LRL

ENGINEERING | INGÉNIERIE

Phase Two
Environmental Site Assessment

400 Coventry Road
Ottawa, Ontario

Prepared for:

400 Coventry Investments Inc.
100-85 Rue Bellehumeur
Gatineau, Quebec
J8T 8B7

Attention: Simon Éthier

LRL File No.: 220200

June 9, 2023

5430 Canotek Road | Ottawa, ON, K1J 9G2 | info@lrl.ca | www.lrl.ca | (613) 842-3434

EXECUTIVE SUMMARY

400 Coventry Investments Inc. has retained LRL Associates Ltd. (LRL) to complete a Phase Two Environmental Site Assessment (ESA) on the property located at 400 Coventry Road in Ottawa, Ontario (herein referred to as the Site). The location of the Site is presented in **Figure 1**.

The objectives of this Phase Two ESA are to address the presence or absence of one or more contaminants at the site as determined in the Phase One ESA completed by LRL Associates Ltd. and to assess the quality of the soil and groundwater. The purpose of the Phase Two ESA for the property is for the submission of a Record of Site Condition (RSC). According to the Client, the future development of the Phase Two Property is to construct multiple high rise residential towers ranging from eighteen (18) to thirty (30) storeys in height. An application for a Record of Site Condition (RSC) will be required to address the more sensitive residual use of the property in accordance with Ontario Regulation (O. Reg.) 153/04 (as amended).

The following is the executive summary of the Phase Two Environmental Site Assessment done by LRL Associates:

Executive Summary	
Phase Two Property (the Site)	The Site is irregularly shaped and covers an area of 1.98 hectares (4.9 acres) with the PIN #04255-0084 (LT). The Site is located at the municipal address of 400 Coventry Road, in Ottawa, Ontario. The property is owned by Enbridge Gas Inc. and is used for office space and as equipment/supplies storage for the corresponding utility company. It is anticipated that the Site is to be redeveloped for residential use.
Phase Two Investigations	Ontario Regulation (O. Reg.) 153/04 (as amended).
Geologic Conditions	The entire Phase Two Property was situated in an area of till; heterogeneous mixture of material ranging from clay to large boulders, generally sandy (Glacial Deposits). Bedrock has been identified as dark grey almost black limestone (Eastview Formation). Bedrock is between 3.6 and 8.5 m below grade (estimated between 61 and 65 m amsl).
Hydrogeological Conditions	The overburden of the site consists primarily of fine-grained deposits. The water table is located between 0.71 and 1.79 meters below ground surface (bgs). The groundwater flows towards the northeast direction. A small component of the groundwater flows in the northeast direction, toward Coventry Road.
Applicable Site Condition Standard	Ministry of the Environment, Conservation and Parks (MECP) “Table 3: Full Depth Generic Site Condition Standards in a Non-potable Groundwater Condition” (Table 3 Standards) for coarse-grained soils in a Residential Parkland Institutional (RPI) property use. The use of Table 3 RPI requires approval from the municipality and the City of Ottawa in accordance to O.Reg 153/04 as amended.

Soil and Groundwater Quality Data	The groundwater at the Phase Two Property was sampled at MW1, MW3, MW5, MW22-14, MW22-15, MW2-16, MW22-20, MW22-21 and MW22-22 and was analyzed for PHCs Fractions F1 through F4; VOCs, PAHs, PCBs, Metals and Inorganics. Chloride concentrations exceeded the site condition standards in each of the monitoring well locations sampled, including the respective supplicate samples. Sodium was also elevated in BH22-20, MW3 and MW5, all of which are located along the parking and circulation area at the western portion of the Site. These exceedances are likely associated to de-icing activities. In accordance to Section 49.1 (1) of Part IX on page 28 of O.Reg153/04, the salt is not a contaminant if it has been used for the purpose of de-icing for safety reasons. Hence these exceedance are not exceedance and can be excluded for the onsite property, however, if the soil is to be re-used for beneficial use elsewhere the EC and SAR exceedance must be taken into account at those other offsite properties. Benzene was reported above the Table 3 site condition standard (SCS) in MW1, MW3 and MW5 as well as in the duplicate sample collected from MW3. 1,4-Dichlorobenzene was reported above the applicable provincial standards in sample MW22-21, located within the southwestern extent of the building. These exceedances are most like a result of the previous gasoline storage tank installation, and repair garage activities. Groundwater impacts with respect to the petroleum based parameters has been delineated horizontally, however vertical delineation has not been established at this time. Vertical delineation must be undertaken if contamination exists in the groundwater table for all impacts expect of sodium or chloride exceedances in accordance to O.Reg 153/04 as amended. Select soil samples submitted for analysis exceeded the appliable site condition standards for the following parameters: SAR, EC, Benzene, Ethylbenzene, Hexane, Toluene, Xylenes, PHC F1, PHC F3, PHC F4, Benzo(a)pyrene, Fluoranthene, Napthalene, Cadmium and Lead. These exceedances were reported in samples collected from BH22-1, BH22-4, BH22-7, BH22-8, BH22-9, BH22-10, BH22-11, BH22-12, BH22-15, BH22-16, BH22-19, BH22-20 and BH22-22. The previously identified APEC 2, APEC 3, APEC 4 and APEC 5 were encountered in the soil and groundwater that exceeded the SCS for the Phase Two Property.
Conclusions	The soil and groundwater on parts of the Phase Two Property did not meet the MECP Table 3 Standards RPI in a non-potable groundwater condition.
Recommendations	The findings presented in this report may be used by the Client, for submission of a Record of Site Condition Standard (RSC) subject to the conclusions and limitations mentioned at the end of the report.

	Further delineation will be required to determine the vertical extend of contamination in soil and groundwater, before remediation or a Risk Assessment is undertaken on the Phase Two Property.
Limitations	Results of this Phase Two ESA should not be considered a warranty that the subject property is free from any and all contaminants from former and current practices, other than those noted in this report, nor that all compliance issues have been addressed.

TABLE OF CONTENTS

FIGURES

(In order following text)

TABLES

(In order following Figures)

APPENDICES

(In order following Tables)

Appendix A **Borehole Logs**

Appendix B **Certificates of Laboratory Analysis**

1 INTRODUCTION

400 Coventry Investments Inc. retained LRL Associates Ltd. (LRL) to complete a Phase Two Environmental Site Assessment (ESA) on the property located at 400 Coventry Road, Ottawa, Ontario (herein referred to as the Site). The Site Location is presented in **Figure 1.** The legal description of the property is Part Lot 3 Plan 747 as in OT67675 Except Pt 1 5R9075.

The objectives of the Phase Two ESA are addressed the presence or absence of one or more contaminants at the Site as determined in the Phase One ESA and to assess the quality of the soil and groundwater.

Given the proposed redevelopment of the Site from commercial to residential, completion of the Phase Two ESA to meet O. Reg 153/04 (as amended) is required as the land is being developed from a less stringent (commercial) to more stringent (residential) land use. Therefore, according to the Ministry of the Environment, Conservation and Parks (MECP), a Record of Site Condition (RSC) is required.

1.1 Site Description

The Site is located at the municipal address of 400 Coventry Road, Ottawa, Ontario. The property is situated in a commercial area along Coventry Road and Belfast Road. The property is currently in commercial land use as the Ottawa headquarters for Enbridge Gas Ltd. The surrounding area is comprised of commercial facilities all around. The property is bounded by Coventry Road to the north, Belfast Road to the east, Highway 417 to the south and retail buildings to the west. The Site Plan is presented in **Figure 2.**

A summary of the Site description is provided in Table 1 – Section 1.1

Table 1 – Section 1.1: Summary of Site Description

Parameters	Information
Location/ Address	400 Coventry Road, in Ottawa, Ontario **Figure 1**: Site Location Plan
Property Identification Numbers (PINs)	PIN #04255-0084 (LT)
Legal Description	Part Lot 3 Plan 747 as in OT67675 Except Pt 1 5R9075
Shape	Irregular shape, being approximately 100 m to 110 m wide (east to west) by approximately 175 to 190 m deep (north-south). Approximately 1.99 hectares (4.9 acres) total surface area.
Access to the Phase Two Property	The Phase Two Property can be accessed from Coventry Road along the northern extent, and Belfast Road along the eastern extent of the Site.
Occupancy	*Enbridge Gas* office space and equipment/materials storage
Current Land Use	Commercial. The Phase One ESA property has been used for commercial purposes since at least the mid 1960's.
Proposed Future Land Use	Residential

1.2 Property Ownership

The Qualified Person from LRL was retained by the Client to carry out this Phase Two ESA. The Site ownership information is presented in **Table 2 – Section 1.2.**

Table 2 – Section 1.2: Phase Two Property Owner Contact Information

Company	Contact
Phase Two Property Owner	Enbridge Gas Ltd.
Phase Two Property Contact	Sal Simone sal.simone@enbridge.com

1.3 Current and Proposed Land Uses

The Site is currently in commercial land use as the Ottawa Headquarters of Enbridge Gas Ltd. The future development of the Site is to construct multiple high rise residential towers ranging from eighteen (18) to thirty (30) storeys in height.

An application for a Record of Site Condition (RSC) will be required to address the more sensitive residential use of the property. However, at the time this report was prepared, a formal RSC submission was not authorized by the client.

1.4 Applicable Site Condition Standard

The results of the soil and groundwater chemical analysis were evaluated using the Standards prescribed in the Ministry of the Environment, Conservation and Parks (MECP) Table 3 Residential/Parkland/Institutional (RPI) Standards for coarse-grained soils in a non-potable groundwater condition.

Although the Site is currently occupied and used for commercial purposes, the residential site conditions standards were used in support of the future site development. These Standards were used to evaluate soil and groundwater quality based on the samples collected and tested, to determine whether soil quality compiled with MECP Standards, and to determine whether additional investigations are required or warranted.

The Site was assessed using the standards contained in MECP Table 3 of the above referenced standards. The use of the Table 3 Standards is considered suitable by LRL based on the considerations listed in the following **Table 3 – Section 1.4**, however the letter must be issued to the Municipality and the City of Ottawa requesting permission to use the MECP Table 3 RPI Standards in accordance to O. Reg 153/04 as amended.

Table 3 – Section 1.4: Phase Two Property Conditions

Parameters	Information
Proposed Land Use	Residential
Potable or Non-Potable Ground Water	Non-potable Groundwater
Proximity to Surface Water	The closest water body is the Rideau River, approximately 1100 m west of the Site.
Areas of Natural Significance	There are no Areas of Natural Scientific Interest (ANSI) in the study area, nor environmentally sensitive areas that encroach within 30 m of the Phase Two Property.
Nature and Depth of Bedrock Strata	According to the data obtained from EcoLog ERIS, Ontario wells, and Bedrock available data for the depth of bedrock, the depth to bedrock can be assumed to be between approximately 3.6 and 8 m below ground surface (bgs). The bedrock is comprised mainly of Eastview Formation composed of dark grey almost black limestone.
Direction of Groundwater Flow	The vast majority of the groundwater was determined to be going towards the northwest and a small component going to the northeast.
Grain Size Analysis	Coarse textured soil will be applied for the purpose of this report.
PH of Soil	Soil pH was between 7 and 8, based on analytical results outlined in greater detail in further sections of this report.

Based on the Site conditions described in **Table 3 – Section 1.4**, the applicable criteria to be used in this Phase Two ESA is Ontario Regulation 153/04 "Table 3: Full Depth Generic Site Condition Standards in a non-potable Ground Water Condition" for Residential Parkland Institutional (Table 3 RPI Standards) as per the MECP document titled *"Soil, Ground Water and Sediment Standards for Use under Part XV. 1 of the Environmental Protection Act",* dated April 15, 2011, as amended.

2 BACKGROUND INFORMATION

2.1 Physical Setting

The Site is located approximately 64 m above mean sea level (ASL) and is generally flat land. The Rideau River is located approximately 1.1 km west of the Site. The vast majority of the groundwater was determined to be going towards the northwest.

According to the Radon Potential Map of Ontario obtained from the website of Canada Radon, the Phase Two Study Area is located in the Relative Radon Hazard Zone 3 – Guarded.

There are no areas of natural significance encroaching within 30 m of the Site.

2.2 Past Investigations

A Phase One Site Assessment was completed by LRL Associates Ltd. in June 2023[1].

A Phase One Environmental Site Assessment, completed by Le Groupe Gesfor was provided to LRL, a Phase Two Environmental Site Assessment, completed by BlueMetric was provided to LRL and an Asbestos Containing Material Survey, completed by T. Harris Environmental Management Inc. was provided to LRL. Copies of these reports, prepared by others, are included in the LRL Phase One ESA, June 2023, for reference.

The Phase Two Environmental Site Assessment, completed by BlueMetric was set out to confirm the possible impacts associated with the areas of potential environmental concern as identified through their review of available records.

- Former garage activities at the southwestern portion of the building on-Site;
- Former presence of a 9,000 L capacity diesel storage tank and storage of coal tar wraps from gas pipes at the southern portion of the subject Site;
- Former present of a private, self-serve gasoline dispensing outlet and associated 9,000 L capacity underground storage tank along the southwestern corner of the building;
- The former presence of a 9,000 L gasoline storage tank, replaced (at the time of the assessment) with a 1,100 L capacity above-ground storage tank for used oil;
- The retrieval of a spill record at the neighbouring property located east of the Site, 440 Coventry Road.

The Phase Two ESA report concluded that no groundwater impacts were encountered with respect to the five (5) areas of potential environmental concern investigated. Impacted soil was encountered on the Site in the area of the former presence of a 9,000 L gasoline storage tank, along the western face of the building.

The Phase One Environmental Site Assessment by Le Groupe Gesfor was completed following the above discussed Phase Two ESA. Based on the findings of the Phase One ESA, an additional Phase Two ESA was recommended to address potential concerns identified. These concerns, as listed in the corresponding report are as follows:

- *"A private fuel outlet (PFO) equipped with a 9,000-litre (L) underground storage tank (UST) containing gasoline was historically located approximately 5 metres (m) west of the southwest corner of the Site Building. Subsurface investigations were completed in the vicinity of the former PFO and UST by BluMetric Environmental Inc. (BluMetric) in 2021. The investigative work concluded that approximately 180 m3 of petroleum hydrocarbon impacted soil was present in the area of the former gasoline UST."*
- *"A PFO equipped with a 9,000-L UST containing diesel was historically located on the southwest portion of the Site. BluMetric installed a single groundwater monitoring well (MW2) in the vicinity of the former UST in 2021; however, based on the estimated size of the tank nest, it is Gesfor's opinion that the subsurface conditions in the vicinity of the former diesel UST have not been sufficiently assessed;*
- *Monitoring well MW5 was installed as part of a previous subsurface investigation completed at the Site and is located within 5 m of the west elevation of the Site. The analytical soil data obtained from this location was found to exceed the applicable criteria for the Site. Based on the proximity*

[1] Phase One Environmental Site Assessment, 400 Coventry Road, Ottawa, Ontario, prepared for 400 Coventry Investments, by LRL, dated June 2023.

of this monitoring well to the west elevation of the Site (< 5 m), it is Gesfor's opinion that there is the potential for off-Site contamination;

- *Occupants of the Site Building have always conducted commercial/light industrial operations, including on-Site vehicle maintenance and servicing from approximately 1966 until the 2000s. An oil/water separator is located within the east portion of the garage, and floor trenches run along the south portion of the garage in an east-west direction. No previous environmental investigations have assessed the subsurface conditions beneath the garage, including in the vicinity of the oil/water separator and floor trenches. Based on the above-noted information, it is Gesfor's opinion that there is a potential for subsurface impacts at the Site; and*
- *During Gesfor's Site reconnaissance, Gesfor observed signage indicating "Coal Tar Storage Area" on the storage shed located on the west-central portion of the Site. Based on the fact that the subsurface conditions in this area have not been previously assessed, it is Gesfor's opinion that there is a potential for subsurface impacts at the Site."*

3 SCOPE OF INVESTIGATION

3.1 Overview of Site Investigation

LRL's Phase Two ESA included the analysis of field investigations carried out between April 27th, 2022, and February 27th, 2023. The field investigation was carried out to assess the quality of the soil and groundwater of the Phase Two Property in relation to the Areas of Potential Environmental Concern (APECs) identified by the Phase One Conceptual Site Model, represented in this report as **Figure 3**.

The scope of the investigation included:

- Preparation of a Health and Safety Plan.
- Collection of the geodetic elevations for borehole locations.
- Advancement of a total of sixteen (16) boreholes to a maximum depth of 6.1 m bgs.
- Six (6) boreholes were completed into monitoring wells designed to intercept the water table.
- Groundwater elevation measurements using an interphase probe for the potential measurements of free phase product either floating on the water table or the base of any water column.
- Sample collection was carried out in accordance with the detailed sampling and analysis plan.
- Field observations were made in accordance with LRL's Standard of Operation (SOP).
- Samples collected were submitted and analyzed by Paracel Laboratories Ltd. testing laboratory companies to the MECP Table 3 RPI Standards for coarse-textured soil.

3.2 Media Investigation

The Phase Two ESA was designed to investigate the potential for impact to soil and groundwater media on, in and beneath the Phase Two Property. The sampling of sediment was not performed, as there were no surface bodies of water on the Site during the Phase Two investigation.

3.2.1 Soil Investigation

The soil investigation was designed to investigate the APECs identified by the Phase One ESA, and consisted of the following components:

- Thirteen (13) boreholes were drilled on the Site, to a maximum depth of 6.1 m below ground surface (bgs) or until refusal, which ever is encountered first. These initial boreholes were completed between April 27th and May 5th, 2022.

- Nine (9) additional boreholes were drilled on the Site to a maximum depth of 6.1 m bgs or refusal, whichever came first. These boreholes were completed between December 19th, 2022, and February 6th, 2023;
- The majority of the boreholes, namely those advanced across the exterior of the Site, were advanced by utilizing continuous flight solid stem augers and hollow stem augers. Samples were retrieved at regular intervals with a 50 mm outside diameter split-barrel sampler driven with a hammer weighing 63.5 kg and dropping 760 mm;
- Those advanced indoors were completed using a manual concrete coring bit followed by either jack-hammer advancement of a split spoon sampler, or manual auger tool;
- The split spoon samplers and manual auger tool were cleaned with Alconox soap solution and, methyl hydrate and rinsed with water between uses;
- Inspection and logging of the split-spoon samples in the field with observations noted pertaining to the soil type, composition, visual staining, discolouration, and olfactory clues for potential chemical impacts;
- Collection of soil samples from each soil layer;
- Prepared sub-samples for chemical laboratory analysis;
- Field screening of soil samples using RKI GX-6000 Photo Ionizaiton Detector (PID) to measure headspace vapour concentrations and determine the potential existence of PHC fractions and other VOCs;
- Collection of sub-samples of soil for chemical laboratory analyssi was done using laboratory prepared, pre-labelled jars and vials. Sub-samples were placed in coolers. Based on the headspace vapour of analysis, the soil samples that exhibited the worst-case vapour readings were submitted to the analytical laboratory, along with a Chain of Custody Form for those samples;
- One (1) QA/QC was conducted on a duplicate sample, for every 10 sample parameters measured in the field. One (1) field duplicate soil sample was analyzed for PHCs, VOCs, PAHs, PCBs, and metal forming hydrides; and
- Soil cuttings were collected and remained on-site for future disposal.

3.2.2 Groundwater Investigation

The groundwater investigation was designed to intercept the groundwater table located approximately between 1.0 and 1.5 m bgs.

- Six (6) monitoring wells (MW22-14, MW22-16, MW22-19, MW22-20, MW22-21 and MW22-22) were installed to assess the potential impact on the groundwater;
- Three (3) existing monitoring wells, completed by others prior to LRLs investigation, were also included in the groundwater investigation;
- The well screens were placed at the bottom of the 3.0 m of the monitoring well depth, with a maximum depth of 6.0 m bgs;
- Development of each well, prior to sampling by the removal (purge) of at least three (3) times the volume of water contained in each well;
- Collection of the purge water in drums for future offside disposal;
- Determination of the presence of non-aqueous phase liquid-free product and the static groundwater elevation at each well;

- A Sampling of groundwater using a low flow pump system (or equivalent) following the water quality test with a Hanna Multi-Parameter water quality meter for determining the pH, conductivity, drawdown, conductivity, dissolved oxygen and temperature. Groundwater samples were collected once the parameters measured by the Hanna Multi-Parameter water quality meter showed the values to be constant;
- Two (2) duplicate sample was collected for QA/QC analysis; at least one (1) for each ten (10) parameters measured in the field;
- The cooler also contained a trip blank for the measurement of VOC samples for groundwater;
- Groundwater samples were placed in laboratory-prepared and pre-labelled jars and placed in ice-filled cooler boxes for storage and transportation to the analytical laboratory, along with a Chain of Custody Form;
- Retention of a copy of the Chain of Custody Form once samples were submitted for analysis;
- Ensured the temperature of the samples submitted was below 10° C;
- Chemical analysis of three (3) groundwater samples for contaminants of concern associated with specific APEC(s) identified by the Phase One ESA. Specifically, a groundwater sample and two (2) field duplicate groundwater sample was submitted for analysis of PHCs, VOCs, PAHs, PCBs, OC pesticides, metals, and metal forming hydrides; and
- Three (3) trip blank groundwater sample was submitted for VOCs.

3.3 Phase One Site Conceptual Model

The Phase One Conceptual Site Model is described as follows:

The PCAs on the Phase One Property and within Phase One Study Area identified through records review, interview, and Site reconnaissance are summarized in **Table 4 – Section 3.3** and incudes the actual groundwater flow direction as measured on-Site during the investigation, as presented in **Figure 4.**

Table 4 – Section 3.3: Phase One CSM – PCAS

No.	O. Reg 153/04 Schedule D PCA	Appr. Direction from Phase One Property	Source Information	Remarks	APEC	Rationale
1	**PCA 28: Gasoline and Associated Products Storage in Fixed Tanks.**	On-Site	TSSA Request, Ecolog ERIS, Site Interview	Former garage used for commercial vehicle maintenance.	Interior of Garage and along western face of the building.	Potential impact to soil and groundwater
2	**PCA 52: Storage, maintenance, fueling and repair of equipment, vehicles, and material used to maintain transportation systems.**	On-Site	Fire insurance plans, Phase One Interview	Former gasoline storage installations associated with historical Site activities as a garage used for commercial vehicle maintenance.	Along western face of building.	Potential impact on soil and groundwater
3	**PCA 30: Importation of Fill Material of Unknown Quality**	On-Site	Phase One Site Visit	The likely present of fill is suspected across the Site, in the areas of parking and circulation at the western and southern portions of the Site.	Across entirety of existing parking and circulation area.	Potential impact on soil
4	**PCA Other – Coal Storage**	On-Site	Phase One Site Visit, and previous reports prepared by others	Coal was previously stored within the shed located at the southwestern portion of the Site.	General south western portion of the Site.	Potential impact on soil and groundwater.
5	**PCA Other: Waste Generator**	On-Site	Ecolog ERIS	The wastes generated on the Site included: petroleum distillates, light fuels, PCBs, oil skimming & sludges, waste oils & lubricants, organic laboratory chemicals, waste compressed gases, aromatic solvents, and	Entire Property.	Potential impact on soil and groundwater.

No.	O. Reg 153/04 Schedule D PCA	Appr. Direction from Phase One Property	Source Information	Remarks	APEC	Rationale
				aliphatic solvents		
8	**PCA Other : Air Emissions**	On-Site	Ecolog ERIS	In 2004, the Site was listed as registered for the release of various products into the air, including VOCs and Particulate Matter	Entire Property	Potential impact on soil
9	**PCA 28: Gasoline and Associated Products Storage in Fixed Tanks**	75 m Northeast of the Site	City Directories and Ecolog ERIS	Red Line Taxi Ltd. listed in 1966-1970 and Blue Line Taxi Co. Ltd. listed from 1975 to 2011 at 455 Coventry Road, confirmed in later records as having six (6) fuel storage tanks listed being present on that property since 1966.	Northeastern portion of the Sire	Up-gradient of the Site. Potenital impact on soil and groundwater.
10	**PCA – Other :** Air Emissions	180 East	Ecolog ERIS	Public Works and Government Services Canada were issued a CofA for air in 2011, at 440 Coventry Road.	Eastern portion of Site.	Up gradient relative to the Phase One Property. Potential impact on soil and groundwater.
23	**PCA Other : Waste Generator**	180 East	Ecolog ERIS	Public Works Canada, Exposition Commission located 440 Coventry Road	Eastern portion of **the** Site	Up gradient relative to the Phase One Property. Potential impact on soil and groundwater.
24	**PCA Other : Waste Generator**	180 East	Ecolog ERIS	Brookfield Lepage Jonson Control located 440 Coventry Road	Eastern portion of the Site	Up gradient relative to the Phase One Property. Potential impact on soil and groundwater.
25	**PCA Other : Waste Generator**	180 East	Ecolog ERIS	Government of Canada – Supply and Services Canadian Government Expositions Centre located 440 Coventry Road	Eastern portion of the Site	Up gradient relative to the Phase One Property. Potential impact on soil and groundwater.

No.	O. Reg 153/04 Schedule D PCA	Appr. Direction from Phase One Property	Source Information	Remarks	APEC	Rationale
26	**PCA Other : Waste Generator**	55 East	Ecolog ERIS	SNC Lavalin O & M, located 440 Coventry Road	Eastern portion of the Site	Up gradient relative to the Phase One Property. Potential impact on soil and groundwater.
29	**PCA Other : Waste Generator**	30 East	Ecolog ERIS	Hydro Ottawa Limited, located at 419 Coventry Road.	n/a	Up gradient relative to the Phase One Property. Potential impact on soil and groundwater.
37	**PCA Other : Waste Generator**	200 East	Ecolog ERIS	Bell Canada at 490 Coventry Road	Eastern portion of the Site	Up gradient relative to the Phase One Property. Potential impact on soil and groundwater.
39	**PCA Other : PCB Supply and Services**	60 East	Ecolog ERIS	Exposition & Audio Visual, located at 440 Coventry Road is listed as a supply and services of PCBs in 1990	Eastern portion of the Site.	Up gradient relative to the Phase One Property. Potential impact on groundwater.
45	**PCA Other : Spill**	55 East	Ecolog ERIS	Two (2) records were retrieved for petroleum related spills at the property located at 440 Coventry Road	Eastern portion of the Site	Up gradient relative to the Phase One Property. Potential impact on soil and groundwater.

The potentially contaminating activities identified above have been evaluated by a qualified person to determine whether an area of potential environmental concern will transpose on the Phase One Property as a result of their presence within the Phase One Property or Phase One Study Area. The rationale for the exclusion of one or more PCAs may be the result of, but not limited to, the direction of site location in conjunction with proposed groundwater flow direction, distance from the site, results from previous environmental reports, etc.

The Areas of Potential Environmental Concern (APEC) identified in the Phase One ESA are summarized in **Table 5 – Section 3.3** as follows:

APEC	Location	Comments	Location of PCA (on-Site or Off-Site)	Contaminants of Potential Concern	Media Potentially Impacted
APEC 1	On-Site, across the south and western areas of the property, in the areas of parking & circulation	PCA 30: Importation of Fill Material of Unknown Quality. Observed through aerial photography, ERIS report and Site visit.	On-Site	PAHs, VOCs, PHCs, Metals, General Inorganics, EC, pH	Soil
APEC 2	On-Site, southwest corner of the building	PCA 28: Gasoline and Associated Products Storage in Fixed Tanks. Noted in the Eris report, TSSA request, underwriters report and reports prepared by others.	On-Site	VOC, PHC, Metals and PAH	Soil and Groundwater
APEC 3	On-Site, southwestern portion of the Site, former diesel private fueling station	PCA 28: Gasoline and Associated Products Storage in Fixed Tanks. Identified in previously prepared Phase One ESA by others. Former diesel storage tank 9,000 L in size.	On-Site	VOC, PHC, metals and PAH	Soil and Groundwater
APEC 4	Southwest corner of the building, where the garage is located	Underwriters Report, Phase One historical report. PCA 52: Storage, maintenance, fueling and repair of equipment, vehicles, and material used to maintain transportation systems.	On-Site	VOC, PHC, Metals and PAH.	Soil and Groundwater
APEC 5	On-Site, at the general southwestern portion of the property.	PCA Other – Coal Storage. Coal was previously stored within the shed	On-Site	PAHs, VOCs, PHCs, PCB, Metals, and Hydride forming metals, EC and SAR	Soil and Groundwater

		located at the southwestern portion of the Site.			
APEC 6	Entirety of the Site.	PCA Other: Waste Generator on-Site	On-Site	PAHs, VOCs, PHCs, Metals, General Inorganics, PCBs, EC, pH	Soil and Groundwater
APEC 7	Entirety of the Site.	PCA Other : Air Emissions on - Site	On-Site	VOCs, Metals	Soil
APEC 8	Northeastern portion of the Site.	PCA 28: Gasoline and Associated Products Storage in Fixed Tanks Records as six (6) fuel storage tanks historically on the neighbouring property to the east.	Off-Site	PHCs, VOCs, Metals and PAHs.	Soil and Groundwater
APEC 9	Northeastern portion of the Site.	PCA – Other : Air Emissions Public Works and Government Services Canada were issued a CofA for air in 2011, at 440 Coventry Road.	Off-Site	VOCs, Metals	Soil
APEC 10	Northeastern portion of the Site.	PCA Other : Waste Generator Records of waste generating activities at 419 Coventry Road, 440 Coventry Road and 469 Coventry Road.	Off-Site	PAHs, VOCs, PHCs, Metals, Hydride forming metals, PCBs	Soil and Groundwater
APEC 11	Northeastern portion of the Site.	PCA Other : Spill Reported petroleum hydrocarbon-based spills on the neighbouring property to the east, 440 Coventry Road.	Off-Site	PAHs, VOCs, PHCs, Metals, Hydride forming metals,	
APEC 12	Northeastern portion of the Site.	PCA Other : PCB Storage Reported at 440 Coventry Road.	Off-Site	PCBs	Soil and Groundwater

Notes:
1 - Area of Potential Environmental Concern (APEC) means the area on, in, or under a Phase One Property where one or more

contaminants are potentially present, as determined through the Phase One ESA, including through:

(a) Identification of past or present uses on, in, or under the Phase One Property, and
(b) Identification of potentially contaminating activity.
2 - Potentially Contaminating Activity means a use or activity set out in Column A of Table 2 of Schedule D that is occurring or has occurred in a Phase One Study Area

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

4 - When submitting a record of site condition for filing, a copy of this table must be attached.

ABNs	PCB's	Metals	Electrical Conductivity/ SAR
CPs	PAH's	As, Sb, Se	Cr (VI)
1,4-Dioxane	THMs	Na	Hg
Dioxins/Furans, PCDDs/PCDFs	VOC's	B-HWS	Methyl Mercury
OCs	BTEX	Cl^-	high pH
PHC's	Ca, Mg	CN^-	low pH

3.3.1 Physical Settings

The Site is situated on an area of glacial deposits consisting of till, heterogeneous mixture of material ranging from clay to large boulders, generally sandy and unmodified till. Base don available mapping system reviewed, the bedrock in the vicinity of the Site is anticipated to consist black and brown shale of the Billings Formation.

Although no surface water features are present in the immediate area of the Site, based on GIS mapping obtained through GeoOttawa, the nearest open water body is the Rideau River located approximately 1.1 km west of the Site.

3.3.2 Water Bodies and Areas of Natural Significance

There are no Areas of Natural Significance within the Phase One Study Area. No water body is identified within 30 m of the Site.

3.4 Deviations from Sampling and Analysis Plan

LRL did not deviate from the SOPs and forms outlined above. The location of the boreholes and monitoring wells in relation to the PCAs and APECs are presented in **Figure 3** and **Figure 4**. Monitoring wells were used to assess the groundwater flow direction and the groundwater quality at each screened interval.

The collection of groundwater samples was performed within 24 hours of purging as is required under the Ontario Regulation (O. Reg.) 153/04 (as amended).

No deviations occurred from the initial Sampling and Analysis Plan.

3.5 Impediments

On Wednesday December 14th, 2022, the CME 750 drill rig had a hydraulic fluid leak. The drill rig was removed from Site and returned to CCC's garage to be repaired. Drilling resumed on Monday December 19th, 2022. Product was not spilt to the ground, but rather onto the equipment, therefore no remedial or clean-up of the Site was considered warranted at this time.

4 INVESTIGATION METHOD

4.1 General

The Phase Two ESA involved various field activities to investigate the quality of the soil and groundwater and was comprised of the following components.

- Retaining public and private utility locator companies;
- Retaining a certified (MECP licensed well drillers) contractor for drilling the boreholes and installing the monitoring wells;
- Supervision and documentation of borehole drilling and monitoring well installation field activities;
- Soil characterization and logging;
- Soil sample collection for chemical analysis;
- Well development;
- Determining the presence of any non-aqueous phase free product and water elevation monitoring; and
- Groundwater sample collection for chemical analysis.

4.2 The investigation method followed the analysis plan for soil shown in Drilling

Prior to conducting subsurface activities on the Site, LRL contacted various private utility marking contractors in the Ottawa region, who were retained to obtain both private and public locates on behalf of LRL. Prior to the advancement of the boreholes within the southwestern extent of the building, a component concrete scanning contractor was retained to confirm the presence of possible underground utilities in the specific drilling locations, as well as possible obstructions (i.e. rebar). Overhead wires were not present in the drilling areas.

Thirteen (13) boreholes were drilled on the Site, to a maximum depth of 6.1 m bgs or until refusal, which ever is encountered first between April 27th and May 5th, 2022. LRL returned to advance an additional nine (9) boreholes between December 19th, 2022, and February 6th, 2023.

Eighteen (18) of the boreholes were drilled to depths of 1.6 to 6.1 m bgs with a CME-750X mounted drill rig. These borehole locations are those presented in **Figure 5** across the exterior of the Site. Four (4) borehole were drilled 'manually; using a cement core drill followed by either a jack hammer with a split spon attachment, or a manual auger tool. These 'manual' boreholes were advanced within the southwestern portion of the building, and extended to depths of between 0.73 and 1.5 m below the top of the cement slab floor, where they were terminated upon refusal over inferred bedrock, or dense sub-surface materials. Nine (9) boreholes were completed into monitoring wells. Flush mount well casings were installed to cover the monitoring wells in the asphalt and grassed area.

4.2.1 Name of the Contractor

CCC Group are licensed environmental and geotechnical drillers and were commissioned to drill nineteen (19) boreholes and install the six (6) monitoring wells. Three (3) of the boreholes were advanced by LRL field staff. These included those in the southwestern extent of the building, and those which were advanced using a manual auger tool.

4.2.2 Description of the Equipment Used

The eighteen (18) boreholes were drilled by use of either a CME-750X Rubber Tire ATV Mounted Drill, or a truck-mounted CME-55, equipped with 50 mm outside diameter rotary hollow stem augers and 0.6 m in length split spoon sampler. The solid stem augers were 4 and 8 inches in diameter as measured from the auger flights. The one (1) interior borehole, completed into a monitoring well, was drilled by hand using a jack hammer, equipped with a split spoon sampler. As previously mentioned, three (3) boreholes were advanced using a manual hand auger within the building.

The boreholes that had monitoring wells installed were fitted with a 51 mm diameter PVC pipe and between 0.6 and 3.0 m of well screen where #2-graded silica sand was added to at least 0.3 m above the top of screen, followed by ¾" bentonite chips to seal the installation.

4.2.3 Description of Measures taken to Minimize Cross-Contamination

Sampling tools used to retrieve soil samples from the split spoon sampler were cleaned with Alconox solution, methyl-hydrate and rinsed with de-ionized water. The dedicated gloves were changed after each sample to prevent cross-contamination. The used gloves were placed in garbage bags and removed from the Site at the end of the drilling program.

4.2.4 The Frequency of Sample Collection

Sampling intervals for the boreholes were continuously taken with a 0.6 m in length split spoon sampler from the ground surface to at most 6.1 m bgs.

4.3 Soil Sampling

4.3.1 Description of Equipment Used for Soil Collection

The soil is removed from the split spoon and placed pre-labelled, laboratory prepared jars and methanol-filled vials and in clear plastic bags marked as BH22-XX-SS1 from 0.0 m to 0.6 m and from 0.6 m to 1.2 m for BH22-XX-SS2.

Following field screening with a photo ionization detector, samples were placed in appropriate laboratory-supplied, pre-labelled bottles and methanol-filled vials (for VOCs and PHC F1 analysis) and placed directly into ice-filled coolers for storage and transportation to Paracel Laboratories.

4.3.2 Geological Descriptions of Soil Samples

Exploratory Location BH/MW	Type	Geological Description	Depth Range (m bgs)	Soil Sample
BH22-14	Asphalt	60 mm	0.0 - 0.06	SS1
	Granular Base	Sand with gravel, dry, brown	0.06 - 2.4	SS1, SS2, SS3, SS4
	Undisturbed Native	Sandy till, moist, dark brown	2.4 - 5.1	SS5, SS6, SS7, SS8, SS9
BH22-15	Asphalt	75 mm	0-0.075	
	Undisturbed Native	Silty sand, brown, dry becoming moist at 1.2 m bgs.	0.075 - 6.1	SS1, SS2, SS3, SS4, SS5, SS6, SS7, SS8, SS9, SS10
BH22-16	Granular Base	Sand with gravel, dry, brown	0.0 - 1.8	SS1, SS2, SS3
	Undisturbed Native	Sandy till, dark brown, moist becoming saturated at 4.3 m bgs.	1.8 - 4.9	SS4, SS5, SS6, SS7, SS8
BH22-18	Asphalt	60 mm	0.0 - 0.06	
	Undisturbed Native	Silty clay, grey, moist.	0.06 - 1.8	SS1, SS2,
	Undisturbed Native	Silty Sand, dark brown, saturated.	1.8 - 4.1	SS3, SS4, SS5, SS6
BH22-19	Granular Base	Sand with gravel, brown, dry.	0.0 - 0.6	SS1
	Undisturbed Native	Silty sand, brown, dry becoming moist at 1.8 m bgs.	0.6 - 3.0	SS2, SS3, SS4, SS5
	Undisturbed Native	Sand, dark brown, saturated.	3.0 - 5.6	SS6, SS7, SS8, SS9, SS10
BH22-20	Granular Base.	Sand, brown, dry.	0.0 - 0.6	SS1
	Undisturbed Native	Silty sand, brown, dry becoming moist at 1.2 m bgs.	0.6 - 2.4	SS2, SS3, SS4
	Undisturbed Native	Sandy till, dark brown, moist.	2.5 - 4.7	SS5, SS6, SS7, SS8
BH22-21	Concrete	Concrete slab 300 mm	0.0 - 0.3	
	Granular Base	Sand fill, brown becoming grey at 1.2 m bgs. Dry.	0.3 - 1.5	SS1, SS2, SS3
BH22-22	Granular Base	Sand with gravel, brown, moist.	0.0 - 0.6	SS1
	Undisturbed Native	Silty sand, brown, moist.	0.6 -3.0	SS2, SS3, SS4, SS5
	Undisturbed Native	Sandy till, brown, moist.	3.0 - 4.7	SS6, SS7, SS8
BH22-23	Topsoil	Topsoil	0.0 - 0.1	SS1
	Undisturbed Native	Silty sand, dark brown, dry.	0.1 - 4.3	SS1, SS2, SS3, SS4, SS5, SS6

4.4 Field Screening Measurements

Field screening of the soil involved the use of a PID to measure headspace concentrations of VOCs (as Isobutylene) in conjunction with visual and olfactory observations. This combination of field screening tools was used to determine the "worst-case" sample of the site and the selection of the samples for submission of VOC and PHC analysis.

4.4.1 PID Screening

Soil samples collected were screened for vapours using the RKI GX-6000 PID. The RKI GX-6000 was calibrated prior to use. Screening of VOC headspace concentrations were performed in accordance with LRL's SOP for Field Measurement of Soil Screening Parameters.

VOC measurements were taken by collecting soil samples into dedicated plastic sampling bags and inserting into the bag while maintaining a tight seal around the probe. The measurements that represent the highest value detected within the first 30 seconds of the field screening and measurements were documented into the field notes. Soil samples with the highest combustible vapours detected were then submitted for laboratory analysis, as discussed below**.**

4.4.2 Chemicals Detected and Associated Detection Limits

The monitoring program was performed using the RKI GX-6000 gas meter equipped with a low range PID sensor and configured to detect VOCs calibrated to isobutylene (IBL The RKI GX-6000 provides detection limit ranges between 0 – 100 ppm for VOCs.

4.4.3 Precision of the Measurements

Duplicate measurements were taken for one (1) in every ten (10) samples to assure the precision of the screening. Deviations greater than 30% of the initial reading indicated a non-reliable result due to random error. When a non-reliable result was encountered, the RKI Eagle II was calibrated to zero in the fresh air and the corresponding sample was re-screened.

4.4.4 Procedure for Checking Calibration of Equipment

The RKI GX-6000 (PID) was calibrated by LRL staff with isobutylene calibration gas prior to use.

The calibration of the RKI GX-6000 is verified by operating the unit in a fresh air environment and ensuring zero readings for all parameters measured.

4.5 Groundwater: Monitoring Well Installation

Six (6) of the twenty-two (22) boreholes advanced were completed into groundwater monitoring wells installed. The locations of the newly installed monitoring wells were determined to permit sampling the groundwater pertaining to APECs identified in the Phase One Environmental Site Assessment. Previously installed groundwater monitoring wells, installed by others at the time of past investigations on the Site, were uncovered during this investigation. A total of three (3) additional monitoring wells was included in the this assessment.

A 51 mm screen interval, ranging between 0.6 and 3.0 m in length was placed at the base of the borehole with a PVC end-cap at the extent of the screen. The screen was encompassed with #2-grade silica sand that extends approximately 0.3 m above the well screen. The well was then sealed with ¾ inch bentonite chips above the sand pack to approximately 10 cm bgs. The 51 mm PVC well riser completed the length of the well and a J-plug was installed at the top of the riser. The monitoring well was encased by a flush mount casing.

The locations of the monitoring wells are presented in **Figure 5**.

4.5.1 Name of the Contractor

CCC Group was commissioned to drill the twenty-two (22) boreholes and install the six (6) groundwater monitoring wells.

4.5.2 Description of the Equipment

Five (5) of the monitoring well locations were drilled by use of either a CME-750X Rubber Tire ATV Mounted Drill, or a truck-mounted CME-55, equipped with 50 mm outside diameter rotary hollow stem augers. The solid stem augers were 4 and 8 inches in diameter as measured from the auger flights. The one (1) interior borehole, completed into a monitoring well, was drilled by hand using a jack hammer, equipped with a split spoon sampler. The cement core hole was 9 1/2 inch diameter drill bit, and the jack-hammer advancement intrusion was 1 ½ inch in diameter.

The monitoring wells were constructed using the following materials:

- Dedicated polyvinyl chloride (PVC) individually wrapped riser pipes and screens;
- 51 mm (2 inches) diameter Schedule 40 PVC pipe capped at the top;
- 51 mm (2 inches) diameter Schedule 40 No. 10-slot PVC screen with a screen length of between 0.6 and 3.0 m and capped at the base with a PVC slip cap;
- Sand pack to approximately 0.3 m above the top of the well screen;
- Bentonite seal to at least 0.3 m above the sand pack;
- A J-Plug was added to the top of each solid stem riser; and,
- Flush mounts were installed to cover the monitoring wells on the asphalt.

4.5.3 Measures to Minimize Potential Cross-Contamination

There are dedicated Schedule 40 PVC pipes and screens encased in a plastic sleeve that is removed prior to installation. Once the monitoring wells were installed. Sterile dedicated tubing was placed in each monitoring for well development.

A dedicated sampling device consisting of a sampling tube and pump attached was used to collect groundwater samples. The groundwater was placed directly in the pre-labelled laboratory-supplied sample jars and vials and was tightly sealed and placed directly into a cooler for delivery to the laboratory. Sterile butyl nitrile gloves were changed for each well to ensure no cross-contamination during the sampling program.

Groundwater samples were placed directly into pre-labelled, laboratory-prepared sample containers and placed directly into a cooler.

4.5.4 Frequency of Sample Collection during Drilling

Groundwater samples were not collected during borehole drilling or monitoring well installation.

4.5.5 Monitoring Well Development

Prior to well development, the groundwater elevation at each monitoring well was established using a Solinst Oil/Water interface probe. The interface probe was used to assess the monitoring well for the presence of Light Non-Aqueous Phase Liquids (LNAPLs) and Dense Non-Aqueous Phase Liquids (DNAPLs). If a free product were present, the thickness of the free product would be measured and recorded, and the actual groundwater surface was corrected accordingly. The interface probe was thoroughly washed with de-ionized water and dried with a clean cloth prior to use at a subsequent well.

Subsequent to the groundwater elevation survey, each well was developed by the removal of at least three (3) times the volume of water (if possible) contained in each well using a pump system. The purged

groundwater removed was collected in dedicated five (5) gallon pails (23 litres) to inspect the removed water for visible identifiers or sheen. The amount of water removed from each well was recorded and is summarized in **Table 7 – Section 4.5.5** as follows.

Table 7 – Section 4.5.5: Monitoring Well Development

Monitoring Well	Groundwater Level (m bgs)	Depth of water column (m)	Required Purge Volume (L)	Date of Development/Purging	The volume of Fluid Removed from Well (L)
MW1	0.71	3.66	73	February 15, 2023	49
MW2	Could not retrieve				
MW3	0.76	3.46	69	February 15, 2023	25
MW4	Could not retrieve				
MW5	0.97	3.40	68	February 16, 2023	31
MW22-14	0.74	3.87	77.5	February 15, 2023	45
MW22-15	0.17	5.54	110	February 15, 2023	60
MW22-16	1.34	2.84	57	February 15, 2023	46
MW22-20	0.79	3.53	70	February 15, 2023	22
MW22-21	1.23	0.22	2.5	February 16, 2023	3.5
MW22-22	1.86	2.51	50	February 15, 2023	46

4.6 Groundwater: Field Measurements of Water Quality Parameters

Groundwater sampling was conducted using low-flow sampling methodology as described below:

- The water was pumped from each well using a peristaltic pump through dedicated ¼" polyethylene tubing and a flow through cell. Dedicated pump tubing was used for each well. Measurements of dissolved oxygen, conductivity, temperature, pH, and oxidation-reduction potential (ORP) were recorded every 3 to 5 minutes until three consecutive readings had stabilized as per the criteria below:
    - Drawdown of <0.10 m was achieved* over the duration of the pumping with consideration to initial expected drop and subsequent stabilization;
    - pH value range of +/- 0.1;
    - Conductivity range of +/- 3%;
    - Dissolved Oxygen range of +/-10% of the reading, or 0.2 mg/L, which ever is considered greater;
    - Temperature within +/- 3%;
    - ORP within +/- 10 mV; and,
    - Turbidity within +/- 10%.
- In wells with continuous drawdown >0.1 m and where there was little to no restoration of groundwater over a 10 – 20-minute period, samples were collected directly from the well into sample bottles. This

was noted in the field notes. If the remaining volume allowed, field parameters were also taken using a multimeter and flow through cell or a clean calibration cup; and

- Once the field measurements had stabilized, the flow through cell was disconnected and groundwater transferred into designated laboratory prepared sampling containers using the peristaltic pump and dedicated tubing.

Excess water from the sampling process was collected was stored in sealed containers on-Site, for disposal at a later date by a contractor at a licenced facility along with the development purge water.

Table 8 – Section 4.6 below summarizes select steady-state water quality parameters measured at each well, prior to the collection of groundwater samples.

Table 8 – Section 4.6: Instrument Readings at Steady-State Conditions

Date	Location	Temp. °C	DO (mg/L)	Electrical Conductivity (mS/cm)	ORP (mV)	pH
February 22, 2023	MW1	4.58	14.54	7.00	222	7.49
February 23, 2023	MW3	1.56	13.28	12.0	160	7.16
February 23, 2023	MW5	10.13	10.83	7.00	105	5.78
February 24, 2024	MW22-14	1.85	3.29	13.3	142	7.92
February 22, 2023	MW22-15	4.71	11.20	10.0	241	7.17
February 22, 2023	MW22-16	4.35	11.54	19.0	147	7.35
February 24, 2023	MW22-20	1.85	5.66	13.3	142	7.96
February 23, 2023	MW22-21	5.87	13.81	25.0	104	7.41
February 22, 2023	MW22-22	3.30	14.12	7.0	226	7.39

Following each use and prior to the commencement of the subsequent groundwater sample, the Hanna Instrument probe was flushed with de-ionized water and dried thoroughly.

4.7 Groundwater: Sampling

Groundwater samples were collected on February 22nd, 23rd and 27th, 2023, following the field measurements of the water quality parameters, in accordance with LRL's SOP for Groundwater Sampling. Due to MW22-14 and MW22-20 going dry on February 24th purging, sampling was completed on a later date of February 27th, 2023.

Groundwater samples were collected from the well as soon as there was sufficient groundwater in the well for sample collection. Horiba multimeter was used to assess the water quality for temperature, conductivity, and pH.

The jars and vials were prepared in advance by the laboratory. The pre-labelled jars were filled in the field sealed when full, packaged in bubble wrap and placed into an ice-filled cool box to maintain temperatures below 10 °C for storage and transportation. The chain of custody form was completed in the field, placed in a protective wrap, and placed into the cooler box for delivery to the laboratory. A copy of the Chain of Custody was retained and is attached to the report in **Appendix B**.

MW-2 and MW-4, located at the southwestern and northeastern portion of the Site, respectively, were intended to be included in the sampling program. However, due to the excessive snow accumulation in that area, and general seasonal conditions, the existing monitoring well could not be located at the time this assessment was completed.

4.8 Sediment: Sampling

The Phase Two Property did not contain a body of water as defined under Ontario Regulation 153/04 (as amended); therefore, sediment was not present in the investigation area and no sediment sampling was conducted.

4.9 Analytical Testing

The soil and groundwater samples were submitted to Paracel Laboratories Ltd. (Ottawa, Ontario), analytical laboratories accredited by the Canadian Association for Laboratory Accreditation (CALA). The analyses were performed in compliance with the MECP Laboratory Services Branch, "Protocol for Analytical Methods Used in the Assessment of Properties under Past XV.1 of the Environmental Protection Act of the Environmental Protection Act, July 1, 2011".

One (1) field duplicate sample was collected for every ten (10) samples, and one (1) trip blank for QA/QC purposes was placed in the cooler for the sampling of VOC parameters in groundwater. The duplicate(s) were labelled generally as those of the actual parent sample location and noted in the field documentations. The location and identity were not provided to the laboratory.

The required RDLs for all parameters were met and there are no RDLs that exceed the applicable site condition standard.

4.10 Residue Management Procedures

4.10.1 Soil Cuttings – Drilling

Soil cuttings removed from the drill augers were stored on-Site for future disposal. The drums were labelled with temporary signage to indicate the details of the contents, in accordance with the specific Site health and safety procedures. Soil drums were removed from the Site by GFL and were disposed of in a licensed facility.

4.10.2 Water from Well Development and Purging

Water generated from the well development and the purging of the wells was collected and stored on-Site for future disposal. The groundwater encountered at the Site did not exhibit any visual or olfactory evidence of chemical impact, sheen, or NAPLs.

4.11 Elevation Surveying

An elevation survey was carried out using a Spectra Precision, LL300 N Self-Leveling Laser Level. The results of the elevation survey are summarized on the borehole logs and the cross-sectional drawings for each borehole, new and existing monitoring well, including in **Appendix A**, and **Figures 8A** through **Figure 8J**, respectively.

4.12 Quality Assurance and Quality Control Measures

For Quality Assurance and Quality Control Measures (QA/QC), one (1) sample was collected as a duplicate sample for every ten (10) sample parameters collected in the field for soil and groundwater. In addition, a trip blank as carried in the cooler when sampling the groundwater for VOCs.

The analysis of QA/QC for both the soil and groundwater were within appropriate range of analytical results with the duplicates taken in the field.

No VOC concentrations were encountered in the trip blank above the various reportable detection limits (RDL), thus indicating that the collected groundwater sample was also unlikely to be influenced by ambient air during transport.

The relative percent difference (RPD) values were calculated and determined that all the parameters measured against their respective duplicate versus the actual samples were met.

4.12.1 Laboratory Supplied Sample Containers and Shipment Procedures

Table 9 – Section 4.12.1 below provides a detailed description of the sample containers, preservation, labelling, handling, and custody for the samples submitted.

Table 9 – Section.12.1: Sampling Parameters and Containers

Parameter	Sample Container	Preservative	Handling & Custody Samples
Soil Samples			
Metals, PHCs (F2-F4), PAHs, PCB, General Inorganics.	Amber glass Teflon lined lids	None	Soil samples were collected from the split-spoon sampler by hand or with the use of a clean steel trowel and transferred to a zip lock bag for field screening. Samples taken for laboratory analysis were placed in pre-prepared and labelled laboratory-supplied sample containers, observing the laboratory requirements for specific sample volumes according to the testing required. The soil samples collected for laboratory analysis were immediately placed into ice-filled cool boxes for storage and transportation to the laboratory. On arrival, all samples were removed from the ice-filled cool box and immediately refrigerated pending final chemical analysis sample selection. Selected samples for laboratory analysis were placed in ice-filled cool boxes and dispatched to the accredited chemical laboratory under Chain of Custody procedures.
VOCs, PHC (F1)	Vial	Methanol	
Groundwater Samples			
PHCs (F2-F4).	Amber Glass Bottle	HCL	Groundwater samples were collected using a peristaltic pump through dedicated ¼" polyethylene tubing and a flow through cell. Dedicated pump tubing was used for each well. Groundwater samples and dispensed directly into the appropriate pre-labelled, laboratory-supplied groundwater sample containers. The collected groundwater samples were immediately placed into ice-filled cool boxes for storage and transportation to the laboratory. On arrival at the laboratory, all samples were removed from the ice-filled cool box and immediately refrigerated pending final chemical analysis sample selection. Selected samples for laboratory analyses were placed in ice-filled cool boxes and dispatched to the accredited chemical laboratory under Chain of Custody procedures.
VOCs, PHC (F1)	Vials	NaHSO4	
PCB/Pesticides-(OCP) surrogate, Cyanide, Mercury, Metals, PCBs, semi volatiles.	Amber Glass Bottle	No preservatives	

Soil samples were collected using dedicated prepared 250 ml jars, syringes, and vials provided by Paracel Laboratories Ltd. Soil samples that required VOC analysis involved placing approximately 5 g of soil into dedicated methanol- filled vials. This method was used to ensure no loss of VOCs during transportation. The vials were placed in the cooler containing the trip blank for VOC analysis. The cooler was placed in ice to ensure the temperature of the samples.

4.12.1 Description of Equipment Cleaning Procedures

The majority of the boreholes were drilled utilizing solid stem augers due to the presence of rocky till and boulders that were not penetrable with hollow stem augers.

Split spoon core samples of soil were obtained during the drilling was collected via a 0.60 m in length split-spoon sampler. The split-spoon samplers were washed and scrubbed with Alconox mixed in water and rinsed between each use to prevent cross-contamination on re-use. The rinse water was placed into the drums for later offsite disposal. Samples collected from the select boreholes advanced used a hand auger were collected directly from the auger tool. The auger was washed using the sample procedures as those for the split spoon sampler as mentioned.

Soil samples were collected from the split-spoon sampler or auger, by hand (using dedicated nitrile gloves that were disposed of after each sample), to mitigate cross-contamination. If necessary, soil samples contained in the split-spoon sampler were removed with the aid of a stainless-steel trowel. Subsequent to soil sample collection, each split-spoon sampler and any other hand-tool used for sample collection were immediately cleaned in accordance with LRL's SOP, as follows:

- Scrubbed with a wire brush in an Alconox solution (a powdered precision cleaner, that is biodegradable and has interfering-residue free and corrosion-inhibiting properties);
- Rinsed with distilled or de-ionized water;
- Horiba instrument was flushed clean with de-ionized water; and,
- All fluids captured for offsite disposal in 205 L drums were clearly marked and labelled.

The soil samples were placed directly into pre-labelled jars specific to the chemical analysis desired. The location of each sampling point is recorded, and the pre-labelled jars were placed in coolers and packed with ice. The remaining sample after classification were placed in a large zip lock bag for further field screening by means of PID for vapour headspace measurements.

4.12.2 Description of Field Quality Control Measures

Soil samples including duplicates were placed into laboratory-provided bottles and vials that were clearly labelled with the sample location, date, and chemical analysis to be conducted on each sample jar. The same labelling was applied to the chain of custody forms. Dedicated nitrile gloves were used for each sample collected in the field and disposed of immediately after use.

VOC samples were collected in methanol vials filled by the laboratory and an exact amount of VOC impacted soil was added to the vials by means of a syringe that captures 5 ml of soil to be added to the vials. The vial caps are tightly sealed and placed directly in a bubble cap package and placed upright into a cooler packed with ice. Sample screening by means of a PID, olfactory clues, discoloration, soil characteristics, and texture were used to determine which samples were to be submitted for further analysis. Trip blanks were supplied in advance of sampling by the laboratory for placement into the sample coolers and were carried in the coolers until turn over to the laboratory.

Samples for analysis of metals parameters were placed into amber-coloured jars prepared by the laboratory sealed with a Teflon-lined cap. The jars were filled to the brim and capped tightly to minimize the vapour headspace in the jar. These jars were placed in bubble wrap containers and placed into a cooler packed with ice. The selection of the samples for analysis was based on the field screening method outlined in LRL's SOPs.

Groundwater samples, including duplicates, were placed into laboratory prepared (with appropriate preservatives) and supplied bottles and vials. The vials and jars were filled to the brim to minimize VOC loss. Trip blanks for VOC analysis were provided by the laboratory in advance of sampling. The trip blank was placed in the cool box at the start of each day that groundwater samples were collected.

The following packaging and transportation procedures were followed:

- Correctly labelled samples were packed in ice-filled cool boxes to maintain temperatures below 10°C during sample collection and transportation from the Phase Two Property to the laboratory and the chemical testing to Paracel Laboratories Inc.; and
- A copy of the chain of custody form was maintained.

4.12.3 Deviations from the Quality Assurance and Quality Control Program

There were no deviations from the Quality Assurance and Quality Control Program.

5 REVIEW AND EVALUATION

5.1 Geology

The entire property is situated on an area of glacial deposits consisting of till, heterogeneous mixture of material ranging from clay to large boulders, generally sandy and unmodified till.

The bedrock in the vicinity of the Site is expected to be black and brown shale of the Billings Formation.

5.1.1 Geological Conditions Encountered

Twenty-two (22) boreholes were advanced across the Site. The soils encountered consisted mainly of brown sandy till and silty sand.

No sheen or evidence of Light Non-Aqueous (LNAPL) and Dense Non Aqueous Phase Liquid (DNAPL) as free product was observed in any of the monitoring wells. Olfactory evidence of hydrocarbon odours were detected in the development water removed from MW22-15, MW22-20 and in the previously installed monitoring well MW-3. An odour indicative of possible PHC or VOC impacts, as well as a sheen, was encountered in the groundwater at the time of development from monitoring well MW5.

The groundwater monitoring wells were positioned to identify potential groundwater impacts associated with the PCAs and APECs identified on the Site. Groundwater contours and inferred groundwater flow direction are presented in **Figure 6.** Based on the elevation encountered, the groundwater flow direction in the overburden across the Site is towards the west.

5.1.2 Elevations Geodetic Benchmark

A laser level was used to determine the arbitrary elevations for each borehole and monitoring well. Should these elevations, including groundwater levels, be used in support of development planning, a formal geodetic survey should be completed, and these values be incorporated accordingly.

5.1.3 Aquifer & Aquitard Properties

The soil stratigraphy indicated that the overburden was primarily comprised of fine-medium grain sand. The monitoring wells were installed to a depth between 1.5 m and 5.7 m bgs and exhibited a static water level of 1.22 m bgs on average.

5.1.4 Rationale for the Choice of Aquifer

There is only one (1) aquifer onsite and only one (1) aquifer was investigated as it lies directly below the Site. Since none of the COC were encountered based on the onsite PCAs and APECs in the aquifer that was above the SCS, further vertical delineation of the aquifer was not warranted. If any of the COC had been encountered above the SCS, then deeper monitoring wells would have been required. The following exceedances were encountered at the Site.

5.1.5 Confirmatory Soil and Groundwater Monitoring Well Design and Rationale

Monitoring Well/ Borehole	Area of Potential Environmental Concern[1]	Location of Area of Potential Environmental Concern on Phase Two Property	Potentially Contaminating Activity[2]	Location of PCA (on-site or off-site)	Contaminants of Potential Concern[3]	Media Potentially Impacted (Groundwater, soil, and/or sediment)
BH22-1, BH22-2, BH22-3, BH22-7, BH22-11, MW22-14. MW22-15, MW22-16, MW22-20, MW22-22, BH22-3 MW1, MW3, MW5	APEC 1	On-Site, across the south and western areas of the property, in the areas of parking & circulation	**PCA 30:** Importation of Fill Material of Unknown Quality	On Site	PAHs, VOCs, PHCs, Metals, General Inorganics, EC, pH, PCB	Soil
MW22-20, BH22-10, BH22-9, MW22-21, BH22-7, BH22-8	APEC2	On-Site, southwest corner of the building	**PCA 28:** Gasoline and Associated Products Storage in Fixed Tanks.	On-Site	VOC, PHC, metals and PAH	Soil and Groundwater
MW22-15, BH22-13, MW22-16, BH22-12, BH22-3	APEC3	On-Site, southwestern portion of the Site, former diesel private fueling station	**PCA 28:** Gasoline and Associated Products Storage in Fixed Tanks.	On-Site	VOC, PHC metals and PAH	Soil and Groundwater
BH22-4, BH22-5, BH22-6, MW22-21	APEC4	Southwest corner of the building, where the garage is located	**PCA 52:** Storage, maintenance, fueling and repair of equipment, vehicles, and material used to maintain transportation systems.	On-Site	VOC, PHC, Metals, PCB and PAH.	Soil and Groundwater
MW22-15, BH22-13, MW22-16, BH22-12, BH22-3	APEC5	On-Site, at the general southwestern portion of the property.	**PCA Other:** Coal Storage.	On-Site	PAHs, VOCs, PHCs, Metals and general inorganics, hydride forming metals, pH, EC and SAR	Soil and Groundwater
BH22-1, BH22-2, BH22-3, BH22-7, BH22-11, MW22-14. MW22-15, MW22-16, MW22-20, MW22-22, BH22-3 MW1, MW3, MW5	APEC 6	Entirety of the Site.	**PCA Other:** Waste Generator on-Site	On-Site	PAHs, VOCs, PHCs, Metals, General Inorganics, PCBs, EC, pH	Soil and Groundwater

BH22-1, BH22-2, BH22-3, BH22-7, BH22-11, MW22-14. MW22-15, MW22-16, MW22-20, MW22-22, BH22-3 MW1, MW3, MW5	APEC 7	Entirety of the Site.	**PCA Other :** Air Emissions	On-Site	VOCs, Metals	Soil
BH22-23, MW4, MW1, BH22-2, MW22-22	APEC 8	Northeastern portion of the Site.	**PCA 28:** Gasoline and Associated Products Storage in Fixed Tanks	Off-Site	PHCs, VOCs, Metals and PAHs.	Soil and Groundwater
BH22-23, MW4, MW1, BH22-2	APEC 9	Northeastern portion of the Site.	**PCA – Other :** Air Emissions	Off-Site	VOCs, Metals	Soil
BH22-23, MW4, MW1, BH22-2	APEC 10	Northeastern portion of the Site.	**PCA Other :** Waste Generator	Off-Site	PAHs, VOCs, PHCs, Metals, and PCB	Soil and Groundwater
BH22-23, MW4, MW1, BH22-2	APEC 11	Northeastern portion of the Site.	**PCA Other :** Spill	Off-Site	PAHs, VOCs, PHCs, Metals,	
BH22-23, MW4, MW1, BH22-2	APEC 12	Northeastern portion of the Site.	**PCA Other :** PCB Storage	Off-Site	PCBs	Soil and Groundwater

5.2 Groundwater Elevations

The direction of groundwater flow has been determined to be mainly in the westerly to slightly south-westerly direction. **Figure 6** shows the groundwater flow direction based on the data collected at the time of this assessment.

5.2.1 Discussion and Rationale for Location and Screen Intervals

The wells were placed generally so that the triangulation of the groundwater elevations could be conducted to determine the groundwater flow direction. The between 0.6 and 3.0 m screen was used to straddle the groundwater table for the interception of LNAPLs and the potential of free phase and dissolved fractions of DNAPLs, as well as providing sufficient area for placement of a proper bentonite seal.

5.2.2 Interphase Probe

No LNAPLs or DNAPLs were detected with the interphase Probe during the measuring of water levels before and after well development. All monitoring wells were purged/developed via waterra tube and foot valve.

5.2.3 Product Thickness

No free product was encountered.

5.3 Groundwater: Hydraulic Gradient

5.3.1 Horizontal Hydraulic Gradient

Hydraulic gradients were as follows:

Table 14 – Section 6.3.1: Hydraulic Gradient

Parameter	Hydraulic Gradient (m/m)	Remarks
Maximum	0.126	Between MW22-22 and MW22-14
Minimum	0.010	Between MW3 and MW5
Average	0.0493	

5.3.2 Vertical Hydraulic Gradient

The vertical hydraulic gradient was not established for the subject Site at the time of this assessment.

If the shallow aquifer or Aquitard is found to be contaminated, then deeper wells will be required to delineate the groundwater at deeper depth in case there is more than one(1) aquifer or aquitard onsite. Vertical delineation is mandatory under O.Reg 153/04 if the shallow aquifer is found to be contaminated. Hence a vertical gradient must be determined when deeper monitoring wells are installed onsite.

5.4 Fine-Medium Soil Texture

Under Ontario Regulation 153/04 (as amended). “coarse-textured soil” is soil that contains more than 50 percent by pass of particles that are 75 micrometers (um) or larger in mean diameter. The more stringent coarse-grained soil analysis was applied to this Site.

5.4.1 Rationale for the Use of Fine – Medium Soil Texture

Not applicable.

5.4.2 Results of the Grain Size Analysis for Fine – Medium Soil Texture

Not applicable

5.4.3 Rationale for the Number of Samples Collected and Analysed for Grain Size Analysis

Not applicable

5.5 Soil: Field Screening

The samples were examined in the field for lithology as well as for aesthetic evidence of impacts (i.e., debris, staining, and odours). In addition, headspace readings were recorded using a photo-ionization detector (PID) calibrated to hexane (HEX) and isobutylene (IBL). This combination of field screening tools was used to determine the “worst-case” sample(s) collected from the subject Site.

5.6 Soil Quality

The Phase One ESA Conceptual Site Model identified the following Contaminants of Concern in the soil in relation to the PCAs and eleven (11) APECs that may affect the Phase Two Property.

- Polycyclic Aromatic Hydrocarbons (PAHs);
- Metals;
- General Inorganics;
- Polychlorinated Biphenyl (PCB)
- Volatile Organic Compounds (VOC); and
- Petroleum Hydrocarbons – F1 through F4.

Between April 27th, 2022, and February 6th, 2023, a total of twenty-four (24) samples including four (4) duplicate samples, were submitted to evaluate the level of potential chemical impact on the soils beneath the Site. All soil samples met the MECP Table 3 Standards RPI for coarse-grained soils in non-potable groundwater conditions.

5.6.1 Location, Depth of Sampling

The following table describes the location and depth of the specific samples submitted for chemical laboratory analysis, and the results of the analyses in comparison to MECP Table 3 RPI.

Table 16 – Section 5.6.1: Soil Chemical Laboratory Analysis

Borehole ID	Sample ID	Depth (m bgs)	Date Sampled	Chemical Analysis						Standard Exceedance (Table 3 RPI for coarse soils)
				PHC F2 – F4	VOCs/F1	PAHs	PCBs	General Inorganic	Metals	
BH22-1	SS2	0.75 – 1.5	May 4, 2022	✓	✓			✓	✓	**SAR, EC**
	SS5	3.0 – 3.5	May 4, 2022				✓			No Exceedances
BH22-2	SS3	1.5 – 2.1	May 4, 2022	✓	✓	✓		✓	✓	**EC**
BH22-4	2	0.35 – 0.50	April 27, 2022	✓	✓	✓		✓	✓	**SAR, EC**
BH22-5	2	0.30 – 0.45	April 27, 2022	✓	✓	✓		✓	✓	No Exceedances
	4	0.60 – 0.86	April 27, 2022	✓	✓	✓		✓	✓	No Exceedances
BH22-6	4	0.83 – 0.91	April 27, 2022	✓	✓	✓		✓	✓	No Exceedances
	Dup (X-4)	0.83 – 0.91	April 27, 2022		✓					No Exceedances
BH22-3	SS3	1.2 – 1.8	May 5, 2022	✓	✓	✓		✓	✓	No Exceedances
BH22-7	SS3	1.2 – 1.8	May 5, 2022	✓	✓	✓	✓	✓	✓	**SAR, EC**
	Dup (SS5)	1.2 – 1.8	May 5, 2022	✓	✓	✓	✓	✓	✓	**SAR, EC**
BH22-8	SS1	0.0 – 0.6	May 5, 2022	✓	✓			✓	✓	No Exceedances
	SS3	1.2 – 1.5	May 5, 2022	✓	✓	✓		✓	✓	**Benzene, Ethylbenzene, Hexane, Toluene, PHC F1 , PHC F2, Methylnaphthalene (1&2), Naphthalene**
	Dup (SS11)	0.0 – 0.6	May 5, 2022	✓	✓			✓	✓	No Exceedances
BH22-9	SS2	0.6 – 1.2	May 5, 2022	✓	✓			✓	✓	**SAR, EC**
	SS3	1.2 – 1.8	May 5, 2022	✓	✓	✓				No Exceedances
	Dup (SS8)	0.6 – 1.2	May 5, 2022	✓	✓			✓	✓	**SAR, EC**
BH22-10	SS2	0.6 – 1.2	May 5, 2022	✓	✓	✓				**Benzene, Ethylbenzene, Hexane, Toluene, Xylenes, PHC F1, PHC F2, Methylnaphthalene (1&2), Naphthalene**
	Dup (SS11)	0.6 – 1.2	May 5, 2022	✓	✓	✓				**Benzene, Ethylbenzene, Hexane, Toluene, Xylenes, PHC F1, Methylnaphthalene (1&2), Naphthalene**
BH22-11	SS1	0.0 – 0.6	May 5, 2022	✓	✓	✓	✓	✓	✓	**SAR, EC**
BH22-12	SS3	1.2 – 1.8	May 5, 2022	✓	✓	✓		✓	✓	**SAR, EC**
BH22-13	SS4	1.8 – 2.4	May 5, 2022	✓	✓	✓		✓	✓	No Exceedances
	Dup (SS5)	1.8 – 2.4	May 5, 2022	✓	✓	✓		✓	✓	**SAR, EC**
BH22-14	SS1	0.0 – 0.6	December 22, 2022					✓	✓	No Exceedances
	SS5	2.4 – 3.0	December 22, 2022	✓	✓	✓		✓		No Exceedances
	Dup (SS11)	2.4 – 3.0	December 22, 2022	✓	✓	✓		✓		No Exceedances
BH22-15	SS2	0.6 – 1.2	December 19, 2022	✓	✓			✓	✓	**SAR, EC**
	SS7	3.6 – 4.2	December 19, 2022			✓				No Exceedances
	SS8	4.2 – 4.7	December 19, 202	✓	✓				✓	No Exceedances
	SS1	0.0 – 0.6	December 22, 2022					✓	✓	**EC**

BH22-16	SS5	2.4 – 3.0	December 22, 2022			✓				**PHC F3 & F4, Benzo(a)anthracene, Fluoranthene, Cadmium, Lead**
BH22-18	SS1	0.0 – 0.6	January 3, 2023	✓	✓	✓				No Exceedances
	SS3	0.8 – 1.6	January 3, 2023	✓	✓	✓				No Exceedances
	SS6	1.6 – 2.3	January 3, 2023					✓	✓	No Exceedances
BH22-19	SS2	0.6 – 1.2	December 20, 2022					✓	✓	**SAR, EC**
	Dup (SS10)	1.8 – 2.4	December 20, 2022					✓	✓	No Exceedances
	SS4	1.8 – 2.4	December 20, 2022	✓	✓	✓		✓	✓	**SAR, EC, Benzene, Ethylbenzene, Xylenes, PHC F1, Napthalene**
	SS6	3.0 – 3.6	December 20, 2022	✓	✓	✓				**Benzene, Xylenes**
BH22-20	SS1	0.0 – 0.6	December 21, 2022				✓	✓	✓	**SAR, EC**
	SS2	0.6 – 1.2	December 21, 2022	✓	✓	✓				**Ethylbenzene, Xylenes**
	Dup (SS11)	0.6 – 1.2	December 21, 2022	✓	✓	✓				No Exceedances
	SS5	2.4 – 3.0	December 21, 2022	✓	✓	✓				No Exceedances
BH22-21 (reported as BH22-18)	SS2	0.6 - 0.9	February 6, 2023			✓				No Exceedances
	SS2B	0.9 – 1.2	February 6, 2023	✓	✓					No Exceedances
	SS3	1.2 - 1.5	February 6, 2023				✓			No Exceedances
BH22-22	SS3	1.2 – 1.8	December 19, 2022	✓	✓			✓	✓	**SAR, EC**
	SS7	3.6 – 4.2	December 19, 2022	✓	✓	✓				No Exceedances
BH22-23	SS1	0.0 – 0.6	January 17, 2023					✓	✓	No Exceedances
	SS4	2.4 – 3.0	January 17, 2023	✓	✓					No Exceedances
	Dup (SS11)	2.4 – 3.0	January 17, 2023	✓	✓					No Exceedances
	SS5	3.0 – 3.6	January 17, 2023			✓				No Exceedances

Notes

XXX	Duplicate sample collected and submitted for laboratory analysis
XXX	Exceedances to the applicable Table 3 site condition standards

The Laboratory Certificates of Analysis are presented in **Appendix B** and the soil analytical results are presented in **Table 2** through **Table 4**, included at the end of this report in the Appendices.

Based on the analysis, select parameters were observed to exceed the appliable site condition standards. These exceedances, although summarized above in the **Table 16**, are further discussed herein:

- Samples **BH22-1-SS2**, collected from depths of between 0.75 and 1.5 m bgs; **BH22-4-2**, collected from depths of between 0.35 and 0.50 m bgs; **BH22-7-SS3**, collected from depths of between 1.2 and 1.8 m bgs (and corresponding duplicate sample), **BH22-9-SS2**, collected from depths between 0.6 and 1.2 m (and the corresponding duplicate sample); **BH22-11-SS1**, collected from between 0.0 and 0.6 m bgs; and sample **BH22-12-SS3**, collected from depths of between 1.2 and 1.8 m bgs (and the corresponding duplicate sample) encountered elevated concentrations of **SAR** and **EC**. **EC** was also reported above the corresponding Table 3 site condition standard in sample **BH22-2-SS3**, collected at depths between 1.5 and 2.1 m bgs. These parameters are commonly associated with de-icing activities;

- Sample **BH22-8-SS3**, collected from depths of between 1.2 and 1.5 m bgs from the borehole located at the south of the former gasoline underground storage tank, previously located along the west face of the building, encountered elevated concentrations of **Benzene, Ethylbenzene, Hexane, Toluene, PHC F1 , PHC F2, Methylnaphthalene (1&2)** and **Naphthalene** parameters. These parameters are likely a result of the previous Site activities including the historical gasoline underground storage tank. The impacted soil has not been delineated vertically in this location;
- Sample **BH22-10-SS2**, collected from depths of between 0.6 and 1.2 m bgs from the borehole located at the north of the former gasoline underground storage tank, previously located along the west face of the building, encountered elevated concentrations of **Benzene, Ethylbenzene, Hexane, Toluene, Xylenes, PHC F1, Methylnaphthalene (1&2)** and **Naphthalene** parameters. These parameters are likely a result of the previous Site activities including the historical gasoline underground storage tank. The impacted soil has not been delineated vertically in this location. The corresponding duplicate sample ha comparable results;
- Sample **BH22-15-SS2**, collected from depths of 0.6 and 1.2 m bgs encountered elevated concentrations of **SAR** and **EC**. These parameters are commonly associated with de-icing activities;
- Sample **BH22-16-SS5**, collected from depths of between 2.4 and 3.0 m bgs from the borehole located at the southwestern portion of the Site, encountered elevated concentrations of **PHC F3 & F4, Benzo(a)anthracene, Fluoranthene, Cadmium** and **Lead** parameters. These parameters are likely a result of the previous Site activities including the historical use for coal storage and the previous diesel storage tank. A sample submitted from above SS5 (BH22-16-SS1) was collected at depth of between 0.0 and 0.6 m bgs. Petroleum-based parameters were not included in the analysis, but rather metals and general inorganics. **EC** concentrations exceeded the site condition standards in sample **BH22-16-SS1**. The full extent of the contamination has not been vertically delineated. Refusal was encountered in this location at a depth of 4.9 m, and generally CSV readings measured between 3.0 and 4.9 m bgs were lower than those of sample BH22-16-SS5. The EC exceedance is likely associated with de-icing activities, therefore elevated concentrations are likely limited to the shallow stratum of soil;
- Sample **BH22-19-SS2**, collected from depths of 0.6 and 1.2 m bgs encountered elevated concentrations of **SAR** and **EC**. A sample submitted from a lower grade of between 1.8 and 2.4 m bgs, sample **BH22-19-SS4**, also was found to have elevated **SAR** and **EC** concentrations. These parameters are commonly associated with de-icing activities;
- Sample **BH22-19-SS4**, collected from depths of between 1.8 and 2.4 m bgs from the borehole located at the south of the former gasoline storage tank, along the western face of the building, encountered elevated concentrations of **Benzene, Ethylbenzene, Xylenes, PHC F1,** and **Napthalene** parameters. These parameters are likely a result of the previous Site activities including the historical gasoline underground storage tank. Sample **SS22-19-SS6**, collected from a depth of between 3.0 and 3.6 m bgs was also found to have VOC exceedances, namely **Benzene** and **Xylenes**. The full extent of the contamination has not been vertically delineated. Refusal was encountered in this location at a depth of 5.6 m bgs;
- Sample **BH22-20-SS1**, collected from depths of between 0.0 and 0.6 m bgs, was reported to have elevated **SAR** and **EC** concentrations. These parameters are commonly associated with de-icing activities;
- Sample BH22-20-SS2, collected from depths of between 0.6 and 1.2 m bgs, was reported to have elevated **ethylbenzene** and **xylenes** concentrations. This borehole is located to the north of the former underground gasoline storage tank, along the western face of the building. These exceedances are likely attributed by the former installation and associated activities. Sample Bh22-20-SS5, collected from between 2.4 and 3.0 m bgs did not have exceedances for petroleum-based parameters, therefore, the contamination encountered is vertically delineated to a depth of 2.4 m bgs;

- Sample **BH22-22-SS3**, collected from depths of between 1.2 and 1.8 m bgs, was reported to have elevated **SAR** and **EC** concentrations. These parameters are commonly associated with de-icing activities.

5.6.2 Analytical Results to SCS

The environmental quality of the soil at the Site was compared to the MECP Table 3 RPI Standard. The Laboratory Certificate of Analysis is presented in **Appendix B**.

5.6.3 Contaminants of Concern (COC)

The contaminants of concern identified in the soil on the property are as follows:

- VOCs, including Benzene, Ethylbenzene, Hexane, Toluene, and Xylenes;
- PHCs, including PHC F1 through PHC F4;
- PAHs, including Benzo(a)anthracene, Fluoranthene, Methylnaphthalene (1&2) and Naphthalene;
- Metals, including Lead and Cadmium; and
- Conductivity (EC) and SAR.

5.6.4 Chemical and Biological Transformations

No chemical or biological transformations were noted on, in or under the Phase Two Property.

5.6.5 Source of Contaminant Mass Contributing to the Groundwater

The soil on Site was found to exceed for petroleum-based parameters, including select VOCs, PHCs as well as PAHs. The likely sources of these contaminates are the former underground petroleum storage tanks, and coal storage activities at the west-central, and southwestern portions of the Site. Select metals and general inorganic parameters were also noted to exceed the applicable site condition standards. Based on these observations, groundwater impacted is possible for this Phase Two ESA Investigation.

5.7 Ground Water Quality

The Phase One ESA Conceptual Site Model identified the following Contaminants of Concern in relations to PCAs and APECs that may affect the Phase Two Property.

On February 22nd, 23rd and 27th, 2023, a total of thirteen (13) groundwater samples including two (2) field duplicate groundwater sample for all sample parameters, and two (2) trip blank for VOCs was analyzed as follows, to appropriately evaluate the level of chemical impact to the groundwater beneath the Phase Two Property in the areas of the various APECs:

- Thirteen (13) samples for VOCs;
- Eleven (11) samples for PHC fractions F1 to F4;
- Eleven (11) samples for PCBs;
- Eleven (11) samples for PAHs; and
- Eleven (11) samples for metals (including mercury and CrVi) and inorganics.

5.7.1 Location and Sample Depth

Table 17 – Section 5.7.1 below described the location and depth of the specific groundwater samples submitted for chemical laboratory analysis, and the results of the analyses in comparison to Table 3 site condition standards for coarse-grained soils.

Table 17 – Section 5.7.1: Groundwater Chemical Laboratory Analysis

Well ID	Sample ID	Depth (m asl)	Date Sampled	Chemical Analysis						Standard Exceedance (Table 3 RPI for coarse sand)
				PHCs F2 – F4	VOCs/F1	PAHs	PCBs	Metals	Inorganics	
MW1	MW1	101.37	February 22, 2023	✓	✓	✓	✓	✓	✓	**Chloride, Benzene**
MW2	Not Retrieved at the time of sampling									
MW3	MW3	99.55	February 23, 2023	✓	✓	✓	✓	✓	✓	**Chloride, Benzene, Sodium**
MW4	Not Retrieved at the time of sampling									
MW5	MW5	99.35	February 23, 2023	✓	✓	✓	✓	✓	✓	**Chloride, Benzene, Sodium**
BH22-14	MW22-14	99.34	February 27, 2023	✓	✓	✓	✓	✓	✓	**Chloride**
BH22-15	MW22-15	99.46	February 22, 2023	✓	✓	✓	✓	✓	✓	**Chloride**
BH22-16	MW22-16	98.95	February 22, 2023	✓	✓	✓	✓	✓	✓	**Chloride**
BH22-20	MW22-20	99.45	February 27, 2023	✓	✓	✓	✓	✓	✓	**Chloride, Sodium**
BH22-21	MW22-21	99.87	February 23, 2023	✓	✓	✓	✓	✓	✓	**Chloride, 1,4-Dichlorobenzene**
BH22-22	MW22-22	98.90	February 22, 2023	✓	✓	✓	✓	✓	✓	**Chloride**
MW3 Duplicate	MW40	--	February 23, 2023	✓	✓	✓	✓	✓	✓	**Chloride, Benzene**
MW22-16 Duplicate	MW22-30	--	February 22, 2023	✓	✓	✓	✓	✓	✓	**Chloride**
--	Trip Blank	--	--		✓					No Exceedances
--	Trip Blank	--	--		✓					No Exceedances

Notes

XXX	Duplicate sample collected and submitted for laboratory analysis
XXX	Exceedances to the applicable Table 3 site condition standards

The Laboratory Certificates of Analysis are presented in Appendix B and detailed assessments of the groundwater analytical results are presented in **Table 5** and **Table 6**, included at the end of this report in the Appendices.

The environmental quality of the groundwater at the Phase Two Property was compared to the MECP Table 3 Standards for non-potable groundwater. None of the groundwater samples collected met the Table 3 standards for non-potable groundwater for select parameters analyzed. As presented above in **Table 17 – Section 5.7.1, Chloride** concentrations exceeded the site condition standards in each of the monitoring well locations sampled, including the respective supplicate samples. **Sodium** was also elevated in BH22-20, MW3 and MW5, all of which are located along the parking and circulation area at the western portion of the Site. These exceedances are likely associated to de-icing activities.

Benzene was reported above the Table 3 site condition standard in MW1, MW3 and MW5 as well as in the duplicate sample collected from MW3. **1,4-Dichlorobenzene** was reported above the applicable provincial standards in sample MW22-21, located within the southwestern extent of the building. These exceedances are most like a result of the previous gasoline storage tank installation, and repair garage activities. Groundwater impacts with respect to the petroleum -based parameters has been delineated horizontally, however vertical delineation has not been established at this time.

5.7.2 Documentation of Field Filtering

Field Filtering was conducted for metals only. The Certificates of Analysis show no lab filtering for the samples submitted for this Site.

5.7.3 Analytical Results to SCS

The environmental quality of the groundwater at the Phase Two Property was compared to the MECP Table 3 RPI Standard.

The Laboratory Certificate of Analysis is presented in **Appendix B.**

5.7.4 Contaminants of Concern (COC)

The contaminants of concern identified in the groundwater on the property are as follows:

- Sodium;
- Chloride;
- Benzene; and
- 1,4 – Dichlorobenzene.

5.7.5 Chemical and Biological Transformation

There are no chemical or biological transformations noted in the groundwater for the COC.

5.7.6 Soil Serves as Source of Contamination to Groundwater

The soil is permeable and may contribute to the quality of the groundwater. Prior to the time of the sampling an extreme melt event occurred resulting in water being present beneath the surface which does not accurately represent the constant groundwater levels present in general.

5.7.7 Presence of LNAPLs or DNAPLs

No free phase products were encountered in the groundwater.

5.8 Sediment Quality

The Phase Two Property did not include a surface water body as defined under O. Reg. 153/04 (as amended); therefore, sediment was not sampled in this Phase Two ESA investigation.

5.9 Quality Assurance and Quality Control Results

Duplicate soil and groundwater samples were collected and submitted for chemical laboratory analyses for QA/QC purposes. In addition, Trip Blank VOC vials were placed in the cooler prior to sampling for VOCs in the groundwater. The samples collected in the field were placed in the cooler with the trip blank and subsequently submitted for analysis.

5.10 Phase Two Conceptual Site Model

Table 18 – Section 5.10 below describes the duplicate samples collected and tested during soil and groundwater sampling as part of the field investigation of the Phase Two ESA.

Parameter	Soil		Groundwater		
	No. of Samples Tested	No. of Duplicates	No. of Samples Tested	No. of Duplicates	No. of Trip Blank
PHC (F1-F4)	31	8	9	2	-
VOC (incl. BTEX)	31	8	9	2	2
PAH	25	5	9	2	-
PCB	5	1	9	2	-
Metals	24	5	9	2	-
Inorganics	23	6	9	2	

Section 3. (3).5 of Schedule E of O. Reg. 153/04 (as amended) requires at least one (1) field duplicate be collected and analyzed for every ten (10) sample parameters submitted for laboratory analysis.

Samples were transported in ice-filled coolers to ensure temperatures were maintained below 10°C, along with a Chain of Custody to Paracel Laboratories. Paracel performed the chemical analysis in compliance with the MECP "Laboratory Services Branch, Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act", as amended. No discrepancies were noted as samples were properly handled with regards to the following:

- Holding Time;
- Preservation Method;
- Storage requirement; and
- Container Type.

The Laboratory Certificates of Analysis for each samples were received and are presented in **Appendix B.** All certificates of analysis received pursuant to clause 47 (2) (b) of the regulation comply with subsection 47 (3) of O. Reg. 153/04 as amended.

The Qualified Person concluded that the data met the quality objective, and the decision-making was not affected. The Qualified Person has also concluded that the overall objectives of the investigation and assessment were met.

Duplicate samples were taken for Soil and Groundwater. The following formula was used to assess the various duplicates against their respective soil or groundwater samples.

Duplicate RPD = {([sample] – [sample duplicate])/([sample] + [sample duplicate])/2} x 100. The values calculated must fall in the Following Ranges shown on **Table 19 – Section 5.9.**

Most of the parameters met their respective RPD values with some exceptions. The soil is not homogenous and values greater than the listed RPD values were expected. Re-sampling was not conducted because the exceedances for the RPD values were small relative to the number of samples analyzed.

Table 19 – Section 5.9: Duplicate RPD Values in Less Than ≤

Parameter	Groundwater RPD Limit	Groundwater Duplicate	Soil RPD Limit	Soil Duplicate
PAH	≤30%	≤3%	NA	NA
OC Pesticides	NA	NA	NA	NA
PCB	≤30%	≤0%	≤40%	≤1%
VOC	≤30%	≤0%	≤40%	≤1%
PHC	≤30%	≤2%	≤40%	≤4%
Free CN	≤20%	≤0%	≤35%	≤0%

5.11 Phase Two Conceptual Site Model

The Phase Two Property is located at 400 Coventry Road, Ottawa, Ontario. The legal description of the Phase Two Property is Part Lot 3 Plan 747 as in OT67675 Except Pt 1 5R9075. The Phase Two Property has an irregular shape and covers an area of approximately 1.98 hectares (4.9 acres). The size and location of the property are shown in **Figure 2**.

The property is situated in a commercial area along Coventry Road and Belfast Road. The Phase Two Property is currently in commercial land use as Enbridge Gas Distribution Inc.'s Ottawa headquarters.

According to the Map of Ontario Geological Survey, the Site is located in an area of glacial deposits of sandy silt to sand. Bedrock geology of the Phase Two Property has been identified as black and brown shale of the Billings Formation. The land surrounding the Phase Two Property is essentially flat.

The Conceptual Site Model shows fifty-four (54) PCAs on and surrounding the property of which relative to the groundwater flow direction, only seven-teen (17) may have an impact on the Phase Two Property. **Figure 3** represents the PCAs on and surrounding the Phase Two Property. The PCAs that affect the Phase Two Property include five (5) on-Site PCAs including **PCA 28** for Gasoline and Associated Products Storage in Fixed Tanks**, PCA 30** for Importation of Fill Material of Unknown Quality**, PCA 52** for Storage, maintenance, fuelling and repair of equipment, vehicles, and material used to maintain transportation systems**,** and **PCA Other –** Coal storage. The off-Site PCAs encountered include **PCA Other – Spill**, **PCA Other – Waste Generator**, **PCA Other – Air Emissions**, **PCA Other – PCB Storage** and **PCA 28** for gasoline and associated products storage in fixed tanks. The seventeen (17) PCAs generated twelve (12) on-Site Areas of Potential Environmental Concern (APECs).

APEC 1 was generated due to PCA 30 for the presence of fill of unknown quality. Based on the site visit, aerial photographs and Ecolog ERIS report.

APEC 2 was generated due to the presence of PCA 28 for gasoline USTs that were formerly present on the Site. Based on the aerial photography, ERIS report and Site visit.

APEC 3 was generated due to the presence of PCA 28 for gasoline USTs that were formerly present on the Site. Identified in previously prepared Phase One ESA by others. Former diesel storage tank 9,000 L in size.

APEC 4 was generated due to the presence of PCA 52, Storage, maintenance, fueling and repair of equipment, vehicles, and material used to maintain transportation systems formerly on-Site. Based on the fire insurance plans, Phase One historical report.

APEC 5 was generated due to the presence of a former coal storage area on the Site (PCA Other – Coal Storage).

APEC 6 was generated due to the presence of waste generator records retrieved on the Site (PCA Other – Waste Generators), including petroleum-based products and metals.

APEC 7 was generated due to the presence of records of air emissions on the Site with the potential for VOC and particulate residual (PCA Other – Air Emissions).

APEC 8 for PCA 28 for gasoline and associated products storage in fixed tanks based on six (6) records of fuel storage tanks on the neighbouring property to the northeast.

APEC 9 was generated due to the presence of records of air emissions on the neighbouring property to the east (PCA Other – Air Emissions) with the potential for particulate impacts.

APEC 10 was generated due to the presence of records of a waste generator on the neighbouring property to the east (PCA Other – Waste Generator), including metals and petroleum-based products.

APEC 11 was generated due to the presence of records of spills on the neighbouring property to the east (PCA Other – Spill).

APEC 12 was generated due to the presence of a PCB storage facility to the east of the Site (PCA Other – PCB).

The location of these APECs are shown in **Figure 4**.

The Ministry of the Environment, Conservation, and Parks (MECP) “Table 3: Full Depth Generic Site Condition Standards in a Non-potable Ground Water Condition” (Table 3 Standards) for Residential Parkland Institutional property use was considered the applicable Site Condition Standard (SCS) for the Phase Two Property and have been used to assess the chemical quality of the soil and groundwater samples obtained from the Phase Two Property. The soil and groundwater were analyzed for PHCs F1 to F4 Fractions, VOCs, PAHs, Metals, PCBs and Inorganics.

The parameters selected were to address the Contaminants of Potential Concern (COPC) from the Potentially Contaminating Activities (PCA) and the Areas of Potential Environmental Concern (APECs) identified in the Phase One ESA.

The CSM is based on the soil and groundwater results from twenty-two (22) boreholes and six (6) monitoring wells. The approximate locations of each borehole and monitoring well are defined in **Figure 5**.

6 CONCLUSIONS

The Phase Two ESA for the RSC property has been conducted in accordance with the regulation by and under the supervision of a QP which includes the evaluation of information gathered from planning and conducting a site investigation to write the report and any updates as required by the regulation.

The groundwater at the Phase Two Property was sampled at MW1, MW3, MW5, MW22-14, MW22-15, MW2-16, MW22-20, MW22-21 and MW22-22 and was analyzed for PHCs Fractions F1 through F4; VOCs, PAHs, PCBs, Metals and Inorganics. Chloride concentrations exceeded the site condition standards in each of the monitoring well locations sampled, including the respective supplicate samples. Sodium was also elevated in BH22-20, MW3 and MW5, all of which are located along the parking and circulation area at the western portion of the Site. These exceedances are likely associated to de-icing activities.

Benzene was reported above the Table 3 site condition standard in MW1, MW3 and MW5 as well as in the duplicate sample collected from MW3. 1,4-Dichlorobenzene was reported above the applicable provincial standards in sample MW22-21, located within the southwestern extent of the building. These exceedances are most like a result of the previous gasoline storage tank installation, and repair garage activities. Groundwater impacts with respect to the petroleum - based parameters has been delineated horizontally, however vertical delineation has not been established at this time.

Select soil samples submitted for analysis exceeded the appliable site condition standards for the following parameters: SAR, EC, Benzene, Ethylbenzene, Hexane, Toluene, Xylenes, PHC F1, PHC F3, PHC F4, Benzo(a)pyrene, Fluoranthene, Napthalene, Cadmium and Lead. These exceedances were reported in samples collected from BH22-1, BH22-4, BH22-7, BH22-8, BH22-9, BH22-10, BH22-11, BH22-12, BH22-15, BH22-16, BH22-19, BH22-20 and BH22-22.

The previously identified APEC 2, APEC 3, APEC 4 and APEC 5 were encountered in the soil and groundwater that exceeded the SCS for the Phase Two Property.

The groundwater flow direction was determined through the groundwater table measurements taken prior to well development and based upon those measurements; the vast majority of groundwater is moving across the subject site in the west direction. The groundwater table on the Phase Two Property ranged from 0.71 m to 1.79 m bgs.

Based upon the results of the parameters tested across the nine (9) monitoring well locations and twenty-two (22) borehole locations during the Phase Two ESA investigation, an RSC filing can be undertaken when the soil and groundwater conditions are addressed and then confirmed to be within the Table 3 SCS. Use of the Table SCS will require permission from the Municipality and the City of Ottawa in accordance to O. Reg 153/04 as amended.

Further delineation will be required vertically and horizontally before proceeding to the remediation or risk assessment of the Phase Two Property. Once the site has been remediated to the site boundaries and below the depth of contamination, and the proper confirmatory analysis has been undertaken in Accordance to Table 2 and Table 3 of Schedule E then a RSC can filed on the property.

We trust you will find this report to be complete within our terms of reference. Should you have any questions regarding the information contained in the report, or require further assistance please contact the LRL Associates Ltd. office.

7 LIMITATIONS AND USE OF REPORT

Results of this Phase Two ESA should not be considered a warranty that the subject property is free from any and all contaminants from former and current practices, other than those noted in this report, nor that all compliance issues have been addressed.

Findings contained in this report are based on data and information collected during the Phase Two ESA of the subject property conducted by LRL Associates Ltd. Conclusions and recommendations are based solely on-site conditions encountered at the time of our site visit and fieldwork between December 19, 2022 and February 27, 2023, supplemented by historical information and data obtained as described in this report. No assurance is made regarding changes in conditions subsequent to the time of this investigation. If additional information is discovered or obtained, LRL Associates Ltd. should be requested to re-evaluate the conclusions presented in this report and to provide amendments as required.

In evaluating the subject property, LRL Associates Ltd. has relied in good faith on information provided by individuals as noted in this report. We assume that the information provided is factual and accurate. We accept no responsibility for any deficiencies, misstatements or inaccuracies contained in this report as a result of omissions, misinterpretation or fraudulent acts of the persons contacted.

This report is intended for the sole use of Serco Realty Ltd. and their authorized agents. LRL Associates Ltd. will not be responsible for any use of the information contained within this report by any third party.

In addition, LRL Associates Ltd. will not be responsible for the real or perceived decrease in the property value, its saleability or ability to gain financing, through the reporting of factual information.

Yours truly,
LRL Associates Ltd.

Jessica Arthurs
Environmental Technician

Gianni Lametti, P. Eng.

I have reviewed the report and confirm that the Phase Two ESA including finds and conclusions, has been carried out in accordance with the requirements of O.Reg 153/04 as amened, in effect as of the date of this report.

https://hlv2kcom.sharepoint.com/sites/LRL/Shared Documents/220200 Phase One & Two ESA/Phase Two ESA - Report & Appendices/2023.06.08.220200.REPORT PhaseTwoESA 400 Coventry Road, Ottawa, Ontario.docx

8 REFERENCES

Canadian Standards Association, Phase II Environmental Site Assessment CAN/CSA-Z769-00, March 2000 (R2013).

Canadian Standards Association, Z768-01 Phase I Environmental Site Assessment, November 2001 (R2016).

City of Ottawa Interactive Map accessed through: http://maps.ottawa.ca/geoottawa/

Harrison, J.E., 1976, Generalized Bedrock Geology, Ottawa-Hull, Ontario and Quebec, Geological Survey of Canada, Map 1508A, Scale 1:125,000.

Ministry of Environment, Conservations and Parks, Ontario Regulation 153/04: Records of Site Condition – Part XV.1 of the Environmental Protection Act, as amended.

Ministry of Environment and Energy, Coal Tar Site Investigations 1986 – 1995, January 1997.

Ministry of the Environment, Guide for Completing Phase I Environmental Site Assessments Under Ontario Regulation 153/04, June 2011.

Ontario Ministry of the Environment, *Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario*, 1996.

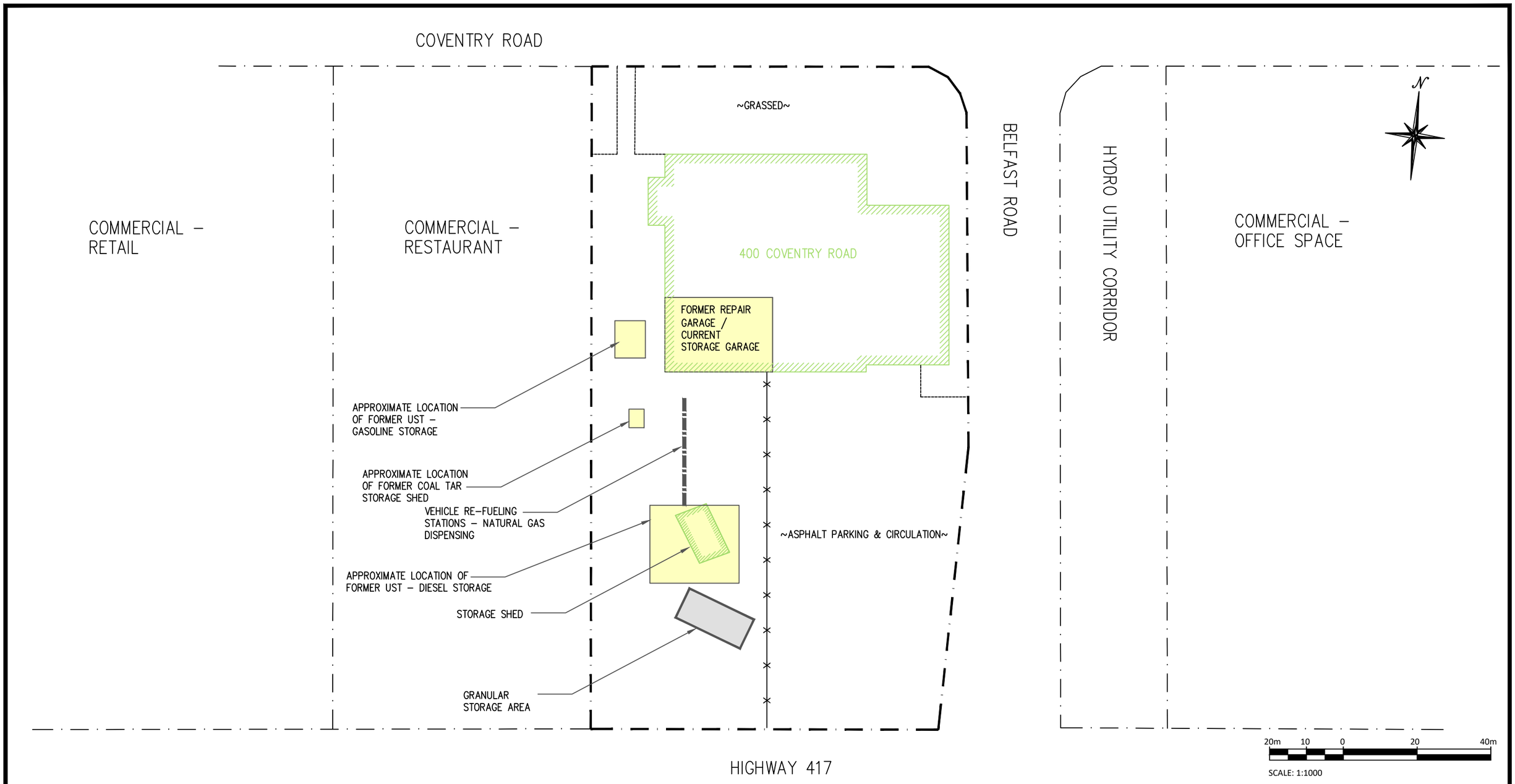
Ontario Ministry of the Environment, *Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*, April 15, 2011.

Ontario Regulation 903, made under the Water Resources Act of the Environmental Protection Act, *Wells*, R.R.O. 1990.

Ontario Well Records Map accessed through: https://www.ontario.ca/environment-and-energy/map-well-records

St-Onge, D.A., (compilation), 2009, Surficial Geology, Lower Ottawa Valley, Ontario-Quebec, Geological Survey of Canada, Map 2140A, Scale 1:125,000.

FIGURES



Legend

- Property Line
- Existing Building
- Existing Fence Line
- Division Between Various Surface Materials
- Areas of Environmental Importance

No.	REVISIONS	BY	DATE
01	DISCUSSION	J.A.	22/03/23

LRL
ENGINEERING | INGÉNIERIE
5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lrl.ca | (613) 842-3434

CLIENT
400 COVENTRY INVESTMENTS INC

DESIGNED BY:	DRAWN BY:	APPROVED BY:
J.A.	J.A.	--

PROJECT
PHASE TWO
ENVIRONMENTAL SITE ASSESSMENT
400 COVENTRY ROAD
OTTAWA, ONTARIO

DRAWING TITLE
SITE PLAN

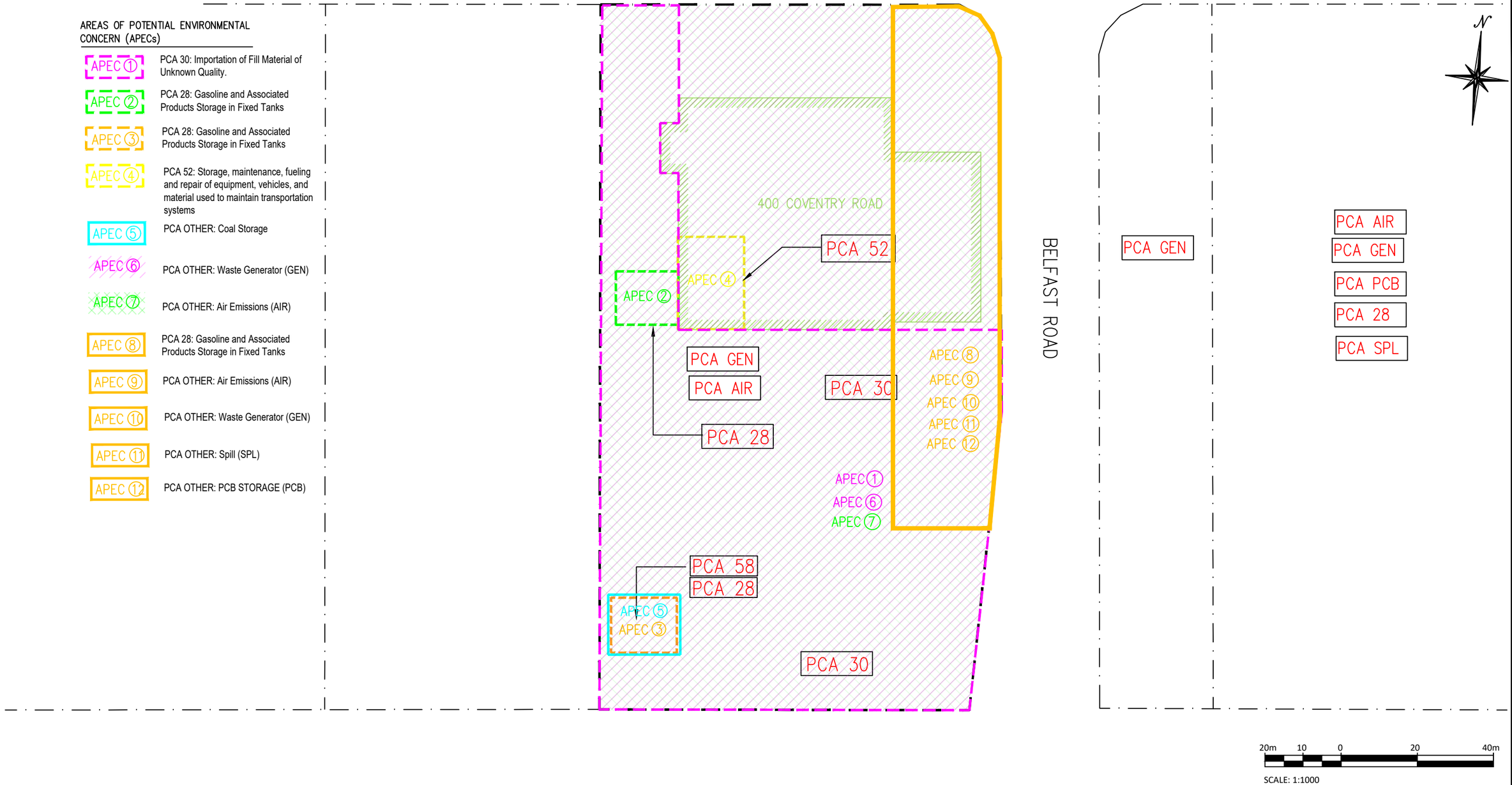
PROJECT NO.
220200

DATE
APRIL 2023

FIGURE2

AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APECs)

- APEC ① — PCA 30: Importation of Fill Material of Unknown Quality.
- APEC ② — PCA 28: Gasoline and Associated Products Storage in Fixed Tanks
- APEC ③ — PCA 28: Gasoline and Associated Products Storage in Fixed Tanks
- APEC ④ — PCA 52: Storage, maintenance, fueling and repair of equipment, vehicles, and material used to maintain transportation systems
- APEC ⑤ — PCA OTHER: Coal Storage
- APEC ⑥ — PCA OTHER: Waste Generator (GEN)
- APEC ⑦ — PCA OTHER: Air Emissions (AIR)
- APEC ⑧ — PCA 28: Gasoline and Associated Products Storage in Fixed Tanks
- APEC ⑨ — PCA OTHER: Air Emissions (AIR)
- APEC ⑩ — PCA OTHER: Waste Generator (GEN)
- APEC ⑪ — PCA OTHER: Spill (SPL)
- APEC ⑫ — PCA OTHER: PCB STORAGE (PCB)



Legend

- Property Line
- Existing Building

No.	REVISIONS	BY	DATE
01	DISCUSSION	J.A.	22/03/23

LRL
ENGINEERING | INGÉNIERIE
5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lrl.ca | (613) 842-3434

CLIENT
400 COVENTRY INVESTMENTS INC

DESIGNED BY:	DRAWN BY:	APPROVED BY:
J.A.	J.A.	--

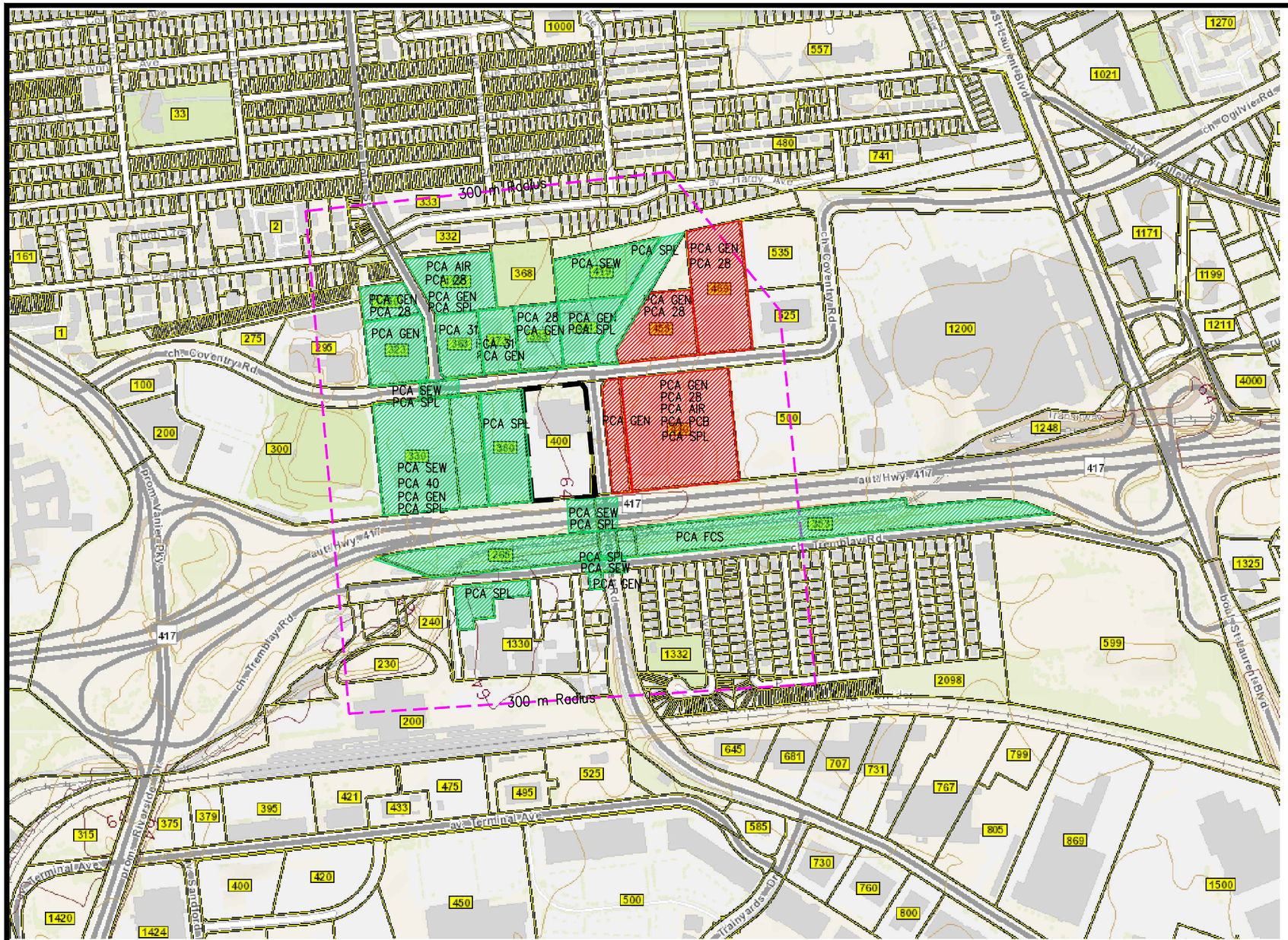
PROJECT
PHASE TWO
ENVIRONMENTAL SITE ASSESSMENT
400 COVENTRY ROAD
OTTAWA, ONTARIO

DRAWING TITLE
LOCATION OF PHASE TWO PROPERTY
PCAs & APECs

PROJECT NO.
220200

DATE
APRIL 2023

FIGURE 3



PCA GEN – WASTE GENERATOR

PCA SPL – SPILL

PCA PCB – PCB HANDLING AND STORAGE

PCA AIR – AIR EMISSIONS

PCA 28 – GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS

PCA 40 – PESTICIDE BULK STORAGE

PCA SEW – MUNICIPAL OR INDUSTRIAL SEWAGE WORKS

PCA FCS – FEDERAL CONTAMINATED SITE

PCA 31 – INK MANUFACTURING, PROCESSING AND BULK STORAGE

Legend

PCA – NOT A POTENTIAL RISK TO THE SUBJECT SITE

PCA – POTENTIAL RISK TO THE SUBJECT SITE

No.	REVISIONS	BY	DATE
01	DISCUSSION	J.A.	22/03/23

LRL
ENGINEERING | INGÉNIERIE
5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lrl.ca | (613) 842-3434

CLIENT

400 COVENTRY INVESTMENTS INC

DESIGNED BY:	DRAWN BY:	APPROVED BY:
J.A.	J.A.	--

PROJECT

PHASE TWO
ENVIRONMENTAL SITE ASSESSMENT
400 COVENTRY ROAD
OTTAWA, ONTARIO

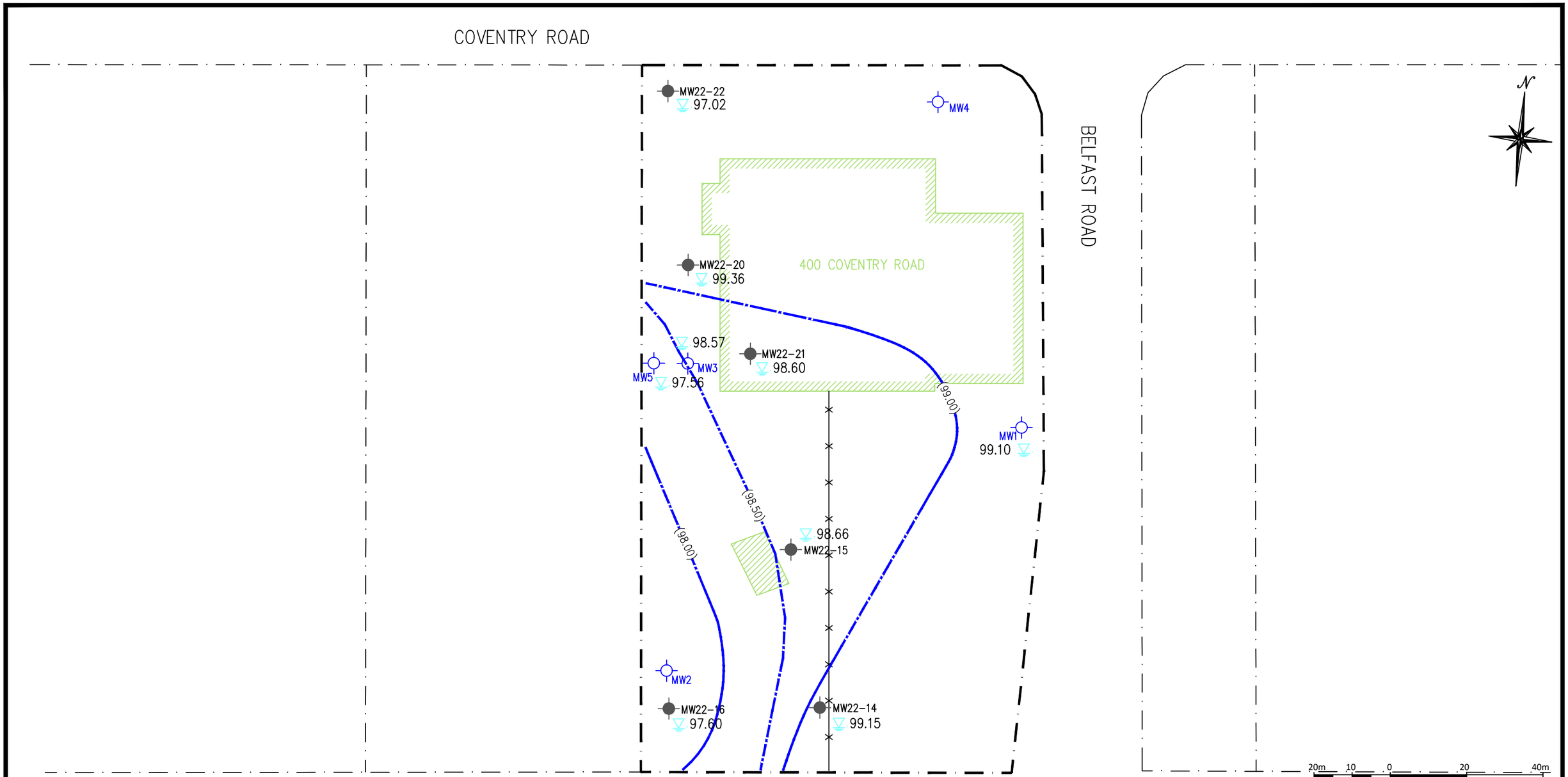
DRAWING TITLE

PCA WITHIN 300 M OF THE SITE
(NOT TO SCALE)

PROJECT NO.
220200

DATE
APRIL 2023

FIGURE4



Legend

- Existing Building
- Property Line
- Borehole/Monitoring Well Location
- Existing Fence Line
- MWXX — Monitoring Well Previously Installed by Others (2021)
- xx.xx — Monitoring Well Previously Installed by Others (2021)

No.	REVISIONS	BY	DATE
01	DISCUSSION	J.A.	22/03/23

LRL
ENGINEERING | INGÉNIERIE
5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lrl.ca | (613) 842-3434

CLIENT
400 COVENTRY INVESTMENTS INC

DESIGNED BY:	DRAWN BY:	APPROVED BY:
J.A.	J.A.	--

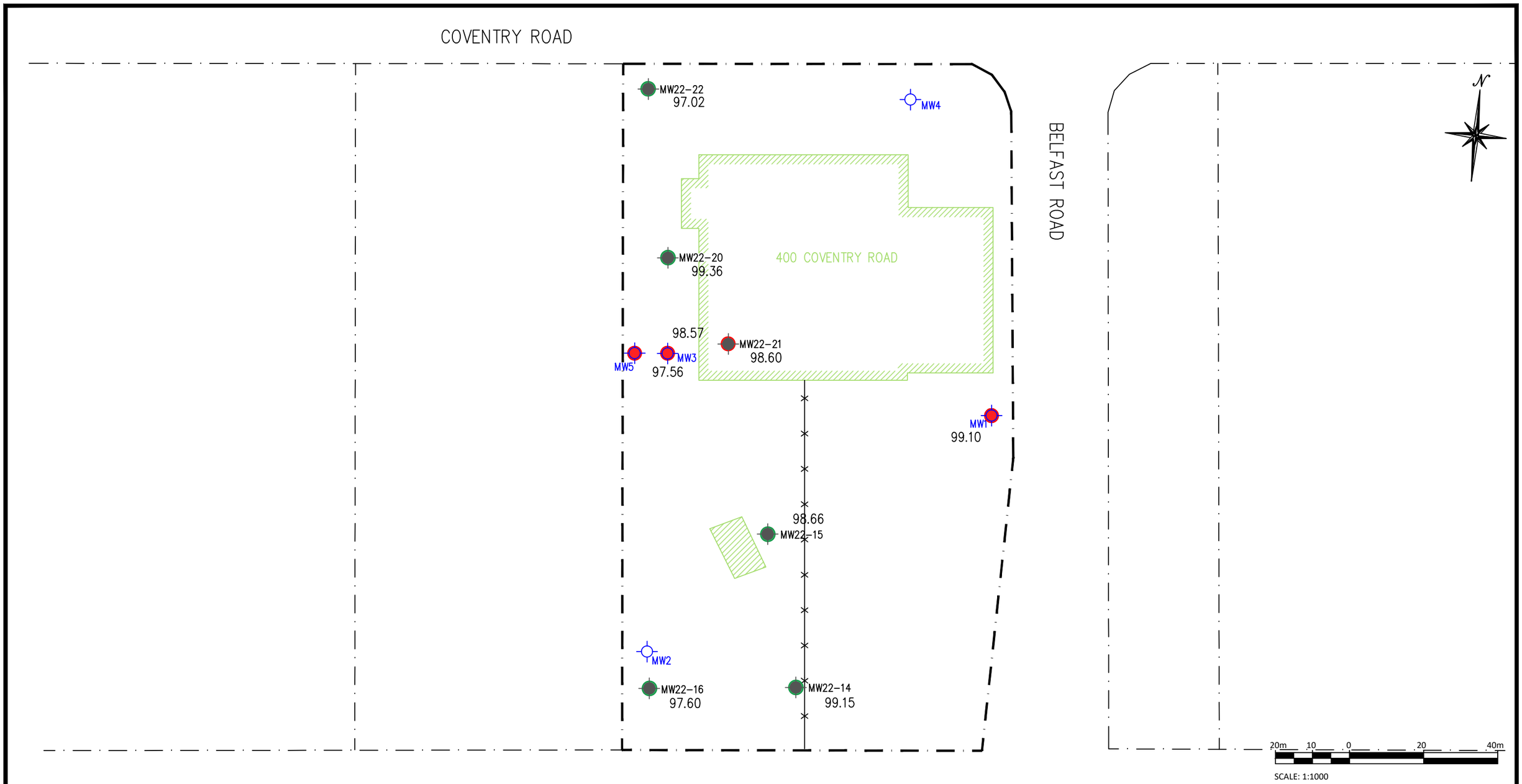
PROJECT
PHASE TWO
ENVIRONMENTAL SITE ASSESSMENT
400 COVENTRY ROAD
OTTAWA, ONTARIO

DRAWING TITLE
GROUNDWATER ELEVATIONS &
GROUNDWATER CONTOUR

PROJECT NO.
220200

DATE
APRIL 2023

FIGURE 6



Legend

- MWXX — Monitoring Well Previously Installed by Others (2021)
- Borehole/Monitoring Well Location (LRL, 2022)
- Existing Building
- Property Line
- Monitoring Well with Exceedance to Table 3 SCS – Residential
- Monitoring Wel with No Exceedance to Table 3 SCS – Residential

No.	REVISIONS	BY	DATE
01	DISCUSSION	J.A.	22/03/23

LRL
ENGINEERING | INGÉNIERIE
5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lrl.ca | (613) 842-3434

CLIENT
400 COVENTRY INVESTMENTS INC

DESIGNED BY:	DRAWN BY:	APPROVED BY:
J.A.	J.A.	--

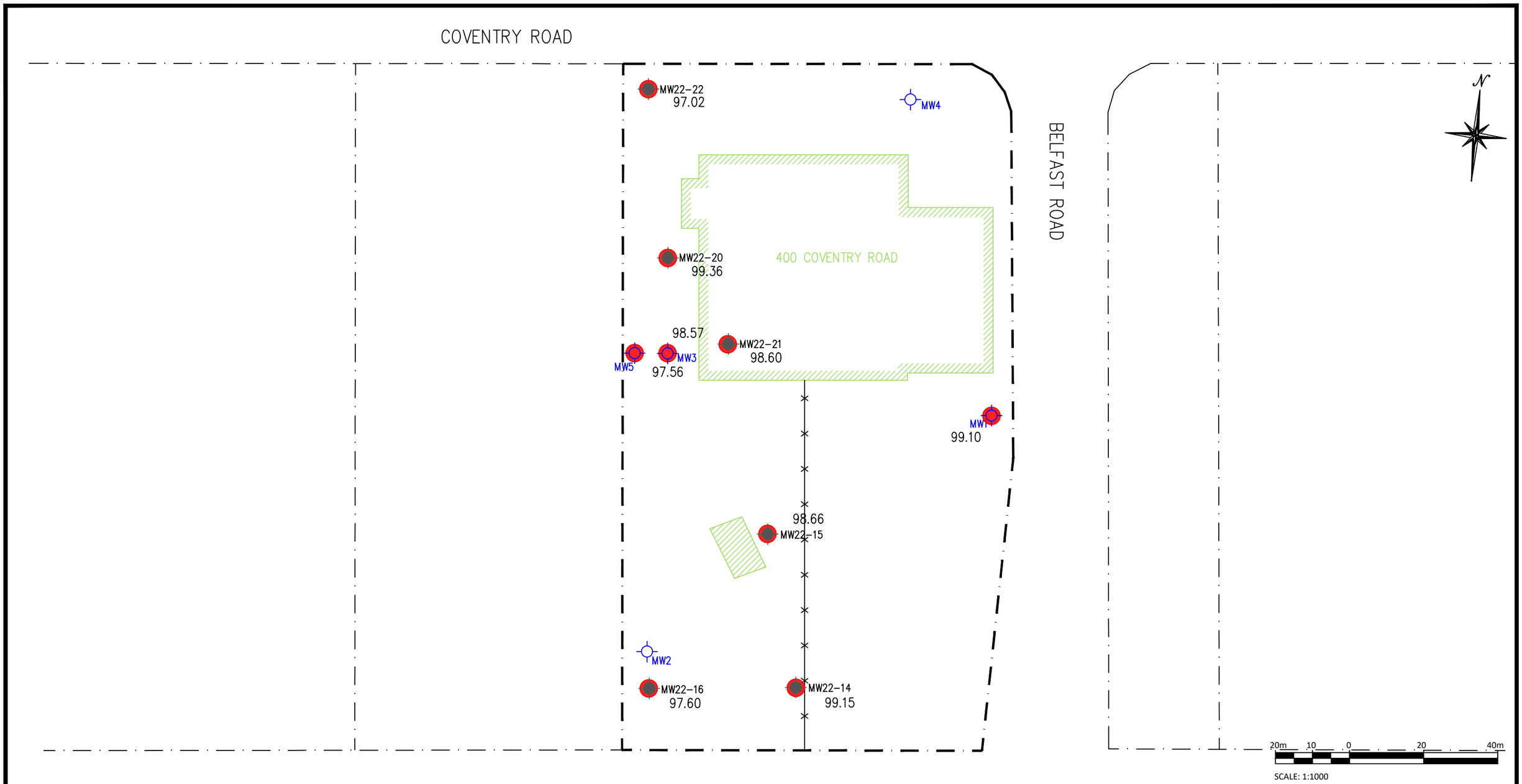
PROJECT
PHASE TWO
ENVIRONMENTAL SITE ASSESSMENT
400 COVENTRY ROAD
OTTAWA, ONTARIO

DRAWING TITLE
VOCs IN GROUNDWATER

PROJECT NO.
220200

DATE
APRIL 2023

FIGURE 7A



Legend

- MWXX — Monitoring Well Previously Installed by Others (2021)
- Borehole/Monitoring Well Location (LRL, 2022)
- Existing Building
- Property Line
- Monitoring Well with Exceedance to Table 3 SCS – Residential
- Monitoring Wel with No Exceedance to Table 3 SCS – Residential

No.	REVISIONS	BY	DATE
01	DISCUSSION	J.A.	22/03/23

LRL
ENGINEERING | INGÉNIERIE
5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lrl.ca | (613) 842-3434

CLIENT
400 COVENTRY INVESTMENTS INC

DESIGNED BY:	DRAWN BY:	APPROVED BY:
J.A.	J.A.	--

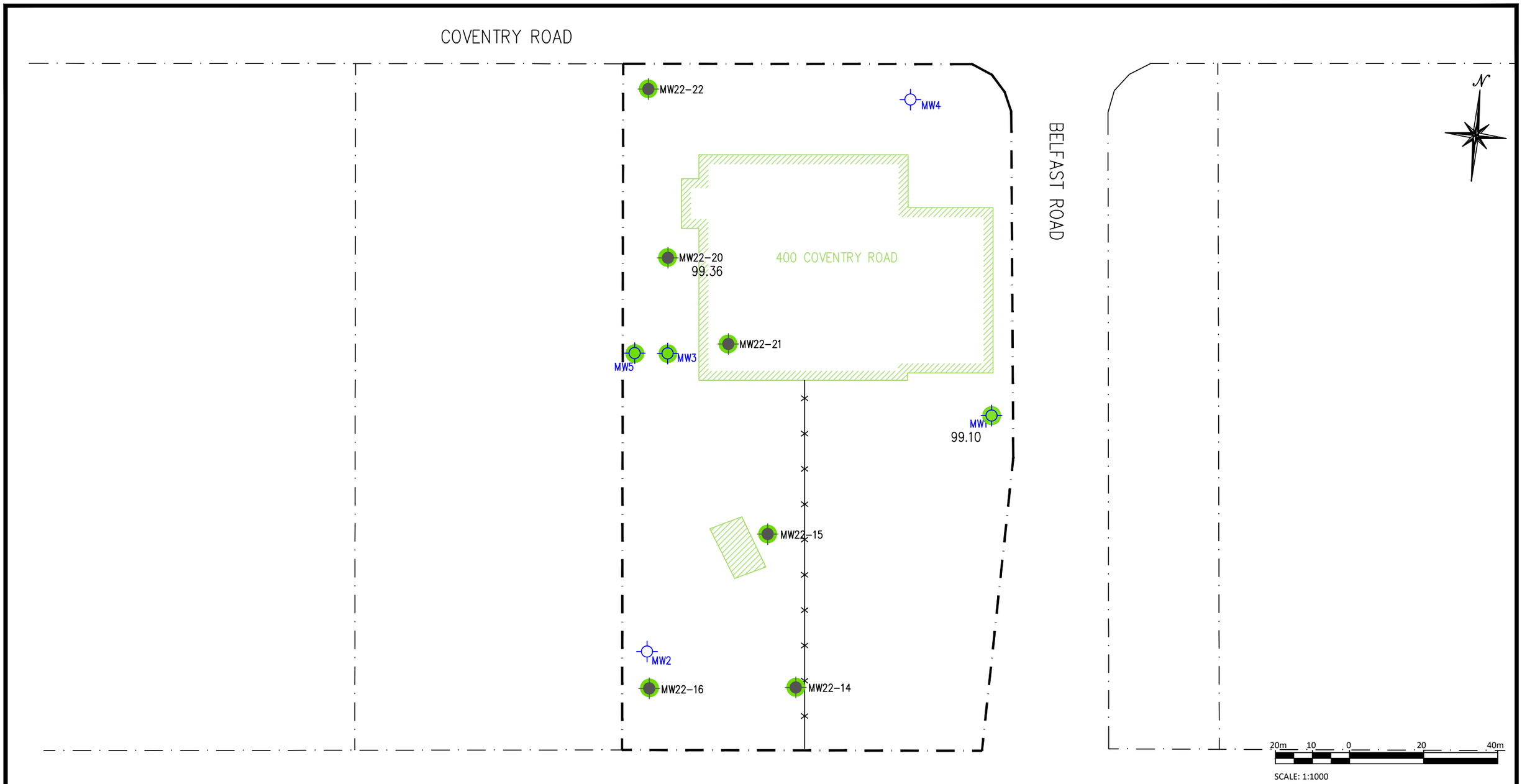
PROJECT
PHASE TWO
ENVIRONMENTAL SITE ASSESSMENT
400 COVENTRY ROAD
OTTAWA, ONTARIO

DRAWING TITLE
CHLORIDE IN GROUNDWATER

PROJECT NO.
220200

DATE
APRIL 2023

FIGURE 7B



Legend

- MWXX — Monitoring Well Previously Installed by Others (2021)
- Borehole/Monitoring Well Location (LRL, 2022)
- Existing Building
- Property Line
- Monitoring Well with Exceedance to Table 3 SCS – Residential
- Monitoring Wel with No Exceedance to Table 3 SCS – Residential

No.	REVISIONS	BY	DATE
01	DISCUSSION	J.A.	22/03/23

LRL
ENGINEERING | INGÉNIERIE
5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lrl.ca | (613) 842-3434

CLIENT
400 COVENTRY INVESTMENTS INC

DESIGNED BY:	DRAWN BY:	APPROVED BY:
J.A.	J.A.	--

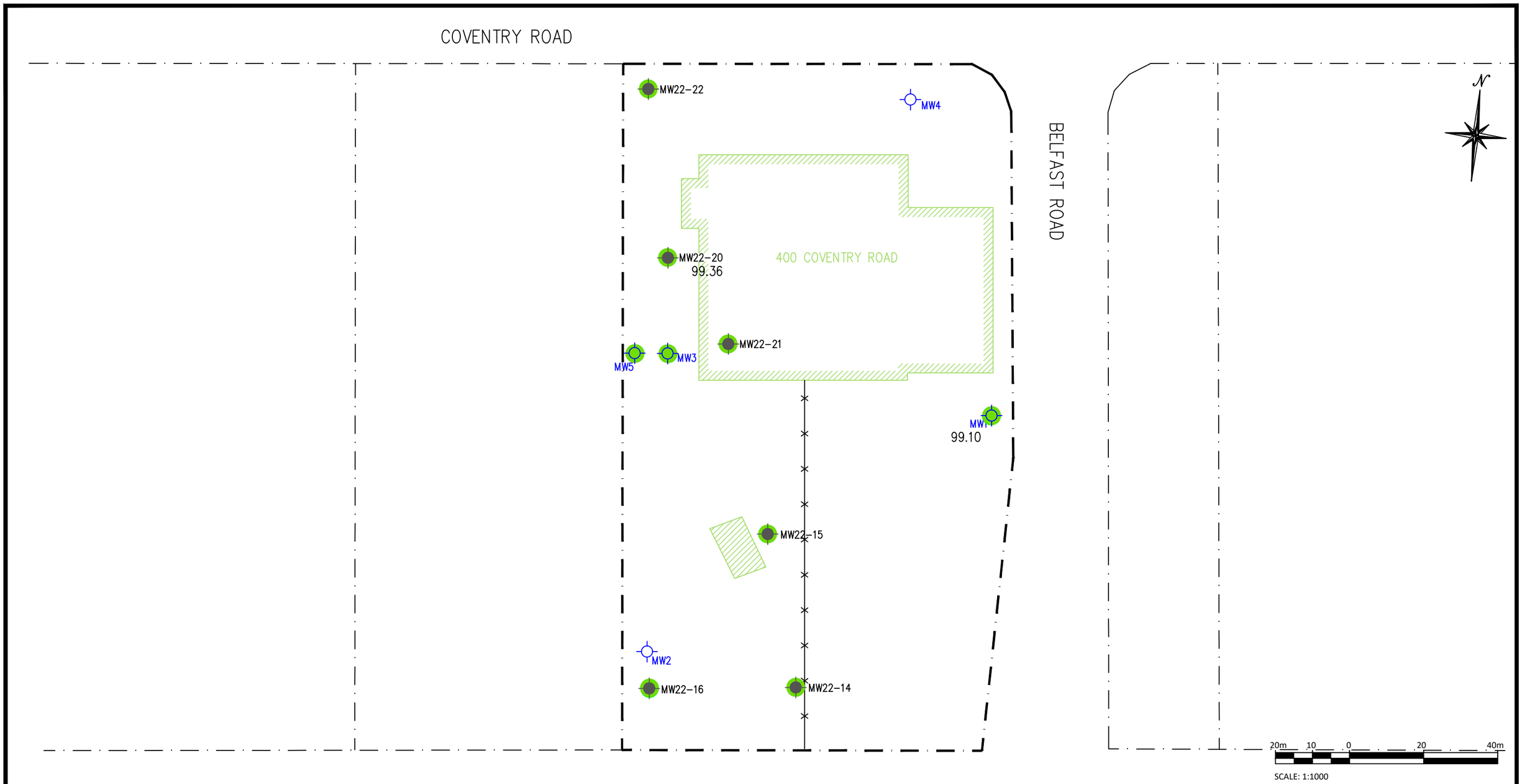
PROJECT
PHASE TWO
ENVIRONMENTAL SITE ASSESSMENT
400 COVENTRY ROAD
OTTAWA, ONTARIO

DRAWING TITLE
PHC IN GROUNDWATER

PROJECT NO.
220200

DATE
APRIL 2023

FIGURE 7C



Legend

- MWXX — Monitoring Well Previously Installed by Others (2021)
- Borehole/Monitoring Well Location (LRL, 2022)
- Existing Building
- Property Line
- Monitoring Well with Exceedance to Table 3 SCS – Residential
- Monitoring Wel with No Exceedance to Table 3 SCS – Residential

No.	REVISIONS	BY	DATE
01	DISCUSSION	J.A.	22/03/23

LRL
ENGINEERING | INGÉNIERIE
5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lrl.ca | (613) 842-3434

CLIENT
400 COVENTRY INVESTMENTS INC

DESIGNED BY:	DRAWN BY:	APPROVED BY:
J.A.	J.A.	--

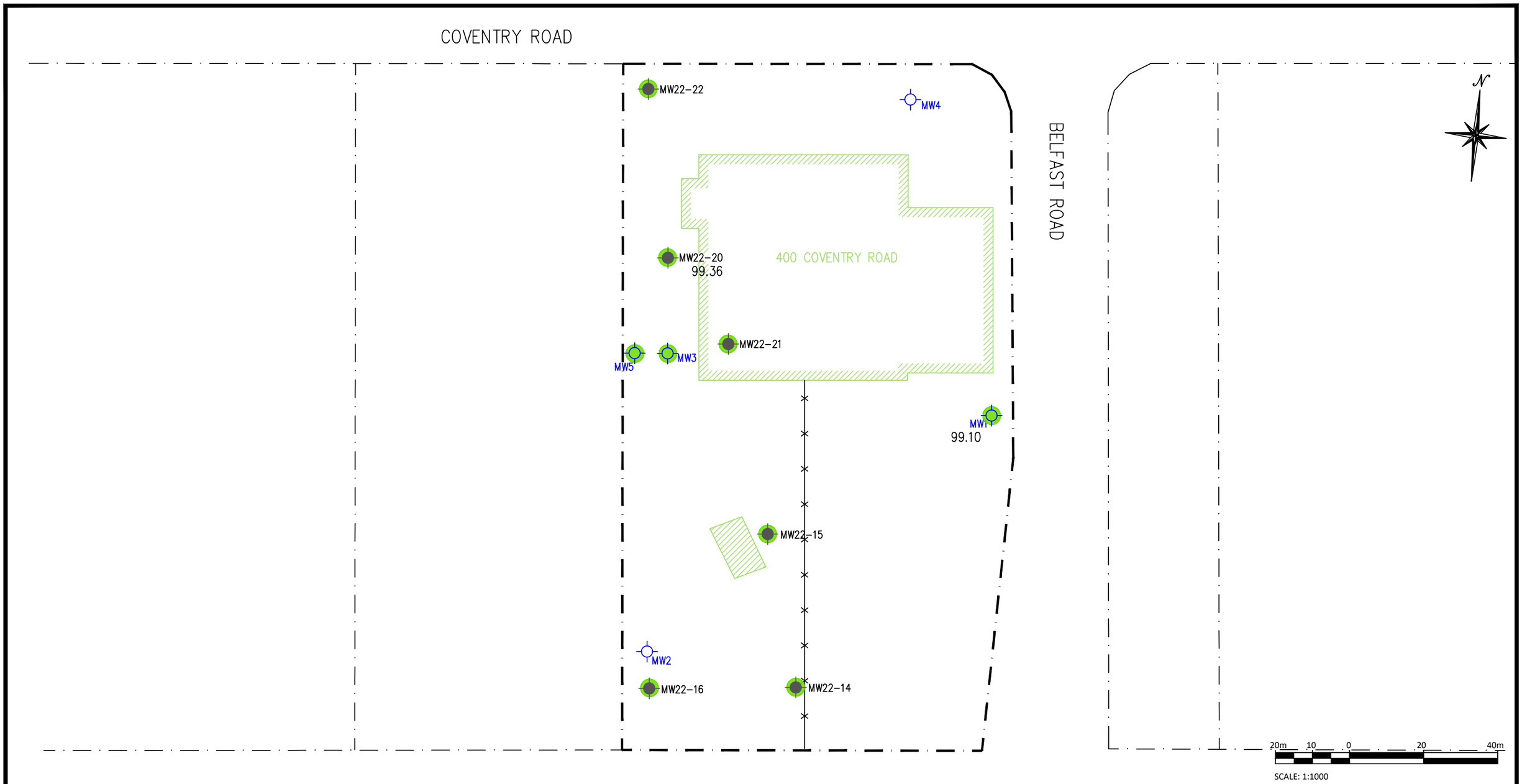
PROJECT
PHASE TWO
ENVIRONMENTAL SITE ASSESSMENT
400 COVENTRY ROAD
OTTAWA, ONTARIO

DRAWING TITLE
PCB IN GROUNDWATER

PROJECT NO.
220200

DATE
APRIL 2023

FIGURE 7D



Legend

- MWXX — Monitoring Well Previously Installed by Others (2021)
- Borehole/Monitoring Well Location (LRL, 2022)
- Existing Building
- Property Line
- Monitoring Well with Exceedance to Table 3 SCS – Residential
- Monitoring Wel with No Exceedance to Table 3 SCS – Residential

No.	REVISIONS	BY	DATE
01	DISCUSSION	J.A.	22/03/23

LRL
ENGINEERING | INGÉNIERIE
5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lrl.ca | (613) 842-3434

CLIENT
400 COVENTRY INVESTMENTS INC

DESIGNED BY:	DRAWN BY:	APPROVED BY:
J.A.	J.A.	--

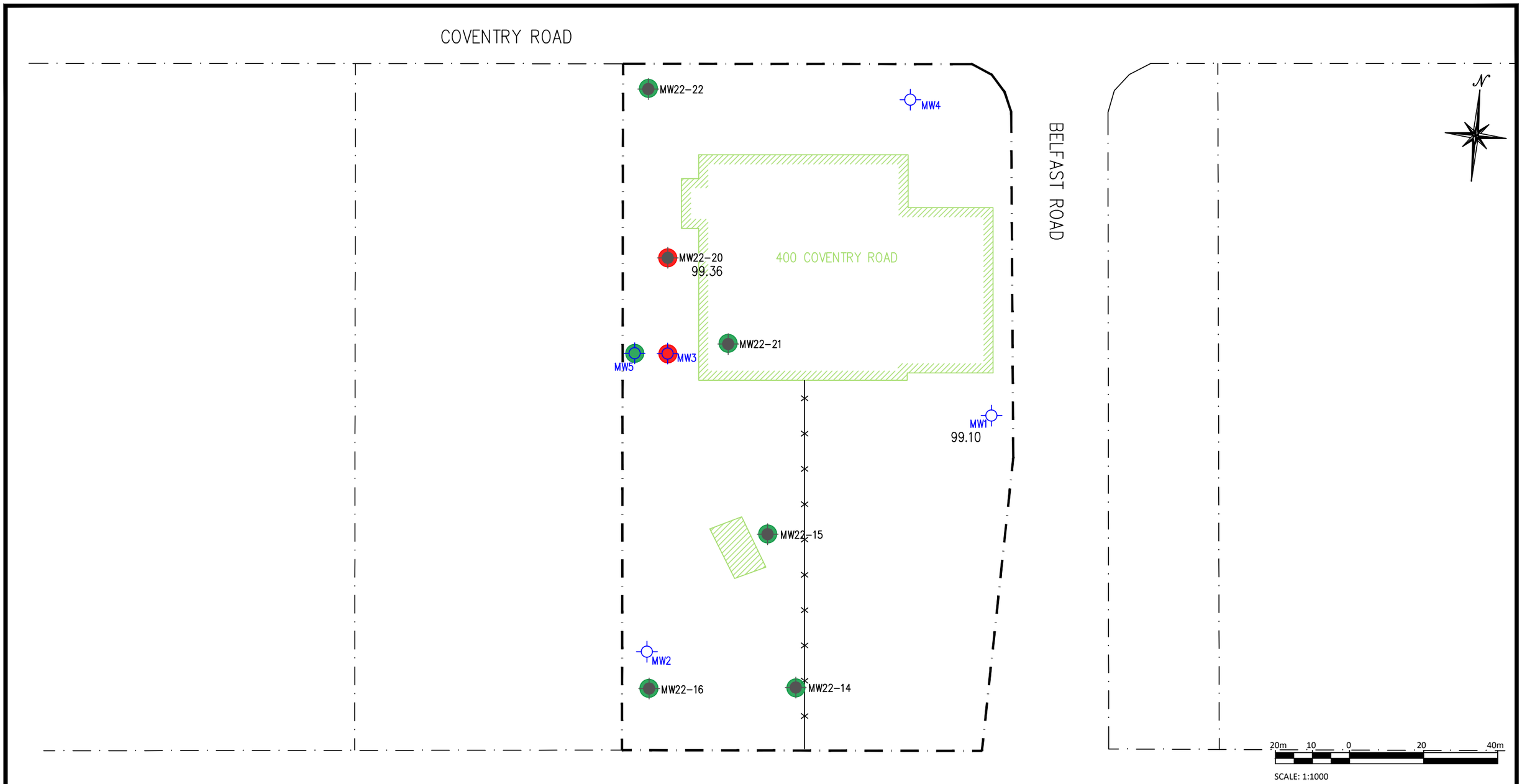
PROJECT
PHASE TWO
ENVIRONMENTAL SITE ASSESSMENT
400 COVENTRY ROAD
OTTAWA, ONTARIO

DRAWING TITLE
PAH IN GROUNDWATER

PROJECT NO.
220200

DATE
APRIL 2023

FIGURE 7E



Legend

- MWXX — Monitoring Well Previously Installed by Others (2021)
- Borehole/Monitoring Well Location (LRL, 2022)
- Existing Building
- Property Line
- Monitoring Well with Exceedance to Table 3 SCS – Residential
- Monitoring Wel with No Exceedance to Table 3 SCS – Residential

No.	REVISIONS	BY	DATE
01	DISCUSSION	J.A.	22/03/23

LRL
ENGINEERING | INGÉNIERIE
5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lrl.ca | (613) 842-3434

CLIENT
400 COVENTRY INVESTMENTS INC

DESIGNED BY:	DRAWN BY:	APPROVED BY:
J.A.	J.A.	--

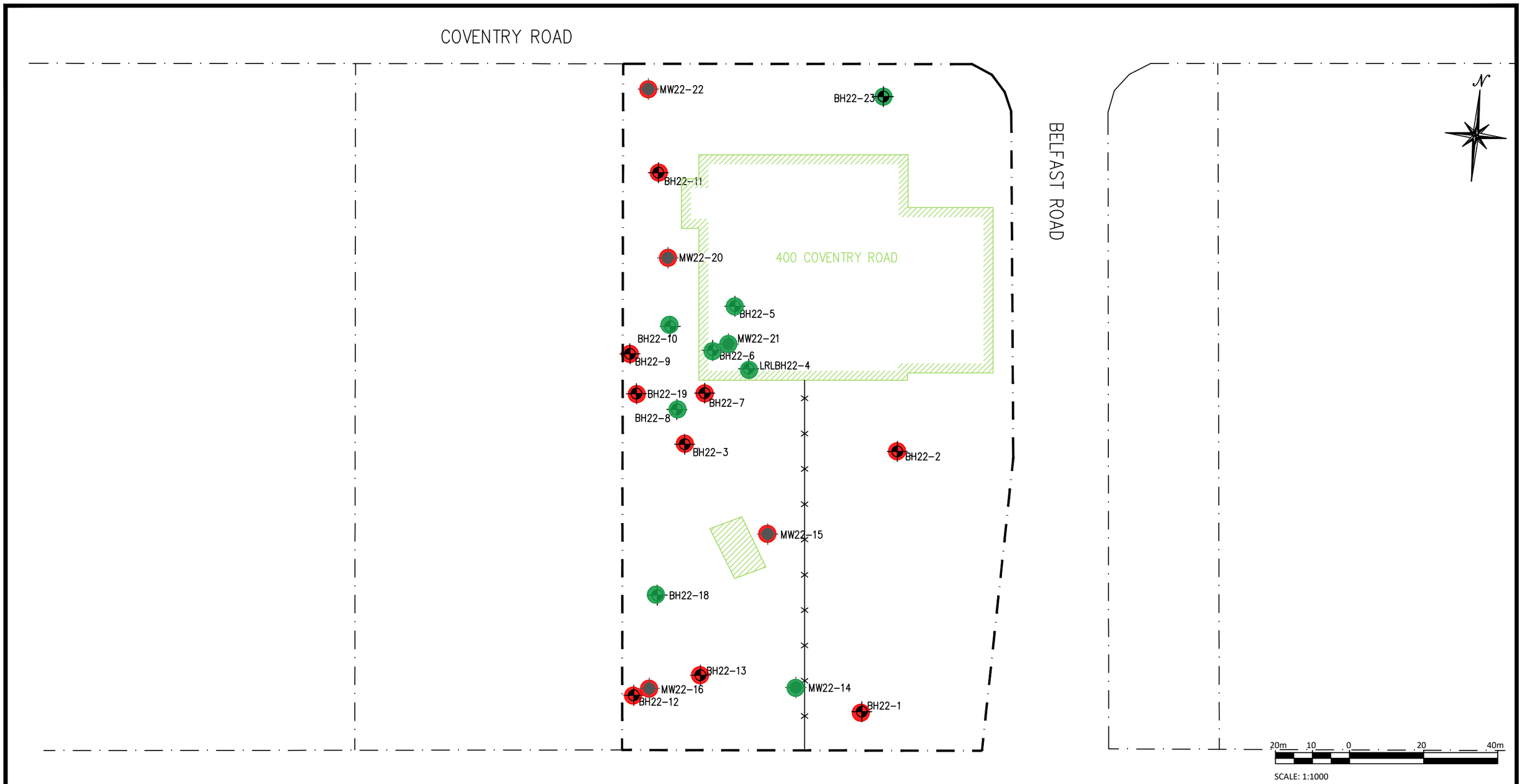
PROJECT
PHASE TWO
ENVIRONMENTAL SITE ASSESSMENT
400 COVENTRY ROAD
OTTAWA, ONTARIO

DRAWING TITLE
METALS IN GROUNDWATER

PROJECT NO.
220200

DATE
APRIL 2023

FIGURE 7F



Legend

- Borehole/Monitoring Well Location (LRL, 2022)
- Existing Building
- Property Line
- Borehole with Exceedance to Table 3 SCS – Residential
- Borehole with No Exceedance to Table 3 SCS – Residential

No.	REVISIONS	BY	DATE
01	DISCUSSION	J.A.	22/03/23

LRL
ENGINEERING | INGÉNIERIE
5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lrl.ca | (613) 842-3434

CLIENT
400 COVENTRY INVESTMENTS INC

DESIGNED BY:	DRAWN BY:	APPROVED BY:
J.A.	J.A.	--

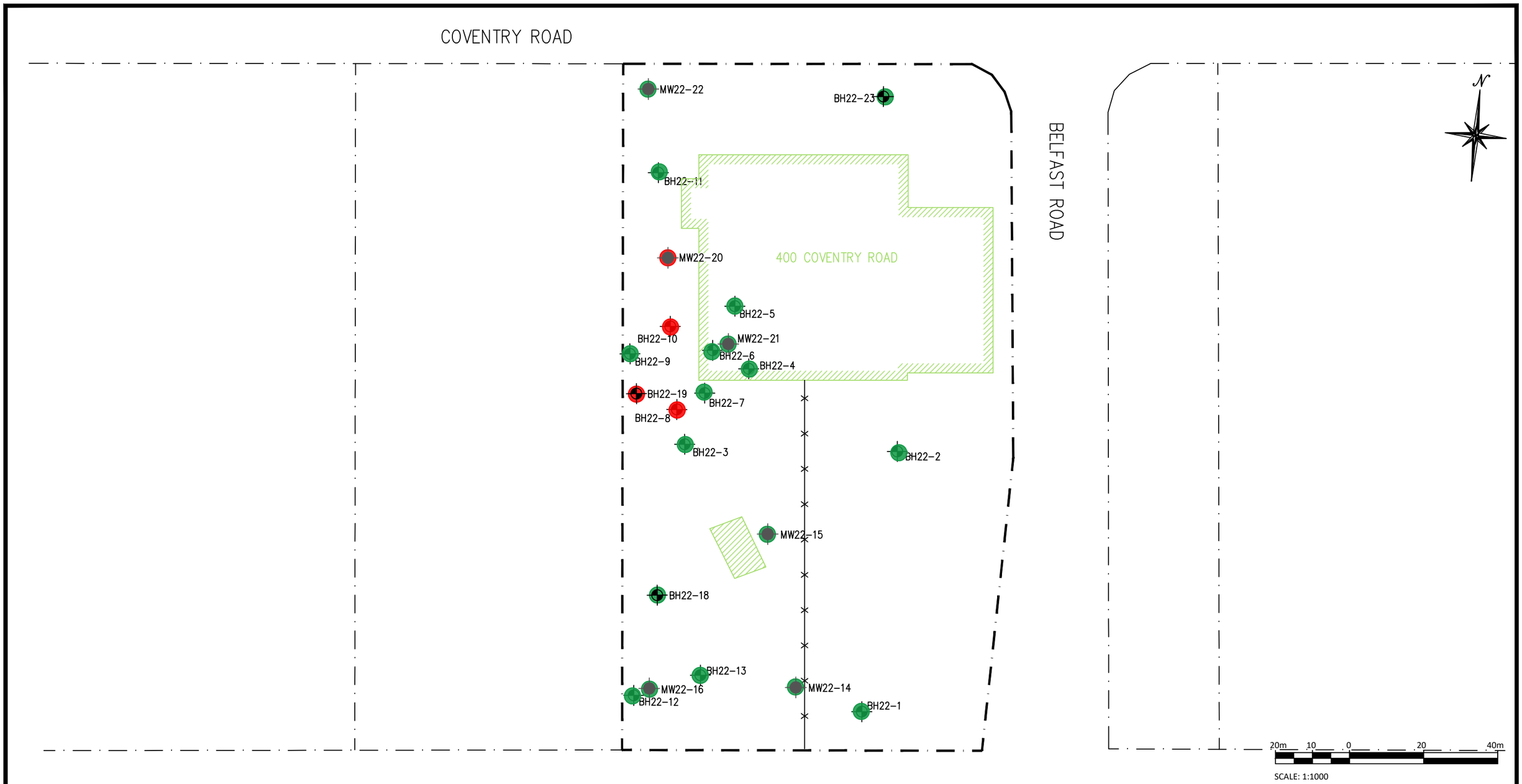
PROJECT
PHASE TWO
ENVIRONMENTAL SITE ASSESSMENT
400 COVENTRY ROAD
OTTAWA, ONTARIO

DRAWING TITLE
INORGANICS IN SOIL

PROJECT NO.
220200

DATE
APRIL 2023

FIGURE 7G



Legend

- Borehole/Monitoring Well Location (LRL, 2022)
- Existing Building
- Property Line
- Borehole with Exceedance to Table 3 SCS – Residential
- Borehole with No Exceedance to Table 3 SCS – Residential

No.	REVISIONS	BY	DATE
01	DISCUSSION	J.A.	22/03/23

LRL
ENGINEERING | INGÉNIERIE
5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lrl.ca | (613) 842-3434

CLIENT
400 COVENTRY INVESTMENTS INC

DESIGNED BY:	DRAWN BY:	APPROVED BY:
J.A.	J.A.	--

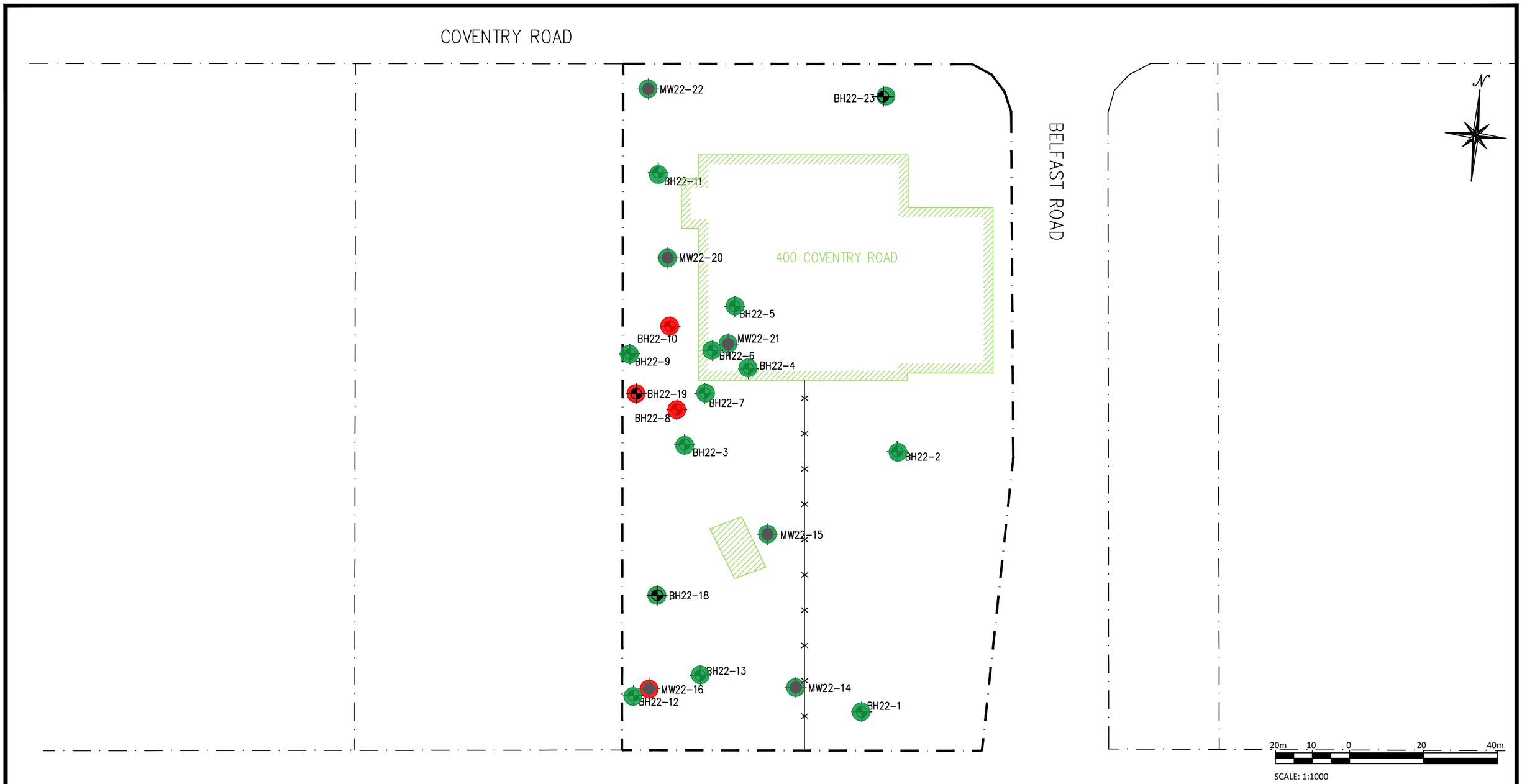
PROJECT
PHASE TWO
ENVIRONMENTAL SITE ASSESSMENT
400 COVENTRY ROAD
OTTAWA, ONTARIO

DRAWING TITLE
VOCS IN SOIL

PROJECT NO.
220200

DATE
APRIL 2023

FIGURE 7H



Legend

- Borehole/Monitoring Well Location (LRL, 2022)
- Existing Building
- Property Line
- Borehole with Exceedance to Table 3 SCS – Residential
- Borehole with No Exceedance to Table 3 SCS – Residential

No.	REVISIONS	BY	DATE
01	DISCUSSION	J.A.	22/03/23

LRL
ENGINEERING | INGÉNIERIE
5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lrl.ca | (613) 842-3434

CLIENT
400 COVENTRY INVESTMENTS INC

DESIGNED BY:	DRAWN BY:	APPROVED BY:
J.A.	J.A.	--

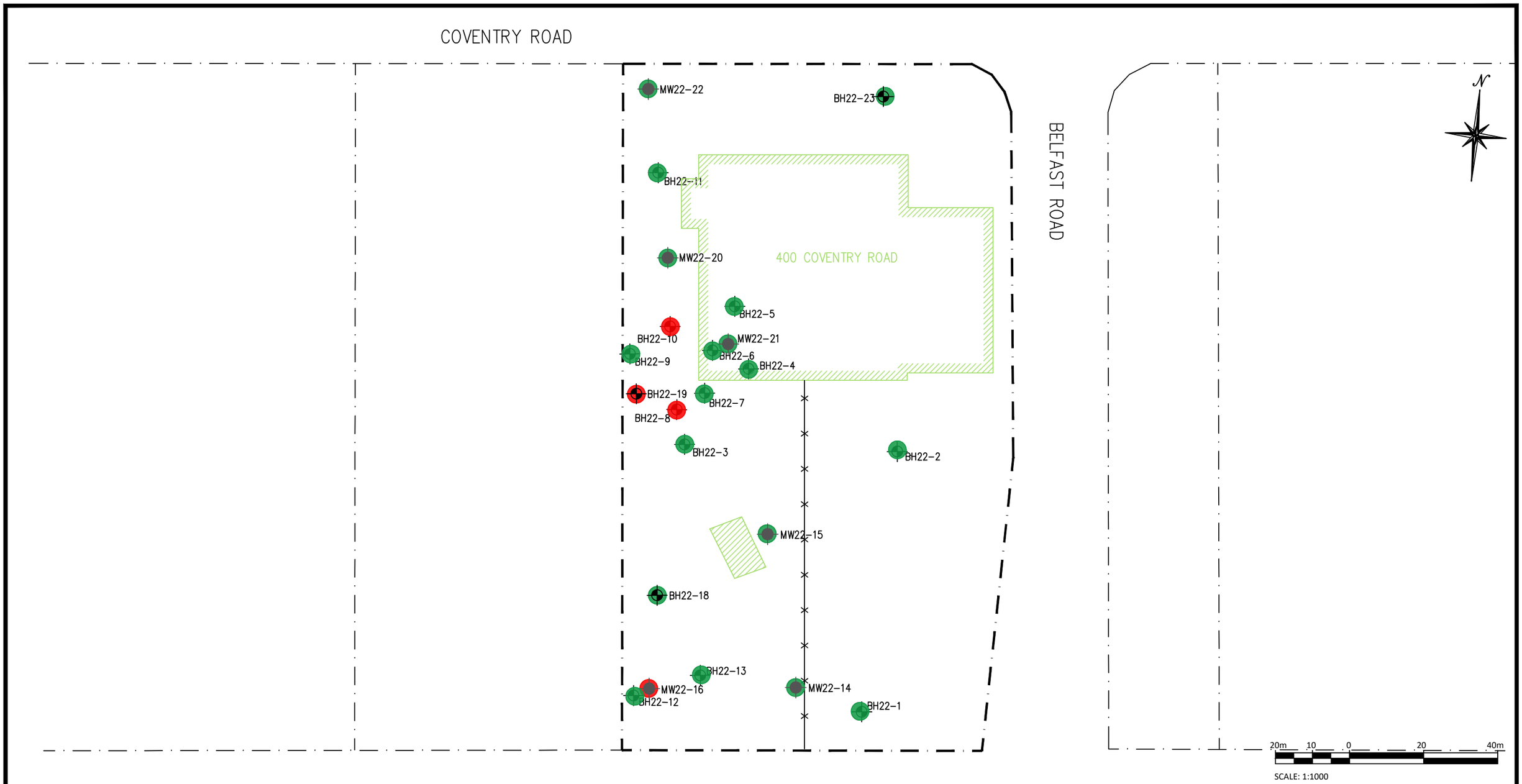
PROJECT
PHASE TWO
ENVIRONMENTAL SITE ASSESSMENT
400 COVENTRY ROAD
OTTAWA, ONTARIO

DRAWING TITLE
PHCs IN SOIL

PROJECT NO.
220200

DATE
APRIL 2023

FIGURE 7I



Legend

- Borehole/Monitoring Well Location (LRL, 2022)
- Existing Building
- Property Line
- Borehole with Exceedance to Table 3 SCS – Residential
- Borehole with No Exceedance to Table 3 SCS – Residential

No.	REVISIONS	BY	DATE
01	DISCUSSION	J.A.	22/03/23

LRL
ENGINEERING | INGÉNIERIE
5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lrl.ca | (613) 842-3434

CLIENT
400 COVENTRY INVESTMENTS INC

DESIGNED BY:	DRAWN BY:	APPROVED BY:
J.A.	J.A.	--

PROJECT
PHASE TWO
ENVIRONMENTAL SITE ASSESSMENT
400 COVENTRY ROAD
OTTAWA, ONTARIO

DRAWING TITLE
PAH IN SOIL

PROJECT NO.
220200

DATE
APRIL 2023

FIGURE 7J

LRL
ENGINEERING | INGÉNIERIE

5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lrl.ca | (613) 842-3434

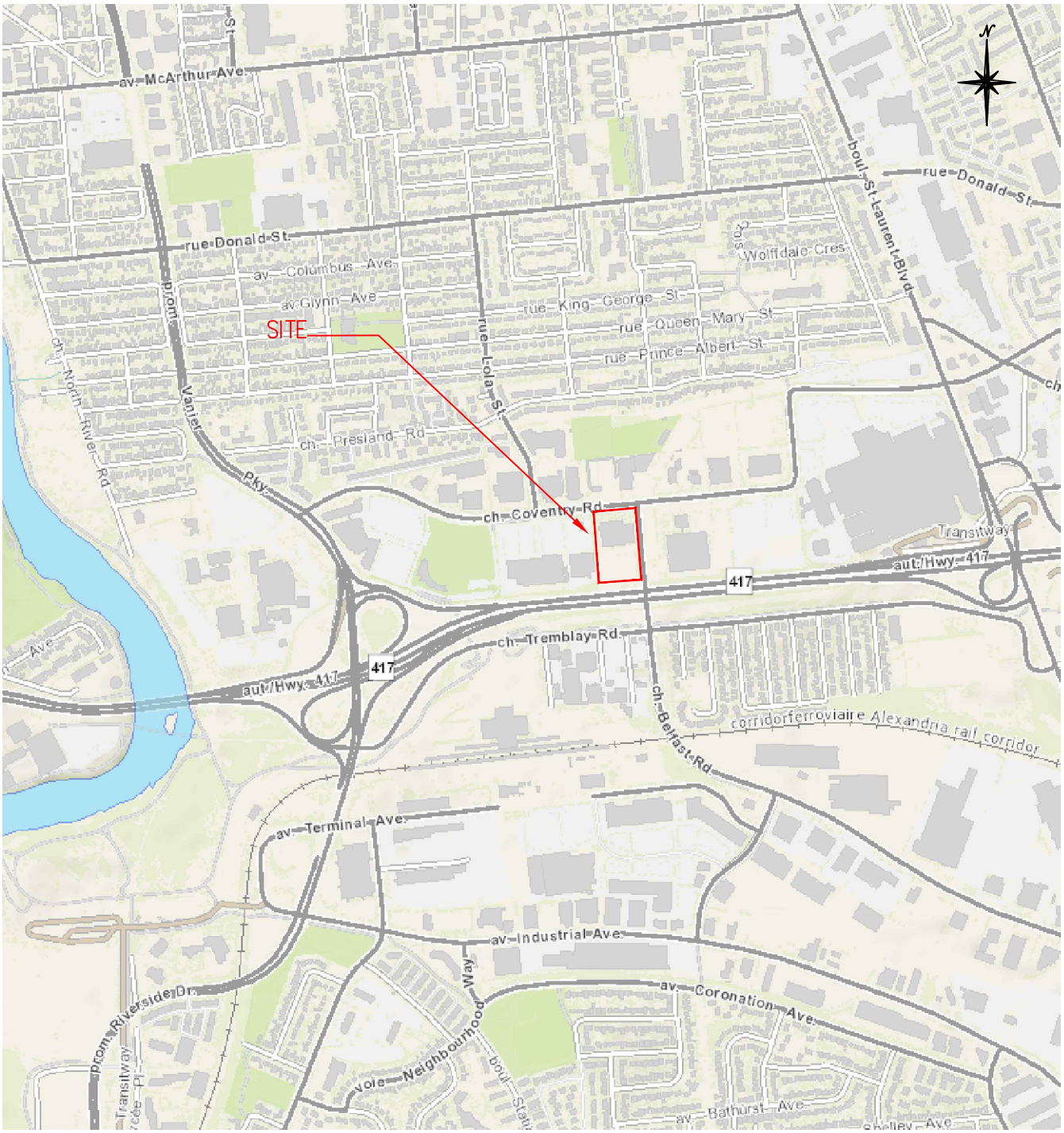
PROJECT

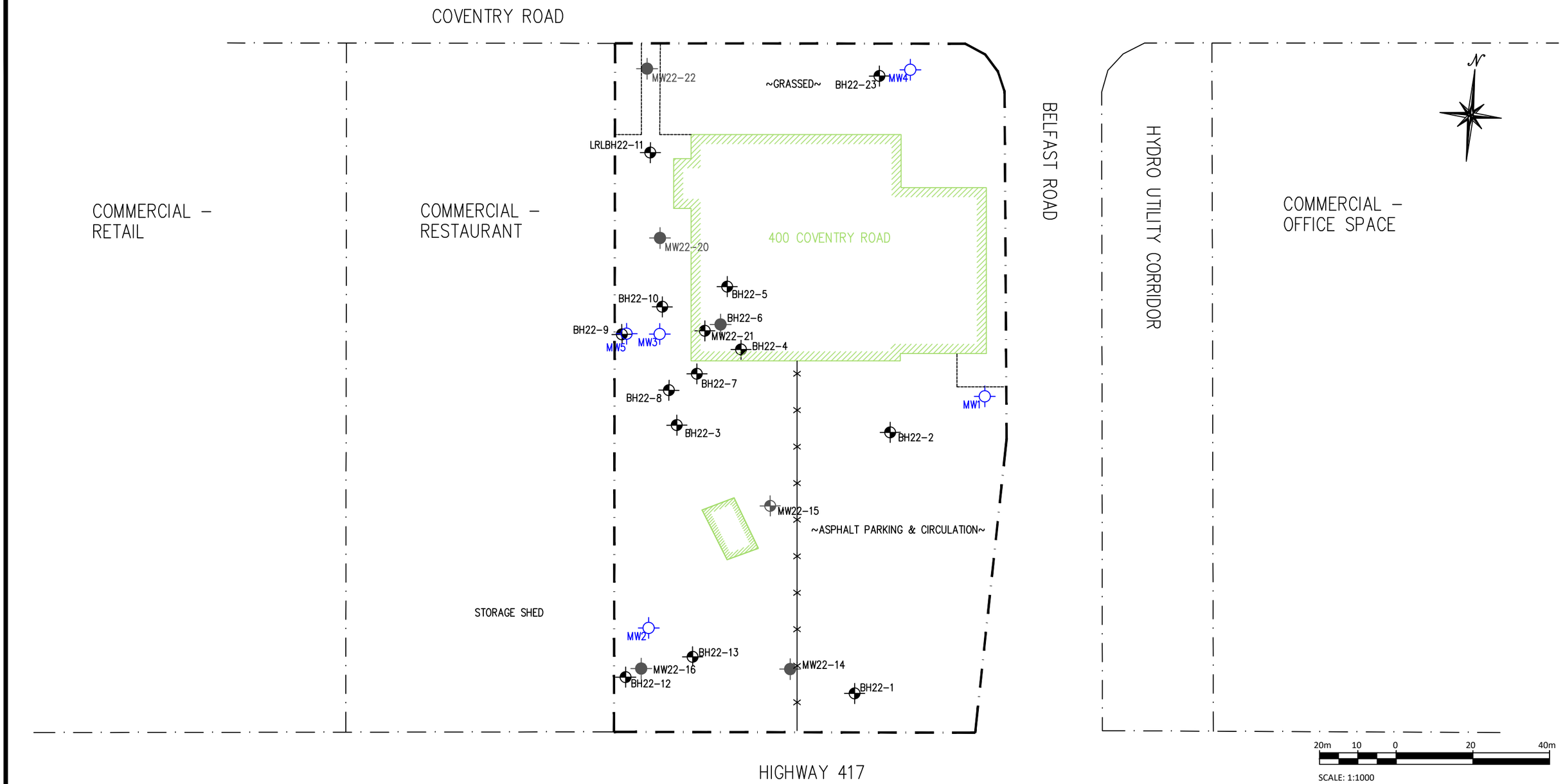
PHASE TWO
ENVIRONMENTAL SITE ASSESSMENT
400 COVENTRY ROAD
OTTAWA, ONTARIO

DRAWING TITLE

SITE LOCATION
(NOT TO SCALE)
SOURCE: geoOTTAWA

CLIENT	DATE	PROJECT	
400 COVENTRY INVESTMENTS INC	APRIL 2023	220200	FIGURE1





Legend

- MWXX — Monitoring Well Previously Installed by Others (2021)
- Borehole/Monitoring Well Location (LRL, 2022)
- Existing Building
- Property Line
- Borehole/Monitoring Well Location

No.	REVISIONS	BY	DATE
01	DISCUSSION	J.A.	22/03/23

LRL
ENGINEERING | INGÉNIERIE
5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lrl.ca | (613) 842-3434

CLIENT
400 COVENTRY INVESTMENTS INC

DESIGNED BY:	DRAWN BY:	APPROVED BY:
J.A.	J.A.	--

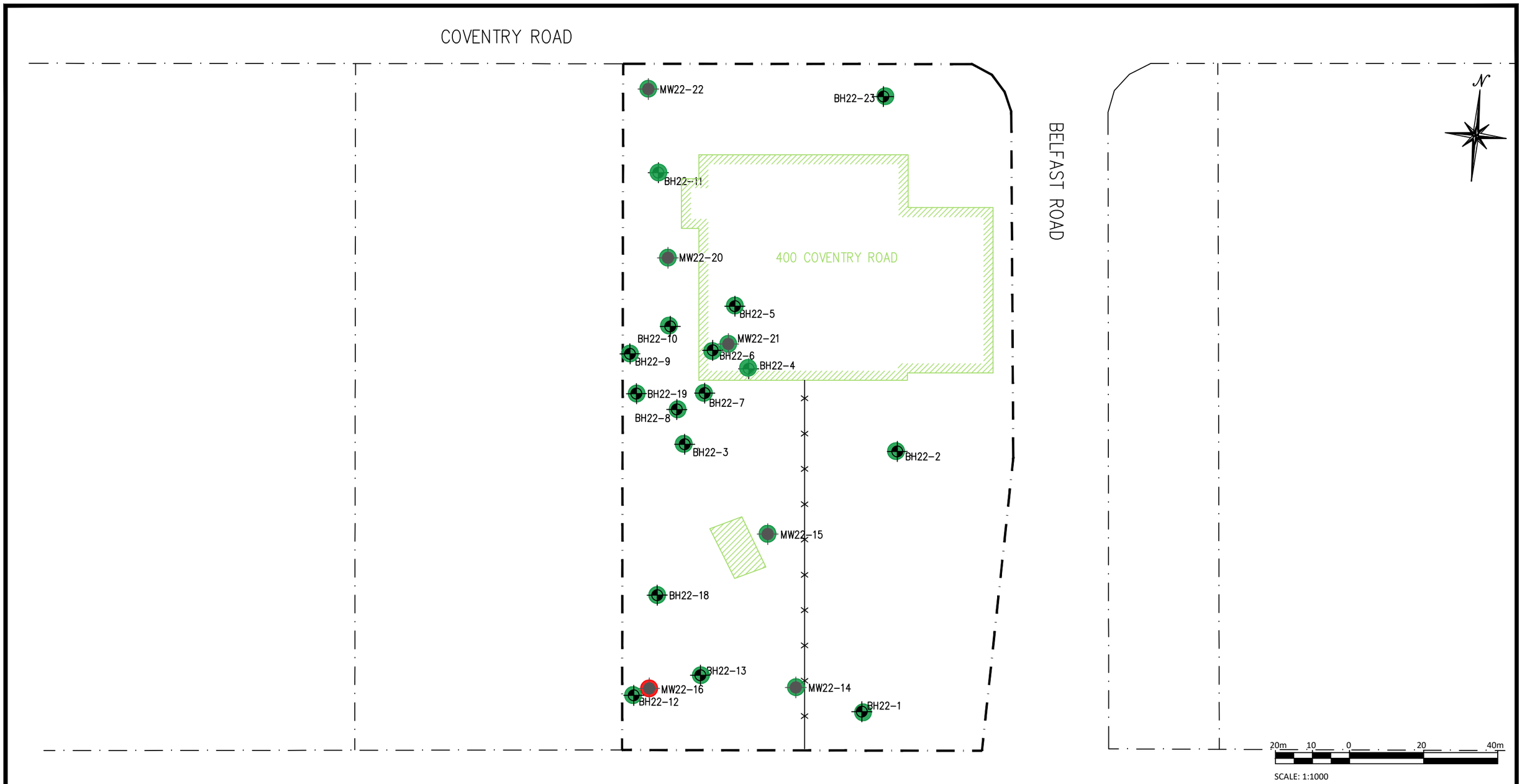
PROJECT
PHASE TWO
ENVIRONMENTAL SITE ASSESSMENT
400 COVENTRY ROAD
OTTAWA, ONTARIO

DRAWING TITLE
BOREHOLE AND MONITORING WELL LOCATIONS

PROJECT NO.
220200

DATE
APRIL 2023

FIGURE5



Legend

- Borehole/Monitoring Well Location (LRL, 2022)
- Existing Building
- Property Line
- Borehole with Exceedance to Table 3 SCS – Residential
- Borehole with No Exceedance to Table 3 SCS – Residential

No.	REVISIONS	BY	DATE
01	DISCUSSION	J.A.	22/03/23

LRL
ENGINEERING | INGÉNIERIE
5430 Canotek Road | Ottawa, ON, K1J 9G2
www.lrl.ca | (613) 842-3434

CLIENT
400 COVENTRY INVESTMENTS INC

DESIGNED BY:	DRAWN BY:	APPROVED BY:
J.A.	J.A.	--

PROJECT
PHASE TWO
ENVIRONMENTAL SITE ASSESSMENT
400 COVENTRY ROAD
OTTAWA, ONTARIO

DRAWING TITLE
METALS IN SOIL

PROJECT NO.
220200

DATE
APRIL 2023

FIGURE 7K

TABLES

Table 1
Summary of Ground Surface and Groundwater Elevations (February 22, 2023)
Phase Two Environmental Site Assessment
400 Coventry Road, Ottawa, Ontario
LRL File: 220200

Monitoring Well	Ground Surface Elevation[1] (m)	Reference Elevation[2] (m)	Depth To Water Table (m)		Groundwater Elevation (m)
			Reference Point	Ground Surface	
MW1	101.37	100.22	1.12	2.28	99.10
MW3	99.55	99.46	0.89	0.98	98.57
MW5	99.35	99.27	1.71	1.79	97.56
MW22-14	99.34	99.15		0.19	99.15
MW22-15	99.46	99.29	0.63	0.80	98.66
MW22-16	98.95	98.82	1.22	1.35	97.60
MW22-20	99.45	99.36		0.09	99.36
MW22-21	99.87	99.79	1.19	1.27	98.60
MW22-22	98.90	98.81	1.79	1.88	97.02

NOTES

[1] Elevations measured from temporary benchmark established "R" on the word "danger" on the storm sewer grate on Forward Avenue directly west of the Site (100.00 m).

[2] Reference elevation is top of PVC riser.

Table 2
Summary of Soil Inorganics, VOC and PHC Analysis
Phase Two Environmental Site Assessment
400 Coventry Road, Ottawa, Ontario
LRL File: 220200

Parameter	Units	MDL	O. Reg. 153/04[1] Table 1[2] Residential Property Use Coarse textured soil	O. Reg. 153/04[1] Table 3[3] Residential Property Use Coarse textured soil	O. Reg. 153/04[1] Table 3[4] Commercial Property Use Coarse textured soil	Sample BH22-4-2	BH22-5-2	BH22-5-4	BH22-6-4	BH22-X-4 (Dup. of BH22-6-4)	BH22-1-SS2	BH22-2-SS3	BH22-3-SS3	BH22-7-SS3	BH22-7-SS5 (Dup. BH22-7-SS3)
Sample Date (d/m/y)			--	--	--	2022.04.27	2022.04.27	2022.04.27	2022.04.27		2022.05.04	2022.05.05	2022.05.05	2022.05.05	
Depth	m		--	--	--	0.35 - 0.50	0.30 - 0.45	0.60 - 0.86	0.83 - 0.91		0.75 - 1.5	1.5 - 2.1	1.2 - 1.8	1.2 - 1.8	
CSV Readings[5]	ppm	0.1/5	--	--	--	<5	<5	15	5		5	65	<5	<5	
Physical Characteristics															
% Solids	% by wt.	0.1	--	--	--	97.4	94.6	95.5	97.8	93.3	85.4	92.9	90.3	76.9	58.2
>0.075 mm	%	0.1	--	--	--	--	61.5	--	--	--	33.8	52.0	49.5	53.3	40.8
<0.075 mm	%	0.1	--	--	--	--	38.5	--	--	--	66.2	48.0	50.5	46.7	59.2
Texture	%	0.1	--	--	--	--	Coarse	--	--	--	Med/Fine	Coarse	Med/Fine	Coarse	Med/Fine
General Inorganics															
SAR	--	0.01	2.4	5.0	12.0	--	--	--	--	--	***5.03***	1.66	***16.9***	***12.4***	***11.2***
Conductivity	uS/cm	5	570	700	1400	--	--	--	--	--	***845***	***985***	***2130***	***2310***	***1930***
Cyanide, free	ug/g dry	0.03	0.051	0.051	0.051	--	--	--	--	--	--	--	--	--	--
pH	pH Units	0.05	--	--	--	--	--	--	--	--	7.52	7.57	7.61	7.59	7.67
Volatiles															
Acetone	ug/g dry	0.50	0.5	16	16	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Benzene	ug/g dry	0.02	0.02	0.21	0.32	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromodichloromethane	ug/g dry	0.05	0.05	13	18	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromoform	ug/g dry	0.05	0.05	0.27	0.61	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromomethane	ug/g dry	0.05	0.05	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g dry	0.05	0.05	0.05	0.21	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorobenzene	ug/g dry	0.05	0.05	2.4	2.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloroform	ug/g dry	0.05	0.05	0.05	0.47	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g dry	0.05	0.05	9.4	13	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorodifluoromethane	ug/g dry	0.05	0.05	16	16	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g dry	0.05	0.05	3.4	6.8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g dry	0.05	0.05	4.8	9.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g dry	0.05	0.05	0.083	0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g dry	0.05	0.05	3.5	17	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichloroethane	ug/g dry	0.05	0.05	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethylene	ug/g dry	0.05	0.05	0.05	0.064	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cis-1,2-Dichloroethylene	ug/g dry	0.05	0.05	3.4	55	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
trans-1,2-Dichloroethylene	ug/g dry	0.05	0.05	0.084	1.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichloropropane	ug/g dry	0.05	0.05	0.05	0.16	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cis-1,3-Dichloropropylene	ug/g dry	0.05	--	--	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
trans-1,3-Dichloropropylene	ug/g dry	0.05	--	--	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene, total	ug/g dry	0.05	0.05	0.05	0.18	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g dry	0.05	0.05	2.0	9.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene dibromide (dibromoethane, 1,2-)	ug/g dry	0.05	0.05	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Hexane	ug/g dry	0.05	0.05	2.8	46	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl Ethyl Ketone (2-Butanone)	ug/g dry	0.50	0.5	16	70	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	ug/g dry	0.50	0.5	0.7	31	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl tert-butyl ether	ug/g dry	0.05	0.05	0.75	11	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g dry	0.05	0.05	0.1	1.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	ug/g dry	0.05	0.05	0.7	34	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g dry	0.05	0.05	0.058	0.087	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g dry	0.05	0.05	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethylene	ug/g dry	0.05	0.05	0.28	4.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Toluene	ug/g dry	0.05	0.2	2.3	68	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1-Trichloroethane	ug/g dry	0.05	0.05	0.38	6.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2-Trichloroethane	ug/g dry	0.05	0.05	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichloroethylene	ug/g dry	0.05	0.05	0.061	0.91	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g dry	0.05	0.25	4	4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g dry	0.02	0.02	0.02	0.032	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
m/p-Xylene	ug/g dry	0.05	--	--	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	ug/g dry	0.05	--	--	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes, total	ug/g dry	0.05	0.05	3.1	26	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Hydrocarbons															
F1 PHCs (C6-C10)	ug/g dry	7	25	55	55	<7	<7	<7	<7	--	<7	<7	<7	<7	<7
F2 PHCs (C10-C16)	ug/g dry	4	10	98	230	<4	<4	<4	<4	--	<4	**12**	<4	<4	<4
F3 PHCs (C16-C34)	ug/g dry	8	240	300	1700	<8	<8	<8	<8	--	28	33	<8	20	32
F4 PHCs (C34-C50)	ug/g dry	6	120	2800	3300	<6	<6	<6	<6	--	30	19	<6	83	88
F4 PHCs (gravimetric)	ug/g dry	50	120	2800	3300	--	--	--	--	--	--	--	--	--	--

Parameter	BH22-8-SS1	BH22-8-SS11 (Dup. BH22-8-S1)	BH22-8-SS3	BH22-9-SS2	BH22-9-SS8 (Dup. BH22-9-SS2)	BH22-9-SS3	BH22-10-SS2	BH22-10-SS11 (Dup. BH22-10-SS2)	BH22-11-SS1	BH22-12-SS3	BH22-13-SS3	BH22-13-SS4	BH22-13-SS5 (Dup. BH22-13-SS4)
Sample Date (d/m/y)	2022.05.05		2022.05.05	2022.05.05		2022.05.05	2022.05.05		2022.05.05	2022.05.04	2022.05.05	2022.05.05	
Depth	0 - 0.6		1.2 - 1.5	0.6 - 1.2		1.2 - 1.8	0.6 - 1.2		0 - 0.6	1.2 - 1.8	1.2 - 1.8	1.8 - 2.4	
CSV Readings[5]	60		75	<5		<5	60		<5	<5	<5	<5	
Physical Characteristics													
% Solids	92.9	91.3	81.7	79.3	84.4	86.1	91.6	86.3	93.9	84.9	90.3	89.7	77.9
>0.075 mm	48.8	85.4	--	35.1	61.2	--	--	--	65.3	93.2	49.5	41.9	41.9
<0.075 mm	51.2	14.6	--	64.9	38.8	--	--	--	34.7	6.8	50.5	58.1	58.1
Texture	Med/Fine	Coarse	--	Med/Fine	Coarse	--	--	--	Coarse	Coarse	Med/Fine	Med/Fine	Med/Fine
General Inorganics													
SAR	**3.05**	2.5	N/A	***10.5***	***6.43***	N/A	N/A	N/A	***6.43***	***5.67***	***16.9***	**3.67**	***7.13***
Conductivity	**616**	537	N/A	***1200***	***1090***	N/A	N/A	N/A	***830***	***885***	***2130***	**872**	***1060***
Cyanide, free	--	--	--	--	--	--	--	--	--	--	--	--	--
pH	7.47	8.78	N/A	7.45	7.75	N/A	N/A	N/A	7.85	7.6	7.61	7.59	7.72
Volatiles													
Acetone	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Benzene	<0.02	<0.02	***1.56***	<0.02	<0.02	<0.02	***1.25***	***3.33***	<0.02	<0.02	<0.02	<0.02	<0.02
Bromodichloromethane	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromoform	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromomethane	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorobenzene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloroform	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorodifluoromethane	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichloroethane	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethylene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cis-1,2-Dichloroethylene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
trans-1,2-Dichloroethylene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichloropropane	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cis-1,3-Dichloropropylene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
trans-1,3-Dichloropropylene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene, total	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	<0.05	<0.05	***63.5***	<0.05	<0.05	<0.05	***4.0***	***59.7***	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene dibromide (dibromoethane, 1,2-)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Hexane	<0.05	<0.05	***53.6***	<0.05	<0.05	<0.05	***8.26***	***38.0***	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl Ethyl Ketone (2-Butanone)	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl tert-butyl ether	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethylene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Toluene	<0.05	<0.05	***33.4***	<0.05	<0.05	<0.05	***4.61***	***92.3***	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1-Trichloroethane	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2-Trichloroethane	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichloroethylene	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
m/p-Xylene	<0.05	<0.05	243	<0.05	<0.05	<0.05	16.7	246	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	<0.05	<0.05	77.2	<0.05	<0.05	<0.05	4.78	84.9	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes, total	<0.05	<0.05	***320***	<0.05	<0.05	<0.05	***21.5***	***331***	<0.05	<0.05	<0.05	<0.05	<0.05
Hydrocarbons													
F1 PHCs (C6-C10)	<7	<7	***463***	<7	<7	<7	***77***	***419***	<7	<7	<7	<7	<7
F2 PHCs (C10-C16)	<4	<4	***460***	<4	<4	<4	***259***	**61**	<4	<4	<4	**33**	**13**
F3 PHCs (C16-C34)	42	41	22	42	40	10	98	100	22	44	<8	126	196
F4 PHCs (C34-C50)	87	75	48	**128**	**141**	57	85	**388**	83	**136**	<6	**410**	**1040**
F4 PHCs (gravimetric)	--	--	--	**353**	**462**	N/A	N/A	**603**	N/A	**318**	--	**836**	**1770**

NOTES:

1 MECP's *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011*
2 Table 1: Full depth Background site condition standards in a non-potable groundwater condition.
3 Proposed Site Condition Standards - Table 3: Full depth generic site condition standards in a non-potable groundwater condition, Residential
4 Existing Site Condition Standards - Table 3: Full depth generic site condition standards in a non-potable groundwater condition, Commercial.
5 Combustible soil vapour concentrations measured with a MiniRAE 2000 PID or RKI II Eagle (methane elimination mode on)

MDL Method Detection Limit
-- No Value/Not Analysed
PHC Petroleum Hydrocarbon
SAR Sodium Absorption Ration
BOLD Exceeds Table 1 Site Condition Standard
Italics Exceeds Proposed Site Condition Standards - Table 3: Full depth generic site condition standards in a non-potable groundwater condition, Residential.
Underline Exceeds Existing Site Condition Standards - Table 3: Full depth generic site condition standards in a non-potable groundwater condition, Commercial.

Table 2 (Continued)
Summary of Soil Inorganics, VOC and PHC Analysis
Phase Two Environmental Site Assessment
400 Coventry Road, Ottawa, Ontario
LRL File: 220200

Parameter	Units	MDL	O. Reg. 153/04[1] Table 1[2] Residential Property Use Coarse textured soil	O. Reg. 153/04[1] Table 3[3] Residential Property Use Coarse textured soil	O. Reg. 153/04[1] Table 3[4] Commercial Property Use Coarse textured soil	BH22-14-SS1	BH22-14-SS5	BH22-14-SS11	BH22-15-SS2	BH22-15-SS7	BH22-15-SS8	BH22-16-SS1	BH22-16-SS5	BH22-18-SS1	BH22-18-SS3	BH22-18-SS6	BH22-19-SS2	BH22-19-SS10
							Duplicate										Duplicate	
Sample Date (d/m/y)			--	--	--	22-Dec-22	22-Dec-22		19-Dec-22	19-Dec-22	19-Dec-22	22-Dec-22	22-Dec-22	03-Jan-23	03-Jan-23	22-Dec-22	20-Dec-22	
Depth	m		--	--	--	0.0 - 0.6	2.4 - 3.0		0.6 - 1.2	3.6 - 4.2	4.2 - 4.7	0.0 - 0.6	2.4 - 3.0	0.0 - 0.6	1.8 - 2.4	2.4 - 3.0	0.6 - 1.2	
CSV Readings[5]	ppm	0.1/5	--	--	--	<0.1	0.3		<0.1	<0.1	<0.1	<0.1	0.9	<0.1	20.1	0.3	<0.1	
Physical Characteristics																		
% Solids	% by wt.	0.1	--	--	--	86.1	93.7	89.7	87.0	93.2	92.2	88.4	69.4	78.4	83.1	93.3	85.1	91.6
>0.075 mm	%	0.1	--	--	--	40.8	50.3	--	--	--	--	--	--	--	--	--	--	--
<0.075 mm	%	0.1	--	--	--	59.2	49.7	--	--	--	--	--	--	--	--	--	--	--
Texture	%	0.1	--	--	--	Med/Fine	Coarse	--	--	--	--	--	--	--	--	--	--	--
General Inorganics																		
SAR	--	0.01	2.4	5.0	12.0	2.17	--	--	**12.5**	--	--	4.61	--	--	--	0.49	***5.02***	--
Conductivity	uS/cm	5	570	700	1400	504	--	--	***1340***	--	--	***969***	--	--	--	296	***1020***	--
Cyanide, free	ug/g dry	0.03	0.051	0.051	0.051	<0.03	--	--	<0.03	--	--	<0.03	--	--	--	<0.03	<0.03	--
pH	pH Units	0.05	--	--	--	7.80	7.73	--	7.53	--	--	7.65	--	--	--	7.60	7.31	--
Volatiles																		
Acetone	ug/g dry	0.50	0.5	16	16	--	<0.5	<0.5	<0.5	--	<0.5	--	<0.5	<0.5	<0.5	--	--	--
Benzene	ug/g dry	0.02	0.02	0.21	0.32	--	<0.02	<0.02	<0.02	--	<0.02	--	<0.02	<0.02	<0.02	--	--	--
Bromodichloromethane	ug/g dry	0.05	0.05	13	18	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
Bromoform	ug/g dry	0.05	0.05	0.27	0.61	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
Bromomethane	ug/g dry	0.05	0.05	0.05	0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
Carbon Tetrachloride	ug/g dry	0.05	0.05	0.05	0.21	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
Chlorobenzene	ug/g dry	0.05	0.05	2.4	2.4	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
Chloroform	ug/g dry	0.05	0.05	0.05	0.47	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
Dibromochloromethane	ug/g dry	0.05	0.05	9.4	13	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
Dichlorodifluoromethane	ug/g dry	0.05	0.05	16	16	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
1,2-Dichlorobenzene	ug/g dry	0.05	0.05	3.4	6.8	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
1,3-Dichlorobenzene	ug/g dry	0.05	0.05	4.8	9.6	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
1,4-Dichlorobenzene	ug/g dry	0.05	0.05	0.083	0.2	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
1,1-Dichloroethane	ug/g dry	0.05	0.05	3.5	17	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
1,2-Dichloroethane	ug/g dry	0.05	0.05	0.05	0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
1,1-Dichloroethylene	ug/g dry	0.05	0.05	0.05	0.064	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
cis-1,2-Dichloroethylene	ug/g dry	0.05	0.05	3.4	55	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
trans-1,2-Dichloroethylene	ug/g dry	0.05	0.05	0.084	1.3	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
1,2-Dichloropropane	ug/g dry	0.05	0.05	0.05	0.16	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
cis-1,3-Dichloropropylene	ug/g dry	0.05	--	--	--	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
trans-1,3-Dichloropropylene	ug/g dry	0.05	--	--	--	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
1,3-Dichloropropene, total	ug/g dry	0.05	0.05	0.05	0.18	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
Ethylbenzene	ug/g dry	0.05	0.05	2.0	9.5	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
Ethylene dibromide (dibromoethane, 1,2-)	ug/g dry	0.05	0.05	0.05	0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
Hexane	ug/g dry	0.05	0.05	2.8	46	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
Methyl Ethyl Ketone (2-Butanone)	ug/g dry	0.50	0.5	16	70	--	<0.5	<0.5	<0.5	--	<0.5	--	<0.5	<0.5	<0.5	--	--	--
Methyl Isobutyl Ketone	ug/g dry	0.50	0.5	0.7	31	--	<0.5	<0.5	<0.5	--	<0.5	--	<0.5	<0.5	<0.5	--	--	--
Methyl tert-butyl ether	ug/g dry	0.05	0.05	0.75	11	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
Methylene Chloride	ug/g dry	0.05	0.05	0.1	1.6	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
Styrene	ug/g dry	0.05	0.05	0.7	34	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
1,1,1,2-Tetrachloroethane	ug/g dry	0.05	0.05	0.058	0.087	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
1,1,2,2-Tetrachloroethane	ug/g dry	0.05	0.05	0.05	0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
Tetrachloroethylene	ug/g dry	0.05	0.05	0.28	4.5	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
Toluene	ug/g dry	0.05	0.2	2.3	68	--	<0.05	<0.05	<0.05	--	0.17	--	<0.05	<0.05	<0.05	--	--	--
1,1,1-Trichloroethane	ug/g dry	0.05	0.05	0.38	6.1	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
1,1,2-Trichloroethane	ug/g dry	0.05	0.05	0.05	0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
Trichloroethylene	ug/g dry	0.05	0.05	0.061	0.91	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
Trichlorofluoromethane	ug/g dry	0.05	0.25	4	4	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
Vinyl Chloride	ug/g dry	0.02	0.02	0.02	0.032	--	<0.02	<0.02	<0.02	--	<0.02	--	<0.02	<0.02	<0.02	--	--	--
m/p-Xylene	ug/g dry	0.05	--	--	--	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
o-Xylene	ug/g dry	0.05	--	--	--	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
Xylenes, total	ug/g dry	0.05	0.05	3.1	26	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	<0.05	--	--	--
Hydrocarbons																		
F1 PHCs (C6-C10)	ug/g dry	7	25	55	55	--	<7	<7	<7	--	<7	--	<7	<7	<7	--	--	--
F2 PHCs (C10-C16)	ug/g dry	4	10	98	230	--	**39**	**48**	<4	--	**50**	--	**12**	<4	<4	--	--	--
F3 PHCs (C16-C34)	ug/g dry	8	240	300	1700	--	62	62	46	--	61	--	***2090***	24	<8	--	--	--
F4 PHCs (C34-C50)	ug/g dry	6	120	2800	3300	--	18	16	223	--	13	--	1540	69	<6	--	--	--
F4 PHCs (gravimetric)	ug/g dry	50	120	2800	3300	--	--	--	379	--	--	--	**3630**	--	--	--	--	--

Parameter	BH22-19-SS4	BH22-19-SS6	BH22-20-SS1	BH22-20-SS2	BH22-20-SS11	BH22-20-SS5	BH22-21-SS2	BH22-21-SS2B	BH22-21-SS3	BH22-22-SS3	BH22-22-SS7	BH22-23-SS1	BH22-23-SS4	BH22-23-SS11	BH22-23-SS5
				Duplicate									Duplicate		
Sample Date (d/m/y)	20-Dec-22	20-Dec-22	21-Dec-22	21-Dec-22		21-Dec-22	06-Feb-23	06-Feb-23	06-Feb-23	19-Dec-22	19-Dec-22	17-Jan-23	17-Jan-23		17-Jan-23
Depth	1.8 - 2.4	3.0 - 3.6	0.0 - 0.6	0.6 - 1.2		2.4 - 3.0	0.3 - 0.9	0.3 - 0.9	0.9 - 1.5	1.5 - 2.1	3.6 - 4.2	0.0 - 0.6	2.4 - 3.0		3.0 - 3.6
CSV Readings[5]	82.8	2.8	30.3	61.8		1.5	8.7	10.2	<0.1	<0.1	<0.1	<0.1	<0.1		<0.1
Physical Characteristics															
% Solids	93.2	93.8	96.4	87.5	78.2	94.2	89.6	83.8	87.8	93.8	93.3	77.0	92.0	90.8	94.0
>0.075 mm	--	--	--	21.6	--	47.0	--	--	--	--	--	--	--	--	--
<0.075 mm	--	--	--	78.4	--	53.0	--	--	--	--	--	--	--	--	--
Texture	--	--	--	Med/Fine	--	Med/Fine	--	--	--	--	--	--	--	--	--
General Inorganics															
SAR	***3.2***	--	**5.91**	--	--	--	--	--	--	**9.61**	--	0.30	--	--	--
Conductivity	***1040***	--	**819**	--	--	--	--	--	--	**749**	--	180	--	--	--
Cyanide, free	<0.03	--	--	--	--	--	--	--	--	<0.03	--	<0.03	--	--	--
pH	7.62	--	7.85	7.82	--	7.81	--	--	--	7.78	--	7.41	--	--	--
Volatiles															
Acetone	<0.5	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	--	<0.5	<0.5	--	<0.5	<0.5	--
Benzene	**0.71**	***0.26***	--	0.08	<0.02	<0.02	--	<0.02	--	<0.02	<0.02	--	<0.02	<0.02	--
Bromodichloromethane	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
Bromoform	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
Bromomethane	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
Carbon Tetrachloride	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
Chlorobenzene	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
Chloroform	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
Dibromochloromethane	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
Dichlorodifluoromethane	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
1,2-Dichlorobenzene	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
1,3-Dichlorobenzene	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
1,4-Dichlorobenzene	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
1,1-Dichloroethane	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
1,2-Dichloroethane	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
1,1-Dichloroethylene	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
cis-1,2-Dichloroethylene	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
trans-1,2-Dichloroethylene	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
1,2-Dichloropropane	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
cis-1,3-Dichloropropylene	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
trans-1,3-Dichloropropylene	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
1,3-Dichloropropene, total	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
Ethylbenzene	***7.85***	1.81	--	***2.58***	0.85	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
Ethylene dibromide (dibromoethane, 1,2-)	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
Hexane	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
Methyl Ethyl Ketone (2-Butanone)	<0.5	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	--	<0.5	<0.5	--	<0.5	<0.5	--
Methyl Isobutyl Ketone	<0.5	<0.5	--	<0.5	<0.5	<0.5	--	<0.5	--	<0.5	<0.5	--	<0.5	<0.5	--
Methyl tert-butyl ether	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
Methylene Chloride	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
Styrene	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
1,1,1,2-Tetrachloroethane	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
1,1,2,2-Tetrachloroethane	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
Tetrachloroethylene	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
Toluene	0.91	0.96	--	0.48	0.16	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
1,1,1-Trichloroethane	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
1,1,2-Trichloroethane	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
Trichloroethylene	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
Trichlorofluoromethane	<0.05	<0.05	--	<0.05	<0.05	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
Vinyl Chloride	<0.02	<0.02	--	<0.02	<0.02	<0.02	--	<0.02	--	<0.02	<0.02	--	<0.02	<0.02	--
m/p-Xylene	24.5	3.77	--	4.05	0.64	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
o-Xylene	4.45	0.84	--	1.34	0.21	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
Xylenes, total	**29.0**	***4.61***	--	***5.39***	0.84	<0.05	--	<0.05	--	<0.05	<0.05	--	<0.05	<0.05	--
Hydrocarbons															
F1 PHCs (C6-C10)	**109**	22	--	<7	24	<7	--	<7	--	<7	<7	--	<7	<7	--
F2 PHCs (C10-C16)	**25**	**29**	--	**50**	9	**46**	--	<4	--	**21**	**30**	--	9	**12**	--
F3 PHCs (C16-C34)	<8	35	--	61	38	93	--	<8	--	30	40	--	12	13	--
F4 PHCs (C34-C50)	<6	<6	--	13	102	95	--	<6	--	<6	39	--	<6	<6	--
F4 PHCs (gravimetric)	--	--	--	--	--	N/A	--	--	--	--	--	--	--	--	--

NOTES:

1 MECP's *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011*
2 Table 1: Full depth Background site condition standards in a non-potable groundwater condition.
3 Proposed Site Condition Standards - Table 3: Full depth generic site condition standards in a non-potable groundwater condition, Residential
4 Existing Site Condition Standards - Table 3: Full depth generic site condition standards in a non-potable groundwater condition, Commercial.
5 Combustible soil vapour concentrations measured with a MiniRAE 2000 PID or RKI II Eagle (methane elimination mode on)

MDL Method Detection Limit
-- No Value/Not Analysed
PHC Petroleum Hydrocarbon
SAR Sodium Absorption Ration
BOLD Exceeds Table 1 Site Condition Standard
Italics Exceeds Proposed Site Condition Standards - Table 3: Full depth generic site condition standards in a non-potable groundwater condition, Residential.
Underline Exceeds Existing Site Condition Standards - Table 3: Full depth generic site condition standards in a non-potable groundwater condition, Commercial.

Table 3
Summary of Soil PAH and PCB Analysis
Phase Two Environmental Site Assessment
400 Coventry Road, Ottawa, Ontario
LRL File: 220200

			O. Reg. 153/04[1]			Sample													
			Table 1[2]	Table 3[3]	Table 3[4]														
Parameter	Units	MDL	Residential Property Use Coarse textured soil	Residential Property Use Coarse textured soil	Commercial Property Use Coarse textured soil	BH22-4-2	BH22-5-2	BH22-5-4	BH22-6-4	BH22-2-SS3	BH22-3-SS3	BH22-7-SS3	BH22-7-SS5 (Dup. BH22-7-SS3)	BH22-8-SS3	BH22-9-SS3	BH22-10-SS2	BH22-10-SS11 (Dup. BH22-10-SS2)	BH22-11-SS1	BH22-12-SS3	BH22-13-SS3	BH22-13-SS4	BH22-13-SS5 (Dup. BH22-13-SS4)
Sample Date (d/m/y)			--	--	--	2022.04.27	2022.04.27	2022.04.27	2022.04.27	2022.05.05	2022.05.05	2022.05.05		2022.05.05	2022.05.05		2022.05.05	2022.05.05	2022.05.04	2022.05.05		2022.05.05
Depth	m		--	--	--	0.35 - 0.50	0.30 - 0.45	0.60 - 0.86	0.83 - 0.91	1.5 - 2.1	1.2 - 1.8	1.2 - 1.8		1.2 - 1.5	1.2 - 1.8		0.6 - 1.2	0 - 0.6	1.2 - 1.8	1.2 - 1.8		1.8 - 2.4
Semi-Volatiles																					
Acenaphthene	ug/g dry	0.02	0.072	7.9	96	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Acenaphthylene	ug/g dry	0.02	0.093	0.15	0.15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Anthracene	ug/g dry	0.02	0.16	0.67	0.67	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo[a]anthracene	ug/g dry	0.02	0.36	0.5	0.96	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo[a]pyrene	ug/g dry	0.02	0.3	0.3	0.3	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo[b]fluoranthene	ug/g dry	0.02	0.47	0.78	0.96	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo[g,h,i]perylene	ug/g dry	0.02	0.68	6.6	9.6	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo[k]fluoranthene	ug/g dry	0.02	0.48	0.78	0.96	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Chrysene	ug/g dry	0.02	2.8	7	9.6	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Dibenzo[a,h]anthracene	ug/g dry	0.02	0.1	0.1	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Fluoranthene	ug/g dry	0.02	0.56	0.69	9.6	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.03	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Fluorene	ug/g dry	0.02	0.12	62	62	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Indeno[1,2,3-cd]pyrene	ug/g dry	0.02	0.23	0.38	0.76	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1-Methylnaphthalene	ug/g dry	0.02	0.59	0.99	76	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	***2.47***	0.04	***1.4***	0.44	<0.02	<0.02	<0.02	<0.02	<0.02
2-Methylnaphthalene	ug/g dry	0.02	0.59	0.99	76	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	***5.28***	0.03	***2.92***	**0.88**	<0.02	<0.02	<0.02	<0.02	<0.02
Methylnaphthalene (1&2)	ug/g dry	0.04	0.59	0.99	76	0.10	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	***7.76***	0.07	***4.32***	***1.32***	<0.04	<0.04	<0.04	<0.04	<0.04
Naphthalene	ug/g dry	0.01	0.09	0.6	9.6	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	***4.8***	<0.01	***2.52***	***1.19***	<0.01	<0.01	<0.01	<0.01	<0.01
Phenanthrene	ug/g dry	0.02	0.69	6.2	12	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.08	<0.02	0.04	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Pyrene	ug/g dry	0.02	1	78	96	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.03	<0.02	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	<0.02
PCBs																						
PCBs, total	ug/g dry	0.05	0.3	0.35	1.1	--	--	--	--	--	--	<0.05	<0.05	--	--	--	--	<0.05	--	--	--	--

NOTES:
1 *MECP's Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011*
2 Table 1: Full depth Background site condition standards in a non-potable groundwater condition.
3 Proposed Site Condition Standards - Table 3: Full depth generic site condition standards in a non-potable groundwater condition, Residential
4 Existing Site Condition Standards - Table 3: Full depth generic site condition standards in a non-potable groundwater condition, Commercial.
5 Combustible soil vapour concentrations measured with a MiniRAE 2000 PID
MDL Method Detection Limit
-- No Value/Not Analysed
BOLD Exceeds Table 1 Site Condition Standard
Italics Exceeds Proposed Site Condition Standards - Table 3: Full depth generic site condition standards in a non-potable groundwater condition, Residential.
Underline Exceeds Existing Site Condition Standards - Table 3: Full depth generic site condition standards in a non-potable groundwater condition, Commercial.

Table 3 (Continued)
Summary of Soil PAH and PCB Analysis
Phase Two Environmental Site Assessment
400 Coventry Road, Ottawa, Ontario
LRL File: 220200

			O. Reg. 153/04[1]			Sample																			
			Table 1[2]	Table 3[3]	Table 3[4]	Duplicate								Duplicate		Duplicate									Duplicate	
			Residential Property Use Coarse textured soil	Residential Property Use Coarse textured soil	Commercial Property Use Coarse textured soil																				
Parameter	**Units**	**MDL**				**BH22-14-SS1**	**BH22-14-SS5**	**BH22-14-SS11**	**BH22-15-SS2**	**BH22-16-SS1**	**BH22-16-SS5**	**BH22-18-SS1**	**BH22-18-SS3**	**BH22-19-SS2**	**BH22-19-SS6**	**BH22-20-SS2**	**BH22-20-SS11**	**BH22-20-SS5**	**BH22-21-SS2**	**BH22-21-SS2B**	**BH22-21-SS3**	**BH22-22-SS3**	**BH22-22-SS7**	**BH22-23-SS1**	**BH22-23-SS4**	**BH22-23-SS11**	**BH22-23-SS5**
Sample Date (d/m/y)			--	--	--	22-Dec-22	22-Dec-22		19-Dec-22	22-Dec-22	22-Dec-22	03-Jan-23	03-Jan-23	20-Dec-22	20-Dec-22	21-Dec-22		21-Dec-22	06-Feb-23	06-Feb-23	06-Feb-23	19-Dec-22	19-Dec-22	17-Jan-23	17-Jan-23		17-Jan-23
Semi-Volatiles																										
Acenaphthene	ug/g dry	0.02	0.072	7.9	96	--	--	--	--	--	0.03	<0.02	<0.02	--	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	--	<0.02	--	--	--	<0.02
Acenaphthylene	ug/g dry	0.02	0.093	0.15	0.15	--	--	--	--	--	0.14	<0.02	<0.02	--	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	--	<0.02	--	--	--	<0.02
Anthracene	ug/g dry	0.02	0.16	0.67	0.67	--	--	--	--	--	0.16	<0.02	<0.02	--	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	--	<0.02	--	--	--	<0.02
Benzo[a]anthracene	ug/g dry	0.02	0.36	0.5	0.96	--	--	--	--	--	0.30	<0.02	<0.02	--	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	--	<0.02	--	--	--	<0.02
Benzo[a]pyrene	ug/g dry	0.02	0.3	0.3	0.3	--	--	--	--	--	***0.35***	<0.02	<0.02	--	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	--	<0.02	--	--	--	<0.02
Benzo[b]fluoranthene	ug/g dry	0.02	0.47	0.78	0.96	--	--	--	--	--	0.59	<0.02	<0.02	--	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	--	<0.02	--	--	--	<0.02
Benzo[g,h,i]perylene	ug/g dry	0.02	0.68	6.6	9.6	--	--	--	--	--	0.28	<0.02	<0.02	--	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	--	<0.02	--	--	--	<0.02
Benzo[k]fluoranthene	ug/g dry	0.02	0.48	0.78	0.96	--	--	--	--	--	0.28	<0.02	<0.02	--	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	--	<0.02	--	--	--	<0.02
Chrysene	ug/g dry	0.02	2.8	7	9.6	--	--	--	--	--	0.33	<0.02	<0.02	--	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	--	<0.02	--	--	--	<0.02
Dibenzo[a,h]anthracene	ug/g dry	0.02	0.1	0.1	0.1	--	--	--	--	--	0.04	<0.02	<0.02	--	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	--	<0.02	--	--	--	<0.02
Fluoranthene	ug/g dry	0.02	0.56	0.69	9.6	--	--	--	--	--	***0.74***	<0.02	<0.02	--	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	--	<0.02	--	--	--	<0.02
Fluorene	ug/g dry	0.02	0.12	62	62	--	--	--	--	--	0.03	<0.02	<0.02	--	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	--	<0.02	--	--	--	<0.02
Indeno[1,2,3-cd]pyrene	ug/g dry	0.02	0.23	0.38	0.76	--	--	--	--	--	0.27	<0.02	<0.02	--	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	--	<0.02	--	--	--	<0.02
1-Methylnaphthalene	ug/g dry	0.02	0.59	0.99	76	--	--	--	--	--	0.05	<0.02	<0.02	--	<0.02	0.33	0.07	0.05	<0.02	<0.02	<0.02	--	<0.02	--	--	--	<0.02
2-Methylnaphthalene	ug/g dry	0.02	0.59	0.99	76	--	--	--	--	--	0.07	<0.02	<0.02	--	<0.02	0.07	<0.02	0.06	<0.02	<0.02	<0.02	--	<0.02	--	--	--	<0.02
Methylnaphthalene (1&2)	ug/g dry	0.04	0.59	0.99	76	--	--	--	--	--	0.12	<0.04	<0.04	--	<0.04	0.40	0.07	0.11	<0.04	<0.04	<0.04	--	<0.04	--	--	--	<0.04
Naphthalene	ug/g dry	0.01	0.09	0.6	9.6	--	--	--	--	--	0.07	<0.01	<0.01	--	<0.01	0.12	0.02	0.08	<0.01	<0.01	<0.01	--	<0.01	--	--	--	<0.01
Phenanthrene	ug/g dry	0.02	0.69	6.2	12	--	--	--	--	--	0.26	<0.02	<0.02	--	<0.02	0.03	<0.02	0.02	<0.02	<0.02	<0.02	--	<0.02	--	--	--	<0.02
Pyrene	ug/g dry	0.02	1	78	96	--	--	--	--	--	0.65	<0.02	<0.02	--	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	--	<0.02	--	--	--	<0.02
PCBs																										
PCBs, total	ug/g dry	0.05	0.3	0.35	1.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<0.05	--	--	--	--	--	--

NOTES:

1 MECP's *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011*
2 Table 1: Full depth Background site condition standards in a non-potable groundwater condition.
3 Proposed Site Condition Standards - Table 3: Full depth generic site condition standards in a non-potable groundwater condition, Residential
4 Existing Site Condition Standards - Table 3: Full depth generic site condition standards in a non-potable groundwater condition, Commercial.
3 Combustible soil vapour concentrations measured with a MiniRAE 2000 PID
MDL Method Detection Limit
-- No Value/Not Analysed
BOLD Exceeds Table 1 Site Condition Standard
Italics Exceeds Proposed Site Condition Standards - Table 3: Full depth generic site condition standards in a non-potable groundwater condition, Residential.
Underline Exceeds Existing Site Condition Standards - Table 3: Full depth generic site condition standards in a non-potable groundwater condition, Commercial.

Table 4
Summary of Soil Metals Analysis
Phase Two Environmental Site Assessment
400 Coventry Road, Ottawa, Ontario
LRL File: 220200

			O. Reg. 153/04[1]			Sample																
Parameter	Units	MDL	Table 1[2] Residential Property Use Coarse textured soil	Table 3[3] Residential Property Use Coarse textured soil	Table 3[4] Commercial Property Use Coarse textured soil	BH22-4-2	BH22-5-2	BH22-5-4	BH22-6-4	BH22-X-4 (Dup. of BH22-6-4)	BH22-1-SS2	BH22-2-SS3	BH22-3-SS3	BH22-7-SS3	BH22-7-SS5 (Dup. BH22-7-SS3)	BH22-8-SS1	BH22-8-SS11 (Dup. BH22-8-SS1)	BH22-9-SS2	BH22-9-SS8 (Dup. BH22-9-SS2)	BH22-11-SS1	BH22-12-SS3	BH22-13-SS3	BH22-13-SS4	BH22-13-SS5 (Dup. BH22-13-SS4)
Sample Date (d/m/y)					--	2022.04.27	2022.04.27	2022.04.27	2022.04.27		2022.05.04	2022.05.05	2022.05.05	2022.05.05		2022.05.05		2022.05.05		2022.05.05	2022.05.04	2022.05.05	2022.05.05	
Depth	m				--	0.35 - 0.50	0.30 - 0.45	0.60 - 0.86	0.83 - 0.91		0.75 - 1.5	1.5 - 2.1	1.2 - 1.8	1.2 - 1.8		0 - 0.6		0.6 - 1.2		0 - 0.6	1.2 - 1.8	1.2 - 1.8	1.8 - 2.4	
Metals																								
Antimony	ug/g dry	1.0	1.3	7.5	40	<1.0	<1.0	<1.0	<1.0	N/A	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	ug/g dry	1.0	18	18	18	1.7	3.8	2.1	1.9	N/A	5.0	5.5	4.2	4.8	4.9	5.4	6.0	5.1	5.5	3.3	1.7	4.2	6.3	1.6
Barium	ug/g dry	1.0	220	390	670	33.7	63.9	37.1	27.2	N/A	48.6	85.9	56.2	52.3	48.1	79.9	45.4	165	116	**229**	32.0	56.2	92.9	47.1
Beryllium	ug/g dry	1.0	2.5	4	8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	0.5	0.5	<0.5	0.8	0.7	<0.5	<0.5	<0.5	<0.5	<0.5
Boron, available	ug/g dry	0.5		1.5	2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Boron	ug/g dry	1.0	36	120	120	<5.0	5.3	<5.0	<5.0	<5.0	<5.0	6.4	5.4	6.3	6.8	6.4	<5.0	7.8	6.8	11.7	<5.0	5.4	6.9	<5.0
Cadmium	ug/g dry	0.5	1.2	1.2	1.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium (VI)	ug/g dry	0.2	0.66	8	8	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chromium	ug/g dry	1.0	70	160	160	8.3	17.0	13.1	11.0	N/A	10	15.8	15.2	20	19.7	27.3	13.6	59.5	45.0	14.1	7.4	15.2	15.9	11.9
Cobalt	ug/g dry	1.0	21	22	80	3.1	7.6	4.7	3.2	N/A	4.1	8.5	6.7	8.1	9.0	9.1	6.6	16.7	14.4	7.7	3.6	6.7	8.4	3.9
Copper	ug/g dry	1.0	92	140	230	6.0	18.2	10.0	7.4	N/A	10.2	21.6	20.1	23.4	23.3	18.6	9.3	31.8	29.6	12.8	10.3	20.1	20.0	12.2
Lead	ug/g dry	1.0	120	120	120	2.3	7.5	4.7	2.4	N/A	2.6	8.1	5.9	7.9	8.9	11.4	11.7	8.9	9.7	6.4	3.1	5.9	7.1	3.8
Mercury	ug/g dry	0.1	0.27	0.27	3.9	<0.1	<0.1	<0.1	<0.1	N/A	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Molybdenum	ug/g dry	1.0	2	6.9	40	<1.0	1.4	<1.0	<1.0	N/A	1.4	**2.5**	**2.1**	**2.2**	**2.9**	**2.6**	**6.5**	**2.1**	**2.5**	1.7	<1.0	**2.1**	**2.2**	<1.0
Nickel	ug/g dry	1.0	82	100	270	5.7	21.1	11.2	6.9	N/A	8.6	23.2	22.1	23.7	25.3	23.9	13.2	35.9	28.8	18.2	7.1	22.1	27.4	9.0
Selenium	ug/g dry	1.0	1.5	2.4	5.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Silver	ug/g dry	0.5	0.5	20	40	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Thallium	ug/g dry	1.0	1	1	3.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Uranium	ug/g dry	1.0	2.5	23	33	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	**2.8**	1.9	1.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.1	<1.0
Vanadium	ug/g dry	1.0	86	86	86	20.5	24.0	20.6	19.5	N/A	19.0	23.6	23.3	25.8	27.5	33.7	16.9	68.9	62.0	15.6	13.6	23.3	24.3	20.2
Zinc	ug/g dry	1.0	290	340	340	<20.0	30.4	<20.0	<20.0	<20.0	<20.0	34.6	34.2	35.7	56.1	39.5	<20.0	66.0	62.5	<20.0	<20.0	34.2	32.0	<20.0

NOTES:

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

2 Table 1: Full depth Background site condition standards in a non-potable groundwater condition.

3 Proposed Site Condition Standards - Table 3: Full depth generic site condition standards in a non-potable groundwater condition, Residential.

4 Existing Site Condition Standards - Table 3: Full depth generic site condition standards in a non-potable groundwater condition, Commercial.

-- No Value/Not Analysed

BOLD Exceeds Table 1 Site Condition Standard

Italics Exceeds Proposed Site Condition Standards - Table 3: Full depth generic site condition standards in a non-potable groundwater condition, Residential.

Underline Exceeds Existing Site Condition Standards - Table 3: Full depth generic site condition standards in a non-potable groundwater condition, Commercial.

Table 4 (Contiinued)
Summary of Soil Metals Analysis
Phase Two Environmental Site Assessment
400 Coventry Road, Ottawa, Ontario
LRL File: 220200

			O. Reg. 153/04[1]			Sample																										
			Table 1[2]	Table 3[3]	Table 3[4]	Duplicate											Duplicate					Duplicate									Duplicate		
Parameter	Units	MDL	Residential Property Use Coarse textured soil	Residential Property Use Coarse textured soil	Commercial Property Use Coarse textured soil	BH22-14-SS1	BH22-14-SS5	BH22-14-SS11	BH22-15-SS2	BH22-15-SS7	BH22-15-SS8	BH22-16-SS1	BH22-16-SS5	BH22-18-SS1	BH22-18-SS3	BH22-18-SS6	BH22-19-SS2	BH22-19-SS10	BH22-19-SS4	BH22-19-SS6	BH22-20-SS1	BH22-20-SS2	BH22-20-SS11	BH22-20-SS5	BH22-21-SS2	BH22-21-SS2B	BH22-21-SS3	BH22-22-SS3	BH22-22-SS7	BH22-23-SS1	BH22-23-SS4	BH22-23-SS11	BH22-23-SS5
Sample Date (d/m/y)					--	22-Dec-22	22-Dec-22		19-Dec-22	19-Dec-22	19-Dec-22	22-Dec-22	22-Dec-22	03-Jan-23	03-Jan-23	22-Dec-22	20-Dec-22		20-Dec-22	20-Dec-22	21-Dec-22	21-Dec-22		21-Dec-22	06-Feb-23	06-Feb-23	06-Feb-23	19-Dec-22	19-Dec-22	17-Jan-23	17-Jan-23		17-Jan-23
Metals																																
Antimony	ug/g dry	1.0	1.3	7.5	40	<1.0	--	--	<1.0	--	<1.0	<1.0	<1.0	--	--	<1.0	1.2	<1.0	<1.0	--	<1.0	--	--	--	--	--	--	<1.0	--	<1.0	--	--	--
Arsenic	ug/g dry	1.0	18	18	18	8.1	--	--	12.5	--	7.3	11.6	8.4	--	--	3.8	4.9	6.1	8.5	--	7.8	--	--	--	--	--	--	7.7	--	<1.0	--	--	--
Barium	ug/g dry	1.0	220	390	670	43.4	--	--	83.6	--	114	34.5	161	--	--	63.9	84.4	102	65.6	--	43.0	--	--	--	--	--	--	77.8	--	<1.0	--	--	--
Beryllium	ug/g dry	1.0	2.5	4	8	<0.5	--	--	0.8	--	0.6	<0.5	0.8	--	--	<0.5	0.7	0.5	0.7	--	<0.5	--	--	--	--	--	--	0.6	--	<0.5	--	--	--
Boron, available	ug/g dry	0.5		1.5	2	<0.5	--	--	<0.5	--	0.5	<0.5	1.4	--	--	<0.5	<0.5	0.5	<0.5	--	<0.5	--	--	--	--	--	--	<0.5	--	<0.5	--	--	--
Boron	ug/g dry	1.0	36	120	120	8.6	--	--	11.4	--	11.7	8.4	8.5	--	--	7.3	9.6	8.8	9.6	--	9.6	--	--	--	--	--	--	9.2	--	<5.0	--	--	--
Cadmium	ug/g dry	0.5	1.2	1.2	1.9	<0.5	--	--	<0.5	--	<0.5	<0.5	***2.0***	--	--	<0.5	<0.5	<0.5	<0.5	--	<0.5	--	--	--	--	--	--	<0.5	--	<0.5	--	--	--
Chromium (VI)	ug/g dry	0.2	0.66	8	8	<0.2	--	--	<0.2	--	<0.2	<0.2	<0.2	--	--	<0.2	<0.2	<0.2	<0.2	--	<0.2	--	--	--	--	--	--	<0.2	--	0.3	--	--	--
Chromium	ug/g dry	1.0	70	160	160	20.8	--	--	36.3	--	23.6	18.5	68.1	--	--	14.3	28.7	24.1	25.4	--	20.2	--	--	--	--	--	--	21.2	--	<5.0	--	--	--
Cobalt	ug/g dry	1.0	21	22	80	8.9	--	--	13.6	--	11.7	9.7	16.4	--	--	7.0	10.2	9.7	13.5	--	7.3	--	--	--	--	--	--	15.4	--	<1.0	--	--	--
Copper	ug/g dry	1.0	92	140	230	16.0	--	--	39.0	--	33.1	14.1	44.2	--	--	19.0	25.2	28.0	38.0	--	22.0	--	--	--	--	--	--	40.0	--	<5.0	--	--	--
Lead	ug/g dry	1.0	120	120	120	16.9	--	--	19.4	**	10.8	36.1	***383***	**	--	7.0	11.1	9.0	12.5	--	14.1	--	**	--	--	--	--	11.2	--	<1.0	--	--	--
Mercury	ug/g dry	0.1	0.27	0.27	3.9	<0.1	--	--	<0.1	--	<0.1	<0.1	0.2	--	--	<0.1	<0.1	<0.1	<0.1	--	<0.1	--	--	--	--	--	--	<0.1	--	<0.2	--	--	--
Molybdenum	ug/g dry	1.0	2	6.9	40	5.5	--	--	6.3	--	3.6	9.2	1.9	--	--	2.0	3.7	2.0	5.0	--	6.1	--	--	--	--	--	--	3.6	--	<1.0	--	--	--
Nickel	ug/g dry	1.0	82	100	270	22.7	--	--	35.8	--	34.0	21.8	36.0	--	--	20.2	29.3	25.0	46.3	--	18.7	--	--	--	--	--	--	39.6	--	<5.0	--	--	--
Selenium	ug/g dry	1.0	1.5	2.4	5.5	<1.0	--	--	<1.0	--	<1.0	<1.0	<1.0	--	--	<1.0	<1.0	<1.0	<1.0	--	<1.0	--	--	--	--	--	--	1.1	--	<1.0	--	--	--
Silver	ug/g dry	0.5	0.5	20	40	<0.3	--	--	<0.3	--	<0.3	<0.3	<0.3	--	--	<0.3	<0.3	<0.3	<0.3	--	<0.3	--	--	--	--	--	--	<0.3	--	<0.3	--	--	--
Thallium	ug/g dry	1.0	1	1	3.3	<1.0	--	--	<1.0	--	<1.0	<1.0	<1.0	--	--	<1.0	<1.0	<1.0	<1.0	--	<1.0	--	--	--	--	--	--	<1.0	--	<1.0	--	--	--
Uranium	ug/g dry	1.0	2.5	23	33	<1.0	--	--	1.3	--	1.6	<1.0	4.4	--	--	1.1	1.2	1.0	1.1	--	<1.0	--	--	--	--	--	--	<1.0	--	<1.0	--	--	--
Vanadium	ug/g dry	1.0	86	86	86	26.9	--	--	69.2	--	35.1	21.3	68.6	--	--	21.8	39.0	33.0	37.8	--	31.8	--	--	--	--	--	--	30.7	--	<10.0	--	--	--
Zinc	ug/g dry	1.0	290	340	340	48.8	--	--	51.2	--	56.2	21.0	250	--	--	23.9	44.2	41.5	58.3	--	23.1	--	--	--	--	--	--	41.4	--	<20.0	--	--	--

NOTES:

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

2 Table 1: Full depth Background site condition standards in a non-potable groundwater condition.

3 Proposed Site Condition Standards - Table 3: Full depth generic site condition standards in a non-potable groundwater condition, Residential.

4 Existing Site Condition Standards - Table 3: Full depth generic site condition standards in a non-potable groundwater condition, Commercial.

-- No Value/Not Analysed

BOLD Exceeds Table 1 Site Condition Standard

Italics Exceeds Proposed Site Condition Standards - Table 3: Full depth generic site condition standards in a non-potable groundwater condition, Residential.

Underline Exceeds Existing Site Condition Standards - Table 3: Full depth generic site condition standards in a non-potable groundwater condition, Commercial.

Table 4
Summary of RDP
Phase Two Environmental Site Assessment
400 Coventry Road, Ottawa, Ontario
LRL File: 220200

Parameter	Units	MDL	BH22-6-4	BH22-X-4 (Dup. of BH22-6-4)	RDP	BH22-7-SS3	BH22-7-SS6 (Dup. BH22-7-SS3)	RDP	BH22-8-SS1	BH22-8-SS11 (Dup. BH22-8-S1)	RDP	BH22-9-SS2	BH22-9-SS8 (Dup. BH22-9-SS2)	RDP	BH22-10-SS2	BH22-10-SS11 (Dup. BH22-10-SS2)	RDP	BH22-13-SS4	BH22-13-SS5 (Dup. BH22-13-SS4)	RDP
Metals																				
Antimony	ug/g dry	1.0	--	--	--	<1.0	<1.0	--	<1.0	<1.0	--	<1.0	<1.0	--	<1.0	<1.0	--	<1.0	<1.0	--
Arsenic	ug/g dry	1.0	--	--	--	4.8	4.9	-2.06	5.4	6.0	-10.53	5.1	5.5	-7.55	N/A	N/A	--	6.3	1.6	*118.99*
Barium	ug/g dry	1.0	--	--	--	52.3	48.1	8.37	79.9	45.4	55.07	165	116	*34.88*	N/A	N/A	--	92.9	47.1	*65.43*
Beryllium	ug/g dry	1.0	--	--	--	0.5	0.5	0.00	0.5	<0.5	--	0.8	0.7	13.33	N/A	N/A	--	<0.5	<0.5	--
Boron, available	ug/g dry	0.5	--	--	--	<0.5	<0.5	--	<0.5	<0.5	--	<0.5	<0.5	--	<0.5	<0.5	--	<0.5	<0.5	--
Boron	ug/g dry	1.0	--	--	--	6.3	6.8	-7.63	6.4	<5.0	--	7.8	6.8	13.70	N/A	N/A	--	6.9	<5.0	--
Cadmium	ug/g dry	0.5	--	--	--	<0.5	<0.5	--	<0.5	<0.5	--	<0.5	<0.5	--	<0.5	<0.5	--	<0.5	<0.5	--
Chromium (VI)	ug/g dry	0.2	--	--	--	<0.2	<0.2	--	<0.2	<0.2	--	<0.2	<0.2	--	<0.2	<0.2	--	<0.2	<0.2	--
Chromium	ug/g dry	1.0	--	--	--	20	19.7	1.51	27.3	13.6	66.99	59.5	45.0	27.75	N/A	N/A	--	15.9	11.9	28.78
Cobalt	ug/g dry	1.0	--	--	--	8.1	9.0	-10.53	9.1	6.8	31.85	16.7	14.4	14.79	N/A	N/A	--	8.4	3.9	*73.17*
Copper	ug/g dry	1.0	--	--	--	23.4	23.3	0.43	18.6	9.3	66.67	31.8	29.6	7.17	N/A	N/A	--	20.0	12.2	*48.45*
Lead	ug/g dry	1.0	--	--	--	7.9	8.9	-11.90	11.4	11.7	-2.60	8.9	9.7	-8.60	N/A	N/A	--	7.1	3.8	*60.55*
Mercury	ug/g dry	0.1	--	--	--	<0.1	<0.1	--	<0.1	<0.1	--	<0.1	<0.1	--	<0.1	<0.1	--	<0.1	<0.1	--
Molybdenum	ug/g dry	1.0	--	--	--	**2.2**	**2.9**	-27.45	**2.6**	**6.5**	*-85.71*	**2.1**	**2.5**	**-17.39**	N/A	N/A	--	**2.2**	<1.0	--
Nickel	ug/g dry	1.0	--	--	--	23.7	25.3	-6.53	23.9	13.2	*57.68*	35.9	28.8	21.95	N/A	N/A	--	27.4	9.0	*101.10*
Selenium	ug/g dry	1.0	--	--	--	<1.0	<1.0	--	<1.0	<1.0	--	<1.0	<1.0	--	<1.0	<1.0	--	<1.0	<1.0	--
Silver	ug/g dry	0.5	--	--	--	<0.3	<0.3	--	<0.3	<0.3	--	<0.3	<0.3	--	<0.3	<0.3	--	<0.3	<0.3	--
Thallium	ug/g dry	1.0	--	--	--	<1.0	<1.0	--	<1.0	<1.0	--	<1.0	<1.0	--	<1.0	<1.0	--	<1.0	<1.0	--
Uranium	ug/g dry	1.0	--	--	--	2.8	1.9	*38.30*	1.1	<1.0	--	<1.0	<1.0	--	<1.0	<1.0	--	1.1	<1.0	--
Vanadium	ug/g dry	1.0	--	--	--	25.8	27.5	-6.38	33.7	16.9	*66.40*	68.9	62.0	10.54	N/A	N/A	--	24.3	20.2	18.43
Zinc	ug/g dry	1.0	--	--	--	35.7	56.1	-44.44	39.5	<20.0	--	66	62.5	5.45	N/A	N/A	--	32.0	<20.0	--
Volatiles																				
Acetone	ug/g dry	0.50	<0.50	<0.50	--	<0.50	<0.50		<0.50	<0.50		<0.50	<0.50		<0.50	<0.50				
Benzene	ug/g dry	0.02	<0.02	<0.02	--	<0.02	<0.02		<0.02	<0.02		<0.02	<0.02		1.25	3.33	*-90.83*			
Bromodichloromethane	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05				
Bromoform	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05				
Bromomethane	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05				
Carbon Tetrachloride	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05				
Chlorobenzene	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05				
Chloroform	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05				
Dibromochloromethane	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05				
Dichlorodifluoromethane	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05				
1,2-Dichlorobenzene	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05				
1,3-Dichlorobenzene	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05				
1,4-Dichlorobenzene	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05				
1,1-Dichloroethane	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05				
1,2-Dichloroethane	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05				
1,1-Dichloroethylene	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05				
cis-1,2-Dichloroethylene	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05				
trans-1,2-Dichloroethylene	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05				
1,2-Dichloropropane	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05				
cis-1,3-Dichloropropylene	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05				
trans-1,3-Dichloropropylene	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05				
1,3-Dichloropropene, total	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05				
Ethylbenzene	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		4.0	59.7	*-174.88*			
Ethylene dibromide (dibromoethane, 1,2-)	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05				
Hexane	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		8.26	38.0	*-128.58*			
Methyl Ethyl Ketone (2-Butanone)	ug/g dry	0.50	<0.50	<0.50	--	<0.50	<0.50		<0.50	<0.50		<0.50	<0.50		<0.50	<0.50				
Methyl Isobutyl Ketone	ug/g dry	0.50	<0.50	<0.50	--	<0.50	<0.50		<0.50	<0.50		<0.50	<0.50		<0.50	<0.50				
Methyl tert-butyl ether	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05				
Methylene Chloride	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05				
Styrene	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05				
1,1,1,2-Tetrachloroethane	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05				
1,1,2,2-Tetrachloroethane	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05				
Tetrachloroethylene	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05				
Toluene	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		4.61	92.3	*-180.97*			
1,1,1-Trichloroethane	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05				
1,1,2-Trichloroethane	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05				
Trichloroethylene	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05				
Trichlorofluoromethane	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		<0.05	<0.05				
Vinyl Chloride	ug/g dry	0.02	<0.02	<0.02	--	<0.02	<0.02		<0.02	<0.02		<0.02	<0.02		<0.02	<0.02				
m/p-Xylene	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		16.7	246	*-174.57*			
o-Xylene	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		4.78	84.9	*-178.68*			
Xylenes, total	ug/g dry	0.05	<0.05	<0.05	--	<0.05	<0.05		<0.05	<0.05		<0.05	<0.05		21.5	331	*-175.60*			
Hydrocarbons																				
F1 PHCs (C6-C10)	ug/g dry	7	<7	--	--	<7	<7	--	<7	<7	--	<7	<7	--	77	419	--			
F2 PHCs (C10-C16)	ug/g dry	4	<4	--	--	<4	<4	--	<4	<4	--	<4	<4	--	259	61	--			
F3 PHCs (C16-C34)	ug/g dry	8	<8	--	--	20	32	*-46.15*	42	41	2.41	42	40.0	4.88	98	100	-2.02			
F4 PHCs (C34-C50)	ug/g dry	6	<6	--	--	83	88	-5.85	87	75	14.81	128	141.0	-9.67	85	388	*-128.12*			
F4 PHCs (gravimetric)	ug/g dry	50	--	--	--	--	--	--	--	--	--	353	462.0	-26.75	N/A	603	--			

Table 6
Summary of Groundwater VOC, PHC, and General Inorganics Analysis
Phase Two Environmental Site Assessment
400 Coventry Road, Ottawa, Ontario
LRL File: 220200

Parameter	Units	MDL	O. Reg. 153/04[1] Table 3[2] Residential Property Use Coarse textured soil	Sample													
				MW1	MW3	MW40	MW5	LRL MW22-14	LRL MW22-15	LRL MW22-16	LRL MW22-30	LRL MW22-20	LRL MW22-21	LRL MW22-22	Trip Blank 1	Trip Blank 2	Trip Blank 3
										Duplicate							
Sample Date (d/m/y)			--	22-Feb-23	23-Feb-23		23-Feb-23	27-Feb-23	22-Feb-23		22-Feb-23	27-Feb-23	23-Feb-23	23-Feb-23	23-Feb-23	23-Feb-23	22-Feb-23
Depth of groundwater below top of casing	m		--	0.71	0.76		1.71	0.74	0.63		1.22	0.79	1.19	1.79	--	--	--
Headspace VOC Readings[3]	ppm	0.1	--	<0.1	15.3		<0.1	<0.1	<0.1		0.4	5.1	<0.1	<0.1	--	--	--
Evidence of free product?	--	--	[4]	No	No		No	No	No		No	**PHC Odour**	No	No	--	--	--
General Inorganics																	
Cyanide, free	ug/g dry	2	52	<2	<2	<2	<2	<2	<2	<2	<2	3	<2	<2	--	--	--
pH	pH Units	0.1		7.1	7.2	7.2	7.1	7.7	7.6	7.4	7.3	6.9	7.1	7.3	--	--	--
Anions																	
Chloride	mg/L	1	1800	**3880**	**6190**	**6250**	**3880**	**3980**	**3720**	**2000**	**1900**	**23500**	**5260**	**3070**	--	--	--
Volatiles																	
Acetone	ug/L	5.0	100000	22.9	<5.0	<5.0	22.9	<5.0	<5.0	<5.0	<5.0	24.6	<5.0	<5.0	<5.0	<5.0	<5.0
Benzene	ug/L	0.5	0.5	**23.6**	**17**	**13.3**	**23.6**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane	ug/L	0.5	67000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	ug/L	0.5	5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromomethane	ug/L	0.5	0.89	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon Tetrachloride	ug/L	0.2	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorobenzene	ug/L	0.5	140	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.5	<0.5	<0.5	<0.5	<0.5
Chloroform	ug/L	0.5	2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	ug/L	0.5	65000	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dichlorodifluoromethane	ug/L	1.0	3500	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dichlorobenzene	ug/L	0.5	150	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	15.8	<0.5	<0.5	<0.5	<0.5
1,3-Dichlorobenzene	ug/L	0.5	7600	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.3	<0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	ug/L	0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**3.2**	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	ug/L	0.5	11	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane	ug/L	0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethylene	ug/L	0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethylene	ug/L	0.5	1.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethylene	ug/L	0.5	1.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	ug/L	0.5	0.58	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,3-Dichloropropylene	ug/L	0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,3-Dichloropropylene	ug/L	0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-Dichloropropene, total	ug/L	0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	ug/L	0.5	54	6.0	14.1	13.6	6.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylene dibromide (dibromoethane, 1,2-)	ug/L	0.2	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Hexane	ug/L	1.0	5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Methyl Ethyl Ketone (2-Butanone)	ug/L	5.0	21000	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Methyl Isobutyl Ketone	ug/L	5.0	5200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Methyl tert-butyl ether	ug/L	2.0	15	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Methylene Chloride	ug/L	5.0	26	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Styrene	ug/L	0.5	43	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1,2-Tetrachloroethane	ug/L	0.5	1.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2,2-Tetrachloroethane	ug/L	0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethylene	ug/L	0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	ug/L	0.5	320	0.6	1.8	1.8	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	ug/L	0.5	23	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	ug/L	0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethylene	ug/L	0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Trichlorofluoromethane	ug/L	1.0	2000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vinyl Chloride	ug/L	0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
m/p-Xylene	ug/L	0.5	--	7.8	34.6	33.6	7.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
o-Xylene	ug/L	0.5	--	<0.5	2.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Xylenes, total	ug/L	0.5	72	7.8	36.8	33.6	7.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Hydrocarbons																	
F1 PHCs (C6-C10)	ug/L	25	420	<25	<25	<25	41	<25	<25	<25	<25	<25	<25	<25	--	--	--
F2 PHCs (C10-C16)	ug/L	100	150	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	--	--	--
F3 PHCs (C16-C34)	ug/L	100	500	<100	<100	<100	<100	<100	<100	<100	<100	480	<100	<100	--	--	--
F4 PHCs (C34-C50)	ug/L	100	500	<100	<100	<100	<100	<100	<100	<100	<100	200	<100	<100	--	--	--

NOTES:
[1] MECP's *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011*
[2] Table 3 Generic Site Condition Standards in a Non-Potable Groundwater Condition, residential property use.
[3] Headspace values were measured with a MiniRAE 3000 PID
[4] To meet the standard there must be no evidence of free product including film or sheen.
MDL Method Detection Limit
-- No Value/Not Analysed
PHC Petroleum Hydrocarbon
BOLD Above Table 3 Standard

Table 7
Summary of Groundwater PCB, PAH, and Metals Analysis
Phase Two Environmental Site Assessment
400 Coventry Road, Ottawa, Ontario
LRL File: 220200

Parameter	Units	MDL	O. Reg. 153/04[1] Table 3[2] Coarse Textured Soil	Sample										
					Duplicate						Duplicate			
				MW1	MW3	MW40	MW5	LRL MW22-14	LRL MW22-15	LRL MW22-16	LRL MW22-30	LRL MW22-20	LRL MW22-21	LRL MW22-22
Sample Date (d/m/y)			--	22-Feb-23	23-Feb-23		23-Feb-23	27-Feb-23	23-Feb-23	22-Feb-23		27-Feb-23	23-Feb-23	23-Feb-23
PCBs														
PCBs, total	ug/L	0.05	0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Polycyclic Aromatic Hydrocarbons														
Acenaphthene	ug/L	0.05	17	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	ug/L	0.05	1.0	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	ug/L	0.01	1.0	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01
Benzo[a]anthracene	ug/L	0.01	1.8	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.03	<0.01	<0.01	<0.01
Benzo[a]pyrene	ug/L	0.01	0.81	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.04	<0.01	<0.01	<0.01
Benzo[b]fluoranthene	ug/L	0.05	0.75	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[g,h,i]perylene	ug/L	0.05	0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[k]fluoranthene	ug/L	0.05	0.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	ug/L	0.05	0.7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenzo[a,h]anthracene	ug/L	0.05	0.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	ug/L	0.01	44	<0.01	<0.01	0.03	<0.01	<0.01	<0.01	0.05	0.08	0.04	0.02	0.02
Fluorene	ug/L	0.05	290	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno[1,2,3-cd]pyrene	ug/L	0.05	0.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1-Methylnaphthalene	ug/L	0.05	1500	<0.05	0.18	0.25	0.15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2-Methylnaphthalene	ug/L	0.05	1500	<0.05	0.05	0.10	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylnaphthalene (1&2)	ug/L	0.10	1500	<0.10	0.23	0.35	0.15	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Naphthalene	ug/L	0.05	7.0	<0.05	0.24	0.78	0.73	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	ug/L	0.05	380	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.08	<0.05	<0.05	<0.05
Pyrene	ug/L	0.01	5.7	<0.01	<0.01	0.03	<0.01	<0.01	<0.01	0.06	0.08	0.05	<0.01	<0.01
Metals														
Mercury	ug/L	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Antimony	ug/L	0.5	16000	0.6	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5
Arsenic	ug/L	1.0	1500	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Barium	ug/L	1.0	23000	55	156	154	523	272	470	84	86	95	783	45
Beryllium	ug/L	0.5	53	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Boron	ug/L	10	36000	37	23	24	43	135	95	44	43	51	107	57
Cadmium	ug/L	0.1	2.1	0.3	<0.1	<0.1	0.10	<0.1	0.10	<0.1	<0.1	0.2	<0.1	<0.1
Chromium	ug/L	1.0	640	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chromium (VI)	ug/L	10	110	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Cobalt	ug/L	0.5	52	5.1	2.6	2.5	2.7	0.7	3.0	<0.5	<0.5	3.0	2.9	0.5
Copper	ug/L	0.5	69	3.9	<0.5	<0.5	0.8	1.1	1.7	<0.5	0.5	3.7	1.2	0.9
Lead	ug/L	0.1	20	<0.1	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1
Molybdenum	ug/L	0.5	7300	31.6	4.4	4.4	80.7	7.3	18.9	5.2	5.2	3.8	2.4	4.6
Nickel	ug/L	1.0	390	45	8.0	8.0	30	6	18	<1.0	<1.0	13	10	3.0
Selenium	ug/L	1.0	50	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Silver	ug/L	0.1	1.2	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.4	<0.1	<0.1
Sodium	ug/L	200	1800000	1500000	**2600000**	**1840000**	1380000	1480000	1430000	1060000	1080000	**9090000**	1710000	931000
Thallium	ug/L	0.1	400	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Uranium	ug/L	0.1	330	15.7	5.3	5.4	5.4	0.7	3.9	0.4	0.4	0.4	1.2	0.3
Vanadium	ug/L	0.5	200	<0.5	<0.5	<0.5	0.6	<0.5	0.7	0.7	0.7	<0.5	0.7	<0.5
Zinc	ug/L	5.0	890	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	58	<5.0	<5.0

NOTES:
[1] MECP's *Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011*
[2] Table 3 Generic Site Condition Standards in a Non-Potable Groundwater Condition, residential property use.
MDL Method Detection Limit
-- No Value/Not Analysed
BOLD Above Table 3 Standard

APPENDIX A

Borehole Logs

Borehole Log: BH22-1

Project No.: 220200
Project: Phase II Environmental Site Assessment
Client: Group Oradev Inc.
Location: 400 Coventry Road, Ottawa, ON
Date: May 4, 2022
Field Personnel: D. Clouthier
Driller: CCC
Drilling Equipment: CME 55
Drilling Method: HSA

Depth (ft)	Depth (m)	Soil Description	Elev./Depth (m)	Lithology	Type	Sample Number	N or RQD (%)	Recovery (%)	Lab Analysis	Combustible Soil Vapours (ppm)	Monitoring Well Details
		Ground Surface	99.16								
0.0	0.0	PAVEMENT STRUCTURE Asphalt 300 mm thick overlaying granular material.	0.00 98.86								
		SAND Grey-brown, dry becoming moist at 0.9 m, loose to compact, presence of gravel throughout.	0.30			SS1	6	100		<5	
	1.0					SS2	7	52	PHC, VOC, Metals (153 + Hg+ CrVI), Inorganics	5	
	2.0					SS3	21	70		<5	
		TILL Silty sand with gravel, grey-brown, moist, compact.	96.86 2.30			SS4	29	70		<5	
	3.0					SS5	18	54	PHC, VOC, Metals (153 + Hg + CrVI), Inorganics	<5	
		End of Borehole upon auger refusal over inferred bedrock.	95.36 3.80								
	4.0										
	5.0										

Easting: 5029810
Northing: 449321
Site Datum: Concrete light post in southern area of the parking lot (100.00m)
Groundsurface Elevation: 99.163 m
Top of Riser Elev.: N/A
Hole Diameter: 203 mm
Monitoring Well Diameter: N/A

NOTES

Borehole Log: BH22-2

Project No.: 220200
Project: Phase II Environmental Site Assessment
Client: Group Oradev Inc.
Location: 400 Coventry Road, Ottawa, ON
Date: May 4, 2022
Field Personnel: D. Clouthier
Driller: CCC
Drilling Equipment: CME 55
Drilling Method: HSA

SUBSURFACE PROFILE

Depth (ft)	Depth (m)	Soil Description	Elev./Depth (m)
0.0	0.0	Ground Surface	99.27
		PAVEMENT STRUCTURE Asphalt 300 mm thick overlying granular material.	0.00
		FILL Silty sand, trace of clay, presence of gravel, brown to grey in depth, dry to moist at 2.1m.	98.97 0.30
		End of Borehole upon auger refusal over inferred bedrock.	95.65 3.62

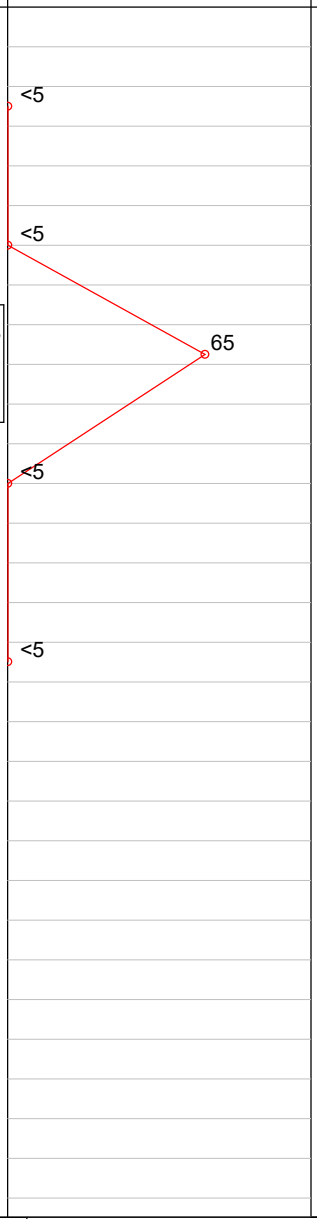
SAMPLE DATA

Sample Number	Type	N or RQD (%)	Recovery (%)	Lab Analysis
SS1		6	63	
SS2		10	88	
SS3		43	58	PHC, VOC, Metals (153 + Hg+ CrVI), Inorganics
SS4		14	33	
SS5		10	8	

Combustible Soil Vapours

ppm: 20 40 60 80

% LEL: 10 20 30 40 50 60 70 80 90



Monitoring Well Details

Easting: 5029867
Northing: 449315
Site Datum: Concrete light post in southern area of the parking lot (100.00 m)
Groundsurface Elevation: 99.268 m
Top of Riser Elev.: N/A
Hole Diameter: 203 mm
Monitoring Well Diameter: N/A

NOTES

Borehole Log: BH22-3

Project No.: 220200
Project: Phase II Environmental Site Assessment
Client: Group Oradev Inc.
Location: 400 Coventry Road, Ottawa, ON
Date: May 4, 2022
Field Personnel: D. Clouthier
Driller: CCC
Drilling Equipment: CME 55
Drilling Method: HSA

Depth (ft / m)	Soil Description	Elev./Depth (m)	Lithology	Type	Sample Number	N or RQD (%)	Recovery (%)	Lab Analysis	Combustible Soil Vapours (ppm)	Monitoring Well Details
0.0 / 0.0	Ground Surface	98.08								
0.0	PAVEMENT STRUCTURE Asphalt 100 mm thick overlying granular material.	0.00								
1.0	SAND Brown, moist, compact.				SS1	20	20		<5	
2.0										
3.0 / 1.0					SS2	12	0		<5	
4.0										
5.0					SS3	13	100	PAH, PHC, VOC, Metals (153 + Hg+ CrVI), Inorganics	<5	
6.0										
7.0 / 2.0		95.98 2.10			SS4	26	100		<5	
8.0	TILL Silty sand with clay, trace gravel, brown becoming grey in depth, compact.									
9.0					SS5	25	66		<5	
10.0 / 3.0										
11.0					SS6	32	96		<5	
12.0		94.48 3.60								
13.0 / 4.0	End of Borehole upon auger refusal over inferred bedrock.									
14.0										
15.0										
16.0										
17.0 / 5.0										
18.0										
19.0										

Easting: 5029885
Northing: 449257
Site Datum: Concrete light post base in southern area of parking lot (100 mm)
Groundsurface Elevation: 98.082 m
Top of Riser Elev.: N/A
Hole Diameter: 203 mm
Monitoring Well Diameter: N/A

NOTES

Borehole Log: BH22-4

Project No.: 220200 | **Project:** Phase II Environmental Site Assessment

Client: Group Oradev Inc. | **Location:** 400 Coventry Road, Ottawa, ON

Date: May 4, 2022 | **Field Personnel:** J. Arthurs

Driller: LRL | **Drilling Equipment:** Core Drill & Hand Auger | **Drilling Method:** Manual

SUBSURFACE PROFILE		SAMPLE DATA							Combustible Soil Vapours	Monitoring Well Details
Depth (ft / m)	Soil Description	Elev./Depth (m)	Lithology	Type	Sample Number	N or RQD (%)	Recovery (%)	Lab Analysis	ppm: 20 40 60 80 / % LEL: 10 20 30 40 50 60 70 80 90	
0.0 / 0.0	Ground Surface	98.65								
	CEMENT SLAB 200 m thick.	0.00								
1.0	GRANULAR Crushed stone fill, grey, dry.				SS1	--	--		<5	
2.0					SS2	--	--		<5	
	FILL Brown, dry.				SS3	--	--		<5	
3.0 / 1.0		97.92 0.73								
	End of Borehole upon auger refusal over dense subsurface material.									
4.0										
5.0										
6.0 / 2.0										
7.0										
8.0										
9.0										
10.0 / 3.0										
11.0										
12.0										
13.0 / 4.0										
14.0										
15.0										
16.0 / 5.0										
17.0										
18.0										
19.0										

Easting: -- **Northing:** --

Site Datum: Concrete light post in southern area of the parking lot (100.00 m)

Groundsurface Elevation: 98.655 m **Top of Riser Elev.:** N/A

Hole Diameter: 91 mm **Monitoring Well Diameter:** N/A

NOTES

Sample SS2 was submitted for laboratory analysis of PAH, PHC, VOC, Inorganics, PH and Heavy Metals.

Borehole Log: BH22-5

Project No.: 220200 | **Project:** Phase II Environmental Site Assessment

Client: Group Oradev Inc. | **Location:** 400 Coventry Road, Ottawa, ON

Date: May 4, 2022 | **Field Personnel:** J. Arthurs

Driller: LRL | **Drilling Equipment:** Core Drill & Hand Auger | **Drilling Method:** Manual

Depth (ft)	Depth (m)	Soil Description	Elev./Depth (m)	Lithology	Type	Sample Number	N or RQD (%)	Recovery (%)	Lab Analysis	Combustible Soil Vapours (ppm)	Monitoring Well Details
		Ground Surface	98.66								
0.0	0.0	CEMENT SLAB 170 mm thick.	0.00								
1.0		FILL Sand, brown becoming dark brown between 0.45 and 0.6 m, traces of gravel and clayey silt between 0.45 and 0.6 m, dry.				1	--	--		<5	
2.0						2	--	--		<5	
3.0	1.0		97.71 0.95			3	--	--		10	
4.0		End of Borehole upon auger refusal over dense subsurface material.				4	--	--		15	
5.0						5	--	--		10	
6.0	2.0										
7.0											
8.0											
9.0											
10.0	3.0										
11.0											
12.0											
13.0	4.0										
14.0											
15.0											
16.0	5.0										
17.0											
18.0											
19.0											

Easting: -- | **Northing:** --

Site Datum: Concrete light post base in southern area of the parking lot (100.00 m)

Groundsurface Elevation: 98.655 m | **Top of Riser Elev.:** N/A

Hole Diameter: 91 mm | **Monitoring Well Diameter:** N/A

NOTES

Samples SS2 and SS4 were submitted for laboratory analysis of PAH, PHC, VOC, Inorganics, PH, Texture and Heavy Metals.

Borehole Log: BH22-6

Project No.: 220200
Project: Phase II Environmental Site Assessment
Client: Group Oradev Inc.
Location: 400 Coventry Road, Ottawa, ON
Date: April 27, 2022
Field Personnel: J. Arthurs
Driller: LRL
Drilling Equipment: Core Drill & Hand Auger
Drilling Method: Manual

Depth (ft)	Depth (m)	Soil Description	Elev./Depth (m)	Lithology	Type	Sample Number	N or RQD (%)	Recovery (%)	Lab Analysis	Combustible Soil Vapours (ppm)	Monitoring Well Details
		Ground Surface	98.66								
0.0	0.0	CEMENT SLAB 220 mm thick.	0.00 98.44								
1.0		FILL Sand, brown becoming grey between 0.35 and 0.93 m, dry.	0.22			1	--	--		<5	
2.0						2	--	--		5	
3.0	1.0		97.73 0.93			3	--	--		<5	
4.0		End of Borehole upon auger refusal over dense subsurface material.				4	--	--		5	
5.0											
6.0	2.0										
7.0											
8.0											
9.0											
10.0	3.0										
11.0											
12.0											
13.0	4.0										
14.0											
15.0											
16.0	5.0										
17.0											
18.0											
19.0											

Easting: --
Northing: --

Site Datum: Concrete light post base in southern area of parking lot (100.00 m)

Groundsurface Elevation: 98.655 m
Top of Riser Elev.: N/A

Hole Diameter: 91 mm
Monitoring Well Diameter: N/A

NOTES

Sample SS4 was submitted for laboratory analysis of PAH, PHC, VOC, Inorganics, PH and Heavy Metals.

Borehole Log: BH22-7

Project No.: 220200 | **Project:** Phase II Environmental Site Assessment

Client: Group Oradev Inc. | **Location:** 400 Coventry Road, Ottawa, ON

Date: May 5, 2022 | **Field Personnel:** D. Clouthier

Driller: CCC | **Drilling Equipment:** CME 55 | **Drilling Method:** HSA

Depth (ft / m)	Soil Description	Elev./Depth (m)	Lithology	Type	Sample Number	N or RQD (%)	Recovery (%)	Lab Analysis	Combustible Soil Vapours (ppm / % LEL)	Monitoring Well Details
0.0 / 0.0	Ground Surface	98.45								
	PAVEMENT STRUCTURE Asphalt 150 mm thick overlying granular material.	0.00								
1.0	FILL Sand to sandy clay at 0.6 m, brown to grey at 0.6 m, loose to compact in depth, moist.				SS1	9	57		<5	
2.0										
3.0 / 1.0					SS2	5	50		<5	
4.0										
5.0					SS3	12	83	PAH, PCB, PHC, VOC, Metals (153 + Hg+ CrVI), Inorganics.	<5	
6.0										
7.0 / 2.0					SS4	56	88		<5	
8.0		96.05								
	End of Borehole upon auger refusal over inferred bedrock.	2.40								
10.0 / 3.0										
13.0 / 4.0										
16.0 / 5.0										
19.0										

Easting: 5029875 | **Northing:** 449267

Site Datum: Concrete light post base in southern area of parking lot (100.00 m)

Groundsurface Elevation: 98.446 m | **Top of Riser Elev.:** N/A

Hole Diameter: 203 mm | **Monitoring Well Diameter:** N/A

NOTES

Rock encountered in split spoon tip at 2.4 m below grade.

Borehole Log: BH22-8

Project No.: 220200 | **Project:** Phase II Environmental Site Assessment

Client: Group Oradev Inc. | **Location:** 400 Coventry Road, Ottawa, ON

Date: May 5, 2022 | **Field Personnel:** D. Clouthier

Driller: CCC | **Drilling Equipment:** CME 55 | **Drilling Method:** HSA

Depth (ft / m)	Soil Description	Elev./Depth (m)	Lithology	Type	Sample Number	N or RQD (%)	Recovery (%)	Lab Analysis	Combustible Soil Vapours (ppm / % LEL)	Monitoring Well Details
0.0 / 0.0	Ground Surface	98.14								
0.0	PAVEMENT STRUCTURE Asphalt 100 mm thick overlyng granular material. .	0.00								
1.0	FILL Sand, prescence of clay, brown-grey, dry to moist at 0.3 m, loose to compact, **PHC odour throughout.**				SS1	14	57	PCB, PHC, VOC, Metals (153 + Hg+ CrVI), Inorganics.	60	
2.0									<5	
3.0 / 1.0					SS2	8	0			
4.0								PHC, VOC, PAH		
5.0					SS3	7	92		75	
6.0										
2.0					SS4	51	72		5	
8.0	SAND Brown, dry becoming moist at 3.8 m in depth, comact to dense. **PHC odour between 1.8 and 3.8 m bgs.**	95.74 2.40			SS5	38	66		<5	
10.0 / 3.0					SS6	51	88		5	
12.0					SS7	15	58		<5	
13.0 / 4.0										
14.0					SS8	69	100		<5	
16.0					SS9	50+	58		<5	
5.0		93.04 5.10								
17.0	End of Borehole upon auger refusal over inferred bedrock.									
18.0										
19.0										

Easting: 5029876 | **Northing:** 449256

Site Datum: Concrete light post base in southern area of parking lot (100.00 m)

Groundsurface Elevation: 98.144 m | **Top of Riser Elev.:** N/A

Hole Diameter: 203 mm | **Monitoring Well Diameter:** N/A

NOTES

Borehole Log: BH22-9

Project No.: 220200
Project: Phase II Environmental Site Assessment
Client: Group Oradev Inc.
Location: 400 Coventry Road, Ottawa, ON
Date: May 5, 2022
Field Personnel: D. Clouthier
Driller: CCC
Drilling Equipment: CME 55
Drilling Method: HSA

Depth (ft)	Depth (m)	Soil Description	Elev./Depth (m)	Lithology	Type	Sample Number	N or RQD (%)	Recovery (%)	Lab Analysis	Combustible Soil Vapours (ppm)	Monitoring Well Details
0.0	0.0	Ground Surface	98.05								
		Asphalt.	0.00								
1.0		Sand with gravel. Dark grey. Dry. Slight PHC odour.				SS1	20	38		<5	
2.0			97.45								
		Sandy clay. Grey. Dry Becoming moist at 1.2 m bgs. PHC odour.	0.60			SS2	14	46	PHC, VOC, Metals (Reg. 153, Hg, CrVI), Inorganics	<5	
3.0	1.0										
4.0						SS3	14	92	PHC, PAH, VOC	<5	
5.0			96.25								
6.0		Sand. Brown. Dry becoming moist at 3.8 m bgs. PHC odour present at 3.8 m.	1.80			SS4	38	100		5	
7.0	2.0										
8.0						SS5	44	79		<5	
9.0											
10.0	3.0					SS6	34	100		<5	
11.0											
12.0						SS7	49	83		<5	
13.0	4.0										
14.0			93.75								
		Crushed rock.	4.30			SS8	50+	42	PHC, VOC, PAH Metals (Reg. 153, Hg, CrVI) and	<5	
15.0			93.45								
		End of Borehole	4.60								
16.0	5.0										
17.0											
18.0											
19.0											

Easting: 5029878
Northing: 449240
Site Datum: Concrete light post base in southern area of parking lot
Groundsurface Elevation: 98.053
Top of Riser Elev.: N/A
Hole Diameter: 8"
Monitoring Well Diameter: N/A

NOTES
Auger refusal at 4.6 m bgs.

Borehole Log: BH22-10

Project No.: 220200
Project: Phase II Environmental Site Assessment
Client: Group Oradev Inc.
Location: 400 Coventry Road, Ottawa, ON
Date: May 5, 2022
Field Personnel: D. Clouthier
Driller: CCC
Drilling Equipment: CME 55
Drilling Method: HSA

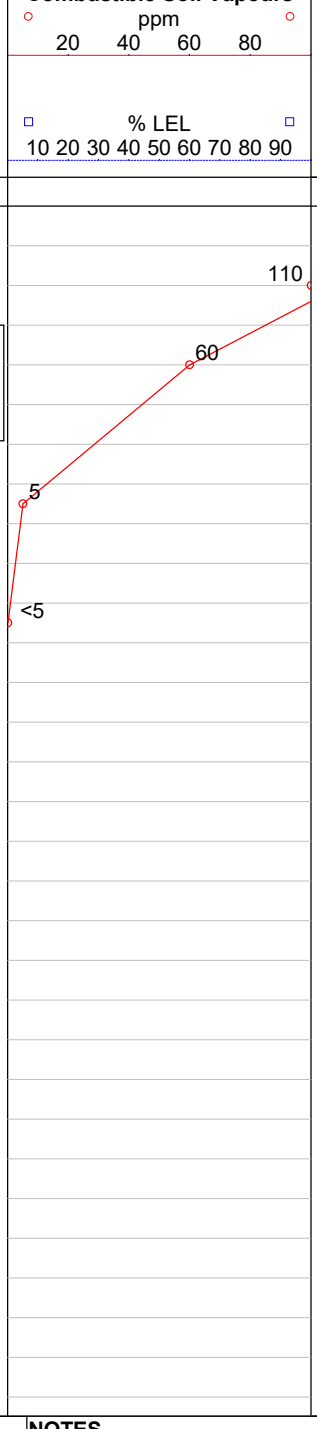
SUBSURFACE PROFILE

Depth (ft / m)	Soil Description	Elev./Depth (m)
0.0 / 0.0	Ground Surface	98.17
0.0 / 0.0	PAVEMENT STRUCTURE Asphalt 100 mm thick overlying granular material.	0.00
1.0	TILL Silty sandy clay, traces of gravel between 1.8 and 2.4 m bgs, brown-grey, saturated to 1.2 m bgs becoming moist, compact to dense. Traces of oxidation at 2.4 m bgs. **PHC odour between 0.35 and 2.4 m bgs.**	
1.0		
2.0		
2.0		
3.0		
3.0		
4.0		
4.0		
5.0		
5.0		
6.0		
6.0		
7.0		
7.0		
8.0		95.77
8.0	End of Borehole upon auger refusal over inferred bedrock.	2.40
9.0		
9.0		
10.0		
10.0		
11.0		
11.0		
12.0		
12.0		
13.0		
13.0		
14.0		
14.0		
15.0		
15.0		
16.0		
16.0		
17.0		
17.0		
18.0		
18.0		
19.0		
19.0		

SAMPLE DATA

Lithology	Type	Sample Number	N or RQD (%)	Recovery (%)	Lab Analysis
		SS1	14	79	
		SS2	9	58	PHC, PAH, VOC
		SS3	56	38	
		SS4	50+	54	

Combustible Soil Vapours



Monitoring Well Details

Easting: 5029878
Northing: 449253
Site Datum: Concrete light post base in southern area of parking lot (100.00 m)
Groundsurface Elevation: 98.174 m
Top of Riser Elev.: N/A
Hole Diameter: 203 mm
Monitoring Well Diameter: N/A

NOTES

Borehole Log: BH22-11

Project No.: 220200
Project: Phase II Environmental Site Assessment
Client: Group Oradev Inc.
Location: 400 Coventry Road, Ottawa, ON
Date: May 5, 2022
Field Personnel: D. Clouthier
Driller: CCC
Drilling Equipment: CME 55
Drilling Method: HSA

Depth (ft / m)	Soil Description	Elev./Depth (m)	Lithology	Type	Sample Number	N or RQD (%)	Recovery (%)	Lab Analysis	Combustible Soil Vapours (ppm / % LEL)	Monitoring Well Details
0.0 / 0.0	Ground Surface	97.72								
	PAVEMENT STRUCTURE Asphalt 100 mm thick.	0.00								
1.0	FILL Sand with gravel, brown, dry becoming moist at 0.6 m bgs, compact.				SS1	19	41		<5	
2.0								PHC, PAH, PCB, Metals and Inorganics		
3.0 / 1.0					SS2	30	41		<5	
4.0										
5.0					SS3	50+	54		<5	
		96.12								
6.0	End of Borehole upon auger refusal over inferred bedrock.	1.60								
7.0 / 2.0										
8.0										
9.0										
10.0 / 3.0										
11.0										
12.0										
13.0 / 4.0										
14.0										
15.0										
16.0										
17.0 / 5.0										
18.0										
19.0										

Easting: 5029933
Northing: 449249

Site Datum: Concrete light post base in southern area of parking lot (100.00 m)

Groundsurface Elevation: 97.715 m
Top of Riser Elev.: N/A

Hole Diameter: 203 mm
Monitoring Well Diameter: N/A

NOTES

Borehole Log: BH22-12

Project No.: 220200 | **Project:** Phase II Environmental Site Assessment

Client: Group Oradev Inc. | **Location:** 400 Coventry Road, Ottawa, ON

Date: May 4, 2022 | **Field Personnel:** D. Clouthier

Driller: CCC | **Drilling Equipment:** CME 55 | **Drilling Method:** HSA

Depth (ft / m)	Soil Description	Elev./Depth (m)	Lithology	Type	Sample Number	N or RQD (%)	Recovery (%)	Lab Analysis	Combustible Soil Vapours (ppm / % LEL)	Monitoring Well Details
0.0 / 0.0	Ground Surface	97.47								
0.0 – 2.0 / 0.0 – 0.60	PAVEMENt STRCUTURE Apshalt 0.6 m thick overlying granular material.	0.00 – 96.87			SS1	24	70		<5	
2.0 – 7.0 / 0.60 – 2.10	SAND Grey-brown, moist becoming saturated at 1.2 m bgs.	0.60 – 95.37			SS2 SS3	13 8	66 54	PHC, PAH, Metals (Reg. 153, Hg, CrVI) and Inorganics	<5 <5	
7.0 – 15.0 / 2.10 – 4.60	CLAY Grey, saturated.	2.10 – 92.87			SS4 SS5 SS6 SS7	6 46 36 34	63 63 50 40		<5 <5 <5 <5	
15.0 / 4.60	End of Borehole upon auger refusal over inferred bedrock.									

Easting: 5029792 | **Northing:** 449272

Site Datum: Concrete light post base in southern area of parking lot (100.00 m)

Groundsurface Elevation: 97.466 m | **Top of Riser Elev.:** N/A

Hole Diameter: 203 mm | **Monitoring Well Diameter:** N/A

NOTES

Borehole Log: BH22-13

Project No.: 220200 | **Project:** Phase II Environmental Site Assessment

Client: Group Oradev Inc. | **Location:** 400 Coventry Road, Ottawa, ON

Date: May 5, 2022 | **Field Personnel:** D. Clouthier

Driller: CCC | **Drilling Equipment:** CME 55 | **Drilling Method:** HSA

Depth (ft)	Depth (m)	Soil Description	Elev./Depth (m)	Lithology	Type	Sample Number	N or RQD (%)	Recovery (%)	Lab Analysis	Combustible Soil Vapours (ppm)	Monitoring Well Details
		Ground Surface	97.95								
0.0	0.0	PAVEMENT STRUCTURE Asphalt overlying granular material, 1.2 m thick.	0.00								
1.0						SS1	17	63		<5	
2.0											
3.0	1.0					SS2	8	16		<5	
4.0			96.75								
		FILL Brown, moist, loose.	1.20								
5.0						SS3	3	70		<5	
6.0	2.0										
7.0						SS4	7	100	PHC, PAH, Metals (Reg. 153, Hg, CrVI) and Inorganics	<5	
8.0			95.55								
		End of Borehole upon auger refusal over inferred bedrock.	2.40								
9.0											
10.0	3.0										
11.0											
12.0											
13.0	4.0										
14.0											
15.0											
16.0	5.0										
17.0											
18.0											
19.0											

Easting: 5029802 | **Northing:** 449273

Site Datum: Concrete light post base in southern area of parking lot (100.00 m)

Groundsurface Elevation: 97.949 m | **Top of Riser Elev.:** N/A

Hole Diameter: 203 mm | **Monitoring Well Diameter:** N/A

NOTES

Borehole Log: BH22-14

Project No.: 220200 | **Project:** Phase II Environmental Site Assessment

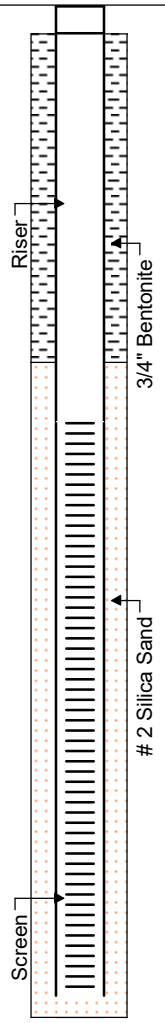
Client: Group Oradev Inc. | **Location:** 400 Coventry Road, Ottawa, ON

Date: December 22, 2022 | **Field Personnel:** D. Clouthier

Driller: CCC | **Drilling Equipment:** CME 55 | **Drilling Method:** SSA

Depth (ft / m)	Soil Description	Elev./Depth (m)	Lithology	Type	Sample Number	N or RQD (%)	Recovery (%)	Lab Analysis	Combustible Soil Vapours (ppm / % LEL)
0.0 / 0.0	Ground Surface	99.34							
	PAVEMENT STRUCTURE Asphalt 60 mm thick overlyng granular material.	0.00							
	SAND AND GRAVEL. Dark brown. Dry becoming moist at 1.2 m bgs.				SS1	22	92	Inorganics, Metals, Textue, pH.	<0.1
					SS2	19	63		<0.1
1.0					SS3	8	100		0.1
2.0					SS4	13	33		<0.1
	SANDY TILL Crushed stone throughout. Dark Brown. Moist.	96.94 2.40			SS5	30	92	PHC, VOC, Texture, pH	0.3
3.0					SS6	50+	50		<0.1
					SS7	50+	66		<0.1
4.0					SS8	50+	100		<0.1
5.0					SS9	50+	76		<0.1
	End of Borehole Upon Auger Refusal Over Inferred Bedrock.	94.24 5.10							

Monitoring Well Details



Easting: 5029866 | **Northing:** 449259

Site Datum: Top of concrete pad at the corner of the SW corner of the building (100.00 m)

Groundsurface Elevation: 98.144 m | **Top of Riser Elev.:** N/A

Hole Diameter: 151 mm | **Monitoring Well Diameter:** 50 mm

NOTES

Borehole Log: BH22-15

Project No.: 220200 | **Project:** Phase II Environmental Site Assessment

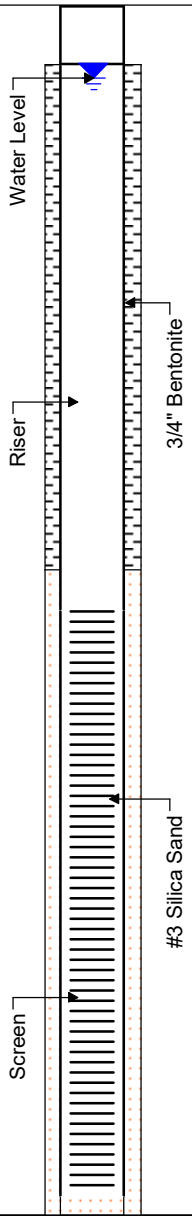
Client: Group Oradev Inc. | **Location:** 400 Coventry Road, Ottawa, ON

Date: December 19, 2022 | **Field Personnel:** D. Clouthier

Driller: CCC | **Drilling Equipment:** CME 55 | **Drilling Method:** SSA

Depth (ft)	Depth (m)	Soil Description	Elev./Depth (m)	Lithology	Type	Sample Number	N or RQD (%)	Recovery (%)	Lab Analysis	Combustible Soil Vapours (ppm)	Combustible Soil Vapours (% LEL)
		Ground Surface	99.34								
0.0	0.0	PAVEMENT STRUCTURE Asphalt 75 mm thick overlyng granular material.	0.00								
1.0		SILTY SAND. Grey with some brown. Dry				SS1	14	33		<0.1	
2.0											
3.0	1.0	Becoming moist, at 1.2 m bgs.				SS2	10	46	PHC, VOC, Metals, Inorganics	<0.1	
4.0		Some oxidation from 1.2 to 1.8 m bgs.									
5.0						SS3	28	66		0.2	
6.0	2.0										
7.0						SS4	41	50		<0.1	
8.0											
9.0						SS5	24	54		<0.1	
10.0	3.0										
11.0						SS6	23	63		<0.1	
12.0											
13.0	4.0					SS7	21	63	PAH	<0.1	
14.0											
15.0						SS8	20	66	PHC, VOC, Metals	<0.1	
16.0											
17.0	5.0					SS9	20	50		<0.1	
18.0											
19.0						SS10	43	92			

Monitoring Well Details



Easting: 5029882 | **Northing:** 449241

Site Datum: Top of concrete pad at the corner of the SW corner of the building (100.00 m)

Groundsurface Elevation: 99.46 | **Top of Riser Elev.:** 99.29

Hole Diameter: 152 mm | **Monitoring Well Diameter:** 50 mm

NOTES

Borehole Log (continued):

Project No.: 220200

Project: Phase II Environmental Site Assessment

Client: Group Oradev Inc.

Location: 400 Coventry Road, Ottawa, ON

Date: December 19, 2022

Field Personnel

Driller: CCC

Drilling Equipment: CME 55

Drilling Method: SSA

SUBSURFACE PROFILE		SAMPLE DATA								
Depth	Soil Description	Elev./Depth (m)	Lithology	Type	Sample Number	N or RQD(%)	Recovery (%)	Lab Analysis	Combustible Soil Vapour ppm 20 40 60 80 / % LEL 10 20 30 40 50 60 70 80 90	Monitoring Well Details
20.0		93.24								
	End of Borehole Upon Auger Refusal Over Inferred Bedrock	6.10								
21.0										
22.0										
23.0 — 7.0										
24.0										
25.0										
26.0 — 8.0										
27.0										
28.0										
29.0 — 9.0										
30.0										
31.0										
32.0										
33.0 — 10.0										
34.0										
35.0										
36.0 — 11.0										
37.0										
38.0										
39.0										

NOTES

Borehole Log: BH22-16

Project No.: 220200
Project: Phase II Environmental Site Assessment
Client: Group Oradev Inc.
Location: 400 Coventry Road, Ottawa, ON
Date: December 22, 2022
Field Personnel: D. Clouthier
Driller: CCC
Drilling Equipment: CME 55
Drilling Method: SSA

Depth (ft)	Depth (m)	Soil Description	Elev./Depth (m)	Lithology	Type	Sample Number	N or RQD (%)	Recovery (%)	Lab Analysis	Combustible Soil Vapours (ppm)	Monitoring Well Details
		Ground Surface	98.95								
0.0	0.0	SAND & GRAVEL Brown. Dry	0.00			SS1	48	54	Metals, Inorganics	<0.1	
						SS2	50+	46		<0.1	
	1.0					SS3	8	38		0.2	
		SANDY TILL Dark brown. Moist becoming saturated at 4.3 m bgs.	97.15 1.80			SS4	7	59		<0.1	
	2.0					SS5	WOH	59	PHC, VOC, Metals, Inorganics	0.9	
	3.0					SS6	49	54		0.1	
						SS7	29	71		0.2	
	4.0					SS8	47	66		<0.1	
		End of Borehole Auger Refusal Over Inferred Bedrock	94.05 4.90							<0.1	
	5.0										

Monitoring Well Details: Riser; Water Level 1.22 m bgs; 3/4" Bentonite; Screen; #3 Silica Sand

Easting: 5029864
Northing: 449248
Site Datum: Top of concrete pad at the corner of the SW corner of the building (100.00 m)
Groundsurface Elevation: 98.95
Top of Riser Elev.: 98.82
Hole Diameter: 152 mm
Monitoring Well Diameter: 50 mm

NOTES

Borehole Log: BH22-18

Project No.: 220200 | **Project:** Phase II Environmental Site Assessment

Client: Group Oradev Inc. | **Location:** 400 Coventry Road, Ottawa, ON

Date: January 3, 2023 | **Field Personnel:** D. Clouthier

Driller: CCC | **Drilling Equipment:** CME 55 | **Drilling Method:** SSA

Depth (ft / m)	Soil Description	Elev./Depth (m)	Lithology	Type	Sample Number	N or RQD (%)	Recovery (%)	Lab Analysis	Combustible Soil Vapours (ppm / % LEL)	Monitoring Well Details
0.0 / 0.0	Ground Surface	99.34								
	ASPHALT	0.00						PHC, VOC, PAH	0	
1.0	SILTY CLAY Grey. Some oxidation. Moist.					25	0			
2.0									<0.1	
3.0 / 1.0					SS1	7	30			
4.0										
5.0					SS2	4	33		<0.1	
6.0	SILY SAND Dark brown. Saturated. Crushed stone from 2.4 m to 2.5 m bgs.	97.54 1.80								
7.0 / 2.0					SS3	28	54	PHC, VOC, PAH	20.1	
8.0										
9.0					SS4	32	59		14.2	
10.0 / 3.0										
11.0					SS5	50+	46		<0.1	
12.0										
13.0 / 4.0					SS6	50+	25	Metals, Inorganics	0.2	
14.0	End of Borehole Auger Refusal Above Inferred Bedrock	95.24 4.10								
15.0									<0.1	
16.0										
17.0 / 5.0									3.6	
18.0										
19.0										

Easting: 5029876 | **Northing:** 449261

Site Datum: Top of concrete pad at the corner of the SW corner of the building (100.00 m)

Groundsurface Elevation: 98.95 | **Top of Riser Elev.:** N/A

Hole Diameter: 152 mm | **Monitoring Well Diameter:** N/A

NOTES

Borehole Log: BH22-19

Project No.: 220200 | **Project:** Phase II Environmental Site Assessment

Client: Group Oradev Inc. | **Location:** 400 Coventry Road, Ottawa, ON

Date: January 3, 2023 | **Field Personnel:** D. Clouthier

Driller: CCC | **Drilling Equipment:** CME 55 | **Drilling Method:** SSA

Depth (ft)	Depth (m)	Soil Description	Elev./Depth (m)	Lithology	Type	Sample Number	N or RQD (%)	Recovery (%)	Lab Analysis	Combustible Soil Vapours (ppm)	Monitoring Well Details
		Ground Surface	99.41								
0.0	0.0	SAND & GRAVEL Asphalt from 0 to 0.1 m bgs. Rocks throughout. Brown. Dry.	0.00			SS1	22	33		<0.1	
3.0	1.0	SILTY SAND Brown. Dry becoming moist at 1.8 m bgs. PHC odour from 1.2 to 3.0 m bgs	98.81 0.60			SS2	13	83	Inorganics, Metals	<0.1	
						SS3	10	88		62.4	
6.0	2.0					SS4	38	96	PHC, VOC, PAH, Metals, Inorganics	82.8	
						SS5	100	100		3.8	
10.0	3.0	SAND Small rocks throughout. Dark brown. Saturated. Crushed stone from 2.4 m to 2.5 m bgs.	96.41 3.00			SS6	39	100	Metals, Inorganics	2.8	
13.0	4.0					SS7	37	88		0.8	
15.0						SS8	22	100		<0.1	
16.0	5.0					SS9	33	50		<0.1	
18.0						SS10	50+	21		<0.1	
19.0		End of Borehole Auger Refusal Above Inferred Bedrock	93.81 5.60								

Easting: 5029876 | **Northing:** 449261

Site Datum: Top of concrete pad at the corner of the SW corner of the building (100.00 m)

Groundsurface Elevation: 99.41 | **Top of Riser Elev.:** N/A

Hole Diameter: 152 mm | **Monitoring Well Diameter:** N/A

NOTES

Borehole Log: BH22-20

Project No.: 220200
Project: Phase II Environmental Site Assessment
Client: Group Oradev Inc.
Location: 400 Coventry Road, Ottawa, ON
Date: December 21, 2022
Field Personnel: D. Clouthier
Driller: CCC
Drilling Equipment: CME 55
Drilling Method: SSA

Depth (ft)	Depth (m)	Soil Description	Elev./Depth (m)	Lithology	Type	Sample Number	N or RQD (%)	Recovery (%)	Lab Analysis
0.0	0.0	Ground Surface	99.45						
0.0	0.0	SAND Brown. Dry. PHC Odour.	0.00			SS1	24	41	Inorganics, Metals, PCB
			98.85						
3.0	1.0	SILTY SAND Brown. Dry becoming moist at 1.2 m bgs. PHC Odour.	0.60			SS2	11	79	PHC, VOC, PAH, Texture, pH
						SS3	7	92	
7.0	2.0					SS4	50+	96	
			97.05						
8.0		SANDY TILL Small rocks throughout. Dark brown. Moist. Crushed stone from 2.4 m to 2.5 m bgs.	2.40			SS5	50	88	PHC, VOC < Texture, pH, PAH
10.0	3.0					SS6	39	100	
13.0	4.0					SS7	34	88	
14.0						SS8	50+	25	
15.0			94.75						
16.0	5.0	End of Borehole Auger Refusal Above Inferred Bedrock	4.70						

Combustible Soil Vapours

ppm: 20 40 60 80

% LEL: 10 20 30 40 50 60 70 80 90

30.3
61.8
<0.1
1.5
1.5
0.9
<0.1
<0.1

Monitoring Well Details

Riser
Water Level
3/4" Bentonite
Screen
#3 Silica Sand

Easting: 5029876
Northing: 449261

Site Datum: Top of concrete pad at the corner of the SW corner of the building

Groundsurface Elevation: 99.36
Top of Riser Elev.: 99.36

Hole Diameter: 152 mm
Monitoring Well Diameter: 50 mm

NOTES

Borehole Log: BH22-21

Project No.: 220200 | **Project:** Phase II Environmental Site Assessment

Client: Group Oradev Inc. | **Location:** 400 Coventry Road, Ottawa, ON

Date: February 6, 2023 | **Field Personnel:** J. Arthurs

Driller: CCC | **Drilling Equipment:** Manual | **Drilling Method:** Jack Hammer

Depth (ft / m)	Soil Description	Elev./Depth (m)	Lithology	Type	Sample Number	N or RQD (%)	Recovery (%)	Lab Analysis
0.0 / 0.0	Ground Surface	99.87						
	CEMENT SLAB 9" concrete slab followed by 3" of stone.	0.00 99.57						
	SAND FILL Brown becoming grey at 1.2 m bgs. Dry. PHC odour beggining at 1.2 m bgs.	0.30			SS1		46	
1.0 / 1.0					SS2		50	PHC, VOC, PAH
		98.37			SS2B		50	PCB
	End of Borehole Auger Refusal Over Inferred Bedrock	1.50						
2.0 / 2.0								
3.0 / 3.0								
4.0 / 4.0								
5.0 / 5.0								
6.0 / 6.0								
7.0 / 7.0								
8.0 / 8.0								
9.0 / 9.0								
10.0 / 10.0								
11.0 / 11.0								
12.0 / 12.0								
13.0 / 13.0								
14.0 / 14.0								
15.0 / 15.0								
16.0 / 16.0								
17.0 / 17.0								
18.0 / 18.0								
19.0 / 19.0								

Combustible Soil Vapours

ppm: 20 40 60 80

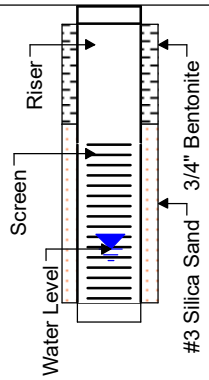
% LEL: 10 20 30 40 50 60 70 80 90

8.7

10.2

18.7

Monitoring Well Details



Easting: N/A Indoor | **Northing:** N/A Indoor

Site Datum: Top of concrete pad at the corner of the SW corner of the building

Groundsurface Elevation: 98.90 | **Top of Riser Elev.:** 99.79

Hole Diameter: 241 mm | **Monitoring Well Diameter:** 32 mm

NOTES

Hand cored. Hole was vac'd out after taking cement core. CSV screening completed the following day.

Borehole Log: BH22-22

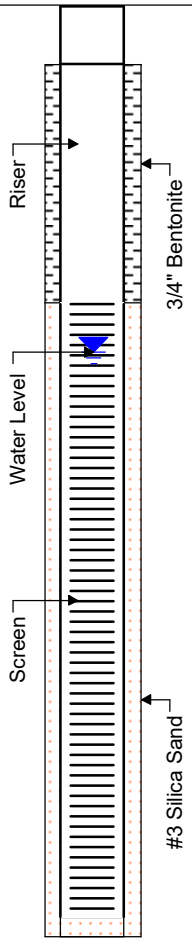
Project No.: 220200
Project: Phase II Environmental Site Assessment
Client: Group Oradev Inc.
Location: 400 Coventry Road, Ottawa, ON
Date: December19, 2022
Field Personnel: D. Clouthier
Driller: CCC
Drilling Equipment: CME 55
Drilling Method: SSA

SUBSURFACE PROFILE / SAMPLE DATA

Depth (ft / m)	Soil Description	Elev./Depth (m)	Lithology	Type	Sample Number	N or RQD (%)	Recovery (%)	Lab Analysis	Combustible Soil Vapours (ppm)
0.0 / 0.0	Ground Surface	99.45							
	ASPHALT	0.00							
1.0	SAND & GRAVEL Brown. Moist. Rocks throughout.	98.85			SS1	32	33		<0.1
2.0	SILTY SAND Brown. Moist. 1/2" rocks throughout.	0.60			SS2	29	38		<0.1
3.0 / 1.0									
4.0					SS3	45	46	PHC, VOC, Metals, Inorganics	<0.1
5.0									
6.0 / 2.0					SS4	21	50		<0.1
7.0									
8.0					SS5	45	66		<0.1
9.0									
10.0 / 3.0	SANDY TILL Brown. Moist. Crushed stone from 4 m to 4.1 m bgs. Crushed stone in tip.	96.45 3.00			SS6	27	62		<0.1
11.0									
12.0					SS7	50+	80	PHC, VOC, PAH	<0.1
13.0 / 4.0									
14.0					SS8	50+	25		<0.1
15.0		94.75							
16.0	End of Borehole Auger Refusal Over Inferred Bedrock	4.70							
5.0 / 17.0									
18.0									
19.0									

% LEL: 10 20 30 40 50 60 70 80 90

Monitoring Well Details



Easting: 5543422
Northing: 449248

Site Datum: Top of concrete pad at the corner of the SW corner of the building (100.00 m)

Groundsurface Elevation: 98.90
Top of Riser Elev.: 98.81

Hole Diameter: 152 mm
Monitoring Well Diameter: 50 mm

NOTES

Borehole Log: BH22-23

Project No.: 220200
Project: Phase II Environmental Site Assessment
Client: Group Oradev Inc.
Location: 400 Coventry Road, Ottawa, ON
Date: January 17, 2023
Field Personnel: D. Clouthier
Driller: CCC
Drilling Equipment: CME 55
Drilling Method: SSA

Depth (ft)	Depth (m)	Soil Description	Elev./Depth (m)	Lithology	Type	Sample Number	N or RQD (%)	Recovery (%)	Lab Analysis	Combustible Soil Vapours (ppm)	Monitoring Well Details
		Ground Surface	99.45								
0.0	0.0	TOPSOIL Brown.	0.00								
1.0		SILTY SAND Dark Brown. Dry becoming moist at 1.8 m bgs. Stone in tip, auger refusal.				SS1	11	79	Metals, Inorganics	<0.1	
2.0											
3.0	1.0										
4.0						SS2	8	79		<0.1	
5.0											
6.0	2.0					SS3	22	75		<0.1	
7.0											
8.0						SS4	17	75	PHC, VOC	<0.1	
9.0											
10.0	3.0					SS5	14	83	PAH	<0.1	
11.0											
12.0						SS6	39	58		<0.1	
13.0	4.0										
14.0		End of Borehole Auger Refusal Over Inferred Bedrock	95.15 4.30								
15.0											
16.0	5.0										
17.0											
18.0											
19.0											

Easting: 5543439
Northing: 449224
Site Datum: Top of concrete pad at the corner of the SW corner of the building (100.00 m)
Groundsurface Elevation: 99.23
Top of Riser Elev.: N/A
Hole Diameter: 152 mm
Monitoring Well Diameter: N/A

NOTES

APPENDIX B

Certificates of Laboratory Analysis

PARACEL LABORATORIES LTD.

TRUSTED.
RESPONSIVE.
RELIABLE.

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

Certificate of Analysis

LRL Associates Ltd.

5430 Canotek Road
Ottawa, ON K1J 9G2
Attn: Jessica Arthurs

Client PO:
Project: 220200
Custody: 60925

Report Date: 4-May-2022
Order Date: 28-Apr-2022

Order #: 2218519

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

Paracel ID	Client ID
2218519-01	BH22-4-2
2218519-02	BH22-5-2
2218519-03	BH22-5-4
2218519-04	BH22-6-4
2218519-05	BH22-X-4

Approved By:

Dale Robertson, BSc
Laboratory Director

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 04-May-2022

Order Date: 28-Apr-2022

Project Description: 220200

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Boron, available	MOE (HWE), EPA 200.8 - ICP-MS	2-May-22	2-May-22
Chromium, hexavalent - soil	MOE E3056 - Extraction, colourimetric	29-Apr-22	3-May-22
Conductivity	MOE E3138 - probe @25 °C, water ext	3-May-22	3-May-22
Cyanide, free	MOE E3015 - Auto Colour, water extraction	29-Apr-22	29-Apr-22
Mercury by CVAA	EPA 7471B - CVAA, digestion	3-May-22	4-May-22
pH, soil	EPA 150.1 - pH probe @ 25 °C, CaCl buffered ext.	29-Apr-22	29-Apr-22
PHC F1	CWS Tier 1 - P&T GC-FID	29-Apr-22	30-Apr-22
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	29-Apr-22	1-May-22
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	2-May-22	2-May-22
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	28-Apr-22	30-Apr-22
REG 153: VOCs by P&T GC/MS	EPA 8260 - P&T GC-MS	29-Apr-22	30-Apr-22
SAR	Calculated	2-May-22	3-May-22
Solids, %	Gravimetric, calculation	29-Apr-22	29-Apr-22
Texture - Coarse Med/Fine	Based on ASTM D2487	29-Apr-22	2-May-22

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 04-May-2022

Order Date: 28-Apr-2022

Project Description: 220200

	Client ID:	BH22-4-2	BH22-5-2	BH22-5-4	BH22-6-4
	Sample Date:	27-Apr-22 12:00	27-Apr-22 12:00	27-Apr-22 12:00	27-Apr-22 12:00
	Sample ID:	2218519-01	2218519-02	2218519-03	2218519-04
	MDL/Units	Soil	Soil	Soil	Soil
Physical Characteristics					
% Solids	0.1 % by Wt.	97.4	94.6	95.5	97.8
>75 um	0.1 %	-	61.5	-	-
<75 um	0.1 %	-	38.5	-	-
Texture	0.1 %	-	Coarse	-	-
General Inorganics					
SAR	0.01 N/A	0.81	0.28	0.20	1.15
Conductivity	5 uS/cm	599	523	331	356
Cyanide, free	0.03 ug/g dry	<0.03	<0.03	<0.03	<0.03
pH	0.05 pH Units	8.33	7.98	7.87	8.10
Metals					
Antimony	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Arsenic	1.0 ug/g dry	1.7	3.8	2.1	1.9
Barium	1.0 ug/g dry	33.7	63.9	37.1	27.2
Beryllium	0.5 ug/g dry	<0.5	<0.5	<0.5	<0.5
Boron	5.0 ug/g dry	<5.0	5.3	<5.0	<5.0
Boron, available	0.5 ug/g dry	<0.5	<0.5	<0.5	<0.5
Cadmium	0.5 ug/g dry	<0.5	<0.5	<0.5	<0.5
Chromium	5.0 ug/g dry	8.3	17.0	13.1	11.0
Chromium (VI)	0.2 ug/g dry	<0.2	<0.2	<0.2	<0.2
Cobalt	1.0 ug/g dry	3.1	7.6	4.7	3.2
Copper	5.0 ug/g dry	6.0	18.2	10.0	7.4
Lead	1.0 ug/g dry	2.3	7.5	4.7	2.4
Mercury	0.1 ug/g dry	<0.1	<0.1	<0.1	<0.1
Molybdenum	1.0 ug/g dry	<1.0	1.4	<1.0	<1.0
Nickel	5.0 ug/g dry	5.7	21.1	11.2	6.9
Selenium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Silver	0.3 ug/g dry	<0.3	<0.3	<0.3	<0.3
Thallium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Uranium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Vanadium	10.0 ug/g dry	20.5	24.0	20.6	19.5
Zinc	20.0 ug/g dry	<20.0	30.4	<20.0	<20.0
Volatiles					
Acetone	0.50 ug/g dry	<0.50	<0.50	<0.50	<0.50
Benzene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Bromodichloromethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 04-May-2022

Order Date: 28-Apr-2022

Project Description: 220200

	Client ID:	BH22-4-2	BH22-5-2	BH22-5-4	BH22-6-4
	Sample Date:	27-Apr-22 12:00	27-Apr-22 12:00	27-Apr-22 12:00	27-Apr-22 12:00
	Sample ID:	2218519-01	2218519-02	2218519-03	2218519-04
	MDL/Units	Soil	Soil	Soil	Soil
Bromoform	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Bromomethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Chlorobenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Chloroform	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Dichlorodifluoromethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,2-Dichloroethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
cis-1,2-Dichloroethylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
trans-1,2-Dichloroethylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,2-Dichloropropane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
cis-1,3-Dichloropropylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
trans-1,3-Dichloropropylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene, total	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Ethylene dibromide (dibromoethane, 1,2-)	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Hexane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g dry	<0.50	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	0.50 ug/g dry	<0.50	<0.50	<0.50	<0.50
Methyl tert-butyl ether	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Styrene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Tetrachloroethylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Toluene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,1,1-Trichloroethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,1,2-Trichloroethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Trichloroethylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 04-May-2022

Order Date: 28-Apr-2022

Project Description: 220200

	Client ID:	BH22-4-2	BH22-5-2	BH22-5-4	BH22-6-4
	Sample Date:	27-Apr-22 12:00	27-Apr-22 12:00	27-Apr-22 12:00	27-Apr-22 12:00
	Sample ID:	2218519-01	2218519-02	2218519-03	2218519-04
	MDL/Units	Soil	Soil	Soil	Soil
Vinyl chloride	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
o-Xylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
4-Bromofluorobenzene	Surrogate	91.2%	106%	111%	117%
Dibromofluoromethane	Surrogate	88.3%	88.0%	87.6%	92.5%
Toluene-d8	Surrogate	92.9%	96.2%	98.7%	98.2%
Hydrocarbons					
F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	<7	<7
F2 PHCs (C10-C16)	4 ug/g dry	<4	<4	<4	<4
F3 PHCs (C16-C34)	8 ug/g dry	<8	<8	<8	<8
F4 PHCs (C34-C50)	6 ug/g dry	<6	<6	<6	<6
Semi-Volatiles					
Acenaphthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Acenaphthylene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [a] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [a] pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Chrysene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Fluorene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
1-Methylnaphthalene	0.02 ug/g dry	0.05	<0.02	<0.02	<0.02
2-Methylnaphthalene	0.02 ug/g dry	0.06	<0.02	<0.02	<0.02
Methylnaphthalene (1&2)	0.04 ug/g dry	0.10	<0.04	<0.04	<0.04
Naphthalene	0.01 ug/g dry	<0.01	<0.01	<0.01	<0.01
Phenanthrene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
2-Fluorobiphenyl	Surrogate	100%	107%	104%	92.5%
Terphenyl-d14	Surrogate	108%	109%	111%	98.2%

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 04-May-2022

Order Date: 28-Apr-2022

Project Description: 220200

	Client ID:	BH22-X-4	-	-	-
	Sample Date:	27-Apr-22 12:00	-	-	-
	Sample ID:	2218519-05	-	-	-
	MDL/Units	Soil	-	-	-
Physical Characteristics					
% Solids	0.1 % by Wt.	93.3	-	-	-
Volatiles					
Acetone	0.50 ug/g dry	<0.50	-	-	-
Benzene	0.02 ug/g dry	<0.02	-	-	-
Bromodichloromethane	0.05 ug/g dry	<0.05	-	-	-
Bromoform	0.05 ug/g dry	<0.05	-	-	-
Bromomethane	0.05 ug/g dry	<0.05	-	-	-
Carbon Tetrachloride	0.05 ug/g dry	<0.05	-	-	-
Chlorobenzene	0.05 ug/g dry	<0.05	-	-	-
Chloroform	0.05 ug/g dry	<0.05	-	-	-
Dibromochloromethane	0.05 ug/g dry	<0.05	-	-	-
Dichlorodifluoromethane	0.05 ug/g dry	<0.05	-	-	-
1,2-Dichlorobenzene	0.05 ug/g dry	<0.05	-	-	-
1,3-Dichlorobenzene	0.05 ug/g dry	<0.05	-	-	-
1,4-Dichlorobenzene	0.05 ug/g dry	<0.05	-	-	-
1,1-Dichloroethane	0.05 ug/g dry	<0.05	-	-	-
1,2-Dichloroethane	0.05 ug/g dry	<0.05	-	-	-
1,1-Dichloroethylene	0.05 ug/g dry	<0.05	-	-	-
cis-1,2-Dichloroethylene	0.05 ug/g dry	<0.05	-	-	-
trans-1,2-Dichloroethylene	0.05 ug/g dry	<0.05	-	-	-
1,2-Dichloropropane	0.05 ug/g dry	<0.05	-	-	-
cis-1,3-Dichloropropylene	0.05 ug/g dry	<0.05	-	-	-
trans-1,3-Dichloropropylene	0.05 ug/g dry	<0.05	-	-	-
1,3-Dichloropropene, total	0.05 ug/g dry	<0.05	-	-	-
Ethylbenzene	0.05 ug/g dry	<0.05	-	-	-
Ethylene dibromide (dibromoethane, 1	0.05 ug/g dry	<0.05	-	-	-
Hexane	0.05 ug/g dry	<0.05	-	-	-
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g dry	<0.50	-	-	-
Methyl Isobutyl Ketone	0.50 ug/g dry	<0.50	-	-	-
Methyl tert-butyl ether	0.05 ug/g dry	<0.05	-	-	-
Methylene Chloride	0.05 ug/g dry	<0.05	-	-	-
Styrene	0.05 ug/g dry	<0.05	-	-	-
1,1,1,2-Tetrachloroethane	0.05 ug/g dry	<0.05	-	-	-
1,1,2,2-Tetrachloroethane	0.05 ug/g dry	<0.05	-	-	-

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 04-May-2022

Order Date: 28-Apr-2022

Project Description: 220200

	Client ID:	BH22-X-4	-	-	-
	Sample Date:	27-Apr-22 12:00	-	-	-
	Sample ID:	2218519-05	-	-	-
	MDL/Units	Soil	-	-	-
Tetrachloroethylene	0.05 ug/g dry	<0.05	-	-	-
Toluene	0.05 ug/g dry	<0.05	-	-	-
1,1,1-Trichloroethane	0.05 ug/g dry	<0.05	-	-	-
1,1,2-Trichloroethane	0.05 ug/g dry	<0.05	-	-	-
Trichloroethylene	0.05 ug/g dry	<0.05	-	-	-
Trichlorofluoromethane	0.05 ug/g dry	<0.05	-	-	-
Vinyl chloride	0.02 ug/g dry	<0.02	-	-	-
m,p-Xylenes	0.05 ug/g dry	<0.05	-	-	-
o-Xylene	0.05 ug/g dry	<0.05	-	-	-
Xylenes, total	0.05 ug/g dry	<0.05	-	-	-
4-Bromofluorobenzene	Surrogate	115%	-	-	-
Dibromofluoromethane	Surrogate	102%	-	-	-
Toluene-d8	Surrogate	99.7%	-	-	-

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
Conductivity	ND	5	uS/cm						
Cyanide, free	ND	0.03	ug/g						
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
Metals									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron, available	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium (VI)	ND	0.2	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Mercury	ND	0.1	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
Semi-Volatiles									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
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	*1.37*		*ug/g*		*103*	*50-140*			
Surrogate: Terphenyl-d14	*1.47*		*ug/g*		*110*	*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						

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Carbon Tetrachloride	ND	0.05	ug/g						
Chlorobenzene	ND	0.05	ug/g						
Chloroform	ND	0.05	ug/g						
Dibromochloromethane	ND	0.05	ug/g						
Dichlorodifluoromethane	ND	0.05	ug/g						
1,2-Dichlorobenzene	ND	0.05	ug/g						
1,3-Dichlorobenzene	ND	0.05	ug/g						
1,4-Dichlorobenzene	ND	0.05	ug/g						
1,1-Dichloroethane	ND	0.05	ug/g						
1,2-Dichloroethane	ND	0.05	ug/g						
1,1-Dichloroethylene	ND	0.05	ug/g						
cis-1,2-Dichloroethylene	ND	0.05	ug/g						
trans-1,2-Dichloroethylene	ND	0.05	ug/g						
1,2-Dichloropropane	ND	0.05	ug/g						
cis-1,3-Dichloropropylene	ND	0.05	ug/g						
trans-1,3-Dichloropropylene	ND	0.05	ug/g						
1,3-Dichloropropene, total	ND	0.05	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Ethylene dibromide (dibromoethane, 1,2	ND	0.05	ug/g						
Hexane	ND	0.05	ug/g						
Methyl Ethyl Ketone (2-Butanone)	ND	0.50	ug/g						
Methyl Isobutyl Ketone	ND	0.50	ug/g						
Methyl tert-butyl ether	ND	0.05	ug/g						
Methylene Chloride	ND	0.05	ug/g						
Styrene	ND	0.05	ug/g						
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g						
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g						
Tetrachloroethylene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
1,1,1-Trichloroethane	ND	0.05	ug/g						
1,1,2-Trichloroethane	ND	0.05	ug/g						
Trichloroethylene	ND	0.05	ug/g						
Trichlorofluoromethane	ND	0.05	ug/g						
Vinyl chloride	ND	0.02	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: 4-Bromofluorobenzene	*3.49*		*ug/g*		*109*	*50-140*			
Surrogate: Dibromofluoromethane	*2.62*		*ug/g*		*81.8*	*50-140*			
Surrogate: Toluene-d8	*3.06*		*ug/g*		*95.7*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
SAR	0.89	0.01	N/A	0.80			10.7	30	
Conductivity	237	5	uS/cm	238			0.4	5	
Cyanide, free	ND	0.03	ug/g	ND			NC	35	
pH	7.56	0.05	pH Units	7.50			0.8	2.3	
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g	ND			NC	30	
F3 PHCs (C16-C34)	ND	8	ug/g	ND			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g	ND			NC	30	
Metals									
Antimony	4.5	1.0	ug/g	4.3			5.0	30	
Arsenic	4.0	1.0	ug/g	4.4			11.3	30	
Barium	48.5	1.0	ug/g	61.8			24.2	30	
Beryllium	ND	0.5	ug/g	ND			NC	30	
Boron, available	ND	0.5	ug/g	ND			NC	35	
Boron	ND	5.0	ug/g	ND			NC	30	
Cadmium	ND	0.5	ug/g	ND			NC	30	
Chromium (VI)	ND	0.2	ug/g	ND			NC	35	
Chromium	13.8	5.0	ug/g	16.1			16.0	30	
Cobalt	9.3	1.0	ug/g	10.8			14.2	30	
Copper	16.5	5.0	ug/g	19.2			15.2	30	
Lead	12.8	1.0	ug/g	15.3			17.5	30	
Mercury	ND	0.1	ug/g	ND			NC	30	
Molybdenum	1.3	1.0	ug/g	1.7			26.5	30	
Nickel	12.5	5.0	ug/g	14.5			14.5	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	ND	1.0	ug/g	ND			NC	30	
Vanadium	24.4	10.0	ug/g	29.2			18.0	30	
Zinc	35.3	20.0	ug/g	40.7			14.3	30	
Physical Characteristics									
% Solids	72.2	0.1	% by Wt.	71.4			1.1	25	
Semi-Volatiles									
Acenaphthene	0.024	0.02	ug/g	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g	ND			NC	40	
Anthracene	0.082	0.02	ug/g	0.029			95.7	40	QR-04
Benzo [a] anthracene	0.295	0.02	ug/g	0.152			64.0	40	QR-04
Benzo [a] pyrene	0.323	0.02	ug/g	0.215			40.2	40	QR-04
Benzo [b] fluoranthene	0.438	0.02	ug/g	0.280			44.1	40	QR-04
Benzo [g,h,i] perylene	0.258	0.02	ug/g	0.188			31.3	40	
Benzo [k] fluoranthene	0.208	0.02	ug/g	0.137			41.1	40	QR-04
Chrysene	0.295	0.02	ug/g	0.148			66.8	40	QR-04
Dibenzo [a,h] anthracene	0.066	0.02	ug/g	0.043			42.0	40	QR-04
Fluoranthene	0.803	0.02	ug/g	0.414			63.9	40	QR-04
Fluorene	0.027	0.02	ug/g	ND			NC	40	
Indeno [1,2,3-cd] pyrene	0.243	0.02	ug/g	0.172			34.2	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	0.334	0.02	ug/g	0.142			80.5	40	QR-04
Pyrene	0.614	0.02	ug/g	0.323			62.2	40	QR-04
Surrogate: 2-Fluorobiphenyl	*1.49*		*ug/g*		*98.6*	*50-140*			
Surrogate: Terphenyl-d14	*1.59*		*ug/g*		*105*	*50-140*			
Volatiles									

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Acetone	ND	0.50	ug/g	ND			NC	50	
Benzene	ND	0.02	ug/g	ND			NC	50	
Bromodichloromethane	ND	0.05	ug/g	ND			NC	50	
Bromoform	ND	0.05	ug/g	ND			NC	50	
Bromomethane	ND	0.05	ug/g	ND			NC	50	
Carbon Tetrachloride	ND	0.05	ug/g	ND			NC	50	
Chlorobenzene	ND	0.05	ug/g	ND			NC	50	
Chloroform	ND	0.05	ug/g	ND			NC	50	
Dibromochloromethane	ND	0.05	ug/g	ND			NC	50	
Dichlorodifluoromethane	ND	0.05	ug/g	ND			NC	50	
1,2-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,3-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,4-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,1-Dichloroethane	ND	0.05	ug/g	ND			NC	50	
1,2-Dichloroethane	ND	0.05	ug/g	ND			NC	50	
1,1-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
cis-1,2-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
trans-1,2-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
1,2-Dichloropropane	ND	0.05	ug/g	ND			NC	50	
cis-1,3-Dichloropropylene	ND	0.05	ug/g	ND			NC	50	
trans-1,3-Dichloropropylene	ND	0.05	ug/g	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g	ND			NC	50	
Ethylene dibromide (dibromoethane, 1,2	ND	0.05	ug/g	ND			NC	50	
Hexane	ND	0.05	ug/g	ND			NC	50	
Methyl Ethyl Ketone (2-Butanone)	ND	0.50	ug/g	ND			NC	50	
Methyl Isobutyl Ketone	ND	0.50	ug/g	ND			NC	50	
Methyl tert-butyl ether	ND	0.05	ug/g	ND			NC	50	
Methylene Chloride	ND	0.05	ug/g	ND			NC	50	
Styrene	ND	0.05	ug/g	ND			NC	50	
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g	ND			NC	50	
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g	ND			NC	50	
Tetrachloroethylene	ND	0.05	ug/g	ND			NC	50	
Toluene	ND	0.05	ug/g	ND			NC	50	
1,1,1-Trichloroethane	ND	0.05	ug/g	ND			NC	50	
1,1,2-Trichloroethane	ND	0.05	ug/g	ND			NC	50	
Trichloroethylene	ND	0.05	ug/g	ND			NC	50	
Trichlorofluoromethane	ND	0.05	ug/g	ND			NC	50	
Vinyl chloride	ND	0.02	ug/g	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g	ND			NC	50	
o-Xylene	ND	0.05	ug/g	ND			NC	50	
Surrogate: 4-Bromofluorobenzene	*4.36*		*ug/g*		*120*	*50-140*			
Surrogate: Dibromofluoromethane	*3.64*		*ug/g*		*99.8*	*50-140*			
Surrogate: Toluene-d8	*3.76*		*ug/g*		*103*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
Cyanide, free	0.283	0.03	ug/g	ND	83.2	50-150			
Hydrocarbons									
F1 PHCs (C6-C10)	175	7	ug/g	ND	87.7	80-120			
F2 PHCs (C10-C16)	73	4	ug/g	ND	88.8	60-140			
F3 PHCs (C16-C34)	232	8	ug/g	ND	115	60-140			
F4 PHCs (C34-C50)	161	6	ug/g	ND	127	60-140			
Metals									
Antimony	38.1	1.0	ug/g	1.7	72.8	70-130			
Arsenic	54.7	1.0	ug/g	1.8	106	70-130			
Barium	69.8	1.0	ug/g	24.7	90.1	70-130			
Beryllium	51.8	0.5	ug/g	ND	103	70-130			
Boron, available	3.94	0.5	ug/g	ND	78.7	70-122			
Boron	49.3	5.0	ug/g	ND	94.6	70-130			
Cadmium	48.2	0.5	ug/g	ND	96.2	70-130			
Chromium (VI)	0.2	0.2	ug/g	ND	75.0	70-130			
Chromium	61.5	5.0	ug/g	6.5	110	70-130			
Cobalt	57.3	1.0	ug/g	4.3	106	70-130			
Copper	56.4	5.0	ug/g	7.7	97.4	70-130			
Lead	53.0	1.0	ug/g	6.1	93.9	70-130			
Mercury	1.44	0.1	ug/g	ND	96.0	70-130			
Molybdenum	50.2	1.0	ug/g	ND	99.0	70-130			
Nickel	57.8	5.0	ug/g	5.8	104	70-130			
Selenium	49.9	1.0	ug/g	ND	99.3	70-130			
Silver	36.0	0.3	ug/g	ND	72.0	70-130			
Thallium	50.2	1.0	ug/g	ND	100	70-130			
Uranium	51.3	1.0	ug/g	ND	102	70-130			
Vanadium	66.9	10.0	ug/g	11.7	110	70-130			
Zinc	62.8	20.0	ug/g	ND	93.1	70-130			
Semi-Volatiles									
Acenaphthene	0.224	0.02	ug/g	ND	119	50-140			
Acenaphthylene	0.203	0.02	ug/g	ND	108	50-140			
Anthracene	0.225	0.02	ug/g	0.029	104	50-140			
Benzo [a] anthracene	0.319	0.02	ug/g	0.152	88.2	50-140			
Benzo [a] pyrene	0.396	0.02	ug/g	0.215	96.1	50-140			
Benzo [b] fluoranthene	0.496	0.02	ug/g	0.280	114	50-140			
Benzo [g,h,i] perylene	0.382	0.02	ug/g	0.188	103	50-140			
Benzo [k] fluoranthene	0.347	0.02	ug/g	0.137	111	50-140			
Chrysene	0.336	0.02	ug/g	0.148	99.7	50-140			
Dibenzo [a,h] anthracene	0.261	0.02	ug/g	0.043	115	50-140			
Fluoranthene	0.592	0.02	ug/g	0.414	94.3	50-140			
Fluorene	0.214	0.02	ug/g	ND	113	50-140			
Indeno [1,2,3-cd] pyrene	0.390	0.02	ug/g	0.172	116	50-140			
1-Methylnaphthalene	0.232	0.02	ug/g	ND	123	50-140			
2-Methylnaphthalene	0.250	0.02	ug/g	ND	132	50-140			
Naphthalene	0.231	0.01	ug/g	ND	122	50-140			
Phenanthrene	0.306	0.02	ug/g	0.142	86.4	50-140			
Pyrene	0.516	0.02	ug/g	0.323	102	50-140			
Surrogate: 2-Fluorobiphenyl	*1.83*		*ug/g*		*121*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: Terphenyl-d14	*1.84*		*ug/g*		*122*	*50-140*			
Volatiles									
Acetone	7.61	0.50	ug/g	ND	76.1	50-140			
Benzene	3.23	0.02	ug/g	ND	80.8	60-130			
Bromodichloromethane	4.09	0.05	ug/g	ND	102	60-130			
Bromoform	4.27	0.05	ug/g	ND	107	60-130			
Bromomethane	3.84	0.05	ug/g	ND	96.0	50-140			
Carbon Tetrachloride	3.29	0.05	ug/g	ND	82.4	60-130			
Chlorobenzene	3.86	0.05	ug/g	ND	96.6	60-130			
Chloroform	4.09	0.05	ug/g	ND	102	60-130			
Dibromochloromethane	3.80	0.05	ug/g	ND	94.9	60-130			
Dichlorodifluoromethane	3.82	0.05	ug/g	ND	95.4	50-140			
1,2-Dichlorobenzene	4.26	0.05	ug/g	ND	106	60-130			
1,3-Dichlorobenzene	3.81	0.05	ug/g	ND	95.2	60-130			
1,4-Dichlorobenzene	4.24	0.05	ug/g	ND	106	60-130			
1,1-Dichloroethane	3.43	0.05	ug/g	ND	85.7	60-130			
1,2-Dichloroethane	3.23	0.05	ug/g	ND	80.9	60-130			
1,1-Dichloroethylene	3.58	0.05	ug/g	ND	89.6	60-130			
cis-1,2-Dichloroethylene	4.08	0.05	ug/g	ND	102	60-130			
trans-1,2-Dichloroethylene	3.92	0.05	ug/g	ND	98.1	60-130			
1,2-Dichloropropane	3.04	0.05	ug/g	ND	76.1	60-130			
cis-1,3-Dichloropropylene	3.52	0.05	ug/g	ND	87.9	60-130			
trans-1,3-Dichloropropylene	3.04	0.05	ug/g	ND	75.9	60-130			
Ethylbenzene	3.50	0.05	ug/g	ND	87.4	60-130			
Ethylene dibromide (dibromoethane, 1,2-	3.85	0.05	ug/g	ND	96.1	60-130			
Hexane	3.65	0.05	ug/g	ND	91.1	60-130			
Methyl Ethyl Ketone (2-Butanone)	8.19	0.50	ug/g	ND	81.9	50-140			
Methyl Isobutyl Ketone	7.41	0.50	ug/g	ND	74.1	50-140			
Methyl tert-butyl ether	10.7	0.05	ug/g	ND	107	50-140			
Methylene Chloride	3.29	0.05	ug/g	ND	82.3	60-130			
Styrene	3.85	0.05	ug/g	ND	96.2	60-130			
1,1,1,2-Tetrachloroethane	4.10	0.05	ug/g	ND	102	60-130			
1,1,2,2-Tetrachloroethane	2.82	0.05	ug/g	ND	70.5	60-130			
Tetrachloroethylene	4.09	0.05	ug/g	ND	102	60-130			
Toluene	4.04	0.05	ug/g	ND	101	60-130			
1,1,1-Trichloroethane	3.47	0.05	ug/g	ND	86.7	60-130			
1,1,2-Trichloroethane	3.18	0.05	ug/g	ND	79.6	60-130			
Trichloroethylene	3.84	0.05	ug/g	ND	96.0	60-130			
Trichlorofluoromethane	3.63	0.05	ug/g	ND	90.9	50-140			
Vinyl chloride	4.23	0.02	ug/g	ND	106	50-140			
m,p-Xylenes	7.51	0.05	ug/g	ND	93.8	60-130			
o-Xylene	3.85	0.05	ug/g	ND	96.2	60-130			
Surrogate: 4-Bromofluorobenzene	*2.33*		*ug/g*		*72.9*	*50-140*			
Surrogate: Dibromofluoromethane	*3.20*		*ug/g*		*100*	*50-140*			
Surrogate: Toluene-d8	*3.23*		*ug/g*		*101*	*50-140*			

Qualifier Notes:

Sample Qualifiers :

QC Qualifiers :

QR-04 : Duplicate results exceeds RPD limits due to non-homogeneous matrix.

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable
ND: Not Detected
MDL: Method Detection Limit
Source Result: Data used as source for matrix and duplicate samples
%REC: Percent recovery.
RPD: Relative percent difference.
NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.
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: 2218519

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2218519	No 60925

Client Name: LRL Associates ltd.
Contact Name: Jessica Arthurs
Address: 5430 Canotek Road, Ottawa, ON K1J 9G2
Telephone: 613 842 3434

Project Ref: 220200
Quote #:
PO #:
E-mail: JarthurS@lrlca

Page 1 of 1

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

☐ REG 153/04 ☐ REG 406/19

☐ Table 1 ☒ Res/Park ☐ Med/Fine
☐ Table 2 ☐ Ind/Comm ☒ Coarse
☒ Table 3 ☐ Agri/Other
☐ Table

For RSC: ☒ Yes ☐ No

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

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

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken: Date	Sample Taken: Time	PAH	PHC	VOC	Inorganics	pH	Heavy Metals (+Hg, CrVI)	Texture
1	BH22-4-2	S		3	April 27/22	PM	X	X	X	X	X	X	
2	BH22-5-2	↓		↓	↓	↓	↓	↓	↓	↓	↓	↓	X
3	BH22-5-4												
4	BH22-6-4			↓			↓	↓	↓	↓	↓	↓	
5	BH22-X-4	↓		2	↓	↓			X				
6													
7													
8													
9													
10													

Required Analysis

Comments:

Method of Delivery: Drop Box

Relinquished By (Sign):	Received By Driver/Depot:	Received at Lab: Sunexpress Blumgi	Verified By:
Relinquished By (Print): Jessica Arthurs	Date/Time:	Date/Time: APR 28 2022 12:55	Date/Time: April 28, 22 16:18
Date/Time: April 28, 2022 14:26	Temperature: °C	Temperature: 9.0 3 °C	pH Verified: ☐ By:

PARACEL LABORATORIES LTD.

TRUSTED.
RESPONSIVE.
RELIABLE.

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

Certificate of Analysis

LRL Associates Ltd.

5430 Canotek Road
Ottawa, ON K1J 9G2
Attn: Devin Clouthier

Client PO:
Project: 220200
Custody: 137271,137273

Report Date: 13-May-2022
Order Date: 6-May-2022

Order #: 2219653

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

Paracel ID	Client ID
2219653-01	BH22-1-SS2
2219653-02	BH22-1-SS5
2219653-03	BH22-2-SS3
2219653-04	BH22-13-SS3
2219653-05	BH22-7-SS3
2219653-06	BH22-7-SS5
2219653-07	BH22-8-SS1
2219653-08	BH22-8-SS3
2219653-09	BH22-8-SS11
2219653-10	BH22-9-SS2
2219653-11	BH22-9-SS3
2219653-12	BH22-9-SS8
2219653-13	BH22-10-SS2
2219653-14	BH22-10-SS11
2219653-15	BH22-11-SS1
2219653-16	BH22-12-SS3
2219653-17	BH22-13-SS4
2219653-18	BH22-13-SS5

Approved By:

Dale Robertson, BSc
Laboratory Director

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 13-May-2022

Order Date: 6-May-2022

Project Description: 220200

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Boron, available	MOE (HWE), EPA 200.8 - ICP-MS	10-May-22	10-May-22
Chromium, hexavalent - soil	MOE E3056 - Extraction, colourimetric	9-May-22	10-May-22
Conductivity	MOE E3138 - probe @25 °C, water ext	13-May-22	13-May-22
Mercury by CVAA	EPA 7471B - CVAA, digestion	10-May-22	11-May-22
PCBs, total	SW846 8082A - GC-ECD	9-May-22	9-May-22
pH, soil	EPA 150.1 - pH probe @ 25 °C, CaCl buffered ext.	10-May-22	10-May-22
PHC F1	CWS Tier 1 - P&T GC-FID	9-May-22	10-May-22
PHC F4G (gravimetric)	CWS Tier 1 - Extraction Gravimetric	11-May-22	12-May-22
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	9-May-22	11-May-22
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	10-May-22	10-May-22
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	9-May-22	11-May-22
REG 153: VOCs by P&T GC/MS	EPA 8260 - P&T GC-MS	9-May-22	10-May-22
SAR	Calculated	11-May-22	11-May-22
Solids, %	Gravimetric, calculation	10-May-22	10-May-22
Texture - Coarse Med/Fine	Based on ASTM D2487	10-May-22	12-May-22

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 13-May-2022

Order Date: 6-May-2022

Project Description: 220200

	Client ID:	BH22-1-SS2	BH22-1-SS5	BH22-2-SS3	BH22-13-SS3
	Sample Date:	04-May-22 09:00	04-May-22 09:00	04-May-22 12:00	05-May-22 12:00
	Sample ID:	2219653-01	2219653-02	2219653-03	2219653-04
	MDL/Units	Soil	Soil	Soil	Soil
Physical Characteristics					
% Solids	0.1 % by Wt.	85.4	92.2	92.9	90.3
>75 um	0.1 %	33.8	-	52.0	49.5
<75 um	0.1 %	66.2	-	48.0	50.5
Texture	0.1 %	Med/Fine	-	Coarse	Med/Fine
General Inorganics					
SAR	0.01 N/A	5.03	-	1.66	16.9
Conductivity	5 uS/cm	845	-	985	2130
pH	0.05 pH Units	7.52	-	7.57	7.61
Metals					
Antimony	1.0 ug/g dry	<1.0	-	<1.0	<1.0
Arsenic	1.0 ug/g dry	5.0	-	5.5	4.2
Barium	1.0 ug/g dry	48.6	-	85.9	56.2
Beryllium	0.5 ug/g dry	<0.5	-	<0.5	<0.5
Boron	5.0 ug/g dry	<5.0	-	6.4	5.4
Boron, available	0.5 ug/g dry	<0.5	-	<0.5	<0.5
Cadmium	0.5 ug/g dry	<0.5	-	<0.5	<0.5
Chromium	5.0 ug/g dry	10.0	-	15.8	15.2
Chromium (VI)	0.2 ug/g dry	<0.2	-	<0.2	<0.2
Cobalt	1.0 ug/g dry	4.1	-	8.5	6.7
Copper	5.0 ug/g dry	10.2	-	21.6	20.1
Lead	1.0 ug/g dry	2.6	-	8.1	5.9
Mercury	0.1 ug/g dry	<0.1	-	<0.1	<0.1
Molybdenum	1.0 ug/g dry	1.4	-	2.5	2.1
Nickel	5.0 ug/g dry	8.6	-	23.2	22.1
Selenium	1.0 ug/g dry	<1.0	-	<1.0	<1.0
Silver	0.3 ug/g dry	<0.3	-	<0.3	<0.3
Thallium	1.0 ug/g dry	<1.0	-	<1.0	<1.0
Uranium	1.0 ug/g dry	<1.0	-	<1.0	<1.0
Vanadium	10.0 ug/g dry	19.0	-	23.6	23.3
Zinc	20.0 ug/g dry	<20.0	-	34.6	34.2
Volatiles					
Acetone	0.50 ug/g dry	<0.50	-	<0.50	<0.50
Benzene	0.02 ug/g dry	<0.02	-	<0.02	<0.02
Bromodichloromethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Bromoform	0.05 ug/g dry	<0.05	-	<0.05	<0.05

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 13-May-2022

Order Date: 6-May-2022

Project Description: 220200

	Client ID:	BH22-1-SS2	BH22-1-SS5	BH22-2-SS3	BH22-13-SS3
	Sample Date:	04-May-22 09:00	04-May-22 09:00	04-May-22 12:00	05-May-22 12:00
	Sample ID:	2219653-01	2219653-02	2219653-03	2219653-04
	MDL/Units	Soil	Soil	Soil	Soil
Bromomethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Carbon Tetrachloride	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Chlorobenzene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Chloroform	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Dibromochloromethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Dichlorodifluoromethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,2-Dichlorobenzene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,3-Dichlorobenzene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,4-Dichlorobenzene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,1-Dichloroethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,2-Dichloroethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,1-Dichloroethylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
cis-1,2-Dichloroethylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
trans-1,2-Dichloroethylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,2-Dichloropropane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
cis-1,3-Dichloropropylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
trans-1,3-Dichloropropylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,3-Dichloropropene, total	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Ethylbenzene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Ethylene dibromide (dibromoethane, 1,2-)	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Hexane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g dry	<0.50	-	<0.50	<0.50
Methyl Isobutyl Ketone	0.50 ug/g dry	<0.50	-	<0.50	<0.50
Methyl tert-butyl ether	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Methylene Chloride	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Styrene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,1,1,2-Tetrachloroethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,1,2,2-Tetrachloroethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Tetrachloroethylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Toluene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,1,1-Trichloroethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,1,2-Trichloroethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Trichloroethylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Trichlorofluoromethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Vinyl chloride	0.02 ug/g dry	<0.02	-	<0.02	<0.02

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 13-May-2022

Order Date: 6-May-2022

Project Description: 220200

	Client ID:	BH22-1-SS2	BH22-1-SS5	BH22-2-SS3	BH22-13-SS3
	Sample Date:	04-May-22 09:00	04-May-22 09:00	04-May-22 12:00	05-May-22 12:00
	Sample ID:	2219653-01	2219653-02	2219653-03	2219653-04
	MDL/Units	Soil	Soil	Soil	Soil
m,p-Xylenes	0.05 ug/g dry	<0.05	-	<0.05	<0.05
o-Xylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Xylenes, total	0.05 ug/g dry	<0.05	-	<0.05	<0.05
4-Bromofluorobenzene	Surrogate	124%	-	119%	121%
Dibromofluoromethane	Surrogate	97.4%	-	91.6%	92.5%
Toluene-d8	Surrogate	117%	-	111%	114%
Hydrocarbons					
F1 PHCs (C6-C10)	7 ug/g dry	<7	-	<7	<7
F2 PHCs (C10-C16)	4 ug/g dry	<4	-	12	<4
F3 PHCs (C16-C34)	8 ug/g dry	28	-	33	<8
F4 PHCs (C34-C50)	6 ug/g dry	30	-	19	<6
Semi-Volatiles					
Acenaphthene	0.02 ug/g dry	-	-	<0.02	<0.02
Acenaphthylene	0.02 ug/g dry	-	-	<0.02	<0.02
Anthracene	0.02 ug/g dry	-	-	<0.02	<0.02
Benzo [a] anthracene	0.02 ug/g dry	-	-	<0.02	<0.02
Benzo [a] pyrene	0.02 ug/g dry	-	-	<0.02	<0.02
Benzo [b] fluoranthene	0.02 ug/g dry	-	-	<0.02	<0.02
Benzo [g,h,i] perylene	0.02 ug/g dry	-	-	<0.02	<0.02
Benzo [k] fluoranthene	0.02 ug/g dry	-	-	<0.02	<0.02
Chrysene	0.02 ug/g dry	-	-	<0.02	<0.02
Dibenzo [a,h] anthracene	0.02 ug/g dry	-	-	<0.02	<0.02
Fluoranthene	0.02 ug/g dry	-	-	<0.02	<0.02
Fluorene	0.02 ug/g dry	-	-	<0.02	<0.02
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	-	-	<0.02	<0.02
1-Methylnaphthalene	0.02 ug/g dry	-	-	<0.02	<0.02
2-Methylnaphthalene	0.02 ug/g dry	-	-	<0.02	<0.02
Methylnaphthalene (1&2)	0.04 ug/g dry	-	-	<0.04	<0.04
Naphthalene	0.01 ug/g dry	-	-	<0.01	<0.01
Phenanthrene	0.02 ug/g dry	-	-	<0.02	<0.02
Pyrene	0.02 ug/g dry	-	-	<0.02	<0.02
2-Fluorobiphenyl	Surrogate	-	-	113%	91.1%
Terphenyl-d14	Surrogate	-	-	122%	111%
PCBs					
PCBs, total	0.05 ug/g dry	-	<0.05	-	-
Decachlorobiphenyl	Surrogate	-	93.5%	-	-

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 13-May-2022

Order Date: 6-May-2022

Project Description: 220200

	Client ID:	BH22-7-SS3	BH22-7-SS5	BH22-8-SS1	BH22-8-SS3
	Sample Date:	05-May-22 12:00	05-May-22 12:00	05-May-22 09:00	05-May-22 09:00
	Sample ID:	2219653-05	2219653-06	2219653-07	2219653-08
	MDL/Units	Soil	Soil	Soil	Soil
Physical Characteristics					
% Solids	0.1 % by Wt.	76.9	58.2	92.9	81.7
>75 um	0.1 %	53.3	40.8	48.8	-
<75 um	0.1 %	46.7	59.2	51.2	-
Texture	0.1 %	Coarse	Med/Fine	Med/Fine	-
General Inorganics					
SAR	0.01 N/A	12.4	11.2	3.05	-
Conductivity	5 uS/cm	2310	1930	616	-
pH	0.05 pH Units	7.59	7.67	7.47	-
Metals					
Antimony	1.0 ug/g dry	<1.0	<1.0	<1.0	-
Arsenic	1.0 ug/g dry	4.8	4.9	5.4	-
Barium	1.0 ug/g dry	52.3	48.1	79.9	-
Beryllium	0.5 ug/g dry	0.5	0.5	0.5	-
Boron	5.0 ug/g dry	6.3	6.8	6.4	-
Boron, available	0.5 ug/g dry	<0.5	<0.5	<0.5	-
Cadmium	0.5 ug/g dry	<0.5	<0.5	<0.5	-
Chromium	5.0 ug/g dry	20.0	19.7	27.3	-
Chromium (VI)	0.2 ug/g dry	<0.2	<0.2	<0.2	-
Cobalt	1.0 ug/g dry	8.1	9.0	9.1	-
Copper	5.0 ug/g dry	23.4	23.3	18.6	-
Lead	1.0 ug/g dry	7.9	8.9	11.4	-
Mercury	0.1 ug/g dry	<0.1	<0.1	<0.1	-
Molybdenum	1.0 ug/g dry	2.2	2.9	2.6	-
Nickel	5.0 ug/g dry	23.7	25.3	23.9	-
Selenium	1.0 ug/g dry	<1.0	<1.0	<1.0	-
Silver	0.3 ug/g dry	<0.3	<0.3	<0.3	-
Thallium	1.0 ug/g dry	<1.0	<1.0	<1.0	-
Uranium	1.0 ug/g dry	2.8	1.9	1.1	-
Vanadium	10.0 ug/g dry	25.8	27.5	33.7	-
Zinc	20.0 ug/g dry	35.7	56.1	39.5	-
Volatiles					
Acetone	0.50 ug/g dry	<0.50	<0.50	<0.50	<0.50
Benzene	0.02 ug/g dry	<0.02	<0.02	<0.02	1.56
Bromodichloromethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Bromoform	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 13-May-2022

Order Date: 6-May-2022

Project Description: 220200

	Client ID:	BH22-7-SS3	BH22-7-SS5	BH22-8-SS1	BH22-8-SS3
	Sample Date:	05-May-22 12:00	05-May-22 12:00	05-May-22 09:00	05-May-22 09:00
	Sample ID:	2219653-05	2219653-06	2219653-07	2219653-08
	MDL/Units	Soil	Soil	Soil	Soil
Bromomethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Chlorobenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Chloroform	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Dichlorodifluoromethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,2-Dichloroethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
cis-1,2-Dichloroethylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
trans-1,2-Dichloroethylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,2-Dichloropropane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
cis-1,3-Dichloropropylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
trans-1,3-Dichloropropylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene, total	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	63.5
Ethylene dibromide (dibromoethane, 1	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Hexane	0.05 ug/g dry	<0.05	<0.05	<0.05	53.6
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g dry	<0.50	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	0.50 ug/g dry	<0.50	<0.50	<0.50	<0.50
Methyl tert-butyl ether	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Styrene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Tetrachloroethylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Toluene	0.05 ug/g dry	<0.05	<0.05	<0.05	33.4
1,1,1-Trichloroethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,1,2-Trichloroethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Trichloroethylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Vinyl chloride	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 13-May-2022

Order Date: 6-May-2022

Project Description: 220200

	Client ID:	BH22-7-SS3	BH22-7-SS5	BH22-8-SS1	BH22-8-SS3
	Sample Date:	05-May-22 12:00	05-May-22 12:00	05-May-22 09:00	05-May-22 09:00
	Sample ID:	2219653-05	2219653-06	2219653-07	2219653-08
	MDL/Units	Soil	Soil	Soil	Soil
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	<0.05	243
o-Xylene	0.05 ug/g dry	<0.05	<0.05	<0.05	77.2
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	<0.05	320
4-Bromofluorobenzene	Surrogate	138%	146%	122%	132%
Dibromofluoromethane	Surrogate	103%	111%	88.3%	94.2%
Toluene-d8	Surrogate	126%	139%	113%	119%
Hydrocarbons					
F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	<7	463
F2 PHCs (C10-C16)	4 ug/g dry	<4	<4	<4	460
F3 PHCs (C16-C34)	8 ug/g dry	20	32	42	22
F4 PHCs (C34-C50)	6 ug/g dry	83	88	87	48
Semi-Volatiles					
Acenaphthene	0.02 ug/g dry	<0.02	<0.02	-	0.04
Acenaphthylene	0.02 ug/g dry	<0.02	<0.02	-	<0.02
Anthracene	0.02 ug/g dry	<0.02	<0.02	-	<0.02
Benzo [a] anthracene	0.02 ug/g dry	<0.02	<0.02	-	<0.02
Benzo [a] pyrene	0.02 ug/g dry	<0.02	<0.02	-	<0.02
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	<0.02	-	<0.02
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	<0.02	-	<0.02
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	<0.02	-	<0.02
Chrysene	0.02 ug/g dry	<0.02	<0.02	-	<0.02
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	<0.02	-	<0.02
Fluoranthene	0.02 ug/g dry	<0.02	<0.02	-	0.03
Fluorene	0.02 ug/g dry	<0.02	<0.02	-	0.04
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	<0.02	-	<0.02
1-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	-	2.47
2-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	-	5.28
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	<0.04	-	7.76
Naphthalene	0.01 ug/g dry	<0.01	<0.01	-	4.80
Phenanthrene	0.02 ug/g dry	<0.02	<0.02	-	0.08
Pyrene	0.02 ug/g dry	<0.02	<0.02	-	0.03
2-Fluorobiphenyl	Surrogate	110%	92.1%	-	85.4%
Terphenyl-d14	Surrogate	129%	121%	-	110%
PCBs					
PCBs, total	0.05 ug/g dry	<0.05	<0.05	-	-

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 13-May-2022

Order Date: 6-May-2022

Project Description: 220200

	Client ID:	BH22-7-SS3	BH22-7-SS5	BH22-8-SS1	BH22-8-SS3
	Sample Date:	05-May-22 12:00	05-May-22 12:00	05-May-22 09:00	05-May-22 09:00
	Sample ID:	2219653-05	2219653-06	2219653-07	2219653-08
	MDL/Units	Soil	Soil	Soil	Soil
Decachlorobiphenyl	Surrogate	102%	104%	-	-

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 13-May-2022

Order Date: 6-May-2022

Project Description: 220200

	Client ID:	BH22-8-SS11	BH22-9-SS2	BH22-9-SS3	BH22-9-SS8
	Sample Date:	05-May-22 12:00	05-May-22 09:00	05-May-22 09:00	05-May-22 09:00
	Sample ID:	2219653-09	2219653-10	2219653-11	2219653-12
	MDL/Units	Soil	Soil	Soil	Soil
Physical Characteristics					
% Solids	0.1 % by Wt.	91.3	79.3	86.1	84.4
>75 um	0.1 %	85.4	35.1	-	61.2
<75 um	0.1 %	14.6	64.9	-	38.8
Texture	0.1 %	Coarse	Med/Fine	-	Coarse
General Inorganics					
SAR	0.01 N/A	2.50	10.5	-	6.43
Conductivity	5 uS/cm	537	1200	-	1090
pH	0.05 pH Units	8.78	7.45	-	7.75
Metals					
Antimony	1.0 ug/g dry	<1.0	<1.0	-	<1.0
Arsenic	1.0 ug/g dry	6.0	5.1	-	5.5
Barium	1.0 ug/g dry	45.4	165	-	116
Beryllium	0.5 ug/g dry	<0.5	0.8	-	0.7
Boron	5.0 ug/g dry	<5.0	7.8	-	6.8
Boron, available	0.5 ug/g dry	<0.5	<0.5	-	<0.5
Cadmium	0.5 ug/g dry	<0.5	<0.5	-	<0.5
Chromium	5.0 ug/g dry	13.6	59.5	-	45.0
Chromium (VI)	0.2 ug/g dry	<0.2	<0.2	-	<0.2
Cobalt	1.0 ug/g dry	6.6	16.7	-	14.4
Copper	5.0 ug/g dry	9.3	31.8	-	29.6
Lead	1.0 ug/g dry	11.7	8.9	-	9.7
Mercury	0.1 ug/g dry	<0.1	<0.1	-	<0.1
Molybdenum	1.0 ug/g dry	6.5	2.1	-	2.5
Nickel	5.0 ug/g dry	13.2	35.9	-	28.8
Selenium	1.0 ug/g dry	<1.0	<1.0	-	<1.0
Silver	0.3 ug/g dry	<0.3	<0.3	-	<0.3
Thallium	1.0 ug/g dry	<1.0	<1.0	-	<1.0
Uranium	1.0 ug/g dry	<1.0	<1.0	-	<1.0
Vanadium	10.0 ug/g dry	16.9	68.9	-	62.0
Zinc	20.0 ug/g dry	<20.0	66.0	-	62.5
Volatiles					
Acetone	0.50 ug/g dry	<0.50	<0.50	<0.50	<0.50
Benzene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Bromodichloromethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Bromoform	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 13-May-2022

Order Date: 6-May-2022

Project Description: 220200

	Client ID:	BH22-8-SS11	BH22-9-SS2	BH22-9-SS3	BH22-9-SS8
	Sample Date:	05-May-22 12:00	05-May-22 09:00	05-May-22 09:00	05-May-22 09:00
	Sample ID:	2219653-09	2219653-10	2219653-11	2219653-12
	MDL/Units	Soil	Soil	Soil	Soil
Bromomethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Chlorobenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Chloroform	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Dichlorodifluoromethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,2-Dichloroethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
cis-1,2-Dichloroethylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
trans-1,2-Dichloroethylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,2-Dichloropropane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
cis-1,3-Dichloropropylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
trans-1,3-Dichloropropylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene, total	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Ethylene dibromide (dibromoethane, 1	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Hexane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g dry	<0.50	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	0.50 ug/g dry	<0.50	<0.50	<0.50	<0.50
Methyl tert-butyl ether	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Styrene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Tetrachloroethylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Toluene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,1,1-Trichloroethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,1,2-Trichloroethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Trichloroethylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Vinyl chloride	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02

Certificate of Analysis

Report Date: 13-May-2022

Client: LRL Associates Ltd.

Order Date: 6-May-2022

Client PO:

Project Description: 220200

	Client ID:	BH22-8-SS11	BH22-9-SS2	BH22-9-SS3	BH22-9-SS8
	Sample Date:	05-May-22 12:00	05-May-22 09:00	05-May-22 09:00	05-May-22 09:00
	Sample ID:	2219653-09	2219653-10	2219653-11	2219653-12
	MDL/Units	Soil	Soil	Soil	Soil
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
o-Xylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
4-Bromofluorobenzene	Surrogate	120%	130%	126%	128%
Dibromofluoromethane	Surrogate	90.4%	96.4%	92.7%	90.6%
Toluene-d8	Surrogate	130%	118%	119%	115%
Hydrocarbons					
F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	<7	<7
F2 PHCs (C10-C16)	4 ug/g dry	<4	<4	<4	<4
F3 PHCs (C16-C34)	8 ug/g dry	41	42	10	40
F4 PHCs (C34-C50)	6 ug/g dry	75	128 [2]	57	141 [2]
F4G PHCs (gravimetric)	50 ug/g dry	-	353	-	462
Semi-Volatiles					
Acenaphthene	0.02 ug/g dry	-	-	<0.02	-
Acenaphthylene	0.02 ug/g dry	-	-	<0.02	-
Anthracene	0.02 ug/g dry	-	-	<0.02	-
Benzo [a] anthracene	0.02 ug/g dry	-	-	<0.02	-
Benzo [a] pyrene	0.02 ug/g dry	-	-	<0.02	-
Benzo [b] fluoranthene	0.02 ug/g dry	-	-	<0.02	-
Benzo [g,h,i] perylene	0.02 ug/g dry	-	-	<0.02	-
Benzo [k] fluoranthene	0.02 ug/g dry	-	-	<0.02	-
Chrysene	0.02 ug/g dry	-	-	<0.02	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	-	-	<0.02	-
Fluoranthene	0.02 ug/g dry	-	-	<0.02	-
Fluorene	0.02 ug/g dry	-	-	<0.02	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	-	-	<0.02	-
1-Methylnaphthalene	0.02 ug/g dry	-	-	0.04	-
2-Methylnaphthalene	0.02 ug/g dry	-	-	0.03	-
Methylnaphthalene (1&2)	0.04 ug/g dry	-	-	0.07	-
Naphthalene	0.01 ug/g dry	-	-	<0.01	-
Phenanthrene	0.02 ug/g dry	-	-	<0.02	-
Pyrene	0.02 ug/g dry	-	-	<0.02	-
2-Fluorobiphenyl	Surrogate	-	-	68.2%	-
Terphenyl-d14	Surrogate	-	-	90.7%	-

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 13-May-2022

Order Date: 6-May-2022

Project Description: 220200

	Client ID:	BH22-10-SS2	BH22-10-SS11	BH22-11-SS1	BH22-12-SS3
	Sample Date:	05-May-22 12:00	05-May-22 12:00	05-May-22 12:00	05-May-22 12:00
	Sample ID:	2219653-13	2219653-14	2219653-15	2219653-16
	MDL/Units	Soil	Soil	Soil	Soil
Physical Characteristics					
% Solids	0.1 % by Wt.	91.6	86.3	93.9	84.9
>75 um	0.1 %	-	-	65.3	93.2
<75 um	0.1 %	-	-	34.7	6.8
Texture	0.1 %	-	-	Coarse	Coarse
General Inorganics					
SAR	0.01 N/A	-	-	6.43	5.67
Conductivity	5 uS/cm	-	-	830	885
pH	0.05 pH Units	-	-	7.85	7.60
Metals					
Antimony	1.0 ug/g dry	-	-	<1.0	<1.0
Arsenic	1.0 ug/g dry	-	-	3.3	1.7
Barium	1.0 ug/g dry	-	-	229	32.0
Beryllium	0.5 ug/g dry	-	-	<0.5	<0.5
Boron	5.0 ug/g dry	-	-	11.7	<5.0
Boron, available	0.5 ug/g dry	-	-	<0.5	<0.5
Cadmium	0.5 ug/g dry	-	-	<0.5	<0.5
Chromium	5.0 ug/g dry	-	-	14.1	7.4
Chromium (VI)	0.2 ug/g dry	-	-	<0.2	<0.2
Cobalt	1.0 ug/g dry	-	-	7.7	3.6
Copper	5.0 ug/g dry	-	-	12.8	10.3
Lead	1.0 ug/g dry	-	-	6.4	3.1
Mercury	0.1 ug/g dry	-	-	<0.1	<0.1
Molybdenum	1.0 ug/g dry	-	-	1.7	<1.0
Nickel	5.0 ug/g dry	-	-	18.2	7.1
Selenium	1.0 ug/g dry	-	-	<1.0	<1.0
Silver	0.3 ug/g dry	-	-	<0.3	<0.3
Thallium	1.0 ug/g dry	-	-	<1.0	<1.0
Uranium	1.0 ug/g dry	-	-	<1.0	<1.0
Vanadium	10.0 ug/g dry	-	-	15.6	13.6
Zinc	20.0 ug/g dry	-	-	<20.0	<20.0
Volatiles					
Acetone	0.50 ug/g dry	<0.50	<0.50	<0.50	<0.50
Benzene	0.02 ug/g dry	1.25	3.33	<0.02	<0.02
Bromodichloromethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Bromoform	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 13-May-2022

Order Date: 6-May-2022

Project Description: 220200

	Client ID:	BH22-10-SS2	BH22-10-SS11	BH22-11-SS1	BH22-12-SS3
	Sample Date:	05-May-22 12:00	05-May-22 12:00	05-May-22 12:00	05-May-22 12:00
	Sample ID:	2219653-13	2219653-14	2219653-15	2219653-16
	MDL/Units	Soil	Soil	Soil	Soil
Bromomethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Chlorobenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Chloroform	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Dichlorodifluoromethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,2-Dichloroethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
cis-1,2-Dichloroethylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
trans-1,2-Dichloroethylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,2-Dichloropropane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
cis-1,3-Dichloropropylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
trans-1,3-Dichloropropylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene, total	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	0.05 ug/g dry	4.00	59.7	<0.05	<0.05
Ethylene dibromide (dibromoethane, 1	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Hexane	0.05 ug/g dry	8.26	38.0	<0.05	<0.05
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g dry	<0.50	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	0.50 ug/g dry	<0.50	<0.50	<0.50	<0.50
Methyl tert-butyl ether	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Styrene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Tetrachloroethylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Toluene	0.05 ug/g dry	4.61	92.3	<0.05	<0.05
1,1,1-Trichloroethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
1,1,2-Trichloroethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Trichloroethylene	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	0.05 ug/g dry	<0.05	<0.05	<0.05	<0.05
Vinyl chloride	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 13-May-2022

Order Date: 6-May-2022

Project Description: 220200

	Client ID:	BH22-10-SS2	BH22-10-SS11	BH22-11-SS1	BH22-12-SS3
	Sample Date:	05-May-22 12:00	05-May-22 12:00	05-May-22 12:00	05-May-22 12:00
	Sample ID:	2219653-13	2219653-14	2219653-15	2219653-16
	MDL/Units	Soil	Soil	Soil	Soil
m,p-Xylenes	0.05 ug/g dry	16.7	246	<0.05	<0.05
o-Xylene	0.05 ug/g dry	4.78	84.9	<0.05	<0.05
Xylenes, total	0.05 ug/g dry	21.5	331	<0.05	<0.05
4-Bromofluorobenzene	Surrogate	114%	133%	119%	127%
Dibromofluoromethane	Surrogate	87.9%	91.3%	89.7%	91.4%
Toluene-d8	Surrogate	112%	116%	112%	118%
Hydrocarbons					
F1 PHCs (C6-C10)	7 ug/g dry	77	419	<7	<7
F2 PHCs (C10-C16)	4 ug/g dry	259	61	<4	<4
F3 PHCs (C16-C34)	8 ug/g dry	98	100	22	44
F4 PHCs (C34-C50)	6 ug/g dry	85	388 [2]	83	136 [2]
F4G PHCs (gravimetric)	50 ug/g dry	-	603	-	318
Semi-Volatiles					
Acenaphthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Acenaphthylene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [a] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [a] pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Chrysene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Fluoranthene	0.02 ug/g dry	<0.02	0.02	<0.02	<0.02
Fluorene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
1-Methylnaphthalene	0.02 ug/g dry	1.40	0.44	<0.02	<0.02
2-Methylnaphthalene	0.02 ug/g dry	2.92	0.88	<0.02	<0.02
Methylnaphthalene (1&2)	0.04 ug/g dry	4.32	1.32	<0.04	<0.04
Naphthalene	0.01 ug/g dry	2.52	1.19	<0.01	<0.01
Phenanthrene	0.02 ug/g dry	0.04	0.02	<0.02	<0.02
Pyrene	0.02 ug/g dry	<0.02	0.03	<0.02	<0.02
2-Fluorobiphenyl	Surrogate	96.9%	98.1%	120%	96.4%
Terphenyl-d14	Surrogate	100%	108%	116%	112%
PCBs					

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 13-May-2022

Order Date: 6-May-2022

Project Description: 220200

	Client ID:	BH22-10-SS2	BH22-10-SS11	BH22-11-SS1	BH22-12-SS3
	Sample Date:	05-May-22 12:00	05-May-22 12:00	05-May-22 12:00	05-May-22 12:00
	Sample ID:	2219653-13	2219653-14	2219653-15	2219653-16
	MDL/Units	Soil	Soil	Soil	Soil
PCBs, total	0.05 ug/g dry	-	-	<0.05	-
Decachlorobiphenyl	Surrogate	-	-	101%	-

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 13-May-2022

Order Date: 6-May-2022

Project Description: 220200

	Client ID:	BH22-13-SS4	BH22-13-SS5	-	-
	Sample Date:	05-May-22 12:00	05-May-22 12:00	-	-
	Sample ID:	2219653-17	2219653-18	-	-
	MDL/Units	Soil	Soil	-	-
Physical Characteristics					
% Solids	0.1 % by Wt.	89.7	77.9	-	-
>75 um	0.1 %	41.9	41.9	-	-
<75 um	0.1 %	58.1	58.1	-	-
Texture	0.1 %	Med/Fine	Med/Fine	-	-
General Inorganics					
SAR	0.01 N/A	3.67	7.13	-	-
Conductivity	5 uS/cm	872	1060	-	-
pH	0.05 pH Units	7.59	7.72	-	-
Metals					
Antimony	1.0 ug/g dry	<1.0	<1.0	-	-
Arsenic	1.0 ug/g dry	6.3	1.6	-	-
Barium	1.0 ug/g dry	92.9	47.1	-	-
Beryllium	0.5 ug/g dry	<0.5	<0.5	-	-
Boron	5.0 ug/g dry	6.9	<5.0	-	-
Boron, available	0.5 ug/g dry	<0.5	<0.5	-	-
Cadmium	0.5 ug/g dry	<0.5	<0.5	-	-
Chromium	5.0 ug/g dry	15.9	11.9	-	-
Chromium (VI)	0.2 ug/g dry	<0.2	<0.2	-	-
Cobalt	1.0 ug/g dry	8.4	3.9	-	-
Copper	5.0 ug/g dry	20.0	12.2	-	-
Lead	1.0 ug/g dry	7.1	3.8	-	-
Mercury	0.1 ug/g dry	<0.1	<0.1	-	-
Molybdenum	1.0 ug/g dry	2.2	<1.0	-	-
Nickel	5.0 ug/g dry	27.4	9.0	-	-
Selenium	1.0 ug/g dry	<1.0	<1.0	-	-
Silver	0.3 ug/g dry	<0.3	<0.3	-	-
Thallium	1.0 ug/g dry	<1.0	<1.0	-	-
Uranium	1.0 ug/g dry	1.1	<1.0	-	-
Vanadium	10.0 ug/g dry	24.3	20.2	-	-
Zinc	20.0 ug/g dry	32.0	<20.0	-	-
Volatiles					
Acetone	0.50 ug/g dry	<0.50	<0.50	-	-
Benzene	0.02 ug/g dry	<0.02	<0.02	-	-
Bromodichloromethane	0.05 ug/g dry	<0.05	<0.05	-	-
Bromoform	0.05 ug/g dry	<0.05	<0.05	-	-

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 13-May-2022

Order Date: 6-May-2022

Project Description: 220200

	Client ID:	BH22-13-SS4	BH22-13-SS5	-	-
	Sample Date:	05-May-22 12:00	05-May-22 12:00	-	-
	Sample ID:	2219653-17	2219653-18	-	-
	MDL/Units	Soil	Soil	-	-
Bromomethane	0.05 ug/g dry	<0.05	<0.05	-	-
Carbon Tetrachloride	0.05 ug/g dry	<0.05	<0.05	-	-
Chlorobenzene	0.05 ug/g dry	<0.05	<0.05	-	-
Chloroform	0.05 ug/g dry	<0.05	<0.05	-	-
Dibromochloromethane	0.05 ug/g dry	<0.05	<0.05	-	-
Dichlorodifluoromethane	0.05 ug/g dry	<0.05	<0.05	-	-
1,2-Dichlorobenzene	0.05 ug/g dry	<0.05	<0.05	-	-
1,3-Dichlorobenzene	0.05 ug/g dry	<0.05	<0.05	-	-
1,4-Dichlorobenzene	0.05 ug/g dry	<0.05	<0.05	-	-
1,1-Dichloroethane	0.05 ug/g dry	<0.05	<0.05	-	-
1,2-Dichloroethane	0.05 ug/g dry	<0.05	<0.05	-	-
1,1-Dichloroethylene	0.05 ug/g dry	<0.05	<0.05	-	-
cis-1,2-Dichloroethylene	0.05 ug/g dry	<0.05	<0.05	-	-
trans-1,2-Dichloroethylene	0.05 ug/g dry	<0.05	<0.05	-	-
1,2-Dichloropropane	0.05 ug/g dry	<0.05	<0.05	-	-
cis-1,3-Dichloropropylene	0.05 ug/g dry	<0.05	<0.05	-	-
trans-1,3-Dichloropropylene	0.05 ug/g dry	<0.05	<0.05	-	-
1,3-Dichloropropene, total	0.05 ug/g dry	<0.05	<0.05	-	-
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	-	-
Ethylene dibromide (dibromoethane, 1	0.05 ug/g dry	<0.05	<0.05	-	-
Hexane	0.05 ug/g dry	<0.05	<0.05	-	-
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g dry	<0.50	<0.50	-	-
Methyl Isobutyl Ketone	0.50 ug/g dry	<0.50	<0.50	-	-
Methyl tert-butyl ether	0.05 ug/g dry	<0.05	<0.05	-	-
Methylene Chloride	0.05 ug/g dry	<0.05	<0.05	-	-
Styrene	0.05 ug/g dry	<0.05	<0.05	-	-
1,1,1,2-Tetrachloroethane	0.05 ug/g dry	<0.05	<0.05	-	-
1,1,2,2-Tetrachloroethane	0.05 ug/g dry	<0.05	<0.05	-	-
Tetrachloroethylene	0.05 ug/g dry	<0.05	<0.05	-	-
Toluene	0.05 ug/g dry	<0.05	<0.05	-	-
1,1,1-Trichloroethane	0.05 ug/g dry	<0.05	<0.05	-	-
1,1,2-Trichloroethane	0.05 ug/g dry	<0.05	<0.05	-	-
Trichloroethylene	0.05 ug/g dry	<0.05	<0.05	-	-
Trichlorofluoromethane	0.05 ug/g dry	<0.05	<0.05	-	-
Vinyl chloride	0.02 ug/g dry	<0.02	<0.02	-	-

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 13-May-2022

Order Date: 6-May-2022

Project Description: 220200

	Client ID:	BH22-13-SS4	BH22-13-SS5	-	-
	Sample Date:	05-May-22 12:00	05-May-22 12:00	-	-
	Sample ID:	2219653-17	2219653-18	-	-
	MDL/Units	Soil	Soil	-	-
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	-	-
o-Xylene	0.05 ug/g dry	<0.05	<0.05	-	-
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	-	-
4-Bromofluorobenzene	Surrogate	124%	136%	-	-
Dibromofluoromethane	Surrogate	89.1%	98.0%	-	-
Toluene-d8	Surrogate	115%	128%	-	-
Hydrocarbons					
F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	-	-
F2 PHCs (C10-C16)	4 ug/g dry	33	13	-	-
F3 PHCs (C16-C34)	8 ug/g dry	126	196	-	-
F4 PHCs (C34-C50)	6 ug/g dry	410 [2]	1040 [2]	-	-
F4G PHCs (gravimetric)	50 ug/g dry	836	1770	-	-
Semi-Volatiles					
Acenaphthene	0.02 ug/g dry	<0.02	<0.02	-	-
Acenaphthylene	0.02 ug/g dry	<0.02	<0.02	-	-
Anthracene	0.02 ug/g dry	<0.02	<0.02	-	-
Benzo [a] anthracene	0.02 ug/g dry	<0.02	<0.02	-	-
Benzo [a] pyrene	0.02 ug/g dry	<0.02	<0.02	-	-
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	<0.02	-	-
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	<0.02	-	-
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	<0.02	-	-
Chrysene	0.02 ug/g dry	<0.02	<0.02	-	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	<0.02	-	-
Fluoranthene	0.02 ug/g dry	<0.02	<0.02	-	-
Fluorene	0.02 ug/g dry	<0.02	<0.02	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	<0.02	-	-
1-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	-	-
2-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	-	-
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	<0.04	-	-
Naphthalene	0.01 ug/g dry	<0.01	<0.01	-	-
Phenanthrene	0.02 ug/g dry	<0.02	<0.02	-	-
Pyrene	0.02 ug/g dry	<0.02	<0.02	-	-
2-Fluorobiphenyl	Surrogate	103%	85.5%	-	-
Terphenyl-d14	Surrogate	118%	97.4%	-	-

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
Conductivity	ND	5	uS/cm						
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
F4G PHCs (gravimetric)	ND	50	ug/g						
Metals									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron, available	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium (VI)	ND	0.2	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Mercury	ND	0.1	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
PCBs									
PCBs, total	ND	0.05	ug/g						
Surrogate: Decachlorobiphenyl	*0.0953*		*ug/g*		*95.3*	*60-140*			
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	*1.28*		*ug/g*		*96.3*	*50-140*			
Surrogate: Terphenyl-d14	*1.49*		*ug/g*		*112*	*50-140*			
Volatiles									
Acetone	ND	0.50	ug/g						
Benzene	ND	0.02	ug/g						

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Bromodichloromethane	ND	0.05	ug/g						
Bromoform	ND	0.05	ug/g						
Bromomethane	ND	0.05	ug/g						
Carbon Tetrachloride	ND	0.05	ug/g						
Chlorobenzene	ND	0.05	ug/g						
Chloroform	ND	0.05	ug/g						
Dibromochloromethane	ND	0.05	ug/g						
Dichlorodifluoromethane	ND	0.05	ug/g						
1,2-Dichlorobenzene	ND	0.05	ug/g						
1,3-Dichlorobenzene	ND	0.05	ug/g						
1,4-Dichlorobenzene	ND	0.05	ug/g						
1,1-Dichloroethane	ND	0.05	ug/g						
1,2-Dichloroethane	ND	0.05	ug/g						
1,1-Dichloroethylene	ND	0.05	ug/g						
cis-1,2-Dichloroethylene	ND	0.05	ug/g						
trans-1,2-Dichloroethylene	ND	0.05	ug/g						
1,2-Dichloropropane	ND	0.05	ug/g						
cis-1,3-Dichloropropylene	ND	0.05	ug/g						
trans-1,3-Dichloropropylene	ND	0.05	ug/g						
1,3-Dichloropropene, total	ND	0.05	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Ethylene dibromide (dibromoethane, 1,2-	ND	0.05	ug/g						
Hexane	ND	0.05	ug/g						
Methyl Ethyl Ketone (2-Butanone)	ND	0.50	ug/g						
Methyl Isobutyl Ketone	ND	0.50	ug/g						
Methyl tert-butyl ether	ND	0.05	ug/g						
Methylene Chloride	ND	0.05	ug/g						
Styrene	ND	0.05	ug/g						
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g						
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g						
Tetrachloroethylene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
1,1,1-Trichloroethane	ND	0.05	ug/g						
1,1,2-Trichloroethane	ND	0.05	ug/g						
Trichloroethylene	ND	0.05	ug/g						
Trichlorofluoromethane	ND	0.05	ug/g						
Vinyl chloride	ND	0.02	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: 4-Bromofluorobenzene	*9.04*		*ug/g*		*113*	*50-140*			
Surrogate: Dibromofluoromethane	*7.32*		*ug/g*		*91.5*	*50-140*			
Surrogate: Toluene-d8	*8.44*		*ug/g*		*106*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
SAR	5.16	0.01	N/A	5.03			2.4	30	
Conductivity	348	5	uS/cm	349			0.4	5	
pH	7.25	0.05	pH Units	7.31			0.8	2.3	
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g	ND			NC	30	
F3 PHCs (C16-C34)	ND	8	ug/g	ND			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g	ND			NC	30	
Metals									
Antimony	ND	1.0	ug/g	ND			NC	30	
Arsenic	4.1	1.0	ug/g	5.0			18.9	30	
Barium	40.7	1.0	ug/g	48.6			17.6	30	
Beryllium	ND	0.5	ug/g	ND			NC	30	
Boron, available	2.46	0.5	ug/g	2.50			1.5	35	
Boron	ND	5.0	ug/g	ND			NC	30	
Cadmium	ND	0.5	ug/g	ND			NC	30	
Chromium (VI)	ND	0.2	ug/g	ND			NC	35	
Chromium	9.0	5.0	ug/g	10.0			10.7	30	
Cobalt	3.5	1.0	ug/g	4.1			14.8	30	
Copper	8.6	5.0	ug/g	10.2			16.8	30	
Lead	2.5	1.0	ug/g	2.6			6.9	30	
Mercury	ND	0.1	ug/g	ND			NC	30	
Molybdenum	1.3	1.0	ug/g	1.4			7.1	30	
Nickel	7.4	5.0	ug/g	8.6			14.4	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	ND	1.0	ug/g	ND			NC	30	
Vanadium	16.9	10.0	ug/g	19.0			11.7	30	
Zinc	ND	20.0	ug/g	ND			NC	30	
PCBs									
PCBs, total	ND	0.05	ug/g	ND			NC	40	
Surrogate: Decachlorobiphenyl	*0.107*		*ug/g*		*92.2*	*60-140*			
Physical Characteristics									
% Solids	91.1	0.1	% by Wt.	91.1			0.1	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	0.057	0.02	ug/g	0.036			NC	40	
2-Methylnaphthalene	0.048	0.02	ug/g	0.035			32.6	40	
Naphthalene	0.016	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	*1.25*		*ug/g*		*80.4*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: Terphenyl-d14	*1.41*		*ug/g*		*90.8*	*50-140*			
Volatiles									
Acetone	ND	0.50	ug/g	ND			NC	50	
Benzene	ND	0.02	ug/g	ND			NC	50	
Bromodichloromethane	ND	0.05	ug/g	ND			NC	50	
Bromoform	ND	0.05	ug/g	ND			NC	50	
Bromomethane	ND	0.05	ug/g	ND			NC	50	
Carbon Tetrachloride	ND	0.05	ug/g	ND			NC	50	
Chlorobenzene	ND	0.05	ug/g	ND			NC	50	
Chloroform	ND	0.05	ug/g	ND			NC	50	
Dibromochloromethane	ND	0.05	ug/g	ND			NC	50	
Dichlorodifluoromethane	ND	0.05	ug/g	ND			NC	50	
1,2-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,3-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,4-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,1-Dichloroethane	ND	0.05	ug/g	ND			NC	50	
1,2-Dichloroethane	ND	0.05	ug/g	ND			NC	50	
1,1-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
cis-1,2-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
trans-1,2-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
1,2-Dichloropropane	ND	0.05	ug/g	ND			NC	50	
cis-1,3-Dichloropropylene	ND	0.05	ug/g	ND			NC	50	
trans-1,3-Dichloropropylene	ND	0.05	ug/g	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g	ND			NC	50	
Ethylene dibromide (dibromoethane, 1,2	ND	0.05	ug/g	ND			NC	50	
Hexane	ND	0.05	ug/g	ND			NC	50	
Methyl Ethyl Ketone (2-Butanone)	ND	0.50	ug/g	ND			NC	50	
Methyl Isobutyl Ketone	ND	0.50	ug/g	ND			NC	50	
Methyl tert-butyl ether	ND	0.05	ug/g	ND			NC	50	
Methylene Chloride	ND	0.05	ug/g	ND			NC	50	
Styrene	ND	0.05	ug/g	ND			NC	50	
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g	ND			NC	50	
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g	ND			NC	50	
Tetrachloroethylene	ND	0.05	ug/g	ND			NC	50	
Toluene	ND	0.05	ug/g	ND			NC	50	
1,1,1-Trichloroethane	ND	0.05	ug/g	ND			NC	50	
1,1,2-Trichloroethane	ND	0.05	ug/g	ND			NC	50	
Trichloroethylene	ND	0.05	ug/g	ND			NC	50	
Trichlorofluoromethane	ND	0.05	ug/g	ND			NC	50	
Vinyl chloride	ND	0.02	ug/g	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g	ND			NC	50	
o-Xylene	ND	0.05	ug/g	ND			NC	50	
Surrogate: 4-Bromofluorobenzene	*11.5*		*ug/g*		*122*	*50-140*			
Surrogate: Dibromofluoromethane	*8.89*		*ug/g*		*94.8*	*50-140*			
Surrogate: Toluene-d8	*10.8*		*ug/g*		*115*	*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)	222	7	ug/g	ND	111	80-120			
F2 PHCs (C10-C16)	70	4	ug/g	ND	79.8	60-140			
F3 PHCs (C16-C34)	214	8	ug/g	ND	100	60-140			
F4 PHCs (C34-C50)	141	6	ug/g	ND	104	60-140			
F4G PHCs (gravimetric)	860	50	ug/g	ND	86.0	80-120			
Metals									
Antimony	38.0	1.0	ug/g	ND	76.1	70-130			
Arsenic	48.9	1.0	ug/g	2.0	93.7	70-130			
Barium	61.2	1.0	ug/g	19.4	83.6	70-130			
Beryllium	44.1	0.5	ug/g	ND	88.1	70-130			
Boron, available	5.05	0.5	ug/g	2.50	51.1	70-122			QM-07
Boron	44.5	5.0	ug/g	ND	87.3	70-130			
Cadmium	42.6	0.5	ug/g	ND	85.3	70-130			
Chromium (VI)	8.9	0.2	ug/g	ND	85.5	70-130			
Chromium	46.4	5.0	ug/g	ND	84.8	70-130			
Cobalt	43.5	1.0	ug/g	1.6	83.7	70-130			
Copper	44.1	5.0	ug/g	ND	80.0	70-130			
Lead	40.0	1.0	ug/g	1.1	77.8	70-130			
Mercury	1.41	0.1	ug/g	ND	93.8	70-130			
Molybdenum	42.4	1.0	ug/g	ND	83.7	70-130			
Nickel	44.4	5.0	ug/g	ND	82.0	70-130			
Selenium	42.8	1.0	ug/g	ND	85.5	70-130			
Thallium	44.6	1.0	ug/g	ND	89.1	70-130			
Uranium	43.6	1.0	ug/g	ND	86.9	70-130			
Vanadium	50.8	10.0	ug/g	ND	86.4	70-130			
Zinc	47.9	20.0	ug/g	ND	81.8	70-130			
PCBs									
PCBs, total	0.449	0.05	ug/g	ND	97.2	60-140			
Surrogate: Decachlorobiphenyl	*0.107*		*ug/g*		*92.8*	*60-140*			
Semi-Volatiles									
Acenaphthene	0.187	0.02	ug/g	ND	96.4	50-140			
Acenaphthylene	0.153	0.02	ug/g	ND	78.7	50-140			
Anthracene	0.153	0.02	ug/g	ND	78.9	50-140			
Benzo [a] anthracene	0.134	0.02	ug/g	ND	69.3	50-140			
Benzo [a] pyrene	0.170	0.02	ug/g	ND	87.6	50-140			
Benzo [b] fluoranthene	0.197	0.02	ug/g	ND	102	50-140			
Benzo [g,h,i] perylene	0.178	0.02	ug/g	ND	91.9	50-140			
Benzo [k] fluoranthene	0.176	0.02	ug/g	ND	90.9	50-140			
Chrysene	0.182	0.02	ug/g	ND	93.9	50-140			
Dibenzo [a,h] anthracene	0.188	0.02	ug/g	ND	96.8	50-140			
Fluoranthene	0.153	0.02	ug/g	ND	79.0	50-140			
Fluorene	0.137	0.02	ug/g	ND	70.8	50-140			
Indeno [1,2,3-cd] pyrene	0.183	0.02	ug/g	ND	94.3	50-140			
1-Methylnaphthalene	0.208	0.02	ug/g	0.036	88.6	50-140			
2-Methylnaphthalene	0.212	0.02	ug/g	0.035	91.4	50-140			
Naphthalene	0.193	0.01	ug/g	ND	99.9	50-140			
Phenanthrene	0.173	0.02	ug/g	ND	89.2	50-140			
Pyrene	0.168	0.02	ug/g	ND	86.6	50-140			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: 2-Fluorobiphenyl	*1.64*		*ug/g*		*106*	*50-140*			
Surrogate: Terphenyl-d14	*1.75*		*ug/g*		*113*	*50-140*			
Volatiles									
Acetone	9.81	0.50	ug/g	ND	98.1	50-140			
Benzene	2.88	0.02	ug/g	ND	72.1	60-130			
Bromodichloromethane	4.05	0.05	ug/g	ND	101	60-130			
Bromoform	3.51	0.05	ug/g	ND	87.7	60-130			
Bromomethane	3.49	0.05	ug/g	ND	87.2	50-140			
Carbon Tetrachloride	2.95	0.05	ug/g	ND	73.8	60-130			
Chlorobenzene	3.91	0.05	ug/g	ND	97.7	60-130			
Chloroform	3.07	0.05	ug/g	ND	76.8	60-130			
Dibromochloromethane	3.63	0.05	ug/g	ND	90.8	60-130			
Dichlorodifluoromethane	3.23	0.05	ug/g	ND	80.7	50-140			
1,2-Dichlorobenzene	3.83	0.05	ug/g	ND	95.8	60-130			
1,3-Dichlorobenzene	3.91	0.05	ug/g	ND	97.8	60-130			
1,4-Dichlorobenzene	3.87	0.05	ug/g	ND	96.8	60-130			
1,1-Dichloroethane	3.27	0.05	ug/g	ND	81.7	60-130			
1,2-Dichloroethane	2.97	0.05	ug/g	ND	74.4	60-130			
1,1-Dichloroethylene	4.15	0.05	ug/g	ND	104	60-130			
cis-1,2-Dichloroethylene	2.93	0.05	ug/g	ND	73.2	60-130			
trans-1,2-Dichloroethylene	3.84	0.05	ug/g	ND	95.9	60-130			
1,2-Dichloropropane	2.91	0.05	ug/g	ND	72.7	60-130			
cis-1,3-Dichloropropylene	3.69	0.05	ug/g	ND	92.4	60-130			
trans-1,3-Dichloropropylene	3.40	0.05	ug/g	ND	85.1	60-130			
Ethylbenzene	3.82	0.05	ug/g	ND	95.5	60-130			
Ethylene dibromide (dibromoethane, 1,2-	4.82	0.05	ug/g	ND	121	60-130			
Hexane	3.42	0.05	ug/g	ND	85.6	60-130			
Methyl Ethyl Ketone (2-Butanone)	7.26	0.50	ug/g	ND	72.6	50-140			
Methyl Isobutyl Ketone	7.69	0.50	ug/g	ND	76.9	50-140			
Methyl tert-butyl ether	9.12	0.05	ug/g	ND	91.2	50-140			
Methylene Chloride	3.47	0.05	ug/g	ND	86.6	60-130			
Styrene	3.70	0.05	ug/g	ND	92.4	60-130			
1,1,1,2-Tetrachloroethane	4.31	0.05	ug/g	ND	108	60-130			
1,1,2,2-Tetrachloroethane	3.25	0.05	ug/g	ND	81.2	60-130			
Tetrachloroethylene	3.98	0.05	ug/g	ND	99.4	60-130			
Toluene	4.01	0.05	ug/g	ND	100	60-130			
1,1,1-Trichloroethane	3.05	0.05	ug/g	ND	76.3	60-130			
1,1,2-Trichloroethane	2.93	0.05	ug/g	ND	73.1	60-130			
Trichloroethylene	3.26	0.05	ug/g	ND	81.5	60-130			
Trichlorofluoromethane	3.96	0.05	ug/g	ND	99.1	50-140			
Vinyl chloride	4.43	0.02	ug/g	ND	111	50-140			
m,p-Xylenes	7.26	0.05	ug/g	ND	90.7	60-130			
o-Xylene	3.69	0.05	ug/g	ND	92.3	60-130			
Surrogate: 4-Bromofluorobenzene	*9.06*		*ug/g*		*113*	*50-140*			
Surrogate: Dibromofluoromethane	*7.65*		*ug/g*		*95.6*	*50-140*			
Surrogate: Toluene-d8	*8.15*		*ug/g*		*102*	*50-140*			

Qualifier Notes:

Login Qualifiers :

Container and COC sample IDs don't match - Sample labelled as BH22-13-SS3, lid is labelled 3-3, chain of custody reads BH22-3-SS3

Applies to samples: BH22-13-SS3

Sample Qualifiers :

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

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

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.
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.

PARACE LABORATORIES LTI

Paracel ID: 2219653

vd.
08
com

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2219653	№ 137271

Client Name: LRL Associates Ltd.
Contact Name: Devin Clouthier
Address: 5430 Canotek Road, Ottawa, ON K1J 9G2
Telephone: 613-842-3434

Project Ref: 220200
Quote #:
PO #:
E-mail: dclouthier@lrl.ca anoud@lrl.ca

Page 1 of 2

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

☒ REG 153/04 ☐ REG 406/19

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

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

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

	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)	Inorganics (pH, EC, SAR, texture)	PCB			
1	BH22-1-SS2	S		2	May 4/22	AM	X	X		X	X	X	X	X				
2	BH22-1-SS5			2	May 4/22	AM									X			
3	BH22-2-SS3			3	May 4/22	PM	X	X	X	X	X	X	X	X				
4	BH22-3-SS3			3	May 5/22	PM	X	X	X	X	X	X	X	X				
5	BH22-7-SS3			3	May 5/22	PM	X	X	X	X	X	X	X	X	X			
6	BH22-7-SS5			3	May 5/22	PM	X	X	X	X	X	X	X	X	X			
7	BH22-8-SS1			2	May 5/22	AM	X	X		X	X	X	X	X				
8	BH22-8-SS3			2	May 5/22	AM	X	X	X									
9	BH22-8-SS11			2	May 5/22	PM	X	X		X	X	X	X	X				
10	BH22-9-SS2			2	May 5/22	AM	X	X		X	X	X	X	X				

* ↓

Comments:

Method of Delivery: Drop Box

Relinquished By (Sign):	Received By Driver/Depot:	Received at Lab: Sunreet Dhumal	Verified By:
Relinquished By (Print): Devin Clouthier	Date/Time:	Date/Time: May 06 2022 04:17	Date/Time: May 6/2022 1757
Date/Time: May 6/22 3:45pm	Temperature: °C	Temperature: 9.1 °C	pH Verified: ☐ By:

PARACEL LABORATORIES LTD

Paracel ID: 2219653

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
	№ 137273

Client Name: LRL Associates Ltd.	Project Ref: 220260	Page 2 of 2
Contact Name: Devin Clouthier	Quote #:	Turnaround Time
Address: 5430 Canotek Road, Ottawa, ON K1J 9G2	PO #:	☐ 1 day ☐ 3 day
	E-mail: dclouthier@lrlca.com	☐ 2 day ☒ Regular
Telephone: 613-842-3434		Date Required:

☒ REG 153/04 ☐ REG 406/19	Other Regulation	Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)
☐ Table 1 ☐ Res/Park ☐ Med/Fine	☐ REG 558 ☐ PWQO	
☐ Table 2 ☐ Ind/Comm ☐ Coarse	☐ CCME ☐ MISA	
☒ Table 3 ☐ Agri/Other	☐ SU - Sani ☐ SU - Storm	
☐ Table ___	Mun:	
For RSC: ☒ Yes ☐ No	☐ Other:	

	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)	Inorganics (pH, EC, SAR, Texture)	PCB			
1	BH22-9-SS3	S		2	May 5/22	AM	X	X	X									
2	BH22-9-SS8	↓		2	May 5/22	AM	X	X		X	X	X	X	X				
3	BH22-10-SS2			2	May 5/22	PM	X	X	X									
4	BH22-10-SS11			2	May 5/22	PM	X	X	X	X								
5	BH22-11-SS1			3	May 5/22	AM	X	X	X	X	X	X	X	X	X			
6	BH22-12-SS3			3	May 5/22	PM	X	X	X	X	X	X	X	X				
7	BH22-13-SS4			3	May 5/22	PM	X	X	X	X	X	X	X	X				
8	BH22-13-SS5	↓		3	May 5/22	PM	X	X	X	X	X	X	X	X				
9																		
10																		

Comments: Metals by ICP for BH22-10-SS11 should not be analyzed

Method of Delivery:

Relinquished By (Sign):	Received By Driver/Depot:	Received at Lab: Jvneepam Dhaliwal 04:17	Verified By:
Relinquished By (Print): Devin Clouthier	Date/Time:	Date/Time: May 06 2022	Date/Time: May 6 2022 17:17
Date/Time: May 6/22 3:45 pm	Temperature: °C	Temperature: 9.1 °C	pH Verified: ☐ By:

PARACEL LABORATORIES LTD.
TRUSTED. RESPONSIVE. RELIABLE.

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

Certificate of Analysis

LRL Associates Ltd.

5430 Canotek Road
Ottawa, ON K1J 9G2
Attn: Devin Clouthier

Client PO:
Project: 220200
Custody: 60436,60437

Report Date: 4-Jan-2023
Order Date: 22-Dec-2022

Order #: 2252428

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

Paracel ID	Client ID
2252428-01	BH22-19-SS2
2252428-02	BH22-19-SS4
2252428-03	BH22-19-SS6
2252428-04	BH22-19-SS10
2252428-05	MW22-15-SS2
2252428-06	MW22-15-SS7
2252428-07	MW22-15-SS8
2252428-08	MW22-22-SS3
2252428-09	MW22-22-SS7
2252428-10	MW22-14-SS1
2252428-11	MW22-14-SS5
2252428-12	MW22-14-SS11
2252428-13	MW22-16-SS1
2252428-14	MW22-16-SS5
2252428-15	MW22-20-SS2
2252428-16	MW22-20-SS11
2252428-17	MW22-20-SS1
2252428-18	MW22-20-SS5

Approved By:

Dale Robertson, BSc
Laboratory Director

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 04-Jan-2023

Order Date: 22-Dec-2022

Project Description: 220200

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Boron, available	MOE (HWE), EPA 200.8 - ICP-MS	30-Dec-22	30-Dec-22
Chromium, hexavalent - soil	MOE E3056 - Extraction, colourimetric	29-Dec-22	30-Dec-22
Conductivity	MOE E3138 - probe @25 °C, water ext	29-Dec-22	29-Dec-22
Cyanide, free	MOE E3015 - Auto Colour, water extraction	29-Dec-22	29-Dec-22
Mercury by CVAA	EPA 7471B - CVAA, digestion	30-Dec-22	30-Dec-22
PCBs, total	SW846 8082A - GC-ECD	28-Dec-22	30-Dec-22
pH, soil	EPA 150.1 - pH probe @ 25 °C, CaCl buffered ext.	29-Dec-22	30-Dec-22
PHC F1	CWS Tier 1 - P&T GC-FID	28-Dec-22	28-Dec-22
PHC F4G (gravimetric)	CWS Tier 1 - Extraction Gravimetric	29-Dec-22	30-Dec-22
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	28-Dec-22	29-Dec-22
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	30-Dec-22	30-Dec-22
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	21-Dec-22	4-Jan-23
REG 153: VOCs by P&T GC/MS	EPA 8260 - P&T GC-MS	28-Dec-22	28-Dec-22
SAR	Calculated	29-Dec-22	30-Dec-22
Solids, %	CWS Tier 1 - Gravimetric	29-Dec-22	30-Dec-22
Texture - Coarse Med/Fine	Based on ASTM D2487	30-Dec-22	3-Jan-23

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 04-Jan-2023

Order Date: 22-Dec-2022

Project Description: 220200

	Client ID:	BH22-19-SS2	BH22-19-SS4	BH22-19-SS6	BH22-19-SS10
	Sample Date:	20-Dec-22 09:00	20-Dec-22 09:00	20-Dec-22 09:00	20-Dec-22 09:00
	Sample ID:	2252428-01	2252428-02	2252428-03	2252428-04
	MDL/Units	Soil	Soil	Soil	Soil
Physical Characteristics					
% Solids	0.1 % by Wt.	85.1	93.2	93.8	91.6
General Inorganics					
SAR	0.01 N/A	5.02	3.21	-	-
Conductivity	5 uS/cm	1020	1040	-	-
Cyanide, free	0.03 ug/g dry	<0.03	<0.03	-	-
pH	0.05 pH Units	7.31	7.62	-	-
Metals					
Antimony	1.0 ug/g dry	1.2	<1.0	-	<1.0
Arsenic	1.0 ug/g dry	4.9	8.5	-	6.1
Barium	1.0 ug/g dry	84.4	65.6	-	102
Beryllium	0.5 ug/g dry	0.7	0.7	-	0.5
Boron	5.0 ug/g dry	9.6	9.6	-	8.8
Boron, available	0.5 ug/g dry	<0.5	<0.5	-	0.5
Cadmium	0.5 ug/g dry	<0.5	<0.5	-	<0.5
Chromium	5.0 ug/g dry	28.7	25.4	-	24.1
Chromium (VI)	0.2 ug/g dry	<0.2	<0.2	-	<0.2
Cobalt	1.0 ug/g dry	10.2	13.5	-	9.7
Copper	5.0 ug/g dry	25.2	38.0	-	28.0
Lead	1.0 ug/g dry	11.1	12.5	-	9.0
Mercury	0.1 ug/g dry	<0.1	<0.1	-	<0.1
Molybdenum	1.0 ug/g dry	3.7	5.0	-	2.0
Nickel	5.0 ug/g dry	29.3	46.3	-	25.0
Selenium	1.0 ug/g dry	<1.0	<1.0	-	<1.0
Silver	0.3 ug/g dry	<0.3	<0.3	-	<0.3
Thallium	1.0 ug/g dry	<1.0	<1.0	-	<1.0
Uranium	1.0 ug/g dry	1.2	1.1	-	1.0
Vanadium	10.0 ug/g dry	39.0	37.8	-	33.0
Zinc	20.0 ug/g dry	44.2	58.3	-	41.5
Volatiles					
Acetone	0.50 ug/g dry	-	<0.50	<0.50	-
Benzene	0.02 ug/g dry	-	0.71	0.26	-
Bromodichloromethane	0.05 ug/g dry	-	<0.05	<0.05	-
Bromoform	0.05 ug/g dry	-	<0.05	<0.05	-
Bromomethane	0.05 ug/g dry	-	<0.05	<0.05	-
Carbon Tetrachloride	0.05 ug/g dry	-	<0.05	<0.05	-

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 04-Jan-2023

Order Date: 22-Dec-2022

Project Description: 220200

	Client ID:	BH22-19-SS2	BH22-19-SS4	BH22-19-SS6	BH22-19-SS10
	Sample Date:	20-Dec-22 09:00	20-Dec-22 09:00	20-Dec-22 09:00	20-Dec-22 09:00
	Sample ID:	2252428-01	2252428-02	2252428-03	2252428-04
	MDL/Units	Soil	Soil	Soil	Soil
Chlorobenzene	0.05 ug/g dry	-	<0.05	<0.05	-
Chloroform	0.05 ug/g dry	-	<0.05	<0.05	-
Dibromochloromethane	0.05 ug/g dry	-	<0.05	<0.05	-
Dichlorodifluoromethane	0.05 ug/g dry	-	<0.05	<0.05	-
1,2-Dichlorobenzene	0.05 ug/g dry	-	<0.05	<0.05	-
1,3-Dichlorobenzene	0.05 ug/g dry	-	<0.05	<0.05	-
1,4-Dichlorobenzene	0.05 ug/g dry	-	<0.05	<0.05	-
1,1-Dichloroethane	0.05 ug/g dry	-	<0.05	<0.05	-
1,2-Dichloroethane	0.05 ug/g dry	-	<0.05	<0.05	-
1,1-Dichloroethylene	0.05 ug/g dry	-	<0.05	<0.05	-
cis-1,2-Dichloroethylene	0.05 ug/g dry	-	<0.05	<0.05	-
trans-1,2-Dichloroethylene	0.05 ug/g dry	-	<0.05	<0.05	-
1,2-Dichloropropane	0.05 ug/g dry	-	<0.05	<0.05	-
cis-1,3-Dichloropropylene	0.05 ug/g dry	-	<0.05	<0.05	-
trans-1,3-Dichloropropylene	0.05 ug/g dry	-	<0.05	<0.05	-
1,3-Dichloropropene, total	0.05 ug/g dry	-	<0.05	<0.05	-
Ethylbenzene	0.05 ug/g dry	-	7.85	1.81	-
Ethylene dibromide (dibromoethane, 1,2-)	0.05 ug/g dry	-	<0.05	<0.05	-
Hexane	0.05 ug/g dry	-	<0.05	<0.05	-
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g dry	-	<0.50	<0.50	-
Methyl Isobutyl Ketone	0.50 ug/g dry	-	<0.50	<0.50	-
Methyl tert-butyl ether	0.05 ug/g dry	-	<0.05	<0.05	-
Methylene Chloride	0.05 ug/g dry	-	<0.05	<0.05	-
Styrene	0.05 ug/g dry	-	<0.05	<0.05	-
1,1,1,2-Tetrachloroethane	0.05 ug/g dry	-	<0.05	<0.05	-
1,1,2,2-Tetrachloroethane	0.05 ug/g dry	-	<0.05	<0.05	-
Tetrachloroethylene	0.05 ug/g dry	-	<0.05	<0.05	-
Toluene	0.05 ug/g dry	-	0.91	0.96	-
1,1,1-Trichloroethane	0.05 ug/g dry	-	<0.05	<0.05	-
1,1,2-Trichloroethane	0.05 ug/g dry	-	<0.05	<0.05	-
Trichloroethylene	0.05 ug/g dry	-	<0.05	<0.05	-
Trichlorofluoromethane	0.05 ug/g dry	-	<0.05	<0.05	-
Vinyl chloride	0.02 ug/g dry	-	<0.02	<0.02	-
m,p-Xylenes	0.05 ug/g dry	-	24.5	3.77	-
o-Xylene	0.05 ug/g dry	-	4.45	0.84	-

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 04-Jan-2023

Order Date: 22-Dec-2022

Project Description: 220200

	Client ID:	BH22-19-SS2	BH22-19-SS4	BH22-19-SS6	BH22-19-SS10
	Sample Date:	20-Dec-22 09:00	20-Dec-22 09:00	20-Dec-22 09:00	20-Dec-22 09:00
	Sample ID:	2252428-01	2252428-02	2252428-03	2252428-04
	MDL/Units	Soil	Soil	Soil	Soil
Xylenes, total	0.05 ug/g dry	-	29.0	4.61	-
4-Bromofluorobenzene	Surrogate	-	82.1%	82.4%	-
Dibromofluoromethane	Surrogate	-	72.9%	66.7%	-
Toluene-d8	Surrogate	-	68.2%	73.0%	-
Hydrocarbons					
F1 PHCs (C6-C10)	7 ug/g dry	-	109	22	-
F2 PHCs (C10-C16)	4 ug/g dry	-	25	29	-
F3 PHCs (C16-C34)	8 ug/g dry	-	<8	35	-
F4 PHCs (C34-C50)	6 ug/g dry	-	<6	<6	-
Semi-Volatiles					
Acenaphthene	0.02 ug/g dry	-	<0.02	<0.02	-
Acenaphthylene	0.02 ug/g dry	-	<0.02	<0.02	-
Anthracene	0.02 ug/g dry	-	<0.02	<0.02	-
Benzo [a] anthracene	0.02 ug/g dry	-	<0.02	<0.02	-
Benzo [a] pyrene	0.02 ug/g dry	-	<0.02	<0.02	-
Benzo [b] fluoranthene	0.02 ug/g dry	-	<0.02	<0.02	-
Benzo [g,h,i] perylene	0.02 ug/g dry	-	<0.02	<0.02	-
Benzo [k] fluoranthene	0.02 ug/g dry	-	<0.02	<0.02	-
Chrysene	0.02 ug/g dry	-	<0.02	<0.02	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	-	<0.02	<0.02	-
Fluoranthene	0.02 ug/g dry	-	<0.02	<0.02	-
Fluorene	0.02 ug/g dry	-	<0.02	<0.02	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	-	<0.02	<0.02	-
1-Methylnaphthalene	0.02 ug/g dry	-	0.27	<0.02	-
2-Methylnaphthalene	0.02 ug/g dry	-	0.53	<0.02	-
Methylnaphthalene (1&2)	0.04 ug/g dry	-	0.80	<0.04	-
Naphthalene	0.01 ug/g dry	-	0.86	<0.01	-
Phenanthrene	0.02 ug/g dry	-	0.02	<0.02	-
Pyrene	0.02 ug/g dry	-	<0.02	<0.02	-
2-Fluorobiphenyl	Surrogate	-	91.7%	63.1%	-
Terphenyl-d14	Surrogate	-	103%	68.5%	-

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 04-Jan-2023

Order Date: 22-Dec-2022

Project Description: 220200

	Client ID:	MW22-15-SS2	MW22-15-SS7	MW22-15-SS8	MW22-22-SS3
	Sample Date:	19-Dec-22 09:00	19-Dec-22 09:00	19-Dec-22 09:00	19-Dec-22 09:00
	Sample ID:	2252428-05	2252428-06	2252428-07	2252428-08
	MDL/Units	Soil	Soil	Soil	Soil
Physical Characteristics					
% Solids	0.1 % by Wt.	87.0	93.2	92.2	93.8
General Inorganics					
SAR	0.01 N/A	12.5	-	-	9.61
Conductivity	5 uS/cm	1340	-	-	749
Cyanide, free	0.03 ug/g dry	<0.03	-	-	<0.03
pH	0.05 pH Units	7.53	-	-	7.78
Metals					
Antimony	1.0 ug/g dry	<1.0	-	<1.0	<1.0
Arsenic	1.0 ug/g dry	12.5	-	7.3	7.7
Barium	1.0 ug/g dry	83.6	-	114	77.8
Beryllium	0.5 ug/g dry	0.8	-	0.6	0.6
Boron	5.0 ug/g dry	11.4	-	11.7	9.2
Boron, available	0.5 ug/g dry	<0.5	-	0.5	<0.5
Cadmium	0.5 ug/g dry	<0.5	-	<0.5	<0.5
Chromium	5.0 ug/g dry	36.3	-	23.6	21.2
Chromium (VI)	0.2 ug/g dry	<0.2	-	<0.2	<0.2
Cobalt	1.0 ug/g dry	13.6	-	11.7	15.4
Copper	5.0 ug/g dry	39.0	-	33.1	40.0
Lead	1.0 ug/g dry	19.4	-	10.8	11.2
Mercury	0.1 ug/g dry	<0.1	-	<0.1	<0.1
Molybdenum	1.0 ug/g dry	6.3	-	3.6	3.6
Nickel	5.0 ug/g dry	35.8	-	34.0	39.6
Selenium	1.0 ug/g dry	<1.0	-	<1.0	1.1
Silver	0.3 ug/g dry	<0.3	-	<0.3	<0.3
Thallium	1.0 ug/g dry	<1.0	-	<1.0	<1.0
Uranium	1.0 ug/g dry	1.3	-	1.6	<1.0
Vanadium	10.0 ug/g dry	69.2	-	35.1	30.7
Zinc	20.0 ug/g dry	51.2	-	56.2	41.4
Volatiles					
Acetone	0.50 ug/g dry	<0.50	-	<0.50	<0.50
Benzene	0.02 ug/g dry	<0.02	-	<0.02	<0.02
Bromodichloromethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Bromoform	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Bromomethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Carbon Tetrachloride	0.05 ug/g dry	<0.05	-	<0.05	<0.05

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 04-Jan-2023

Order Date: 22-Dec-2022

Project Description: 220200

	Client ID:	MW22-15-SS2	MW22-15-SS7	MW22-15-SS8	MW22-22-SS3
	Sample Date:	19-Dec-22 09:00	19-Dec-22 09:00	19-Dec-22 09:00	19-Dec-22 09:00
	Sample ID:	2252428-05	2252428-06	2252428-07	2252428-08
	MDL/Units	Soil	Soil	Soil	Soil
Chlorobenzene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Chloroform	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Dibromochloromethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Dichlorodifluoromethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,2-Dichlorobenzene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,3-Dichlorobenzene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,4-Dichlorobenzene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,1-Dichloroethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,2-Dichloroethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,1-Dichloroethylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
cis-1,2-Dichloroethylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
trans-1,2-Dichloroethylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,2-Dichloropropane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
cis-1,3-Dichloropropylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
trans-1,3-Dichloropropylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,3-Dichloropropene, total	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Ethylbenzene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Ethylene dibromide (dibromoethane, 1	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Hexane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g dry	<0.50	-	<0.50	<0.50
Methyl Isobutyl Ketone	0.50 ug/g dry	<0.50	-	<0.50	<0.50
Methyl tert-butyl ether	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Methylene Chloride	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Styrene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,1,1,2-Tetrachloroethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,1,2,2-Tetrachloroethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Tetrachloroethylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Toluene	0.05 ug/g dry	<0.05	-	0.17	<0.05
1,1,1-Trichloroethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,1,2-Trichloroethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Trichloroethylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Trichlorofluoromethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Vinyl chloride	0.02 ug/g dry	<0.02	-	<0.02	<0.02
m,p-Xylenes	0.05 ug/g dry	<0.05	-	<0.05	<0.05
o-Xylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 04-Jan-2023

Order Date: 22-Dec-2022

Project Description: 220200

	Client ID:	MW22-15-SS2	MW22-15-SS7	MW22-15-SS8	MW22-22-SS3
	Sample Date:	19-Dec-22 09:00	19-Dec-22 09:00	19-Dec-22 09:00	19-Dec-22 09:00
	Sample ID:	2252428-05	2252428-06	2252428-07	2252428-08
	MDL/Units	Soil	Soil	Soil	Soil
Xylenes, total	0.05 ug/g dry	<0.05	-	<0.05	<0.05
4-Bromofluorobenzene	Surrogate	85.0%	-	88.6%	82.3%
Dibromofluoromethane	Surrogate	69.0%	-	78.9%	69.0%
Toluene-d8	Surrogate	77.6%	-	77.4%	72.0%
Hydrocarbons					
F1 PHCs (C6-C10)	7 ug/g dry	<7	-	<7	<7
F2 PHCs (C10-C16)	4 ug/g dry	<4	-	50	21
F3 PHCs (C16-C34)	8 ug/g dry	46	-	61	30
F4 PHCs (C34-C50)	6 ug/g dry	223 [2]	-	13	<6
F4G PHCs (gravimetric)	50 ug/g dry	379	-	-	-
Semi-Volatiles					
Acenaphthene	0.02 ug/g dry	-	<0.02	-	-
Acenaphthylene	0.02 ug/g dry	-	<0.02	-	-
Anthracene	0.02 ug/g dry	-	<0.02	-	-
Benzo [a] anthracene	0.02 ug/g dry	-	<0.02	-	-
Benzo [a] pyrene	0.02 ug/g dry	-	<0.02	-	-
Benzo [b] fluoranthene	0.02 ug/g dry	-	<0.02	-	-
Benzo [g,h,i] perylene	0.02 ug/g dry	-	<0.02	-	-
Benzo [k] fluoranthene	0.02 ug/g dry	-	<0.02	-	-
Chrysene	0.02 ug/g dry	-	<0.02	-	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	-	<0.02	-	-
Fluoranthene	0.02 ug/g dry	-	<0.02	-	-
Fluorene	0.02 ug/g dry	-	<0.02	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	-	<0.02	-	-
1-Methylnaphthalene	0.02 ug/g dry	-	<0.02	-	-
2-Methylnaphthalene	0.02 ug/g dry	-	<0.02	-	-
Methylnaphthalene (1&2)	0.04 ug/g dry	-	<0.04	-	-
Naphthalene	0.01 ug/g dry	-	<0.01	-	-
Phenanthrene	0.02 ug/g dry	-	<0.02	-	-
Pyrene	0.02 ug/g dry	-	<0.02	-	-
2-Fluorobiphenyl	Surrogate	-	93.8%	-	-
Terphenyl-d14	Surrogate	-	108%	-	-

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 04-Jan-2023

Order Date: 22-Dec-2022

Project Description: 220200

	Client ID:	MW22-22-SS7	MW22-14-SS1	MW22-14-SS5	MW22-14-SS11
	Sample Date:	19-Dec-22 09:00	22-Dec-22 09:00	22-Dec-22 09:00	22-Dec-22 09:00
	Sample ID:	2252428-09	2252428-10	2252428-11	2252428-12
	MDL/Units	Soil	Soil	Soil	Soil
Physical Characteristics					
% Solids	0.1 % by Wt.	93.3	86.1	93.7	89.7
>75 um	0.1 %	-	40.8	50.3	-
<75 um	0.1 %	-	59.2	49.7	-
Texture	0.1 %	-	Med/Fine	Coarse	-
General Inorganics					
SAR	0.01 N/A	-	2.17	-	-
Conductivity	5 uS/cm	-	504	-	-
Cyanide, free	0.03 ug/g dry	-	<0.03	-	-
pH	0.05 pH Units	-	7.80	7.73	-
Metals					
Antimony	1.0 ug/g dry	-	<1.0	-	-
Arsenic	1.0 ug/g dry	-	8.1	-	-
Barium	1.0 ug/g dry	-	43.4	-	-
Beryllium	0.5 ug/g dry	-	<0.5	-	-
Boron	5.0 ug/g dry	-	8.6	-	-
Boron, available	0.5 ug/g dry	-	<0.5	-	-
Cadmium	0.5 ug/g dry	-	<0.5	-	-
Chromium	5.0 ug/g dry	-	20.8	-	-
Chromium (VI)	0.2 ug/g dry	-	<0.2	-	-
Cobalt	1.0 ug/g dry	-	8.9	-	-
Copper	5.0 ug/g dry	-	16.0	-	-
Lead	1.0 ug/g dry	-	16.9	-	-
Mercury	0.1 ug/g dry	-	<0.1	-	-
Molybdenum	1.0 ug/g dry	-	5.5	-	-
Nickel	5.0 ug/g dry	-	22.7	-	-
Selenium	1.0 ug/g dry	-	<1.0	-	-
Silver	0.3 ug/g dry	-	<0.3	-	-
Thallium	1.0 ug/g dry	-	<1.0	-	-
Uranium	1.0 ug/g dry	-	<1.0	-	-
Vanadium	10.0 ug/g dry	-	26.9	-	-
Zinc	20.0 ug/g dry	-	48.8	-	-
Volatiles					
Acetone	0.50 ug/g dry	<0.50	-	<0.50	<0.50
Benzene	0.02 ug/g dry	<0.02	-	<0.02	<0.02
Bromodichloromethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 04-Jan-2023

Order Date: 22-Dec-2022

Project Description: 220200

	Client ID:	MW22-22-SS7	MW22-14-SS1	MW22-14-SS5	MW22-14-SS11
	Sample Date:	19-Dec-22 09:00	22-Dec-22 09:00	22-Dec-22 09:00	22-Dec-22 09:00
	Sample ID:	2252428-09	2252428-10	2252428-11	2252428-12
	MDL/Units	Soil	Soil	Soil	Soil
Bromoform	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Bromomethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Carbon Tetrachloride	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Chlorobenzene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Chloroform	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Dibromochloromethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Dichlorodifluoromethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,2-Dichlorobenzene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,3-Dichlorobenzene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,4-Dichlorobenzene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,1-Dichloroethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,2-Dichloroethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,1-Dichloroethylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
cis-1,2-Dichloroethylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
trans-1,2-Dichloroethylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,2-Dichloropropane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
cis-1,3-Dichloropropylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
trans-1,3-Dichloropropylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,3-Dichloropropene, total	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Ethylbenzene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Ethylene dibromide (dibromoethane, 1	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Hexane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g dry	<0.50	-	<0.50	<0.50
Methyl Isobutyl Ketone	0.50 ug/g dry	<0.50	-	<0.50	<0.50
Methyl tert-butyl ether	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Methylene Chloride	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Styrene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,1,1,2-Tetrachloroethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,1,2,2-Tetrachloroethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Tetrachloroethylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Toluene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,1,1-Trichloroethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,1,2-Trichloroethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Trichloroethylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Trichlorofluoromethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 04-Jan-2023

Order Date: 22-Dec-2022

Project Description: 220200

	Client ID:	MW22-22-SS7	MW22-14-SS1	MW22-14-SS5	MW22-14-SS11
	Sample Date:	19-Dec-22 09:00	22-Dec-22 09:00	22-Dec-22 09:00	22-Dec-22 09:00
	Sample ID:	2252428-09	2252428-10	2252428-11	2252428-12
	MDL/Units	Soil	Soil	Soil	Soil
Vinyl chloride	0.02 ug/g dry	<0.02	-	<0.02	<0.02
m,p-Xylenes	0.05 ug/g dry	<0.05	-	<0.05	<0.05
o-Xylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Xylenes, total	0.05 ug/g dry	<0.05	-	<0.05	<0.05
4-Bromofluorobenzene	Surrogate	85.8%	-	84.5%	84.3%
Dibromofluoromethane	Surrogate	70.2%	-	68.9%	72.8%
Toluene-d8	Surrogate	74.7%	-	75.4%	75.4%
Hydrocarbons					
F1 PHCs (C6-C10)	7 ug/g dry	<7	-	<7	<7
F2 PHCs (C10-C16)	4 ug/g dry	30	-	39	48
F3 PHCs (C16-C34)	8 ug/g dry	40	-	62	62
F4 PHCs (C34-C50)	6 ug/g dry	39	-	18	16
Semi-Volatiles					
Acenaphthene	0.02 ug/g dry	<0.02	-	-	-
Acenaphthylene	0.02 ug/g dry	<0.02	-	-	-
Anthracene	0.02 ug/g dry	<0.02	-	-	-
Benzo [a] anthracene	0.02 ug/g dry	<0.02	-	-	-
Benzo [a] pyrene	0.02 ug/g dry	<0.02	-	-	-
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	-	-	-
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	-	-	-
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	-	-	-
Chrysene	0.02 ug/g dry	<0.02	-	-	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	-	-	-
Fluoranthene	0.02 ug/g dry	<0.02	-	-	-
Fluorene	0.02 ug/g dry	<0.02	-	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	-	-	-
1-Methylnaphthalene	0.02 ug/g dry	<0.02	-	-	-
2-Methylnaphthalene	0.02 ug/g dry	<0.02	-	-	-
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	-	-	-
Naphthalene	0.01 ug/g dry	<0.01	-	-	-
Phenanthrene	0.02 ug/g dry	<0.02	-	-	-
Pyrene	0.02 ug/g dry	<0.02	-	-	-
2-Fluorobiphenyl	Surrogate	60.0%	-	-	-
Terphenyl-d14	Surrogate	67.7%	-	-	-

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 04-Jan-2023

Order Date: 22-Dec-2022

Project Description: 220200

	Client ID:	MW22-16-SS1	MW22-16-SS5	MW22-20-SS2	MW22-20-SS11
	Sample Date:	22-Dec-22 12:00	22-Dec-22 12:00	21-Dec-22 12:00	21-Dec-22 12:00
	Sample ID:	2252428-13	2252428-14	2252428-15	2252428-16
	MDL/Units	Soil	Soil	Soil	Soil
Physical Characteristics					
% Solids	0.1 % by Wt.	88.4	69.4	87.5	78.2
>75 um	0.1 %	-	-	21.6	-
<75 um	0.1 %	-	-	78.4	-
Texture	0.1 %	-	-	Med/Fine	-
General Inorganics					
SAR	0.01 N/A	4.61	-	-	-
Conductivity	5 uS/cm	969	-	-	-
Cyanide, free	0.03 ug/g dry	<0.03	-	-	-
pH	0.05 pH Units	7.65	-	7.82	-
Metals					
Antimony	1.0 ug/g dry	<1.0	<1.0	-	-
Arsenic	1.0 ug/g dry	11.6	8.4	-	-
Barium	1.0 ug/g dry	34.5	161	-	-
Beryllium	0.5 ug/g dry	<0.5	0.8	-	-
Boron	5.0 ug/g dry	8.4	8.5	-	-
Boron, available	0.5 ug/g dry	<0.5	1.4	-	-
Cadmium	0.5 ug/g dry	<0.5	2.0	-	-
Chromium	5.0 ug/g dry	18.5	68.1	-	-
Chromium (VI)	0.2 ug/g dry	<0.2	<0.2	-	-
Cobalt	1.0 ug/g dry	9.7	16.4	-	-
Copper	5.0 ug/g dry	14.1	44.2	-	-
Lead	1.0 ug/g dry	36.1	383	-	-
Mercury	0.1 ug/g dry	<0.1	0.2	-	-
Molybdenum	1.0 ug/g dry	9.2	1.9	-	-
Nickel	5.0 ug/g dry	21.8	36.0	-	-
Selenium	1.0 ug/g dry	<1.0	<1.0	-	-
Silver	0.3 ug/g dry	<0.3	<0.3	-	-
Thallium	1.0 ug/g dry	<1.0	<1.0	-	-
Uranium	1.0 ug/g dry	<1.0	4.4	-	-
Vanadium	10.0 ug/g dry	21.3	68.6	-	-
Zinc	20.0 ug/g dry	21.0	250	-	-
Volatiles					
Acetone	0.50 ug/g dry	-	<0.50	<0.50	<0.50
Benzene	0.02 ug/g dry	-	<0.02	0.08	<0.02
Bromodichloromethane	0.05 ug/g dry	-	<0.05	<0.05	<0.05

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 04-Jan-2023

Order Date: 22-Dec-2022

Project Description: 220200

	Client ID:	MW22-16-SS1	MW22-16-SS5	MW22-20-SS2	MW22-20-SS11
	Sample Date:	22-Dec-22 12:00	22-Dec-22 12:00	21-Dec-22 12:00	21-Dec-22 12:00
	Sample ID:	2252428-13	2252428-14	2252428-15	2252428-16
	MDL/Units	Soil	Soil	Soil	Soil
Bromoform	0.05 ug/g dry	-	<0.05	<0.05	<0.05
Bromomethane	0.05 ug/g dry	-	<0.05	<0.05	<0.05
Carbon Tetrachloride	0.05 ug/g dry	-	<0.05	<0.05	<0.05
Chlorobenzene	0.05 ug/g dry	-	<0.05	<0.05	<0.05
Chloroform	0.05 ug/g dry	-	<0.05	<0.05	<0.05
Dibromochloromethane	0.05 ug/g dry	-	<0.05	<0.05	<0.05
Dichlorodifluoromethane	0.05 ug/g dry	-	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	0.05 ug/g dry	-	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	0.05 ug/g dry	-	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	0.05 ug/g dry	-	<0.05	<0.05	<0.05
1,1-Dichloroethane	0.05 ug/g dry	-	<0.05	<0.05	<0.05
1,2-Dichloroethane	0.05 ug/g dry	-	<0.05	<0.05	<0.05
1,1-Dichloroethylene	0.05 ug/g dry	-	<0.05	<0.05	<0.05
cis-1,2-Dichloroethylene	0.05 ug/g dry	-	<0.05	<0.05	<0.05
trans-1,2-Dichloroethylene	0.05 ug/g dry	-	<0.05	<0.05	<0.05
1,2-Dichloropropane	0.05 ug/g dry	-	<0.05	<0.05	<0.05
cis-1,3-Dichloropropylene	0.05 ug/g dry	-	<0.05	<0.05	<0.05
trans-1,3-Dichloropropylene	0.05 ug/g dry	-	<0.05	<0.05	<0.05
1,3-Dichloropropene, total	0.05 ug/g dry	-	<0.05	<0.05	<0.05
Ethylbenzene	0.05 ug/g dry	-	<0.05	2.58	0.85
Ethylene dibromide (dibromoethane, 1	0.05 ug/g dry	-	<0.05	<0.05	<0.05
Hexane	0.05 ug/g dry	-	<0.05	<0.05	<0.05
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g dry	-	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	0.50 ug/g dry	-	<0.50	<0.50	<0.50
Methyl tert-butyl ether	0.05 ug/g dry	-	<0.05	<0.05	<0.05
Methylene Chloride	0.05 ug/g dry	-	<0.05	<0.05	<0.05
Styrene	0.05 ug/g dry	-	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	0.05 ug/g dry	-	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	0.05 ug/g dry	-	<0.05	<0.05	<0.05
Tetrachloroethylene	0.05 ug/g dry	-	<0.05	<0.05	<0.05
Toluene	0.05 ug/g dry	-	<0.05	0.48	0.16
1,1,1-Trichloroethane	0.05 ug/g dry	-	<0.05	<0.05	<0.05
1,1,2-Trichloroethane	0.05 ug/g dry	-	<0.05	<0.05	<0.05
Trichloroethylene	0.05 ug/g dry	-	<0.05	<0.05	<0.05
Trichlorofluoromethane	0.05 ug/g dry	-	<0.05	<0.05	<0.05

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 04-Jan-2023

Order Date: 22-Dec-2022

Project Description: 220200

	Client ID:	MW22-16-SS1	MW22-16-SS5	MW22-20-SS2	MW22-20-SS11
	Sample Date:	22-Dec-22 12:00	22-Dec-22 12:00	21-Dec-22 12:00	21-Dec-22 12:00
	Sample ID:	2252428-13	2252428-14	2252428-15	2252428-16
	MDL/Units	Soil	Soil	Soil	Soil
Vinyl chloride	0.02 ug/g dry	-	<0.02	<0.02	<0.02
m,p-Xylenes	0.05 ug/g dry	-	<0.05	4.05	0.64
o-Xylene	0.05 ug/g dry	-	<0.05	1.34	0.21
Xylenes, total	0.05 ug/g dry	-	<0.05	5.39	0.84
4-Bromofluorobenzene	Surrogate	-	93.5%	83.3%	84.2%
Dibromofluoromethane	Surrogate	-	77.6%	75.5%	69.9%
Toluene-d8	Surrogate	-	82.2%	67.0%	77.5%
Hydrocarbons					
F1 PHCs (C6-C10)	7 ug/g dry	-	<7	92	24
F2 PHCs (C10-C16)	4 ug/g dry	-	12	92	9
F3 PHCs (C16-C34)	8 ug/g dry	-	2090	177	38
F4 PHCs (C34-C50)	6 ug/g dry	-	1540 [2]	925 [2]	102
F4G PHCs (gravimetric)	50 ug/g dry	-	3630	583	-
Semi-Volatiles					
Acenaphthene	0.02 ug/g dry	-	0.03	<0.02	<0.02
Acenaphthylene	0.02 ug/g dry	-	0.14	<0.02	<0.02
Anthracene	0.02 ug/g dry	-	0.16	<0.02	<0.02
Benzo [a] anthracene	0.02 ug/g dry	-	0.30	<0.02	<0.02
Benzo [a] pyrene	0.02 ug/g dry	-	0.35	<0.02	<0.02
Benzo [b] fluoranthene	0.02 ug/g dry	-	0.59	<0.02	<0.02
Benzo [g,h,i] perylene	0.02 ug/g dry	-	0.28	<0.02	<0.02
Benzo [k] fluoranthene	0.02 ug/g dry	-	0.28	<0.02	<0.02
Chrysene	0.02 ug/g dry	-	0.33	<0.02	<0.02
Dibenzo [a,h] anthracene	0.02 ug/g dry	-	0.04	<0.02	<0.02
Fluoranthene	0.02 ug/g dry	-	0.74	<0.02	<0.02
Fluorene	0.02 ug/g dry	-	0.03	<0.02	<0.02
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	-	0.27	<0.02	<0.02
1-Methylnaphthalene	0.02 ug/g dry	-	0.05	0.33	0.07
2-Methylnaphthalene	0.02 ug/g dry	-	0.07	0.07	<0.02
Methylnaphthalene (1&2)	0.04 ug/g dry	-	0.12	0.40	0.07
Naphthalene	0.01 ug/g dry	-	0.07	0.12	0.02
Phenanthrene	0.02 ug/g dry	-	0.26	0.03	<0.02
Pyrene	0.02 ug/g dry	-	0.65	<0.02	<0.02
2-Fluorobiphenyl	Surrogate	-	61.2%	87.1%	80.2%
Terphenyl-d14	Surrogate	-	60.5%	91.1%	87.9%

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 04-Jan-2023

Order Date: 22-Dec-2022

Project Description: 220200

	Client ID:	MW22-20-SS1	MW22-20-SS5	-	-
	Sample Date:	21-Dec-22 12:00	21-Dec-22 12:00	-	-
	Sample ID:	2252428-17	2252428-18	-	-
	MDL/Units	Soil	Soil	-	-
Physical Characteristics					
% Solids	0.1 % by Wt.	96.4	94.2	-	-
>75 um	0.1 %	-	47.0	-	-
<75 um	0.1 %	-	53.0	-	-
Texture	0.1 %	-	Med/Fine	-	-
General Inorganics					
SAR	0.01 N/A	5.91	-	-	-
Conductivity	5 uS/cm	819	-	-	-
Cyanide, free	0.03 ug/g dry	<0.03	-	-	-
pH	0.05 pH Units	7.85	7.81	-	-
Metals					
Antimony	1.0 ug/g dry	<1.0	-	-	-
Arsenic	1.0 ug/g dry	7.8	-	-	-
Barium	1.0 ug/g dry	43.0	-	-	-
Beryllium	0.5 ug/g dry	<0.5	-	-	-
Boron	5.0 ug/g dry	9.6	-	-	-
Boron, available	0.5 ug/g dry	<0.5	-	-	-
Cadmium	0.5 ug/g dry	<0.5	-	-	-
Chromium	5.0 ug/g dry	20.2	-	-	-
Chromium (VI)	0.2 ug/g dry	<0.2	-	-	-
Cobalt	1.0 ug/g dry	7.3	-	-	-
Copper	5.0 ug/g dry	22.0	-	-	-
Lead	1.0 ug/g dry	14.1	-	-	-
Mercury	0.1 ug/g dry	<0.1	-	-	-
Molybdenum	1.0 ug/g dry	6.1	-	-	-
Nickel	5.0 ug/g dry	18.7	-	-	-
Selenium	1.0 ug/g dry	<1.0	-	-	-
Silver	0.3 ug/g dry	<0.3	-	-	-
Thallium	1.0 ug/g dry	<1.0	-	-	-
Uranium	1.0 ug/g dry	<1.0	-	-	-
Vanadium	10.0 ug/g dry	31.8	-	-	-
Zinc	20.0 ug/g dry	23.1	-	-	-
Volatiles					
Acetone	0.50 ug/g dry	-	<0.50	-	-
Benzene	0.02 ug/g dry	-	<0.02	-	-
Bromodichloromethane	0.05 ug/g dry	-	<0.05	-	-

Certificate of Analysis

Report Date: 04-Jan-2023

Client: LRL Associates Ltd.

Order Date: 22-Dec-2022

Client PO:

Project Description: 220200

	Client ID:	MW22-20-SS1	MW22-20-SS5	-	-
	Sample Date:	21-Dec-22 12:00	21-Dec-22 12:00	-	-
	Sample ID:	2252428-17	2252428-18	-	-
	MDL/Units	Soil	Soil	-	-
Bromoform	0.05 ug/g dry	-	<0.05	-	-
Bromomethane	0.05 ug/g dry	-	<0.05	-	-
Carbon Tetrachloride	0.05 ug/g dry	-	<0.05	-	-
Chlorobenzene	0.05 ug/g dry	-	<0.05	-	-
Chloroform	0.05 ug/g dry	-	<0.05	-	-
Dibromochloromethane	0.05 ug/g dry	-	<0.05	-	-
Dichlorodifluoromethane	0.05 ug/g dry	-	<0.05	-	-
1,2-Dichlorobenzene	0.05 ug/g dry	-	<0.05	-	-
1,3-Dichlorobenzene	0.05 ug/g dry	-	<0.05	-	-
1,4-Dichlorobenzene	0.05 ug/g dry	-	<0.05	-	-
1,1-Dichloroethane	0.05 ug/g dry	-	<0.05	-	-
1,2-Dichloroethane	0.05 ug/g dry	-	<0.05	-	-
1,1-Dichloroethylene	0.05 ug/g dry	-	<0.05	-	-
cis-1,2-Dichloroethylene	0.05 ug/g dry	-	<0.05	-	-
trans-1,2-Dichloroethylene	0.05 ug/g dry	-	<0.05	-	-
1,2-Dichloropropane	0.05 ug/g dry	-	<0.05	-	-
cis-1,3-Dichloropropylene	0.05 ug/g dry	-	<0.05	-	-
trans-1,3-Dichloropropylene	0.05 ug/g dry	-	<0.05	-	-
1,3-Dichloropropene, total	0.05 ug/g dry	-	<0.05	-	-
Ethylbenzene	0.05 ug/g dry	-	<0.05	-	-
Ethylene dibromide (dibromoethane, 1	0.05 ug/g dry	-	<0.05	-	-
Hexane	0.05 ug/g dry	-	<0.05	-	-
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g dry	-	<0.50	-	-
Methyl Isobutyl Ketone	0.50 ug/g dry	-	<0.50	-	-
Methyl tert-butyl ether	0.05 ug/g dry	-	<0.05	-	-
Methylene Chloride	0.05 ug/g dry	-	<0.05	-	-
Styrene	0.05 ug/g dry	-	<0.05	-	-
1,1,1,2-Tetrachloroethane	0.05 ug/g dry	-	<0.05	-	-
1,1,2,2-Tetrachloroethane	0.05 ug/g dry	-	<0.05	-	-
Tetrachloroethylene	0.05 ug/g dry	-	<0.05	-	-
Toluene	0.05 ug/g dry	-	<0.05	-	-
1,1,1-Trichloroethane	0.05 ug/g dry	-	<0.05	-	-
1,1,2-Trichloroethane	0.05 ug/g dry	-	<0.05	-	-
Trichloroethylene	0.05 ug/g dry	-	<0.05	-	-
Trichlorofluoromethane	0.05 ug/g dry	-	<0.05	-	-

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 04-Jan-2023

Order Date: 22-Dec-2022

Project Description: 220200

	Client ID:	MW22-20-SS1	MW22-20-SS5	-	-
	Sample Date:	21-Dec-22 12:00	21-Dec-22 12:00	-	-
	Sample ID:	2252428-17	2252428-18	-	-
	MDL/Units	Soil	Soil	-	-
Vinyl chloride	0.02 ug/g dry	-	<0.02	-	-
m,p-Xylenes	0.05 ug/g dry	-	<0.05	-	-
o-Xylene	0.05 ug/g dry	-	<0.05	-	-
Xylenes, total	0.05 ug/g dry	-	<0.05	-	-
4-Bromofluorobenzene	Surrogate	-	81.1%	-	-
Dibromofluoromethane	Surrogate	-	66.5%	-	-
Toluene-d8	Surrogate	-	71.9%	-	-
Hydrocarbons					
F1 PHCs (C6-C10)	7 ug/g dry	-	<7	-	-
F2 PHCs (C10-C16)	4 ug/g dry	-	46	-	-
F3 PHCs (C16-C34)	8 ug/g dry	-	93	-	-
F4 PHCs (C34-C50)	6 ug/g dry	-	95	-	-
Semi-Volatiles					
Acenaphthene	0.02 ug/g dry	-	<0.02	-	-
Acenaphthylene	0.02 ug/g dry	-	<0.02	-	-
Anthracene	0.02 ug/g dry	-	<0.02	-	-
Benzo [a] anthracene	0.02 ug/g dry	-	<0.02	-	-
Benzo [a] pyrene	0.02 ug/g dry	-	<0.02	-	-
Benzo [b] fluoranthene	0.02 ug/g dry	-	<0.02	-	-
Benzo [g,h,i] perylene	0.02 ug/g dry	-	<0.02	-	-
Benzo [k] fluoranthene	0.02 ug/g dry	-	<0.02	-	-
Chrysene	0.02 ug/g dry	-	<0.02	-	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	-	<0.02	-	-
Fluoranthene	0.02 ug/g dry	-	<0.02	-	-
Fluorene	0.02 ug/g dry	-	<0.02	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	-	<0.02	-	-
1-Methylnaphthalene	0.02 ug/g dry	-	0.05	-	-
2-Methylnaphthalene	0.02 ug/g dry	-	0.06	-	-
Methylnaphthalene (1&2)	0.04 ug/g dry	-	0.11	-	-
Naphthalene	0.01 ug/g dry	-	0.08	-	-
Phenanthrene	0.02 ug/g dry	-	0.02	-	-
Pyrene	0.02 ug/g dry	-	<0.02	-	-
2-Fluorobiphenyl	Surrogate	-	81.9%	-	-
Terphenyl-d14	Surrogate	-	92.1%	-	-
PCBs					

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 04-Jan-2023

Order Date: 22-Dec-2022

Project Description: 220200

	Client ID:	MW22-20-SS1	MW22-20-SS5	-	-
	Sample Date:	21-Dec-22 12:00	21-Dec-22 12:00	-	-
	Sample ID:	2252428-17	2252428-18	-	-
	MDL/Units	Soil	Soil	-	-
PCBs, total	0.05 ug/g dry	<0.05	-	-	-
Decachlorobiphenyl	Surrogate	114%	-	-	-

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
Conductivity	ND	5	uS/cm						
Cyanide, free	ND	0.03	ug/g						
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
F4G PHCs (gravimetric)	ND	50	ug/g						
Metals									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron, available	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium (VI)	ND	0.2	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Mercury	ND	0.1	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
PCBs									
PCBs, total	ND	0.05	ug/g						
Surrogate: Decachlorobiphenyl	*0.129*		*ug/g*		*129*	*60-140*			
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	*1.22*		*ug/g*		*91.5*	*50-140*			
Surrogate: Terphenyl-d14	*1.37*		*ug/g*		*103*	*50-140*			
Volatiles									
Acetone	ND	0.50	ug/g						

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Benzene	ND	0.02	ug/g						
Bromodichloromethane	ND	0.05	ug/g						
Bromoform	ND	0.05	ug/g						
Bromomethane	ND	0.05	ug/g						
Carbon Tetrachloride	ND	0.05	ug/g						
Chlorobenzene	ND	0.05	ug/g						
Chloroform	ND	0.05	ug/g						
Dibromochloromethane	ND	0.05	ug/g						
Dichlorodifluoromethane	ND	0.05	ug/g						
1,2-Dichlorobenzene	ND	0.05	ug/g						
1,3-Dichlorobenzene	ND	0.05	ug/g						
1,4-Dichlorobenzene	ND	0.05	ug/g						
1,1-Dichloroethane	ND	0.05	ug/g						
1,2-Dichloroethane	ND	0.05	ug/g						
1,1-Dichloroethylene	ND	0.05	ug/g						
cis-1,2-Dichloroethylene	ND	0.05	ug/g						
trans-1,2-Dichloroethylene	ND	0.05	ug/g						
1,2-Dichloropropane	ND	0.05	ug/g						
cis-1,3-Dichloropropylene	ND	0.05	ug/g						
trans-1,3-Dichloropropylene	ND	0.05	ug/g						
1,3-Dichloropropene, total	ND	0.05	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Ethylene dibromide (dibromoethane, 1,2	ND	0.05	ug/g						
Hexane	ND	0.05	ug/g						
Methyl Ethyl Ketone (2-Butanone)	ND	0.50	ug/g						
Methyl Isobutyl Ketone	ND	0.50	ug/g						
Methyl tert-butyl ether	ND	0.05	ug/g						
Methylene Chloride	ND	0.05	ug/g						
Styrene	ND	0.05	ug/g						
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g						
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g						
Tetrachloroethylene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
1,1,1-Trichloroethane	ND	0.05	ug/g						
1,1,2-Trichloroethane	ND	0.05	ug/g						
Trichloroethylene	ND	0.05	ug/g						
Trichlorofluoromethane	ND	0.05	ug/g						
Vinyl chloride	ND	0.02	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: 4-Bromofluorobenzene	*2.68*		*ug/g*		*83.7*	*50-140*			
Surrogate: Dibromofluoromethane	*1.98*		*ug/g*		*61.9*	*50-140*			
Surrogate: Toluene-d8	*2.44*		*ug/g*		*76.2*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
SAR	4.96	0.01	N/A	5.02			1.2	30	
Conductivity	1020	5	uS/cm	1020			0.1	5	
Cyanide, free	ND	0.03	ug/g	ND			NC	35	
pH	7.64	0.05	pH Units	7.67			0.4	2.3	
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g	ND			NC	40	
F2 PHCs (C10-C16)	54	4	ug/g	25			NC	30	
F3 PHCs (C16-C34)	15	8	ug/g	ND			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g	ND			NC	30	
Metals									
Antimony	ND	1.0	ug/g	1.2			NC	30	
Arsenic	4.8	1.0	ug/g	4.9			2.7	30	
Barium	81.0	1.0	ug/g	84.4			4.2	30	
Beryllium	0.6	0.5	ug/g	0.7			12.4	30	
Boron, available	ND	0.5	ug/g	ND			NC	35	
Boron	8.2	5.0	ug/g	9.6			15.9	30	
Cadmium	ND	0.5	ug/g	ND			NC	30	
Chromium (VI)	ND	0.2	ug/g	ND			NC	35	
Chromium	26.8	5.0	ug/g	28.7			6.7	30	
Cobalt	9.7	1.0	ug/g	10.2			4.8	30	
Copper	23.6	5.0	ug/g	25.2			6.5	30	
Lead	10.4	1.0	ug/g	11.1			6.2	30	
Mercury	ND	0.1	ug/g	ND			NC	30	
Molybdenum	3.2	1.0	ug/g	3.7			14.7	30	
Nickel	26.9	5.0	ug/g	29.3			8.4	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	1.0	1.0	ug/g	1.2			11.2	30	
Vanadium	35.1	10.0	ug/g	39.0			10.7	30	
Zinc	42.1	20.0	ug/g	44.2			4.9	30	
PCBs									
PCBs, total	0.200	0.05	ug/g	ND			NC	40	
Surrogate: Decachlorobiphenyl	*0.122*		*ug/g*		*117*	*60-140*			
Physical Characteristics									
% Solids	84.3	0.1	% by Wt.	85.1			1.0	25	
Semi-Volatiles									
Acenaphthene	ND	0.02	ug/g	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g	ND			NC	40	
Anthracene	ND	0.02	ug/g	ND			NC	40	
Benzo [a] anthracene	ND	0.02	ug/g	ND			NC	40	
Benzo [a] pyrene	ND	0.02	ug/g	ND			NC	40	
Benzo [b] fluoranthene	ND	0.02	ug/g	ND			NC	40	
Benzo [g,h,i] perylene	ND	0.02	ug/g	ND			NC	40	
Benzo [k] fluoranthene	ND	0.02	ug/g	ND			NC	40	
Chrysene	ND	0.02	ug/g	ND			NC	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g	ND			NC	40	
Fluoranthene	ND	0.02	ug/g	ND			NC	40	
Fluorene	ND	0.02	ug/g	ND			NC	40	
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g	ND			NC	40	
1-Methylnaphthalene	ND	0.02	ug/g	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g	ND			NC	40	
Naphthalene	ND	0.01	ug/g	ND			NC	40	
Phenanthrene	ND	0.02	ug/g	ND			NC	40	
Pyrene	ND	0.02	ug/g	ND			NC	40	

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: 2-Fluorobiphenyl	*1.47*		*ug/g*		*91.5*	*50-140*			
Surrogate: Terphenyl-d14	*1.63*		*ug/g*		*101*	*50-140*			
Volatiles									
Acetone	ND	0.50	ug/g	ND			NC	50	
Benzene	ND	0.02	ug/g	ND			NC	50	
Bromodichloromethane	ND	0.05	ug/g	ND			NC	50	
Bromoform	ND	0.05	ug/g	ND			NC	50	
Bromomethane	ND	0.05	ug/g	ND			NC	50	
Carbon Tetrachloride	ND	0.05	ug/g	ND			NC	50	
Chlorobenzene	ND	0.05	ug/g	ND			NC	50	
Chloroform	ND	0.05	ug/g	ND			NC	50	
Dibromochloromethane	ND	0.05	ug/g	ND			NC	50	
Dichlorodifluoromethane	ND	0.05	ug/g	ND			NC	50	
1,2-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,3-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,4-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,1-Dichloroethane	ND	0.05	ug/g	ND			NC	50	
1,2-Dichloroethane	ND	0.05	ug/g	ND			NC	50	
1,1-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
cis-1,2-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
trans-1,2-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
1,2-Dichloropropane	ND	0.05	ug/g	ND			NC	50	
cis-1,3-Dichloropropylene	ND	0.05	ug/g	ND			NC	50	
trans-1,3-Dichloropropylene	ND	0.05	ug/g	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g	ND			NC	50	
Ethylene dibromide (dibromoethane, 1,2-	ND	0.05	ug/g	ND			NC	50	
Hexane	ND	0.05	ug/g	ND			NC	50	
Methyl Ethyl Ketone (2-Butanone)	ND	0.50	ug/g	ND			NC	50	
Methyl Isobutyl Ketone	ND	0.50	ug/g	ND			NC	50	
Methyl tert-butyl ether	ND	0.05	ug/g	ND			NC	50	
Methylene Chloride	ND	0.05	ug/g	ND			NC	50	
Styrene	ND	0.05	ug/g	ND			NC	50	
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g	ND			NC	50	
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g	ND			NC	50	
Tetrachloroethylene	ND	0.05	ug/g	ND			NC	50	
Toluene	ND	0.05	ug/g	ND			NC	50	
1,1,1-Trichloroethane	ND	0.05	ug/g	ND			NC	50	
1,1,2-Trichloroethane	ND	0.05	ug/g	ND			NC	50	
Trichloroethylene	ND	0.05	ug/g	ND			NC	50	
Trichlorofluoromethane	ND	0.05	ug/g	ND			NC	50	
Vinyl chloride	ND	0.02	ug/g	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g	ND			NC	50	
o-Xylene	ND	0.05	ug/g	ND			NC	50	
Surrogate: 4-Bromofluorobenzene	*2.84*		*ug/g*		*82.8*	*50-140*			
Surrogate: Dibromofluoromethane	*2.28*		*ug/g*		*66.5*	*50-140*			
Surrogate: Toluene-d8	*2.52*		*ug/g*		*73.4*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
Cyanide, free	0.320	0.03	ug/g	ND	98.7	50-150			
Hydrocarbons									
F1 PHCs (C6-C10)	210	7	ug/g	ND	105	80-120			
F2 PHCs (C10-C16)	139	4	ug/g	25	134	60-140			
F3 PHCs (C16-C34)	269	8	ug/g	ND	128	60-140			
F4 PHCs (C34-C50)	175	6	ug/g	ND	131	60-140			
F4G PHCs (gravimetric)	1000	50	ug/g	ND	100	80-120			
Metals									
Arsenic	58.2	1.0	ug/g	ND	116	70-130			
Beryllium	52.0	0.5	ug/g	ND	104	70-130			
Boron, available	4.51	0.5	ug/g	ND	90.1	70-122			
Boron	53.3	5.0	ug/g	ND	107	70-130			
Cadmium	52.6	0.5	ug/g	ND	105	70-130			
Chromium (VI)	0.2	0.2	ug/g	ND	77.5	70-130			
Cobalt	59.1	1.0	ug/g	ND	118	70-130			
Copper	63.1	5.0	ug/g	ND	126	70-130			
Lead	55.2	1.0	ug/g	ND	110	70-130			
Mercury	1.43	0.1	ug/g	ND	95.1	70-130			
Molybdenum	56.2	1.0	ug/g	ND	112	70-130			
Selenium	46.2	1.0	ug/g	ND	92.3	70-130			
Silver	48.4	0.3	ug/g	ND	96.7	70-130			
Thallium	54.3	1.0	ug/g	ND	109	70-130			
Uranium	57.5	1.0	ug/g	ND	115	70-130			
PCBs									
PCBs, total	0.556	0.05	ug/g	ND	134	60-140			
Surrogate: Decachlorobiphenyl	*0.121*		*ug/g*		*117*	*60-140*			
Semi-Volatiles									
Acenaphthene	0.218	0.02	ug/g	ND	108	50-140			
Acenaphthylene	0.194	0.02	ug/g	ND	96.7	50-140			
Anthracene	0.178	0.02	ug/g	ND	88.7	50-140			
Benzo [a] anthracene	0.182	0.02	ug/g	ND	90.6	50-140			
Benzo [a] pyrene	0.180	0.02	ug/g	ND	90.0	50-140			
Benzo [b] fluoranthene	0.248	0.02	ug/g	ND	124	50-140			
Benzo [g,h,i] perylene	0.163	0.02	ug/g	ND	81.1	50-140			
Benzo [k] fluoranthene	0.254	0.02	ug/g	ND	127	50-140			
Chrysene	0.207	0.02	ug/g	ND	103	50-140			
Dibenzo [a,h] anthracene	0.170	0.02	ug/g	ND	84.7	50-140			
Fluoranthene	0.171	0.02	ug/g	ND	85.3	50-140			
Fluorene	0.194	0.02	ug/g	ND	96.8	50-140			
Indeno [1,2,3-cd] pyrene	0.176	0.02	ug/g	ND	87.6	50-140			
1-Methylnaphthalene	0.200	0.02	ug/g	ND	100	50-140			
2-Methylnaphthalene	0.220	0.02	ug/g	ND	110	50-140			
Naphthalene	0.227	0.01	ug/g	ND	113	50-140			
Phenanthrene	0.189	0.02	ug/g	ND	94.1	50-140			
Pyrene	0.173	0.02	ug/g	ND	86.3	50-140			
Surrogate: 2-Fluorobiphenyl	*1.35*		*ug/g*		*84.4*	*50-140*			
Surrogate: Terphenyl-d14	*1.57*		*ug/g*		*97.6*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Volatiles									
Acetone	7.62	0.50	ug/g	ND	76.2	50-140			
Benzene	4.82	0.02	ug/g	ND	120	60-130			
Bromodichloromethane	3.90	0.05	ug/g	ND	97.5	60-130			
Bromoform	4.41	0.05	ug/g	ND	110	60-130			
Bromomethane	3.79	0.05	ug/g	ND	94.8	50-140			
Carbon Tetrachloride	3.38	0.05	ug/g	ND	84.4	60-130			
Chlorobenzene	4.89	0.05	ug/g	ND	122	60-130			
Chloroform	3.90	0.05	ug/g	ND	97.5	60-130			
Dibromochloromethane	4.59	0.05	ug/g	ND	115	60-130			
Dichlorodifluoromethane	2.97	0.05	ug/g	ND	74.2	50-140			
1,2-Dichlorobenzene	4.48	0.05	ug/g	ND	112	60-130			
1,3-Dichlorobenzene	4.60	0.05	ug/g	ND	115	60-130			
1,4-Dichlorobenzene	4.60	0.05	ug/g	ND	115	60-130			
1,1-Dichloroethane	3.87	0.05	ug/g	ND	96.8	60-130			
1,2-Dichloroethane	3.55	0.05	ug/g	ND	88.8	60-130			
1,1-Dichloroethylene	3.77	0.05	ug/g	ND	94.2	60-130			
cis-1,2-Dichloroethylene	4.43	0.05	ug/g	ND	111	60-130			
trans-1,2-Dichloroethylene	4.45	0.05	ug/g	ND	111	60-130			
1,2-Dichloropropane	4.86	0.05	ug/g	ND	122	60-130			
cis-1,3-Dichloropropylene	4.63	0.05	ug/g	ND	116	60-130			
trans-1,3-Dichloropropylene	4.76	0.05	ug/g	ND	119	60-130			
Ethylbenzene	4.69	0.05	ug/g	ND	117	60-130			
Ethylene dibromide (dibromoethane, 1,2	4.66	0.05	ug/g	ND	116	60-130			
Hexane	4.88	0.05	ug/g	ND	122	60-130			
Methyl Ethyl Ketone (2-Butanone)	9.62	0.50	ug/g	ND	96.2	50-140			
Methyl Isobutyl Ketone	13.3	0.50	ug/g	ND	133	50-140			
Methyl tert-butyl ether	11.4	0.05	ug/g	ND	114	50-140			
Methylene Chloride	3.78	0.05	ug/g	ND	94.5	60-130			
Styrene	4.79	0.05	ug/g	ND	120	60-130			
1,1,1,2-Tetrachloroethane	4.33	0.05	ug/g	ND	108	60-130			
1,1,2,2-Tetrachloroethane	4.59	0.05	ug/g	ND	115	60-130			
Tetrachloroethylene	4.51	0.05	ug/g	ND	113	60-130			
Toluene	4.29	0.05	ug/g	ND	107	60-130			
1,1,1-Trichloroethane	3.80	0.05	ug/g	ND	95.1	60-130			
1,1,2-Trichloroethane	4.58	0.05	ug/g	ND	115	60-130			
Trichloroethylene	4.22	0.05	ug/g	ND	105	60-130			
Trichlorofluoromethane	3.58	0.05	ug/g	ND	89.5	50-140			
Vinyl chloride	4.15	0.02	ug/g	ND	104	50-140			
m,p-Xylenes	8.64	0.05	ug/g	ND	108	60-130			
o-Xylene	4.92	0.05	ug/g	ND	123	60-130			
Surrogate: 4-Bromofluorobenzene	*1.95*		*ug/g*		*61.0*	*50-140*			
Surrogate: Dibromofluoromethane	*2.15*		*ug/g*		*67.2*	*50-140*			
Surrogate: Toluene-d8	*2.20*		*ug/g*		*68.9*	*50-140*			

Qualifier Notes:

Login Qualifiers :

Container and COC sample IDs don't match - MeOH vial is labelled MW22-20-SS1, the lid reads MW22-20-2, and chain of custody reads MW22-20-SS2.

Applies to samples: MW22-20-SS2

Sample Qualifiers :

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

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable
ND: Not Detected
MDL: Method Detection Limit
Source Result: Data used as source for matrix and duplicate samples
%REC: Percent recovery.
RPD: Relative percent difference.
NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.
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.

PARAC LABORATORIES

Paracel ID: 2252428

urent Blvd.
K1G 4J8
47
icellabs.com
s.com

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2252428	Nº 60436

Client Name: LRL Associates	Project Ref: 220200	Page 1 of 2
Contact Name: Kevin Clouthier	Quote #:	Turnaround Time
Address: 5430 Canotek Road, Ottawa, ON K1J 9G2	PO #:	☐ 1 day ☐ 3 day ☐ 2 day ☒ Regular
Telephone: 613-842-3434	E-mail: dclouthier@lrl.ca jarthurs@lrl.ca	Date Required:

☒ REG 153/04 ☐ REG 406/19	Other Regulation	Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)
☐ Table 1 ☐ Res/Park ☐ Med/Fine	☐ REG,558 ☐ PWQO	
☐ Table 2 ☐ Ind/Comm ☐ Coarse	☐ CCME ☐ MISA	
☒ Table 3 ☐ Agri/Other	☐ SU - Sani ☐ SU - Storm	
☐ Table ___	Mun:	
For RSC: ☒ Yes ☐ No	☐ Other:	

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken: Date	Sample Taken: Time	Inorganics	Reg 153 Metals	VOCs	PHC	PAH	Texture	pH						
1	BH22-19-SS2	S		3	Dec20/22	AM	X	X											
2	BH22-19-SS4	↓		3	↓	↓	X	X	X	X	X								
3	BH22-19-SS6			3					X	X	X								
4	BH22-19-SS10			2				X											
5	MW22-15-SS2			3	Dec19/22	AM	X	X	X	X									
6	MW22-15-SS7										X								
7	MW22-15-SS8							X	X	X									
8	MW22-22-SS3						X	X	X	X									
9	MW22-22-SS7								X	X	X								
10	MW22-14-SS1	↓		↓	Dec22/22	AM	X	X				XA							

Comments:

Method of Delivery: Drop Box

Relinquished By (Sign):	Received By Driver/Depot:	Received at Lab:	Verified By:
Relinquished By (Print): Kevin Clouthier	Date/Time:	Date/Time: 22 Dec 22 17:35	Date/Time: Dec 23 11:04
Date/Time: 5:30 Dec 22/22	Temperature: °C	Temperature: 3.6 °C	pH Verified: ☐ By:

PARACE LABORATORIES L

Paracel ID: 2252428

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
	№ 60437

Client Name: LRL Associates	Project Ref: 220200	Page 2 of 2
Contact Name: Dean Clarkin	Quote #:	Turnaround Time
Address: 5430 Canotek Road, Ottawa ON	PO #:	☐ 1 day ☐ 3 day
	E-mail: dclarkin@lrl.ca tarthers@lrl.ca	☐ 2 day ☒ Regular
Telephone: 613-842-3434		Date Required:

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

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

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken: Date	Sample Taken: Time	PHC	VOC	Texture	pH	Inorganics	Reg 153 Metals	PAHs	PCB				
1	MW22-14-SS5	S		3	Dec 22/22	AM	X	X	X	X								
2	MW22-14-SS11	S		3	↓	↓	X	X										
3	MW22-16-SS1	S		3	Dec 22/22	PM					X	X						
4	MW22-16-SS5	S		3	Dec 22/22	PM	X	X				X	X					
5	MW22-20-SS2	|		3	Dec 21/22	PM	X	X	X	X			X					
6	MW22-20-SS11	|		3	|	|	X	X					X					
7	MW22-20-SS1	|		3	|	|					X	X		X				
8	MW22-20-SS5	↓		3	↓	↓	X	X	X	X			X					
9																		
10																		

Comments:			Method of Delivery: Dep box
Relinquished By (Sign):	Received By Driver/Depot:	Received at Lab:	Verified By: Sandra Demarino
Relinquished By (Print): Dean Clarkin	Date/Time:	Date/Time: 22-Dec-22 1735	Date/Time: Dec 23 11:04
Date/Time: 5:30 Dec 21/22	Temperature: °C	Temperature: 4.6 °C	pH Verified: ☐ By:

PARACEL LABORATORIES LTD.

TRUSTED.
RESPONSIVE.
RELIABLE.

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

Certificate of Analysis

LRL Associates Ltd.

5430 Canotek Road
Ottawa, ON K1J 9G2
Attn: Devin Clouthier

Client PO:
Project: 220200
Custody: 67015

Report Date: 10-Jan-2023
Order Date: 5-Jan-2023

Order #: 2301251

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

Paracel ID	Client ID
2301251-01	BH22-18-SS1
2301251-02	BH22-18-SS3
2301251-03	BH22-18-SS6

Approved By:

Dale Robertson, BSc
Laboratory Director

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 10-Jan-2023

Order Date: 5-Jan-2023

Project Description: 220200

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Boron, available	MOE (HWE), EPA 200.8 - ICP-MS	9-Jan-23	9-Jan-23
Chromium, hexavalent - soil	MOE E3056 - Extraction, colourimetric	6-Jan-23	9-Jan-23
Conductivity	MOE E3138 - probe @25 °C, water ext	9-Jan-23	9-Jan-23
Cyanide, free	MOE E3015 - Auto Colour, water extraction	6-Jan-23	6-Jan-23
Mercury by CVAA	EPA 7471B - CVAA, digestion	9-Jan-23	9-Jan-23
pH, soil	EPA 150.1 - pH probe @ 25 °C, CaCl buffered ext.	7-Jan-23	7-Jan-23
PHC F1	CWS Tier 1 - P&T GC-FID	6-Jan-23	6-Jan-23
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	5-Jan-23	9-Jan-23
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	9-Jan-23	9-Jan-23
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	6-Jan-23	7-Jan-23
REG 153: VOCs by P&T GC/MS	EPA 8260 - P&T GC-MS	6-Jan-23	6-Jan-23
SAR	Calculated	9-Jan-23	9-Jan-23
Solids, %	CWS Tier 1 - Gravimetric	6-Jan-23	9-Jan-23

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 10-Jan-2023

Order Date: 5-Jan-2023

Project Description: 220200

	Client ID:	BH22-18-SS1	BH22-18-SS3	BH22-18-SS6	-
	Sample Date:	03-Jan-23 09:00	03-Jan-23 09:00	03-Jan-23 09:00	-
	Sample ID:	2301251-01	2301251-02	2301251-03	-
	MDL/Units	Soil	Soil	Soil	-
Physical Characteristics					
% Solids	0.1 % by Wt.	78.4	83.5	93.3	-
General Inorganics					
SAR	0.01 N/A	-	-	0.49	-
Conductivity	5 uS/cm	-	-	296	-
Cyanide, free	0.03 ug/g dry	-	-	<0.03	-
pH	0.05 pH Units	-	-	7.60	-
Metals					
Antimony	1.0 ug/g dry	-	-	<1.0	-
Arsenic	1.0 ug/g dry	-	-	3.8	-
Barium	1.0 ug/g dry	-	-	63.9	-
Beryllium	0.5 ug/g dry	-	-	<0.5	-
Boron	5.0 ug/g dry	-	-	7.3	-
Boron, available	0.5 ug/g dry	-	-	<0.5	-
Cadmium	0.5 ug/g dry	-	-	<0.5	-
Chromium	5.0 ug/g dry	-	-	14.3	-
Chromium (VI)	0.2 ug/g dry	-	-	<0.2	-
Cobalt	1.0 ug/g dry	-	-	7.0	-
Copper	5.0 ug/g dry	-	-	19.0	-
Lead	1.0 ug/g dry	-	-	7.0	-
Mercury	0.1 ug/g dry	-	-	<0.1	-
Molybdenum	1.0 ug/g dry	-	-	2.0	-
Nickel	5.0 ug/g dry	-	-	20.2	-
Selenium	1.0 ug/g dry	-	-	<1.0	-
Silver	0.3 ug/g dry	-	-	<0.3	-
Thallium	1.0 ug/g dry	-	-	<1.0	-
Uranium	1.0 ug/g dry	-	-	1.1	-
Vanadium	10.0 ug/g dry	-	-	21.8	-
Zinc	20.0 ug/g dry	-	-	23.9	-
Volatiles					
Acetone	0.50 ug/g dry	<0.50	<0.50	-	-
Benzene	0.02 ug/g dry	<0.02	<0.02	-	-
Bromodichloromethane	0.05 ug/g dry	<0.05	<0.05	-	-
Bromoform	0.05 ug/g dry	<0.05	<0.05	-	-
Bromomethane	0.05 ug/g dry	<0.05	<0.05	-	-
Carbon Tetrachloride	0.05 ug/g dry	<0.05	<0.05	-	-

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 10-Jan-2023

Order Date: 5-Jan-2023

Project Description: 220200

	Client ID:	BH22-18-SS1	BH22-18-SS3	BH22-18-SS6	-
	Sample Date:	03-Jan-23 09:00	03-Jan-23 09:00	03-Jan-23 09:00	-
	Sample ID:	2301251-01	2301251-02	2301251-03	-
	MDL/Units	Soil	Soil	Soil	-
Chlorobenzene	0.05 ug/g dry	<0.05	<0.05	-	-
Chloroform	0.05 ug/g dry	<0.05	<0.05	-	-
Dibromochloromethane	0.05 ug/g dry	<0.05	<0.05	-	-
Dichlorodifluoromethane	0.05 ug/g dry	<0.05	<0.05	-	-
1,2-Dichlorobenzene	0.05 ug/g dry	<0.05	<0.05	-	-
1,3-Dichlorobenzene	0.05 ug/g dry	<0.05	<0.05	-	-
1,4-Dichlorobenzene	0.05 ug/g dry	<0.05	<0.05	-	-
1,1-Dichloroethane	0.05 ug/g dry	<0.05	<0.05	-	-
1,2-Dichloroethane	0.05 ug/g dry	<0.05	<0.05	-	-
1,1-Dichloroethylene	0.05 ug/g dry	<0.05	<0.05	-	-
cis-1,2-Dichloroethylene	0.05 ug/g dry	<0.05	<0.05	-	-
trans-1,2-Dichloroethylene	0.05 ug/g dry	<0.05	<0.05	-	-
1,2-Dichloropropane	0.05 ug/g dry	<0.05	<0.05	-	-
cis-1,3-Dichloropropylene	0.05 ug/g dry	<0.05	<0.05	-	-
trans-1,3-Dichloropropylene	0.05 ug/g dry	<0.05	<0.05	-	-
1,3-Dichloropropene, total	0.05 ug/g dry	<0.05	<0.05	-	-
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	-	-
Ethylene dibromide (dibromoethane, 1,2-)	0.05 ug/g dry	<0.05	<0.05	-	-
Hexane	0.05 ug/g dry	<0.05	<0.05	-	-
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g dry	<0.50	<0.50	-	-
Methyl Isobutyl Ketone	0.50 ug/g dry	<0.50	<0.50	-	-
Methyl tert-butyl ether	0.05 ug/g dry	<0.05	<0.05	-	-
Methylene Chloride	0.05 ug/g dry	<0.05	<0.05	-	-
Styrene	0.05 ug/g dry	<0.05	<0.05	-	-
1,1,1,2-Tetrachloroethane	0.05 ug/g dry	<0.05	<0.05	-	-
1,1,2,2-Tetrachloroethane	0.05 ug/g dry	<0.05	<0.05	-	-
Tetrachloroethylene	0.05 ug/g dry	<0.05	<0.05	-	-
Toluene	0.05 ug/g dry	<0.05	<0.05	-	-
1,1,1-Trichloroethane	0.05 ug/g dry	<0.05	<0.05	-	-
1,1,2-Trichloroethane	0.05 ug/g dry	<0.05	<0.05	-	-
Trichloroethylene	0.05 ug/g dry	<0.05	<0.05	-	-
Trichlorofluoromethane	0.05 ug/g dry	<0.05	<0.05	-	-
Vinyl chloride	0.02 ug/g dry	<0.02	<0.02	-	-
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	-	-
o-Xylene	0.05 ug/g dry	<0.05	<0.05	-	-

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 10-Jan-2023

Order Date: 5-Jan-2023

Project Description: 220200

	Client ID:	BH22-18-SS1	BH22-18-SS3	BH22-18-SS6	-
	Sample Date:	03-Jan-23 09:00	03-Jan-23 09:00	03-Jan-23 09:00	-
	Sample ID:	2301251-01	2301251-02	2301251-03	-
	MDL/Units	Soil	Soil	Soil	-
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	-	-
4-Bromofluorobenzene	Surrogate	74.5%	85.0%	-	-
Dibromofluoromethane	Surrogate	123%	114%	-	-
Toluene-d8	Surrogate	120%	118%	-	-
Hydrocarbons					
F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	-	-
F2 PHCs (C10-C16)	4 ug/g dry	<4	<4	-	-
F3 PHCs (C16-C34)	8 ug/g dry	24	<8	-	-
F4 PHCs (C34-C50)	6 ug/g dry	69	<6	-	-
Semi-Volatiles					
Acenaphthene	0.02 ug/g dry	<0.02	<0.02	-	-
Acenaphthylene	0.02 ug/g dry	<0.02	<0.02	-	-
Anthracene	0.02 ug/g dry	<0.02	<0.02	-	-
Benzo [a] anthracene	0.02 ug/g dry	<0.02	<0.02	-	-
Benzo [a] pyrene	0.02 ug/g dry	<0.02	<0.02	-	-
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	<0.02	-	-
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	<0.02	-	-
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	<0.02	-	-
Chrysene	0.02 ug/g dry	<0.02	<0.02	-	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	<0.02	-	-
Fluoranthene	0.02 ug/g dry	<0.02	<0.02	-	-
Fluorene	0.02 ug/g dry	<0.02	<0.02	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	<0.02	-	-
1-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	-	-
2-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	-	-
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	<0.04	-	-
Naphthalene	0.01 ug/g dry	<0.01	<0.01	-	-
Phenanthrene	0.02 ug/g dry	<0.02	<0.02	-	-
Pyrene	0.02 ug/g dry	<0.02	<0.02	-	-
2-Fluorobiphenyl	Surrogate	99.2%	110%	-	-
Terphenyl-d14	Surrogate	113%	126%	-	-

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
Conductivity	ND	5	uS/cm						
Cyanide, free	ND	0.03	ug/g						
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
Metals									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron, available	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium (VI)	ND	0.2	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Mercury	ND	0.1	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
Semi-Volatiles									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
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	*1.14*		*ug/g*		*85.3*	*50-140*			
Surrogate: Terphenyl-d14	*1.32*		*ug/g*		*99.0*	*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						

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 10-Jan-2023

Order Date: 5-Jan-2023

Project Description: 220200

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Carbon Tetrachloride	ND	0.05	ug/g						
Chlorobenzene	ND	0.05	ug/g						
Chloroform	ND	0.05	ug/g						
Dibromochloromethane	ND	0.05	ug/g						
Dichlorodifluoromethane	ND	0.05	ug/g						
1,2-Dichlorobenzene	ND	0.05	ug/g						
1,3-Dichlorobenzene	ND	0.05	ug/g						
1,4-Dichlorobenzene	ND	0.05	ug/g						
1,1-Dichloroethane	ND	0.05	ug/g						
1,2-Dichloroethane	ND	0.05	ug/g						
1,1-Dichloroethylene	ND	0.05	ug/g						
cis-1,2-Dichloroethylene	ND	0.05	ug/g						
trans-1,2-Dichloroethylene	ND	0.05	ug/g						
1,2-Dichloropropane	ND	0.05	ug/g						
cis-1,3-Dichloropropylene	ND	0.05	ug/g						
trans-1,3-Dichloropropylene	ND	0.05	ug/g						
1,3-Dichloropropene, total	ND	0.05	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Ethylene dibromide (dibromoethane, 1,2	ND	0.05	ug/g						
Hexane	ND	0.05	ug/g						
Methyl Ethyl Ketone (2-Butanone)	ND	0.50	ug/g						
Methyl Isobutyl Ketone	ND	0.50	ug/g						
Methyl tert-butyl ether	ND	0.05	ug/g						
Methylene Chloride	ND	0.05	ug/g						
Styrene	ND	0.05	ug/g						
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g						
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g						
Tetrachloroethylene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
1,1,1-Trichloroethane	ND	0.05	ug/g						
1,1,2-Trichloroethane	ND	0.05	ug/g						
Trichloroethylene	ND	0.05	ug/g						
Trichlorofluoromethane	ND	0.05	ug/g						
Vinyl chloride	ND	0.02	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: 4-Bromofluorobenzene	*2.46*		*ug/g*		*76.8*	*50-140*			
Surrogate: Dibromofluoromethane	*3.25*		*ug/g*		*101*	*50-140*			
Surrogate: Toluene-d8	*3.37*		*ug/g*		*105*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
SAR	0.48	0.01	N/A	0.50			4.1	30	
Conductivity	191	5	uS/cm	197			3.1	5	
Cyanide, free	ND	0.03	ug/g	ND			NC	35	
pH	6.01	0.05	pH Units	6.00			0.2	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)	177	8	ug/g	66			91.1	30	QR-04
F4 PHCs (C34-C50)	243	6	ug/g	193			22.7	30	
Metals									
Antimony	ND	1.0	ug/g	ND			NC	30	
Arsenic	3.0	1.0	ug/g	3.1			2.0	30	
Barium	25.4	1.0	ug/g	28.2			10.5	30	
Beryllium	ND	0.5	ug/g	ND			NC	30	
Boron, available	ND	0.5	ug/g	ND			NC	35	
Boron	6.5	5.0	ug/g	6.6			1.7	30	
Cadmium	ND	0.5	ug/g	ND			NC	30	
Chromium (VI)	ND	0.2	ug/g	ND			NC	35	
Chromium	10.1	5.0	ug/g	9.3			7.9	30	
Cobalt	2.4	1.0	ug/g	2.1			11.7	30	
Copper	ND	5.0	ug/g	ND			NC	30	
Lead	7.4	1.0	ug/g	6.9			7.2	30	
Mercury	ND	0.1	ug/g	ND			NC	30	
Molybdenum	ND	1.0	ug/g	ND			NC	30	
Nickel	5.4	5.0	ug/g	ND			NC	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	ND	1.0	ug/g	ND			NC	30	
Vanadium	11.3	10.0	ug/g	10.4			7.6	30	
Zinc	ND	20.0	ug/g	ND			NC	30	
Physical Characteristics									
% Solids	79.5	0.1	% by Wt.	78.4			1.4	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	*1.64*		*ug/g*		*96.3*	*50-140*			
Surrogate: Terphenyl-d14	*1.96*		*ug/g*		*115*	*50-140*			
Volatiles									

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Acetone	ND	0.50	ug/g	ND			NC	50	
Benzene	ND	0.02	ug/g	ND			NC	50	
Bromodichloromethane	ND	0.05	ug/g	ND			NC	50	
Bromoform	ND	0.05	ug/g	ND			NC	50	
Bromomethane	ND	0.05	ug/g	ND			NC	50	
Carbon Tetrachloride	ND	0.05	ug/g	ND			NC	50	
Chlorobenzene	ND	0.05	ug/g	ND			NC	50	
Chloroform	ND	0.05	ug/g	ND			NC	50	
Dibromochloromethane	ND	0.05	ug/g	ND			NC	50	
Dichlorodifluoromethane	ND	0.05	ug/g	ND			NC	50	
1,2-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,3-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,4-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,1-Dichloroethane	ND	0.05	ug/g	ND			NC	50	
1,2-Dichloroethane	ND	0.05	ug/g	ND			NC	50	
1,1-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
cis-1,2-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
trans-1,2-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
1,2-Dichloropropane	ND	0.05	ug/g	ND			NC	50	
cis-1,3-Dichloropropylene	ND	0.05	ug/g	ND			NC	50	
trans-1,3-Dichloropropylene	ND	0.05	ug/g	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g	ND			NC	50	
Ethylene dibromide (dibromoethane, 1,2	ND	0.05	ug/g	ND			NC	50	
Hexane	ND	0.05	ug/g	ND			NC	50	
Methyl Ethyl Ketone (2-Butanone)	ND	0.50	ug/g	ND			NC	50	
Methyl Isobutyl Ketone	ND	0.50	ug/g	ND			NC	50	
Methyl tert-butyl ether	ND	0.05	ug/g	ND			NC	50	
Methylene Chloride	ND	0.05	ug/g	ND			NC	50	
Styrene	ND	0.05	ug/g	ND			NC	50	
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g	ND			NC	50	
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g	ND			NC	50	
Tetrachloroethylene	ND	0.05	ug/g	ND			NC	50	
Toluene	ND	0.05	ug/g	ND			NC	50	
1,1,1-Trichloroethane	ND	0.05	ug/g	ND			NC	50	
1,1,2-Trichloroethane	ND	0.05	ug/g	ND			NC	50	
Trichloroethylene	ND	0.05	ug/g	ND			NC	50	
Trichlorofluoromethane	ND	0.05	ug/g	ND			NC	50	
Vinyl chloride	ND	0.02	ug/g	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g	ND			NC	50	
o-Xylene	ND	0.05	ug/g	ND			NC	50	
Surrogate: 4-Bromofluorobenzene	*3.48*		*ug/g*		*86.0*	*50-140*			
Surrogate: Dibromofluoromethane	*4.51*		*ug/g*		*112*	*50-140*			
Surrogate: Toluene-d8	*4.72*		*ug/g*		*117*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
Cyanide, free	0.203	0.03	ug/g	ND	47.3	50-150			QM-01
Hydrocarbons									
F1 PHCs (C6-C10)	190	7	ug/g	ND	95.1	80-120			
F2 PHCs (C10-C16)	113	4	ug/g	ND	119	60-140			
F3 PHCs (C16-C34)	358	8	ug/g	66	125	60-140			
F4 PHCs (C34-C50)	444	6	ug/g	193	170	60-140			QM-06
Metals									
Arsenic	48.3	1.0	ug/g	1.2	94.2	70-130			
Barium	54.1	1.0	ug/g	11.3	85.7	70-130			
Beryllium	45.4	0.5	ug/g	ND	90.6	70-130			
Boron	46.3	5.0	ug/g	ND	87.4	70-130			
Cadmium	44.2	0.5	ug/g	ND	88.4	70-130			
Chromium (VI)	0.03	0.2	ug/g	ND	14.0	70-130			QM-05
Chromium	52.4	5.0	ug/g	ND	97.3	70-130			
Cobalt	49.1	1.0	ug/g	ND	96.5	70-130			
Copper	46.2	5.0	ug/g	ND	90.1	70-130			
Lead	45.7	1.0	ug/g	2.8	85.9	70-130			
Mercury	1.18	0.1	ug/g	ND	78.8	70-130			
Molybdenum	46.3	1.0	ug/g	ND	92.0	70-130			
Nickel	48.7	5.0	ug/g	ND	93.5	70-130			
Selenium	41.3	1.0	ug/g	ND	82.2	70-130			
Silver	44.0	0.3	ug/g	ND	88.0	70-130			
Thallium	42.1	1.0	ug/g	ND	84.1	70-130			
Uranium	45.5	1.0	ug/g	ND	90.7	70-130			
Vanadium	53.0	10.0	ug/g	ND	97.6	70-130			
Zinc	45.7	20.0	ug/g	ND	83.4	70-130			
Semi-Volatiles									
Acenaphthene	0.166	0.02	ug/g	ND	78.2	50-140			
Acenaphthylene	0.143	0.02	ug/g	ND	67.1	50-140			
Anthracene	0.151	0.02	ug/g	ND	70.8	50-140			
Benzo [a] anthracene	0.137	0.02	ug/g	ND	64.5	50-140			
Benzo [a] pyrene	0.147	0.02	ug/g	ND	69.1	50-140			
Benzo [b] fluoranthene	0.184	0.02	ug/g	ND	86.8	50-140			
Benzo [g,h,i] perylene	0.148	0.02	ug/g	ND	69.4	50-140			
Benzo [k] fluoranthene	0.164	0.02	ug/g	ND	77.1	50-140			
Chrysene	0.173	0.02	ug/g	ND	81.5	50-140			
Dibenzo [a,h] anthracene	0.148	0.02	ug/g	ND	69.5	50-140			
Fluoranthene	0.146	0.02	ug/g	ND	68.8	50-140			
Fluorene	0.156	0.02	ug/g	ND	73.5	50-140			
Indeno [1,2,3-cd] pyrene	0.147	0.02	ug/g	ND	69.0	50-140			
1-Methylnaphthalene	0.187	0.02	ug/g	ND	87.9	50-140			
2-Methylnaphthalene	0.201	0.02	ug/g	ND	94.6	50-140			
Naphthalene	0.185	0.01	ug/g	ND	86.9	50-140			
Phenanthrene	0.160	0.02	ug/g	ND	75.4	50-140			
Pyrene	0.148	0.02	ug/g	ND	69.8	50-140			
Surrogate: 2-Fluorobiphenyl	*1.38*		*ug/g*		*80.9*	*50-140*			
Surrogate: Terphenyl-d14	*1.67*		*ug/g*		*98.4*	*50-140*			
Volatiles									

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Acetone	9.45	0.50	ug/g	ND	94.5	50-140			
Benzene	4.25	0.02	ug/g	ND	106	60-130			
Bromodichloromethane	4.34	0.05	ug/g	ND	108	60-130			
Bromoform	4.19	0.05	ug/g	ND	105	60-130			
Bromomethane	4.80	0.05	ug/g	ND	120	50-140			
Carbon Tetrachloride	4.33	0.05	ug/g	ND	108	60-130			
Chlorobenzene	3.99	0.05	ug/g	ND	99.7	60-130			
Chloroform	4.37	0.05	ug/g	ND	109	60-130			
Dibromochloromethane	3.84	0.05	ug/g	ND	96.0	60-130			
Dichlorodifluoromethane	4.27	0.05	ug/g	ND	107	50-140			
1,2-Dichlorobenzene	4.20	0.05	ug/g	ND	105	60-130			
1,3-Dichlorobenzene	4.24	0.05	ug/g	ND	106	60-130			
1,4-Dichlorobenzene	3.99	0.05	ug/g	ND	99.7	60-130			
1,1-Dichloroethane	4.46	0.05	ug/g	ND	112	60-130			
1,2-Dichloroethane	4.28	0.05	ug/g	ND	107	60-130			
1,1-Dichloroethylene	4.45	0.05	ug/g	ND	111	60-130			
cis-1,2-Dichloroethylene	4.28	0.05	ug/g	ND	107	60-130			
trans-1,2-Dichloroethylene	4.48	0.05	ug/g	ND	112	60-130			
1,2-Dichloropropane	4.15	0.05	ug/g	ND	104	60-130			
cis-1,3-Dichloropropylene	4.30	0.05	ug/g	ND	108	60-130			
trans-1,3-Dichloropropylene	4.21	0.05	ug/g	ND	105	60-130			
Ethylbenzene	3.88	0.05	ug/g	ND	96.9	60-130			
Ethylene dibromide (dibromoethane, 1,2-	3.97	0.05	ug/g	ND	99.1	60-130			
Hexane	4.38	0.05	ug/g	ND	109	60-130			
Methyl Ethyl Ketone (2-Butanone)	9.66	0.50	ug/g	ND	96.6	50-140			
Methyl Isobutyl Ketone	9.99	0.50	ug/g	ND	99.9	50-140			
Methyl tert-butyl ether	10.9	0.05	ug/g	ND	109	50-140			
Methylene Chloride	3.89	0.05	ug/g	ND	97.2	60-130			
Styrene	4.04	0.05	ug/g	ND	101	60-130			
1,1,1,2-Tetrachloroethane	3.85	0.05	ug/g	ND	96.2	60-130			
1,1,2,2-Tetrachloroethane	3.88	0.05	ug/g	ND	97.0	60-130			
Tetrachloroethylene	3.87	0.05	ug/g	ND	96.7	60-130			
Toluene	3.69	0.05	ug/g	ND	92.1	60-130			
1,1,1-Trichloroethane	4.26	0.05	ug/g	ND	106	60-130			
1,1,2-Trichloroethane	4.19	0.05	ug/g	ND	105	60-130			
Trichloroethylene	4.23	0.05	ug/g	ND	106	60-130			
Trichlorofluoromethane	4.45	0.05	ug/g	ND	111	50-140			
Vinyl chloride	4.45	0.02	ug/g	ND	111	50-140			
m,p-Xylenes	8.08	0.05	ug/g	ND	101	60-130			
o-Xylene	4.18	0.05	ug/g	ND	104	60-130			
Surrogate: 4-Bromofluorobenzene	*3.03*		*ug/g*		*94.8*	*50-140*			
Surrogate: Dibromofluoromethane	*3.37*		*ug/g*		*105*	*50-140*			
Surrogate: Toluene-d8	*3.16*		*ug/g*		*98.6*	*50-140*			

Qualifier Notes:

QC Qualifiers :

QM-01	The spike recovery for this QC sample is outside of established control limits due to sample matrix interference.
QM-05	The spike recovery was outside acceptance limits for the matrix spike due to matrix interference.
QM-06	Due to noted non-homogeneity of the QC sample matrix, the spike recoveries were out side the accepted range. Batch data accepted based on other QC.
QR-04	Duplicate results exceeds RPD limits due to non-homogeneous matrix.

Sample Data Revisions

None

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 when the units are denoted with 'dry'.
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: 2301251

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2301251	№ 67015

Page 1 of 1

Client Name: LRL Associates	Project Ref: 220200
Contact Name: Devin Clouthier	Quote #:
Address: 5430 Canotek Road, Ottawa, ON K1J 9G2	PO #:
Telephone: 613-842-3434	E-mail: dclouthier@lrl.ca, jarthurs@lrl.ca

Turnaround Time

☐ 1 day ☐ 3 day ☐ 2 day ☒ Regular

Date Required: _____

☒ REG 153/04 ☐ REG 406/19

☐ Table 1 ☐ Res/Park ☐ Med/Fine

☐ Table 2 ☐ Ind/Comm ☐ Coarse

☒ Table 3 ☐ Agri/Other

☐ Table

For RSC: ☒ Yes ☐ No

Other Regulation

☐ REG 558 ☐ PWQO

☐ CCME ☐ MISA

☐ SU - Sani ☐ SU - Storm

Mun:

☐ Other:

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

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken: Date	Sample Taken: Time	Required Analysis: VOC	PHC	PAH	Reg 153 Metals	Inorganics
1	BH22-18-SS1	S		3	Jan 3/23	AM	X	X	X		
2	BH22-18-SS3	↓		3	↓	↓	X	X	X		
3	BH22-18-SS6	↓		3	↓	↓				X	X
4											
5											
6											
7											
8											
9											
10											

Comments:

Method of Delivery: Walk

Relinquished By (Sign):	Received By Driver/Depot:	Received at Lab:	Verified By: Sandra Demarins
Relinquished By (Print): Devin Clouthier	Date/Time:	Date/Time: Jan 5/23 4:14pm	Date/Time: Jan 5 4:36
Date/Time: Jan 5/23 4 pm	Temperature: °C	Temperature: 1.8 °C	pH Verified: ☐ By:

PARACEL LABORATORIES LTD.

TRUSTED.
RESPONSIVE.
RELIABLE.

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

Certificate of Analysis

LRL Associates Ltd.

5430 Canotek Road
Ottawa, ON K1J 9G2
Attn: Devin Clouthier

Client PO:
Project: 220200
Custody: 69895

Report Date: 23-Jan-2023
Order Date: 18-Jan-2023

Order #: 2303299

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

Paracel ID	Client ID
2303299-01	BH22-23-SS1
2303299-02	BH22-23-SS4
2303299-03	BH22-23-SS5
2303299-04	BH22-23-SS11

Approved By:

Dale Robertson, BSc
Laboratory Director

Certificate of Analysis
Client: **LRL Associates Ltd.**
Client PO:

Report Date: 23-Jan-2023
Order Date: 18-Jan-2023
Project Description: 220200

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Boron, available	MOE (HWE), EPA 200.8 - ICP-MS	20-Jan-23	20-Jan-23
Chromium, hexavalent - soil	MOE E3056 - Extraction, colourimetric	19-Jan-23	19-Jan-23
Conductivity	MOE E3138 - probe @25 °C, water ext	20-Jan-23	20-Jan-23
Cyanide, free	MOE E3015 - Auto Colour, water extraction	19-Jan-23	19-Jan-23
Mercury by CVAA	EPA 7471B - CVAA, digestion	20-Jan-23	20-Jan-23
pH, soil	EPA 150.1 - pH probe @ 25 °C, CaCl buffered ext.	19-Jan-23	20-Jan-23
PHC F1	CWS Tier 1 - P&T GC-FID	20-Jan-23	23-Jan-23
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	19-Jan-23	20-Jan-23
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	20-Jan-23	20-Jan-23
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	19-Jan-23	21-Jan-23
REG 153: VOCs by P&T GC/MS	EPA 8260 - P&T GC-MS	20-Jan-23	23-Jan-23
SAR	Calculated	20-Jan-23	23-Jan-23
Solids, %	CWS Tier 1 - Gravimetric	19-Jan-23	20-Jan-23

Certificate of Analysis

Client: **LRL Associates Ltd.**

Client PO:

Report Date: 23-Jan-2023

Order Date: 18-Jan-2023

Project Description: 220200

	Client ID:	BH22-23-SS1	BH22-23-SS4	BH22-23-SS5	BH22-23-SS11
	Sample Date:	17-Jan-23 00:00	17-Jan-23 00:00	17-Jan-23 00:00	17-Jan-23 00:00
	Sample ID:	2303299-01	2303299-02	2303299-03	2303299-04
	MDL/Units	Soil	Soil	Soil	Soil
Physical Characteristics					
% Solids	0.1 % by Wt.	77.0	92.0	94.0	90.8
General Inorganics					
SAR	0.01 N/A	0.30	-	-	-
Conductivity	5 uS/cm	180	-	-	-
Cyanide, free	0.03 ug/g dry	<0.03	-	-	-
pH	0.05 pH Units	7.41	-	-	-
Metals					
Antimony	1.0 ug/g dry	<1.0	-	-	-
Arsenic	1.0 ug/g dry	<1.0	-	-	-
Barium	1.0 ug/g dry	<1.0	-	-	-
Beryllium	0.5 ug/g dry	<0.5	-	-	-
Boron	5.0 ug/g dry	<5.0	-	-	-
Boron, available	0.5 ug/g dry	<0.5	-	-	-
Cadmium	0.5 ug/g dry	<0.5	-	-	-
Chromium	5.0 ug/g dry	<5.0	-	-	-
Chromium (VI)	0.2 ug/g dry	0.3	-	-	-
Cobalt	1.0 ug/g dry	<1.0	-	-	-
Copper	5.0 ug/g dry	<5.0	-	-	-
Lead	1.0 ug/g dry	<1.0	-	-	-
Mercury	0.1 ug/g dry	<0.1	-	-	-
Molybdenum	1.0 ug/g dry	<1.0	-	-	-
Nickel	5.0 ug/g dry	<5.0	-	-	-
Selenium	1.0 ug/g dry	<1.0	-	-	-
Silver	0.3 ug/g dry	<0.3	-	-	-
Thallium	1.0 ug/g dry	<1.0	-	-	-
Uranium	1.0 ug/g dry	<1.0	-	-	-
Vanadium	10.0 ug/g dry	<10.0	-	-	-
Zinc	20.0 ug/g dry	<20.0	-	-	-
Volatiles					
Acetone	0.50 ug/g dry	-	<0.50	-	<0.50
Benzene	0.02 ug/g dry	-	<0.02	-	<0.02
Bromodichloromethane	0.05 ug/g dry	-	<0.05	-	<0.05
Bromoform	0.05 ug/g dry	-	<0.05	-	<0.05
Bromomethane	0.05 ug/g dry	-	<0.05	-	<0.05
Carbon Tetrachloride	0.05 ug/g dry	-	<0.05	-	<0.05

Certificate of Analysis

Client: **LRL Associates Ltd.**

Client PO:

Report Date: 23-Jan-2023

Order Date: 18-Jan-2023

Project Description: 220200

	Client ID:	BH22-23-SS1	BH22-23-SS4	BH22-23-SS5	BH22-23-SS11
	Sample Date:	17-Jan-23 00:00	17-Jan-23 00:00	17-Jan-23 00:00	17-Jan-23 00:00
	Sample ID:	2303299-01	2303299-02	2303299-03	2303299-04
	MDL/Units	Soil	Soil	Soil	Soil
Chlorobenzene	0.05 ug/g dry	-	<0.05	-	<0.05
Chloroform	0.05 ug/g dry	-	<0.05	-	<0.05
Dibromochloromethane	0.05 ug/g dry	-	<0.05	-	<0.05
Dichlorodifluoromethane	0.05 ug/g dry	-	<0.05	-	<0.05
1,2-Dichlorobenzene	0.05 ug/g dry	-	<0.05	-	<0.05
1,3-Dichlorobenzene	0.05 ug/g dry	-	<0.05	-	<0.05
1,4-Dichlorobenzene	0.05 ug/g dry	-	<0.05	-	<0.05
1,1-Dichloroethane	0.05 ug/g dry	-	<0.05	-	<0.05
1,2-Dichloroethane	0.05 ug/g dry	-	<0.05	-	<0.05
1,1-Dichloroethylene	0.05 ug/g dry	-	<0.05	-	<0.05
cis-1,2-Dichloroethylene	0.05 ug/g dry	-	<0.05	-	<0.05
trans-1,2-Dichloroethylene	0.05 ug/g dry	-	<0.05	-	<0.05
1,2-Dichloropropane	0.05 ug/g dry	-	<0.05	-	<0.05
cis-1,3-Dichloropropylene	0.05 ug/g dry	-	<0.05	-	<0.05
trans-1,3-Dichloropropylene	0.05 ug/g dry	-	<0.05	-	<0.05
1,3-Dichloropropene, total	0.05 ug/g dry	-	<0.05	-	<0.05
Ethylbenzene	0.05 ug/g dry	-	<0.05	-	<0.05
Ethylene dibromide (dibromoethane, 1,2-)	0.05 ug/g dry	-	<0.05	-	<0.05
Hexane	0.05 ug/g dry	-	<0.05	-	<0.05
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g dry	-	<0.50	-	<0.50
Methyl Isobutyl Ketone	0.50 ug/g dry	-	<0.50	-	<0.50
Methyl tert-butyl ether	0.05 ug/g dry	-	<0.05	-	<0.05
Methylene Chloride	0.05 ug/g dry	-	<0.05	-	<0.05
Styrene	0.05 ug/g dry	-	<0.05	-	<0.05
1,1,1,2-Tetrachloroethane	0.05 ug/g dry	-	<0.05	-	<0.05
1,1,2,2-Tetrachloroethane	0.05 ug/g dry	-	<0.05	-	<0.05
Tetrachloroethylene	0.05 ug/g dry	-	<0.05	-	<0.05
Toluene	0.05 ug/g dry	-	<0.05	-	<0.05
1,1,1-Trichloroethane	0.05 ug/g dry	-	<0.05	-	<0.05
1,1,2-Trichloroethane	0.05 ug/g dry	-	<0.05	-	<0.05
Trichloroethylene	0.05 ug/g dry	-	<0.05	-	<0.05
Trichlorofluoromethane	0.05 ug/g dry	-	<0.05	-	<0.05
Vinyl chloride	0.02 ug/g dry	-	<0.02	-	<0.02
m,p-Xylenes	0.05 ug/g dry	-	<0.05	-	<0.05
o-Xylene	0.05 ug/g dry	-	<0.05	-	<0.05

Certificate of Analysis

Client: **LRL Associates Ltd.**

Client PO:

Report Date: 23-Jan-2023

Order Date: 18-Jan-2023

Project Description: 220200

	Client ID:	BH22-23-SS1	BH22-23-SS4	BH22-23-SS5	BH22-23-SS11
	Sample Date:	17-Jan-23 00:00	17-Jan-23 00:00	17-Jan-23 00:00	17-Jan-23 00:00
	Sample ID:	2303299-01	2303299-02	2303299-03	2303299-04
	MDL/Units	Soil	Soil	Soil	Soil
Xylenes, total	0.05 ug/g dry	-	<0.05	-	<0.05
4-Bromofluorobenzene	Surrogate	-	86.3%	-	91.9%
Dibromofluoromethane	Surrogate	-	118%	-	114%
Toluene-d8	Surrogate	-	88.5%	-	89.0%
Hydrocarbons					
F1 PHCs (C6-C10)	7 ug/g dry	-	<7	-	<7
F2 PHCs (C10-C16)	4 ug/g dry	-	9	-	12
F3 PHCs (C16-C34)	8 ug/g dry	-	12	-	13
F4 PHCs (C34-C50)	6 ug/g dry	-	<6	-	<6
Semi-Volatiles					
Acenaphthene	0.02 ug/g dry	-	-	<0.02	-
Acenaphthylene	0.02 ug/g dry	-	-	<0.02	-
Anthracene	0.02 ug/g dry	-	-	<0.02	-
Benzo [a] anthracene	0.02 ug/g dry	-	-	<0.02	-
Benzo [a] pyrene	0.02 ug/g dry	-	-	<0.02	-
Benzo [b] fluoranthene	0.02 ug/g dry	-	-	<0.02	-
Benzo [g,h,i] perylene	0.02 ug/g dry	-	-	<0.02	-
Benzo [k] fluoranthene	0.02 ug/g dry	-	-	<0.02	-
Chrysene	0.02 ug/g dry	-	-	<0.02	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	-	-	<0.02	-
Fluoranthene	0.02 ug/g dry	-	-	<0.02	-
Fluorene	0.02 ug/g dry	-	-	<0.02	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	-	-	<0.02	-
1-Methylnaphthalene	0.02 ug/g dry	-	-	<0.02	-
2-Methylnaphthalene	0.02 ug/g dry	-	-	<0.02	-
Methylnaphthalene (1&2)	0.04 ug/g dry	-	-	<0.04	-
Naphthalene	0.01 ug/g dry	-	-	<0.01	-
Phenanthrene	0.02 ug/g dry	-	-	<0.02	-
Pyrene	0.02 ug/g dry	-	-	<0.02	-
2-Fluorobiphenyl	Surrogate	-	-	114%	-
Terphenyl-d14	Surrogate	-	-	119%	-

Certificate of Analysis
Client: **LRL Associates Ltd.**
Client PO:

Report Date: 23-Jan-2023
Order Date: 18-Jan-2023
Project Description: 220200

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
Conductivity	ND	5	uS/cm						
Cyanide, free	ND	0.03	ug/g						
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
Metals									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron, available	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium (VI)	ND	0.2	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Mercury	ND	0.1	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
Semi-Volatiles									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
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	*1.36*		*ug/g*		*102*	*50-140*			
Surrogate: Terphenyl-d14	*1.49*		*ug/g*		*112*	*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						

Certificate of Analysis
Client: **LRL Associates Ltd.**
Client PO:

Report Date: 23-Jan-2023
Order Date: 18-Jan-2023
Project Description: 220200

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Carbon Tetrachloride	ND	0.05	ug/g						
Chlorobenzene	ND	0.05	ug/g						
Chloroform	ND	0.05	ug/g						
Dibromochloromethane	ND	0.05	ug/g						
Dichlorodifluoromethane	ND	0.05	ug/g						
1,2-Dichlorobenzene	ND	0.05	ug/g						
1,3-Dichlorobenzene	ND	0.05	ug/g						
1,4-Dichlorobenzene	ND	0.05	ug/g						
1,1-Dichloroethane	ND	0.05	ug/g						
1,2-Dichloroethane	ND	0.05	ug/g						
1,1-Dichloroethylene	ND	0.05	ug/g						
cis-1,2-Dichloroethylene	ND	0.05	ug/g						
trans-1,2-Dichloroethylene	ND	0.05	ug/g						
1,2-Dichloropropane	ND	0.05	ug/g						
cis-1,3-Dichloropropylene	ND	0.05	ug/g						
trans-1,3-Dichloropropylene	ND	0.05	ug/g						
1,3-Dichloropropene, total	ND	0.05	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Ethylene dibromide (dibromoethane, 1,2	ND	0.05	ug/g						
Hexane	ND	0.05	ug/g						
Methyl Ethyl Ketone (2-Butanone)	ND	0.50	ug/g						
Methyl Isobutyl Ketone	ND	0.50	ug/g						
Methyl tert-butyl ether	ND	0.05	ug/g						
Methylene Chloride	ND	0.05	ug/g						
Styrene	ND	0.05	ug/g						
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g						
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g						
Tetrachloroethylene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
1,1,1-Trichloroethane	ND	0.05	ug/g						
1,1,2-Trichloroethane	ND	0.05	ug/g						
Trichloroethylene	ND	0.05	ug/g						
Trichlorofluoromethane	ND	0.05	ug/g						
Vinyl chloride	ND	0.02	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: 4-Bromofluorobenzene	*3.15*		*ug/g*		*98.5*	*50-140*			
Surrogate: Dibromofluoromethane	*3.65*		*ug/g*		*114*	*50-140*			
Surrogate: Toluene-d8	*3.29*		*ug/g*		*103*	*50-140*			

Certificate of Analysis
Client: **LRL Associates Ltd.**
Client PO:

Report Date: 23-Jan-2023
Order Date: 18-Jan-2023
Project Description: 220200

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
SAR	5.33	0.01	N/A	5.15			3.4	30	
Conductivity	411	5	uS/cm	410			0.2	5	
Cyanide, free	ND	0.03	ug/g	ND			NC	35	
pH	7.42	0.05	pH Units	7.41			0.1	2.3	
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g	ND			NC	40	
F2 PHCs (C10-C16)	15	4	ug/g	9			NC	30	
F3 PHCs (C16-C34)	21	8	ug/g	12			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g	ND			NC	30	
Metals									
Antimony	ND	1.0	ug/g	ND			NC	30	
Arsenic	2.6	1.0	ug/g	2.5			5.6	30	
Barium	84.3	1.0	ug/g	84.8			0.7	30	
Beryllium	0.5	0.5	ug/g	ND			NC	30	
Boron, available	ND	0.5	ug/g	ND			NC	35	
Boron	8.3	5.0	ug/g	7.2			14.0	30	
Cadmium	ND	0.5	ug/g	ND			NC	30	
Chromium (VI)	ND	0.2	ug/g	ND			NC	35	
Chromium	20.0	5.0	ug/g	18.8			6.3	30	
Cobalt	5.8	1.0	ug/g	5.6			2.6	30	
Copper	17.4	5.0	ug/g	16.5			5.1	30	
Lead	49.3	1.0	ug/g	44.8			9.6	30	
Mercury	ND	0.1	ug/g	ND			NC	30	
Molybdenum	ND	1.0	ug/g	ND			NC	30	
Nickel	10.4	5.0	ug/g	10.2			2.8	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	ND	1.0	ug/g	ND			NC	30	
Vanadium	32.3	10.0	ug/g	32.4			0.3	30	
Zinc	49.9	20.0	ug/g	46.7			6.8	30	
Physical Characteristics									
% Solids	78.1	0.1	% by Wt.	76.8			1.6	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	*1.67*		*ug/g*		*111*	*50-140*			
Surrogate: Terphenyl-d14	*1.78*		*ug/g*		*118*	*50-140*			
Volatiles									

Certificate of Analysis
Client: **LRL Associates Ltd.**
Client PO:

Report Date: 23-Jan-2023
Order Date: 18-Jan-2023
Project Description: 220200

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Acetone	ND	0.50	ug/g	ND			NC	50	
Benzene	ND	0.02	ug/g	ND			NC	50	
Bromodichloromethane	ND	0.05	ug/g	ND			NC	50	
Bromoform	ND	0.05	ug/g	ND			NC	50	
Bromomethane	ND	0.05	ug/g	ND			NC	50	
Carbon Tetrachloride	ND	0.05	ug/g	ND			NC	50	
Chlorobenzene	ND	0.05	ug/g	ND			NC	50	
Chloroform	ND	0.05	ug/g	ND			NC	50	
Dibromochloromethane	ND	0.05	ug/g	ND			NC	50	
Dichlorodifluoromethane	ND	0.05	ug/g	ND			NC	50	
1,2-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,3-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,4-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,1-Dichloroethane	ND	0.05	ug/g	ND			NC	50	
1,2-Dichloroethane	ND	0.05	ug/g	ND			NC	50	
1,1-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
cis-1,2-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
trans-1,2-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
1,2-Dichloropropane	ND	0.05	ug/g	ND			NC	50	
cis-1,3-Dichloropropylene	ND	0.05	ug/g	ND			NC	50	
trans-1,3-Dichloropropylene	ND	0.05	ug/g	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g	ND			NC	50	
Ethylene dibromide (dibromoethane, 1,2	ND	0.05	ug/g	ND			NC	50	
Hexane	ND	0.05	ug/g	ND			NC	50	
Methyl Ethyl Ketone (2-Butanone)	ND	0.50	ug/g	ND			NC	50	
Methyl Isobutyl Ketone	ND	0.50	ug/g	ND			NC	50	
Methyl tert-butyl ether	ND	0.05	ug/g	ND			NC	50	
Methylene Chloride	ND	0.05	ug/g	ND			NC	50	
Styrene	ND	0.05	ug/g	ND			NC	50	
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g	ND			NC	50	
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g	ND			NC	50	
Tetrachloroethylene	ND	0.05	ug/g	ND			NC	50	
Toluene	ND	0.05	ug/g	ND			NC	50	
1,1,1-Trichloroethane	ND	0.05	ug/g	ND			NC	50	
1,1,2-Trichloroethane	ND	0.05	ug/g	ND			NC	50	
Trichloroethylene	ND	0.05	ug/g	ND			NC	50	
Trichlorofluoromethane	ND	0.05	ug/g	ND			NC	50	
Vinyl chloride	ND	0.02	ug/g	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g	ND			NC	50	
o-Xylene	ND	0.05	ug/g	ND			NC	50	
Surrogate: 4-Bromofluorobenzene	*4.23*		*ug/g*		*108*	*50-140*			
Surrogate: Dibromofluoromethane	*5.09*		*ug/g*		*130*	*50-140*			
Surrogate: Toluene-d8	*4.52*		*ug/g*		*115*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
Cyanide, free	0.351	0.03	ug/g	ND	88.3	50-150			
Hydrocarbons									
F1 PHCs (C6-C10)	190	7	ug/g	ND	95.0	80-120			
F2 PHCs (C10-C16)	115	4	ug/g	9	122	60-140			
F3 PHCs (C16-C34)	270	8	ug/g	12	121	60-140			
F4 PHCs (C34-C50)	165	6	ug/g	ND	122	60-140			
Metals									
Arsenic	49.0	1.0	ug/g	1.0	96.0	70-130			
Barium	79.5	1.0	ug/g	33.9	91.1	70-130			
Beryllium	48.0	0.5	ug/g	ND	95.6	70-130			
Boron, available	4.27	0.5	ug/g	ND	85.4	70-122			
Boron	50.0	5.0	ug/g	ND	94.3	70-130			
Cadmium	46.0	0.5	ug/g	ND	91.7	70-130			
Chromium (VI)	4.2	0.2	ug/g	ND	79.5	70-130			
Chromium	58.8	5.0	ug/g	7.5	103	70-130			
Cobalt	52.2	1.0	ug/g	2.2	99.9	70-130			
Copper	54.6	5.0	ug/g	6.6	95.9	70-130			
Lead	61.0	1.0	ug/g	17.9	86.2	70-130			
Mercury	1.27	0.1	ug/g	ND	84.5	70-130			
Molybdenum	46.1	1.0	ug/g	ND	91.7	70-130			
Nickel	53.0	5.0	ug/g	ND	97.9	70-130			
Selenium	43.8	1.0	ug/g	ND	87.4	70-130			
Silver	41.8	0.3	ug/g	ND	83.5	70-130			
Thallium	45.8	1.0	ug/g	ND	91.4	70-130			
Uranium	47.0	1.0	ug/g	ND	93.6	70-130			
Vanadium	63.6	10.0	ug/g	12.9	101	70-130			
Zinc	64.7	20.0	ug/g	ND	92.1	70-130			
Semi-Volatiles									
Acenaphthene	0.169	0.02	ug/g	ND	89.5	50-140			
Acenaphthylene	0.143	0.02	ug/g	ND	76.0	50-140			
Anthracene	0.156	0.02	ug/g	ND	82.6	50-140			
Benzo [a] anthracene	0.152	0.02	ug/g	ND	80.5	50-140			
Benzo [a] pyrene	0.153	0.02	ug/g	ND	81.4	50-140			
Benzo [b] fluoranthene	0.206	0.02	ug/g	ND	109	50-140			
Benzo [g,h,i] perylene	0.152	0.02	ug/g	ND	80.9	50-140			
Benzo [k] fluoranthene	0.190	0.02	ug/g	ND	101	50-140			
Chrysene	0.184	0.02	ug/g	ND	97.6	50-140			
Dibenzo [a,h] anthracene	0.150	0.02	ug/g	ND	79.6	50-140			
Fluoranthene	0.154	0.02	ug/g	ND	81.8	50-140			
Fluorene	0.153	0.02	ug/g	ND	81.3	50-140			
Indeno [1,2,3-cd] pyrene	0.155	0.02	ug/g	ND	82.0	50-140			
1-Methylnaphthalene	0.169	0.02	ug/g	ND	89.9	50-140			
2-Methylnaphthalene	0.182	0.02	ug/g	ND	96.5	50-140			
Naphthalene	0.174	0.01	ug/g	ND	92.3	50-140			
Phenanthrene	0.171	0.02	ug/g	ND	90.8	50-140			
Pyrene	0.157	0.02	ug/g	ND	83.2	50-140			
Surrogate: 2-Fluorobiphenyl	*1.41*		*ug/g*		*93.4*	*50-140*			
Surrogate: Terphenyl-d14	*1.68*		*ug/g*		*112*	*50-140*			

Certificate of Analysis
Client: **LRL Associates Ltd.**
Client PO:

Report Date: 23-Jan-2023
Order Date: 18-Jan-2023
Project Description: 220200

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Volatiles									
Acetone	9.84	0.50	ug/g	ND	98.4	50-140			
Benzene	4.58	0.02	ug/g	ND	115	60-130			
Bromodichloromethane	3.34	0.05	ug/g	ND	83.4	60-130			
Bromoform	4.56	0.05	ug/g	ND	114	60-130			
Bromomethane	4.42	0.05	ug/g	ND	110	50-140			
Carbon Tetrachloride	4.69	0.05	ug/g	ND	117	60-130			
Chlorobenzene	4.47	0.05	ug/g	ND	112	60-130			
Chloroform	4.68	0.05	ug/g	ND	117	60-130			
Dibromochloromethane	4.11	0.05	ug/g	ND	103	60-130			
Dichlorodifluoromethane	4.46	0.05	ug/g	ND	112	50-140			
1,2-Dichlorobenzene	3.98	0.05	ug/g	ND	99.5	60-130			
1,3-Dichlorobenzene	3.99	0.05	ug/g	ND	99.9	60-130			
1,4-Dichlorobenzene	3.87	0.05	ug/g	ND	96.8	60-130			
1,1-Dichloroethane	4.92	0.05	ug/g	ND	123	60-130			
1,2-Dichloroethane	4.08	0.05	ug/g	ND	102	60-130			
1,1-Dichloroethylene	4.70	0.05	ug/g	ND	118	60-130			
cis-1,2-Dichloroethylene	4.53	0.05	ug/g	ND	113	60-130			
trans-1,2-Dichloroethylene	4.91	0.05	ug/g	ND	123	60-130			
1,2-Dichloropropane	4.17	0.05	ug/g	ND	104	60-130			
cis-1,3-Dichloropropylene	3.93	0.05	ug/g	ND	98.1	60-130			
trans-1,3-Dichloropropylene	4.27	0.05	ug/g	ND	107	60-130			
Ethylbenzene	4.00	0.05	ug/g	ND	100	60-130			
Ethylene dibromide (dibromoethane, 1,2	4.01	0.05	ug/g	ND	100	60-130			
Hexane	4.51	0.05	ug/g	ND	113	60-130			
Methyl Ethyl Ketone (2-Butanone)	9.43	0.50	ug/g	ND	94.3	50-140			
Methyl Isobutyl Ketone	9.22	0.50	ug/g	ND	92.2	50-140			
Methyl tert-butyl ether	9.03	0.05	ug/g	ND	90.3	50-140			
Methylene Chloride	4.40	0.05	ug/g	ND	110	60-130			
Styrene	4.17	0.05	ug/g	ND	104	60-130			
1,1,1,2-Tetrachloroethane	4.35	0.05	ug/g	ND	109	60-130			
1,1,2,2-Tetrachloroethane	4.08	0.05	ug/g	ND	102	60-130			
Tetrachloroethylene	4.07	0.05	ug/g	ND	102	60-130			
Toluene	4.16	0.05	ug/g	ND	104	60-130			
1,1,1-Trichloroethane	4.33	0.05	ug/g	ND	108	60-130			
1,1,2-Trichloroethane	4.61	0.05	ug/g	ND	115	60-130			
Trichloroethylene	4.15	0.05	ug/g	ND	104	60-130			
Trichlorofluoromethane	4.12	0.05	ug/g	ND	103	50-140			
Vinyl chloride	4.14	0.02	ug/g	ND	103	50-140			
m,p-Xylenes	8.89	0.05	ug/g	ND	111	60-130			
o-Xylene	4.65	0.05	ug/g	ND	116	60-130			
Surrogate: 4-Bromofluorobenzene	*1.92*		*ug/g*		*59.9*	*50-140*			
Surrogate: Dibromofluoromethane	*3.42*		*ug/g*		*107*	*50-140*			
Surrogate: Toluene-d8	*3.24*		*ug/g*		*101*	*50-140*			

Qualifier Notes:

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable
ND: Not Detected
MDL: Method Detection Limit
Source Result: Data used as source for matrix and duplicate samples
%REC: Percent recovery.
RPD: Relative percent difference.
NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.
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 crite
- When reported, data for F4G has been processed using a silica gel cleanup.

PARACEL LABORATORIES LTD

Paracel ID: 2303299

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2303299	№ 69895

Client Name: LRL Associates
Contact Name: Devin Clouthier
Address: 5430 Canotek Road, Ottawa ON K1J 9G2
Telephone:

Project Ref: 220200
Quote #:
PO #:
E-mail: dclouthier@lrl.ca jarthurs@lrl.ca

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
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)

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken Date	Sample Taken Time	Reg 153 Metals	General Inorganics	PAH	PHC	VOC
1	BH22-23-SS1	S		2	Jan 17/23	PM	X	X			
2	BH22-23-SS4	↓		3	↓	↓				X	X
3	BH22-23-SS5	↓		2	↓	↓			X		
4	BH22-23-SS11	↓		3	↓	↓				X	X
5											
6											
7											
8											
9											
10											

Comments:

Method of Delivery: Walk-in

Relinquished By (Sign):	Received By Driver/Depot:	Received at Lab:	Verified By:
Relinquished By (Print): Devin Clouthier	Date/Time:	Date/Time: Jan 18/23 3:58pm	Date/Time: Jan 18/23 16:36
Date/Time: Jan 18/23 4pm.	Temperature: °C	Temperature: 4.9 °C	pH Verified: ☐ By: N/A

PARACEL LABORATORIES LTD.

TRUSTED.
RESPONSIVE.
RELIABLE.

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

Certificate of Analysis

LRL Associates Ltd.

5430 Canotek Road
Ottawa, ON K1J 9G2
Attn: Devin Clouthier

Client PO:
Project: 220200
Custody: 69895

Report Date: 23-Jan-2023
Order Date: 18-Jan-2023

Order #: 2303299

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

Paracel ID	Client ID
2303299-01	BH22-23-SS1
2303299-02	BH22-23-SS4
2303299-03	BH22-23-SS5
2303299-04	BH22-23-SS11

Approved By:

Dale Robertson, BSc
Laboratory Director

Certificate of Analysis
Client: **LRL Associates Ltd.**
Client PO:

Report Date: 23-Jan-2023
Order Date: 18-Jan-2023
Project Description: 220200

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Boron, available	MOE (HWE), EPA 200.8 - ICP-MS	20-Jan-23	20-Jan-23
Chromium, hexavalent - soil	MOE E3056 - Extraction, colourimetric	19-Jan-23	19-Jan-23
Conductivity	MOE E3138 - probe @25 °C, water ext	20-Jan-23	20-Jan-23
Cyanide, free	MOE E3015 - Auto Colour, water extraction	19-Jan-23	19-Jan-23
Mercury by CVAA	EPA 7471B - CVAA, digestion	20-Jan-23	20-Jan-23
pH, soil	EPA 150.1 - pH probe @ 25 °C, CaCl buffered ext.	19-Jan-23	20-Jan-23
PHC F1	CWS Tier 1 - P&T GC-FID	20-Jan-23	23-Jan-23
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	19-Jan-23	20-Jan-23
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	20-Jan-23	20-Jan-23
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	19-Jan-23	21-Jan-23
REG 153: VOCs by P&T GC/MS	EPA 8260 - P&T GC-MS	20-Jan-23	23-Jan-23
SAR	Calculated	20-Jan-23	23-Jan-23
Solids, %	CWS Tier 1 - Gravimetric	19-Jan-23	20-Jan-23

Certificate of Analysis

Client: **LRL Associates Ltd.**

Client PO:

Report Date: 23-Jan-2023

Order Date: 18-Jan-2023

Project Description: 220200

	Client ID:	BH22-23-SS1	BH22-23-SS4	BH22-23-SS5	BH22-23-SS11
	Sample Date:	17-Jan-23 00:00	17-Jan-23 00:00	17-Jan-23 00:00	17-Jan-23 00:00
	Sample ID:	2303299-01	2303299-02	2303299-03	2303299-04
	MDL/Units	Soil	Soil	Soil	Soil
Physical Characteristics					
% Solids	0.1 % by Wt.	77.0	92.0	94.0	90.8
General Inorganics					
SAR	0.01 N/A	0.30	-	-	-
Conductivity	5 uS/cm	180	-	-	-
Cyanide, free	0.03 ug/g dry	<0.03	-	-	-
pH	0.05 pH Units	7.41	-	-	-
Metals					
Antimony	1.0 ug/g dry	<1.0	-	-	-
Arsenic	1.0 ug/g dry	<1.0	-	-	-
Barium	1.0 ug/g dry	<1.0	-	-	-
Beryllium	0.5 ug/g dry	<0.5	-	-	-
Boron	5.0 ug/g dry	<5.0	-	-	-
Boron, available	0.5 ug/g dry	<0.5	-	-	-
Cadmium	0.5 ug/g dry	<0.5	-	-	-
Chromium	5.0 ug/g dry	<5.0	-	-	-
Chromium (VI)	0.2 ug/g dry	0.3	-	-	-
Cobalt	1.0 ug/g dry	<1.0	-	-	-
Copper	5.0 ug/g dry	<5.0	-	-	-
Lead	1.0 ug/g dry	<1.0	-	-	-
Mercury	0.1 ug/g dry	<0.1	-	-	-
Molybdenum	1.0 ug/g dry	<1.0	-	-	-
Nickel	5.0 ug/g dry	<5.0	-	-	-
Selenium	1.0 ug/g dry	<1.0	-	-	-
Silver	0.3 ug/g dry	<0.3	-	-	-
Thallium	1.0 ug/g dry	<1.0	-	-	-
Uranium	1.0 ug/g dry	<1.0	-	-	-
Vanadium	10.0 ug/g dry	<10.0	-	-	-
Zinc	20.0 ug/g dry	<20.0	-	-	-
Volatiles					
Acetone	0.50 ug/g dry	-	<0.50	-	<0.50
Benzene	0.02 ug/g dry	-	<0.02	-	<0.02
Bromodichloromethane	0.05 ug/g dry	-	<0.05	-	<0.05
Bromoform	0.05 ug/g dry	-	<0.05	-	<0.05
Bromomethane	0.05 ug/g dry	-	<0.05	-	<0.05
Carbon Tetrachloride	0.05 ug/g dry	-	<0.05	-	<0.05

Certificate of Analysis

Client: **LRL Associates Ltd.**

Client PO:

Report Date: 23-Jan-2023

Order Date: 18-Jan-2023

Project Description: 220200

	Client ID:	BH22-23-SS1	BH22-23-SS4	BH22-23-SS5	BH22-23-SS11
	Sample Date:	17-Jan-23 00:00	17-Jan-23 00:00	17-Jan-23 00:00	17-Jan-23 00:00
	Sample ID:	2303299-01	2303299-02	2303299-03	2303299-04
	MDL/Units	Soil	Soil	Soil	Soil
Chlorobenzene	0.05 ug/g dry	-	<0.05	-	<0.05
Chloroform	0.05 ug/g dry	-	<0.05	-	<0.05
Dibromochloromethane	0.05 ug/g dry	-	<0.05	-	<0.05
Dichlorodifluoromethane	0.05 ug/g dry	-	<0.05	-	<0.05
1,2-Dichlorobenzene	0.05 ug/g dry	-	<0.05	-	<0.05
1,3-Dichlorobenzene	0.05 ug/g dry	-	<0.05	-	<0.05
1,4-Dichlorobenzene	0.05 ug/g dry	-	<0.05	-	<0.05
1,1-Dichloroethane	0.05 ug/g dry	-	<0.05	-	<0.05
1,2-Dichloroethane	0.05 ug/g dry	-	<0.05	-	<0.05
1,1-Dichloroethylene	0.05 ug/g dry	-	<0.05	-	<0.05
cis-1,2-Dichloroethylene	0.05 ug/g dry	-	<0.05	-	<0.05
trans-1,2-Dichloroethylene	0.05 ug/g dry	-	<0.05	-	<0.05
1,2-Dichloropropane	0.05 ug/g dry	-	<0.05	-	<0.05
cis-1,3-Dichloropropylene	0.05 ug/g dry	-	<0.05	-	<0.05
trans-1,3-Dichloropropylene	0.05 ug/g dry	-	<0.05	-	<0.05
1,3-Dichloropropene, total	0.05 ug/g dry	-	<0.05	-	<0.05
Ethylbenzene	0.05 ug/g dry	-	<0.05	-	<0.05
Ethylene dibromide (dibromoethane, 1,2-)	0.05 ug/g dry	-	<0.05	-	<0.05
Hexane	0.05 ug/g dry	-	<0.05	-	<0.05
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g dry	-	<0.50	-	<0.50
Methyl Isobutyl Ketone	0.50 ug/g dry	-	<0.50	-	<0.50
Methyl tert-butyl ether	0.05 ug/g dry	-	<0.05	-	<0.05
Methylene Chloride	0.05 ug/g dry	-	<0.05	-	<0.05
Styrene	0.05 ug/g dry	-	<0.05	-	<0.05
1,1,1,2-Tetrachloroethane	0.05 ug/g dry	-	<0.05	-	<0.05
1,1,2,2-Tetrachloroethane	0.05 ug/g dry	-	<0.05	-	<0.05
Tetrachloroethylene	0.05 ug/g dry	-	<0.05	-	<0.05
Toluene	0.05 ug/g dry	-	<0.05	-	<0.05
1,1,1-Trichloroethane	0.05 ug/g dry	-	<0.05	-	<0.05
1,1,2-Trichloroethane	0.05 ug/g dry	-	<0.05	-	<0.05
Trichloroethylene	0.05 ug/g dry	-	<0.05	-	<0.05
Trichlorofluoromethane	0.05 ug/g dry	-	<0.05	-	<0.05
Vinyl chloride	0.02 ug/g dry	-	<0.02	-	<0.02
m,p-Xylenes	0.05 ug/g dry	-	<0.05	-	<0.05
o-Xylene	0.05 ug/g dry	-	<0.05	-	<0.05

Certificate of Analysis

Client: **LRL Associates Ltd.**

Client PO:

Report Date: 23-Jan-2023

Order Date: 18-Jan-2023

Project Description: 220200

	Client ID:	BH22-23-SS1	BH22-23-SS4	BH22-23-SS5	BH22-23-SS11
	Sample Date:	17-Jan-23 00:00	17-Jan-23 00:00	17-Jan-23 00:00	17-Jan-23 00:00
	Sample ID:	2303299-01	2303299-02	2303299-03	2303299-04
	MDL/Units	Soil	Soil	Soil	Soil
Xylenes, total	0.05 ug/g dry	-	<0.05	-	<0.05
4-Bromofluorobenzene	Surrogate	-	86.3%	-	91.9%
Dibromofluoromethane	Surrogate	-	118%	-	114%
Toluene-d8	Surrogate	-	88.5%	-	89.0%
Hydrocarbons					
F1 PHCs (C6-C10)	7 ug/g dry	-	<7	-	<7
F2 PHCs (C10-C16)	4 ug/g dry	-	9	-	12
F3 PHCs (C16-C34)	8 ug/g dry	-	12	-	13
F4 PHCs (C34-C50)	6 ug/g dry	-	<6	-	<6
Semi-Volatiles					
Acenaphthene	0.02 ug/g dry	-	-	<0.02	-
Acenaphthylene	0.02 ug/g dry	-	-	<0.02	-
Anthracene	0.02 ug/g dry	-	-	<0.02	-
Benzo [a] anthracene	0.02 ug/g dry	-	-	<0.02	-
Benzo [a] pyrene	0.02 ug/g dry	-	-	<0.02	-
Benzo [b] fluoranthene	0.02 ug/g dry	-	-	<0.02	-
Benzo [g,h,i] perylene	0.02 ug/g dry	-	-	<0.02	-
Benzo [k] fluoranthene	0.02 ug/g dry	-	-	<0.02	-
Chrysene	0.02 ug/g dry	-	-	<0.02	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	-	-	<0.02	-
Fluoranthene	0.02 ug/g dry	-	-	<0.02	-
Fluorene	0.02 ug/g dry	-	-	<0.02	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	-	-	<0.02	-
1-Methylnaphthalene	0.02 ug/g dry	-	-	<0.02	-
2-Methylnaphthalene	0.02 ug/g dry	-	-	<0.02	-
Methylnaphthalene (1&2)	0.04 ug/g dry	-	-	<0.04	-
Naphthalene	0.01 ug/g dry	-	-	<0.01	-
Phenanthrene	0.02 ug/g dry	-	-	<0.02	-
Pyrene	0.02 ug/g dry	-	-	<0.02	-
2-Fluorobiphenyl	Surrogate	-	-	114%	-
Terphenyl-d14	Surrogate	-	-	119%	-

Certificate of Analysis
Client: **LRL Associates Ltd.**
Client PO:

Report Date: 23-Jan-2023
Order Date: 18-Jan-2023
Project Description: 220200

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
Conductivity	ND	5	uS/cm						
Cyanide, free	ND	0.03	ug/g						
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
Metals									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron, available	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium (VI)	ND	0.2	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Mercury	ND	0.1	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
Semi-Volatiles									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
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	*1.36*		*ug/g*		*102*	*50-140*			
Surrogate: Terphenyl-d14	*1.49*		*ug/g*		*112*	*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						

Certificate of Analysis
Client: **LRL Associates Ltd.**
Client PO:

Report Date: 23-Jan-2023
Order Date: 18-Jan-2023
Project Description: 220200

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Carbon Tetrachloride	ND	0.05	ug/g						
Chlorobenzene	ND	0.05	ug/g						
Chloroform	ND	0.05	ug/g						
Dibromochloromethane	ND	0.05	ug/g						
Dichlorodifluoromethane	ND	0.05	ug/g						
1,2-Dichlorobenzene	ND	0.05	ug/g						
1,3-Dichlorobenzene	ND	0.05	ug/g						
1,4-Dichlorobenzene	ND	0.05	ug/g						
1,1-Dichloroethane	ND	0.05	ug/g						
1,2-Dichloroethane	ND	0.05	ug/g						
1,1-Dichloroethylene	ND	0.05	ug/g						
cis-1,2-Dichloroethylene	ND	0.05	ug/g						
trans-1,2-Dichloroethylene	ND	0.05	ug/g						
1,2-Dichloropropane	ND	0.05	ug/g						
cis-1,3-Dichloropropylene	ND	0.05	ug/g						
trans-1,3-Dichloropropylene	ND	0.05	ug/g						
1,3-Dichloropropene, total	ND	0.05	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Ethylene dibromide (dibromoethane, 1,2	ND	0.05	ug/g						
Hexane	ND	0.05	ug/g						
Methyl Ethyl Ketone (2-Butanone)	ND	0.50	ug/g						
Methyl Isobutyl Ketone	ND	0.50	ug/g						
Methyl tert-butyl ether	ND	0.05	ug/g						
Methylene Chloride	ND	0.05	ug/g						
Styrene	ND	0.05	ug/g						
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g						
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g						
Tetrachloroethylene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
1,1,1-Trichloroethane	ND	0.05	ug/g						
1,1,2-Trichloroethane	ND	0.05	ug/g						
Trichloroethylene	ND	0.05	ug/g						
Trichlorofluoromethane	ND	0.05	ug/g						
Vinyl chloride	ND	0.02	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: 4-Bromofluorobenzene	*3.15*		*ug/g*		*98.5*	*50-140*			
Surrogate: Dibromofluoromethane	*3.65*		*ug/g*		*114*	*50-140*			
Surrogate: Toluene-d8	*3.29*		*ug/g*		*103*	*50-140*			

Certificate of Analysis
Client: **LRL Associates Ltd.**
Client PO:

Report Date: 23-Jan-2023
Order Date: 18-Jan-2023
Project Description: 220200

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
SAR	5.33	0.01	N/A	5.15			3.4	30	
Conductivity	411	5	uS/cm	410			0.2	5	
Cyanide, free	ND	0.03	ug/g	ND			NC	35	
pH	7.42	0.05	pH Units	7.41			0.1	2.3	
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g	ND			NC	40	
F2 PHCs (C10-C16)	15	4	ug/g	9			NC	30	
F3 PHCs (C16-C34)	21	8	ug/g	12			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g	ND			NC	30	
Metals									
Antimony	ND	1.0	ug/g	ND			NC	30	
Arsenic	2.6	1.0	ug/g	2.5			5.6	30	
Barium	84.3	1.0	ug/g	84.8			0.7	30	
Beryllium	0.5	0.5	ug/g	ND			NC	30	
Boron, available	ND	0.5	ug/g	ND			NC	35	
Boron	8.3	5.0	ug/g	7.2			14.0	30	
Cadmium	ND	0.5	ug/g	ND			NC	30	
Chromium (VI)	ND	0.2	ug/g	ND			NC	35	
Chromium	20.0	5.0	ug/g	18.8			6.3	30	
Cobalt	5.8	1.0	ug/g	5.6			2.6	30	
Copper	17.4	5.0	ug/g	16.5			5.1	30	
Lead	49.3	1.0	ug/g	44.8			9.6	30	
Mercury	ND	0.1	ug/g	ND			NC	30	
Molybdenum	ND	1.0	ug/g	ND			NC	30	
Nickel	10.4	5.0	ug/g	10.2			2.8	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	ND	1.0	ug/g	ND			NC	30	
Vanadium	32.3	10.0	ug/g	32.4			0.3	30	
Zinc	49.9	20.0	ug/g	46.7			6.8	30	
Physical Characteristics									
% Solids	78.1	0.1	% by Wt.	76.8			1.6	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	*1.67*		*ug/g*		*111*	*50-140*			
Surrogate: Terphenyl-d14	*1.78*		*ug/g*		*118*	*50-140*			
Volatiles									

Certificate of Analysis
Client: **LRL Associates Ltd.**
Client PO:

Report Date: 23-Jan-2023
Order Date: 18-Jan-2023
Project Description: 220200

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Acetone	ND	0.50	ug/g	ND			NC	50	
Benzene	ND	0.02	ug/g	ND			NC	50	
Bromodichloromethane	ND	0.05	ug/g	ND			NC	50	
Bromoform	ND	0.05	ug/g	ND			NC	50	
Bromomethane	ND	0.05	ug/g	ND			NC	50	
Carbon Tetrachloride	ND	0.05	ug/g	ND			NC	50	
Chlorobenzene	ND	0.05	ug/g	ND			NC	50	
Chloroform	ND	0.05	ug/g	ND			NC	50	
Dibromochloromethane	ND	0.05	ug/g	ND			NC	50	
Dichlorodifluoromethane	ND	0.05	ug/g	ND			NC	50	
1,2-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,3-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,4-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,1-Dichloroethane	ND	0.05	ug/g	ND			NC	50	
1,2-Dichloroethane	ND	0.05	ug/g	ND			NC	50	
1,1-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
cis-1,2-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
trans-1,2-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
1,2-Dichloropropane	ND	0.05	ug/g	ND			NC	50	
cis-1,3-Dichloropropylene	ND	0.05	ug/g	ND			NC	50	
trans-1,3-Dichloropropylene	ND	0.05	ug/g	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g	ND			NC	50	
Ethylene dibromide (dibromoethane, 1,2	ND	0.05	ug/g	ND			NC	50	
Hexane	ND	0.05	ug/g	ND			NC	50	
Methyl Ethyl Ketone (2-Butanone)	ND	0.50	ug/g	ND			NC	50	
Methyl Isobutyl Ketone	ND	0.50	ug/g	ND			NC	50	
Methyl tert-butyl ether	ND	0.05	ug/g	ND			NC	50	
Methylene Chloride	ND	0.05	ug/g	ND			NC	50	
Styrene	ND	0.05	ug/g	ND			NC	50	
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g	ND			NC	50	
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g	ND			NC	50	
Tetrachloroethylene	ND	0.05	ug/g	ND			NC	50	
Toluene	ND	0.05	ug/g	ND			NC	50	
1,1,1-Trichloroethane	ND	0.05	ug/g	ND			NC	50	
1,1,2-Trichloroethane	ND	0.05	ug/g	ND			NC	50	
Trichloroethylene	ND	0.05	ug/g	ND			NC	50	
Trichlorofluoromethane	ND	0.05	ug/g	ND			NC	50	
Vinyl chloride	ND	0.02	ug/g	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g	ND			NC	50	
o-Xylene	ND	0.05	ug/g	ND			NC	50	
Surrogate: 4-Bromofluorobenzene	*4.23*		*ug/g*		*108*	*50-140*			
Surrogate: Dibromofluoromethane	*5.09*		*ug/g*		*130*	*50-140*			
Surrogate: Toluene-d8	*4.52*		*ug/g*		*115*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
Cyanide, free	0.351	0.03	ug/g	ND	88.3	50-150			
Hydrocarbons									
F1 PHCs (C6-C10)	190	7	ug/g	ND	95.0	80-120			
F2 PHCs (C10-C16)	115	4	ug/g	9	122	60-140			
F3 PHCs (C16-C34)	270	8	ug/g	12	121	60-140			
F4 PHCs (C34-C50)	165	6	ug/g	ND	122	60-140			
Metals									
Arsenic	49.0	1.0	ug/g	1.0	96.0	70-130			
Barium	79.5	1.0	ug/g	33.9	91.1	70-130			
Beryllium	48.0	0.5	ug/g	ND	95.6	70-130			
Boron, available	4.27	0.5	ug/g	ND	85.4	70-122			
Boron	50.0	5.0	ug/g	ND	94.3	70-130			
Cadmium	46.0	0.5	ug/g	ND	91.7	70-130			
Chromium (VI)	4.2	0.2	ug/g	ND	79.5	70-130			
Chromium	58.8	5.0	ug/g	7.5	103	70-130			
Cobalt	52.2	1.0	ug/g	2.2	99.9	70-130			
Copper	54.6	5.0	ug/g	6.6	95.9	70-130			
Lead	61.0	1.0	ug/g	17.9	86.2	70-130			
Mercury	1.27	0.1	ug/g	ND	84.5	70-130			
Molybdenum	46.1	1.0	ug/g	ND	91.7	70-130			
Nickel	53.0	5.0	ug/g	ND	97.9	70-130			
Selenium	43.8	1.0	ug/g	ND	87.4	70-130			
Silver	41.8	0.3	ug/g	ND	83.5	70-130			
Thallium	45.8	1.0	ug/g	ND	91.4	70-130			
Uranium	47.0	1.0	ug/g	ND	93.6	70-130			
Vanadium	63.6	10.0	ug/g	12.9	101	70-130			
Zinc	64.7	20.0	ug/g	ND	92.1	70-130			
Semi-Volatiles									
Acenaphthene	0.169	0.02	ug/g	ND	89.5	50-140			
Acenaphthylene	0.143	0.02	ug/g	ND	76.0	50-140			
Anthracene	0.156	0.02	ug/g	ND	82.6	50-140			
Benzo [a] anthracene	0.152	0.02	ug/g	ND	80.5	50-140			
Benzo [a] pyrene	0.153	0.02	ug/g	ND	81.4	50-140			
Benzo [b] fluoranthene	0.206	0.02	ug/g	ND	109	50-140			
Benzo [g,h,i] perylene	0.152	0.02	ug/g	ND	80.9	50-140			
Benzo [k] fluoranthene	0.190	0.02	ug/g	ND	101	50-140			
Chrysene	0.184	0.02	ug/g	ND	97.6	50-140			
Dibenzo [a,h] anthracene	0.150	0.02	ug/g	ND	79.6	50-140			
Fluoranthene	0.154	0.02	ug/g	ND	81.8	50-140			
Fluorene	0.153	0.02	ug/g	ND	81.3	50-140			
Indeno [1,2,3-cd] pyrene	0.155	0.02	ug/g	ND	82.0	50-140			
1-Methylnaphthalene	0.169	0.02	ug/g	ND	89.9	50-140			
2-Methylnaphthalene	0.182	0.02	ug/g	ND	96.5	50-140			
Naphthalene	0.174	0.01	ug/g	ND	92.3	50-140			
Phenanthrene	0.171	0.02	ug/g	ND	90.8	50-140			
Pyrene	0.157	0.02	ug/g	ND	83.2	50-140			
Surrogate: 2-Fluorobiphenyl	*1.41*		*ug/g*		*93.4*	*50-140*			
Surrogate: Terphenyl-d14	*1.68*		*ug/g*		*112*	*50-140*			

Certificate of Analysis
Client: **LRL Associates Ltd.**
Client PO:

Report Date: 23-Jan-2023
Order Date: 18-Jan-2023
Project Description: 220200

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Volatiles									
Acetone	9.84	0.50	ug/g	ND	98.4	50-140			
Benzene	4.58	0.02	ug/g	ND	115	60-130			
Bromodichloromethane	3.34	0.05	ug/g	ND	83.4	60-130			
Bromoform	4.56	0.05	ug/g	ND	114	60-130			
Bromomethane	4.42	0.05	ug/g	ND	110	50-140			
Carbon Tetrachloride	4.69	0.05	ug/g	ND	117	60-130			
Chlorobenzene	4.47	0.05	ug/g	ND	112	60-130			
Chloroform	4.68	0.05	ug/g	ND	117	60-130			
Dibromochloromethane	4.11	0.05	ug/g	ND	103	60-130			
Dichlorodifluoromethane	4.46	0.05	ug/g	ND	112	50-140			
1,2-Dichlorobenzene	3.98	0.05	ug/g	ND	99.5	60-130			
1,3-Dichlorobenzene	3.99	0.05	ug/g	ND	99.9	60-130			
1,4-Dichlorobenzene	3.87	0.05	ug/g	ND	96.8	60-130			
1,1-Dichloroethane	4.92	0.05	ug/g	ND	123	60-130			
1,2-Dichloroethane	4.08	0.05	ug/g	ND	102	60-130			
1,1-Dichloroethylene	4.70	0.05	ug/g	ND	118	60-130			
cis-1,2-Dichloroethylene	4.53	0.05	ug/g	ND	113	60-130			
trans-1,2-Dichloroethylene	4.91	0.05	ug/g	ND	123	60-130			
1,2-Dichloropropane	4.17	0.05	ug/g	ND	104	60-130			
cis-1,3-Dichloropropylene	3.93	0.05	ug/g	ND	98.1	60-130			
trans-1,3-Dichloropropylene	4.27	0.05	ug/g	ND	107	60-130			
Ethylbenzene	4.00	0.05	ug/g	ND	100	60-130			
Ethylene dibromide (dibromoethane, 1,2	4.01	0.05	ug/g	ND	100	60-130			
Hexane	4.51	0.05	ug/g	ND	113	60-130			
Methyl Ethyl Ketone (2-Butanone)	9.43	0.50	ug/g	ND	94.3	50-140			
Methyl Isobutyl Ketone	9.22	0.50	ug/g	ND	92.2	50-140			
Methyl tert-butyl ether	9.03	0.05	ug/g	ND	90.3	50-140			
Methylene Chloride	4.40	0.05	ug/g	ND	110	60-130			
Styrene	4.17	0.05	ug/g	ND	104	60-130			
1,1,1,2-Tetrachloroethane	4.35	0.05	ug/g	ND	109	60-130			
1,1,2,2-Tetrachloroethane	4.08	0.05	ug/g	ND	102	60-130			
Tetrachloroethylene	4.07	0.05	ug/g	ND	102	60-130			
Toluene	4.16	0.05	ug/g	ND	104	60-130			
1,1,1-Trichloroethane	4.33	0.05	ug/g	ND	108	60-130			
1,1,2-Trichloroethane	4.61	0.05	ug/g	ND	115	60-130			
Trichloroethylene	4.15	0.05	ug/g	ND	104	60-130			
Trichlorofluoromethane	4.12	0.05	ug/g	ND	103	50-140			
Vinyl chloride	4.14	0.02	ug/g	ND	103	50-140			
m,p-Xylenes	8.89	0.05	ug/g	ND	111	60-130			
o-Xylene	4.65	0.05	ug/g	ND	116	60-130			
Surrogate: 4-Bromofluorobenzene	*1.92*		*ug/g*		*59.9*	*50-140*			
Surrogate: Dibromofluoromethane	*3.42*		*ug/g*		*107*	*50-140*			
Surrogate: Toluene-d8	*3.24*		*ug/g*		*101*	*50-140*			

Qualifier Notes:

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable
ND: Not Detected
MDL: Method Detection Limit
Source Result: Data used as source for matrix and duplicate samples
%REC: Percent recovery.
RPD: Relative percent difference.
NC: Not Calculated

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.
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 crite
- When reported, data for F4G has been processed using a silica gel cleanup.

PARACEL LABORATORIES LTD

Paracel ID: 2303299

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2303299	№ 69895

Client Name: LRL Associates
Contact Name: Devin Clouthier
Address: 5430 Canotek Road, Ottawa ON K1J 9G2
Telephone:

Project Ref: 220200
Quote #:
PO #:
E-mail: dclouthier@lrl.ca jarthurs@lrl.ca

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
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)

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken Date	Sample Taken Time	Reg 153 Metals	General Inorganics	PAH	PHC	VOC
1	BH22-23-SS1	S		2	Jan 17/23	PM	X	X			
2	BH22-23-SS4	↓		3	↓	↓				X	X
3	BH22-23-SS5	↓		2	↓	↓			X		
4	BH22-23-SS11	↓		3	↓	↓				X	X
5											
6											
7											
8											
9											
10											

Comments:

Method of Delivery: Walk-in

Relinquished By (Sign):	Received By Driver/Depot:	Received at Lab:	Verified By:
Relinquished By (Print): Devin Clouthier	Date/Time:	Date/Time: Jan 18/23 3:58pm	Date/Time: Jan 18/23 16:36
Date/Time: Jan 18/23 4pm.	Temperature: °C	Temperature: 4.9 °C	pH Verified: ☐ By: N/A

PARACEL LABORATORIES LTD.

TRUSTED.
RESPONSIVE.
RELIABLE.

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

Certificate of Analysis

LRL Associates Ltd.

5430 Canotek Road
Ottawa, ON K1J 9G2
Attn: Jessica Arthurs

Client PO:
Project: 220200
Custody: 138201

Report Date: 10-Feb-2023
Order Date: 7-Feb-2023

Order #: 2306201

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

Paracel ID	Client ID
2306201-01	BH22-18-SS2
2306201-02	BH22-18-SS2B
2306201-03	BH22-18-SS3

Approved By: Mark Foto

Mark Foto, M.Sc.
Lab Supervisor

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 10-Feb-2023

Order Date: 7-Feb-2023

Project Description: 220200

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
PCBs, total	SW846 8082A - GC-ECD	8-Feb-23	9-Feb-23
PHC F1	CWS Tier 1 - P&T GC-FID	8-Feb-23	8-Feb-23
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	7-Feb-23	9-Feb-23
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	6-Feb-23	9-Feb-23
REG 153: VOCs by P&T GC/MS	EPA 8260 - P&T GC-MS	8-Feb-23	8-Feb-23
Solids, %	CWS Tier 1 - Gravimetric	7-Feb-23	8-Feb-23

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 10-Feb-2023

Order Date: 7-Feb-2023

Project Description: 220200

	Client ID:	BH22-18-SS2	BH22-18-SS2B	BH22-18-SS3	-
	Sample Date:	06-Feb-23 12:00	06-Feb-23 12:00	06-Feb-23 12:00	-
	Sample ID:	2306201-01	2306201-02	2306201-03	-
	MDL/Units	Soil	Soil	Soil	-
Physical Characteristics					
% Solids	0.1 % by Wt.	89.6	83.8	87.8	-
Volatiles					
Acetone	0.50 ug/g dry	-	<0.50	-	-
Benzene	0.02 ug/g dry	-	<0.02	-	-
Bromodichloromethane	0.05 ug/g dry	-	<0.05	-	-
Bromoform	0.05 ug/g dry	-	<0.05	-	-
Bromomethane	0.05 ug/g dry	-	<0.05	-	-
Carbon Tetrachloride	0.05 ug/g dry	-	<0.05	-	-
Chlorobenzene	0.05 ug/g dry	-	<0.05	-	-
Chloroform	0.05 ug/g dry	-	<0.05	-	-
Dibromochloromethane	0.05 ug/g dry	-	<0.05	-	-
Dichlorodifluoromethane	0.05 ug/g dry	-	<0.05	-	-
1,2-Dichlorobenzene	0.05 ug/g dry	-	<0.05	-	-
1,3-Dichlorobenzene	0.05 ug/g dry	-	<0.05	-	-
1,4-Dichlorobenzene	0.05 ug/g dry	-	<0.05	-	-
1,1-Dichloroethane	0.05 ug/g dry	-	<0.05	-	-
1,2-Dichloroethane	0.05 ug/g dry	-	<0.05	-	-
1,1-Dichloroethylene	0.05 ug/g dry	-	<0.05	-	-
cis-1,2-Dichloroethylene	0.05 ug/g dry	-	<0.05	-	-
trans-1,2-Dichloroethylene	0.05 ug/g dry	-	<0.05	-	-
1,2-Dichloropropane	0.05 ug/g dry	-	<0.05	-	-
cis-1,3-Dichloropropylene	0.05 ug/g dry	-	<0.05	-	-
trans-1,3-Dichloropropylene	0.05 ug/g dry	-	<0.05	-	-
1,3-Dichloropropene, total	0.05 ug/g dry	-	<0.05	-	-
Ethylbenzene	0.05 ug/g dry	-	<0.05	-	-
Ethylene dibromide (dibromoethane, 1,2-)	0.05 ug/g dry	-	<0.05	-	-
Hexane	0.05 ug/g dry	-	<0.05	-	-
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g dry	-	<0.50	-	-
Methyl Isobutyl Ketone	0.50 ug/g dry	-	<0.50	-	-
Methyl tert-butyl ether	0.05 ug/g dry	-	<0.05	-	-
Methylene Chloride	0.05 ug/g dry	-	<0.05	-	-
Styrene	0.05 ug/g dry	-	<0.05	-	-
1,1,1,2-Tetrachloroethane	0.05 ug/g dry	-	<0.05	-	-
1,1,2,2-Tetrachloroethane	0.05 ug/g dry	-	<0.05	-	-
Tetrachloroethylene	0.05 ug/g dry	-	<0.05	-	-

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 10-Feb-2023

Order Date: 7-Feb-2023

Project Description: 220200

	Client ID:	BH22-18-SS2	BH22-18-SS2B	BH22-18-SS3	-
	Sample Date:	06-Feb-23 12:00	06-Feb-23 12:00	06-Feb-23 12:00	-
	Sample ID:	2306201-01	2306201-02	2306201-03	-
	MDL/Units	Soil	Soil	Soil	-
Toluene	0.05 ug/g dry	-	<0.05	-	-
1,1,1-Trichloroethane	0.05 ug/g dry	-	<0.05	-	-
1,1,2-Trichloroethane	0.05 ug/g dry	-	<0.05	-	-
Trichloroethylene	0.05 ug/g dry	-	<0.05	-	-
Trichlorofluoromethane	0.05 ug/g dry	-	<0.05	-	-
Vinyl chloride	0.02 ug/g dry	-	<0.02	-	-
m,p-Xylenes	0.05 ug/g dry	-	<0.05	-	-
o-Xylene	0.05 ug/g dry	-	<0.05	-	-
Xylenes, total	0.05 ug/g dry	-	<0.05	-	-
4-Bromofluorobenzene	Surrogate	-	105%	-	-
Dibromofluoromethane	Surrogate	-	82.3%	-	-
Toluene-d8	Surrogate	-	108%	-	-
Hydrocarbons					
F1 PHCs (C6-C10)	7 ug/g dry	-	<7	-	-
F2 PHCs (C10-C16)	4 ug/g dry	-	<4	-	-
F3 PHCs (C16-C34)	8 ug/g dry	-	<8	-	-
F4 PHCs (C34-C50)	6 ug/g dry	-	<6	-	-
Semi-Volatiles					
Acenaphthene	0.02 ug/g dry	<0.02	-	-	-
Acenaphthylene	0.02 ug/g dry	<0.02	-	-	-
Anthracene	0.02 ug/g dry	<0.02	-	-	-
Benzo [a] anthracene	0.02 ug/g dry	<0.02	-	-	-
Benzo [a] pyrene	0.02 ug/g dry	<0.02	-	-	-
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	-	-	-
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	-	-	-
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	-	-	-
Chrysene	0.02 ug/g dry	<0.02	-	-	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	-	-	-
Fluoranthene	0.02 ug/g dry	<0.02	-	-	-
Fluorene	0.02 ug/g dry	<0.02	-	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	-	-	-
1-Methylnaphthalene	0.02 ug/g dry	<0.02	-	-	-
2-Methylnaphthalene	0.02 ug/g dry	<0.02	-	-	-
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	-	-	-
Naphthalene	0.01 ug/g dry	<0.01	-	-	-
Phenanthrene	0.02 ug/g dry	<0.02	-	-	-

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 10-Feb-2023

Order Date: 7-Feb-2023

Project Description: 220200

	Client ID:	BH22-18-SS2	BH22-18-SS2B	BH22-18-SS3	-
	Sample Date:	06-Feb-23 12:00	06-Feb-23 12:00	06-Feb-23 12:00	-
	Sample ID:	2306201-01	2306201-02	2306201-03	-
	MDL/Units	Soil	Soil	Soil	-
Pyrene	0.02 ug/g dry	<0.02	-	-	-
2-Fluorobiphenyl	Surrogate	87.8%	-	-	-
Terphenyl-d14	Surrogate	113%	-	-	-
PCBs					
PCBs, total	0.05 ug/g dry	-	-	<0.05	-
Decachlorobiphenyl	Surrogate	-	-	104%	-

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 10-Feb-2023

Order Date: 7-Feb-2023

Project Description: 220200

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
PCBs									
PCBs, total	ND	0.05	ug/g						
Surrogate: Decachlorobiphenyl	*0.0985*		*ug/g*		*98.5*	*60-140*			
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	*1.02*		*ug/g*		*76.5*	*50-140*			
Surrogate: Terphenyl-d14	*1.29*		*ug/g*		*96.5*	*50-140*			
Volatiles									
Acetone	ND	0.50	ug/g						
Benzene	ND	0.02	ug/g						
Bromodichloromethane	ND	0.05	ug/g						
Bromoform	ND	0.05	ug/g						
Bromomethane	ND	0.05	ug/g						
Carbon Tetrachloride	ND	0.05	ug/g						
Chlorobenzene	ND	0.05	ug/g						
Chloroform	ND	0.05	ug/g						
Dibromochloromethane	ND	0.05	ug/g						
Dichlorodifluoromethane	ND	0.05	ug/g						
1,2-Dichlorobenzene	ND	0.05	ug/g						
1,3-Dichlorobenzene	ND	0.05	ug/g						
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						

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 10-Feb-2023

Order Date: 7-Feb-2023

Project Description: 220200

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Methylene Chloride	ND	0.05	ug/g						
Styrene	ND	0.05	ug/g						
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g						
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g						
Tetrachloroethylene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
1,1,1-Trichloroethane	ND	0.05	ug/g						
1,1,2-Trichloroethane	ND	0.05	ug/g						
Trichloroethylene	ND	0.05	ug/g						
Trichlorofluoromethane	ND	0.05	ug/g						
Vinyl chloride	ND	0.02	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: 4-Bromofluorobenzene	*3.11*		*ug/g*		*97.1*	*50-140*			
Surrogate: Dibromofluoromethane	*3.03*		*ug/g*		*94.7*	*50-140*			
Surrogate: Toluene-d8	*3.07*		*ug/g*		*95.9*	*50-140*			

Certificate of Analysis
Client: LRL Associates Ltd.
Client PO:

Report Date: 10-Feb-2023
Order Date: 7-Feb-2023
Project Description: 220200

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g	ND			NC	30	
F3 PHCs (C16-C34)	20	8	ug/g	30			40.7	30	QR-04
F4 PHCs (C34-C50)	26	6	ug/g	66			85.5	30	QR-04
PCBs									
PCBs, total	ND	0.05	ug/g	ND			NC	40	
Surrogate: Decachlorobiphenyl	*0.118*		*ug/g*		*103*	*60-140*			
Physical Characteristics									
% Solids	84.1	0.1	% by Wt.	83.1			1.2	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	*1.72*		*ug/g*		*80.4*	*50-140*			
Surrogate: Terphenyl-d14	*2.34*		*ug/g*		*109*	*50-140*			
Volatiles									
Acetone	ND	0.50	ug/g	ND			NC	50	
Benzene	ND	0.02	ug/g	ND			NC	50	
Bromodichloromethane	ND	0.05	ug/g	ND			NC	50	
Bromoform	ND	0.05	ug/g	ND			NC	50	
Bromomethane	ND	0.05	ug/g	ND			NC	50	
Carbon Tetrachloride	ND	0.05	ug/g	ND			NC	50	
Chlorobenzene	ND	0.05	ug/g	ND			NC	50	
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	

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 10-Feb-2023

Order Date: 7-Feb-2023

Project Description: 220200

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Methyl Isobutyl Ketone	ND	0.50	ug/g	ND			NC	50	
Methyl tert-butyl ether	ND	0.05	ug/g	ND			NC	50	
Methylene Chloride	ND	0.05	ug/g	ND			NC	50	
Styrene	ND	0.05	ug/g	ND			NC	50	
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g	ND			NC	50	
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g	ND			NC	50	
Tetrachloroethylene	ND	0.05	ug/g	ND			NC	50	
Toluene	ND	0.05	ug/g	ND			NC	50	
1,1,1-Trichloroethane	ND	0.05	ug/g	ND			NC	50	
1,1,2-Trichloroethane	ND	0.05	ug/g	ND			NC	50	
Trichloroethylene	ND	0.05	ug/g	ND			NC	50	
Trichlorofluoromethane	ND	0.05	ug/g	ND			NC	50	
Vinyl chloride	ND	0.02	ug/g	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g	ND			NC	50	
o-Xylene	ND	0.05	ug/g	ND			NC	50	
Surrogate: 4-Bromofluorobenzene	*3.19*		*ug/g*		*95.3*	*50-140*			
Surrogate: Dibromofluoromethane	*3.52*		*ug/g*		*105*	*50-140*			
Surrogate: Toluene-d8	*3.20*		*ug/g*		*95.5*	*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)	163	7	ug/g	ND	81.7	80-120			
F2 PHCs (C10-C16)	111	4	ug/g	ND	114	60-140			
F3 PHCs (C16-C34)	314	8	ug/g	30	119	60-140			
F4 PHCs (C34-C50)	303	6	ug/g	66	156	60-140			QM-06
PCBs									
PCBs, total	0.479	0.05	ug/g	ND	120	60-140			
Surrogate: Decachlorobiphenyl	*0.0996*		*ug/g*		*99.6*	*60-140*			
Semi-Volatiles									
Acenaphthene	0.255	0.02	ug/g	ND	95.1	50-140			
Acenaphthylene	0.217	0.02	ug/g	ND	81.0	50-140			
Anthracene	0.213	0.02	ug/g	ND	79.5	50-140			
Benzo [a] anthracene	0.196	0.02	ug/g	ND	73.2	50-140			
Benzo [a] pyrene	0.173	0.02	ug/g	ND	64.6	50-140			
Benzo [b] fluoranthene	0.277	0.02	ug/g	ND	103	50-140			
Benzo [g,h,i] perylene	0.188	0.02	ug/g	ND	70.3	50-140			
Benzo [k] fluoranthene	0.243	0.02	ug/g	ND	90.9	50-140			
Chrysene	0.249	0.02	ug/g	ND	93.0	50-140			
Dibenzo [a,h] anthracene	0.184	0.02	ug/g	ND	68.7	50-140			
Fluoranthene	0.213	0.02	ug/g	ND	79.7	50-140			
Fluorene	0.239	0.02	ug/g	ND	89.2	50-140			
Indeno [1,2,3-cd] pyrene	0.178	0.02	ug/g	ND	66.5	50-140			
1-Methylnaphthalene	0.263	0.02	ug/g	ND	98.1	50-140			
2-Methylnaphthalene	0.277	0.02	ug/g	ND	103	50-140			
Naphthalene	0.273	0.01	ug/g	ND	102	50-140			
Phenanthrene	0.233	0.02	ug/g	ND	86.8	50-140			
Pyrene	0.217	0.02	ug/g	ND	81.0	50-140			
Surrogate: 2-Fluorobiphenyl	*1.99*		*ug/g*		*92.7*	*50-140*			
Surrogate: Terphenyl-d14	*2.57*		*ug/g*		*120*	*50-140*			
Volatiles									
Acetone	6.80	0.50	ug/g	ND	68.0	50-140			
Benzene	3.39	0.02	ug/g	ND	84.7	60-130			
Bromodichloromethane	2.71	0.05	ug/g	ND	67.7	60-130			
Bromoform	4.57	0.05	ug/g	ND	114	60-130			
Bromomethane	3.98	0.05	ug/g	ND	99.5	50-140			
Carbon Tetrachloride	3.06	0.05	ug/g	ND	76.6	60-130			
Chlorobenzene	4.66	0.05	ug/g	ND	117	60-130			
Chloroform	3.31	0.05	ug/g	ND	82.6	60-130			
Dibromochloromethane	4.01	0.05	ug/g	ND	100	60-130			
Dichlorodifluoromethane	2.90	0.05	ug/g	ND	72.4	50-140			
1,2-Dichlorobenzene	3.97	0.05	ug/g	ND	99.1	60-130			
1,3-Dichlorobenzene	3.99	0.05	ug/g	ND	99.8	60-130			
1,4-Dichlorobenzene	3.91	0.05	ug/g	ND	97.8	60-130			
1,1-Dichloroethane	3.53	0.05	ug/g	ND	88.3	60-130			
1,2-Dichloroethane	2.72	0.05	ug/g	ND	68.1	60-130			
1,1-Dichloroethylene	3.19	0.05	ug/g	ND	79.8	60-130			
cis-1,2-Dichloroethylene	3.05	0.05	ug/g	ND	76.3	60-130			
trans-1,2-Dichloroethylene	3.58	0.05	ug/g	ND	89.5	60-130			
1,2-Dichloropropane	3.19	0.05	ug/g	ND	79.7	60-130			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
cis-1,3-Dichloropropylene	2.79	0.05	ug/g	ND	69.7	60-130			
trans-1,3-Dichloropropylene	3.09	0.05	ug/g	ND	77.2	60-130			
Ethylbenzene	4.17	0.05	ug/g	ND	104	60-130			
Ethylene dibromide (dibromoethane, 1,2-	4.07	0.05	ug/g	ND	102	60-130			
Hexane	3.08	0.05	ug/g	ND	76.9	60-130			
Methyl Ethyl Ketone (2-Butanone)	6.92	0.50	ug/g	ND	69.2	50-140			
Methyl Isobutyl Ketone	6.64	0.50	ug/g	ND	66.4	50-140			
Methyl tert-butyl ether	6.58	0.05	ug/g	ND	65.8	50-140			
Methylene Chloride	3.10	0.05	ug/g	ND	77.5	60-130			
Styrene	4.25	0.05	ug/g	ND	106	60-130			
1,1,1,2-Tetrachloroethane	4.43	0.05	ug/g	ND	111	60-130			
1,1,2,2-Tetrachloroethane	4.73	0.05	ug/g	ND	118	60-130			
Tetrachloroethylene	4.14	0.05	ug/g	ND	104	60-130			
Toluene	4.33	0.05	ug/g	ND	108	60-130			
1,1,1-Trichloroethane	2.93	0.05	ug/g	ND	73.2	60-130			
1,1,2-Trichloroethane	3.24	0.05	ug/g	ND	81.0	60-130			
Trichloroethylene	2.90	0.05	ug/g	ND	72.5	60-130			
Trichlorofluoromethane	3.15	0.05	ug/g	ND	78.8	50-140			
Vinyl chloride	2.90	0.02	ug/g	ND	72.6	50-140			
m,p-Xylenes	9.12	0.05	ug/g	ND	114	60-130			
o-Xylene	4.64	0.05	ug/g	ND	116	60-130			
Surrogate: 4-Bromofluorobenzene	*1.98*		*ug/g*		*61.9*	*50-140*			
Surrogate: Dibromofluoromethane	*1.82*		*ug/g*		*56.8*	*50-140*			
Surrogate: Toluene-d8	*3.13*		*ug/g*		*97.8*	*50-140*			

Qualifier Notes:

QC Qualifiers :

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

Sample Data Revisions

None

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 when the units are denoted with 'dry'.
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: 2306201

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2306201	№ 138201

Client Name: LRL Associates ltd.	Project Ref: 220200	Page 1 of 1
Contact Name: Jessica Arthurs	Quote #:	Turnaround Time
Address: 5430 Canotek Rd Ottawa, on K1J 9G2	PO #:	☐ 1 day ☐ 3 day
	E-mail:	☐ 2 day ☒ Regular
Telephone: 613 842 3434	jarthurs@lrlca	Date Required:

☐ REG 153/04 ☐ REG 406/19

Other Regulation

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

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

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	Required Analysis: PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	PCB
1	BH22-18-SS2	S		2	2023/02/06	PM			X					
2	BH22-18-SS2B	↓		2	↓	↓	X	X						
3	BH 22-18-SS3	↓		1	↓	↓								X
4														
5														
6														
7														
8														
9														
10														

Comments:

Method of Delivery: Walk-in

Relinquished By (Sign):	Received By Driver/Depot:	Received at Lab:	Verified By: Sandra Demarin
Relinquished By (Print): Jessica Arthurs	Date/Time:	Date/Time: Feb 7/23 4:14pm	Date/Time: Feb 7, 4:15
Date/Time: Feb 7/2023 / 4:10 p.m	Temperature: °C	Temperature: 7.6 °C	pH Verified: ☐ By:

PARACEL LABORATORIES LTD.

TRUSTED.
RESPONSIVE.
RELIABLE.

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

Certificate of Analysis

LRL Associates Ltd.

5430 Canotek Road
Ottawa, ON K1J 9G2
Attn: Jessica Arthurs

Client PO:
Project: 220200
Custody: 138201

Report Date: 10-Feb-2023
Order Date: 7-Feb-2023

Order #: 2306201

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

Paracel ID	Client ID
2306201-01	BH22-18-SS2
2306201-02	BH22-18-SS2B
2306201-03	BH22-18-SS3

Approved By: Mark Foto

Mark Foto, M.Sc.
Lab Supervisor

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 10-Feb-2023

Order Date: 7-Feb-2023

Project Description: 220200

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
PCBs, total	SW846 8082A - GC-ECD	8-Feb-23	9-Feb-23
PHC F1	CWS Tier 1 - P&T GC-FID	8-Feb-23	8-Feb-23
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	7-Feb-23	9-Feb-23
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	6-Feb-23	9-Feb-23
REG 153: VOCs by P&T GC/MS	EPA 8260 - P&T GC-MS	8-Feb-23	8-Feb-23
Solids, %	CWS Tier 1 - Gravimetric	7-Feb-23	8-Feb-23

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 10-Feb-2023

Order Date: 7-Feb-2023

Project Description: 220200

	Client ID:	BH22-18-SS2	BH22-18-SS2B	BH22-18-SS3	-
	Sample Date:	06-Feb-23 12:00	06-Feb-23 12:00	06-Feb-23 12:00	-
	Sample ID:	2306201-01	2306201-02	2306201-03	-
	MDL/Units	Soil	Soil	Soil	-
Physical Characteristics					
% Solids	0.1 % by Wt.	89.6	83.8	87.8	-
Volatiles					
Acetone	0.50 ug/g dry	-	<0.50	-	-
Benzene	0.02 ug/g dry	-	<0.02	-	-
Bromodichloromethane	0.05 ug/g dry	-	<0.05	-	-
Bromoform	0.05 ug/g dry	-	<0.05	-	-
Bromomethane	0.05 ug/g dry	-	<0.05	-	-
Carbon Tetrachloride	0.05 ug/g dry	-	<0.05	-	-
Chlorobenzene	0.05 ug/g dry	-	<0.05	-	-
Chloroform	0.05 ug/g dry	-	<0.05	-	-
Dibromochloromethane	0.05 ug/g dry	-	<0.05	-	-
Dichlorodifluoromethane	0.05 ug/g dry	-	<0.05	-	-
1,2-Dichlorobenzene	0.05 ug/g dry	-	<0.05	-	-
1,3-Dichlorobenzene	0.05 ug/g dry	-	<0.05	-	-
1,4-Dichlorobenzene	0.05 ug/g dry	-	<0.05	-	-
1,1-Dichloroethane	0.05 ug/g dry	-	<0.05	-	-
1,2-Dichloroethane	0.05 ug/g dry	-	<0.05	-	-
1,1-Dichloroethylene	0.05 ug/g dry	-	<0.05	-	-
cis-1,2-Dichloroethylene	0.05 ug/g dry	-	<0.05	-	-
trans-1,2-Dichloroethylene	0.05 ug/g dry	-	<0.05	-	-
1,2-Dichloropropane	0.05 ug/g dry	-	<0.05	-	-
cis-1,3-Dichloropropylene	0.05 ug/g dry	-	<0.05	-	-
trans-1,3-Dichloropropylene	0.05 ug/g dry	-	<0.05	-	-
1,3-Dichloropropene, total	0.05 ug/g dry	-	<0.05	-	-
Ethylbenzene	0.05 ug/g dry	-	<0.05	-	-
Ethylene dibromide (dibromoethane, 1,2-)	0.05 ug/g dry	-	<0.05	-	-
Hexane	0.05 ug/g dry	-	<0.05	-	-
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g dry	-	<0.50	-	-
Methyl Isobutyl Ketone	0.50 ug/g dry	-	<0.50	-	-
Methyl tert-butyl ether	0.05 ug/g dry	-	<0.05	-	-
Methylene Chloride	0.05 ug/g dry	-	<0.05	-	-
Styrene	0.05 ug/g dry	-	<0.05	-	-
1,1,1,2-Tetrachloroethane	0.05 ug/g dry	-	<0.05	-	-
1,1,2,2-Tetrachloroethane	0.05 ug/g dry	-	<0.05	-	-
Tetrachloroethylene	0.05 ug/g dry	-	<0.05	-	-

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 10-Feb-2023

Order Date: 7-Feb-2023

Project Description: 220200

	Client ID:	BH22-18-SS2	BH22-18-SS2B	BH22-18-SS3	-
	Sample Date:	06-Feb-23 12:00	06-Feb-23 12:00	06-Feb-23 12:00	-
	Sample ID:	2306201-01	2306201-02	2306201-03	-
	MDL/Units	Soil	Soil	Soil	-
Toluene	0.05 ug/g dry	-	<0.05	-	-
1,1,1-Trichloroethane	0.05 ug/g dry	-	<0.05	-	-
1,1,2-Trichloroethane	0.05 ug/g dry	-	<0.05	-	-
Trichloroethylene	0.05 ug/g dry	-	<0.05	-	-
Trichlorofluoromethane	0.05 ug/g dry	-	<0.05	-	-
Vinyl chloride	0.02 ug/g dry	-	<0.02	-	-
m,p-Xylenes	0.05 ug/g dry	-	<0.05	-	-
o-Xylene	0.05 ug/g dry	-	<0.05	-	-
Xylenes, total	0.05 ug/g dry	-	<0.05	-	-
4-Bromofluorobenzene	Surrogate	-	105%	-	-
Dibromofluoromethane	Surrogate	-	82.3%	-	-
Toluene-d8	Surrogate	-	108%	-	-
Hydrocarbons					
F1 PHCs (C6-C10)	7 ug/g dry	-	<7	-	-
F2 PHCs (C10-C16)	4 ug/g dry	-	<4	-	-
F3 PHCs (C16-C34)	8 ug/g dry	-	<8	-	-
F4 PHCs (C34-C50)	6 ug/g dry	-	<6	-	-
Semi-Volatiles					
Acenaphthene	0.02 ug/g dry	<0.02	-	-	-
Acenaphthylene	0.02 ug/g dry	<0.02	-	-	-
Anthracene	0.02 ug/g dry	<0.02	-	-	-
Benzo [a] anthracene	0.02 ug/g dry	<0.02	-	-	-
Benzo [a] pyrene	0.02 ug/g dry	<0.02	-	-	-
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	-	-	-
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	-	-	-
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	-	-	-
Chrysene	0.02 ug/g dry	<0.02	-	-	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	-	-	-
Fluoranthene	0.02 ug/g dry	<0.02	-	-	-
Fluorene	0.02 ug/g dry	<0.02	-	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	-	-	-
1-Methylnaphthalene	0.02 ug/g dry	<0.02	-	-	-
2-Methylnaphthalene	0.02 ug/g dry	<0.02	-	-	-
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	-	-	-
Naphthalene	0.01 ug/g dry	<0.01	-	-	-
Phenanthrene	0.02 ug/g dry	<0.02	-	-	-

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 10-Feb-2023

Order Date: 7-Feb-2023

Project Description: 220200

	Client ID:	BH22-18-SS2	BH22-18-SS2B	BH22-18-SS3	-
	Sample Date:	06-Feb-23 12:00	06-Feb-23 12:00	06-Feb-23 12:00	-
	Sample ID:	2306201-01	2306201-02	2306201-03	-
	MDL/Units	Soil	Soil	Soil	-
Pyrene	0.02 ug/g dry	<0.02	-	-	-
2-Fluorobiphenyl	Surrogate	87.8%	-	-	-
Terphenyl-d14	Surrogate	113%	-	-	-
PCBs					
PCBs, total	0.05 ug/g dry	-	-	<0.05	-
Decachlorobiphenyl	Surrogate	-	-	104%	-

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 10-Feb-2023

Order Date: 7-Feb-2023

Project Description: 220200

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
PCBs									
PCBs, total	ND	0.05	ug/g						
Surrogate: Decachlorobiphenyl	*0.0985*		*ug/g*		*98.5*	*60-140*			
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	*1.02*		*ug/g*		*76.5*	*50-140*			
Surrogate: Terphenyl-d14	*1.29*		*ug/g*		*96.5*	*50-140*			
Volatiles									
Acetone	ND	0.50	ug/g						
Benzene	ND	0.02	ug/g						
Bromodichloromethane	ND	0.05	ug/g						
Bromoform	ND	0.05	ug/g						
Bromomethane	ND	0.05	ug/g						
Carbon Tetrachloride	ND	0.05	ug/g						
Chlorobenzene	ND	0.05	ug/g						
Chloroform	ND	0.05	ug/g						
Dibromochloromethane	ND	0.05	ug/g						
Dichlorodifluoromethane	ND	0.05	ug/g						
1,2-Dichlorobenzene	ND	0.05	ug/g						
1,3-Dichlorobenzene	ND	0.05	ug/g						
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						

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 10-Feb-2023

Order Date: 7-Feb-2023

Project Description: 220200

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Methylene Chloride	ND	0.05	ug/g						
Styrene	ND	0.05	ug/g						
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g						
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g						
Tetrachloroethylene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
1,1,1-Trichloroethane	ND	0.05	ug/g						
1,1,2-Trichloroethane	ND	0.05	ug/g						
Trichloroethylene	ND	0.05	ug/g						
Trichlorofluoromethane	ND	0.05	ug/g						
Vinyl chloride	ND	0.02	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: 4-Bromofluorobenzene	*3.11*		*ug/g*		*97.1*	*50-140*			
Surrogate: Dibromofluoromethane	*3.03*		*ug/g*		*94.7*	*50-140*			
Surrogate: Toluene-d8	*3.07*		*ug/g*		*95.9*	*50-140*			

Certificate of Analysis
Client: LRL Associates Ltd.
Client PO:

Report Date: 10-Feb-2023
Order Date: 7-Feb-2023
Project Description: 220200

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g	ND			NC	30	
F3 PHCs (C16-C34)	20	8	ug/g	30			40.7	30	QR-04
F4 PHCs (C34-C50)	26	6	ug/g	66			85.5	30	QR-04
PCBs									
PCBs, total	ND	0.05	ug/g	ND			NC	40	
Surrogate: Decachlorobiphenyl	*0.118*		*ug/g*		*103*	*60-140*			
Physical Characteristics									
% Solids	84.1	0.1	% by Wt.	83.1			1.2	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	*1.72*		*ug/g*		*80.4*	*50-140*			
Surrogate: Terphenyl-d14	*2.34*		*ug/g*		*109*	*50-140*			
Volatiles									
Acetone	ND	0.50	ug/g	ND			NC	50	
Benzene	ND	0.02	ug/g	ND			NC	50	
Bromodichloromethane	ND	0.05	ug/g	ND			NC	50	
Bromoform	ND	0.05	ug/g	ND			NC	50	
Bromomethane	ND	0.05	ug/g	ND			NC	50	
Carbon Tetrachloride	ND	0.05	ug/g	ND			NC	50	
Chlorobenzene	ND	0.05	ug/g	ND			NC	50	
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	

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 10-Feb-2023

Order Date: 7-Feb-2023

Project Description: 220200

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Methyl Isobutyl Ketone	ND	0.50	ug/g	ND			NC	50	
Methyl tert-butyl ether	ND	0.05	ug/g	ND			NC	50	
Methylene Chloride	ND	0.05	ug/g	ND			NC	50	
Styrene	ND	0.05	ug/g	ND			NC	50	
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g	ND			NC	50	
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g	ND			NC	50	
Tetrachloroethylene	ND	0.05	ug/g	ND			NC	50	
Toluene	ND	0.05	ug/g	ND			NC	50	
1,1,1-Trichloroethane	ND	0.05	ug/g	ND			NC	50	
1,1,2-Trichloroethane	ND	0.05	ug/g	ND			NC	50	
Trichloroethylene	ND	0.05	ug/g	ND			NC	50	
Trichlorofluoromethane	ND	0.05	ug/g	ND			NC	50	
Vinyl chloride	ND	0.02	ug/g	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g	ND			NC	50	
o-Xylene	ND	0.05	ug/g	ND			NC	50	
Surrogate: 4-Bromofluorobenzene	*3.19*		*ug/g*		*95.3*	*50-140*			
Surrogate: Dibromofluoromethane	*3.52*		*ug/g*		*105*	*50-140*			
Surrogate: Toluene-d8	*3.20*		*ug/g*		*95.5*	*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)	163	7	ug/g	ND	81.7	80-120			
F2 PHCs (C10-C16)	111	4	ug/g	ND	114	60-140			
F3 PHCs (C16-C34)	314	8	ug/g	30	119	60-140			
F4 PHCs (C34-C50)	303	6	ug/g	66	156	60-140			QM-06
PCBs									
PCBs, total	0.479	0.05	ug/g	ND	120	60-140			
Surrogate: Decachlorobiphenyl	*0.0996*		*ug/g*		*99.6*	*60-140*			
Semi-Volatiles									
Acenaphthene	0.255	0.02	ug/g	ND	95.1	50-140			
Acenaphthylene	0.217	0.02	ug/g	ND	81.0	50-140			
Anthracene	0.213	0.02	ug/g	ND	79.5	50-140			
Benzo [a] anthracene	0.196	0.02	ug/g	ND	73.2	50-140			
Benzo [a] pyrene	0.173	0.02	ug/g	ND	64.6	50-140			
Benzo [b] fluoranthene	0.277	0.02	ug/g	ND	103	50-140			
Benzo [g,h,i] perylene	0.188	0.02	ug/g	ND	70.3	50-140			
Benzo [k] fluoranthene	0.243	0.02	ug/g	ND	90.9	50-140			
Chrysene	0.249	0.02	ug/g	ND	93.0	50-140			
Dibenzo [a,h] anthracene	0.184	0.02	ug/g	ND	68.7	50-140			
Fluoranthene	0.213	0.02	ug/g	ND	79.7	50-140			
Fluorene	0.239	0.02	ug/g	ND	89.2	50-140			
Indeno [1,2,3-cd] pyrene	0.178	0.02	ug/g	ND	66.5	50-140			
1-Methylnaphthalene	0.263	0.02	ug/g	ND	98.1	50-140			
2-Methylnaphthalene	0.277	0.02	ug/g	ND	103	50-140			
Naphthalene	0.273	0.01	ug/g	ND	102	50-140			
Phenanthrene	0.233	0.02	ug/g	ND	86.8	50-140			
Pyrene	0.217	0.02	ug/g	ND	81.0	50-140			
Surrogate: 2-Fluorobiphenyl	*1.99*		*ug/g*		*92.7*	*50-140*			
Surrogate: Terphenyl-d14	*2.57*		*ug/g*		*120*	*50-140*			
Volatiles									
Acetone	6.80	0.50	ug/g	ND	68.0	50-140			
Benzene	3.39	0.02	ug/g	ND	84.7	60-130			
Bromodichloromethane	2.71	0.05	ug/g	ND	67.7	60-130			
Bromoform	4.57	0.05	ug/g	ND	114	60-130			
Bromomethane	3.98	0.05	ug/g	ND	99.5	50-140			
Carbon Tetrachloride	3.06	0.05	ug/g	ND	76.6	60-130			
Chlorobenzene	4.66	0.05	ug/g	ND	117	60-130			
Chloroform	3.31	0.05	ug/g	ND	82.6	60-130			
Dibromochloromethane	4.01	0.05	ug/g	ND	100	60-130			
Dichlorodifluoromethane	2.90	0.05	ug/g	ND	72.4	50-140			
1,2-Dichlorobenzene	3.97	0.05	ug/g	ND	99.1	60-130			
1,3-Dichlorobenzene	3.99	0.05	ug/g	ND	99.8	60-130			
1,4-Dichlorobenzene	3.91	0.05	ug/g	ND	97.8	60-130			
1,1-Dichloroethane	3.53	0.05	ug/g	ND	88.3	60-130			
1,2-Dichloroethane	2.72	0.05	ug/g	ND	68.1	60-130			
1,1-Dichloroethylene	3.19	0.05	ug/g	ND	79.8	60-130			
cis-1,2-Dichloroethylene	3.05	0.05	ug/g	ND	76.3	60-130			
trans-1,2-Dichloroethylene	3.58	0.05	ug/g	ND	89.5	60-130			
1,2-Dichloropropane	3.19	0.05	ug/g	ND	79.7	60-130			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
cis-1,3-Dichloropropylene	2.79	0.05	ug/g	ND	69.7	60-130			
trans-1,3-Dichloropropylene	3.09	0.05	ug/g	ND	77.2	60-130			
Ethylbenzene	4.17	0.05	ug/g	ND	104	60-130			
Ethylene dibromide (dibromoethane, 1,2-	4.07	0.05	ug/g	ND	102	60-130			
Hexane	3.08	0.05	ug/g	ND	76.9	60-130			
Methyl Ethyl Ketone (2-Butanone)	6.92	0.50	ug/g	ND	69.2	50-140			
Methyl Isobutyl Ketone	6.64	0.50	ug/g	ND	66.4	50-140			
Methyl tert-butyl ether	6.58	0.05	ug/g	ND	65.8	50-140			
Methylene Chloride	3.10	0.05	ug/g	ND	77.5	60-130			
Styrene	4.25	0.05	ug/g	ND	106	60-130			
1,1,1,2-Tetrachloroethane	4.43	0.05	ug/g	ND	111	60-130			
1,1,2,2-Tetrachloroethane	4.73	0.05	ug/g	ND	118	60-130			
Tetrachloroethylene	4.14	0.05	ug/g	ND	104	60-130			
Toluene	4.33	0.05	ug/g	ND	108	60-130			
1,1,1-Trichloroethane	2.93	0.05	ug/g	ND	73.2	60-130			
1,1,2-Trichloroethane	3.24	0.05	ug/g	ND	81.0	60-130			
Trichloroethylene	2.90	0.05	ug/g	ND	72.5	60-130			
Trichlorofluoromethane	3.15	0.05	ug/g	ND	78.8	50-140			
Vinyl chloride	2.90	0.02	ug/g	ND	72.6	50-140			
m,p-Xylenes	9.12	0.05	ug/g	ND	114	60-130			
o-Xylene	4.64	0.05	ug/g	ND	116	60-130			
Surrogate: 4-Bromofluorobenzene	*1.98*		*ug/g*		*61.9*	*50-140*			
Surrogate: Dibromofluoromethane	*1.82*		*ug/g*		*56.8*	*50-140*			
Surrogate: Toluene-d8	*3.13*		*ug/g*		*97.8*	*50-140*			

Qualifier Notes:

QC Qualifiers :

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

Sample Data Revisions

None

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 when the units are denoted with 'dry'.
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: 2306201

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2306201	№ 138201

Client Name: LRL Associates ltd.	Project Ref: 220200	Page 1 of 1
Contact Name: Jessica Arthurs	Quote #:	Turnaround Time
Address: 5430 Canotek Rd Ottawa, on K1J 9G2	PO #:	☐ 1 day ☐ 3 day
	E-mail:	☐ 2 day ☒ Regular
Telephone: 613 842 3434	jarthurs@lrlca	Date Required:

☐ REG 153/04 ☐ REG 406/19

Other Regulation

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

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

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	Required Analysis: PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	PCB
1	BH22-18-SS2	S		2	2023/02/06	PM			X					
2	BH22-18-SS2B	↓		2	↓	↓	X	X						
3	BH 22-18-SS3	↓		1	↓	↓								X
4														
5														
6														
7														
8														
9														
10														

Comments:

Method of Delivery: Walk-in

Relinquished By (Sign):	Received By Driver/Depot:	Received at Lab:	Verified By: Sandra Demarin
Relinquished By (Print): Jessica Arthurs	Date/Time:	Date/Time: Feb 7/23 4:14pm	Date/Time: Feb 7, 4:15
Date/Time: Feb 7/2023 / 4:10 p.m	Temperature: °C	Temperature: 7.6 °C	pH Verified: ☐ By:

PARACEL LABORATORIES LTD.

TRUSTED.
RESPONSIVE.
RELIABLE.

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

Certificate of Analysis

LRL Associates Ltd.

5430 Canotek Road
Ottawa, ON K1J 9G2
Attn: Abdul Kader Alhaj

Client PO:
Project: 220200
Custody: 141207

Report Date: 28-Feb-2023
Order Date: 22-Feb-2023

Order #: 2308192

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

Paracel ID	Client ID
2308192-01	MW1
2308192-02	LRL MW22-15
2308192-03	LRL MW22-22
2308192-04	LRL MW22-16
2308192-05	LRL MW22-30
2308192-06	Trip Blank

Approved By:

Mark Foto

Mark Foto, M.Sc.
Lab Supervisor

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 28-Feb-2023

Order Date: 22-Feb-2023

Project Description: 220200

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Anions	EPA 300.1 - IC	23-Feb-23	23-Feb-23
Chromium, hexavalent - water	MOE E3056 - colourimetric	23-Feb-23	23-Feb-23
Cyanide, free	MOE E3015 - Auto Colour	24-Feb-23	24-Feb-23
Mercury by CVAA	EPA 245.2 - Cold Vapour AA	23-Feb-23	23-Feb-23
Metals, ICP-MS	EPA 200.8 - ICP-MS	23-Feb-23	23-Feb-23
PCBs, total	EPA 608 - GC-ECD	27-Feb-23	27-Feb-23
pH	EPA 150.1 - pH probe @25 °C	23-Feb-23	23-Feb-23
PHC F1	CWS Tier 1 - P&T GC-FID	23-Feb-23	23-Feb-23
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	27-Feb-23	28-Feb-23
REG 153: PAHs by GC-MS	EPA 625 - GC-MS, extraction	24-Feb-23	25-Feb-23
REG 153: VOCs by P&T GC/MS	EPA 624 - P&T GC-MS	23-Feb-23	23-Feb-23

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 28-Feb-2023

Order Date: 22-Feb-2023

Project Description: 220200

	Client ID:	MW1	LRL MW22-15	LRL MW22-22	LRL MW22-16
	Sample Date:	22-Feb-23 08:50	22-Feb-23 13:25	22-Feb-23 11:30	22-Feb-23 14:55
	Sample ID:	2308192-01	2308192-02	2308192-03	2308192-04
	MDL/Units	Ground Water	Ground Water	Ground Water	Ground Water
General Inorganics					
Cyanide, free	2 ug/L	2	<2	<2	<2
pH	0.1 pH Units	7.3	7.6	7.3	7.4
Anions					
Chloride	1 mg/L	3420	3720	3070	2000
Metals					
Mercury	0.1 ug/L	<0.1	<0.1	<0.1	<0.1
Antimony	0.5 ug/L	0.6	0.6	<0.5	<0.5
Arsenic	1 ug/L	<1	<1	<1	<1
Barium	1 ug/L	55	470	45	84
Beryllium	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Boron	10 ug/L	37	95	57	44
Cadmium	0.1 ug/L	0.3	0.1	<0.1	<0.1
Chromium	1 ug/L	<1	<1	<1	<1
Chromium (VI)	10 ug/L	<10	<10	<10	<10
Cobalt	0.5 ug/L	5.1	3.0	0.5	<0.5
Copper	0.5 ug/L	3.9	1.7	0.9	<0.5
Lead	0.1 ug/L	<0.1	<0.1	<0.1	<0.1
Molybdenum	0.5 ug/L	31.6	18.9	4.6	5.2
Nickel	1 ug/L	45	18	3	<1
Selenium	1 ug/L	<1	<1	<1	<1
Silver	0.1 ug/L	0.2	<0.1	<0.1	<0.1
Sodium	200 ug/L	1500000	1430000	931000	1060000
Thallium	0.1 ug/L	0.1	<0.1	<0.1	<0.1
Uranium	0.1 ug/L	15.7	3.9	0.3	0.4
Vanadium	0.5 ug/L	<0.5	0.7	<0.5	0.7
Zinc	5 ug/L	<5	<5	<5	<5
Volatiles					
Acetone	5.0 ug/L	<5.0	<5.0	<5.0	<5.0
Benzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Bromoform	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Bromomethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Carbon Tetrachloride	0.2 ug/L	<0.2	<0.2	<0.2	<0.2
Chlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Chloroform	0.5 ug/L	<0.5	<0.5	<0.5	<0.5

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 28-Feb-2023

Order Date: 22-Feb-2023

Project Description: 220200

	Client ID:	MW1	LRL MW22-15	LRL MW22-22	LRL MW22-16
	Sample Date:	22-Feb-23 08:50	22-Feb-23 13:25	22-Feb-23 11:30	22-Feb-23 14:55
	Sample ID:	2308192-01	2308192-02	2308192-03	2308192-04
	MDL/Units	Ground Water	Ground Water	Ground Water	Ground Water
Dibromochloromethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Dichlorodifluoromethane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0
1,2-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,3-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
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
Ethylbenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Ethylene dibromide (dibromoethane, 1,2-)	0.2 ug/L	<0.2	<0.2	<0.2	<0.2
Hexane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0
Methyl Ethyl Ketone (2-Butanone)	5.0 ug/L	<5.0	<5.0	<5.0	<5.0
Methyl Isobutyl Ketone	5.0 ug/L	<5.0	<5.0	<5.0	<5.0
Methyl tert-butyl ether	2.0 ug/L	<2.0	<2.0	<2.0	<2.0
Methylene Chloride	5.0 ug/L	<5.0	<5.0	<5.0	<5.0
Styrene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,1,2,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Tetrachloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Toluene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Trichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Trichlorofluoromethane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0
Vinyl chloride	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
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
4-Bromofluorobenzene	Surrogate	105%	105%	105%	106%
Dibromofluoromethane	Surrogate	104%	104%	83.2%	107%

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 28-Feb-2023

Order Date: 22-Feb-2023

Project Description: 220200

	Client ID:	MW1	LRL MW22-15	LRL MW22-22	LRL MW22-16
	Sample Date:	22-Feb-23 08:50	22-Feb-23 13:25	22-Feb-23 11:30	22-Feb-23 14:55
	Sample ID:	2308192-01	2308192-02	2308192-03	2308192-04
	MDL/Units	Ground Water	Ground Water	Ground Water	Ground Water
Toluene-d8	Surrogate	107%	107%	107%	107%
Hydrocarbons					
F1 PHCs (C6-C10)	25 ug/L	<25	<25	<25	<25
F2 PHCs (C10-C16)	100 ug/L	<100	<100	<100	<100
F3 PHCs (C16-C34)	100 ug/L	<100	<100	<100	<100
F4 PHCs (C34-C50)	100 ug/L	<100	<100	<100	<100
Semi-Volatiles					
Acenaphthene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Anthracene	0.01 ug/L	<0.01	<0.01	<0.01	<0.01
Benzo [a] anthracene	0.01 ug/L	<0.01	<0.01	<0.01	<0.01
Benzo [a] pyrene	0.01 ug/L	<0.01	<0.01	<0.01	<0.01
Benzo [b] fluoranthene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Benzo [g,h,i] perylene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Benzo [k] fluoranthene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Chrysene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Dibenzo [a,h] anthracene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Fluoranthene	0.01 ug/L	<0.01	<0.01	<0.01	0.05
Fluorene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Indeno [1,2,3-cd] pyrene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
1-Methylnaphthalene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
2-Methylnaphthalene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Methylnaphthalene (1&2)	0.10 ug/L	<0.10	<0.10	<0.10	<0.10
Naphthalene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Phenanthrene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Pyrene	0.01 ug/L	<0.01	<0.01	<0.01	0.06
2-Fluorobiphenyl	Surrogate	106%	118%	115%	109%
Terphenyl-d14	Surrogate	124%	121%	126%	117%
PCBs					
PCBs, total	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Decachlorobiphenyl	Surrogate	99.0%	91.2%	94.2%	94.4%

Certificate of Analysis

Client: **LRL Associates Ltd.**

Client PO:

Report Date: 28-Feb-2023

Order Date: 22-Feb-2023

Project Description: 220200

	Client ID:	LRL MW22-30	Trip Blank	-	-
	Sample Date:	22-Feb-23 15:00	19-Jan-23 00:00	-	-
	Sample ID:	2308192-05	2308192-06	-	-
	MDL/Units	Ground Water	Water	-	-
General Inorganics					
Cyanide, free	2 ug/L	<2	-	-	-
pH	0.1 pH Units	7.3	-	-	-
Anions					
Chloride	1 mg/L	1900	-	-	-
Metals					
Mercury	0.1 ug/L	<0.1	-	-	-
Antimony	0.5 ug/L	<0.5	-	-	-
Arsenic	1 ug/L	<1	-	-	-
Barium	1 ug/L	86	-	-	-
Beryllium	0.5 ug/L	<0.5	-	-	-
Boron	10 ug/L	43	-	-	-
Cadmium	0.1 ug/L	<0.1	-	-	-
Chromium	1 ug/L	<1	-	-	-
Chromium (VI)	10 ug/L	<10	-	-	-
Cobalt	0.5 ug/L	<0.5	-	-	-
Copper	0.5 ug/L	0.5	-	-	-
Lead	0.1 ug/L	<0.1	-	-	-
Molybdenum	0.5 ug/L	5.2	-	-	-
Nickel	1 ug/L	<1	-	-	-
Selenium	1 ug/L	<1	-	-	-
Silver	0.1 ug/L	<0.1	-	-	-
Sodium	200 ug/L	1080000	-	-	-
Thallium	0.1 ug/L	<0.1	-	-	-
Uranium	0.1 ug/L	0.4	-	-	-
Vanadium	0.5 ug/L	0.7	-	-	-
Zinc	5 ug/L	<5	-	-	-
Volatiles					
Acetone	5.0 ug/L	<5.0	<5.0	-	-
Benzene	0.5 ug/L	<0.5	<0.5	-	-
Bromodichloromethane	0.5 ug/L	<0.5	<0.5	-	-
Bromoform	0.5 ug/L	<0.5	<0.5	-	-
Bromomethane	0.5 ug/L	<0.5	<0.5	-	-
Carbon Tetrachloride	0.2 ug/L	<0.2	<0.2	-	-
Chlorobenzene	0.5 ug/L	<0.5	<0.5	-	-
Chloroform	0.5 ug/L	<0.5	<0.5	-	-

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 28-Feb-2023

Order Date: 22-Feb-2023

Project Description: 220200

	Client ID:	LRL MW22-30	Trip Blank	-	-
	Sample Date:	22-Feb-23 15:00	19-Jan-23 00:00	-	-
	Sample ID:	2308192-05	2308192-06	-	-
	MDL/Units	Ground Water	Water	-	-
Dibromochloromethane	0.5 ug/L	<0.5	<0.5	-	-
Dichlorodifluoromethane	1.0 ug/L	<1.0	<1.0	-	-
1,2-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	-	-
1,3-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	-	-
1,4-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	-	-
1,1-Dichloroethane	0.5 ug/L	<0.5	<0.5	-	-
1,2-Dichloroethane	0.5 ug/L	<0.5	<0.5	-	-
1,1-Dichloroethylene	0.5 ug/L	<0.5	<0.5	-	-
cis-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	-	-
trans-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	-	-
1,2-Dichloropropane	0.5 ug/L	<0.5	<0.5	-	-
cis-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	-	-
trans-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	-	-
1,3-Dichloropropene, total	0.5 ug/L	<0.5	<0.5	-	-
Ethylbenzene	0.5 ug/L	<0.5	<0.5	-	-
Ethylene dibromide (dibromoethane, 1	0.2 ug/L	<0.2	<0.2	-	-
Hexane	1.0 ug/L	<1.0	<1.0	-	-
Methyl Ethyl Ketone (2-Butanone)	5.0 ug/L	<5.0	<5.0	-	-
Methyl Isobutyl Ketone	5.0 ug/L	<5.0	<5.0	-	-
Methyl tert-butyl ether	2.0 ug/L	<2.0	<2.0	-	-
Methylene Chloride	5.0 ug/L	<5.0	<5.0	-	-
Styrene	0.5 ug/L	<0.5	<0.5	-	-
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	-	-
1,1,2,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	-	-
Tetrachloroethylene	0.5 ug/L	<0.5	<0.5	-	-
Toluene	0.5 ug/L	<0.5	<0.5	-	-
1,1,1-Trichloroethane	0.5 ug/L	<0.5	<0.5	-	-
1,1,2-Trichloroethane	0.5 ug/L	<0.5	<0.5	-	-
Trichloroethylene	0.5 ug/L	<0.5	<0.5	-	-
Trichlorofluoromethane	1.0 ug/L	<1.0	<1.0	-	-
Vinyl chloride	0.5 ug/L	<0.5	<0.5	-	-
m,p-Xylenes	0.5 ug/L	<0.5	<0.5	-	-
o-Xylene	0.5 ug/L	<0.5	<0.5	-	-
Xylenes, total	0.5 ug/L	<0.5	<0.5	-	-
4-Bromofluorobenzene	Surrogate	106%	110%	-	-

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 28-Feb-2023

Order Date: 22-Feb-2023

Project Description: 220200

	Client ID:	LRL MW22-30	Trip Blank	-	-
	Sample Date:	22-Feb-23 15:00	19-Jan-23 00:00	-	-
	Sample ID:	2308192-05	2308192-06	-	-
	MDL/Units	Ground Water	Water	-	-
Dibromofluoromethane	Surrogate	106%	101%	-	-
Toluene-d8	Surrogate	107%	106%	-	-
Hydrocarbons					
F1 PHCs (C6-C10)	25 ug/L	<25	-	-	-
F2 PHCs (C10-C16)	100 ug/L	<100	-	-	-
F3 PHCs (C16-C34)	100 ug/L	<100	-	-	-
F4 PHCs (C34-C50)	100 ug/L	<100	-	-	-
Semi-Volatiles					
Acenaphthene	0.05 ug/L	<0.05	-	-	-
Acenaphthylene	0.05 ug/L	<0.05	-	-	-
Anthracene	0.01 ug/L	0.02	-	-	-
Benzo [a] anthracene	0.01 ug/L	0.03	-	-	-
Benzo [a] pyrene	0.01 ug/L	0.04	-	-	-
Benzo [b] fluoranthene	0.05 ug/L	<0.05	-	-	-
Benzo [g,h,i] perylene	0.05 ug/L	<0.05	-	-	-
Benzo [k] fluoranthene	0.05 ug/L	<0.05	-	-	-
Chrysene	0.05 ug/L	<0.05	-	-	-
Dibenzo [a,h] anthracene	0.05 ug/L	<0.05	-	-	-
Fluoranthene	0.01 ug/L	0.08	-	-	-
Fluorene	0.05 ug/L	<0.05	-	-	-
Indeno [1,2,3-cd] pyrene	0.05 ug/L	<0.05	-	-	-
1-Methylnaphthalene	0.05 ug/L	<0.05	-	-	-
2-Methylnaphthalene	0.05 ug/L	<0.05	-	-	-
Methylnaphthalene (1&2)	0.10 ug/L	<0.10	-	-	-
Naphthalene	0.05 ug/L	<0.05	-	-	-
Phenanthrene	0.05 ug/L	0.08	-	-	-
Pyrene	0.01 ug/L	0.08	-	-	-
2-Fluorobiphenyl	Surrogate	110%	-	-	-
Terphenyl-d14	Surrogate	120%	-	-	-
PCBs					
PCBs, total	0.05 ug/L	<0.05	-	-	-
Decachlorobiphenyl	Surrogate	106%	-	-	-

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Chloride	ND	1	mg/L						
General Inorganics									
Cyanide, free	ND	2	ug/L						
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									
Mercury	ND	0.1	ug/L						
Antimony	ND	0.5	ug/L						
Arsenic	ND	1	ug/L						
Barium	ND	1	ug/L						
Beryllium	ND	0.5	ug/L						
Boron	ND	10	ug/L						
Cadmium	ND	0.1	ug/L						
Chromium (VI)	ND	10	ug/L						
Chromium	ND	1	ug/L						
Cobalt	ND	0.5	ug/L						
Copper	ND	0.5	ug/L						
Lead	ND	0.1	ug/L						
Molybdenum	ND	0.5	ug/L						
Nickel	ND	1	ug/L						
Selenium	ND	1	ug/L						
Silver	ND	0.1	ug/L						
Sodium	ND	200	ug/L						
Thallium	ND	0.1	ug/L						
Uranium	ND	0.1	ug/L						
Vanadium	ND	0.5	ug/L						
Zinc	ND	5	ug/L						
PCBs									
PCBs, total	ND	0.05	ug/L						
Surrogate: Decachlorobiphenyl	*0.619*		*ug/L*		*124*	*60-140*			
Semi-Volatiles									
Acenaphthene	ND	0.05	ug/L						
Acenaphthylene	ND	0.05	ug/L						
Anthracene	ND	0.01	ug/L						
Benzo [a] anthracene	ND	0.01	ug/L						
Benzo [a] pyrene	ND	0.01	ug/L						
Benzo [b] fluoranthene	ND	0.05	ug/L						
Benzo [g,h,i] perylene	ND	0.05	ug/L						
Benzo [k] fluoranthene	ND	0.05	ug/L						
Chrysene	ND	0.05	ug/L						
Dibenzo [a,h] anthracene	ND	0.05	ug/L						
Fluoranthene	ND	0.01	ug/L						
Fluorene	ND	0.05	ug/L						
Indeno [1,2,3-cd] pyrene	ND	0.05	ug/L						
1-Methylnaphthalene	ND	0.05	ug/L						
2-Methylnaphthalene	ND	0.05	ug/L						
Methylnaphthalene (1&2)	ND	0.10	ug/L						
Naphthalene	ND	0.05	ug/L						
Phenanthrene	ND	0.05	ug/L						
Pyrene	ND	0.01	ug/L						
Surrogate: 2-Fluorobiphenyl	*20.1*		*ug/L*		*101*	*50-140*			
Surrogate: Terphenyl-d14	*24.5*		*ug/L*		*122*	*50-140*			
Volatiles									

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
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						
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	*90.4*		*ug/L*		*113*	*50-140*			
Surrogate: Dibromofluoromethane	*79.0*		*ug/L*		*98.7*	*50-140*			
Surrogate: Toluene-d8	*88.1*		*ug/L*		*110*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Chloride	4.96	1	mg/L	4.97			0.1	20	
General Inorganics									
Cyanide, free	ND	2	ug/L	ND			NC	20	
pH	7.3	0.1	pH Units	7.3			0.4	3.3	
Hydrocarbons									
F1 PHCs (C6-C10)	ND	25	ug/L	ND			NC	30	
Metals									
Mercury	ND	0.1	ug/L	ND			NC	20	
Antimony	2.40	0.5	ug/L	2.39			0.4	20	
Arsenic	4.2	1	ug/L	4.4			3.0	20	
Barium	232	1	ug/L	229			1.5	20	
Beryllium	ND	0.5	ug/L	ND			NC	20	
Boron	196	10	ug/L	195			0.6	20	
Cadmium	ND	0.1	ug/L	ND			NC	20	
Chromium (VI)	ND	10	ug/L	ND			NC	20	
Chromium	ND	1	ug/L	ND			NC	20	
Cobalt	0.66	0.5	ug/L	0.68			3.1	20	
Copper	1.83	0.5	ug/L	1.84			0.4	20	
Lead	0.20	0.1	ug/L	0.20			2.4	20	
Molybdenum	18.0	0.5	ug/L	17.7			1.5	20	
Nickel	5.6	1	ug/L	5.4			2.4	20	
Selenium	1.0	1	ug/L	ND			NC	20	
Silver	ND	0.1	ug/L	ND			NC	20	
Sodium	528000	200	ug/L	612000			14.7	20	
Thallium	0.11	0.1	ug/L	ND			NC	20	
Uranium	4.0	0.1	ug/L	4.0			0.9	20	
Vanadium	0.62	0.5	ug/L	0.61			2.1	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	
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	

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 28-Feb-2023

Order Date: 22-Feb-2023

Project Description: 220200

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
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	
o-Xylene	ND	0.5	ug/L	ND			NC	30	
Surrogate: 4-Bromofluorobenzene	*85.4*		*ug/L*		*107*	*50-140*			
Surrogate: Dibromofluoromethane	*83.6*		*ug/L*		*104*	*50-140*			
Surrogate: Toluene-d8	*86.3*		*ug/L*		*108*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Chloride	14.4	1	mg/L	4.97	94.2	70-124			
General Inorganics									
Cyanide, free	47.7	2	ug/L	ND	95.5	61-139			
Hydrocarbons									
F1 PHCs (C6-C10)	1850	25	ug/L	ND	92.5	68-117			
F2 PHCs (C10-C16)	1680	100	ug/L	ND	105	60-140			
F3 PHCs (C16-C34)	4530	100	ug/L	ND	116	60-140			
F4 PHCs (C34-C50)	2780	100	ug/L	ND	112	60-140			
Metals									
Mercury	2.69	0.1	ug/L	ND	89.7	70-130			
Arsenic	50.6	1	ug/L	4.4	92.4	80-120			
Barium	43.1	1	ug/L	ND	86.1	80-120			
Beryllium	36.6	0.5	ug/L	ND	73.3	80-120			QM-07
Boron	44	10	ug/L	ND	87.7	80-120			
Cadmium	37.4	0.1	ug/L	ND	74.7	80-120			QM-07
Chromium (VI)	207	10	ug/L	ND	104	70-130			
Chromium	58.5	1	ug/L	ND	116	80-120			
Cobalt	51.3	0.5	ug/L	0.68	101	80-120			
Copper	46.5	0.5	ug/L	1.84	89.4	80-120			
Lead	37.9	0.1	ug/L	0.20	75.4	80-120			QM-07
Molybdenum	64.9	0.5	ug/L	17.7	94.4	80-120			
Nickel	52.6	1	ug/L	5.4	94.3	80-120			
Selenium	42.8	1	ug/L	ND	85.7	80-120			
Silver	45.4	0.1	ug/L	ND	90.8	80-120			
Sodium	8580	200	ug/L	ND	85.8	80-120			
Thallium	39.1	0.1	ug/L	0.10	77.9	80-120			QM-07
Uranium	45.9	0.1	ug/L	4.0	83.8	80-120			
Vanadium	60.6	0.5	ug/L	0.61	120	80-120			
Zinc	44	5	ug/L	ND	88.5	80-120			
PCBs									
PCBs, total	1.19	0.05	ug/L	ND	119	65-135			
Surrogate: Decachlorobiphenyl	*0.508*		*ug/L*		*102*	*60-140*			
Semi-Volatiles									
Acenaphthene	4.72	0.05	ug/L	ND	94.3	50-140			
Acenaphthylene	4.16	0.05	ug/L	ND	83.1	50-140			
Anthracene	4.48	0.01	ug/L	ND	89.7	50-140			
Benzo [a] anthracene	4.71	0.01	ug/L	ND	94.3	50-140			
Benzo [a] pyrene	4.63	0.01	ug/L	ND	92.6	50-140			
Benzo [b] fluoranthene	6.49	0.05	ug/L	ND	130	50-140			
Benzo [g,h,i] perylene	4.24	0.05	ug/L	ND	84.9	50-140			
Benzo [k] fluoranthene	5.34	0.05	ug/L	ND	107	50-140			
Chrysene	5.14	0.05	ug/L	ND	103	50-140			
Dibenzo [a,h] anthracene	4.43	0.05	ug/L	ND	88.5	50-140			
Fluoranthene	4.25	0.01	ug/L	ND	84.9	50-140			
Fluorene	4.68	0.05	ug/L	ND	93.6	50-140			
Indeno [1,2,3-cd] pyrene	4.73	0.05	ug/L	ND	94.7	50-140			
1-Methylnaphthalene	4.71	0.05	ug/L	ND	94.1	50-140			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
2-Methylnaphthalene	5.27	0.05	ug/L	ND	105	50-140			
Naphthalene	4.75	0.05	ug/L	ND	95.0	50-140			
Phenanthrene	4.27	0.05	ug/L	ND	85.4	50-140			
Pyrene	4.47	0.01	ug/L	ND	89.4	50-140			
Surrogate: 2-Fluorobiphenyl	*22.8*		*ug/L*		*114*	*50-140*			
Surrogate: Terphenyl-d14	*26.9*		*ug/L*		*135*	*50-140*			
Volatiles									
Acetone	110	5.0	ug/L	ND	110	50-140			
Benzene	42.2	0.5	ug/L	ND	105	60-130			
Bromodichloromethane	44.6	0.5	ug/L	ND	112	60-130			
Bromoform	38.7	0.5	ug/L	ND	96.8	60-130			
Bromomethane	39.4	0.5	ug/L	ND	98.4	50-140			
Carbon Tetrachloride	39.6	0.2	ug/L	ND	99.0	60-130			
Chlorobenzene	38.5	0.5	ug/L	ND	96.2	60-130			
Chloroform	39.8	0.5	ug/L	ND	99.4	60-130			
Dibromochloromethane	38.0	0.5	ug/L	ND	95.0	60-130			
Dichlorodifluoromethane	46.0	1.0	ug/L	ND	115	50-140			
1,2-Dichlorobenzene	37.0	0.5	ug/L	ND	92.4	60-130			
1,3-Dichlorobenzene	35.6	0.5	ug/L	ND	88.9	60-130			
1,4-Dichlorobenzene	34.4	0.5	ug/L	ND	86.0	60-130			
1,1-Dichloroethane	35.7	0.5	ug/L	ND	89.2	60-130			
1,2-Dichloroethane	41.4	0.5	ug/L	ND	103	60-130			
1,1-Dichloroethylene	47.8	0.5	ug/L	ND	119	60-130			
cis-1,2-Dichloroethylene	37.0	0.5	ug/L	ND	92.4	60-130			
trans-1,2-Dichloroethylene	35.5	0.5	ug/L	ND	88.7	60-130			
1,2-Dichloropropane	42.6	0.5	ug/L	ND	107	60-130			
cis-1,3-Dichloropropylene	40.3	0.5	ug/L	ND	101	60-130			
trans-1,3-Dichloropropylene	37.4	0.5	ug/L	ND	93.5	60-130			
Ethylbenzene	40.8	0.5	ug/L	ND	102	60-130			
Ethylene dibromide (dibromoethane, 1,2	39.2	0.2	ug/L	ND	97.9	60-130			
Hexane	45.2	1.0	ug/L	ND	113	60-130			
Methyl Ethyl Ketone (2-Butanone)	100	5.0	ug/L	ND	100	50-140			
Methyl Isobutyl Ketone	103	5.0	ug/L	ND	103	50-140			
Methyl tert-butyl ether	82.7	2.0	ug/L	ND	82.7	50-140			
Methylene Chloride	47.7	5.0	ug/L	ND	119	60-130			
Styrene	34.0	0.5	ug/L	ND	85.0	60-130			
1,1,1,2-Tetrachloroethane	38.4	0.5	ug/L	ND	95.9	60-130			
1,1,2,2-Tetrachloroethane	35.3	0.5	ug/L	ND	88.3	60-130			
Tetrachloroethylene	37.2	0.5	ug/L	ND	92.9	60-130			
Toluene	40.2	0.5	ug/L	ND	101	60-130			
1,1,1-Trichloroethane	45.5	0.5	ug/L	ND	114	60-130			
1,1,2-Trichloroethane	38.6	0.5	ug/L	ND	96.5	60-130			
Trichloroethylene	36.7	0.5	ug/L	ND	91.6	60-130			
Trichlorofluoromethane	49.7	1.0	ug/L	ND	124	60-130			
Vinyl chloride	44.5	0.5	ug/L	ND	111	50-140			
m,p-Xylenes	75.6	0.5	ug/L	ND	94.5	60-130			
o-Xylene	38.3	0.5	ug/L	ND	95.8	60-130			
Surrogate: 4-Bromofluorobenzene	*86.0*		*ug/L*		*107*	*50-140*			
Surrogate: Dibromofluoromethane	*91.5*		*ug/L*		*114*	*50-140*			
Surrogate: Toluene-d8	*83.6*		*ug/L*		*104*	*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:

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

Other Report Notes:

n/a: not applicable
ND: Not Detected
MDL: Method Detection Limit
Source Result: Data used as source for matrix and duplicate samples
%REC: Percent recovery.
RPD: Relative percent difference.
NC: Not Calculated

CCME PHC additional information:

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

PARACEL LABORATORIES LTD.

Paracel ID: 2308192

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
	№ 141207

Client Name: LRL Associates	Project Ref: 220200	Page 1 of 1
Contact Name: Abdul Kader	Quote #:	Turnaround Time
Address: 5430 Canotek Rd Ottawa, ON	PO #:	☐ 1 day ☐ 3 day
	E-mail: akader@lrl.ca	☐ 2 day ☒ Regular
Telephone: 613 315 6602		Date Required:

☐ REG 153/04 ☐ REG 406/19

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

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

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

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken: Date	Sample Taken: Time	Required Analysis: PHCs F1-F4+BTEX	VOCs	PAHs	Metals Reg 153	Hg	CrVI	B (HWS)	PCB	Inorganics	Mercury & CrVI		
1	MW1	GW		10	2023.02.22	8:50	X	X	X	X				X	X	X		
2	LRL MW22-15	↓		↓	↓	1:25	↓	↓	↓	↓				↓	↓	↓		
3	LRL MW22-22					11:30												
4	LRL MW22-16					2:55												
5	LRL MW22-30	↓		↓	↓	3:0	↓	↓	↓	↓				↓	↓	↓		
6	Trip blank	O		1	Jan. 19			X										
7																		
8																		
9																		
10																		

Comments:

Method of Delivery: Walk-in

Relinquished By (Sign):	Received By Driver/Depot:	Received at Lab:	Verified By:
Relinquished By (Print): Abdul Kader	Date/Time:	Date/Time: Feb 22/23 5pm	Date/Time: Feb 23/2023 8:15
Date/Time: 2023.02.22	Temperature: °C	Temperature: 18.9 °C	pH Verified: ☐ By:

PARACEL LABORATORIES LTD.

TRUSTED.
RESPONSIVE.
RELIABLE.

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

Certificate of Analysis

LRL Associates Ltd.

5430 Canotek Road
Ottawa, ON K1J 9G2
Attn: Abdul Kader Alhaj

Client PO:
Project: 220200
Custody: 141206

Report Date: 1-Mar-2023
Order Date: 23-Feb-2023

Order #: 2308297

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

Paracel ID	Client ID
2308297-01	MW3
2308297-02	MW5
2308297-03	LRL MW22-21
2308297-04	MW40
2308297-05	Trip Blank

Approved By:

Mark Foto

Mark Foto, M.Sc.
Lab Supervisor

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 01-Mar-2023

Order Date: 23-Feb-2023

Project Description: 220200

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Anions	EPA 300.1 - IC	27-Feb-23	27-Feb-23
Chromium, hexavalent - water	MOE E3056 - colourimetric	27-Feb-23	27-Feb-23
Cyanide, free	MOE E3015 - Auto Colour	24-Feb-23	24-Feb-23
Mercury by CVAA	EPA 245.2 - Cold Vapour AA	24-Feb-23	24-Feb-23
Metals, ICP-MS	EPA 200.8 - ICP-MS	24-Feb-23	24-Feb-23
PCBs, total	EPA 608 - GC-ECD	27-Feb-23	27-Feb-23
pH	EPA 150.1 - pH probe @25 °C	24-Feb-23	24-Feb-23
PHC F1	CWS Tier 1 - P&T GC-FID	24-Feb-23	27-Feb-23
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	28-Feb-23	28-Feb-23
REG 153: PAHs by GC-MS	EPA 625 - GC-MS, extraction	27-Feb-23	27-Feb-23
REG 153: VOCs by P&T GC/MS	EPA 624 - P&T GC-MS	24-Feb-23	27-Feb-23

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 01-Mar-2023

Order Date: 23-Feb-2023

Project Description: 220200

	Client ID:	MW3	MW5	LRL MW22-21	MW40
	Sample Date:	23-Feb-23 12:50	23-Feb-23 11:25	23-Feb-23 14:50	23-Feb-23 13:00
	Sample ID:	2308297-01	2308297-02	2308297-03	2308297-04
	MDL/Units	Ground Water	Ground Water	Ground Water	Ground Water
General Inorganics					
Cyanide, free	2 ug/L	<2	<2	<2	<2
pH	0.1 pH Units	7.2	7.1	7.1	7.2
Anions					
Chloride	1 mg/L	6190	3880	5260	6250
Metals					
Mercury	0.1 ug/L	<0.1	<0.1	<0.1	<0.1
Antimony	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Arsenic	1 ug/L	<1	2	<1	<1
Barium	1 ug/L	156	523	783	154
Beryllium	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Boron	10 ug/L	23	43	101	24
Cadmium	0.1 ug/L	<0.1	0.1	<0.1	<0.1
Chromium	1 ug/L	<1	<1	<1	<1
Chromium (VI)	10 ug/L	<10	<10	<10	<10
Cobalt	0.5 ug/L	2.6	2.7	2.9	2.5
Copper	0.5 ug/L	<0.5	0.8	1.2	<0.5
Lead	0.1 ug/L	<0.1	0.1	<0.1	<0.1
Molybdenum	0.5 ug/L	4.4	80.7	2.4	4.4
Nickel	1 ug/L	8	30	10	8
Selenium	1 ug/L	<1	<1	<1	<1
Silver	0.1 ug/L	<0.1	<0.1	<0.1	<0.1
Sodium	200 ug/L	2600000	1380000	1710000	1840000
Thallium	0.1 ug/L	<0.1	<0.1	<0.1	<0.1
Uranium	0.1 ug/L	5.3	5.4	1.2	5.4
Vanadium	0.5 ug/L	<0.5	0.6	0.7	<0.5
Zinc	5 ug/L	<5	<5	<5	<5
Volatiles					
Acetone	5.0 ug/L	<5.0	22.9	<5.0	<5.0
Benzene	0.5 ug/L	17.0	23.6	<0.5	13.3
Bromodichloromethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Bromoform	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Bromomethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Carbon Tetrachloride	0.2 ug/L	<0.2	<0.2	<0.2	<0.2
Chlorobenzene	0.5 ug/L	<0.5	<0.5	2.5	<0.5
Chloroform	0.5 ug/L	<0.5	<0.5	<0.5	<0.5

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 01-Mar-2023

Order Date: 23-Feb-2023

Project Description: 220200

	Client ID:	MW3	MW5	LRL MW22-21	MW40
	Sample Date:	23-Feb-23 12:50	23-Feb-23 11:25	23-Feb-23 14:50	23-Feb-23 13:00
	Sample ID:	2308297-01	2308297-02	2308297-03	2308297-04
	MDL/Units	Ground Water	Ground Water	Ground Water	Ground Water
Dibromochloromethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Dichlorodifluoromethane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0
1,2-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	15.8	<0.5
1,3-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	2.3	<0.5
1,4-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	3.2	<0.5
1,1-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
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
Ethylbenzene	0.5 ug/L	14.1	6.0	<0.5	13.6
Ethylene dibromide (dibromoethane, 1,2-)	0.2 ug/L	<0.2	<0.2	<0.2	<0.2
Hexane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0
Methyl Ethyl Ketone (2-Butanone)	5.0 ug/L	<5.0	<5.0	<5.0	<5.0
Methyl Isobutyl Ketone	5.0 ug/L	<5.0	<5.0	<5.0	<5.0
Methyl tert-butyl ether	2.0 ug/L	<2.0	<2.0	<2.0	<2.0
Methylene Chloride	5.0 ug/L	<5.0	<5.0	<5.0	<5.0
Styrene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,1,2,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Tetrachloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Toluene	0.5 ug/L	1.8	0.6	<0.5	1.8
1,1,1-Trichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Trichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Trichlorofluoromethane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0
Vinyl chloride	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
m,p-Xylenes	0.5 ug/L	34.6	7.8	<0.5	33.6
o-Xylene	0.5 ug/L	2.2	<0.5	<0.5	<0.5
Xylenes, total	0.5 ug/L	36.8	7.8	<0.5	33.6
4-Bromofluorobenzene	Surrogate	103%	103%	101%	104%
Dibromofluoromethane	Surrogate	96.6%	96.1%	96.8%	77.4%

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 01-Mar-2023

Order Date: 23-Feb-2023

Project Description: 220200

	Client ID:	MW3	MW5	LRL MW22-21	MW40
	Sample Date:	23-Feb-23 12:50	23-Feb-23 11:25	23-Feb-23 14:50	23-Feb-23 13:00
	Sample ID:	2308297-01	2308297-02	2308297-03	2308297-04
	MDL/Units	Ground Water	Ground Water	Ground Water	Ground Water
Toluene-d8	Surrogate	109%	108%	108%	108%
Hydrocarbons					
F1 PHCs (C6-C10)	25 ug/L	<25	41	<25	<25
F2 PHCs (C10-C16)	100 ug/L	<100	<100	<100	<100
F3 PHCs (C16-C34)	100 ug/L	<100	<100	<100	<100
F4 PHCs (C34-C50)	100 ug/L	<100	<100	<100	<100
Semi-Volatiles					
Acenaphthene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Anthracene	0.01 ug/L	<0.01	<0.01	<0.01	<0.01
Benzo [a] anthracene	0.01 ug/L	<0.01	<0.01	<0.01	<0.01
Benzo [a] pyrene	0.01 ug/L	<0.01	<0.01	<0.01	<0.01
Benzo [b] fluoranthene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Benzo [g,h,i] perylene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Benzo [k] fluoranthene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Chrysene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Dibenzo [a,h] anthracene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Fluoranthene	0.01 ug/L	<0.01	<0.01	<0.01	<0.01
Fluorene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Indeno [1,2,3-cd] pyrene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
1-Methylnaphthalene	0.05 ug/L	0.18	0.15	<0.05	0.25
2-Methylnaphthalene	0.05 ug/L	0.05	<0.05	<0.05	0.10
Methylnaphthalene (1&2)	0.10 ug/L	0.23	0.15	<0.10	0.35
Naphthalene	0.05 ug/L	0.24	0.73	<0.05	0.78
Phenanthrene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Pyrene	0.01 ug/L	<0.01	<0.01	<0.01	<0.01
2-Fluorobiphenyl	Surrogate	119%	110%	117%	112%
Terphenyl-d14	Surrogate	123%	118%	121%	116%
PCBs					
PCBs, total	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Decachlorobiphenyl	Surrogate	102%	103%	94.9%	107%

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 01-Mar-2023

Order Date: 23-Feb-2023

Project Description: 220200

	Client ID:	Trip Blank	-	-	-
	Sample Date:	19-Jan-23 00:00	-	-	-
	Sample ID:	2308297-05	-	-	-
	MDL/Units	Water	-	-	-
Volatiles					
Acetone	5.0 ug/L	<5.0	-	-	-
Benzene	0.5 ug/L	<0.5	-	-	-
Bromodichloromethane	0.5 ug/L	<0.5	-	-	-
Bromoform	0.5 ug/L	<0.5	-	-	-
Bromomethane	0.5 ug/L	<0.5	-	-	-
Carbon Tetrachloride	0.2 ug/L	<0.2	-	-	-
Chlorobenzene	0.5 ug/L	<0.5	-	-	-
Chloroform	0.5 ug/L	<0.5	-	-	-
Dibromochloromethane	0.5 ug/L	<0.5	-	-	-
Dichlorodifluoromethane	1.0 ug/L	<1.0	-	-	-
1,2-Dichlorobenzene	0.5 ug/L	<0.5	-	-	-
1,3-Dichlorobenzene	0.5 ug/L	<0.5	-	-	-
1,4-Dichlorobenzene	0.5 ug/L	<0.5	-	-	-
1,1-Dichloroethane	0.5 ug/L	<0.5	-	-	-
1,2-Dichloroethane	0.5 ug/L	<0.5	-	-	-
1,1-Dichloroethylene	0.5 ug/L	<0.5	-	-	-
cis-1,2-Dichloroethylene	0.5 ug/L	<0.5	-	-	-
trans-1,2-Dichloroethylene	0.5 ug/L	<0.5	-	-	-
1,2-Dichloropropane	0.5 ug/L	<0.5	-	-	-
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	-	-	-
Ethylbenzene	0.5 ug/L	<0.5	-	-	-
Ethylene dibromide (dibromoethane, 1	0.2 ug/L	<0.2	-	-	-
Hexane	1.0 ug/L	<1.0	-	-	-
Methyl Ethyl Ketone (2-Butanone)	5.0 ug/L	<5.0	-	-	-
Methyl Isobutyl Ketone	5.0 ug/L	<5.0	-	-	-
Methyl tert-butyl ether	2.0 ug/L	<2.0	-	-	-
Methylene Chloride	5.0 ug/L	<5.0	-	-	-
Styrene	0.5 ug/L	<0.5	-	-	-
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5	-	-	-
1,1,2,2-Tetrachloroethane	0.5 ug/L	<0.5	-	-	-
Tetrachloroethylene	0.5 ug/L	<0.5	-	-	-
Toluene	0.5 ug/L	<0.5	-	-	-

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 01-Mar-2023

Order Date: 23-Feb-2023

Project Description: 220200

	Client ID:	Trip Blank	-	-	-
	Sample Date:	19-Jan-23 00:00	-	-	-
	Sample ID:	2308297-05	-	-	-
	MDL/Units	Water	-	-	-
1,1,1-Trichloroethane	0.5 ug/L	<0.5	-	-	-
1,1,2-Trichloroethane	0.5 ug/L	<0.5	-	-	-
Trichloroethylene	0.5 ug/L	<0.5	-	-	-
Trichlorofluoromethane	1.0 ug/L	<1.0	-	-	-
Vinyl chloride	0.5 ug/L	<0.5	-	-	-
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	-	-	-
4-Bromofluorobenzene	Surrogate	110%	-	-	-
Dibromofluoromethane	Surrogate	93.4%	-	-	-
Toluene-d8	Surrogate	108%	-	-	-

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Chloride	ND	1	mg/L						
General Inorganics									
Cyanide, free	ND	2	ug/L						
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									
Mercury	ND	0.1	ug/L						
Antimony	ND	0.5	ug/L						
Arsenic	ND	1	ug/L						
Barium	ND	1	ug/L						
Beryllium	ND	0.5	ug/L						
Boron	ND	10	ug/L						
Cadmium	ND	0.1	ug/L						
Chromium (VI)	ND	10	ug/L						
Chromium	ND	1	ug/L						
Cobalt	ND	0.5	ug/L						
Copper	ND	0.5	ug/L						
Lead	ND	0.1	ug/L						
Molybdenum	ND	0.5	ug/L						
Nickel	ND	1	ug/L						
Selenium	ND	1	ug/L						
Silver	ND	0.1	ug/L						
Sodium	ND	200	ug/L						
Thallium	ND	0.1	ug/L						
Uranium	ND	0.1	ug/L						
Vanadium	ND	0.5	ug/L						
Zinc	ND	5	ug/L						
PCBs									
PCBs, total	ND	0.05	ug/L						
Surrogate: Decachlorobiphenyl	*0.619*		*ug/L*		*124*	*60-140*			
Semi-Volatiles									
Acenaphthene	ND	0.05	ug/L						
Acenaphthylene	ND	0.05	ug/L						
Anthracene	ND	0.01	ug/L						
Benzo [a] anthracene	ND	0.01	ug/L						
Benzo [a] pyrene	ND	0.01	ug/L						
Benzo [b] fluoranthene	ND	0.05	ug/L						
Benzo [g,h,i] perylene	ND	0.05	ug/L						
Benzo [k] fluoranthene	ND	0.05	ug/L						
Chrysene	ND	0.05	ug/L						
Dibenzo [a,h] anthracene	ND	0.05	ug/L						
Fluoranthene	ND	0.01	ug/L						
Fluorene	ND	0.05	ug/L						
Indeno [1,2,3-cd] pyrene	ND	0.05	ug/L						
1-Methylnaphthalene	ND	0.05	ug/L						
2-Methylnaphthalene	ND	0.05	ug/L						
Methylnaphthalene (1&2)	ND	0.10	ug/L						
Naphthalene	ND	0.05	ug/L						
Phenanthrene	ND	0.05	ug/L						
Pyrene	ND	0.01	ug/L						
Surrogate: 2-Fluorobiphenyl	*24.7*		*ug/L*		*123*	*50-140*			
Surrogate: Terphenyl-d14	*23.5*		*ug/L*		*118*	*50-140*			
Volatiles									

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
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						
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	*88.3*		*ug/L*		*110*	*50-140*			
Surrogate: Dibromofluoromethane	*77.2*		*ug/L*		*96.6*	*50-140*			
Surrogate: Toluene-d8	*88.2*		*ug/L*		*110*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Chloride	170	1	mg/L	170			0.1	20	
General Inorganics									
Cyanide, free	ND	2	ug/L	ND			NC	20	
pH	7.9	0.1	pH Units	7.9			0.4	3.3	
Hydrocarbons									
F1 PHCs (C6-C10)	ND	25	ug/L	ND			NC	30	
Metals									
Mercury	ND	0.1	ug/L	ND			NC	20	
Antimony	ND	0.5	ug/L	ND			NC	20	
Arsenic	ND	1	ug/L	ND			NC	20	
Barium	20.4	1	ug/L	20.2			1.0	20	
Beryllium	ND	0.5	ug/L	ND			NC	20	
Boron	18	10	ug/L	18			1.6	20	
Cadmium	ND	0.1	ug/L	ND			NC	20	
Chromium (VI)	ND	10	ug/L	ND			NC	20	
Chromium	ND	1	ug/L	ND			NC	20	
Cobalt	ND	0.5	ug/L	ND			NC	20	
Copper	0.80	0.5	ug/L	0.83			4.0	20	
Lead	ND	0.1	ug/L	ND			NC	20	
Molybdenum	1.01	0.5	ug/L	0.98			2.9	20	
Nickel	ND	1	ug/L	ND			NC	20	
Selenium	ND	1	ug/L	ND			NC	20	
Silver	ND	0.1	ug/L	ND			NC	20	
Sodium	15700	200	ug/L	15500			1.3	20	
Thallium	ND	0.1	ug/L	ND			NC	20	
Uranium	ND	0.1	ug/L	ND			NC	20	
Vanadium	ND	0.5	ug/L	ND			NC	20	
Zinc	6	5	ug/L	6			0.7	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	2.59	0.5	ug/L	2.47			4.7	30	
Chloroform	ND	0.5	ug/L	ND			NC	30	
Dibromochloromethane	ND	0.5	ug/L	ND			NC	30	
Dichlorodifluoromethane	ND	1.0	ug/L	ND			NC	30	
1,2-Dichlorobenzene	16.6	0.5	ug/L	15.8			5.4	30	
1,3-Dichlorobenzene	2.46	0.5	ug/L	2.28			7.6	30	
1,4-Dichlorobenzene	3.33	0.5	ug/L	3.17			4.9	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	

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 01-Mar-2023

Order Date: 23-Feb-2023

Project Description: 220200

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
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	
o-Xylene	ND	0.5	ug/L	ND			NC	30	
Surrogate: 4-Bromofluorobenzene	*80.1*		*ug/L*		*100*	*50-140*			
Surrogate: Dibromofluoromethane	*77.0*		*ug/L*		*96.2*	*50-140*			
Surrogate: Toluene-d8	*85.9*		*ug/L*		*107*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Chloride	180	1	mg/L	170	102	70-124			
General Inorganics									
Cyanide, free	47.7	2	ug/L	ND	95.5	61-139			
Hydrocarbons									
F1 PHCs (C6-C10)	1920	25	ug/L	ND	95.8	68-117			
F2 PHCs (C10-C16)	1470	100	ug/L	ND	91.8	60-140			
F3 PHCs (C16-C34)	3990	100	ug/L	ND	102	60-140			
F4 PHCs (C34-C50)	2780	100	ug/L	ND	112	60-140			
Metals									
Mercury	2.48	0.1	ug/L	ND	82.8	70-130			
Arsenic	47.9	1	ug/L	ND	95.3	80-120			
Barium	63.7	1	ug/L	20.2	87.0	80-120			
Beryllium	47.3	0.5	ug/L	ND	94.6	80-120			
Boron	60	10	ug/L	18	84.1	80-120			
Cadmium	45.8	0.1	ug/L	ND	91.5	80-120			
Chromium (VI)	192	10	ug/L	ND	96.0	70-130			
Chromium	49.3	1	ug/L	ND	98.0	80-120			
Cobalt	46.1	0.5	ug/L	ND	92.1	80-120			
Copper	44.8	0.5	ug/L	0.83	88.0	80-120			
Lead	42.6	0.1	ug/L	ND	85.2	80-120			
Molybdenum	45.0	0.5	ug/L	0.98	88.1	80-120			
Nickel	46.5	1	ug/L	ND	91.9	80-120			
Selenium	44.4	1	ug/L	ND	88.6	80-120			
Silver	42.6	0.1	ug/L	ND	85.2	80-120			
Sodium	23500	200	ug/L	15500	79.6	80-120			QM-07
Thallium	42.8	0.1	ug/L	ND	85.6	80-120			
Uranium	44.8	0.1	ug/L	ND	89.6	80-120			
Vanadium	48.8	0.5	ug/L	ND	97.3	80-120			
Zinc	49	5	ug/L	6	86.2	80-120			
PCBs									
PCBs, total	1.19	0.05	ug/L	ND	119	65-135			
Surrogate: Decachlorobiphenyl	*0.508*		*ug/L*		*102*	*60-140*			
Semi-Volatiles									
Acenaphthene	4.79	0.05	ug/L	ND	95.9	50-140			
Acenaphthylene	3.94	0.05	ug/L	ND	78.8	50-140			
Anthracene	4.50	0.01	ug/L	ND	90.1	50-140			
Benzo [a] anthracene	4.68	0.01	ug/L	ND	93.5	50-140			
Benzo [a] pyrene	5.41	0.01	ug/L	ND	108	50-140			
Benzo [b] fluoranthene	5.18	0.05	ug/L	ND	104	50-140			
Benzo [g,h,i] perylene	5.89	0.05	ug/L	ND	118	50-140			
Benzo [k] fluoranthene	5.53	0.05	ug/L	ND	111	50-140			
Chrysene	5.63	0.05	ug/L	ND	113	50-140			
Dibenzo [a,h] anthracene	5.19	0.05	ug/L	ND	104	50-140			
Fluoranthene	4.79	0.01	ug/L	ND	95.9	50-140			
Fluorene	4.81	0.05	ug/L	ND	96.2	50-140			
Indeno [1,2,3-cd] pyrene	5.73	0.05	ug/L	ND	115	50-140			
1-Methylnaphthalene	5.57	0.05	ug/L	ND	111	50-140			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
2-Methylnaphthalene	5.71	0.05	ug/L	ND	114	50-140			
Naphthalene	5.30	0.05	ug/L	ND	106	50-140			
Phenanthrene	4.49	0.05	ug/L	ND	89.9	50-140			
Pyrene	4.59	0.01	ug/L	ND	91.9	50-140			
Surrogate: 2-Fluorobiphenyl	*24.2*		*ug/L*		*121*	*50-140*			
Surrogate: Terphenyl-d14	*24.8*		*ug/L*		*124*	*50-140*			
Volatiles									
Acetone	96.5	5.0	ug/L	ND	96.5	50-140			
Benzene	41.1	0.5	ug/L	ND	103	60-130			
Bromodichloromethane	41.4	0.5	ug/L	ND	104	60-130			
Bromoform	36.8	0.5	ug/L	ND	92.1	60-130			
Bromomethane	47.5	0.5	ug/L	ND	119	50-140			
Carbon Tetrachloride	36.2	0.2	ug/L	ND	90.4	60-130			
Chlorobenzene	37.7	0.5	ug/L	ND	94.3	60-130			
Chloroform	39.1	0.5	ug/L	ND	97.8	60-130			
Dibromochloromethane	34.5	0.5	ug/L	ND	86.2	60-130			
Dichlorodifluoromethane	34.4	1.0	ug/L	ND	86.1	50-140			
1,2-Dichlorobenzene	35.1	0.5	ug/L	ND	87.7	60-130			
1,3-Dichlorobenzene	34.0	0.5	ug/L	ND	85.1	60-130			
1,4-Dichlorobenzene	32.7	0.5	ug/L	ND	81.8	60-130			
1,1-Dichloroethane	34.6	0.5	ug/L	ND	86.4	60-130			
1,2-Dichloroethane	41.2	0.5	ug/L	ND	103	60-130			
1,1-Dichloroethylene	46.5	0.5	ug/L	ND	116	60-130			
cis-1,2-Dichloroethylene	45.9	0.5	ug/L	ND	115	60-130			
trans-1,2-Dichloroethylene	33.6	0.5	ug/L	ND	83.9	60-130			
1,2-Dichloropropane	41.1	0.5	ug/L	ND	103	60-130			
cis-1,3-Dichloropropylene	35.1	0.5	ug/L	ND	87.6	60-130			
trans-1,3-Dichloropropylene	32.6	0.5	ug/L	ND	81.5	60-130			
Ethylbenzene	40.4	0.5	ug/L	ND	101	60-130			
Ethylene dibromide (dibromoethane, 1,2	37.5	0.2	ug/L	ND	93.7	60-130			
Hexane	44.8	1.0	ug/L	ND	112	60-130			
Methyl Ethyl Ketone (2-Butanone)	102	5.0	ug/L	ND	102	50-140			
Methyl Isobutyl Ketone	105	5.0	ug/L	ND	105	50-140			
Methyl tert-butyl ether	79.5	2.0	ug/L	ND	79.5	50-140			
Methylene Chloride	42.8	5.0	ug/L	ND	107	60-130			
Styrene	33.6	0.5	ug/L	ND	84.1	60-130			
1,1,1,2-Tetrachloroethane	35.5	0.5	ug/L	ND	88.7	60-130			
1,1,2,2-Tetrachloroethane	34.0	0.5	ug/L	ND	84.9	60-130			
Tetrachloroethylene	36.0	0.5	ug/L	ND	90.0	60-130			
Toluene	40.2	0.5	ug/L	ND	101	60-130			
1,1,1-Trichloroethane	42.6	0.5	ug/L	ND	106	60-130			
1,1,2-Trichloroethane	37.2	0.5	ug/L	ND	93.0	60-130			
Trichloroethylene	35.4	0.5	ug/L	ND	88.6	60-130			
Trichlorofluoromethane	46.8	1.0	ug/L	ND	117	60-130			
Vinyl chloride	43.0	0.5	ug/L	ND	108	50-140			
m,p-Xylenes	75.5	0.5	ug/L	ND	94.4	60-130			
o-Xylene	38.5	0.5	ug/L	ND	96.2	60-130			
Surrogate: 4-Bromofluorobenzene	*84.4*		*ug/L*		*106*	*50-140*			
Surrogate: Dibromofluoromethane	*91.0*		*ug/L*		*114*	*50-140*			
Surrogate: Toluene-d8	*84.7*		*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:

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

Other Report Notes:

n/a: not applicable
ND: Not Detected
MDL: Method Detection Limit
Source Result: Data used as source for matrix and duplicate samples
%REC: Percent recovery.
RPD: Relative percent difference.
NC: Not Calculated

CCME PHC additional information:

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

PARACEL LABORATORIES LTD.

Paracel ID: 2308297

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only) № 141206

Client Name: LRL Associates	Project Ref: 220200	Page 1 of 1
Contact Name: Abdul Trader	Quote #:	Turnaround Time
Address: 5430 Canotek Rd Ottawa, ON	PO #:	☐ 1 day ☐ 3 day ☐ 2 day ☒ Regular
Telephone: 613 315 6602	E-mail: atrader@lrl.ca	Date Required:

☐ REG 153/04 ☐ REG 406/19

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

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

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

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken: Date	Sample Taken: Time	Required Analysis: PHCs F1-F4+BTEX	VOCs	PAHs	Metals Reg 153	Hg	CrVI	B (HWS)	PCB	Inorganics	Mercury (SCrul)
1	MW3	GW		10	2023.02.23	12:50	X	X	X	X				X	X	X
2	MW5	↓		↓		11:25	↓	↓	↓	↓				↓	↓	↓
3	LRL MW22-21					2:50										
4	MW40					1:0										
5	Trip blank	O		1	Jan 19			X								
6																
7																
8																
9																
10																

Comments:

Method of Delivery: Walk in

Relinquished By (Sign):	Received By Driver/Depot:	Received at Lab: D. PROOM	Verified By:
Relinquished By (Print): Abdul Trader	Date/Time:	Date/Time: FEB 23,23 3:55	Date/Time: Feb 23/23 16:25
Date/Time: 2023.02.23 / 3:55pm	Temperature: °C	Temperature: 9.0 °C	pH Verified: ☑ By:

PARACEL LABORATORIES LTD.

TRUSTED.
RESPONSIVE.
RELIABLE.

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

Certificate of Analysis

LRL Associates Ltd.

5430 Canotek Road
Ottawa, ON K1J 9G2
Attn: Devin Clouthier

Client PO:
Project: 220200
Custody: 138754

Report Date: 3-Mar-2023
Order Date: 27-Feb-2023

Order #: 2309031

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

Paracel ID	Client ID
2309031-01	MW22-14
2309031-02	MW22-20
2309031-03	Trip Blank

Approved By:

Mark Foto

Mark Foto, M.Sc.
Lab Supervisor

Certificate of Analysis

Report Date: 03-Mar-2023

Client: LRL Associates Ltd.

Order Date: 27-Feb-2023

Client PO:

Project Description: 220200

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Anions	EPA 300.1 - IC	27-Feb-23	27-Feb-23
Chromium, hexavalent - water	MOE E3056 - colourimetric	27-Feb-23	27-Feb-23
Cyanide, free	MOE E3015 - Auto Colour	2-Mar-23	2-Mar-23
Mercury by CVAA	EPA 245.2 - Cold Vapour AA	27-Feb-23	27-Feb-23
Metals, ICP-MS	EPA 200.8 - ICP-MS	27-Feb-23	27-Feb-23
PCBs, total	EPA 608 - GC-ECD	28-Feb-23	28-Feb-23
pH	EPA 150.1 - pH probe @25 °C	1-Mar-23	1-Mar-23
PHC F1	CWS Tier 1 - P&T GC-FID	28-Feb-23	28-Feb-23
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	2-Mar-23	2-Mar-23
REG 153: PAHs by GC-MS	EPA 625 - GC-MS, extraction	1-Mar-23	1-Mar-23
REG 153: VOCs by P&T GC/MS	EPA 624 - P&T GC-MS	28-Feb-23	28-Feb-23

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 03-Mar-2023

Order Date: 27-Feb-2023

Project Description: 220200

	Client ID:	MW22-14	MW22-20	Trip Blank	-
	Sample Date:	27-Feb-23 09:00	27-Feb-23 09:00	19-Jan-23 09:00	-
	Sample ID:	2309031-01	2309031-02	2309031-03	-
	MDL/Units	Ground Water	Ground Water	Water	-
General Inorganics					
Cyanide, free	2 ug/L	<2	3	-	-
pH	0.1 pH Units	7.7	6.9	-	-
Anions					
Chloride	1 mg/L	3980	23500	-	-
Metals					
Mercury	0.1 ug/L	<0.1	<0.1	-	-
Antimony	0.5 ug/L	<0.5	<0.5	-	-
Arsenic	1 ug/L	<1	<1	-	-
Barium	1 ug/L	272	95	-	-
Beryllium	0.5 ug/L	<0.5	<0.5	-	-
Boron	10 ug/L	135	51	-	-
Cadmium	0.1 ug/L	<0.1	0.2	-	-
Chromium	1 ug/L	<1	<1	-	-
Chromium (VI)	10 ug/L	<10	<10	-	-
Cobalt	0.5 ug/L	0.7	3.0	-	-
Copper	0.5 ug/L	1.1	3.7	-	-
Lead	0.1 ug/L	<0.1	0.2	-	-
Molybdenum	0.5 ug/L	7.3	3.8	-	-
Nickel	1 ug/L	6	13	-	-
Selenium	1 ug/L	<1	<1	-	-
Silver	0.1 ug/L	<0.1	0.4	-	-
Sodium	200 ug/L	1480000	9090000	-	-
Thallium	0.1 ug/L	<0.1	<0.1	-	-
Uranium	0.1 ug/L	0.7	0.4	-	-
Vanadium	0.5 ug/L	<0.5	<0.5	-	-
Zinc	5 ug/L	<5	58	-	-
Volatiles					
Acetone	5.0 ug/L	<5.0	24.6	<5.0	-
Benzene	0.5 ug/L	<0.5	<0.5	<0.5	-
Bromodichloromethane	0.5 ug/L	<0.5	<0.5	<0.5	-
Bromoform	0.5 ug/L	<0.5	<0.5	<0.5	-
Bromomethane	0.5 ug/L	<0.5	<0.5	<0.5	-
Carbon Tetrachloride	0.2 ug/L	<0.2	<0.2	<0.2	-
Chlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	-
Chloroform	0.5 ug/L	<0.5	<0.5	<0.5	-

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 03-Mar-2023

Order Date: 27-Feb-2023

Project Description: 220200

	Client ID:	MW22-14	MW22-20	Trip Blank	-
	Sample Date:	27-Feb-23 09:00	27-Feb-23 09:00	19-Jan-23 09:00	-
	Sample ID:	2309031-01	2309031-02	2309031-03	-
	MDL/Units	Ground Water	Ground Water	Water	-
Dibromochloromethane	0.5 ug/L	<0.5	<0.5	<0.5	-
Dichlorodifluoromethane	1.0 ug/L	<1.0	<1.0	<1.0	-
1,2-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	-
1,3-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	-
1,4-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	-
1,1-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	-
1,2-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	-
1,1-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	-
cis-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	-
trans-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	-
1,2-Dichloropropane	0.5 ug/L	<0.5	<0.5	<0.5	-
cis-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	<0.5	-
trans-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	<0.5	-
1,3-Dichloropropene, total	0.5 ug/L	<0.5	<0.5	<0.5	-
Ethylbenzene	0.5 ug/L	<0.5	<0.5	<0.5	-
Ethylene dibromide (dibromoethane, 1,2-)	0.2 ug/L	<0.2	<0.2	<0.2	-
Hexane	1.0 ug/L	<1.0	<1.0	<1.0	-
Methyl Ethyl Ketone (2-Butanone)	5.0 ug/L	<5.0	<5.0	<5.0	-
Methyl Isobutyl Ketone	5.0 ug/L	<5.0	<5.0	<5.0	-
Methyl tert-butyl ether	2.0 ug/L	<2.0	<2.0	<2.0	-
Methylene Chloride	5.0 ug/L	<5.0	<5.0	<5.0	-
Styrene	0.5 ug/L	<0.5	<0.5	<0.5	-
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	-
1,1,2,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	-
Tetrachloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	-
Toluene	0.5 ug/L	<0.5	<0.5	<0.5	-
1,1,1-Trichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	-
1,1,2-Trichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	-
Trichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	-
Trichlorofluoromethane	1.0 ug/L	<1.0	<1.0	<1.0	-
Vinyl chloride	0.5 ug/L	<0.5	<0.5	<0.5	-
m,p-Xylenes	0.5 ug/L	<0.5	<0.5	<0.5	-
o-Xylene	0.5 ug/L	<0.5	<0.5	<0.5	-
Xylenes, total	0.5 ug/L	<0.5	<0.5	<0.5	-
4-Bromofluorobenzene	Surrogate	106%	100%	107%	-
Dibromofluoromethane	Surrogate	91.9%	80.4%	90.0%	-

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 03-Mar-2023

Order Date: 27-Feb-2023

Project Description: 220200

	Client ID:	MW22-14	MW22-20	Trip Blank	-
	Sample Date:	27-Feb-23 09:00	27-Feb-23 09:00	19-Jan-23 09:00	-
	Sample ID:	2309031-01	2309031-02	2309031-03	-
	MDL/Units	Ground Water	Ground Water	Water	-
Toluene-d8	Surrogate	109%	107%	108%	-
Hydrocarbons					
F1 PHCs (C6-C10)	25 ug/L	<25	<25	-	-
F2 PHCs (C10-C16)	100 ug/L	<100	<100	-	-
F3 PHCs (C16-C34)	100 ug/L	<100	480	-	-
F4 PHCs (C34-C50)	100 ug/L	<100	200	-	-
Semi-Volatiles					
Acenaphthene	0.05 ug/L	<0.05	<0.05	-	-
Acenaphthylene	0.05 ug/L	<0.05	<0.05	-	-
Anthracene	0.01 ug/L	<0.01	<0.01	-	-
Benzo [a] anthracene	0.01 ug/L	<0.01	<0.01	-	-
Benzo [a] pyrene	0.01 ug/L	<0.01	<0.01	-	-
Benzo [b] fluoranthene	0.05 ug/L	<0.05	<0.05	-	-
Benzo [g,h,i] perylene	0.05 ug/L	<0.05	<0.05	-	-
Benzo [k] fluoranthene	0.05 ug/L	<0.05	<0.05	-	-
Chrysene	0.05 ug/L	<0.05	<0.05	-	-
Dibenzo [a,h] anthracene	0.05 ug/L	<0.05	<0.05	-	-
Fluoranthene	0.01 ug/L	<0.01	0.04	-	-
Fluorene	0.05 ug/L	<0.05	<0.05	-	-
Indeno [1,2,3-cd] pyrene	0.05 ug/L	<0.05	<0.05	-	-
1-Methylnaphthalene	0.05 ug/L	<0.05	<0.05	-	-
2-Methylnaphthalene	0.05 ug/L	<0.05	<0.05	-	-
Methylnaphthalene (1&2)	0.10 ug/L	<0.10	<0.10	-	-
Naphthalene	0.05 ug/L	<0.05	<0.05	-	-
Phenanthrene	0.05 ug/L	<0.05	<0.05	-	-
Pyrene	0.01 ug/L	<0.01	0.05	-	-
2-Fluorobiphenyl	Surrogate	101%	94.4%	-	-
Terphenyl-d14	Surrogate	120%	109%	-	-
PCBs					
PCBs, total	0.05 ug/L	<0.05	<0.05	-	-
Decachlorobiphenyl	Surrogate	107%	93.8%	-	-

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Chloride	ND	1	mg/L						
General Inorganics									
Cyanide, free	ND	2	ug/L						
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									
Mercury	ND	0.1	ug/L						
Arsenic	ND	1	ug/L						
Barium	ND	1	ug/L						
Beryllium	ND	0.5	ug/L						
Boron	ND	10	ug/L						
Cadmium	ND	0.1	ug/L						
Chromium (VI)	ND	10	ug/L						
Chromium	ND	1	ug/L						
Cobalt	ND	0.5	ug/L						
Copper	ND	0.5	ug/L						
Lead	ND	0.1	ug/L						
Molybdenum	ND	0.5	ug/L						
Nickel	ND	1	ug/L						
Selenium	ND	1	ug/L						
Silver	ND	0.1	ug/L						
Sodium	ND	200	ug/L						
Thallium	ND	0.1	ug/L						
Uranium	ND	0.1	ug/L						
Vanadium	ND	0.5	ug/L						
Zinc	ND	5	ug/L						
PCBs									
PCBs, total	ND	0.05	ug/L						
Surrogate: Decachlorobiphenyl	*0.619*		*ug/L*		*124*	*60-140*			
Semi-Volatiles									
Acenaphthene	ND	0.05	ug/L						
Acenaphthylene	ND	0.05	ug/L						
Anthracene	ND	0.01	ug/L						
Benzo [a] anthracene	ND	0.01	ug/L						
Benzo [a] pyrene	ND	0.01	ug/L						
Benzo [b] fluoranthene	ND	0.05	ug/L						
Benzo [g,h,i] perylene	ND	0.05	ug/L						
Benzo [k] fluoranthene	ND	0.05	ug/L						
Chrysene	ND	0.05	ug/L						
Dibenzo [a,h] anthracene	ND	0.05	ug/L						
Fluoranthene	ND	0.01	ug/L						
Fluorene	ND	0.05	ug/L						
Indeno [1,2,3-cd] pyrene	ND	0.05	ug/L						
1-Methylnaphthalene	ND	0.05	ug/L						
2-Methylnaphthalene	ND	0.05	ug/L						
Methylnaphthalene (1&2)	ND	0.10	ug/L						
Naphthalene	ND	0.05	ug/L						
Phenanthrene	ND	0.05	ug/L						
Pyrene	ND	0.01	ug/L						
Surrogate: 2-Fluorobiphenyl	*17.5*		*ug/L*		*87.6*	*50-140*			
Surrogate: Terphenyl-d14	*23.8*		*ug/L*		*119*	*50-140*			
Volatiles									
Acetone	ND	5.0	ug/L						

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
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						
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	*85.8*		*ug/L*		*107*	*50-140*			
Surrogate: Dibromofluoromethane	*69.3*		*ug/L*		*86.7*	*50-140*			
Surrogate: Toluene-d8	*88.4*		*ug/L*		*111*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Chloride	170	1	mg/L	170			0.1	20	
General Inorganics									
Cyanide, free	2.8	2	ug/L	2.8			0.5	20	
pH	7.8	0.1	pH Units	7.7			0.5	3.3	
Hydrocarbons									
F1 PHCs (C6-C10)	ND	25	ug/L	ND			NC	30	
Metals									
Mercury	ND	0.1	ug/L	ND			NC	20	
Antimony	ND	0.5	ug/L	ND			NC	20	
Arsenic	ND	1	ug/L	ND			NC	20	
Barium	108	1	ug/L	109			0.7	20	
Beryllium	ND	0.5	ug/L	ND			NC	20	
Boron	442	10	ug/L	447			1.0	20	
Cadmium	ND	0.1	ug/L	ND			NC	20	
Chromium (VI)	ND	10	ug/L	ND			NC	20	
Chromium	ND	1	ug/L	ND			NC	20	
Cobalt	ND	0.5	ug/L	ND			NC	20	
Copper	ND	0.5	ug/L	ND			NC	20	
Lead	ND	0.1	ug/L	ND			NC	20	
Molybdenum	2.08	0.5	ug/L	2.07			0.5	20	
Nickel	ND	1	ug/L	ND			NC	20	
Selenium	ND	1	ug/L	ND			NC	20	
Silver	ND	0.1	ug/L	ND			NC	20	
Sodium	58100	200	ug/L	56500			2.8	20	
Thallium	ND	0.1	ug/L	ND			NC	20	
Uranium	ND	0.1	ug/L	ND			NC	20	
Vanadium	ND	0.5	ug/L	ND			NC	20	
Zinc	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	
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	

Certificate of Analysis

Client: LRL Associates Ltd.

Client PO:

Report Date: 03-Mar-2023

Order Date: 27-Feb-2023

Project Description: 220200

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
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	3.48	0.5	ug/L	3.39			2.6	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	
o-Xylene	ND	0.5	ug/L	ND			NC	30	
Surrogate: 4-Bromofluorobenzene	*85.2*		*ug/L*		*107*	*50-140*			
Surrogate: Dibromofluoromethane	*72.4*		*ug/L*		*90.4*	*50-140*			
Surrogate: Toluene-d8	*87.3*		*ug/L*		*109*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Chloride	180	1	mg/L	170	102	70-124			
General Inorganics									
Cyanide, free	43.2	2	ug/L	2.8	80.8	61-139			
Hydrocarbons									
F1 PHCs (C6-C10)	1820	25	ug/L	ND	90.9	68-117			
F2 PHCs (C10-C16)	1600	100	ug/L	ND	100	60-140			
F3 PHCs (C16-C34)	4160	100	ug/L	ND	106	60-140			
F4 PHCs (C34-C50)	2000	100	ug/L	ND	80.8	60-140			
Metals									
Mercury	2.56	0.1	ug/L	ND	85.4	70-130			
Arsenic	49.0	1	ug/L	ND	97.9	80-120			
Barium	42.9	1	ug/L	ND	85.8	80-120			
Beryllium	40.5	0.5	ug/L	ND	81.0	80-120			
Cadmium	43.0	0.1	ug/L	ND	86.1	80-120			
Chromium (VI)	192	10	ug/L	ND	96.0	70-130			
Chromium	50.7	1	ug/L	ND	101	80-120			
Cobalt	44.6	0.5	ug/L	ND	89.1	80-120			
Copper	44.3	0.5	ug/L	ND	88.7	80-120			
Lead	40.1	0.1	ug/L	ND	80.1	80-120			
Molybdenum	44.6	0.5	ug/L	2.07	85.1	80-120			
Nickel	43.6	1	ug/L	ND	87.0	80-120			
Selenium	42.9	1	ug/L	ND	85.2	80-120			
Silver	42.2	0.1	ug/L	ND	84.5	80-120			
Sodium	9100	200	ug/L	ND	91.0	80-120			
Thallium	40.3	0.1	ug/L	ND	80.5	80-120			
Uranium	41.9	0.1	ug/L	ND	83.8	80-120			
Vanadium	52.3	0.5	ug/L	ND	105	80-120			
PCBs									
PCBs, total	1.19	0.05	ug/L	ND	119	65-135			
Surrogate: Decachlorobiphenyl	*0.508*		*ug/L*		*102*	*60-140*			
Semi-Volatiles									
Acenaphthene	4.40	0.05	ug/L	ND	88.0	50-140			
Acenaphthylene	3.85	0.05	ug/L	ND	77.0	50-140			
Anthracene	3.97	0.01	ug/L	ND	79.4	50-140			
Benzo [a] anthracene	3.87	0.01	ug/L	ND	77.4	50-140			
Benzo [a] pyrene	4.77	0.01	ug/L	ND	95.4	50-140			
Benzo [b] fluoranthene	5.26	0.05	ug/L	ND	105	50-140			
Benzo [g,h,i] perylene	4.49	0.05	ug/L	ND	89.9	50-140			
Benzo [k] fluoranthene	5.53	0.05	ug/L	ND	111	50-140			
Chrysene	4.62	0.05	ug/L	ND	92.4	50-140			
Dibenzo [a,h] anthracene	4.62	0.05	ug/L	ND	92.5	50-140			
Fluoranthene	3.96	0.01	ug/L	ND	79.2	50-140			
Fluorene	4.31	0.05	ug/L	ND	86.2	50-140			
Indeno [1,2,3-cd] pyrene	4.91	0.05	ug/L	ND	98.2	50-140			
1-Methylnaphthalene	5.25	0.05	ug/L	ND	105	50-140			
2-Methylnaphthalene	5.71	0.05	ug/L	ND	114	50-140			
Naphthalene	5.07	0.05	ug/L	ND	101	50-140			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Phenanthrene	4.12	0.05	ug/L	ND	82.5	50-140			
Pyrene	4.10	0.01	ug/L	ND	82.1	50-140			
Surrogate: 2-Fluorobiphenyl	*22.9*		*ug/L*		*114*	*50-140*			
Surrogate: Terphenyl-d14	*24.3*		*ug/L*		*122*	*50-140*			
Volatiles									
Acetone	102	5.0	ug/L	ND	102	50-140			
Benzene	45.7	0.5	ug/L	ND	114	60-130			
Bromodichloromethane	41.0	0.5	ug/L	ND	103	60-130			
Bromoform	33.4	0.5	ug/L	ND	83.6	60-130			
Bromomethane	43.2	0.5	ug/L	ND	108	50-140			
Carbon Tetrachloride	35.4	0.2	ug/L	ND	88.4	60-130			
Chlorobenzene	41.2	0.5	ug/L	ND	103	60-130			
Chloroform	40.9	0.5	ug/L	ND	102	60-130			
Dibromochloromethane	32.9	0.5	ug/L	ND	82.3	60-130			
Dichlorodifluoromethane	45.7	1.0	ug/L	ND	114	50-140			
1,2-Dichlorobenzene	37.2	0.5	ug/L	ND	93.0	60-130			
1,3-Dichlorobenzene	36.0	0.5	ug/L	ND	90.1	60-130			
1,4-Dichlorobenzene	34.7	0.5	ug/L	ND	86.8	60-130			
1,1-Dichloroethane	33.9	0.5	ug/L	ND	84.7	60-130			
1,2-Dichloroethane	46.1	0.5	ug/L	ND	115	60-130			
1,1-Dichloroethylene	40.4	0.5	ug/L	ND	101	60-130			
cis-1,2-Dichloroethylene	46.4	0.5	ug/L	ND	116	60-130			
trans-1,2-Dichloroethylene	39.4	0.5	ug/L	ND	98.5	60-130			
1,2-Dichloropropane	45.9	0.5	ug/L	ND	115	60-130			
cis-1,3-Dichloropropylene	35.7	0.5	ug/L	ND	89.3	60-130			
trans-1,3-Dichloropropylene	30.6	0.5	ug/L	ND	76.4	60-130			
Ethylbenzene	44.1	0.5	ug/L	ND	110	60-130			
Ethylene dibromide (dibromoethane, 1,2-	36.2	0.2	ug/L	ND	90.4	60-130			
Hexane	46.7	1.0	ug/L	ND	117	60-130			
Methyl Ethyl Ketone (2-Butanone)	108	5.0	ug/L	ND	108	50-140			
Methyl Isobutyl Ketone	123	5.0	ug/L	ND	123	50-140			
Methyl tert-butyl ether	74.4	2.0	ug/L	ND	74.4	50-140			
Methylene Chloride	41.9	5.0	ug/L	ND	105	60-130			
Styrene	34.4	0.5	ug/L	ND	85.9	60-130			
1,1,1,2-Tetrachloroethane	33.9	0.5	ug/L	ND	84.8	60-130			
1,1,2,2-Tetrachloroethane	35.0	0.5	ug/L	ND	87.5	60-130			
Tetrachloroethylene	37.2	0.5	ug/L	ND	93.1	60-130			
Toluene	44.0	0.5	ug/L	ND	110	60-130			
1,1,1-Trichloroethane	41.4	0.5	ug/L	ND	104	60-130			
1,1,2-Trichloroethane	39.7	0.5	ug/L	ND	99.3	60-130			
Trichloroethylene	37.6	0.5	ug/L	ND	94.0	60-130			
Trichlorofluoromethane	42.5	1.0	ug/L	ND	106	60-130			
Vinyl chloride	40.5	0.5	ug/L	ND	101	50-140			
m,p-Xylenes	82.8	0.5	ug/L	ND	104	60-130			
o-Xylene	42.5	0.5	ug/L	ND	106	60-130			
Surrogate: 4-Bromofluorobenzene	*83.4*		*ug/L*		*104*	*50-140*			
Surrogate: Dibromofluoromethane	*83.7*		*ug/L*		*105*	*50-140*			
Surrogate: Toluene-d8	*85.4*		*ug/L*		*107*	*50-140*			

Qualifier Notes:

Sample Data Revisions

None

Work Order Revisions / Comments:

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

Other Report Notes:

n/a: not applicable
ND: Not Detected
MDL: Method Detection Limit
Source Result: Data used as source for matrix and duplicate samples
%REC: Percent recovery.
RPD: Relative percent difference.
NC: Not Calculated

CCME PHC additional information:

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

PARACEL LABORATORIES LTD

Paracel ID: 2309031

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2309031	№ 138754

Client Name: LEC Engineering	Project Ref: 220200	Page 1 of 1
Contact Name: Devin Clouthier	Quote #:	Turnaround Time
Address: 5430 Canotek Road, Ottawa, ON K1J 9G1	PO #:	☐ 1 day ☐ 3 day ☐ 2 day ☒ Regular
Telephone: 613-841-3434	E-mail: dclouthier@lrl.ca jarthurs@lrl.ca	Date Required:

☒ REG 153/04 ☐ REG 406/19

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

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

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

	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)	PCB	Inorganics			
1	MW22-14	GW		10	Feb27/23	AM	X	X	X	X	X	X		X	X			
2	MW22-20	GW		10	Feb27/23	AM	X	X	X	X	X	X		X	X			
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Comments: 1

Method of Delivery: Walk-In

Relinquished By (Sign):	Received By Driver/Depot:	Received at Lab:	Verified By: Sandra Demczas
Relinquished By (Print): Devin Clouthier	Date/Time:	Date/Time: 2023/02/27 10:34am	Date/Time: Feb 27 10:50
Date/Time: Feb 27/23	Temperature: °C	Temperature: 12.8 °C	pH Verified: ☑ By: Sandra Demczas