Phase Two Environmental Site Assessment - 1386 - 1394 Greely Lane Ottawa, Ontario

April 24, 2023

Prepared for:
Cassidy EW Construction Consultant Ltd. and
2688023 Ontario Inc

Cambium Reference: 17281-001

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Table of Contents

List of Figures

List of Tables

List of Appendices

1.0 Executive Summary

Cassidy EW Construction Consultant Ltd. and 2688023 Ontario Inc ("Client") retained Cambium Inc. (Cambium) to complete a Phase Two Environmental Site Assessment (ESA) at 1386 – 1394 Greely Lane, Ottawa, Ontario ('Site' or 'Phase Two Property'). The Phase Two ESA will be used to support filing a Site Plan Approval (SPA) application with the City of Ottawa, and was, therefore, completed to meet the general requirements of Ontario Regulation (O.Reg.) 153/04. As the Site will be remaining commercial land use, it is understood that a Record of Site Condition (RSC) will not be required.

The Site consists of a 0.47 ha irregular land parcel that is developed with a former car wash building to the north but is otherwise vacant grassland.

A Phase I ESA was completed by CM3 Environmental Inc. (CM3) for the Site (CM3 Environmental, 2023) which identified 30 potentially contaminating activity (PCAs), two on-site and 28 off-site, within the Phase One study area. The on-site PCAs and two off-site PCAs contributed to areas of potential environmental concern (APECs). The related contaminants of potential concern (COPCs) were petroleum hydrocarbons (PHCs), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and metals. Potentially contaminated media was soil and groundwater.

A Phase Two ESA work program was developed to investigate COPCs in soil and groundwater. The Phase Two ESA included three boreholes, each of which was completed as a groundwater monitoring well. A groundwater sample was also collected and submitted from monitoring well MW3, which was originally installed during CM3's 2016 Phase II ESA.

Concentrations of COPCs met the applicable Table 6 SCS in the analyzed soil and groundwater samples. It is Cambium's opinion that no further environmental work is required at the Site at this time.

2.0 Introduction

Cassidy EW Construction Consultant Ltd. (Cassidy, or the Client) as well as 2688023 Ontario Inc. retained Cambium to complete a Phase Two ESA at 1386-1394 Greely Lane, Ottawa, Ontario. The Phase Two ESA will be used to support filing of a SPA with the City of Ottawa Section and was, therefore, completed in general accordance with O.Reg. 153/04. As the Site will be remaining commercial land use, it is understood that a Record of Site Condition (RSC) will not be required.

2.1 Site Description

The Site is at 1386 – 1394 Greely Lane (Figure 1). The Universal Transverse Mercator (UTM) coordinates for the centre of the Site are Zone 18T, 455173 m east and 5011849 m north.

The roughly 0.47 ha (1.15 acres) Site is an irregularly shaped property that is developed for commercial use. The Site is generally flat, includes asphalt, grass covered, and vegetated areas, and is developed with a single-storey, commercial car wash building constructed in the 1980s. The southern half of the Site is underlain by septic field, discharging towards the east. The Site is bound by Greely Lane to the east, Parkway Road to the south, and commercial use to the north and west.

Regionally, surface elevation decreases to the east toward Rideau River. Based on the location of the nearest water bodies and regional topographic relief, the inferred groundwater flow direction is easterly.

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

Site Identification Information

Municipal Address	1386 – 1394 Greely Lane, Ottawa, Ontario
Historical Land Use	Commercial and Agricultural
Current Land Use	Commercial
Future Land Use	Commercial
PIN	04319-0701 (LT) and 04319-0702 (LT)
Universal Transverse Mercator Coordinates*	Zone 18T 455,167 m E, 5,011,845 m N
Legal Description	PCL 3-3, SEC 4M-351; PT BLK 3, PL 4M-351, Part 4, 4R5327; OSGOODE PCL 3-8, SEC 4M-351; PT BLK 3, PL 4M-351, Part 4, 4R5327; OSGOODE Concession 4, Block 3, Parts 4 and 5 of City of Ottawa Plan 4M-351
Site Area	≈ 0.47 ha

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

2.2 Property Ownership

Property Owner	Contact Information
Greely Car Wash 1386 Greely Lane Greely, K4P 1A1	Roger Grenon Owner Phone: 1-613-8211-4984 Email: greelycarwash@gmail.com

2.3 Current and Proposed Future Uses

The Phase One Property is currently commercial use, developed with a single-storey, commercial car wash building constructed in the 1980s. It is proposed the Site be redeveloped with two butler-style commercial buildings, which does not constitute a change to a more sensitive land use.

2.4 Applicable Site Condition Standards

The following site characteristics were reviewed to determine the applicable site condition standards (SCS) in the *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* (MOE, 2011b).

- The Site is a commercial property in the Village of Greely.
- The Site and surrounding properties rely on potable groundwater.
- The Site is not within or adjacent to an area of natural significance, and does not include land within 30 m of such an area. As such, the Site is not environmentally sensitive as per Section 41 of O.Reg. 153/04.
- The average overburden thickness was greater than 2 m based on observations made during the subsurface investigation; as such, Section 43.1(a) of O.Reg. 153/04 does not apply.
- The Site is not within 30 m of a water body as defined in O.Reg. 153/04; as such, Section 43.1(b) of O.Reg. 153/04 does not apply.
- The average depth to groundwater was less than 3 m below ground surface (mbgs); therefore, the SCS for shallow soil were considered applicable to account for potential deceased biodegradation and groundwater dilution and increased vapour to indoor air migration.
- Grain size analysis completed on a representative soil sample indicated that the soil texture at the Site is coarse.

Based on the review of site characteristics, the Table 6 generic SCS for shallow soils in a potable ground water condition, industrial/commercial/community (ICC) property use, and coarse-textured soils are applicable.

2.5 General Objectives

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

3.0 Background Information

3.1 Physical Setting

The topography at the Site is relatively flat and generally similar to the adjacent properties. The topography decreases locally and regionally to the east with contours generally following the shoreline of North Castor River.

The Site is within the Russel and Prescott Sand Plains physiographic region, characterized by sand plains (Chapman & Putnam, 1984). In the general area, the overburden is comprised of coarse-textured glaciomarine deposits of sand, gravel, and minor silt and clay (OGS, 2010). The soils overlie Beekmantown Group dolostone and sandstone (OGS, 2007).

The closest water body is the North Castor River, about 220-250 m south-southeast of the Site. Based on the measured groundwater elevations, the groundwater flow direction in the Phase Two study area is southeast. No Areas of Natural Significance, as defined in Section 1 of O.Reg. 153/04, were identified in whole or in part within the Phase One study area (MNRF, 2023).

The Phase I study area relies on groundwater as a potable water supply. Several domestic water supply wells were identified within the Phase I study area. The Phase I 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 12 records for wells within the study area. The stratigraphy, depth to bedrock, and depth to water table were reviewed and incorporated throughout the report. Six of the records identified wells used for domestic water supply, one of which was present at the Site, despite being mistakenly identified in the database as “off-site”.

3.2 Past Investigations

The following reports were reviewed by Cambium.

Phase I ESA – 1386-1394 Greely Lane (CM3 Environmentral Inc., 2023).

A Phase I ESA was completed on the Phase Two Property following requirements of the Canadian Standards Association CSA) Standard Z768-01 and in general accordance with O.Reg. 153/04 for due diligence in support of a real estate transaction.

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 Phase Two Property was likely developed for agricultural use prior to 1976. Subsequent re-development for its current (commercial) use occurred in the 1980s.

Thirty PCAs were identified within the Phase One Study Area, consisting of two on-site and twenty-eight off-site PCAs. The on-site PCAs contributed to APECs, related to fill of unknown quality and car wash water discharge. Based on the inferred groundwater flow direction, and the distance and/or direction from the Site, ten of the off-site PCAs contributed to APECs along the eastern, northern, and western Site boundaries, related to fuel storage, ASTs, pesticide storage, generation of PHC and pesticide waste, metal fabrication, auto repair, bus fleet operations, and a storage/maintenance garage.

The related contaminants of potential concern (COPCs) were petroleum hydrocarbons (PHCs), volatile organic compounds (VOCs), metals, and pesticides. Potentially contaminated media was soil and groundwater.

Based on the observations and information obtained during the Phase I ESA, CM3 concluded that a Phase Two ESA was required.

Phase I ESA – 1386-1394 Greely Lane (CM3 Environmental Inc., 2016a)

A Phase I ESA was completed on the Phase Two Property following requirements of the Canadian Standards Association CSA) Standard Z768-01 and in general accordance with O.Reg. 153/04 for due diligence in support of a real estate transaction.

Following the investigation, CM3 identified one on-site PCA and 13 off-site PCAs. CM3 also identified the following areas of potential environmental concern (APECs) for the Site related to historical on- and off-site operations at neighbouring properties.

- APEC 1: on-site concern related to the car wash discharge system to septic system
- APEC 2: off-site concern related to vehicle storage/maintenance and petroleum product storage at a property east of the Site
- APEC 3: off-site concern related to vehicle and equipment maintenance/storage, petroleum product and herbicide/pesticide storage at properties to the north and northeast
- APEC 4: vehicle and equipment maintenance, fill, and petroleum products at a property to the west

PHCs, VOCs, metals, herbicides, and pesticides were identified as contaminants of potential concern (COPCs).

CM3 recommended a Phase II ESA to verify the presence of the COPCs at the Site.

Phase II ESA – 1386-1394 Greely Lane (CM3 Environmental Inc., 2016b)

A Phase II ESA was completed on the Phase Two Property following requirements of the Canadian Standards Association CSA) Standard Z768-01 and in general accordance with O.Reg. 153/04 for the purposes of identifying potential impacts to soil and groundwater associated with APECs identified during the 2016 Phase I ESA.

Three boreholes (MW1, MW2, and MW3) were advanced by CM3 staff at the Site and sampled for soil and groundwater as part of a Phase II investigation. Soil and groundwater results met the MOECC Table 2 SCS, except for a barium exceedance in groundwater at monitoring well MW2. CM3 suggested that the presence of barium may be partially attributed to natural processes. As such, CM3 concluded that no significant environmental concerns were identified at the Site, but recommended testing the on-site water supply and installing water softening equipment for the on-site building's potable water supply.

Upon Site inspection by Cambium in 2023, it was found that MW1 and MW2 had been lost or destroyed and only MW3 was found to still be present and in good condition.

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 I ESA (CM3 Environmental, 2023). 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.

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.

Cambium collected soil and groundwater samples to address the identified APECs. .

4.2 Media Investigated

The Phase Two ESA investigated soil and groundwater. As no water bodies exist on the Site, surface water and sediment sampling were not applicable. Soil quality at the Site was investigated through drilling and soil sampling. Monitoring wells were installed in the drilled boreholes for groundwater sampling.

4.3 Phase One Conceptual Site Model

The Phase I Conceptual Site Model (CSM) is required to assist the Qualified Person (QP) in illustrating the results of the Phase I ESA and to provide a basis for further work, if required. The CSM was developed based on the findings of CM3's 2023 Phase I ESA Report. The following descriptions and discussion supplement the figures, and together comprise the CSM.

4.3.1 Site Description

The roughly 0.47 ha Site is located at the northwest corner of Parkway Road and Greely Lane in Greely, Ontario. The municipal address is 1386 – 1394 Greely Lane. The PINs for the Site are 04319-0701 (LT) and 04319-0702 (LT) and the legal description is Concession 4, Block 3, Parts 4 and 5 of City of Ottawa Plan 4M-351. The Universal Transverse Mercator coordinates for the Site are Zone 18T 455,167 m east and 5,011,845 m north.

Property use surrounding the Site is as follows.

North – Commercial (vehicle, equipment, materials storage, auto repair, construction management, materials supply, retail)

South – Agricultural (beyond Parkway Road)

East – Commercial (fleet storage and maintenance)

West – Commercial (fleet storage and maintenance, municipal fire station, machine shop, metal fabrication, auto repair, retail)

4.3.2 Existing Buildings and Structures

Two structures are present at the Site: a car wash and a vehicle storage building within the northwest portion of the Site.

The slab-on-grade, concrete block walled car wash building is approximately 30 years old, includes a mechanical room and two interior car wash bays. A 2019 addition to the west consists of an indoor vehicle storage/work area. The southern half of the Site is underlain by septic field, discharging towards the east.

The vehicle storage building, constructed between 2019 and 2021, consists of two steel shipping containers, connected via wood frame walls and a metal roof.

4.3.3 Water Bodies and Areas of Natural Significance

No Areas of Natural Significance, as defined in Section 1 of O.Reg. 153/04, were identified in whole or in part within the Phase One study area (MNRF, 2023). The closest water body is the North Castor River, about 220-250 m south-southeast of the Site.

4.3.4 Drinking Water Wells

The Phase I study area relies on groundwater as a potable water supply. Several domestic water supply wells were identified within the Phase I study area. The Phase I 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 12 records for wells within the study area. The stratigraphy, depth to bedrock, and depth to water table were reviewed and incorporated throughout the report. Six of the records identified wells used for domestic water supply, one of which was present at the Site, despite being mistakenly identified in the database as “off-site”.

4.3.5 Potentially Contaminating Activities

Cambium reviewed information available for the Phase I Study Area to identify environmental issues normally assessed in a Phase I ESA. Thirty PCAs were identified within the Phase I Study Area, consisting of two on-site and twenty-eight off-site PCAs. Refer to CM3’s 2023 report for further description of the PCAs and PCA locations.

The following PCAs contribute to APECs:

PCA 1 – On-site – fill material of unknown quality

PCA 2 – On-site – car wash discharge to on-site septic system

PCA 10 – Off-site (1387-1395 Greely Lane) – commercial trucking and container terminal

PCA 11 – Off-site (1387-1395 Greely Lane) – fuel storage

PCA 12 – Off-site (1387-1395 Greely Lane) – storage, maintenance, fueling, and repair of commercial trucks

PCA 3 – Off-site (1380 Greely Lane) – pesticide storage

PCA 4 – Off-site (1380 Greely Lane) – PHC, halogenated pesticide, and non-halogenated pesticide waste generation

PCA 5 – Off-site (1368 Greely Lane) – metal fabrication

PCA 8 – Off-site (1375 Greely Lane) – auto repair garage

PCA 15 – Off-site (6906 McKeown Drive) – fuel storage

PCA 16 – Off-site (6906 McKeown Drive) – solvent storage

PCA 17 – Off-site (6906 McKeown Drive) – storage, maintenance, fueling, and repair of commercial buses

The following PCAs do not contribute to APECs:

PCA 6 – Off-site (1369 Greely Lane) – waste oils and lubricants waste generation

PCA 7 – Off-site (6954 McKeown Drive) – waste oils and lubricants waste generation

PCA 9 – Off-site (1381 Greely Lane) – former wood product storage yard

PCA 13 – Off-site (1359 Coker Street) – metal treatment and finishing

PCA 14 – Off-site (1359 Coker Street) – metal fabrication

PCA 18 – Off-site (6916 McKeown Drive) – metal fabrication

PCA 19 – Off-site (6926 McKeown Drive) – waste oils and lubricants waste generation

PCA 20 – Off-site (6968 McKeown Drive) – metal fabrication

PCA 21 – Off-site (6968 McKeown Drive) – paint storage

PCA 22 – Off-site (6891 Parkway Roadway) – fire training

PCA 23 – Off-site (6921 McKeown Drive) – auto repair garage

PCA 24 – Off-site (1347 Coker Street) – auto repair garage

PCA 25 – Off-site (1358 Coker Street) – auto repair garage

PCA 26 – Off-site (6876 McKeown Drive) – auto repair garage

PCA 27 – Off-site (6933 McKeown Drive) – metal fabrication

PCA 28 – Off-site (6933 McKeown Drive) – PHC and paint residue waste generation

PCA 29 – Off-site (east of site at 1375 and 1386 Greely Lane) – pole mounted transformers

PCA 30 – Off-site (Phase I study area) – fill of unknown quality

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 result in an APEC. Based on a review of the potential to result in contamination at the Site, ten off-site PCAs contributed to APECs. The APECs are summarized below. Refer to CM3's 2023 report for further description of the APECs and APEC locations.

APEC 1 – Entire Site, associated with PCAs 1 and 2, imported fill and car wash water discharge to septic

APEC 2 – Eastern Site boundary, associated with PCAs 10,11, and 12: commercial fuel delivery fleet storage and maintenance, and AST

APEC 3 – Northern Site boundary, associated with PCAs 3,4,5, and 8: pesticide storage, PHC and pesticide waste generation, metal fabrication, and an auto repair garage

Pesticides were not considered to be a COPC based on the results of the previous Phase II ESA (CM3 Environmental Inc., 2016b).

APEC 4 – Western Site boundary, associated with PCAs 15,16, and 17: bus fleet operations and a storage and maintenance garage

4.3.7 Contaminants of Potential Concern

COPCs were identified for each PCA contributing to an APEC. The COPCs specific to each APEC are summarized in Table 5. BTEX/PHCs, VOCs, PAHs, PCBs, metals, hydride-forming metals, general inorganics, and other regulated parameters (hot water soluble boron, cyanide, chromium VI, mercury, EC, SAR, and pH) were identified as COPCs related to the current and historical on- and off-site PCAs that contributed to APECs.

Pesticides were not carried forward based on the results of the 2016 Phase II ESA completed by CM3. Both MW1 and MW3 were located along the northern property boundary nearest the pesticide PCA, and neither had any detections of pesticides in soil or groundwater. Based on this, as well as the lack of information regarding the pesticide PCA besides “waste generation” it was determined that pesticides could be removed as a COPC for this Phase Two ESA.

4.3.8 Contaminant Distribution and Transport

Utility trenches are present on the Site. There is also a large septic bed covering the southern half of the Site. Contaminant distribution and transport may be influenced by the presence of utility trenches beneath adjacent properties and roads. Based on observed Site stratigraphy and the expected utility trench depth, trench fill would likely demonstrate a similar hydraulic conductivity to that of surrounding soils. As such, preferential contaminant migration via utility trenches is unlikely.

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

4.3.9 Geological and Hydrogeological Setting

The topography at the Site is relatively flat and generally similar to the adjacent properties. The topography decreases locally and regionally to the east with contours generally following the shoreline of North Castor River.

The Site is within the Russel and Prescott Sand Plains physiographic region, characterized by sand plains (Chapman & Putnam, 1984). In the general area, the overburden is comprised of coarse-textured glaciomarine deposits of sand, gravel, and minor silt and clay (OGS, 2010). The soils overlie Beekmantown Group dolostone and sandstone (OGS, 2007).

A search of the Ministry Water Well Information System by ERIS identified no records for on-site wells, and 12 records for wells within the study area. The stratigraphy, depth to bedrock, and depth to water table were reviewed and incorporated throughout the report. Six of the records identified wells used for domestic water supply, one of which was present at the Site, despite being mistakenly identified in the database as “off-site”.

4.3.10 Uncertainty or Absence of Information

As access to the entire Site was possible, and adequate historical information was available through the interviewees and records review, uncertainty or absence of information is not expected.

5.0 Investigation Method

5.1 General

The following sections provide a detailed description of the subsurface investigations. The COPCs at the Site were related to on-site fill of unknown quality and car wash water discharge, as well as off-site spills from a former furnace oil AST and transformer oil suspected to contain PCBs. Soil and groundwater samples were selectively analyzed for BTEX/PHCs, VOCs, PAHs, metals, hydride-forming metals, hot water soluble boron, cyanide, chromium VI, mercury, EC, SAR, and 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 the Table 6 SCS. Commercial property use and coarse soil texture were selected to identify analyzed parameters present on the Site at concentrations exceeding the SCS.

5.2 Soil: Drilling

Prior to commencing the drilling program, Cambium arranged for underground services to be located and marked for public and private utilities. One-Call Systems Inc. attended the Site on March 3, 2023 to provide clearance for buried services at the proposed drilling locations. The drilling locations were clear of utilities.

A joint geotechnical and environmental investigation was undertaken at the Site on March 6 and 7, 2023. OGS Inc. advanced three environmental boreholes (BH105, BH106, and BH107) to a maximum depth of 6.7 m below ground surface (mbgs) using a track-mounted drilling rig equipped with hollow-stem augers and split-spoon sampling equipment. Soil and groundwater from each of the boreholes, were evaluated as a component of the Phase Two ESA.

Environmental Boreholes were advanced at the following locations (Figure 2). Borehole logs for the environmental boreholes are provided in Appendix A.

- Borehole BH105-23, in the grass just southwest of the Site building along the northern property boundary in the area of the former MW1 from the CM3 Phase II ESA;

- Borehole BH106-23, near the southwest property boundary; and,
- Borehole BH107-23, southeast portion of the Site along the eastern property boundary within the mantle of the on-site septic bed, in the area of the former MW2 from the CM3 Phase II ESA.

5.3 Soil: Sampling

Samples were collected consistent with accepted industry practices and regulatory guidance. During the soil investigation program, soil samples were collected in 0.61 m sections. Each sample was handled solely by the field technician using dedicated nitrile gloves to reduce the potential for cross-contamination. Gloves were replaced after collection of each sample. Samples to be submitted for analysis of VOCs and/or PHC F1 were collected using a pre-calibrated syringe sampler and methanol preserved vials.

Soil samples were selected for laboratory analysis based on the soil screening results, visual and olfactory observation, and location of the sample with respect to an environmental concern. Four soil samples, including a quality control duplicate sample were submitted to the laboratory for analysis. The soil analysis results are discussed in Section 6.6.

5.4 Field Screening Measurements

Olfactory and visual observations of the soil samples were documented immediately upon extraction for soil characteristics and potential indicators of environmental contamination. The samples, which were placed in plastic sample bags and sealed, were used to determine if volatile and/or organic contaminants were present in the sample headspace. An RKI Eagle 2 portable gas detector was used to screen the soil samples for concentrations of combustible soil vapour (CSV) and organic vapour (OV). The RKI was calibrated to hexane and isobutylene standards. After agitating the sample, the peak concentration was recorded by inserting the RKI probe into the sample bag. All measured concentrations were non-detectible.

5.5 Groundwater: Monitoring Well Installation

Boreholes BH105-23, BH106-23, and BH107-23 were instrumented with groundwater monitoring wells in accordance with Ontario Regulation 903 - Wells. The monitoring wells were constructed using 51 mm flush-threaded environmental quality PVC well pipe. Each well was constructed with a riser pipe and 3 m section of screen installed to intersect the groundwater table. Silica sand filter-pack was placed in the annular space to approximately 0.3 m above the top of the screen. Bentonite was placed in the remaining annular space to about 6 cm below ground surface to seal the well. The bentonite was hydrated using store bought distilled water. A flush mount protective cover was cemented in place at the ground surface to protect the well from damage. Well construction details are shown on the borehole logs in Appendix A.

Following installation, the monitoring wells were developed by purging at least three well volumes, to remove sediment from the well, stabilize and grade the filter pack, improve connectivity between the well and the formation, and restore groundwater that may have been disturbed during the drilling process.

5.6 Groundwater: Sampling

Groundwater sampling was conducted on March 16, 2023, consistent with O.Reg. 153/04 under the supervision of a QP. The three newly installed monitoring wells (BH105-23, BH106-23 and BH107-23) were included in the groundwater sampling program in addition to the only remaining CM3 Phase II ESA monitoring well, monitoring well (MW3) immediately northeast of the car wash building.

On March 15 and March 16, 2023, the depth to groundwater was measured in each monitoring well prior to purging or sampling. An interface probe, which can accurately measure the depth to groundwater and the thickness of dense and light non-aqueous phase liquids (DNAPL and LNAPL, respectively) that may be present in the monitoring wells, was used to measure fluid levels. The probe was cleaned between wells with a mixture of Alconox™ soap and water and rinsed with distilled water to reduce the potential for cross-contamination between the monitoring wells.

On March 16, 2023, using the low-flow purging method, 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 were collected using a peristaltic pump, with dedicated tubing installed in each of the monitoring wells. The peristatic pump reduces the amount of sediment entrained in the collected groundwater samples, as agitation of the water column is reduced by lowering the pumping rate and limiting the movement of the tubing in the water column. Groundwater samples submitted for analysis of metals were field filtered.

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

5.7 Analytical Testing

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

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

- Based on field observations and screening, the following soil samples were submitted for analysis, excluding quality control samples:
  - Three samples for BTEX/PHCs
  - Three samples for VOCs
  - Three samples for PAHs
  - Three samples for PCBs
  - Three samples for metals, hydride-forming metals, hot water soluble boron, cyanide, chromium VI, mercury, EC, and SAR

- Three samples for pH

- The following groundwater samples were submitted for analysis, excluding quality control samples:
  - Four samples for BTEX/PHCs
  - Four samples for VOCs
  - Four samples for PAHs
  - Four samples for metals and hydride-forming metals

5.8 Residue Management Procedures

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

5.9 Elevation Surveying

Ground surface and top of pipe elevations were surveyed at the boreholes and monitoring wells. Elevations were determined relative to the northern concrete septic cover on the Site.

5.10 Quality Assurance and Quality Control Measures

As part of the QA/QC program, blind duplicate soil and groundwater samples were submitted at a rate of one duplicate sample for every ten samples analyzed. Blind duplicate samples were collected at the same time as the parent sample and placed into a separate container; split sampling methodology was used to ensure that the sampling was completed using the same method for both parent and duplicate samples. Refer to Section 6.7.4 for the results of the QA/QC program.

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 Appendix A.

The stratigraphy consisted of fill and/or topsoil, underlain by silt, with varying amounts of clay and sand. Bedrock was not encountered to the maximum depth of the investigation.

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 March 16, 2023 as summarized in Table 1. Groundwater flow was to the southeast as shown on Figure 2.

6.3 Groundwater: Conductivity

Based on the predominant soil type in the saturated zone (sand and silt) observed during the field investigation, subsurface hydraulic conductivity in the shallow water-bearing sand and silt layer likely ranges from 1×10^{-7} to 1×10^{-3} m/s (Cherry & Freeze, 1979).

6.4 Coarse Soil Texture

Soil samples were collected from three soil units identified at the Site. Soil was coarse-textured, based on grain size results; therefore, the SCS for coarse-textured soil were utilized. The laboratory certificates of analysis for the grain size analyses are included in Appendix B.

6.5 Soil: Field Screening

No measurable CSV or OV was detected in 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 5.7.

Samples were submitted for analysis of one or more of the following: BTEX/PHCs, VOCs, PAHs, PCBs, metals, hydride-forming metals, hot water-soluble boron, cyanide, chromium VI, mercury, EC, SAR, and pH. Soil analysis results are presented in Table 2 and Table 3. Laboratory Certificates of Analysis are included in Appendix B. The soil sampling locations are shown on Figure 3.

6.6.1 BTEX/PHCs

Three soil samples were submitted for analysis of BTEX/PHCs. Concentrations were less than the Table 6 ICC SCS in the analyzed soil samples as shown on Figure 2.

6.6.2 VOCs

Three soil samples were submitted for analysis of VOCs. Concentrations were less than the Table 6 ICC SCS in the analyzed soil samples, as shown on Figure 2.

6.6.3 PAHs

Three soil samples were submitted for analysis of PAHs. Concentrations were less than the Table 6 ICC SCS in the analyzed soil samples, as shown on Figure 2.

6.6.4 Metals and Inorganics, and pH

Three soil samples were submitted for analysis of metals, hydride-forming metals, hot water soluble boron, cyanide, chromium VI, mercury, EC, and SAR. Concentrations were less than the Table 6 ICC SCS in the analyzed soil samples, as shown on Figure 2. Three samples were analyzed for pH. On-site soil pH was within the acceptable ranges for surface (≤1.5 mbgs) and sub-surface (>1.5 mbgs) soil. As such, the Site is not environmentally sensitive as per Section 41 of O.Reg. 153/04.

6.6.5 Polychlorinated Biphenyls

Three soil samples were submitted for analysis of PCBs. Concentrations was less than the Table 6 SCS, as shown on Figure 2.

6.7 Groundwater Quality

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

Groundwater samples were collected from the three new monitoring wells, and one remaining CM3 well (MW3). Samples were submitted for analysis of one or more of the following: BTEX/PHCs, VOCs, PAHs, metals, and hydride-forming metals. Groundwater analysis results are presented in Table 4 and Table 5. Laboratory Certificates of Analysis are included in Appendix B. The groundwater sampling locations are shown on Figure 4.

6.7.1 BTEX/PHCs

Four monitoring wells were sampled for analysis of BTEX/PHCs. Concentrations were less than the Table 6 RPIICC SCS in the analyzed groundwater samples, as shown on Figure 3.

6.7.2 VOCs

Four monitoring wells were sampled for analysis of VOCs. Concentrations were less than the Table 6 RPIICC SCS in the analyzed groundwater samples, as shown on Figure 3.

6.7.3 PAHs

Four monitoring wells were sampled for analysis of PAHs. Concentrations were less than the Table 6 RPIICC SCS in the analyzed groundwater samples, as shown on Figure 3.

6.7.4 Metals and Inorganics

Four monitoring wells were sampled for analysis of metals and hydride-forming metals. Concentrations were less than the Table 6 RPIICC SCS in the analyzed groundwater samples, as shown on Figure 3.

6.8 Quality Assurance and Quality Control

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

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

Where: x_1 = parent sample result

x_2 = duplicate sample result

x_m = arithmetic mean of initial and duplicate sample results

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

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

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 roughly 0.47 ha Site is located at the northwest corner of Parkway Road and Greely Lane in Greely, Ontario. The municipal address is 1386 – 1394 Greely Lane. The PINs for the Site are 04319-0701 (LT) and 04319-0702 (LT) and the legal description is Concession 4, Block 3, Parts 4 and 5 of City of Ottawa Plan 4M-351. The Universal Transverse Mercator coordinates for the Site are Zone 18T 455,167 m east and 5,011,845 m north.

Property use surrounding the Site is as follows.

North – Commercial (vehicle, equipment, materials storage, auto repair, construction management, materials supply, retail)

South – Agricultural (beyond Parkway Road)

East – Commercial (fleet storage and maintenance)

West – Commercial (fleet storage and maintenance, municipal fire station, machine shop, metal fabrication, auto repair, retail)

The Site is currently commercial use, and is owned by Roger Grenon. The Site includes PINs 04319-0701 (LT) and 04319-0702 (LT). The proposed future land use is commercial.

6.9.2 Potentially Contaminating Activities

Thirty PCAs were identified within the Phase I Study Area, consisting of two on-site and twenty-eight off-site PCAs. Refer to CM3's 2023 Phase I ESA report for further description of the PCAs and PCA locations.

The following PCAs contribute to APECs:

PCA 1 – On-site – fill material of unknown quality

PCA 2 – On-site – car wash discharge to on-site septic system

PCA 3 – Off-site (1380 Greely Lane) – pesticide storage

PCA 4 – Off-site (1380 Greely Lane) – PHC, halogenated pesticide, and non-halogenated pesticide waste generation

PCA 5 – Off-site (1368 Greely Lane) – metal fabrication

PCA 8 – Off-site (1375 Greely Lane) – auto repair garage

PCA 10 – Off-site (1387-1395 Greely Lane) – commercial trucking and container terminal

PCA 11 – Off-site (1387-1395 Greely Lane) – fuel storage

PCA 12 – Off-site (1387-1395 Greely Lane) – storage, maintenance, fueling, and repair of commercial trucks

PCA 15 – Off-site (6906 McKeown Drive) – fuel storage

PCA 16 – Off-site (6906 McKeown Drive) – solvent storage

PCA 17 – Off-site (6906 McKeown Drive) – storage, maintenance, fueling, and repair of commercial buses

The following PCAs do not contribute to APECs:

PCA 6 – Off-site (1369 Greely Lane) – waste oils and lubricants waste generation

PCA 7 – Off-site (6954 McKeown Drive) – waste oils and lubricants waste generation

PCA 9 – Off-site (1381 Greely Lane) – former wood product storage yard

PCA 13 – Off-site (1359 Coker Street) – metal treatment and finishing

PCA 14 – Off-site (1359 Coker Street) – metal fabrication

PCA 18 – Off-site (6916 McKeown Drive) – metal fabrication

PCA 19 – Off-site (6926 McKeown Drive) – waste oils and lubricants waste generation

PCA 20 – Off-site (6968 McKeown Drive) – metal fabrication

PCA 21 – Off-site (6968 McKeown Drive) – paint storage

PCA 22 – Off-site (6891 Parkway Roadway) – fire training

PCA 23 – Off-site (6921 McKeown Drive) – auto repair garage

PCA 24 – Off-site (1347 Coker Street) – auto repair garage

PCA 25 – Off-site (1358 Coker Street) – auto repair garage

PCA 26 – Off-site (6876 McKeown Drive) – auto repair garage

PCA 27 – Off-site (6933 McKeown Drive) – metal fabrication

PCA 28 – Off-site (6933 McKeown Drive) – PHC and paint residue waste generation

PCA 29 – Off-site (east of site at 1375 and 1386 Greely Lane) – pole mounted transformers

PCA 30 – Off-site (Phase I study area) – fill of unknown quality

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.

6.9.3 Areas of Potential Environmental Concern

As required by O.Reg. 153/04, all on-site PCAs result in an APEC. Based on a review of the potential to result in contamination at the Site, ten off-site PCAs contributed to APECs. The APECs are summarized below. Refer to CM3's 2023 Phase I ESA report for further description of the APECs and APEC locations.

APEC 1 – Entire Site, associated with 1 and 2, imported fill and car wash water discharge to septic

APEC 2 – Eastern Site boundary, associated with PCAs 10,11, and 12: commercial fuel delivery fleet storage and maintenance, and AST

APEC 3 – Northern Site boundary, associated with PCAs 3,4,5, and 8: pesticide storage, PHC and pesticide waste generation, metal fabrication, and an auto repair garage.
Pesticides were not considered to be a COPC based on the results of the previous Phase II ESA (CM3 Environmental Inc., 2016b).

APEC 4 – Western Site boundary, associated with PCAs 15,16, and 17: bus fleet operations and a storage and maintenance garage

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

Boreholes with monitoring wells, BH105-23, BH106-23, and BH107-23 were completed to assess the APECs. Groundwater was also sampled from MW3, which was previously installed by CM3 in 2016.

- BH105-23 investigated soil and groundwater in APEC 1, APEC 3 and APEC 4;
- BH106-23 investigated soil and groundwater in APEC 1 and APEC 4;
- BH107-23 investigated soil and groundwater in APEC 1 and APEC 2; and,
- MW3 investigated groundwater in APEC 1, APEC 2 and APEC 3.

Refer to Figure 3 for borehole and monitoring well locations.

6.9.4 Subsurface Structures and Utilities

Utility trenches are present on the Site. A septic bed is present across the southern half of the property. Contaminant distribution and transport may be influenced by the presence of utility trenches beneath adjacent properties and roads. Based on observed Site stratigraphy and the expected utility trench depth, trench fill would likely demonstrate a similar hydraulic conductivity to that of surrounding soils. As such, preferential contaminant migration via utility trenches is unlikely.

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

6.9.5 Stratigraphy

The stratigraphy consisted of fill and/or topsoil, underlain by silt, with varying amounts of clay and sand. Bedrock was not encountered to the maximum depth of the investigation. A detailed description of the subsurface soils can be found on the borehole logs in Appendix B.

6.9.6 Hydrogeological Characteristics and Groundwater Elevations

The closest water body is the North Castor River, about 220-250 m south-southeast of the Site.

To determine the relative groundwater elevation, the horizontal gradient, and the groundwater flow direction, water level measurements were recorded on March 15, 2023. Groundwater flow was to the southeast. The relative groundwater elevation data and flow direction are presented on Figure 4

6.9.7 Applicable Site Condition Standards

The following site characteristics were reviewed to determine the applicable site condition standards (SCS) in the *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act* (MOE, 2011b).

- The Site is a commercial property in the Village of Greely.

- The Site and surrounding properties rely on potable groundwater.
- The Site is not within or adjacent to an area of natural significance, and does not include land within 30 m of such an area. As such, the Site is not environmentally sensitive as per Section 41 of O.Reg. 153/04.
- The average overburden thickness was greater than 2 m based on observations made during the subsurface investigation; as such, Section 43.1(a) of O.Reg. 153/04 does not apply.
- The Site is not within 30 m of a water body as defined in O.Reg. 153/04; as such, Section 43.1(b) of O.Reg. 153/04 does not apply.
- The average depth to groundwater was less than 3 m below ground surface (mbgs); therefore, the SCS for shallow soil were considered applicable to account for potential deceased biodegradation and groundwater dilution and increased vapour to indoor air migration.
- Grain size analysis completed on a representative soil sample indicated that the soil texture at the Site is coarse.

Based on the review of site characteristics, the Table 6 generic SCS for shallow soils in a potable ground water condition, industrial/commercial/community (ICC) property use, and coarse-textured soils are applicable.

6.9.8 Contaminant Identification and Distribution

Site features/sampling locations and the interpreted groundwater flow direction are shown on Figure 2.

A single exceedance for barium was noted in groundwater in 2016 by CM3, in their well MW1 along the northern property boundary, southwest of the Site building. As MW1 could not be found in 2023, Cambium installed BH105 in the same area and noted no exceedances of barium in groundwater during this Phase Two ESA. As such, this initial exceedance for Barium in groundwater in 2016 in understood to either have been anomalous, potentially due to

excess sediment getting into the sample, or that the concentrations have naturally attenuated to within the applicable SCS since 2016.

Concentrations of all COPCs were less than the Table 6 SCS in the analyzed soil and groundwater samples.

6.9.9 Contaminant Migration and Transport

Concentrations of all COPCs were less than the Table 6 SCS in the analyzed soil and groundwater samples. Contaminant migration is not applicable.

6.9.10 Exposure Pathways and Receptors

Concentrations of all COPCs were less than the Table 6 SCS in the analyzed soil and groundwater samples. Exposure pathways and receptors are not applicable.

6.9.11 Location of Buildings and Structures

Two structures are present at the Site: a car wash and a vehicle storage building within the northwest portion of the Site. A septic field underlies the south half of the Site.

The slab-on-grade, concrete block walled car wash building is approximately 30 years old, includes a mechanical room and two interior car wash bays. A 2019 attachment to the west consists of an indoor vehicle storage/work area.

6.9.12 Areas of Contamination on the Property

Concentrations of all COPCs were less than the Table 6 SCS in the analyzed soil and groundwater samples. There were no areas of contamination identified on the Site.

7.0 Conclusions

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

7.1 Environmental Conditions

A Phase Two ESA work program was developed to investigate COPCs (BTEX/PHCs, VOCs, PAHs, PCBs, metals, hydride-forming metals, hot water soluble boron, cyanide, chromium VI, mercury, EC, SAR, and pH) in soil and groundwater. The Phase Two ESA included three boreholes, all of which were completed as groundwater monitoring wells. Groundwater was also sampled from MW3, which was previously installed by CM3 in 2016.

Concentrations of all COPCs were less than the Table 6 SCS in all soil and groundwater samples. On-site soil pH was within the acceptable ranges for surface (≤1.5 mbgs) and sub-surface (>1.5 mbgs) soil. Based on the results of the Phase Two ESA investigation, Cambium concluded that soil and groundwater at the Site meets the Table 6 SCS.

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

7.2 Signatures

This Phase Two ESA was completed 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.

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

Curtis Edgington, P.Eng., QP_{ESA}
Project Manager

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8.0 References

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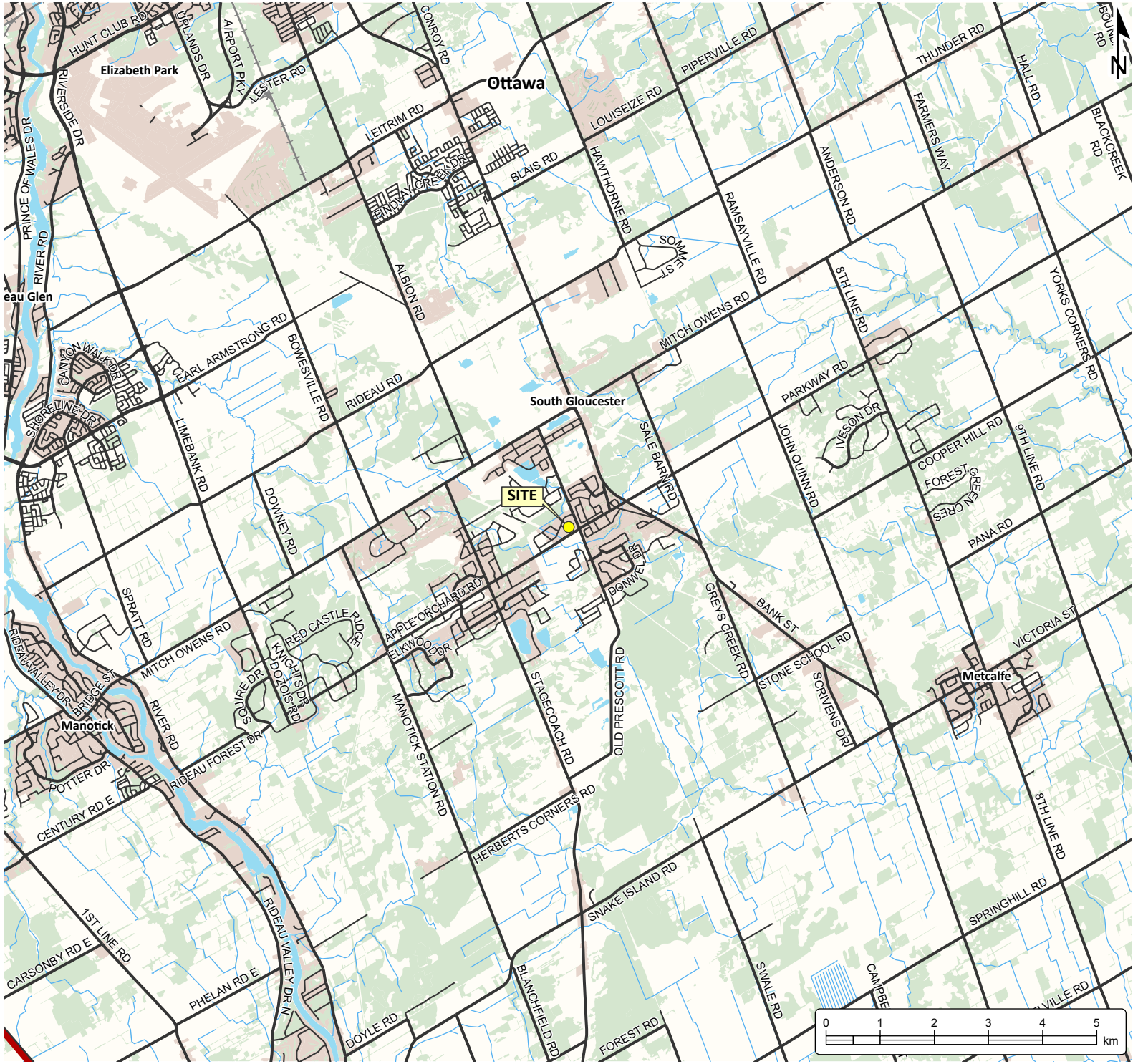
Appended Figures



PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CASSIDY E.W. CONSTRUCTION CONSULTANT LTD. & 2688023 ONTARIO INC.

1386 - 1394 Greely Lane, Ottawa, Ontario

LEGEND

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

Notes:

- Base mapping features are © Queen's Printer of Ontario, 2019 (this does not constitute an endorsement by the Ministry of Natural Resources or the Ontario Government).
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SITE LOCATION MAP

Project No.: 17281-001		Date: April 2023 Rev.:	
Scale: 1:100,000		Projection: NAD 1983 UTM Zone 18N	
Created by: NLB	Checked by: AW	Figure:	1

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PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

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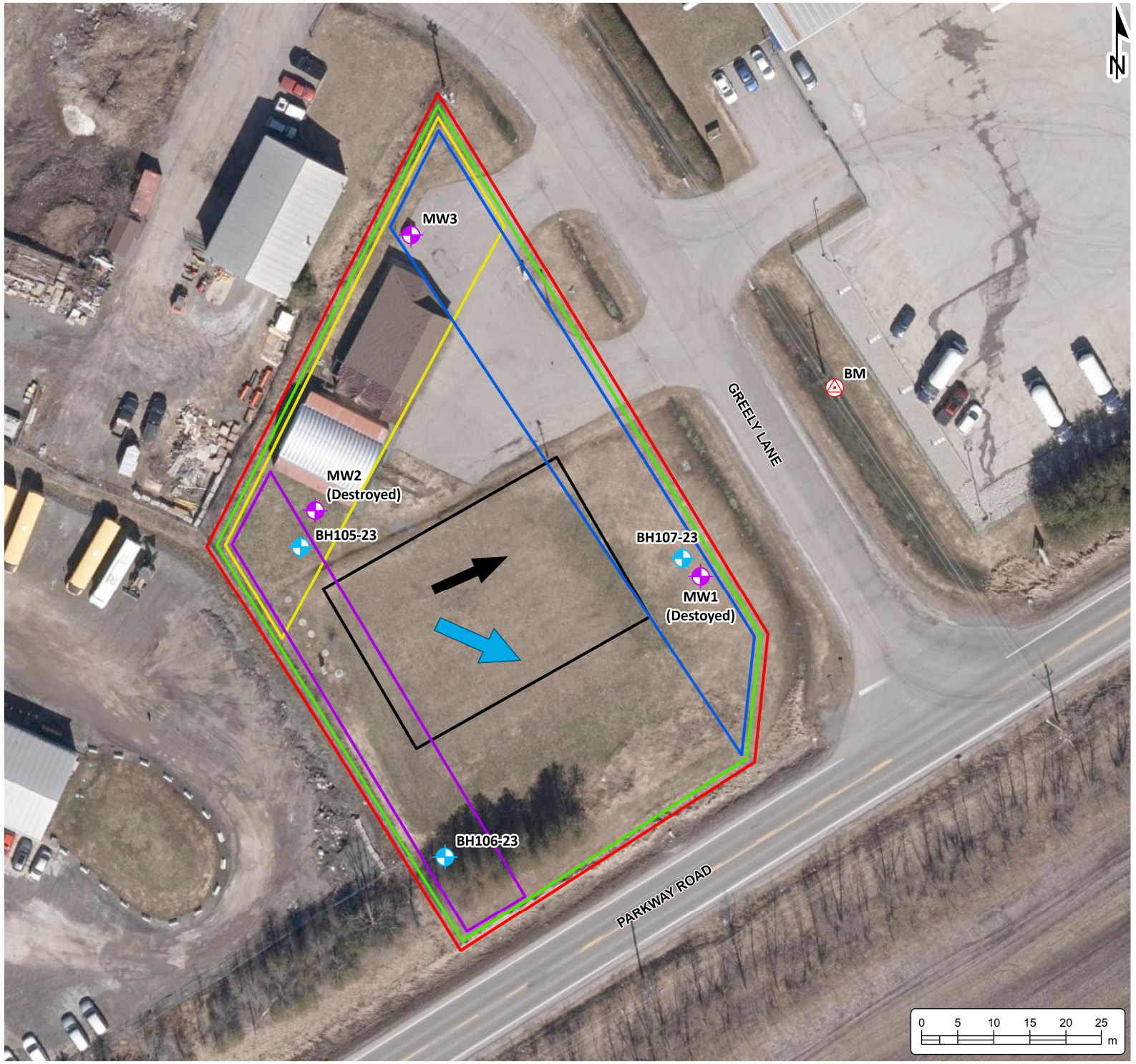
Ottawa, Ontario



LEGEND

- Benchmark
- Environmental Borehole/ Monitoring Well
- CM3 Monitoring Well
- Septic Bed
- Site (approximate)

Areas of Potential Environmental Concern:

- APEC #1
- APEC #2
- APEC #3
- APEC #4
- Groundwater Flow Direction (March 15, 2023)
- Septic Discharge Direction

Benchmarks:
BM - Top of north concrete septic cover located on northeast side of Greely Lane. Given elevation of 100.0m

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SITE PLAN

Project No.: 17281-001		Date: April 2023 Rev.:	
Scale: 1:750		Projection: NAD 1983 UTM Zone 18N	
Created by: NLB	Checked by: AW	Figure:	**2**

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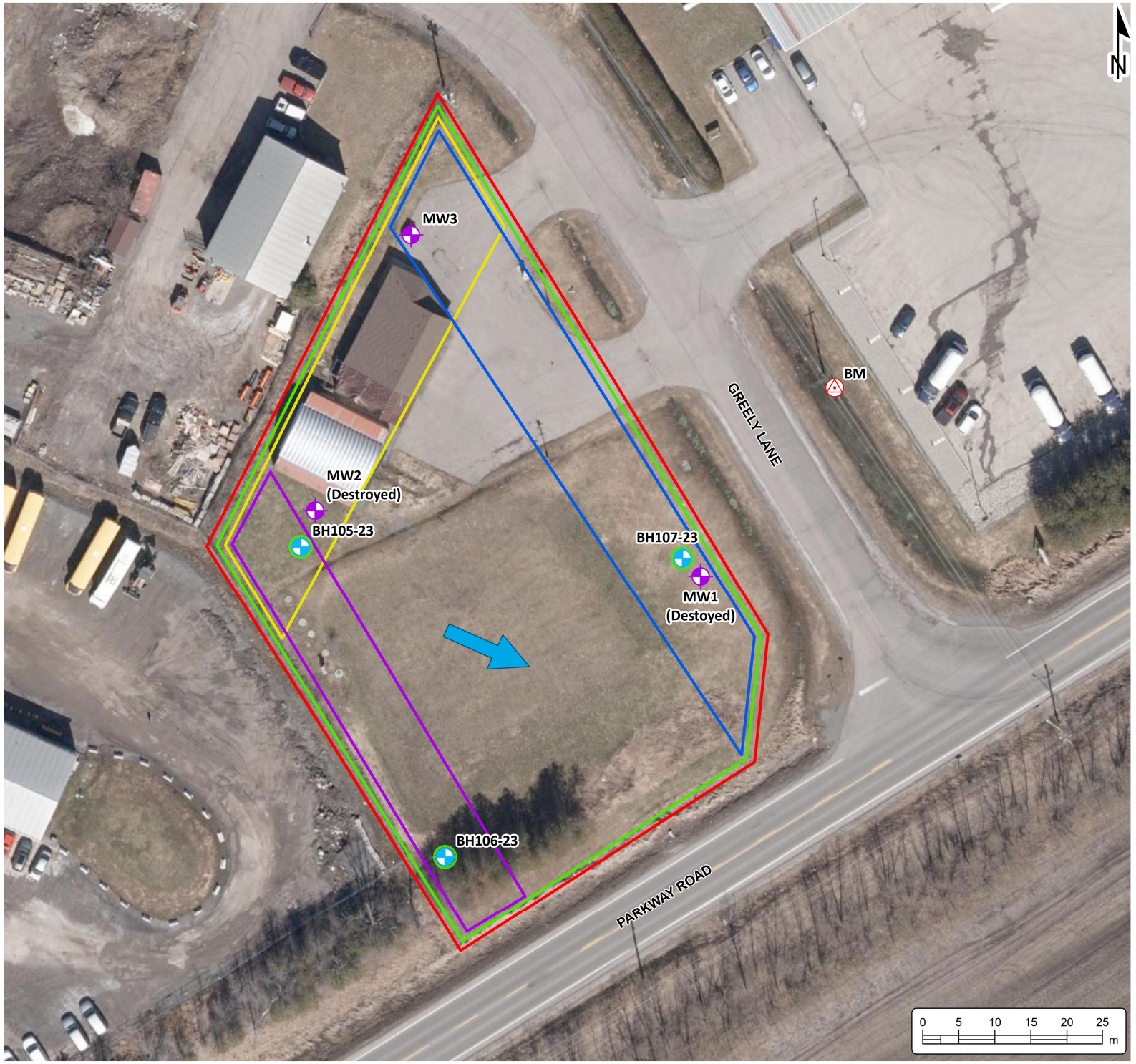

LEGEND

- Benchmark
- Environmental Borehole/ Monitoring Well
- CM3 Monitoring Well
- Meets Table 6 RPI Standard
- Site (approximate)

Areas of Potential Environmental Concern:

- APEC #1
- APEC #2
- APEC #3
- APEC #4
- Groundwater Flow Direction (March 15, 2023)

Benchmarks:
BM - Top of north concrete septic cover located on northeast side of Greely Lane. Given elevation of 100.0m

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SOIL QUALITY

Project No.: 17281-001		Date: April 2023	Rev.:
Scale: 1:750		Projection: NAD 1983 UTM Zone 18N	
Created by: NLB	Checked by: AW	Figure: 3	

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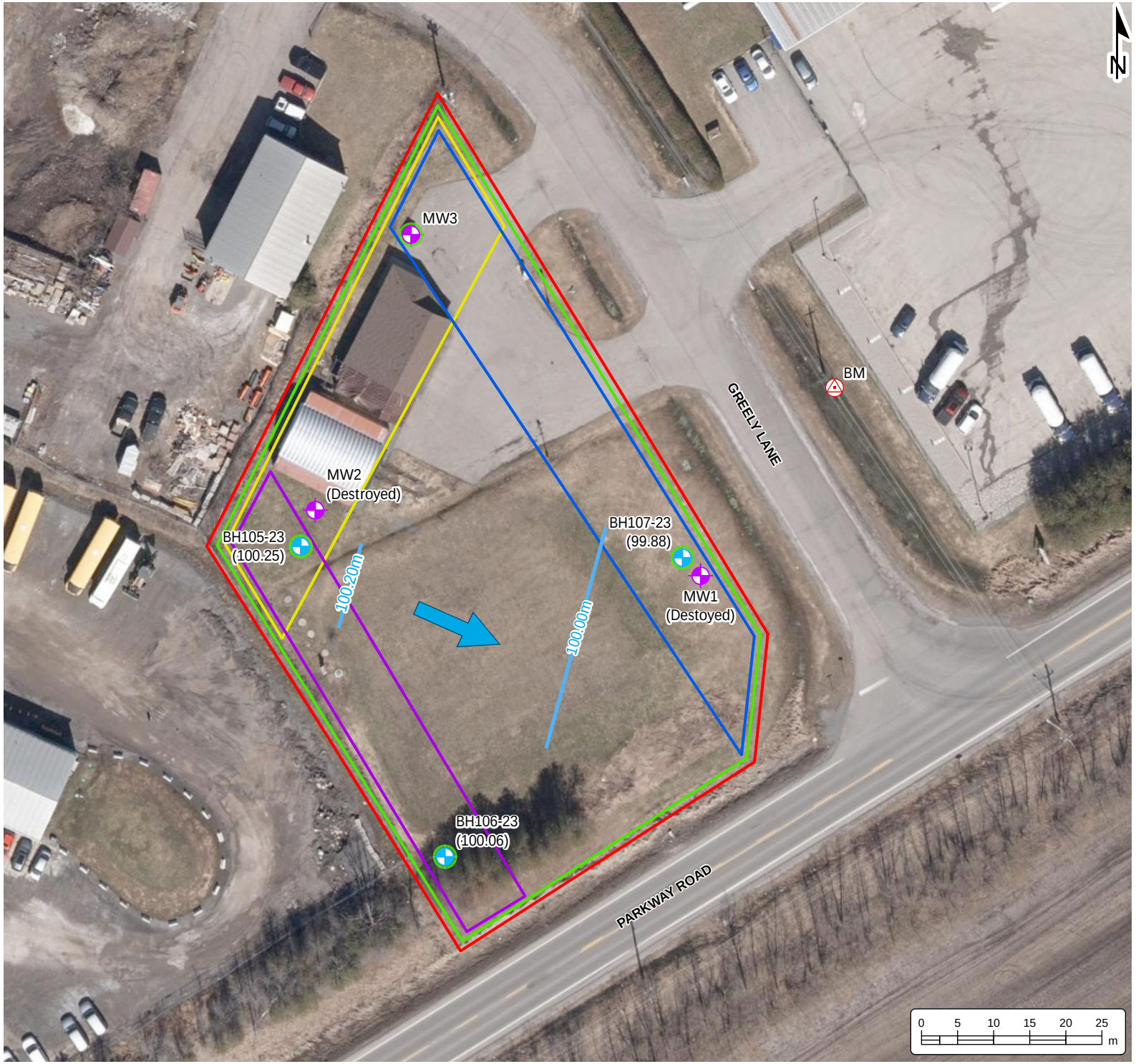

LEGEND

- Benchmark
- Environmental Borehole/ Monitoring Well
- CM3 Monitoring Well
- Meets Table 6 RPI Standard
- Groundwater Contours
- Site (approximate)

Areas of Potential Environmental Concern:

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

(100.00) Groundwater Elevation (March 15, 2023)

Groundwater Flow Direction (March 15, 2023)

Benchmarks:
BM - Top of north concrete septic cover located on northeast side of Greely Lane. Given elevation of 100.0m

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GROUNDWATER QUALITY

Project No.: 17281-001		Date: April 2023 Rev.:	
Scale: 1:750		Projection: NAD 1983 UTM Zone 18N	
Created by: NLB	Checked by: AW	Figure:	4

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Appended Tables

Table 1 - Groundwater Elevations

Monitoring Well ID	Measuring Point Elevation (masl)	Groundwater Elevations
		16-Mar-23
BH105	100.565	100.25
BH106	100.37	100.06
BH107	100.77	99.88

Notes:

All measurements are reported relative to masl.

Table 2 - Soil Quality - PHCs & VOCs

Sample Location	Units	RDL	Table 6 ICC (Coarse)	BH105		BH106	BH107
Sample ID				BH105_0.15-0.6	QA/QC #1	BH106_0.9-1.35	BH107_0.75-1.35
Sample Date (dd-mmm-yy)				07-Mar-23	07-Mar-23	07-Mar-23	07-Mar-23
Sample Depth (mbgs)				0.15-0.6	0.15-0.6	0.9-1.35	0.75-1.35
Volatiles							
Acetone	µg/g	0.5	16	< 0.50	< 0.50	< 0.50	< 0.50
Benzene	µg/g	0.02	0.32	< 0.02	< 0.02	< 0.02	< 0.02
Bromodichloromethane	µg/g	0.05	1.5	< 0.05	< 0.05	< 0.05	< 0.05
Bromoform	µg/g	0.05	0.61	< 0.05	< 0.05	< 0.05	< 0.05
Bromomethane	µg/g	0.05	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Carbon Tetrachloride	µg/g	0.05	0.21	< 0.05	< 0.05	< 0.05	< 0.05
Chlorobenzene	µg/g	0.05	2.4	< 0.05	< 0.05	< 0.05	< 0.05
Chloroform	µg/g	0.05	0.47	< 0.05	< 0.05	< 0.05	< 0.05
Dibromochloromethane	µg/g	0.05	2.3	< 0.05	< 0.05	< 0.05	< 0.05
Dichlorodifluoromethane	µg/g	0.05	16	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichlorobenzene	µg/g	0.05	1.2	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichlorobenzene	µg/g	0.05	9.6	< 0.05	< 0.05	< 0.05	< 0.05
1,4-Dichlorobenzene	µg/g	0.05	0.2	< 0.05	< 0.05	< 0.05	< 0.05
1,1-Dichloroethane	µg/g	0.05	0.47	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichloroethane	µg/g	0.05	0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,1-Dichloroethylene	µg/g	0.05	0.064	< 0.05	< 0.05	< 0.05	< 0.05
cis-1,2-Dichloroethylene	µg/g	0.05	1.9	< 0.05	< 0.05	< 0.05	< 0.05
trans-1,2-Dichloroethylene	µg/g	0.05	1.3	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichloropropane	µg/g	0.05	0.16	< 0.05	< 0.05	< 0.05	< 0.05
cis-1,3-Dichloropropene	µg/g	0.05	NV	< 0.05	< 0.05	< 0.05	< 0.05
trans-1,3-Dichloropropene	µg/g	0.05	NV	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichloropropene	µg/g	0.05	0.059	< 0.05	< 0.05	< 0.05	< 0.05
Ethylbenzene	µg/g	0.05	1.1	< 0.05	< 0.05	< 0.05	< 0.05
Ethylene dibromide	µg/g	0.05	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Hexane	µg/g	0.05	46	< 0.05	< 0.05	< 0.05	< 0.05
Methyl Ethyl Ketone	µg/g	0.5	70	< 0.50	< 0.50	< 0.50	< 0.50
Methyl Isobutyl Ketone	µg/g	0.5	31	< 0.50	< 0.50	< 0.50	< 0.50
Methyl tert-butyl ether	µg/g	0.05	1.6	< 0.05	< 0.05	< 0.05	< 0.05
Methylene Chloride	µg/g	0.05	1.6	< 0.05	< 0.05	< 0.05	< 0.05
Styrene	µg/g	0.05	34	< 0.05	< 0.05	< 0.05	< 0.05
1,1,1,2-Tetrachloroethane	µg/g	0.05	0.087	< 0.05	< 0.05	< 0.05	< 0.05
1,1,2,2-Tetrachloroethane	µg/g	0.05	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Tetrachloroethylene	µg/g	0.05	1.9	< 0.05	< 0.05	< 0.05	< 0.05
Toluene	µg/g	0.05	6.4	< 0.05	< 0.05	< 0.05	< 0.05
1,1,1-Trichloroethane	µg/g	0.05	6.1	< 0.05	< 0.05	< 0.05	< 0.05
1,1,2-Trichloroethane	µg/g	0.05	0.05	< 0.05	< 0.05	< 0.05	< 0.05
Trichloroethylene	µg/g	0.05	0.55	< 0.05	< 0.05	< 0.05	< 0.05
Trichlorofluoromethane	µg/g	0.05	4	< 0.05	< 0.05	< 0.05	< 0.05
Vinyl Chloride	µg/g	0.02	0.032	< 0.02	< 0.02	< 0.02	< 0.02
m/p-Xylene	µg/g	0.05	NV	< 0.05	< 0.05	< 0.05	< 0.05
o-Xylene	µg/g	0.05	NV	< 0.05	< 0.05	< 0.05	< 0.05
Xylene, m,p,o-	µg/g	0.05	26	< 0.05	< 0.05	< 0.05	< 0.05
Hydrocarbons							
F1 (C6-C10)	µg/g	7	55	< 7	< 7	< 7	< 7
F2 (C10-C16)	µg/g	4	230	< 4	< 4	< 4	< 4
F3 (C16-C34)	µg/g	8	1700	< 8	< 8	< 8	< 8
F4 (C34-C50)	µg/g	6	3300	< 6	< 6	< 6	< 6

Notes:
Notes:
Table 6 Standards - Generic Site Condition Standards for Shallow Soils in a Potable Ground Water Condition Industrial/Commercial/Community Property Use
Bold and shaded grey - value exceeds Table 6 ICC
Bold and underline - RDL exceeds standard
N/A - not applicable
NC - The duplicate RPD was not calculated. One or both samples < 5x RDL.
NV - no value
"-" not analyzed

Table 3 - Soil Quality - Metals and Inorganics, PAHs, and PCBs

Sample Location	Units	RDL	Table 6 ICC (Coarse)	BH105		BH106	BH107
Sample ID				**BH105_0.15-0.6**	**QA/QC #1**	**BH106_0.9-1.35**	**BH107_0.75-1.35**
Sample Date (dd-mmm-yy)				07-Mar-23	07-Mar-23	07-Mar-23	07-Mar-23
Sample Depth (mbgs)				0.15-0.6	0.15-0.6	0.9-1.35	0.75-1.35
Metals							
Antimony	µg/g	1	40	< 1.0	< 1.0	< 1.0	< 1.0
Arsenic	µg/g	1	18	4.7	5	2.2	2.3
Barium	µg/g	1	670	101	46.6	150	174
Beryllium	µg/g	0.5	8	0.6	< 0.5	< 0.5	< 0.5
Boron (Hot Water Soluble)	µg/g	0.5	2	< 0.5	< 0.5	< 0.5	< 0.5
Boron	µg/g	5	120	8.1	8.7	< 5.0	5.1
Cadmium	µg/g	0.5	1.9	< 0.5	< 0.5	< 0.5	< 0.5
Chromium (VI)	µg/g	0.2	8	< 0.2	< 0.2	< 0.2	< 0.2
Chromium	µg/g	5	160	20.3	15.1	27.1	27.8
Cobalt	µg/g	1	80	7.6	6.3	7.8	7.9
Copper	µg/g	5	230	31.9	19.8	17	17.3
Lead	µg/g	1	120	10.8	11	3.5	3.7
Mercury	µg/g	0.1	3.9	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum	µg/g	1	40	1.4	1.8	< 1.0	< 1.0
Nickel	µg/g	5	270	17.2	13.8	16.1	16.6
Selenium	µg/g	1	5.5	< 1.0	< 1.0	< 1.0	< 1.0
Silver	µg/g	0.3	40	< 0.3	< 0.3	< 0.3	< 0.3
Thallium	µg/g	1	3.3	< 1.0	< 1.0	< 1.0	< 1.0
Uranium	µg/g	1	33	< 1.0	< 1.0	< 1.0	< 1.0
Vanadium	µg/g	10	86	34.2	23.5	38.9	40.4
Zinc	µg/g	20	340	37.7	28.5	43	42.8
General Inorganics							
Sodium Adsorption Ratio	N/A	0.01	12	0.15	0.12	4.48	2.47
Conductivity	mS/cm	5	1.4	0.179	0.138	0.565	0.539
Cyanide	µg/g	0.03	0.051	< 0.03	< 0.03	< 0.03	< 0.03
pH	N/A	0.05	NV	7.61	N/A	7.67	7.71
Semi-Volatiles							
Acenaphthene	µg/g	0.02	21	< 0.02	< 0.02	< 0.02	< 0.02
Acenaphthylene	µg/g	0.02	0.15	< 0.02	< 0.02	< 0.02	< 0.02
Anthracene	µg/g	0.02	0.67	< 0.02	< 0.02	< 0.02	< 0.02
Benzo(a)anthracene	µg/g	0.02	0.96	< 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(b)fluoranthene	µg/g	0.02	0.96	< 0.02	< 0.02	< 0.02	< 0.02
Benzo(g,h,i)perylene	µg/g	0.02	9.6	< 0.02	< 0.02	< 0.02	< 0.02
Benzo(k)fluoranthene	µg/g	0.02	0.96	< 0.02	< 0.02	< 0.02	< 0.02
Chrysene	µg/g	0.02	9.6	< 0.02	< 0.02	< 0.02	< 0.02
Dibenzo(a,h)anthracene	µg/g	0.02	0.1	< 0.02	< 0.02	< 0.02	< 0.02
Fluoranthene	µg/g	0.02	9.6	< 0.02	< 0.02	< 0.02	< 0.02
Fluorene	µg/g	0.02	62	< 0.02	< 0.02	< 0.02	< 0.02
Indeno(1,2,3-cd)pyrene	µg/g	0.02	0.76	< 0.02	< 0.02	< 0.02	< 0.02
1-Methylnaphthalene	µg/g	0.02	30	< 0.02	< 0.02	< 0.02	< 0.02
2-Methylnaphthalene	µg/g	0.02	30	< 0.02	< 0.02	< 0.02	< 0.02
Methylnaphthalene, 2-(1-)	µg/g	0.04	30	< 0.04	< 0.04	< 0.04	< 0.04
Naphthalene	µg/g	0.01	9.6	< 0.01	< 0.01	< 0.01	< 0.01
Phenanthrene	µg/g	0.02	12	< 0.02	< 0.02	< 0.02	< 0.02
Pyrene	µg/g	0.02	96	< 0.02	< 0.02	< 0.02	< 0.02
PCBs							
Polychlorinated Biphenyls (PCBs)	µg/g	0.05	1.1	< 0.05	< 0.05	< 0.05	< 0.05

Notes:
Table 6 Standards - Generic Site Condition Standards for Shallow Soils in a Potable Ground Water Condition - Industrial/Commercial/Community Property Use
Bold and shaded grey - value exceeds Table 6 ICC
Bold and underline - RDL exceeds standard
N/A - not applicable
NC - The duplicate RPD was not calculated. One or both samples < 5x RDL.
NV - no value
"-" not analyzed

Table 4 - Groundwater Quality - PHCs & VOCs

Sample Location	Note	Units	RDL	Table 6 RPIICC	BH105		BH106	BH107	MW3
Sample ID					BH105	QA/QC 1			
Sample Date (dd-mmm-yy)					16-Mar-23	16-Mar-23	16-Mar-23	16-Mar-23	16-Mar-23
Volatiles									
Acetone		µg/L	5	130000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Benzene		µg/L	0.5	44	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane		µg/L	0.5	85000	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform		µg/L	0.5	380	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane		µg/L	0.5	5.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride		µg/L	0.2	0.79	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chlorobenzene		µg/L	0.5	630	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform		µg/L	0.5	2.4	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane		µg/L	0.5	82000	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane		µg/L	1	4400	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
1,2-Dichlorobenzene		µg/L	0.5	4600	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,3-Dichlorobenzene		µg/L	0.5	9600	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,4-Dichlorobenzene		µg/L	0.5	8	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethane		µg/L	0.5	320	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichloroethane		µg/L	0.5	1.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethylene		µg/L	0.5	1.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
cis-1,2-Dichloroethylene		µg/L	0.5	1.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
trans-1,2-Dichloroethylene		µg/L	0.5	1.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichloropropane		µg/L	0.5	16	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
cis-1,3-Dichloropropene		µg/L	0.5	5.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
trans-1,3-Dichloropropene		µg/L	0.5	5.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,3-Dichloropropene		µg/L	0.5	5.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene		µg/L	0.5	2300	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Ethylene dibromide		µg/L	0.2	0.25	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Hexane		µg/L	1	51	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Methyl Ethyl Ketone		µg/L	5	470000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Methyl Isobutyl Ketone		µg/L	5	140000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Methyl tert-butyl ether		µg/L	2	190	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Methylene Chloride		µg/L	5	610	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Styrene		µg/L	0.5	1300	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,1,2-Tetrachloroethane		µg/L	0.5	3.3	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2,2-Tetrachloroethane		µg/L	0.5	3.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethylene		µg/L	0.5	1.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Toluene		µg/L	0.5	18000	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,1-Trichloroethane		µg/L	0.5	640	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2-Trichloroethane		µg/L	0.5	4.7	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethylene		µg/L	0.5	1.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Trichlorofluoromethane		µg/L	1	2500	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl Chloride		µg/L	0.5	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
m/p-Xylene		µg/L	0.5	NV	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
o-Xylene		µg/L	0.5	NV	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Xylene, m,p,o-		µg/L	0.5	4200	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Hydrocarbons									
F1 (C6 to C10)		µg/L	25	750	< 25	< 25	< 25	< 25	< 25
F2 (C10 to C16)		µg/L	100	150	< 100	< 100	< 100	< 100	< 100
F3 (C16 to C34)		µg/L	100	500	< 100	< 100	< 100	< 100	< 100
F4 (C34 to C50)		µg/L	100	500	< 100	< 100	< 100	< 100	< 100

Notes:
Table 6 Standards - Generic Site Condition Standards for Shallow Soils in a Potable Ground Water Condition - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use
N/A - not applicable
NC - The duplicate RPD was not calculated. One or both samples < 5x RDL.
NV - no value
"-" not analyzed
Bold and shaded - value exceeds standard
Bold and underline - RDL exceeds standard
1 - Standard is applicable to 1-methylnaphthallene and 2- methylnaphthalene, with the provision that if both are detected the sum of the two must not exceed the standard.
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 applie d to F3.
5 - Standard is applicable to total xylenes, and m & p-xylenes and o-xylenes should be summed for comparison.
6 - Standard is applicable to 1,3-Dichloropropene, and the individual isomers (cis + trans) should be added for comparison.
7 - Standard is applicable to total PCBs, and the individual Aroclors should be added for comparison.
8 - Standard is for benzo(b)fluoranthene; however, the laboratory can not distinguish between benzo(b)fluoranthene and benzo(k)f luoranthene.

Table 5 - Groundwater Quality - Metals, PAHs, and PCBs

Sample Location	Note	Units	RDL	Table 6 RPIICC	BH105		BH106	BH107	MW3
Sample ID					BH105	QA/QC 1			
Sample Date (dd-mmm-yy)					16-Mar-23	16-Mar-23	16-Mar-23	16-Mar-23	16-Mar-23
Metals									
Antimony		µg/L	0.5	20000	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Arsenic		µg/L	1	1900	< 1	< 1	< 1	< 1	< 1
Barium		µg/L	1	29000	52	45	405	1700	143
Beryllium		µg/L	0.5	67	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Boron		µg/L	10	45000	13	13	21	42	17
Cadmium		µg/L	0.1	2.7	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Chromium		µg/L	1	810	< 1	< 1	< 1	< 1	< 1
Cobalt		µg/L	0.5	66	0.8	0.9	1.2	1.6	< 0.5
Copper		µg/L	0.5	87	3.3	2	4	1.9	1
Lead		µg/L	0.1	25	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Molybdenum		µg/L	0.5	9200	1.7	1.8	3.6	3.4	2.6
Nickel		µg/L	1	490	1	1	3	8	5
Selenium		µg/L	1	63	< 1	< 1	< 1	< 1	< 1
Silver		µg/L	0.1	1.5	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Sodium		µg/L	200	2300000	24200	25000	588000	415000	178000
Thallium		µg/L	0.1	510	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Uranium		µg/L	0.1	420	3.8	3.6	5.9	3.5	< 0.1
Vanadium		µg/L	0.5	250	< 0.5	< 0.5	< 0.5	1	< 0.5
Zinc		µg/L	5	1100	< 5	< 5	< 5	< 5	< 5
Semi-Volatiles									
Acenaphthene		µg/L	0.05	600	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Acenaphthylene		µg/L	0.05	1.8	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Anthracene		µg/L	0.01	2.4	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)anthracene		µg/L	0.01	4.7	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(a)pyrene		µg/L	0.01	0.81	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Benzo(b)fluoranthene		µg/L	0.05	0.75	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(g,h,i)perylene		µg/L	0.05	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Benzo(k)fluoranthene		µg/L	0.05	0.4	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chrysene		µg/L	0.05	1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibenzo(a,h)anthracene		µg/L	0.05	0.52	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Fluoranthene		µg/L	0.01	130	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01
Fluorene		µg/L	0.05	400	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Indeno(1,2,3-cd)pyrene		µg/L	0.05	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1-Methylnaphthalene		µg/L	0.05	1800	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
2-Methylnaphthalene		µg/L	0.05	1800	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Methylnaphthalene, 2-(1-)		µg/L	0.1	1800	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Naphthalene		µg/L	0.05	1400	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Phenanthrene		µg/L	0.05	580	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Pyrene		µg/L	0.01	68	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01

Notes:
Table 6 Standards - Generic Site Condition Standards for Shallow Soils in a Potable Ground Water Condition - Residential/Parkland/Institutional/Industrial/Commercial/Community Property Use
N/A - not applicable
NC - The duplicate RPD was not calculated. One or both samples < 5x RDL.
NV - no value
"-" not analyzed
Bold and shaded - value exceeds standard
Bold and underline - RDL exceeds standard
1 - Standard is applicable to 1-methylnaphthallene and 2- methylnaphthalene, with the provision that if both are detected the sum of the two must not exceed the standard.
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 applie d to F3.
5 - Standard is applicable to total xylenes, and m & p-xylenes and o-xylenes should be summed for comparison.
6 - Standard is applicable to 1,3-Dichloropropene, and the individual isomers (cis + trans) should be added for comparison.
7 - Standard is applicable to total PCBs, and the individual Aroclors should be added for comparison.

Appendix A
Borehole Logs

Client: Cassidy EW Construction **Project Name:** 1386 & 1394 Greely Lane **Log of Borehole:** BH105-23

Contractor: OGS Inc. **Method:** Track Mounted Hollow Stem Auger Page: 1 of 1

Location: Ottawa, ON **Elevation:** 100.65 mREL **Date Completed:** March 8, 2023

Project No.: 17281-001 - B **UTM:** 18 T **N:** 5011843 **E:** 455141

SUBSURFACE PROFILE				SAMPLE						
Elevation (m)	Depth	Lithology	Description	Elevation / Depth	Number	Type	% Recovery	CSV (ppm)	OV (ppm)	Well Installation	Log Notes
100.6	0		**TOPSOIL:** 150 mm	100.5	1A	SS				Cap	
			FILL: (SM) SILTY SAND: brown, wet, loose, some gravel, trace clay	0.15	1B	SS	67	ND	ND	Bentonite Plug	
100.2	0.5									Riser	
			-becomes grey, decrease in silt content		2A	SS					
99.6	1				2B	SS	63	ND	ND		
99.2	1.5			99.13							
			(ML) sandy CLAYEY SILT: grey, cohesive, w>PL, firm	1.52	3	SS	92	ND	ND	Sand Back Fill	
98.6	2									PVC Screen	Groundwater measured at 2.0 mbgs following completion.
				98.21	4A	SS					
98.2	2.5		**(ML) SILT:** grey, non-cohesive, wet, loose, some sand, trace clay	2.44	4B	SS	63	ND	ND		
97.6	3		-becomes compact								
97.2	3.5			96.99	5	SS	50	ND	ND	Cap	
			Borehole terminated @ 3.7m due to target depth achieved.	3.66							
96.6	4										
96.2	4.5										
95.6	5										
95.2	5.5										
94.6	6										
94.2	6.5										
93.6	7										
93.7											

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

1m = 24 units

Logged By: FI **Input By:** BV

Client: Cassidy EW Construction **Project Name:** 1386 & 1394 Greely Lane **Log of Borehole:** BH106-23

Contractor: OGS Inc. **Method:** Track Mounted Hollow Stem Auger Page: 1 of 1

Location: Ottawa, ON **Elevation:** 100.38 mASL **Date Completed:** March 7, 2023

Project No.: 17281-001 - B **UTM:** 18 T **N:** 5011800 **E:** 455161

Elevation (m)	Depth	Description	Elevation / Depth	Number	Type	% Recovery	CSV (ppm)	OV (ppm)	Well Installation	Log Notes
100.4	0	**TOPSOIL:** 125 mm	100.25	1A	SS	54	ND	ND	Cap	
				1B	SS				Bentonite Plug	
		FILL: (SM) SILTY SAND: brown, wet, very loose, trace gravel	0.13	1C	SS				Riser	
99.9	0.5									
			99.52	2A	SS					
99.4	1	**(ML) sandy CLAYEY SILT:** grey, cohesive, w>PL, soft	0.86	2B	SS	75	ND	ND		
98.9	1.5	-becomes firm								Groundwater measured at 1.5 mbgs following completion.
				3	SS	100	ND	ND	Sand	
98.4	2								Backfill	
									PVC Screen	
97.9	2.5			4	SS	92	ND	ND		
97.4	3		97.33							
		(ML) sandy SILT: grey, non-cohesive, wet, compact, trace clay	3.05	5	SS	75	ND	ND		
96.9	3.5		96.72						Cap	
		Borehole terminated @ 3.7m due to target depth achieved.	3.66							
96.4	4									
95.9	4.5									
95.4	5									
94.9	5.5									
94.4	6									
93.9	6.5									
93.4	7									
93.4										

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

1m = 24 units

Logged By: FI **Input By:** BV

Peterborough, Barrie, Oshawa, Kingston, Ottawa

Client: Cassidy EW Construction **Project Name:** 1386 & 1394 Greely Lane **Log of Borehole:** BH107-23

Contractor: OGS Inc. **Method:** Track Mounted Hollow Stem Auger Page: 1 of 1

Location: Ottawa, ON **Elevation:** 99.86 mREL **Date Completed:** March 8, 2023

Project No.: 17281-001 - B **UTM:** 18 T **N:** 5011845 **E:** 455203

SUBSURFACE PROFILE				SAMPLE						
Elevation (m) / Depth	Lithology	Description	Elevation / Depth	Number	Type	% Recovery	CSV (ppm)	OV (ppm)	Well Installation	Log Notes
99.9 — 0		**TOPSOIL:** 75 mm	99.78 / 0.08	1A	SS				Cap	
				1B	SS	79	ND	ND	Bentonite Plug	
		FILL: (SM) SILTY SAND: brown, wet, trace clay	99.56 / 0.3	1C	SS				Riser	
99.4 — 0.5		**(ML) sandy CLAYEY SILT:** grey, cohesive, w>PL, stiff								
98.9 — 1				2	SS	79	ND	ND		
98.4 — 1.5		-becomes firm								
				3	SS	100	ND	ND	Sand Back PVC Screen	Groundwater measured at 1.8 mbgs following completion.
97.9 — 2			97.57 / 2.29							
97.4 — 2.5		**(ML) sandy SILT:** grey, non-cohesive, wet, compact, trace clay		4	SS	75	ND	ND		
96.9 — 3										
96.4 — 3.5				5	SS	63	ND	ND	Cap	
		Borehole terminated @ 3.7m due to target depth achieved.	96.2 / 3.66							
95.9 — 4										
95.4 — 4.5										
94.9 — 5										
94.4 — 5.5										
93.9 — 6										
93.4 — 6.5										
92.9 — 7										
92.9										

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

1m = 24 units

Logged By: FI **Input By:** BV

Peterborough, Barrie, Oshawa, Kingston, Ottawa

Appendix B
Laboratory Certificates of Analysis

PARACEL LABORATORIES LTD.

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RESPONSIVE.
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300 - 2319 St. Laurent Blvd
Ottawa, ON, K1G 4J8
1-800-749-1947
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Certificate of Analysis

Cambium Inc. (Kingston)
625 Fortune Crescent Unit 1
Kingston, ON K7P0L5
Attn: Alex Wood

Client PO:
Project: 17281-001
Custody:

Report Date: 30-Mar-2023
Order Date: 10-Mar-2023

Order #: 2310430

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

Paracel ID	Client ID
2310430-01	BH105_0.15-0.6
2310430-02	QAQC1
2310430-03	BH106_0.9-1.35
2310430-04	BH107_0.75-1.35

Approved By:

Dale Robertson, BSc
Laboratory Director

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Boron, available	MOE (HWE), EPA 200.8 - ICP-MS	14-Mar-23	14-Mar-23
Chromium, hexavalent - soil	MOE E3056 - Extraction, colourimetric	14-Mar-23	14-Mar-23
Conductivity	MOE E3138 - probe @25 °C, water ext	15-Mar-23	15-Mar-23
Cyanide, free	MOE E3015 - Auto Colour, water extraction	14-Mar-23	14-Mar-23
Mercury by CVAA	EPA 7471B - CVAA, digestion	14-Mar-23	14-Mar-23
PCBs, total	SW846 8082A - GC-ECD	13-Mar-23	14-Mar-23
pH, soil	EPA 150.1 - pH probe @ 25 °C, CaCl buffered ext.	15-Mar-23	15-Mar-23
PHC F1	CWS Tier 1 - P&T GC-FID	13-Mar-23	14-Mar-23
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	13-Mar-23	14-Mar-23
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	15-Mar-23	15-Mar-23
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	13-Mar-23	15-Mar-23
REG 153: VOCs by P&T GC/MS	EPA 8260 - P&T GC-MS	13-Mar-23	14-Mar-23
SAR	Calculated	15-Mar-23	16-Mar-23
Solids, %	CWS Tier 1 - Gravimetric	14-Mar-23	14-Mar-23

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 -T7 Ind/Com, coarse	Reg 153/04 -T7 Ind/Com, fine

Certificate of Analysis

Report Date: 30-Mar-2023

Client: **Cambium Inc. (Kingston)**

Order Date: 10-Mar-2023

Client PO:

Project Description: 17281-001

	Client ID:	BH105_0.15-0.6	QAQC1	BH106_0.9-1.35	BH107_0.75-1.35	Criteria:	
	Sample Date:	07-Mar-23 13:00	07-Mar-23 09:00	08-Mar-23 09:00	08-Mar-23 15:00	Reg 153/04 -T7 Ind/Com, coarse	Reg 153/04 -T7 Ind/Com, fine
	Sample ID:	2310430-01	2310430-02	2310430-03	2310430-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Physical Characteristics							
% Solids	0.1 % by Wt.	89.9	92.6	84.4	86.8	-	-
General Inorganics							
SAR	0.01 N/A	0.15	0.12	4.48	2.47	12 N/A	12 N/A
Conductivity	5 uS/cm	179	138	565	539	1.4 mS/cm	1.4 mS/cm
Cyanide, free	0.03 ug/g	<0.03	<0.03	<0.03	<0.03	0.051 ug/g	0.051 ug/g
pH	0.05 pH Units	7.61	-	7.67	7.71	5.00 - 9.00 pH Units	5.00 - 9.00 pH Units
Metals							
Antimony	1 ug/g	<1.0	<1.0	<1.0	<1.0	40 ug/g	50 ug/g
Arsenic	1 ug/g	4.7	5.0	2.2	2.3	18 ug/g	18 ug/g
Barium	1 ug/g	101	46.6	150	174	670 ug/g	670 ug/g
Beryllium	0.5 ug/g	0.6	<0.5	<0.5	<0.5	8 ug/g	10 ug/g
Boron	5 ug/g	8.1	8.7	<5.0	5.1	120 ug/g	120 ug/g
Boron, available	0.5 ug/g	<0.5	<0.5	<0.5	<0.5	2 ug/g	2 ug/g
Cadmium	0.5 ug/g	<0.5	<0.5	<0.5	<0.5	1.9 ug/g	1.9 ug/g
Chromium (VI)	0.2 ug/g	<0.2	<0.2	<0.2	<0.2	8 ug/g	10 ug/g
Chromium	5 ug/g	20.3	15.1	27.1	27.8	160 ug/g	160 ug/g
Cobalt	1 ug/g	7.6	6.3	7.8	7.9	80 ug/g	100 ug/g
Copper	5 ug/g	31.9	19.8	17.0	17.3	230 ug/g	300 ug/g
Lead	1 ug/g	10.8	11.0	3.5	3.7	120 ug/g	120 ug/g
Mercury	0.1 ug/g	<0.1	<0.1	<0.1	<0.1	3.9 ug/g	20 ug/g
Molybdenum	1 ug/g	1.4	1.8	<1.0	<1.0	40 ug/g	40 ug/g
Nickel	5 ug/g	17.2	13.8	16.1	16.6	270 ug/g	340 ug/g
Selenium	1 ug/g	<1.0	<1.0	<1.0	<1.0	5.5 ug/g	5.5 ug/g
Silver	0.3 ug/g	<0.3	<0.3	<0.3	<0.3	40 ug/g	50 ug/g
Thallium	1 ug/g	<1.0	<1.0	<1.0	<1.0	3.3 ug/g	3.3 ug/g

Certificate of Analysis

Report Date: 30-Mar-2023

Client: **Cambium Inc. (Kingston)**

Order Date: 10-Mar-2023

Client PO:

Project Description: 17281-001

	Client ID:	BH105_0.15-0.6	QAQC1	BH106_0.9-1.35	BH107_0.75-1.35	Criteria:	
	Sample Date:	07-Mar-23 13:00	07-Mar-23 09:00	08-Mar-23 09:00	08-Mar-23 15:00	Reg 153/04 -T7 Ind/Com, coarse	Reg 153/04 -T7 Ind/Com, fine
	Sample ID:	2310430-01	2310430-02	2310430-03	2310430-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Metals							
Uranium	1 ug/g	<1.0	<1.0	<1.0	<1.0	33 ug/g	33 ug/g
Vanadium	10 ug/g	34.2	23.5	38.9	40.4	86 ug/g	86 ug/g
Zinc	20 ug/g	37.7	28.5	43.0	42.8	340 ug/g	340 ug/g
Volatiles							
Acetone	0.5 ug/g	<0.50	<0.50	<0.50	<0.50	16 ug/g	28 ug/g
Benzene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.32 ug/g	0.4 ug/g
Bromodichloromethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	18 ug/g	18 ug/g
Bromoform	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.61 ug/g	1.7 ug/g
Bromomethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.05 ug/g	0.05 ug/g
Carbon Tetrachloride	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.21 ug/g	1.5 ug/g
Chlorobenzene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	2.4 ug/g	2.7 ug/g
Chloroform	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.47 ug/g	0.18 ug/g
Dibromochloromethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	13 ug/g	13 ug/g
Dichlorodifluoromethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	16 ug/g	25 ug/g
1,2-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	6.8 ug/g	8.5 ug/g
1,3-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	9.6 ug/g	12 ug/g
1,4-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.2 ug/g	0.84 ug/g
1,1-Dichloroethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	17 ug/g	21 ug/g
1,2-Dichloroethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.05 ug/g	0.05 ug/g
1,1-Dichloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.064 ug/g	0.48 ug/g
cis-1,2-Dichloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	55 ug/g	37 ug/g
trans-1,2-Dichloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	1.3 ug/g	9.3 ug/g
1,2-Dichloropropane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.16 ug/g	0.68 ug/g
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	-	-

	Client ID:	BH105_0.15-0.6	QAQC1	BH106_0.9-1.35	BH107_0.75-1.35	Criteria:	
	Sample Date:	07-Mar-23 13:00	07-Mar-23 09:00	08-Mar-23 09:00	08-Mar-23 15:00	Reg 153/04 -T7 Ind/Com, coarse	Reg 153/04 -T7 Ind/Com, fine
	Sample ID:	2310430-01	2310430-02	2310430-03	2310430-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Volatiles							
1,3-Dichloropropene, total	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.18 ug/g	0.21 ug/g
Ethylene dibromide (dibromoethane,	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.05 ug/g	0.05 ug/g
Ethylbenzene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	9.5 ug/g	19 ug/g
Hexane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	46 ug/g	88 ug/g
Methyl Ethyl Ketone (2-Butanone)	0.5 ug/g	<0.50	<0.50	<0.50	<0.50	70 ug/g	88 ug/g
Methyl Isobutyl Ketone	0.5 ug/g	<0.50	<0.50	<0.50	<0.50	31 ug/g	210 ug/g
Methyl tert-butyl ether	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	11 ug/g	3.2 ug/g
Methylene Chloride	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	1.6 ug/g	2 ug/g
Styrene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	34 ug/g	43 ug/g
1,1,1,2-Tetrachloroethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.087 ug/g	0.11 ug/g
1,1,2,2-Tetrachloroethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.05 ug/g	0.094 ug/g
Tetrachloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	4.5 ug/g	21 ug/g
Toluene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	68 ug/g	78 ug/g
1,1,1-Trichloroethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	6.1 ug/g	12 ug/g
1,1,2-Trichloroethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.05 ug/g	0.11 ug/g
Trichloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	0.91 ug/g	0.61 ug/g
Trichlorofluoromethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	4 ug/g	5.8 ug/g
Vinyl chloride	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.032 ug/g	0.25 ug/g
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	26 ug/g	30 ug/g
Dibromofluoromethane	Surrogate	112%	109%	111%	112%	-	-
4-Bromofluorobenzene	Surrogate	105%	103%	107%	110%	-	-
Toluene-d8	Surrogate	129%	127%	129%	129%	-	-
Hydrocarbons							

Certificate of Analysis

Report Date: 30-Mar-2023

Client: **Cambium Inc. (Kingston)**

Order Date: 10-Mar-2023

Client PO:

Project Description: 17281-001

	Client ID:	BH105_0.15-0.6	QAQC1	BH106_0.9-1.35	BH107_0.75-1.35	Criteria:	
	Sample Date:	07-Mar-23 13:00	07-Mar-23 09:00	08-Mar-23 09:00	08-Mar-23 15:00	Reg 153/04 -T7 Ind/Com, coarse	Reg 153/04 -T7 Ind/Com, fine
	Sample ID:	2310430-01	2310430-02	2310430-03	2310430-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Hydrocarbons							
F1 PHCs (C6-C10)	7 ug/g	<7	<7	<7	<7	55 ug/g	65 ug/g
F2 PHCs (C10-C16)	4 ug/g	<4	<4	<4	<4	230 ug/g	250 ug/g
F3 PHCs (C16-C34)	8 ug/g	<8	<8	<8	<8	1700 ug/g	2500 ug/g
F4 PHCs (C34-C50)	6 ug/g	<6	<6	<6	<6	3300 ug/g	6600 ug/g
Semi-Volatiles							
Acenaphthene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	96 ug/g	96 ug/g
Acenaphthylene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.15 ug/g	0.17 ug/g
Anthracene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.67 ug/g	0.74 ug/g
Benzo [a] anthracene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.96 ug/g	0.96 ug/g
Benzo [a] pyrene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.3 ug/g	0.3 ug/g
Benzo [b] fluoranthene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.96 ug/g	0.96 ug/g
Benzo [g,h,i] perylene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	9.6 ug/g	9.6 ug/g
Benzo [k] fluoranthene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.96 ug/g	0.96 ug/g
Chrysene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	9.6 ug/g	9.6 ug/g
Dibenzo [a,h] anthracene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.1 ug/g	0.1 ug/g
Fluoranthene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	9.6 ug/g	9.6 ug/g
Fluorene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	62 ug/g	69 ug/g
Indeno [1,2,3-cd] pyrene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	0.76 ug/g	0.95 ug/g
1-Methylnaphthalene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	76 ug/g	85 ug/g
2-Methylnaphthalene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	76 ug/g	85 ug/g
Methylnaphthalene (1&2)	0.04 ug/g	<0.04	<0.04	<0.04	<0.04	76 ug/g	85 ug/g
Naphthalene	0.01 ug/g	<0.01	<0.01	<0.01	<0.01	9.6 ug/g	28 ug/g
Phenanthrene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	12 ug/g	16 ug/g
Pyrene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	96 ug/g	96 ug/g
2-Fluorobiphenyl	Surrogate	79.5%	92.7%	65.5%	78.3%	-	-

Certificate of Analysis

Report Date: 30-Mar-2023

Client: **Cambium Inc. (Kingston)**

Order Date: 10-Mar-2023

Client PO:

Project Description: 17281-001

	Client ID:	BH105_0.15-0.6	QAQC1	BH106_0.9-1.35	BH107_0.75-1.35	Criteria:	
	Sample Date:	07-Mar-23 13:00	07-Mar-23 09:00	08-Mar-23 09:00	08-Mar-23 15:00	Reg 153/04 -T7 Ind/Com, coarse	Reg 153/04 -T7 Ind/Com, fine
	Sample ID:	2310430-01	2310430-02	2310430-03	2310430-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Semi-Volatiles							
Terphenyl-d14	Surrogate	91.7%	111%	73.0%	88.0%	-	-
PCBs							
PCBs, total	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	1.1 ug/g	1.1 ug/g
Decachlorobiphenyl	Surrogate	115%	118%	119%	126%	-	-

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					
PCBs								
PCBs, total	ND	0.05	ug/g					
Surrogate: Decachlorobiphenyl	*0.114*		*ug/g*	*114*	*60-140*			

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
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					
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	*1.43*		*ug/g*	*107*	*50-140*			
Surrogate: Terphenyl-d14	*1.59*		*ug/g*	*119*	*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					

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Dichlorodifluoromethane	ND	0.05	ug/g					
1,2-Dichlorobenzene	ND	0.05	ug/g					
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					

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: 4-Bromofluorobenzene	*9.91*		*ug/g*	*124*	*50-140*			
Surrogate: Dibromofluoromethane	*8.27*		*ug/g*	*103*	*50-140*			
Surrogate: Toluene-d8	*9.87*		*ug/g*	*123*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
SAR	0.43	0.01	N/A	0.46			6.7	30	
Conductivity	181	5	uS/cm	179			1.1	5	
Cyanide, free	ND	0.03	ug/g	ND			NC	35	
pH	7.93	0.05	pH Units	7.95			0.3	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)	21	8	ug/g	54			88.0	30	QR-04
F4 PHCs (C34-C50)	77	6	ug/g	166			73.0	30	QR-04
Metals									
Antimony	ND	1.0	ug/g	ND			NC	30	
Arsenic	9.8	1.0	ug/g	8.7			12.0	30	
Barium	79.4	1.0	ug/g	74.2			6.8	30	
Beryllium	0.9	0.5	ug/g	0.8			4.8	30	
Boron, available	ND	0.5	ug/g	ND			NC	35	
Boron	14.2	5.0	ug/g	11.5			21.1	30	
Cadmium	ND	0.5	ug/g	ND			NC	30	
Chromium (VI)	ND	0.2	ug/g	ND			NC	35	
Chromium	24.6	5.0	ug/g	21.4			13.8	30	
Cobalt	11.7	1.0	ug/g	10.4			12.3	30	
Copper	26.3	5.0	ug/g	22.5			15.6	30	
Lead	11.2	1.0	ug/g	9.5			16.2	30	
Molybdenum	4.0	1.0	ug/g	3.6			11.4	30	
Nickel	32.3	5.0	ug/g	27.4			16.4	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	ND			NC	30	
Vanadium	37.0	10.0	ug/g	32.3			13.4	30	
Zinc	68.8	20.0	ug/g	61.7			10.9	30	

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
PCBs									
PCBs, total	ND	0.05	ug/g	ND			NC	40	
Surrogate: Decachlorobiphenyl	*0.140*		*ug/g*		*130*	*60-140*			
Physical Characteristics									
% Solids	89.6	0.1	% by Wt.	89.9			0.4	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	*1.21*		*ug/g*		*76.5*	*50-140*			
Surrogate: Terphenyl-d14	*1.43*		*ug/g*		*90.3*	*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	

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
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	
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	

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
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	
m,p-Xylenes	ND	0.05	ug/g	ND			NC	50	
o-Xylene	ND	0.05	ug/g	ND			NC	50	
Surrogate: 4-Bromofluorobenzene	*8.91*		*ug/g*		*103*	*50-140*			
Surrogate: Dibromofluoromethane	*9.47*		*ug/g*		*109*	*50-140*			
Surrogate: Toluene-d8	*10.7*		*ug/g*		*123*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
Cyanide, free	0.327	0.03	ug/g	ND	100	50-150			
Hydrocarbons									
F1 PHCs (C6-C10)	221	7	ug/g	ND	110	80-120			
F2 PHCs (C10-C16)	91	4	ug/g	ND	105	60-140			
F3 PHCs (C16-C34)	305	8	ug/g	54	118	60-140			
F4 PHCs (C34-C50)	329	6	ug/g	166	121	60-140			
Metals									
Arsenic	48.5	1.0	ug/g	3.5	90.0	70-130			
Barium	74.6	1.0	ug/g	29.7	89.9	70-130			
Beryllium	49.7	0.5	ug/g	ND	98.7	70-130			
Boron, available	4.28	0.5	ug/g	ND	85.5	70-122			
Boron	51.1	5.0	ug/g	ND	93.0	70-130			
Cadmium	42.9	0.5	ug/g	ND	85.5	70-130			
Chromium (VI)	0.1	0.2	ug/g	ND	61.0	70-130			QM-05
Chromium	58.0	5.0	ug/g	8.6	98.8	70-130			
Cobalt	52.3	1.0	ug/g	4.1	96.3	70-130			
Copper	57.5	5.0	ug/g	9.0	97.1	70-130			
Lead	46.0	1.0	ug/g	3.8	84.4	70-130			
Mercury	1.00	0.1	ug/g	ND	66.7	70-130			QM-07
Molybdenum	53.3	1.0	ug/g	1.4	104	70-130			
Nickel	60.7	5.0	ug/g	11.0	99.4	70-130			
Selenium	45.3	1.0	ug/g	ND	90.2	70-130			
Silver	37.8	0.3	ug/g	ND	75.6	70-130			
Thallium	42.9	1.0	ug/g	ND	85.5	70-130			
Uranium	44.5	1.0	ug/g	ND	88.2	70-130			
Vanadium	62.8	10.0	ug/g	12.9	99.8	70-130			
Zinc	72.7	20.0	ug/g	24.7	95.9	70-130			
PCBs									
PCBs, total	0.578	0.05	ug/g	ND	134	60-140			
Surrogate: Decachlorobiphenyl	*0.140*		*ug/g*		*130*	*60-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Semi-Volatiles									
Acenaphthene	0.167	0.02	ug/g	ND	84.5	50-140			
Acenaphthylene	0.142	0.02	ug/g	ND	71.9	50-140			
Anthracene	0.140	0.02	ug/g	ND	70.9	50-140			
Benzo [a] anthracene	0.125	0.02	ug/g	ND	63.1	50-140			
Benzo [a] pyrene	0.145	0.02	ug/g	ND	73.2	50-140			
Benzo [b] fluoranthene	0.149	0.02	ug/g	ND	75.7	50-140			
Benzo [g,h,i] perylene	0.123	0.02	ug/g	ND	62.0	50-140			
Benzo [k] fluoranthene	0.139	0.02	ug/g	ND	70.6	50-140			
Chrysene	0.169	0.02	ug/g	ND	85.6	50-140			
Dibenzo [a,h] anthracene	0.122	0.02	ug/g	ND	62.0	50-140			
Fluoranthene	0.143	0.02	ug/g	ND	72.2	50-140			
Fluorene	0.150	0.02	ug/g	ND	75.8	50-140			
Indeno [1,2,3-cd] pyrene	0.124	0.02	ug/g	ND	62.9	50-140			
1-Methylnaphthalene	0.154	0.02	ug/g	ND	77.9	50-140			
2-Methylnaphthalene	0.159	0.02	ug/g	ND	80.2	50-140			
Naphthalene	0.163	0.01	ug/g	ND	82.4	50-140			
Phenanthrene	0.153	0.02	ug/g	ND	77.3	50-140			
Pyrene	0.146	0.02	ug/g	ND	73.7	50-140			
Surrogate: 2-Fluorobiphenyl	*1.10*		*ug/g*		*69.8*	*50-140*			
Surrogate: Terphenyl-d14	*1.35*		*ug/g*		*85.2*	*50-140*			
Volatiles									
Acetone	12.6	0.50	ug/g	ND	126	50-140			
Benzene	3.68	0.02	ug/g	ND	92.0	60-130			
Bromodichloromethane	3.75	0.05	ug/g	ND	93.7	60-130			
Bromoform	4.13	0.05	ug/g	ND	103	60-130			
Bromomethane	4.37	0.05	ug/g	ND	109	50-140			
Carbon Tetrachloride	3.67	0.05	ug/g	ND	91.7	60-130			
Chlorobenzene	3.99	0.05	ug/g	ND	99.7	60-130			
Chloroform	3.86	0.05	ug/g	ND	96.5	60-130			
Dibromochloromethane	4.24	0.05	ug/g	ND	106	60-130			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Dichlorodifluoromethane	3.32	0.05	ug/g	ND	83.0	50-140			
1,2-Dichlorobenzene	3.40	0.05	ug/g	ND	85.0	60-130			
1,3-Dichlorobenzene	3.48	0.05	ug/g	ND	86.9	60-130			
1,4-Dichlorobenzene	3.23	0.05	ug/g	ND	80.7	60-130			
1,1-Dichloroethane	4.21	0.05	ug/g	ND	105	60-130			
1,2-Dichloroethane	3.66	0.05	ug/g	ND	91.5	60-130			
1,1-Dichloroethylene	3.95	0.05	ug/g	ND	98.7	60-130			
cis-1,2-Dichloroethylene	3.79	0.05	ug/g	ND	94.7	60-130			
trans-1,2-Dichloroethylene	3.79	0.05	ug/g	ND	94.7	60-130			
1,2-Dichloropropane	3.50	0.05	ug/g	ND	87.5	60-130			
cis-1,3-Dichloropropylene	3.45	0.05	ug/g	ND	86.3	60-130			
trans-1,3-Dichloropropylene	3.61	0.05	ug/g	ND	90.3	60-130			
Ethylbenzene	3.83	0.05	ug/g	ND	95.9	60-130			
Ethylene dibromide (dibromoethane, 1,2-)	3.90	0.05	ug/g	ND	97.5	60-130			
Hexane	4.23	0.05	ug/g	ND	106	60-130			
Methyl Ethyl Ketone (2-Butanone)	10.4	0.50	ug/g	ND	104	50-140			
Methyl Isobutyl Ketone	8.88	0.50	ug/g	ND	88.8	50-140			
Methyl tert-butyl ether	7.98	0.05	ug/g	ND	79.8	50-140			
Methylene Chloride	4.63	0.05	ug/g	ND	116	60-130			
Styrene	3.72	0.05	ug/g	ND	93.0	60-130			
1,1,1,2-Tetrachloroethane	4.12	0.05	ug/g	ND	103	60-130			
1,1,2,2-Tetrachloroethane	4.32	0.05	ug/g	ND	108	60-130			
Tetrachloroethylene	4.10	0.05	ug/g	ND	103	60-130			
Toluene	4.07	0.05	ug/g	ND	102	60-130			
1,1,1-Trichloroethane	3.68	0.05	ug/g	ND	92.0	60-130			
1,1,2-Trichloroethane	3.57	0.05	ug/g	ND	89.3	60-130			
Trichloroethylene	3.45	0.05	ug/g	ND	86.3	60-130			
Trichlorofluoromethane	4.86	0.05	ug/g	ND	122	50-140			
Vinyl chloride	3.90	0.02	ug/g	ND	97.4	50-140			
m,p-Xylenes	8.22	0.05	ug/g	ND	103	60-130			
o-Xylene	4.09	0.05	ug/g	ND	102	60-130			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: 4-Bromofluorobenzene	*7.48*		*ug/g*		*93.5*	*50-140*			
Surrogate: Dibromofluoromethane	*8.12*		*ug/g*		*101*	*50-140*			
Surrogate: Toluene-d8	*8.21*		*ug/g*		*103*	*50-140*			

Qualifier Notes:

QC Qualifiers:

QM-05	The spike recovery was outside acceptance limits for the matrix spike due to matrix interference.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on other acceptable QC.
QR-04	Duplicate results exceeds RPD limits due to non-homogeneous matrix.

Sample Data Revisions:

None

Certificate of Analysis

Report Date: 30-Mar-2023

Client: **Cambium Inc. (Kingston)**

Order Date: 10-Mar-2023

Client PO:

Project Description: 17281-001

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 unlesss 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.

PARACEL LABORATORIES LTD.

Paracel ID: 2310430

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2310430	

Client Name: Cambium Inc.	Project Ref: 17281-001	Page 1 of 1
Contact Name: Alex Wood	Quote #:	Turnaround Time
Address:	PO #:	☐ 1 day ☐ 3 day
	E-mail: alex.wood@camibum-inc.com	☐ 2 day ☒ Regular
Telephone: 613-876-2047	christine.wilson@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 7
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)

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken Date	Sample Taken Time	PHCs / VOCs	PAHs	Reg 153 Metals	Reg 153 Inorganic	pH
1	BH105_0.15-0.6	S		2	07-03-23	1:00pm	✔	✔	✔	✔	✔
2	QAQC1	S		2	/	/	✔	✔	✔	✔	
3	BH106_0.9-1.35	S		2	08-03-23	9:00 AM	✔	✔	✔	✔	✔
4	BH107_0.75-1.35	S		2	08-03-23	3:00 pm	✔	✔	✔	✔	✔
5											
6											
7											
8											
9											
10											

Comments:

Method of Delivery: Drop Box

Relinquished By (Sign):	Received By Driver/Depot: Anita Payne	Received at Lab:	Verified By: Raeen Cooper
Relinquished By (Print): Fortan Imbaz	Date/Time: March 10 23 8:30	Date/Time: Mar 11 2023	Date/Time: Mar 10 14:42
Date/Time: 09/03/23, 5:00 pm	Temperature: 8.5 °C	Temperature: 7.6	pH Verified: ☐ By:

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Certificate of Analysis

Cambium Inc. (Kingston)
625 Fortune Crescent Unit 1
Kingston, ON K7P0L5
Attn: Alex Wood

Client PO:
Project: 17281-001
Custody: 138623

Report Date: 22-Mar-2023
Order Date: 17-Mar-2023

Order #: 2311454

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

Paracel ID	Client ID
2311454-01	BH105
2311454-02	BH106
2311454-03	BH107
2311454-04	MW3
2311454-05	QAQC1

Approved By:

Mark Foto, M.Sc.
Lab Supervisor

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Metals, ICP-MS	EPA 200.8 - ICP-MS	21-Mar-23	21-Mar-23
PHC F1	CWS Tier 1 - P&T GC-FID	21-Mar-23	21-Mar-23
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	21-Mar-23	22-Mar-23
REG 153: PAHs by GC-MS	EPA 625 - GC-MS, extraction	20-Mar-23	20-Mar-23
REG 153: VOCs by P&T GC/MS	EPA 624 - P&T GC-MS	21-Mar-23	21-Mar-23

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 -T7 Non-Potable Groundwater, coarse	Reg 153/04 -T7 Non-Potable Groundwater, fine

Certificate of Analysis

Report Date: 22-Mar-2023

Client: **Cambium Inc. (Kingston)**

Order Date: 17-Mar-2023

Client PO:

Project Description: 17281-001

	Client ID:	BH105	BH106	BH107	MW3	Criteria:	
	Sample Date:	16-Mar-23 10:00	16-Mar-23 12:45	16-Mar-23 11:30	16-Mar-23 14:30	**Reg 153/04 -T7 Non-Potable Groundwater, coarse**	**Reg 153/04 -T7 Non-Potable Groundwater, fine**
	Sample ID:	2311454-01	2311454-02	2311454-03	2311454-04		
	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	16000 ug/L	16000 ug/L
Arsenic	1 ug/L	<1	<1	<1	<1	1500 ug/L	1500 ug/L
Barium	1 ug/L	52	405	1700	143	23000 ug/L	23000 ug/L
Beryllium	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	53 ug/L	53 ug/L
Boron	10 ug/L	13	21	42	17	36000 ug/L	36000 ug/L
Cadmium	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	2.1 ug/L	2.1 ug/L
Chromium	1 ug/L	<1	<1	<1	<1	640 ug/L	640 ug/L
Cobalt	0.5 ug/L	0.8	1.2	1.6	<0.5	52 ug/L	52 ug/L
Copper	0.5 ug/L	3.3	4.0	1.9	1.0	69 ug/L	69 ug/L
Lead	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	20 ug/L	20 ug/L
Molybdenum	0.5 ug/L	1.7	3.6	3.4	2.6	7300 ug/L	7300 ug/L
Nickel	1 ug/L	1	3	8	5	390 ug/L	390 ug/L
Selenium	1 ug/L	<1	<1	<1	<1	50 ug/L	50 ug/L
Silver	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	1.2 ug/L	1.2 ug/L
Sodium	200 ug/L	24200	588000	415000	178000	1800000 ug/L	1800000 ug/L
Thallium	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	400 ug/L	400 ug/L
Uranium	0.1 ug/L	3.8	5.9	3.5	<0.1	330 ug/L	330 ug/L
Vanadium	0.5 ug/L	<0.5	<0.5	1.0	<0.5	200 ug/L	200 ug/L
Zinc	5 ug/L	<5	<5	<5	<5	890 ug/L	890 ug/L
Volatiles							
Acetone	5 ug/L	<5.0	<5.0	<5.0	<5.0	100000 ug/L	100000 ug/L
Benzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	0.5 ug/L	0.5 ug/L
Bromodichloromethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	67000 ug/L	67000 ug/L
Bromoform	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	5 ug/L	5 ug/L
Bromomethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	0.89 ug/L	0.89 ug/L

Certificate of Analysis

Report Date: 22-Mar-2023

Client: **Cambium Inc. (Kingston)**

Order Date: 17-Mar-2023

Client PO:

Project Description: 17281-001

	Client ID:	BH105	BH106	BH107	MW3	Criteria:	
	Sample Date:	16-Mar-23 10:00	16-Mar-23 12:45	16-Mar-23 11:30	16-Mar-23 14:30	Reg 153/04 -T7 Non-Potable Groundwater, coarse	Reg 153/04 -T7 Non-Potable Groundwater, fine
	Sample ID:	2311454-01	2311454-02	2311454-03	2311454-04		
	Matrix:	Ground Water	Ground Water	Ground Water	Ground Water		
	MDL/Units						
Volatiles							
Carbon Tetrachloride	0.2 ug/L	<0.2	<0.2	<0.2	<0.2	0.2 ug/L	0.2 ug/L
Chlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	140 ug/L	140 ug/L
Chloroform	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	2 ug/L	2 ug/L
Dibromochloromethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	65000 ug/L	65000 ug/L
Dichlorodifluoromethane	1 ug/L	<1.0	<1.0	<1.0	<1.0	3500 ug/L	3500 ug/L
1,2-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	150 ug/L	150 ug/L
1,3-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	7600 ug/L	7600 ug/L
1,4-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	0.5 ug/L	0.5 ug/L
1,1-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	11 ug/L	11 ug/L
1,2-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	0.5 ug/L	0.5 ug/L
1,1-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	0.5 ug/L	0.5 ug/L
cis-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	1.6 ug/L	1.6 ug/L
trans-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	1.6 ug/L	1.6 ug/L
1,2-Dichloropropane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	0.58 ug/L	0.58 ug/L
cis-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
trans-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,3-Dichloropropene, total	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	0.5 ug/L	0.5 ug/L
Ethylene dibromide (dibromoethane,	0.2 ug/L	<0.2	<0.2	<0.2	<0.2	0.2 ug/L	0.2 ug/L
Ethylbenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	54 ug/L	54 ug/L
Hexane	1 ug/L	<1.0	<1.0	<1.0	<1.0	5 ug/L	5 ug/L
Methyl Ethyl Ketone (2-Butanone)	5 ug/L	<5.0	<5.0	<5.0	<5.0	21000 ug/L	21000 ug/L
Methyl Isobutyl Ketone	5 ug/L	<5.0	<5.0	<5.0	<5.0	5200 ug/L	5200 ug/L
Methyl tert-butyl ether	2 ug/L	<2.0	<2.0	<2.0	<2.0	15 ug/L	15 ug/L
Methylene Chloride	5 ug/L	<5.0	<5.0	<5.0	<5.0	26 ug/L	26 ug/L
Styrene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	43 ug/L	43 ug/L

	Client ID:	BH105	BH106	BH107	MW3	Criteria:	
	Sample Date:	16-Mar-23 10:00	16-Mar-23 12:45	16-Mar-23 11:30	16-Mar-23 14:30	**Reg 153/04 -T7 Non-Potable Groundwater, coarse**	**Reg 153/04 -T7 Non-Potable Groundwater, fine**
	Sample ID:	2311454-01	2311454-02	2311454-03	2311454-04		
	Matrix:	Ground Water	Ground Water	Ground Water	Ground Water		
	MDL/Units						
Volatiles							
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	1.1 ug/L	1.1 ug/L
1,1,2,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	0.5 ug/L	0.5 ug/L
Tetrachloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	0.5 ug/L	0.5 ug/L
Toluene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	320 ug/L	320 ug/L
1,1,1-Trichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	23 ug/L	23 ug/L
1,1,2-Trichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	0.5 ug/L	0.5 ug/L
Trichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	0.5 ug/L	0.5 ug/L
Trichlorofluoromethane	1 ug/L	<1.0	<1.0	<1.0	<1.0	2000 ug/L	2000 ug/L
Vinyl chloride	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	0.5 ug/L	0.5 ug/L
m,p-Xylenes	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
o-Xylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Xylenes, total	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	72 ug/L	72 ug/L
4-Bromofluorobenzene	Surrogate	106%	108%	107%	106%	-	-
Toluene-d8	Surrogate	110%	110%	111%	110%	-	-
Dibromofluoromethane	Surrogate	107%	107%	107%	106%	-	-
Hydrocarbons							
F1 PHCs (C6-C10)	25 ug/L	<25	<25	<25	<25	420 ug/L	420 ug/L
F2 PHCs (C10-C16)	100 ug/L	<100	<100	<100	<100	150 ug/L	150 ug/L
F3 PHCs (C16-C34)	100 ug/L	<100	<100	<100	<100	500 ug/L	500 ug/L
F4 PHCs (C34-C50)	100 ug/L	<100	<100	<100	<100	500 ug/L	500 ug/L
Semi-Volatiles							
Acenaphthene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05	17 ug/L	17 ug/L
Acenaphthylene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05	1 ug/L	1 ug/L
Anthracene	0.01 ug/L	<0.01	<0.01	<0.01	<0.01	1 ug/L	1 ug/L
Benzo [a] anthracene	0.01 ug/L	<0.01	<0.01	<0.01	<0.01	1.8 ug/L	1.8 ug/L

	Client ID:	BH105	BH106	BH107	MW3	Criteria:	
	Sample Date:	16-Mar-23 10:00	16-Mar-23 12:45	16-Mar-23 11:30	16-Mar-23 14:30	Reg 153/04 -T7 Non-Potable Groundwater, coarse	Reg 153/04 -T7 Non-Potable Groundwater, fine
	Sample ID:	2311454-01	2311454-02	2311454-03	2311454-04		
	Matrix:	Ground Water	Ground Water	Ground Water	Ground Water		
	MDL/Units						
Semi-Volatiles							
Benzo [a] pyrene	0.01 ug/L	<0.01	<0.01	<0.01	<0.01	0.81 ug/L	0.81 ug/L
Benzo [b] fluoranthene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05	0.75 ug/L	0.75 ug/L
Benzo [g,h,i] perylene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05	0.2 ug/L	0.2 ug/L
Benzo [k] fluoranthene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05	0.4 ug/L	0.4 ug/L
Chrysene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05	0.7 ug/L	0.7 ug/L
Dibenzo [a,h] anthracene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05	0.4 ug/L	0.4 ug/L
Fluoranthene	0.01 ug/L	<0.01	<0.01	<0.01	<0.01	44 ug/L	44 ug/L
Fluorene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05	290 ug/L	290 ug/L
Indeno [1,2,3-cd] pyrene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05	0.2 ug/L	0.2 ug/L
1-Methylnaphthalene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05	1500 ug/L	1500 ug/L
2-Methylnaphthalene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05	1500 ug/L	1500 ug/L
Methylnaphthalene (1&2)	0.1 ug/L	<0.10	<0.10	<0.10	<0.10	1500 ug/L	1500 ug/L
Naphthalene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05	7 ug/L	7 ug/L
Phenanthrene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05	380 ug/L	380 ug/L
Pyrene	0.01 ug/L	<0.01	<0.01	<0.01	<0.01	5.7 ug/L	5.7 ug/L
2-Fluorobiphenyl	Surrogate	72.4%	64.5%	78.9%	95.4%	-	-
Terphenyl-d14	Surrogate	56.3%	58.2%	61.3%	83.0%	-	-

Certificate of Analysis

Report Date: 22-Mar-2023

Client: **Cambium Inc. (Kingston)**

Order Date: 17-Mar-2023

Client PO:

Project Description: 17281-001

	Client ID:	QAQC1				Criteria:	
	Sample Date:	16-Mar-23 09:00				Reg 153/04 -T7 Non-Potable Groundwater, coarse	Reg 153/04 -T7 Non-Potable Groundwater, fine
	Sample ID:	2311454-05					
	Matrix:	Ground Water					
	MDL/Units						
Metals							
Antimony	0.5 ug/L	<0.5	-	-	-	16000 ug/L	16000 ug/L
Arsenic	1 ug/L	<1	-	-	-	1500 ug/L	1500 ug/L
Barium	1 ug/L	45	-	-	-	23000 ug/L	23000 ug/L
Beryllium	0.5 ug/L	<0.5	-	-	-	53 ug/L	53 ug/L
Boron	10 ug/L	13	-	-	-	36000 ug/L	36000 ug/L
Cadmium	0.1 ug/L	<0.1	-	-	-	2.1 ug/L	2.1 ug/L
Chromium	1 ug/L	<1	-	-	-	640 ug/L	640 ug/L
Cobalt	0.5 ug/L	0.9	-	-	-	52 ug/L	52 ug/L
Copper	0.5 ug/L	2.0	-	-	-	69 ug/L	69 ug/L
Lead	0.1 ug/L	<0.1	-	-	-	20 ug/L	20 ug/L
Molybdenum	0.5 ug/L	1.8	-	-	-	7300 ug/L	7300 ug/L
Nickel	1 ug/L	1	-	-	-	390 ug/L	390 ug/L
Selenium	1 ug/L	<1	-	-	-	50 ug/L	50 ug/L
Silver	0.1 ug/L	<0.1	-	-	-	1.2 ug/L	1.2 ug/L
Sodium	200 ug/L	25000	-	-	-	1800000 ug/L	1800000 ug/L
Thallium	0.1 ug/L	<0.1	-	-	-	400 ug/L	400 ug/L
Uranium	0.1 ug/L	3.6	-	-	-	330 ug/L	330 ug/L
Vanadium	0.5 ug/L	<0.5	-	-	-	200 ug/L	200 ug/L
Zinc	5 ug/L	<5	-	-	-	890 ug/L	890 ug/L
Volatiles							
Acetone	5 ug/L	<5.0	-	-	-	100000 ug/L	100000 ug/L
Benzene	0.5 ug/L	<0.5	-	-	-	0.5 ug/L	0.5 ug/L
Bromodichloromethane	0.5 ug/L	<0.5	-	-	-	67000 ug/L	67000 ug/L
Bromoform	0.5 ug/L	<0.5	-	-	-	5 ug/L	5 ug/L
Bromomethane	0.5 ug/L	<0.5	-	-	-	0.89 ug/L	0.89 ug/L

	Client ID:	QAQC1				Criteria:	
	Sample Date:	16-Mar-23 09:00				Reg 153/04 -T7 Non-Potable Groundwater, coarse	Reg 153/04 -T7 Non-Potable Groundwater, fine
	Sample ID:	2311454-05					
	Matrix:	Ground Water					
	MDL/Units						
Volatiles							
Carbon Tetrachloride	0.2 ug/L	<0.2	-	-	-	0.2 ug/L	0.2 ug/L
Chlorobenzene	0.5 ug/L	<0.5	-	-	-	140 ug/L	140 ug/L
Chloroform	0.5 ug/L	<0.5	-	-	-	2 ug/L	2 ug/L
Dibromochloromethane	0.5 ug/L	<0.5	-	-	-	65000 ug/L	65000 ug/L
Dichlorodifluoromethane	1 ug/L	<1.0	-	-	-	3500 ug/L	3500 ug/L
1,2-Dichlorobenzene	0.5 ug/L	<0.5	-	-	-	150 ug/L	150 ug/L
1,3-Dichlorobenzene	0.5 ug/L	<0.5	-	-	-	7600 ug/L	7600 ug/L
1,4-Dichlorobenzene	0.5 ug/L	<0.5	-	-	-	0.5 ug/L	0.5 ug/L
1,1-Dichloroethane	0.5 ug/L	<0.5	-	-	-	11 ug/L	11 ug/L
1,2-Dichloroethane	0.5 ug/L	<0.5	-	-	-	0.5 ug/L	0.5 ug/L
1,1-Dichloroethylene	0.5 ug/L	<0.5	-	-	-	0.5 ug/L	0.5 ug/L
cis-1,2-Dichloroethylene	0.5 ug/L	<0.5	-	-	-	1.6 ug/L	1.6 ug/L
trans-1,2-Dichloroethylene	0.5 ug/L	<0.5	-	-	-	1.6 ug/L	1.6 ug/L
1,2-Dichloropropane	0.5 ug/L	<0.5	-	-	-	0.58 ug/L	0.58 ug/L
cis-1,3-Dichloropropylene	0.5 ug/L	<0.5	-	-	-	-	-
trans-1,3-Dichloropropylene	0.5 ug/L	<0.5	-	-	-	-	-
1,3-Dichloropropene, total	0.5 ug/L	<0.5	-	-	-	0.5 ug/L	0.5 ug/L
Ethylene dibromide (dibromoethane,	0.2 ug/L	<0.2	-	-	-	0.2 ug/L	0.2 ug/L
Ethylbenzene	0.5 ug/L	<0.5	-	-	-	54 ug/L	54 ug/L
Hexane	1 ug/L	<1.0	-	-	-	5 ug/L	5 ug/L
Methyl Ethyl Ketone (2-Butanone)	5 ug/L	<5.0	-	-	-	21000 ug/L	21000 ug/L
Methyl Isobutyl Ketone	5 ug/L	<5.0	-	-	-	5200 ug/L	5200 ug/L
Methyl tert-butyl ether	2 ug/L	<2.0	-	-	-	15 ug/L	15 ug/L
Methylene Chloride	5 ug/L	<5.0	-	-	-	26 ug/L	26 ug/L
Styrene	0.5 ug/L	<0.5	-	-	-	43 ug/L	43 ug/L

	Client ID:	QAQC1				Criteria:	
	Sample Date:	16-Mar-23 09:00				Reg 153/04 -T7 Non-Potable Groundwater, coarse	Reg 153/04 -T7 Non-Potable Groundwater, fine
	Sample ID:	2311454-05					
	Matrix:	Ground Water					
	MDL/Units						
Volatiles							
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5	-	-	-	1.1 ug/L	1.1 ug/L
1,1,2,2-Tetrachloroethane	0.5 ug/L	<0.5	-	-	-	0.5 ug/L	0.5 ug/L
Tetrachloroethylene	0.5 ug/L	<0.5	-	-	-	0.5 ug/L	0.5 ug/L
Toluene	0.5 ug/L	<0.5	-	-	-	320 ug/L	320 ug/L
1,1,1-Trichloroethane	0.5 ug/L	<0.5	-	-	-	23 ug/L	23 ug/L
1,1,2-Trichloroethane	0.5 ug/L	<0.5	-	-	-	0.5 ug/L	0.5 ug/L
Trichloroethylene	0.5 ug/L	<0.5	-	-	-	0.5 ug/L	0.5 ug/L
Trichlorofluoromethane	1 ug/L	<1.0	-	-	-	2000 ug/L	2000 ug/L
Vinyl chloride	0.5 ug/L	<0.5	-	-	-	0.5 ug/L	0.5 ug/L
m,p-Xylenes	0.5 ug/L	<0.5	-	-	-	-	-
o-Xylene	0.5 ug/L	<0.5	-	-	-	-	-
Xylenes, total	0.5 ug/L	<0.5	-	-	-	72 ug/L	72 ug/L
Dibromofluoromethane	Surrogate	105%	-	-	-	-	-
4-Bromofluorobenzene	Surrogate	106%	-	-	-	-	-
Toluene-d8	Surrogate	110%	-	-	-	-	-
Hydrocarbons							
F1 PHCs (C6-C10)	25 ug/L	<25	-	-	-	420 ug/L	420 ug/L
F2 PHCs (C10-C16)	100 ug/L	<100	-	-	-	150 ug/L	150 ug/L
F3 PHCs (C16-C34)	100 ug/L	<100	-	-	-	500 ug/L	500 ug/L
F4 PHCs (C34-C50)	100 ug/L	<100	-	-	-	500 ug/L	500 ug/L
Semi-Volatiles							
Acenaphthene	0.05 ug/L	<0.05	-	-	-	17 ug/L	17 ug/L
Acenaphthylene	0.05 ug/L	<0.05	-	-	-	1 ug/L	1 ug/L
Anthracene	0.01 ug/L	<0.01	-	-	-	1 ug/L	1 ug/L
Benzo [a] anthracene	0.01 ug/L	<0.01	-	-	-	1.8 ug/L	1.8 ug/L

	Client ID:	QAQC1				Criteria:	
	Sample Date:	16-Mar-23 09:00				Reg 153/04 -T7 Non-Potable Groundwater, coarse	Reg 153/04 -T7 Non-Potable Groundwater, fine
	Sample ID:	2311454-05					
	Matrix:	Ground Water					
	MDL/Units						
Semi-Volatiles							
Benzo [a] pyrene	0.01 ug/L	<0.01	-	-	-	0.81 ug/L	0.81 ug/L
Benzo [b] fluoranthene	0.05 ug/L	<0.05	-	-	-	0.75 ug/L	0.75 ug/L
Benzo [g,h,i] perylene	0.05 ug/L	<0.05	-	-	-	0.2 ug/L	0.2 ug/L
Benzo [k] fluoranthene	0.05 ug/L	<0.05	-	-	-	0.4 ug/L	0.4 ug/L
Chrysene	0.05 ug/L	<0.05	-	-	-	0.7 ug/L	0.7 ug/L
Dibenzo [a,h] anthracene	0.05 ug/L	<0.05	-	-	-	0.4 ug/L	0.4 ug/L
Fluoranthene	0.01 ug/L	<0.01	-	-	-	44 ug/L	44 ug/L
Fluorene	0.05 ug/L	<0.05	-	-	-	290 ug/L	290 ug/L
Indeno [1,2,3-cd] pyrene	0.05 ug/L	<0.05	-	-	-	0.2 ug/L	0.2 ug/L
1-Methylnaphthalene	0.05 ug/L	<0.05	-	-	-	1500 ug/L	1500 ug/L
2-Methylnaphthalene	0.05 ug/L	<0.05	-	-	-	1500 ug/L	1500 ug/L
Methylnaphthalene (1&2)	0.1 ug/L	<0.10	-	-	-	1500 ug/L	1500 ug/L
Naphthalene	0.05 ug/L	<0.05	-	-	-	7 ug/L	7 ug/L
Phenanthrene	0.05 ug/L	<0.05	-	-	-	380 ug/L	380 ug/L
Pyrene	0.01 ug/L	<0.01	-	-	-	5.7 ug/L	5.7 ug/L
2-Fluorobiphenyl	Surrogate	79.6%	-	-	-	-	-
Terphenyl-d14	Surrogate	89.3%	-	-	-	-	-

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					

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	*15.0*		*ug/L*	*75.1*	*50-140*			
Surrogate: Terphenyl-d14	*19.2*		*ug/L*	*96.0*	*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					
cis-1,2-Dichloroethylene	ND	0.5	ug/L					

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
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	*87.9*		*ug/L*	*110*	*50-140*			
Surrogate: Dibromofluoromethane	*85.6*		*ug/L*	*107*	*50-140*			
Surrogate: Toluene-d8	*88.9*		*ug/L*	*111*	*50-140*			

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	2.0	1	ug/L	2.1			7.7	20	
Barium	279	1	ug/L	281			0.4	20	
Beryllium	ND	0.5	ug/L	ND			NC	20	
Boron	27	10	ug/L	27			0.2	20	
Cadmium	ND	0.1	ug/L	ND			NC	20	
Chromium	ND	1	ug/L	ND			NC	20	
Cobalt	ND	0.5	ug/L	ND			NC	20	
Copper	ND	0.5	ug/L	ND			NC	20	
Lead	1.33	0.1	ug/L	1.27			4.7	20	
Molybdenum	0.70	0.5	ug/L	0.70			0.1	20	
Nickel	ND	1	ug/L	ND			NC	20	
Selenium	2.9	1	ug/L	3.4			16.5	20	
Silver	ND	0.1	ug/L	ND			NC	20	
Sodium	1700000	2000	ug/L	1710000			0.4	20	
Thallium	ND	0.1	ug/L	ND			NC	20	
Uranium	1.4	0.1	ug/L	1.4			0.4	20	
Vanadium	ND	0.5	ug/L	ND			NC	20	
Zinc	ND	5	ug/L	ND			NC	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	
Chloroform	ND	0.5	ug/L	ND			NC	30	

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
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	ND	0.5	ug/L	ND			NC	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	
m,p-Xylenes	ND	0.5	ug/L	ND			NC	30	

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
o-Xylene	ND	0.5	ug/L	ND			NC	30	
Surrogate: 4-Bromofluorobenzene	*83.8*		*ug/L*		*105*	*50-140*			
Surrogate: Dibromofluoromethane	*83.1*		*ug/L*		*104*	*50-140*			
Surrogate: Toluene-d8	*88.2*		*ug/L*		*110*	*50-140*			

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	68-117			
F2 PHCs (C10-C16)	1770	100	ug/L	ND	111	60-140			
F3 PHCs (C16-C34)	4520	100	ug/L	ND	115	60-140			
F4 PHCs (C34-C50)	2360	100	ug/L	ND	95.3	60-140			
Metals									
Antimony	48.6	0.5	ug/L	ND	96.9	80-120			
Arsenic	50.7	1	ug/L	2.1	97.1	80-120			
Barium	315	1	ug/L	281	68.4	80-120			QM-07
Beryllium	46.8	0.5	ug/L	ND	93.6	80-120			
Boron	62	10	ug/L	27	69.9	80-120			QM-07
Cadmium	40.9	0.1	ug/L	ND	81.8	80-120			
Chromium	52.7	1	ug/L	ND	105	80-120			
Cobalt	55.8	0.5	ug/L	ND	111	80-120			
Copper	45.2	0.5	ug/L	ND	90.4	80-120			
Lead	43.1	0.1	ug/L	1.27	83.7	80-120			
Molybdenum	49.8	0.5	ug/L	0.70	98.3	80-120			
Nickel	52.3	1	ug/L	ND	104	80-120			
Selenium	46.4	1	ug/L	ND	92.9	80-120			
Silver	39.4	0.1	ug/L	ND	78.8	80-120			QM-07
Sodium	9050	200	ug/L	ND	90.5	80-120			
Thallium	45.0	0.1	ug/L	ND	90.0	80-120			
Uranium	52.6	0.1	ug/L	1.4	102	80-120			
Vanadium	52.6	0.5	ug/L	ND	105	80-120			
Zinc	50	5	ug/L	ND	101	80-120			
Semi-Volatiles									
Acenaphthene	4.61	0.05	ug/L	ND	92.2	50-140			
Acenaphthylene	4.14	0.05	ug/L	ND	82.9	50-140			
Anthracene	4.23	0.01	ug/L	ND	84.6	50-140			
Benzo [a] anthracene	4.98	0.01	ug/L	ND	99.6	50-140			
Benzo [a] pyrene	5.51	0.01	ug/L	ND	110	50-140			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Benzo [b] fluoranthene	5.88	0.05	ug/L	ND	118	50-140			
Benzo [g,h,i] perylene	3.97	0.05	ug/L	ND	79.5	50-140			
Benzo [k] fluoranthene	5.56	0.05	ug/L	ND	111	50-140			
Chrysene	5.33	0.05	ug/L	ND	107	50-140			
Dibenzo [a,h] anthracene	4.34	0.05	ug/L	ND	86.8	50-140			
Fluoranthene	4.36	0.01	ug/L	ND	87.1	50-140			
Fluorene	4.35	0.05	ug/L	ND	87.0	50-140			
Indeno [1,2,3-cd] pyrene	4.55	0.05	ug/L	ND	91.0	50-140			
1-Methylnaphthalene	4.93	0.05	ug/L	ND	98.6	50-140			
2-Methylnaphthalene	5.31	0.05	ug/L	ND	106	50-140			
Naphthalene	4.88	0.05	ug/L	ND	97.5	50-140			
Phenanthrene	4.19	0.05	ug/L	ND	83.8	50-140			
Pyrene	4.42	0.01	ug/L	ND	88.4	50-140			
Surrogate: 2-Fluorobiphenyl	*19.5*		*ug/L*		*97.4*	*50-140*			
Surrogate: Terphenyl-d14	*22.4*		*ug/L*		*112*	*50-140*			
Volatiles									
Acetone	121	5.0	ug/L	ND	121	50-140			
Benzene	49.6	0.5	ug/L	ND	124	60-130			
Bromodichloromethane	44.8	0.5	ug/L	ND	112	60-130			
Bromoform	38.9	0.5	ug/L	ND	97.2	60-130			
Bromomethane	34.9	0.5	ug/L	ND	87.2	50-140			
Carbon Tetrachloride	42.2	0.2	ug/L	ND	106	60-130			
Chlorobenzene	42.2	0.5	ug/L	ND	106	60-130			
Chloroform	46.4	0.5	ug/L	ND	116	60-130			
Dibromochloromethane	39.6	0.5	ug/L	ND	98.9	60-130			
Dichlorodifluoromethane	34.8	1.0	ug/L	ND	86.9	50-140			
1,2-Dichlorobenzene	39.6	0.5	ug/L	ND	99.0	60-130			
1,3-Dichlorobenzene	37.6	0.5	ug/L	ND	94.1	60-130			
1,4-Dichlorobenzene	36.3	0.5	ug/L	ND	90.6	60-130			
1,1-Dichloroethane	41.0	0.5	ug/L	ND	103	60-130			
1,2-Dichloroethane	45.8	0.5	ug/L	ND	115	60-130			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
1,1-Dichloroethylene	43.2	0.5	ug/L	ND	108	60-130			
cis-1,2-Dichloroethylene	48.3	0.5	ug/L	ND	121	60-130			
trans-1,2-Dichloroethylene	38.0	0.5	ug/L	ND	94.9	60-130			
1,2-Dichloropropane	47.9	0.5	ug/L	ND	120	60-130			
cis-1,3-Dichloropropylene	46.5	0.5	ug/L	ND	116	60-130			
trans-1,3-Dichloropropylene	42.3	0.5	ug/L	ND	106	60-130			
Ethylbenzene	46.2	0.5	ug/L	ND	116	60-130			
Ethylene dibromide (dibromoethane, 1,2-)	45.1	0.2	ug/L	ND	113	60-130			
Hexane	39.7	1.0	ug/L	ND	99.3	60-130			
Methyl Ethyl Ketone (2-Butanone)	140	5.0	ug/L	ND	140	50-140			
Methyl Isobutyl Ketone	136	5.0	ug/L	ND	136	50-140			
Methyl tert-butyl ether	95.1	2.0	ug/L	ND	95.1	50-140			
Methylene Chloride	47.1	5.0	ug/L	ND	118	60-130			
Styrene	39.3	0.5	ug/L	ND	98.3	60-130			
1,1,1,2-Tetrachloroethane	40.5	0.5	ug/L	ND	101	60-130			
1,1,2,2-Tetrachloroethane	42.9	0.5	ug/L	ND	107	60-130			
Tetrachloroethylene	38.3	0.5	ug/L	ND	95.6	60-130			
Toluene	45.4	0.5	ug/L	ND	114	60-130			
1,1,1-Trichloroethane	49.4	0.5	ug/L	ND	123	60-130			
1,1,2-Trichloroethane	47.3	0.5	ug/L	ND	118	60-130			
Trichloroethylene	41.2	0.5	ug/L	ND	103	60-130			
Trichlorofluoromethane	48.1	1.0	ug/L	ND	120	60-130			
Vinyl chloride	39.1	0.5	ug/L	ND	97.8	50-140			
m,p-Xylenes	84.6	0.5	ug/L	ND	106	60-130			
o-Xylene	43.0	0.5	ug/L	ND	107	60-130			
Surrogate: 4-Bromofluorobenzene	*85.6*		*ug/L*		*107*	*50-140*			
Surrogate: Dibromofluoromethane	*95.1*		*ug/L*		*119*	*50-140*			
Surrogate: Toluene-d8	*84.8*		*ug/L*		*106*	*50-140*			

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.

PARACEL LABORATORIES LTD.

Paracel ID: 2311454

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2311454	№ 138623

Client Name: Cambium Inc.
Contact Name: Alex Wood
Address: 625 Fortune Cres, Kingston On.
Telephone: 613 876 2047

Project Ref: 17281-001
Quote #:
PO #:
E-mail: Alex.Wood@cambium-inc.com, Christine.Wilson@cambium-inc.com, Samuel.Phillips@cambium-inc.com

Page 1 of 1

Turnaround Time
☐ 1 day ☐ 3 day
☐ 2 day ☑ Regular
Date Required:

☒ REG 153/04 ☐ REG 406/19

Other Regulation
☐ REG 558 ☐ PWQO
☐ CCME ☐ MISA
☐ SU - Sani ☐ SU - Storm
Mun:
☐ Other:

☐ Table 1 ☐ Res/Park ☐ Med/Fine
☐ Table 2 ☐ Ind/Comm ☐ Coarse
☐ Table 3 ☐ Agri/Other
☒ Table 7 ICL
For RSC: ☒ Yes ☐ No

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: Date	Sample Taken: Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	Metals + Inorganics				
1	BH105	GW		5	Mar 16/23	10:00	✓	✓	✓					✓				
2	BH106	GW		5		12:45	✓	✓	✓					✓				
3	BH107	GW		5		11:30	✓	✓	✓					✓				
4	MW3	GW		5		14:30	✓	✓	✓					✓				
5	QAQC1	GW		5			✓	✓	✓					✓				
6																		
7																		
8																		
9																		
10																		

Comments:

Method of Delivery: drop-box

Relinquished By (Sign):	Received By Driver/Depot:	Received At Lab:	Verified By: Kacey Cooper
Relinquished By (Print): Samuel Phillips	Date/Time: Mar 17 08:30	Date/Time: Mar 18/2023 11:55	Date/Time: Mar 17 14:34
Date/Time: Mar 16 2023 18:10	Temperature: 8.7 °C	Temperature: 9.7 °C	pH Verified: ☑ By: Kacey