene	3.42	0.05	ug/g	ND	85.5	60-130			
Surrogate: 4-Bromofluorobenzene	7.60		%		95.1	50-140			
Surrogate: Dibromofluoromethane	8.30		%		104	50-140			



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Client: Cambium Inc. (Kingston)

Order Date: 3-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: Toluene-d8	7.31		%		91.4	50-140			
Benzene	3.18	0.02	ug/g	ND	79.5	60-130			
Ethylbenzene	3.33	0.05	ug/g	ND	83.4	60-130			
Toluene	2.72	0.05	ug/g	ND	68.0	60-130			
m,p-Xylenes	7.15	0.05	ug/g	ND	89.3	60-130			
o-Xylene	3.42	0.05	ug/g	ND	85.5	60-130			
Surrogate: Toluene-d8	7.31		%		91.4	50-140			



Order #: 2340141

Certificate of Analysis

Report Date: 31-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 3-Oct-2023

Client PO:

Project Description: 17181-001

Qualifier Notes:

Sample Qualifiers :

1: GC-FID signal did not return to baseline by C50

QC Qualifiers:

QM-01 The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.

Sample Data Revisions:

None

Certificate of Analysis

Report Date: 31-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 3-Oct-2023

Client PO:

Project Description: 17181-001

Work Order Revisions / Comments:

REVISION-1: This report includes additional PAHs data.

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis unless otherwise noted.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.

Any use of these results implies your agreement that our total liability in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.



Paracel ID: 2340141

Paracel Order Number
(Lab Use Only)

2340141

Chain Of Custody
(Lab Use Only)

No 142076

Client Name: Cambium Inc.	Project Ref: 17181-001	Page 1 of 2
Contact Name: Laura Fitzgerald	Quote #:	Turnaround Time ☐ 1 day ☐ 3 day ☐ 2 day ☒ Regular
Address: 625 Fortune Cres, Kingston Unit 1	PO #:	
Telephone: 866-217-7900	E-mail: Laura.Fitzgerald@Cambium-inc.com Kelsi.Daugherty@Cambium-inc.com	
Date Required:		

☒ REG 153/04 ☐ REG 406/19	Other Regulation	Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)	Required Analysis															
☐ Table 1 ☐ Res/Park ☐ Med/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☐ Table _____ For RSC: ☒ Yes ☐ No	☐ REG 558 ☐ PWQO ☐ CCME ☐ MISA ☐ SU - Sani ☐ SU - Storm Mun: _____ ☐ Other: _____																	
Sample ID/Location Name		Matrix	Air Volume	# of Containers	Sample Taken		PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	153 metals	PH	Texture	CN	EC	SAR
Date	Time																	
1 BH101-0.010-0.60	02/10/23	14:50	S	3			X		X	X	X			X	X			
2 BH101-1.52-2.43	02/10/23	14:55	S	2										X	X			
3 BH102-0.010-0.60	02/10/23	15:40	S	2			X	X	X			X				X	X	X
4 BH102-1.52-3.04	02/10/23	15:45	S	2														
5 BH103-0.025-0.60	02/10/23	12:50	S	2			X	X	X			X				X	X	X
6 BH103-1.52-3.04	02/10/23	12:55	S	2														
7 BH104-0.025-0.45	02/10/23	13:50	S	2			X		X		X		X					
8 BH104-3.04-4.57	02/10/23	13:55	S	2				X		X	X		X					
9 BH105-0.025-0.12	02/10/23	10:20	S	2			X	X	X			X				X	X	X
10 BH105-0.20-3.04	02/10/23	10:25	S	2														

Comments: HOLD All Extra soil.				Method of Delivery: Drop Box			
Relinquished By (Sign): Kelsi Daugherty	Received By Driver/Depot: Shirley Payer	Received at Lab: Shirley Payer	Verified By: Karen Cooper				
Relinquished By (Print): Kelsi Daugherty	Date/Time: October 03, 2023 11:05	Date/Time: Oct 04, 2023 09:12	Date/Time: Oct 03 13:31				
Date/Time: 03/10/23 @ 10:49	Temperature: 21 °C	Temperature: 12.1 °C	pH Verified: ☐ By: _____				

Chain of Custody (Env).xlsx

Revision 4.0



Paracel ID: 2340141

Paracel Order Number
(Lab Use Only)

2340141

Chain Of Custody
(Lab Use Only)

No 142078

Client Name:	Project Ref:	Page 2 of 2
Contact Name:	Quote #:	Turnaround Time ☐ 1 day ☐ 3 day ☐ 2 day ☒ Regular Date Required:
Address:	PO #:	
Telephone:	E-mail:	

☒ REG 153/04 ☐ REG 406/19 ☐ Table 1 ☐ Res/Park ☐ Med/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☐ Table _____ For RSC: ☒ Yes ☐ No	Other Regulation ☐ REG 558 ☐ PWQO ☐ CCME ☐ MISA ☐ SU - Sani ☐ SU - Storm Mun: _____ ☐ Other: _____	Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)	Required Analysis														
Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken		PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	153 metals	pH	Texture	CN	EC	SAR
1 BH106-0.025-0.60	S		2	02/10/23	12:00	X	X	X				X			X	X	X
2 BH106-1.52-3.04	S		2	02/10/23	12:05										X	X	X
3 BH107-0.025-0.10	S		2	02/10/23	11:05	X		X									
4 BH107-0.152-2.42	S		2	02/10/23	11:10	X		X	X								
5 QAQC1	S		2	02/10/23		X											
6 QAQC2	S		1	02/10/23				X									
7 QAQC3	S		1	02/10/23			X										
8 QAQC4	S		2	02/10/23		X											
9 QAQC5	S		1	02/10/23							X						
10																	

Comments:			Method of Delivery:		
Relinquished By (Sign):	Received By (Driver Sign):	Received at Lab:	Verified By:		
Relinquished By (Print):	Date/Time:	Date/Time:	Date/Time:		
Date/Time:	Temperature:	Temperature:	pH Verified: ☐ By:		

Chain of Custody (Env) xlsx



300 - 2319 St. Laurent Blvd
Ottawa, ON, K1G 4J8
1-800-749-1947
www.paracellabs.com

Certificate of Analysis

Cambium Inc. (Kingston)

31 Hyperion Court, Suite 102
Oshawa, ON K7K7G3
Attn: Laura Fitzgerald

Client PO:
Project: 17181-001
Custody: 144586

Report Date: 10-May-2024
Order Date: 6-May-2024

Order #: 2419022

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2419022-01	BH201
2419022-02	QAQC-GW4

Approved By:

A handwritten signature in blue ink, appearing to read 'Dale Robertson', is shown within a light blue rectangular box.

Dale Robertson, BSc
Laboratory Director



Order #: 2419022

Certificate of Analysis

Report Date: 10-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
REG 153: PAHs by GC-MS	EPA 625 - GC-MS, extraction	8-May-24	9-May-24



Order #: 2419022

Certificate of Analysis

Report Date: 10-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Summary of Criteria Exceedances

(If this page is blank then there are no exceedances)

Only those criteria that a sample exceeds will be highlighted in red

Regulatory Comparison:

Paracel Laboratories has provided regulatory guidelines on this report for informational purposes only and makes no representations or warranties that the data is accurate or reflects the current regulatory values. The user is advised to consult with the appropriate official regulations to evaluate compliance. Sample results that are highlighted have exceeded the selected regulatory limit. Calculated uncertainty estimations have not been applied for determining regulatory exceedances.

Sample	Analyte	MDL / Units	Result	Reg 153/04 -T1 Groundwater	Reg 153/04 -T8 Groundwater
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Order #: 2419022

Certificate of Analysis

Report Date: 10-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Client ID:	BH201	QAQC-GW4	-	-	Criteria:	
Sample Date:	06-May-24 07:25	06-May-24 09:00	-	-	Reg 153/04 -T1	Reg 153/04 -T8
Sample ID:	2419022-01	2419022-02	-	-	Groundwater	Groundwater
Matrix:	Ground Water	Ground Water	-	-		
MDL/Units						

Semi-Volatiles							
Acenaphthene	0.05 ug/L	<0.05	<0.05	-	-	4.1 ug/L	4.1 ug/L
Acenaphthylene	0.05 ug/L	<0.05	<0.05	-	-	1 ug/L	1 ug/L
Anthracene	0.01 ug/L	<0.01	<0.01	-	-	0.1 ug/L	1 ug/L
Benzo [a] anthracene	0.01 ug/L	<0.01	<0.01	-	-	0.2 ug/L	1 ug/L
Benzo [a] pyrene	0.01 ug/L	<0.01	<0.01	-	-	0.01 ug/L	0.01 ug/L
Benzo [b] fluoranthene	0.05 ug/L	<0.05	<0.05	-	-	0.1 ug/L	0.1 ug/L
Benzo [g,h,i] perylene	0.05 ug/L	<0.05	<0.05	-	-	0.2 ug/L	0.2 ug/L
Benzo [k] fluoranthene	0.05 ug/L	<0.05	<0.05	-	-	0.1 ug/L	0.1 ug/L
Chrysene	0.05 ug/L	<0.05	<0.05	-	-	0.1 ug/L	0.1 ug/L
Dibenzo [a,h] anthracene	0.05 ug/L	<0.05	<0.05	-	-	0.2 ug/L	0.2 ug/L
Fluoranthene	0.01 ug/L	<0.01	<0.01	-	-	0.4 ug/L	0.41 ug/L
Fluorene	0.05 ug/L	<0.05	<0.05	-	-	120 ug/L	120 ug/L
Indeno [1,2,3-cd] pyrene	0.05 ug/L	<0.05	<0.05	-	-	0.2 ug/L	0.2 ug/L
1-Methylnaphthalene	0.05 ug/L	<0.05	<0.05	-	-	2 ug/L	3.2 ug/L
2-Methylnaphthalene	0.05 ug/L	<0.05	<0.05	-	-	2 ug/L	3.2 ug/L
Methylnaphthalene (1&2)	0.10 ug/L	<0.10	<0.10	-	-	2 ug/L	3.2 ug/L
Naphthalene	0.05 ug/L	<0.05	<0.05	-	-	7 ug/L	11 ug/L
Phenanthrene	0.05 ug/L	<0.05	<0.05	-	-	0.1 ug/L	1 ug/L
Pyrene	0.01 ug/L	<0.01	<0.01	-	-	0.2 ug/L	4.1 ug/L
2-Fluorobiphenyl	Surrogate	76.5%	70.3%	-	-	-	-
Terphenyl-d14	Surrogate	120%	117%	-	-	-	-



Order #: 2419022

Certificate of Analysis

Report Date: 10-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Semi-Volatiles								
Acenaphthene	ND	0.05	ug/L					
Acenaphthylene	ND	0.05	ug/L					
Anthracene	ND	0.01	ug/L					
Benzo [a] anthracene	ND	0.01	ug/L					
Benzo [a] pyrene	ND	0.01	ug/L					
Benzo [b] fluoranthene	ND	0.05	ug/L					
Benzo [g,h,i] perylene	ND	0.05	ug/L					
Benzo [k] fluoranthene	ND	0.05	ug/L					
Chrysene	ND	0.05	ug/L					
Dibenzo [a,h] anthracene	ND	0.05	ug/L					
Fluoranthene	ND	0.01	ug/L					
Fluorene	ND	0.05	ug/L					
Indeno [1,2,3-cd] pyrene	ND	0.05	ug/L					
1-Methylnaphthalene	ND	0.05	ug/L					
2-Methylnaphthalene	ND	0.05	ug/L					
Methylnaphthalene (1&2)	ND	0.10	ug/L					
Naphthalene	ND	0.05	ug/L					
Phenanthrene	ND	0.05	ug/L					
Pyrene	ND	0.01	ug/L					
Surrogate: 2-Fluorobiphenyl	13.9		%	69.6	50-140			
Surrogate: Terphenyl-d14	20.0		%	100	50-140			



Order #: 2419022

Certificate of Analysis

Report Date: 10-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Semi-Volatiles									
Acenaphthene	4.39	0.05	ug/L	ND	87.9	50-140			
Acenaphthylene	4.66	0.05	ug/L	ND	93.1	50-140			
Anthracene	4.80	0.01	ug/L	ND	95.9	50-140			
Benzo [a] anthracene	3.88	0.01	ug/L	ND	77.6	50-140			
Benzo [a] pyrene	3.77	0.01	ug/L	ND	75.4	50-140			
Benzo [b] fluoranthene	3.60	0.05	ug/L	ND	72.1	50-140			
Benzo [g,h,i] perylene	3.78	0.05	ug/L	ND	75.6	50-140			
Benzo [k] fluoranthene	4.03	0.05	ug/L	ND	80.6	50-140			
Chrysene	4.08	0.05	ug/L	ND	81.5	50-140			
Dibenzo [a,h] anthracene	4.08	0.05	ug/L	ND	81.5	50-140			
Fluoranthene	4.91	0.01	ug/L	ND	98.2	50-140			
Fluorene	3.91	0.05	ug/L	ND	78.2	50-140			
Indeno [1,2,3-cd] pyrene	4.07	0.05	ug/L	ND	81.4	50-140			
1-Methylnaphthalene	3.54	0.05	ug/L	ND	70.8	50-140			
2-Methylnaphthalene	3.68	0.05	ug/L	ND	73.7	50-140			
Naphthalene	4.15	0.05	ug/L	ND	83.0	50-140			
Phenanthrene	4.14	0.05	ug/L	ND	82.7	50-140			
Pyrene	4.95	0.01	ug/L	ND	98.9	50-140			
Surrogate: 2-Fluorobiphenyl	13.7		%		68.6	50-140			
Surrogate: Terphenyl-d14	20.2		%		101	50-140			



Order #: 2419022

Certificate of Analysis

Report Date: 10-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Qualifier Notes:

Sample Data Revisions:

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Any use of these results implies your agreement that our total liability in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.



Parcel ID: 2419022

Parcel Order Number
(Lab Use Only)

241 9022

Chain of Custody
(Lab Use Only)

No 144586

Client Name: <u>Cambium Inc.</u>	Project Ref: <u>17181-001</u>	Page <u>1</u> of <u>1</u>
Contact Name: <u>Laura Fitzgerald</u>	Quote #:	Turnaround Time ☐ 1 day ☐ 3 day ☐ 2 day ☒ Regular
Address: <u>31 Hyperion crt, Kingston.</u>	PO #:	
Telephone: <u>866-217-7900</u>	E-mail: <u>Laura.Fitzgerald@cambium-inc.com</u> <u>patrick.garrett@cambium-inc.com</u> <u>kristi.dougherty</u>	
Date Required:		

☒ REG 153/04 ☐ REG 406/19		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (paint) A (Air) O (Other)		Required Analysis												
☒ Table 1 ☒ Res/Park ☐ Med/Fine ☐ Table 2 ☒ Ind/Comm ☒ Coarse ☐ Table 3 ☐ Agri/Other ☒ Table 8	☐ REG 558 ☐ PWQO ☐ CCME ☐ MISA ☐ SU - Sani ☐ SU-Storm Mun: _____ ☐ Other	Matrix	Air Volume	# of Containers	Sample Taken Date Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	Cu/I	B (HWS)						
For RSC: ☒ Yes ☐ No																		
Sample ID/Location Name																		
1 BH201		GW		1	05/06/24 7:25			X										
2 QAQC-GW4		"		"	"			X										
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Comments:				Method of Delivery:			
Relinquished By (Sign): <u>[Signature]</u>	Received at Depot: <u>[Signature]</u>	Received at Lab: <u>SS</u>	Verified By: <u>drop-box</u> <u>Racyn Cooper</u>				
Relinquished By (Print): <u>Kristi Dougherty</u>	Date/Time: <u>May 06 10:27</u>	Date/Time: <u>7 May 24 1055</u>	Date/Time: <u>May 06 15:07</u>				
Date/Time: <u>05/06/24 @ 10:30</u>	Temperature: <u>17.9</u> °C	Temperature: <u>7.4</u> °C	pH Verified: ☐ By: _____				

Chain of Custody (Env).xlsx



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Certificate of Analysis

Cambium Inc. (Kingston)

31 Hyperion Court, Suite 102
Oshawa, ON K7K7G3
Attn: Laura Fitzgerald

Client PO:
Project: 17181-001
Custody: 144659, 660, 661

Report Date: 10-May-2024
Order Date: 6-May-2024

Order #: 2419033

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2419033-01	BH201_0.1-0.8
2419033-04	BH205_0.0-0.06
2419033-06	BH206_0.0-0.06
2419033-08	BH207_0.0-0.06
2419033-10	BH208_0.0-0.1
2419033-12	BH209_0.12-1.52
2419033-14	BH210_0.12-1.52
2419033-15	BH202_0.1-0.8
2419033-17	BH203_0.1-0.8
2419033-19	BH204_0.1-0.8
2419033-21	QAQC6
2419033-22	QAQC7
2419033-23	QAQC8

Approved By:

A blue ink signature of Dale Robertson, Laboratory Director.

Dale Robertson, BSc
Laboratory Director



Order #: 2419033

Certificate of Analysis

Report Date: 10-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	8-May-24	8-May-24
Mercury by CVAA	EPA 7471B - CVAA, digestion	8-May-24	8-May-24
PHC F1	CWS Tier 1 - P&T GC-FID	8-May-24	8-May-24
PHC F4G (gravimetric)	CWS Tier 1 - Extraction Gravimetric	9-May-24	9-May-24
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	8-May-24	9-May-24
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	8-May-24	8-May-24
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	7-May-24	10-May-24
Solids, %	CWS Tier 1 - Gravimetric	8-May-24	9-May-24

Certificate of Analysis

Report Date: 10-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Summary of Criteria Exceedances

(If this page is blank then there are no exceedances)

Only those criteria that a sample exceeds will be highlighted in red

Regulatory Comparison:

Paracel Laboratories has provided regulatory guidelines on this report for informational purposes only and makes no representations or warranties that the data is accurate or reflects the current regulatory values. The user is advised to consult with the appropriate official regulations to evaluate compliance. Sample results that are highlighted have exceeded the selected regulatory limit. Calculated uncertainty estimations have not been applied for determining regulatory exceedances.

Sample	Analyte	MDL / Units	Result	Reg 153/04 -T1 Res	Reg 153/04 -T8 Res/Park/Ind/Com, Potable
BH201_0.1-0.8	Acenaphthylene	0.02 ug/g	0.25	0.093 ug/g	0.093 ug/g
BH208_0.0-0.1	Xylenes, total	0.05 ug/g	0.30	0.05 ug/g	0.05 ug/g
BH208_0.0-0.1	F2 PHCs (C10-C16)	4 ug/g	<80 [1]	10 ug/g	10 ug/g
BH208_0.0-0.1	F4 PHCs (C34-C50)	6 ug/g	3630 [2]	120 ug/g	120 ug/g
BH208_0.0-0.1	F4G PHCs (gravimetric)	50 ug/g	4960	120 ug/g	120 ug/g
BH209_0.12-1.52	Barium	1.0 ug/g	1540	220 ug/g	220 ug/g
BH209_0.12-1.52	Molybdenum	1.0 ug/g	2.3	2 ug/g	2 ug/g
BH203_0.1-0.8	Acenaphthylene	0.02 ug/g	0.41	0.093 ug/g	0.093 ug/g
BH203_0.1-0.8	Anthracene	0.02 ug/g	0.22	0.16 ug/g	0.22 ug/g
BH203_0.1-0.8	Benzo [a] anthracene	0.02 ug/g	0.42	0.36 ug/g	0.36 ug/g
BH203_0.1-0.8	Benzo [a] pyrene	0.02 ug/g	0.44	0.3 ug/g	0.3 ug/g
BH203_0.1-0.8	Fluoranthene	0.02 ug/g	0.69	0.56 ug/g	0.69 ug/g
BH203_0.1-0.8	Indeno [1,2,3-cd] pyrene	0.02 ug/g	0.27	0.23 ug/g	0.23 ug/g
BH204_0.1-0.8	Acenaphthylene	0.02 ug/g	1.34	0.093 ug/g	0.093 ug/g
BH204_0.1-0.8	Anthracene	0.02 ug/g	0.67	0.16 ug/g	0.22 ug/g
BH204_0.1-0.8	Benzo [a] anthracene	0.02 ug/g	1.34	0.36 ug/g	0.36 ug/g
BH204_0.1-0.8	Benzo [a] pyrene	0.02 ug/g	1.41	0.3 ug/g	0.3 ug/g
BH204_0.1-0.8	Benzo [b] fluoranthene	0.02 ug/g	1.40	0.47 ug/g	0.47 ug/g
BH204_0.1-0.8	Benzo [g,h,i] perylene	0.02 ug/g	0.98	0.68 ug/g	0.68 ug/g
BH204_0.1-0.8	Benzo [k] fluoranthene	0.02 ug/g	1.11	0.48 ug/g	0.48 ug/g
BH204_0.1-0.8	Dibenzo [a,h] anthracene	0.02 ug/g	0.25	0.1 ug/g	0.1 ug/g



Order #: 2419033

Certificate of Analysis

Report Date: 10-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Summary of Criteria Exceedances

(If this page is blank then there are no exceedances)

Only those criteria that a sample exceeds will be highlighted in red

Regulatory Comparison:

Paracel Laboratories has provided regulatory guidelines on this report for informational purposes only and makes no representations or warranties that the data is accurate or reflects the current regulatory values. The user is advised to consult with the appropriate official regulations to evaluate compliance. Sample results that are highlighted have exceeded the selected regulatory limit. Calculated uncertainty estimations have not been applied for determining regulatory exceedances.

Sample	Analyte	MDL / Units	Result	Reg 153/04 -T1 Res	Reg 153/04 -T8 Res/Park/Ind/Com, Potable
BH204_0.1-0.8	Fluoranthene	0.02 ug/g	1.88	0.56 ug/g	0.69 ug/g
BH204_0.1-0.8	Indeno [1,2,3-cd] pyrene	0.02 ug/g	0.91	0.23 ug/g	0.23 ug/g
BH204_0.1-0.8	Pyrene	0.02 ug/g	2.71	1 ug/g	1 ug/g
QAQC8	Barium	1.0 ug/g	1560	220 ug/g	220 ug/g



Order #: 2419033

Certificate of Analysis

Report Date: 10-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Client ID:	BH201_0.1-0.8	BH205_0.0-0.06	BH206_0.0-0.06	BH207_0.0-0.06	Criteria:	
Sample Date:	03-May-24 09:05	03-May-24 10:10	03-May-24 10:15	03-May-24 10:20	Reg 153/04 -T1 Res	Reg 153/04 -T8
Sample ID:	2419033-01	2419033-04	2419033-06	2419033-08	Res/Park/Ind/Com,	
Matrix:	Soil	Soil	Soil	Soil	Potable	
MDL/Units						

Physical Characteristics

% Solids	0.1 % by Wt.	90.2	74.3	89.0	90.5	-	-
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Volatiles

Benzene	0.02 ug/g	-	<0.02	<0.02	<0.02	0.02 ug/g	0.02 ug/g
Ethylbenzene	0.05 ug/g	-	<0.05	<0.05	<0.05	0.05 ug/g	0.05 ug/g
Toluene	0.05 ug/g	-	<0.05	<0.05	<0.05	0.2 ug/g	0.2 ug/g
m,p-Xylenes	0.05 ug/g	-	<0.05	<0.05	<0.05	-	-
o-Xylene	0.05 ug/g	-	<0.05	<0.05	<0.05	-	-
Xylenes, total	0.05 ug/g	-	<0.05	<0.05	<0.05	0.05 ug/g	0.05 ug/g
Toluene-d8	Surrogate	-	116%	102%	109%	-	-

Hydrocarbons

F1 PHCs (C6-C10)	7 ug/g	-	<7	<7	<7	25 ug/g	25 ug/g
F2 PHCs (C10-C16)	4 ug/g	-	<4	<4	<4	10 ug/g	10 ug/g
F3 PHCs (C16-C34)	8 ug/g	-	<8	<8	10	240 ug/g	240 ug/g
F4 PHCs (C34-C50)	6 ug/g	-	<6	<6	34	120 ug/g	120 ug/g

Semi-Volatiles

Acenaphthene	0.02 ug/g	<0.02	-	-	-	0.072 ug/g	0.072 ug/g
Acenaphthylene	0.02 ug/g	0.25	-	-	-	0.093 ug/g	0.093 ug/g
Anthracene	0.02 ug/g	0.11	-	-	-	0.16 ug/g	0.22 ug/g
Benzo [a] anthracene	0.02 ug/g	0.12	-	-	-	0.36 ug/g	0.36 ug/g
Benzo [a] pyrene	0.02 ug/g	0.20	-	-	-	0.3 ug/g	0.3 ug/g
Benzo [b] fluoranthene	0.02 ug/g	0.27	-	-	-	0.47 ug/g	0.47 ug/g
Benzo [g,h,i] perylene	0.02 ug/g	0.20	-	-	-	0.68 ug/g	0.68 ug/g
Benzo [k] fluoranthene	0.02 ug/g	0.13	-	-	-	0.48 ug/g	0.48 ug/g
Chrysene	0.02 ug/g	0.10	-	-	-	2.8 ug/g	2.8 ug/g
Dibenzo [a,h] anthracene	0.02 ug/g	0.04	-	-	-	0.1 ug/g	0.1 ug/g



Order #: 2419033

Certificate of Analysis

Report Date: 10-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Client ID:	BH201_0.1-0.8	BH205_0.0-0.06	BH206_0.0-0.06	BH207_0.0-0.06	Criteria:	
Sample Date:	03-May-24 09:05	03-May-24 10:10	03-May-24 10:15	03-May-24 10:20	Reg 153/04 -T1 Res	Reg 153/04 -T8
Sample ID:	2419033-01	2419033-04	2419033-06	2419033-08	Res/Park/Ind/Com,	
Matrix:	Soil	Soil	Soil	Soil	Potable	
MDL/Units						

Semi-Volatiles

Fluoranthene	0.02 ug/g	0.15	-	-	-	0.56 ug/g	0.69 ug/g
Fluorene	0.02 ug/g	<0.02	-	-	-	0.12 ug/g	0.19 ug/g
Indeno [1,2,3-cd] pyrene	0.02 ug/g	0.16	-	-	-	0.23 ug/g	0.23 ug/g
1-Methylnaphthalene	0.02 ug/g	<0.02	-	-	-	0.59 ug/g	0.59 ug/g
2-Methylnaphthalene	0.02 ug/g	<0.02	-	-	-	0.59 ug/g	0.59 ug/g
Methylnaphthalene (1&2)	0.04 ug/g	<0.04	-	-	-	0.59 ug/g	0.59 ug/g
Naphthalene	0.01 ug/g	0.01	-	-	-	0.09 ug/g	0.09 ug/g
Phenanthrene	0.02 ug/g	0.04	-	-	-	0.69 ug/g	0.69 ug/g
Pyrene	0.02 ug/g	0.22	-	-	-	1 ug/g	1 ug/g
2-Fluorobiphenyl	Surrogate	66.0%	-	-	-	-	-
Terphenyl-d14	Surrogate	73.8%	-	-	-	-	-



Order #: 2419033

Certificate of Analysis

Report Date: 10-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Client ID:	BH208_0.0-0.1	BH209_0.12-1.52	BH210_0.12-1.52	BH202_0.1-0.8	Criteria:	
Sample Date:	03-May-24 11:20	03-May-24 11:40	03-May-24 11:50	03-May-24 14:30	Reg 153/04 -T1 Res	Reg 153/04 -T8
Sample ID:	2419033-10	2419033-12	2419033-14	2419033-15	Res/Park/Ind/Com,	
Matrix:	Soil	Soil	Soil	Soil	Potable	
MDL/Units						

Physical Characteristics

% Solids	0.1 % by Wt.	97.3	92.3	95.3	82.8	-	-
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Metals

Antimony	1.0 ug/g	-	<1.0	<1.0	-	1.3 ug/g	1.3 ug/g
Arsenic	1.0 ug/g	-	2.4	2.4	-	18 ug/g	18 ug/g
Barium	1.0 ug/g	-	1540	74.3	-	220 ug/g	220 ug/g
Beryllium	0.5 ug/g	-	<0.5	<0.5	-	2.5 ug/g	2.5 ug/g
Boron	5.0 ug/g	-	<5.0	6.3	-	36 ug/g	36 ug/g
Cadmium	0.5 ug/g	-	<0.5	<0.5	-	1.2 ug/g	1.2 ug/g
Chromium	5.0 ug/g	-	10.3	10.2	-	70 ug/g	70 ug/g
Cobalt	1.0 ug/g	-	2.0	3.2	-	21 ug/g	22 ug/g
Copper	5.0 ug/g	-	9.1	12.4	-	92 ug/g	92 ug/g
Lead	1.0 ug/g	-	26.6	18.3	-	120 ug/g	120 ug/g
Mercury	0.1 ug/g	-	<0.1	<0.1	-	0.27 ug/g	0.27 ug/g
Molybdenum	1.0 ug/g	-	2.3	<1.0	-	2 ug/g	2 ug/g
Nickel	5.0 ug/g	-	<5.0	6.1	-	82 ug/g	82 ug/g
Selenium	1.0 ug/g	-	<1.0	<1.0	-	1.5 ug/g	1.5 ug/g
Silver	0.3 ug/g	-	<0.3	<0.3	-	0.5 ug/g	0.5 ug/g
Thallium	1.0 ug/g	-	<1.0	<1.0	-	1 ug/g	1 ug/g
Uranium	1.0 ug/g	-	<1.0	<1.0	-	2.5 ug/g	2.5 ug/g
Vanadium	10.0 ug/g	-	<10.0	17.5	-	86 ug/g	86 ug/g
Zinc	20.0 ug/g	-	44.7	52.5	-	290 ug/g	290 ug/g

Volatiles

Benzene	0.02 ug/g	<0.02	-	-	-	0.02 ug/g	0.02 ug/g
Ethylbenzene	0.05 ug/g	<0.05	-	-	-	0.05 ug/g	0.05 ug/g
Toluene	0.05 ug/g	<0.05	-	-	-	0.2 ug/g	0.2 ug/g

Certificate of Analysis

Report Date: 10-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Client ID:	BH208_0.0-0.1	BH209_0.12-1.52	BH210_0.12-1.52	BH202_0.1-0.8	Criteria:	
Sample Date:	03-May-24 11:20	03-May-24 11:40	03-May-24 11:50	03-May-24 14:30	Reg 153/04 -T1 Res	Reg 153/04 -T8
Sample ID:	2419033-10	2419033-12	2419033-14	2419033-15	Res/Park/Ind/Com,	
Matrix:	Soil	Soil	Soil	Soil	Potable	
MDL/Units						

Volatiles

m,p-Xylenes	0.05 ug/g	0.16	-	-	-	-
o-Xylene	0.05 ug/g	0.14	-	-	-	-
Xylenes, total	0.05 ug/g	0.30	-	-	-	0.05 ug/g 0.05 ug/g
Toluene-d8	Surrogate	103%	-	-	-	-

Hydrocarbons

F1 PHCs (C6-C10)	7 ug/g	12	-	-	-	25 ug/g 25 ug/g
F2 PHCs (C10-C16)	4 ug/g	<80 [1]	-	-	-	10 ug/g 10 ug/g
F3 PHCs (C16-C34)	8 ug/g	191	-	-	-	240 ug/g 240 ug/g
F4 PHCs (C34-C50)	6 ug/g	3630 [2]	-	-	-	120 ug/g 120 ug/g
F4G PHCs (gravimetric)	50 ug/g	4960	-	-	-	120 ug/g 120 ug/g

Semi-Volatiles

Acenaphthene	0.02 ug/g	-	-	-	<0.02	0.072 ug/g 0.072 ug/g
Acenaphthylene	0.02 ug/g	-	-	-	0.03	0.093 ug/g 0.093 ug/g
Anthracene	0.02 ug/g	-	-	-	<0.02	0.16 ug/g 0.22 ug/g
Benzo [a] anthracene	0.02 ug/g	-	-	-	0.02	0.36 ug/g 0.36 ug/g
Benzo [a] pyrene	0.02 ug/g	-	-	-	0.03	0.3 ug/g 0.3 ug/g
Benzo [b] fluoranthene	0.02 ug/g	-	-	-	0.05	0.47 ug/g 0.47 ug/g
Benzo [g,h,i] perylene	0.02 ug/g	-	-	-	0.03	0.68 ug/g 0.68 ug/g
Benzo [k] fluoranthene	0.02 ug/g	-	-	-	0.03	0.48 ug/g 0.48 ug/g
Chrysene	0.02 ug/g	-	-	-	0.02	2.8 ug/g 2.8 ug/g
Dibenzo [a,h] anthracene	0.02 ug/g	-	-	-	<0.02	0.1 ug/g 0.1 ug/g
Fluoranthene	0.02 ug/g	-	-	-	0.03	0.56 ug/g 0.69 ug/g
Fluorene	0.02 ug/g	-	-	-	<0.02	0.12 ug/g 0.19 ug/g
Indeno [1,2,3-cd] pyrene	0.02 ug/g	-	-	-	0.02	0.23 ug/g 0.23 ug/g
1-Methylnaphthalene	0.02 ug/g	-	-	-	<0.02	0.59 ug/g 0.59 ug/g



Order #: 2419033

Certificate of Analysis

Report Date: 10-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Client ID:	BH208_0.0-0.1	BH209_0.12-1.52	BH210_0.12-1.52	BH202_0.1-0.8	Criteria:	
Sample Date:	03-May-24 11:20	03-May-24 11:40	03-May-24 11:50	03-May-24 14:30	Reg 153/04 -T1 Res	Reg 153/04 -T8
Sample ID:	2419033-10	2419033-12	2419033-14	2419033-15	Res/Park/Ind/Com,	
Matrix:	Soil	Soil	Soil	Soil	Potable	
MDL/Units						

Semi-Volatiles

2-Methylnaphthalene	0.02 ug/g	-	-	-	<0.02	0.59 ug/g	0.59 ug/g
Methylnaphthalene (1&2)	0.04 ug/g	-	-	-	<0.04	0.59 ug/g	0.59 ug/g
Naphthalene	0.01 ug/g	-	-	-	<0.01	0.09 ug/g	0.09 ug/g
Phenanthrene	0.02 ug/g	-	-	-	<0.02	0.69 ug/g	0.69 ug/g
Pyrene	0.02 ug/g	-	-	-	0.04	1 ug/g	1 ug/g
2-Fluorobiphenyl	Surrogate	-	-	-	69.8%	-	-
Terphenyl-d14	Surrogate	-	-	-	81.4%	-	-

Order #: 2419033

Certificate of Analysis

Report Date: 10-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Client ID:	BH203_0.1-0.8	BH204_0.1-0.8	QAQC6	QAQC7	Criteria:	
Sample Date:	03-May-24 14:40	03-May-24 14:50	02-May-24 09:00	02-May-24 09:00	Reg 153/04 -T1 Res	Reg 153/04 -T8
Sample ID:	2419033-17	2419033-19	2419033-21	2419033-22	Res/Park/Ind/Com,	
Matrix:	Soil	Soil	Soil	Soil	Potable	
MDL/Units						

Physical Characteristics

% Solids	0.1 % by Wt.	89.6	89.6	82.7	74.0	-	-
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Volatiles

Benzene	0.02 ug/g	-	-	-	<0.02	0.02 ug/g	0.02 ug/g
Ethylbenzene	0.05 ug/g	-	-	-	<0.05	0.05 ug/g	0.05 ug/g
Toluene	0.05 ug/g	-	-	-	<0.05	0.2 ug/g	0.2 ug/g
m,p-Xylenes	0.05 ug/g	-	-	-	<0.05	-	-
o-Xylene	0.05 ug/g	-	-	-	<0.05	-	-
Xylenes, total	0.05 ug/g	-	-	-	<0.05	0.05 ug/g	0.05 ug/g
Toluene-d8	Surrogate	-	-	-	116%	-	-

Hydrocarbons

F1 PHCs (C6-C10)	7 ug/g	-	-	-	<7	25 ug/g	25 ug/g
F2 PHCs (C10-C16)	4 ug/g	-	-	-	<4	10 ug/g	10 ug/g
F3 PHCs (C16-C34)	8 ug/g	-	-	-	<8	240 ug/g	240 ug/g
F4 PHCs (C34-C50)	6 ug/g	-	-	-	<6	120 ug/g	120 ug/g

Semi-Volatiles

Acenaphthene	0.02 ug/g	<0.02	0.04	<0.02	-	0.072 ug/g	0.072 ug/g
Acenaphthylene	0.02 ug/g	0.41	1.34	<0.02	-	0.093 ug/g	0.093 ug/g
Anthracene	0.02 ug/g	0.22	0.67	<0.02	-	0.16 ug/g	0.22 ug/g
Benzo [a] anthracene	0.02 ug/g	0.42	1.34	<0.02	-	0.36 ug/g	0.36 ug/g
Benzo [a] pyrene	0.02 ug/g	0.44	1.41	<0.02	-	0.3 ug/g	0.3 ug/g
Benzo [b] fluoranthene	0.02 ug/g	0.42	1.40	<0.02	-	0.47 ug/g	0.47 ug/g
Benzo [g,h,i] perylene	0.02 ug/g	0.30	0.98	<0.02	-	0.68 ug/g	0.68 ug/g
Benzo [k] fluoranthene	0.02 ug/g	0.26	1.11	<0.02	-	0.48 ug/g	0.48 ug/g
Chrysene	0.02 ug/g	0.33	1.01	<0.02	-	2.8 ug/g	2.8 ug/g
Dibenzo [a,h] anthracene	0.02 ug/g	0.07	0.25	<0.02	-	0.1 ug/g	0.1 ug/g



Order #: 2419033

Certificate of Analysis

Report Date: 10-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Client ID:	BH203_0.1-0.8	BH204_0.1-0.8	QAQC6	QAQC7	Criteria:	
Sample Date:	03-May-24 14:40	03-May-24 14:50	02-May-24 09:00	02-May-24 09:00	Reg 153/04 -T1 Res	Reg 153/04 -T8
Sample ID:	2419033-17	2419033-19	2419033-21	2419033-22	Res/Park/Ind/Com,	
Matrix:	Soil	Soil	Soil	Soil	Potable	
MDL/Units						

Semi-Volatiles

Fluoranthene	0.02 ug/g	0.69	1.88	<0.02	-	0.56 ug/g	0.69 ug/g
Fluorene	0.02 ug/g	<0.02	<0.02	<0.02	-	0.12 ug/g	0.19 ug/g
Indeno [1,2,3-cd] pyrene	0.02 ug/g	0.27	0.91	<0.02	-	0.23 ug/g	0.23 ug/g
1-Methylnaphthalene	0.02 ug/g	<0.02	<0.02	<0.02	-	0.59 ug/g	0.59 ug/g
2-Methylnaphthalene	0.02 ug/g	<0.02	<0.02	<0.02	-	0.59 ug/g	0.59 ug/g
Methylnaphthalene (1&2)	0.04 ug/g	<0.04	<0.04	<0.04	-	0.59 ug/g	0.59 ug/g
Naphthalene	0.01 ug/g	0.02	0.05	<0.01	-	0.09 ug/g	0.09 ug/g
Phenanthrene	0.02 ug/g	0.12	0.39	<0.02	-	0.69 ug/g	0.69 ug/g
Pyrene	0.02 ug/g	0.84	2.71	<0.02	-	1 ug/g	1 ug/g
2-Fluorobiphenyl	Surrogate	62.3%	69.6%	74.2%	-	-	-
Terphenyl-d14	Surrogate	97.8%	81.8%	101%	-	-	-



Order #: 2419033

Certificate of Analysis

Report Date: 10-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Client ID:	QAQC8					Criteria:	
Sample Date:	02-May-24 09:00					Reg 153/04 -T1 Res	Reg 153/04 -T8
Sample ID:	2419033-23					Res/Park/Ind/Com,	
Matrix:	Soil					Potable	
MDL/Units							

Physical Characteristics

% Solids	0.1 % by Wt.	89.2	-	-	-	-	-
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Metals

Antimony	1.0 ug/g	<1.0	-	-	-	1.3 ug/g	1.3 ug/g
Arsenic	1.0 ug/g	3.4	-	-	-	18 ug/g	18 ug/g
Barium	1.0 ug/g	1560	-	-	-	220 ug/g	220 ug/g
Beryllium	0.5 ug/g	<0.5	-	-	-	2.5 ug/g	2.5 ug/g
Boron	5.0 ug/g	5.1	-	-	-	36 ug/g	36 ug/g
Cadmium	0.5 ug/g	<0.5	-	-	-	1.2 ug/g	1.2 ug/g
Chromium	5.0 ug/g	10.3	-	-	-	70 ug/g	70 ug/g
Cobalt	1.0 ug/g	2.7	-	-	-	21 ug/g	22 ug/g
Copper	5.0 ug/g	9.5	-	-	-	92 ug/g	92 ug/g
Lead	1.0 ug/g	42.4	-	-	-	120 ug/g	120 ug/g
Mercury	0.1 ug/g	<0.1	-	-	-	0.27 ug/g	0.27 ug/g
Molybdenum	1.0 ug/g	1.3	-	-	-	2 ug/g	2 ug/g
Nickel	5.0 ug/g	5.3	-	-	-	82 ug/g	82 ug/g
Selenium	1.0 ug/g	<1.0	-	-	-	1.5 ug/g	1.5 ug/g
Silver	0.3 ug/g	<0.3	-	-	-	0.5 ug/g	0.5 ug/g
Thallium	1.0 ug/g	<1.0	-	-	-	1 ug/g	1 ug/g
Uranium	1.0 ug/g	<1.0	-	-	-	2.5 ug/g	2.5 ug/g
Vanadium	10.0 ug/g	13.4	-	-	-	86 ug/g	86 ug/g
Zinc	20.0 ug/g	57.2	-	-	-	290 ug/g	290 ug/g



Order #: 2419033

Certificate of Analysis

Report Date: 10-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons								
F1 PHCs (C6-C10)	ND	7	ug/g					
F2 PHCs (C10-C16)	ND	4	ug/g					
F3 PHCs (C16-C34)	ND	8	ug/g					
F4 PHCs (C34-C50)	ND	6	ug/g					
F4G PHCs (gravimetric)	ND	50	ug/g					
Metals								
Antimony	ND	1.0	ug/g					
Arsenic	ND	1.0	ug/g					
Barium	ND	1.0	ug/g					
Beryllium	ND	0.5	ug/g					
Boron	ND	5.0	ug/g					
Cadmium	ND	0.5	ug/g					
Chromium	ND	5.0	ug/g					
Cobalt	ND	1.0	ug/g					
Copper	ND	5.0	ug/g					
Lead	ND	1.0	ug/g					
Mercury	ND	0.1	ug/g					
Molybdenum	ND	1.0	ug/g					
Nickel	ND	5.0	ug/g					
Selenium	ND	1.0	ug/g					
Silver	ND	0.3	ug/g					
Thallium	ND	1.0	ug/g					
Uranium	ND	1.0	ug/g					
Vanadium	ND	10.0	ug/g					
Zinc	ND	20.0	ug/g					
Semi-Volatiles								
Acenaphthene	ND	0.02	ug/g					
Acenaphthylene	ND	0.02	ug/g					
Anthracene	ND	0.02	ug/g					
Benzo [a] anthracene	ND	0.02	ug/g					
Benzo [a] pyrene	ND	0.02	ug/g					
Benzo [b] fluoranthene	ND	0.02	ug/g					



Order #: 2419033

Certificate of Analysis

Report Date: 10-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Benzo [g,h,i] perylene	ND	0.02	ug/g					
Benzo [k] fluoranthene	ND	0.02	ug/g					
Chrysene	ND	0.02	ug/g					
Dibenzo [a,h] anthracene	ND	0.02	ug/g					
Fluoranthene	ND	0.02	ug/g					
Fluorene	ND	0.02	ug/g					
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g					
1-Methylnaphthalene	ND	0.02	ug/g					
2-Methylnaphthalene	ND	0.02	ug/g					
Methylnaphthalene (1&2)	ND	0.04	ug/g					
Naphthalene	ND	0.01	ug/g					
Phenanthrene	ND	0.02	ug/g					
Pyrene	ND	0.02	ug/g					
Surrogate: 2-Fluorobiphenyl	0.877		%	65.8	50-140			
Surrogate: Terphenyl-d14	1.31		%	98.6	50-140			
Volatiles								
Benzene	ND	0.02	ug/g					
Ethylbenzene	ND	0.05	ug/g					
Toluene	ND	0.05	ug/g					
m,p-Xylenes	ND	0.05	ug/g					
o-Xylene	ND	0.05	ug/g					
Xylenes, total	ND	0.05	ug/g					
Surrogate: Toluene-d8	8.57		%	107	50-140			



Order #: 2419033

Certificate of Analysis

Report Date: 10-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g	ND			NC	30	
F3 PHCs (C16-C34)	ND	8	ug/g	ND			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g	ND			NC	30	
F4G PHCs (gravimetric)	1190	50	ug/g	1460			20.0	30	
Metals									
Antimony	ND	1.0	ug/g	ND			NC	30	
Arsenic	7.1	1.0	ug/g	7.0			1.1	30	
Barium	1060	1.0	ug/g	924			13.3	30	
Beryllium	2.0	0.5	ug/g	2.0			1.4	30	
Boron	25.3	5.0	ug/g	21.6			15.9	30	
Cadmium	0.5	0.5	ug/g	ND			NC	30	
Chromium	47.4	5.0	ug/g	48.7			2.7	30	
Cobalt	12.9	1.0	ug/g	13.1			1.5	30	
Copper	19.6	5.0	ug/g	19.9			2.0	30	
Lead	23.8	1.0	ug/g	23.2			2.4	30	
Mercury	ND	0.1	ug/g	ND			NC	30	
Molybdenum	ND	1.0	ug/g	ND			NC	30	
Nickel	30.0	5.0	ug/g	31.1			3.4	30	
Selenium	1.0	1.0	ug/g	ND			NC	30	
Silver	ND	0.3	ug/g	ND			NC	30	
Thallium	ND	1.0	ug/g	ND			NC	30	
Uranium	ND	1.0	ug/g	ND			NC	30	
Vanadium	38.3	10.0	ug/g	38.9			1.6	30	
Zinc	40.6	20.0	ug/g	41.3			1.5	30	
Physical Characteristics									
% Solids	91.6	0.1	% by Wt.	90.8			0.8	25	
Semi-Volatiles									
Acenaphthene	ND	0.02	ug/g	ND			NC	40	
Acenaphthylene	0.225	0.02	ug/g	0.251			11.0	40	

Certificate of Analysis

Report Date: 10-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anthracene	0.104	0.02	ug/g	0.107			3.6	40	
Benzo [a] anthracene	0.106	0.02	ug/g	0.119			11.7	40	
Benzo [a] pyrene	0.187	0.02	ug/g	0.204			9.0	40	
Benzo [b] fluoranthene	0.200	0.02	ug/g	0.268			29.1	40	
Benzo [g,h,i] perylene	0.157	0.02	ug/g	0.197			22.7	40	
Benzo [k] fluoranthene	0.146	0.02	ug/g	0.130			11.5	40	
Chrysene	0.095	0.02	ug/g	0.097			1.6	40	
Dibenzo [a,h] anthracene	0.037	0.02	ug/g	0.042			12.1	40	
Fluoranthene	0.143	0.02	ug/g	0.152			5.8	40	
Fluorene	ND	0.02	ug/g	ND			NC	40	
Indeno [1,2,3-cd] pyrene	0.112	0.02	ug/g	0.157			32.9	40	
1-Methylnaphthalene	ND	0.02	ug/g	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g	ND			NC	40	
Naphthalene	0.012	0.01	ug/g	0.012			3.6	40	
Phenanthrene	0.040	0.02	ug/g	0.044			9.7	40	
Pyrene	0.224	0.02	ug/g	0.215			3.9	40	
Surrogate: 2-Fluorobiphenyl	0.872		%		59.0	50-140			
Surrogate: Terphenyl-d14	1.13		%		76.5	50-140			
Volatiles									
Benzene	ND	0.02	ug/g	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g	ND			NC	50	
Toluene	ND	0.05	ug/g	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g	ND			NC	50	
o-Xylene	ND	0.05	ug/g	ND			NC	50	
Surrogate: Toluene-d8	10.2		%		110	50-140			



Order #: 2419033

Certificate of Analysis

Report Date: 10-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	197	7	ug/g	ND	114	85-115			
F2 PHCs (C10-C16)	110	4	ug/g	ND	102	60-140			
F3 PHCs (C16-C34)	277	8	ug/g	ND	105	60-140			
F4 PHCs (C34-C50)	180	6	ug/g	ND	108	60-140			
F4G PHCs (gravimetric)	970	50	ug/g	ND	97.0	80-120			
Metals									
Arsenic	52.7	1.0	ug/g	2.8	99.8	70-130			
Barium	55.9	1.0	ug/g	ND	112	70-130			
Beryllium	51.3	0.5	ug/g	0.8	101	70-130			
Boron	56.6	5.0	ug/g	8.6	96.0	70-130			
Cadmium	55.6	0.5	ug/g	ND	111	70-130			
Chromium	76.1	5.0	ug/g	19.5	113	70-130			
Cobalt	56.7	1.0	ug/g	5.2	103	70-130			
Copper	57.5	5.0	ug/g	8.0	99.1	70-130			
Lead	64.4	1.0	ug/g	9.3	110	70-130			
Mercury	1.53	0.1	ug/g	ND	102	70-130			
Molybdenum	52.1	1.0	ug/g	ND	104	70-130			
Nickel	63.8	5.0	ug/g	12.4	103	70-130			
Selenium	49.5	1.0	ug/g	ND	98.4	70-130			
Silver	49.6	0.3	ug/g	ND	99.0	70-130			
Thallium	52.6	1.0	ug/g	ND	105	70-130			
Uranium	57.1	1.0	ug/g	ND	114	70-130			
Vanadium	69.1	10.0	ug/g	15.5	107	70-130			
Zinc	65.8	20.0	ug/g	ND	98.6	70-130			
Semi-Volatiles									
Acenaphthene	0.199	0.02	ug/g	ND	108	50-140			
Acenaphthylene	0.463	0.02	ug/g	0.251	115	50-140			
Anthracene	0.300	0.02	ug/g	0.107	104	50-140			
Benzo [a] anthracene	0.354	0.02	ug/g	0.119	127	50-140			
Benzo [a] pyrene	0.420	0.02	ug/g	0.204	117	50-140			



Order #: 2419033

Certificate of Analysis

Report Date: 10-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Benzo [b] fluoranthene	0.511	0.02	ug/g	0.268	132	50-140			
Benzo [g,h,i] perylene	0.383	0.02	ug/g	0.197	101	50-140			
Benzo [k] fluoranthene	0.369	0.02	ug/g	0.130	129	50-140			
Chrysene	0.340	0.02	ug/g	0.097	132	50-140			
Dibenzo [a,h] anthracene	0.211	0.02	ug/g	0.042	91.7	50-140			
Fluoranthene	0.397	0.02	ug/g	0.152	133	50-140			
Fluorene	0.220	0.02	ug/g	ND	119	50-140			
Indeno [1,2,3-cd] pyrene	0.353	0.02	ug/g	0.157	106	50-140			
1-Methylnaphthalene	0.194	0.02	ug/g	ND	105	50-140			
2-Methylnaphthalene	0.210	0.02	ug/g	ND	114	50-140			
Naphthalene	0.202	0.01	ug/g	0.012	103	50-140			
Phenanthrene	0.233	0.02	ug/g	0.044	102	50-140			
Pyrene	0.421	0.02	ug/g	0.215	112	50-140			
Surrogate: 2-Fluorobiphenyl	1.12		%		76.0	50-140			
Surrogate: Terphenyl-d14	1.18		%		80.1	50-140			
Volatiles									
Benzene	2.86	0.02	ug/g	ND	71.5	60-130			
Ethylbenzene	3.97	0.05	ug/g	ND	99.2	60-130			
Toluene	3.86	0.05	ug/g	ND	96.5	60-130			
m,p-Xylenes	8.21	0.05	ug/g	ND	103	60-130			
o-Xylene	4.13	0.05	ug/g	ND	103	60-130			
Surrogate: Toluene-d8	8.18		%		102	50-140			

Certificate of Analysis

Client: Cambium Inc. (Kingston)

Client PO:

Report Date: 10-May-2024

Order Date: 6-May-2024

Project Description: 17181-001

Qualifier Notes:

Sample Qualifiers :

- 1: Elevated reporting limits due to the nature of the sample matrix.
Applies to Samples: BH208_0.0-0.1
- 2: GC-FID signal did not return to baseline by C50
Applies to Samples: BH208_0.0-0.1

Sample Data Revisions:

None

Certificate of Analysis

Report Date: 10-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis unless otherwise noted.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.

Any use of these results implies your agreement that our total liability in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.



Parcel ID: 2419033



Parcel Order Number
(Lab Use Only)

2419033

Chain of Custody
(Lab Use Only)

No 144659

Client Name: Combium	Project Ref: 17181-001	Page 1 of 3
Contact Name: Laura Fitzgerald	Quote #:	Turnaround Time ☐ 1 day ☐ 3 day ☐ 2 day ☒ Regular
Address: 31 Hyperion Crt, Kingston	PO #:	
Telephone: 866-217-7900	E-mail: Laura.Fitzgerald@combium-inc.com Patrick.garratt@combium-inc.com Kelsi.douglass@combium-inc.com	
Date Required:		

☒ REG 153/04 ☐ REG 406/19 ☒ Table 1 ☒ Res/Park ☐ Med/Fine ☐ REG 558 ☐ PW00 ☐ Table 2 ☒ Ind/Comm ☒ Coarse ☐ CCME ☐ MISA ☐ Table 3 ☐ Agri/Other ☐ SU - Sani ☐ SU-Storm ☒ Table 8 For RSC: ☒ Yes ☐ No		Other Regulation ☐ REG 558 ☐ PW00 ☐ CCME ☐ MISA ☐ SU - Sani ☐ SU-Storm Mun: _____ ☐ Other		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint A (Air) O (Other))		Required Analysis PHCs F1-F4+BTEX VOCs PAHs Metals by ICP Hg CrVI B (HWS) H ₂ O									
Sample ID/Location Name		Matrix	Air Volume	# of Containers	Sample Taken Date Time		PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	H ₂ O	
1	BH201-01-08	S		1	05/03/24	9 05			✓						
2	BH201-152-304	S		1	"	9 10			✓				X		
3	BH201-30-36	S		1	"	9 15			✓				X		
4	BH205-00-006	S		2	"	10 10	X								
5	BH205-061-091	S		2	"	10 10							X		
6	BH206-00-006	S		2	"	10 15	X								
7	BH206-061-091	S		2	"	10 15							X		
8	BH207-00-006	S		2	"	10 20	X								
9	BH207-061-091	S		2	"	10 20							X		
10	BH208-00-01	S		2	"	11 20	X								

Comments:		Method of Delivery: Drop box	
Relinquished By (Sign):	Received at Depot: CHART	Received at Lab: SS	Verified By: Racyn Cooper
Relinquished By (Print): Kelsi Douglass	Date/Time: May 06, 2024 11:08	Date/Time: 7 May 24 1055	Date/Time: May 06 12:06
Date/Time: 05/06/24 @ 10:50	Temperature: 10.9 °C	Temperature: 8.8 7.4 °C	pH Verified ☐ by

Chain of Custody (Env) xlsx



Parcel ID: 2419033



Parcel Order Number
(Lab Use Only)

241 9033

Chain of Custody
(Lab Use Only)

No 144661

Client Name:	Project Ref:	Page 2 of 3
Contact Name:	Quote #	Turnaround Time ☐ 1 day ☐ 3 day ☐ 2 day ☐ Regular Date Required: _____
Address:	PO #	
Telephone:	E-mail	

See previous sheet.

☐ REG 153/04 ☐ REG 406/19 ☐ Table 1 ☐ Res/Park ☐ Med/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☐ Table _____ For RSC: ☐ Yes ☐ No	Other Regulation ☐ REG 558 ☐ PW00 ☐ CCME ☐ MISA ☐ SU - Sani ☐ SU-Storm Mun: _____ ☐ Other	Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (paint) A (Air) O (Other)	Required Analysis PHCs F1-F4+BTEX VOCs PAHs Metals by ICP Hg CrVI B (HWS) H ₂ O													
Sample ID/Location Name		Matrix	Air Volume	# of Containers	Sample Taken		Date	Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	H ₂ O
1 BH208-061-091		S		2	05/07/24		11:20									X
2 BH209-012-152				1			11:40					X	X			X
3 BH209-152-182				1			11:40									X
4 BH210-012-152				1			11:50					X	X			
5 BH262-01-08				1			14:30			X						
6 BH202-08-10				1			14:35									X
7 BH203-01-08				1			14:40			X						
8 BH203-08-10				1			14:45									X
9 BH204-01-08				1			14:50			X						
10 BH204-08-10				1			14:55									X

Comments:	Method of Delivery Drop Box	
Relinquished By (Sign): Keri's Daughter	Received at Depot: Keri's Daughter	Received at Lab: SS
Relinquished By (Print): Keri's Daughter	Date/Time: May 06, 2024 11:08	Date/Time: May 24 1055
Date/Time: 05/06/24 @ 10:50	Temperature: 10.9 °C	Temperature: 18.8, 7.4 °C
Chain of Custody (Err):		Verified By: Keri's Daughter May 06 12:06



Parcel ID: 2419033

Parcel Order Number
(Lab Use Only)

2419033

Chain of Custody
(Lab Use Only)

No 144660

Client Name:	Project Ref:	Page 3 of 3
Contact Name:	Quote #:	Turnaround Time ☐ 1 day ☐ 3 day ☐ 2 day ☐ Regular Date Required: _____
Address:	PO #:	
Telephone:	E-mail: See 1st sheet	

☐ REG 153/04 ☐ REG 406/19		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (paint) A (Air) O (Other)		Required Analysis														
☐ Table 1 ☐ Res/Park ☐ Med/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☐ Table _____ For RSC: ☐ Yes ☐ No		☐ REG 558 ☐ PWQO ☐ CCME ☐ MISA ☐ SU - Sani ☐ SU-Storm Mun: _____ ☐ Other				PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)								
Sample ID/Location Name		Matrix	Air Volume	# of Containers	Sample Taken															
1	QAGC6	S		1	05/02/24			X												
2	QAGC7	S		2	"	X														
3	QAGC8	S		1	"				X	X										
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Comments:				Method of Delivery: Drop Box			
Relinquished By (Sign): <i>Kels. Douglas</i>	Received at Depot: <i>CRK</i>	Received at Lab: <i>SS</i>	Verified By: <i>Deven Capper</i>				
Relinquished By (Print): Kels. Douglas	Date/Time: May 06, 2024 11:08	Date/Time: May 24 1055	Date/Time: May 06 12:00				
Date/Time: 05/06/24 @ 10:50	Temperature: 10.9 °C	Temperature: 8-8 7.4	pH Viewed: ☐ 0				

Chain of Custody (Env) xlsx



300 - 2319 St. Laurent Blvd
Ottawa, ON, K1G 4J8
1-800-749-1947
www.paracellabs.com

Certificate of Analysis

Cambium Inc. (Kingston)

31 Hyperion Court, Suite 102
Oshawa, ON K7K7G3
Attn: Laura Fitzgerald

Client PO:
Project: 17181-001
Custody: 144659, 660, 661

Report Date: 17-May-2024
Order Date: 6-May-2024

Revised Report

Order #: 2419033

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID	Paracel ID	Client ID
2419033-01	BH201_0.1-0.8	2419033-22	QAQC7
2419033-02	BH201_1.52-3.04	2419033-23	QAQC8
2419033-04	BH205_0.0-0.06		
2419033-06	BH206_0.0-0.06		
2419033-08	BH207_0.0-0.06		
2419033-10	BH208_0.0-0.1		
2419033-11	BH208_0.61-0.91		
2419033-12	BH209_0.12-1.52		
2419033-13	BH209_1.52-1.82		
2419033-14	BH210_0.12-1.52		
2419033-15	BH202_0.1-0.8		
2419033-17	BH203_0.1-0.8		
2419033-18	BH203_0.8-1.0		
2419033-19	BH204_0.1-0.8		
2419033-20	BH204_0.8-1.0		
2419033-21	QAQC6		

Approved By: 

Dale Robertson, BSc
Laboratory Director



Order #: 2419033

Certificate of Analysis

Report Date: 17-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	8-May-24	8-May-24
Mercury by CVAA	EPA 7471B - CVAA, digestion	8-May-24	8-May-24
PHC F1	CWS Tier 1 - P&T GC-FID	8-May-24	8-May-24
PHC F4G (gravimetric)	CWS Tier 1 - Extraction Gravimetric	9-May-24	9-May-24
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	8-May-24	9-May-24
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	8-May-24	8-May-24
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	7-May-24	10-May-24
Solids, %	CWS Tier 1 - Gravimetric	8-May-24	9-May-24

Certificate of Analysis

Report Date: 17-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Summary of Criteria Exceedances

(If this page is blank then there are no exceedances)

Only those criteria that a sample exceeds will be highlighted in red

Regulatory Comparison:

Paracel Laboratories has provided regulatory guidelines on this report for informational purposes only and makes no representations or warranties that the data is accurate or reflects the current regulatory values. The user is advised to consult with the appropriate official regulations to evaluate compliance. Sample results that are highlighted have exceeded the selected regulatory limit. Calculated uncertainty estimations have not been applied for determining regulatory exceedances.

Sample	Analyte	MDL / Units	Result	Reg 153/04 -T1 Res	Reg 153/04 -T8 Res/Park/Ind/Com, Potable
BH201_0.1-0.8	Acenaphthylene	0.02 ug/g	0.25	0.093 ug/g	0.093 ug/g
BH208_0.0-0.1	Xylenes, total	0.05 ug/g	0.30	0.05 ug/g	0.05 ug/g
BH208_0.0-0.1	F2 PHCs (C10-C16)	4 ug/g	<80 [1]	10 ug/g	10 ug/g
BH208_0.0-0.1	F4 PHCs (C34-C50)	6 ug/g	3630 [2]	120 ug/g	120 ug/g
BH208_0.0-0.1	F4G PHCs (gravimetric)	50 ug/g	4960	120 ug/g	120 ug/g
BH209_0.12-1.52	Barium	1.0 ug/g	1540	220 ug/g	220 ug/g
BH209_0.12-1.52	Molybdenum	1.0 ug/g	2.3	2 ug/g	2 ug/g
BH203_0.1-0.8	Acenaphthylene	0.02 ug/g	0.41	0.093 ug/g	0.093 ug/g
BH203_0.1-0.8	Anthracene	0.02 ug/g	0.22	0.16 ug/g	0.22 ug/g
BH203_0.1-0.8	Benzo [a] anthracene	0.02 ug/g	0.42	0.36 ug/g	0.36 ug/g
BH203_0.1-0.8	Benzo [a] pyrene	0.02 ug/g	0.44	0.3 ug/g	0.3 ug/g
BH203_0.1-0.8	Fluoranthene	0.02 ug/g	0.69	0.56 ug/g	0.69 ug/g
BH203_0.1-0.8	Indeno [1,2,3-cd] pyrene	0.02 ug/g	0.27	0.23 ug/g	0.23 ug/g
BH203_0.8-1.0	Acenaphthylene	0.02 ug/g	1.15	0.093 ug/g	0.093 ug/g
BH203_0.8-1.0	Anthracene	0.02 ug/g	0.60	0.16 ug/g	0.22 ug/g
BH203_0.8-1.0	Benzo [a] anthracene	0.02 ug/g	1.58	0.36 ug/g	0.36 ug/g
BH203_0.8-1.0	Benzo [a] pyrene	0.02 ug/g	1.56	0.3 ug/g	0.3 ug/g
BH203_0.8-1.0	Benzo [b] fluoranthene	0.02 ug/g	1.44	0.47 ug/g	0.47 ug/g
BH203_0.8-1.0	Benzo [g,h,i] perylene	0.02 ug/g	0.99	0.68 ug/g	0.68 ug/g
BH203_0.8-1.0	Benzo [k] fluoranthene	0.02 ug/g	1.00	0.48 ug/g	0.48 ug/g
BH203_0.8-1.0	Dibenzo [a,h] anthracene	0.02 ug/g	0.23	0.1 ug/g	0.1 ug/g



Order #: 2419033

Certificate of Analysis

Report Date: 17-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Summary of Criteria Exceedances

(If this page is blank then there are no exceedances)

Only those criteria that a sample exceeds will be highlighted in red

Regulatory Comparison:

Paracel Laboratories has provided regulatory guidelines on this report for informational purposes only and makes no representations or warranties that the data is accurate or reflects the current regulatory values. The user is advised to consult with the appropriate official regulations to evaluate compliance. Sample results that are highlighted have exceeded the selected regulatory limit. Calculated uncertainty estimations have not been applied for determining regulatory exceedances.

Sample	Analyte	MDL / Units	Result	Reg 153/04 -T1 Res	Reg 153/04 -T8 Res/Park/Ind/Com, Potable
BH203_0.8-1.0	Fluoranthene	0.02 ug/g	2.34	0.56 ug/g	0.69 ug/g
BH203_0.8-1.0	Indeno [1,2,3-cd] pyrene	0.02 ug/g	0.88	0.23 ug/g	0.23 ug/g
BH203_0.8-1.0	Pyrene	0.02 ug/g	3.24	1 ug/g	1 ug/g
BH204_0.1-0.8	Acenaphthylene	0.02 ug/g	1.34	0.093 ug/g	0.093 ug/g
BH204_0.1-0.8	Anthracene	0.02 ug/g	0.67	0.16 ug/g	0.22 ug/g
BH204_0.1-0.8	Benzo [a] anthracene	0.02 ug/g	1.34	0.36 ug/g	0.36 ug/g
BH204_0.1-0.8	Benzo [a] pyrene	0.02 ug/g	1.41	0.3 ug/g	0.3 ug/g
BH204_0.1-0.8	Benzo [b] fluoranthene	0.02 ug/g	1.40	0.47 ug/g	0.47 ug/g
BH204_0.1-0.8	Benzo [g,h,i] perylene	0.02 ug/g	0.98	0.68 ug/g	0.68 ug/g
BH204_0.1-0.8	Benzo [k] fluoranthene	0.02 ug/g	1.11	0.48 ug/g	0.48 ug/g
BH204_0.1-0.8	Dibenzo [a,h] anthracene	0.02 ug/g	0.25	0.1 ug/g	0.1 ug/g
BH204_0.1-0.8	Fluoranthene	0.02 ug/g	1.88	0.56 ug/g	0.69 ug/g
BH204_0.1-0.8	Indeno [1,2,3-cd] pyrene	0.02 ug/g	0.91	0.23 ug/g	0.23 ug/g
BH204_0.1-0.8	Pyrene	0.02 ug/g	2.71	1 ug/g	1 ug/g
BH204_0.8-1.0	Acenaphthylene	0.02 ug/g	0.45	0.093 ug/g	0.093 ug/g
BH204_0.8-1.0	Anthracene	0.02 ug/g	0.18	0.16 ug/g	0.22 ug/g
BH204_0.8-1.0	Benzo [a] pyrene	0.02 ug/g	0.47	0.3 ug/g	0.3 ug/g
BH204_0.8-1.0	Indeno [1,2,3-cd] pyrene	0.02 ug/g	0.32	0.23 ug/g	0.23 ug/g
QAQC8	Barium	1.0 ug/g	1560	220 ug/g	220 ug/g



Order #: 2419033

Certificate of Analysis

Report Date: 17-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Client ID:	BH201_0.1-0.8	BH201_1.52-3.04	BH205_0.0-0.06	BH206_0.0-0.06	Criteria:	
Sample Date:	03-May-24 09:05	03-May-24 09:10	03-May-24 10:10	03-May-24 10:15	Reg 153/04 -T1 Res	Reg 153/04 -T8
Sample ID:	2419033-01	2419033-02	2419033-04	2419033-06	Res/Park/Ind/Com,	
Matrix:	Soil	Soil	Soil	Soil	Potable	
MDL/Units						

Physical Characteristics

% Solids	0.1 % by Wt.	90.2	73.1	74.3	89.0	-	-
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Volatiles

Benzene	0.02 ug/g	-	-	<0.02	<0.02	0.02 ug/g	0.02 ug/g
Ethylbenzene	0.05 ug/g	-	-	<0.05	<0.05	0.05 ug/g	0.05 ug/g
Toluene	0.05 ug/g	-	-	<0.05	<0.05	0.2 ug/g	0.2 ug/g
m,p-Xylenes	0.05 ug/g	-	-	<0.05	<0.05	-	-
o-Xylene	0.05 ug/g	-	-	<0.05	<0.05	-	-
Xylenes, total	0.05 ug/g	-	-	<0.05	<0.05	0.05 ug/g	0.05 ug/g
Toluene-d8	Surrogate	-	-	116%	102%	-	-

Hydrocarbons

F1 PHCs (C6-C10)	7 ug/g	-	-	<7	<7	25 ug/g	25 ug/g
F2 PHCs (C10-C16)	4 ug/g	-	-	<4	<4	10 ug/g	10 ug/g
F3 PHCs (C16-C34)	8 ug/g	-	-	<8	<8	240 ug/g	240 ug/g
F4 PHCs (C34-C50)	6 ug/g	-	-	<6	<6	120 ug/g	120 ug/g

Semi-Volatiles

Acenaphthene	0.02 ug/g	<0.02	<0.02	-	-	0.072 ug/g	0.072 ug/g
Acenaphthylene	0.02 ug/g	0.25	<0.02	-	-	0.093 ug/g	0.093 ug/g
Anthracene	0.02 ug/g	0.11	<0.02	-	-	0.16 ug/g	0.22 ug/g
Benzo [a] anthracene	0.02 ug/g	0.12	<0.02	-	-	0.36 ug/g	0.36 ug/g
Benzo [a] pyrene	0.02 ug/g	0.20	<0.02	-	-	0.3 ug/g	0.3 ug/g
Benzo [b] fluoranthene	0.02 ug/g	0.27	<0.02	-	-	0.47 ug/g	0.47 ug/g
Benzo [g,h,i] perylene	0.02 ug/g	0.20	<0.02	-	-	0.68 ug/g	0.68 ug/g
Benzo [k] fluoranthene	0.02 ug/g	0.13	<0.02	-	-	0.48 ug/g	0.48 ug/g
Chrysene	0.02 ug/g	0.10	<0.02	-	-	2.8 ug/g	2.8 ug/g
Dibenzo [a,h] anthracene	0.02 ug/g	0.04	<0.02	-	-	0.1 ug/g	0.1 ug/g



Order #: 2419033

Certificate of Analysis

Report Date: 17-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Client ID:	BH201_0.1-0.8	BH201_1.52-3.04	BH205_0.0-0.06	BH206_0.0-0.06	Criteria:	
Sample Date:	03-May-24 09:05	03-May-24 09:10	03-May-24 10:10	03-May-24 10:15	Reg 153/04 -T1 Res	Reg 153/04 -T8
Sample ID:	2419033-01	2419033-02	2419033-04	2419033-06	Res/Park/Ind/Com,	
Matrix:	Soil	Soil	Soil	Soil	Potable	
MDL/Units						

Semi-Volatiles

Fluoranthene	0.02 ug/g	0.15	<0.02	-	-	0.56 ug/g	0.69 ug/g
Fluorene	0.02 ug/g	<0.02	<0.02	-	-	0.12 ug/g	0.19 ug/g
Indeno [1,2,3-cd] pyrene	0.02 ug/g	0.16	<0.02	-	-	0.23 ug/g	0.23 ug/g
1-Methylnaphthalene	0.02 ug/g	<0.02	<0.02	-	-	0.59 ug/g	0.59 ug/g
2-Methylnaphthalene	0.02 ug/g	<0.02	<0.02	-	-	0.59 ug/g	0.59 ug/g
Methylnaphthalene (1&2)	0.04 ug/g	<0.04	<0.04	-	-	0.59 ug/g	0.59 ug/g
Naphthalene	0.01 ug/g	0.01	<0.01	-	-	0.09 ug/g	0.09 ug/g
Phenanthrene	0.02 ug/g	0.04	<0.02	-	-	0.69 ug/g	0.69 ug/g
Pyrene	0.02 ug/g	0.22	<0.02	-	-	1 ug/g	1 ug/g
2-Fluorobiphenyl	Surrogate	66.0%	64.5%	-	-	-	-
Terphenyl-d14	Surrogate	73.8%	80.5%	-	-	-	-



Order #: 2419033

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Report Date: 17-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Client ID:	BH207_0.0-0.06	BH208_0.0-0.1	BH208_0.61-0.91	BH209_0.12-1.52	Criteria:	
Sample Date:	03-May-24 10:20	03-May-24 11:20	03-May-24 11:20	03-May-24 11:40	Reg 153/04 -T1 Res	Reg 153/04 -T8
Sample ID:	2419033-08	2419033-10	2419033-11	2419033-12	Res/Park/Ind/Com,	
Matrix:	Soil	Soil	Soil	Soil	Potable	
MDL/Units						

Physical Characteristics

% Solids	0.1 % by Wt.	90.5	97.3	80.6	92.3	-	-
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Metals

Antimony	1.0 ug/g	-	-	-	<1.0	1.3 ug/g	1.3 ug/g
Arsenic	1.0 ug/g	-	-	-	2.4	18 ug/g	18 ug/g
Barium	1.0 ug/g	-	-	-	1540	220 ug/g	220 ug/g
Beryllium	0.5 ug/g	-	-	-	<0.5	2.5 ug/g	2.5 ug/g
Boron	5.0 ug/g	-	-	-	<5.0	36 ug/g	36 ug/g
Cadmium	0.5 ug/g	-	-	-	<0.5	1.2 ug/g	1.2 ug/g
Chromium	5.0 ug/g	-	-	-	10.3	70 ug/g	70 ug/g
Cobalt	1.0 ug/g	-	-	-	2.0	21 ug/g	22 ug/g
Copper	5.0 ug/g	-	-	-	9.1	92 ug/g	92 ug/g
Lead	1.0 ug/g	-	-	-	26.6	120 ug/g	120 ug/g
Mercury	0.1 ug/g	-	-	-	<0.1	0.27 ug/g	0.27 ug/g
Molybdenum	1.0 ug/g	-	-	-	2.3	2 ug/g	2 ug/g
Nickel	5.0 ug/g	-	-	-	<5.0	82 ug/g	82 ug/g
Selenium	1.0 ug/g	-	-	-	<1.0	1.5 ug/g	1.5 ug/g
Silver	0.3 ug/g	-	-	-	<0.3	0.5 ug/g	0.5 ug/g
Thallium	1.0 ug/g	-	-	-	<1.0	1 ug/g	1 ug/g
Uranium	1.0 ug/g	-	-	-	<1.0	2.5 ug/g	2.5 ug/g
Vanadium	10.0 ug/g	-	-	-	<10.0	86 ug/g	86 ug/g
Zinc	20.0 ug/g	-	-	-	44.7	290 ug/g	290 ug/g

Volatiles

Benzene	0.02 ug/g	<0.02	<0.02	<0.02	-	0.02 ug/g	0.02 ug/g
Ethylbenzene	0.05 ug/g	<0.05	<0.05	<0.05	-	0.05 ug/g	0.05 ug/g
Toluene	0.05 ug/g	<0.05	<0.05	<0.05	-	0.2 ug/g	0.2 ug/g



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Report Date: 17-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Client ID:	BH207_0.0-0.06	BH208_0.0-0.1	BH208_0.61-0.91	BH209_0.12-1.52	Criteria:	
Sample Date:	03-May-24 10:20	03-May-24 11:20	03-May-24 11:20	03-May-24 11:40	Reg 153/04 -T1 Res	Reg 153/04 -T8
Sample ID:	2419033-08	2419033-10	2419033-11	2419033-12	Res/Park/Ind/Com,	
Matrix:	Soil	Soil	Soil	Soil	Potable	
MDL/Units						

Volatiles

m,p-Xylenes	0.05 ug/g	<0.05	0.16	<0.05	-	-	-
o-Xylene	0.05 ug/g	<0.05	0.14	<0.05	-	-	-
Xylenes, total	0.05 ug/g	<0.05	0.30	<0.05	-	0.05 ug/g	0.05 ug/g
Toluene-d8	Surrogate	109%	103%	122%	-	-	-

Hydrocarbons

F1 PHCs (C6-C10)	7 ug/g	<7	12	<7	-	25 ug/g	25 ug/g
F2 PHCs (C10-C16)	4 ug/g	<4	<80 [1]	<4	-	10 ug/g	10 ug/g
F3 PHCs (C16-C34)	8 ug/g	10	191	16	-	240 ug/g	240 ug/g
F4 PHCs (C34-C50)	6 ug/g	34	3630 [2]	31	-	120 ug/g	120 ug/g
F4G PHCs (gravimetric)	50 ug/g	-	4960	-	-	120 ug/g	120 ug/g



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Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Client ID:	BH209_1.52-1.82	BH210_0.12-1.52	BH202_0.1-0.8	BH203_0.1-0.8	Criteria:	
Sample Date:	03-May-24 11:40	03-May-24 11:50	03-May-24 14:30	03-May-24 14:40	Reg 153/04 -T1 Res	Reg 153/04 -T8
Sample ID:	2419033-13	2419033-14	2419033-15	2419033-17	Res/Park/Ind/Com,	
Matrix:	Soil	Soil	Soil	Soil	Potable	
MDL/Units						

Physical Characteristics

% Solids	0.1 % by Wt.	80.4	95.3	82.8	89.6	-	-
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Metals

Antimony	1.0 ug/g	<1.0	<1.0	-	-	1.3 ug/g	1.3 ug/g
Arsenic	1.0 ug/g	2.4	2.4	-	-	18 ug/g	18 ug/g
Barium	1.0 ug/g	66.1	74.3	-	-	220 ug/g	220 ug/g
Beryllium	0.5 ug/g	0.5	<0.5	-	-	2.5 ug/g	2.5 ug/g
Boron	5.0 ug/g	<5.0	6.3	-	-	36 ug/g	36 ug/g
Cadmium	0.5 ug/g	<0.5	<0.5	-	-	1.2 ug/g	1.2 ug/g
Chromium	5.0 ug/g	20.9	10.2	-	-	70 ug/g	70 ug/g
Cobalt	1.0 ug/g	6.8	3.2	-	-	21 ug/g	22 ug/g
Copper	5.0 ug/g	9.1	12.4	-	-	92 ug/g	92 ug/g
Lead	1.0 ug/g	12.3	18.3	-	-	120 ug/g	120 ug/g
Mercury	0.1 ug/g	-	<0.1	-	-	0.27 ug/g	0.27 ug/g
Molybdenum	1.0 ug/g	<1.0	<1.0	-	-	2 ug/g	2 ug/g
Nickel	5.0 ug/g	9.6	6.1	-	-	82 ug/g	82 ug/g
Selenium	1.0 ug/g	<1.0	<1.0	-	-	1.5 ug/g	1.5 ug/g
Silver	0.3 ug/g	<0.3	<0.3	-	-	0.5 ug/g	0.5 ug/g
Thallium	1.0 ug/g	<1.0	<1.0	-	-	1 ug/g	1 ug/g
Uranium	1.0 ug/g	<1.0	<1.0	-	-	2.5 ug/g	2.5 ug/g
Vanadium	10.0 ug/g	36.1	17.5	-	-	86 ug/g	86 ug/g
Zinc	20.0 ug/g	45.2	52.5	-	-	290 ug/g	290 ug/g

Semi-Volatiles

Acenaphthene	0.02 ug/g	-	-	<0.02	<0.02	0.072 ug/g	0.072 ug/g
Acenaphthylene	0.02 ug/g	-	-	0.03	0.41	0.093 ug/g	0.093 ug/g
Anthracene	0.02 ug/g	-	-	<0.02	0.22	0.16 ug/g	0.22 ug/g



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Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Client ID:	BH209_1.52-1.82	BH210_0.12-1.52	BH202_0.1-0.8	BH203_0.1-0.8	Criteria:	
Sample Date:	03-May-24 11:40	03-May-24 11:50	03-May-24 14:30	03-May-24 14:40	Reg 153/04 -T1 Res	Reg 153/04 -T8
Sample ID:	2419033-13	2419033-14	2419033-15	2419033-17	Res/Park/Ind/Com,	
Matrix:	Soil	Soil	Soil	Soil	Potable	
MDL/Units						

Semi-Volatiles

Benzo [a] anthracene	0.02 ug/g	-	-	0.02	0.42	0.36 ug/g	0.36 ug/g
Benzo [a] pyrene	0.02 ug/g	-	-	0.03	0.44	0.3 ug/g	0.3 ug/g
Benzo [b] fluoranthene	0.02 ug/g	-	-	0.05	0.42	0.47 ug/g	0.47 ug/g
Benzo [g,h,i] perylene	0.02 ug/g	-	-	0.03	0.30	0.68 ug/g	0.68 ug/g
Benzo [k] fluoranthene	0.02 ug/g	-	-	0.03	0.26	0.48 ug/g	0.48 ug/g
Chrysene	0.02 ug/g	-	-	0.02	0.33	2.8 ug/g	2.8 ug/g
Dibenzo [a,h] anthracene	0.02 ug/g	-	-	<0.02	0.07	0.1 ug/g	0.1 ug/g
Fluoranthene	0.02 ug/g	-	-	0.03	0.69	0.56 ug/g	0.69 ug/g
Fluorene	0.02 ug/g	-	-	<0.02	<0.02	0.12 ug/g	0.19 ug/g
Indeno [1,2,3-cd] pyrene	0.02 ug/g	-	-	0.02	0.27	0.23 ug/g	0.23 ug/g
1-Methylnaphthalene	0.02 ug/g	-	-	<0.02	<0.02	0.59 ug/g	0.59 ug/g
2-Methylnaphthalene	0.02 ug/g	-	-	<0.02	<0.02	0.59 ug/g	0.59 ug/g
Methylnaphthalene (1&2)	0.04 ug/g	-	-	<0.04	<0.04	0.59 ug/g	0.59 ug/g
Naphthalene	0.01 ug/g	-	-	<0.01	0.02	0.09 ug/g	0.09 ug/g
Phenanthrene	0.02 ug/g	-	-	<0.02	0.12	0.69 ug/g	0.69 ug/g
Pyrene	0.02 ug/g	-	-	0.04	0.84	1 ug/g	1 ug/g
2-Fluorobiphenyl	Surrogate	-	-	69.8%	62.3%	-	-
Terphenyl-d14	Surrogate	-	-	81.4%	97.8%	-	-

Certificate of Analysis

Report Date: 17-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Client ID:	BH203_0.8-1.0	BH204_0.1-0.8	BH204_0.8-1.0	QAQC6	Criteria:
Sample Date:	03-May-24 14:45	03-May-24 14:50	03-May-24 14:55	02-May-24 09:00	Reg 153/04 -T1 Res
Sample ID:	2419033-18	2419033-19	2419033-20	2419033-21	Reg 153/04 -T8
Matrix:	Soil	Soil	Soil	Soil	Res/Park/Ind/Com, Potable
MDL/Units					

Physical Characteristics

% Solids	0.1 % by Wt.	89.6	89.6	89.3	82.7	-	-
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Semi-Volatiles

Acenaphthene	0.02 ug/g	0.03	0.04	<0.02	<0.02	0.072 ug/g	0.072 ug/g
Acenaphthylene	0.02 ug/g	1.15	1.34	0.45	<0.02	0.093 ug/g	0.093 ug/g
Anthracene	0.02 ug/g	0.60	0.67	0.18	<0.02	0.16 ug/g	0.22 ug/g
Benzo [a] anthracene	0.02 ug/g	1.58	1.34	0.32	<0.02	0.36 ug/g	0.36 ug/g
Benzo [a] pyrene	0.02 ug/g	1.56	1.41	0.47	<0.02	0.3 ug/g	0.3 ug/g
Benzo [b] fluoranthene	0.02 ug/g	1.44	1.40	0.46	<0.02	0.47 ug/g	0.47 ug/g
Benzo [g,h,i] perylene	0.02 ug/g	0.99	0.98	0.39	<0.02	0.68 ug/g	0.68 ug/g
Benzo [k] fluoranthene	0.02 ug/g	1.00	1.11	0.26	<0.02	0.48 ug/g	0.48 ug/g
Chrysene	0.02 ug/g	1.22	1.01	0.27	<0.02	2.8 ug/g	2.8 ug/g
Dibenzo [a,h] anthracene	0.02 ug/g	0.23	0.25	0.09	<0.02	0.1 ug/g	0.1 ug/g
Fluoranthene	0.02 ug/g	2.34	1.88	0.32	<0.02	0.56 ug/g	0.69 ug/g
Fluorene	0.02 ug/g	0.03	<0.02	<0.02	<0.02	0.12 ug/g	0.19 ug/g
Indeno [1,2,3-cd] pyrene	0.02 ug/g	0.88	0.91	0.32	<0.02	0.23 ug/g	0.23 ug/g
1-Methylnaphthalene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.59 ug/g	0.59 ug/g
2-Methylnaphthalene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.59 ug/g	0.59 ug/g
Methylnaphthalene (1&2)	0.04 ug/g	<0.04	<0.04	<0.04	<0.04	0.59 ug/g	0.59 ug/g
Naphthalene	0.01 ug/g	0.03	0.05	<0.01	<0.01	0.09 ug/g	0.09 ug/g
Phenanthrene	0.02 ug/g	0.33	0.39	0.03	<0.02	0.69 ug/g	0.69 ug/g
Pyrene	0.02 ug/g	3.24	2.71	0.44	<0.02	1 ug/g	1 ug/g
2-Fluorobiphenyl	Surrogate	68.7%	69.6%	57.1%	74.2%	-	-
Terphenyl-d14	Surrogate	91.6%	81.8%	87.4%	101%	-	-



Order #: 2419033

Certificate of Analysis

Report Date: 17-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Client ID:	QAQC7	QAQC8			Criteria:	
Sample Date:	02-May-24 09:00	02-May-24 09:00			Reg 153/04 -T1 Res	Reg 153/04 -T8
Sample ID:	2419033-22	2419033-23			Res/Park/Ind/Com,	
Matrix:	Soil	Soil			Potable	
MDL/Units						

Physical Characteristics

% Solids	0.1 % by Wt.	74.0	89.2	-	-	-	-
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Metals

Antimony	1.0 ug/g	-	<1.0	-	-	1.3 ug/g	1.3 ug/g
Arsenic	1.0 ug/g	-	3.4	-	-	18 ug/g	18 ug/g
Barium	1.0 ug/g	-	1560	-	-	220 ug/g	220 ug/g
Beryllium	0.5 ug/g	-	<0.5	-	-	2.5 ug/g	2.5 ug/g
Boron	5.0 ug/g	-	5.1	-	-	36 ug/g	36 ug/g
Cadmium	0.5 ug/g	-	<0.5	-	-	1.2 ug/g	1.2 ug/g
Chromium	5.0 ug/g	-	10.3	-	-	70 ug/g	70 ug/g
Cobalt	1.0 ug/g	-	2.7	-	-	21 ug/g	22 ug/g
Copper	5.0 ug/g	-	9.5	-	-	92 ug/g	92 ug/g
Lead	1.0 ug/g	-	42.4	-	-	120 ug/g	120 ug/g
Mercury	0.1 ug/g	-	<0.1	-	-	0.27 ug/g	0.27 ug/g
Molybdenum	1.0 ug/g	-	1.3	-	-	2 ug/g	2 ug/g
Nickel	5.0 ug/g	-	5.3	-	-	82 ug/g	82 ug/g
Selenium	1.0 ug/g	-	<1.0	-	-	1.5 ug/g	1.5 ug/g
Silver	0.3 ug/g	-	<0.3	-	-	0.5 ug/g	0.5 ug/g
Thallium	1.0 ug/g	-	<1.0	-	-	1 ug/g	1 ug/g
Uranium	1.0 ug/g	-	<1.0	-	-	2.5 ug/g	2.5 ug/g
Vanadium	10.0 ug/g	-	13.4	-	-	86 ug/g	86 ug/g
Zinc	20.0 ug/g	-	57.2	-	-	290 ug/g	290 ug/g

Volatiles

Benzene	0.02 ug/g	<0.02	-	-	-	0.02 ug/g	0.02 ug/g
Ethylbenzene	0.05 ug/g	<0.05	-	-	-	0.05 ug/g	0.05 ug/g
Toluene	0.05 ug/g	<0.05	-	-	-	0.2 ug/g	0.2 ug/g



Order #: 2419033

Certificate of Analysis

Report Date: 17-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Client ID:	QAQC7	QAQC8			Criteria:	
Sample Date:	02-May-24 09:00	02-May-24 09:00			Reg 153/04 -T1 Res	Reg 153/04 -T8
Sample ID:	2419033-22	2419033-23			Res/Park/Ind/Com,	
Matrix:	Soil	Soil			Potable	
MDL/Units						

Volatiles

m,p-Xylenes	0.05 ug/g	<0.05	-	-	-	-
o-Xylene	0.05 ug/g	<0.05	-	-	-	-
Xylenes, total	0.05 ug/g	<0.05	-	-	-	0.05 ug/g 0.05 ug/g
Toluene-d8	Surrogate	116%	-	-	-	-

Hydrocarbons

F1 PHCs (C6-C10)	7 ug/g	<7	-	-	-	25 ug/g 25 ug/g
F2 PHCs (C10-C16)	4 ug/g	<4	-	-	-	10 ug/g 10 ug/g
F3 PHCs (C16-C34)	8 ug/g	<8	-	-	-	240 ug/g 240 ug/g
F4 PHCs (C34-C50)	6 ug/g	<6	-	-	-	120 ug/g 120 ug/g



Order #: 2419033

Certificate of Analysis

Report Date: 17-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons								
F1 PHCs (C6-C10)	ND	7	ug/g					
F2 PHCs (C10-C16)	ND	4	ug/g					
F3 PHCs (C16-C34)	ND	8	ug/g					
F4 PHCs (C34-C50)	ND	6	ug/g					
F4G PHCs (gravimetric)	ND	50	ug/g					
Metals								
Antimony	ND	1.0	ug/g					
Arsenic	ND	1.0	ug/g					
Barium	ND	1.0	ug/g					
Beryllium	ND	0.5	ug/g					
Boron	ND	5.0	ug/g					
Cadmium	ND	0.5	ug/g					
Chromium	ND	5.0	ug/g					
Cobalt	ND	1.0	ug/g					
Copper	ND	5.0	ug/g					
Lead	ND	1.0	ug/g					
Mercury	ND	0.1	ug/g					
Molybdenum	ND	1.0	ug/g					
Nickel	ND	5.0	ug/g					
Selenium	ND	1.0	ug/g					
Silver	ND	0.3	ug/g					
Thallium	ND	1.0	ug/g					
Uranium	ND	1.0	ug/g					
Vanadium	ND	10.0	ug/g					
Zinc	ND	20.0	ug/g					
Semi-Volatiles								
Acenaphthene	ND	0.02	ug/g					
Acenaphthylene	ND	0.02	ug/g					
Anthracene	ND	0.02	ug/g					
Benzo [a] anthracene	ND	0.02	ug/g					
Benzo [a] pyrene	ND	0.02	ug/g					
Benzo [b] fluoranthene	ND	0.02	ug/g					



Order #: 2419033

Certificate of Analysis

Report Date: 17-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Benzo [g,h,i] perylene	ND	0.02	ug/g					
Benzo [k] fluoranthene	ND	0.02	ug/g					
Chrysene	ND	0.02	ug/g					
Dibenzo [a,h] anthracene	ND	0.02	ug/g					
Fluoranthene	ND	0.02	ug/g					
Fluorene	ND	0.02	ug/g					
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g					
1-Methylnaphthalene	ND	0.02	ug/g					
2-Methylnaphthalene	ND	0.02	ug/g					
Methylnaphthalene (1&2)	ND	0.04	ug/g					
Naphthalene	ND	0.01	ug/g					
Phenanthrene	ND	0.02	ug/g					
Pyrene	ND	0.02	ug/g					
Surrogate: 2-Fluorobiphenyl	0.877		%	65.8	50-140			
Surrogate: Terphenyl-d14	1.31		%	98.6	50-140			
Volatiles								
Benzene	ND	0.02	ug/g					
Ethylbenzene	ND	0.05	ug/g					
Toluene	ND	0.05	ug/g					
m,p-Xylenes	ND	0.05	ug/g					
o-Xylene	ND	0.05	ug/g					
Xylenes, total	ND	0.05	ug/g					
Surrogate: Toluene-d8	8.57		%	107	50-140			



Order #: 2419033

Certificate of Analysis

Report Date: 17-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g	ND			NC	30	
F3 PHCs (C16-C34)	ND	8	ug/g	ND			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g	ND			NC	30	
F4G PHCs (gravimetric)	1190	50	ug/g	1460			20.0	30	
Metals									
Antimony	ND	1.0	ug/g	ND			NC	30	
Arsenic	7.1	1.0	ug/g	7.0			1.1	30	
Barium	1060	1.0	ug/g	924			13.3	30	
Beryllium	2.0	0.5	ug/g	2.0			1.4	30	
Boron	25.3	5.0	ug/g	21.6			15.9	30	
Cadmium	0.5	0.5	ug/g	ND			NC	30	
Chromium	47.4	5.0	ug/g	48.7			2.7	30	
Cobalt	12.9	1.0	ug/g	13.1			1.5	30	
Copper	19.6	5.0	ug/g	19.9			2.0	30	
Lead	23.8	1.0	ug/g	23.2			2.4	30	
Mercury	ND	0.1	ug/g	ND			NC	30	
Molybdenum	ND	1.0	ug/g	ND			NC	30	
Nickel	30.0	5.0	ug/g	31.1			3.4	30	
Selenium	1.0	1.0	ug/g	ND			NC	30	
Silver	ND	0.3	ug/g	ND			NC	30	
Thallium	ND	1.0	ug/g	ND			NC	30	
Uranium	ND	1.0	ug/g	ND			NC	30	
Vanadium	38.3	10.0	ug/g	38.9			1.6	30	
Zinc	40.6	20.0	ug/g	41.3			1.5	30	
Physical Characteristics									
% Solids	91.6	0.1	% by Wt.	90.8			0.8	25	
Semi-Volatiles									
Acenaphthene	ND	0.02	ug/g	ND			NC	40	
Acenaphthylene	0.225	0.02	ug/g	0.251			11.0	40	

Certificate of Analysis

Report Date: 17-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anthracene	0.104	0.02	ug/g	0.107			3.6	40	
Benzo [a] anthracene	0.106	0.02	ug/g	0.119			11.7	40	
Benzo [a] pyrene	0.187	0.02	ug/g	0.204			9.0	40	
Benzo [b] fluoranthene	0.200	0.02	ug/g	0.268			29.1	40	
Benzo [g,h,i] perylene	0.157	0.02	ug/g	0.197			22.7	40	
Benzo [k] fluoranthene	0.146	0.02	ug/g	0.130			11.5	40	
Chrysene	0.095	0.02	ug/g	0.097			1.6	40	
Dibenzo [a,h] anthracene	0.037	0.02	ug/g	0.042			12.1	40	
Fluoranthene	0.143	0.02	ug/g	0.152			5.8	40	
Fluorene	ND	0.02	ug/g	ND			NC	40	
Indeno [1,2,3-cd] pyrene	0.112	0.02	ug/g	0.157			32.9	40	
1-Methylnaphthalene	ND	0.02	ug/g	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g	ND			NC	40	
Naphthalene	0.012	0.01	ug/g	0.012			3.6	40	
Phenanthrene	0.040	0.02	ug/g	0.044			9.7	40	
Pyrene	0.224	0.02	ug/g	0.215			3.9	40	
Surrogate: 2-Fluorobiphenyl	0.872		%		59.0	50-140			
Surrogate: Terphenyl-d14	1.13		%		76.5	50-140			
Volatiles									
Benzene	ND	0.02	ug/g	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g	ND			NC	50	
Toluene	ND	0.05	ug/g	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g	ND			NC	50	
o-Xylene	ND	0.05	ug/g	ND			NC	50	
Surrogate: Toluene-d8	10.2		%		110	50-140			



Order #: 2419033

Certificate of Analysis

Report Date: 17-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	197	7	ug/g	ND	114	85-115			
F2 PHCs (C10-C16)	110	4	ug/g	ND	102	60-140			
F3 PHCs (C16-C34)	277	8	ug/g	ND	105	60-140			
F4 PHCs (C34-C50)	180	6	ug/g	ND	108	60-140			
F4G PHCs (gravimetric)	970	50	ug/g	ND	97.0	80-120			
Metals									
Arsenic	52.7	1.0	ug/g	2.8	99.8	70-130			
Barium	66.0	1.0	ug/g	7.2	118	70-130			
Beryllium	51.3	0.5	ug/g	0.8	101	70-130			
Boron	56.6	5.0	ug/g	8.6	96.0	70-130			
Cadmium	55.6	0.5	ug/g	ND	111	70-130			
Chromium	76.1	5.0	ug/g	19.5	113	70-130			
Cobalt	56.7	1.0	ug/g	5.2	103	70-130			
Copper	57.5	5.0	ug/g	8.0	99.1	70-130			
Lead	64.4	1.0	ug/g	9.3	110	70-130			
Mercury	1.53	0.1	ug/g	ND	102	70-130			
Molybdenum	52.1	1.0	ug/g	ND	104	70-130			
Nickel	63.8	5.0	ug/g	12.4	103	70-130			
Selenium	49.5	1.0	ug/g	ND	98.4	70-130			
Silver	49.6	0.3	ug/g	ND	99.0	70-130			
Thallium	52.6	1.0	ug/g	ND	105	70-130			
Uranium	57.1	1.0	ug/g	ND	114	70-130			
Vanadium	69.1	10.0	ug/g	15.5	107	70-130			
Zinc	65.8	20.0	ug/g	ND	98.6	70-130			
Semi-Volatiles									
Acenaphthene	0.199	0.02	ug/g	ND	108	50-140			
Acenaphthylene	0.463	0.02	ug/g	0.251	115	50-140			
Anthracene	0.300	0.02	ug/g	0.107	104	50-140			
Benzo [a] anthracene	0.354	0.02	ug/g	0.119	127	50-140			
Benzo [a] pyrene	0.420	0.02	ug/g	0.204	117	50-140			



Order #: 2419033

Certificate of Analysis

Report Date: 17-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Benzo [b] fluoranthene	0.511	0.02	ug/g	0.268	132	50-140			
Benzo [g,h,i] perylene	0.383	0.02	ug/g	0.197	101	50-140			
Benzo [k] fluoranthene	0.369	0.02	ug/g	0.130	129	50-140			
Chrysene	0.340	0.02	ug/g	0.097	132	50-140			
Dibenzo [a,h] anthracene	0.211	0.02	ug/g	0.042	91.7	50-140			
Fluoranthene	0.397	0.02	ug/g	0.152	133	50-140			
Fluorene	0.220	0.02	ug/g	ND	119	50-140			
Indeno [1,2,3-cd] pyrene	0.353	0.02	ug/g	0.157	106	50-140			
1-Methylnaphthalene	0.194	0.02	ug/g	ND	105	50-140			
2-Methylnaphthalene	0.210	0.02	ug/g	ND	114	50-140			
Naphthalene	0.202	0.01	ug/g	0.012	103	50-140			
Phenanthrene	0.233	0.02	ug/g	0.044	102	50-140			
Pyrene	0.421	0.02	ug/g	0.215	112	50-140			
Surrogate: 2-Fluorobiphenyl	1.12		%		76.0	50-140			
Surrogate: Terphenyl-d14	1.18		%		80.1	50-140			
Volatiles									
Benzene	2.86	0.02	ug/g	ND	71.5	60-130			
Ethylbenzene	3.97	0.05	ug/g	ND	99.2	60-130			
Toluene	3.86	0.05	ug/g	ND	96.5	60-130			
m,p-Xylenes	8.21	0.05	ug/g	ND	103	60-130			
o-Xylene	4.13	0.05	ug/g	ND	103	60-130			
Surrogate: Toluene-d8	8.18		%		102	50-140			

Certificate of Analysis

Client: Cambium Inc. (Kingston)

Client PO:

Report Date: 17-May-2024

Order Date: 6-May-2024

Project Description: 17181-001

Qualifier Notes:

Sample Qualifiers :

- 1: Elevated reporting limits due to the nature of the sample matrix.
Applies to Samples: BH208_0.0-0.1
- 2: GC-FID signal did not return to baseline by C50
Applies to Samples: BH208_0.0-0.1

Sample Data Revisions:

None

Certificate of Analysis

Report Date: 17-May-2024

Client: Cambium Inc. (Kingston)

Order Date: 6-May-2024

Client PO:

Project Description: 17181-001

Work Order Revisions / Comments:

REVISION-1: This report includes additional analysis data.

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis unless otherwise noted.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.

Any use of these results implies your agreement that our total liability in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.



Parcel ID: 2419033



Parcel Order Number
(Lab Use Only)

2419033

Chain of Custody
(Lab Use Only)

No 144659

Client Name: Combium	Project Ref: 17181-001	Page 1 of 3
Contact Name: Laura Fitzgerald	Quote #:	Turnaround Time ☐ 1 day ☐ 3 day ☐ 2 day ☒ Regular
Address: 31 Hyperion Crt, Kingston	PO #:	
Telephone: 866-217-7900	E-mail: Laura.Fitzgerald@combium-inc.com Patrick.garratt@combium-inc.com Kelsi.douglass@combium-inc.com	
Date Required:		

☒ REG 153/04 ☐ REG 408/19 ☒ Table 1 ☒ Res/Park ☐ Med/Fine ☐ REG 558 ☐ PW00 ☐ Table 2 ☒ Ind/Comm ☒ Coarse ☐ CCME ☐ MISA ☐ Table 3 ☐ Agri/Other ☐ SU - Sani ☐ SU-Storm ☒ Table 8 For RSC: ☒ Yes ☐ No		Other Regulation ☐ REG 558 ☐ PW00 ☐ CCME ☐ MISA ☐ SU - Sani ☐ SU-Storm Mun: _____ ☐ Other		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint A (Air) O (Other))		Required Analysis PHCs F1-F4+BTEX VOCs PAHs Metals by ICP Hg CrVI B (HWS) H ₂ O									
Sample ID/Location Name		Matrix	Air Volume	# of Containers	Sample Taken Date Time		PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	H ₂ O	
1	BH201-01-08	S		1	05/03/24	9 05			✓						
2	BH201-152-304	S		1	"	9 10			✓				X		
3	BH201-30-36	S		1	"	9 15			✓				X		
4	BH205-00-006	S		2	"	10 10	X								
5	BH205-061-091	S		2	"	10 10							X		
6	BH206-00-006	S		2	"	10 15	X								
7	BH206-061-091	S		2	"	10 15							X		
8	BH207-00-006	S		2	"	10 20	X								
9	BH207-061-091	S		2	"	10 20							X		
10	BH208-00-01	S		2	"	11 20	X								

Comments:		Method of Delivery: Drop box	
Relinquished By (Sign):	Received at Depot: CPST	Received at Lab: SS	Verified By: Racyn Cooper
Relinquished By (Print): Kelsi Douglass	Date/Time: May 06, 2024 11:08	Date/Time: 7 May 24 1055	Date/Time: May 06 12:06
Date/Time: 05/06/24 @ 10:50	Temperature: 10.9 °C	Temperature: 8.8 7.4 °C	pH Verified ☐ by

Chain of Custody (Env) xlsx



Parcel ID: 2419033



Parcel Order Number
(Lab Use Only)

241 9033

Chain of Custody
(Lab Use Only)

No 144661

Client Name:	Project Ref:	Page 2 of 3
Contact Name:	Quote #	Turnaround Time ☐ 1 day ☐ 3 day ☐ 2 day ☐ Regular
Address:	PO #	
Telephone:	E-mail	
See previous sheet		Date Required:

☐ REG 153/04 ☐ REG 406/19 ☐ Table 1 ☐ Res/Park ☐ Med/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☐ Table _____ For RSC: ☐ Yes ☐ No	Other Regulation ☐ REG 558 ☐ PW00 ☐ CCME ☐ MISA ☐ SU - Sani ☐ SU-Storm Mun: _____ ☐ Other	Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (paint) A (Air) O (Other)	Required Analysis PHCs F1-F4+BTEX VOCs PAHs Metals by ICP Hg CrVI B (HWS) H ₂ O									
Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken Date Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	H ₂ O
1 BH208-0.61-0.91	S		2	05/07/24 11:20								X
2 BH209-0.12-1.52			1	11:40				X	X			M.D
3 BH209-1.52-1.82			1	11:40								X
4 BH210-0.12-1.52			1	11:50				X	X			
5 BH262-0.1-0.8			1	14:30			X					
6 BH202-0.8-1.0			1	14:35								X
7 BH203-0.1-0.8			1	14:40			X					
8 BH203-0.8-1.0			1	14:45								X
9 BH204-0.1-0.8			1	14:50			X					
10 BH204-0.8-1.0			1	14:55								X

Comments:	Method of Delivery Drop Box
Relinquished By (Sign): Keri's Daughter	Received at Depot: Keri's Daughter
Relinquished By (Print): Keri's Daughter	Received at Lab: SS
Date/Time: 05/06/24 @ 10:50	Date/Time: May 06 2024 11:08
Temperature: 10.9 °C	Temperature: 7 May 24 1055 8.8, 7.4 °C
Chain of Custody (Error) xix	Verified By: Kerry Capes May 06 12:06
	pH Verified: ☐ By:



Parcel ID: 2419033

Parcel Order Number
(Lab Use Only)

2419033

Chain of Custody
(Lab Use Only)

No 144660

Client Name:	Project Ref:	Page 3 of 3
Contact Name:	Quote #:	Turnaround Time ☐ 1 day ☐ 3 day ☐ 2 day ☐ Regular Date Required: _____
Address:	PO #:	
Telephone:	E-mail: See 1st sheet	

☐ REG 153/04 ☐ REG 406/19		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water)		Required Analysis									
☐ Table 1 ☐ Res/Park ☐ Med/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☐ Table _____ For RSC: ☐ Yes ☐ No		☐ REG 558 ☐ PWQO ☐ CCME ☐ MISA ☐ SU - Sani ☐ SU-Storm Mun: _____ ☐ Other		SW (Surface Water) SS (Storm/Sanitary Sewer) P (paint) A (Air) O (Other)											
Sample ID/Location Name		Matrix	Air Volume	# of Containers	Sample Taken	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)			
					Date Time										
1	QAGC6	S		1	05/02/24			X							
2	QAGC7	S		2	"	X									
3	QAGC8	S		1	"				X	X					
4															
5															
6															
7															
8															
9															
10															

Comments:				Method of Delivery: Drop Box			
Relinquished By (Sign): <i>Kels. Douglas</i>		Received at Depot: <i>CRK</i>		Received at Lab: <i>SS</i>		Verified By: <i>Deven Capper</i>	
Relinquished By (Print): Kels. Douglas		Date/Time: May 06, 2024 11:08		Date/Time: May 24 1055		Date/Time: May 06 12:00	
Date/Time: 05/06/24 @ 10:50		Temperature: 10.9 °C		Temperature: 8-8 7.4		pH Viewed: ☐ 0	

Chain of Custody (Env) xlsx



300 - 2319 St. Laurent Blvd
Ottawa, ON, K1G 4J8
1-800-749-1947
www.paracellabs.com

Certificate of Analysis

Cambium Inc. (Kingston)
625 Fortune Cres
Kingston, ON K7P 0L5
Attn: Laura Fitzgerald

Client PO:
Project: 17181-001
Custody: 142074

Report Date: 18-Oct-2023
Order Date: 11-Oct-2023

Order #: 2341193

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2341193-01	BH107
2341193-02	BH101
2341193-03	BH104
2341193-04	QAQC-GW1
2341193-05	QAQC-GW2
2341193-06	QAQC-GW3
2341193-07	Trip Blank

Approved By:

A blue ink signature of Dale Robertson, Laboratory Director.

Dale Robertson, BSc
Laboratory Director



Order #: 2341193

Certificate of Analysis

Report Date: 18-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 11-Oct-2023

Client PO:

Project Description: 17181-001

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 624 - P&T GC-MS	13-Oct-23	13-Oct-23
Chromium, hexavalent - water	MOE E3056 - colourimetric	16-Oct-23	16-Oct-23
Metals, ICP-MS	EPA 200.8 - ICP-MS	13-Oct-23	13-Oct-23
PHC F1	CWS Tier 1 - P&T GC-FID	13-Oct-23	13-Oct-23
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	13-Oct-23	14-Oct-23
REG 153: PAHs by GC-MS	EPA 625 - GC-MS, extraction	16-Oct-23	17-Oct-23
REG 153: VOCs by P&T GC/MS	EPA 624 - P&T GC-MS	13-Oct-23	13-Oct-23

Certificate of Analysis

Report Date: 18-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 11-Oct-2023

Client PO:

Project Description: 17181-001

Client ID:	BH107	BH101	BH104	QAQC-GW1		
Sample Date:	11-Oct-23 10:05	11-Oct-23 11:18	11-Oct-23 13:08	11-Oct-23 09:00	-	-
Sample ID:	2341193-01	2341193-02	2341193-03	2341193-04		
Matrix:	Ground Water	Ground Water	Ground Water	Ground Water		
MDL/Units						

Metals

Antimony	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Arsenic	1 ug/L	<1	<1	<1	<1	-	-
Barium	1 ug/L	190	160	281	160	-	-
Beryllium	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Boron	10 ug/L	131	31	26	32	-	-
Cadmium	0.1 ug/L	0.1	<0.1	<0.1	<0.1	-	-
Chromium	1 ug/L	<1	<1	<1	<1	-	-
Chromium (VI)	10 ug/L	-	-	<10	-	-	-
Cobalt	0.5 ug/L	6.0	<0.5	<0.5	<0.5	-	-
Copper	0.5 ug/L	5.3	0.6	0.8	0.8	-	-
Lead	0.1 ug/L	0.3	<0.1	<0.1	<0.1	-	-
Molybdenum	0.5 ug/L	45.4	0.8	1.5	<0.5	-	-
Nickel	1 ug/L	10	<1	<1	<1	-	-
Selenium	1 ug/L	<1	<1	<1	<1	-	-
Silver	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-
Sodium	200 ug/L	30600	42800	14800	42900	-	-
Thallium	0.1 ug/L	0.1	<0.1	<0.1	<0.1	-	-
Uranium	0.1 ug/L	0.9	1.3	0.5	1.3	-	-
Vanadium	0.5 ug/L	0.5	<0.5	<0.5	<0.5	-	-
Zinc	5 ug/L	10	<5	<5	<5	-	-

Volatiles

Acetone	5.0 ug/L	<5.0	-	<5.0	-	-	-
Benzene	0.5 ug/L	<0.5	-	<0.5	-	-	-
Bromodichloromethane	0.5 ug/L	<0.5	-	<0.5	-	-	-
Bromoform	0.5 ug/L	<0.5	-	<0.5	-	-	-

Certificate of Analysis

Report Date: 18-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 11-Oct-2023

Client PO:

Project Description: 17181-001

Client ID:	BH107	BH101	BH104	QAQC-GW1		
Sample Date:	11-Oct-23 10:05	11-Oct-23 11:18	11-Oct-23 13:08	11-Oct-23 09:00	-	-
Sample ID:	2341193-01	2341193-02	2341193-03	2341193-04		
Matrix:	Ground Water	Ground Water	Ground Water	Ground Water		
MDL/Units						

Volatiles

Bromomethane	0.5 ug/L	<0.5	-	<0.5	-	-
Carbon Tetrachloride	0.2 ug/L	<0.2	-	<0.2	-	-
Chlorobenzene	0.5 ug/L	<0.5	-	<0.5	-	-
Chloroform	0.5 ug/L	<0.5	-	<0.5	-	-
Dibromochloromethane	0.5 ug/L	<0.5	-	<0.5	-	-
Dichlorodifluoromethane	1.0 ug/L	<1.0	-	<1.0	-	-
1,2-Dichlorobenzene	0.5 ug/L	<0.5	-	<0.5	-	-
1,3-Dichlorobenzene	0.5 ug/L	<0.5	-	<0.5	-	-
1,4-Dichlorobenzene	0.5 ug/L	<0.5	-	<0.5	-	-
1,1-Dichloroethane	0.5 ug/L	<0.5	-	<0.5	-	-
1,2-Dichloroethane	0.5 ug/L	<0.5	-	<0.5	-	-
1,1-Dichloroethylene	0.5 ug/L	<0.5	-	<0.5	-	-
cis-1,2-Dichloroethylene	0.5 ug/L	<0.5	-	<0.5	-	-
trans-1,2-Dichloroethylene	0.5 ug/L	<0.5	-	<0.5	-	-
1,2-Dichloropropane	0.5 ug/L	<0.5	-	<0.5	-	-
cis-1,3-Dichloropropylene	0.5 ug/L	<0.5	-	<0.5	-	-
trans-1,3-Dichloropropylene	0.5 ug/L	<0.5	-	<0.5	-	-
1,3-Dichloropropene, total	0.5 ug/L	<0.5	-	<0.5	-	-
Ethylbenzene	0.5 ug/L	<0.5	-	<0.5	-	-
Ethylene dibromide (dibromoethane,	0.2 ug/L	<0.2	-	<0.2	-	-
Hexane	1.0 ug/L	<1.0	-	<1.0	-	-
Methyl Ethyl Ketone (2-Butanone)	5.0 ug/L	<5.0	-	<5.0	-	-
Methyl Isobutyl Ketone	5.0 ug/L	<5.0	-	<5.0	-	-
Methyl tert-butyl ether	2.0 ug/L	<2.0	-	<2.0	-	-
Methylene Chloride	5.0 ug/L	<5.0	-	<5.0	-	-

Certificate of Analysis

Report Date: 18-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 11-Oct-2023

Client PO:

Project Description: 17181-001

Client ID:	BH107	BH101	BH104	QAQC-GW1		
Sample Date:	11-Oct-23 10:05	11-Oct-23 11:18	11-Oct-23 13:08	11-Oct-23 09:00	-	-
Sample ID:	2341193-01	2341193-02	2341193-03	2341193-04		
Matrix:	Ground Water	Ground Water	Ground Water	Ground Water		
MDL/Units						

Volatiles

Styrene	0.5 ug/L	<0.5	-	<0.5	-	-
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5	-	<0.5	-	-
1,1,2,2-Tetrachloroethane	0.5 ug/L	<0.5	-	<0.5	-	-
Tetrachloroethylene	0.5 ug/L	<0.5	-	<0.5	-	-
Toluene	0.5 ug/L	<0.5	-	<0.5	-	-
1,1,1-Trichloroethane	0.5 ug/L	<0.5	-	<0.5	-	-
1,1,2-Trichloroethane	0.5 ug/L	<0.5	-	<0.5	-	-
Trichloroethylene	0.5 ug/L	<0.5	-	<0.5	-	-
Trichlorofluoromethane	1.0 ug/L	<1.0	-	<1.0	-	-
Vinyl chloride	0.5 ug/L	<0.5	-	<0.5	-	-
m,p-Xylenes	0.5 ug/L	<0.5	-	<0.5	-	-
o-Xylene	0.5 ug/L	<0.5	-	<0.5	-	-
Xylenes, total	0.5 ug/L	<0.5	-	<0.5	-	-
4-Bromofluorobenzene	Surrogate	122%	-	115%	-	-
Toluene-d8	Surrogate	115%	-	111%	-	-
Dibromofluoromethane	Surrogate	87.6%	-	77.9%	-	-
Benzene	0.5 ug/L	-	<0.5	-	<0.5	-
Ethylbenzene	0.5 ug/L	-	<0.5	-	<0.5	-
Toluene	0.5 ug/L	-	<0.5	-	<0.5	-
m,p-Xylenes	0.5 ug/L	-	<0.5	-	<0.5	-
o-Xylene	0.5 ug/L	-	<0.5	-	<0.5	-
Xylenes, total	0.5 ug/L	-	<0.5	-	<0.5	-
Toluene-d8	Surrogate	-	117%	-	113%	-

Hydrocarbons

F1 PHCs (C6-C10)	25 ug/L	<25	<25	-	<25	-
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Order #: 2341193

Certificate of Analysis

Report Date: 18-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 11-Oct-2023

Client PO:

Project Description: 17181-001

Client ID:	BH107	BH101	BH104	QAQC-GW1		
Sample Date:	11-Oct-23 10:05	11-Oct-23 11:18	11-Oct-23 13:08	11-Oct-23 09:00	-	-
Sample ID:	2341193-01	2341193-02	2341193-03	2341193-04		
Matrix:	Ground Water	Ground Water	Ground Water	Ground Water		
MDL/Units						

Hydrocarbons

F2 PHCs (C10-C16)	100 ug/L	<100	<100	-	<100	-	-
F3 PHCs (C16-C34)	100 ug/L	<100	<100	-	<100	-	-
F4 PHCs (C34-C50)	100 ug/L	<100	<100	-	<100	-	-

Semi-Volatiles

Acenaphthene	0.05 ug/L	<0.05	<0.05	-	<0.05	-	-
Acenaphthylene	0.05 ug/L	<0.05	<0.05	-	<0.05	-	-
Anthracene	0.01 ug/L	<0.01	<0.01	-	<0.01	-	-
Benzo [a] anthracene	0.01 ug/L	<0.01	<0.01	-	<0.01	-	-
Benzo [a] pyrene	0.01 ug/L	<0.01	<0.01	-	<0.01	-	-
Benzo [b] fluoranthene	0.05 ug/L	<0.05	<0.05	-	<0.05	-	-
Benzo [g,h,i] perylene	0.05 ug/L	<0.05	<0.05	-	<0.05	-	-
Benzo [k] fluoranthene	0.05 ug/L	<0.05	<0.05	-	<0.05	-	-
Chrysene	0.05 ug/L	<0.05	<0.05	-	<0.05	-	-
Dibenzo [a,h] anthracene	0.05 ug/L	<0.05	<0.05	-	<0.05	-	-
Fluoranthene	0.01 ug/L	<0.01	<0.01	-	<0.01	-	-
Fluorene	0.05 ug/L	<0.05	<0.05	-	<0.05	-	-
Indeno [1,2,3-cd] pyrene	0.05 ug/L	<0.05	<0.05	-	<0.05	-	-
1-Methylnaphthalene	0.05 ug/L	<0.05	<0.05	-	<0.05	-	-
2-Methylnaphthalene	0.05 ug/L	<0.05	<0.05	-	<0.05	-	-
Methylnaphthalene (1&2)	0.10 ug/L	<0.10	<0.10	-	<0.10	-	-
Naphthalene	0.05 ug/L	<0.05	<0.05	-	<0.05	-	-
Phenanthrene	0.05 ug/L	<0.05	<0.05	-	<0.05	-	-
Pyrene	0.01 ug/L	<0.01	<0.01	-	<0.01	-	-
2-Fluorobiphenyl	Surrogate	69.1%	72.5%	-	65.7%	-	-
Terphenyl-d14	Surrogate	80.6%	71.7%	-	70.9%	-	-



Order #: 2341193

Certificate of Analysis

Report Date: 18-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 11-Oct-2023

Client PO:

Project Description: 17181-001

Client ID:	QAQC-GW2	QAQC-GW3	Trip Blank		
Sample Date:	11-Oct-23 09:00	11-Oct-23 09:00	20-Sep-23 16:00	-	-
Sample ID:	2341193-05	2341193-06	2341193-07		
Matrix:	Ground Water	Ground Water	Ground Water		
MDL/Units					

Metals

Chromium (VI)	10 ug/L	-	<10	-	-	-	-
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Volatiles

Acetone	5.0 ug/L	<5.0	-	<5.0	-	-	-
Benzene	0.5 ug/L	<0.5	-	<0.5	-	-	-
Bromodichloromethane	0.5 ug/L	<0.5	-	<0.5	-	-	-
Bromoform	0.5 ug/L	<0.5	-	<0.5	-	-	-
Bromomethane	0.5 ug/L	<0.5	-	<0.5	-	-	-
Carbon Tetrachloride	0.2 ug/L	<0.2	-	<0.2	-	-	-
Chlorobenzene	0.5 ug/L	<0.5	-	<0.5	-	-	-
Chloroform	0.5 ug/L	<0.5	-	<0.5	-	-	-
Dibromochloromethane	0.5 ug/L	<0.5	-	<0.5	-	-	-
Dichlorodifluoromethane	1.0 ug/L	<1.0	-	<1.0	-	-	-
1,2-Dichlorobenzene	0.5 ug/L	<0.5	-	<0.5	-	-	-
1,3-Dichlorobenzene	0.5 ug/L	<0.5	-	<0.5	-	-	-
1,4-Dichlorobenzene	0.5 ug/L	<0.5	-	<0.5	-	-	-
1,1-Dichloroethane	0.5 ug/L	<0.5	-	<0.5	-	-	-
1,2-Dichloroethane	0.5 ug/L	<0.5	-	<0.5	-	-	-
1,1-Dichloroethylene	0.5 ug/L	<0.5	-	<0.5	-	-	-
cis-1,2-Dichloroethylene	0.5 ug/L	<0.5	-	<0.5	-	-	-
trans-1,2-Dichloroethylene	0.5 ug/L	<0.5	-	<0.5	-	-	-
1,2-Dichloropropane	0.5 ug/L	<0.5	-	<0.5	-	-	-
cis-1,3-Dichloropropylene	0.5 ug/L	<0.5	-	<0.5	-	-	-
trans-1,3-Dichloropropylene	0.5 ug/L	<0.5	-	<0.5	-	-	-
1,3-Dichloropropene, total	0.5 ug/L	<0.5	-	<0.5	-	-	-
Ethylbenzene	0.5 ug/L	<0.5	-	<0.5	-	-	-



Order #: 2341193

Certificate of Analysis

Report Date: 18-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 11-Oct-2023

Client PO:

Project Description: 17181-001

Client ID:	QAQC-GW2	QAQC-GW3	Trip Blank		
Sample Date:	11-Oct-23 09:00	11-Oct-23 09:00	20-Sep-23 16:00		
Sample ID:	2341193-05	2341193-06	2341193-07		
Matrix:	Ground Water	Ground Water	Ground Water		
MDL/Units					

Volatiles

Ethylene dibromide (dibromoethane,	0.2 ug/L	<0.2	-	<0.2	-	-
Hexane	1.0 ug/L	<1.0	-	<1.0	-	-
Methyl Ethyl Ketone (2-Butanone)	5.0 ug/L	<5.0	-	<5.0	-	-
Methyl Isobutyl Ketone	5.0 ug/L	<5.0	-	<5.0	-	-
Methyl tert-butyl ether	2.0 ug/L	<2.0	-	<2.0	-	-
Methylene Chloride	5.0 ug/L	<5.0	-	<5.0	-	-
Styrene	0.5 ug/L	<0.5	-	<0.5	-	-
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5	-	<0.5	-	-
1,1,2,2-Tetrachloroethane	0.5 ug/L	<0.5	-	<0.5	-	-
Tetrachloroethylene	0.5 ug/L	<0.5	-	<0.5	-	-
Toluene	0.5 ug/L	<0.5	-	<0.5	-	-
1,1,1-Trichloroethane	0.5 ug/L	<0.5	-	<0.5	-	-
1,1,2-Trichloroethane	0.5 ug/L	<0.5	-	<0.5	-	-
Trichloroethylene	0.5 ug/L	<0.5	-	<0.5	-	-
Trichlorofluoromethane	1.0 ug/L	<1.0	-	<1.0	-	-
Vinyl chloride	0.5 ug/L	<0.5	-	<0.5	-	-
m,p-Xylenes	0.5 ug/L	<0.5	-	<0.5	-	-
o-Xylene	0.5 ug/L	<0.5	-	<0.5	-	-
Xylenes, total	0.5 ug/L	<0.5	-	<0.5	-	-
Toluene-d8	Surrogate	121%	-	115%	-	-
4-Bromofluorobenzene	Surrogate	125%	-	113%	-	-
Dibromofluoromethane	Surrogate	50.4%	-	80.9%	-	-

Certificate of Analysis

Report Date: 18-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 11-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons								
F1 PHCs (C6-C10)	ND	25	ug/L					
F2 PHCs (C10-C16)	ND	100	ug/L					
F3 PHCs (C16-C34)	ND	100	ug/L					
F4 PHCs (C34-C50)	ND	100	ug/L					
Metals								
Antimony	ND	0.5	ug/L					
Arsenic	ND	1	ug/L					
Barium	ND	1	ug/L					
Beryllium	ND	0.5	ug/L					
Boron	ND	10	ug/L					
Cadmium	ND	0.1	ug/L					
Chromium (VI)	ND	10	ug/L					
Chromium	ND	1	ug/L					
Cobalt	ND	0.5	ug/L					
Copper	ND	0.5	ug/L					
Lead	ND	0.1	ug/L					
Molybdenum	ND	0.5	ug/L					
Nickel	ND	1	ug/L					
Selenium	ND	1	ug/L					
Silver	ND	0.1	ug/L					
Sodium	ND	200	ug/L					
Thallium	ND	0.1	ug/L					
Uranium	ND	0.1	ug/L					
Vanadium	ND	0.5	ug/L					
Zinc	ND	5	ug/L					
Semi-Volatiles								
Acenaphthene	ND	0.05	ug/L					
Acenaphthylene	ND	0.05	ug/L					
Anthracene	ND	0.01	ug/L					
Benzo [a] anthracene	ND	0.01	ug/L					
Benzo [a] pyrene	ND	0.01	ug/L					
Benzo [b] fluoranthene	ND	0.05	ug/L					

Certificate of Analysis

Report Date: 18-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 11-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Benzo [g,h,i] perylene	ND	0.05	ug/L					
Benzo [k] fluoranthene	ND	0.05	ug/L					
Chrysene	ND	0.05	ug/L					
Dibenzo [a,h] anthracene	ND	0.05	ug/L					
Fluoranthene	ND	0.01	ug/L					
Fluorene	ND	0.05	ug/L					
Indeno [1,2,3-cd] pyrene	ND	0.05	ug/L					
1-Methylnaphthalene	ND	0.05	ug/L					
2-Methylnaphthalene	ND	0.05	ug/L					
Methylnaphthalene (1&2)	ND	0.10	ug/L					
Naphthalene	ND	0.05	ug/L					
Phenanthrene	ND	0.05	ug/L					
Pyrene	ND	0.01	ug/L					
Surrogate: 2-Fluorobiphenyl	11.8		%	58.9	50-140			
Surrogate: Terphenyl-d14	15.5		%	77.6	50-140			
Volatiles								
Acetone	ND	5.0	ug/L					
Benzene	ND	0.5	ug/L					
Bromodichloromethane	ND	0.5	ug/L					
Bromoform	ND	0.5	ug/L					
Bromomethane	ND	0.5	ug/L					
Carbon Tetrachloride	ND	0.2	ug/L					
Chlorobenzene	ND	0.5	ug/L					
Chloroform	ND	0.5	ug/L					
Dibromochloromethane	ND	0.5	ug/L					
Dichlorodifluoromethane	ND	1.0	ug/L					
1,2-Dichlorobenzene	ND	0.5	ug/L					
1,3-Dichlorobenzene	ND	0.5	ug/L					
1,4-Dichlorobenzene	ND	0.5	ug/L					
1,1-Dichloroethane	ND	0.5	ug/L					
1,2-Dichloroethane	ND	0.5	ug/L					
1,1-Dichloroethylene	ND	0.5	ug/L					

Certificate of Analysis

Report Date: 18-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 11-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
cis-1,2-Dichloroethylene	ND	0.5	ug/L					
trans-1,2-Dichloroethylene	ND	0.5	ug/L					
1,2-Dichloropropane	ND	0.5	ug/L					
cis-1,3-Dichloropropylene	ND	0.5	ug/L					
trans-1,3-Dichloropropylene	ND	0.5	ug/L					
1,3-Dichloropropene, total	ND	0.5	ug/L					
Ethylbenzene	ND	0.5	ug/L					
Ethylene dibromide (dibromoethane, 1,2-)	ND	0.2	ug/L					
Hexane	ND	1.0	ug/L					
Methyl Ethyl Ketone (2-Butanone)	ND	5.0	ug/L					
Methyl Isobutyl Ketone	ND	5.0	ug/L					
Methyl tert-butyl ether	ND	2.0	ug/L					
Methylene Chloride	ND	5.0	ug/L					
Styrene	ND	0.5	ug/L					
1,1,1,2-Tetrachloroethane	ND	0.5	ug/L					
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L					
Tetrachloroethylene	ND	0.5	ug/L					
Toluene	ND	0.5	ug/L					
1,1,1-Trichloroethane	ND	0.5	ug/L					
1,1,2-Trichloroethane	ND	0.5	ug/L					
Trichloroethylene	ND	0.5	ug/L					
Trichlorofluoromethane	ND	1.0	ug/L					
Vinyl chloride	ND	0.5	ug/L					
m,p-Xylenes	ND	0.5	ug/L					
o-Xylene	ND	0.5	ug/L					
Xylenes, total	ND	0.5	ug/L					
Surrogate: 4-Bromofluorobenzene	93.8		%	117	50-140			
Surrogate: Dibromofluoromethane	65.6		%	82.0	50-140			
Surrogate: Toluene-d8	91.2		%	114	50-140			
Benzene	ND	0.5	ug/L					
Ethylbenzene	ND	0.5	ug/L					
Toluene	ND	0.5	ug/L					



Order #: 2341193

Certificate of Analysis

Report Date: 18-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 11-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
m,p-Xylenes	ND	0.5	ug/L					
o-Xylene	ND	0.5	ug/L					
Xylenes, total	ND	0.5	ug/L					
Surrogate: Toluene-d8	91.2		%	114	50-140			

Certificate of Analysis

Report Date: 18-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 11-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	25	ug/L	ND			NC	30	
Metals									
Antimony	ND	0.5	ug/L	ND			NC	20	
Arsenic	ND	1	ug/L	ND			NC	20	
Barium	21.7	1	ug/L	22.5			3.3	20	
Beryllium	ND	0.5	ug/L	ND			NC	20	
Boron	19	10	ug/L	20			3.1	20	
Cadmium	ND	0.1	ug/L	ND			NC	20	
Chromium (VI)	ND	10	ug/L	ND			NC	20	
Chromium	ND	1	ug/L	ND			NC	20	
Cobalt	ND	0.5	ug/L	ND			NC	20	
Copper	1.42	0.5	ug/L	1.46			2.2	20	
Lead	ND	0.1	ug/L	ND			NC	20	
Molybdenum	1.01	0.5	ug/L	1.11			9.4	20	
Nickel	ND	1	ug/L	ND			NC	20	
Selenium	ND	1	ug/L	ND			NC	20	
Silver	ND	0.1	ug/L	ND			NC	20	
Sodium	16200	200	ug/L	16100			0.5	20	
Thallium	ND	0.1	ug/L	ND			NC	20	
Uranium	ND	0.1	ug/L	ND			NC	20	
Vanadium	ND	0.5	ug/L	ND			NC	20	
Zinc	5	5	ug/L	6			7.5	20	
Volatiles									
Acetone	ND	5.0	ug/L	ND			NC	30	
Benzene	ND	0.5	ug/L	ND			NC	30	
Bromodichloromethane	ND	0.5	ug/L	ND			NC	30	
Bromoform	ND	0.5	ug/L	ND			NC	30	
Bromomethane	ND	0.5	ug/L	ND			NC	30	
Carbon Tetrachloride	ND	0.2	ug/L	ND			NC	30	
Chlorobenzene	ND	0.5	ug/L	ND			NC	30	

Certificate of Analysis

Report Date: 18-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 11-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Chloroform	ND	0.5	ug/L	ND			NC	30	
Dibromochloromethane	ND	0.5	ug/L	ND			NC	30	
Dichlorodifluoromethane	ND	1.0	ug/L	ND			NC	30	
1,2-Dichlorobenzene	ND	0.5	ug/L	ND			NC	30	
1,3-Dichlorobenzene	ND	0.5	ug/L	ND			NC	30	
1,4-Dichlorobenzene	ND	0.5	ug/L	ND			NC	30	
1,1-Dichloroethane	ND	0.5	ug/L	ND			NC	30	
1,2-Dichloroethane	ND	0.5	ug/L	ND			NC	30	
1,1-Dichloroethylene	ND	0.5	ug/L	ND			NC	30	
cis-1,2-Dichloroethylene	ND	0.5	ug/L	ND			NC	30	
trans-1,2-Dichloroethylene	ND	0.5	ug/L	ND			NC	30	
1,2-Dichloropropane	ND	0.5	ug/L	ND			NC	30	
cis-1,3-Dichloropropylene	ND	0.5	ug/L	ND			NC	30	
trans-1,3-Dichloropropylene	ND	0.5	ug/L	ND			NC	30	
Ethylbenzene	1.49	0.5	ug/L	1.52			2.0	30	
Ethylene dibromide (dibromoethane, 1,2-)	ND	0.2	ug/L	ND			NC	30	
Hexane	ND	1.0	ug/L	ND			NC	30	
Methyl Ethyl Ketone (2-Butanone)	ND	5.0	ug/L	ND			NC	30	
Methyl Isobutyl Ketone	ND	5.0	ug/L	ND			NC	30	
Methyl tert-butyl ether	ND	2.0	ug/L	ND			NC	30	
Methylene Chloride	ND	5.0	ug/L	ND			NC	30	
Styrene	ND	0.5	ug/L	ND			NC	30	
1,1,1,2-Tetrachloroethane	ND	0.5	ug/L	ND			NC	30	
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L	ND			NC	30	
Tetrachloroethylene	ND	0.5	ug/L	ND			NC	30	
Toluene	ND	0.5	ug/L	ND			NC	30	
1,1,1-Trichloroethane	ND	0.5	ug/L	ND			NC	30	
1,1,2-Trichloroethane	ND	0.5	ug/L	ND			NC	30	
Trichloroethylene	ND	0.5	ug/L	ND			NC	30	
Trichlorofluoromethane	ND	1.0	ug/L	ND			NC	30	
Vinyl chloride	ND	0.5	ug/L	ND			NC	30	

Certificate of Analysis

Report Date: 18-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 11-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
m,p-Xylenes	2.83	0.5	ug/L	2.96			4.5	30	
o-Xylene	ND	0.5	ug/L	ND			NC	30	
Surrogate: 4-Bromofluorobenzene	82.7		%		103	50-140			
Surrogate: Dibromofluoromethane	69.8		%		87.3	50-140			
Surrogate: Toluene-d8	89.3		%		112	50-140			
Benzene	ND	0.5	ug/L	ND			NC	30	
Ethylbenzene	1.49	0.5	ug/L	1.52			2.0	30	
Toluene	ND	0.5	ug/L	ND			NC	30	
m,p-Xylenes	2.83	0.5	ug/L	2.96			4.5	30	
o-Xylene	ND	0.5	ug/L	ND			NC	30	
Surrogate: Toluene-d8	89.3		%		112	50-140			

Certificate of Analysis

Report Date: 18-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 11-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	1970	25	ug/L	ND	115	85-115			
F2 PHCs (C10-C16)	1460	100	ug/L	ND	91.4	60-140			
F3 PHCs (C16-C34)	4400	100	ug/L	ND	112	60-140			
F4 PHCs (C34-C50)	2580	100	ug/L	ND	104	60-140			
Metals									
Arsenic	52.5	1	ug/L	ND	104	80-120			
Barium	68.1	1	ug/L	22.5	91.2	80-120			
Beryllium	49.3	0.5	ug/L	ND	98.6	80-120			
Boron	62	10	ug/L	20	84.5	80-120			
Cadmium	49.3	0.1	ug/L	ND	98.6	80-120			
Chromium (VI)	199	10	ug/L	ND	99.5	70-130			
Chromium	53.1	1	ug/L	ND	106	80-120			
Cobalt	51.0	0.5	ug/L	ND	102	80-120			
Copper	49.4	0.5	ug/L	1.46	96.0	80-120			
Lead	45.9	0.1	ug/L	ND	91.6	80-120			
Molybdenum	46.3	0.5	ug/L	1.11	90.3	80-120			
Nickel	50.2	1	ug/L	ND	99.5	80-120			
Selenium	47.6	1	ug/L	ND	94.9	80-120			
Silver	47.8	0.1	ug/L	ND	95.7	80-120			
Sodium	24600	200	ug/L	16100	85.1	80-120			
Thallium	46.3	0.1	ug/L	ND	92.5	80-120			
Uranium	47.8	0.1	ug/L	ND	95.5	80-120			
Vanadium	53.2	0.5	ug/L	ND	106	80-120			
Zinc	52	5	ug/L	6	91.6	80-120			
Semi-Volatiles									
Acenaphthene	4.59	0.05	ug/L	ND	91.9	50-140			
Acenaphthylene	4.89	0.05	ug/L	ND	97.8	50-140			
Anthracene	5.17	0.01	ug/L	ND	103	50-140			
Benzo [a] anthracene	3.91	0.01	ug/L	ND	78.2	50-140			
Benzo [a] pyrene	4.13	0.01	ug/L	ND	82.7	50-140			

Certificate of Analysis

Report Date: 18-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 11-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Benzo [b] fluoranthene	3.35	0.05	ug/L	ND	66.9	50-140			
Benzo [g,h,i] perylene	3.04	0.05	ug/L	ND	60.8	50-140			
Benzo [k] fluoranthene	3.73	0.05	ug/L	ND	74.7	50-140			
Chrysene	4.31	0.05	ug/L	ND	86.2	50-140			
Dibenzo [a,h] anthracene	3.17	0.05	ug/L	ND	63.4	50-140			
Fluoranthene	4.93	0.01	ug/L	ND	98.6	50-140			
Fluorene	4.29	0.05	ug/L	ND	85.8	50-140			
Indeno [1,2,3-cd] pyrene	3.32	0.05	ug/L	ND	66.5	50-140			
1-Methylnaphthalene	3.22	0.05	ug/L	ND	64.4	50-140			
2-Methylnaphthalene	3.43	0.05	ug/L	ND	68.7	50-140			
Naphthalene	4.18	0.05	ug/L	ND	83.6	50-140			
Phenanthrene	4.81	0.05	ug/L	ND	96.2	50-140			
Pyrene	5.24	0.01	ug/L	ND	105	50-140			
Surrogate: 2-Fluorobiphenyl	11.4		%		56.9	50-140			
Surrogate: Terphenyl-d14	13.7		%		68.5	50-140			
Volatiles									
Acetone	118	5.0	ug/L	ND	118	50-140			
Benzene	40.5	0.5	ug/L	ND	101	60-130			
Bromodichloromethane	45.4	0.5	ug/L	ND	114	60-130			
Bromoform	46.6	0.5	ug/L	ND	117	60-130			
Bromomethane	42.3	0.5	ug/L	ND	106	50-140			
Carbon Tetrachloride	47.2	0.2	ug/L	ND	118	60-130			
Chlorobenzene	43.5	0.5	ug/L	ND	109	60-130			
Chloroform	43.4	0.5	ug/L	ND	108	60-130			
Dibromochloromethane	45.4	0.5	ug/L	ND	113	60-130			
Dichlorodifluoromethane	35.2	1.0	ug/L	ND	88.1	50-140			
1,2-Dichlorobenzene	42.8	0.5	ug/L	ND	107	60-130			
1,3-Dichlorobenzene	42.1	0.5	ug/L	ND	105	60-130			
1,4-Dichlorobenzene	42.7	0.5	ug/L	ND	107	60-130			
1,1-Dichloroethane	41.6	0.5	ug/L	ND	104	60-130			
1,2-Dichloroethane	48.9	0.5	ug/L	ND	122	60-130			

Certificate of Analysis

Report Date: 18-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 11-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
1,1-Dichloroethylene	36.9	0.5	ug/L	ND	92.3	60-130			
cis-1,2-Dichloroethylene	38.5	0.5	ug/L	ND	96.4	60-130			
trans-1,2-Dichloroethylene	37.6	0.5	ug/L	ND	93.9	60-130			
1,2-Dichloropropane	34.4	0.5	ug/L	ND	86.0	60-130			
cis-1,3-Dichloropropylene	39.5	0.5	ug/L	ND	98.6	60-130			
trans-1,3-Dichloropropylene	42.4	0.5	ug/L	ND	106	60-130			
Ethylbenzene	42.6	0.5	ug/L	ND	107	60-130			
Ethylene dibromide (dibromoethane, 1,2-)	38.3	0.2	ug/L	ND	95.8	60-130			
Hexane	37.6	1.0	ug/L	ND	94.1	60-130			
Methyl Ethyl Ketone (2-Butanone)	124	5.0	ug/L	ND	124	50-140			
Methyl Isobutyl Ketone	117	5.0	ug/L	ND	117	50-140			
Methyl tert-butyl ether	113	2.0	ug/L	ND	113	50-140			
Methylene Chloride	40.7	5.0	ug/L	ND	102	60-130			
Styrene	46.1	0.5	ug/L	ND	115	60-130			
1,1,1,2-Tetrachloroethane	45.6	0.5	ug/L	ND	114	60-130			
1,1,2,2-Tetrachloroethane	40.6	0.5	ug/L	ND	101	60-130			
Tetrachloroethylene	44.3	0.5	ug/L	ND	111	60-130			
Toluene	43.9	0.5	ug/L	ND	110	60-130			
1,1,1-Trichloroethane	46.1	0.5	ug/L	ND	115	60-130			
1,1,2-Trichloroethane	37.0	0.5	ug/L	ND	92.5	60-130			
Trichloroethylene	39.7	0.5	ug/L	ND	99.3	60-130			
Trichlorofluoromethane	44.4	1.0	ug/L	ND	111	60-130			
Vinyl chloride	44.7	0.5	ug/L	ND	112	50-140			
m,p-Xylenes	95.4	0.5	ug/L	ND	119	60-130			
o-Xylene	47.4	0.5	ug/L	ND	119	60-130			
Surrogate: 4-Bromofluorobenzene	74.4		%		93.0	50-140			
Surrogate: Dibromofluoromethane	73.1		%		91.4	50-140			
Surrogate: Toluene-d8	69.3		%		86.6	50-140			
Benzene	40.5	0.5	ug/L	ND	101	60-130			
Ethylbenzene	42.6	0.5	ug/L	ND	107	60-130			
Toluene	43.9	0.5	ug/L	ND	110	60-130			



Order #: 2341193

Certificate of Analysis

Report Date: 18-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 11-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
m,p-Xylenes	95.4	0.5	ug/L	ND	119	60-130			
o-Xylene	47.4	0.5	ug/L	ND	119	60-130			
Surrogate: Toluene-d8	69.3		%		86.6	50-140			



Order #: 2341193

Certificate of Analysis

Report Date: 18-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 11-Oct-2023

Client PO:

Project Description: 17181-001

Qualifier Notes:

Sample Data Revisions:

None

Work Order Revisions / Comments:

The Sample Date for lab provided Trip QC samples is based on the date of preparation at the lab.

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

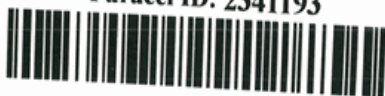
CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.

Any use of these results implies your agreement that our total liability in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.



Parcel ID: 2341193

Parcel Order Number
(Lab Use Only)

2341193

Chain Of Custody

(Lab Use Only)

No 142074

Client Name: <u>Camblum Inc</u>	Project Ref: <u>17181-001</u>	Page <u>1</u> of <u>1</u>
Contact Name: <u>Laura Fitzgerald</u>	Quote #:	Turnaround Time ☐ 1 day ☐ 3 day ☐ 2 day ☒ Regular
Address: <u>625 Fortune cres, Kingston</u> <u>unit 1</u>	PO #:	
Telephone: <u>866-217-7900</u>	E-mail: <u>laura.fitzgerald@camblum-inc.com</u> <u>kelsi.dougherty@camblum-inc.com</u>	
Date Required: _____		

☒ REG 153/04 ☐ REG 406/19 Other Regulation ☐ Table 1 ☐ Res/Park ☐ Med/Fine ☐ REG 558 ☐ PWQO ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ CCME ☐ MISA ☐ Table 3 ☐ Agri/Other ☐ Table _____ For RSC: ☒ Yes ☐ No ☐ Other: _____		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)		Required Analysis														
Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken		PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)						
				Date	Time													
1 BH107	GW		5	11/10/23	10:05	X	X	X	X									
2 BH101	GW		3	"	11:18	X		X	X									
3 BH104	GW		4	"	13:08		X		X		X							
4																		
5 QAQC-GW1	GW		3			X		X	X									
6 QAQC-GW2	GW		2				X											
7 QAQC-GW3	GW		1								X							
8 Trip Blank	GW		2	Sep 20, 2023			X											
9																		
10																		

Comments:		Method of Delivery: <u>Drop Box</u>	
Relinquished By (Sign): <u>[Signature]</u>	Received By Driver/Depot: <u>[Signature]</u>	Received at Lab: <u>SO</u>	Verified By: <u>[Signature]</u>
Relinquished By (Print): <u>Kelsi dougherty</u>	Date/Time: <u>October 11, 2023 16:10</u>	Date/Time: <u>Oct 13, 2023 4:38pm</u>	Date/Time: <u>Oct 12 11:55</u>
Date/Time: <u>11/10/23 @ 16:56</u>	Temperature: <u>15.4 °C</u>	Temperature: <u>4.7 °C</u>	pH Verified: ☒ By: <u>[Signature]</u>



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Certificate of Analysis

Cambium Inc. (Kingston)

625 Fortune Cres
Kingston, ON K7P 0L5
Attn: Laura Fitzgerald

Client PO:
Project: 17181-001
Custody: 142103

Report Date: 16-Oct-2023
Order Date: 13-Oct-2023

Order #: 2341321

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2341321-01	BH101
2341321-02	QAQC-GW4

Approved By:

A handwritten signature in blue ink, appearing to read 'D. Robertson', is shown within a rectangular box.

Dale Robertson, BSc
Laboratory Director

Any use of these results implies your agreement that our total liability in connection with this work, however arising shall be limited to the amount paid by you for this work, and that our employees or agents shall not under circumstances be liable to you in connection with this work

Certificate of Analysis

Report Date: 16-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 13-Oct-2023

Client PO:

Project Description: 17181-001

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Mercury by CVAA	EPA 245.2 - Cold Vapour AA	16-Oct-23	16-Oct-23

Qualifier Notes:

None

Sample Data Revisions

None

Work Order Revisions/Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.



Order #: 2341321

Certificate of Analysis

Client: Cambium Inc. (Kingston)

Client PO:

Report Date: 16-Oct-2023

Order Date: 13-Oct-2023

Project Description: 17181-001

Sample Results

Mercury						Matrix: Ground Water	
Paracel ID	Client ID	Sample Date	Units	MDL	Result		
2341321-01	BH101	13-Oct-23	ug/L	0.1	<0.1		
2341321-02	QAQC-GW4	13-Oct-23	ug/L	0.1	<0.1		

Laboratory Internal QA/QC

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Matrix Blank									
Mercury	ND	0.1	ug/L						
Matrix Duplicate									
Mercury	ND	0.1	ug/L	ND			NC	20	
Matrix Spike									
Mercury	2.58	0.1	ug/L	ND	85.9	70-130			


Parcel ID: 2341321

Parcel Order Number
(Lab Use Only)

2341321

Chain Of Custody
(Lab Use Only)

No 142103

Client Name: Cambium inc.	Project Ref: 17181-001	Page 1 of 1
Contact Name: Laura Fitzgerald.	Quote #:	Turnaround Time ☐ 1 day ☐ 3 day ☐ 2 day ☒ Regular
Address: 625 Fortune Cres, Kingston Unit 1	PO #:	
Telephone: 866-217-7900	E-mail: Laura.Fitzgerald@cambium-inc.com Kelsi.doughty@cambium-inc.com	
Date Required: _____		

☐ REG 153/04 ☐ REG 406/19 ☐ Table 1 ☐ Res/Park ☐ Med/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☐ Table _____ For RSC ☒ Yes ☐ No		Other Regulation ☐ REG 558 ☐ PWQO ☐ CCME ☐ MISA ☐ SU - Sani ☐ SU - Storm Mun: _____ ☐ Other: _____		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)		Required Analysis PHCs F1-F4+BTEX VOCs PAHs Metals by ICP Hg CrVI B (HWS)														
Sample ID/Location Name		Matrix	Air Volume	# of Containers	Sample Taken Date Time															
1	BH101	GW		1	13/10/23	7:30														
2	QAGC-GWH	GW		1	13/10/23															
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Comments:		Method of Delivery: drop-box	
Relinquished By (Sign):	Received By Driver/Depot:	Received at (Sign):	Verified By: Kelsi Cooper
Relinquished By (Print): Kelsi Doughty	Date/Time: Oct 13 9:23	Date/Time: Oct 14 2023 13:01	Date/Time: Oct 13 13:01
Date/Time: 13/10/23 @ 9:16	Temperature: 16.4 °C	Temperature: 3.0 °C	pH Verified: ☒ By:

Chain of Custody (Env) xlsx

Revision 4.0



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Certificate of Analysis

Cambium Inc. (Kingston)
625 Fortune Cres
Kingston, ON K7P 0L5
Attn: Laura Fitzgerald

Client PO:
Project: 17181-001
Custody: 142106

Report Date: 20-Oct-2023
Order Date: 16-Oct-2023

Order #: 2342052

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2342052-01	BH109

Approved By:

A blue ink signature, likely of Dale Robertson, is shown on a light blue background.

Dale Robertson, BSc
Laboratory Director



Order #: 2342052

Certificate of Analysis

Report Date: 20-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 16-Oct-2023

Client PO:

Project Description: 17181-001

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 624 - P&T GC-MS	17-Oct-23	17-Oct-23
Metals, ICP-MS	EPA 200.8 - ICP-MS	18-Oct-23	18-Oct-23
PHC F1	CWS Tier 1 - P&T GC-FID	17-Oct-23	17-Oct-23
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	19-Oct-23	20-Oct-23
REG 153: PAHs by GC-MS	EPA 625 - GC-MS, extraction	18-Oct-23	19-Oct-23

Certificate of Analysis

Report Date: 20-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 16-Oct-2023

Client PO:

Project Description: 17181-001

Client ID:	BH109	-	-	-	-
Sample Date:	16-Oct-23 10:55	-	-	-	-
Sample ID:	2342052-01	-	-	-	-
Matrix:	Ground Water	-	-	-	-
MDL/Units					

Metals

Antimony	0.5 ug/L	<0.5	-	-	-	-
Arsenic	1 ug/L	1	-	-	-	-
Barium	1 ug/L	240	-	-	-	-
Beryllium	0.5 ug/L	<0.5	-	-	-	-
Boron	10 ug/L	119	-	-	-	-
Cadmium	0.1 ug/L	<0.1	-	-	-	-
Chromium	1 ug/L	1	-	-	-	-
Cobalt	0.5 ug/L	0.9	-	-	-	-
Copper	0.5 ug/L	2.1	-	-	-	-
Lead	0.1 ug/L	0.1	-	-	-	-
Molybdenum	0.5 ug/L	2.0	-	-	-	-
Nickel	1 ug/L	2	-	-	-	-
Selenium	1 ug/L	2	-	-	-	-
Silver	0.1 ug/L	<0.1	-	-	-	-
Sodium	200 ug/L	32900	-	-	-	-
Thallium	0.1 ug/L	<0.1	-	-	-	-
Uranium	0.1 ug/L	0.8	-	-	-	-
Vanadium	0.5 ug/L	0.6	-	-	-	-
Zinc	5 ug/L	5	-	-	-	-

Volatiles

Benzene	0.5 ug/L	<0.5	-	-	-	-
Ethylbenzene	0.5 ug/L	<0.5	-	-	-	-
Toluene	0.5 ug/L	<0.5	-	-	-	-
m,p-Xylenes	0.5 ug/L	<0.5	-	-	-	-
o-Xylene	0.5 ug/L	<0.5	-	-	-	-

Certificate of Analysis

Report Date: 20-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 16-Oct-2023

Client PO:

Project Description: 17181-001

Client ID:	BH109	-	-	-	-
Sample Date:	16-Oct-23 10:55	-	-	-	-
Sample ID:	2342052-01	-	-	-	-
Matrix:	Ground Water	-	-	-	-
MDL/Units					

Volatiles

Xylenes, total	0.5 ug/L	<0.5	-	-	-	-
Toluene-d8	Surrogate	113%	-	-	-	-

Hydrocarbons

F1 PHCs (C6-C10)	25 ug/L	<25	-	-	-	-
F2 PHCs (C10-C16)	100 ug/L	<100	-	-	-	-
F3 PHCs (C16-C34)	100 ug/L	<100	-	-	-	-
F4 PHCs (C34-C50)	100 ug/L	<100	-	-	-	-

Semi-Volatiles

Acenaphthene	0.05 ug/L	<0.05	-	-	-	-
Acenaphthylene	0.05 ug/L	<0.05	-	-	-	-
Anthracene	0.01 ug/L	<0.01	-	-	-	-
Benzo [a] anthracene	0.01 ug/L	<0.01	-	-	-	-
Benzo [a] pyrene	0.01 ug/L	<0.01	-	-	-	-
Benzo [b] fluoranthene	0.05 ug/L	<0.05	-	-	-	-
Benzo [g,h,i] perylene	0.05 ug/L	<0.05	-	-	-	-
Benzo [k] fluoranthene	0.05 ug/L	<0.05	-	-	-	-
Chrysene	0.05 ug/L	<0.05	-	-	-	-
Dibenzo [a,h] anthracene	0.05 ug/L	<0.05	-	-	-	-
Fluoranthene	0.01 ug/L	<0.01	-	-	-	-
Fluorene	0.05 ug/L	<0.05	-	-	-	-
Indeno [1,2,3-cd] pyrene	0.05 ug/L	<0.05	-	-	-	-
1-Methylnaphthalene	0.05 ug/L	<0.05	-	-	-	-
2-Methylnaphthalene	0.05 ug/L	<0.05	-	-	-	-
Methylnaphthalene (1&2)	0.10 ug/L	<0.10	-	-	-	-
Naphthalene	0.05 ug/L	0.07	-	-	-	-



Order #: 2342052

Certificate of Analysis

Report Date: 20-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 16-Oct-2023

Client PO:

Project Description: 17181-001

Client ID:	BH109	-	-	-	
Sample Date:	16-Oct-23 10:55	-	-	-	-
Sample ID:	2342052-01	-	-	-	
Matrix:	Ground Water	-	-	-	
MDL/Units					

Semi-Volatiles

Phenanthrene	0.05 ug/L	<0.05	-	-	-	-
Pyrene	0.01 ug/L	0.05	-	-	-	-
2-Fluorobiphenyl	Surrogate	75.7%	-	-	-	-
Terphenyl-d14	Surrogate	77.0%	-	-	-	-

Certificate of Analysis

Report Date: 20-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 16-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons								
F1 PHCs (C6-C10)	ND	25	ug/L					
F2 PHCs (C10-C16)	ND	100	ug/L					
F3 PHCs (C16-C34)	ND	100	ug/L					
F4 PHCs (C34-C50)	ND	100	ug/L					
Metals								
Antimony	ND	0.5	ug/L					
Arsenic	ND	1	ug/L					
Barium	ND	1	ug/L					
Beryllium	ND	0.5	ug/L					
Boron	ND	10	ug/L					
Cadmium	ND	0.1	ug/L					
Chromium	ND	1	ug/L					
Cobalt	ND	0.5	ug/L					
Copper	ND	0.5	ug/L					
Lead	ND	0.1	ug/L					
Molybdenum	ND	0.5	ug/L					
Nickel	ND	1	ug/L					
Selenium	ND	1	ug/L					
Silver	ND	0.1	ug/L					
Sodium	ND	200	ug/L					
Thallium	ND	0.1	ug/L					
Uranium	ND	0.1	ug/L					
Vanadium	ND	0.5	ug/L					
Zinc	ND	5	ug/L					
Semi-Volatiles								
Acenaphthene	ND	0.05	ug/L					
Acenaphthylene	ND	0.05	ug/L					
Anthracene	ND	0.01	ug/L					
Benzo [a] anthracene	ND	0.01	ug/L					
Benzo [a] pyrene	ND	0.01	ug/L					
Benzo [b] fluoranthene	ND	0.05	ug/L					
Benzo [g,h,i] perylene	ND	0.05	ug/L					

Certificate of Analysis

Report Date: 20-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 16-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Benzo [k] fluoranthene	ND	0.05	ug/L					
Chrysene	ND	0.05	ug/L					
Dibenzo [a,h] anthracene	ND	0.05	ug/L					
Fluoranthene	ND	0.01	ug/L					
Fluorene	ND	0.05	ug/L					
Indeno [1,2,3-cd] pyrene	ND	0.05	ug/L					
1-Methylnaphthalene	ND	0.05	ug/L					
2-Methylnaphthalene	ND	0.05	ug/L					
Methylnaphthalene (1&2)	ND	0.10	ug/L					
Naphthalene	ND	0.05	ug/L					
Phenanthrene	ND	0.05	ug/L					
Pyrene	ND	0.01	ug/L					
Surrogate: 2-Fluorobiphenyl	15.8		%	79.0	50-140			
Surrogate: Terphenyl-d14	16.8		%	84.1	50-140			
Volatiles								
Benzene	ND	0.5	ug/L					
Ethylbenzene	ND	0.5	ug/L					
Toluene	ND	0.5	ug/L					
m,p-Xylenes	ND	0.5	ug/L					
o-Xylene	ND	0.5	ug/L					
Xylenes, total	ND	0.5	ug/L					
Surrogate: Toluene-d8	87.6		%	109	50-140			

Certificate of Analysis

Report Date: 20-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 16-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	25	ug/L	ND			NC	30	
Metals									
Antimony	0.73	0.5	ug/L	ND			NC	20	
Arsenic	1.2	1	ug/L	1.1			1.3	20	
Barium	245	1	ug/L	240			2.0	20	
Beryllium	ND	0.5	ug/L	ND			NC	20	
Boron	116	10	ug/L	119			2.1	20	
Cadmium	ND	0.1	ug/L	ND			NC	20	
Chromium	1.3	1	ug/L	1.3			2.7	20	
Cobalt	0.89	0.5	ug/L	0.93			4.3	20	
Copper	1.95	0.5	ug/L	2.06			5.4	20	
Lead	0.12	0.1	ug/L	0.12			0.1	20	
Molybdenum	2.12	0.5	ug/L	2.01			5.4	20	
Nickel	1.9	1	ug/L	1.9			3.8	20	
Selenium	1.7	1	ug/L	1.5			9.7	20	
Silver	ND	0.1	ug/L	ND			NC	20	
Sodium	32300	200	ug/L	32900			1.9	20	
Thallium	ND	0.1	ug/L	ND			NC	20	
Uranium	0.8	0.1	ug/L	0.8			3.5	20	
Vanadium	0.57	0.5	ug/L	0.56			1.7	20	
Zinc	5	5	ug/L	5			0.9	20	
Volatiles									
Benzene	ND	0.5	ug/L	ND			NC	30	
Ethylbenzene	ND	0.5	ug/L	ND			NC	30	
Toluene	ND	0.5	ug/L	ND			NC	30	
m,p-Xylenes	ND	0.5	ug/L	ND			NC	30	
o-Xylene	ND	0.5	ug/L	ND			NC	30	
Surrogate: Toluene-d8	91.7		%		115	50-140			

Certificate of Analysis

Report Date: 20-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 16-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	1900	25	ug/L	ND	94.9	85-115			
F2 PHCs (C10-C16)	1760	100	ug/L	ND	110	60-140			
F3 PHCs (C16-C34)	4610	100	ug/L	ND	118	60-140			
F4 PHCs (C34-C50)	2710	100	ug/L	ND	109	60-140			
Metals									
Arsenic	54.7	1	ug/L	1.1	107	80-120			
Barium	273	1	ug/L	240	65.9	80-120			QM-07
Beryllium	47.2	0.5	ug/L	ND	94.3	80-120			
Boron	155	10	ug/L	119	72.2	80-120			QM-07
Cadmium	48.9	0.1	ug/L	ND	97.8	80-120			
Chromium	56.5	1	ug/L	1.3	110	80-120			
Cobalt	51.4	0.5	ug/L	0.93	101	80-120			
Copper	48.4	0.5	ug/L	2.06	92.6	80-120			
Lead	40.3	0.1	ug/L	0.12	80.3	80-120			
Molybdenum	48.7	0.5	ug/L	2.01	93.3	80-120			
Nickel	50.9	1	ug/L	1.9	97.9	80-120			
Selenium	51.8	1	ug/L	1.5	101	80-120			
Silver	40.3	0.1	ug/L	ND	80.4	80-120			
Sodium	41000	200	ug/L	32900	80.5	80-120			
Thallium	45.5	0.1	ug/L	ND	91.0	80-120			
Uranium	44.4	0.1	ug/L	0.8	87.2	80-120			
Vanadium	57.6	0.5	ug/L	0.56	114	80-120			
Zinc	51	5	ug/L	5	92.0	80-120			
Semi-Volatiles									
Acenaphthene	4.99	0.05	ug/L	ND	99.8	50-140			
Acenaphthylene	5.43	0.05	ug/L	ND	109	50-140			
Anthracene	5.99	0.01	ug/L	ND	120	50-140			
Benzo [a] anthracene	5.04	0.01	ug/L	ND	101	50-140			
Benzo [a] pyrene	4.03	0.01	ug/L	ND	80.6	50-140			
Benzo [b] fluoranthene	4.55	0.05	ug/L	ND	91.0	50-140			

Certificate of Analysis

Report Date: 20-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 16-Oct-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Benzo [g,h,i] perylene	4.04	0.05	ug/L	ND	80.8	50-140			
Benzo [k] fluoranthene	5.13	0.05	ug/L	ND	103	50-140			
Chrysene	4.86	0.05	ug/L	ND	97.3	50-140			
Dibenzo [a,h] anthracene	4.14	0.05	ug/L	ND	82.8	50-140			
Fluoranthene	5.68	0.01	ug/L	ND	114	50-140			
Fluorene	4.90	0.05	ug/L	ND	98.0	50-140			
Indeno [1,2,3-cd] pyrene	4.27	0.05	ug/L	ND	85.5	50-140			
1-Methylnaphthalene	4.25	0.05	ug/L	ND	85.0	50-140			
2-Methylnaphthalene	4.54	0.05	ug/L	ND	90.8	50-140			
Naphthalene	4.59	0.05	ug/L	ND	91.8	50-140			
Phenanthrene	5.23	0.05	ug/L	ND	105	50-140			
Pyrene	5.83	0.01	ug/L	ND	117	50-140			
Surrogate: 2-Fluorobiphenyl	17.5		%		87.6	50-140			
Surrogate: Terphenyl-d14	13.2		%		66.1	50-140			
Volatiles									
Benzene	44.2	0.5	ug/L	ND	111	60-130			
Ethylbenzene	45.4	0.5	ug/L	ND	114	60-130			
Toluene	47.3	0.5	ug/L	ND	118	60-130			
m,p-Xylenes	79.6	0.5	ug/L	ND	99.5	60-130			
o-Xylene	50.1	0.5	ug/L	ND	125	60-130			
Surrogate: Toluene-d8	66.4		%		83.0	50-140			



Order #: 2342052

Certificate of Analysis

Report Date: 20-Oct-2023

Client: Cambium Inc. (Kingston)

Order Date: 16-Oct-2023

Client PO:

Project Description: 17181-001

Qualifier Notes:

QC Qualifiers:

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on other acceptable QC.

Sample Data Revisions:

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.
- F1 range corrected for BTEX.
- F2 to F3 ranges corrected for appropriate PAHs where available.
- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.
- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.
- When reported, data for F4G has been processed using a silica gel cleanup.

Any use of these results implies your agreement that our total liability in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.



Parcel ID: 2342052

Parcel Order Number
(Lab Use Only)

2342052

Chain Of Custody
(Lab Use Only)

No 142106

Client Name: Cambridge Inc.	Project Ref: 17181-001	Page 1 of 1
Contact Name: Laura Fitzgerald	Quote #:	Turnaround Time ☐ 1 day ☐ 3 day ☐ 2 day ☒ Regular
Address: 625 Fortmeades, Unit 7 Kingston	PO #:	
Telephone: 866-217-7900	E-mail: Laura.Fitzgerald@Cambridge-inc.com Keri.Dougherty@Cambridge-inc.com	Date Required: _____

☒ REG 153/04 ☐ REG 406/19 ☐ Table 1 ☐ Res/Park ☐ Med/Fine ☐ REG 558 ☐ PWQO ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ CCME ☐ MISA ☐ Table 3 ☐ Agri/Other ☐ SU - Sani ☐ SU - Storm ☐ Table _____ Mun: _____ For RSC: ☒ Yes ☐ No ☐ Other: _____		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)		Required Analysis															
Sample ID/Location Name		Matrix	Air Volume	# of Containers	Sample Taken		PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)						
1 BH109				5	10/16/23	10:55	X		X	X									
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Comments:				Method of Delivery: Drop Box			
Relinquished By (Sign): Keri Dougherty	Received By Driver/Depot: Quinn Payne	Received at Lab: SO	Verified By: Karen Cooper				
Relinquished By (Print): Keri Dougherty	Date/Time: October 16, 2023 12:55	Date/Time: Oct 17, 2023 9:47am	Date/Time: Oct 16 15:08				
Date/Time: 10/16/23 @ 12:38	Temperature: 13.7 °C	Temperature: 8.3 °C	pH Verified: ☒ By: SO				



300 - 2319 St. Laurent Blvd
Ottawa, ON, K1G 4J8
1-800-749-1947
www.paracellabs.com

Certificate of Analysis

Cambium Inc. (Kingston)

31 Hyperion Court, Suite 102
Oshawa, ON K7K7G3
Attn: Laura Fitzgerald

Client PO:
Project: 17181-001
Custody: 142570

Report Date: 15-Dec-2023
Order Date: 12-Dec-2023

Order #: 2350121

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2350121-01	BH107

Approved By: 

Mark Foto, M.Sc.
Lab Supervisor



Order #: 2350121

Certificate of Analysis

Report Date: 15-Dec-2023

Client: Cambium Inc. (Kingston)

Order Date: 12-Dec-2023

Client PO:

Project Description: 17181-001

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Metals, ICP-MS	EPA 200.8 - ICP-MS	13-Dec-23	14-Dec-23



Order #: 2350121

Certificate of Analysis

Report Date: 15-Dec-2023

Client: Cambium Inc. (Kingston)

Order Date: 12-Dec-2023

Client PO:

Project Description: 17181-001

Client ID:	BH107	-	-	-	
Sample Date:	12-Dec-23 08:05	-	-	-	-
Sample ID:	2350121-01	-	-	-	
Matrix:	Ground Water	-	-	-	
MDL/Units					

Metals						
Antimony	0.5 ug/L	<0.5	-	-	-	-
Arsenic	1 ug/L	<1	-	-	-	-
Barium	1 ug/L	192	-	-	-	-
Beryllium	0.5 ug/L	<0.5	-	-	-	-
Boron	10 ug/L	132	-	-	-	-
Cadmium	0.1 ug/L	<0.1	-	-	-	-
Chromium	1 ug/L	1	-	-	-	-
Cobalt	0.5 ug/L	0.6	-	-	-	-
Copper	0.5 ug/L	7.3	-	-	-	-
Lead	0.1 ug/L	<0.1	-	-	-	-
Molybdenum	0.5 ug/L	9.7	-	-	-	-
Nickel	1 ug/L	3	-	-	-	-
Selenium	1 ug/L	<1	-	-	-	-
Silver	0.1 ug/L	<0.1	-	-	-	-
Sodium	200 ug/L	24400	-	-	-	-
Thallium	0.1 ug/L	<0.1	-	-	-	-
Uranium	0.1 ug/L	0.8	-	-	-	-
Vanadium	0.5 ug/L	<0.5	-	-	-	-
Zinc	5 ug/L	<5	-	-	-	-



Order #: 2350121

Certificate of Analysis

Report Date: 15-Dec-2023

Client: Cambium Inc. (Kingston)

Order Date: 12-Dec-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Metals								
Antimony	ND	0.5	ug/L					
Arsenic	ND	1	ug/L					
Barium	ND	1	ug/L					
Beryllium	ND	0.5	ug/L					
Boron	ND	10	ug/L					
Cadmium	ND	0.1	ug/L					
Chromium	ND	1	ug/L					
Cobalt	ND	0.5	ug/L					
Copper	ND	0.5	ug/L					
Lead	ND	0.1	ug/L					
Molybdenum	ND	0.5	ug/L					
Nickel	ND	1	ug/L					
Selenium	ND	1	ug/L					
Silver	ND	0.1	ug/L					
Sodium	ND	200	ug/L					
Thallium	ND	0.1	ug/L					
Uranium	ND	0.1	ug/L					
Vanadium	ND	0.5	ug/L					
Zinc	ND	5	ug/L					



Order #: 2350121

Certificate of Analysis

Report Date: 15-Dec-2023

Client: Cambium Inc. (Kingston)

Order Date: 12-Dec-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Metals									
Antimony	ND	0.5	ug/L	ND			NC	20	
Arsenic	ND	1	ug/L	ND			NC	20	
Barium	155	1	ug/L	156			0.4	20	
Beryllium	ND	0.5	ug/L	ND			NC	20	
Boron	18	10	ug/L	17			4.1	20	
Cadmium	ND	0.1	ug/L	ND			NC	20	
Chromium	ND	1	ug/L	ND			NC	20	
Cobalt	1.59	0.5	ug/L	1.61			0.8	20	
Copper	1.65	0.5	ug/L	1.66			0.5	20	
Lead	ND	0.1	ug/L	ND			NC	20	
Molybdenum	0.87	0.5	ug/L	0.83			5.7	20	
Nickel	6.8	1	ug/L	6.8			0.1	20	
Selenium	ND	1	ug/L	ND			NC	20	
Silver	ND	0.1	ug/L	ND			NC	20	
Sodium	96000	200	ug/L	97000			1.1	20	
Thallium	ND	0.1	ug/L	ND			NC	20	
Uranium	2.0	0.1	ug/L	1.9			2.4	20	
Vanadium	1.69	0.5	ug/L	1.61			4.9	20	
Zinc	ND	5	ug/L	ND			NC	20	

Certificate of Analysis

Report Date: 15-Dec-2023

Client: Cambium Inc. (Kingston)

Order Date: 12-Dec-2023

Client PO:

Project Description: 17181-001

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Metals									
Arsenic	52.3	1	ug/L	ND	103	80-120			
Barium	84.4	1	ug/L	42.6	83.6	80-120			
Beryllium	46.6	0.5	ug/L	ND	93.1	80-120			
Boron	57	10	ug/L	17	80.3	80-120			
Cadmium	44.6	0.1	ug/L	ND	89.1	80-120			
Chromium	53.6	1	ug/L	ND	107	80-120			
Cobalt	50.4	0.5	ug/L	1.61	97.7	80-120			
Copper	46.9	0.5	ug/L	1.66	90.5	80-120			
Lead	41.9	0.1	ug/L	ND	83.7	80-120			
Molybdenum	45.5	0.5	ug/L	0.83	89.3	80-120			
Nickel	53.2	1	ug/L	6.8	92.8	80-120			
Selenium	47.9	1	ug/L	ND	95.5	80-120			
Silver	40.1	0.1	ug/L	ND	80.2	80-120			
Sodium	10400	200	ug/L	1050	93.8	80-120			
Thallium	43.6	0.1	ug/L	ND	87.2	80-120			
Uranium	48.6	0.1	ug/L	1.9	93.4	80-120			
Vanadium	56.9	0.5	ug/L	1.61	111	80-120			
Zinc	44	5	ug/L	ND	80.8	80-120			



Order #: 2350121

Certificate of Analysis

Report Date: 15-Dec-2023

Client: Cambium Inc. (Kingston)

Order Date: 12-Dec-2023

Client PO:

Project Description: 17181-001

Qualifier Notes:

Sample Data Revisions:

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Any use of these results implies your agreement that our total liability in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.



2350121


 Parcel Order Number
(Lab Use Only)

2350121

Chain Of Custody

(Lab Use Only)

№ 142570

Client Name: Cambrum Inc.	Project Ref: 17181-001	Page <u> </u> of <u> </u>
Contact Name: Laura Fitzgerald	Quote #:	Turnaround Time
Address: 31 Hyperion crk, Kingston	PO #:	☐ 1 day ☐ 3 day
Telephone: 866-217-7900	E-mail: Laura.Fitzgerald@Cambrum-inc.com Kelsi.doughty@Cambrum-inc.com	☐ 2 day ☒ Regular
		Date Required: <u> </u>

☒ REG 153/04 ☐ REG 406/19		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water)		Required Analysis												
☐ Table 1 ☐ Res/Park ☐ Med/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☐ Table <u> </u>		☐ REG 558 ☐ PWQO ☐ CCME ☐ MISA ☐ SU - Sani ☐ SU - Storm Mun: <u> </u> ☐ Other: <u> </u>		SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)		PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)						
For RSC: ☒ Yes ☐ No				Sample Taken														
Sample ID/Location Name				Matrix	Air Volume	# of Containers	Date	Time										
1	BH107			GW		1	12/12/23	8:05				X						
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Comments:			Method of Delivery: Drop Box	
Relinquished By (Sign): <i>[Signature]</i>	Received By Driver/Dept: <i>[Signature]</i>	Received at Lab: <i>[Signature]</i>	Verified By: <i>[Signature]</i>	
Relinquished By (Print): Kelsi Doughty	Date/Time: Dec 12, 2023 10:20	Date/Time: Dec 13, 2023 11:15	Date/Time: Dec 13, 2023 11:30	
Date/Time: 12/12/23 @ 10:10	Temperature: 8.2 °C	Temperature: 8.7 °C	pH Verified: ☐ By: <i>[Signature]</i>	



Appendix C
Site Photographs



Photo 1 Drilling BH101, October 2023.



Photo 2 BH101 completed with a monitoring well, October 2023.



Photo 3 Drilling BH102, October 2023.

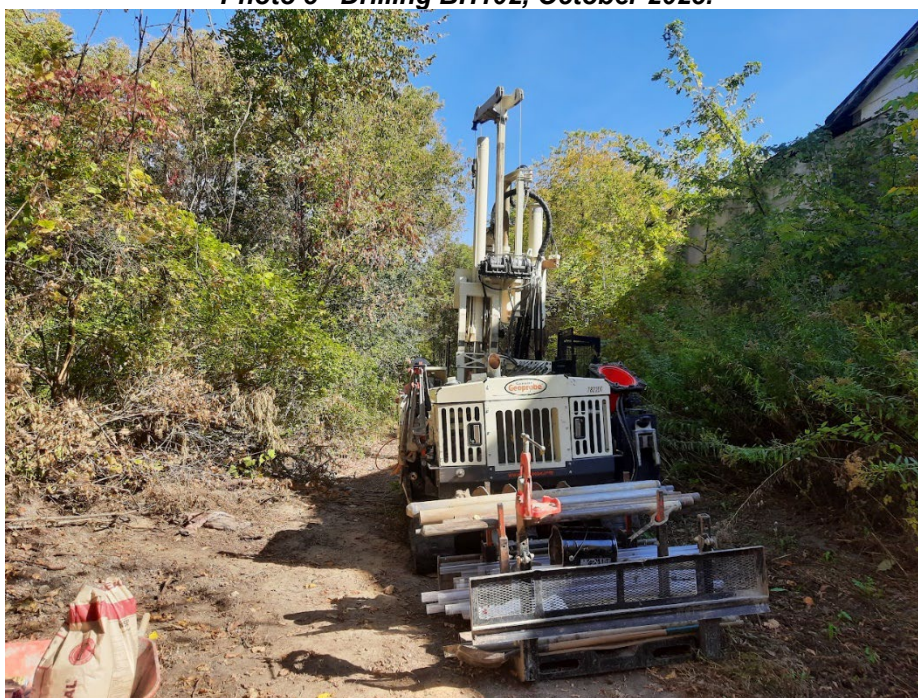


Photo 4 Drilling BH103, October 2023.



Photo 5 Set up – BH104, October 2023.



Photo 6 BH104 completed with monitoring well, October 2023.



Photo 7 Drilling BH105, October, 2023.



Photo 8 Drilling BH106, October 2023.

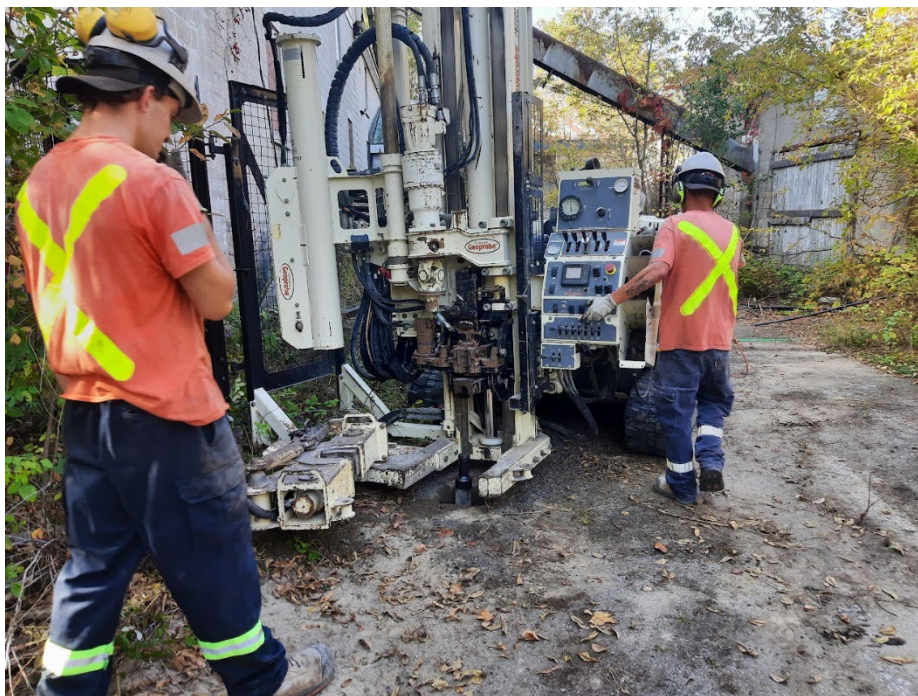


Photo 9 Drilling BH107, October 2023.



Photo 10 BH107 completed with a monitoring well, October 2023.



Photo 11 Coring BH108, October 2023.



Photo 12 Hand Augering BH108, October 2023.



Photo 13 Drilling BH109, October 2023.



Photo 14 BH109 completed with a monitoring well, October 2023.



Photo 15 Drilling BH201, May 2024.

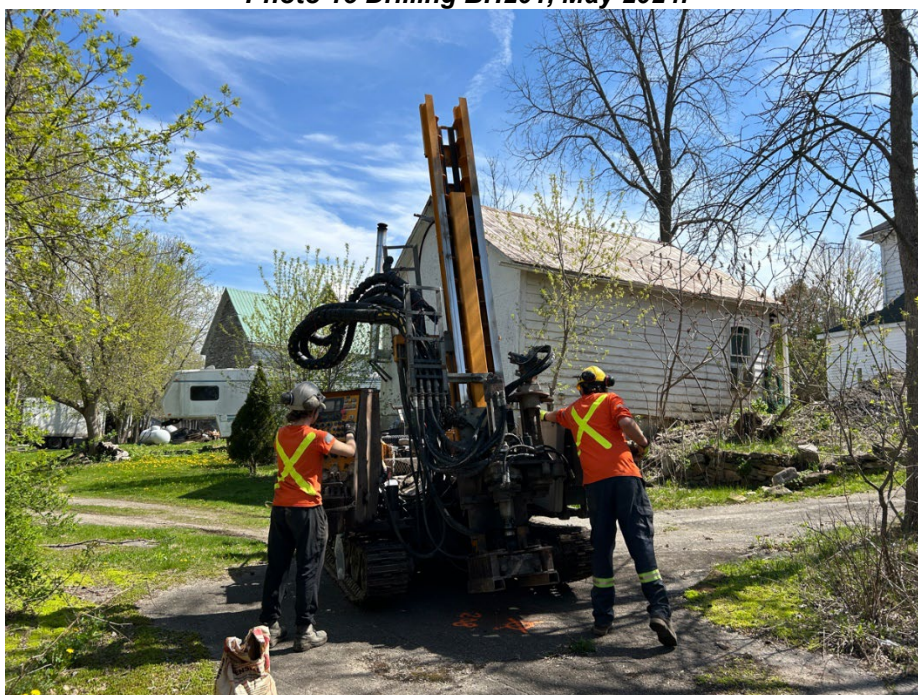


Photo 16 Drilling BH208, May 2024.