Phase Two Environmental Site Assessment

2165 Robertson Road
Ottawa, Ontario

Prepared for:

Huntington Construction & Development
1306 Wellington Street West, Suite 200
Ottawa, ON K1Y 3B2

February 19, 2021

Pinchin File: 229900.001

Issued To:	**Huntington Construction & Development**
Issued On:	**February 19, 2021**
Pinchin File:	**229900.001**
Issuing Office:	**Kanata, ON**

Author: Michael Kosiw, B.Sc. Hons., EP, CESA$_{II}$
Project Manager
613.219.4973
mkosiw@pinchin.com

Reviewer: Matthew Ryan, B.A., CET., EP
Operations Manager
613.614.7221
mryan@pinchin.com

Reviewer: Scott Mather, P.Eng., QP$_{ESA}$
Director, Eastern Ontario
613.851.4098
smather@pinchin.com

TABLE OF CONTENTS

APPENDICES

FIGURES

TABLES

1.0 EXECUTIVE SUMMARY

Pinchin Ltd. (Pinchin) was retained by Huntington Construction & Development (Client), to complete a Phase Two Environmental Site Assessment (Phase Two ESA) of the property located at 2165 Robertson Road in Ottawa, Ontario (hereafter referred to as the Site or Phase Two Property). The Phase Two Property is approximately 2.8 acres in size and consists of vacant undeveloped land used as a gravel parking lot.

The Phase Two ESA was conducted at the request of the Client in support of the Client's application for Site Plan Approval (SPA) with the City of Ottawa for the above-noted property (Site). The Client intends to develop the Site with a single-storey commercial building on the south portion of the Site, and a single-storey commercial building on the north potion of the Site.

This Phase Two ESA was conducted in accordance with the Province of Ontario's *Ontario Regulation 153/04: Records of Site Condition – Part XV.1 of the Act*, which was last amended by Ontario Regulation 274/20 on July 1, 2020 (O. Reg. 153/04) at the request of the Client in relation to the future development of the Phase Two Property. It is Pinchin's understanding that the Phase Two Property will be developed for commercial use and that the Client does not intend to file a Record of Site Condition (RSC) with the Ontario Ministry of Environment, Conservation and Parks (MECP), nor is an obtaining an RSC a regulatory requirement given that the land use at the Phase Two Property will remain commercial.

The objectives of this Phase Two ESA were to assess the soil quality in relation to three areas of potential environmental concern (APECs) and related potentially contaminating activities (PCAs) and contaminants of potential concern (COPCs) identified in a Phase One ESA completed by Pinchin in accordance with O. Reg. 153/04. The identified APECs, PCAs and COPCs are summarized in Tables 1-1 and 2-1 (all Tables are provided within Section 9.0).

The Phase Two ESA was completed by Pinchin on January 25, 2021, and included the advancement of seven boreholes at the Phase Two Property. The boreholes were advanced to depths ranging from approximately 1.2 to 2.4 metres below ground surface (mbgs). Select soil samples collected from each of the borehole locations were submitted for laboratory analysis of volatile organic compounds (VOCs), petroleum hydrocarbons (PHCs) fractions 1 through 4 (F1-F4), polycyclic aromatic hydrocarbons (PAHs), and metals.

Based on Site-specific information, the applicable regulatory standards for the Phase Two Property were determined to be the *"Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition",* provided in the MECP document entitled, *"Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act"* dated April 15, 2011 *(Table 3 Standards)* for medium and fine-textured soils and industrial/commercial/community property use.

The laboratory results for the submitted soil and groundwater samples indicated that all reported concentrations for the parameters analyzed met the corresponding *Table 3 Standards*.

It is the opinion of the Qualified Person (QP) who supervised the Phase Two ESA that the applicable *Table 3 Standards* for soil at the Phase Two Property have been met, and that no further subsurface investigation is required in relation to assessing the APECs at the Phase Two Property.

This Executive Summary is subject to the same standard limitations as contained in the report and must be read in conjunction with the entire report.

2.0 INTRODUCTION

A Phase Two ESA is defined as an "assessment of property conducted in accordance with the regulations by or under the supervision of a QP to determine the location and concentration of one or more contaminants in the land or water on, in or under the property". Under O. Reg. 153/04, the purpose of a Phase Two ESA is as follows:

- To determine the location and concentration of contaminants in the land or water on, in or under the Phase Two Property;
- To obtain information about environmental conditions in the land or water on, in or under the Phase Two Property necessary to undertake a Risk Assessment, in accordance with O. Reg. 153/04, with respect to one or more contaminants of concern; and
- To determine if applicable Site Condition Standards for contaminants on, in or under the Phase Two Property were met as of the certification date by developing an understanding of the geological conditions at the Phase Two Property and conducting one or more rounds of field sampling for all contaminants associated with any APEC identified in the Phase Two ESA sampling and analysis plan (SAP) and for any such contaminants identified during subsequent Phase Two ESA activities and analyses of environmental conditions at the Phase Two Property.

This Phase Two ESA was conducted at the request of the Client in support of the Client's application for Site Plan Approval (SPA) with the City of Ottawa for the above-noted property (Site). The Client intends to develop the Site with a single-storey commercial building on the south portion of the Site, and a single-storey commercial building on the north potion of the Site. The Phase Two ESA was conducted in accordance with O. Reg. 153/04 even though the Client does not intend to submit an RSC to MECP given that there is no regulatory requirement to file one.

The overall objectives of this Phase Two ESA were to assess the soil quality in relation to APECs related COPCs identified in a Phase One ESA completed by Pinchin, the findings of which were summarized in the report entitled "*Phase One Environmental Site Assessment*, *"2165 Robertson Road, Ottawa, Ontario*", completed by Pinchin for the Client and dated October 26, 2018. The property assessed by the Pinchin Phase One ESA is referred to herein as the Phase One Property. The Phase Two ESA was conducted on the whole Phase One Property, at specific APECs identified during the Phase One ESA, and the Phase One Property and Phase Two Property have the same boundaries.

2.1 Site Description

This Phase Two ESA was completed for the property located at the municipal address of 2165 Robertson Road, Ottawa, Ontario. The Phase Two Property is 2.8 acres (1.1 hectares) in size and is bounded to the south by Robertson Road. The adjacent property to the southeast is occupied by a commercial building and to the east by a hydro-corridor. Two commercial buildings are located adjacent to the northeast elevation of the Phase Two Property. A former railway line is located approximately 5 m north of the Phase Two Property followed by agricultural land. A commercial building occupied by a call centre is located adjacent to the west elevation of the Phase Two Property. A Key Map showing the Phase Two Property location is provided on Figure 1 and a detailed plan of the Phase Two Property and surrounding lands is provided on Figure 2 (all Figures are provided within Section 9.0).

A summary of the pertinent details of the Phase Two Property is provided in the following table:

Detail	Source / Reference	Information
Legal Description	http://maps.ottawa.ca/geoottawa/	Concession 2 of Part Lot 9 RP 4R23046; Parts 1, 7, 8 and 9 Geographical Township of Nepean, Ottawa
Municipal Address	http://maps.ottawa.ca/geoottawa/ City of Ottawa, Client	2165 Robertson Road Ottawa, ON K2H 5Z2
Parcel Identification Number (PIN)	http://maps.ottawa.ca/geoottawa/ City of Ottawa	047090068, 047090072 and 047090070
Current Owner	Client	Huntington Construction & Development
Current Occupant	Client	Myer's Ottawa Nissan (dealership automotive storage)
Client	Authorization to Proceed Form	Huntington Construction & Development
Client Contact Information	Authorization to Proceed Form	Ms. Lisa Westphal Huntington Construction & Development 1306 Wellington Street West, Suite 200 Ottawa, ON K1Y 3B2 lwestphal@huntingtonproperties.ca
Site Area	http://maps.ottawa.ca/geoottawa/	1.1 hectares (2.8 acres).
Current Zoning	http://maps.ottawa.ca/geoottawa/ City of Ottawa	AM - Arterial Mainstreet Zone Mixed Use Commercial

A legal survey showing the Phase Two Property is provided in Appendix A (all Appendices are provided in Section 10.0).

2.2 Property Ownership

The entirety of the Phase Two Property is currently owned by Huntington Construction & Development, located at 1306 Wellington Street West, Suite 200, Ottawa, ON K1Y 3B2. Contact information for the Phase Two Property owner is provided in the preceding section.

Pinchin was retained by Ms. Lisa Westphal to conduct the Phase Two ESA of the Phase Two Property. Contact information for Ms. Westphal is provided in the preceding section.

2.3 Current and Proposed Future Uses

The Phase Two Property is presently utilized for commercial land use (i.e., gravel parking). The proposed future use of the Site is two commercial buildings. The proposed change of land use does not require that an RSC be filed as per Section 168.3.1 of the Province of Ontario's *Environmental Protection Act*.

2.4 Applicable Site Condition Standards

The Phase Two Property is currently a commercial property located within the City of Ottawa and the proposed future land use is to remain commercial. It is Pinchin's understanding that drinking water for the Phase Two Property and surrounding properties within 250 metres of the Phase Two Property is supplied by the City of Ottawa, and there are no known drinking water supply wells within 250 metres of the Phase Two Property. Source water is obtained by the City of Ottawa from the Ottawa River.

Bedrock was not encountered at any of the boreholes completed at the Phase Two Property during the Phase Two ESA, which were advanced to a maximum depth of approximately 2.4 mbgs and, as such, the Phase Two Property is not a shallow soil property as defined in Section 43.1 of O. Reg. 153/04.

The Phase Two Property does not contain a water body nor is it located within 30 metres of a water body and the use of standards for properties situated within 30 metres of a water body is not required.

Section 41 of O. Reg. 153/04 states that a property is classified as an "environmentally sensitive area" if the pH of the surface soil (less than or equal to 1.5 mbgs) is less than 5 or greater than 9, if the pH of the subsurface soil (greater than 1.5 mbgs) is less than 5 or greater than 11, or if the property is an area of natural significance or is adjacent to or contains land within 30 metres of an area of natural significance. A total of two representative soil samples collected from the boreholes advanced at the Phase Two Property were submitted for pH analysis. The pH analytical results are summarized in Table 2. The pH values measured in the submitted soil samples were within the limits for non-sensitive sites. The Phase Two Property is also not an area of natural significance and it is not adjacent to, nor does it contain land within 30 metres of, an area of natural significance. As such, the Phase Two Property is not an environmentally sensitive area.

As discussed further in Section 6.4, based on the results of grain size analysis completed on representative soil samples collected during the Phase Two ESA and the observed stratigraphy at the borehole locations at the Phase Two Property, it is the QP's opinion that over two-thirds of the overburden at the Phase Two Property is medium and fine-textured as defined by O. Reg. 153/04. Therefore, the soil at the Phase Two Property has been considered medium and fine-textured for the purpose of establishing the applicable MECP Site Condition Standards.

Based on the above, the appropriate Site Condition Standards for the Phase Two Property are the Table 3 Standards for:

- Medium and fine-textured soils; and
- Industrial/commercial/community property use.

3.0 BACKGROUND INFORMATION

3.1 Physical Setting

The Phase Two Property is located in the west portion of the City of Ottawa at an elevation of approximately 94 metres above mean sea level (mamsl). The topography of the Phase Two Property is generally flat with little relief. The properties surrounding the Phase Two Property are at an equivalent grade. There are no drainage features (e.g., open ditches or swales) present on-Site. Surface water (e.g., storm runoff) is inferred to run overland and drain into the on-Site municipal storm sewer catch basins.

There are no open water bodies or areas of natural significance located on-Site or within the area assessed by the Pinchin Phase One ESA (the Phase One Study Area). A plan showing the Phase One Study Area is presented on Figure 3. The nearest surface water body to the Phase Two Property is the Stillwater Creek located approximately 130 m northwest of the Site and the Ottawa River is located approximately 3.5 kilometres north of the Phase Two Property at an elevation of approximately 63 mamsl.

A review of the municipal plan for the City of Ottawa indicated that the Phase One Study Area is not located in whole or in part within a well head protection area or other designation identified by the City of Ottawa for the protection of groundwater.

The records review indicated that the Phase One Property and all other properties within the Phase One Study Area are not serviced by a municipal drinking water system.

3.2 Past Investigations

3.2.1 Summary of Previous Environmental Investigations by Others

Reports summarizing the following environmental investigations completed by others and by Pinchin and pertaining to the Phase Two Property were reviewed as part of the Pinchin Phase One ESA:

- Report entitled "*Phase I Environmental Site Assessment, 145 Robertson Road, Ottawa, Ontario*", prepared for the Dymon Capital Corporation, by T. Harris Environmental Management Inc. (T. Harris), and dated March 2007 (2007 T. Harris Phase I ESA Report);
- Report entitled "*Phase I Environmental Site Assessment, 145 Robertson Road, Ottawa, Ontario*", prepared for Erez Capital Fund Inc. by Pinchin, and dated July 2008 (2008 Pinchin Phase I ESA Report);
- Report entitled "*Phase II Environmental Site Assessment, 145 Robertson Road, Ottawa, Ontario*", prepared for Erez Capital Fund Inc. by Pinchin, and dated November 5, 2008 (2008 Pinchin Phase II ESA Report); and
- Report entitled "*Phase I Environmental Site Assessment, 145 Robertson Road, Ottawa, Ontario",* prepared for the Client by Pinchin, and dated July 2012 (2012 Pinchin Phase I ESA Report).

A summary of the salient information identified in the above-referenced reports prepared by others is provided below:

2007 T. Harris Phase I ESA Report

The 2007 T. Harris Phase I ESA Report completed in general accordance with the CSA document entitled "*Phase I Environmental Site Assessment*" (CSA Document Z768-01), dated November 2001 (reaffirmed 2016), including a review of readily available historical records and reasonably ascertainable regulatory information, a property reconnaissance, interviews, an evaluation of information and reporting. Based on Pinchin's review of the 2007 T. Harris Phase I ESA Report, the following salient information was noted:

- The Phase I ESA was completed for the property located adjacent to the west elevation of the Phase One Property;
- At the time of the Site reconnaissance, the property was used as a commercial office building occupied by Sitel, whose operations consisted of a call centre;
- The property was originally developed with the existing building on the property in the 1950's;

- The property was occupied by Beaver Lumber from 1991 until 1994 when the property was unoccupied until 1999. Subsequent tenants included Companions of the Cross in the early 2000's until Sitel in 2008;
- The present-day building on the property was converted into the existing commercial use in 2000; and
- The surrounding areas were historically developed with railway lines, vacant land and commercial land uses, including a hydro corridor, Canadian Tire, Hyundai West, Speedy Muffler Shop, Hooters Restaurant, Day's Inn, Living Lighting, Viceroy Model Homes, Tony Graham Nissan, Collision Centre, Tool & Equipment Store, Ottawa Fastener Supply, Chevrolet West, and VW Citiwest.

T. Harris did not identify anything that could result in subsurface impacts at the subject property or the Phase One Property and did not recommend additional environmental investigation.

2008 Pinchin Phase I ESA Report

The 2008 Pinchin Phase I ESA Report completed in general accordance with the CSA document entitled "*Phase I Environmental Site Assessment*" (CSA Document Z768-01), dated November 2001 (reaffirmed 2016), including a review of readily available historical records and reasonably ascertainable regulatory information, a property reconnaissance, interviews, an evaluation of information and reporting. Based on a review of the 2008 Pinchin Phase I ESA Report, the following salient information was noted:

- The Phase I ESA was completed for the property located adjacent to the west elevation of the Phase One Property;
- At the time of the Site reconnaissance, the property was used as a commercial office building occupied by Resolve (formerly Sitel), whose operations consisted of a call-centre;
- The property was originally developed with the existing building on the property in the 1950's;
- The property was occupied by Beaver Lumber from the late 1980's until 1994 when the property was unoccupied until 1999. Subsequent tenants included Companions of the Cross in the early 2000's followed by Sitel until 2008. Based on a review of a property underwriters plan (PUP), a private fuel outlet (PFO) equipped with one 6,810 litre (L) diesel underground storage tank (UST) and two 2,270 L gasoline USTs were formerly located on the property. In addition, a review of the TSSA request for information indicated that on April 11, 1989, a leaking 5,000-gallon gasoline UST was encountered at this property. Documents provided by the TSSA indicated that the abandoned gasoline

UST and approximately 3,800 tonnes of contaminated soil were removed from the property; however, no information regarding the dates of this remediation and verification soil sampling data was provided to Pinchin and no groundwater sampling was completed;

- The present-day building on the property was converted into the existing commercial use in 2000; and
- The surrounding areas were historically developed with vacant land and commercial land uses, including Viceroy Homes, Living Lighting, Active Green and Ross, Hyundai, Brady's Pool and Spa, a hydro corridor multi-tenant office buildings, Collision Centre, Ottawa Building Supplies, and additional commercial buildings.

Pinchin indicated that the historical operation of a PFO with USTs, as well as the previously identified impacted soil at this property, could have resulted in subsurface impacts at the property and recommended a Phase II ESA.

2008 Pinchin Phase II ESA Report

The Pinchin Phase II ESA was completed to investigate the soil and groundwater conditions at the former PFO with USTs located on the property located adjacent to the west elevation of the Phase One Property identified in the 2008 Pinchin Phase I ESA Report.

Pinchin drilled four boreholes to a maximum depth of 4.9 m below ground surface (mbgs), with two of the boreholes completed as groundwater monitoring wells. Soil stratigraphy at the borehole locations generally consisted of sandy gravel fill underlain by silty sandy clay. Saturated soil conditions ranged from approximately 3.1 mbgs to 4.0 mbgs.

Criteria used for the evaluation of soil and groundwater laboratory analysis results were the standards outlined by the MECP in the document "*Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*", and dated March 9, 2004 for commercial property use in a non-potable groundwater condition and coarse-textured soil (*2004 Table 3 Standards*).

Four soil samples were submitted for laboratory analysis of petroleum hydrocarbons (PHCs) in fraction F1 to F4 (F1-F4), benzene, toluene, ethylbenzene and xylenes (BTEX) and/or metals and met the *2004 Table 3 Standards*.

Two groundwater samples were submitted for laboratory analysis of PHCs (F1-F4), BTEX and metals and met the *2004 Table 3 Standards.*

Pinchin did not recommend additional environmental investigation at the Site.

Pinchin reviewed the analytical data presented in the 2008 Pinchin II ESA Report, and compared the data to the *Table 3 Standards*. The reported concentrations for parameters in soil and groundwater were below the *Table 3 Standards*.

2012 Pinchin Phase I ESA Report

The 2012 Pinchin Phase I ESA Report completed in general accordance with the CSA document entitled "*Phase I Environmental Site Assessment*" (CSA Document Z768-01), dated November 2001 (reaffirmed 2016), including a review of readily available historical records and reasonably ascertainable regulatory information, a property reconnaissance, interviews, an evaluation of information and reporting.

Pinchin did not identify anything that could result in subsurface impacts at the subject property or the Phase One Property and did not recommend additional environmental investigation.

Previous Environmental Report Summary

Based on Pinchin's review of the above-referenced previous environmental reports, nothing was identified that is likely to result in potential subsurface impacts at the Phase One Property.

3.2.2 Pinchin Phase One ESA Summary

In October 2018, Pinchin conducted a Phase One ESA in support of a future SPA for the Phase Two Property. The Phase One ESA consisted of a Site visit, interviews with Site personnel, records review, evaluation of information, and preparation of a written report which was completed under the supervision of a QP. A plan showing the Phase One Study Area is attached as Figure 3.

The Phase One ESA was completed recently and in accordance with the requirements of O. Reg. 153/04. Therefore, the information provided within the Phase One ESA Report is considered adequate such that it can be relied upon for the purpose of this Phase Two ESA and future SPA.

Based on information obtained during the Phase One ESA, a total of three APECs and corresponding potentially contaminating activities (PCAs) and COPCs were identified that could potentially affect the environmental condition of the subsurface media on, in or under the Phase Two Property. The COPCs associated with each APEC were determined based on a review of the PCAs and substances associated with the related activities, and on several sources of information, including but not limited to, Pinchin's experience with environmental contamination and hazardous substances, common industry practices for analysis of such contaminants and point sources, literature reviews of COPCs and associated hazardous substances, and evaluations of contaminant mobility and susceptibility for migration in the subsurface.

Table 1-1 presents the APECs and their associated PCAs and COPCs. Identified on-Site and off-Site PCAs are summarized in Table 2-1 and their locations are shown on Figure 4 (on-Site PCAs) and Figure 5 (off-Site PCAs). APECs at the Phase Two Property are illustrated on Figure 6.

3.2.3 Use of Previous Analytical Data

No previous soil and groundwater data were available for use in the Phase Two ESA.

4.0 SCOPE OF INVESTIGATION

4.1 Overview of Site Investigation

The scope of work for this Phase Two ESA was prepared to address the APECs identified at the Phase Two Property and consisted of the following:

- Prepared a health and safety plan and arranged for the completion of underground utility locates prior to the commencement of drilling activities;
- Retained Strata Drilling Group Inc. (Strata) to advance boreholes using a Geoprobe 540™ drill rig. Strata is licensed by the MECP in accordance with Ontario Regulation 903 (as amended) (O. Reg. 903) to undertake borehole drilling/well installation activities. Strata advanced seven boreholes at the Phase Two Property to investigate the potential for soil contaminants associated with the APECs identified in the Phase One ESA.
- Collected soil samples at regular intervals within each borehole;
- Field screened soil samples for visual/olfactory evidence of impacts as well as for petroleum-derived vapours in soil headspace using a combustible gas indicator (CGI) calibrated to hexane and VOC-derived vapours in soil headspace using a photoionization detector (PID);
- Submitted a minimum of one “worst case” soil sample from each borehole for chemical analysis of:
  - PHCs F1-F4;
  - VOCs;
  - PAHs; and
  - Metals.
- Submitted one duplicate soil sample for chemical analysis of the above-noted parameters for quality assurance/quality control (QA/QC) purposes;
- Compared the soil analytical results to the applicable criteria stipulated in the *Table 3 Standards*; and
- Prepared a report (this report) documenting the findings of the Phase Two ESA which meets the reporting requirements listed in *Schedule E* and *Table 1 – Mandatory Requirements for Phase Two Environmental Site Assessment Reports* of O. Reg. 153/04.

4.2 Media Investigated

The scope of work for this Phase Two ESA was prepared to address the APECs and corresponding media at the Phase Two Property as identified through completion of the Phase One ESA.

The media of concern for the Phase Two ESA was soil. The assessment of groundwater quality was not included in the Phase Two ESA because the APECs were related to PCAs located at the ground surface and the results of soil samples collected and analyzed from these APECs showed no evidence of soil impacts and groundwater impacts were considered unlikely.

For assessing the soil at the Phase Two Property for the presence of COPCs, a total of seven boreholes were advanced at the Phase Two Property for the purpose of collecting soil samples. Select “worst case” samples collected from each of the boreholes, were submitted for laboratory analysis of the COPCs.

4.3 Phase One Conceptual Site Model

A conceptual site model (CSM) has been created to provide a summary of the findings of the Phase One ESA. The Phase One CSM is summarized in Figures 1 through Figure 3, which illustrate the following features within the Phase One Study Area, where present:

- Existing buildings and structures;
- Water bodies located in whole or in part within the Phase One Study Area;
- Areas of natural significance located in whole or in part within the Phase One Study Area;
- Drinking water wells located at the Phase One Property;
- Land use of adjacent properties;
- Roads within the Phase One Study Area;
- PCAs within the Phase One Study Area, including the locations of tanks; and
- APECs at the Phase One Property.

The following provides a narrative summary of the Phase One CSM:

- The Phase One Property is a quasi-rectangular-shaped parcel of land approximately 2.8 acres (1.1 hectares) in size located on the north side of Robertson Road in Ottawa, Ontario. The Phase One Property consists of vacant gravel parking areas. The Phase One Property has been used for parking purposes since the demolition of former on-Site warehouses in 2008. There is no record of industrial use or of a commercial use (e.g., garage, bulk liquid dispensing facility or dry cleaner) that would require classifying the Phase One Property as an enhanced investigation property;

- Water bodies located within the Phase One Study Area consisted of Stillwater Creek located approximately 130 m northwest of the Phase One Property;
- No areas of natural significance were identified within the Phase One Study Area;
- No drinking water wells were located on the Phase One Property;
- The Phase One Property is bounded to the south by Robertson Road. The adjacent property to the southeast is occupied by a commercial building and to the east by a hydro-corridor. Two commercial buildings are located adjacent to the northeast elevation of the Phase One Property. A former railway line is located approximately 5 m north of the Phase One Property followed by agricultural land. A commercial building occupied by a call centre is located adjacent to the west elevation of the Phase One Property. The Phase One Study Area has been developed with residential and commercial buildings since approximately 1976, based on a review of aerial photographs;
- No PCAs were identified at the Phase One Property and six PCAs were identified within the Phase One study area, outside of the Phase One Property. The off-Site PCAs are a railway line located 5 m north of the Phase One Property, an RFO located approximately 220 m east of the Phase One Property (2135 Robertson Road), an automotive dealership located approximately 30 m south of the Phase One Property (2164 Robertson Road), an automotive dealership located approximately 75 m west of the Phase One Property (2185 Robertson Road), an automotive collision centre located approximately 150 m west of the Phase One Property (2195 Robertson Road) and a hydro-corridor located adjacent to the northeast elevation of the Site. Groundwater flow within the Phase One Study Area is interpreted to be to the northwest towards Stillwater Creek. Given that these PCAs are located at down/transgradient properties that are at least 30 m from the Phase One Property, the off-Site PCAs are not considered to result in APECs at the Phase One Property. Contaminants of potential concern associated with the off-Site PCAs are not a concern to the Phase One Property because there are no APECs at the Phase One Property;
- The Phase One Property and the surrounding properties located within the Phase One Study Area are located within alluvial deposits consisting of sandy gravel fill underlain by silty sandy clay. Bedrock is expected to consist of sedimentary rocks consisting of limestone, dolomite, shale, argillite, sandstone, quartzite, and/or grit; and

- The Phase One Property is relatively flat with little relief. Local groundwater flow is inferred to be to the northwest, based on the location of Stillwater Creek. Regional groundwater flow is inferred to be to the north towards the Ottawa River. The topography is considered to be mainly flat to rolling low local relief with dry surface water drainage conditions.

4.4 Impediments

Pinchin had full access to the Phase Two Property throughout the completion of the Phase Two ESA.

5.0 INVESTIGATION METHOD

5.1 General

The Phase Two ESA field work was conducted in accordance with Pinchin's standard operating procedures (SOPs), which have been developed in accordance with the procedures and protocols provided in the MECP document entitled "*Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario*", dated December 1996, in the Association of Professional Geoscientists of Ontario document entitled *"Guidance for Environmental Site Assessments under Ontario Regulation 153/04 (as amended)"*, dated April 2011, and in O. Reg. 153/04.

No deviations from Pinchin's SOPs occurred during the Phase Two ESA.

5.2 Drilling and Excavating

Pinchin retained Strata to advance a total of seven boreholes BH-1 through BH-7 at the Phase Two Property on January 25, 2021 to investigate the potential presence of COPCs associated with the APECs identified in the Phase One ESA. The boreholes were drilled to a maximum depth of 2.4 mbgs using a Geoprobe 540™ drill rig.

The locations of the boreholes are provided on Figure 7. A description of the subsurface stratigraphy encountered during the drilling program is documented in the borehole logs included in Appendix B.

Measures taken to minimize the potential for cross-contamination during the borehole drilling program included:

- The use of dedicated, disposable polyvinyl chloride (PVC) soil sample liners for soil sample collection during direct-push drilling;
- The extraction of soil samples from the interior of the sampling device (where possible), rather than from areas in contact with the sampler walls;

- The cleaning of all non-dedicated drilling and soil sampling equipment (i.e., spatulas used for sample collection) before initial use and between sample and borehole locations; and
- The use of dedicated and disposable nitrile gloves for all soil sample handling.

Soil samples were collected at continuous intervals during direct-push drilling at a general frequency of one soil sample for every 0.5 metres drilled.

No excavating activities (e.g., test pitting) were completed as part of the Phase Two ESA.

5.3 Soil Sampling

Soil samples were collected in the boreholes at continuous intervals using 3.8 centimetre (cm) inner diameter (ID) direct push soil samplers with dedicated single-use sample liners.

Discrete soil samples were collected from the dedicated sample liners by Pinchin personnel using a stainless-steel spatula. Dedicated and disposable nitrile gloves were worn during the collection of each soil sample. A portion of each sample was placed in a resealable plastic bag for field screening and a portion was containerized in laboratory-supplied glass sampling jars. Following sample collection, the sample jars were placed into dedicated coolers with ice for storage pending transport to Paracel Laboratories (Paracel) in Ottawa, Ontario. Formal chain of custody records were maintained between Pinchin and the staff at Paracel.

Subsurface soil conditions were logged on-Site by Pinchin personnel at the time of borehole drilling. Based on the soil samples recovered during the borehole drilling program, the soil stratigraphy at the drilling locations generally consists of fill material comprised of sand and gravel, and trace silt with organic material and occasional brick (BH-3), underlain by silty clay and clay to a maximum depth of approximately 2.4 mbgs.

No odours or staining were observed in the soil samples collected during the borehole drilling program.

A detailed description of the subsurface stratigraphy encountered during the borehole drilling program is documented in the borehole logs included in Appendix B.

5.4 Field Screening Measurements

Soil samples were collected at each of the sampling intervals during the drilling activities and analyzed in the field for VOC-derived and petroleum-derived vapour concentrations in soil headspace with an RKI Eagle 2™ equipped with a PID and a CGI operated in methane elimination mode. The soil samples collected for field-screening purposes were placed in resealable plastic bags. The plastic bags were stored in a warm environment for a minimum of five minutes and agitated in order to release organic vapours within the soil pore space prior to analysis with the PID and CGI.

Based on a review of the operator's manual, the RKI Eagle 2™ PID has an accuracy/precision of up to 0.1 parts per million (ppm). The PID was calibrated prior to field use by the equipment supplier Maxim Environmental and Safety (Maxim) according to Maxim's standard operating procedures. The gas standard was stored in a gas cylinder and delivered to the PID via a regulator valve. An in-field re-calibration of the PID was conducted (using the gas standard in accordance with the operator's manual instructions) if the calibration check indicated that the PID's calibration had drifted by more than +/- 10%.

Based on a review of the operator's manual, the RKI Eagle 2™ has an accuracy/precision of up to +/- 25 ppm, or +/- 5% of the reading (whichever is greater). The CGI was calibrated prior to field use by Maxim according to Maxim's standard operating procedures. In addition, the CGI calibration was tested at the beginning of each day of drilling activities (beginning on the second day of drilling) against a Maxim-provided hexane gas standard with a concentration of 1,650 ppm. The gas standard was stored in a gas cylinder and delivered to the CGI via a regulator valve. An in-field re-calibration of the CGI was conducted (using the gas standard in accordance with the operator's manual instructions) if the calibration check indicated that the CGI's calibration had drifted by more than +/- 10%.

In general, the soil samples with the highest measured vapour concentrations (i.e., "worst case") from a given borehole were submitted for laboratory analysis. Sample depth and visual and olfactory observations of potential contaminants were also used in conjunction with the vapour concentrations in making the final selection of "worst case" soil samples for laboratory analysis.

5.5 Groundwater Sampling

Groundwater sampling was not completed as part of this Phase Two ESA.

5.6 Sediment Sampling

Sediment sampling was not completed as part of this Phase Two ESA.

5.7 Analytical Testing

All collected soil samples were delivered to Paracel for analysis. Paracel is an independent laboratory accredited by the Canadian Association for Laboratory Accreditation. Formal chain of custody records of the sample submissions were maintained between Pinchin and the staff at Paracel. Paracel conducted the laboratory analysis in accordance with the MECP document entitled *"Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act"* dated March 9, 2004 and revised on July 1, 2011 (*Analytical Protocol)*.

5.8 Residue Management Procedures

Given that the laboratory results for the submitted soil samples indicated that all reported concentrations for the parameters analyzed met the corresponding *Table 3 Standards*, and no evidence of NAPL, odours or sheens was observed during sampling and monitoring activities, the excess soil was deposited on the ground surface at the Phase Two Property.

5.9 Quality Assurance and Quality Control Measures

The QA/QC protocols that were followed during borehole drilling and soil and groundwater sampling so that representative samples were obtained are described in the following subsections.

5.9.1 Sample Containers, Preservation, Labelling, Handling and Custody of Samples

Soil and groundwater samples were containerized within laboratory-prepared sample containers in accordance with the *Analytical Protocol*.

The following soil sample containers and preservatives were used:

- VOCs and PHCs F1: 40 millilitre (mL) glass vials with septum-lids, pre-charged with methanol preservative; and
- PHCs F2-F4, PAHs, metals, inorganics, pH and grain size: 120 or 250 mL unpreserved clear glass wide-mouth jars with a Teflon™–lined lid.

Each soil, groundwater and QA/QC sample was labelled with a unique sample identifier along with the company name, sampling date, Pinchin project number and analysis required.

Each sample was placed in a cooler on ice immediately upon collection and prior to submission to Paracel for analysis. Formal chain of custody records of the sample submissions were maintained between Pinchin and the staff at BV Labs.

5.9.2 Equipment Cleaning Procedures

Dedicated, single-use PVC sample liners were used for each soil sample collected, which precluded the need for drilling equipment cleaning during soil sample collection. Equipment utilized in soil sample collection and handling (i.e., spatulas used to remove soil from the sample liners) was cleaned with a solution of Alconox™ detergent and potable water followed by a distilled water rinse prior to initial use and between samples.

5.9.3 Field Quality Control Measures

One field duplicate soil sample was collected by Pinchin during the Phase Two ESA for analysis of one or more of the COPCs. The frequency of field duplicate soil sample analysis complied with the requirement

that one field duplicate soil sample is analyzed for every ten regular soil samples submitted for analysis of the COPCs. The soil sample field duplicate pairings and corresponding analytical schedules are summarized as follows:

- Soil sample “BH-3 SS-2” and its corresponding field duplicate “DUP-1” were submitted for laboratory analysis of PHCs, VOCs, PAHs and metals.

The calibrations of the RKI Eagle™ 2 used for field screening were checked by the equipment supplier (Maxim) prior to use in the field by Pinchin. Maxim completed calibration checks in accordance with the equipment manufacturers’ specifications and/or Maxims SOPs.

5.9.4 QA/QC Sampling Program Deviations

There were no deviations from the QA/QC sampling program outlined in the Phase Two ESA Proposal.

6.0 REVIEW AND EVALUATION

6.1 Geology

Based on the stratigraphic information obtained from the soil samples recovered during the drilling activities completed as part of the Phase Two ESA, the gravel ground surface at the Phase Two Property is underlain by granular soil fill materials comprised of sand and gravel, and trace silt with organic material and occasional brick underlain by silty clay and clay to a maximum depth of approximately 2.4 mbgs.

The overburden/bedrock interface was not encountered during the drilling activities. Based on geological data published by the Ontario Geological Survey, bedrock is expected to consist of sedimentary rocks consisting of limestone, dolomite, shale, argillite, sandstone, quartzite, and/or grit.

6.2 Fine-Medium Soil Texture

Two soil samples collected from the boreholes advanced at the Phase Two Property were submitted for 75 micron single-sieve grain size analysis. The soil samples selected for analysis were considered to be representative of the two primary stratigraphic units observed at the borehole locations, which were a sand and gravel with trace silt fill unit and a native silty clay unit. As indicated in Table 2, one soil sample that was representative of the sand and trace gravel fill (subgrade) material was classified as medium and fine-textured one representative sample of the native silty clay present beneath the surficial fill material at the Phase Two Property was classified as medium and fine-textured.

Based on these grain size analysis results and the observed stratigraphy at the borehole locations at the Phase Two Property, it is the QP’s opinion that over two-thirds of the overburden at the Phase Two Property is medium and fine-textured as defined by O. Reg. 153/04. Therefore, the soil at the Phase Two

Property was interpreted to be medium and fine-textured for the purpose of determining the MECP Site Condition Standards applicable to the Phase Two Property.

6.3 Soil Field Screening

Soil vapour headspace concentrations measured in the soil samples collected as part of this Phase Two ESA are presented in the borehole logs. Soil vapour headspace values measured with the CGI in methane elimination mode was 0 ppm by volume (ppm_v).

One most apparent “worst case” soil sample, based on vapour concentrations as well as visual and/or olfactory considerations recovered from each borehole was submitted for laboratory analysis of VOCs, PHCs (F1-F4), PAHs and/or metals.

6.4 Soil Quality

A total of seven boreholes were advanced at the Phase Two Property at the locations shown on Figure 7 in order to assess for the presence of subsurface impacts resulting from the APECs identified in the Pinchin Phase One ESA. Select soil samples were collected from each of the advanced boreholes and submitted for laboratory analysis of the COPCs. The soil sample locations, depths and laboratory analyses are summarized in Table 1 through 5 and in the borehole logs.

The soil sample analytical results were compared to the *Table 3 Standards* and the following subsections provide a discussion of the findings.

6.4.1 VOCs

The soil sample analytical results for VOCs, along with the corresponding *Table 3 Standards*, are presented in Table 4. As indicated in Table 4, all reported concentrations of VOCs in the soil samples submitted for analysis were below the *Table 3 Standards*.

6.4.2 PHCs F1-F4

The soil sample analytical results for PHCs F1-F4, along with the corresponding *Table 3 Standards*, are presented in Table 3. As indicated in Table 3, all reported concentrations of PHCs F1- F4 in the soil samples submitted for analysis were below the *Table 3 Standards*.

6.4.3 PAHs

The soil sample analytical results for PAHs, along with the corresponding *Table 3 Standards*, are presented in Table 5. As indicated in Table 5, all reported concentrations of PAHs in the soil samples submitted for analysis were below the *Table 3 Standards*.

6.4.4 Metals and Inorganics

The soil sample analytical results for metals and inorganics parameters, along with the corresponding *Table 3 Standards*, are presented in Table 6. As indicated in Table 6, all reported concentrations of metals and inorganics in the soil samples submitted for analysis were below the *Table 3 Standards*.

6.4.5 General Comments on Soil Quality

The soil sample results show no evidence of chemical or biological transformations of chemical parameters in the subsurface.

The soil sample analytical results also show no evidence of NAPLs in the subsurface at the Site. In addition, no evidence of NAPL was observed during borehole drilling.

6.5 Groundwater Quality

Sediment sampling was not completed as part of this Phase Two ESA.

6.6 Sediment Quality

Sediment sampling was not completed as part of this Phase Two ESA.

6.7 Quality Assurance and Quality Control Results

QA/QC comprises technical activities that are used to measure or assess the effect of errors or variability in sampling and analysis. It may also include specification of acceptance criteria for the data and corrective actions to be taken when they are exceeded. QA/QC also includes checks performed to evaluate laboratory analytical quality, checks designed to assess the combined influence of field sampling and laboratory analysis and checks to specifically evaluate the potential for cross contamination during sampling and sample handling.

The QA/QC samples collected and submitted for analysis by Pinchin during the Phase Two ESA consisted of the following:

- Field duplicate soil samples to assess the suitability of field sampling methods and laboratory performance.

In addition to the above, laboratory quality control activities and sample checks employed by Paracel included:

- Method blanks - where a clean sample is processed simultaneously with and under the same conditions (i.e., using the same reagents and solvents) as the samples being analyzed. These are used to confirm whether the instrument, reagents and solvents used are contaminant free;

- Laboratory duplicates - where two samples obtained from the sample container are analyzed. These are used to evaluate laboratory precision;
- Surrogate spike samples - where a known mass of compound not found in nature (e.g., deuterated compounds such as toluene-d8) but that has similar characteristics to the analyzed compounds is added to a sample at a known concentration. These are used to assess the recovery efficiency;
- Matrix spike samples - where a known mass of target analyte is added to a matrix sample with known concentrations. These are used to evaluate the influence of the matrix on a method's recovery efficiency; and
- Use of standard or certified reference materials - a reference material where the content or concentration has been established to a very high level of certainty (usually by a national regulatory agency). These are used to assess accuracy.

The results of the field QA/QC samples are discussed in the following subsections.

6.7.1 Soil Duplicate Results

During borehole soil sampling activities, one soil duplicate sample pair, consisting of soil sample "BH-3 SS-2" and its corresponding field duplicate "DUP-1", were submitted for laboratory analysis of VOCs, PHCs, PAHs, and metals.

The quality of the analytical results was evaluated by calculating relative percent differences (RPDs) for the parameters analyzed for the original and field duplicate samples. The RPD for each parameter was calculated using the following equation:

$$\text{RPD} = \frac{(\text{Original Concentration} - \text{Duplicate Concentration}) \times 100}{(\text{Original Concentration} + \text{Duplicate Concentration})/2}$$

An RPD was not calculated unless the parameter concentration in both the original and duplicate sample had detectable concentrations above the corresponding practical quantitation limit for the parameter, which is equal to five times the lowest laboratory reportable detection limit (RDL).

The calculated RPDs for the original and field duplicate soil samples have been compared to performance standards provided in the *Analytical Protocol.* Pinchin notes that although these performance standards only strictly apply to laboratory duplicate samples, they have been considered suitable for comparison to the field duplicate soil sample results as well.

Each of the calculated RPDs met the corresponding performance standards.

6.7.2 Deviations from Analytical Protocol

There were no deviations from the holding times, preservation methods, storage requirements and container types specified in the *Analytical Protocol* during the completion of the Phase Two ESA.

6.7.3 Laboratory Certificates of Analysis

Pinchin has reviewed the laboratory Certificates of Analysis provided by Paracel for the samples submitted during the Phase Two ESA and confirms the following:

- All laboratory Certificates of Analysis contain a complete record of the sample submission and analysis and meet the requirements of Section 47(3) of O. Reg. 153/04;
- A laboratory Certificate of Analysis has been received for each sample submitted for analysis during the Phase Two ESA; and
- All laboratory Certificates of Analysis have been included in full in Appendix C.

6.7.4 QA/QC Sample Summary

The overall evaluation of the QA/QC sample results indicates no issues with respect to field collection methods and laboratory performance, and no apparent bias due to ambient conditions at the Phase Two Property and during transportation of the sample containers/samples to and from the analytical laboratory.

As such, it is the QP's opinion that the soil and groundwater analytical data obtained during the Phase Two ESA are representative of actual Site conditions and are appropriate for meeting the objective of assessing whether the soil and groundwater at the Phase Two Property meets the applicable MECP Site Condition Standards.

7.0 CONCLUSIONS

Pinchin completed a Phase Two ESA at the Phase Two Property in accordance with the requirements stipulated in O. Reg. 153/04 for the purpose of an SPA. The SPA is required by the Client in relation to the future redevelopment of the Phase Two Property from a commercial parking lot to two commercial buildings.

The Phase Two ESA completed by Pinchin included the advancement of seven boreholes at the Phase Two Property.

Based on Site-specific information, the applicable regulatory standards for the Phase Two Property were determined to be the *Table 3 Standards* for commercial land use and medium and fine-textured soils. Soil samples were collected from each of the borehole locations and submitted for laboratory analysis of VOCs, PHCs, PAHs, and metals

It is the opinion of the Qualified Person (QP) who supervised the Phase Two ESA that the applicable *Table 3 Standards* for soil at the Phase Two Property have been met, and that no further subsurface investigation is required in relation to assessing the APECs at the Phase Two Property.

7.1 Signatures

This Phase Two ESA was undertaken under the supervision of Scott Mather, P.Eng., QP_{ESA} in accordance with the requirements of O. Reg. 153/04 to support the filing of an RSC for the Phase Two Property.

7.2 Terms and Limitations

This Phase Two ESA was performed for Huntington Construction & Development (Client) in order to investigate potential environmental impacts at 2165 Robertson Road, Ottawa, Ontario (Site). The term recognized environmental condition means the presence or likely presence of any hazardous substance on a property under conditions that indicate an existing release, past release, or a material threat of a release of a hazardous substance into structures on the property or into the ground, groundwater, or surface water of the property. This Phase Two ESA does not quantify the extent of the current and/or recognized environmental condition or the cost of any remediation.

Conclusions derived are specific to the immediate area of study and cannot be extrapolated extensively away from sample locations. Samples have been analyzed for a limited number of contaminants that are expected to be present at the Site, and the absence of information relating to a specific contaminant does not indicate that it is not present.

No environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions on a property. Performance of this Phase Two ESA to the standards established by Pinchin is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions on the Site, and recognizes reasonable limits on time and cost.

This Phase Two ESA was performed in general compliance with currently acceptable practices for environmental site investigations, and specific Client requests, as applicable to this Site.

This report was prepared for the exclusive use of the Client, subject to the terms, conditions and limitations contained within the duly authorized proposal for this project. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, is the sole responsibility of such third parties. Pinchin accepts no responsibility for damages suffered by any third party as a result of decisions made or actions conducted.

If additional parties require reliance on this report, written authorization from Pinchin will be required. Pinchin disclaims responsibility of consequential financial effects on transactions or property values, or

requirements for follow-up actions and costs. No other warranties are implied or expressed. Furthermore, this report should not be construed as legal advice. Pinchin will not provide results or information to any party unless disclosure by Pinchin is required by law.

Pinchin makes no other representations whatsoever, including those concerning the legal significance of its findings, or as to other legal matters touched on in this report, including, but not limited to, ownership of any property, or the application of any law to the facts set forth herein. With respect to regulatory compliance issues, regulatory statutes are subject to interpretation and these interpretations may change over time.

8.0 REFERENCES

The following documents provided information used in this report:

- "*Phase I Environmental Site Assessment, 145 Robertson Road, Ottawa, Ontario*", prepared for the Dymon Capital Corporation, by T. Harris Environmental Management Inc. (T. Harris), and dated March 2007;
- "*Phase I Environmental Site Assessment, 145 Robertson Road, Ottawa, Ontario*", prepared for Erez Capital Fund Inc. by Pinchin, and dated July 2008;
- "*Phase II Environmental Site Assessment, 145 Robertson Road, Ottawa, Ontario*", prepared for Erez Capital Fund Inc. by Pinchin, and dated November 5, 2008;
- "*Phase I Environmental Site Assessment, 145 Robertson Road, Ottawa, Ontario",* prepared for the Client by Pinchin, and dated July 2012;
- Association of Professional Geoscientists of Ontario. Guidance for Environmental Site Assessments under Ontario Regulation 153/04 (as amended). April 2011;
- Ontario Ministry of the Environment. Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario. December 1996;
- Ontario Ministry of the Environment. Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act. March 9, 2004 amended July 1, 2011;
- Ontario Ministry of the Environment. Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act. April 15, 2011;
- Pinchin Ltd. Phase One Environmental Site Assessment, 2165 Robertson Road, Ottawa Ontario. Prepared for Huntington Construction & Development, October 26, 2018;
- Province of Ontario. Environmental Protection Act, R.S.O 1990, Chapter E.19;

- Province of Ontario. R.R.O. 1990, Regulation 347, General – Waste Management, as amended by Ontario Regulation 234/11;
- Province of Ontario. Ontario Regulation 153/04: Records of Site Condition – Part XV.1 of the Act. Last amended by Ontario Regulation 274/20 on July 1, 2020; and
- U.S. Environmental Protection Agency - Region 1. Low Stress (Low Flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells. Revised January 19, 2010.

9.0 FIGURES AND TABLES

Table 1-1 - Table of Areas of Potential Environmental Concern

Area of Potential Environmental Concern[1]	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity[2]	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern[3]	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
APEC-1 (Historical railway line on the north portion of the Phase One Property)	North portion of the Phase One Property.	Item 46 - Rail Yards, Tracks and Spurs	On-Site	PAHs Metals	Soil
APEC-2 (Historical lumber storage on the north portion of the Phase One Property)	North portion of the Phase One Property.	Item 59 - Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products	On-Site	PAHs	Soil
APEC-3 (Fill material of unknown quality on the south-central portion of the Phase One Property)	South-central portion of the Phase One Property.	Item 30 – Importation of Fill Material of Unknown Quality	On-Site	PAHs Metals	Soil

Notes:

1 - Areas of potential environmental concern means the area on, in or under a phase one property where one or more contaminants are potentially present, as determined through the phase one environmental site assessment, 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:

List of Method Groups:

ABNs	PCBs	Metals	Electrical Conductivity
CPs	PAHs	As, Sb, Se	Cr (VI)
1,4-Dioxane	THMs	Na	Hg
Dioxins/Furans, PCDDs/PCDFs	VOCs	B-HWS	Methyl Mercury
OCs	BTEX	Cl-	Low or high pH,
PHCs	Ca, Mg	CN-	SAR

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

Table 2-1 - Table of Potentially Contaminating Activities

PCA Designation	Location of Potentially Contaminating Activity	Potentially Contaminating Activity	Location of PCA (On-Site or Off-Site)	Distance from Phase One Property (metres)	Location Relative to Inferred Groundwater Flow Direction[1]	Contributing to an APEC at the Site (Yes/No)	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
PCA-1	North portion of the Phase One Property.	Item 46 - Rail Yards, Tracks and Spurs	On-Site	NA – On-Site PCA	NA - On-Site PCA	Yes	Soil
PCA-2	North portion of the Phase One Property.	Item 59 - Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products	On-Site	NA – On-Site PCA	NA - On-Site PCA	Yes	Soil
PCA-3	South-central portion of the Phase One Property.	Item 30 – Importation of Fill Material of Unknown Quality	On-Site	NA – On-Site PCA	NA - On-Site PCA	Yes	Soil
PCA-4	Hydro-corridor which transects the central portion of the Site, and adjacent to the east and north elevations of the Phase One Property.	Item 55 - Transformer Manufacturing, Processing and Use	On-Site	NA – On-Site PCA	NA - On-Site PCA	No	Soil and Groundwater
PCA-5	Canadian Tire RFO at 2135 Robertson Road, located 220 m east of the Phase One Property.	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	Off-Site	220	Upgradient/Transgradient	No	Soil and Groundwater
PCA-6	Former railway line located 5 m north of the Phase One Property.	Item 46 - Rail Yards, Tracks and Spurs	Off-Site	5	Transgradient/Downgradient	No	Soil and Groundwater
PCA-7	Automotive dealership and repair facility located approximately 100 m west of the Phase One Property.	Item 10 - Commercial Autobody Shops	Off-Site	100	Transgradient/Downgradient	No	Soil and Groundwater
PCA-8	Automotive dealership and repair facility located approximately 180 m west of the Phase One Property.	Item 10 - Commercial Autobody Shops	Off-Site	180	Transgradient/Downgradient	No	Soil and Groundwater
PCA-9	Automotive dealership and repair facility located approximately 30 m south of the Phase One Property.	Item 10 - Commercial Autobody Shops	Off-Site	30	Upgradient/Transgradient	No	Soil and Groundwater

Notes:

APEC – Area of Potential Environmental Concern

PCA – Potentially Contaminating Activity

1 – Location of PCA relative to the Phase One Property in relation to the inferred groundwater flow direction in the Phase One Study Area

TABLE 1
SAMPLES SUBMITTED FOR LABORATORY ANALYSIS
Huntington Consturction & Development
2165 Roberston Road, Ottawa, Ontario

Samples			Parameters								
Borehole / Monitoring Well ID	Sample ID			PHCs (F1-F4) & BTEX	VOCs	PAHs	Metals	pH	Grain Size Analysis	TCLP	Rationale/Notes
BH-1	SS-1		SOIL SAMPLES	●	●	●	●				Assess soil quality at former on-Site railway line and former lumber yard (APECs 1 and 2)/Confirm applicable MECP standards.
	SS-2							●	●		
BH-2	SS-1			●	●	●	●				
	SS-4							●	●		
BH-3	SS-2			●	●	●	●				Assess soil quality at former on-Site former lumber yard (APEC 2).
DUP-1	DUP-1			●	●	●	●				
BH-4	SS-1			●	●	●	●				Assess soil quality for on-Site fill material of unknown quality on the south-central portion of the Site (APEC 3).
BH-5	SS-1			●	●	●	●				
BH-6	SS-2			●	●	●	●				
BH-7	SS-2			●	●	●	●				

Notes:

PHCs (F1-F4)	Petroleum Hydrocarbons (Fraction 1 to Fraction 4)
BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes
PCBs	Polychlorinated Biphenyls
VOCs	Volatile Organic Compounds
FOC	Fraction of Organic Carbon
PAHs	Polycyclic Aromatic Hydrocarbons
TCLP	Toxicity Characteristic Leaching Procedure
mbgs	Metres Below Ground Surface
MECP	Ontario Ministry of the Environment, Conservation and Parks

Pinchin File: 229900.001

TABLE 2
pH AND GRAIN SIZE ANALYSIS FOR SOIL
Huntington Consturction & Development
2165 Roberston Road, Ottawa, Ontario

Parameter	*Units*	*MECP Site Condition Standard Selection Criteria*	*Sample Designation*	
			Sample Collection Date (dd/mm/yyyy)	
			Sample Depth (mbgs)	
			BH-1 SS-2	*BH-2 SS-4*
			25/01/2021	25/01/2021
			0.5 - 1.2	*1.8 - 2.4*
			Surface	*Sub-surface*
pH		Surface: 5 < pH < 9 Subsurface: 5 < pH < 11	7.13	7.28
Sieve #200 <0.075 mm	%	50%	55	95
Sieve #200 >0.075 mm	%	50%	45	5
		Grain Size Classification	MEDIUM/FINE	MEDIUM/FINE

Notes:

BOLD	Environmentally Sensitive Area (Based Upon pH of Surface Soil)
BOLD	Environmentally Sensitive Area (Based Upon pH of Sub-Surface Soil)
NA	Not Analysed
mbgs	Metres Below Ground Surface

Pinchin File: 229900.001

TABLE 3

PETROLEUM HYDROCARBON AND BTEX ANALYSIS FOR SOIL

Huntington Consturction & Development

2165 Roberston Road, Ottawa, Ontario

Parameter	*MECP Table 3 Standards**	*Sample Designation*							
		Sample Collection Date (dd/mm/yyyy)							
		Sample Depth (mbgs)							
		BH-1 SS-1	*BH-2 SS-1*	*BH-3 SS-2*	*DUP-1*	*BH-4 SS-1*	*BH-5 SS-1*	*BH-6 SS-2*	*BH-7 SS-2*
		25/01/2021	*25/01/2021*	*25/01/2021*	*25/01/2021*	*25/01/2021*	*25/01/2021*	*25/01/2021*	*25/01/2021*
		0 - 0.5	*0 - 0.5*	*0.5 - 1.2*	*0.5 - 1.2*	*0 - 0.5*	*0 - 0.5*	*0.5 - 1.2*	*0.5 - 1.2*
Petroleum Hydrocarbons F1 (C_6 - C_{10})	65	<7	<7	<7	<7	<7	<7	<7	<7
Petroleum Hydrocarbons F2 (>C_{10} - C_{16})	250	13	<4	<4	<4	13	<4	<4	<4
Petroleum Hydrocarbons F3 (>C_{16} - C_{34})	2500	25	<8	<8	<8	25	30	13	<8
Petroleum Hydrocarbons F4 (>C_{34} - C_{50})	6600	12	<6	<6	<6	9	13	62	<6

Notes:

MECP Table 3 Standards* — Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011, Table 3 Standards, Medium/Fine-Textured Soils, Non-Potable Groundwater Condition, for Industrial/Commercial/Community Property Use.

BOLD — Exceeds Site Condition Standard

BOLD — Reportable Detection Limit Exceeds Site Condition Standard

Units — All Units in µg/g

mbgs — Metres Below Ground Surface

BTEX — Benzene, Toluene, Ethylbenzene and Xylenes

TABLE 4

VOLATILE ORGANIC COMPOUND ANALYSIS FOR SOIL

Huntington Consturction & Development

2165 Roberston Road, Ottawa, Ontario

Parameter	MECP Table 3 Standards*	Sample Designation							
		Sample Collection Date (dd/mm/yyyy)							
		Sample Depth (mbgs)							
		BH-1 SS-1	BH-2 SS-1	BH-3 SS-2	DUP-1	BH-4 SS-1	BH-5 SS-1	BH-6 SS-2	BH-7 SS-2
		25/01/2021	25/01/2021	25/01/2021	25/01/2021	25/01/2021	25/01/2021	25/01/2021	25/01/2021
		0 - 0.5	0 - 0.5	0.5 - 1.2	0.5 - 1.2	0 - 0.5	0 - 0.5	0.5 - 1.2	0.5 - 1.2
Acetone	28	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzene	0.4	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromodichloromethane	18	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromoform	1.7	<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
Carbon Tetrachloride	1.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorobenzene	2.7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloroform	0.18	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	13	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorodifluoromethane	25	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	8.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	0.84	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	21	<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
1,1-Dichloroethylene	0.48	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cis-1,2-Dichloroethylene	37	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
trans-1,2-Dichloroethylene	9.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichloropropane	0.68	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene, total	0.21	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	19	<0.05	<0.05	<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
Hexane	88	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl Ethyl Ketone (2-Butanone)	88	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Methyl Isobutyl Ketone	210	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Methyl tert-butyl ether	3.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	43	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	0.11	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	0.094	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethylene	21	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Toluene	78	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1-Trichloroethane	12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2-Trichloroethane	0.11	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichloroethylene	0.61	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	5.8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	0.25	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Xylenes, total	30	0.13	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05

Notes:

MECP Table 3 Standards* — Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011, Table 3 Standards, Medium/Fine-Textured Soils, Non-Potable Groundwater Condition, for Industrial/Commercial/Community Property Use.

BOLD — Exceeds Site Condition Standard

BOLD — Reportable Detection Limit Exceeds Site Condition Standard

Units — All Units in µg/g

mbgs — Metres Below Ground Surface

Pinchin File: 229900.001

TABLE 5
POLYCYCLIC AROMATIC HYDROCARBON ANALYSIS FOR SOIL
Huntington Consturction & Development
2165 Roberston Road, Ottawa, Ontario

Parameter	*MECP Table 3 Standards**	*Sample Designation*							
		Sample Collection Date (dd/mm/yyyy)							
		Sample Depth (mbgs)							
		BH-1 SS-1	*BH-2 SS-1*	*BH-3 SS-2*	*DUP-1*	*BH-4 SS-1*	*BH-5 SS-1*	*BH-6 SS-2*	*BH-7 SS-2*
		25/01/2021	*25/01/2021*	*25/01/2021*	*25/01/2021*	*25/01/2021*	*25/01/2021*	*25/01/2021*	*25/01/2021*
		0 - 0.5	*0 - 0.5*	*0.5 - 1.2*	*0.5 - 1.2*	*0 - 0.5*	*0 - 0.5*	*0.5 - 1.2*	*0.5 - 1.2*
Acenaphthene	96	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Acenaphthylene	0.17	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Anthracene	0.74	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo[a]anthracene	0.96	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo[a]pyrene	0.3	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo[b]fluoranthene	0.96	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo[g,h,i]perylene	9.6	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Benzo[k]fluoranthene	0.96	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Chrysene	9.6	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Dibenzo[a,h]anthracene	0.1	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Fluoranthene	9.6	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Fluorene	69	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Indeno[1,2,3-cd]pyrene	0.95	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1-Methylnaphthalene	85	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
2-Methylnaphthalene	85	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Methylnaphthalene (1&2)	85	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Naphthalene	28	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Phenanthrene	16	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Pyrene	96	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02

Notes:

MECP Table 3 Standards* — Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011, Table 3 Standards, Medium/Fine-Textured Soils, Non-Potable Groundwater Condition, for Industrial/Commercial/Community Property Use.

BOLD — Exceeds Site Condition Standard

BOLD — Reportable Detection Limit Exceeds Site Condition Standard

Units — All Units in µg/g

mbgs — Metres Below Ground Surface

Pinchin File: 229900.001

TABLE 6
METALS ANALYSIS FOR SOIL
Huntington Consturction & Development
2165 Roberston Road, Ottawa, Ontario

Parameter	*MECP Table 3 Standards**	*Sample Designation*							
		Sample Collection Date (dd/mm/yyyy)							
		Sample Depth (mbgs)							
		BH-1 SS-1	*BH-2 SS-1*	*BH-3 SS-2*	*DUP-1*	*BH-4 SS-1*	*BH-5 SS-1*	*BH-6 SS-2*	*BH-7 SS-2*
		25/01/2021	*25/01/2021*	*25/01/2021*	*25/01/2021*	*25/01/2021*	*25/01/2021*	*25/01/2021*	*25/01/2021*
		0 - 0.5	*0 - 0.5*	*0.5 - 1.2*	*0.5 - 1.2*	*0 - 0.5*	*0 - 0.5*	*0.5 - 1.2*	*0.5 - 1.2*
Antimony	50	<1	<1	<1	<1	<1	<1	<1	<1
Arsenic	18	2.8	1.6	1.6	1.4	1.6	4.3	2.7	2.6
Barium	670	112	40	54.2	41	87.2	99.8	101	54.3
Beryllium	10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5
Boron	120	8	<5	<5	<5	5.1	9.1	5.2	6.8
Cadmium	1.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	160	14.7	21	20.7	17.8	16.1	14.3	31.1	17.3
Cobalt	100	3	4.6	4.9	4.4	5.4	4.3	6.8	5
Copper	300	10	5.4	6.7	5.6	11.2	14.9	13.8	11.2
Lead	120	9.2	3	3.8	3	5	7.7	10.9	3.9
Molybdenum	40	<1	<1	<1	<1	<1	<1	<1	<1
Nickel	340	8.6	11.3	11.2	10	11.3	9.6	15.4	10.4
Selenium	5.5	<1	<1	<1	<1	<1	<1	<1	<1
Silver	50	0.4	<0.3	<0.3	<0.3	1.6	2.3	<0.3	<0.3
Thallium	3.3	<1	<1	<1	<1	<1	<1	<1	<1
Uranium	33	<1	<1	<1	<1	<1	<1	<1	<1
Vanadium	86	<10	33	31	29	19.1	13.6	39.3	21.4
Zinc	340	<20	24.8	28.3	21.1	<20	<20	46.1	<20

Notes:

MECP Table 3 Standards* — Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011, Table 3 Standards, Medium/Fine-Textured Soils, Non-Potable Groundwater Condition, for Industrial/Commercial/Community Property Use.

BOLD	Exceeds Site Condition Standard
BOLD	Reportable Detection Limit Exceeds Site Condition Standard
Units	All Units in µg/g
mbgs	Metres Below Ground Surface
NA	Not Applicable

Pinchin File: 229900.001

10.0 APPENDICES

APPENDIX A

Legal Survey

Topographic Plan of Survey of

PART OF LOT 9
CONCESSION 2 (OTTAWA FRONT)
Geographic Township of Nepean
CITY OF OTTAWA
Surveyed by Annis, O'Sullivan, Vollebekk Ltd.

Scale 1 : 300

12 9 6 3 0 6 12 Metres

Metric

DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

Surveyor's Certificate

I CERTIFY THAT :

1. This survey and plan are correct and in accordance with the Surveys Act, the Surveyors Act and the Land Titles Act and the regulations made under them.
2. The survey was completed on the 18th day of October, 2018.

Oct. 19, 2018 — Date

E. H. Herweyer
Ontario Land Surveyor

Notes & Legend

Symbol	Denotes	
—□—	"	Survey Monument Planted
—■—	"	Survey Monument Found
SIB	"	Standard Iron Bar
SSIB	"	Short Standard Iron Bar
IB	"	Iron Bar
CC	"	Cut Cross
CP	"	Concrete Pin
*	"	Survey Monument (0.3 Long)
Meas.	"	Measured
(WIT)	"	Witness
(AOG)	"	Annis, O'Sullivan, Vollebekk Ltd.
(P1)	"	Plan 4R-23046
BF	"	Board Fence
CLF	"	Chain Link Fence
C/L	"	Centreline
LS	"	Light Standard
UP	"	Utility Pole
PO-C	"	Concrete Pole
PO-W	"	Wooden Pole
	"	Deciduous Tree
	"	Coniferous Tree
MH-ST	"	Maintenance Hole (Storm Sewer)
MH-S	"	Maintenance Hole (Sanitary)
MH-B	"	Maintenance Hole (Bell Telephone)
MH	"	Maintenance Hole (Unidentified)
M-W	"	Monitoring Well
FH	"	Fire Hydrant
VC	"	Valve Chamber
WV	"	Water Valve
CB	"	Catch Basin
CSP	"	Corrugated Steel Pipe
B	"	Bollard
C-S	"	Commercial Sign
S	"	Parking Sign
	"	Disabled Parking
TB-B	"	Bell Terminal Box
TB-T	"	Traffic Terminal Box
AN	"	Anchor
ø	"	Diameter
+ 65.00	"	Location of Elevations
+ **65.00**	"	Top of Concrete Curb Elevation
TOS	"	Top of Slope
BOS	"	Bottom of Slope
T/G	"	Top of Lid/Grate
INV	"	Invert
— OHW —	"	Overhead Wires

Bearings are astronomic, derived from the easterly limit of Plan 4R-23046, shown to be N 30°41'00" W thereon.

Total Site Area = 1.1327 Ha.

ASSOCIATION OF ONTARIO LAND SURVEYORS
PLAN SUBMISSION FORM
2068065
THIS PLAN IS NOT VALID UNLESS IT IS AN EMBOSSED ORIGINAL COPY ISSUED BY THE SURVEYOR In accordance with Regulation 1026, Section 29 (3).

ELEVATION NOTES

1. Elevations shown are referred to geodetic datum.
2. It is the responsibility of the user of this information to verify that the job benchmark has not been altered or disturbed and that it's relative elevation and description agrees with the information shown on this drawing.

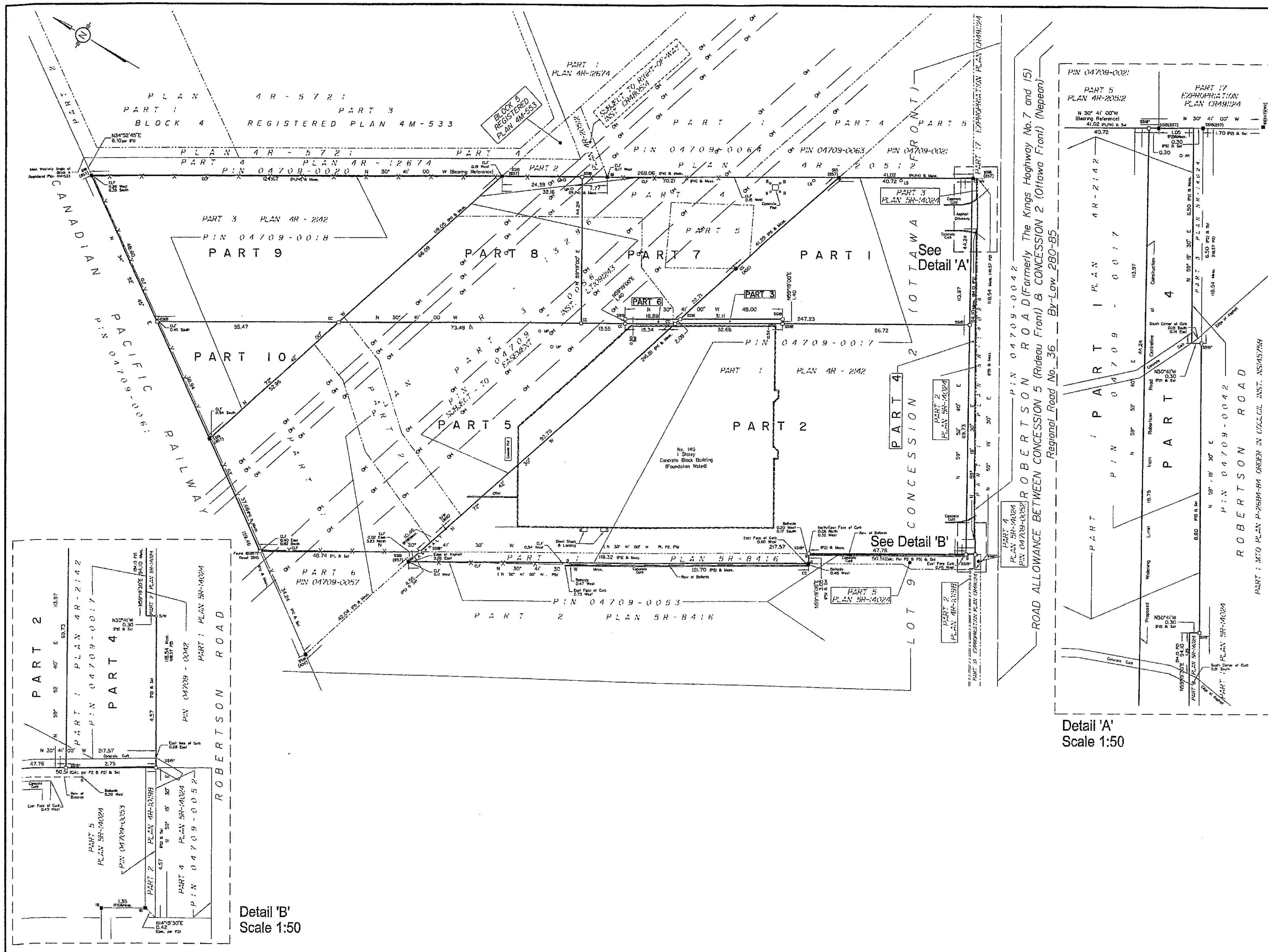
UTILITY NOTES

1. This drawing cannot be accepted as acknowledging all of the utilities and it will be the responsibility of the user to contact the respective utility authorities for confirmation.
2. Only visible surface utilities were located.
3. A field location of underground plant by the pertinent utility authority is mandatory before any work involving breaking ground, probing, excavating etc.

ANNIS, O'SULLIVAN, VOLLEBEKK LTD.
14 Concourse Gate, Suite 500
Nepean, Ont. K2E 7S6
Phone: (613) 727-0850 / Fax: (613) 727-1079
Email: Nepean@aovltd.com
Ontario Land Surveyors

Job No. 17482-18 Huntington Pt Lt 9 C2 OF NP T F N

Y:\2018\17482-18\FINAL\17482-18 Huntington Pt L9 C2 OF NP T F.dwg



I REQUIRE THIS PLAN TO BE DEPOSITED UNDER THE LAND TITLES ACT.

DATE: Aug. 13, 2008

E.H. HERWEYER
ONTARIO LAND SURVEYOR

PLAN 4R-23046

RECEIVED AND DEPOSITED
DATE: Aug. 13/08

Ast. DR. 'Amie M-McNicol'
LAND REGISTRAR FOR THE LAND TITLES DIVISION OF OTTAWA-CARLETON NO. 4.

SCHEDULE

PART	PART OF LOT	CONCESSION	ALL OF PIN
1	9	2 (Ottawa Front)	04709-0017
2			
3			
4			
5			04709-0056
6			
7			
8			
9			04709-0018
10			

Parts 5, 6, 7 & 8 : Subject-to easement Inst. LT1091243

PLAN OF SURVEY OF

PART OF LOT 9
CONCESSION 2 (OTTAWA FRONT)
Geographic Township of Nepean
CITY OF OTTAWA

Surveyed by Annis, O'Sullivan, Vollebekk Ltd .

Scale 1 : 500

20 15 10 5 0 10 20 Metres

Metric
DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

Surveyor's Certificate

I CERTIFY THAT :
1. This survey and plan are correct and in accordance with the Surveys Act, the Surveyors Act, the Land Titles Act and the regulations made under them.
2. The survey was completed on the 31st day of July, 2008

Aug. 13, 2008
Date

E. H. Herweyer
Ontario Land Surveyor

Notes & Legend

—□— Denotes		Survey Monument Planted
—■—	"	Survey Monument Found
SIB	"	Standard Iron Bar
SSIB	"	Short Standard Iron Bar
SSIB*	"	Short Standard Iron Bar (0.3 long)
IB	"	Iron Bar
CC	"	Cut Cross
S/W	"	Spike & Washer (in asphalt)
(WIT)	"	Witness
(AOG)	"	Annis, O'Sullivan, Vollebekk Ltd.
Meas.	"	Measured
CLF	"	Chain Link Fence
CRW	"	Concrete Retaining Wall
o LS	"	Light Standard
o UP	"	Utility Pole
— OH —	"	Overhead Wires
o AN	"	Anchor
o B	"	Bollard
(P1)	"	Plan 4R-13296
(P2)	"	Plan 5R-14024
(P3)	"	Plan 4R-10198
(P4)	"	Plan 4R-12674
(P5)	"	Plan 5R-8416

Bearings are astronomic derived from the easterly limits of Plan 4R-13296 shown to be N30°41'00"W thereon.

ANNIS, O'SULLIVAN, VOLLEBEKK LTD.
14 Concourse Gate, Suite 500
Nepean, Ont. K2E 7S6
Phone: (613) 727-0850 / Fax: (613) 727-1079
Email: Nepean@aovltd.com
Ontario Land Surveyors

Job No. 6230-07 Pt.L9 Con2 OF R-Plan F.dwg

APPENDIX B
Borehole Logs

Log of Borehole: BH-1

Project #: 229900.001 **Logged By:** MK

Project: Phase Two Environmental Site Assessment

Client: Huntington Construction & Development

Location: 2165 Robertson Road, Ottawa, Ontario

Drill Date: January 25, 2021

SUBSURFACE PROFILE					SAMPLE			
Depth (ft / m)	Symbol	Description	Measured Depth (m)	Monitoring Well Details	Recovery (%)	Sample ID	Soil Vapour Concentration* (ppm) CGI/PID	Laboratory Analysis
0 / 0		Ground Surface	0.00	No Monitoring Well Installed				
0 – 2 / 0 – 0.61		***Sand and Gravel Fill*** Grey brown, damp.	0.61		90	SS-1	0/0.0	PHCs, VOCs, PAHs, Metals
2 – 4 / 0.61 – 1.22		***Sand*** Brown, trace gravel, moist.	1.22			SS-2	0/0.0	Grain Size, pH
4 – 8 / 1.22 – 2.44		***Silty Clay*** Grey, damp.	2.44		100	SS-3	0/0.0	
						SS-4	0/0.0	
8 / 2.44		End of Borehole No Refusal						
9 – 10 / 2.74 – 3								

Contractor: Strata Drilling Group

Drilling Method: Direct Push

Well Casing Size: NA

Note:
* Soil vapour concentrations measured using a RKI Eagle 2 equipped with a combustible gas indicator (CGI) and a photoionization detector (PID).

Grade Elevation: NM

Top of Casing Elevation: NA

Sheet: 1 of 1

Log of Borehole: BH-2

Project #: 229900.001 **Logged By:** MK

Project: Phase Two Environmental Site Assessment

Client: Huntington Construction & Development

Location: 2165 Robertson Road, Ottawa, Ontario

Drill Date: January 25, 2021

SUBSURFACE PROFILE					SAMPLE			
Depth (ft / m)	Symbol	Description	Measured Depth (m)	Monitoring Well Details	Recovery (%)	Sample ID	Soil Vapour Concentration* (ppm) CGI/PID	Laboratory Analysis
0 / 0		Ground Surface	0.00	No Monitoring Well Installed				
0 – 3 / 0 – 1		***Sand and Gravel Fill*** Brown, trace organics, damp.	0.91		100	SS-1	0/0.0	PHCs, VOCs, PAHs, Metals
						SS-2	0/0.0	
3 – 8 / 1 – 2		***Silty Clay*** Brown grey, damp.	2.44		100	SS-3	0/0.0	
						SS-4	0/0.0	Grain Size, pH
8 / 2		End of Borehole No Refusal						
10 / 3								

Contractor: Strata Drilling Group

Drilling Method: Direct Push

Well Casing Size: NA

Note:
* Soil vapour concentrations measured using a RKI Eagle 2 equipped with a combustible gas indicator (CGI) and a photoionization detector (PID).

Grade Elevation: NM

Top of Casing Elevation: NA

Sheet: 1 of 1

Log of Borehole: BH-3

Project #: 229900.001 **Logged By:** MK

Project: Phase Two Environmental Site Assessment

Client: Huntington Construction & Development

Location: 2165 Robertson Road, Ottawa, Ontario

Drill Date: January 25, 2021

SUBSURFACE PROFILE					SAMPLE			
Depth (ft / m)	Symbol	Description	Measured Depth (m)	Monitoring Well Details	Recovery (%)	Sample ID	Soil Vapour Concentration* (ppm) CGI/PID	Laboratory Analysis
0 / 0		Ground Surface	0.00	No Monitoring Well Installed				
		Sand and Gravel Fill Brown, damp.				SS-1	0/0.0	
2					100			
						SS-2	0/0.0	PHCs, VOCs, PAHs, Metals
3 / 1		Trace brick and asphalt at 1.07 mbgs.						
4			1.22					
		Silty Clay Brown grey, damp.				SS-3	0/0.0	
5								
6					100			
						SS-4	0/0.0	
7 / 2								
8			2.44					
		End of Borehole No Refusal						
9								
10 / 3								

Contractor: Strata Drilling Group

Drilling Method: Direct Push

Well Casing Size: NA

Note:
* Soil vapour concentrations measured using a RKI Eagle 2 equipped with a combustible gas indicator (CGI) and a photoionization detector (PID).

Grade Elevation: NM

Top of Casing Elevation: NA

Sheet: 1 of 1

Log of Borehole: BH-4

Project #: 229900.001 **Logged By:** MK

Project: Phase Two Environmental Site Assessment

Client: Huntington Construction & Development

Location: 2165 Robertson Road, Ottawa, Ontario

Drill Date: January 25, 2021

SUBSURFACE PROFILE					SAMPLE			
Depth (ft / m)	Symbol	Description	Measured Depth (m)	Monitoring Well Details	Recovery (%)	Sample ID	Soil Vapour Concentration* (ppm) CGI/PID	Laboratory Analysis
0 / 0		Ground Surface	0.00	No Monitoring Well Installed				
0 – 3 / 0 – 1		***Sand and Gravel Fill*** Brown, damp.	0.91		100	SS-1	0/0.0	PHCs, VOCs, PAHs, Metals
3 – 4 / 1 – 1.22		***Silty Clay*** Brown grey, damp.	1.22			SS-2	0/0.0	
4 / 1.22		End of Borehole No Refusal						

Contractor: Strata Drilling Group

Drilling Method: Direct Push

Well Casing Size: NA

Note:
* Soil vapour concentrations measured using a RKI Eagle 2 equipped with a combustible gas indicator (CGI) and a photoionization detector (PID).

Grade Elevation: NM

Top of Casing Elevation: NA

Sheet: 1 of 1

Log of Borehole: BH-5

Project #: 229900.001 **Logged By:** MK

Project: Phase Two Environmental Site Assessment

Client: Huntington Construction & Development

Location: 2165 Robertson Road, Ottawa, Ontario

Drill Date: January 25, 2021

SUBSURFACE PROFILE					SAMPLE			
Depth (ft / m)	Symbol	Description	Measured Depth (m)	Monitoring Well Details	Recovery (%)	Sample ID	Soil Vapour Concentration* (ppm) CGI/PID	Laboratory Analysis
0 / 0		Ground Surface	0.00	No Monitoring Well Installed				
0 – 3 / 0 – 1		***Sand and Gravel Fill*** Grey brown, damp.	0.91		100	SS-1	0/0.0	PHCs, VOCs, PAHs, Metals
3 – 4 / 1		***Silty Clay*** Dark grey, some gravels, damp, organic-like odour.	1.22			SS-2	0/0.0	
4 / 1		End of Borehole No Refusal						

Contractor: Strata Drilling Group

Drilling Method: Direct Push

Well Casing Size: NA

Note:
* Soil vapour concentrations measured using a RKI Eagle 2 equipped with a combustible gas indicator (CGI) and a photoionization detector (PID).

Grade Elevation: NM

Top of Casing Elevation: NA

Sheet: 1 of 1

Log of Borehole: BH-6

Project #: 229900.001 **Logged By:** MK

Project: Phase Two Environmental Site Assessment

Client: Huntington Construction & Development

Location: 2165 Robertson Road, Ottawa, Ontario

Drill Date: January 25, 2021

SUBSURFACE PROFILE					SAMPLE			
Depth (ft / m)	Symbol	Description	Measured Depth (m)	Monitoring Well Details	Recovery (%)	Sample ID	Soil Vapour Concentration* (ppm) CGI/PID	Laboratory Analysis
0 / 0		Ground Surface	0.00	No Monitoring Well Installed				
0 – 3 / 0 – 1		***Sand and Gravel Fill*** Brown, damp. Some clay and stone at 1.07 mbgs.	1.22		100	SS-1	0/0.0	
						SS-2	0/0.0	PHCs, VOCs, PAHs, Metals
4 / 1		End of Borehole No Refusal						
10 / 3								

Contractor: Strata Drilling Group

Drilling Method: Direct Push

Well Casing Size: NA

Note:
* Soil vapour concentrations measured using a RKI Eagle 2 equipped with a combustible gas indicator (CGI) and a photoionization detector (PID).

Grade Elevation: NM

Top of Casing Elevation: NA

Sheet: 1 of 1

Log of Borehole: BH-7

Project #: 229900.001 **Logged By:** MK

Project: Phase Two Environmental Site Assessment

Client: Huntington Construction & Development

Location: 2165 Robertson Road, Ottawa, Ontario

Drill Date: January 25, 2021

SUBSURFACE PROFILE					SAMPLE			
Depth (ft / m)	Symbol	Description	Measured Depth (m)	Monitoring Well Details	Recovery (%)	Sample ID	Soil Vapour Concentration* (ppm) CGI/PID	Laboratory Analysis
0 / 0		Ground Surface	0.00					
0 – 5 / 0 – 1		***Sand and Gravel Fill*** Brown, damp.		No Monitoring Well Installed	100	SS-1	0/0.0	
						SS-2	0/0.0	PHCs, VOCs, PAHs, Metals
						SS-3	0/0.0	
5 / 1		End of Borehole	1.52					
		Refusal on Boulder at 1.52 mbgs.						
10 / 3								

Contractor: Strata Drilling Group

Drilling Method: Direct Push

Well Casing Size: NA

Note:
* Soil vapour concentrations measured using a RKI Eagle 2 equipped with a combustible gas indicator (CGI) and a photoionization detector (PID).

Grade Elevation: NM

Top of Casing Elevation: NA

Sheet: 1 of 1

APPENDIX C

Laboratory Certificates of 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

Pinchin Ltd. (Ottawa)

1 Hines Road, Suite 200
Kanata, ON K2K 3C7
Attn: Michael Kosiw

Client PO:
Project: 229900.001
Custody: 130583

Report Date: 1-Feb-2021
Order Date: 26-Jan-2021

Order #: 2105174

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

Paracel ID	Client ID
2105174-01	BH-1 SS-1
2105174-02	BH-1 SS-2
2105174-03	BH-2 SS-1
2105174-04	BH-2 SS-4
2105174-05	BH-3 SS-2
2105174-06	Dup-1
2105174-07	BH-4 SS-1
2105174-08	BH-5 SS-1
2105174-09	BH-6 SS-2
2105174-10	BH-7 SS-2

Approved By:

Mark Foto, M.Sc.
Lab Supervisor

Certificate of Analysis

Report Date: 01-Feb-2021

Client: Pinchin Ltd. (Ottawa)

Order Date: 26-Jan-2021

Client PO:

Project Description: 229900.001

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
pH, soil	EPA 150.1 - pH probe @ 25 °C, CaCl buffered ext.	26-Jan-21	27-Jan-21
PHC F1	CWS Tier 1 - P&T GC-FID	27-Jan-21	27-Jan-21
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	26-Jan-21	28-Jan-21
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	28-Jan-21	28-Jan-21
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	26-Jan-21	29-Jan-21
REG 153: VOCs by P&T GC/MS	EPA 8260 - P&T GC-MS	27-Jan-21	27-Jan-21
Solids, %	Gravimetric, calculation	27-Jan-21	27-Jan-21
Texture - Coarse Med/Fine	Based on ASTM D2487	28-Jan-21	28-Jan-21

Certificate of Analysis

Client: **Pinchin Ltd. (Ottawa)**

Client PO:

Report Date: 01-Feb-2021

Order Date: 26-Jan-2021

Project Description: 229900.001

	Client ID:	BH-1 SS-1	BH-1 SS-2	BH-2 SS-1	BH-2 SS-4
	Sample Date:	25-Jan-21 09:00	25-Jan-21 09:00	25-Jan-21 09:00	25-Jan-21 09:00
	Sample ID:	2105174-01	2105174-02	2105174-03	2105174-04
	MDL/Units	Soil	Soil	Soil	Soil
Physical Characteristics					
% Solids	0.1 % by Wt.	89.6	-	77.5	-
>75 um	0.1 %	-	45.1	-	4.6
<75 um	0.1 %	-	54.9	-	95.4
Texture	0.1 %	-	Med/Fine	-	Med/Fine
General Inorganics					
pH	0.05 pH Units	-	7.13	-	7.28
Metals					
Antimony	1.0 ug/g dry	<1.0	-	<1.0	-
Arsenic	1.0 ug/g dry	2.8	-	1.6	-
Barium	1.0 ug/g dry	112	-	40.0	-
Beryllium	0.5 ug/g dry	<0.5	-	<0.5	-
Boron	5.0 ug/g dry	8.0	-	<5.0	-
Cadmium	0.5 ug/g dry	<0.5	-	<0.5	-
Chromium	5.0 ug/g dry	14.7	-	21.0	-
Cobalt	1.0 ug/g dry	3.0	-	4.6	-
Copper	5.0 ug/g dry	10.0	-	5.4	-
Lead	1.0 ug/g dry	9.2	-	3.0	-
Molybdenum	1.0 ug/g dry	<1.0	-	<1.0	-
Nickel	5.0 ug/g dry	8.6	-	11.3	-
Selenium	1.0 ug/g dry	<1.0	-	<1.0	-
Silver	0.3 ug/g dry	0.4	-	<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	<10.0	-	33.0	-
Zinc	20.0 ug/g dry	<20.0	-	24.8	-
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	-
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	-

Certificate of Analysis

Client: **Pinchin Ltd. (Ottawa)**

Client PO:

Report Date: 01-Feb-2021

Order Date: 26-Jan-2021

Project Description: 229900.001

	Client ID:	BH-1 SS-1	BH-1 SS-2	BH-2 SS-1	BH-2 SS-4
	Sample Date:	25-Jan-21 09:00	25-Jan-21 09:00	25-Jan-21 09:00	25-Jan-21 09:00
	Sample ID:	2105174-01	2105174-02	2105174-03	2105174-04
	MDL/Units	Soil	Soil	Soil	Soil
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	0.08	-	<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	0.13	-	<0.05	-
o-Xylene	0.05 ug/g dry	<0.05	-	<0.05	-
Xylenes, total	0.05 ug/g dry	0.13	-	<0.05	-
4-Bromofluorobenzene	Surrogate	99.9%	-	96.1%	-
Dibromofluoromethane	Surrogate	92.2%	-	92.1%	-
Toluene-d8	Surrogate	105%	-	106%	-

Certificate of Analysis

Client: **Pinchin Ltd. (Ottawa)**

Client PO:

Report Date: 01-Feb-2021

Order Date: 26-Jan-2021

Project Description: 229900.001

	Client ID:	BH-1 SS-1	BH-1 SS-2	BH-2 SS-1	BH-2 SS-4
	Sample Date:	25-Jan-21 09:00	25-Jan-21 09:00	25-Jan-21 09:00	25-Jan-21 09:00
	Sample ID:	2105174-01	2105174-02	2105174-03	2105174-04
	MDL/Units	Soil	Soil	Soil	Soil
Hydrocarbons					
F1 PHCs (C6-C10)	7 ug/g dry	<7	-	<7	-
F2 PHCs (C10-C16)	4 ug/g dry	13	-	<4	-
F3 PHCs (C16-C34)	8 ug/g dry	25	-	<8	-
F4 PHCs (C34-C50)	6 ug/g dry	12	-	<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	81.1%	-	65.0%	-
Terphenyl-d14	Surrogate	108%	-	99.1%	-

Certificate of Analysis

Client: **Pinchin Ltd. (Ottawa)**

Client PO:

Report Date: 01-Feb-2021

Order Date: 26-Jan-2021

Project Description: 229900.001

	Client ID:	BH-3 SS-2	Dup-1	BH-4 SS-1	BH-5 SS-1
	Sample Date:	25-Jan-21 09:00	25-Jan-21 09:00	25-Jan-21 09:00	25-Jan-21 12:00
	Sample ID:	2105174-05	2105174-06	2105174-07	2105174-08
	MDL/Units	Soil	Soil	Soil	Soil
Physical Characteristics					
% Solids	0.1 % by Wt.	82.3	84.6	85.9	92.8
Metals					
Antimony	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Arsenic	1.0 ug/g dry	1.6	1.4	1.6	4.3
Barium	1.0 ug/g dry	54.2	41.0	87.2	99.8
Beryllium	0.5 ug/g dry	<0.5	<0.5	<0.5	<0.5
Boron	5.0 ug/g dry	<5.0	<5.0	5.1	9.1
Cadmium	0.5 ug/g dry	<0.5	<0.5	<0.5	<0.5
Chromium	5.0 ug/g dry	20.7	17.8	16.1	14.3
Cobalt	1.0 ug/g dry	4.9	4.4	5.4	4.3
Copper	5.0 ug/g dry	6.7	5.6	11.2	14.9
Lead	1.0 ug/g dry	3.8	3.0	5.0	7.7
Molybdenum	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Nickel	5.0 ug/g dry	11.2	10.0	11.3	9.6
Selenium	1.0 ug/g dry	<1.0	<1.0	<1.0	<1.0
Silver	0.3 ug/g dry	<0.3	<0.3	1.6	2.3
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	31.0	29.0	19.1	13.6
Zinc	20.0 ug/g dry	28.3	21.1	<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
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

Certificate of Analysis

Client: **Pinchin Ltd. (Ottawa)**

Client PO:

Report Date: 01-Feb-2021

Order Date: 26-Jan-2021

Project Description: 229900.001

	Client ID:	BH-3 SS-2	Dup-1	BH-4 SS-1	BH-5 SS-1
	Sample Date:	25-Jan-21 09:00	25-Jan-21 09:00	25-Jan-21 09:00	25-Jan-21 12:00
	Sample ID:	2105174-05	2105174-06	2105174-07	2105174-08
	MDL/Units	Soil	Soil	Soil	Soil
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
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	0.06	<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	0.06	<0.05
4-Bromofluorobenzene	Surrogate	98.7%	99.3%	100%	101%
Dibromofluoromethane	Surrogate	91.7%	93.8%	93.2%	92.0%
Toluene-d8	Surrogate	106%	106%	107%	107%
Hydrocarbons					
F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	<7	<7
F2 PHCs (C10-C16)	4 ug/g dry	<4	<4	13	<4
F3 PHCs (C16-C34)	8 ug/g dry	<8	<8	25	30

Certificate of Analysis

Client: Pinchin Ltd. (Ottawa)

Client PO:

Report Date: 01-Feb-2021

Order Date: 26-Jan-2021

Project Description: 229900.001

	Client ID:	BH-3 SS-2	Dup-1	BH-4 SS-1	BH-5 SS-1
	Sample Date:	25-Jan-21 09:00	25-Jan-21 09:00	25-Jan-21 09:00	25-Jan-21 12:00
	Sample ID:	2105174-05	2105174-06	2105174-07	2105174-08
	MDL/Units	Soil	Soil	Soil	Soil
F4 PHCs (C34-C50)	6 ug/g dry	<6	<6	9	13
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	<0.02	<0.02	<0.02	<0.02
2-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	<0.02	<0.02
Methylnaphthalene (1&2)	0.04 ug/g dry	<0.04	<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	70.3%	63.3%	83.3%	81.3%
Terphenyl-d14	Surrogate	108%	89.8%	114%	111%

Certificate of Analysis

Client: **Pinchin Ltd. (Ottawa)**

Client PO:

Report Date: 01-Feb-2021

Order Date: 26-Jan-2021

Project Description: 229900.001

	Client ID:	BH-6 SS-2	BH-7 SS-2	-	-
	Sample Date:	25-Jan-21 12:00	25-Jan-21 12:00	-	-
	Sample ID:	2105174-09	2105174-10	-	-
	MDL/Units	Soil	Soil	-	-
Physical Characteristics					
% Solids	0.1 % by Wt.	86.1	95.1	-	-
Metals					
Antimony	1.0 ug/g dry	<1.0	<1.0	-	-
Arsenic	1.0 ug/g dry	2.7	2.6	-	-
Barium	1.0 ug/g dry	101	54.3	-	-
Beryllium	0.5 ug/g dry	0.5	<0.5	-	-
Boron	5.0 ug/g dry	5.2	6.8	-	-
Cadmium	0.5 ug/g dry	<0.5	<0.5	-	-
Chromium	5.0 ug/g dry	31.1	17.3	-	-
Cobalt	1.0 ug/g dry	6.8	5.0	-	-
Copper	5.0 ug/g dry	13.8	11.2	-	-
Lead	1.0 ug/g dry	10.9	3.9	-	-
Molybdenum	1.0 ug/g dry	<1.0	<1.0	-	-
Nickel	5.0 ug/g dry	15.4	10.4	-	-
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	39.3	21.4	-	-
Zinc	20.0 ug/g dry	46.1	<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	-	-
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	-	-

Certificate of Analysis

Client: **Pinchin Ltd. (Ottawa)**

Client PO:

Report Date: 01-Feb-2021

Order Date: 26-Jan-2021

Project Description: 229900.001

	Client ID:	BH-6 SS-2	BH-7 SS-2	-	-
	Sample Date:	25-Jan-21 12:00	25-Jan-21 12:00	-	-
	Sample ID:	2105174-09	2105174-10	-	-
	MDL/Units	Soil	Soil	-	-
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	-	-
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	97.9%	102%	-	-
Dibromofluoromethane	Surrogate	92.0%	92.3%	-	-
Toluene-d8	Surrogate	104%	105%	-	-
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	13	<8	-	-

Certificate of Analysis

Client: **Pinchin Ltd. (Ottawa)**

Client PO:

Report Date: 01-Feb-2021

Order Date: 26-Jan-2021

Project Description: 229900.001

	Client ID:	BH-6 SS-2	BH-7 SS-2	-	-
	Sample Date:	25-Jan-21 12:00	25-Jan-21 12:00	-	-
	Sample ID:	2105174-09	2105174-10	-	-
	MDL/Units	Soil	Soil	-	-
F4 PHCs (C34-C50)	6 ug/g dry	62	<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	87.5%	83.5%	-	-
Terphenyl-d14	Surrogate	123%	105%	-	-

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						
Metals									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
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	*0.990*		*ug/g*		*74.2*	*50-140*			
Surrogate: Terphenyl-d14	*1.31*		*ug/g*		*98.5*	*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						

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
1,4-Dichlorobenzene	ND	0.05	ug/g						
1,1-Dichloroethane	ND	0.05	ug/g						
1,2-Dichloroethane	ND	0.05	ug/g						
1,1-Dichloroethylene	ND	0.05	ug/g						
cis-1,2-Dichloroethylene	ND	0.05	ug/g						
trans-1,2-Dichloroethylene	ND	0.05	ug/g						
1,2-Dichloropropane	ND	0.05	ug/g						
cis-1,3-Dichloropropylene	ND	0.05	ug/g						
trans-1,3-Dichloropropylene	ND	0.05	ug/g						
1,3-Dichloropropene, total	ND	0.05	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Ethylene dibromide (dibromoethane, 1,2	ND	0.05	ug/g						
Hexane	ND	0.05	ug/g						
Methyl Ethyl Ketone (2-Butanone)	ND	0.50	ug/g						
Methyl Isobutyl Ketone	ND	0.50	ug/g						
Methyl tert-butyl ether	ND	0.05	ug/g						
Methylene Chloride	ND	0.05	ug/g						
Styrene	ND	0.05	ug/g						
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g						
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g						
Tetrachloroethylene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
1,1,1-Trichloroethane	ND	0.05	ug/g						
1,1,2-Trichloroethane	ND	0.05	ug/g						
Trichloroethylene	ND	0.05	ug/g						
Trichlorofluoromethane	ND	0.05	ug/g						
Vinyl chloride	ND	0.02	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: 4-Bromofluorobenzene	*7.71*		*ug/g*		*96.4*	*50-140*			
Surrogate: Dibromofluoromethane	*7.09*		*ug/g*		*88.7*	*50-140*			
Surrogate: Toluene-d8	*8.30*		*ug/g*		*104*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
pH	7.45	0.05	pH Units	7.46			0.1	2.3	
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g dry	ND			NC	30	
F3 PHCs (C16-C34)	ND	8	ug/g dry	ND			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g dry	ND			NC	30	
Metals									
Antimony	ND	1.0	ug/g dry	ND			NC	30	
Arsenic	1.5	1.0	ug/g dry	1.4			11.5	30	
Barium	10.2	1.0	ug/g dry	9.8			4.3	30	
Beryllium	ND	0.5	ug/g dry	ND			NC	30	
Boron	ND	5.0	ug/g dry	ND			NC	30	
Cadmium	ND	0.5	ug/g dry	ND			NC	30	
Chromium	5.9	5.0	ug/g dry	5.2			11.7	30	
Cobalt	2.0	1.0	ug/g dry	1.8			9.8	30	
Copper	ND	5.0	ug/g dry	ND			NC	30	
Lead	3.0	1.0	ug/g dry	2.8			5.3	30	
Molybdenum	ND	1.0	ug/g dry	ND			NC	30	
Nickel	5.5	5.0	ug/g dry	ND			NC	30	
Selenium	ND	1.0	ug/g dry	ND			NC	30	
Silver	ND	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	13.9	10.0	ug/g dry	12.3			12.3	30	
Zinc	ND	20.0	ug/g dry	ND			NC	30	
Physical Characteristics									
% Solids	92.6	0.1	% by Wt.	93.5			1.0	25	
Semi-Volatiles									
Acenaphthene	ND	0.02	ug/g dry	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g dry	ND			NC	40	
Anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [a] pyrene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [b] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [g,h,i] perylene	ND	0.02	ug/g dry	ND			NC	40	
Benzo [k] fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Chrysene	ND	0.02	ug/g dry	ND			NC	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g dry	ND			NC	40	
Fluoranthene	ND	0.02	ug/g dry	ND			NC	40	
Fluorene	ND	0.02	ug/g dry	ND			NC	40	
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g dry	ND			NC	40	
1-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g dry	ND			NC	40	
Naphthalene	ND	0.01	ug/g dry	ND			NC	40	
Phenanthrene	ND	0.02	ug/g dry	ND			NC	40	
Pyrene	ND	0.02	ug/g dry	ND			NC	40	
Surrogate: 2-Fluorobiphenyl	*1.06*		*ug/g dry*		*73.5*	*50-140*			
Surrogate: Terphenyl-d14	*1.48*		*ug/g dry*		*103*	*50-140*			
Volatiles									
Acetone	ND	0.50	ug/g dry	ND			NC	50	
Benzene	ND	0.02	ug/g dry	ND			NC	50	
Bromodichloromethane	ND	0.05	ug/g dry	ND			NC	50	
Bromoform	ND	0.05	ug/g dry	ND			NC	50	
Bromomethane	ND	0.05	ug/g dry	ND			NC	50	
Carbon Tetrachloride	ND	0.05	ug/g dry	ND			NC	50	

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Chlorobenzene	ND	0.05	ug/g dry	ND			NC	50	
Chloroform	ND	0.05	ug/g dry	ND			NC	50	
Dibromochloromethane	ND	0.05	ug/g dry	ND			NC	50	
Dichlorodifluoromethane	ND	0.05	ug/g dry	ND			NC	50	
1,2-Dichlorobenzene	ND	0.05	ug/g dry	ND			NC	50	
1,3-Dichlorobenzene	ND	0.05	ug/g dry	ND			NC	50	
1,4-Dichlorobenzene	ND	0.05	ug/g dry	ND			NC	50	
1,1-Dichloroethane	ND	0.05	ug/g dry	ND			NC	50	
1,2-Dichloroethane	ND	0.05	ug/g dry	ND			NC	50	
1,1-Dichloroethylene	ND	0.05	ug/g dry	ND			NC	50	
cis-1,2-Dichloroethylene	ND	0.05	ug/g dry	ND			NC	50	
trans-1,2-Dichloroethylene	ND	0.05	ug/g dry	ND			NC	50	
1,2-Dichloropropane	ND	0.05	ug/g dry	ND			NC	50	
cis-1,3-Dichloropropylene	ND	0.05	ug/g dry	ND			NC	50	
trans-1,3-Dichloropropylene	ND	0.05	ug/g dry	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g dry	ND			NC	50	
Ethylene dibromide (dibromoethane, 1,2-	ND	0.05	ug/g dry	ND			NC	50	
Hexane	ND	0.05	ug/g dry	ND			NC	50	
Methyl Ethyl Ketone (2-Butanone)	ND	0.50	ug/g dry	ND			NC	50	
Methyl Isobutyl Ketone	ND	0.50	ug/g dry	ND			NC	50	
Methyl tert-butyl ether	ND	0.05	ug/g dry	ND			NC	50	
Methylene Chloride	ND	0.05	ug/g dry	ND			NC	50	
Styrene	ND	0.05	ug/g dry	ND			NC	50	
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g dry	ND			NC	50	
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g dry	ND			NC	50	
Tetrachloroethylene	ND	0.05	ug/g dry	ND			NC	50	
Toluene	ND	0.05	ug/g dry	ND			NC	50	
1,1,1-Trichloroethane	ND	0.05	ug/g dry	ND			NC	50	
1,1,2-Trichloroethane	ND	0.05	ug/g dry	ND			NC	50	
Trichloroethylene	ND	0.05	ug/g dry	ND			NC	50	
Trichlorofluoromethane	ND	0.05	ug/g dry	ND			NC	50	
Vinyl chloride	ND	0.02	ug/g dry	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND			NC	50	
o-Xylene	ND	0.05	ug/g dry	ND			NC	50	
Surrogate: 4-Bromofluorobenzene	*10.2*		*ug/g dry*		*99.1*	*50-140*			
Surrogate: Dibromofluoromethane	*9.74*		*ug/g dry*		*94.3*	*50-140*			
Surrogate: Toluene-d8	*11.0*		*ug/g dry*		*107*	*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)	214	7	ug/g	ND	107	80-120			
F2 PHCs (C10-C16)	92	4	ug/g	ND	90.2	60-140			
F3 PHCs (C16-C34)	277	8	ug/g	ND	111	60-140			
F4 PHCs (C34-C50)	178	6	ug/g	ND	113	60-140			
Metals									
Antimony	43.4	1.0	ug/g	ND	86.8	70-130			
Arsenic	50.9	1.0	ug/g	ND	101	70-130			
Barium	53.5	1.0	ug/g	3.9	99.1	70-130			
Beryllium	48.3	0.5	ug/g	ND	96.5	70-130			
Boron	45.2	5.0	ug/g	ND	88.9	70-130			
Cadmium	48.3	0.5	ug/g	ND	96.5	70-130			
Chromium	52.4	5.0	ug/g	ND	101	70-130			
Cobalt	49.7	1.0	ug/g	ND	98.0	70-130			
Copper	48.9	5.0	ug/g	ND	94.9	70-130			
Lead	47.3	1.0	ug/g	1.1	92.2	70-130			
Molybdenum	50.8	1.0	ug/g	ND	101	70-130			
Nickel	50.0	5.0	ug/g	ND	96.4	70-130			
Selenium	45.1	1.0	ug/g	ND	90.1	70-130			
Silver	43.2	0.3	ug/g	ND	86.4	70-130			
Thallium	48.3	1.0	ug/g	ND	96.6	70-130			
Uranium	49.9	1.0	ug/g	ND	99.7	70-130			
Vanadium	55.1	10.0	ug/g	ND	100	70-130			
Zinc	50.7	20.0	ug/g	ND	93.2	70-130			
Semi-Volatiles									
Acenaphthene	0.127	0.02	ug/g	ND	70.3	50-140			
Acenaphthylene	0.109	0.02	ug/g	ND	60.7	50-140			
Anthracene	0.125	0.02	ug/g	ND	69.4	50-140			
Benzo [a] anthracene	0.108	0.02	ug/g	ND	59.9	50-140			
Benzo [a] pyrene	0.114	0.02	ug/g	ND	63.5	50-140			
Benzo [b] fluoranthene	0.135	0.02	ug/g	ND	75.1	50-140			
Benzo [g,h,i] perylene	0.122	0.02	ug/g	ND	67.6	50-140			
Benzo [k] fluoranthene	0.125	0.02	ug/g	ND	69.4	50-140			
Chrysene	0.121	0.02	ug/g	ND	67.4	50-140			
Dibenzo [a,h] anthracene	0.137	0.02	ug/g	ND	75.8	50-140			
Fluoranthene	0.123	0.02	ug/g	ND	68.5	50-140			
Fluorene	0.119	0.02	ug/g	ND	65.8	50-140			
Indeno [1,2,3-cd] pyrene	0.129	0.02	ug/g	ND	71.7	50-140			
1-Methylnaphthalene	0.107	0.02	ug/g	ND	59.6	50-140			
2-Methylnaphthalene	0.119	0.02	ug/g	ND	66.3	50-140			
Naphthalene	0.133	0.01	ug/g	ND	73.9	50-140			
Phenanthrene	0.125	0.02	ug/g	ND	69.2	50-140			
Pyrene	0.123	0.02	ug/g	ND	68.4	50-140			
Surrogate: 2-Fluorobiphenyl	*1.05*		*ug/g*		*72.9*	*50-140*			
Surrogate: Terphenyl-d14	*1.50*		*ug/g*		*104*	*50-140*			
Volatiles									
Acetone	9.25	0.50	ug/g	ND	92.5	50-140			
Benzene	3.36	0.02	ug/g	ND	84.0	60-130			
Bromodichloromethane	3.84	0.05	ug/g	ND	96.0	60-130			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Bromoform	3.10	0.05	ug/g	ND	77.6	60-130			
Bromomethane	3.71	0.05	ug/g	ND	92.8	50-140			
Carbon Tetrachloride	3.50	0.05	ug/g	ND	87.5	60-130			
Chlorobenzene	3.64	0.05	ug/g	ND	91.0	60-130			
Chloroform	3.70	0.05	ug/g	ND	92.6	60-130			
Dibromochloromethane	3.60	0.05	ug/g	ND	90.1	60-130			
Dichlorodifluoromethane	4.95	0.05	ug/g	ND	124	50-140			
1,2-Dichlorobenzene	3.76	0.05	ug/g	ND	93.9	60-130			
1,3-Dichlorobenzene	3.87	0.05	ug/g	ND	96.6	60-130			
1,4-Dichlorobenzene	3.87	0.05	ug/g	ND	96.8	60-130			
1,1-Dichloroethane	3.54	0.05	ug/g	ND	88.6	60-130			
1,2-Dichloroethane	3.41	0.05	ug/g	ND	85.1	60-130			
1,1-Dichloroethylene	3.68	0.05	ug/g	ND	92.1	60-130			
cis-1,2-Dichloroethylene	3.48	0.05	ug/g	ND	87.0	60-130			
trans-1,2-Dichloroethylene	3.63	0.05	ug/g	ND	90.8	60-130			
1,2-Dichloropropane	3.39	0.05	ug/g	ND	84.6	60-130			
cis-1,3-Dichloropropylene	3.47	0.05	ug/g	ND	86.7	60-130			
trans-1,3-Dichloropropylene	3.22	0.05	ug/g	ND	80.5	60-130			
Ethylbenzene	4.12	0.05	ug/g	ND	103	60-130			
Ethylene dibromide (dibromoethane, 1,2-	3.85	0.05	ug/g	ND	96.2	60-130			
Hexane	3.51	0.05	ug/g	ND	87.8	60-130			
Methyl Ethyl Ketone (2-Butanone)	8.38	0.50	ug/g	ND	83.8	50-140			
Methyl Isobutyl Ketone	7.39	0.50	ug/g	ND	73.9	50-140			
Methyl tert-butyl ether	8.60	0.05	ug/g	ND	86.0	50-140			
Methylene Chloride	3.35	0.05	ug/g	ND	83.7	60-130			
Styrene	3.77	0.05	ug/g	ND	94.2	60-130			
1,1,1,2-Tetrachloroethane	3.82	0.05	ug/g	ND	95.5	60-130			
1,1,2,2-Tetrachloroethane	3.27	0.05	ug/g	ND	81.7	60-130			
Tetrachloroethylene	3.96	0.05	ug/g	ND	99.1	60-130			
Toluene	3.93	0.05	ug/g	ND	98.3	60-130			
1,1,1-Trichloroethane	3.67	0.05	ug/g	ND	91.7	60-130			
1,1,2-Trichloroethane	3.48	0.05	ug/g	ND	87.0	60-130			
Trichloroethylene	4.00	0.05	ug/g	ND	100	60-130			
Trichlorofluoromethane	4.04	0.05	ug/g	ND	101	50-140			
Vinyl chloride	3.79	0.02	ug/g	ND	94.8	50-140			
m,p-Xylenes	7.51	0.05	ug/g	ND	93.8	60-130			
o-Xylene	3.71	0.05	ug/g	ND	92.9	60-130			
Surrogate: 4-Bromofluorobenzene	*7.80*		*ug/g*		*97.5*	*50-140*			
Surrogate: Dibromofluoromethane	*8.40*		*ug/g*		*105*	*50-140*			
Surrogate: Toluene-d8	*8.00*		*ug/g*		*100*	*50-140*			

Qualifier Notes:

Login Qualifiers :

Container and COC sample IDs don't match - Sample Jar labelled as BH-3 SS-2 while the lid is labelled Dup-1, coc reads BH-3 SS-2

Applies to samples: BH-3 SS-2

Container and COC sample IDs don't match - Sample Jar labelled as Dup-1 while the lid is labelled BH-3 SS-2, coc reads Dup 1

Applies to samples: Dup-1

Sample not received in Paracel verified container / media

Applies to samples: BH-1 SS-2, BH-2 SS-4

Sample Qualifiers :

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 LABORATORIE

Paracel ID: 2105174

aurent Blvd.
o K1G 4J8
947
acellabs.com
abs.com

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2105174	№ 130583

Client Name: Pinchin Ltd	Project Ref: 229900.001		Page 1 of 1
Contact Name: M. Kosiw M. Ryan	Quote #:		Turnaround Time
Address: 1 Hines Rd, Kanata, ON	PO #:		☐ 1 day ☐ 3 day
	E-mail: mkosiw } @pinchin.com / mryan }		☐ 2 day ☒ Regular
Telephone:			Date Required:

Regulation 153/04	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)

Required Analysis

#	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Date	Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	pH	Texture (Kim)					
1	BH-1 SS-1	S		2	Jan 25 2021	AM	X	X	X	X										✓
2	BH-1 SS-2			1										X	X					✓
3	BH-2 SS-1			2			X	X	X	X				[scribbled out]	[scribbled out]					✓
4	BH-2 SS-4			1										X	X					✓
5 ✓	BH-3 SS-2			2			X	X	X	X										✓
6 ✓	Dup-1						X	X	X	X										✓
7	BH-4 SS-1						X	X	X	X										✓
8	BH-5 SS-1					PM	X	X	X	X										✓
9	BH-6 SS-2						X	X	X	X										✓
10	BH-7 SS-2	↓		↓	↓	↓	X	X	X	X										✓

Comments: VOC meth vials blurry but ledgible please contact if required to confirm

Method of Delivery: PARACEL COURIER

Relinquished By (Sign): [signature]	Received By Driver/Depot: T. Proulx	Received at Lab: Smeepavm Dokmai	Verified By: [signature]
Relinquished By (Print): Mike Kosiw	Date/Time: 26/01/21 12:30	Date/Time: Jan 26, 2021 01:32	Date/Time: Jan 26 2021 1406
Date/Time: Jan 26, 2021 11:00AM	Temperature: °C PR	Temperature: 5.2 °C	pH Verified: ☐ By: