Phase Two Environmental Site Assessment

15 Oblats Avenue
Ottawa, Ontario

Prepared for:

Forum/SLP LP
226 Argyle Avenue
Ottawa, ON K2P 1B9

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1.0 EXECUTIVE SUMMARY

Pinchin Ltd. (Pinchin) was retained by Forum/SLP LP (Client), to complete a Phase Two Environmental Site Assessment (Phase Two ESA) of the property located at 15 Oblats Avenue in Ottawa, Ontario (hereafter referred to as the Site or Phase Two Property). The Phase Two Property is presently developed with a three-storey multi-tenant residential/community building (Site Building) and that the Client intends to retrofit the Site Building with residential units.

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 retrofit the current residential/community building with residential units.

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 redevelopment (retrofit) of the Phase Two Property. It is Pinchin's understanding that the Phase Two Property will be developed for residential 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 residential.

The objectives of this Phase Two ESA were to assess the soil and groundwater quality in relation to two 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 Phase Two ESA was completed by Pinchin on January 27, 2021 and included the advancement of six boreholes at the Phase Two Property. The boreholes were advanced to depths ranging from approximately 4.6 to 6.1 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/or 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 residential/parkland/institutional.

The laboratory results for the submitted soil samples indicated that all reported concentrations for the parameters analyzed met the corresponding *Table 3 Standards*, except for the following:

- The concentrations of benzo[a]anthracene (1.31 micrograms per gram (µg/g) vs. the *Table 3 Standard* of 0.63 µg/g), benzo[a]pyrene (1.31 µg/g vs. the *Table 3 Standard* of 0.3 µg/g), benzo[b]fluoranthene (1.32 µg/g vs. the *Table 3 Standard* of 0.78 µg/g), dibenzo[a,h]anthracene (0.2 µg/g vs. the *Table 3 Standard* of 0.1 µg/g), fluoranthene (3.7 µg/g vs. the *Table 3 Standard* of 0.69 µg/g) and indeno[1,2,3-cd]pyrene (0.66 µg/g vs. the *Table 3 Standard* of 0.48 µg/g), reported for soil sample BH-1, SS-2, collected at borehole BH-1 from a depth of 0.8 to 1.5 mbgs, exceeded the *Table 3 Standards*;
- The concentrations of barium (415 µg/g vs. the *Table 3 Standard* of 390 µg/g), cobalt (24.8 µg/g vs. the *Table 3 Standard* of 22 µg/g) and vanadium (119 µg/g vs. the *Table 3 Standard* of 86 µg/g), reported for soil sample BH-1, SS-4, collected at borehole BH-1 from a depth of 2.3 to 3.1 mbgs, exceeded the *Table 3 Standards*;
- The concentrations of acenaphthylene (0.84 µg/g vs. the *Table 3 Standard* of 0.17 µg/g), anthracene (4.94 µg/g vs. the *Table 3 Standard* of 0.74 µg/g), benzo[a]anthracene (9.61 µg/g vs. the *Table 3 Standard* of 0.63 µg/g), benzo[a]pyrene (9.85 µg/g vs. the *Table 3 Standard* of 0.3 µg/g), benzo[b]fluoranthene (8.69 µg/g vs. the *Table 3 Standard* of 0.78 µg/g), benzo[k]fluoranthene (5.03 µg/g vs. the *Table 3 Standard* of 0.78 µg/g), chrysene (11 µg/g vs. the *Table 3 Standard* of 7.8 µg/g), dibenzo[a,h]anthracene (0.76 µg/g vs. the *Table 3 Standard* of 0.1 µg/g), fluoranthene (23.9 µg/g vs. the *Table 3 Standard* of 0.69 µg/g), indeno[1,2,3-cd]pyrene (4.62 µg/g vs. the *Table 3 Standard* of 0.48 µg/g), phenanthrene (19.2 µg/g vs. the *Table 3 Standard* of 7.8 µg/g) reported for soil sample BH-2, SS-2, collected at borehole BH-2 from a depth of 0.8 to 1.5 mbgs, exceeded the *Table 3 Standards*;
- The concentrations of acenaphthylene (0.61 µg/g vs. the *Table 3 Standard* of 0.17 µg/g), anthracene (4.72 µg/g vs. the *Table 3 Standard* of 0.74 µg/g), benzo[a]anthracene (5.21 µg/g vs. the *Table 3 Standard* of 0.63 µg/g), benzo[a]pyrene (4.99 µg/g vs. the *Table 3 Standard* of 0.3 µg/g), benzo[b]fluoranthene (5.02 µg/g vs. the *Table 3 Standard* of 0.78 µg/g), benzo[k]fluoranthene (2.5 µg/g vs. the *Table 3 Standard* of 0.78 µg/g), dibenzo[a,h]anthracene (0.74 µg/g vs. the *Table 3 Standard* of 0.1 µg/g), fluoranthene (16.5 µg/g vs. the *Table 3 Standard* of 0.69 µg/g), indeno[1,2,3-cd]pyrene (2.53 µg/g vs. the *Table 3 Standard* of 0.48 µg/g), naphthalene (3.22 µg/g vs. the *Table 3 Standard* of 0.75 µg/g), phenanthrene (20 µg/g vs. the *Table 3 Standard* of 7.8 µg/g) reported for soil sample DUP, collected at borehole BH-2, SS-2 from a depth of 0.8 to 1.5 mbgs, exceeded the *Table 3 Standards*;

- The concentrations of benzo[a]anthracene (1.27 µg/g vs. the *Table 3 Standard* of 0.63 µg/g), benzo[a]pyrene (1.33 µg/g vs. the *Table 3 Standard* of 0.3 µg/g), benzo[b]fluoranthene (1.06 µg/g vs. the *Table 3 Standard* of 0.78 µg/g), dibenzo[a,h]anthracene (0.16 µg/g vs. the *Table 3 Standard* of 0.1 µg/g), fluoranthene (3.03 µg/g vs. the *Table 3 Standard* of 0.69 µg/g), indeno[1,2,3-cd]pyrene (0.51 µg/g vs. the *Table 3 Standard* of 0.48 µg/g) reported for soil sample BH-2, SS-4, collected at borehole BH-2 from a depth of 2.3 to 3.1 mbgs, exceeded the *Table 3 Standards*;
- The concentrations of benzo[a]anthracene (0.94 µg/g vs. the *Table 3 Standard* of 0.63 µg/g), benzo[a]pyrene (0.86 µg/g vs. the *Table 3 Standard* of 0.3 µg/g), benzo[b]fluoranthene (0.92 µg/g vs. the *Table 3 Standard* of 0.78 µg/g), dibenzo[a,h]anthracene (0.13 µg/g vs. the *Table 3 Standard* of 0.1 µg/g), fluoranthene (2.55 µg/g vs. the *Table 3 Standard* of 0.69 µg/g) reported for soil sample BH-6, SS-1, collected at borehole BH-6 from a depth of 0.0 to 0.8 mbgs, exceeded the *Table 3 Standards*; and
- The concentrations of cobalt (22.7 µg/g vs. the *Table 3 Standard* of 22 µg/g) and vanadium (97.9 µg/g vs. the *Table 3 Standard* of 86 µg/g), reported for soil sample BH-6, SS-4, collected at borehole BH-6 from a depth of 2.3 to 3.1 mbgs, exceeded the *Table 3 Standards*.

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

The findings of this Phase Two ESA identified PAH and/or metals exceedances in boreholes BH-1, BH-2 and BH-6, which is likely attributed to fill material imported to the Site during the initial Site development. It is Pinchin's opinion that given the nature of the impacts with respect to limited migration behaviours and relative absence of volatilization, the reported soil impacts would not likely represent a significant environmental concern to on-going Site operations and/or future occupancy. If any future site redevelopment activities occur at the Site, the impacted fill material should be addressed at that time.

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 and standards specified in a Risk Assessment for contaminants on, in or under the Phase Two Property were met as of the certification date by developing an understanding of the geological and hydrogeological 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 One ESA 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 relation to the future redevelopment of the Phase Two Property. A Site Plan Approval (SPA) submittal to the City of Ottawa is a mandatory requirement when redevelopment is planned.

The overall objectives of this Phase Two ESA were to assess the soil and groundwater quality in relation to APECs and 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*, *15 Oblats Avenue, Ottawa, Ontario*", completed by Pinchin for the Client and dated December 23, 2020. 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, 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 15 and 17 Oblats Avenue and 96 Springhurst Avenue, Ottawa, Ontario. The Phase Two Property is 6,774 m^2 (1.68 acres) in size and is located on the north side of Oblats Avenue, located approximately 100 m east of the intersection of Main Street and Oblats Avenue. 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).

The Phase Two Property is developed with a four-storey vacant building (Site Building).

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

Detail	Source/Reference	Information
Legal Description	Legal Survey Drawing provided by Client	Block A, Lots 1 to 6, Lots 20, 21 and 22, Registered Plan 243 and Lot 91 and the Rear Passage and Lost 165 to 168 Registered Plan 110574 and Part of Lot H Concession D, Geographic Township of Nepean, City of Ottawa
Municipal Address	Client	15 and 17 Oblats Avenue and 96 Springhurst Avenue, Ottawa, Ontario, K1S 0E6
Parcel Identification Number (PIN)	Legal Survey Drawing provided by the Client	04203-0043
Current Owner	Site Representative	Smart Living Properties
Owner Contact Information	Client	Jeremy Silburt c/o Forum/SLP LP 226 Argyle Avenue Ottawa, ON K2P 1B9 Phone: 613-880-5491 jeremy@smartlivingproperties.com
Current Occupant	Client	Vacant
Client	Authorization to Proceed Form for Pinchin Proposal	Forum/SLP LP
Site Area	http://maps.ottawa.ca/geoottawa/ City of Ottawa	6,774 m^2 (1.68 acres)
Current Zoning	http://maps.ottawa.ca/geoottawa/ City of Ottawa	17 – Capital

2.2 Property Ownership

The Phase Two Property consists of three legal lots situated at civic address 15 and 17 Oblats Avenue and 96 Springhurst Avenue, Ottawa, Ontario which is currently owned by Smart Living Properties.

Contact information for the Phase Two Property owner is provided in the preceding section.

Pinchin was retained by Mr. Jeremy Silburt of the Client to conduct the Phase Two ESA of the Site. Contact information for Mr. Silburt is provided in the preceding section.

2.3 Current and Proposed Future Uses

The Phase Two Property is presently vacant however, was formerly utilized for residential purposes.

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 residential. 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 6.1 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 four 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
- Residential/parkland/institutional property use.

As such, all analytical results have been compared to these *Table 3 Standards*.

3.0 BACKGROUND INFORMATION

3.1 Physical Setting

The Phase Two Property is located in the central portion of the City of Ottawa at an elevation of approximately 66.8 metres above mean sea level (mamsl). The topography of the Phase Two Property is generally flat with a slight grade downwards in elevation to the east. The properties surrounding the Phase Two Property are at an equivalent grade with a gradual decrease in elevation towards the east. 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 is the Rideau River located approximately 200 m east of the Phase One Property at an elevation of approximately 57 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.

The Phase One Property and all other properties within the Phase One Study Area are serviced by a municipal drinking water system.

The records review did not identify the presence of wells within the Phase One Property or within the Phase One Study Area that supply water for human consumption or for agricultural purposes.

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, 15 Oblats Avenue, Ottawa, Ontario",* prepared by Paterson Group Inc. for Domicile Developments Inc. and dated April 28, 2020 (2020 Paterson Phase I ESA Report);
- Report entitled "*Phase II Environmental Site Assessment, 15 Oblats Avenue, Ottawa, Ontario*" prepared by Paterson Group Inc. for Domicile Developments Inc. and dated May 25, 2020 (2020 Paterson Phase II ESA Report); and
- Report entitled "*Geotechnical Investigation, Proposal Multi-Storey Building, 15 Oblats Avenue, Ottawa, Ontario*", prepared by Paterson Group Inc. for Domicile Developments Inc. and dated May 27, 2020 (2020 Paterson Geotechnical Investigation).

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

<u>2020 Paterson Phase I ESA Report</u>

The Phase I ESA completed by Paterson in April 2020 consisted of historical reviews, a review of surrounding properties, a regulatory database search, and interviews as well as an exterior assessment of the Site.

The following summaries the findings of the Phase l ESA:

- The Ontario Spills database indicated that less than 15 L of furnace oil was spilled onto the ground surface at the Phase One Property in 1993. Paterson noted that the spill was likely associated with a former fuel oil UST, which was located on the northeast portion of the Phase One Property. Paterson inferred that the UST was installed at the Phase One Property in approximately the late 1940's and early 1950's and was removed upon the connection of natural gas at the Phase One Property in approximately 2003; and
- The 1974 PUR indicated that ASTs were located in the boiler room and used for the laundry equipment.

Based on the above-noted information, it was Paterson's opinion that the above-noted UST and ASTs located at the Phase One Property represent APECs at the Phase One Property. Based on the results of the 2020 Paterson Phase l ESA Report, Paterson recommended completing a Phase ll ESA at the Phase One Property.

2020 Paterson Phase ll ESA Report and 2020 Paterson Geotechnical Report

A Phase II ESA and Geotechnical investigation were completed at the Phase One Property in May 2020 by Paterson based on the results of the 2020 Paterson Phase l ESA Report and potential future development of the Phase One Property. In addition, Paterson identified fill material of unknown quality during the advancement of boreholes as part of the 2020 Paterson Geotechnical Report. Paterson noted that the fill material is considered an APEC.

The scope of work included the advancement of four boreholes to a maximum depth of 6.1 mbgs and installation of three groundwater monitoring wells, as well as the collection and analysis of soil and groundwater samples.

Criteria used for the evaluation of soil and groundwater laboratory analysis results were the MECP Table 3 Standards as outlined in their document, "*Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act*", and dated April 15, 2011, for residential land use and coarse grained soils in a non-potable groundwater condition (Table 3 Standards).

A total of six soil samples were submitted for laboratory analysis of several parameters including benzene, toluene, ethylbenzene and xylene (BTEX), petroleum hydrocarbon fractions (PHCs), polycyclic aromatic hydrocarbons (PAHs) and/or metals. A total of three groundwater samples were submitted for laboratory analysis of several parameters including BTEX, PHCs, volatile organic compounds and PAHs. In addition, groundwater samples were submitted for volatile organic compounds. Soil and groundwater analytical results reported concentrations that satisfied the Table 3 Standards, with the exception of the following:

- BH-1: Soil sample concentration of lead (125 µg/g vs. 120 µg/g); and
- BH-4: Soil sample for concentrations of benzo[a]anthracene (0.53 ug/g vs. 0.5 µg/g), benzo[a]pyrene (0.57 ug/g vs. 0.3 µg/g) and fluoranthene (1.21 ug/g vs. 0.69 µg/g).

Based upon the 2020 Paterson Phase ll ESA Report and 2020 Paterson Geotechnical Report, Paterson recommended that upon redevelopment of the Phase One Property, the contaminated soil must be disposed of at an accredited landfill. In addition, Paterson noted that further subsurface investigations would be required at the Phase One Property in order to delineate the extent of the contamination.

Previous Environmental Report Summary

Based on Pinchin's review of the above-referenced reports prepared by others, the following could result in potential subsurface impacts, or are known subsurface impacts, at the Phase Two Property:

- Item 30 – Importation of Fill Material of Unknown Quality (fill material was observed during the advancement of boreholes at the Phase One Property). Based on the results of previous subsurface investigations, the fill material has resulted in concentrations which exceed the *Table 3 Standards*. As such, the fill material represents an APEC for the Phase One Property; and
- Item 28 – Gasoline and Associated Products Storage in Fixed Tanks (a former fuel oil UST located on the northeast portion of the Phase One Property). The Ontario Spills database indicated that less than 15 L of furnace oil was spilled onto the ground surface at the Phase One Property in 1993. Paterson noted that the spill was likely associated with a former fuel oil UST. Based on the results of previous subsurface investigations, the fill material exceeds the *Table 3 Standards*. As such, the above-noted information represents an APEC for the Phase One Property.

3.2.2 Pinchin Phase One ESA Summary

From December 3, 2020 through December 23, 2020, Pinchin conducted a Phase One ESA in support of the future filing of an 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 (i.e., within three months of the start of the Phase Two ESA) 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 filing of an SPA.

Based on information obtained during the Phase One ESA, a total of two 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.

3.2.3 Use of Previous Analytical Data

Pinchin notes that the information provided in the previously completed environmental reports was reviewed for the purpose of identifying APECs pertaining to the Phase Two Property during the Phase One ESA. The analytical data provided in these reports were not relied upon as no samples were collected for quality assurance/quality control (QA/QC) purposes and Pinchin cannot confirm whether the methods utilized to obtain the analytical data conform to the present-day minimum requirements stipulated in O. Reg. 153/04 for the purpose of filing an SPA.

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 and complete monitoring well installations using a Geoprobe 6620DT™. 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 six boreholes at the Phase Two Property to investigate the potential for soil contaminants associated with the APECs identified in the Phase One ESA. Three of the advanced boreholes were instrumented with a monitoring well in accordance with O. Reg. 903 for the purpose of monitoring hydrogeological conditions and groundwater quality on-Site;
- 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/or

- Metals.

- Developed each of the newly installed monitoring wells prior to the collection of groundwater samples;
- Submitted one representative groundwater sample from each of the newly installed monitoring wells and for the chemical analysis of the following parameters:
  - PHCs F1-F4;
  - VOCs;
  - PAHs; and
  - Metals.
- Submitted one duplicate soil sample and one duplicate groundwater sample for chemical analysis of the above-noted parameters for quality assurance/quality control (QA/QC) purposes;
- Submitted one trip blank for the groundwater sampling program for the chemical analysis of VOCs for QA/QC purposes;
- Submitted four representative soil samples for the laboratory analysis of grain size and four representative soil samples for the laboratory analysis of pH in order to confirm the appropriate MECP Site Condition Standards;
- Conducted groundwater monitoring at each of the newly installed groundwater monitoring wells by measuring depth to groundwater from both top of casing and ground surface reference points, and assessing the presence/absence of non-aqueous phase liquid using an oil/water interface probe;
- Completed an elevation survey to establish the elevations of the newly installed monitoring wells relative to a benchmark with an assumed elevation;
- Compared the soil and groundwater 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 were soil and groundwater. Pinchin included the assessment of groundwater as part of the Phase Two ESA to investigate groundwater quality in relation to the importation of impacted fill material (APEC 1) and the former on-Site UST (APEC-2),

For assessing the soil at the Phase Two Property for the presence of COPCs, a total of six 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. Additional soil samples were submitted for analysis for lateral and vertical delineation purposes.

For assessing the groundwater at the Phase Two Property for the presence of COPCs, groundwater monitoring wells were installed in three of the six boreholes completed at the Phase Two Property to permit the collection of groundwater samples. Groundwater samples, comprising samples collected from each of the newly installed monitoring wells (i.e., MW-3 through MW-5) were submitted to the analytical laboratory for 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 6 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 rectangular-shaped parcel of land approximately 1.68 acres (0.68 hectares) in size located on the north Site of Oblats Avenue approximately 95 m east of Main Street in the City of Ottawa. The Phase One Property is improved with a vacant building (Site Building) that occupies the central and southern portions of the Phase One Property. The Phase One Property has been used for a nun convent and boarding school since initial development in 1910. 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 the Rideau River located approximately 200 m east 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 properties within the Phase One Study Area consist of residential, commercial and institutional land uses. The properties located north of the Phase One Property consist of Springhurst Avenue followed by residential dwellings, Evelyn Avenue, residential dwellings, an institutional building, Lees Avenue and additional residential dwellings to beyond 150 m from the Phase One Property. The properties located south of the Phase One Property consist of Oblats Avenue followed by multi-tenant commercial/residential buildings under construction and commercial buildings to beyond 250 m from the Phase One Property. The properties located east of the Phase One Property consist of residential dwellings, an institutional building, a multi-tenant residential building and the Rideau River to beyond 250 m from the Phase One Property. The properties located west of the Phase One Property consist of multi-tenant residential/commercial buildings followed by Main Street and an institutional building to beyond 250 m from the Phase One Property;
- A total of three PCA were identified within the Phase One Study Area, consisting of two PCAs at the Phase One Property and one PCA within the Phase One Study Area, outside of the Phase One Property. As shown on Figure 2, a former RFO located approximately 60 m west of the Site. Based on the distance between the former RFO and the Phase One Property, it is Pinchin's opinion that this property is unlikely to result in potential subsurface impacts at the Phase One Property. All PCAs identified at the Phase One Property represent APECs at the Phase One Property. Figure 3 provides a detailed summary of the APECs and associated PCAs and COPCs;
- The Phase One Property and the surrounding properties located within the Phase One Study Area are located within alluvial deposits consisting of sand, silt and clay, based on a review of previous subsurface investigations. 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. The area surrounding the Phase One Property slopes gradually to the east towards the Rideau River. Local groundwater flow is inferred to be to the east, based on the topography of the area surrounding the Phase One Property and the location of the Rideau River.

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) as provided in the SAP, 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.

In addition, Pinchin's SOP for groundwater sampling using low-flow purging and sampling procedures follows the United States Environmental Protection Agency Region I document entitled *"Low Stress (Low Flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells"* dated January 19, 2010 (Low Flow Sampling Protocol).

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

5.2 Drilling

Pinchin retained Strata to advance a total of six boreholes (BH-1 and BH-2, MW-3 through MW-5 and BH-6) at the Phase Two Property on January 27, 2021 to investigate the potential presence of COPCs associated with the APECs identified in the Phase One ESA. Three of the advanced boreholes (MW-3 through MW-5) were completed as monitoring wells in accordance with O. Reg. 903 for the purpose of monitoring hydrogeological conditions and groundwater quality on-Site. The boreholes were drilled to a maximum depth of 6.1 mbgs using a Geoprobe 6622DT™. Upon completion of the drilling and monitoring well installations, Strata completed and filed a Water Well Record with the MECP for the well cluster in accordance with O. Reg. 903.

The locations of the boreholes and monitoring wells are provided on Figure 7. A description of the subsurface stratigraphy encountered during the drilling and test pitting program is documented in the borehole logs included in Appendix B. Well completion details and elevation data are provided in Table 4 and on the borehole logs provided in Appendix B.

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

- The use of dedicated, disposable PVC soil sample liners for soil sample collection during direct-push drilling;
- The use of dedicated, pre-cleaned augers for each borehole location;
- 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 0.75 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 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 Analytics Ltd (Paracel) in Ottawa, Ontario. Formal chain of custody records were maintained between Pinchin and the staff at Paracel Labs.

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 material and occasional brick and concrete debris throughout, to a maximum depth of approximately 2.4 mbgs, followed by silty

clay that extended to the maximum investigation depth of 6.1 mbgs. Moist to wet soil conditions were generally observed between 3.2 and 3.5 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 Inc. (Maxim) according to Maxims's standard operating procedures.

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.

Soil samples collected during the drilling activities completed on January 27, 2021, were field screened for petroleum-derived vapour concentrations using the RKI Eagle 2™. The organic vapour concentrations measured in the soil samples were low, not ranging above zero ppm by volume (ppm_v). As such, the primary consideration in selecting soil samples for submission was sample depth, and samples collected from the near surface (including fill material) and near the water table were considered to represent "worst case" samples with respect to assessing impacts related to road salt application, leaks from road vehicles and fill material quality.

5.5 Groundwater Monitoring Well Installation

Following soil sampling, Strata installed a groundwater monitoring well in boreholes MW-3 through MW-5, under the full-time monitoring of a Pinchin field representative.

The monitoring wells were constructed with 5.1 cm inner diameter (ID) flush-threaded Schedule 40 polyvinyl chloride (PVC) risers, followed by a length of 5.1 cm ID No. 10 slot PVC screen. Each well

screen was sealed at the bottom using a threaded cap and each riser was sealed at the top with a lockable J-plug cap. Silica sand was placed around and above the screened interval to form a filter pack around the well screen. A layer of bentonite was placed above the silica sand and was extended to just below the ground surface. A 10 cm ID Schedule 40 PVC outer casing, approximately 20 cm in length, was installed in each well around the top of the riser and into the top of the bentonite seal. A bentonite seal was then placed between the riser and outer casing. A protective flush-mount cover was installed at the ground surface over each riser pipe and outer casing and cemented in place.

All monitoring wells were installed in accordance with O. Reg. 903. The monitoring well construction details are provided in Table 3 and on the borehole logs in Appendix B. Upon completion of the monitoring well installations, Strata completed and filed a Water Well Record with the MECP for the well cluster.

The monitoring wells were developed on February 5 and 10, 2021 in accordance with Pinchin's SOP for well development by removing a minimum of three to a maximum of seven standing water column volumes using dedicated inertial pumps comprised of Waterra polyethylene tubing and foot valves. The well development activities were completed a minimum of 24 hours prior to the groundwater sampling activities.

Measures taken to minimize the potential for cross-contamination during well installation and well development included the following:

- The use of dedicated and disposable nitrile gloves for handling well materials during well installation and during well development; and
- The use of dedicated inertial pumps for each well.

5.6 Groundwater Field Measurements of Water Quality Parameters

Water quality parameters were measured during the low-flow purging and sampling procedure completed on February 10, 2021 at monitoring wells MW-3 through MW-5.

Measurements of the water quality parameters oxidation-reduction potential, dissolved oxygen, temperature, specific conductance, pH and turbidity were made during purging using a flow-through cell and a Horiba U52™ water quality meter (Horiba Water Quality Meter). The Horiba Water Quality Meter was calibrated prior to use by the equipment supplier (Maxim) in accordance with the manufacturer's specifications.

Field-measured parameters were recorded from the Horiba Water Quality Meter at regular intervals in order to determine stabilized groundwater geochemical conditions and hence representative groundwater sampling conditions, in general accordance with the criteria stipulated in the Low Flow Sampling Protocol.

It should be noted that representative groundwater sampling conditions were determined by Pinchin personnel utilizing the field parameter stabilization criteria noted within the Low Flow Sampling Protocol as well as additional factors including total purge time and purge volume.

5.7 Groundwater Sampling

All monitoring wells installed by Pinchin as part of the Phase Two ESA were sampled. The monitoring wells were sampled a minimum of 24 hours after the completion of well development activities (see Section 5.5). Monitoring wells All monitoring wells were sampled in accordance with the Low Flow Sampling Protocol as described below.

Well purging was completed using a using a Geotech™ submersible bladder pump and Geotech™ controller powered by a 12-Volt battery. Compressed air was delivered to the bladder pump unit via 47-millimetre (3/16-inch) ID polyethylene tubing. Groundwater was returned to the surface from the bladder pump via dedicated 0.64-cm (1/4-inch) ID polyethylene tubing. A Horiba Water Quality Meter connected to a flow-through cell was used to monitor water quality parameters during groundwater purging to assess whether water quality parameter stabilization was achieved prior to sample collection. The flow rate of the bladder pump was adjusted to minimize drawdown of the water table and the introduction of sediment into the samples.

Once field parameter stabilization was achieved, groundwater samples were collected at each well using the bladder pump and dedicated polyethylene tubing by pumping groundwater directly into new laboratory-supplied sample bottles at a pumping rate of less than 0.5 litres per minute.

Groundwater samples for metals analyses were field-filtered prior to preservation using dedicated 0.45 micron in-line filters. As appropriate, laboratory sample bottles were pre-filled by Paracel Labs with preservatives intended to preserve the collected groundwater samples prior to analysis.

Following sample collection, the sample bottles were placed into dedicated coolers with ice for storage pending transport to Paracel Labs. Formal chain of custody records were maintained between Pinchin and the staff at Paracel Labs.

5.8 Sediment Sampling

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

5.9 Analytical Testing

All collected soil and groundwater samples were delivered to Paracel Labs for analysis. Paracel Labs 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 Labs. Paracel Labs 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)*.

5.10 Residue Management Procedures

Soil cuttings generated by the borehole drilling program were containerized in one 205-L drum that was stored adjacent to the north east Site Building boundary of the Phase Two Property.

One composite soil sample (representative of the excess soil cuttings generated by the borehole drilling program) collected from the boreholes was submitted for the laboratory analysis of the leachate concentrations of inorganics, VOCs, PCBs and benzo(a)pyrene in accordance with the Toxicity Characteristic Leachate Procedure (TCLP) analysis as per Ontario Regulation 347/90 (O. Reg. 347/90) in order to characterize the soil cuttings for off-Site disposal purposes. The TCLP analytical results are provided in Appendix D, which illustrate that the excess soil cuttings are classified as non-hazardous waste in accordance with O. Reg. 347/90.

Excess water produced during well purging activities was containerized in fourteen 20-L clean, sealed plastic pails and removed from the Phase Two Property.

Excess fluids produced during equipment cleaning were placed within the pails of purge water.

Pinchin notes that at the time of writing, the drums of excess soil cuttings have not been removed from the Phase Two Property. Pinchin will assist the Client in arranging for disposal of these materials by MECP-approved waste haulers at MECP-approved waste management facilities.

Given that the laboratory results for the submitted groundwater 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 purge water was deposited on the ground surface at the Phase Two Property.

5.11 Elevation Surveying

On February 10, 2021, Pinchin completed a vertical elevation survey of all borehole and monitoring well locations (MW-1 through MW-3) using a Topcon Self-Leveling Laser Level and receiver. The elevations of the monitoring wells were tied to a temporary benchmark, the sanitary sewer catch basin, along the north portion of the Phase One Property, which was assigned an arbitrary elevation of 100.00 m.

A summary of the well elevation survey data is provided in Table 3.

5.12 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.

5.12.1 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.

The following groundwater sample containers and preservatives were used:

- VOCs and PHCs F1: 40 mL clear glass vials with septum-lids, pre-charged with sodium bisulphate preservative;
- PHCs F2-F4: 250 mL amber glass bottles with Teflon™–lined lids, pre-charged with sodium bisulphate preservative;
- PAHs: 250 mL unpreserved amber glass bottles with Teflon™–lined lids;
- Inorganics: 500 mL unpreserved high density polyethylene (HDPE) bottles; and
- Metals (excluding hexavalent chromium and mercury): 125 mL acid-rinsed HDPE bottles, pre-charged with nitric acid preservative.

Groundwater samples submitted for metals analyses were field-filtered using dedicated 0.45 micron filters.

Trip blank water samples for VOC parameter analysis were provided by Paracel Labs in 40 mL clear glass vials filled with VOC-free water.

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 Labs for analysis. Formal chain of custody records of the sample submissions were maintained between Pinchin and the staff at Paracel Labs.

5.12.2 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.

During groundwater sampling activities, the Geotech™ bladder pump used for purging and sampling was cleaned before initial use and between well locations by flushing with a solution of Alconox™ detergent and potable water followed by flushing with distilled water. New bladders were also installed in the pump before initial use and between well locations. During groundwater monitoring activities, the oil/water interface probe used to measure water levels and the Horiba Water Quality Meter used for groundwater field parameter measurements were cleaned with a solution of Alconox™ detergent and potable water followed by a distilled water rinse prior to initial use and between well locations.

5.12.3 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-2, SS-2 and its corresponding field duplicate “DUP” were submitted for laboratory analysis of VOCs, PHCs, PAHs, and metals.

One field duplicate groundwater sample was collected by Pinchin during the Phase Two ESA for analysis of the COPCs. The frequency of field duplicate groundwater sample analysis complied with the requirement that one field duplicate groundwater sample is analyzed for every ten regular groundwater samples submitted for analysis of the COPCs. The groundwater sample field duplicate pairings and corresponding analytical schedules are summarized as follows:

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

One laboratory-prepared trip blank was analyzed for VOC parameters to comply with the requirement that one trip blank is analyzed for each submission of groundwater samples for VOC parameter analysis.

The calibrations of the RKI Eagle 2™ CGI used for field screening and the Horiba Water Quality Meter used for water quality parameter measurements were checked by the equipment supplier (Maxim) prior to use in the field by Pinchin.

Maxim completed the calibration checks in accordance with the equipment manufacturers' specifications and/or Maxim's SOPs.

5.12.4 QA/QC Sampling Program Deviations

There were no deviations from the QA/QC sampling program outlined in the SAP with the following exception:

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 asphalt-covered ground surface at the Phase Two Property is underlain by granular soil fill materials to a maximum depth of approximately 2.4 mbgs. The native soil underlying the surficial soil fill materials is generally comprised of silty clay to a depth ranging from approximately 2.4 mbgs to 6.1 mbgs. The water table is located within this unit at a depth of approximately 3 to 6 mbgs and this uppermost water bearing unit represents an unconfined aquifer.

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.

The APECs investigated by the Phase Two ESA related to surface soil impacted with metals and PAHs parameters. Impacts on groundwater quality, if any, from these contaminants would be expected in the shallow groundwater zone and, as such, the water table groundwater quality (unconfined aquifer) was assessed during the Phase Two ESA.

6.2 Groundwater Elevations and Flow Direction

The wells screens in each monitoring well installed by Pinchin were of a consistent length (i.e., 3.05 metres). All monitoring wells were installed at depth intervals intended to investigate groundwater quality in the shallow groundwater zone within the unconfined aquifer. Given that PHCs were a COPC for groundwater at the Phase Two Property, the monitoring wells were installed at the Phase Two Property such that the well screens intersected the water table.

The following summarizes the findings of a groundwater monitoring event completed on February 10, 2021:

- The depths to groundwater measured within the on-Site monitoring wells installed within the unconfined aquifer ranged from 2.9 mbgs at monitoring well MW-3 to 3.4 mbgs at monitoring well MW-4;
- The calculated groundwater elevations within the groundwater monitoring wells installed within the unconfined aquifer ranged between 97.857 mamsl at MW-3 and 98.484 mamsl at MW-5; and
- No NAPL thicknesses were measured with the oil/water interface probe in any of the groundwater monitoring wells.

The surveyed top of well riser pipe elevations were utilized in conjunction with the measured depths to groundwater to calculate the groundwater level elevation data. The measured depths to groundwater and calculated groundwater elevation measurements, and the results of NAPL monitoring for the monitoring event is summarized in Tables 3 and 4, respectively.

The water table elevations calculated using the water level measurements made on February 10, 2021 show that groundwater flow at the Site is inferred to be towards the northeast in the unconfined aquifer; however, Pinchin notes that groundwater conditions may not have been at equilibrium at the time of the water level measurements.

6.3 Fine-Medium Soil Texture

Three 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 Site.

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.

6.4 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 did not range above 0 ppm by volume (ppm_v) in any of collected soil samples.

Soil vapour headspace values measured with the PID did not range above 0.0 ppm_v in any of collected soil samples.

Up to two most apparent worst case soil samples, based on vapour concentrations as well as visual and/or olfactory considerations, preferred pathway migration, groundwater depths and contaminant characteristics, recovered from each borehole was submitted for laboratory analysis of VOCs, PHCs (F1-F4), PAHs and/or metals.

6.5 Soil Quality

A total of six 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 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.

6.5.1 VOCs

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

6.5.2 PHCs F1-F4

The soil sample analytical results for PHCs F1-F4, along with the corresponding *Table 3 Standards*, are presented in Table 5. As indicated in Table 5, all reported concentrations of PHCs F1- F4 in the soil samples submitted for analysis were below the *Table 3 Standards*.

6.5.3 PAHs

The soil sample analytical results for PAHs, along with the corresponding *Table 3 Standards*, are presented in Table 7. As indicated in Table 7, all reported concentrations of PAHs in the soil samples submitted for analysis were below the *Table 3 Standards*, except for the following:

- The concentrations of benzo[a]anthracene (1.31 µg/g vs. the *Table 3 Standard* of 0.63 µg/g), benzo[a]pyrene (1.31 µg/g vs. the *Table 3 Standard* of 0.3 µg/g), benzo[b]fluoranthene (1.32 µg/g vs. the *Table 3 Standard* of 0.78 µg/g), dibenzo[a,h]anthracene (0.2 µg/g vs. the *Table 3 Standard* of 0.1 µg/g), fluoranthene (3.7 µg/g vs. the *Table 3 Standard* of 0.69 µg/g) and indeno[1,2,3-cd]pyrene (0.66 µg/g vs. the

Table 3 Standard of 0.48 µg/g), reported for soil sample BH-1, SS-2, collected at borehole BH-1 from a depth of 0.8 to 1.5 mbgs, exceeded the *Table 3 Standards*;

- The concentrations of acenaphthylene (0.84 µg/g vs. the *Table 3 Standard* of 0.17 µg/g), anthracene (4.94 µg/g vs. the *Table 3 Standard* of 0.74 µg/g), benzo[a]anthracene (9.61 µg/g vs. the *Table 3 Standard* of 0.63 µg/g), benzo[a]pyrene (9.85 µg/g vs. the *Table 3 Standard* of 0.3 µg/g), benzo[b]fluoranthene (8.69 µg/g vs. the *Table 3 Standard* of 0.78 µg/g), benzo[k]fluoranthene (5.03 µg/g vs. the *Table 3 Standard* of 0.78 µg/g), chrysene (11 µg/g vs. the *Table 3 Standard* of 7.8 µg/g), dibenzo[a,h]anthracene (0.76 µg/g vs. the *Table 3 Standard* of 0.1 µg/g), fluoranthene (23.9 µg/g vs. the *Table 3 Standard* of 0.69 µg/g), indeno[1,2,3-cd]pyrene (4.62 µg/g vs. the *Table 3 Standard* of 0.48 µg/g), phenanthrene (19.2 µg/g vs. the *Table 3 Standard* of 7.8 µg/g) reported for soil sample BH-2, SS-2, collected at borehole BH-2 from a depth of 0.8 to 1.5 mbgs, exceeded the *Table 3 Standards*;
- The concentrations of acenaphthylene (0.61 µg/g vs. the *Table 3 Standard* of 0.17 µg/g), anthracene (4.72 µg/g vs. the *Table 3 Standard* of 0.74 µg/g), benzo[a]anthracene (5.21 µg/g vs. the *Table 3 Standard* of 0.63 µg/g), benzo[a]pyrene (4.99 µg/g vs. the *Table 3 Standard* of 0.3 µg/g), benzo[b]fluoranthene (5.02 µg/g vs. the *Table 3 Standard* of 0.78 µg/g), benzo[k]fluoranthene (2.5 µg/g vs. the *Table 3 Standard* of 0.78 µg/g), dibenzo[a,h]anthracene (0.74 µg/g vs. the *Table 3 Standard* of 0.1 µg/g), fluoranthene (16.5 µg/g vs. the *Table 3 Standard* of 0.69 µg/g), indeno[1,2,3-cd]pyrene (2.53 µg/g vs. the *Table 3 Standard* of 0.48 µg/g), naphthalene (3.22 µg/g vs. the *Table 3 Standard* of 0.75 µg/g), phenanthrene (20 µg/g vs. the *Table 3 Standard* of 7.8 µg/g) reported for soil sample DUP, collected at borehole BH-2, SS-2 from a depth of 0.8 to 1.5 mbgs, exceeded the *Table 3 Standards*;
- The concentrations of benzo[a]anthracene (1.27 µg/g vs. the *Table 3 Standard* of 0.63 µg/g), benzo[a]pyrene (1.33 µg/g vs. the *Table 3 Standard* of 0.3 µg/g), benzo[b]fluoranthene (1.06 µg/g vs. the *Table 3 Standard* of 0.78 µg/g), dibenzo[a,h]anthracene (0.16 µg/g vs. the *Table 3 Standard* of 0.1 µg/g), fluoranthene (3.03 µg/g vs. the *Table 3 Standard* of 0.69 µg/g), indeno[1,2,3-cd]pyrene (0.51 µg/g vs. the *Table 3 Standard* of 0.48 µg/g) reported for soil sample BH-2, SS-4, collected at borehole BH-2 from a depth of 2.3 to 3.1 mbgs, exceeded the *Table 3 Standards*; and

- The concentrations of benzo[a]anthracene (0.94 µg/g vs. the *Table 3 Standard* of 0.63 µg/g), benzo[a]pyrene (0.86 µg/g vs. the *Table 3 Standard* of 0.3 µg/g), benzo[b]fluoranthene (0.92 µg/g vs. the *Table 3 Standard* of 0.78 µg/g), dibenzo[a,h]anthracene (0.13 µg/g vs. the *Table 3 Standard* of 0.1 µg/g), fluoranthene (2.55 µg/g vs. the *Table 3 Standard* of 0.69 µg/g) reported for soil sample BH-6, SS-1, collected at borehole BH-6 from a depth of 0.0 to 0.8 mbgs, exceeded the *Table 3 Standards*.

6.5.4 Metals and Inorganics

The soil sample analytical results for metals, along with the corresponding *Table 3 Standards*, are presented in Table 8. As indicated in Table 8, all reported concentrations of metals in the soil samples submitted for analysis were below the *Table 3 Standards*, except for the following:

- The concentrations of barium (415 µg/g vs. the *Table 3 Standard* of 390 µg/g), cobalt (24.8 µg/g vs. the *Table 3 Standard* of 22 µg/g) and vanadium (119 µg/g vs. the *Table 3 Standard* of 86 µg/g), reported for soil sample BH-1, SS-4, collected at borehole BH-1 from a depth of 2.3 to 3.1 mbgs, exceeded the *Table 3 Standards*; and
- The concentrations of cobalt (22.7 µg/g vs. the *Table 3 Standard* of 22 µg/g) and vanadium (97.9 µg/g vs. the *Table 3 Standard* of 86 µg/g), reported for soil sample BH-6, SS-4, collected at borehole BH-6 from a depth of 2.3 to 3.1 mbgs, exceeded the *Table 3 Standards*.

6.5.5 General Comments on Soil Quality

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

6.6 Groundwater Quality

Groundwater samples were collected from monitoring wells MW-3 through MW-5 and submitted for analysis of the COPCs to assess for the presence of subsurface impacts within the APECs identified in the Pinchin Phase One ESA. The locations of the monitoring wells are shown on Figure 7. The groundwater sample collection depths and laboratory analysis are summarized in Table 7. All groundwater samples collected for metals analysis were filtered in the field using dedicated, disposable 0.45 micron in-line filters prior to preservation in accordance with the *Analytical Protocol.* In addition, all groundwater samples collected for benzo(a)pyrene analysis were filtered by Paracel Labs prior to analysis as permitted by the *Analytical Protocol*.

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

6.6.1 VOCs

The groundwater analytical results for VOCs, along with the corresponding *Table 3 Standards*, are presented in Table 11. As indicated in Table 11, all reported concentrations of VOCs in the groundwater samples submitted for analysis were below the *Table 3 Standards.*

6.6.2 PHCs F1-F4

The groundwater analytical results for PHCs F1-F4, along with the corresponding *Table 3 Standards*, are presented in Table 10. As indicated in Table 10, all reported concentrations of PHCs F1-F4 in the groundwater samples submitted for analysis met the *Table 3 Standards.*

6.6.3 PAHs

The groundwater analytical results for PAHs, along with the corresponding *Table 3 Standards*, are presented in Table 12. As indicated in Table 12, all reported concentrations of PAHs in the groundwater samples submitted for analysis met the *Table 3 Standards*.

6.6.4 Metals and Inorganics

The groundwater analytical results for metals and inorganic parameters, along with the corresponding *Table 3 Standards*, are presented in Table 13. As indicated in Table 13, all reported concentrations of metals and inorganics parameters in the groundwater samples submitted for analysis met the *Table 3 Standards*.

6.6.5 General Comments on Groundwater Quality

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

6.7 Sediment Quality

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

6.8 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 and groundwater samples to assess the suitability of field sampling methods and laboratory performance; and
- A trip blank water sample to assess whether ambient conditions during transport of groundwater sample containers from the analytical laboratory to the Phase Two Property and back to the analytical laboratory may have biased the groundwater sample results with respect to volatile constituents.

In addition to the above, laboratory quality control activities and sample checks employed by Paracel Labs 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 QA/QC samples are discussed in the following subsections.

6.8.1 Soil Duplicate Results

During borehole soil sampling activities, one soil duplicate sample pair, consisting of soil sample BH-2, SS-2 and its corresponding field duplicate DUP, 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:

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

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.

The calculated RPDs values met the performance standards with the exception of the following:

- The RPD values for soil sample pairing BH-2, SS-2/DUP, collected from borehole BH-2 at a depth of 0.8 to 1.5 mbgs, exceeded the corresponding performance standard for PHCs (F2 and F3), multiple PAHs and metals.

The primary cause of the elevated RPD values and discrepancies observed in the analytical results for soil sample pairings BH-2, SS-2/DUP is inferred to be heterogeneity in the soil matrix from which the samples were collected. As such, the observed variances in RPDs for these sample pairings are not expected to reflect deficiencies in sampling or analytical methods. In addition, given that the laboratory did not report any internal QA/QC errors and appropriate QA/QC methods were employed, the data is considered valid and the level of variance in the reported analytical results is considered acceptable for the purposes of meeting the data quality objectives of this Phase Two ESA. Based on Pinchin's review of the calculated RPD values for the remainder of the collected soil duplicate sample pairing, the level of observed variance in the reported analytical results is considered acceptable for the purpose of meeting the data quality objectives of this Phase Two ESA.

6.8.2 Groundwater Sample Duplicate Results

During groundwater sampling activities, one groundwater duplicate sample pair, consisting of groundwater sample MW-3 and its corresponding field duplicate DUP were submitted for laboratory analysis of VOCs, PHCs, PAHs and metals.

The calculated RPDs for the original and field duplicate groundwater 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 groundwater sample results as well.

Each of the calculated RPDs met the corresponding performance standard.

Based on Pinchin's review of the calculated RPD values for the submitted groundwater sample duplicate pairing, the level of observed variance in the reported analytical results is considered acceptable for the purpose of meeting the data quality objectives of this Phase Two ESA.

6.8.3 Groundwater Trip Blank Results

A trip blank sample, consisting of VOC-free water contained within a set of VOC sample vials, was prepared by Paracel Labs and accompanied the VOC groundwater sample containers during transportation to the Phase Two Property and was stored in the cooler with the VOC groundwater samples in the field and during transportation back to Paracel Labs. The trip blank sample was submitted to Paracel Labs for chemical analysis for VOCs during the groundwater sampling activities completed as part of this Phase Two ESA.

As indicated in Table 11, the concentrations of the VOC parameters analyzed in the trip blank sample was below the laboratory RDLs. These findings indicate that ambient conditions during the transportation of the sample containers to and from the Phase Two Property, and during groundwater sampling, did not positively bias the VOCs parameter analytical results for the groundwater samples.

6.8.4 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.

6.8.5 Laboratory Certificates of Analysis

Pinchin has reviewed the laboratory Certificates of Analysis provided by Paracel Labs 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.

6.8.6 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 filing an SPA. The SPA is required by the Client in relation to the future redevelopment of the Phase Two Property.

The Phase Two ESA completed by Pinchin included the advancement of six boreholes at the Phase Two Property, three of which were completed as groundwater monitoring wells to facilitate the sampling of groundwater.

Based on Site-specific information, the applicable regulatory standards for the Phase Two Property were determined to be the *Table 3 Standards* for residential 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/or metals.

The laboratory results for the soil samples submitted during the Phase Two ESA indicated that all reported concentrations for the parameters analyzed met the corresponding *Table 3 Standards*, with the exception of the following:

- The concentrations of benzo[a]anthracene (1.31 µg/g vs. the *Table 3 Standard* of 0.63 µg/g), benzo[a]pyrene (1.31 µg/g vs. the *Table 3 Standard* of 0.3 µg/g), benzo[b]fluoranthene (1.32 µg/g vs. the *Table 3 Standard* of 0.78 µg/g), dibenzo[a,h]anthracene (0.2 µg/g vs. the *Table 3 Standard* of 0.1 µg/g), fluoranthene (3.7 µg/g vs. the *Table 3 Standard* of 0.69 µg/g) and indeno[1,2,3-cd]pyrene (0.66 µg/g vs. the

Table 3 Standard of 0.48 µg/g), reported for soil sample BH-1, SS-2, collected at borehole BH-1 from a depth of 0.8 to 1.5 mbgs, exceeded the *Table 3 Standards*;

- The concentrations of barium (415 µg/g vs. the *Table 3 Standard* of 390 µg/g), cobalt (24.8 µg/g vs. the *Table 3 Standard* of 22 µg/g) and vanadium (119 µg/g vs. the *Table 3 Standard* of 86 µg/g), reported for soil sample BH-1, SS-4, collected at borehole BH-1 from a depth of 2.3 to 3.1 mbgs, exceeded the *Table 3 Standards*;
- The concentrations of acenaphthylene (0.84 µg/g vs. the *Table 3 Standard* of 0.17 µg/g), anthracene (4.94 µg/g vs. the *Table 3 Standard* of 0.74 µg/g), benzo[a]anthracene (9.61 µg/g vs. the *Table 3 Standard* of 0.63 µg/g), benzo[a]pyrene (9.85 µg/g vs. the *Table 3 Standard* of 0.3 µg/g), benzo[b]fluoranthene (8.69 µg/g vs. the *Table 3 Standard* of 0.78 µg/g), benzo[k]fluoranthene (5.03 µg/g vs. the *Table 3 Standard* of 0.78 µg/g), chrysene (11 µg/g vs. the *Table 3 Standard* of 7.8 µg/g), dibenzo[a,h]anthracene (0.76 µg/g vs. the *Table 3 Standard* of 0.1 µg/g), fluoranthene (23.9 µg/g vs. the *Table 3 Standard* of 0.69 µg/g), indeno[1,2,3-cd]pyrene (4.62 µg/g vs. the *Table 3 Standard* of 0.48 µg/g), phenanthrene (19.2 µg/g vs. the *Table 3 Standard* of 7.8 µg/g) reported for soil sample BH-2, SS-2, collected at borehole BH-2 from a depth of 0.8 to 1.5 mbgs, exceeded the *Table 3 Standards*;
- The concentrations of acenaphthylene (0.61 µg/g vs. the *Table 3 Standard* of 0.17 µg/g), anthracene (4.72 µg/g vs. the *Table 3 Standard* of 0.74 µg/g), benzo[a]anthracene (5.21 µg/g vs. the *Table 3 Standard* of 0.63 µg/g), benzo[a]pyrene (4.99 µg/g vs. the *Table 3 Standard* of 0.3 µg/g), benzo[b]fluoranthene (5.02 µg/g vs. the *Table 3 Standard* of 0.78 µg/g), benzo[k]fluoranthene (2.5 µg/g vs. the *Table 3 Standard* of 0.78 µg/g), dibenzo[a,h]anthracene (0.74 µg/g vs. the *Table 3 Standard* of 0.1 µg/g), fluoranthene (16.5 µg/g vs. the *Table 3 Standard* of 0.69 µg/g), indeno[1,2,3-cd]pyrene (2.53 µg/g vs. the *Table 3 Standard* of 0.48 µg/g), naphthalene (3.22 µg/g vs. the *Table 3 Standard* of 0.75 µg/g), phenanthrene (20 µg/g vs. the *Table 3 Standard* of 7.8 µg/g) reported for soil sample DUP, collected at borehole BH-2, SS-2 from a depth of 0.8 to 1.5 mbgs, exceeded the *Table 3 Standards*;
- The concentrations of benzo[a]anthracene (1.27 µg/g vs. the *Table 3 Standard* of 0.63 µg/g), benzo[a]pyrene (1.33 µg/g vs. the *Table 3 Standard* of 0.3 µg/g), benzo[b]fluoranthene (1.06 µg/g vs. the *Table 3 Standard* of 0.78 µg/g), dibenzo[a,h]anthracene (0.16 µg/g vs. the *Table 3 Standard* of 0.1 µg/g), fluoranthene (3.03 µg/g vs. the *Table 3 Standard* of 0.69 µg/g), indeno[1,2,3-cd]pyrene (0.51 µg/g vs. the *Table 3 Standard* of 0.48 µg/g) reported for soil sample BH-2, SS-4, collected at borehole BH-2 from a depth of 2.3 to 3.1 mbgs, exceeded the *Table 3 Standards*;

- The concentrations of benzo[a]anthracene (0.94 µg/g vs. the *Table 3 Standard* of 0.63 µg/g), benzo[a]pyrene (0.86 µg/g vs. the *Table 3 Standard* of 0.3 µg/g), benzo[b]fluoranthene (0.92 µg/g vs. the *Table 3 Standard* of 0.78 µg/g), dibenzo[a,h]anthracene (0.13 µg/g vs. the *Table 3 Standard* of 0.1 µg/g), fluoranthene (2.55 µg/g vs. the *Table 3 Standard* of 0.69 µg/g) reported for soil sample BH-6, SS-1, collected at borehole BH-6 from a depth of 0.0 to 0.8 mbgs, exceeded the *Table 3 Standards*; and
- The concentrations of cobalt (22.7 µg/g vs. the *Table 3 Standard* of 22 µg/g) and vanadium (97.9 µg/g vs. the *Table 3 Standard* of 86 µg/g), reported for soil sample BH-6, SS-4, collected at borehole BH-6 from a depth of 2.3 to 3.1 mbgs, exceeded the *Table 3 Standards*.

The laboratory results for all groundwater samples submitted during the Phase Two ESA indicated that all reported concentrations for the parameters analyzed met the corresponding *Table 3 Standards*.

The findings of this Phase Two ESA identified PAH and/or metals exceedances in boreholes BH-1, BH-2 and BH-6, which is likely attributed to fill material imported to the Site during the initial Site development. It is Pinchin's opinion that given the nature of the impacts with respect to limited migration behaviours and relative absence of volatilization, the reported soil impacts would not likely represent a significant environmental concern to on-going Site operations and/or future occupancy. If any, future site redevelopment activities occur at the Site, the impacted fill material should be addressed at that time.

7.1 Signatures

This Phase Two ESA was undertaken under the supervision of Scott Mather, B.Sc., P.Eng., QP_{ESA} in accordance with the requirements of O. Reg. 153/04.

7.2 Terms and Limitations

This Phase Two ESA was performed for Forum/SLP LP (Client) in order to investigate potential environmental impacts at 15 Oblats Avenue in 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.

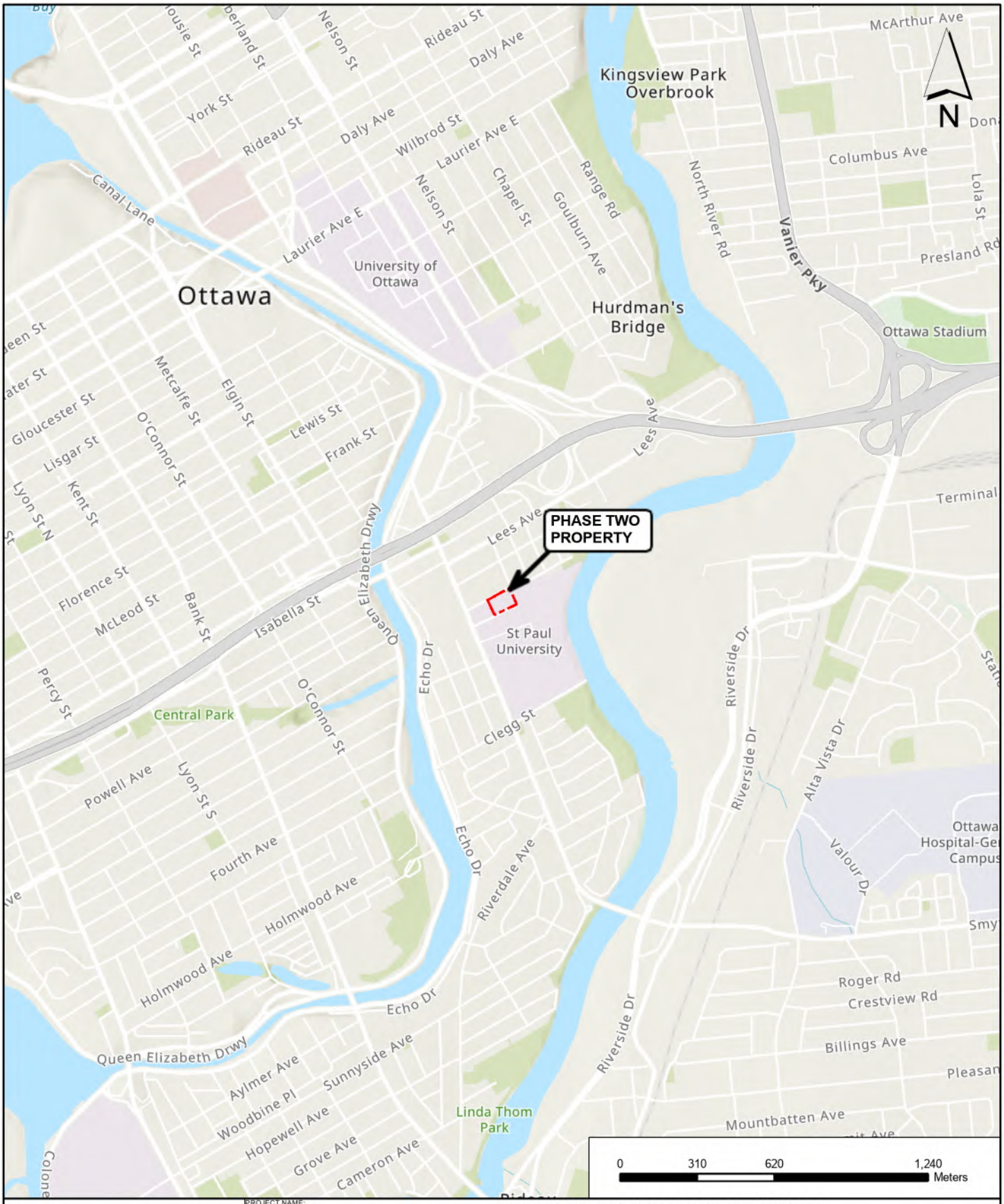
8.0 REFERENCES

The following documents provided information used in this report:

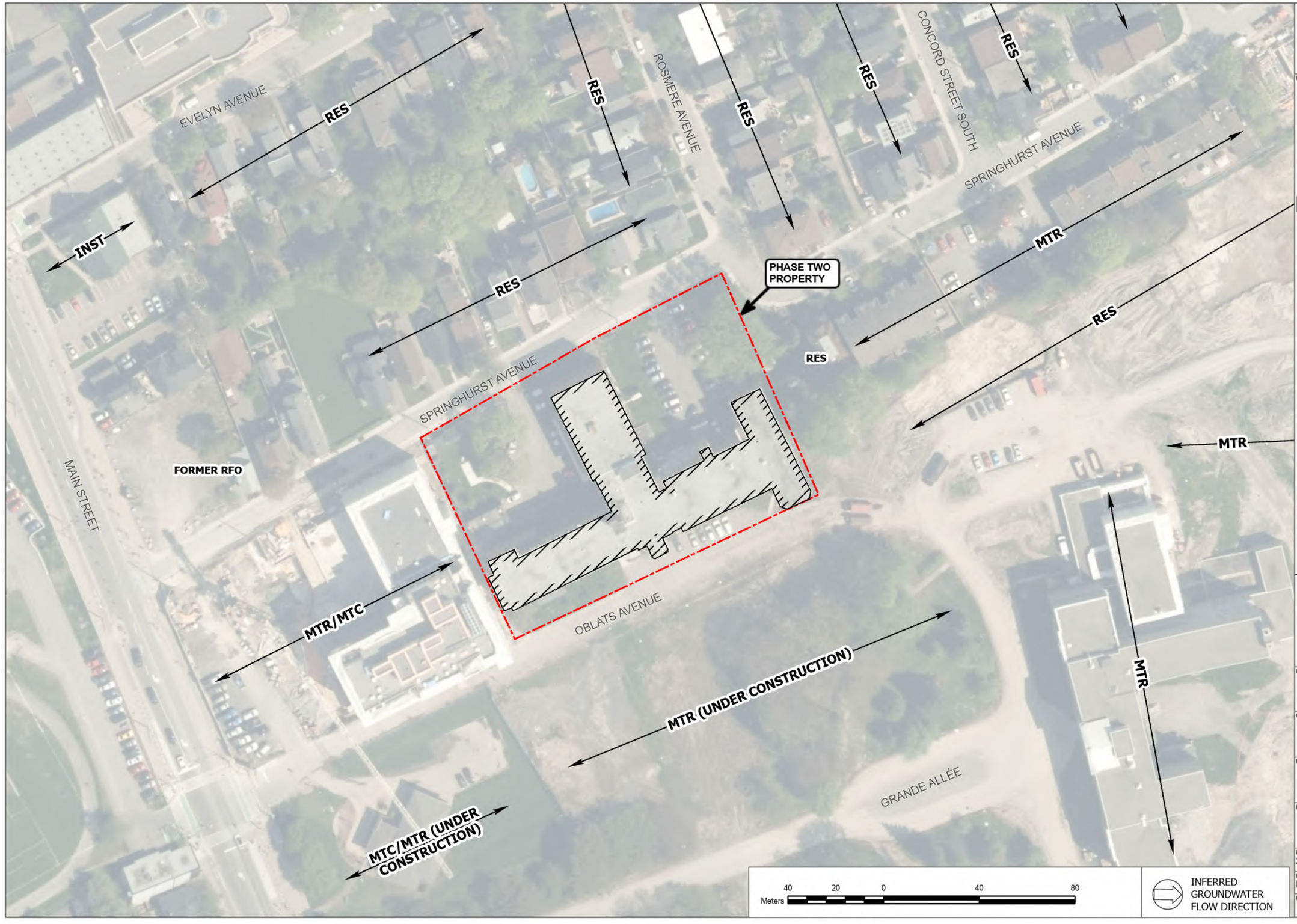
- Paterson Group Inc. Phase I Environmental Site Assessment, 15 Oblats Avenue, Ottawa, Ontario. prepared for Domicile Developments Inc. April 28, 2020;
- Paterson Group Inc. Phase II Environmental Site Assessment, 15 Oblats Avenue, Ottawa, Ontario. prepared for Domicile Developments Inc. May 25, 2020;
- Paterson Group Inc. Geotechnical Investigation, Proposal Multi-Storey Building, 15 Oblats Avenue, Ottawa, Ontario. prepared for Domicile Developments Inc. May 27, 2020;

- 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, 15 Oblats Avenue Street, Ottawa, Ontario. Prepared for Smart Living Properties., December 22, 2020;
- 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



PINCHIN	PROJECT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT				
	CLIENT NAME: SMART LIVING PROPERTIES				
	PROJECT LOCATION: 15 OBLATS AVENUE, OTTAWA, ONTARIO				
	FIGURE NAME: KEY MAP				FIGURE NUMBER: 1
	PROJECT NUMBER: 284665.001	SCALE: 1:30,000	DRAWN BY: PKM	REVIEWED BY: SM	DATE: FEBRUARY 2021



N

LEGEND

- INST - INSTITUTIONAL
- MTC - MULTI TENANT COMMERCIAL
- MTR - MULTI-TENANT RESIDENTIAL
- RES - RESIDENTIAL
- PHASE TWO PROPERTY
- SITE BUILDING

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5) Coordinate system: WGS 1984 Web Mercator Auxiliary Sphere.
6) Source: Pinchin Ltd., .

PINCHIN

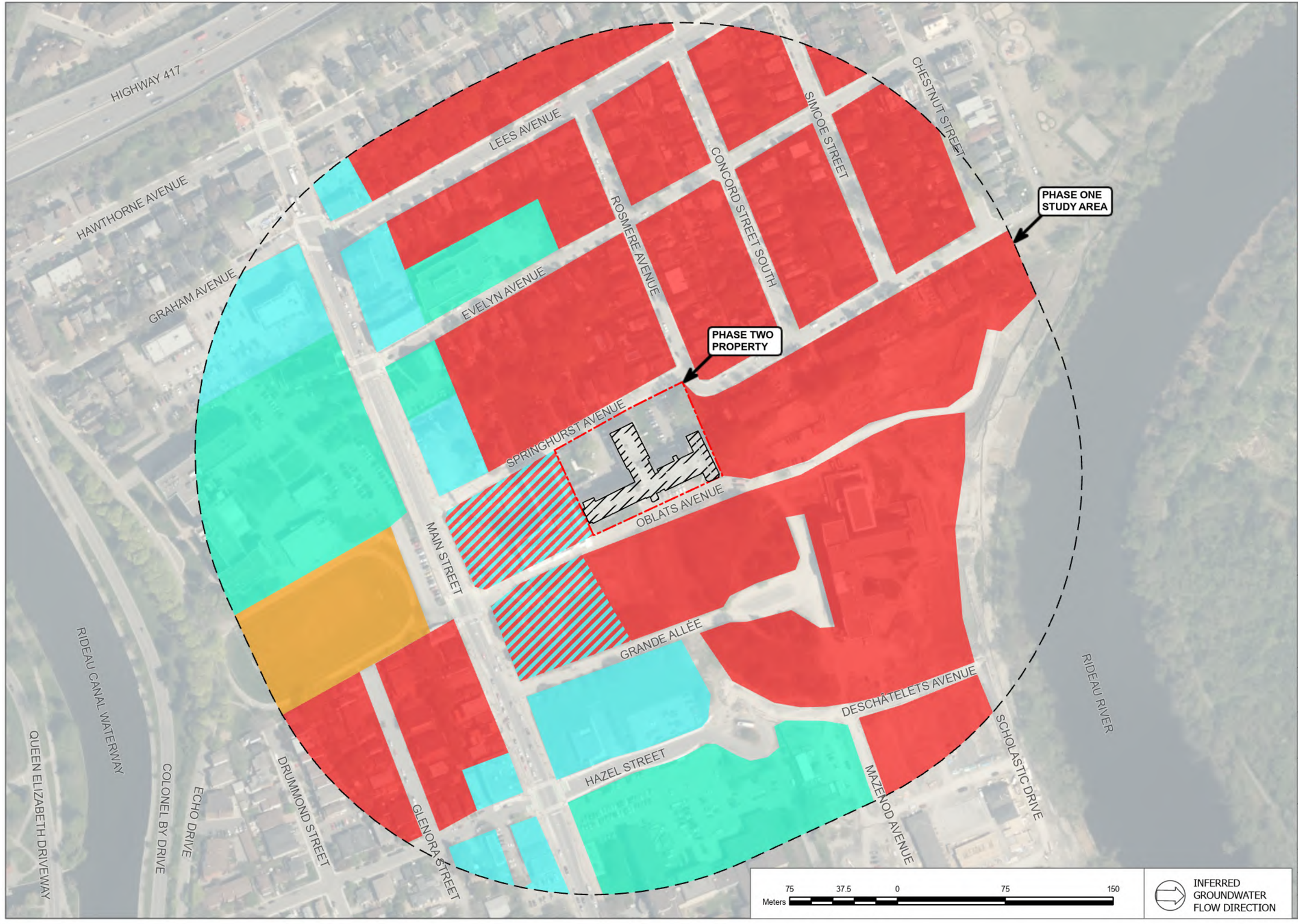
PROJECT NAME
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME
SMART LIVING PROPERTIES

PROJECT LOCATION
15 OBLATS AVENUE, OTTAWA, ONTARIO

FIGURE NAME
PHASE TWO PROPERTY

PROJECT NUMBER:	SCALE
284665.001	1:1,500
DRAWN BY: PKM	REVIEWED BY: SM
DATE: FEBRUARY 2021	FIGURE NUMBER: 2



N

LEGEND

- PHASE TWO PROPERTY
- SITE BUILDING
- PHASE ONE STUDY AREA
- COMMERCIAL
- INSTITUTIONAL
- PARKLAND
- RESIDENTIAL
- RESIDENTIAL/COMMMERCIAL

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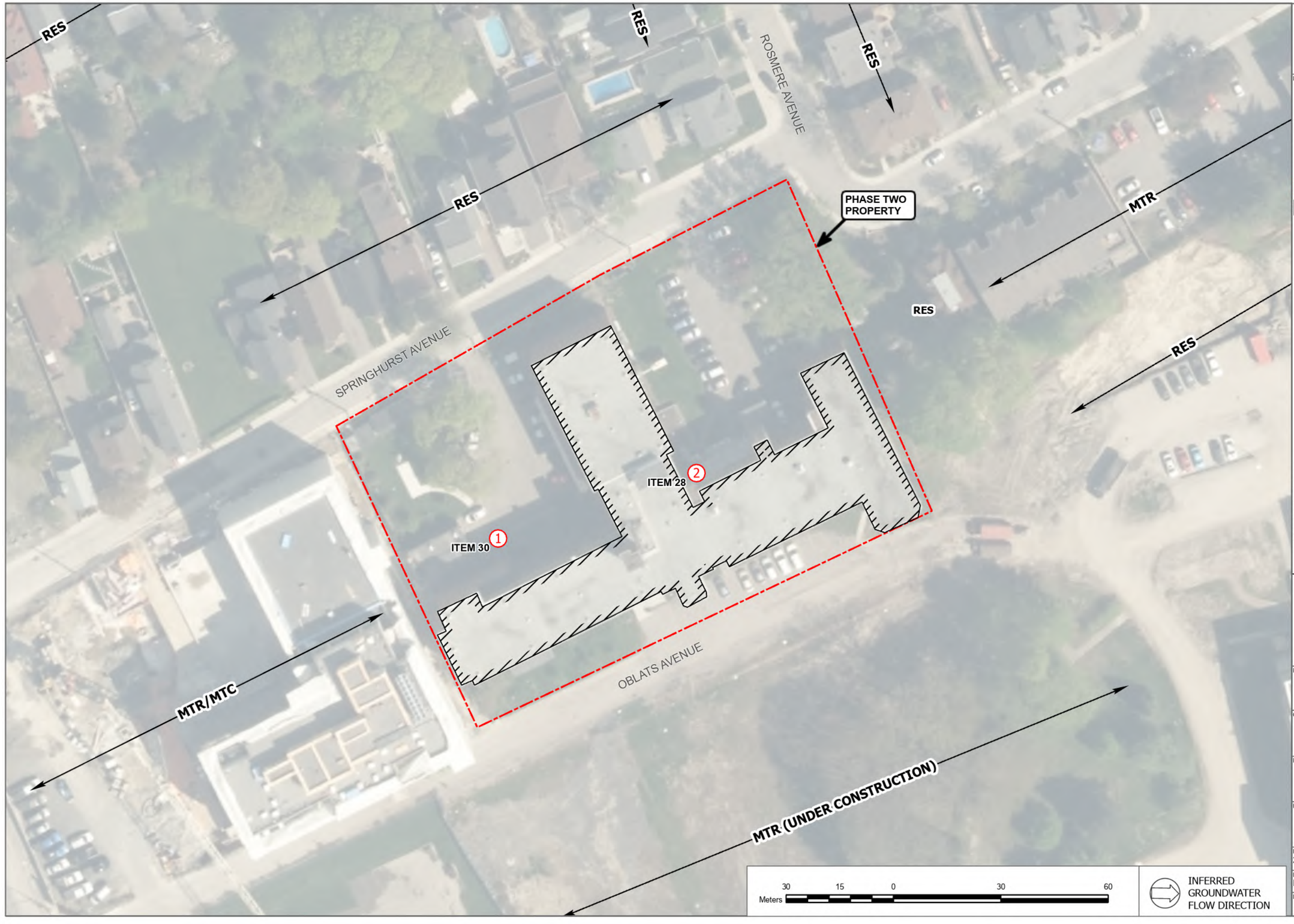
PROJECT NAME
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME
SMART LIVING PROPERTIES

PROJECT LOCATION
15 OBLATS AVENUE, OTTAWA, ONTARIO

FIGURE NAME
PHASE ONE STUDY AREA

PROJECT NUMBER:	SCALE
284665.001	1:2,500
DRAWN BY: PKM	REVIEWED BY: SM
DATE: FEBRUARY 2021	FIGURE NUMBER: 3



N

LEGEND

- PCA DOES NOT CONTRIBUTE TO APEC
- MTC - MULTI TENANT COMMERCIAL
- MTR - MULTI-TENANT RESIDENTIAL
- RESIDENTIAL
- PHASE TWO PROPERTY
- SITE BUILDING
- PCA POTENTIALLY CONTAMINATING ACTIVITY
- APEC AREA OF POTENTIAL ENVIRONMENTAL CONCERN

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6) Source: Pinchin Ltd., .

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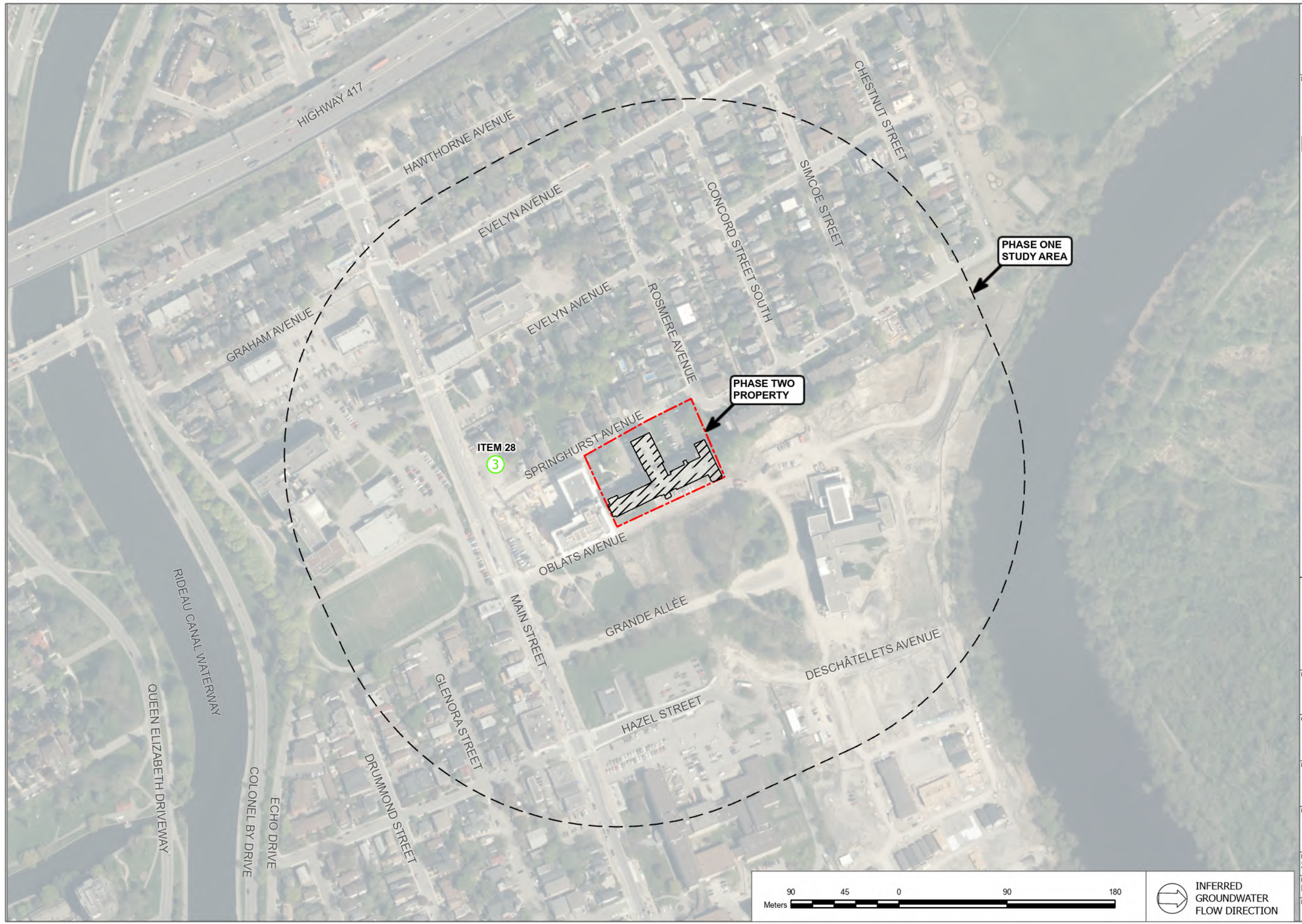
PROJECT NAME
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME
SMART LIVING PROPERTIES

PROJECT LOCATION
15 OBLATS AVENUE, OTTAWA, ONTARIO

FIGURE NAME
POTENTIALLY CONTAMINATING ACTIVITIES - ON-SITE

PROJECT NUMBER:	SCALE
284665.001	1:1,000
DRAWN BY: PKM	REVIEWED BY: SM
DATE: FEBRUARY 2021	FIGURE NUMBER: 4



N

LEGEND

- PCA DOES NOT CONTRIBUTE TO APEC
- PHASE TWO PROPERTY
- SITE BUILDING
- PHASE ONE STUDY AREA
- PCA POTENTIALLY CONTAMINATING AREAS
- APEC AREA OF POTENTIAL ENVIRONMENTAL CONCERN

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6) Source: Pinchin Ltd., .

PINCHIN

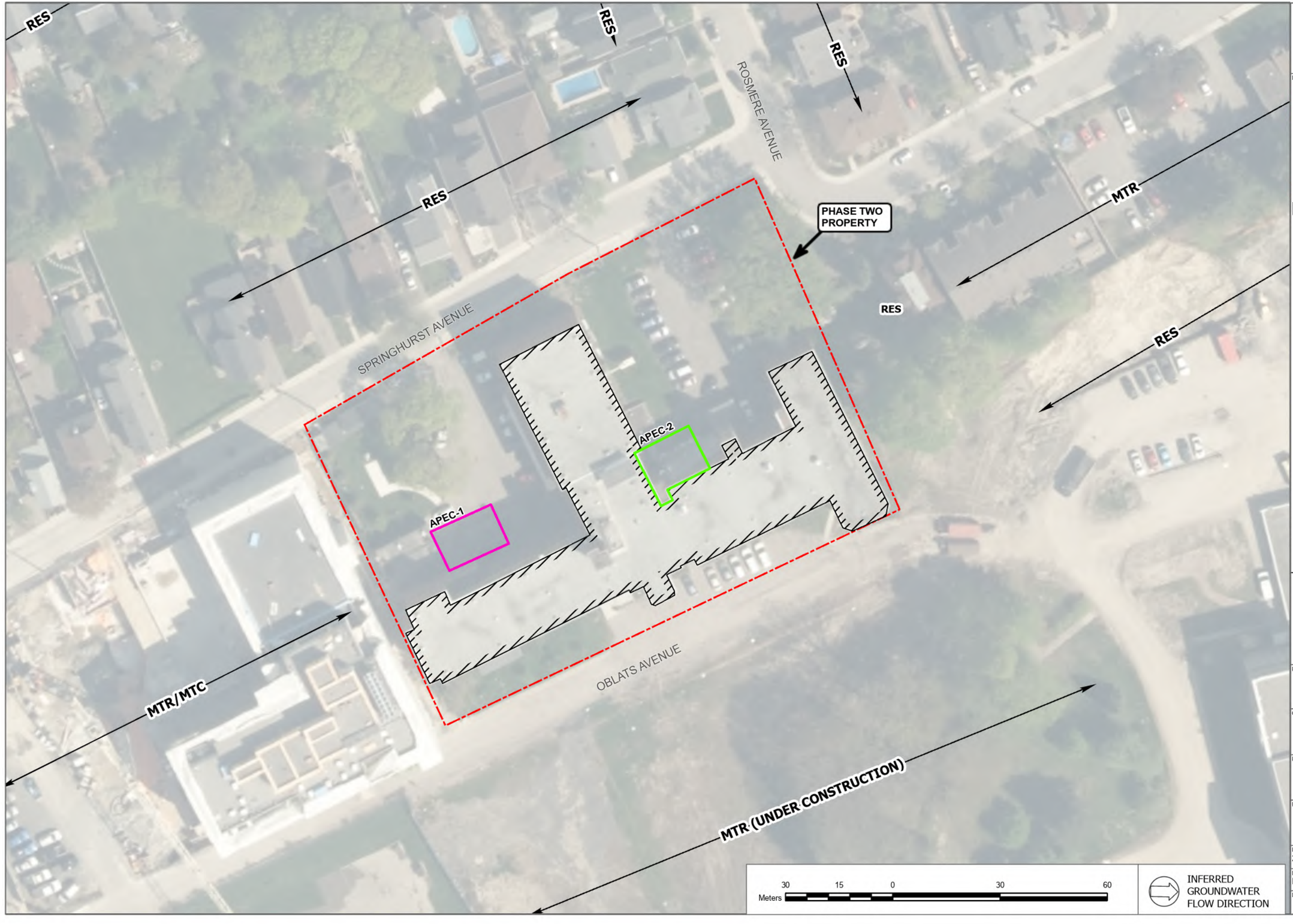
PROJECT NAME
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME
SMART LIVING PROPERTIES

PROJECT LOCATION
15 OBLATS AVENUE, OTTAWA, ONTARIO

FIGURE NAME
POTENTIALLY CONTAMINATING ACTIVITIES - OFF-SITE

PROJECT NUMBER:	SCALE
284665.001	1:3,000
DRAWN BY: PKM	REVIEWED BY: SM
DATE: FEBRUARY 2021	FIGURE NUMBER: 5



N

LEGEND

- APEC #1
- APEC #2
- MTC - MULTI TENANT COMMERCIAL
- MTR - MULTI-TENANT RESIDENTIAL
- RESIDENTIAL
- PHASE TWO PROPERTY
- SITE BUILDING
- APEC AREA OF POTENTIAL ENVIRONMENTAL CONCERN

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6) Source: Pinchin Ltd., .

PINCHIN

PROJECT NAME
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME
SMART LIVING PROPERTIES

PROJECT LOCATION
15 OBLATS AVENUE, OTTAWA, ONTARIO

FIGURE NAME
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT NUMBER:	SCALE
284665.001	1:1,000
DRAWN BY: PKM	REVIEWED BY: SM
DATE: FEBRUARY 2021	FIGURE NUMBER: 6

N

LEGEND

- BOREHOLE (PINCHIN 2021)
- MONITORING WELL (PINCHIN 2021)
- BOREHOLE (PATERSON 2013)
- BOREHOLE (PATERSON, 2020)
- MONITORING WELL (PATERSON, 2020)
- PHASE ONE PROPERTY
- SITE BUILDING

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5) Coordinate system: WGS 1984 Web Mercator Auxiliary Sphere.
6) Source: Pinchin Ltd., .

PINCHIN

PROJECT NAME
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME
SMART LIVING PROPERTIES

PROJECT LOCATION
15 OBLATS AVENUE, OTTAWA, ONTARIO

FIGURE NAME
BOREHOLE AND MONITORING WELL LOCATION PLAN

PROJECT NUMBER:	SCALE
284665.001	1:500
DRAWN BY: PKM	REVIEWED BY: SM
DATE: FEBRUARY 2021	FIGURE NUMBER: 7

TABLE 1
SAMPLES SUBMITTED FOR LABORATORY ANALYSIS
Smart Living Properties
15 Oblats Avenue, Ottawa, Ontario

Samples			Parameters													
Borehole / Monitoring Well ID	Sample ID	Sample Depth Range (mbgs)	SOIL SAMPLES	PHCs (F1-F4) & BTEX	VOCs	PAHs	Metals	pH	Grain Size Analysis	TCLP	GROUNDWATER SAMPLES	PHCs (F1-F4) & BTEX	VOCs	PAHs	Metals	Rationale/Notes
BH-1	BH-1, SS-2	0.8-1.5		●	●	●		●								
	BH-1, SS-4	2.3-3.1				●										
	BH-1, SS-5	3.1-3.8						●	●							
BH-2	BH-2, SS-2/DUP	0.8-1.5		●	●	●	●									Assess soil and groundwater quality in relation to APEC #1/Confirm applicable MECP standards.
	BH-2, SS-4	2.3-3.1		●	●	●	●									
MW-3	MW-3, SS-2	0.8-1.5		●	●	●	●									
	MW-3, SS-5	3.1-3.8							●							
	MW-3/DUP	-										●	●	●	●	
MW-4	MW-4, SS-1	0.0-0.8		●	●	●	●									
	MW-4	-										●	●	●	●	
MW-5	MW-5, SS-1	0.0-0.8		●	●	●	●									
	MW-5, SS-2	0.8-1.5						●								
	MW-5, SS-4	2.3-3.1						●	●							Assess soil and groundwater quality in relation to APEC #2/Confirm applicable MECP standards.
	MW-5, SS-5	3.1-3.8							●							
	MW-5	-										●	●	●	●	
BH-6	BH-6, SS-1	0.0-0.8		●	●	●	●									
	BH-6, SS-4	2.3-3.1				●	●									
Trip	Trip	-			●											QA/QC
Composite	Composite	-								●						Classify excess soil generated by borehole drilling for off-Site disposal.

Notes:

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

TABLE 2
pH AND GRAIN SIZE ANALYSIS FOR SOIL
Smart Living Properties
15 Oblats Avenue, 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-1 SS-5*	*MW-3 SS-5*	*MW-5 SS-2*	*MW-5 SS-4*	*MW-5 SS-5*
			27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
			0.5 - 1.8	*3.1 - 3.8*	*3.1 - 3.8*	*0.5 - 1.8*	*2.3 - 3.1*	*3.1 - 3.8*
			Surface	*Sub-surface*	*NA*	*Surface*	*NA*	*Sub-surface*
pH		Surface: 5 < pH < 9 Subsurface: 5 < pH < 11	7.87	7.96	NA	7.75	NA	8.07
Sieve #200 <0.075 mm	%	50%	NA	90	97	NA	96	94
Sieve #200 >0.075 mm	%	50%	NA	10	3	NA	4	6
		Grain Size Classification	NA	MEDIUM/FINE	MEDIUM/FINE	NA	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

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TABLE 3
MONITORING WELL CONSTRUCTION DETAILS
Smart Living Properties
15 Oblats Avenue, Ottawa, Ontario

Well Number	*Surveyed TOC Elevation (mREL)*	*Surveyed Ground Elevation (mREL)*	*Calculated Difference Between Ground and TOC (m)*	*Length of Screen (m)*
MW-3	100.65	100.74	0.09	3.05
MW-4	101.24	101.35	0.11	3.05
MW-5	101.58	101.71	0.12	3.05

Notes:

mREL	Indicates Groundwater Elevation (metres) Relative to Site Benchmark with Assumed Elevation of 100.00 Metres
TOC	Indicates Top of Casing
NM	Not Measured
m	Metres

TABLE 4
GROUNDWATER ELEVATION DATA
Smart Living Properties
15 Oblats Avenue, Ottawa, Ontario

Well Number	*Date (dd/mm/yyyy)*	*NAPL Level Measurement from TOC (m)*	*Water Level Measurement from TOC (m)*	*Water Level Measurement from Ground (mbgs)*	*Product Thickness (m)*	*Calculated Water Level Elevation (mREL)*
MW-3	10/02/2021	ND	2.80	2.89	ND	97.85
MW-4	10/02/2021	ND	3.29	3.40	ND	97.95
MW-5	10/02/2021	ND	3.10	3.22	ND	98.49

Notes:

mREL	Indicates Groundwater Elevation (metres) Relative To Site Benchmark with Assumed Elevation of 100.00 Metres
NAPL	Non-Aqueous Phase Liquid
ND	Not Detected
TOC	Indicates Top of Casing
m	Metres
mbgs	Metres Below Ground Surface

TABLE 5
PETROLEUM HYDROCARBON AND BTEX ANALYSIS FOR SOIL
Smart Living Properties
15 Oblats Avenue, Ottawa, Ontario

Parameter	*MECP Table 3 Standards**	*Sample Designation*							
		Sample Collection Date (dd/mm/yyyy)							
		Sample Depth (mbgs)							
		BH-1 SS-2	*BH-2 SS-2/DUP*		*BH-2 SS-4*	*MW-3 SS-2*	*MW-4 SS-1*	*MW-5 SS-1*	*BH-6 SS-1*
		27/01/2021	*27/01/2021*	*27/01/2021*	*27/01/2021*	*27/01/2021*	*27/01/2021*	*27/01/2021*	*27/01/2021*
		0.8 - 1.5	*0.8 - 1.5*	*0.8 - 1.5*	*2.3 - 3.1*	*0.8 - 1.5*	*0.0 - 0.8*	*0.0 - 0.8*	*0.0 - 0.8*
Petroleum Hydrocarbons F1 (C_6 - C_{10})	65	<7	<7	<7	<7	<7	<7	<7	<7
Petroleum Hydrocarbons F2 (>C_{10} - C_{16})	150	<4	<4	17	<4	<4	<4	<4	<4
Petroleum Hydrocarbons F3 (>C_{16} - C_{34})	1300	<8	<8	37	62	<8	<8	<8	12
Petroleum Hydrocarbons F4 (>C_{34} - C_{50})	5600	<6	<6	<6	29	<6	<6	<6	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 Residential/Parkland/Institutional 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 6
VOLATILE ORGANIC COMPOUND ANALYSIS FOR SOIL
Smart Living Properties
15 Oblats Avenue, Ottawa, Ontario

Parameter	MECP Table 3 Standards*	Sample Designation							
		Sample Collection Date (dd/mm/yyyy)							
		Sample Depth (mbgs)							
		BH-1 SS-2	BH-2 SS-2/DUP		BH-2 SS-4	MW-3 SS-2	MW-4 SS-1	MW-5 SS-1	BH-6 SS-1
		27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021	27/01/2021
		0.8 - 1.5	0.8 - 1.5	0.8 - 1.5	2.3 - 3.1	0.8 - 1.5	0.0 - 0.8	0.0 - 0.8	0.0 - 0.8
Acetone	28	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzene	0.17	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromodichloromethane	13	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromoform	0.26	<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	0.12	<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	9.4	<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	4.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	0.097	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	11	<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	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
cis-1,2-Dichloroethylene	30	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
trans-1,2-Dichloroethylene	0.75	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichloropropane	0.085	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene, total	0.083	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene dibromide (dibromoethane, 1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Hexane	34	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl Ethyl Ketone (2-Butanone)	44	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Methyl Isobutyl Ketone	4.3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Methyl tert-butyl ether	1.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	0.96	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	2.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethylene	2.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Toluene	6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1-Trichloroethane	3.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2-Trichloroethane	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichloroethylene	0.52	<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	0.022	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Xylenes, total	25	<0.05	<0.05	<0.05	<0.05	<0.05	<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 Residential/Parkland/Institutional 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: 284665.001

TABLE 7
POLYCYCLIC AROMATIC HYDROCARBON ANALYSIS FOR SOIL
Smart Living Properties
15 Oblats Avenue, Ottawa, Ontario

Parameter	*MECP Table 3 Standards**	*Sample Designation*									
		Sample Collection Date (dd/mm/yyyy)									
		Sample Depth (mbgs)									
		BH-1 SS-2	*BH-1 SS-4*	*BH-2 SS-2/DUP*		*BH-2 SS-4*	*MW-3 SS-2*	*MW-4 SS-1*	*MW-5 SS-1*	*BH-6 SS-1*	*BH-6 SS-4*
		27/01/2021	*27/01/2021*	*27/01/2021*	*27/01/2021*	*27/01/2021*	*27/01/2021*	*27/01/2021*	*27/01/2021*	*27/01/2021*	*27/01/2021*
		0.8 - 1.5	*2.3 - 3.1*	*0.8 - 1.5*	*0.8 - 1.5*	*2.3 - 3.1*	*0.8 - 1.5*	*0.0 - 0.8*	*0.0 - 0.8*	*0.0 - 0.8*	*2.3 - 3.1*
Acenaphthene	58	0.22	<0.02	1.96	1.58	0.16	<0.02	<0.02	<0.02	0.21	<0.02
Acenaphthylene	0.17	0.03	<0.02	**0.84**	**0.61**	0.05	<0.02	<0.02	<0.02	0.03	<0.02
Anthracene	0.74	0.59	<0.02	**4.94**	**4.72**	0.61	<0.02	<0.02	<0.02	0.45	<0.02
Benzo[a]anthracene	0.63	**1.31**	<0.02	**9.61**	**5.21**	**1.27**	<0.02	<0.02	<0.02	**0.94**	<0.02
Benzo[a]pyrene	0.3	**1.31**	<0.02	**9.85**	**4.99**	**1.33**	<0.02	<0.02	<0.02	**0.86**	<0.02
Benzo[b]fluoranthene	0.78	**1.32**	<0.02	**8.69**	**5.02**	**1.06**	<0.02	<0.02	<0.02	**0.92**	<0.02
Benzo[g,h,i]perylene	7.8	0.69	<0.02	4.8	2.89	0.57	<0.02	<0.02	<0.02	0.42	<0.02
Benzo[k]fluoranthene	0.78	0.74	<0.02	**5.03**	**2.5**	0.64	<0.02	<0.02	<0.02	0.51	<0.02
Chrysene	7.8	1.35	<0.02	**11**	5.27	1.33	<0.02	<0.02	<0.02	0.99	<0.02
Dibenzo[a,h]anthracene	0.1	**0.2**	<0.02	**0.76**	**0.74**	**0.16**	<0.02	<0.02	<0.02	**0.13**	<0.02
Fluoranthene	0.69	**3.7**	<0.02	**23.9**	**16.5**	**3.03**	<0.02	<0.02	<0.02	**2.55**	<0.02
Fluorene	69	0.2	<0.02	2.02	2.38	0.21	<0.02	<0.02	<0.02	0.2	<0.02
Indeno[1,2,3-cd]pyrene	0.48	**0.66**	<0.02	**4.62**	**2.53**	**0.51**	<0.02	<0.02	<0.02	0.42	<0.02
1-Methylnaphthalene	3.4	0.03	<0.02	<0.4	0.93	0.08	<0.02	<0.02	<0.02	<0.02	<0.02
2-Methylnaphthalene	3.4	0.03	<0.02	<0.4	1.3	0.14	<0.02	<0.02	<0.02	0.02	<0.02
Methylnaphthalene (1&2)	3.4	0.06	<0.04	<0.8	2.22	0.22	<0.04	<0.04	<0.04	0.04	<0.04
Naphthalene	0.75	0.02	<0.01	0.74	**3.22**	0.07	<0.01	<0.01	<0.01	0.03	<0.01
Phenanthrene	7.8	2.33	<0.02	**19.2**	**20**	1.88	<0.02	<0.02	<0.02	1.9	<0.02
Pyrene	78	2.73	<0.02	19.2	13.2	2.43	<0.02	<0.02	<0.02	1.87	<0.02

Notes: 78

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 Residential/Parkland/Institutional 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

TABLE 8
METALS ANALYSIS FOR SOIL
Smart Living Properties
15 Oblats Avenue, Ottawa, Ontario

Parameter	*MECP Table 3 Standards**	*Sample Designation*								
		Sample Collection Date (dd/mm/yyyy)								
		Sample Depth (mbgs)								
		BH-1 SS-4	*BH-2 SS-2/DUP*		*BH-2 SS-4*	*MW-3 SS-2*	*MW-4 SS-1*	*MW-5 SS-1*	*BH-6 SS-1*	*BH-6 SS-4*
		27/01/2021	*27/01/2021*	*27/01/2021*	*27/01/2021*	*27/01/2021*	*27/01/2021*	*27/01/2021*	*27/01/2021*	*27/01/2021*
		2.3 - 3.1	*0.8 - 1.5*	*0.8 - 1.5*	*2.3 - 3.1*	*0.8 - 1.5*	*0.0 - 0.8*	*0.0 - 0.8*	*0.0 - 0.8*	*2.3 - 3.1*
Antimony	7.5	<1	1.3	<1	1.6	<1	<1	<1	<1	<1
Arsenic	18	2.8	7.1	4.3	5.7	2.7	2.7	1.6	4.6	2.6
Barium	390	**415**	156	26.2	98.6	62.3	55.6	46.3	85.9	352
Beryllium	5	0.8	0.7	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	0.8
Boron	120	9.7	7.9	5.2	6.5	<5	<5	<5	<5	6.3
Cadmium	1.2	<0.5	<0.5)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	160	110	47.9	11.8	35.4	31.5	37.2	27.1	33.3	93.4
Cobalt	22	**24.8**	11.5	4.5	7.7	6.2	7.4	6.7	7.8	**22.7**
Copper	180	60.4	29.8	21.7	22	11.4	13.7	8.9	28	45
Lead	120	5.9	52	8.9	40.9	9.1	6.8	5	65.8	5.9
Molybdenum	6.9	1.5	1.2	<1	1.1	<1	<1	<1	<1	<1
Nickel	130	63.1	40.7	10.5	21.4	14.7	16.5	13.5	17.3	57.6
Selenium	2.4	<1	1	<1	<1	<1	<1	<1	<1	<1
Silver	25	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Thallium	1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Uranium	23	1.7	1	<1	1.2	<1	1.2	<1	<1	<1
Vanadium	86	**119**	52.3	21.1	38.8	34.6	42.3	31.4	37.2	**97.9**
Zinc	340	127	96	46	59.1	35.8	31.2	28.7	120	115

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 Residential/Parkland/Institutional 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: 284665.001

TABLE 9
TOXICITY CHARACTERISTIC LEACHING PROCEDURE (TCLP) ANALYSIS FOR SOIL
Smart Living Properties
15 Oblats Avenue, Ottawa, Ontario

Parameter	*Schedule 4 ++*	*Sample Designation*
		Sample Collection Date (dd/mm/yyyy)
		Composite
		27/1/2021
VOLATILE ORGANIC COMPOUNDS		
Benzene	0.5	<0.005
Carbon Tetrachloride	0.5	<0.005
Chlorobenzene	8	<0.004
Chloroform	10	<0.006
1,2-Dichlorobenzene	20	<0.004
1,4-Dichlorobenzene	0.5	<0.004
1,2-Dichloroethane	0.5	<0.005
1,1-Dichloroethylene	1.4	<0.006
Methyl Ethyl Ketone	200	<0.3
Tetrachloroethylene	3	<0.005
Trichloroethylene	5	<0.004
Vinyl Chloride	0.2	<0.005
INORGANICS		
Fluoride	150	0.15
Free Cyanide	20	<0.02
Nitrite and Nitrate	1000	<1
POLYCHLORINATED BIPHENYLS		
Total PCBs	0.3	<0.003
SEMI-VOLATILE		
Benzo(a)pyrene	0.001	<0.0001

Notes:

Schedule 4 ++ Ontario Regulation 347/90 - As Amended

BOLD Exceeds Schedule 4 Criteria

Units All Values Reported in Units of mg/L.

Pinchin File: 284665.001

TABLE 10
PETROLEUM HYDROCARBON AND BTEX ANALYSIS FOR GROUNDWATER
Smart Living Properties
15 Oblats Avenue, Ottawa, Ontario

Parameter	*MECP Table 3 Standards**	*Sample Designation*			
		Sample Collection Date (dd/mm/yyyy)			
		MW-3/DUP		*MW-5*	*MW-4*
		10/02/2021	*10/02/2021*	*10/02/2021*	*10/02/2021*
Petroleum Hydrocarbons F1 (C_6 - C_{10})	750	<25	<25	<25	<25
Petroleum Hydrocarbons F2 (>C_{10} - C_{16})	150	<100	<100	<100	<100
Petroleum Hydrocarbons F3 (>C_{16} - C_{34})	500	<100	<100	<100	<100
Petroleum Hydrocarbons F4 (>C_{34} - C_{50})	500	<100	<100	<100	<100

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 All Types of Property Use.
BOLD	Exceeds Site Condition Standard
BOLD	Reportable Detection Limit Exceeds Site Condition Standard
Units	All Units in µg/L
BTEX	Benzene, Toluene, Ethylbenzene and Xylenes

TABLE 11
VOLATILE ORGANIC COMPOUND ANALYSIS FOR GROUNDWATER
Smart Living Properties
15 Oblats Avenue, Ottawa, Ontario

Parameter	*MECP Table 3 Standards**	*Sample Designation*				
		Sample Collection Date (dd/mm/yyyy)				
		MW-3/DUP		*MW-5*	*MW-4*	*Trip*
		10/02/2021	*10/02/2021*	*10/02/2021*	*10/02/2021*	*10/02/2021*
Acetone	130000	<5	<5	<5	<5	<5
Benzene	430	<0.5	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane	85000	<0.5	<0.5	<0.5	<0.5	<0.5
Bromoform	770	<0.5	<0.5	<0.5	<0.5	<0.5
Bromomethane	56	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon Tetrachloride	8.4	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorobenzene	630	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	22	<0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	82000	<0.5	<0.5	<0.5	<0.5	<0.5
Dichlorodifluoromethane	4400	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	9600	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-Dichlorobenzene	9600	<0.5	<0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	67	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	3100	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane	12	<0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethylene	17	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethylene	17	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethylene	17	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	140	<0.5	<0.5	<0.5	<0.5	<0.5
1,3-Dichloropropene, total	45	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	2300	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylene dibromide (dibromoethane, 1,2-)	0.83	<0.2	<0.2	<0.2	<0.2	<0.2
Hexane	520	<1	<1	<1	<1	<1
Methyl Ethyl Ketone (2-Butanone)	1500000	<5	<5	<5	<5	<5
Methyl Isobutyl Ketone	580000	<5	<5	<5	<5	<5
Methyl tert-butyl ether	1400	<2	<2	<2	<2	<2
Methylene Chloride	5500	<5	<5	<5	<5	<5
Styrene	9100	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,1,2-Tetrachloroethane	28	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2,2-Tetrachloroethane	15	<0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethylene	17	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	18000	0.6	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	6700	<0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	30	<0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethylene	17	<0.5	<0.5	<0.5	<0.5	<0.5
Trichlorofluoromethane	2500	<1	<1	<1	<1	<1
Vinyl Chloride	1.7	<0.5	<0.5	<0.5	<0.5	<0.5
Xylenes, total	4200	1.6	1	<0.5	<0.5	<0.5

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 All Types of Property Use.

BOLD — Exceeds Site Condition Standard
BOLD — Reportable Detection Limit Exceeds Site Condition Standard
Units — All Units in µg/L

Pinchin File: 284665.001

TABLE 12
POLYCYCLIC AROMATIC HYDROCARBON ANALYSIS FOR GROUNDWATER
Smart Living Properties
15 Oblats Avenue, Ottawa, Ontario

Parameter	*MECP Table 3 Standards**	*Sample Designation*			
		Sample Collection Date (dd/mm/yyyy)			
		MW-3/DUP		*MW-5*	*MW-4*
		10/02/2021	*10/02/2021*	*10/02/2021*	*10/02/2021*
Acenaphthene	1700	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	1.8	<0.05	<0.05	<0.05	<0.05
Anthracene	2.4	<0.01	<0.01	<0.01	<0.01
Benzo[a]anthracene	4.7	<0.01	<0.01	<0.01	<0.01
Benzo[a]pyrene	0.81	<0.01	<0.01	<0.01	<0.01
Benzo[b]fluoranthene	0.75	<0.05	<0.05	<0.05	<0.05
Benzo[g,h,i]perylene	0.2	<0.05	<0.05	<0.05	<0.05
Benzo[k]fluoranthene	0.4	<0.05	<0.05	<0.05	<0.05
Chrysene	1	<0.05	<0.05	<0.05	<0.05
Dibenzo[a,h]anthracene	0.52	<0.05	<0.05	<0.05	<0.05
Fluoranthene	130	<0.01	<0.01	<0.01	<0.01
Fluorene	400	<0.05	<0.05	<0.05	<0.05
Indeno[1,2,3-cd]pyrene	0.2	<0.05	<0.05	<0.05	<0.05
1-Methylnaphthalene	1800	<0.05	<0.05	<0.05	<0.05
2-Methylnaphthalene	1800	<0.05	<0.05	<0.05	<0.05
Methylnaphthalene (1&2)	1800	<0.1	<0.1	<0.1	<0.1
Naphthalene	6400	<0.05	<0.05	<0.05	<0.05
Phenanthrene	580	<0.05	<0.05	<0.05	<0.05
Pyrene	68	<0.01	<0.01	<0.01	<0.01

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 All Types of Property Use.

BOLD — Exceeds Site Condition Standard

BOLD — Reportable Detection Limit Exceeds Site Condition Standard

Units — All Units in µg/L

Pinchin File: 284665.001

TABLE 13
METALS ANALYSIS FOR GROUNDWATER
Smart Living Properties
15 Oblats Avenue, Ottawa, Ontario

Parameter	*MECP Table 3 Standards**	*Sample Designation*			
		Sample Collection Date (dd/mm/yyyy)			
		MW-3/DUP		*MW-5*	*MW-4*
		10/02/2021	*10/02/2021*	*10/02/2021*	*10/02/2021*
Antimony	20000	<0.5	<0.5	<0.5	<0.5
Arsenic	1900	1	2	2	1
Barium	29000	219	177	113	220
Beryllium	67	<0.5	<0.5	<0.5	<0.5
Boron	45000	34	40	36	35
Cadmium	2.7	<0.1	<0.1	<0.1	<0.1
Chromium	810	<1	<1	<1	<1
Cobalt	66	1.6	<0.5	<0.5	1.5
Copper	87	0.8	0.9	0.8	0.8
Lead	25	<0.1	<0.1	<0.1	<0.1
Molybdenum	9200	11.9	18.7	13.2	12
Nickel	490	4	3	2	4
Selenium	63	<1	<1	<1	<1
Silver	1.5	<0.1	<0.1	<0.1	<0.1
Sodium	2300000	42300	41800	37200	39700
Thallium	510	<0.1	<0.1	<0.1	<0.1
Uranium	420	2.4	2.9	1.7	2.4
Vanadium	250	1.5	3	3.5	1.4
Zinc	1100	<5	6	7	<5

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 All Types of Property Use.

BOLD — Exceeds Site Condition Standard

BOLD — Reportable Detection Limit Exceeds Site Condition Standard

Units — All Units in µg/L

Pinchin File: 284665.001

10.0 APPENDICES

APPENDIX A

Legal Survey and Survey Data

PLAN 4R-27624

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

DATE JANUARY 09, 2014

Ronald A. Denis

RONALD A. DENIS
ONTARIO LAND SURVEYOR

RECEIVED AND DEPOSITED

DATE January 10 2014

C. Holloway

LAND REGISTRAR FOR THE LAND TITLES DIVISION OF OTTAWA-CARLETON No.4

S

SCHEDULE

Part	Lot	Plan	P.I.N.
1	Part of Block 'A' All of Lots 1, 2,20,21,22& Part of Lot 3	243	Part of 04203-0043
	Part of Lot 'H'	Concession 'D' (RF)	
2	Part of Lot 3 Part of Block 'A' All of Lots 4,5&6	243	Part of 04203-0043
	All Of Lot 91, Rear Passage & Lots 165, 166,167&168	110574	
	Part of Lot 'H'	Concession 'D' (RF)	
3	Part of Lot 'H'	Concession 'D' (RF)	Part of 04203-0761

Parts 1 & 2– Comprise All Of PIN.04203-0043
Part 3– Subject to Easements Per Inst. No. CR92265, CR211386, CR242454

BLOCK "A", LOTS 1 TO 6 (Inclusive) LOTS 20, 21 & 22 (Inclusive) REGISTERED PLAN 243 AND LOT 91 AND THE REAR PASSAGE AND LOTS 165 TO 168 (Inclusive) REGISTERED PLAN 110574 AND PART OF LOT "H" CONCESSION "D" (RIDEAU FRONT)

GEOGRAPHIC TOWNSHIP OF NEPEAN

CITY OF OTTAWA

FARLEY, SMITH & DENIS SURVEYING LTD.
2014

SCALE 1:200

0 2 4 6 8 10 12 14 16 18 20 metres

METRIC NOTE

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

BEARING NOTE

BEARINGS ARE GRID AND ARE DERIVED FROM REFERENCE POINTS (A) AND (B) BY REAL TIME NETWORK OBSERVATIONS AND ARE REFERRED TO THE CENTRAL MERIDIAN 76°30'W LONGITUDE, MTM ZONE 9, N.A.D. 1983 (ORIGINAL).

DISTANCES ARE GROUND AND CAN BE CONVERTED TO GRID BY MULTIPLYING BY A COMBINED SCALE FACTOR OF 0.999965.

CO-ORDINATES WERE DERIVED FROM REAL TIME NETWORK OBSERVATIONS (SMARTNET) MTM ZONE 9, N.A.D. 1983 (ORIGINAL).

POINT ID	NORTHING	EASTING
(A)	5030320.834	369116.762
(B)	5030235.500	369152.500

CO-ORDINATES ARE MTM ZONE 9, N.A.D. 1983 (ORIGINAL), TO URBAN ACCURACY PER SEC. 14 (2) OF O.REG. 216/10, AND CANNOT, IN THEMSELVES, BE USED TO RE-ESTABLISH CORNERS OR BOUNDARIES SHOWN ON THIS PLAN.

LEGEND

■	SURVEY MONUMENT FOUND
□	SURVEY MONUMENT SET
SIB	STANDARD IRON BAR
SSIB	SHORT STANDARD IRON BAR
IB	IRON BAR
ø	ROUND
CC	CUT CROSS
CP	CONCRETE PIN
WIT	WITNESS
OU	ORIGIN UNKNOWN
647/HRF	H.R.FARLEY O.L.S.
1692/FSD	FARLEY, SMITH & DENIS SURVEYING LTD. October 31, 2011, February 29, 2012
1319	WEBSTER&SIMMONDS SURVEYING LTD.
AOG	ANNIS, O'SULLIVAN & VOLLEBEKK LTD.
CITY	CITY OF OTTAWA
RP1	REGISTERED PLAN 110574
RP2	REGISTERED PLAN 243
P1	PLAN 4R-19046
P2	PLAN 4R-20323
P3	PLAN 5R-13960
P4	PLAN 5R-13576
P5	PLAN 4R-20118
P6	PLAN 4R-1790
D1	INST. No. CR211386 (1stly)
D2	INST. No. CR92265
D3	INST. No. CR334718
D4	INST. No. CR207452
(hatched)	DENOTES EXISTING BUILDING

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 16th day of December, 2013.

Date: JANUARY 09, 2014

Ronald A. Denis

RONALD A. DENIS
Ontario Land Surveyor

FARLEY, SMITH & DENIS SURVEYING LTD.
ONTARIO LAND SURVEYORS
CANADA LANDS SURVEYORS
190 COLONNADE ROAD, OTTAWA, ONTARIO K2E 7J5
(613) 727-8226 FAX (613) 727-1823

FILE No. : J-1177

JANUARY 09, 2014 12:32:19 CAD FILE= U:\Ljiljana\2014\R-PLAN_GPS\J-1177_15_OBLATE.dwg

APPENDIX B
Borehole Logs

Log of Borehole: BH-1

Project #: 284665.001 **Logged By:** RL

Project: Phase Two Environmental Site Assessment

Client: Smart Living Properties

Location: 15 Oblats Avenue, Ottawa, Ontario

Drill Date: January 27, 2021 **Sheet:** 1 of 1

SUBSURFACE PROFILE					SAMPLE			
Depth (ft / m)	Symbol	Description	Elevation (m)	Monitoring Well Details	Recovery (%)	Sample ID	Soil Vapour Concentration (ppm) CGI/PID	Laboratory Analysis
0 / 0		Ground Surface		No Monitoring Well Installed				
0		***Asphalt***						
1		***Sand and Gravel*** Trace bricks and concrete throughout, brown, moist, no staining, no odour			90	SS1	0/0	
2 / 1					90	SS2	0/0	pH, PHCs, VOCs, PAHs
3					90	SS3	0/0	
4		***Silty Clay*** Brown, moist, no staining, no odour			90	SS4	0/0	PHCs, VOCs, PAHs, Metals
5 / 2								
6								
7								
8								
9								
10 / 3								
11		Turning grey and wet			100	SS5	0/0	pH, Grain Size
12								
13								
14 / 4					100	SS6	0/0	
15		***No Refusal***						
16		End of Borehole						
17 / 5								
18								
19								
20 / 6								
21								
22								
23 / 7								

Contractor: Strata Drilling Group

Grade Elevation: NM

Drilling Method: Direct Push

Top of Casing Elevation: NM

Well Casing Size: NA

UTM Coordinates: NM

Log of Borehole: BH-2

Project #: 284665.001 **Logged By:** RL

Project: Phase Two Environmental Site Assessment

Client: Smart Living Properties

Location: 15 Oblats Avenue, Ottawa, Ontario

Drill Date: January 27, 2021 **Sheet:** 1 of 1

SUBSURFACE PROFILE					SAMPLE			
Depth (ft / m)	Symbol	Description	Elevation (m)	Monitoring Well Details	Recovery (%)	Sample ID	Soil Vapour Concentration (ppm) CGI/PID	Laboratory Analysis
0 / 0		Ground Surface						
0 / 0		***Asphalt***						
1 / 0		***Sand and Gravel*** Trace bricks and concrete throughout, brown, moist, no staining, no odour			80	SS1	0/0	
3 / 1					80	SS2	0/0	PHCs, VOCs, PAHs
6 / 2					60	SS3	0/0	
8 / 2		***Silty Clay*** Brown, moist, no staining, no odour			60	SS4	0/0	PHC, VOCs, PAHs, Metals
11 / 3		Turning grey and wet			100	SS5	0/0	
13 / 4					100	SS6	0/0	
15 / 4		***No Refusal*** End of Borehole						
0 / 0 to 15 / 4				No Monitoring Well Installed				

Contractor: Strata Drilling Group

Grade Elevation: NM

Drilling Method: Direct Push

Top of Casing Elevation: NM

Well Casing Size: NA

UTM Coordinates: NM

Log of Borehole: MW-3

Project #: 284665.001 **Logged By:** RL

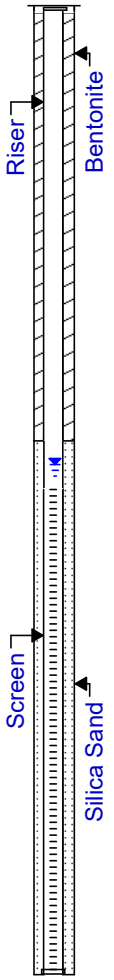
Project: Phase Two Environmental Site Assessment

Client: Smart Living Properties

Location: 15 Oblats Avenue, Ottawa, Ontario

Drill Date: January 27, 2021 **Sheet:** 1 of 1

SUBSURFACE PROFILE					SAMPLE			
Depth (ft / m)	Symbol	Description	Elevation (m)	Monitoring Well Details	Recovery (%)	Sample ID	Soil Vapour Concentration (ppm) CGI/PID	Laboratory Analysis
0 / 0		Ground Surface	100.74					
		Asphalt						
		Sand and Gravel Trace bricks and concrete throughout, brown, moist, no staining, no odour			50	SS1	0/0	
3 / 1			99.67		50	SS2	0/0	PHCs, VOCs, PAHs, Metals
		Silty Sand Brown, moist, no staining, no odour			20	SS3	0/0	
10 / 3			97.69		20	SS4	0/0	
		Silty Clay Grey, wet, no staining, no odour			100	SS5	0/0	Grain Size
					100	SS6	0/0	
					100	SS7	0/0	
20 / 6			94.64		100	SS8	0/0	
		No Refusal						
		End of Borehole						



Groundwater measured at 2.89 mbgs on February 10, 2021

Contractor: Strata Drilling Group

Grade Elevation: 100.739 mREL

Drilling Method: Direct Push

Top of Casing Elevation: 100.647 mREL

Well Casing Size: 5.08 cm

UTM Coordinates: NM

Log of Borehole: MW-4

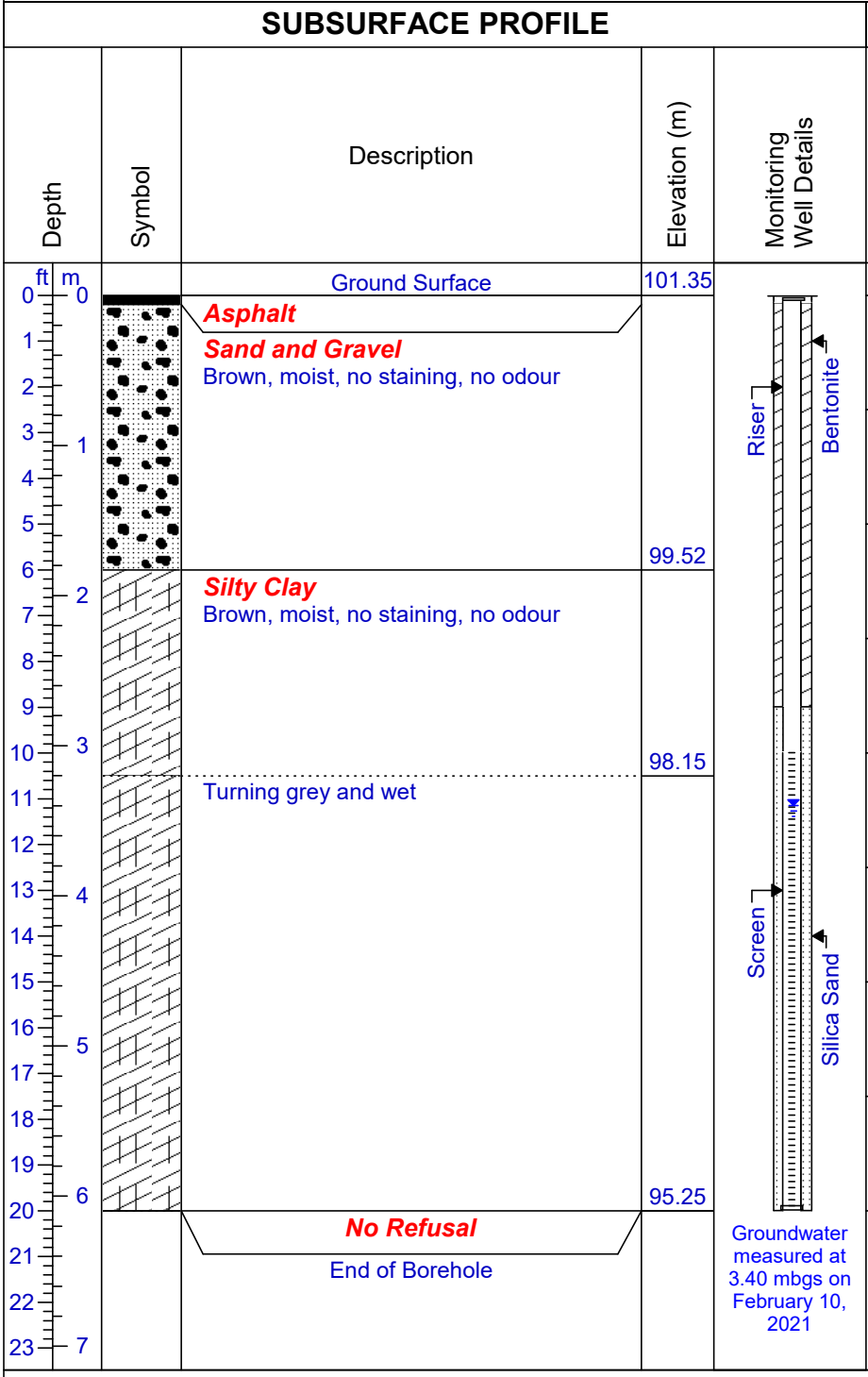
Project #: 284665.001 **Logged By:** RL

Project: Phase Two Environmental Site Assessment

Client: Smart Living Properties

Location: 15 Oblats Avenue, Ottawa, Ontario

Drill Date: January 27, 2021 **Sheet:** 1 of 1



Contractor: Strata Drilling Group

Grade Elevation: 101.349

Drilling Method: Direct Push

Top of Casing Elevation: 101.236

Well Casing Size: 5.08 cm

UTM Coordinates: NM

Log of Borehole: MW-5

Project #: 284665.001 **Logged By:** RL

Project: Phase Two Environmental Site Assessment

Client: Smart Living Properties

Location: 15 Oblats Avenue, Ottawa, Ontario

Drill Date: January 27, 2021 **Sheet:** 1 of 1

SUBSURFACE PROFILE

Depth (ft)	Depth (m)	Symbol	Description	Elevation (m)
0	0		Ground Surface	101.71
0	0		***Asphalt***	
1			***Sand and Gravel*** Brown, moist, no staining, no odour	
2	1			
3				
4				
5				
6				
7	2			99.57
8			***Silty Clay*** Brown, moist, no staining, no odour	
9				
10	3			
11				98.35
12			Turning grey and wet	
13	4			
14				
15				
16	5			
17				
18				
19				
20	6			95.61
21			***No Refusal***	
22			End of Borehole	
23	7			

Monitoring Well Details: Riser, Bentonite, Screen, Silica Sand

Groundwater measured at 3.22 mbgs on February 10, 2021

SAMPLE

Recovery (%)	Sample ID	Soil Vapour Concentration (ppm) CGI/PID	Laboratory Analysis
50	SS1	0/0	PHCs, VOCs, PAHs, Metals
50	SS2	0/0	pH
100	SS3	0/0	
100	SS4	0/0	Grain Size
100	SS5	0/0	pH, Grain Size
100	SS6	0/0	
100	SS7	0/0	
100	SS8	0/0	

Contractor: Strata Drilling Group

Grade Elevation: 101.705 mREL

Drilling Method: Direct Push

Top of Casing Elevation: 101.584 mREL

Well Casing Size: 5.08 cm

UTM Coordinates: NM

Log of Borehole: BH-6

Project #: 284665.001 **Logged By:** RL

Project: Phase Two Environmental Site Assessment

Client: Smart Living Properties

Location: 15 Oblats Avenue, Ottawa, Ontario

Drill Date: January 27, 2021 **Sheet:** 1 of 1

SUBSURFACE PROFILE					SAMPLE			
Depth (ft / m)	Symbol	Description	Elevation (m)	Monitoring Well Details	Recovery (%)	Sample ID	Soil Vapour Concentration (ppm) CGI/PID	Laboratory Analysis
0 / 0		Ground Surface						
0		***Asphalt***		No Monitoring Well Installed	50	SS1	0/0	PHCs, VOCs, PAHs, Metals
1		***Sand and Gravel*** Brown, moist, no staining, no odour						
2 / 1					50	SS2	0/0	
3					100	SS3	0/0	
4								
5								
6 / 2					100	SS4	0/0	Grain Size, Metals
7		***Silty Clay*** Brown, moist, no staining, no odour						
8								
9								
10 / 3					100	SS5	0/0	
11		Turning grey and wet						
12								
13					100	SS6	0/0	
14								
15 / 4		***No Refusal***						
16		End of Borehole						
17 / 5								
18								
19								
20 / 6								
21								
22								
23 / 7								

Contractor: Strata Drilling Group

Grade Elevation: NM

Drilling Method: Direct Push

Top of Casing Elevation: NM

Well Casing Size: NA

UTM Coordinates: NM

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: Ryan LaRonde

Client PO: Oblats Rd
Project: 284665.001
Custody:

Report Date: 19-Feb-2021
Order Date: 29-Jan-2021

Revised Report

Order #: 2105488

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

Paracel ID	Client ID
2105488-01	BH-1,SS-2
2105488-02	BH-1,SS-5
2105488-03	BH-2,SS-2
2105488-04	MW-3,SS-2
2105488-05	MW-4,SS-1
2105488-06	MW-5,SS-1
2105488-07	MW-5,SS-2
2105488-08	MW-5,SS-5
2105488-09	BH-6,SS-1
2105488-10	BH-1,SS4
2105488-11	BH-2,SS4
2105488-12	MW-3,SS5
2105488-14	MW-5,SS4
2105488-15	BH-6,SS4

Approved By:

Mark Foto

Mark Foto, M.Sc.
Lab Supervisor

Certificate of Analysis

Client: Pinchin Ltd. (Ottawa)

Client PO: Oblats Rd

Report Date: 19-Feb-2021

Order Date: 29-Jan-2021

Project Description: 284665.001

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Boron, available	MOE (HWE), EPA 200.7 - ICP-OES	19-Feb-21	17-Feb-21
Chromium, hexavalent - soil	MOE E3056 - Extraction, colourimetric	16-Feb-21	17-Feb-21
Mercury by CVAA	EPA 7471B - CVAA, digestion	17-Feb-21	17-Feb-21
pH, soil	EPA 150.1 - pH probe @ 25 °C, CaCl buffered ext.	2-Feb-21	2-Feb-21
PHC F1	CWS Tier 1 - P&T GC-FID	1-Feb-21	2-Feb-21
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	29-Jan-21	1-Feb-21
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	2-Feb-21	17-Feb-21
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	1-Feb-21	2-Feb-21
REG 153: VOCs by P&T GC/MS	EPA 8260 - P&T GC-MS	1-Feb-21	2-Feb-21
Solids, %	Gravimetric, calculation	8-Feb-21	1-Feb-21
Texture - Coarse Med/Fine	Based on ASTM D2487	9-Feb-21	4-Feb-21

Certificate of Analysis

Client: Pinchin Ltd. (Ottawa)

Client PO: Oblats Rd

Report Date: 19-Feb-2021

Order Date: 29-Jan-2021

Project Description: 284665.001

	Client ID:	BH-1,SS-2	BH-1,SS-5	BH-2,SS-2	MW-3,SS-2
	Sample Date:	27-Jan-21 00:00	27-Jan-21 00:00	27-Jan-21 00:00	27-Jan-21 00:00
	Sample ID:	2105488-01	2105488-02	2105488-03	2105488-04
	MDL/Units	Soil	Soil	Soil	Soil
Physical Characteristics					
% Solids	0.1 % by Wt.	82.8	-	84.5	86.9
>75 um	0.1 %	-	9.7	-	-
<75 um	0.1 %	-	90.3	-	-
Texture	0.1 %	-	Med/Fine	-	-
General Inorganics					
pH	0.05 pH Units	7.87	7.96	-	-
Metals					
Antimony	1.0 ug/g dry	-	-	1.3	<1.0
Arsenic	1.0 ug/g dry	-	-	7.1	2.7
Barium	1.0 ug/g dry	-	-	156	62.3
Beryllium	0.5 ug/g dry	-	-	0.7	<0.5
Boron	5.0 ug/g dry	-	-	7.9	<5.0
Boron, available	0.5 ug/g dry	-	-	<0.5	-
Cadmium	0.5 ug/g dry	-	-	<0.5	<0.5
Chromium	5.0 ug/g dry	-	-	47.9	31.5
Chromium (VI)	0.2 ug/g dry	-	-	<0.2	-
Cobalt	1.0 ug/g dry	-	-	11.5	6.2
Copper	5.0 ug/g dry	-	-	29.8	11.4
Lead	1.0 ug/g dry	-	-	52.0	9.1
Mercury	0.1 ug/g dry	-	-	<0.1	-
Molybdenum	1.0 ug/g dry	-	-	1.2	<1.0
Nickel	5.0 ug/g dry	-	-	40.7	14.7
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	-	-	52.3	34.6
Zinc	20.0 ug/g dry	-	-	96.0	35.8
Volatiles					
Acetone	0.50 ug/g dry	<0.50	-	<0.50	<0.50
Benzene	0.02 ug/g dry	<0.02	-	<0.02	<0.02
Bromodichloromethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Bromoform	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Bromomethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Carbon Tetrachloride	0.05 ug/g dry	<0.05	-	<0.05	<0.05

Certificate of Analysis

Client: Pinchin Ltd. (Ottawa)

Client PO: Oblats Rd

Report Date: 19-Feb-2021

Order Date: 29-Jan-2021

Project Description: 284665.001

	Client ID:	BH-1,SS-2	BH-1,SS-5	BH-2,SS-2	MW-3,SS-2
	Sample Date:	27-Jan-21 00:00	27-Jan-21 00:00	27-Jan-21 00:00	27-Jan-21 00:00
	Sample ID:	2105488-01	2105488-02	2105488-03	2105488-04
	MDL/Units	Soil	Soil	Soil	Soil
Chlorobenzene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Chloroform	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Dibromochloromethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Dichlorodifluoromethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,2-Dichlorobenzene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,3-Dichlorobenzene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,4-Dichlorobenzene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,1-Dichloroethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,2-Dichloroethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,1-Dichloroethylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
cis-1,2-Dichloroethylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
trans-1,2-Dichloroethylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,2-Dichloropropane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
cis-1,3-Dichloropropylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
trans-1,3-Dichloropropylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,3-Dichloropropene, total	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Ethylbenzene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Ethylene dibromide (dibromoethane, 1,2-)	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Hexane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g dry	<0.50	-	<0.50	<0.50
Methyl Isobutyl Ketone	0.50 ug/g dry	<0.50	-	<0.50	<0.50
Methyl tert-butyl ether	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Methylene Chloride	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Styrene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,1,1,2-Tetrachloroethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,1,2,2-Tetrachloroethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Tetrachloroethylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Toluene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,1,1-Trichloroethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
1,1,2-Trichloroethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Trichloroethylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Trichlorofluoromethane	0.05 ug/g dry	<0.05	-	<0.05	<0.05
Vinyl chloride	0.02 ug/g dry	<0.02	-	<0.02	<0.02
m,p-Xylenes	0.05 ug/g dry	<0.05	-	<0.05	<0.05
o-Xylene	0.05 ug/g dry	<0.05	-	<0.05	<0.05

Certificate of Analysis

Client: Pinchin Ltd. (Ottawa)

Client PO: Oblats Rd

Report Date: 19-Feb-2021

Order Date: 29-Jan-2021

Project Description: 284665.001

	Client ID:	BH-1,SS-2	BH-1,SS-5	BH-2,SS-2	MW-3,SS-2
	Sample Date:	27-Jan-21 00:00	27-Jan-21 00:00	27-Jan-21 00:00	27-Jan-21 00:00
	Sample ID:	2105488-01	2105488-02	2105488-03	2105488-04
	MDL/Units	Soil	Soil	Soil	Soil
Xylenes, total	0.05 ug/g dry	<0.05	-	<0.05	<0.05
4-Bromofluorobenzene	Surrogate	93.8%	-	97.9%	98.2%
Dibromofluoromethane	Surrogate	79.0%	-	79.3%	79.5%
Toluene-d8	Surrogate	105%	-	105%	105%
Hydrocarbons					
F1 PHCs (C6-C10)	7 ug/g dry	<7	-	<7	<7
F2 PHCs (C10-C16)	4 ug/g dry	<4	-	<4	<4
F3 PHCs (C16-C34)	8 ug/g dry	<8	-	<8	<8
F4 PHCs (C34-C50)	6 ug/g dry	<6	-	<6	<6
Semi-Volatiles					
Acenaphthene	0.02 ug/g dry	0.22	-	1.96	<0.02
Acenaphthylene	0.02 ug/g dry	0.03	-	0.84	<0.02
Anthracene	0.02 ug/g dry	0.59	-	4.94	<0.02
Benzo [a] anthracene	0.02 ug/g dry	1.31	-	9.61	<0.02
Benzo [a] pyrene	0.02 ug/g dry	1.31	-	9.85	<0.02
Benzo [b] fluoranthene	0.02 ug/g dry	1.32	-	8.69	<0.02
Benzo [g,h,i] perylene	0.02 ug/g dry	0.69	-	4.80	<0.02
Benzo [k] fluoranthene	0.02 ug/g dry	0.74	-	5.03	<0.02
Chrysene	0.02 ug/g dry	1.35	-	11.0	<0.02
Dibenzo [a,h] anthracene	0.02 ug/g dry	0.20	-	0.76	<0.02
Fluoranthene	0.02 ug/g dry	3.70	-	23.9	<0.02
Fluorene	0.02 ug/g dry	0.20	-	2.02	<0.02
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	0.66	-	4.62	<0.02
1-Methylnaphthalene	0.02 ug/g dry	0.03	-	<0.40 [1]	<0.02
2-Methylnaphthalene	0.02 ug/g dry	0.03	-	<0.40 [1]	<0.02
Methylnaphthalene (1&2)	0.04 ug/g dry	0.06	-	<0.80 [1]	<0.04
Naphthalene	0.01 ug/g dry	0.02	-	0.74	<0.01
Phenanthrene	0.02 ug/g dry	2.33	-	19.2	<0.02
Pyrene	0.02 ug/g dry	2.73	-	19.2	<0.02
2-Fluorobiphenyl	Surrogate	86.4%	-	115%	77.9%
Terphenyl-d14	Surrogate	119%	-	129%	103%

Certificate of Analysis

Client: Pinchin Ltd. (Ottawa)

Client PO: Oblats Rd

Report Date: 19-Feb-2021

Order Date: 29-Jan-2021

Project Description: 284665.001

	Client ID:	MW-4,SS-1	MW-5,SS-1	MW-5,SS-2	MW-5,SS-5
	Sample Date:	27-Jan-21 00:00	27-Jan-21 00:00	27-Jan-21 00:00	27-Jan-21 00:00
	Sample ID:	2105488-05	2105488-06	2105488-07	2105488-08
	MDL/Units	Soil	Soil	Soil	Soil
Physical Characteristics					
% Solids	0.1 % by Wt.	85.2	83.5	-	-
>75 um	0.1 %	-	-	-	5.6
<75 um	0.1 %	-	-	-	94.4
Texture	0.1 %	-	-	-	Med/Fine
General Inorganics					
pH	0.05 pH Units	-	-	7.75	8.07
Metals					
Antimony	1.0 ug/g dry	<1.0	<1.0	-	-
Arsenic	1.0 ug/g dry	2.7	1.6	-	-
Barium	1.0 ug/g dry	55.6	46.3	-	-
Beryllium	0.5 ug/g dry	<0.5	<0.5	-	-
Boron	5.0 ug/g dry	<5.0	<5.0	-	-
Cadmium	0.5 ug/g dry	<0.5	<0.5	-	-
Chromium	5.0 ug/g dry	37.2	27.1	-	-
Cobalt	1.0 ug/g dry	7.4	6.7	-	-
Copper	5.0 ug/g dry	13.7	8.9	-	-
Lead	1.0 ug/g dry	6.8	5.0	-	-
Molybdenum	1.0 ug/g dry	<1.0	<1.0	-	-
Nickel	5.0 ug/g dry	16.5	13.5	-	-
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	1.2	<1.0	-	-
Vanadium	10.0 ug/g dry	42.3	31.4	-	-
Zinc	20.0 ug/g dry	31.2	28.7	-	-
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: Oblats Rd

Report Date: 19-Feb-2021

Order Date: 29-Jan-2021

Project Description: 284665.001

	Client ID:	MW-4,SS-1	MW-5,SS-1	MW-5,SS-2	MW-5,SS-5
	Sample Date:	27-Jan-21 00:00	27-Jan-21 00:00	27-Jan-21 00:00	27-Jan-21 00:00
	Sample ID:	2105488-05	2105488-06	2105488-07	2105488-08
	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	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	95.5%	99.6%	-	-
Dibromofluoromethane	Surrogate	78.3%	79.2%	-	-

Certificate of Analysis

Client: Pinchin Ltd. (Ottawa)

Client PO: Oblats Rd

Report Date: 19-Feb-2021

Order Date: 29-Jan-2021

Project Description: 284665.001

	Client ID:	MW-4,SS-1	MW-5,SS-1	MW-5,SS-2	MW-5,SS-5
	Sample Date:	27-Jan-21 00:00	27-Jan-21 00:00	27-Jan-21 00:00	27-Jan-21 00:00
	Sample ID:	2105488-05	2105488-06	2105488-07	2105488-08
	MDL/Units	Soil	Soil	Soil	Soil
Toluene-d8	Surrogate	106%	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	<8	<8	-	-
F4 PHCs (C34-C50)	6 ug/g dry	<6	<6	-	-
Semi-Volatiles					
Acenaphthene	0.02 ug/g dry	<0.02	<0.02	-	-
Acenaphthylene	0.02 ug/g dry	<0.02	<0.02	-	-
Anthracene	0.02 ug/g dry	<0.02	<0.02	-	-
Benzo [a] anthracene	0.02 ug/g dry	<0.02	<0.02	-	-
Benzo [a] pyrene	0.02 ug/g dry	<0.02	<0.02	-	-
Benzo [b] fluoranthene	0.02 ug/g dry	<0.02	<0.02	-	-
Benzo [g,h,i] perylene	0.02 ug/g dry	<0.02	<0.02	-	-
Benzo [k] fluoranthene	0.02 ug/g dry	<0.02	<0.02	-	-
Chrysene	0.02 ug/g dry	<0.02	<0.02	-	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	<0.02	<0.02	-	-
Fluoranthene	0.02 ug/g dry	<0.02	<0.02	-	-
Fluorene	0.02 ug/g dry	<0.02	<0.02	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	<0.02	<0.02	-	-
1-Methylnaphthalene	0.02 ug/g dry	<0.02	<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	84.9%	66.6%	-	-
Terphenyl-d14	Surrogate	115%	94.1%	-	-

Certificate of Analysis

Client: Pinchin Ltd. (Ottawa)

Client PO: Oblats Rd

Report Date: 19-Feb-2021

Order Date: 29-Jan-2021

Project Description: 284665.001

	Client ID:	BH-6,SS-1	BH-1,SS4	BH-2,SS4	MW-3,SS5
	Sample Date:	27-Jan-21 00:00	27-Jan-21 00:00	27-Jan-21 00:00	27-Jan-21 00:00
	Sample ID:	2105488-09	2105488-10	2105488-11	2105488-12
	MDL/Units	Soil	Soil	Soil	Soil
Physical Characteristics					
% Solids	0.1 % by Wt.	82.9	61.6	80.9	-
>75 um	0.1 %	-	-	-	2.8
<75 um	0.1 %	-	-	-	97.2
Texture	0.1 %	-	-	-	Med/Fine
Metals					
Antimony	1.0 ug/g dry	<1.0	<1.0	1.6	-
Arsenic	1.0 ug/g dry	4.6	2.8	5.7	-
Barium	1.0 ug/g dry	85.9	415	98.6	-
Beryllium	0.5 ug/g dry	<0.5	0.8	0.5	-
Boron	5.0 ug/g dry	<5.0	9.7	6.5	-
Boron, available	0.5 ug/g dry	-	3.4	-	-
Cadmium	0.5 ug/g dry	<0.5	<0.5	<0.5	-
Chromium	5.0 ug/g dry	33.3	110	35.4	-
Chromium (VI)	0.2 ug/g dry	-	0.6	-	-
Cobalt	1.0 ug/g dry	7.8	24.8	7.7	-
Copper	5.0 ug/g dry	28.0	60.4	22.0	-
Lead	1.0 ug/g dry	65.8	5.9	40.9	-
Mercury	0.1 ug/g dry	-	<0.1	-	-
Molybdenum	1.0 ug/g dry	<1.0	1.5	1.1	-
Nickel	5.0 ug/g dry	17.3	63.1	21.4	-
Selenium	1.0 ug/g dry	<1.0	<1.0	<1.0	-
Silver	0.3 ug/g dry	<0.3	<0.3	<0.3	-
Thallium	1.0 ug/g dry	<1.0	<1.0	<1.0	-
Uranium	1.0 ug/g dry	<1.0	1.7	1.2	-
Vanadium	10.0 ug/g dry	37.2	119	38.8	-
Zinc	20.0 ug/g dry	120	127	59.1	-
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	-

Certificate of Analysis

Client: Pinchin Ltd. (Ottawa)

Client PO: Oblats Rd

Report Date: 19-Feb-2021

Order Date: 29-Jan-2021

Project Description: 284665.001

	Client ID:	BH-6,SS-1	BH-1,SS4	BH-2,SS4	MW-3,SS5
	Sample Date:	27-Jan-21 00:00	27-Jan-21 00:00	27-Jan-21 00:00	27-Jan-21 00:00
	Sample ID:	2105488-09	2105488-10	2105488-11	2105488-12
	MDL/Units	Soil	Soil	Soil	Soil
Dibromochloromethane	0.05 ug/g dry	<0.05	-	<0.05	-
Dichlorodifluoromethane	0.05 ug/g dry	<0.05	-	<0.05	-
1,2-Dichlorobenzene	0.05 ug/g dry	<0.05	-	<0.05	-
1,3-Dichlorobenzene	0.05 ug/g dry	<0.05	-	<0.05	-
1,4-Dichlorobenzene	0.05 ug/g dry	<0.05	-	<0.05	-
1,1-Dichloroethane	0.05 ug/g dry	<0.05	-	<0.05	-
1,2-Dichloroethane	0.05 ug/g dry	<0.05	-	<0.05	-
1,1-Dichloroethylene	0.05 ug/g dry	<0.05	-	<0.05	-
cis-1,2-Dichloroethylene	0.05 ug/g dry	<0.05	-	<0.05	-
trans-1,2-Dichloroethylene	0.05 ug/g dry	<0.05	-	<0.05	-
1,2-Dichloropropane	0.05 ug/g dry	<0.05	-	<0.05	-
cis-1,3-Dichloropropylene	0.05 ug/g dry	<0.05	-	<0.05	-
trans-1,3-Dichloropropylene	0.05 ug/g dry	<0.05	-	<0.05	-
1,3-Dichloropropene, total	0.05 ug/g dry	<0.05	-	<0.05	-
Ethylbenzene	0.05 ug/g dry	<0.05	-	<0.05	-
Ethylene dibromide (dibromoethane, 1	0.05 ug/g dry	<0.05	-	<0.05	-
Hexane	0.05 ug/g dry	<0.05	-	<0.05	-
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g dry	<0.50	-	<0.50	-
Methyl Isobutyl Ketone	0.50 ug/g dry	<0.50	-	<0.50	-
Methyl tert-butyl ether	0.05 ug/g dry	<0.05	-	<0.05	-
Methylene Chloride	0.05 ug/g dry	<0.05	-	<0.05	-
Styrene	0.05 ug/g dry	<0.05	-	<0.05	-
1,1,1,2-Tetrachloroethane	0.05 ug/g dry	<0.05	-	<0.05	-
1,1,2,2-Tetrachloroethane	0.05 ug/g dry	<0.05	-	<0.05	-
Tetrachloroethylene	0.05 ug/g dry	<0.05	-	<0.05	-
Toluene	0.05 ug/g dry	<0.05	-	<0.05	-
1,1,1-Trichloroethane	0.05 ug/g dry	<0.05	-	<0.05	-
1,1,2-Trichloroethane	0.05 ug/g dry	<0.05	-	<0.05	-
Trichloroethylene	0.05 ug/g dry	<0.05	-	<0.05	-
Trichlorofluoromethane	0.05 ug/g dry	<0.05	-	<0.05	-
Vinyl chloride	0.02 ug/g dry	<0.02	-	<0.02	-
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	97.2%	-	96.1%	-

Certificate of Analysis

Client: Pinchin Ltd. (Ottawa)

Client PO: Oblats Rd

Report Date: 19-Feb-2021

Order Date: 29-Jan-2021

Project Description: 284665.001

	Client ID:	BH-6,SS-1	BH-1,SS4	BH-2,SS4	MW-3,SS5
	Sample Date:	27-Jan-21 00:00	27-Jan-21 00:00	27-Jan-21 00:00	27-Jan-21 00:00
	Sample ID:	2105488-09	2105488-10	2105488-11	2105488-12
	MDL/Units	Soil	Soil	Soil	Soil
Dibromofluoromethane	Surrogate	80.1%	-	80.2%	-
Toluene-d8	Surrogate	105%	-	107%	-
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	12	-	62	-
F4 PHCs (C34-C50)	6 ug/g dry	20	-	29	-
Semi-Volatiles					
Acenaphthene	0.02 ug/g dry	0.21	<0.02	0.16	-
Acenaphthylene	0.02 ug/g dry	0.03	<0.02	0.05	-
Anthracene	0.02 ug/g dry	0.45	<0.02	0.61	-
Benzo [a] anthracene	0.02 ug/g dry	0.94	<0.02	1.27	-
Benzo [a] pyrene	0.02 ug/g dry	0.86	<0.02	1.33	-
Benzo [b] fluoranthene	0.02 ug/g dry	0.92	<0.02	1.06	-
Benzo [g,h,i] perylene	0.02 ug/g dry	0.42	<0.02	0.57	-
Benzo [k] fluoranthene	0.02 ug/g dry	0.51	<0.02	0.64	-
Chrysene	0.02 ug/g dry	0.99	<0.02	1.33	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	0.13	<0.02	0.16	-
Fluoranthene	0.02 ug/g dry	2.55	<0.02	3.03	-
Fluorene	0.02 ug/g dry	0.20	<0.02	0.21	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	0.42	<0.02	0.51	-
1-Methylnaphthalene	0.02 ug/g dry	<0.02	<0.02	0.08	-
2-Methylnaphthalene	0.02 ug/g dry	0.02	<0.02	0.14	-
Methylnaphthalene (1&2)	0.04 ug/g dry	0.04	<0.04	0.22	-
Naphthalene	0.01 ug/g dry	0.03	<0.01	0.07	-
Phenanthrene	0.02 ug/g dry	1.90	<0.02	1.88	-
Pyrene	0.02 ug/g dry	1.87	<0.02	2.43	-
2-Fluorobiphenyl	Surrogate	91.7%	70.5%	110%	-
Terphenyl-d14	Surrogate	121%	85.8%	95.2%	-

Certificate of Analysis

Client: Pinchin Ltd. (Ottawa)

Client PO: Oblats Rd

Report Date: 19-Feb-2021

Order Date: 29-Jan-2021

Project Description: 284665.001

	Client ID:	MW-5,SS4	BH-6,SS4	-	-
	Sample Date:	27-Jan-21 00:00	27-Jan-21 00:00	-	-
	Sample ID:	2105488-14	2105488-15	-	-
	MDL/Units	Soil	Soil	-	-
Physical Characteristics					
% Solids	0.1 % by Wt.	-	61.3	-	-
>75 um	0.1 %	3.6	-	-	-
<75 um	0.1 %	96.4	-	-	-
Texture	0.1 %	Med/Fine	-	-	-
Metals					
Antimony	1.0 ug/g dry	-	<1.0	-	-
Arsenic	1.0 ug/g dry	-	2.6	-	-
Barium	1.0 ug/g dry	-	352	-	-
Beryllium	0.5 ug/g dry	-	0.8	-	-
Boron	5.0 ug/g dry	-	6.3	-	-
Boron, available	0.5 ug/g dry	-	<0.5	-	-
Cadmium	0.5 ug/g dry	-	<0.5	-	-
Chromium	5.0 ug/g dry	-	93.4	-	-
Chromium (VI)	0.2 ug/g dry	-	0.8	-	-
Cobalt	1.0 ug/g dry	-	22.7	-	-
Copper	5.0 ug/g dry	-	45.0	-	-
Lead	1.0 ug/g dry	-	5.9	-	-
Mercury	0.1 ug/g dry	-	<0.1	-	-
Molybdenum	1.0 ug/g dry	-	<1.0	-	-
Nickel	5.0 ug/g dry	-	57.6	-	-
Selenium	1.0 ug/g dry	-	<1.0	-	-
Silver	0.3 ug/g dry	-	<0.3	-	-
Thallium	1.0 ug/g dry	-	<1.0	-	-
Uranium	1.0 ug/g dry	-	<1.0	-	-
Vanadium	10.0 ug/g dry	-	97.9	-	-
Zinc	20.0 ug/g dry	-	115	-	-
Semi-Volatiles					
Acenaphthene	0.02 ug/g dry	-	<0.02	-	-
Acenaphthylene	0.02 ug/g dry	-	<0.02	-	-
Anthracene	0.02 ug/g dry	-	<0.02	-	-
Benzo [a] anthracene	0.02 ug/g dry	-	<0.02	-	-
Benzo [a] pyrene	0.02 ug/g dry	-	<0.02	-	-
Benzo [b] fluoranthene	0.02 ug/g dry	-	<0.02	-	-
Benzo [g,h,i] perylene	0.02 ug/g dry	-	<0.02	-	-
Benzo [k] fluoranthene	0.02 ug/g dry	-	<0.02	-	-

Certificate of Analysis

Client: Pinchin Ltd. (Ottawa)

Client PO: Oblats Rd

Report Date: 19-Feb-2021

Order Date: 29-Jan-2021

Project Description: 284665.001

	Client ID:	MW-5,SS4	BH-6,SS4	-	-
	Sample Date:	27-Jan-21 00:00	27-Jan-21 00:00	-	-
	Sample ID:	2105488-14	2105488-15	-	-
	MDL/Units	Soil	Soil	-	-
Chrysene	0.02 ug/g dry	-	<0.02	-	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	-	<0.02	-	-
Fluoranthene	0.02 ug/g dry	-	<0.02	-	-
Fluorene	0.02 ug/g dry	-	<0.02	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	-	<0.02	-	-
1-Methylnaphthalene	0.02 ug/g dry	-	<0.02	-	-
2-Methylnaphthalene	0.02 ug/g dry	-	<0.02	-	-
Methylnaphthalene (1&2)	0.04 ug/g dry	-	<0.04	-	-
Naphthalene	0.01 ug/g dry	-	<0.01	-	-
Phenanthrene	0.02 ug/g dry	-	<0.02	-	-
Pyrene	0.02 ug/g dry	-	<0.02	-	-
2-Fluorobiphenyl	Surrogate	-	87.6%	-	-
Terphenyl-d14	Surrogate	-	99.6%	-	-

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, available	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium (VI)	ND	0.2	ug/g						
Chromium	ND	5.0	ug/g						
Cobalt	ND	1.0	ug/g						
Copper	ND	5.0	ug/g						
Lead	ND	1.0	ug/g						
Mercury	ND	0.1	ug/g						
Molybdenum	ND	1.0	ug/g						
Nickel	ND	5.0	ug/g						
Selenium	ND	1.0	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1.0	ug/g						
Uranium	ND	1.0	ug/g						
Vanadium	ND	10.0	ug/g						
Zinc	ND	20.0	ug/g						
Semi-Volatiles									
Acenaphthene	ND	0.02	ug/g						
Acenaphthylene	ND	0.02	ug/g						
Anthracene	ND	0.02	ug/g						
Benzo [a] anthracene	ND	0.02	ug/g						
Benzo [a] pyrene	ND	0.02	ug/g						
Benzo [b] fluoranthene	ND	0.02	ug/g						
Benzo [g,h,i] perylene	ND	0.02	ug/g						
Benzo [k] fluoranthene	ND	0.02	ug/g						
Chrysene	ND	0.02	ug/g						
Dibenzo [a,h] anthracene	ND	0.02	ug/g						
Fluoranthene	ND	0.02	ug/g						
Fluorene	ND	0.02	ug/g						
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g						
1-Methylnaphthalene	ND	0.02	ug/g						
2-Methylnaphthalene	ND	0.02	ug/g						
Methylnaphthalene (1&2)	ND	0.04	ug/g						
Naphthalene	ND	0.01	ug/g						
Phenanthrene	ND	0.02	ug/g						
Pyrene	ND	0.02	ug/g						
Surrogate: 2-Fluorobiphenyl	*1.03*		*ug/g*		*77.5*	*50-140*			
Surrogate: Terphenyl-d14	*1.32*		*ug/g*		*99.4*	*50-140*			
Volatiles									
Acetone	ND	0.50	ug/g						
Benzene	ND	0.02	ug/g						
Bromodichloromethane	ND	0.05	ug/g						
Bromoform	ND	0.05	ug/g						
Bromomethane	ND	0.05	ug/g						
Carbon Tetrachloride	ND	0.05	ug/g						
Chlorobenzene	ND	0.05	ug/g						
Chloroform	ND	0.05	ug/g						
Dibromochloromethane	ND	0.05	ug/g						

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Dichlorodifluoromethane	ND	0.05	ug/g						
1,2-Dichlorobenzene	ND	0.05	ug/g						
1,3-Dichlorobenzene	ND	0.05	ug/g						
1,4-Dichlorobenzene	ND	0.05	ug/g						
1,1-Dichloroethane	ND	0.05	ug/g						
1,2-Dichloroethane	ND	0.05	ug/g						
1,1-Dichloroethylene	ND	0.05	ug/g						
cis-1,2-Dichloroethylene	ND	0.05	ug/g						
trans-1,2-Dichloroethylene	ND	0.05	ug/g						
1,2-Dichloropropane	ND	0.05	ug/g						
cis-1,3-Dichloropropylene	ND	0.05	ug/g						
trans-1,3-Dichloropropylene	ND	0.05	ug/g						
1,3-Dichloropropene, total	ND	0.05	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Ethylene dibromide (dibromoethane, 1,2-	ND	0.05	ug/g						
Hexane	ND	0.05	ug/g						
Methyl Ethyl Ketone (2-Butanone)	ND	0.50	ug/g						
Methyl Isobutyl Ketone	ND	0.50	ug/g						
Methyl tert-butyl ether	ND	0.05	ug/g						
Methylene Chloride	ND	0.05	ug/g						
Styrene	ND	0.05	ug/g						
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g						
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g						
Tetrachloroethylene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
1,1,1-Trichloroethane	ND	0.05	ug/g						
1,1,2-Trichloroethane	ND	0.05	ug/g						
Trichloroethylene	ND	0.05	ug/g						
Trichlorofluoromethane	ND	0.05	ug/g						
Vinyl chloride	ND	0.02	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: 4-Bromofluorobenzene	*7.76*		*ug/g*		*97.0*	*50-140*			
Surrogate: Dibromofluoromethane	*7.50*		*ug/g*		*93.7*	*50-140*			
Surrogate: Toluene-d8	*8.51*		*ug/g*		*106*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
pH	7.80	0.05	pH Units	7.80			0.0	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	1.2			NC	30	
Arsenic	5.9	1.0	ug/g dry	5.8			2.6	30	
Barium	119	1.0	ug/g dry	121			1.6	30	
Beryllium	0.5	0.5	ug/g dry	0.5			1.7	30	
Boron, available	2.95	0.5	ug/g dry	3.43			14.9	35	
Boron	6.0	5.0	ug/g dry	6.2			2.7	30	
Cadmium	0.7	0.5	ug/g dry	ND			NC	30	
Chromium (VI)	ND	0.2	ug/g dry	ND			NC	35	
Chromium	27.1	5.0	ug/g dry	26.9			0.8	30	
Cobalt	88.7	1.0	ug/g dry	91.9			3.5	30	
Copper	16.7	5.0	ug/g dry	16.2			3.3	30	
Lead	7.0	1.0	ug/g dry	6.6			5.7	30	
Mercury	ND	0.1	ug/g dry	ND			NC	30	
Molybdenum	ND	1.0	ug/g dry	1.3			NC	30	
Nickel	26.7	5.0	ug/g dry	27.7			3.7	30	
Selenium	ND	1.0	ug/g dry	ND			NC	30	
Silver	0.5	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	1.3	1.0	ug/g dry	ND			NC	30	
Vanadium	31.3	10.0	ug/g dry	31.6			1.2	30	
Zinc	34.6	20.0	ug/g dry	34.0			1.8	30	
Physical Characteristics									
% Solids	91.8	0.1	% by Wt.	93.0			1.3	25	
Semi-Volatiles									
Acenaphthene	ND	0.40	ug/g dry	ND			NC	40	
Acenaphthylene	ND	0.40	ug/g dry	ND			NC	40	
Anthracene	ND	0.40	ug/g dry	ND			NC	40	
Benzo [a] anthracene	ND	0.40	ug/g dry	ND			NC	40	
Benzo [a] pyrene	ND	0.40	ug/g dry	ND			NC	40	
Benzo [b] fluoranthene	ND	0.40	ug/g dry	ND			NC	40	
Benzo [g,h,i] perylene	ND	0.40	ug/g dry	ND			NC	40	
Benzo [k] fluoranthene	ND	0.40	ug/g dry	ND			NC	40	
Chrysene	ND	0.40	ug/g dry	ND			NC	40	
Dibenzo [a,h] anthracene	ND	0.40	ug/g dry	ND			NC	40	
Fluoranthene	ND	0.40	ug/g dry	ND			NC	40	
Fluorene	ND	0.40	ug/g dry	ND			NC	40	
Indeno [1,2,3-cd] pyrene	ND	0.40	ug/g dry	ND			NC	40	
1-Methylnaphthalene	ND	0.40	ug/g dry	ND			NC	40	
2-Methylnaphthalene	ND	0.40	ug/g dry	ND			NC	40	
Naphthalene	ND	0.20	ug/g dry	ND			NC	40	
Phenanthrene	ND	0.40	ug/g dry	ND			NC	40	
Pyrene	ND	0.40	ug/g dry	ND			NC	40	
Surrogate: 2-Fluorobiphenyl	*1.22*		*ug/g dry*		*83.5*	*50-140*			
Surrogate: Terphenyl-d14	*1.71*		*ug/g dry*		*117*	*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	

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
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	
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	0.131	0.05	ug/g dry	0.165			23.5	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	0.185	0.05	ug/g dry	0.247			28.8	50	
o-Xylene	0.112	0.05	ug/g dry	0.150			29.3	50	
Surrogate: 4-Bromofluorobenzene	*10.8*		*ug/g dry*		*95.3*	*50-140*			
Surrogate: Dibromofluoromethane	*10.8*		*ug/g dry*		*95.2*	*50-140*			
Surrogate: Toluene-d8	*12.1*		*ug/g dry*		*106*	*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)	215	7	ug/g	ND	108	80-120			
F2 PHCs (C10-C16)	80	4	ug/g	ND	88.8	60-140			
F3 PHCs (C16-C34)	211	8	ug/g	ND	95.4	60-140			
F4 PHCs (C34-C50)	140	6	ug/g	ND	99.6	60-140			
Metals									
Antimony	46.7	1.0	ug/g	ND	92.5	70-130			
Arsenic	51.1	1.0	ug/g	2.3	97.7	70-130			
Barium	94.8	1.0	ug/g	48.2	93.2	70-130			
Beryllium	49.8	0.5	ug/g	ND	99.3	70-130			
Boron, available	7.27	0.5	ug/g	3.43	76.8	70-122			
Boron	48.1	5.0	ug/g	ND	91.3	70-130			
Cadmium	47.3	0.5	ug/g	ND	94.5	70-130			
Chromium (VI)	0.1	0.2	ug/g	ND	67.0	70-130			QM-05
Chromium	61.9	5.0	ug/g	10.8	102	70-130			
Cobalt	79.3	1.0	ug/g	36.8	85.1	70-130			
Copper	54.4	5.0	ug/g	6.5	95.8	70-130			
Lead	45.6	1.0	ug/g	2.7	85.8	70-130			
Mercury	1.21	0.1	ug/g	ND	80.7	70-130			
Molybdenum	48.8	1.0	ug/g	ND	96.5	70-130			
Nickel	59.0	5.0	ug/g	11.1	95.8	70-130			
Selenium	46.7	1.0	ug/g	ND	93.1	70-130			
Silver	43.8	0.3	ug/g	ND	87.5	70-130			
Thallium	44.7	1.0	ug/g	ND	89.2	70-130			
Uranium	42.3	1.0	ug/g	ND	84.0	70-130			
Vanadium	64.2	10.0	ug/g	12.7	103	70-130			
Zinc	60.4	20.0	ug/g	ND	93.6	70-130			
Semi-Volatiles									
Acenaphthene	0.221	0.02	ug/g	ND	81.5	50-140			
Acenaphthylene	0.177	0.02	ug/g	ND	65.4	50-140			
Anthracene	0.217	0.02	ug/g	ND	80.3	50-140			
Benzo [a] anthracene	0.166	0.02	ug/g	ND	61.2	50-140			
Benzo [a] pyrene	0.206	0.02	ug/g	ND	76.3	50-140			
Benzo [b] fluoranthene	0.215	0.02	ug/g	ND	79.5	50-140			
Benzo [g,h,i] perylene	0.199	0.02	ug/g	ND	73.6	50-140			
Benzo [k] fluoranthene	0.211	0.02	ug/g	ND	78.0	50-140			
Chrysene	0.222	0.02	ug/g	ND	82.0	50-140			
Dibenzo [a,h] anthracene	0.197	0.02	ug/g	ND	72.7	50-140			
Fluoranthene	0.194	0.02	ug/g	ND	71.6	50-140			
Fluorene	0.213	0.02	ug/g	ND	78.9	50-140			
Indeno [1,2,3-cd] pyrene	0.191	0.02	ug/g	ND	70.5	50-140			
1-Methylnaphthalene	0.210	0.02	ug/g	ND	77.8	50-140			
2-Methylnaphthalene	0.235	0.02	ug/g	ND	86.8	50-140			
Naphthalene	0.253	0.01	ug/g	ND	93.7	50-140			
Phenanthrene	0.197	0.02	ug/g	ND	72.7	50-140			
Pyrene	0.192	0.02	ug/g	ND	71.1	50-140			
Surrogate: 2-Fluorobiphenyl	*1.62*		*ug/g*		*75.0*	*50-140*			
Surrogate: Terphenyl-d14	*1.91*		*ug/g*		*88.0*	*50-140*			
Volatiles									

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Acetone	6.83	0.50	ug/g	ND	68.3	50-140			
Benzene	3.51	0.02	ug/g	ND	87.8	60-130			
Bromodichloromethane	3.51	0.05	ug/g	ND	87.8	60-130			
Bromoform	3.09	0.05	ug/g	ND	77.1	60-130			
Bromomethane	3.30	0.05	ug/g	ND	82.5	50-140			
Carbon Tetrachloride	3.28	0.05	ug/g	ND	82.0	60-130			
Chlorobenzene	3.83	0.05	ug/g	ND	95.6	60-130			
Chloroform	3.26	0.05	ug/g	ND	81.6	60-130			
Dibromochloromethane	3.57	0.05	ug/g	ND	89.3	60-130			
Dichlorodifluoromethane	3.58	0.05	ug/g	ND	89.5	50-140			
1,2-Dichlorobenzene	4.04	0.05	ug/g	ND	101	60-130			
1,3-Dichlorobenzene	4.15	0.05	ug/g	ND	104	60-130			
1,4-Dichlorobenzene	4.14	0.05	ug/g	ND	103	60-130			
1,1-Dichloroethane	3.08	0.05	ug/g	ND	77.0	60-130			
1,2-Dichloroethane	3.24	0.05	ug/g	ND	81.1	60-130			
1,1-Dichloroethylene	3.14	0.05	ug/g	ND	78.5	60-130			
cis-1,2-Dichloroethylene	3.14	0.05	ug/g	ND	78.4	60-130			
trans-1,2-Dichloroethylene	3.18	0.05	ug/g	ND	79.5	60-130			
1,2-Dichloropropane	3.52	0.05	ug/g	ND	88.0	60-130			
cis-1,3-Dichloropropylene	3.30	0.05	ug/g	ND	82.4	60-130			
trans-1,3-Dichloropropylene	3.05	0.05	ug/g	ND	76.3	60-130			
Ethylbenzene	4.08	0.05	ug/g	ND	102	60-130			
Ethylene dibromide (dibromoethane, 1,2-	3.83	0.05	ug/g	ND	95.8	60-130			
Hexane	2.85	0.05	ug/g	ND	71.2	60-130			
Methyl Ethyl Ketone (2-Butanone)	6.55	0.50	ug/g	ND	65.5	50-140			
Methyl Isobutyl Ketone	7.11	0.50	ug/g	ND	71.1	50-140			
Methyl tert-butyl ether	7.52	0.05	ug/g	ND	75.2	50-140			
Methylene Chloride	3.11	0.05	ug/g	ND	77.8	60-130			
Styrene	3.76	0.05	ug/g	ND	94.0	60-130			
1,1,1,2-Tetrachloroethane	3.90	0.05	ug/g	ND	97.4	60-130			
1,1,2,2-Tetrachloroethane	3.82	0.05	ug/g	ND	95.5	60-130			
Tetrachloroethylene	4.15	0.05	ug/g	ND	104	60-130			
Toluene	4.19	0.05	ug/g	ND	105	60-130			
1,1,1-Trichloroethane	3.34	0.05	ug/g	ND	83.6	60-130			
1,1,2-Trichloroethane	3.63	0.05	ug/g	ND	90.7	60-130			
Trichloroethylene	3.95	0.05	ug/g	ND	98.7	60-130			
Trichlorofluoromethane	3.19	0.05	ug/g	ND	79.7	50-140			
Vinyl chloride	2.90	0.02	ug/g	ND	72.4	50-140			
m,p-Xylenes	7.84	0.05	ug/g	ND	98.0	60-130			
o-Xylene	3.92	0.05	ug/g	ND	98.0	60-130			
Surrogate: 4-Bromofluorobenzene	*7.87*		*ug/g*		*98.4*	*50-140*			
Surrogate: Dibromofluoromethane	*6.91*		*ug/g*		*86.4*	*50-140*			
Surrogate: Toluene-d8	*8.08*		*ug/g*		*101*	*50-140*			

Qualifier Notes:

Sample Qualifiers :

1 : Elevated detection limit due to dilution required because of high target analyte concentration.

QC Qualifiers :

QM-05 : The spike recovery was outside acceptance limits for the matrix spike due to matrix interference.

Sample Data Revisions

None

Work Order Revisions / Comments:

REVISION 1: This report includes an updated parameter list as per the client.

REVISION 2: This report includes an updated parameter list as per the client.

REVISION 3: This report includes an updated parameter list as per the client.

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.

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Paracel ID: 2105488

Client Name: Pinchin Ltd.	Project Ref: 284665.001 Oblats Rd
Contact Name: Ryan LaRonde/Matt Ryan/ Mike Kosiw/ Scott Mather	Quote #:
Address: 1 Hines Road, Kanata, ON	PO #:
	E-mail: rlaronde@pinchin.com/mryan@pinchin.com/mkosiw@pinchin.com
Telephone: 613-291-5656	

Turnaround Time

1 day ☐ 3 day
☐ 2 day ☒ Regular
Date Required: ______

Regulation 153/04

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

Other Regulation

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

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

Required Analysis

#	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken Date	Sample Taken Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	pH	Texture size +- 75mc	HOLD			
1	BH-1, SS-2	S		4	27-Jan		X	X	X					X					
2	BH-1, SS-4	S		3	27-Jan											X			
3	BH-1, SS-5	S		2	27-Jan									X	X				
4	BH-2, SS-2	S		3	27-Jan		X	X	X										
5	BH-2, SS-4	S		3	27-Jan											X			
6	MW-3, SS-2	S		3	27-Jan		X	X	X	X									
7	MW-3, SS-5	S		3	27-Jan											X			
8	MW-4, SS-1	S		3	27-Jan		X	X	X	X									
9	MW-4, SS-4	S		3	27-Jan											X			
10	MW-5, SS-1	S		2	27-Jan		X	X	X	X									
11	MW-5, SS-2	S		~~1~~ 2	27-Jan									X					
12	MW-5, SS-4	S		3	27-Jan											X			
13	MW-5, SS-5	S		2	27-Jan									X	X				
14	BH-6, SS-1	S		3	27-Jan		X	X	X	X									
15	BH-6, SS-4	S		3	27-Jan											X			

Comments:

Method of Delivery: Paracel Courier

Relinquished By (Sign): [signature]	Received By Driver/Depot: M. Drouse	Received at Lab: Sreepoorn Dohmen	Verified By: [signature]
Relinquished By (Print): Ryan LaRonde	Date/Time: 29/01/21 10:42	Date/Time: Jan 29, 2021 12:10	Date/Time: Jan 29 2021 1359
Date/Time: Jan 28 @9:00am	Temperature: °C AM	Temperature: 2.7 °C	pH Verified: ☐ By:

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Certificate of Analysis

Pinchin Ltd. (Ottawa)

1 Hines Road, Suite 200
Kanata, ON K2K 3C7
Attn: Ryan LaRonde

Client PO: Oblats Rd.
Project: 284665.001
Custody:

Report Date: 11-Feb-2021
Order Date: 8-Feb-2021

Order #: 2107062

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

Paracel ID	Client ID
2107062-01	DUP

Approved By:

Mark Foto, M.Sc.
Lab Supervisor

Certificate of Analysis

Client: Pinchin Ltd. (Ottawa)

Client PO: Oblats Rd.

Report Date: 11-Feb-2021

Order Date: 8-Feb-2021

Project Description: 284665.001

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
PHC F1	CWS Tier 1 - P&T GC-FID	9-Feb-21	9-Feb-21
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	9-Feb-21	11-Feb-21
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	10-Feb-21	10-Feb-21
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	9-Feb-21	11-Feb-21
REG 153: VOCs by P&T GC/MS	EPA 8260 - P&T GC-MS	9-Feb-21	9-Feb-21
Solids, %	Gravimetric, calculation	10-Feb-21	10-Feb-21

Certificate of Analysis

Client: Pinchin Ltd. (Ottawa)

Client PO: Oblats Rd.

Report Date: 11-Feb-2021

Order Date: 8-Feb-2021

Project Description: 284665.001

	Client ID:	DUP	-	-	-
	Sample Date:	27-Jan-21 09:00	-	-	-
	Sample ID:	2107062-01	-	-	-
	MDL/Units	Soil	-	-	-
Physical Characteristics					
% Solids	0.1 % by Wt.	73.7	-	-	-
Metals					
Antimony	1.0 ug/g dry	<1.0	-	-	-
Arsenic	1.0 ug/g dry	4.3	-	-	-
Barium	1.0 ug/g dry	26.2	-	-	-
Beryllium	0.5 ug/g dry	<0.5	-	-	-
Boron	5.0 ug/g dry	5.2	-	-	-
Cadmium	0.5 ug/g dry	<0.5	-	-	-
Chromium	5.0 ug/g dry	11.8	-	-	-
Cobalt	1.0 ug/g dry	4.5	-	-	-
Copper	5.0 ug/g dry	21.7	-	-	-
Lead	1.0 ug/g dry	8.9	-	-	-
Molybdenum	1.0 ug/g dry	<1.0	-	-	-
Nickel	5.0 ug/g dry	10.5	-	-	-
Selenium	1.0 ug/g dry	<1.0	-	-	-
Silver	0.3 ug/g dry	<0.3	-	-	-
Thallium	1.0 ug/g dry	<1.0	-	-	-
Uranium	1.0 ug/g dry	<1.0	-	-	-
Vanadium	10.0 ug/g dry	21.1	-	-	-
Zinc	20.0 ug/g dry	46.0	-	-	-
Volatiles					
Acetone	0.50 ug/g dry	<0.50	-	-	-
Benzene	0.02 ug/g dry	<0.02	-	-	-
Bromodichloromethane	0.05 ug/g dry	<0.05	-	-	-
Bromoform	0.05 ug/g dry	<0.05	-	-	-
Bromomethane	0.05 ug/g dry	<0.05	-	-	-
Carbon Tetrachloride	0.05 ug/g dry	<0.05	-	-	-
Chlorobenzene	0.05 ug/g dry	<0.05	-	-	-
Chloroform	0.05 ug/g dry	<0.05	-	-	-
Dibromochloromethane	0.05 ug/g dry	<0.05	-	-	-
Dichlorodifluoromethane	0.05 ug/g dry	<0.05	-	-	-
1,2-Dichlorobenzene	0.05 ug/g dry	<0.05	-	-	-
1,3-Dichlorobenzene	0.05 ug/g dry	<0.05	-	-	-
1,4-Dichlorobenzene	0.05 ug/g dry	<0.05	-	-	-
1,1-Dichloroethane	0.05 ug/g dry	<0.05	-	-	-

	Client ID:	DUP	-	-	-
	Sample Date:	27-Jan-21 09:00	-	-	-
	Sample ID:	2107062-01	-	-	-
	MDL/Units	Soil	-	-	-
1,2-Dichloroethane	0.05 ug/g dry	<0.05	-	-	-
1,1-Dichloroethylene	0.05 ug/g dry	<0.05	-	-	-
cis-1,2-Dichloroethylene	0.05 ug/g dry	<0.05	-	-	-
trans-1,2-Dichloroethylene	0.05 ug/g dry	<0.05	-	-	-
1,2-Dichloropropane	0.05 ug/g dry	<0.05	-	-	-
cis-1,3-Dichloropropylene	0.05 ug/g dry	<0.05	-	-	-
trans-1,3-Dichloropropylene	0.05 ug/g dry	<0.05	-	-	-
1,3-Dichloropropene, total	0.05 ug/g dry	<0.05	-	-	-
Ethylbenzene	0.05 ug/g dry	<0.05	-	-	-
Ethylene dibromide (dibromoethane, 1,2-)	0.05 ug/g dry	<0.05	-	-	-
Hexane	0.05 ug/g dry	<0.05	-	-	-
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g dry	<0.50	-	-	-
Methyl Isobutyl Ketone	0.50 ug/g dry	<0.50	-	-	-
Methyl tert-butyl ether	0.05 ug/g dry	<0.05	-	-	-
Methylene Chloride	0.05 ug/g dry	<0.05	-	-	-
Styrene	0.05 ug/g dry	<0.05	-	-	-
1,1,1,2-Tetrachloroethane	0.05 ug/g dry	<0.05	-	-	-
1,1,2,2-Tetrachloroethane	0.05 ug/g dry	<0.05	-	-	-
Tetrachloroethylene	0.05 ug/g dry	<0.05	-	-	-
Toluene	0.05 ug/g dry	<0.05	-	-	-
1,1,1-Trichloroethane	0.05 ug/g dry	<0.05	-	-	-
1,1,2-Trichloroethane	0.05 ug/g dry	<0.05	-	-	-
Trichloroethylene	0.05 ug/g dry	<0.05	-	-	-
Trichlorofluoromethane	0.05 ug/g dry	<0.05	-	-	-
Vinyl chloride	0.02 ug/g dry	<0.02	-	-	-
m,p-Xylenes	0.05 ug/g dry	<0.05	-	-	-
o-Xylene	0.05 ug/g dry	<0.05	-	-	-
Xylenes, total	0.05 ug/g dry	<0.05	-	-	-
4-Bromofluorobenzene	Surrogate	95.2%	-	-	-
Dibromofluoromethane	Surrogate	77.4%	-	-	-
Toluene-d8	Surrogate	106%	-	-	-
Hydrocarbons					
F1 PHCs (C6-C10)	7 ug/g dry	<7	-	-	-
F2 PHCs (C10-C16)	4 ug/g dry	17	-	-	-
F3 PHCs (C16-C34)	8 ug/g dry	37	-	-	-
F4 PHCs (C34-C50)	6 ug/g dry	<6	-	-	-

Certificate of Analysis

Client: Pinchin Ltd. (Ottawa)

Client PO: Oblats Rd.

Report Date: 11-Feb-2021

Order Date: 8-Feb-2021

Project Description: 284665.001

	Client ID:	DUP	-	-	-
	Sample Date:	27-Jan-21 09:00	-	-	-
	Sample ID:	2107062-01	-	-	-
	MDL/Units	Soil	-	-	-
Semi-Volatiles					
Acenaphthene	0.02 ug/g dry	1.58	-	-	-
Acenaphthylene	0.02 ug/g dry	0.61	-	-	-
Anthracene	0.02 ug/g dry	4.72	-	-	-
Benzo [a] anthracene	0.02 ug/g dry	5.21	-	-	-
Benzo [a] pyrene	0.02 ug/g dry	4.99	-	-	-
Benzo [b] fluoranthene	0.02 ug/g dry	5.02	-	-	-
Benzo [g,h,i] perylene	0.02 ug/g dry	2.89	-	-	-
Benzo [k] fluoranthene	0.02 ug/g dry	2.50	-	-	-
Chrysene	0.02 ug/g dry	5.27	-	-	-
Dibenzo [a,h] anthracene	0.02 ug/g dry	0.74	-	-	-
Fluoranthene	0.02 ug/g dry	16.5	-	-	-
Fluorene	0.02 ug/g dry	2.38	-	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g dry	2.53	-	-	-
1-Methylnaphthalene	0.02 ug/g dry	0.93	-	-	-
2-Methylnaphthalene	0.02 ug/g dry	1.30	-	-	-
Methylnaphthalene (1&2)	0.04 ug/g dry	2.22	-	-	-
Naphthalene	0.01 ug/g dry	3.22	-	-	-
Phenanthrene	0.02 ug/g dry	20.0	-	-	-
Pyrene	0.02 ug/g dry	13.2	-	-	-
2-Fluorobiphenyl	Surrogate	86.3%	-	-	-
Terphenyl-d14	Surrogate	101%	-	-	-

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	*1.17*		*ug/g*		*88.0*	*50-140*			
Surrogate: Terphenyl-d14	*1.39*		*ug/g*		*104*	*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	*7.83*		*ug/g*		*97.9*	*50-140*			
Surrogate: Dibromofluoromethane	*7.31*		*ug/g*		*91.3*	*50-140*			
Surrogate: Toluene-d8	*8.46*		*ug/g*		*106*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g dry	ND			NC	30	
F3 PHCs (C16-C34)	49	8	ug/g dry	51			4.2	30	
F4 PHCs (C34-C50)	129	6	ug/g dry	145			11.5	30	
Metals									
Antimony	ND	1.0	ug/g dry	ND			NC	30	
Arsenic	2.6	1.0	ug/g dry	2.6			0.7	30	
Barium	71.1	1.0	ug/g dry	70.1			1.5	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	32.1	5.0	ug/g dry	32.4			0.9	30	
Cobalt	6.8	1.0	ug/g dry	6.9			1.5	30	
Copper	15.4	5.0	ug/g dry	15.6			1.6	30	
Lead	20.5	1.0	ug/g dry	20.3			1.0	30	
Molybdenum	ND	1.0	ug/g dry	ND			NC	30	
Nickel	17.3	5.0	ug/g dry	17.5			1.3	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	31.9	10.0	ug/g dry	33.0			3.3	30	
Zinc	45.6	20.0	ug/g dry	47.6			4.3	30	
Physical Characteristics									
% Solids	92.7	0.1	% by Wt.	92.6			0.1	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	*1.03*		*ug/g dry*		*69.6*	*50-140*			
Surrogate: Terphenyl-d14	*1.25*		*ug/g dry*		*84.8*	*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	
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	

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
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	*8.33*		*ug/g dry*		*94.4*	*50-140*			
Surrogate: Dibromofluoromethane	*6.88*		*ug/g dry*		*77.9*	*50-140*			
Surrogate: Toluene-d8	*9.39*		*ug/g dry*		*106*	*50-140*			

Certificate of Analysis

Client: Pinchin Ltd. (Ottawa)

Client PO: Oblats Rd.

Report Date: 11-Feb-2021

Order Date: 8-Feb-2021

Project Description: 284665.001

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	193	7	ug/g	ND	96.3	80-120			
F2 PHCs (C10-C16)	99	4	ug/g	ND	106	60-140			
F3 PHCs (C16-C34)	339	8	ug/g	51	126	60-140			
F4 PHCs (C34-C50)	320	6	ug/g	145	121	60-140			
Metals									
Antimony	45.9	1.0	ug/g	ND	91.9	70-130			
Arsenic	50.8	1.0	ug/g	1.0	99.5	70-130			
Barium	73.7	1.0	ug/g	27.0	93.3	70-130			
Beryllium	52.5	0.5	ug/g	ND	105	70-130			
Boron	49.7	5.0	ug/g	ND	93.4	70-130			
Cadmium	47.0	0.5	ug/g	ND	94.0	70-130			
Chromium	58.1	5.0	ug/g	6.3	104	70-130			
Cobalt	51.0	1.0	ug/g	2.8	96.4	70-130			
Copper	52.8	5.0	ug/g	ND	95.8	70-130			
Lead	48.6	1.0	ug/g	2.6	92.0	70-130			
Molybdenum	49.9	1.0	ug/g	ND	99.5	70-130			
Nickel	55.3	5.0	ug/g	5.9	98.8	70-130			
Selenium	48.4	1.0	ug/g	ND	96.6	70-130			
Silver	46.7	0.3	ug/g	ND	93.3	70-130			
Thallium	44.6	1.0	ug/g	ND	89.1	70-130			
Uranium	49.3	1.0	ug/g	ND	98.2	70-130			
Vanadium	61.3	10.0	ug/g	ND	104	70-130			
Zinc	57.3	20.0	ug/g	ND	92.2	70-130			
Semi-Volatiles									
Acenaphthene	0.147	0.02	ug/g	ND	79.7	50-140			
Acenaphthylene	0.124	0.02	ug/g	ND	67.0	50-140			
Anthracene	0.135	0.02	ug/g	ND	73.1	50-140			
Benzo [a] anthracene	0.114	0.02	ug/g	ND	61.6	50-140			
Benzo [a] pyrene	0.130	0.02	ug/g	ND	70.4	50-140			
Benzo [b] fluoranthene	0.152	0.02	ug/g	ND	82.2	50-140			
Benzo [g,h,i] perylene	0.125	0.02	ug/g	ND	67.7	50-140			
Benzo [k] fluoranthene	0.136	0.02	ug/g	ND	73.7	50-140			
Chrysene	0.139	0.02	ug/g	ND	75.2	50-140			
Dibenzo [a,h] anthracene	0.126	0.02	ug/g	ND	68.4	50-140			
Fluoranthene	0.122	0.02	ug/g	ND	66.0	50-140			
Fluorene	0.142	0.02	ug/g	ND	76.9	50-140			
Indeno [1,2,3-cd] pyrene	0.124	0.02	ug/g	ND	67.0	50-140			
1-Methylnaphthalene	0.142	0.02	ug/g	ND	76.7	50-140			
2-Methylnaphthalene	0.154	0.02	ug/g	ND	83.4	50-140			
Naphthalene	0.164	0.01	ug/g	ND	88.9	50-140			
Phenanthrene	0.139	0.02	ug/g	ND	75.1	50-140			
Pyrene	0.123	0.02	ug/g	ND	66.9	50-140			
Surrogate: 2-Fluorobiphenyl	*1.03*		*ug/g*		*69.9*	*50-140*			
Surrogate: Terphenyl-d14	*1.21*		*ug/g*		*81.8*	*50-140*			
Volatiles									
Acetone	10.1	0.50	ug/g	ND	101	50-140			
Benzene	3.71	0.02	ug/g	ND	92.8	60-130			
Bromodichloromethane	3.42	0.05	ug/g	ND	85.5	60-130			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Bromoform	2.47	0.05	ug/g	ND	61.7	60-130			
Bromomethane	3.54	0.05	ug/g	ND	88.6	50-140			
Carbon Tetrachloride	3.29	0.05	ug/g	ND	82.3	60-130			
Chlorobenzene	4.64	0.05	ug/g	ND	116	60-130			
Chloroform	3.35	0.05	ug/g	ND	83.7	60-130			
Dibromochloromethane	3.57	0.05	ug/g	ND	89.3	60-130			
Dichlorodifluoromethane	4.71	0.05	ug/g	ND	118	50-140			
1,2-Dichlorobenzene	3.64	0.05	ug/g	ND	90.9	60-130			
1,3-Dichlorobenzene	3.77	0.05	ug/g	ND	94.2	60-130			
1,4-Dichlorobenzene	3.77	0.05	ug/g	ND	94.4	60-130			
1,1-Dichloroethane	3.23	0.05	ug/g	ND	80.8	60-130			
1,2-Dichloroethane	2.93	0.05	ug/g	ND	73.1	60-130			
1,1-Dichloroethylene	3.45	0.05	ug/g	ND	86.2	60-130			
cis-1,2-Dichloroethylene	3.25	0.05	ug/g	ND	81.3	60-130			
trans-1,2-Dichloroethylene	3.39	0.05	ug/g	ND	84.8	60-130			
1,2-Dichloropropane	3.62	0.05	ug/g	ND	90.5	60-130			
cis-1,3-Dichloropropylene	2.87	0.05	ug/g	ND	71.7	60-130			
trans-1,3-Dichloropropylene	2.66	0.05	ug/g	ND	66.5	60-130			
Ethylbenzene	4.98	0.05	ug/g	ND	125	60-130			
Ethylene dibromide (dibromoethane, 1,2-	4.38	0.05	ug/g	ND	109	60-130			
Hexane	3.47	0.05	ug/g	ND	86.8	60-130			
Methyl Ethyl Ketone (2-Butanone)	7.39	0.50	ug/g	ND	73.9	50-140			
Methyl Isobutyl Ketone	7.63	0.50	ug/g	ND	76.3	50-140			
Methyl tert-butyl ether	8.15	0.05	ug/g	ND	81.5	50-140			
Methylene Chloride	3.20	0.05	ug/g	ND	80.0	60-130			
Styrene	4.38	0.05	ug/g	ND	110	60-130			
1,1,1,2-Tetrachloroethane	4.38	0.05	ug/g	ND	109	60-130			
1,1,2,2-Tetrachloroethane	3.74	0.05	ug/g	ND	93.4	60-130			
Tetrachloroethylene	4.99	0.05	ug/g	ND	125	60-130			
Toluene	5.13	0.05	ug/g	ND	128	60-130			
1,1,1-Trichloroethane	3.40	0.05	ug/g	ND	85.0	60-130			
1,1,2-Trichloroethane	3.58	0.05	ug/g	ND	89.5	60-130			
Trichloroethylene	4.36	0.05	ug/g	ND	109	60-130			
Trichlorofluoromethane	3.69	0.05	ug/g	ND	92.3	50-140			
Vinyl chloride	3.28	0.02	ug/g	ND	81.9	50-140			
m,p-Xylenes	9.52	0.05	ug/g	ND	119	60-130			
o-Xylene	4.75	0.05	ug/g	ND	119	60-130			
Surrogate: 4-Bromofluorobenzene	*7.78*		*ug/g*		*97.3*	*50-140*			
Surrogate: Dibromofluoromethane	*7.78*		*ug/g*		*97.3*	*50-140*			
Surrogate: Toluene-d8	*7.74*		*ug/g*		*96.8*	*50-140*			

Qualifier Notes:

None

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

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

Soil results are reported on a dry weight basis when the units are denoted with 'dry'.
Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

CCME PHC additional information:

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

PARACEL LABORATORIES LTD.

Paracel ID: 2107062

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2107062	

Client Name: Pinchin Ltd.	Project Ref: 284665.001 Oblats Rd
Contact Name: Ryan LaRonde/Matt Ryan/ Mike Kosiw	Quote #:
Address: 1 Hines Road, Kanata, ON	PO #:
Telephone: 613-291-5656	E-mail: rlaronde@pinchin.com/mryan@pinchin.com/mkosiw@pinchin.com

Page 1 of 1

Turnaround Time

☐ 1 day ☐ 3 day ☐ 2 day ☒ Regular

Date Required: _____

Regulation 153/04

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

Other Regulation

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

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

Required Analysis

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken: Date	Sample Taken: Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	pH	Texture size = -75mc				
1	DUP	S		3	27-Jan		X	X	X	X									
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			

Comments:

Method of Delivery: PARACEL COURIER

Relinquished By (Sign):	Received By Driver/Depot: M. DEQUIE	Received at Lab: Jumeepam Rahmadi
Relinquished By (Print): Ryan LaRonde	Date/Time: 08/02/21 12:05	Date/Time: FEB 08, 2021 11:03
Date/Time: February 5 @ 12:00	Temperature: °C P.M.	Temperature: 4.8 °C

Verified By: [signature]
Date/Time: Feb 8 2021 13:36
pH Verified: ☐ By:

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Certificate of Analysis

Pinchin Ltd. (Ottawa)

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Kanata, ON K2K 3C7
Attn: Ryan LaRonde

Client PO: Oblats Rd
Project: 284665.001
Custody:

Report Date: 12-Feb-2021
Order Date: 29-Jan-2021

Order #: 2107163

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

Paracel ID	Client ID
2107163-01	Composite

Approved By: Mark Foto

Mark Foto, M.Sc.
Lab Supervisor

Certificate of Analysis

Client: Pinchin Ltd. (Ottawa)

Client PO: Oblats Rd

Report Date: 12-Feb-2021

Order Date: 29-Jan-2021

Project Description: 284665.001

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
REG 558 - Cyanide	MOE E3015- Auto Colour	11-Feb-21	11-Feb-21
REG 558 - Fluoride	EPA 340.2 - ISE	11-Feb-21	11-Feb-21
REG 558 - NO3/NO2	EPA 300.1 - IC	11-Feb-21	11-Feb-21
REG 558 - PAHs	EPA 625 - GC-MS	11-Feb-21	11-Feb-21
REG 558 - PCBs	EPA 608 - GC-ECD	11-Feb-21	11-Feb-21
REG 558 - VOCs	EPA 624 - P&T GC-MS	11-Feb-21	11-Feb-21
Solids, %	Gravimetric, calculation	10-Feb-21	11-Feb-21

Certificate of Analysis

Client: Pinchin Ltd. (Ottawa)

Client PO: Oblats Rd

Report Date: 12-Feb-2021

Order Date: 29-Jan-2021

Project Description: 284665.001

	Client ID:	Composite	-	-	-
	Sample Date:	27-Jan-21 09:00	-	-	-
	Sample ID:	2107163-01	-	-	-
	MDL/Units	Soil	-	-	-
Physical Characteristics					
% Solids	0.1 % by Wt.	83.9	-	-	-
EPA 1311 - TCLP Leachate Inorganics					
Fluoride	0.05 mg/L	0.15	-	-	-
Nitrate as N	1 mg/L	<1	-	-	-
Nitrite as N	1 mg/L	<1	-	-	-
Cyanide, free	0.02 mg/L	<0.02	-	-	-
EPA 1311 - TCLP Leachate Volatiles					
Benzene	0.005 mg/L	<0.005	-	-	-
Carbon Tetrachloride	0.005 mg/L	<0.005	-	-	-
Chlorobenzene	0.004 mg/L	<0.004	-	-	-
Chloroform	0.006 mg/L	<0.006	-	-	-
1,2-Dichlorobenzene	0.004 mg/L	<0.004	-	-	-
1,4-Dichlorobenzene	0.004 mg/L	<0.004	-	-	-
1,2-Dichloroethane	0.005 mg/L	<0.005	-	-	-
1,1-Dichloroethylene	0.006 mg/L	<0.006	-	-	-
Methyl Ethyl Ketone (2-Butanone)	0.30 mg/L	<0.30	-	-	-
Methylene Chloride	0.04 mg/L	<0.04	-	-	-
Tetrachloroethylene	0.005 mg/L	<0.005	-	-	-
Trichloroethylene	0.004 mg/L	<0.004	-	-	-
Vinyl chloride	0.005 mg/L	<0.005	-	-	-
4-Bromofluorobenzene	Surrogate	85.9%	-	-	-
Dibromofluoromethane	Surrogate	80.7%	-	-	-
Toluene-d8	Surrogate	107%	-	-	-
EPA 1311 - TCLP Leachate Organics					
Benzo [a] pyrene	0.0001 mg/L	<0.0001	-	-	-
Terphenyl-d14	Surrogate	128%	-	-	-
PCBs, total	0.003 mg/L	<0.003	-	-	-
Decachlorobiphenyl	Surrogate	90.9%	-	-	-

Certificate of Analysis

Client: Pinchin Ltd. (Ottawa)

Client PO: Oblats Rd

Report Date: 12-Feb-2021

Order Date: 29-Jan-2021

Project Description: 284665.001

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
EPA 1311 - TCLP Leachate Inorganics									
Fluoride	ND	0.05	mg/L						
Nitrate as N	ND	1	mg/L						
Nitrite as N	ND	1	mg/L						
Cyanide, free	ND	0.02	mg/L						
EPA 1311 - TCLP Leachate Organics									
Benzo [a] pyrene	ND	0.0001	mg/L						
Surrogate: Terphenyl-d14	*0.25*		*mg/L*		*123*	*37.1-155.6*			
PCBs, total	ND	0.003	mg/L						
Surrogate: Decachlorobiphenyl	*0.010*		*mg/L*		*102*	*62-138*			
EPA 1311 - TCLP Leachate Volatiles									
Benzene	ND	0.005	mg/L						
Carbon Tetrachloride	ND	0.005	mg/L						
Chlorobenzene	ND	0.004	mg/L						
Chloroform	ND	0.006	mg/L						
1,2-Dichlorobenzene	ND	0.004	mg/L						
1,4-Dichlorobenzene	ND	0.004	mg/L						
1,2-Dichloroethane	ND	0.005	mg/L						
1,1-Dichloroethylene	ND	0.006	mg/L						
Methyl Ethyl Ketone (2-Butanone)	ND	0.30	mg/L						
Methylene Chloride	ND	0.04	mg/L						
Tetrachloroethylene	ND	0.005	mg/L						
Trichloroethylene	ND	0.004	mg/L						
Vinyl chloride	ND	0.005	mg/L						
Surrogate: 4-Bromofluorobenzene	*0.616*		*mg/L*		*89.6*	*83-134*			
Surrogate: Dibromofluoromethane	*0.576*		*mg/L*		*83.7*	*78-124*			
Surrogate: Toluene-d8	*0.721*		*mg/L*		*105*	*76-118*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
EPA 1311 - TCLP Leachate Inorganics									
Fluoride	0.33	0.05	mg/L	0.34			1.7	20	
Nitrate as N	ND	1	mg/L	ND			NC	20	
Nitrite as N	ND	1	mg/L	ND			NC	20	
Cyanide, free	ND	0.02	mg/L	ND			NC	20	
EPA 1311 - TCLP Leachate Organics									
PCBs, total	ND	0.003	mg/L	ND			NC	30	
Surrogate: Decachlorobiphenyl	*0.011*		*mg/L*		*110*	*62-138*			
EPA 1311 - TCLP Leachate Volatiles									
Benzene	ND	0.005	mg/L	ND			NC	25	
Carbon Tetrachloride	ND	0.005	mg/L	ND			NC	25	
Chlorobenzene	ND	0.004	mg/L	ND			NC	25	
Chloroform	ND	0.006	mg/L	ND			NC	25	
1,2-Dichlorobenzene	ND	0.004	mg/L	ND			NC	25	
1,4-Dichlorobenzene	ND	0.004	mg/L	ND			NC	25	
1,2-Dichloroethane	ND	0.005	mg/L	ND			NC	25	
1,1-Dichloroethylene	ND	0.006	mg/L	ND			NC	25	
Methyl Ethyl Ketone (2-Butanone)	ND	0.30	mg/L	ND			NC	25	
Methylene Chloride	ND	0.04	mg/L	ND			NC	25	
Tetrachloroethylene	ND	0.005	mg/L	ND			NC	25	
Trichloroethylene	ND	0.004	mg/L	ND			NC	25	
Vinyl chloride	ND	0.005	mg/L	ND			NC	25	
Surrogate: 4-Bromofluorobenzene	*0.642*		*mg/L*		*93.3*	*83-134*			
Surrogate: Dibromofluoromethane	*0.654*		*mg/L*		*95.0*	*78-124*			
Surrogate: Toluene-d8	*0.717*		*mg/L*		*104*	*76-118*			
Physical Characteristics									
% Solids	85.6	0.1	% by Wt.	86.1			0.5	25	

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
EPA 1311 - TCLP Leachate Inorganics									
Fluoride	0.80	0.05	mg/L	0.34	93.0	70-130			
Nitrate as N	10	1	mg/L	ND	104	81-112			
Nitrite as N	9	1	mg/L	ND	91.3	76-107			
Cyanide, free	0.053	0.02	mg/L	ND	107	60-136			
EPA 1311 - TCLP Leachate Organics									
Benzo [a] pyrene	0.0409	0.0001	mg/L	ND	81.8	39-123			
Surrogate: Terphenyl-d14	*0.22*		*mg/L*		*111*	*37.1-155.6*			
PCBs, total	0.051	0.003	mg/L	ND	127	86-145			
Surrogate: Decachlorobiphenyl	*0.011*		*mg/L*		*107*	*62-138*			
EPA 1311 - TCLP Leachate Volatiles									
Benzene	0.341	0.005	mg/L	ND	99.2	55-141			
Carbon Tetrachloride	0.297	0.005	mg/L	ND	86.2	49-149			
Chlorobenzene	0.395	0.004	mg/L	ND	115	64-137			
Chloroform	0.309	0.006	mg/L	ND	89.8	58-138			
1,2-Dichlorobenzene	0.362	0.004	mg/L	ND	105	60-150			
1,4-Dichlorobenzene	0.365	0.004	mg/L	ND	106	63-132			
1,2-Dichloroethane	0.293	0.005	mg/L	ND	85.1	50-140			
1,1-Dichloroethylene	0.318	0.006	mg/L	ND	92.4	43-153			
Methyl Ethyl Ketone (2-Butanone)	0.585	0.30	mg/L	ND	68.1	26-153			
Methylene Chloride	0.306	0.04	mg/L	ND	89.0	58-149			
Tetrachloroethylene	0.355	0.005	mg/L	ND	103	51-145			
Trichloroethylene	0.385	0.004	mg/L	ND	112	52-135			
Vinyl chloride	0.312	0.005	mg/L	ND	90.6	31-159			
Surrogate: 4-Bromofluorobenzene	*0.737*		*mg/L*		*107*	*83-134*			
Surrogate: Dibromofluoromethane	*0.554*		*mg/L*		*80.5*	*78-124*			
Surrogate: Toluene-d8	*0.694*		*mg/L*		*101*	*76-118*			

Qualifier Notes:

Login Qualifiers :

Sample was composited at the lab

Applies to samples: Composite

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.

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Paracel ID: 2107163

Client Name: Pinchin Ltd.	Project Ref: 284665.001 Oblats Rd
Contact Name: Ryan LaRonde/Matt Ryan/ Mike Kosiw/ Scott Mather	Quote #:
Address: 1 Hines Road, Kanata, ON	PO #:
Telephone: 613-291-5656	E-mail: rlaronde@pinchin.com/mryan@pinchin.com/mkosiw@pinchin.com

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

Regulation 153/04
☐ Table 1 ☒ Res/Park ☒ Med/Fine
☐ Table 2 Ind/Comm Coarse
☒ Table 3 ☐ Agri/Other
☐ Table
For RSC: ☐ Yes ☐ No

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

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

Required Analysis

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken: Date	Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	pH	Texture size +- 75mc	HOLD	*CL Inorganics combo		
1	BH-1, SS-2	S		4	27-Jan												X		
2	BH-1, SS-4	S		3	27-Jan		X	X	X					X					
3	BH-1, SS-5	S		2	27-Jan											X			
4	BH-2, SS-2	S		3	27-Jan									X	X				
5	BH-2, SS-4	S		3	27-Jan		X	X	X								X		
6	MW-3, SS-2	S		3	27-Jan											X			
7	MW-3, SS-5	S		3	27-Jan		X	X	X	X									
8	MW-4, SS-1	S		3	27-Jan											X			
9	MW-4, SS-4	S		3	27-Jan		X	X	X	X									
10	MW-5, SS-1	S		2	27-Jan											X			
11	MW-5, SS-2	S		4	27-Jan		X	X	X	X									
12	MW-5, SS-4	S		3	27-Jan								X						
13	MW-5, SS-5	S		2	27-Jan											X			
14	BH-6, SS-1	S		3	27-Jan								X	X					
15	BH-6, SS-4	S		3	27-Jan		X	X	X	X							X		

Comments:

Relinquished By (Sign):	Received By Driver/Depot: T. Deuse	Received at Lab: Umaporn Dolmen	Method of Delivery: PARACEL COURIER
Relinquished By (Print): Ryan LaRonde	Date/Time: 29/01/21 10:42	Date/Time: Jan 29, 2021 12:10	Verified By:
Date/Time: Jan 28 @9:00am	Temperature: °C AM	Temperature: 2.7 °C	Date/Time: Jan 25 2021 13:5
			pH Verified: ☐ By:

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Certificate of Analysis

Pinchin Ltd. (Ottawa)

1 Hines Road, Suite 200
Kanata, ON K2K 3C7
Attn: Ryan LaRonde

Client PO:
Project:
Custody:

Report Date: 16-Feb-2021
Order Date: 11-Feb-2021

Order #: 2107414

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

Paracel ID	Client ID
2107414-01	MW-3
2107414-02	MW-4
2107414-03	MW-5
2107414-04	Dup
2107414-05	Trip

Approved By:

Mark Foto

Mark Foto, M.Sc.
Lab Supervisor

Certificate of Analysis

Report Date: 16-Feb-2021

Client: Pinchin Ltd. (Ottawa)

Order Date: 11-Feb-2021

Client PO:

Project Description:

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Metals, ICP-MS	EPA 200.8 - ICP-MS	12-Feb-21	12-Feb-21
PHC F1	CWS Tier 1 - P&T GC-FID	12-Feb-21	12-Feb-21
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	12-Feb-21	12-Feb-21
REG 153: PAHs by GC-MS	EPA 625 - GC-MS, extraction	12-Feb-21	12-Feb-21
REG 153: VOCs by P&T GC/MS	EPA 624 - P&T GC-MS	12-Feb-21	12-Feb-21

Certificate of Analysis

Report Date: 16-Feb-2021

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

Order Date: 11-Feb-2021

Client PO:

Project Description:

	Client ID:	MW-3	MW-4	MW-5	Dup
	Sample Date:	10-Feb-21 09:00	10-Feb-21 09:00	10-Feb-21 09:00	10-Feb-21 09:00
	Sample ID:	2107414-01	2107414-02	2107414-03	2107414-04
	MDL/Units	Water	Water	Water	Water
Metals					
Antimony	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Arsenic	1 ug/L	1	2	2	1
Barium	1 ug/L	219	177	113	220
Beryllium	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Boron	10 ug/L	34	40	36	35
Cadmium	0.1 ug/L	<0.1	<0.1	<0.1	<0.1
Chromium	1 ug/L	<1	<1	<1	<1
Cobalt	0.5 ug/L	1.6	<0.5	<0.5	1.5
Copper	0.5 ug/L	0.8	0.9	0.8	0.8
Lead	0.1 ug/L	<0.1	<0.1	<0.1	<0.1
Molybdenum	0.5 ug/L	11.9	18.7	13.2	12.0
Nickel	1 ug/L	4	3	2	4
Selenium	1 ug/L	<1	<1	<1	<1
Silver	0.1 ug/L	<0.1	<0.1	<0.1	<0.1
Sodium	200 ug/L	42300	41800	37200	39700
Thallium	0.1 ug/L	<0.1	<0.1	<0.1	<0.1
Uranium	0.1 ug/L	2.4	2.9	1.7	2.4
Vanadium	0.5 ug/L	1.5	3.0	3.5	1.4
Zinc	5 ug/L	<5	6	7	<5
Volatiles					
Acetone	5.0 ug/L	<5.0	<5.0	<5.0	<5.0
Benzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Bromoform	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Bromomethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Carbon Tetrachloride	0.2 ug/L	<0.2	<0.2	<0.2	<0.2
Chlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Chloroform	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Dichlorodifluoromethane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0
1,2-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,3-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5

Certificate of Analysis

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

Client PO:

Report Date: 16-Feb-2021

Order Date: 11-Feb-2021

Project Description:

	Client ID:	MW-3	MW-4	MW-5	Dup
	Sample Date:	10-Feb-21 09:00	10-Feb-21 09:00	10-Feb-21 09:00	10-Feb-21 09:00
	Sample ID:	2107414-01	2107414-02	2107414-03	2107414-04
	MDL/Units	Water	Water	Water	Water
1,1-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
cis-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
trans-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,3-Dichloropropene, total	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Ethylene dibromide (dibromoethane, 1,2-)	0.2 ug/L	<0.2	<0.2	<0.2	<0.2
Hexane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0
Methyl Ethyl Ketone (2-Butanone)	5.0 ug/L	<5.0	<5.0	<5.0	<5.0
Methyl Isobutyl Ketone	5.0 ug/L	<5.0	<5.0	<5.0	<5.0
Methyl tert-butyl ether	2.0 ug/L	<2.0	<2.0	<2.0	<2.0
Methylene Chloride	5.0 ug/L	<5.0	<5.0	<5.0	<5.0
Styrene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,1,2,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Tetrachloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Toluene	0.5 ug/L	0.6	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Trichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Trichlorofluoromethane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0
Vinyl chloride	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
m,p-Xylenes	0.5 ug/L	1.6	1.0	<0.5	<0.5
o-Xylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5
Xylenes, total	0.5 ug/L	1.6	1.0	<0.5	<0.5
4-Bromofluorobenzene	Surrogate	113%	120%	121%	117%
Dibromofluoromethane	Surrogate	83.5%	86.9%	89.0%	90.3%
Toluene-d8	Surrogate	104%	104%	113%	103%
Hydrocarbons					
F1 PHCs (C6-C10)	25 ug/L	<25	<25	<25	<25
F2 PHCs (C10-C16)	100 ug/L	<100	<100	<100	<100
F3 PHCs (C16-C34)	100 ug/L	<100	<100	<100	<100
F4 PHCs (C34-C50)	100 ug/L	<100	<100	<100	<100
Semi-Volatiles					

Certificate of Analysis

Report Date: 16-Feb-2021

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

Order Date: 11-Feb-2021

Client PO:

Project Description:

	Client ID:	MW-3	MW-4	MW-5	Dup
	Sample Date:	10-Feb-21 09:00	10-Feb-21 09:00	10-Feb-21 09:00	10-Feb-21 09:00
	Sample ID:	2107414-01	2107414-02	2107414-03	2107414-04
	MDL/Units	Water	Water	Water	Water
Acenaphthene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Anthracene	0.01 ug/L	<0.01	<0.01	<0.01	<0.01
Benzo [a] anthracene	0.01 ug/L	<0.01	<0.01	<0.01	<0.01
Benzo [a] pyrene	0.01 ug/L	<0.01	<0.01	<0.01	<0.01
Benzo [b] fluoranthene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Benzo [g,h,i] perylene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Benzo [k] fluoranthene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Chrysene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Dibenzo [a,h] anthracene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Fluoranthene	0.01 ug/L	<0.01	<0.01	<0.01	<0.01
Fluorene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Indeno [1,2,3-cd] pyrene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
1-Methylnaphthalene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
2-Methylnaphthalene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Methylnaphthalene (1&2)	0.10 ug/L	<0.10	<0.10	<0.10	<0.10
Naphthalene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Phenanthrene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05
Pyrene	0.01 ug/L	<0.01	<0.01	<0.01	<0.01
2-Fluorobiphenyl	Surrogate	104%	98.1%	92.1%	89.9%
Terphenyl-d14	Surrogate	115%	120%	120%	121%

Certificate of Analysis

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

Client PO:

Report Date: 16-Feb-2021

Order Date: 11-Feb-2021

Project Description:

	Client ID:	Trip	-	-	-
	Sample Date:	05-Feb-21 09:00	-	-	-
	Sample ID:	2107414-05	-	-	-
	MDL/Units	Water	-	-	-
Volatiles					
Acetone	5.0 ug/L	<5.0	-	-	-
Benzene	0.5 ug/L	<0.5	-	-	-
Bromodichloromethane	0.5 ug/L	<0.5	-	-	-
Bromoform	0.5 ug/L	<0.5	-	-	-
Bromomethane	0.5 ug/L	<0.5	-	-	-
Carbon Tetrachloride	0.2 ug/L	<0.2	-	-	-
Chlorobenzene	0.5 ug/L	<0.5	-	-	-
Chloroform	0.5 ug/L	<0.5	-	-	-
Dibromochloromethane	0.5 ug/L	<0.5	-	-	-
Dichlorodifluoromethane	1.0 ug/L	<1.0	-	-	-
1,2-Dichlorobenzene	0.5 ug/L	<0.5	-	-	-
1,3-Dichlorobenzene	0.5 ug/L	<0.5	-	-	-
1,4-Dichlorobenzene	0.5 ug/L	<0.5	-	-	-
1,1-Dichloroethane	0.5 ug/L	<0.5	-	-	-
1,2-Dichloroethane	0.5 ug/L	<0.5	-	-	-
1,1-Dichloroethylene	0.5 ug/L	<0.5	-	-	-
cis-1,2-Dichloroethylene	0.5 ug/L	<0.5	-	-	-
trans-1,2-Dichloroethylene	0.5 ug/L	<0.5	-	-	-
1,2-Dichloropropane	0.5 ug/L	<0.5	-	-	-
cis-1,3-Dichloropropylene	0.5 ug/L	<0.5	-	-	-
trans-1,3-Dichloropropylene	0.5 ug/L	<0.5	-	-	-
1,3-Dichloropropene, total	0.5 ug/L	<0.5	-	-	-
Ethylbenzene	0.5 ug/L	<0.5	-	-	-
Ethylene dibromide (dibromoethane, 1	0.2 ug/L	<0.2	-	-	-
Hexane	1.0 ug/L	<1.0	-	-	-
Methyl Ethyl Ketone (2-Butanone)	5.0 ug/L	<5.0	-	-	-
Methyl Isobutyl Ketone	5.0 ug/L	<5.0	-	-	-
Methyl tert-butyl ether	2.0 ug/L	<2.0	-	-	-
Methylene Chloride	5.0 ug/L	<5.0	-	-	-
Styrene	0.5 ug/L	<0.5	-	-	-
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5	-	-	-
1,1,2,2-Tetrachloroethane	0.5 ug/L	<0.5	-	-	-
Tetrachloroethylene	0.5 ug/L	<0.5	-	-	-
Toluene	0.5 ug/L	<0.5	-	-	-

Certificate of Analysis

Report Date: 16-Feb-2021

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

Order Date: 11-Feb-2021

Client PO:

Project Description:

	Client ID:	Trip	-	-	-
	Sample Date:	05-Feb-21 09:00	-	-	-
	Sample ID:	2107414-05	-	-	-
	MDL/Units	Water	-	-	-
1,1,1-Trichloroethane	0.5 ug/L	<0.5	-	-	-
1,1,2-Trichloroethane	0.5 ug/L	<0.5	-	-	-
Trichloroethylene	0.5 ug/L	<0.5	-	-	-
Trichlorofluoromethane	1.0 ug/L	<1.0	-	-	-
Vinyl chloride	0.5 ug/L	<0.5	-	-	-
m,p-Xylenes	0.5 ug/L	<0.5	-	-	-
o-Xylene	0.5 ug/L	<0.5	-	-	-
Xylenes, total	0.5 ug/L	<0.5	-	-	-
4-Bromofluorobenzene	Surrogate	119%	-	-	-
Dibromofluoromethane	Surrogate	83.7%	-	-	-
Toluene-d8	Surrogate	112%	-	-	-

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	25	ug/L						
F2 PHCs (C10-C16)	ND	100	ug/L						
F3 PHCs (C16-C34)	ND	100	ug/L						
F4 PHCs (C34-C50)	ND	100	ug/L						
Metals									
Antimony	ND	0.5	ug/L						
Arsenic	ND	1	ug/L						
Barium	ND	1	ug/L						
Beryllium	ND	0.5	ug/L						
Boron	ND	10	ug/L						
Cadmium	ND	0.1	ug/L						
Chromium	ND	1	ug/L						
Cobalt	ND	0.5	ug/L						
Copper	ND	0.5	ug/L						
Lead	ND	0.1	ug/L						
Molybdenum	ND	0.5	ug/L						
Nickel	ND	1	ug/L						
Selenium	ND	1	ug/L						
Silver	ND	0.1	ug/L						
Sodium	ND	200	ug/L						
Thallium	ND	0.1	ug/L						
Uranium	ND	0.1	ug/L						
Vanadium	ND	0.5	ug/L						
Zinc	ND	5	ug/L						
Semi-Volatiles									
Acenaphthene	ND	0.05	ug/L						
Acenaphthylene	ND	0.05	ug/L						
Anthracene	ND	0.01	ug/L						
Benzo [a] anthracene	ND	0.01	ug/L						
Benzo [a] pyrene	ND	0.01	ug/L						
Benzo [b] fluoranthene	ND	0.05	ug/L						
Benzo [g,h,i] perylene	ND	0.05	ug/L						
Benzo [k] fluoranthene	ND	0.05	ug/L						
Chrysene	ND	0.05	ug/L						
Dibenzo [a,h] anthracene	ND	0.05	ug/L						
Fluoranthene	ND	0.01	ug/L						
Fluorene	ND	0.05	ug/L						
Indeno [1,2,3-cd] pyrene	ND	0.05	ug/L						
1-Methylnaphthalene	ND	0.05	ug/L						
2-Methylnaphthalene	ND	0.05	ug/L						
Methylnaphthalene (1&2)	ND	0.10	ug/L						
Naphthalene	ND	0.05	ug/L						
Phenanthrene	ND	0.05	ug/L						
Pyrene	ND	0.01	ug/L						
Surrogate: 2-Fluorobiphenyl	*18.9*		*ug/L*		*94.4*	*50-140*			
Surrogate: Terphenyl-d14	*23.9*		*ug/L*		*120*	*50-140*			
Volatiles									
Acetone	ND	5.0	ug/L						
Benzene	ND	0.5	ug/L						
Bromodichloromethane	ND	0.5	ug/L						
Bromoform	ND	0.5	ug/L						
Bromomethane	ND	0.5	ug/L						
Carbon Tetrachloride	ND	0.2	ug/L						
Chlorobenzene	ND	0.5	ug/L						
Chloroform	ND	0.5	ug/L						
Dibromochloromethane	ND	0.5	ug/L						
Dichlorodifluoromethane	ND	1.0	ug/L						
1,2-Dichlorobenzene	ND	0.5	ug/L						

Certificate of Analysis

Report Date: 16-Feb-2021

Client: Pinchin Ltd. (Ottawa)

Order Date: 11-Feb-2021

Client PO:

Project Description:

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
1,3-Dichlorobenzene	ND	0.5	ug/L						
1,4-Dichlorobenzene	ND	0.5	ug/L						
1,1-Dichloroethane	ND	0.5	ug/L						
1,2-Dichloroethane	ND	0.5	ug/L						
1,1-Dichloroethylene	ND	0.5	ug/L						
cis-1,2-Dichloroethylene	ND	0.5	ug/L						
trans-1,2-Dichloroethylene	ND	0.5	ug/L						
1,2-Dichloropropane	ND	0.5	ug/L						
cis-1,3-Dichloropropylene	ND	0.5	ug/L						
trans-1,3-Dichloropropylene	ND	0.5	ug/L						
1,3-Dichloropropene, total	ND	0.5	ug/L						
Ethylbenzene	ND	0.5	ug/L						
Ethylene dibromide (dibromoethane, 1,2	ND	0.2	ug/L						
Hexane	ND	1.0	ug/L						
Methyl Ethyl Ketone (2-Butanone)	ND	5.0	ug/L						
Methyl Isobutyl Ketone	ND	5.0	ug/L						
Methyl tert-butyl ether	ND	2.0	ug/L						
Methylene Chloride	ND	5.0	ug/L						
Styrene	ND	0.5	ug/L						
1,1,1,2-Tetrachloroethane	ND	0.5	ug/L						
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L						
Tetrachloroethylene	ND	0.5	ug/L						
Toluene	ND	0.5	ug/L						
1,1,1-Trichloroethane	ND	0.5	ug/L						
1,1,2-Trichloroethane	ND	0.5	ug/L						
Trichloroethylene	ND	0.5	ug/L						
Trichlorofluoromethane	ND	1.0	ug/L						
Vinyl chloride	ND	0.5	ug/L						
m,p-Xylenes	ND	0.5	ug/L						
o-Xylene	ND	0.5	ug/L						
Xylenes, total	ND	0.5	ug/L						
Surrogate: 4-Bromofluorobenzene	*97.0*		*ug/L*		*121*	*50-140*			
Surrogate: Dibromofluoromethane	*68.0*		*ug/L*		*85.0*	*50-140*			
Surrogate: Toluene-d8	*84.6*		*ug/L*		*106*	*50-140*			

Certificate of Analysis

Client: Pinchin Ltd. (Ottawa)

Client PO:

Report Date: 16-Feb-2021

Order Date: 11-Feb-2021

Project Description:

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	25	ug/L	ND			NC	30	
Metals									
Antimony	0.62	0.5	ug/L	ND			NC	20	
Arsenic	1.4	1	ug/L	1.3			6.0	20	
Barium	210	1	ug/L	219			4.6	20	
Beryllium	ND	0.5	ug/L	ND			NC	20	
Boron	33	10	ug/L	34			5.7	20	
Cadmium	ND	0.1	ug/L	ND			NC	20	
Chromium	ND	1	ug/L	ND			NC	20	
Cobalt	1.52	0.5	ug/L	1.55			2.1	20	
Copper	0.74	0.5	ug/L	0.79			6.3	20	
Lead	ND	0.1	ug/L	ND			NC	20	
Molybdenum	11.7	0.5	ug/L	11.9			1.3	20	
Nickel	3.9	1	ug/L	4.0			2.8	20	
Selenium	ND	1	ug/L	ND			NC	20	
Silver	ND	0.1	ug/L	ND			NC	20	
Sodium	41200	200	ug/L	42300			2.7	20	
Thallium	ND	0.1	ug/L	ND			NC	20	
Uranium	2.4	0.1	ug/L	2.4			0.0	20	
Vanadium	1.48	0.5	ug/L	1.49			1.0	20	
Zinc	6	5	ug/L	ND			NC	20	
Volatiles									
Acetone	ND	5.0	ug/L	ND			NC	30	
Benzene	ND	0.5	ug/L	ND			NC	30	
Bromodichloromethane	ND	0.5	ug/L	ND			NC	30	
Bromoform	ND	0.5	ug/L	ND			NC	30	
Bromomethane	ND	0.5	ug/L	ND			NC	30	
Carbon Tetrachloride	ND	0.2	ug/L	ND			NC	30	
Chlorobenzene	ND	0.5	ug/L	ND			NC	30	
Chloroform	ND	0.5	ug/L	ND			NC	30	
Dibromochloromethane	ND	0.5	ug/L	ND			NC	30	
Dichlorodifluoromethane	ND	1.0	ug/L	ND			NC	30	
1,2-Dichlorobenzene	ND	0.5	ug/L	ND			NC	30	
1,3-Dichlorobenzene	ND	0.5	ug/L	ND			NC	30	
1,4-Dichlorobenzene	ND	0.5	ug/L	ND			NC	30	
1,1-Dichloroethane	ND	0.5	ug/L	ND			NC	30	
1,2-Dichloroethane	ND	0.5	ug/L	ND			NC	30	
1,1-Dichloroethylene	ND	0.5	ug/L	ND			NC	30	
cis-1,2-Dichloroethylene	ND	0.5	ug/L	ND			NC	30	
trans-1,2-Dichloroethylene	ND	0.5	ug/L	ND			NC	30	
1,2-Dichloropropane	ND	0.5	ug/L	ND			NC	30	
cis-1,3-Dichloropropylene	ND	0.5	ug/L	ND			NC	30	
trans-1,3-Dichloropropylene	ND	0.5	ug/L	ND			NC	30	
Ethylbenzene	ND	0.5	ug/L	ND			NC	30	
Ethylene dibromide (dibromoethane, 1,2-	ND	0.2	ug/L	ND			NC	30	
Hexane	ND	1.0	ug/L	ND			NC	30	
Methyl Ethyl Ketone (2-Butanone)	ND	5.0	ug/L	ND			NC	30	
Methyl Isobutyl Ketone	ND	5.0	ug/L	ND			NC	30	
Methyl tert-butyl ether	ND	2.0	ug/L	ND			NC	30	
Methylene Chloride	ND	5.0	ug/L	ND			NC	30	
Styrene	ND	0.5	ug/L	ND			NC	30	
1,1,1,2-Tetrachloroethane	ND	0.5	ug/L	ND			NC	30	
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L	ND			NC	30	
Tetrachloroethylene	ND	0.5	ug/L	ND			NC	30	
Toluene	0.53	0.5	ug/L	0.60			12.4	30	
1,1,1-Trichloroethane	ND	0.5	ug/L	ND			NC	30	
1,1,2-Trichloroethane	ND	0.5	ug/L	ND			NC	30	

Certificate of Analysis

Client: Pinchin Ltd. (Ottawa)

Client PO:

Report Date: 16-Feb-2021

Order Date: 11-Feb-2021

Project Description:

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Trichloroethylene	ND	0.5	ug/L	ND			NC	30	
Trichlorofluoromethane	ND	1.0	ug/L	ND			NC	30	
Vinyl chloride	ND	0.5	ug/L	ND			NC	30	
m,p-Xylenes	1.49	0.5	ug/L	1.57			5.2	30	
o-Xylene	ND	0.5	ug/L	ND			NC	30	
Surrogate: 4-Bromofluorobenzene	*94.3*		*ug/L*		*118*	*50-140*			
Surrogate: Dibromofluoromethane	*68.8*		*ug/L*		*86.0*	*50-140*			
Surrogate: Toluene-d8	*83.7*		*ug/L*		*105*	*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)	2090	25	ug/L	ND	104	68-117			
F2 PHCs (C10-C16)	1550	100	ug/L	ND	96.8	60-140			
F3 PHCs (C16-C34)	4090	100	ug/L	ND	104	60-140			
F4 PHCs (C34-C50)	2480	100	ug/L	ND	100	60-140			
Metals									
Antimony	44.3	0.5	ug/L	ND	88.1	80-120			
Arsenic	54.0	1	ug/L	1.3	105	80-120			
Barium	50.4	1	ug/L	ND	101	80-120			
Beryllium	49.0	0.5	ug/L	ND	97.9	80-120			
Boron	72	10	ug/L	34	75.8	80-120			QM-07
Cadmium	44.7	0.1	ug/L	ND	89.4	80-120			
Chromium	56.5	1	ug/L	ND	112	80-120			
Cobalt	52.9	0.5	ug/L	1.55	103	80-120			
Copper	48.2	0.5	ug/L	0.79	94.9	80-120			
Lead	44.1	0.1	ug/L	ND	88.2	80-120			
Molybdenum	57.5	0.5	ug/L	11.9	91.1	80-120			
Nickel	52.7	1	ug/L	4.0	97.4	80-120			
Selenium	46.8	1	ug/L	ND	93.4	80-120			
Silver	39.5	0.1	ug/L	ND	79.0	80-120			QM-07
Sodium	8450	200	ug/L	ND	84.5	80-120			
Thallium	44.4	0.1	ug/L	ND	88.7	80-120			
Uranium	48.5	0.1	ug/L	2.4	92.1	80-120			
Vanadium	58.6	0.5	ug/L	1.49	114	80-120			
Zinc	46	5	ug/L	ND	84.8	80-120			
Semi-Volatiles									
Acenaphthene	4.51	0.05	ug/L	ND	90.2	50-140			
Acenaphthylene	4.13	0.05	ug/L	ND	82.5	50-140			
Anthracene	4.54	0.01	ug/L	ND	90.9	50-140			
Benzo [a] anthracene	4.06	0.01	ug/L	ND	81.1	50-140			
Benzo [a] pyrene	4.31	0.01	ug/L	ND	86.3	50-140			
Benzo [b] fluoranthene	5.40	0.05	ug/L	ND	108	50-140			
Benzo [g,h,i] perylene	3.76	0.05	ug/L	ND	75.1	50-140			
Benzo [k] fluoranthene	5.72	0.05	ug/L	ND	114	50-140			
Chrysene	4.75	0.05	ug/L	ND	94.9	50-140			
Dibenzo [a,h] anthracene	4.09	0.05	ug/L	ND	81.9	50-140			
Fluoranthene	4.41	0.01	ug/L	ND	88.3	50-140			
Fluorene	4.48	0.05	ug/L	ND	89.5	50-140			
Indeno [1,2,3-cd] pyrene	4.08	0.05	ug/L	ND	81.5	50-140			
1-Methylnaphthalene	4.40	0.05	ug/L	ND	87.9	50-140			
2-Methylnaphthalene	4.87	0.05	ug/L	ND	97.4	50-140			
Naphthalene	4.80	0.05	ug/L	ND	95.9	50-140			
Phenanthrene	4.29	0.05	ug/L	ND	85.9	50-140			
Pyrene	4.43	0.01	ug/L	ND	88.6	50-140			
Surrogate: 2-Fluorobiphenyl	*18.8*		*ug/L*		*93.8*	*50-140*			
Surrogate: Terphenyl-d14	*25.6*		*ug/L*		*128*	*50-140*			
Volatiles									
Acetone	96.7	5.0	ug/L	ND	96.7	50-140			
Benzene	39.2	0.5	ug/L	ND	97.9	60-130			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Bromodichloromethane	42.5	0.5	ug/L	ND	106	60-130			
Bromoform	40.9	0.5	ug/L	ND	102	60-130			
Bromomethane	25.9	0.5	ug/L	ND	64.7	50-140			
Carbon Tetrachloride	43.0	0.2	ug/L	ND	107	60-130			
Chlorobenzene	41.3	0.5	ug/L	ND	103	60-130			
Chloroform	40.6	0.5	ug/L	ND	102	60-130			
Dibromochloromethane	44.4	0.5	ug/L	ND	111	60-130			
Dichlorodifluoromethane	36.0	1.0	ug/L	ND	90.0	50-140			
1,2-Dichlorobenzene	41.4	0.5	ug/L	ND	103	60-130			
1,3-Dichlorobenzene	39.6	0.5	ug/L	ND	98.9	60-130			
1,4-Dichlorobenzene	41.4	0.5	ug/L	ND	103	60-130			
1,1-Dichloroethane	35.1	0.5	ug/L	ND	87.7	60-130			
1,2-Dichloroethane	38.2	0.5	ug/L	ND	95.6	60-130			
1,1-Dichloroethylene	35.9	0.5	ug/L	ND	89.6	60-130			
cis-1,2-Dichloroethylene	38.0	0.5	ug/L	ND	95.1	60-130			
trans-1,2-Dichloroethylene	38.3	0.5	ug/L	ND	95.8	60-130			
1,2-Dichloropropane	35.0	0.5	ug/L	ND	87.5	60-130			
cis-1,3-Dichloropropylene	41.2	0.5	ug/L	ND	103	60-130			
trans-1,3-Dichloropropylene	43.4	0.5	ug/L	ND	109	60-130			
Ethylbenzene	36.2	0.5	ug/L	ND	90.5	60-130			
Ethylene dibromide (dibromoethane, 1,2	43.8	0.2	ug/L	ND	109	60-130			
Hexane	31.2	1.0	ug/L	ND	77.9	60-130			
Methyl Ethyl Ketone (2-Butanone)	86.9	5.0	ug/L	ND	86.9	50-140			
Methyl Isobutyl Ketone	82.3	5.0	ug/L	ND	82.3	50-140			
Methyl tert-butyl ether	95.5	2.0	ug/L	ND	95.5	50-140			
Methylene Chloride	33.5	5.0	ug/L	ND	83.8	60-130			
Styrene	35.5	0.5	ug/L	ND	88.6	60-130			
1,1,1,2-Tetrachloroethane	43.4	0.5	ug/L	ND	108	60-130			
1,1,2,2-Tetrachloroethane	35.4	0.5	ug/L	ND	88.6	60-130			
Tetrachloroethylene	42.0	0.5	ug/L	ND	105	60-130			
Toluene	35.7	0.5	ug/L	ND	89.2	60-130			
1,1,1-Trichloroethane	42.7	0.5	ug/L	ND	107	60-130			
1,1,2-Trichloroethane	42.7	0.5	ug/L	ND	107	60-130			
Trichloroethylene	44.8	0.5	ug/L	ND	112	60-130			
Trichlorofluoromethane	39.4	1.0	ug/L	ND	98.4	60-130			
Vinyl chloride	24.1	0.5	ug/L	ND	60.2	50-140			
m,p-Xylenes	84.2	0.5	ug/L	ND	105	60-130			
o-Xylene	37.3	0.5	ug/L	ND	93.2	60-130			
Surrogate: 4-Bromofluorobenzene	*87.2*		*ug/L*		*109*	*50-140*			
Surrogate: Dibromofluoromethane	*86.0*		*ug/L*		*107*	*50-140*			
Surrogate: Toluene-d8	*73.7*		*ug/L*		*92.1*	*50-140*			

Qualifier Notes:

QC Qualifiers :

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

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

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

CCME PHC additional information:

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

PARACEL LABORATORIES LTD.

Paracel ID: 2107414

Paracel Order Number (Lab Use Only): 2107414

Chain Of Custody (Lab Use Only)

Page 1 of 1

Client Name: Pinchin Ltd	Project Ref:
Contact Name: Ryan LaRonde/ Mike Kosiw/ Matt Ryan	Quote #:
Address: 1 Hines Road, Kanata, ON	PO #:
	E-mail: rlaronde@pinchin.com/ mryan@pinchin.com mkosiw@pinchin.com
Telephone: 613-291-5656	

Turnaround Time

- ☐ 1 day
- ☐ 3 day
- ☒ 2 day
- ☐ Regular

Date Required: ______

Regulation 153/04

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

Other Regulation

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

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

Required Analysis

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken Date	Sample Taken Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)
1	MW-3	gw		5	February 10		✓	✓	✓	✓			
2	MW-4	gw		5	February 10		✓	✓	✓	✓			
3	MW-5	gw		5	February 10		✓	✓	✓	✓			
4	Dup	gw		5	February 10		✓	✓	✓	✓			
5	Trip	gw		5	February 10			✓					
6													
7													
8													
9													
10													

Comments:

Method of Delivery: Paracel Courier

Relinquished By (Sign):	Received By Driver/Depot: M. Jeouse	Received at Lab: Sunnypoom Dohmai	Verified By:
Relinquished By (Print): Ryan LaRonde	Date/Time: 11/02/21 2:40	Date/Time: Feb 11, 2021 04.40	Date/Time: 2-11-21 16:44
Date/Time: February 11	Temperature: °C	Temperature: 2.1 °C	pH Verified: ☒ By: MD

Revsion 3.0

Chain of Custody (Env).xlsx