FINAL

Phase Two Environmental Site Assessment

500 Coventry Road
Ottawa, Ontario

Prepared for:

Morguard REIT c/o Morguard Investments Limited
55 City Centre Drive, Suite 800
Mississauga, ON L5B 1M3

November 15, 2024

Pinchin File: 319674.002

Issued To:	**Morguard REIT c/o Morguard Investments Limited**
Issued On:	**November 15, 2024**
Pinchin File:	**319674.002**
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1.0 EXECUTIVE SUMMARY

Pinchin Ltd. (Pinchin) was retained by Morguard REIT c/o Morguard Investments Limited (Client), to complete a Phase Two Environmental Site Assessment (Phase Two ESA) of the property located at 500 Coventry Road in Ottawa, Ontario (hereafter referred to as the Site or Phase Two Property). The Phase Two Property is approximately 3.5 hectares in size and exists as vacant land partially utilized as a parking lot and snow stockpiling area for the St. Laurent Shopping Centre.

The Phase Two ESA was conducted at the request of the Client in relation to the future redevelopment of the Phase Two Property from commercial to residential land use. A Record of Site Condition (RSC) submittal to the Ontario Ministry of Environment, Conservation and Parks (MECP) is a mandatory requirement when a land use changes to a more sensitive land use and as such, to support the RSC submission, the 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 362/23 on January 1, 2024 (O. Reg. 153/04).

The objectives of this Phase Two ESA were to assess the soil and groundwater quality in relation to 13 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 (report dated April 19, 2024) in accordance with O. Reg. 153/04. The identified APECs, PCAs and COPCs are summarized in Tables 1 and 2 (all Tables are provided within Section 9.0). The Phase Two ESA was completed by Pinchin between April 8, 2024 and June 21, 2024, and consisted of the following:

- Initial investigation of the APECs.

The initial APECs investigation included the advancement of 24 boreholes at the Phase Two Property, 18 of which were completed as groundwater monitoring wells to facilitate the sampling of groundwater and the assessment of groundwater flow. The boreholes were advanced to depths ranging from approximately 1.83 to 8.03 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), glycols, polychlorinated biphenyls (PCBs), metals and/or inorganic parameters. In addition, groundwater samples were collected from each of the newly-installed monitoring wells and submitted for laboratory analysis of VOCs, PHCs, PAHs, PCBs, metals and/or inorganic parameters.

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 coarse-textured soils and residential/parkland/institutional property use.

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 1,1,2,2-tetrachloroethane (0.45 micrograms per gram [µg/g] vs. the *Table 3 Standard* of 0.05 µg/g) reported for soil sample MW11-S6, collected at borehole MW11 from a depth of 3.81 to 4.27 mbgs, exceeded the *Table 3 Standards*.
- The concentrations of benzene (0.73 µg/g vs. the *Table 3 Standard* of 0.21 µg/g), ethylbenzene (3.93 µg/g vs. the *Table 3 Standard* of 2 µg/g), PHCs (F2) (310 µg/g vs. the *Table 3 Standard* of 98 µg/g) and 2-,1-methylnaphthalene (2.41 µg/g vs. the *Table 3 Standard* of 0.99 µg/g) reported for soil sample MW14-S3 (and its corresponding field duplicate DUP-5), collected at borehole MW14 from a depth of 1.52 to 2.29 mbgs, exceeded the *Table 3 Standards*. In addition, concentrations of PHCs (F1) (71 µg/g vs. the *Table 3 Standard* of 55 µg/g) reported for soil sample DUP-5 collected at borehole MW14 exceeded the *Table 3 Standards*.
- The concentrations of benzo(a)anthracene (0.67 µg/g vs. the *Table 3 Standard* of 0.5 µg/g), benzo(a)pyrene (0.37 µg/g vs. the *Table 3 Standard* of 0.3 µg/g) and fluoranthene (1.61 µg/g vs. the *Table 3 Standard* of 0.69 µg/g) reported for soil sample BH15-S2, collected at borehole BH15 from a depth of 0.76 to 1.52 mbgs, exceeded the *Table 3 Standards*.
- The EC value (7.6 milliSiemens per centimetre [mS/cm] vs. the *Table 3 Standard* of 0.7 mS/cm) and SAR value (44.9 vs. the *Table 3 Standard* of 5) reported for soil sample MW16-SS2, collected at borehole MW16 from a depth of 0.76 to 1.52 mbgs, exceeded the *Table 3 Standards*.
- The EC value (1.04 mS/cm vs. the *Table 3 Standard* of 0.7 mS/cm) and SAR value (6.51 vs. the *Table 3 Standard* of 5) reported for soil sample MW17-SS2, collected at borehole MW17 from a depth of 0.76 to 1.37 mbgs, exceeded the *Table 3 Standards*.
- The EC value (1.39 mS/cm vs. the *Table 3 Standard* of 0.7 mS/cm) and SAR value (12.8 vs. the *Table 3 Standard* of 5) reported for soil sample MW17-SS3, collected at borehole MW17 from a depth of 1.52 to 2.13 mbgs, exceeded the *Table 3 Standards*.
- The EC value (1.89 mS/cm vs. the *Table 3 Standard* of 0.7 mS/cm) and SAR value (10.0 vs. the *Table 3 Standard* of 5) reported for soil sample MW17-SS5, collected at borehole MW17 from a depth of 2.74 to 3.35 mbgs, exceeded the *Table 3 Standards*.

- The EC value (1.74 mS/cm vs. the *Table 3 Standard* of 0.7 mS/cm) and SAR value (9.96 vs. the *Table 3 Standard* of 5) reported for soil sample MW18-SS2, collected at borehole MW18 from a depth of 0.76 to 1.37 mbgs, exceeded the *Table 3 Standards*.
- The EC value (0.779 mS/cm vs. the *Table 3 Standard* of 0.7 mS/cm) and SAR value (6.47 vs. the *Table 3 Standard* of 5) reported for soil sample MW19-SS2, collected at borehole MW18 from a depth of 0.76 to 1.37 mbgs, exceeded the *Table 3 Standards*.
- The EC value (2.90 mS/cm vs. the *Table 3 Standard* of 0.7 mS/cm) and SAR value (11.8 vs. the *Table 3 Standard* of 5) reported for soil sample BH24-SS2, collected at borehole BH24 from a depth of 1.52 to 2.13 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*, except for the following:

- The concentrations of chloride (2,960,000 micrograms per litre [µg/L] vs. the *Table 3 Standard* of 2,300,000 µg/L) reported for the groundwater sample collected from monitoring well MW19 (as well as its corresponding field duplicate DUP-2) at a pump intake depth of approximately 6.1 mbgs, exceeded the *Table 3 Standards*.
- The concentrations of chloride (6,500,000 µg/L vs. the *Table 3 Standard* of 2,300,000 µg/L) and sodium (3,120,000 µg/L vs. the *Table 3 Standard* of 2,300,000 µg/L) reported for the groundwater sample collected from monitoring well MW18 at a pump intake depth of approximately 6.1 mbgs, exceeded the *Table 3 Standards*.
- The concentrations of chloride (7,750,000 µg/L vs. the *Table 3 Standard* of 2,300,000 µg/L) and sodium (5,170,000 µg/L vs. the *Table 3 Standard* of 2,300,000 µg/L) reported for the groundwater sample collected from monitoring well MW14 at a pump intake depth of approximately 2.3 mbgs, exceeded the *Table 3 Standards*.
- The concentrations of chloride (23,300,000 µg/L vs. the *Table 3 Standard* of 2,300,000 µg/L) and sodium (17,500,000 µg/L vs. the *Table 3 Standard* of 2,300,000 µg/L) reported for the groundwater sample collected from monitoring well MW16 at a pump intake depth of approximately 6.1 mbgs, exceeded the *Table 3 Standards*.

With respect to the identified soil and groundwater parameter exceedances summarized above, the completion of soil and groundwater remediation and/or a Risk Assessment in accordance with O. Reg. 153/04 will be required to develop Property Specific Standards (PSS) for the parameters exceeding the *Table 3 Standards* before an RSC can be filed by the Qualified Person (QP) for the Phase Two Property.

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

2.0 INTRODUCTION

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

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

This Phase Two ESA was conducted at the request of the Client in relation to the future redevelopment of the Phase Two Property from commercial to residential land use. An RSC submittal to the MECP is a mandatory requirement when a land use changes to a more sensitive land use and as such, to support the RSC submission, the Phase Two ESA was conducted in accordance with O. Reg. 153/04.

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*, *500 Coventry Road, Ottawa, Ontario*", completed by Pinchin for the Client and dated April 19, 2024. 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 500 Coventry Road, Ottawa, Ontario. The Phase Two Property is 8.6 acres (3.5 hectares) in size and is bounded by Coventry Road to the north, Highway 417 to the south, and commercial properties to the east and west. 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 northwest portion of the Phase Two Property is leased for bus parking, the northeast portion is used for vehicular parking, the southeast portion is used for stockpiling snow from the east adjacent shopping mall property, and the southwest portion remains vacant, undeveloped land. A summary of the pertinent details of the Phase Two Property is provided in the following table:

Pertinent details of the Phase One Property are provided in the following table:

Detail	Source / Reference	Information
Legal Description	Legal Survey Drawing provided by the Client, Service Ontario Parcel Register	Lot 1 of Registered Plan No. 747, City of Ottawa
Municipal Address	Client	500 Coventry Road Ottawa, ON K1A 0T1
Parcel Identification Number (PIN)	Client	04254-0063 (LT)
Current Owner	Client	1339895 Ontario Limited
Owner Contact Information	Client	1339895 Ontario Limited 55 City Centre Drive, Suite 800 Mississauga, ON L5B 1M3
Current Occupants	Client	Commercial use – the northwest portion is leased for bus parking; the northeast portion used for vehicular parking; southeast portion used for stockpiling snow; and southwest portion remains vacant and undeveloped land
Client	Authorization to Proceed Form for Pinchin Proposal	Morguard REIT c/o Morguard Investments Limited
Client Contact Information	Authorization to Proceed Form for Pinchin Proposal	Mark Bradley c/o Morguard Corporation 55 City Centre Drive, Suite 800 Mississauga, ON L5B 1M3
Site Area	Client	3.47 hectares (8.57 acres)
Current Zoning	GeoOttawa https://maps.ottawa.ca/geoottawa/	TD Zoning – Transit Oriented Development, subzone TD3 (residential)

Detail	Source / Reference	Information
Centroid UTM Co-ordinates	Google Earth	449662 Easting
		5029930 Northing
		Zone 18T

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

2.2 Property Ownership

The entirety of the Phase Two Property is currently owned by 1339895 Ontario Limited, 55 City Centre Drive, Suite 800, Mississauga, Ontario. Contact information for the Phase Two Property owner is provided in the preceding section.

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

2.3 Current and Proposed Future Uses

The Phase Two Property is presently utilized for commercial purposes and it is Pinchin's understanding that the Client intends to redevelop the Phase Two Property for residential land use.

Given that the future land use is changing to a more sensitive land use, there is a mandatory requirement that an RSC be filed as per Section 168.3.1 of the Province of Ontario's *Environmental Protection Act.*

2.4 Applicable Site Condition Standards

The Phase Two Property is currently a commercial property located within the City of Ottawa and the proposed future land use is 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.

The depth to bedrock at the boreholes completed at the Phase Two Property during the Phase Two ESA ranged from 1.8 to 5.3 mbgs. Based on the available information, the depth to bedrock is interpreted to be greater than 2 mbgs over more than two-thirds of the Phase Two Property 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 three 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 3. 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 one-third of the overburden at the Phase Two Property is coarse-textured as defined by O. Reg. 153/04. Therefore, the soil at the Phase Two Property has been considered coarse-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:

- Coarse-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 elevation of the Phase One Property, based on information obtained from the Ontario Base Map series, is approximately 68 m above mean sea level (mamsl). The general topography in the local and surrounding area is generally flat and the Phase One Property is at a similar elevation to the adjacent/surrounding properties. No bedrock outcrops were observed on-Site or in the surrounding area.

A review of the available physiographical data indicates that the Phase One Property and the surrounding properties located within the Phase One Study Area are located within alluvial deposits consisting of stratified gravel, sand, silt and clay, with an overburden thickness ranging from 2 to 5 mbgs. Bedrock is expected to consist of sedimentary rocks consisting of limestone, dolomite, shale, argillite, sandstone, quartzite, and/or grit. The topography is considered to be mainly flat to rolling low local relief with dry surface water drainage conditions.

Based on general hydrogeological principles, in combination with the 2013 borehole logs (Golder, 2013) Pinchin's familiarity with subsurface conditions beneath the Phase One Property and the surrounding properties within the Phase One Study Area, inferred the unconfined groundwater flows in a westerly-northwesterly direction. 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. Ottawa River located approximately 1.5 kilometres (km) west of the Phase One Property at an elevation of approximately 60 mamsl. A review of the municipal plan for the City of Ottawa indicated that the Phase One Study Area is not located in whole or in part within a well head protection area or other designation identified by the City of Ottawa for the protection of groundwater.

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

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 pertaining to the Phase Two Property were reviewed as part of the Pinchin Phase One ESA:

- Report entitled "*Environmental Site Assessment, 500 Coventry Road, Ottawa, Ontario*" prepared by Jacques Whitford Environmental Limited (JWEL) for Provigo Distribution Inc., and dated August 22, 1996 (1996 JWEL ESA Report);
- Report entitled "*Decommissioning Report, Coca-Cola Beverages Limited Distribution Plant, 500 Coventry Road, Ottawa, Ontario*" prepared by Arcturus Environmental (Arcturus) for Coca-Cola Beverages Ltd., and dated October 1996 (1996 Arcturus Decommissioning Report);
- Report entitled "*Phase II Environmental Site Assessment, 500 Coventry Road, Ottawa, Ontario*" prepared by Golder Associates Ltd. (Golder) for Acktion Corporation, and dated February 23, 2000 (2000 Golder Phase II ESA Report);

- Report entitled "*Phase I Environmental Site Assessment, 500 Coventry Road, Ottawa, Ontario*" prepared by Golder for Acktion Corporation c/o Morguard Investments Limited and Morguard Real Estate Investment Trust, and dated April 2000 (2000 Golder Phase I ESA Report);
- Report entitled "*On-Site Soil Remediation Program, 500 Coventry Road, Ottawa, Ontario*" prepared by JWEL for Morguard Real Estate Investment Trust, and dated August 9, 2001 (2001 JWEL Soil Remediation Report);
- Report entitled "*Phase I Environmental Site Assessment and Asbestos/mould reconnaissance Survey, 500 Coventry Road, Ottawa, Ontario*" prepared by Golder for Morguard Real Estate Investment Trust, and dated February 2005 (2005 Golder Phase I ESA Report);
- Report entitled "*Phase I Environmental Site Assessment Update, 500 Coventry Road, Ottawa, Ontario*" prepared by Golder for Morguard Investment Limited, and dated August 2010 (2010 Golder Phase I ESA Update Report);
- Report entitled "*Phase I Environmental Site Assessment, 1135, 1200 & 1400 St. Laurent Boulevard and 500 Coventry Road, Ottawa, Ontario*" prepared by Golder for Morguard Investment Limited, and dated October 2013 (2013 Golder Phase I ESA Report);
- Report entitled "*Phase II Environmental Site Assessment, 1200 St. Laurent Boulevard and 500 Coventry Road, Ottawa, Ontario*" prepared by Golder for Morguard Investment Limited, and dated November 2013 (2013 Golder Phase II ESA Report);
- Report entitled "*Screening Level Risk Assessment, St. Laurent Shopping Centre and 500 Coventry Road, Ottawa, Ontario,"* prepared by Golder for Morguard Investment Limited, and dated August 2014 (2014 Golder Screening Level Risk Assessment Report);
- Report entitled "*Phase I Environmental Site Assessment, 1135, 1200 and 1400 St. Laurent Boulevard and 500 Coventry Road, Ottawa, Ontario*" prepared by Golder for Morguard Investment Limited, and dated October 2018 (2018 Golder Phase I ESA Report);
- Report entitled *"Phase I Environmental Site Assessment, 1130, 1200 and 1400 St. Laurent Boulevard and 500 Coventry Road, Ottawa ON"* prepared by ECOH Management Inc., and dated September 11, 2023 (2023 ECOH Phase I ESA Report); and
- Report entitled "Well Condition, 500 Coventry Road, Ottawa ON' prepared by Geosyntec Consultants, and dated June 2, 2023 (2023 Geosyntech Well Conditions).

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

1996 Arcturus Decommissioning Report

The 1996 Arcturus Decommissioning Report detailed the on-Site remediation program in the immediate area of a former pump island and underground storage tanks (UST) nest (Two USTs), located on the west side of the Site Building.

The remediation program consisted of the bioremediation of 10,000 tonnes of Total Petroleum Hydrocarbons (TPHs) and benzene, toluene, ethylbenzene and xylene (BTEX)-contaminated soil identified in the vicinity of the two former USTs, and a former pump island. TPH and BTEX contamination was identified in a report entitled "Site Assessment and Evaluation of Remedial Alternatives, 500 Coventry Road, Ottawa, Ontario" prepared by Arcturus in December 1994; it should be noted that this report was not provided for Pinchin's review. Between October 1995 and August 1996, the 10,000 tonnes of TPH and BTEX contaminated soil was remediated in the ex-situ bioremediation cell (EBC) situated on southwest portion of the Site. In addition, a total of 2,726,627-Litres (L) of contaminated groundwater was pumped, treated and discharged off-site. Several representative soil and groundwater samples were collected from the EBC throughout the bioremediation process and submitted for laboratory analyses of TPHs and BTEX. Criteria used for the evaluation of soil and groundwater laboratory analysis results were the *1996 Table B Standards*. The results of the laboratory analysis for the soil and groundwater samples indicated that the concentrations of the parameters tested (TPHs and BTEX) were below the *1996 Table B Standards*.

Approximately 10,000 tonnes of impacted soil were treated, and 2,726,627 L of contaminated groundwater was treated during the program. The EBC operation was decommissioned, and the Site grade was restored by backfilling the remediation excavations.

Based on the results of the 1996 Arcturus Decommissioning Report, the Site was remediated to the applicable site standards at that time, and as such, no further remedial work was considered necessary.

Pinchin compared the values reported in the 1996 Arcturus Decommissioning Report to the Pinchin compared the values reported in the 1996 JWEL ESA Report to the *Table 3 Standards*. There is no direct correlation as to how the measured concentrations of TPH (gas/diesel) compared to the *Table 3 Standards*, as the revised *2011 Table 3 Standards* utilizes carbon fractions F1 – F4 in PHCs to characterize soil and groundwater. The *2011 Table 3 Standards* for PHCs (F2) in soil (which represents diesel fuels) is 98 ug/g. Several confirmatory soil samples along the floor and east wall of the excavations exceeded the applicable standards. It is Pinchin's opinion that the Phase One Property would not comply with the *2011 Table 3 Standards*.

1996 JWEL ESA Report

The ESA completed by JWEL in August 1996 consisted of historical reviews, a review of surrounding properties, a regulatory database search, interviews, an exterior assessment of the Site and a Phase II ESA.

The following summarizes the findings of the Phase I ESA portion of the 1996 JWEL ESA Report:

- A 2,100 imperial gallon aboveground storage tank (AST) containing bunker oil was observed adjacent to the west exterior wall of the former Site Building, next to the boiler room;
- An ex-situ bioremediation process was utilized on the southwest corner of the Site;
- Two 250-gallon waste oil ASTs, one 250-gallon supply oil AST, and two 125-gallon supply oil ASTs were observed in the vehicle and equipment maintenance area within the former on-Site building; and
- Significant oil staining was observed on the concrete floor surface in the vicinity of the above-noted ASTs. In addition, an oily sheen and sediment was observed in the water in the floor drain catch basin. An oil/water separator was reported to be on the Site, however, one was not located during the JWEL Site reconnaissance.

The Phase II ESA completed by JWEL in August 1996 was conducted in order to investigate potential subsurface contamination associated with the above-noted concerns. The Phase II ESA portion of the 1996 JWEL ESA report detailed the advancement of 11 boreholes; nine of which were placed across the Site, while the remaining two were placed/drilled in the interior, south portion of the existing Site Building. Three of the exterior boreholes were completed as groundwater monitoring wells. 11 soil samples and three groundwater samples were collected from the boreholes and submitted for laboratory analyses of TPHs, BTEX and metals.

Criteria used for the evaluation of soil and groundwater laboratory analysis results were the generic Table B Standards (industrial/commercial/community land use in a non-potable groundwater environment), as stipulated in the former MECP document entitled "*Guideline for Use at Contaminated Sites in Ontario*", and dated June 1996 (*1996 Table B Standards*).

JWEL reported that the results of the laboratory analysis for the soil and groundwater samples indicated that the concentrations of the parameters tested (TPHs, BTEX and metals) were below the *1996 Table B Standards*.

Based on the results of the 1996 JWEL ESA Report, JWEL recommended that the area in the vicinity of the ex-situ bioremediation process be investigated, and any subsurface contamination be remediated to ensure soil and groundwater remediation levels satisfy the *1996 Table B Standards*.

Pinchin compared the values reported in the 1996 JWEL ESA Report to the revised *Table 3 Standards*. There is no direct correlation as to how the measured concentrations of TPH (gas/diesel) compared to the revised *2011 Table 3 Standards*, as the revised *2011 Table 3 Standards* utilizes carbon fractions F1 – F4 in petroleum hydrocarbons (PHCs) to characterize soil and groundwater. The *2011 Table 3 Standards* for residential land use of PHCs (F2) concentration in soil (which represents diesel fuels) is 98 ug/g. Several confirmatory soil samples along the floor and east wall excavations on-Site, exceeded the applicable standards. It is Pinchin's opinion that the Phase One Property would not comply with the *2011 Table 3 Standards*.

2000 Golder Phase I ESA Report

The ESA completed by Golder in April 2000 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 2000 Golder Phase I ESA Report identified the following potential environmental concerns:

- The presence of a former private fuel outlet (PFO) consisting of two fuel USTs and a pump island situated on the west exterior portion of the southern end of the former Site Building (circa 1987). The USTs and associated ancillary equipment of the PFO, was decommissioned in 1994;
- The potential presence of a historical PFO from circa 1965, situated on the western side of the former Site Building, slightly more north than the 1987 PFO;
- The presence of a former waste oil UST situated on the eastern side of the former Site Building;
- The former on-Site bioremediation cell used to treat PHC-impacted soil;
- The presence of a former engine (truck) repair and maintenance garage within the former Site;
- Derelict vehicles, barrels and pails of oil and other chemicals, and scrap mechanical debris located on the east and south exterior portions of the Phase One Property were noted to be leaking or have potential to leak and should be contained and removed from the Site;
- Presence of fill and a pile of asphalt pile of situated on the southern portion of the Phase One Property; and
- Potential on-Site soil and/or groundwater impact along the western property boundary as a result of the on-Site historical PFO (USTs and pump island), including potential off-site impacts on Public Works property to the adjacent west.

Based on the findings noted above, Golder recommended completing a Phase II ESA at the Phase One Property.

2000 Golder Phase II ESA Report

The Phase II ESA completed by Golder in February 2000 was conducted in order to investigate the potential environmental concerns identified in a 2000 Golder Phase I ESA Report. The 2000 Golder Phase II ESA detailed the advancement of 25 boreholes, 25 test pits and 26 groundwater monitoring wells. 44 soil samples and 14 groundwater samples were collected from the boreholes and submitted for laboratory analyses of TPHs, BTEX, volatile organic compounds (VOCs) and metals.

Criteria used for the evaluation of soil and groundwater laboratory analysis results were the *1996 Table B Standards*.

The results of the laboratory analysis for the soil and groundwater samples indicated that the concentrations of the parameters tested (TPHs, BTEX, VOCs and metals) were below the *1996 Table B Standards*, with the exception of TPH, BTEX and VOC contamination in the vicinity of the former on-Site USTs, pump islands, waste oil AST, decommissioned bioremediation cell and former vehicle and equipment maintenance area. In addition, TPH and VOC contamination was identified in groundwater samples collected from the above-noted areas.

Based on the results of the 2000 Golder Phase II ESA Report, Golder recommended soil remediation in the vicinity of the former on-site USTs, pump islands, waste oil AST, decommissioned bioremediation cell and former vehicle and equipment maintenance area.

Pinchin compared the values reported in the 2000 Golder Phase II ESA Report to the *2011 Table 3 Standards*. There is no direct correlation as to how the measured concentrations of TPH (gas/diesel) compared to the revised *2011 Table 3 Standards*, as the revised *2011 Table 3 Standards* utilizes carbon fractions F1 – F4 in PHCs to characterize soil and groundwater. The *2011 Table 3 Standards* for residential land use of PHCs (F2) concentration in soil (which represents diesel fuels) is 98 ug/g. Several soil samples on-Site exceeded the applicable standards. It is Pinchin's opinion that the Phase One Property would not comply with the *2011 Table 3 Standards*.

2001 JWEL Soil Remediation Report

The Soil Remediation completed by JWEL in August 2001 was conducted in order to remediate soil contamination identified in the 2000 Golder Phase II ESA Report. TPH, BTEX and VOC contamination was identified in the vicinity of the former on-Site USTs, pump islands, waste oil AST, decommissioned bioremediation cell and former vehicle and equipment maintenance area. Contaminated soil was removed from the above-noted areas on the west exterior portion of the Phase One Property and disposed of at an off-Site waste facility. A total of 41 soil samples were collected from the walls and floors of the excavation areas and submitted for laboratory analyses of TPHs, BTEX and metals.

Criteria used for the evaluation of soil laboratory analysis results were the *1996 Table B Standards*.

The results of the laboratory analysis for the soil and groundwater samples indicated that the concentrations of the parameters tested (TPHs, BTEX and metals) were below the *1996 Table B Standards*.

Based on the results of the 2001 JWEL Soil Remediation Report, no further remedial work was warranted with respect to the environmental concerns associated with the excavation areas.

Pinchin compared the values reported in the 2001 JWEL Soil Remediation Report to the *2011 Table 3 Standards*. There is no direct correlation as to how the measured concentrations of TPH (gas/diesel) compared to the *Table 3 Standards*, as the *Table 3 Standards* utilizes carbon fractions F1 – F4 in PHCs to characterize soil and groundwater. The *2011 Table 3 Standards* for residential land use of PHCs (F2) concentration in soil (which represents diesel fuels) is 98 ug/g. Several confirmatory soil samples on-Site exceeded the applicable standards. It is Pinchin's opinion that the Phase One Property would not comply with the *2011 Table 3 Standards*.

2005 Golder Phase I ESA and 2010 Golder Phase I ESA Update Reports

The Phase I ESA and Phase I ESA Update completed by Golder in February 2005 and August 2010 consisted of historical reviews, a review of surrounding properties, a regulatory database search, and interviews as well as an exterior assessment of the Site. In addition, Golder reviewed the above-noted reports prepared for the Site.

The results of the 2005 Golder Phase I ESA and 2010 Golder Phase I ESA Update Reports indicated that there were no significant potential environmental concerns associated with the current and historical use of the Site and adjacent properties and as such, no further environmental assessment work was recommended.

2013 Golder Phase I ESA Report

The Phase I ESA completed by Golder in October 2013 consisted of historical reviews, a review of surrounding properties, a regulatory database search, and interviews as well as an exterior assessment of the Site and properties located at 1135, 1200 and 1400 St, Laurent Boulevard. In addition, Golder reviewed the above-noted reports prepared for the Site.

The following summarizes the findings of the 2013 Golder Phase I ESA Report:

- Fill material of unknown origin was present at 1200 St. Laurent Boulevard, located adjacent to the east elevation of the Phase One Property;

- A former oil UST, with on-going PHC clean-up, was present at the property located at 1200 St. Laurent Boulevard;
- Fill material of unknown origin was present throughout the Phase One Property;
- The south exterior portion of the Phase One Property was utilized for snow stockpiling, which may have resulted in on-Site road salt impacts; and
- An RSC was accepted by the MOE (now, MECP) for the Phase One Property in 2001; however, since 2002, the Phase One Property has been utilized for commercial purposes, and as such, the former RSC is no longer valid.

Based on the findings noted above, Golder did not provide a recommendation.

2013 Golder Phase II ESA Report

The Phase II ESA was conducted by Golder in 2013 in order to investigate the potential environmental concerns outlined in the 2013 Golder Phase I ESA Report for the Phase One Property and the adjacent property to the east, addressed 1200 St. Laurent Boulevard.

The 2013 Golder Phase II ESA program detailed the advancement of 10 boreholes, four (13-7 through 13-10) of which were placed across the northern side of 1200 St. Laurent Boulevard, while the remaining six (13-1 through 13-6) were placed across the Phase One Property.

The scope of work for 1200 St. Laurent Boulevard consisted of placing four boreholes along the northern portion of the property as well as resample the existing groundwater monitoring wells. Four soil samples were submitted for BTEX, PHCs (F1-F4), and PAHs. All of the soil samples complied with the selected *Table 3 Standards,* with the exception of one soil sample, in which several PAH parameter concentrations were in excess of the applicable standards.

Four groundwater samples were collected from the existing monitoring wells and submitted for laboratory analyses of BTEX and PHCs (F1-F4). All of the groundwater samples, with the exception of one at location 13-9 were in compliance with the *2011 Table 3 Standards.* Fraction, F3 concentration was in excess of the selected standards, approximately 200 m northeast of the Phase One Property. As such, any groundwater impact identified beneath 1200 St. Laurent Boulevard is not considered to pose any risk to the Phase One Property.

The scope of work for the Phase One Property consisted of placing six boreholes (13-1 through 13-6) across the Phase One Property, all of which were completed as groundwater monitoring wells. The general soil profile reportedly consisted of granular/engineered fill, followed by fill material (sand, silty-sand or silt, and some gravel), overlying glacial till, followed by shale bedrock. Bedrock was encountered at depths ranging from 2.21 to 3.12 mbgs.

Seven soil samples were collected from boreholes BH13-1 through BH13-6 and submitted for laboratory analyses of BTEX, PHCs (F1-F4), VOCs, PAHs, and metals. Two soil samples retrieved from borehole BH13-3 situated on the southwest portion of the Site contained concentrations of PHCs (F1-F2), benzene, ethylbenzene, xylenes and several PAH parameters in excess of the current *Table 3 Standards* for residential land use, while the remaining soil samples met the selected standards.

Soil samples from boreholes BH13-3 and BH13-4 were analyzed for electrical conductivity (EC) and sodium adsorption ratio (SAR); both samples exceeded the *Table 3 Standards* residential land use.

Five groundwater samples including a field duplicate were collected from monitoring wells 13-1 through 13-6, and submitted for laboratory analyses of BTEX, PHCs (F1-F4), VOCs, PAHs, and metals. All of the analyzed groundwater samples on the Phase One Property complied with the *Table 3 Standards.*

Groundwater samples retrieved from the monitoring wells 13-3 and 13-4 were submitted for sodium chloride (salt); both groundwater samples exceeded the *Table 3 Standards.*

2014 Golder Screening Level Risk Assessment Report

The Screening Level Risk Assessment (SLRA) was conducted for the properties located at 1200 St. Laurent Boulevard (St. Laurent Shopping Centre) and 500 Coventry Road (Phase One Property) by Golder in August 2014.

The SLRA was conducted to evaluate the human health and ecological risks associated with the soil and groundwater impacts that were identified in the 2013 Golder Phase II ESA. As previously discussed, the impacted soil and groundwater at 1200 St. Laurent Boulevard was not considered to pose any risk to the Phase One Property, based on the relative separation distance, coupled with the 2013 groundwater results at the Phase One Property, specifically at locations BH13-1, BH13-2, BH13-5 and BH13-6. Therefore, for the purpose of this assessment, the SLRA report has been summarized in relation to the Phase One Property only.

The results of the 2013 Golder Phase II ESA identified fill material impacted with PHCs (F1 and F2), benzene and benzo(a)pyrene in excess of the *Table 3 Standards* for commercial land use on the southwest part of the Site (BH13-3). In addition, fill material with elevated EC and SAR and groundwater impacted with sodium and chloride were identified along the southern part of the Site (BH13-3 and BH13-4). It should be noted that the SLRA was conducted based on the aforementioned contaminants of potential concern (COPCs) in excess of the commercial *Table 3 Standards,* and as such, was limited to these COPCs only.

Based on Golder's SLRA report, the findings of the human health and ecological risks at the Phase One Property with regard to the COPCs in excess of the *Table 3 Standards* for commercial land use, were considered acceptable based on the following risk management considerations:

- Prevent human access by maintaining the barricades that separate the parking lot area and snow dump stockpile area; and
- Should construction activities occur in the future, workers on-Site should wear appropriate personal protective equipment.

It was recommended by Golder that the SLRA for the Phase One Property would need to be re-evaluated if the Site conditions changed from the time in which the assessment was completed.

2018 Golder Phase I ESA Report

The Phase I ESA completed by Golder in October 2018 consisted of historical reviews, a review of surrounding properties, a regulatory database search, and interviews as well as an exterior assessment of the Phase One Property and the properties located at 1135, 1200 and 1400 St. Laurent Boulevard. In addition, Golder reviewed the above-noted reports prepared for the Phase One Property.

The results of the 2018 Golder Phase I ESA Report indicated that there were no significant potential environmental concerns associated with the current and historical use of the Site and adjacent properties and as such, no further environmental assessment work was recommended.

2023 Geosynthetic Consultants Well Condition Report

The Well Condition Report was prepared in June 2023 by Geosynthetic Consultants to assess the conditions of the six groundwater monitoring wells drilled on the Phase One Property in 2013, as part of the 2013 Golder Phase II ESA.

According to the Well Condition Report, four of the six monitoring wells (13-1, 13-2, 13-5, and 13-6) were located and viable for future resampling, while the two remaining wells situated along the southern side of the Site appeared to be covered by gravel and/or fill material. Upon the review of this well report, a fuel AST was noted adjacent to the temporary salt storage shed located on the southeastern corner of the Phase One Property. The presence of a fuel AST on-site was considered a PCA that represents an APEC.

3.2.2 Pinchin Phase One ESA Summary

From December 19, 2023 through April 19, 2024, Pinchin conducted a Phase One ESA in support of the future filing of an RSC 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 RSC.

Based on information obtained during the Phase One ESA, a total of 13 APECs and corresponding potentially contaminating activities (PCAs) and COPCs were identified that could potentially affect the environmental condition of the subsurface media on, in or under the Phase Two Property. The COPCs associated with each APEC were determined based on a review of the PCAs and substances associated with the related activities, and on several sources of information, including but not limited to, Pinchin's experience with environmental contamination and hazardous substances, common industry practices for analysis of such contaminants and point sources, literature reviews of COPCs and associated hazardous substances, and evaluations of contaminant mobility and susceptibility for migration in the subsurface.

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

3.2.3 Use of Previous Analytical Data

The soil and groundwater data from the above-mentioned reports were generally obtained more than five years ago, and are considered too old and potentially unrepresentative of current conditions at the Phase Two Property. As such, no soil and groundwater quality data from previous environmental investigations were relied upon in preparing this Phase Two ESA report.

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.
- Developed a detailed SAP prior to the advancement of the boreholes and the installation of the monitoring wells. The SAP was outlined in the document entitled "*Sampling and Analysis Plan for Phase Two Environmental Site Assessment, 500 Coventry Road, Ottawa, Ontario*", dated March 20, 2024, which is provided in Appendix B. Based on Pinchin's knowledge of the surrounding properties and known hydrogeological conditions, boreholes were advanced at the Phase Two Property to a maximum depth of approximately 6.1 mbgs.

- Retained Strata Drilling Group Inc. (Strata) to advance boreholes and complete monitoring well installations using a Geoprobe 6620DT™ drill rig. Strata is licensed by the MECP in accordance with Ontario Regulation 903 (as amended) (O. Reg. 903) to undertake borehole drilling/well installation activities. Strata advanced 24 boreholes at the Phase Two Property to investigate the potential for soil contaminants associated with the APECs identified in the Phase One ESA. 18 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;
  - Polychlorinated biphenyls (PCBs);
  - Metals; and/or
  - EC/SAR.
- 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 for the chemical analysis of the following parameters:
  - PHCs F1-F4;
  - VOCs;
  - PAHs;
  - PCBs;
  - Metals.

- Submitted five duplicate soil samples and three duplicate groundwater samples 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 three representative soil samples for the laboratory analysis of grain size and five 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 (NAPL), using an oil/water interface probe.
- Completed an elevation survey to establish the elevations of the boreholes and newly-installed monitoring wells relative to a benchmark with a known elevation.
- Obtained UTM coordinates for the boreholes and newly-installed monitoring wells using a portable Global Positioning System (GPS) device.
- Compared the soil and groundwater analytical results to the applicable criteria stipulated in the *Table 3 Standards.*
- 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 former on-Site USTs and ASTs as well as historical on-Site industrial operations. Note that due to the historical industrial land use at the Phase Two Property, the Phase Two Property is an enhanced investigation property requiring mandatory sampling and analysis of groundwater. Pinchin did not conduct sediment sampling as part of this Phase Two ESA as there are no surface water bodies and, therefore no sources of sediment, present on-Site.

For assessing the soil at the Phase Two Property for the presence of COPCs, a total of 24 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.

For assessing the groundwater at the Phase Two Property for the presence of COPCs, groundwater monitoring wells were installed in 18 of the 24 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., MW1, MW2, MW3, MW6, MW7, MW8, MW9, MW10, MW11, MW12, MW13, MW14, MW16, MW18, MW19, MW20, MW21, MW22 and MW23) 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 Figure 4, 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.
- Groundwater monitoring wells located at the Phase One Property.
- Land use of adjacent properties.
- Roads within the Phase One Study Area.
- PCAs and APECs on the Phase One Property.
- PCAs within the Phase One Study Area, including the locations of tanks.

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

- The Phase One Property consists of one legal lot situated at the municipal address of 500 Coventry Road, Ottawa, Ontario and is currently owned by 1339895 Ontario Limited. The Phase One Property is located immediately south of Coventry Road, approximately 235 m east of the intersection between Coventry Road and Belfast Road. The Phase One Property is approximately 3.5 hectares in size and presently consists of vacant undeveloped land utilized as a parking lot and snow stockpiling area for the St. Laurent Shopping Centre;
- The nearest surface water body is the Ottawa River located approximately 1.5 km west of the Phase One Property at an elevation of approximately 60 mamsl;

- 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 adjacent and surrounding properties in the vicinity of the Site consist of commercial, residential, institutional and vacant land uses. The properties located east and west of the Phase One Property consist of commercial developments and associated roadways to beyond 200 m from the Phase One Property; the properties located north of the Phase One Property consist of commercial developments, a light industrial development, vacant undeveloped land and associated roadways to beyond 200 m from the Phase One Property; and the properties located south of the Phase One Property consist of residential dwellings, railway lines and associated roadways to beyond 200 m from the Phase One Property;
- A total of 28 PCAs were identified within the Phase One Study Area, consisting of 13 PCAs on the Phase One Property and 15 off-Site PCAs within the Phase One Study Area. As shown on Figure 4 – On-Site Potentially Contaminating Activities, all on-site PCAs resulted in APECs, while none of the off-site PCAs were considered to generate APECs on the Phase One Property, as shown in Figure 5 – Off-Site Potentially Contaminating Activities;
- Groundwater flow beneath the Phase One Property and properties within a 250 m search radius, is considered to flow in a north/northwesterly direction towards the Ottawa River. Any off-Site PCAs inferred to be upgradient or transgradient with respect to the Site are not considered to represent APECs on the Phase One Property. Figure 6 – Areas of Potential Environmental Concern 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 stratified gravel, sand, silt and clay with an overburden thickness ranging from approximately 2 to 5 mbgs. 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. Local groundwater flow is inferred to be to the north/northwest, based on the topographic map and nearest surface water body.

There were no deviations from the Phase One ESA requirements specified in O. Reg. 153/04 or absence of information that have resulted in uncertainty that would affect the validity of the Phase One CSM.

4.4 Deviations from Sampling and Analysis Plan

The following deviations from the SAP occurred during the completion of the Phase Two ESA investigation activities:

- Existing monitoring wells MW13-1, MW13-2, MW13-5 and MW13-6 were intended to be developed and sampled as part of this Phase Two ESA; however, these monitoring wells were observed to be in poor condition or were not located within an APEC, and as such, were not sampled as part of this investigation.
- One monitoring well, MW8, was unable to be located after installation, and as such could not be sampled. Pinchin suspects that this monitoring well was damaged during Site regrading activities in the northwest corner following drilling activities.

No additional scope of work items were added to the Phase Two ESA or other notable constraints and limitations with respect to the SAP were documented during the field activities, and as such Pinchin has conducted the Phase Two ESA in a manner generally consistent with the SAP provided in Appendix B.

It is the QP's opinion that the above-noted deviations from the SAP did not affect the investigation of the APECs for COPCs and had no impact on the overall findings and conclusions of the Phase Two ESA.

4.5 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 and Excavating

Pinchin retained Strata to advance a total of 24 boreholes (MW1 through BH24) at the Phase Two Property on April 8, April 25, April 29, April 30, and May 1, 2024 to investigate the potential presence of COPCs associated with the APECs identified in the Phase One ESA. 18 of the advanced boreholes 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 8.03 mbgs using a Geoprobe 6622DT™ drill rig. 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. Section 6.10.2 includes a table summarizing the boreholes and monitoring wells completed to investigate each of the APECs. A description of the subsurface stratigraphy encountered during the drilling program is documented in the borehole logs included in Appendix C. Well completion details and elevation data are provided in Table 4 and on the borehole logs provided in Appendix C.

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., split-spoon sampler, auger flights, spatulas used for sample collection) before initial use and between sample and borehole locations.
- 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 in the boreholes at continuous intervals using 5.71 centimetre (cm) outer diameter (OD) direct push soil samplers with dedicated single-use sample liners.

Discrete soil samples were collected from the dedicated sample liners 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 AGAT Laboratories (AGAT) in Mississauga, Ontario. Formal chain of custody records were maintained between Pinchin and the staff at AGAT 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 gravelly sand to a maximum depth of approximately 2.4 mbgs, followed by silty sand till to a maximum depth of approximately 5.3 mbgs. Moist to wet soil conditions were generally observed between 2.4 and 5.3 mbgs.

No odours or staining were observed in the soil samples collected during the borehole drilling, with the exception of:

- Soil samples MW2-S4 and MW2-S5 collected at borehole MW2 at depths of 2.3 to 4.0 mbgs which exhibited PHC-like odours;
- Soil sample BH5-S4 collected at borehole BH5 at a depth of 2.3 to 3.0 mbgs which exhibited PHC-like odours;
- Soil samples MW9-S3, MW9-S4 and MW10-S5 collected at borehole MW10 at depths of 1.5 to 3.8 mbgs which exhibited PHC-like odours; and
- Soil samples MW11-S3, MW11-S4 and MW11-S5 collected MW11 at a depth of 3.0 to 4.3 mbgs which exhibited PHC-like odours.

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

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 & Safety Inc. (Maxim) according to Maxim's standard operating procedures. In addition, the PID calibration was tested at the beginning of each day of drilling activities (beginning on the second day of drilling) against a Maxim-provided isobutylene gas standard with a concentration of 100 ppm. The gas standard was stored in a gas cylinder and delivered to the PID via a regulator valve. An in-field re-calibration of the PID was conducted (using the gas standard in accordance with the operator's manual instructions) if the calibration check indicated that the PID's calibration had drifted by more than +/- 10%.

Based on a review of the operator's manual, the RKI Eagle 2™ has an accuracy/precision of up to +/- 25 ppm, or +/- 5% of the reading (whichever is greater). The CGI was calibrated prior to field use by Maxim according to Maxim's standard operating procedures. In addition, the CGI calibration was tested at the beginning of each day of drilling activities (beginning on the second day of drilling) against a Maxim-provided hexane gas standard with a concentration of 400 ppm. The gas standard was stored in a gas cylinder and delivered to the CGI via a regulator valve. An in-field re-calibration of the CGI was conducted (using the gas standard in accordance with the operator's manual instructions) if the calibration check indicated that the CGI's calibration had drifted by more than +/- 10%.

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

5.5 Groundwater Monitoring Well Installation

Following soil sampling, Strata installed a groundwater monitoring well in boreholes MW1, MW2, MW3, MW6, MW7, MW8, MW9, MW10, MW11, MW12, MW13, MW14, MW16, MW18, MW19, MW20, MW21, MW22 and MW23, under the full-time monitoring of a Pinchin field representative. To accommodate the well installations, each borehole was overdrilled using solid stem augers to a maximum depth of 5.3 mbgs using the Geoprobe 6622DT™ drill rig.

The monitoring wells were constructed with 51-millimetre (2-inch) inner diameter (ID) flush-threaded schedule 40 polyvinyl chloride (PVC) risers followed by a 3.1 metre length of 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 bentonite seal was then placed between the riser and outer casing. A protective flush-mount cover or aboveground monument casing 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 4 and on the borehole logs in Appendix C. Upon completion of the monitoring well installations, Strata completed and filed a Water Well Record with the MECP for the well cluster.

No additional soil sampling or groundwater sampling was completed during the well installations.

The monitoring wells were developed on May 8, 2024 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 a 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, pre-cleaned augers for overdrilling each borehole location.
- The use of dedicated and disposable nitrile gloves for handling well materials during well installation and during well development.
- 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 May 13 and 23, 2024 at monitoring wells MW3, MW6, MW9, MW10 and MW18. Low flow purging and sampling methods could not be employed at the remainder monitoring wells due to the low yield of the formation in which the wells were installed.

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™ 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 Maxim 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.

5.7 Groundwater Sampling

All monitoring wells installed by Pinchin as part of the Phase Two ESA were sampled, with the exception of monitoring well MW8. The monitoring wells were sampled a minimum of 24 hours after the completion of well development activities (see Section 5.5). Monitoring wells MW3, MW6, MW9, MW10 and MW18 were sampled in accordance with the Low Flow Sampling Protocol as described below.

Well purging was completed 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.

The remaining monitoring wells could not be sampled using the Low Flow Sampling Protocol because the wells could not sustain a yield and were purged to dryness even when pumping at the lowest possible pumping rate. Following recovery after purging these wells/this well to dryness, groundwater samples for volatile parameters (i.e., VOCs and PHCs F1), metals and inorganics analysis were collected using a dedicated inertial pump comprised of Waterra polyethylene tubing and a foot valve, and groundwater samples for PHCs (F2-F4) and PAHs analysis were collected using a peristaltic pump and dedicated 0.64-cm (1/4-inch) ID polyethylene tubing.

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 AGAT 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 AGAT Labs. Formal chain of custody records were maintained between Pinchin and the staff at AGAT 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 AGAT Labs for analysis. AGAT 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 AGAT Labs. AGAT 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 four 205-L drums that were stored in the northwest portion 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 two 205-L drums that were stored in the northwest portion of the Phase Two Property.

Pinchin notes that at the time of writing, the drums of excess soil cuttings and purge water 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.

During the drilling and groundwater sampling activities, no evidence of NAPL or significant staining was observed in the subsurface. As such, the limited volumes of wash water utilized to clean the sampling equipment were discharged to the ground surface at the Phase Two Property.

5.11 Elevation Surveying

Pinchin completed a vertical elevation survey of all borehole and monitoring well locations (MW1, MW2, MW3, MW6, MW7, MW8, MW9, MW10, MW11, MW12, MW13, MW14, MW16, MW18, MW19, MW20, MW21, MW22 and MW23) using a Topcon RL-H5A Self-Leveling Laser Level and receiver. The elevations of the monitoring wells were tied to a geodetic benchmark, which was the top of the fire hydrant spindle at the north end of the Phase Two Property, with a geodetic reference elevation of 67.99 mamsl).

The UTM coordinates of each monitoring well and borehole were determined by Pinchin using a hand-held GPS device (i.e., Garmin eTrex LEGEND HCx).

A summary of the well elevation survey data is provided in Table 4. The UTM coordinates for each monitoring well and borehole are provided on the borehole logs in Appendix C.

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.
- PHCs F2-F4, PAHs, metals, inorganics, pH and grain size: 120 or 250 mL unpreserved clear glass wide-mouth jars with a Teflon^{TM}–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^{TM}–lined lids, pre-charged with sodium bisulphate preservative.
- PAHs: 250 mL unpreserved amber glass bottles with Teflon^{TM}–lined lids.
- Inorganics: 500 mL unpreserved high density polyethylene (HDPE) bottles.
- Metals (excluding hexavalent chromium and mercury): 125 mL acid-rinsed HDPE bottles, pre-charged with nitric acid preservative.
- Hexavalent chromium: 125 mL acid-rinsed HDPE bottles, pre-charged with ammonium sulphate/ammonium hydroxide preservative.
- Mercury: 125 mL clear glass bottles with Teflon^{TM}–lined lids, pre-charged with hydrochloric acid preservative.

Groundwater samples submitted for metals analyses (including hexavalent chromium and mercury) were field-filtered using dedicated 0.45 micron filters.

Trip blank water samples for VOC parameter analysis were provided by AGAT 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 AGAT Labs for analysis. Formal chain of custody records of the sample submissions were maintained between Pinchin and the staff at AGAT 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 auger drilling, the split-spoon samplers used to collect soil samples were cleaned before initial use and between samples using an Alconox™/potable water mixture followed by a distilled water rinse. The augers used to drill the boreholes were pre-cleaned by Strata prior to arrival at the Site.

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

A total of five field duplicate soil samples were 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 “MW16-SS3” and its corresponding field duplicate “DUP-1” were submitted for laboratory analysis of PAHs.

- Soil sample “MW17-SS2” and its corresponding field duplicate “DUP-2” were submitted for laboratory analysis of PHCs and BTEX.
- Soil sample “MW20-S5” and its corresponding field duplicate “DUP-3” were submitted for laboratory analysis of VOCs, PHCs, PAHs, metals, and PCBs.
- Soil sample “MW2-S5” and its corresponding field duplicate “DUP-4” were submitted for laboratory analysis of VOCs and PHCs.
- Soil sample “MW14-S3” and its corresponding field duplicate “DUP-5” were submitted for laboratory analysis of PHCs, BTEX and PAHs.

A total of three field duplicate groundwater samples were 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 “MW20” and its corresponding field duplicate “DUP-1” were submitted for laboratory analysis of VOCs, PHCs, PAHs and metals.
- Groundwater sample “MW19” and its corresponding field duplicate “DUP-2” were submitted for laboratory analysis of sodium and chloride.
- Groundwater sample “MW3” and its corresponding field duplicate “DUP-3” were submitted for laboratory analysis of VOCs, PHCs, PAHs, metals and PCBs.

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/PID 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. As described in Section 5.4, calibration checks and recalibration (if required) were completed daily for the RKI Eagle 2™ CGI/PID during the drilling program.

5.12.4 QA/QC Sampling Program Deviations

There were no deviations from the QA/QC sampling program outlined in the SAP.

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 Phase Two Property is underlain by gravelly sand fill to a maximum depth of approximately 3.1 mbgs. The native soil underlying the surficial soil fill materials is generally comprised of gravelly sand or silt till to a maximum depth of approximately 5.3 mbgs. The shallow water table is located within the overburden on-Site. The till is underlain by limestone bedrock.

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 generally of consistent length (i.e., 1.52 or 3.05 metres depending on the well depth and installation). Monitoring wells MW1, MW2, MW3, MW6, MW7, MW9, MW10, MW11, MW12, MW13, MW14, MW20, MW21 and MW22 were installed at depth intervals intended to investigate groundwater quality in the shallow groundwater zone within the overburden on-Site. MW16, MW18, MW19, MW23 were installed in the underlying bedrock 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 April 17, 2024:

- The depths to groundwater measured within the on-Site monitoring wells installed within the underlying bedrock aquifer ranged from 1.34 mbgs at monitoring well MW18 to 3.03 mbgs at monitoring well MW23.
- The calculated groundwater elevations within the groundwater monitoring wells installed within the aquitard ranged between 63.79 mamsl at MW23 and 65.21 mamsl at MW18.
- No NAPL thicknesses were measured with the oil/water interface probe in any of the groundwater monitoring wells.

The following summarizes the findings of a groundwater monitoring event completed on May 8, 2024:

- The depths to groundwater measured within the on-Site monitoring wells installed within the overburden aquifer ranged from 0.27 mbgs at monitoring well MW1 to 1.18 mbgs at monitoring well MW12.
- The calculated groundwater elevations within the groundwater monitoring wells installed within the unconfined aquifer ranged between 65.13 mamsl at MW14 and 67.37 mamsl at MW21.
- No NAPL thicknesses were measured with the oil/water interface probe in any of the groundwater monitoring wells.

The surveyed ground surface elevations adjacent to each well and measured distance between the ground surface elevations and tops of the well riser pipes 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 both monitoring events are summarized in Tables 5 and 6, respectively.

6.3 Groundwater Hydraulic Gradients

6.3.1 Groundwater Horizontal Hydraulic Gradients

The plotted groundwater surface elevation contours were utilized to estimate horizontal hydraulic gradient values for both the overburden and limestone bedrock aquifers at the Phase Two Property. The horizontal hydraulic gradient can be estimated by dividing the difference between two groundwater contour values by the distance between the two plotted groundwater contours. The distance between select groundwater contours can be determined by drawing a straight line which transects each contour in a perpendicular fashion on the plotted groundwater contour figure.

By utilizing groundwater contours which are closely spaced, the estimated maximum horizontal hydraulic gradient for the overburden aquifer at the Phase Two Property is approximately 0.02, and the horizontal hydraulic gradient for the bedrock aquifer at the Phase Two Property is approximately 0.02.

By utilizing groundwater contours which are more distantly spaced, the estimated minimum horizontal gradient for the overburden aquifer at the Phase Two Property is approximately 0.002, and the minimum horizontal gradient for the bedrock aquifer at the Phase Two Property is approximately 0.003.

By utilizing the two most distant (highest and lowest) groundwater elevation contours plotted at the Phase Two Property, a normalized horizontal hydraulic gradient value for the overburden aquifer at the Phase Two Property using groundwater surface elevations measured on May 8, 2024 was estimated to be approximately 0.02.

By utilizing the two most distant (highest and lowest) groundwater elevation contours plotted at the Phase Two Property, a normalized horizontal hydraulic gradient value for the bedrock aquifer at the Phase Two Property using groundwater surface elevations measured on April 17, 2024 was estimated to be approximately 0.02.

6.3.2 Groundwater Vertical Hydraulic Gradients

No nested monitoring well pairs were installed on-Site; as such, no vertical hydraulic gradients could be calculated for the Phase Two Property.

6.4 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 two primary stratigraphic units observed at the borehole locations, which were a gravelly sand fill unit and a native sandy silt till unit. As indicated in Table 3, one soil sample (BH24-SS3) that was representative of the sandy gravel material present beneath the asphalt at the Site was classified as coarse-textured (65.9% coarse-grained soil) and two representative samples (MW17-SS5 and MW18-SS4) of the native sandy silt till present beneath the surficial fill material at the Phase Two Property were classified as coarse-textured (73.3% and 74.0% coarse-grained soil, respectively).

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 one-third of the overburden at the Phase Two Property is coarse-textured as defined by O. Reg. 153/04. Therefore, the soil at the Phase Two Property was interpreted to be coarse-textured for the purpose of determining the MECP Site Condition Standards applicable to the Phase Two Property.

6.5 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 ranged from 0 ppm by volume (ppm_v) in several of the collected soil samples to a maximum of 240 ppm_v in soil sample MW11-S2 collected from borehole MW11 at a depth of approximately 0.76 to 1.52 mbgs. Soil vapour headspace values measured with the PID ranged from 0.0 ppm_v in several of the collected soil samples to a maximum of 24 ppm_v in soil sample MW14-S3, collected from borehole MW14 at a depth of approximately 1.52 to 2.29 mbgs.

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

6.6 Soil Quality

A total of 24 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 3 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.

6.6.1 VOCs

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

- The concentrations of 1,1,2,2-tetrachloroethane (0.45 micrograms per gram [µg/g] vs. the *Table 3 Standard* of 0.05 µg/g) reported for soil sample MW11-S6, collected at borehole MW11 from a depth of 3.81 to 4.27 mbgs, exceeded the *Table 3 Standards*.
- The concentrations of benzene (0.73 µg/g vs. the *Table 3 Standard* of 0.21 µg/g) and ethylbenzene (3.93 µg/g vs. the *Table 3 Standard* of 2 µg/g) reported for soil sample MW14-S3 (and its corresponding field duplicate DUP-5), collected at borehole MW14 from a depth of 1.52 to 2.29 mbgs, exceeded the *Table 3 Standards*.

6.6.2 PHCs F1-F4

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

- The concentrations of PHCs (F2) (310 µg/g vs. the *Table 3 Standard* of 98 µg/g) reported for soil sample MW14-S3, collected at borehole MW14 from a depth of 1.52 to 2.29 mbgs, exceeded the *Table 3 Standards*. In addition, concentrations of PHCs (F1) (71 µg/g vs. the *Table 3 Standard* of 55 µg/g) reported for soil sample DUP-5 collected at borehole MW14 exceeded the *Table 3 Standards*.

6.6.3 PAHs

The soil sample analytical results for PAHs, along with the corresponding *Table 3 Standards*, are presented in Table 3. As indicated in Table 3, 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 (0.67 µg/g vs. the *Table 3 Standard* of 0.5 µg/g), benzo(a)pyrene (0.37 µg/g vs. the *Table 3 Standard* of 0.3 µg/g) and fluoranthene (1.61 µg/g vs. the *Table 3 Standard* of 0.69 µg/g) reported for soil sample BH15-S2, collected at borehole BH15 from a depth of 0.76 to 1.52 mbgs, exceeded the *Table 3 Standards*.
- The concentrations of 2-,1-methylnaphthalene (2.41 µg/g vs. the *Table 3 Standard* of 0.99 µg/g) reported for soil sample MW14-S3 collected at borehole MW14 from a depth of 1.52 to 2.29 mbgs, exceeded the *Table 3 Standards*.

6.6.4 Metals and Inorganics

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

- The EC value (7.6 milliSiemens per centimetre [mS/cm] vs. the *Table 3 Standard* of 0.7 mS/cm) and SAR value (44.9 vs. the *Table 3 Standard* of 5) reported for soil sample MW16-SS2, collected at borehole MW16 from a depth of 0.76 to 1.52 mbgs, exceeded the *Table 3 Standards*.
- The EC value (1.04 mS/cm vs. the *Table 3 Standard* of 0.7 mS/cm) and SAR value (6.51 vs. the *Table 3 Standard* of 5) reported for soil sample MW17-SS2, collected at borehole MW17 from a depth of 0.76 to 1.37 mbgs, exceeded the *Table 3 Standards*.
- The EC value (1.39 mS/cm vs. the *Table 3 Standard* of 0.7 mS/cm) and SAR value (12.8 vs. the *Table 3 Standard* of 5) reported for soil sample MW17-SS3, collected at borehole MW17 from a depth of 1.52 to 2.13 mbgs, exceeded the *Table 3 Standards*.
- The EC value (1.89 mS/cm vs. the *Table 3 Standard* of 0.7 mS/cm) and SAR value (10.0 vs. the *Table 3 Standard* of 5) reported for soil sample MW17-SS5, collected at borehole MW17 from a depth of 2.74 to 3.35 mbgs, exceeded the *Table 3 Standards*.
- The EC value (1.74 mS/cm vs. the *Table 3 Standard* of 0.7 mS/cm) and SAR value (9.96 vs. the *Table 3 Standard* of 5) reported for soil sample MW18-SS2, collected at borehole MW18 from a depth of 0.76 to 1.37 mbgs, exceeded the *Table 3 Standards*.
- The EC value (0.779 mS/cm vs. the *Table 3 Standard* of 0.7 mS/cm) and SAR value (6.47 vs. the *Table 3 Standard* of 5) reported for soil sample MW19-SS2, collected at borehole MW18 from a depth of 0.76 to 1.37 mbgs, exceeded the *Table 3 Standards*.

- The EC value (2.90 mS/cm vs. the *Table 3 Standard* of 0.7 mS/cm) and SAR value (11.8 vs. the *Table 3 Standard* of 5) reported for soil sample BH24-SS2, collected at borehole BH24 from a depth of 1.52 to 2.13 mbgs, exceeded the *Table 3 Standards*.

6.6.5 PCBs

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

6.6.6 General Comments on Soil Quality

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

Elevated levels of SAR and EC in soil exceeding the *Table 3 Standards* have been identified at depths ranging from 0.76 to 3.38 mbgs at boreholes MW17, MW18, MW19 and BH24, which were completed in snow stockpile area in the southeast portion of the Phase Two Property. These SAR and EC exceedances have been attributed to the historical snow stockpiling and bulk salt storage. The concentration of sodium and/or chloride in the groundwater at monitoring wells MW14, MW16, MW18 and MW19 exceeds the *Table 3 Standards* and it appears that the downward leaching of sodium and chloride from the road salt-impacted snow in the stockpile area to the water table has occurred. As such, road salt in the soil is interpreted to be a source of contaminant mass contributing to the elevated sodium and chloride concentrations in groundwater in the southeast portion of the Phase Two Property.

The soil sample analytical results show no evidence of NAPL in the subsurface at the Site. All reported soil sample concentrations either meet the *Table 3 Standards* or are above the *Table 3 Standards* but well below their corresponding free-product thresholds, where applicable. In addition, no evidence of NAPL was observed during borehole drilling.

6.7 Groundwater Quality

Groundwater samples were collected from monitoring wells MW1, MW2, MW3, MW6, MW7, MW9, MW10, MW11, MW12, MW13, MW14, MW16, MW18, MW19, MW20, MW21, MW22 and MW23 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.*

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

6.7.1 VOCs

The groundwater analytical results for VOCs, along with the corresponding *Table 3 Standards*, are presented in Table 7. As indicated in Table 7, all reported concentrations of VOCs in the groundwater samples submitted for analysis were below the *Table 3 Standards.*

6.7.2 PHCs F1-F4

The groundwater analytical results for PHCs F1-F4, along with the corresponding *Table 3 Standards*, are presented in Table 7. As indicated in Table 7, all reported concentrations of PHCs F1-F4 in the groundwater samples submitted for analysis met the *Table 3 Standards.*

6.7.3 PAHs

The groundwater 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 groundwater samples submitted for analysis met the *Table 3 Standards*.

6.7.4 Metals and Inorganics

The groundwater analytical results for metals and inorganic parameters, along with the corresponding *Table 3 Standards*, are presented in Table 7. As indicated in Table 7, all reported concentrations of metals and inorganics parameters in the groundwater samples submitted for analysis met the *Table 3 Standards*, except for the following:

- The concentrations of chloride (2,960,000 micrograms per litre [µg/L] vs. the *Table 3 Standard* of 2,300,000 µg/L) reported for the groundwater sample collected from monitoring well MW19 (as well as its corresponding field duplicate DUP-2) at a pump intake depth of approximately 6.1 mbgs, exceeded the *Table 3 Standards*.
- The concentrations of chloride (6,500,000 µg/L vs. the *Table 3 Standard* of 2,300,000 µg/L) and sodium (3,120,000 µg/L vs. the *Table 3 Standard* of 2,300,000 µg/L) reported for the groundwater sample collected from monitoring well MW18 at a pump intake depth of approximately 6.1 mbgs, exceeded the *Table 3 Standards*.
- The concentrations of chloride (7,750,000 µg/L vs. the *Table 3 Standard* of 2,300,000 µg/L) and sodium (5,170,000 µg/L vs. the *Table 3 Standard* of 2,300,000 µg/L) reported for the groundwater sample collected from monitoring well MW14 at a pump intake depth of approximately 2.3 mbgs, exceeded the *Table 3 Standards*.

- The concentrations of chloride (23,300,000 µg/L vs. the *Table 3 Standard* of 2,300,000 µg/L) and sodium (17,500,000 µg/L vs. the *Table 3 Standard* of 2,300,000 µg/L) reported for the groundwater sample collected from monitoring well MW16 at a pump intake depth of approximately 6.1 mbgs, exceeded the *Table 3 Standards*.

6.7.5 PCBs

The groundwater analytical results for PCBs, along with the corresponding *Table 3 Standards*, are presented in Table 7. As indicated in Table 7, all reported concentrations of PCBs in the groundwater samples submitted for analysis were below the *Table 3 Standards.*

6.7.6 General Comments on Groundwater Quality

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

As discussed in Section 6.6.5, the historical stockpiling of snow in the southeast portion of the Phase Two Property has been interpreted as the source of SAR and EC exceedances in shallow soil. Groundwater collected from monitoring wells installed within the southeast portion of the Phase Two Property has reported concentrations of sodium and/or chloride exceeding the *Table 3 Standards*. The road salt in the stockpiled snow has been interpreted as a source of contaminant mass contributing to the elevated sodium and chloride concentrations in groundwater in the southeast portion of the Phase Two Property.

During groundwater monitoring activities, no NAPL thicknesses were measured in any of the on-Site monitoring wells.

6.8 Sediment Quality

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

6.9 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.
- 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 AGAT 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.
- 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.

6.9.1 Soil Duplicate Results

During borehole soil sampling activities, a total of five separate soil duplicate sample pairs were submitted for laboratory analysis. The field duplicate samples were collected by vertically splitting the soil cores into two equal halves, with one half collected as the regular sample and the other half collected as the field duplicate sample. The sample pairings and corresponding laboratory analyses are as follows:

- Soil sample “MW16-SS3” and its corresponding field duplicate “DUP-1” were submitted for laboratory analysis of PAHs.

- Soil sample “MW17-SS2” and its corresponding field duplicate “DUP-2” were submitted for laboratory analysis of PHCs and BTEX.
- Soil sample “MW20-S5” and its corresponding field duplicate “DUP-3” were submitted for laboratory analysis of VOCs, PHCs, PAHs, metals, and PCBs.
- Soil sample “MW2-S5” and its corresponding field duplicate “DUP-4” were submitted for laboratory analysis of VOCs and PHCs.
- Soil sample “MW14-S3” and its corresponding field duplicate “DUP-5” were submitted for laboratory analysis of PHCs, BTEX and PAHs.

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

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

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 MW14-S3/DUP-5, collected from borehole MW14 at a depth of 1.52 to 2.29 mbgs, exceeded the performance standards of 30% for PHCs (F2) (RPD of 52%), acenaphthene (RPD of 46%), fluorene (RPD of 71%), 2-,1-methylnaphthalene (RPD of 120%), naphthalene (RPD of 78%) and phenanthrene (RPD of 70%).

The primary cause of the elevated RPD values and discrepancies observed in the analytical results for soil sample pairing MW14-S3/DUP-5 is inferred to be heterogeneity in the matrix of the fill materials from which the samples were collected. Pinchin notes that fill materials are generally more variable in terms of parameter concentrations in comparison to native, undisturbed soil deposits. As such, the observed variances in RPDs for these sample pairings are not expected to reflect deficiencies in sampling or analytical methods. Based on Pinchin’s review of the calculated RPD values for the remainder of the collected soil duplicate sample pairings, 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.

6.9.2 Groundwater Sample Duplicate Results

During groundwater sampling activities, a total of three separate groundwater duplicate sample pairs were submitted for laboratory analysis. The sample pairings and corresponding laboratory analyses are as follows:

- Groundwater sample “MW20” and its corresponding field duplicate “DUP-1” were submitted for laboratory analysis of VOCs, PHCs, PAHs and metals.
- Groundwater sample “MW19” and its corresponding field duplicate “DUP-2” were submitted for laboratory analysis of sodium and chloride.
- Groundwater sample “MW3” and its corresponding field duplicate “DUP-3” were submitted for laboratory analysis of VOCs, PHCs, PAHs, metals and PCBs.

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.

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

- The RPD values for groundwater sample pairing MW20/DUP-1, collected from monitoring well MW20, exceeded the corresponding performance standard of 20% for the analytical results reported for arsenic (RPD of 29%).

The primary cause of the elevated RPD values and discrepancies observed in the analytical results for groundwater sample pairings MW20/DUP-1 is inferred to be the result of different levels of sediment in the sample pairing. Although every effort was made during groundwater sampling to minimize the sediment content of the samples, minor amounts of sediment were observed in each of the samples and were included in the analysis as per the *Analytical Protocol*. The inclusion of sediment in the sample analysis has likely resulted in varying levels of positive sediment bias, which has resulted in the apparent lack of precision in the analytical results. Pinchin notes that all parameter concentrations in the groundwater sample pairing are below the corresponding *Table 3 Standards* so the apparent lack of precision is not considered a concern. Based on Pinchin’s review of the calculated RPD values for the remainder of the collected groundwater duplicate sample pairings, 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.

6.9.3 Groundwater Trip Blank Results

A trip blank sample, consisting of VOC-free water contained within a set of VOC sample vials, was prepared by AGAT 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 AGAT Labs. The trip blank sample was submitted to AGAT Labs for chemical analysis for VOCs during the groundwater sampling activities completed as part of this Phase Two ESA.

As indicated in Table 7, the concentrations of the VOC parameters analyzed in the trip blank sample were 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.

6.9.4 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.

6.9.5 Laboratory Certificates of Analysis

Pinchin has reviewed the laboratory Certificates of Analysis provided by AGAT 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.
- All laboratory Certificates of Analysis have been included in full in Appendix H.
- All of the analytical data reported in the Certificates of Analysis have been summarized, in full, in Tables 3 and 7.

6.9.6 Laboratory Comments Regarding Sample Analysis

AGAT Labs routinely conducts internal QA/QC analyses in order to satisfy regulatory QA/QC requirements. The results of the AGAT Labs QA/QC analyses for the submitted soil samples are summarized in the laboratory Certificates of Analyses provided in Appendix H. Also included in Appendix H are all correspondences between the laboratory and staff at Pinchin.

No comments were noted by AGAT Labs on the laboratory Certificates of Analysis for the submitted soil or groundwater samples.

The results of the QA/QC analyses were reviewed by the project staff at AGAT Labs and observed to be within the laboratory's internal requirements. Pinchin has also reviewed the laboratory Certificates of Analysis and has confirmed that the results of the analyses are acceptable for the purpose of meeting the data quality objectives of this Phase Two ESA.

The following general comments apply to the laboratory Certificates of Analysis received from AGAT Labs as part of this Phase Two ESA:

- The temperatures of the submitted soil and groundwater samples upon receipt met the sample preservation requirements of the *Analytical Protocol* of 5 ± 3ºC (i.e., between 2 and 8ºC).
- The custody seal was present and intact on all submissions.

6.9.7 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.

6.10 Phase Two Conceptual Site Model

The Phase Two Property is approximately 8.6 acres (3.5 hectares) in size and is bounded by Coventry Road to the north, Highway 417 to the south, and commercial properties to the east and west. The northwest portion of the Phase Two Property is leased for bus parking, the northeast portion is used for vehicular parking, the southeast portion is used for stockpiling snow from the east adjacent shopping mall property, and the southwest portion remains vacant, undeveloped land. During the Phase One ESA, Pinchin documented that the Phase One Property was formerly used as beverage distribution facility (Coca-Cola Bottling Limited) from circa 1962 to 1994. A key map showing the Phase Two Property location is provided as Figure 1.

A Phase One CSM was created during the Pinchin Phase One ESA in order to provide a detailed visualization of the APECs which could occur on, in, under, or affecting the Phase Two Property. 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.
- APECs at the Phase One Property.

The following subsections expand on the Phase One CSM with the information collected during the completion of the Phase Two ESA.

6.10.1 Potentially Contaminating Activities

The Phase One ESA identified a total of 28 PCAs within the Phase One Study Area. These PCAs consisted of 13 PCAs at the Phase Two Property and 15 PCAs within the Phase One Study Area, outside of the Phase Two Property. Each of the on-Site PCAs were interpreted as potentially affecting the environmental condition of the subsurface media on, in or under the Phase Two Property and were considered to result in APECs. Identified on-Site and off-Site PCAs are summarized in Table 2 and their locations are shown on Figure 4 (on-Site PCAs) and Figure 5 (off-Site PCAs).

6.10.2 Areas of Potential Environmental Concern

Table 1 summarizes the APECs identified at the Phase Two Property, as well as their respective PCAs, COPCs and the media that could potentially be impacted. APECs at the Phase Two Property are illustrated on Figure 6. The Phase Two ESA included an assessment of soil and groundwater quality within each of the APECs.

The following table summarizes the boreholes and monitoring wells completed to investigate each of the APECs:

APEC	Investigation Location
APEC-1	MW1
APEC-2	MW2, MW3
APEC-3	BH4*
APEC-4	BH5*
APEC-5	MW6
APEC-6	MW7, MW8

APEC	Investigation Location
APEC-7	MW9, MW10, MW11
APEC-8	MW6*, MW9*, MW10*, MW11*
APEC-9	MW16*, BH17*
APEC-10	MW12, MW13, MW14
APEC-11	MW16, BH17*, MW18, MW19, BH24*
APEC-12	MW20, MW21, MW22
APEC-13	BH23*

* Soil sampling only

** Groundwater sampling only

A summary of the findings for each of the APECs is provided below.

APEC-1

During Pinchin's review of previous environmental reports, a former 2,100 gallon bunker oil AST was identified along the west exterior wall of the former Site Building. The former AST represented a PCA that required investigation as part of the Phase Two ESA. The subsurface investigation of APEC-1 completed by Pinchin as part of the Phase Two ESA included new borehole/groundwater monitoring well MW1. Soil and groundwater samples collected during the Phase Two ESA from borehole/monitoring well MW1 located within APEC-1 and submitted for laboratory analysis met the *Table 3 Standards*.

APEC-2

During Pinchin's review of previous environmental reports, a former motor vehicle (truck) repair/maintenance facility was identified along the south portion of the former Site Building. The former truck repair/maintenance operations represented a PCA that required investigation as part of the Phase Two ESA. The subsurface investigation of APEC-2 completed by Pinchin as part of the Phase Two ESA included new boreholes/groundwater monitoring wells MW2 and MW3. Soil and groundwater samples collected during the Phase Two ESA from boreholes/monitoring wells MW2 and MW3 located within APEC-1 and submitted for laboratory analysis met the *Table 3 Standards*.

APEC-3

During Pinchin's review of previous environmental reports, two former 250 gallon waste oil ASTs were identified within the former vehicle and equipment maintenance area of the former Site Building. The former ASTs represented a PCA that required investigation as part of the Phase Two ESA. The subsurface investigation of APEC-3 completed by Pinchin as part of the Phase Two ESA included new borehole BH4. Soil samples collected during the Phase Two ESA from borehole BH4 located within APEC-3 and submitted for laboratory analysis met the *Table 3 Standards*.

APEC-4

During Pinchin's review of previous environmental reports, one former 250 gallon supply oil AST and two former 125 gallon supply oil ASTs were identified within the former vehicle and equipment maintenance area of the former Site Building. The former ASTs represented a PCA that required investigation as part of the Phase Two ESA. The subsurface investigation of APEC-4 completed by Pinchin as part of the Phase Two ESA included new borehole BH5. Soil samples collected during the Phase Two ESA from borehole BH5 located within APEC-4 and submitted for laboratory analysis met the *Table 3 Standards*.

APEC-5

During Pinchin's review of previous environmental reports, one former waste oil UST of unknown volume was identified on the eastern side of the Phase One Property, adjacent to the former Site Building. The former waste oil UST represented a PCA that required investigation as part of the Phase Two ESA. The subsurface investigation of APEC-5 completed by Pinchin as part of the Phase Two ESA included new borehole/monitoring well MW6. Soil and groundwater samples collected during the Phase Two ESA from borehole/monitoring well MW6 located within APEC-5 and submitted for laboratory analysis met the *Table 3 Standards*.

APEC-6

During Pinchin's review of previous environmental reports, a former private fuel outlet (PFO) was identified on the western portion of the Phase Two Property, circa 1962. The former PFO represented a PCA that required investigation as part of the Phase Two ESA. The subsurface investigation of APEC-6 completed by Pinchin as part of the Phase Two ESA included new boreholes/monitoring wells MW7 and MW8. Soil and groundwater samples collected during the Phase Two ESA from boreholes/monitoring wells MW7 and MW8 located within APEC-6 and submitted for laboratory analysis met the *Table 3 Standards*.

APEC-7

During Pinchin's review of previous environmental reports, the former presence of a PFO equipped a pump island, one 20,000-litre gasoline UST, and one 20,000-litre diesel UST (circa 1987-1990), and associated UST fuel release in 1994 as documented in the Ontario Spills database. The second former PFO represented a PCA that required investigation as part of the Phase Two ESA. The subsurface investigation of APEC-7 completed by Pinchin as part of the Phase Two ESA included new boreholes/monitoring wells MW9, MW10, MW11. Soil and groundwater samples collected during the

Phase Two ESA from boreholes/monitoring wells MW9, MW10, MW11 located within APEC-7 and submitted for laboratory analysis met the *Table 3 Standards*.

APEC-8

During Pinchin's review of previous environmental reports, fill material of unknown/undocumented quality was imported to the Phase Two Property to backfill remedial excavations. The importation of fill material of unknown quality represented a PCA that required investigation as part of the Phase Two ESA. The subsurface investigation of APEC-8 completed by Pinchin as part of the Phase Two ESA included new boreholes MW6, MW9, MW10, MW11. Soil samples collected during the Phase Two ESA from boreholes MW6, MW9, MW10, MW11 located within APEC-8 and submitted for laboratory analysis met the *Table 3 Standards*.

APEC-9

During Pinchin's review of previous environmental reports, fill material of unknown/undocumented quality was imported to the Phase Two Property to backfill remedial excavations. The importation of fill material of unknown quality represented a PCA that required investigation as part of the Phase Two ESA. The subsurface investigation of APEC-9 completed by Pinchin as part of the Phase Two ESA included new boreholes MW16 and MW17. Soil samples collected during the Phase Two ESA from boreholes MW6, MW9, MW10, MW11 located within APEC-9 and submitted for laboratory analysis met the *Table 3 Standards*, with the exception of soil sample MW11-S6, collected at borehole MW11 from a depth of 3.81 to 4.27 mbgs, which exceeded the *Table 3 Standards* for 1,1,2,2-tetrachloroethane. These soil impacts were interpreted to be related to APEC-9.

APEC-10

During Pinchin's review of previous environmental reports, it was evident that a bioremediation cell was utilized on the southwest portion of the Phase Two Property to treat PHC-impacted soil. The bioremediation cell may have required the importation of fill material, which represented a PCA that required investigation as part of the Phase Two ESA. The subsurface investigation of APEC-10 completed by Pinchin as part of the Phase Two ESA included new boreholes MW12, MW13, MW14. Soil samples collected during the Phase Two ESA from boreholes MW12, MW13, MW14 located within APEC-10 and submitted for laboratory analysis met the *Table 3 Standards*, with the exception of soil sample MW14-S3 which identified concentrations of benzene, ethylbenzene PHCs (F1 and F2) and 2-,1-methylnaphthalene exceeding the *Table 3 Standards*.

APEC-11

During the Phase One ESA Site reconnaissance, a temporary salt storage area was identified on the southeast portion of the Phase Two Property. The bulk salt storage represented a PCA that required investigation as part of the Phase Two ESA. The subsurface investigation of APEC-11 completed by Pinchin as part of the Phase Two ESA included new boreholes/monitoring wells MW16, BH17, MW18, and MW19. Soil and groundwater samples collected during the Phase Two ESA from boreholes/monitoring wells MW16, BH17, MW18, MW19 and BH24 located within APEC-11 and submitted for laboratory analysis met the *Table 3 Standards*, with the following exceptions:

- Soil sample MW16-SS2 collected at borehole MW16 from a depth of 0.76 to 1.52 mbgs which had EC and SAR values that exceeded the *Table 3 Standards*;
- Soil samples MW17-SS2, MW17-SS3 and MW17-SS5 collected at borehole MW17 from depths of 0.76 to 1.52 mbgs, 0.76 to 1.37 mbgs and 2.74 to 3.35 mbgs, respectively, which had EC and SAR values that exceeded the *Table 3 Standards*;
- Soil sample MW18-SS2 collected at borehole MW18 from a depth of 0.76 to 1.37 mbgs which had EC and SAR values that exceeded the *Table 3 Standards*;
- Soil sample MW19-SS2 collected at borehole MW19 from a depth of 0.76 to 1.37 mbgs which had EC and SAR values that exceeded the *Table 3 Standards*;
- Soil sample BH24-SS2 collected at borehole BH24 from a depth of 1.52 to 2.13 mbgs which had EC and SAR values that exceeded the *Table 3 Standards*;
- Groundwater samples collected from monitoring wells MW14, MW16, MW18 and MW19 which had concentrations of sodium and/or chloride that exceeded the *Table 3 Standards*.

The EC/SAR exceedances in soil and sodium and chloride exceedances in the groundwater samples were attributed to the bulk salt storage on-Site as well as the historical stockpiling of potential salt-impacted snow.

APEC-12

During the Phase One ESA, Pinchin documented that the Phase One Property was formerly used as beverage distribution facility (Coca-Cola Bottling Limited) from circa 1962 to 1994. The former on-Site industrial activity represented a PCA that required investigation as part of the Phase Two ESA. The subsurface investigation of APEC-12 completed by Pinchin as part of the Phase Two ESA included new boreholes/monitoring wells MW20, MW21 and MW22. Soil and groundwater samples collected during the Phase Two ESA from boreholes/monitoring wells MW20, MW21, MW22 located within APEC-12 and submitted for laboratory analysis met the *Table 3 Standards*.

APEC-13

During the Phase One ESA Site reconnaissance, one 2,320-L diesel AST was identified on the southeast portion of the Phase Two Property. The diesel AST represented a PCA that required investigation as part of the Phase Two ESA. The subsurface investigation of APEC-13 completed by Pinchin as part of the Phase Two ESA included new borehole BH23. Soil samples collected during the Phase Two ESA from borehole BH23 located within APEC-13 and submitted for laboratory analysis met the *Table 3 Standards*.

6.10.3 Subsurface Structures and Utilities

Underground utilities which are known or inferred to be present at the Phase Two Property include buried electrical lines located along the north portion of the Phase Two Property in the vicinity of the parking lot areas.

Interaction of the groundwater at the Phase Two Property with buried utilities is possible given that the water table in some areas of the Phase Two Property is located at approximate depths of between 0.3 and 1.0 mbgs and the utilities are known to be located at these shallow depths. However, no groundwater impacts were identified on the north portion of the Phase Two Property.

6.10.4 Physical Setting

Based on the work completed as part of this Phase Two ESA, the following subsections provide a summary of the physical setting of the Phase Two Property.

Stratigraphy

The observed stratigraphy at the borehole locations completed for the Phase Two ESA generally consisted of the Phase Two Property is underlain by gravelly sand fill to a maximum depth of approximately 3.1 mbgs. The native soil underlying the surficial soil fill materials is generally comprised of gravelly sand or silt till to a maximum depth of approximately 5.3 mbgs. The shallow water table is located within the overburden on-Site. The till is underlain by limestone bedrock. The borehole locations are shown on Figure 7.

Hydrogeological Characteristics

The groundwater flow direction in the overburden aquifer at the Phase Two Property is inferred to be towards the west and the groundwater flow direction in the underlying limestone bedrock aquifer in inferred to be towards the southeast. The horizontal hydraulic gradient within the unconfined aquifer at the Phase Two Property was estimated to be 0.02.

The hydraulic conductivity of the overburden aquifer at the Phase Two Property (i.e., gravelly sand or silt till) ranges from 9.9 x 10^{-8} metres/second to 1.6 x 10^{-7} metres/second, and groundwater flow velocity is estimated to be approximately 0.2 to 0.3 metres/year.

Depth to Bedrock

Bedrock was encountered at each of the borehole locations at depths ranging from 1.8 mbgs at borehole BH24 to 5.3 mbgs at borehole BH5.

Depth to Water Table

The water table at the Phase Two Property is located primarily within the shallow gravelly sand or silt till. The depths to groundwater measured within the on-Site monitoring wells installed within the underlying bedrock aquifer ranged from 1.34 mbgs at monitoring well MW18 to 3.03 mbgs at monitoring well MW23.

The depths to groundwater measured within the on-Site monitoring wells installed within the overburden aquifer ranged from 0.27 mbgs at monitoring well MW1 to 1.18 mbgs at monitoring well MW12.

Applicability of Section 35, 41 or 43.1 of O. Reg 153/04

Site Condition Standards for non-potable groundwater use have been applied to the Phase Two Property given that the following conditions specified in Section 35 of O. Reg. 153/04 have been met:

- The Phase Two Property and all properties within 250 metres of the Phase Two Property are supplied by a municipal drinking water system.
- The Phase Two Property is not located within a well head protection area or other designation identified by the City of Ottawa for the protection of groundwater.
- There are no wells located at the Phase Two Property or within the Phase One Study Area that are used or intended for use as a water source for human consumption or agriculture.
- The City of Ottawa has provided written notice that they do not object to the use of non-potable Site Condition Standards at the Phase Two Property.

Section 41 of O. Reg. 153/04 states that a property is classified as an “environmentally sensitive area” if the property is within an area of natural significance, the property includes or is adjacent to an area of natural significance or part of such an area, the property includes land that is within 30 m of an area of natural significance or part of such an area, the soil at the property has a pH value for surface soil less than 5 or greater than 9 or the soil at the property has a pH value for subsurface soil less than 5 or greater than 11.

The Phase Two Property is not located in or adjacent to, nor does it contain land within 30 m of, an area of natural significance. Furthermore, the pH values measured in the submitted soil samples were within the limits for non-sensitive sites. As such, the Phase Two Property is not an environmentally sensitive area as defined by Section 41 of O. Reg. 153/04.

Section 43.1 of O. Reg. 153/04 states that a property is classified as a “shallow soil property” if one-third or more of the area consists of soil less than 2 m in depth.

Based on a review of the depths to bedrock and the spatial distribution of the borehole locations, the depth to bedrock is interpreted to be greater than 2.0 mbgs over more than one-third of the Phase Two Property. As such, the Phase Two Property is not a shallow soil property as defined by Section 43.1 of O. Reg. 153/04.

As per Section 43.1 of O. Reg. 153/04, the proximity of the Phase Two Property to a water body must be considered when selecting the appropriate Site Condition Standards.

The Phase Two Property does not include all or part of a water body, it is not adjacent to a water body and it does not include land within 30 m of a water body. As such, Site Condition Standards for use within 30 m of a water body were not applied.

Soil Imported to Phase Two Property

No soil was imported to the Phase Two Property during completion of the Phase Two ESA.

Proposed Buildings and Other Structures

Pinchin understands that the future use of the Phase Two Property will be for a residential development that is still in the planning stages and the configuration of the Phase Two Property, including proposed building locations, has yet to be confirmed.

6.10.5 Applicable Site Condition Standards

Based on the grain size analysis of representative soil samples collected during the Phase Two ESA and the observed stratigraphy at the borehole locations, Pinchin concluded that over one-third of the overburden at the Phase Two Property is coarse-textured as defined by O. Reg. 153/04 and as such Site Condition Standards for coarse-textured soil were applied.

Based on the information obtained from the Phase One and Two ESAs, the appropriate Site Condition Standards for the Phase Two Property are:

- “Table 3: Full Depth Generic Site Condition Standards for Use in a Non-Potable Ground Water Condition”, provided in the Ontario Ministry of the Environment, Conservation and Parks (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:
  - Coarse-textured soils; and
  - Residential/parkland/institutional property use.

6.10.6 Contaminants Exceeding Applicable Site Condition Standards in Soil

BTEX, PHCs and PAHs

Soil with concentrations of BTEX and/or PHCs F1/F2 exceeding the *Table 3 Standards* was identified at boreholes MW14 at depths between approximately 1.52 to 2.29 mbgs. The source of the soil impacts is inferred to be PHC-impacted soils that were bioremediated in the southwest portion of the Phase Two Property.

A number of factors can govern the transport and fate of contaminants in subsurface environments, including dilution, adsorption, advection and dispersion, volatilization, geochemical dynamics, and chemical or biological transformation (microbial attenuation).

In the absence of future remediation, it is expected that geochemical factors which would reduce the BTEX and PHCs F1/F2 concentrations at the Phase Two Property will be generally limited to microbial attenuation (based on the organic nature of BTEX and PHCs F1/F2) and to a lesser degree, volatilization (based on the volatile nature of BTEX and PHCs F1 and the semi-volatile nature of PHCs F2 and select PAHs). However, the rate of attenuation of the BTEX and PHCs F1/F2 concentrations at the Phase Two Property cannot be accurately quantified and, would be anticipated to persist for some period of time at the Phase Two Property.

The lateral and vertical distribution of PHC, BTEX and PAH concentrations in soil samples collected at the Phase Two Property is shown in Figures 10A to 10C, Figures 11A to 11C, and Figures 13A to 13C, respectively.

EC and SAR

Elevated levels of SAR and EC in soil exceeding the *Table 3 Standards* have been identified at depths ranging from 0.76 to 3.38 mbgs at boreholes MW17, MW18, MW19 and BH24, which were completed in snow stockpile area in the southeast portion of the Phase Two Property. These SAR and EC exceedances have been attributed to the historical snow stockpiling and bulk salt storage.

The lateral and vertical distribution of EC and SAR values in soil samples collected at the Phase Two Property is shown in Figures 14A to 14C, respectively.

6.10.7 Contaminants Exceeding Applicable Site Condition Standards in Groundwater

Sodium and Chloride

The concentration of sodium and/or chloride in the groundwater at monitoring wells MW14, MW16, MW18 and MW19 exceeds the *Table 3 Standards*. It appears that the downward leaching of sodium and chloride from the road salt-impacted snow in the stockpile area and bulk salt storage area to the water table has occurred. As such, road salt in the soil is interpreted to be a source of contaminant mass contributing to the elevated sodium and chloride concentrations in groundwater in the southeast portion of the Phase Two Property.

The lateral and vertical distribution of sodium and chloride concentrations in groundwater samples collected at the Phase Two Property is shown in Figures 15A to 15C, respectively.

6.10.8 Meteorological and Climatic Conditions

The groundwater table was observed to fluctuate slightly in elevation over two rounds of groundwater monitoring completed on May 8 and 23, 2024. The minor temporal groundwater table fluctuations are expected to have had a minimal effect on contaminant distribution throughout the Phase Two Property. As such, it is the QP's opinion that meteorological or climatic conditions have not influenced the distribution or migration of the contaminants at the Phase Two Property.

6.10.9 Soil Vapour Intrusion

Various volatile parameters were identified at concentrations exceeding the *Table 3 Standards*. As such, soil vapour intrusion into future buildings at the Phase Two Property may be considered a concern.

6.10.10 Contaminant Exposure Assessment

Potential exposure pathways and receptors were evaluated for the Phase Two Property. The exposure pathways and receptors which are considered are as follows:

- GW1 – The protection of drinking water for humans.
- GW2 – The protection of indoor air sourced from vapours originating from groundwater for humans in an overlying building.
- GW3 – The protection of the aquatic environment in the nearest surface water body.
- S1 – High-frequency, high-intensity, human health direct contact exposure scenario equivalent to that of surface soil at a residential/parkland/institutional or agricultural/other site (children and pregnant women are present).
- S2 – Lower-frequency and lower-intensity, human health direct contact exposure scenario without children present and used at commercial/industrial/community sites or at depth at residential/parkland/institutional or agricultural/other sites.
- S3 – Low-frequency, high-intensity, human health direct contact exposure scenario without children present that is protective of a worker digging in the soil. It is used for subsurface soils at commercial/industrial/community sites.
- S-IA – The protection of indoor air sourced from vapours originating from soil for humans in an overlying building.

- S-OA – The protection of outdoor air sourced from vapours originating from soil, using a volatilization model combined with atmospheric mixing for humans.
- S-Odour – Soil concentrations that will not result in unacceptable odours from direct sniffing of the soil.
- S-GW1 – The protection of drinking water for humans via leaching of soil.
- S-GW3 – The protection of the aquatic environment in the nearest surface water body via leaching of soil.
- Plants and Soil Organisms (P&O) – Soil values protective of direct contact exposure scenario for plants and soil-dwelling organisms.
- Mammals and Birds (M&B) – Soil values protective of direct contact exposure scenario for some representative mammalian and avian species.

In considering the current and proposed land use scenarios and future redevelopment activities (i.e., digging, construction, etc.), all exposure pathway/receptor scenarios are considered applicable, with the exception of:

- S-GW1 and GW1 pathways, as the Phase Two Property is in a non-potable water scenario, rendering the potable groundwater pathways as incomplete.

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 RSC. The RSC is required by the Client in relation to the future redevelopment of the Phase Two Property from commercial to residential land use.

The Phase Two ESA completed by Pinchin included the advancement of 24 boreholes at the Phase Two Property, 18 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 coarse-textured soils. Soil samples were collected from each of the borehole locations and submitted for laboratory analysis of VOCs, PHCs, PAHs, metals, PCBs, and/or inorganic parameters. In addition, groundwater samples were collected from the 18 newly-installed monitoring wells and submitted for laboratory analysis of VOCs, PHCs, PAHs, metals, PCBs and/or inorganic parameters.

- The concentrations of 1,1,2,2-tetrachloroethane (0.45 µg/g vs. the *Table 3 Standard* of 0.05 µg/g) reported for soil sample MW11-S6, collected at borehole MW11 from a depth of 3.81 to 4.27 mbgs, exceeded the *Table 3 Standards*.

- The concentrations of benzene (0.73 µg/g vs. the *Table 3 Standard* of 0.21 µg/g), ethylbenzene (3.93 µg/g vs. the *Table 3 Standard* of 2 µg/g), PHCs (F2) (310 µg/g vs. the *Table 3 Standard* of 98 µg/g) and 2-,1-methylnaphthalene (2.41 µg/g vs. the *Table 3 Standard* of 0.99 µg/g) reported for soil sample MW14-S3 (and its corresponding field duplicate DUP-5), collected at borehole MW14 from a depth of 1.52 to 2.29 mbgs, exceeded the *Table 3 Standards*. In addition, concentrations of PHCs (F1) (71 µg/g vs. the *Table 3 Standard* of 55 µg/g) reported for soil sample DUP-5 collected at borehole MW14 exceeded the *Table 3 Standards*.
- The concentrations of benzo(a)anthracene (0.67 µg/g vs. the *Table 3 Standard* of 0.5 µg/g), benzo(a)pyrene (0.37 µg/g vs. the *Table 3 Standard* of 0.3 µg/g) and fluoranthene (1.61 µg/g vs. the *Table 3 Standard* of 0.69 µg/g) reported for soil sample BH15-S2, collected at borehole BH15 from a depth of 0.76 to 1.52 mbgs, exceeded the *Table 3 Standards*.
- The EC value (7.6 mS/cm vs. the *Table 3 Standard* of 0.7 mS/cm) and SAR value (44.9 vs. the *Table 3 Standard* of 5) reported for soil sample MW16-SS2, collected at borehole MW16 from a depth of 0.76 to 1.52 mbgs, exceeded the *Table 3 Standards*.
- The EC value (1.04 mS/cm vs. the *Table 3 Standard* of 0.7 mS/cm) and SAR value (6.51 vs. the *Table 3 Standard* of 5) reported for soil sample MW17-SS2, collected at borehole MW17 from a depth of 0.76 to 1.37 mbgs, exceeded the *Table 3 Standards*.
- The EC value (1.39 mS/cm vs. the *Table 3 Standard* of 0.7 mS/cm) and SAR value (12.8 vs. the *Table 3 Standard* of 5) reported for soil sample MW17-SS3, collected at borehole MW17 from a depth of 1.52 to 2.13 mbgs, exceeded the *Table 3 Standards*.
- The EC value (1.89 mS/cm vs. the *Table 3 Standard* of 0.7 mS/cm) and SAR value (10.0 vs. the *Table 3 Standard* of 5) reported for soil sample MW17-SS5, collected at borehole MW17 from a depth of 2.74 to 3.35 mbgs, exceeded the *Table 3 Standards*.
- The EC value (1.74 mS/cm vs. the *Table 3 Standard* of 0.7 mS/cm) and SAR value (9.96 vs. the *Table 3 Standard* of 5) reported for soil sample MW18-SS2, collected at borehole MW18 from a depth of 0.76 to 1.37 mbgs, exceeded the *Table 3 Standards*.
- The EC value (0.779 mS/cm vs. the *Table 3 Standard* of 0.7 mS/cm) and SAR value (6.47 vs. the *Table 3 Standard* of 5) reported for soil sample MW19-SS2, collected at borehole MW18 from a depth of 0.76 to 1.37 mbgs, exceeded the *Table 3 Standards*.
- The EC value (2.90 mS/cm vs. the *Table 3 Standard* of 0.7 mS/cm) and SAR value (11.8 vs. the *Table 3 Standard* of 5) reported for soil sample BH24-SS2, collected at borehole BH24 from a depth of 1.52 to 2.13 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*, except for the following:

- The concentrations of chloride (2,960,000 µg/L vs. the *Table 3 Standard* of 2,300,000 µg/L) reported for the groundwater sample collected from monitoring well MW19 (as well as its corresponding field duplicate DUP-2) at a pump intake depth of approximately 6.1 mbgs, exceeded the *Table 3 Standards*.
- The concentrations of chloride (6,500,000 µg/L vs. the *Table 3 Standard* of 2,300,000 µg/L) and sodium (3,120,000 µg/L vs. the *Table 3 Standard* of 2,300,000 µg/L) reported for the groundwater sample collected from monitoring well MW18 at a pump intake depth of approximately 6.1 mbgs, exceeded the *Table 3 Standards*.
- The concentrations of chloride (7,750,000 µg/L vs. the *Table 3 Standard* of 2,300,000 µg/L) and sodium (5,170,000 µg/L vs. the *Table 3 Standard* of 2,300,000 µg/L) reported for the groundwater sample collected from monitoring well MW14 at a pump intake depth of approximately 2.3 mbgs, exceeded the *Table 3 Standards*.
- The concentrations of chloride (23,300,000 µg/L vs. the *Table 3 Standard* of 2,300,000 µg/L) and sodium (17,500,000 µg/L vs. the *Table 3 Standard* of 2,300,000 µg/L) reported for the groundwater sample collected from monitoring well MW16 at a pump intake depth of approximately 6.1 mbgs, exceeded the *Table 3 Standards*.

The maximum reported soil and groundwater concentrations for the parameters analyzed are summarized in Tables 8 and 9, respectively.

With respect to the identified soil and groundwater parameter exceedances summarized above, the completion of a soil and groundwater remediation and/or a Risk Assessment in accordance with O. Reg. 153/04 will be required to develop PSS for the parameters exceeding the *Table 3 Standards* before an RSC can be filed for the Phase Two Property.

7.1 Signatures

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

7.2 Terms and Limitations

This Phase Two ESA was performed for Morguard REIT c/o Morguard Investments Limited (Client) in order to investigate potential environmental impacts at 500 Coventry Road 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:

- 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, 500 Coventry Road, Ottawa, Ontario. Prepared for Morguard REIT c/o Morguard Investments Limited, April 19, 2024.
- 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 362/23 on January 1, 2024.
- 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.
- “*Environmental Site Assessment, 500 Coventry Road, Ottawa, Ontario*” prepared by Jacques Whitford Environmental Limited for Provigo Distribution Inc., and dated August 22, 1996.
- “Decommissioning Report, Coca-Cola Beverages Limited Distribution Plant, 500 Coventry Road, Ottawa, Ontario” prepared by Arcturus Environmental for Coca-Cola Beverages Ltd., and dated October 1996.
- “*Phase II Environmental Site Assessment, 500 Coventry Road, Ottawa, Ontario*” prepared by Golder Associates Ltd. for Acktion Corporation, and dated February 23, 2000.
- “*Phase I Environmental Site Assessment, 500 Coventry Road, Ottawa, Ontario*” prepared by Golder Associates Ltd. for Acktion Corporation c/o Morguard Investments Limited and Morguard Real Estate Investment Trust, and dated April 2000.

- "*On-Site Soil Remediation Program, 500 Coventry Road, Ottawa, Ontario*" prepared by Jacques Whitford Environmental Limited for Morguard Real Estate Investment Trust, and dated August 9, 2001.
- "Phase I Environmental Site Assessment and Asbestos/mould reconnaissance Survey, 500 Coventry Road, Ottawa, Ontario" prepared by Golder Associates Ltd. for Morguard Real Estate Investment Trust, and dated February 2005.
- "*Phase I Environmental Site Assessment Update, 500 Coventry Road, Ottawa, Ontario*" prepared by Golder Associates Ltd. for Morguard Investment Limited, and dated August 2010.
- "Phase I Environmental Site Assessment, 1135, 1200 & 1400 St. Laurent Boulevard and 500 Coventry Road, Ottawa, Ontario" prepared by Golder Associates Ltd. for Morguard Investment Limited, and dated October 2013.
- "Phase II Environmental Site Assessment, 1200 St. Laurent Boulevard and 500 Coventry Road, Ottawa, Ontario" prepared by Golder Associates Ltd. for Morguard Investment Limited, and dated November 2013.
- "Screening Level Risk Assessment, St. Laurent Shopping Centre and 500 Coventry Road, Ottawa, Ontario," prepared by Golder Associates Ltd. for Morguard Investment Limited, and dated August 2014.
- "Phase I Environmental Site Assessment, 1135, 1200 and 1400 St. Laurent Boulevard and 500 Coventry Road, Ottawa, Ontario" prepared by Golder Associates Ltd. for Morguard Investment Limited, and dated October 2018.
- *"Well Condition, 500 Coventry Road, Ottawa ON'* prepared by Geosyntec Consultants, and dated June 2, 2023.

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Template: Master Report for RSC Phase Two ESA Report – Impacted Site, EDR, July 18, 2024

9.0 FIGURES AND TABLES

PINCHIN

PROJECT NAME: PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

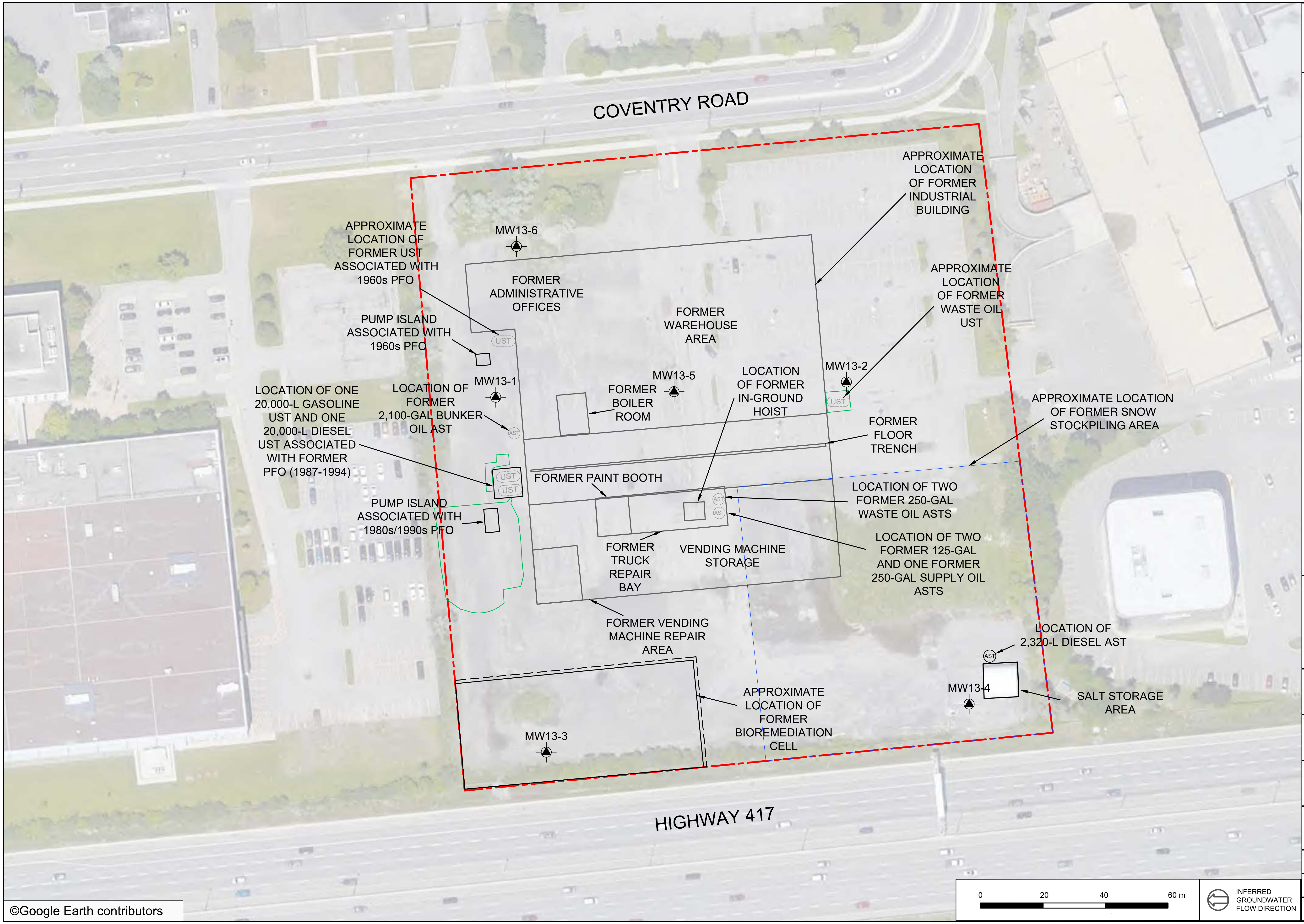
CLIENT NAME: MORGUARD CORPORATION

PROJECT LOCATION: 500 COVENTRY ROAD, OTTAWA, ONTARIO

FIGURE NAME: KEY MAP

FIGURE NUMBER: 1

PROJECT NUMBER:	SCALE:	DRAWN BY:	REVIEWED BY:	DATE:
319674.001	1:15,000	NJ	AK	NOVEMBER 2024



N

LEGEND

- SITE BOUNDARY
- LIMITS OF FORMER REMEDIAL EXCAVATIONS (BY OTHERS)
- RAILWAY LINE
- AST ABOVEGROUND STORAGE TANK
- AST FORMER ABOVEGROUND STORAGE TANK
- UST UNDERGROUND STORAGE TANK
- UST FORMER UNDERGROUND STORAGE TANK
- P PARKING
- MONITORING WELL BY OTHERS

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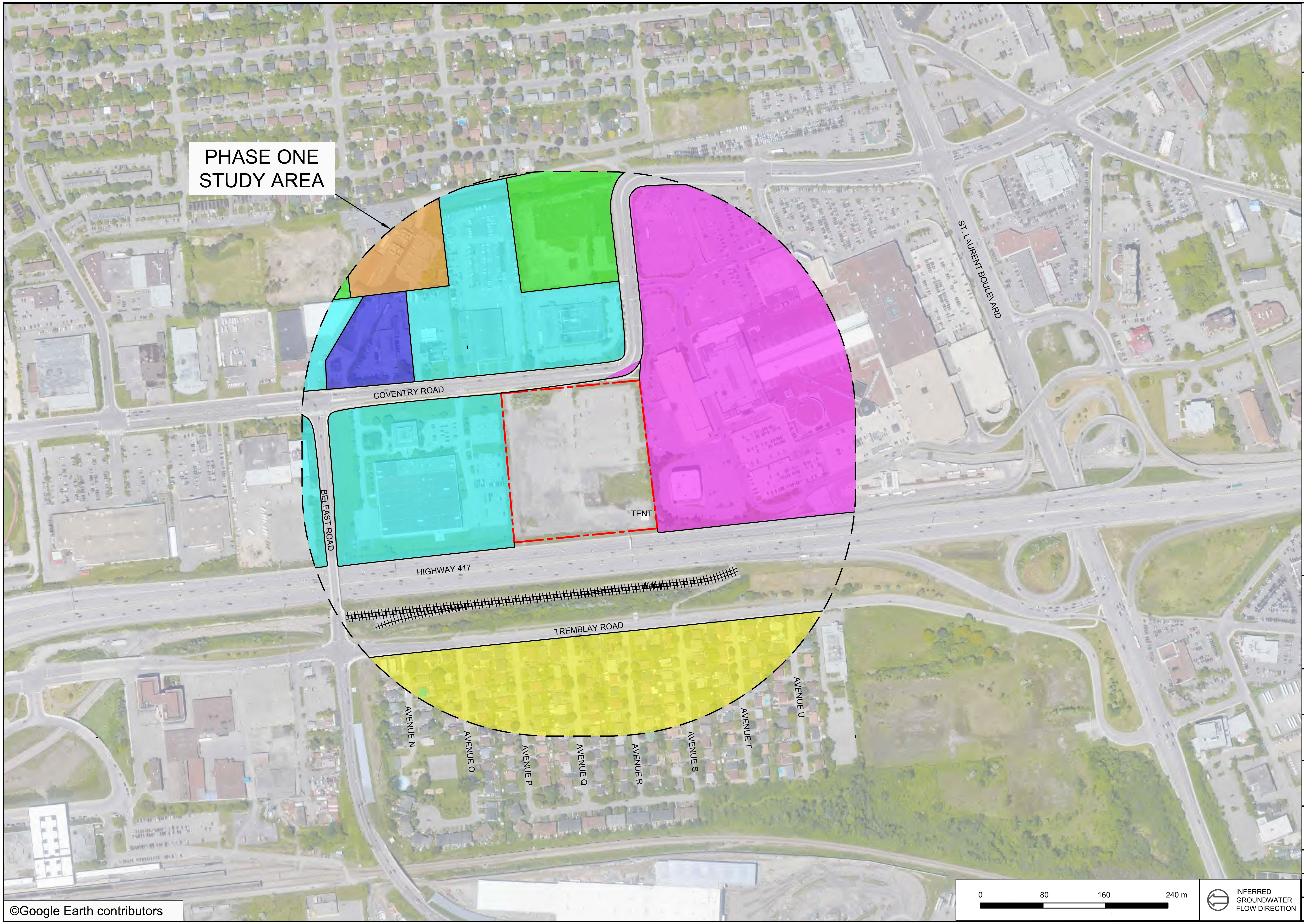
PROJECT NAME:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME:
MORGUARD CORPORATION

PROJECT LOCATION:
500 COVENTRY ROAD,
OTTAWA, ONTARIO

FIGURE NAME:
PHASE ONE PROPERTY

PROJECT NUMBER: 319674.001	SCALE: AS SHOWN
DRAWN BY: NJ	REVIEWED BY: AK
DATE: NOVEMBER 2024	FIGURE NUMBER: 2



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LEGEND

- SITE BOUNDARY
- PHASE ONE STUDY AREA BOUNDARY
- RAILWAY LINE
- 🟨 RESIDENTIAL
- 🟩 VACANT/GREEN SPACE
- 🟦 COMMERCIAL
- 🟪 MULTI-TENANT COMMERCIAL
- 🟧 HYDRO STATION
- 🟦 AUTOMOTIVE REPAIR/SERVICING FACILITY

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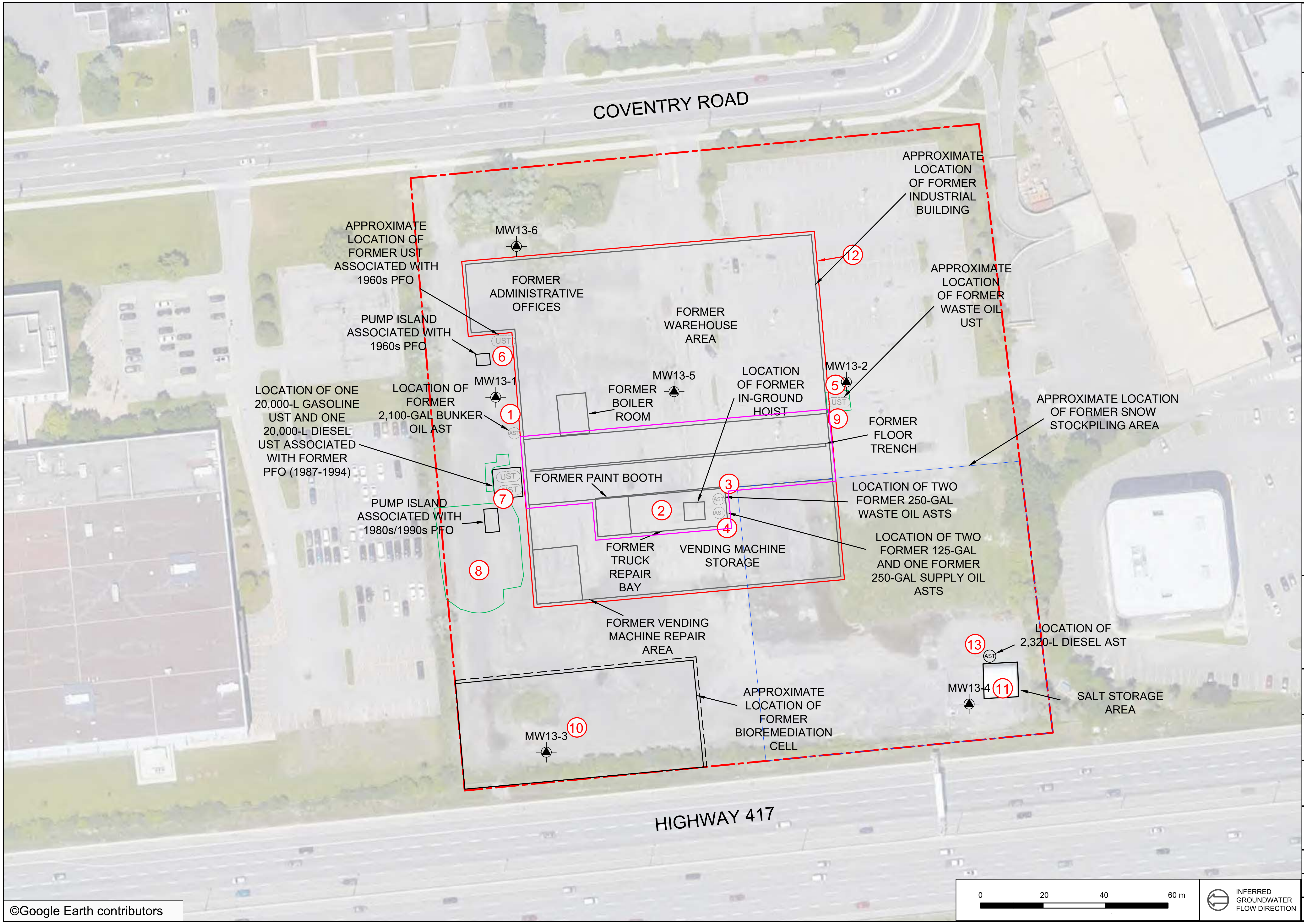
PROJECT NAME:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME:
MORGUARD CORPORATION

PROJECT LOCATION:
500 COVENTRY ROAD,
OTTAWA, ONTARIO

FIGURE NAME:
PHASE ONE STUDY AREA

PROJECT NUMBER: 319674.001	SCALE: AS SHOWN
DRAWN BY: NJ	REVIEWED BY: AK
DATE: NOVEMBER 2024	FIGURE NUMBER: 3



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LEGEND

- SITE BOUNDARY
- LIMITS OF FORMER REMEDIAL EXCAVATIONS (BY OTHERS)
- RAILWAY LINE
- AST ABOVEGROUND STORAGE TANK
- AST FORMER ABOVEGROUND STORAGE TANK
- UST UNDERGROUND STORAGE TANK
- UST FORMER UNDERGROUND STORAGE TANK
- P PARKING
- MONITORING WELL BY OTHERS
- # PCA CONTRIBUTES TO AN APEC
- # PCA DOES NOT CONTRIBUTE TO AN APEC
- PCA POTENTIALLY CONTAMINATING ACTIVITY

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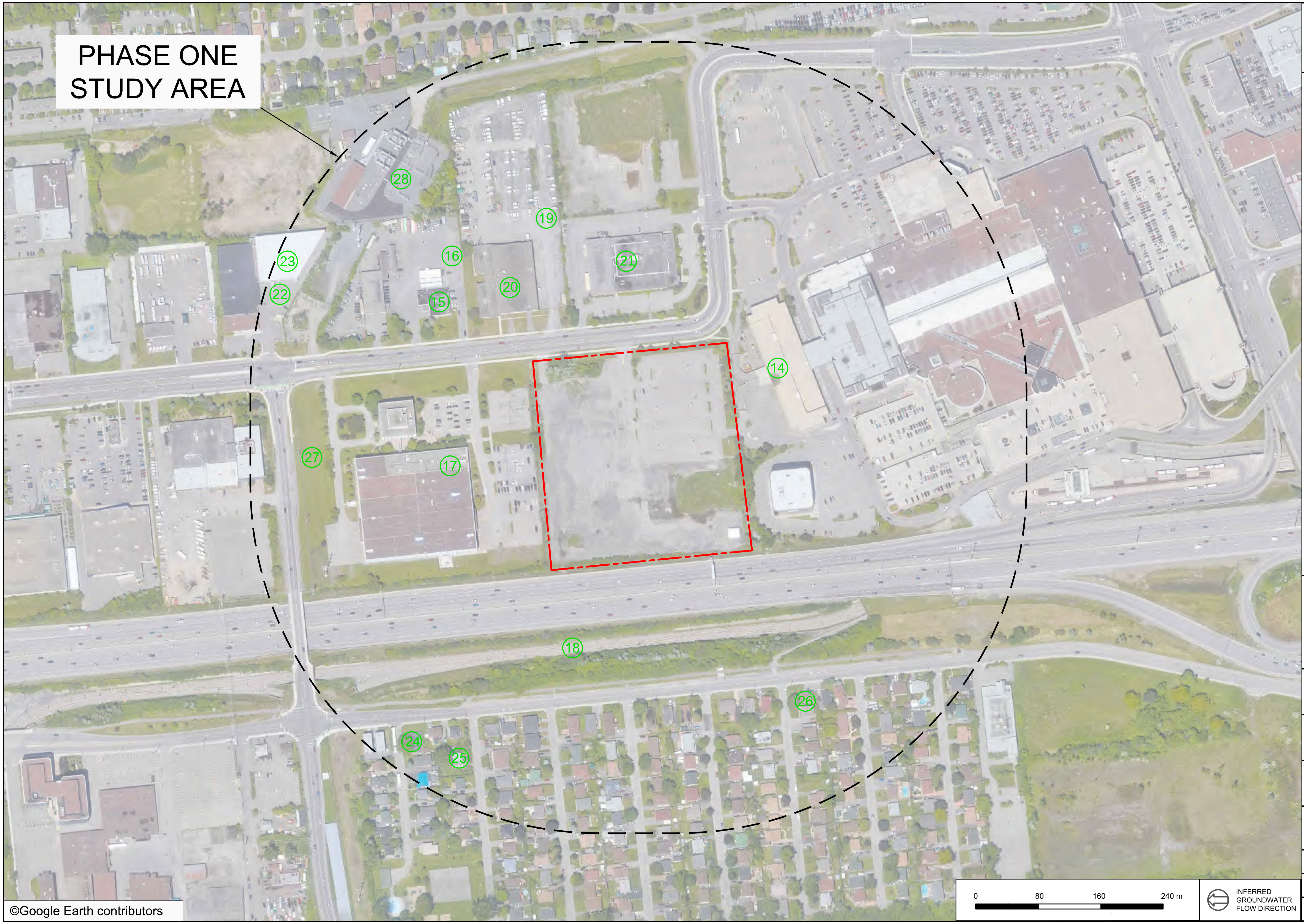
PROJECT NAME:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME:
MORGUARD CORPORATION

PROJECT LOCATION:
500 COVENTRY ROAD,
OTTAWA, ONTARIO

FIGURE NAME:
POTENTIALLY CONTAMINATING ACTIVITIES (ON-SITE)

PROJECT NUMBER: 319674.001	SCALE: AS SHOWN
DRAWN BY: NJ	REVIEWED BY: AK
DATE: NOVEMBER 2024	FIGURE NUMBER: 4



N

LEGEND

- 🟥 SITE BOUNDARY
- - - - PHASE ONE STUDY AREA BOUNDARY
- (#) PCA CONTRIBUTES TO AN APEC
- (#) PCA DOES NOT CONTRIBUTE TO AN APEC

PCA POTENTIALLY CONTAMINATING ACTIVITY

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PINCHIN

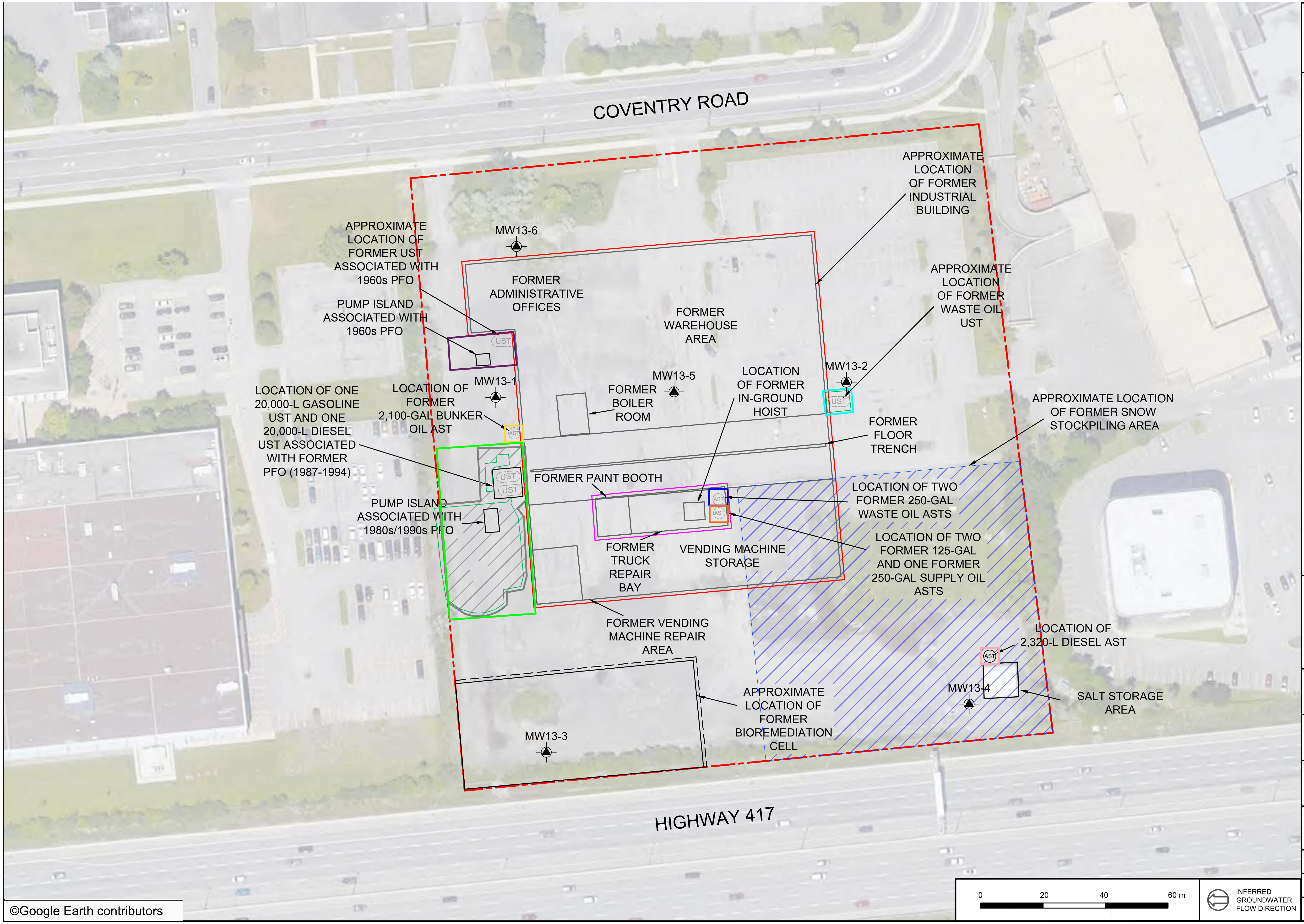
PROJECT NAME:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME:
MORGUARD CORPORATION

PROJECT LOCATION:
500 COVENTRY ROAD,
OTTAWA, ONTARIO

FIGURE NAME:
POTENTIALLY CONTAMINATING ACTIVITIES (OFF-SITE)

PROJECT NUMBER: 319674	SCALE: AS SHOWN
DRAWN BY: NJ	REVIEWED BY: AK
DATE: NOVEMBER 2024	FIGURE NUMBER: 5



LEGEND

- SITE BOUNDARY
- LIMITS OF FORMER REMEDIAL EXCAVATIONS (BY OTHERS)
- RAILWAY LINE
- AST ABOVEGROUND STORAGE TANK
- AST FORMER ABOVEGROUND STORAGE TANK
- UST UNDERGROUND STORAGE TANK
- UST FORMER UNDERGROUND STORAGE TANK
- 🟨 APEC-1
- 🟪 APEC-2
- 🟦 APEC-3
- 🟧 APEC-4
- 🟦 APEC-5 AND APEC-9
- 🟪 APEC-6
- 🟩 APEC-7
- ▨ APEC-8
- ⬚ APEC-10
- ▨ APEC-11
- 🟥 APEC-12
- 🟥 APEC-13

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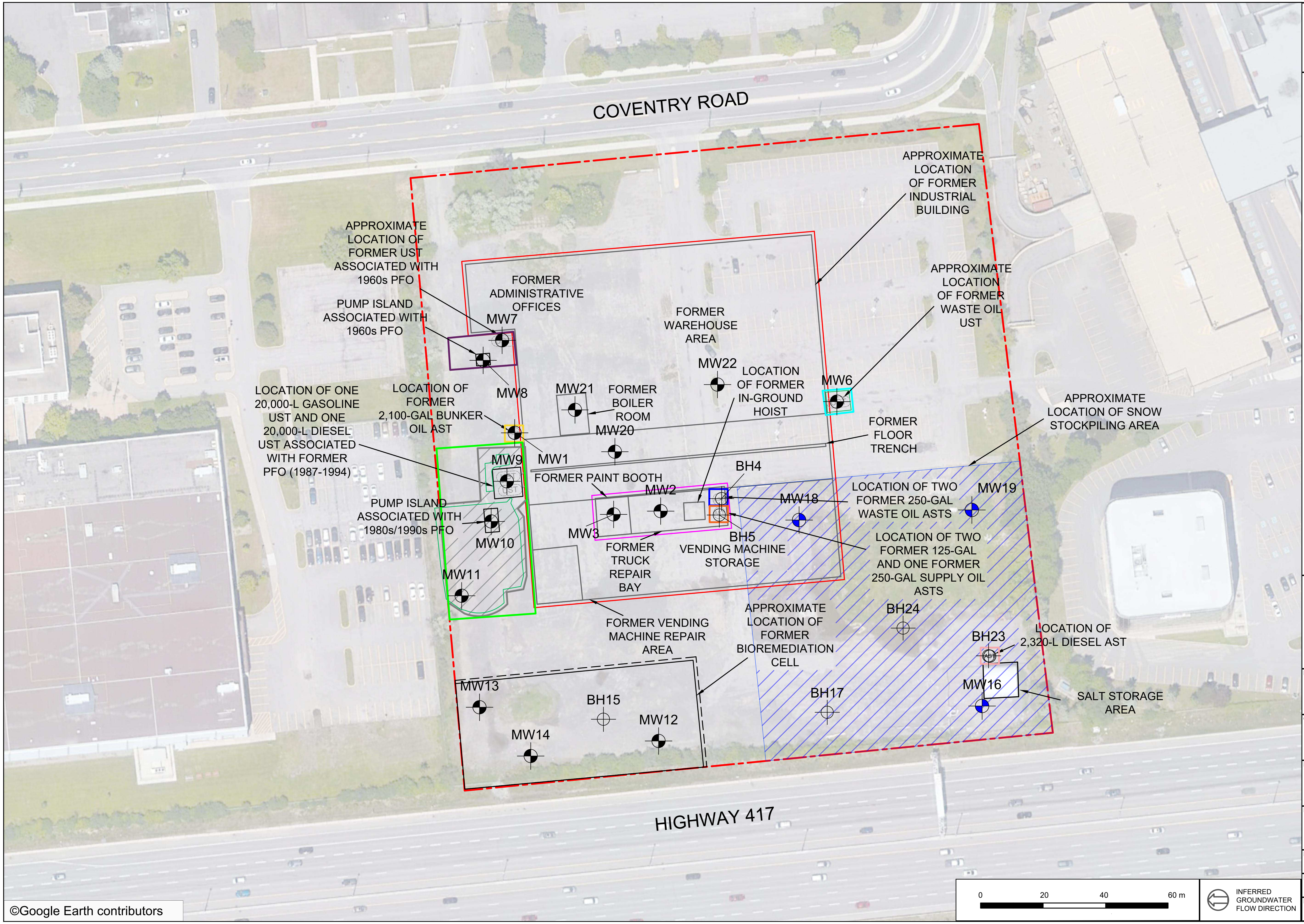
PROJECT NAME:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME:
MORGUARD CORPORATION

PROJECT LOCATION:
500 COVENTRY ROAD,
OTTAWA, ONTARIOP

FIGURE NAME:
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT NUMBER: 319674	SCALE: AS SHOWN
DRAWN BY: NJ	REVIEWED BY: AK
DATE: NOVEMBER 2024	FIGURE NUMBER: 6



N

LEGEND

SITE BOUNDARY
LIMITS OF FORMER REMEDIAL EXCAVATIONS (BY OTHERS)
RAILWAY LINE
AST ABOVEGROUND STORAGE TANK
AST FORMER ABOVEGROUND STORAGE TANK
UST UNDERGROUND STORAGE TANK
UST FORMER UNDERGROUND STORAGE TANK
🟨 APEC-1
🟪 APEC-2
🟦 APEC-3
🟧 APEC-4
🟦 APEC-5 AND APEC-9
🟪 APEC-6
🟩 APEC-7
▨ APEC-8
[ ] APEC-10
▨ APEC-11
🟥 APEC-12
🟥 APEC-13
⌖ BOREHOLE
⊕ MONITORING WELL (PHASE TWO ESA ONLY)
⊕ MONITORING WELL (PHASE TWO ESA & GEOTECHNICAL INVESTIGATION)

PINCHIN

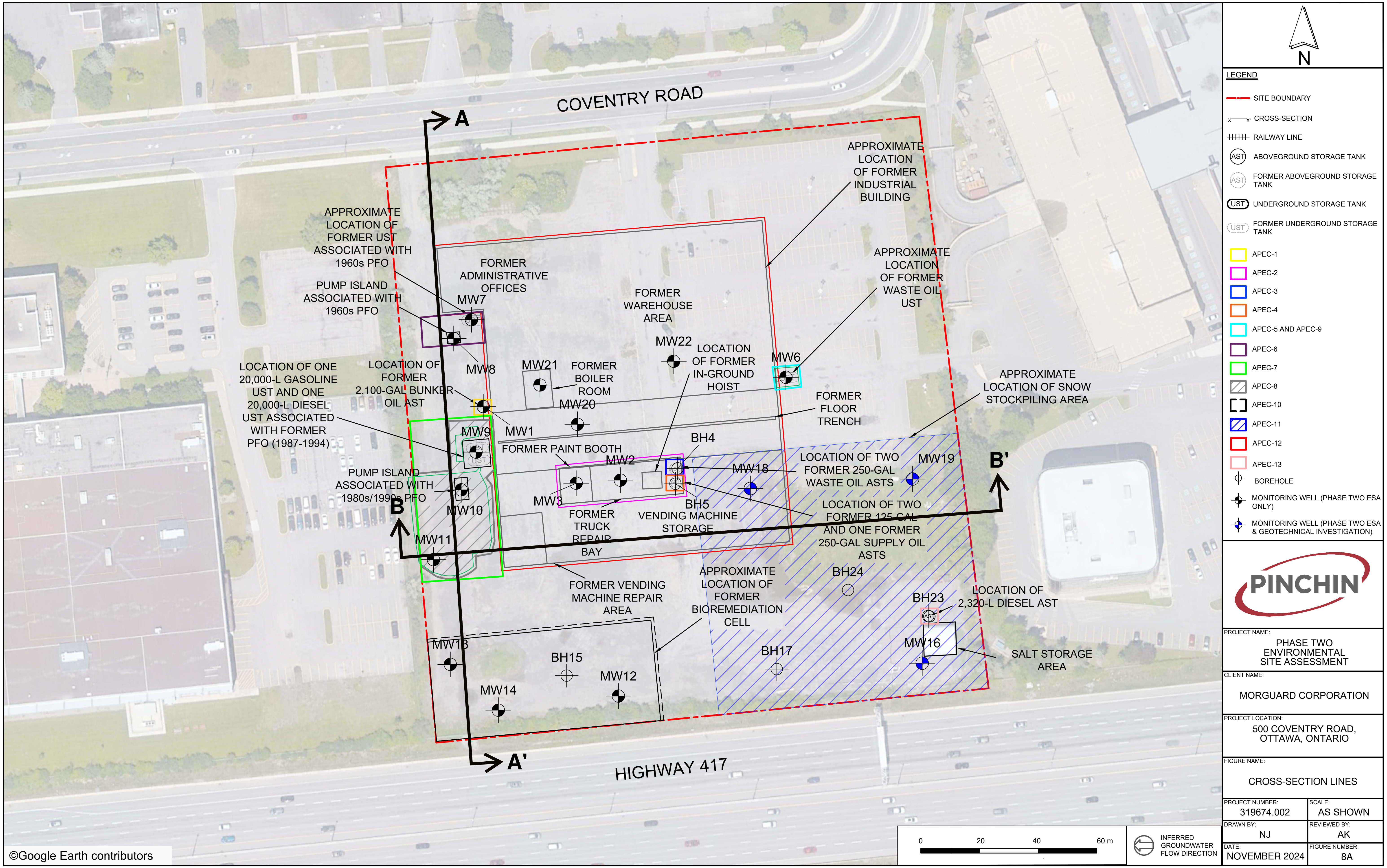
PROJECT NAME:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME:
MORGUARD CORPORATION

PROJECT LOCATION:
500 COVENTRY ROAD, OTTAWA, ONTARIO

FIGURE NAME:
BOREHOLE AND MONITORING WELL LOCATION PLAN

PROJECT NUMBER: 319674.002	SCALE: AS SHOWN
DRAWN BY: NJ	REVIEWED BY: AK
DATE: NOVEMBER 2024	FIGURE NUMBER: 7



PINCHIN

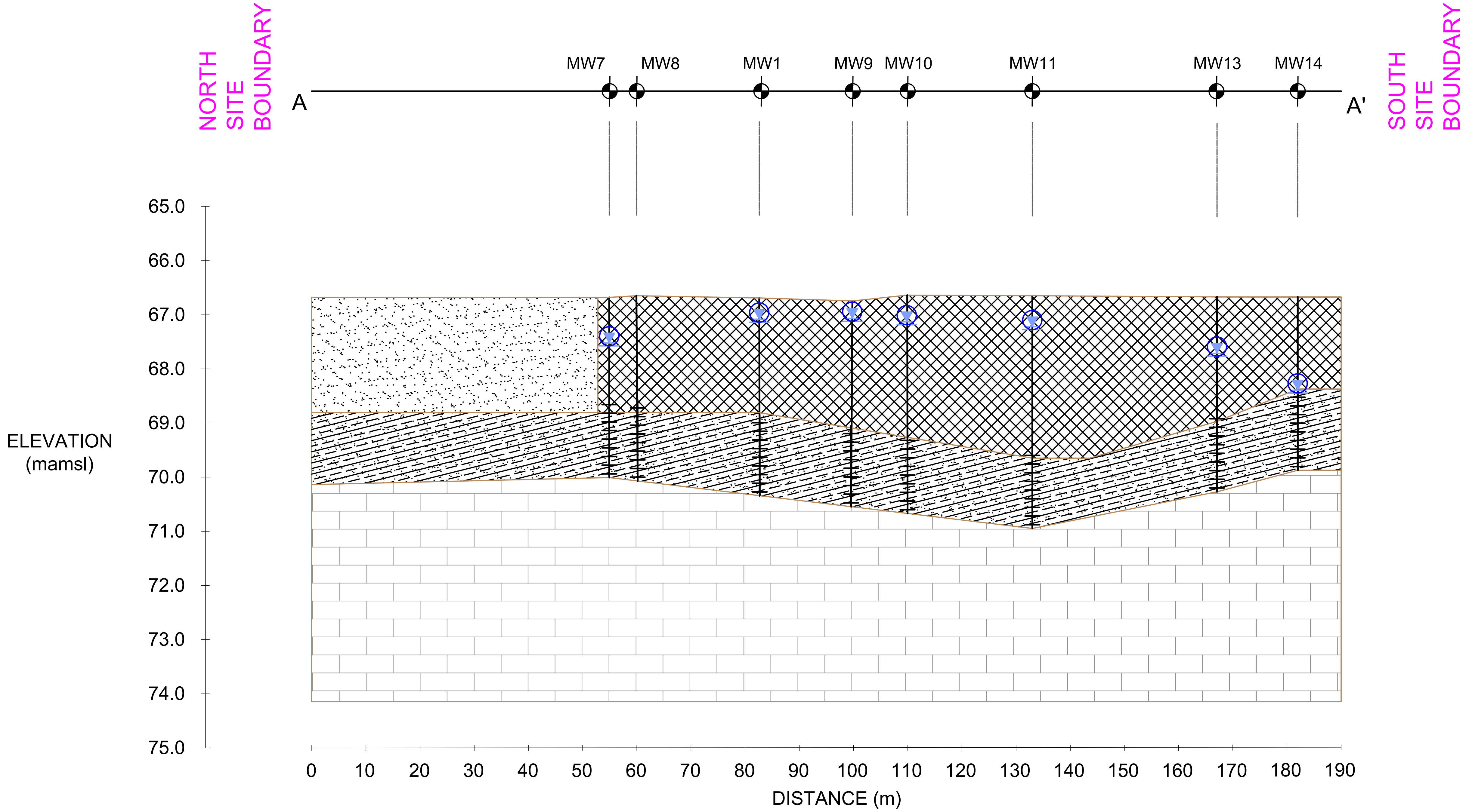
PROJECT NAME:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME:
MORGUARD CORPORATION

PROJECT LOCATION:
500 COVENTRY ROAD,
OTTAWA, ONTARIO

FIGURE NAME:
CROSS-SECTION LINES

PROJECT NUMBER: 319674.002	SCALE: AS SHOWN
DRAWN BY: NJ	REVIEWED BY: AK
DATE: NOVEMBER 2024	FIGURE NUMBER: 8A



N

LEGEND

x——x CROSS-SECTION
ǂ WELL SCREEN
◉ MEASURED GROUNDWATER ELEVATION
▨ FILL
▨ SANDY CLAY
▤ LIMESTONE
▨ SILTY SAND

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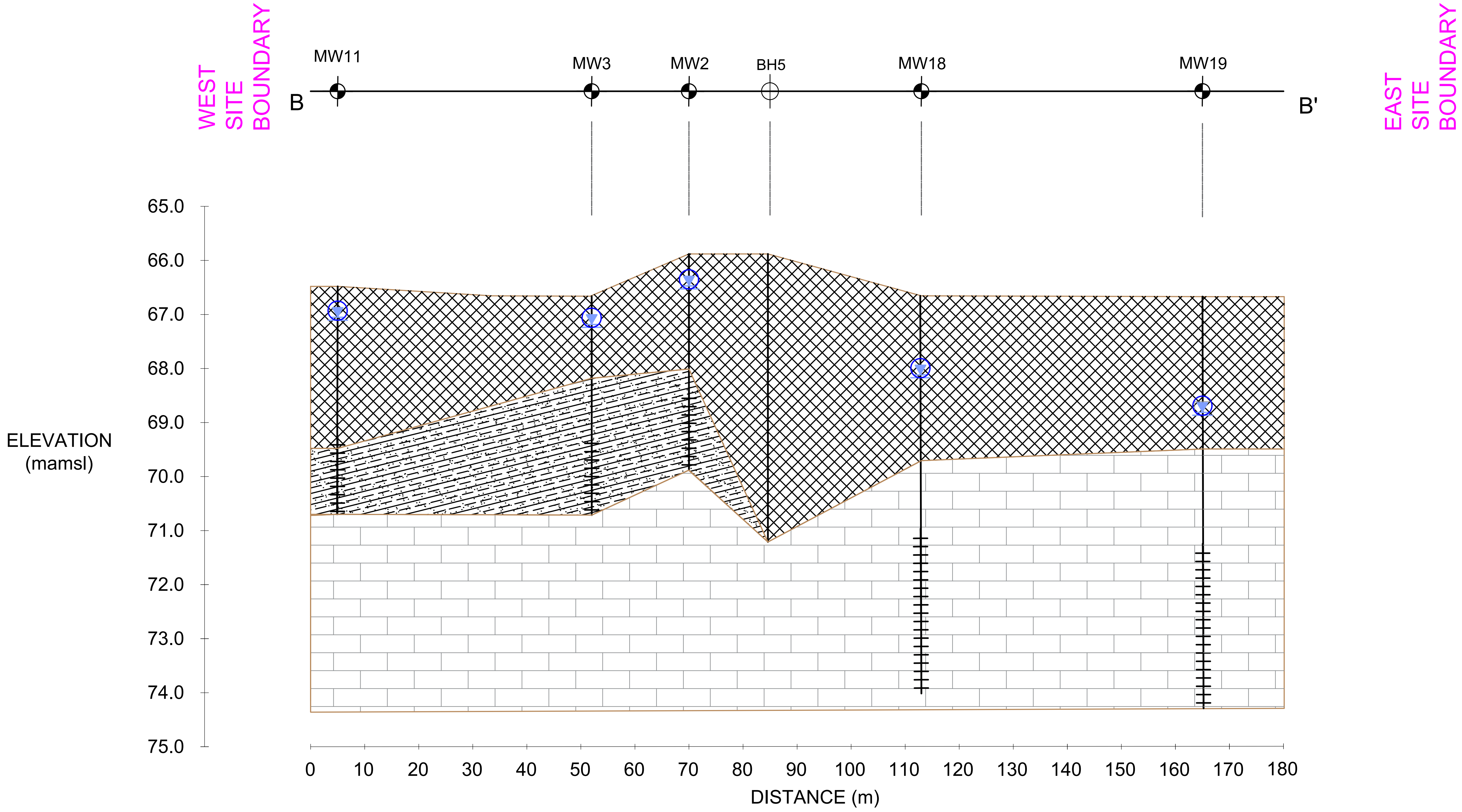
PROJECT NAME:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME:
MORGUARD CORPORATION

PROJECT LOCATION:
500 COVENTRY ROAD, OTTAWA, ONTARIO

FIGURE NAME:
CROSS-SECTION A - A'

PROJECT NUMBER: 319674.002	SCALE: AS SHOWN
DRAWN BY: NJ	REVIEWED BY: AK
DATE: NOVEMBER 2024	FIGURE NUMBER: 8B



N

LEGEND

- CROSS-SECTION
- WELL SCREEN
- ● MEASURED GROUNDWATER ELEVATION
- ▨ FILL
- ▨ SANDY CLAY
- ▦ LIMESTONE
- ▨ SILTY SAND

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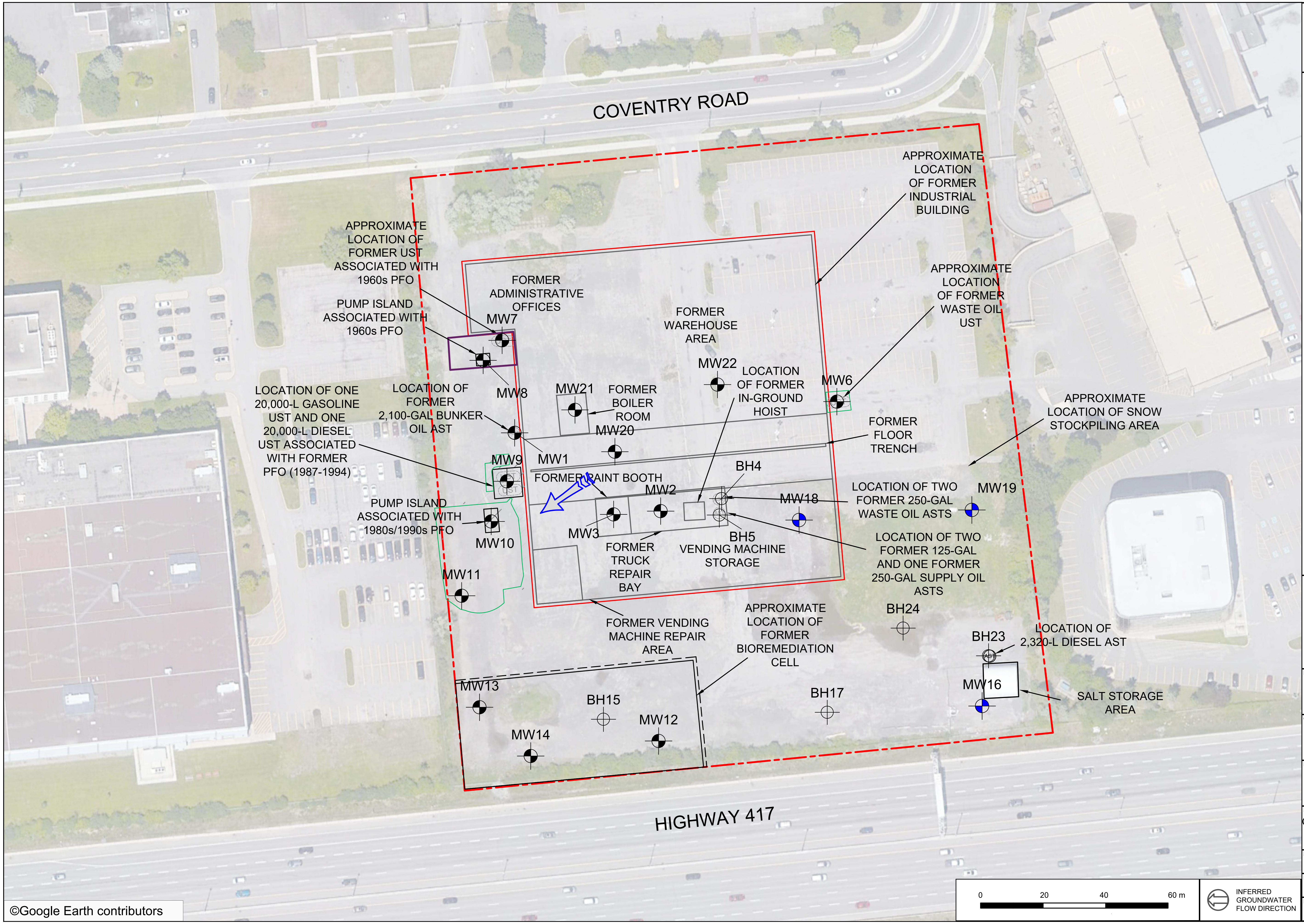
PROJECT NAME:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME:
MORGUARD CORPORATION

PROJECT LOCATION:
500 COVENTRY ROAD,
OTTAWA, ONTARIO

FIGURE NAME:
CROSS-SECTION B - B'

PROJECT NUMBER: 319674.002	SCALE: AS SHOWN
DRAWN BY: NJ	REVIEWED BY: AK
DATE: NOVEMBER 2024	FIGURE NUMBER: 8C



N

LEGEND

- SITE BOUNDARY
- LIMITS OF FORMER REMEDIAL EXCAVATIONS (BY OTHERS)
- RAILWAY LINE
- AST ABOVEGROUND STORAGE TANK
- AST FORMER ABOVEGROUND STORAGE TANK
- UST UNDERGROUND STORAGE TANK
- UST FORMER UNDERGROUND STORAGE TANK
- BOREHOLE
- MONITORING WELL (PHASE TWO ESA ONLY)
- MONITORING WELL (PHASE TWO ESA & GEOTECHNICAL INVESTIGATION)
- GROUNDWATER FLOW DIRECTION

PINCHIN

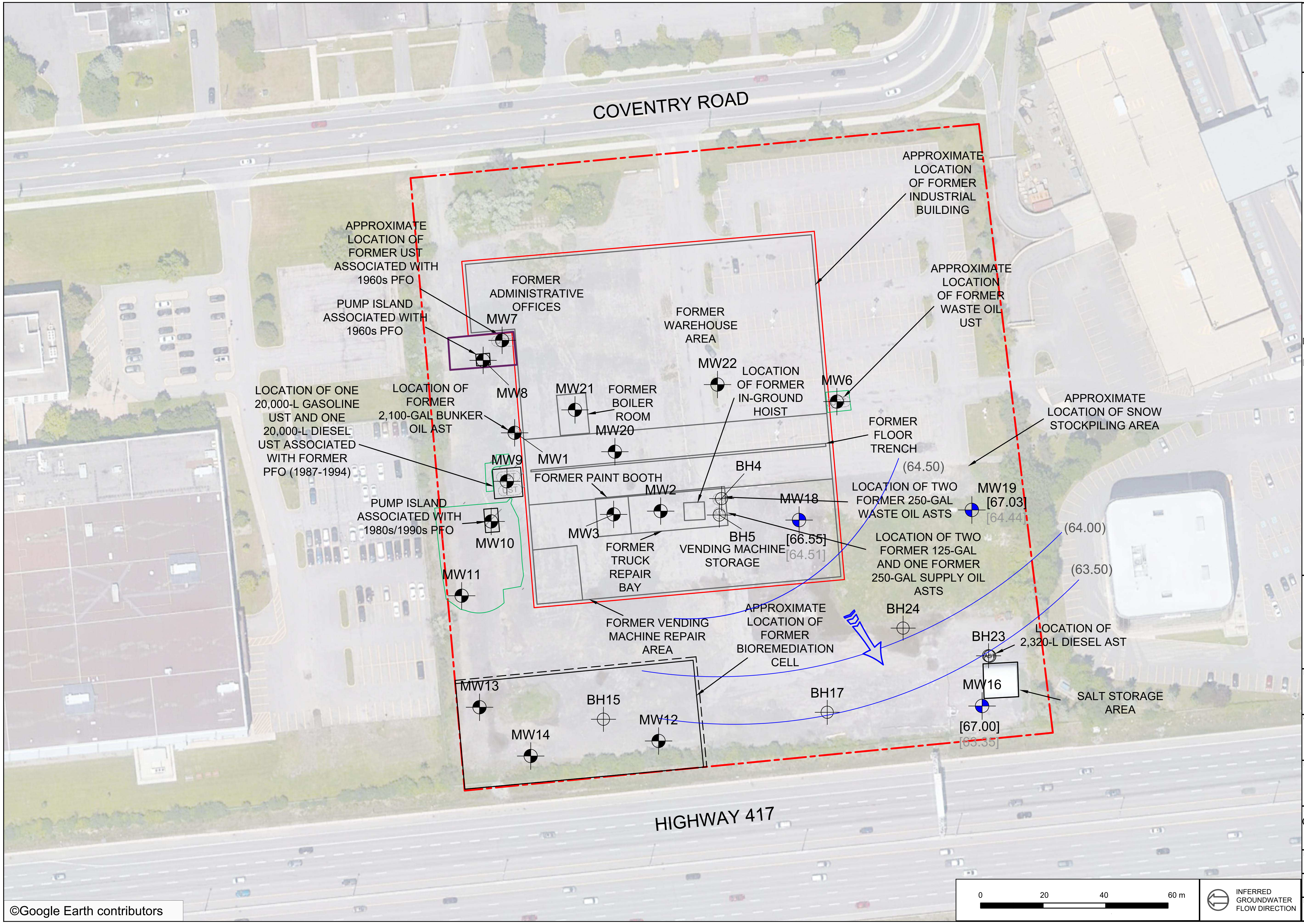
PROJECT NAME:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME:
MORGUARD CORPORATION

PROJECT LOCATION:
500 COVENTRY ROAD,
OTTAWA, ONTARIO

FIGURE NAME:
GROUNDWATER FLOW DIRECTION IN OVERBURDEN MONITORING WELLS

PROJECT NUMBER: 319674.002	SCALE: AS SHOWN
DRAWN BY: NJ	REVIEWED BY: AK
DATE: NOVEMBER 2024	FIGURE NUMBER: 9A



N

LEGEND

	SITE BOUNDARY
	LIMITS OF FORMER REMEDIAL EXCAVATIONS (BY OTHERS)
	RAILWAY LINE
AST	ABOVEGROUND STORAGE TANK
AST	FORMER ABOVEGROUND STORAGE TANK
UST	UNDERGROUND STORAGE TANK
UST	FORMER UNDERGROUND STORAGE TANK
⌖	BOREHOLE
⌖	MONITORING WELL (PHASE TWO ESA ONLY)
⌖	MONITORING WELL (PHASE TWO ESA & GEOTECHNICAL INVESTIGATION)
[XX.XX]	APPROXIMATE GEODETIC GROUND ELEVATION (mamsl)
[XX.XX]	APPROXIMATE GEODETIC GROUND-WATER ELEVATION (mamsl)
↖	GROUNDWATER FLOW DIRECTION

PINCHIN

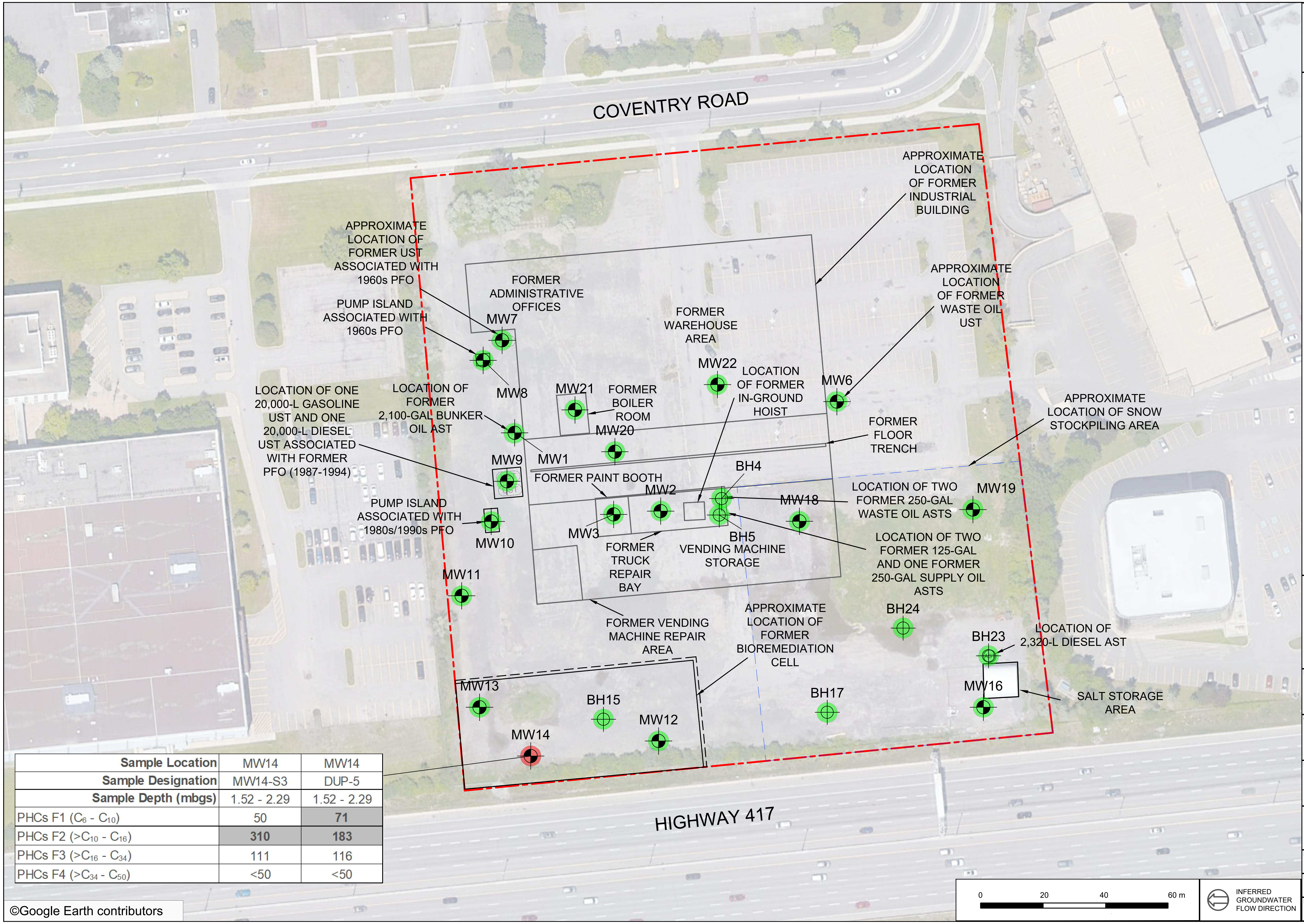
PROJECT NAME:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME:
MORGUARD CORPORATION

PROJECT LOCATION:
500 COVENTRY ROAD, OTTAWA, ONTARIO

FIGURE NAME:
GROUNDWATER FLOW DIRECTION IN SHALLOW BEDROCK MONITORING WELLS

PROJECT NUMBER: 319674.002	SCALE: AS SHOWN
DRAWN BY: NJ	REVIEWED BY: AK
DATE: NOVEMBER 2024	FIGURE NUMBER: 9B



Sample Location	MW14	MW14
Sample Designation	MW14-S3	DUP-5
Sample Depth (mbgs)	1.52 - 2.29	1.52 - 2.29
PHCs F1 (C_6 - C_{10})	50	71
PHCs F2 (>C_{10} - C_{16})	310	183
PHCs F3 (>C_{16} - C_{34})	111	116
PHCs F4 (>C_{34} - C_{50})	<50	<50

N

LEGEND

SITE BOUNDARY
LIMITS OF FORMER REMEDIAL EXCAVATIONS (BY OTHERS)
RAILWAY LINE
AST ABOVEGROUND STORAGE TANK
AST FORMER ABOVEGROUND STORAGE TANK
UST UNDERGROUND STORAGE TANK
UST FORMER UNDERGROUND STORAGE TANK
BOREHOLE
MONITORING WELL
🟥 EXCEEDS APPLICABLE STANDARDS/CRITERIA
🟩 MEETS APPLICABLE STANDARDS/CRITERIA

Petroleum Hydrocarbons (PHCs)	*Table 3 Standards*
PHCs F1 (C_6 - C_{10})	55
PHCs F2 (>C_{10} - C_{16})	98
PHCs F3 (>C_{16} - C_{34})	300
PHCs F4 (>C_{34} - C_{50})	2800

PINCHIN

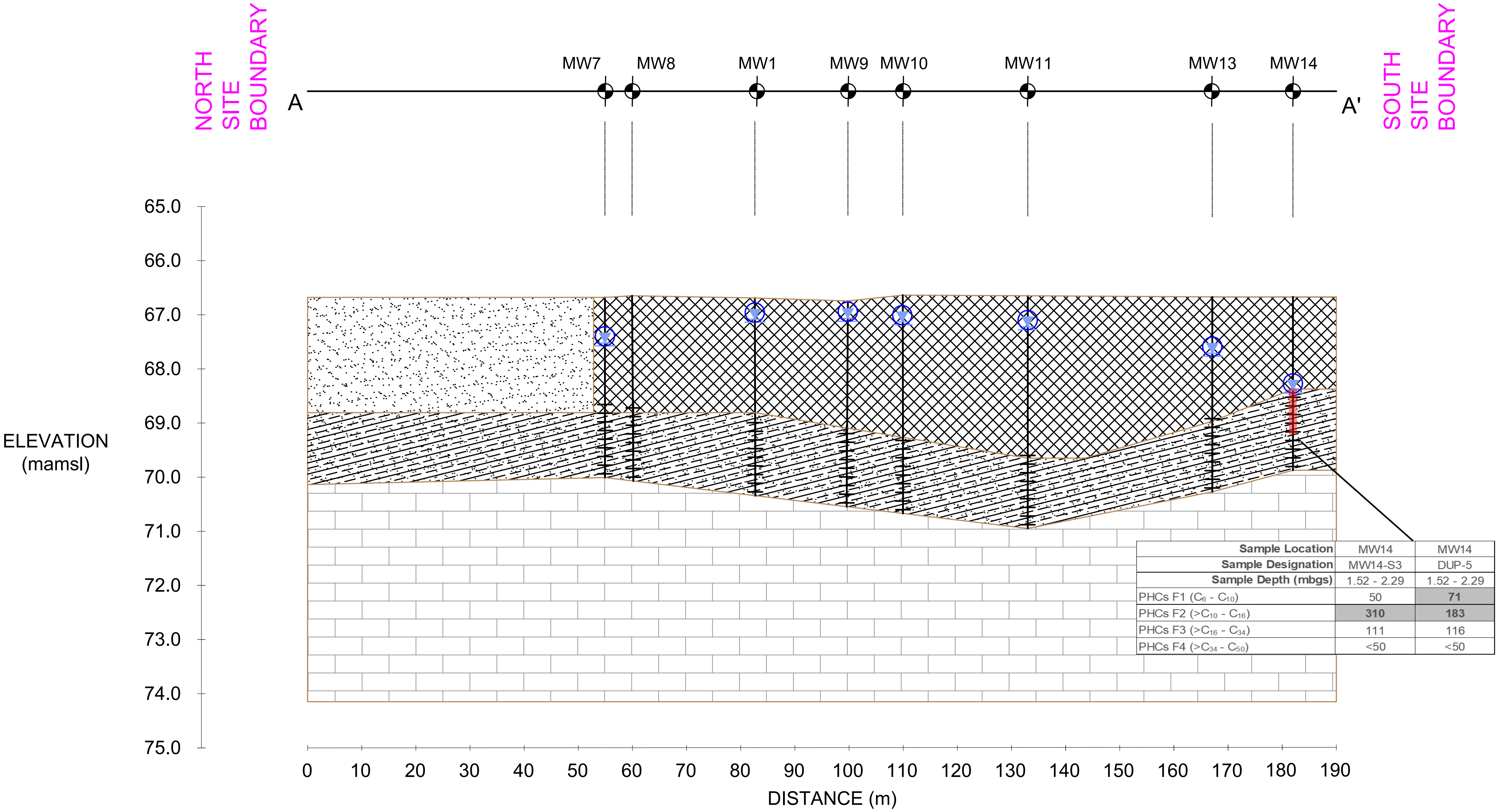
PROJECT NAME:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME:
MORGUARD CORPORATION

PROJECT LOCATION:
500 COVENTRY ROAD,
OTTAWA, ONTARIO

FIGURE NAME:
PLAN VIEW SHOWING PHC EXCEEDANCES IN SOIL

PROJECT NUMBER: 319674.002
SCALE: AS SHOWN
DRAWN BY: NJ
REVIEWED BY: AK
DATE: NOVEMBER 2024
FIGURE NUMBER: 10A



Sample Location	MW14	MW14
Sample Designation	MW14-S3	DUP-5
Sample Depth (mbgs)	1.52 - 2.29	1.52 - 2.29
PHCs F1 (C_6 - C_{10})	50	**71**
PHCs F2 (>C_{10} - C_{16})	**310**	**183**
PHCs F3 (>C_{16} - C_{34})	111	116
PHCs F4 (>C_{34} - C_{50})	<50	<50

N

LEGEND

x—x	CROSS-SECTION
ǂ	WELL SCREEN
⊗	MEASURED GROUNDWATER ELEVATION
▩	FILL
▨	SANDY CLAY
▤	LIMESTONE
▦	SILTY SAND

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PINCHIN

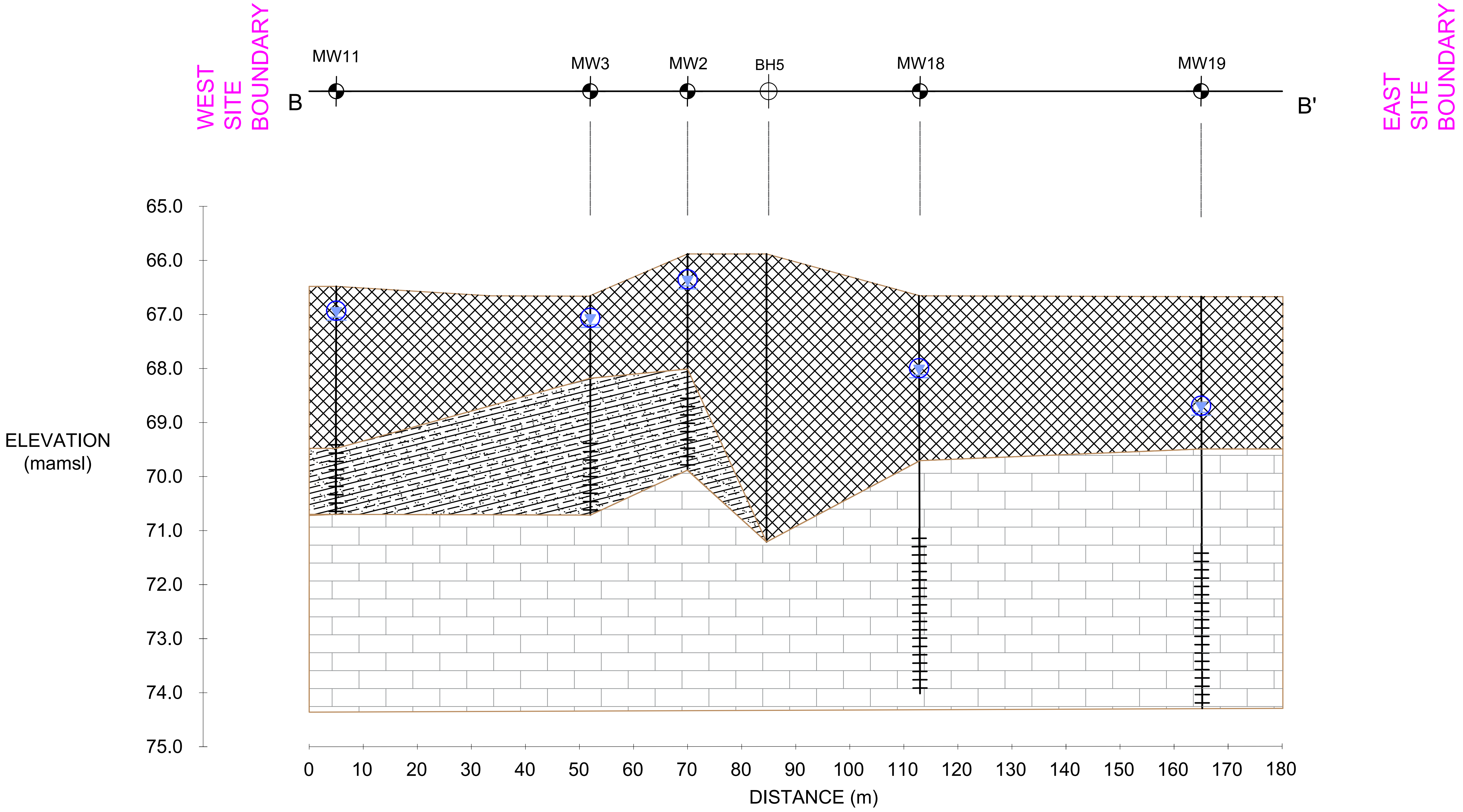
PROJECT NAME:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME:
MORGUARD CORPORATION

PROJECT LOCATION:
500 COVENTRY ROAD,
OTTAWA, ONTARIO

FIGURE NAME:
CROSS-SECTION A - A' SHOWING PHC EXCEEDANCES IN SOIL

PROJECT NUMBER: 319674.002	SCALE: AS SHOWN
DRAWN BY: NJ	REVIEWED BY: AK
DATE: NOVEMBER 2024	FIGURE NUMBER: 10B



N

LEGEND

CROSS-SECTION
WELL SCREEN
MEASURED GROUNDWATER ELEVATION
▨ FILL
▨ SANDY CLAY
▨ LIMESTONE
▨ SILTY SAND

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PINCHIN

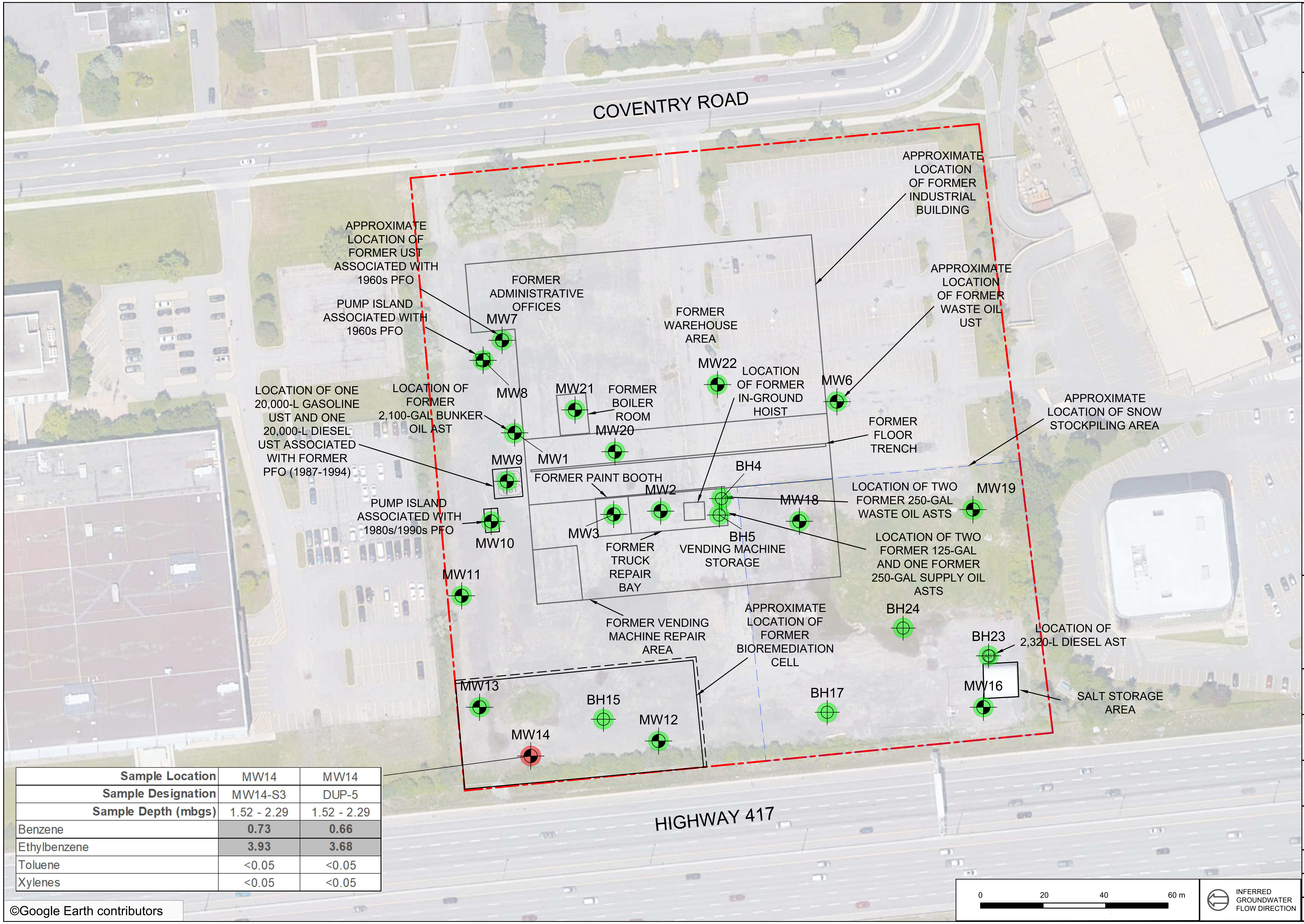
PROJECT NAME:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME:
MORGUARD CORPORATION

PROJECT LOCATION:
500 COVENTRY ROAD,
OTTAWA, ONTARIO

FIGURE NAME:
CROSS-SECTION B - B' SHOWING PHC EXCEEDANCES IN SOIL

PROJECT NUMBER: 319674.002	SCALE: AS SHOWN
DRAWN BY: NJ	REVIEWED BY: AK
DATE: NOVEMBER 2024	FIGURE NUMBER: 10C



Sample Location	MW14	MW14
Sample Designation	MW14-S3	DUP-5
Sample Depth (mbgs)	1.52 - 2.29	1.52 - 2.29
Benzene	**0.73**	**0.66**
Ethylbenzene	**3.93**	**3.68**
Toluene	<0.05	<0.05
Xylenes	<0.05	<0.05

LEGEND

- SITE BOUNDARY
- LIMITS OF FORMER REMEDIAL EXCAVATIONS (BY OTHERS)
- RAILWAY LINE
- AST ABOVEGROUND STORAGE TANK
- AST FORMER ABOVEGROUND STORAGE TANK
- UST UNDERGROUND STORAGE TANK
- UST FORMER UNDERGROUND STORAGE TANK
- BOREHOLE
- MONITORING WELL
- 🟥 EXCEEDS APPLICABLE STANDARDS/CRITERIA
- 🟩 MEETS APPLICABLE STANDARDS/CRITERIA

	Table 3 Standards
Benzene	0.21
Ethylbenzene	2
Toluene	2.3
Xylenes	3.1

PINCHIN

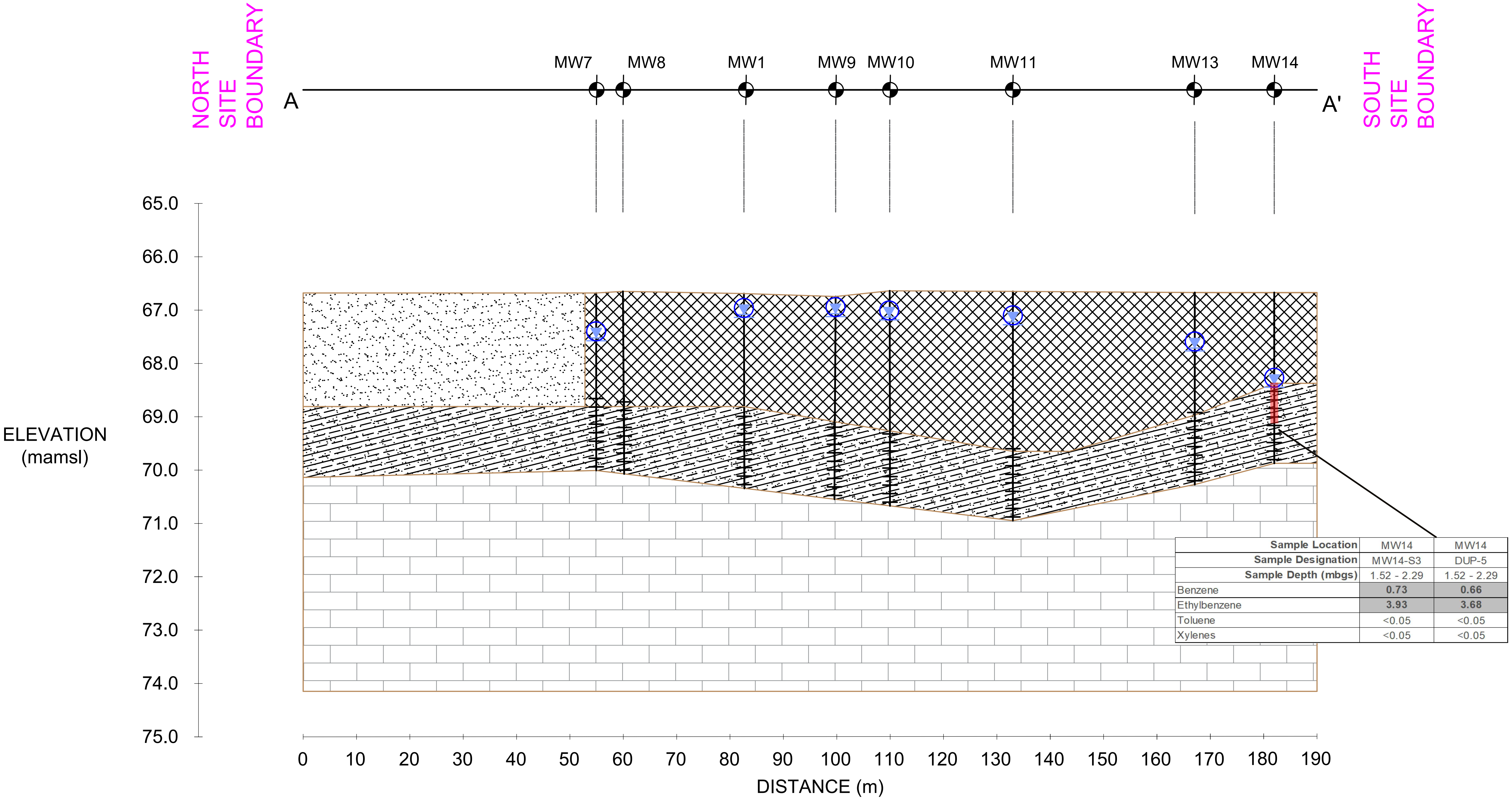
PROJECT NAME:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME:
MORGUARD CORPORATION

PROJECT LOCATION:
500 COVENTRY ROAD,
OTTAWA, ONTARIO

FIGURE NAME:
PLAN VIEW SHOWING BTEX EXCEEDANCES IN SOIL

PROJECT NUMBER:	SCALE:
319674.002	AS SHOWN
DRAWN BY: NJ	REVIEWED BY: AK
DATE: NOVEMBER 2024	FIGURE NUMBER: 11A



Sample Location	MW14	MW14
Sample Designation	MW14-S3	DUP-5
Sample Depth (mbgs)	1.52 - 2.29	1.52 - 2.29
Benzene	**0.73**	**0.66**
Ethylbenzene	**3.93**	**3.68**
Toluene	<0.05	<0.05
Xylenes	<0.05	<0.05

N

LEGEND

- x—x CROSS-SECTION
- ǂ WELL SCREEN
- ⊗ MEASURED GROUNDWATER ELEVATION
- ▩ FILL
- ▨ SANDY CLAY
- ▤ LIMESTONE
- ▦ SILTY SAND

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NON-COLOUR COPIES MAY ALTER
INTERPRETATION.

PINCHIN

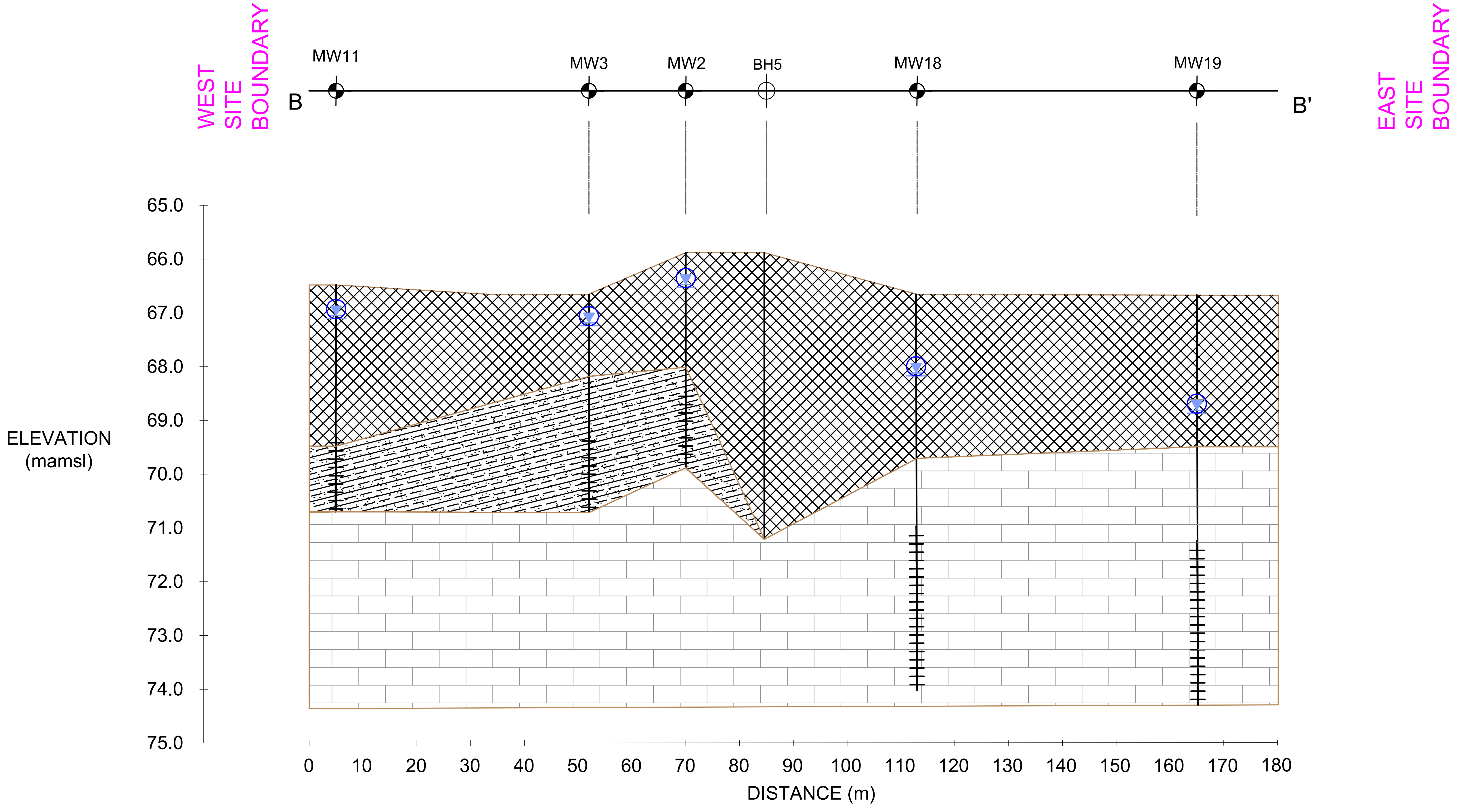
PROJECT NAME:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME:
MORGUARD CORPORATION

PROJECT LOCATION:
500 COVENTRY ROAD,
OTTAWA, ONTARIO

FIGURE NAME:
CROSS-SECTION A - A' SHOWING BTEX EXCEEDANCES IN SOIL

PROJECT NUMBER: 319674.002	SCALE: AS SHOWN
DRAWN BY: NJ	REVIEWED BY: AK
DATE: NOVEMBER 2024	FIGURE NUMBER: 11B



LEGEND

- CROSS-SECTION
- WELL SCREEN
- MEASURED GROUNDWATER ELEVATION
- ▨ FILL
- ▨ SANDY CLAY
- ▨ LIMESTONE
- ▨ SILTY SAND

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PINCHIN

PROJECT NAME:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME:
MORGUARD CORPORATION

PROJECT LOCATION:
500 COVENTRY ROAD,
OTTAWA, ONTARIO

FIGURE NAME:
CROSS-SECTION B - B' SHOWING BTEX EXCEEDANCES IN SOIL

PROJECT NUMBER: 319674.002	SCALE: AS SHOWN
DRAWN BY: NJ	REVIEWED BY: AK
DATE: NOVEMBER 2024	FIGURE NUMBER: 11C

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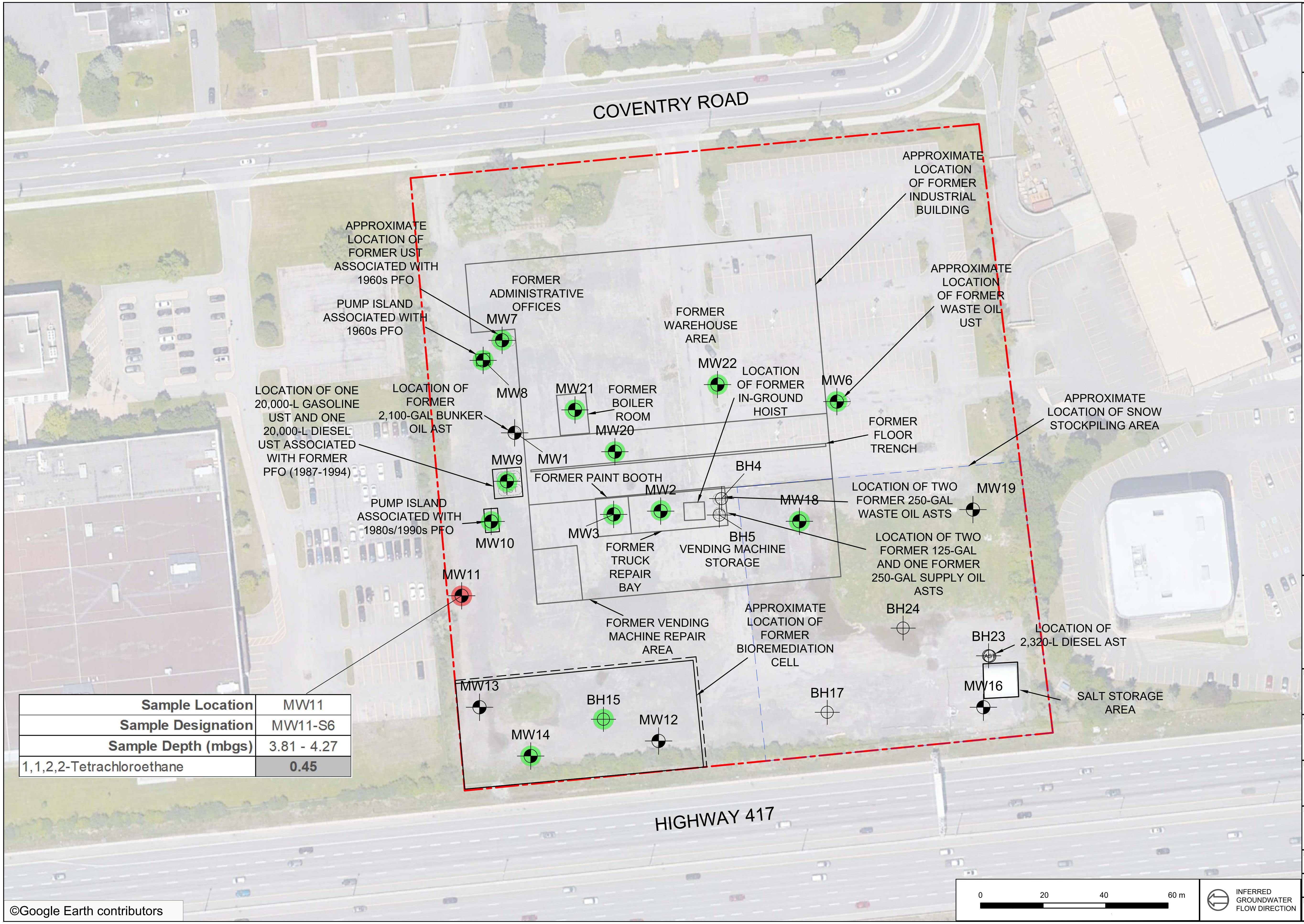


Sample Location	MW11
Sample Designation	MW11-S6
Sample Depth (mbgs)	3.81 - 4.27
1,1,2,2-Tetrachloroethane	**0.45**

N

LEGEND

SITE BOUNDARY

LIMITS OF FORMER REMEDIAL EXCAVATIONS (BY OTHERS)

RAILWAY LINE

AST ABOVEGROUND STORAGE TANK

AST FORMER ABOVEGROUND STORAGE TANK

UST UNDERGROUND STORAGE TANK

UST FORMER UNDERGROUND STORAGE TANK

BOREHOLE

MONITORING WELL

🟥 EXCEEDS APPLICABLE STANDARDS/CRITERIA

🟩 MEETS APPLICABLE STANDARDS/CRITERIA

	Table 3 Standards
1,1,2,2-Tetrachloroethane	0.05

PINCHIN

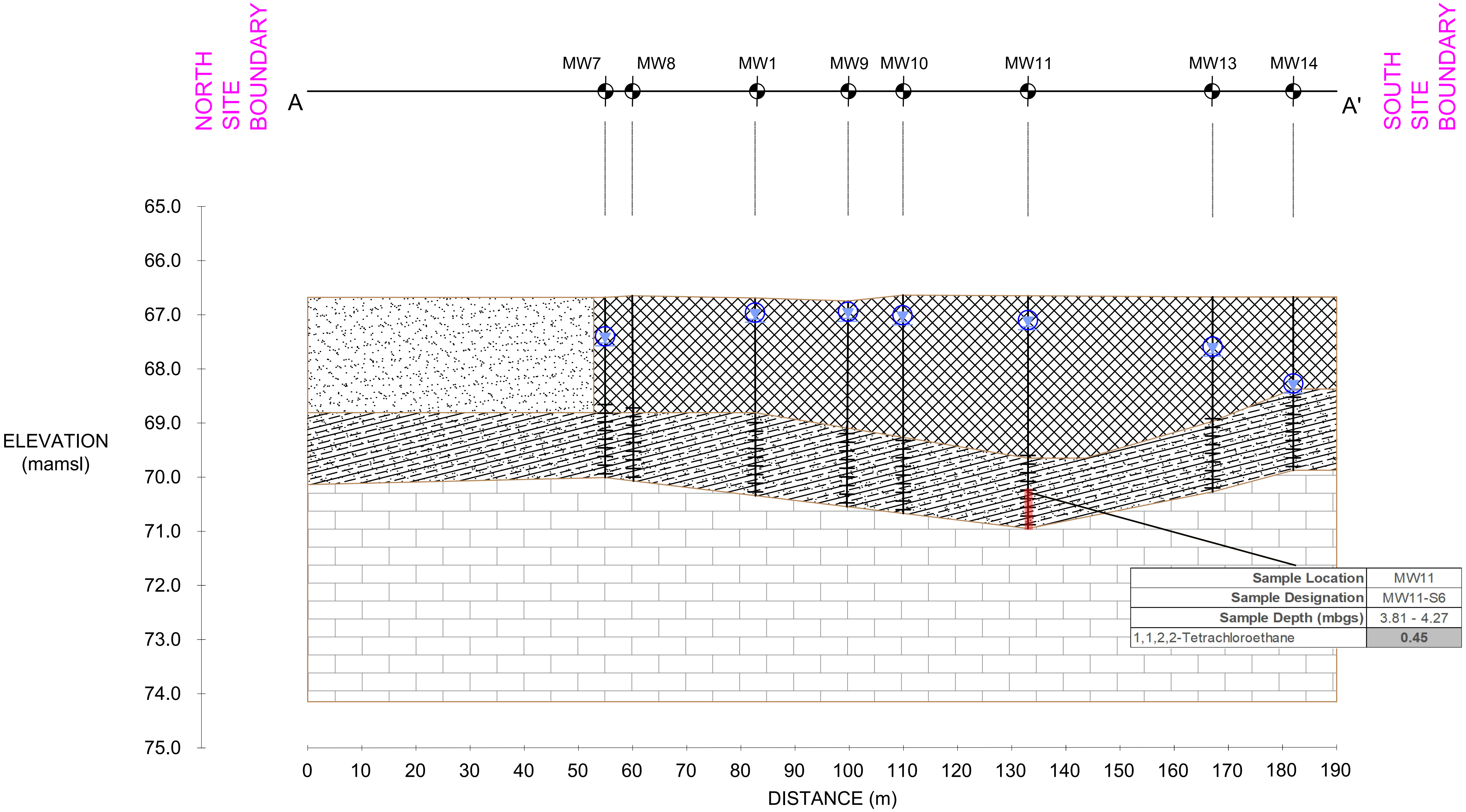
PROJECT NAME:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME:
MORGUARD CORPORATION

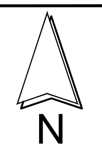
PROJECT LOCATION:
500 COVENTRY ROAD,
OTTAWA, ONTARIO

FIGURE NAME:
PLAN VIEW SHOWING VOC EXCEEDANCES IN SOIL

PROJECT NUMBER: 319674.002	SCALE: AS SHOWN
DRAWN BY: NJ	REVIEWED BY: AK
DATE: NOVEMBER 2024	FIGURE NUMBER: 12A



Sample Location	MW11
Sample Designation	MW11-S6
Sample Depth (mbgs)	3.81 - 4.27
1,1,2,2-Tetrachloroethane	**0.45**



LEGEND

×—×	CROSS-SECTION
ǂ	WELL SCREEN
●	MEASURED GROUNDWATER ELEVATION
▩	FILL
▨	SANDY CLAY
▤	LIMESTONE
▦	SILTY SAND

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PINCHIN

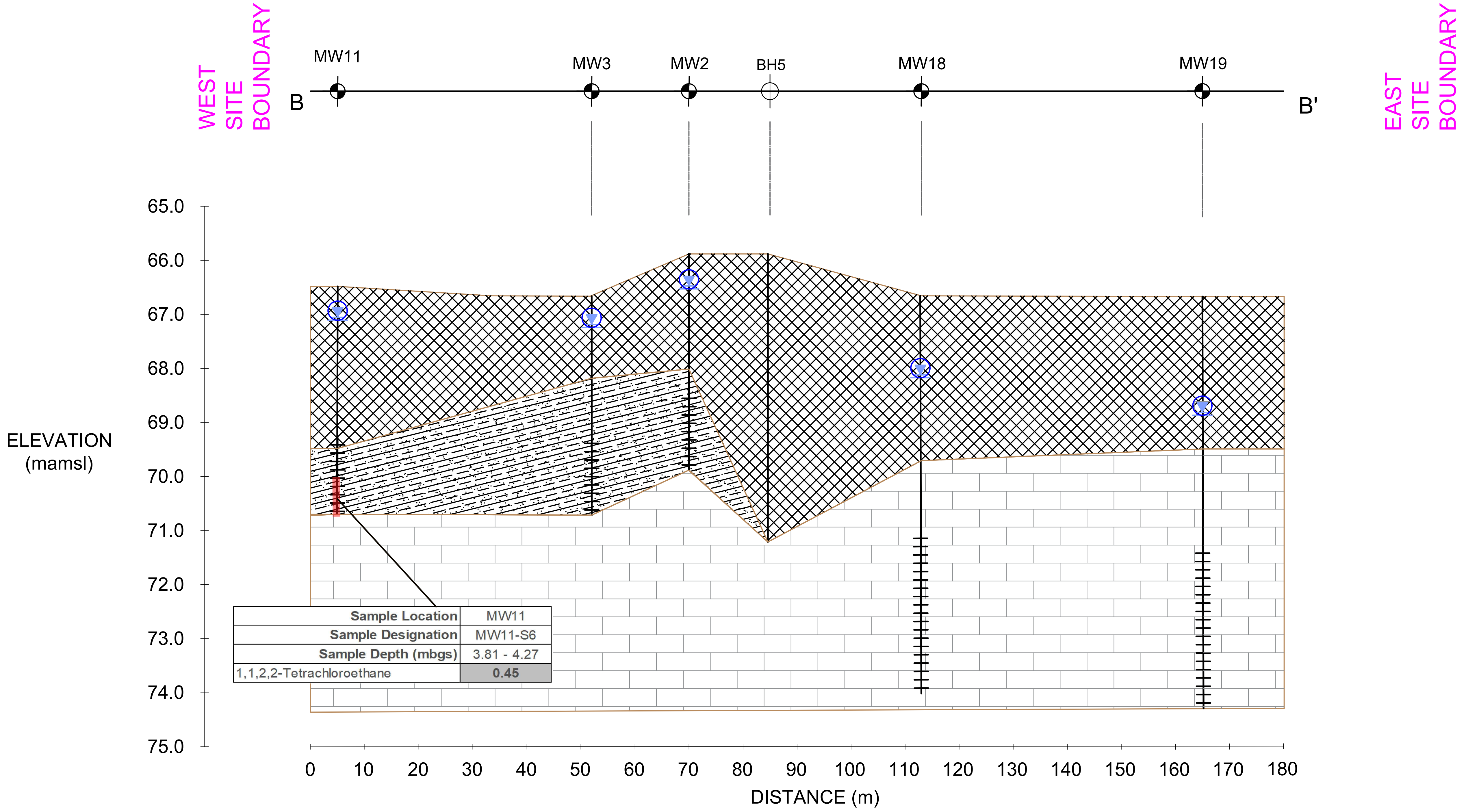
PROJECT NAME:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME:
MORGUARD CORPORATION

PROJECT LOCATION:
500 COVENTRY ROAD,
OTTAWA, ONTARIO

FIGURE NAME:
CROSS-SECTION A - A' SHOWING VOC EXCEEDANCES IN SOIL

PROJECT NUMBER: 319674.002	SCALE: AS SHOWN
DRAWN BY: NJ	REVIEWED BY: AK
DATE: NOVEMBER 2024	FIGURE NUMBER: 12B



Sample Location	MW11
Sample Designation	MW11-S6
Sample Depth (mbgs)	3.81 - 4.27
1,1,2,2-Tetrachloroethane	0.45

N

LEGEND

x—x CROSS-SECTION
ǂ WELL SCREEN
◉ MEASURED GROUNDWATER ELEVATION
▨ FILL
▨ SANDY CLAY
▤ LIMESTONE
▨ SILTY SAND

LEGEND IS COLOUR DEPENDENT. NON-COLOUR COPIES MAY ALTER INTERPRETATION.

PINCHIN

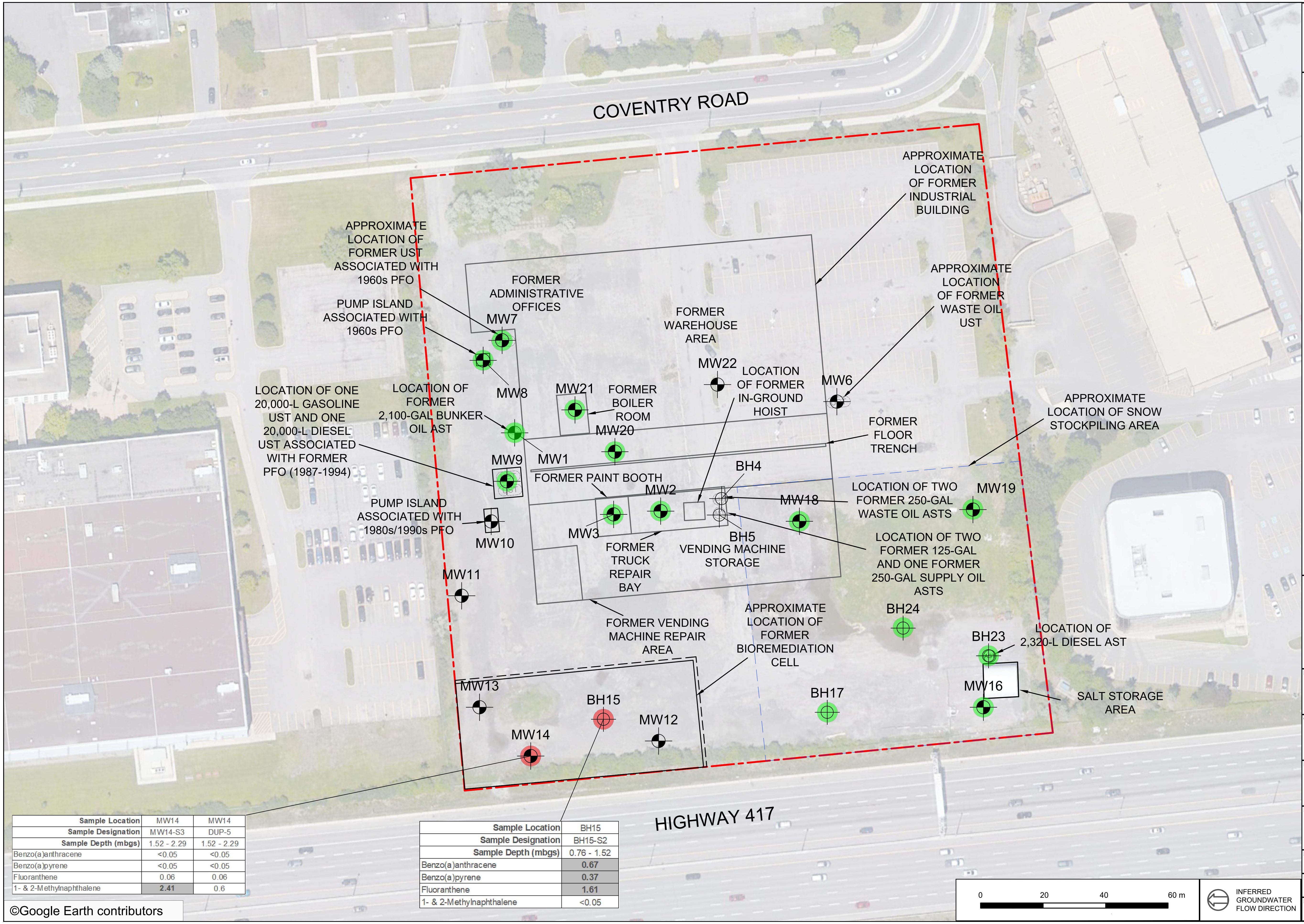
PROJECT NAME:
PHASE TWO
ENVIRONMENTAL
SITE ASSESSMENT

CLIENT NAME:
MORGUARD CORPORATION

PROJECT LOCATION:
500 COVENTRY ROAD,
OTTAWA, ONTARIO

FIGURE NAME:
CROSS-SECTION B - B' SHOWING
VOC EXCEEDANCES IN SOIL

PROJECT NUMBER:	SCALE:
319674.002	AS SHOWN
DRAWN BY:	REVIEWED BY:
NJ	AK
DATE:	FIGURE NUMBER:
NOVEMBER 2024	12C



Sample Location	MW14	MW14
Sample Designation	MW14-S3	DUP-5
Sample Depth (mbgs)	1.52 - 2.29	1.52 - 2.29
Benzo(a)anthracene	<0.05	<0.05
Benzo(a)pyrene	<0.05	<0.05
Fluoranthene	0.06	0.06
1- & 2-Methylnaphthalene	**2.41**	0.6

Sample Location	BH15
Sample Designation	BH15-S2
Sample Depth (mbgs)	0.76 - 1.52
Benzo(a)anthracene	**0.67**
Benzo(a)pyrene	**0.37**
Fluoranthene	**1.61**
1- & 2-Methylnaphthalene	<0.05

LEGEND

- SITE BOUNDARY
- LIMITS OF FORMER REMEDIAL EXCAVATIONS (BY OTHERS)
- RAILWAY LINE
- AST ABOVEGROUND STORAGE TANK
- AST FORMER ABOVEGROUND STORAGE TANK
- UST UNDERGROUND STORAGE TANK
- UST FORMER UNDERGROUND STORAGE TANK
- BOREHOLE
- MONITORING WELL
- 🟥 EXCEEDS APPLICABLE STANDARDS/CRITERIA
- 🟩 MEETS APPLICABLE STANDARDS/CRITERIA

Polycyclic Aromatic Hydrocarbons	*Table 3 Standards*
Benzo(a)anthracene	0.5
Benzo(a)pyrene	0.3
Fluoranthene	0.69
1- & 2-Methylnaphthalene	0.99

PINCHIN

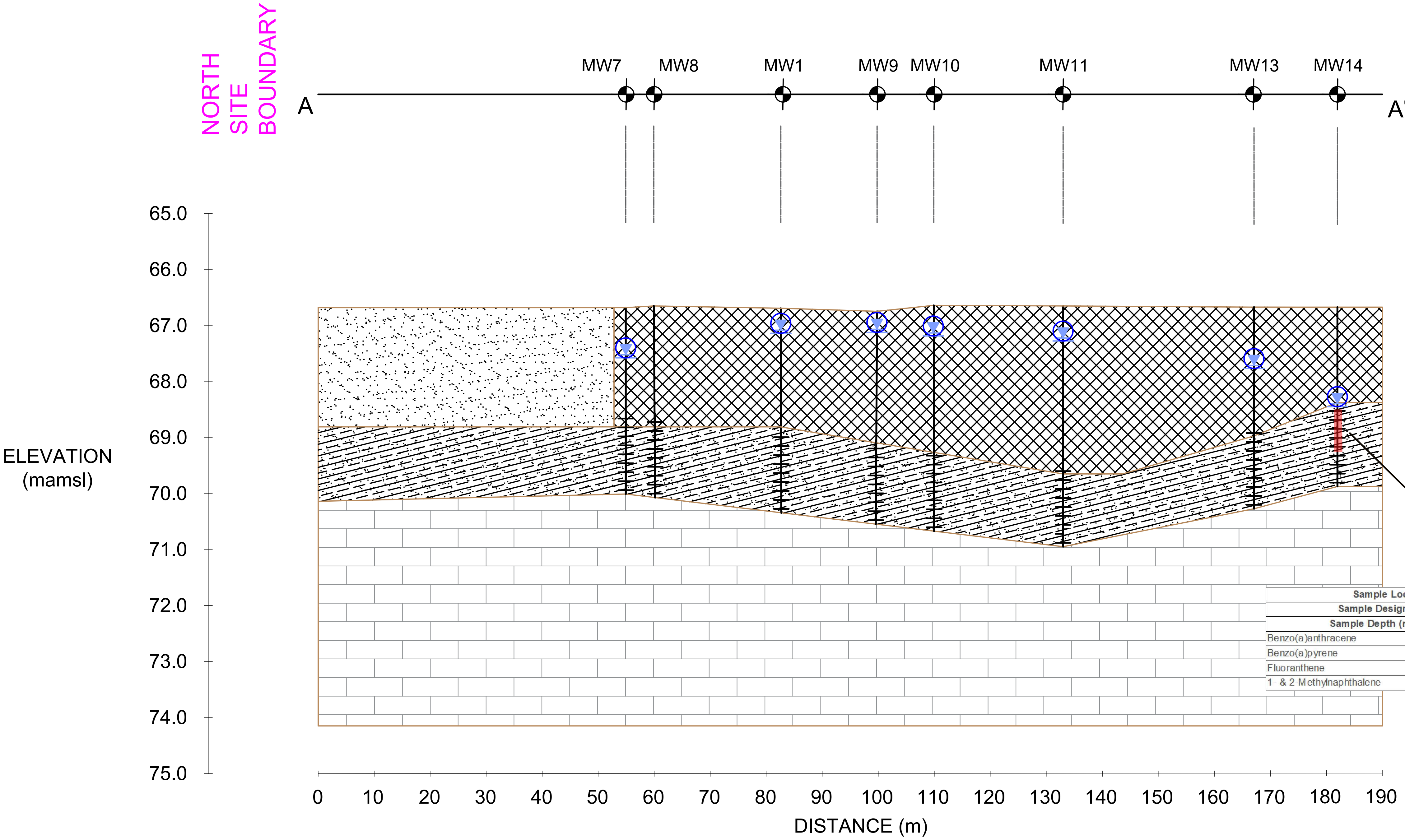
PROJECT NAME:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME:
MORGUARD CORPORATION

PROJECT LOCATION:
500 COVENTRY ROAD,
OTTAWA, ONTARIO

FIGURE NAME:
PLAN VIEW SHOWING PAH EXCEEDANCES IN SOIL

PROJECT NUMBER:	SCALE:
319674.002	AS SHOWN
DRAWN BY: NJ	REVIEWED BY: AK
DATE: NOVEMBER 2024	FIGURE NUMBER: 13A



Sample Location	MW14	MW14
Sample Designation	MW14-S3	DUP-5
Sample Depth (mbgs)	1.52 - 2.29	1.52 - 2.29
Benzo(a)anthracene	<0.05	<0.05
Benzo(a)pyrene	<0.05	<0.05
Fluoranthene	0.06	0.06
1- & 2-Methylnaphthalene	**2.41**	0.6

N

LEGEND

- CROSS-SECTION
- WELL SCREEN
- MEASURED GROUNDWATER ELEVATION
- ▨ FILL
- ▨ SANDY CLAY
- ▨ LIMESTONE
- ▨ SILTY SAND

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PINCHIN

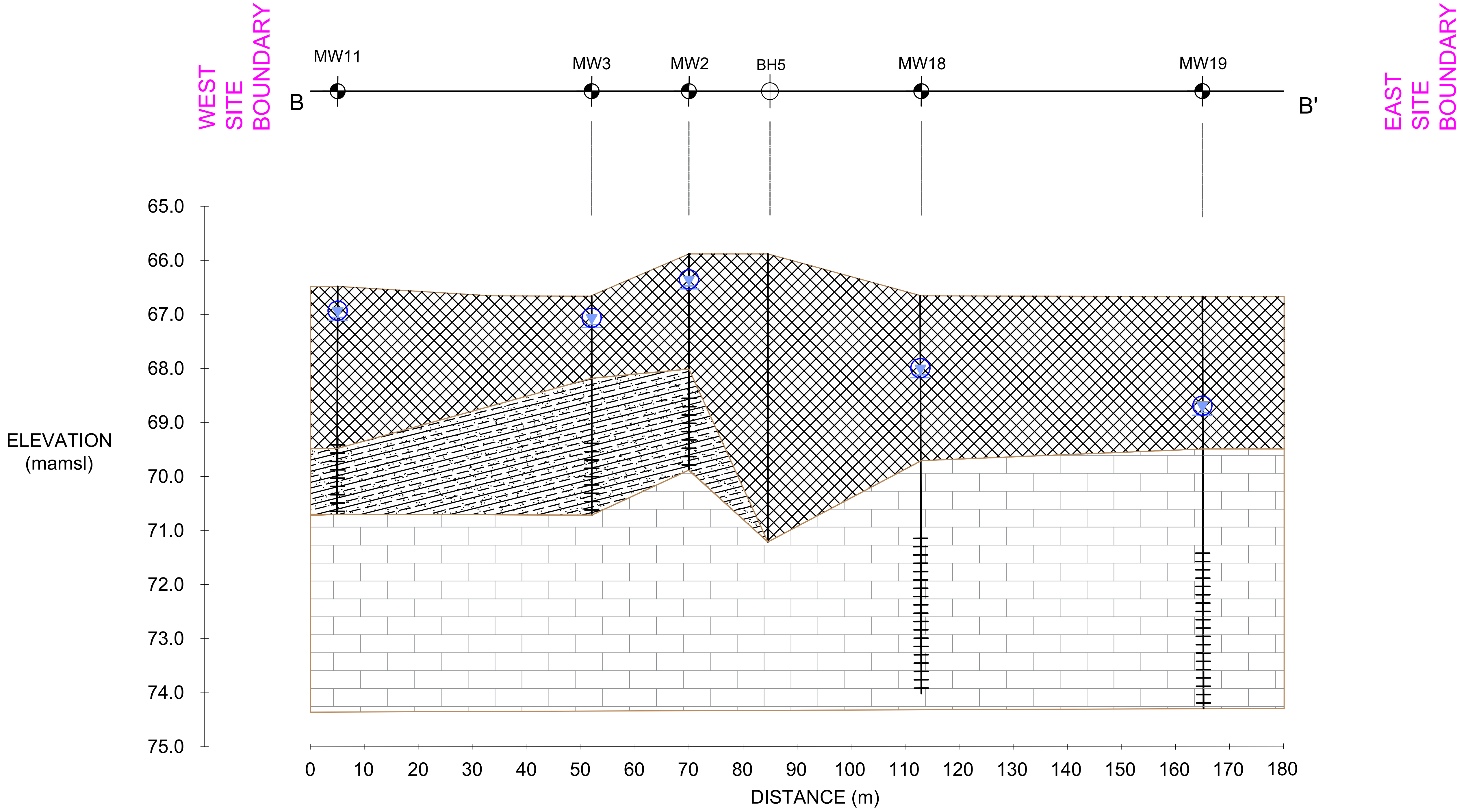
PROJECT NAME:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME:
MORGUARD CORPORATION

PROJECT LOCATION:
500 COVENTRY ROAD,
OTTAWA, ONTARIO

FIGURE NAME:
CROSS-SECTION A - A' SHOWING PAH EXCEEDANCES IN SOIL

PROJECT NUMBER:	SCALE:
319674.002	AS SHOWN
DRAWN BY: NJ	REVIEWED BY: AK
DATE: NOVEMBER 2024	FIGURE NUMBER: 13B



N

LEGEND

CROSS-SECTION

WELL SCREEN

MEASURED GROUNDWATER ELEVATION

▨ FILL

▨ SANDY CLAY

▨ LIMESTONE

▨ SILTY SAND

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PINCHIN

PROJECT NAME:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME:
MORGUARD CORPORATION

PROJECT LOCATION:
500 COVENTRY ROAD,
OTTAWA, ONTARIO

FIGURE NAME:
CROSS-SECTION B - B' SHOWING PAH EXCEEDANCES IN SOIL

PROJECT NUMBER: 319674.002	SCALE: AS SHOWN
DRAWN BY: NJ	REVIEWED BY: AK
DATE: NOVEMBER 2024	FIGURE NUMBER: 13C

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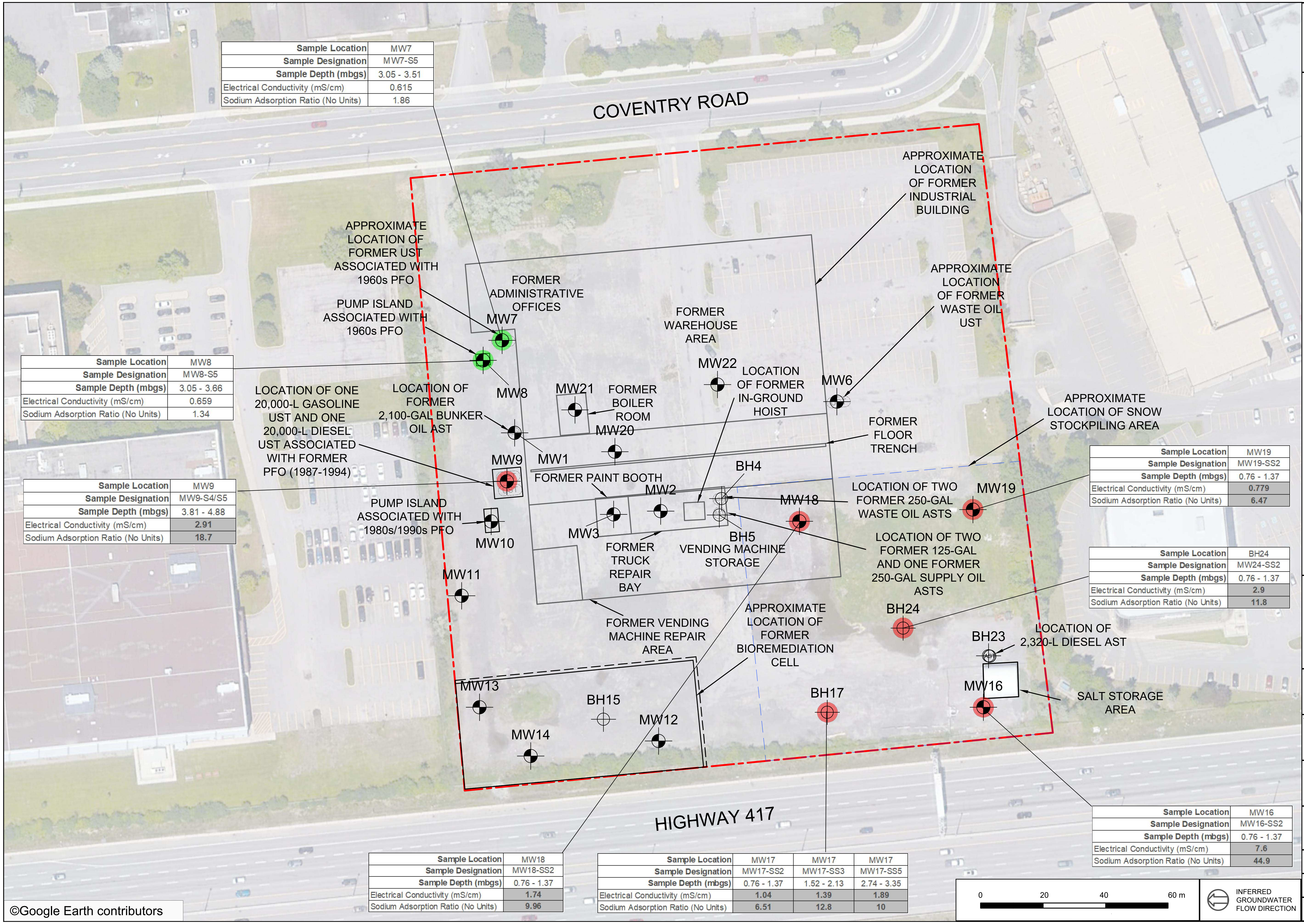


Sample Location	MW7
Sample Designation	MW7-S5
Sample Depth (mbgs)	3.05 - 3.51
Electrical Conductivity (mS/cm)	0.615
Sodium Adsorption Ratio (No Units)	1.86

Sample Location	MW8
Sample Designation	MW8-S5
Sample Depth (mbgs)	3.05 - 3.66
Electrical Conductivity (mS/cm)	0.659
Sodium Adsorption Ratio (No Units)	1.34

Sample Location	MW9
Sample Designation	MW9-S4/S5
Sample Depth (mbgs)	3.81 - 4.88
Electrical Conductivity (mS/cm)	**2.91**
Sodium Adsorption Ratio (No Units)	**18.7**

Sample Location	MW19
Sample Designation	MW19-SS2
Sample Depth (mbgs)	0.76 - 1.37
Electrical Conductivity (mS/cm)	**0.779**
Sodium Adsorption Ratio (No Units)	**6.47**

Sample Location	BH24
Sample Designation	MW24-SS2
Sample Depth (mbgs)	0.76 - 1.37
Electrical Conductivity (mS/cm)	**2.9**
Sodium Adsorption Ratio (No Units)	**11.8**

Sample Location	MW16
Sample Designation	MW16-SS2
Sample Depth (mbgs)	0.76 - 1.37
Electrical Conductivity (mS/cm)	**7.6**
Sodium Adsorption Ratio (No Units)	**44.9**

Sample Location	MW18
Sample Designation	MW18-SS2
Sample Depth (mbgs)	0.76 - 1.37
Electrical Conductivity (mS/cm)	**1.74**
Sodium Adsorption Ratio (No Units)	**9.96**

Sample Location	MW17	MW17	MW17
Sample Designation	MW17-SS2	MW17-SS3	MW17-SS5
Sample Depth (mbgs)	0.76 - 1.37	1.52 - 2.13	2.74 - 3.35
Electrical Conductivity (mS/cm)	**1.04**	**1.39**	**1.89**
Sodium Adsorption Ratio (No Units)	**6.51**	**12.8**	**10**

LEGEND

- SITE BOUNDARY
- LIMITS OF FORMER REMEDIAL EXCAVATIONS (BY OTHERS)
- RAILWAY LINE
- AST ABOVEGROUND STORAGE TANK
- AST FORMER ABOVEGROUND STORAGE TANK
- UST UNDERGROUND STORAGE TANK
- UST FORMER UNDERGROUND STORAGE TANK
- BOREHOLE
- MONITORING WELL
- 🟥 EXCEEDS APPLICABLE STANDARDS/CRITERIA
- 🟩 MEETS APPLICABLE STANDARDS/CRITERIA

	Table 3 Standards
Electrical Conductivity (mS/cm)	0.7
Sodium Adsorption Ratio (No Units)	5

PINCHIN

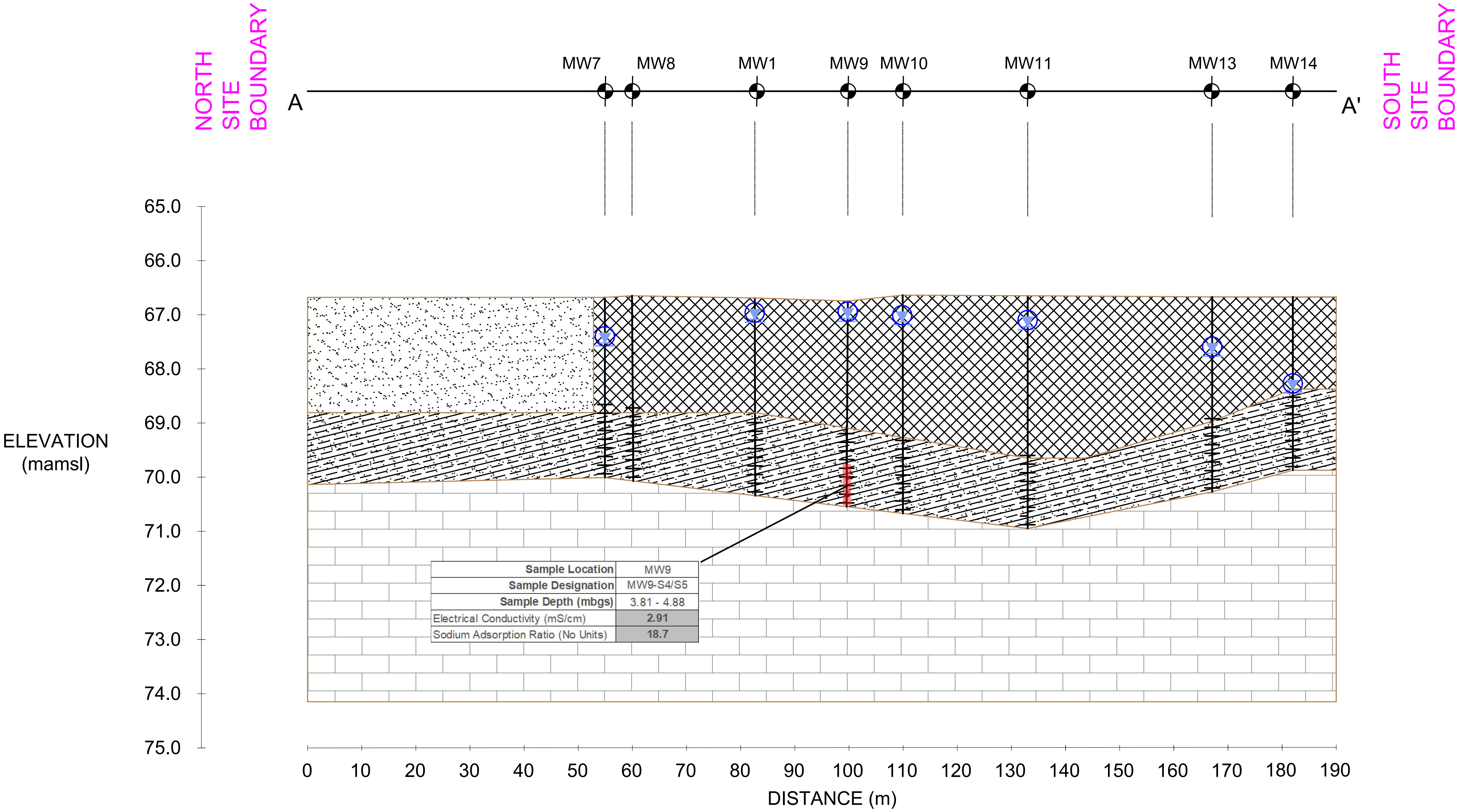
PROJECT NAME:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME:
MORGUARD CORPORATION

PROJECT LOCATION:
500 COVENTRY ROAD, OTTAWA, ONTARIO

FIGURE NAME:
PLAN VIEW SHOWING EC AND SAR EXCEEDANCES IN SOIL

PROJECT NUMBER: 319674.002	SCALE: AS SHOWN
DRAWN BY: NJ	REVIEWED BY: AK
DATE: NOVEMBER 2024	FIGURE NUMBER: 14A



Sample Location	MW9
Sample Designation	MW9-S4/S5
Sample Depth (mbgs)	3.81 - 4.88
Electrical Conductivity (mS/cm)	**2.91**
Sodium Adsorption Ratio (No Units)	**18.7**

N

LEGEND

x—x	CROSS-SECTION
ǂ	WELL SCREEN
◉	MEASURED GROUNDWATER ELEVATION
▩	FILL
▨	SANDY CLAY
▤	LIMESTONE
▦	SILTY SAND

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PINCHIN

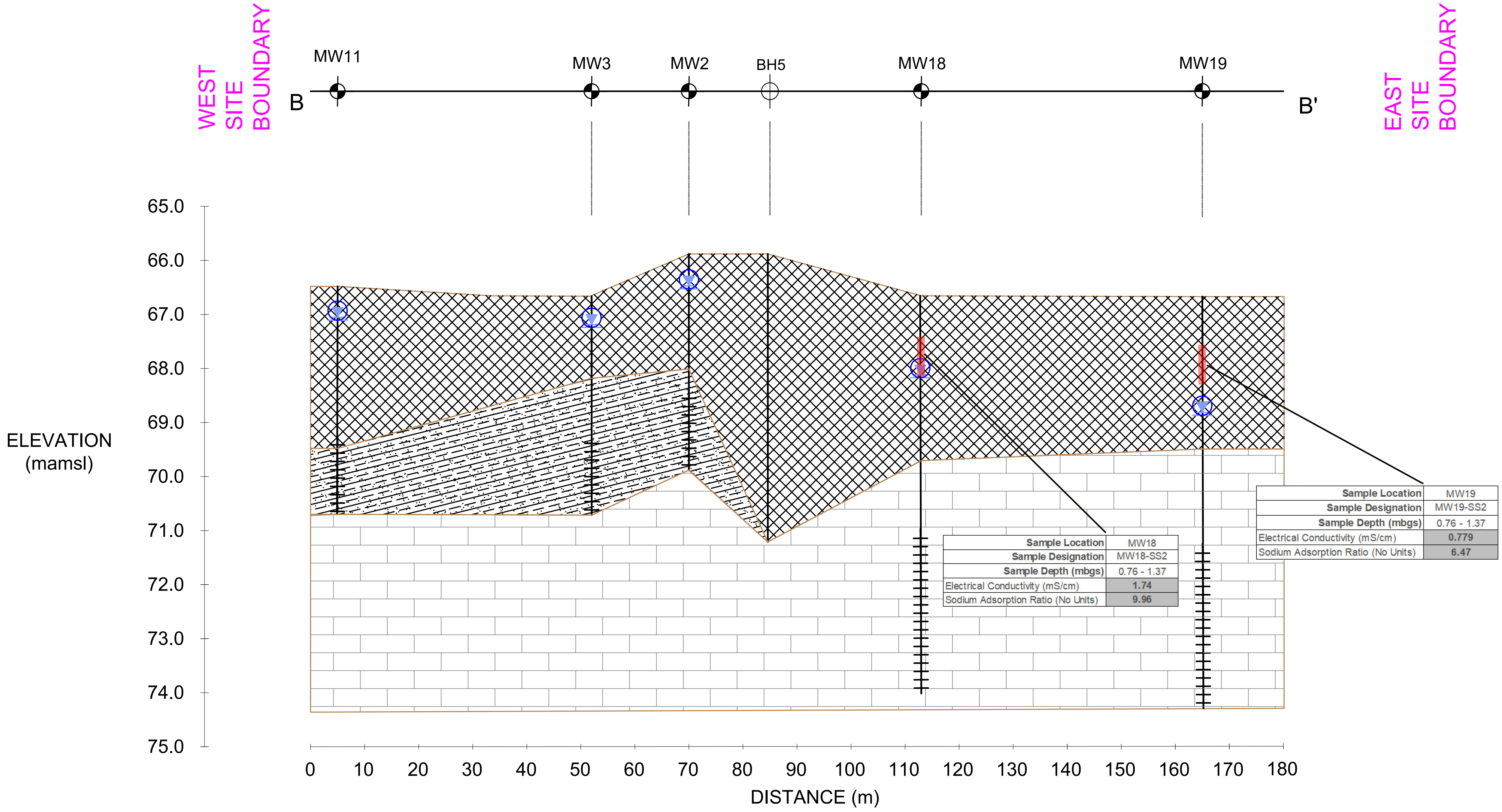
PROJECT NAME:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME:
MORGUARD CORPORATION

PROJECT LOCATION:
500 COVENTRY ROAD,
OTTAWA, ONTARIO

FIGURE NAME:
CROSS-SECTION A - A' SHOWING EC/SAR EXCEEDANCES IN SOIL

PROJECT NUMBER: 319674.002	SCALE: AS SHOWN
DRAWN BY: NJ	REVIEWED BY: AK
DATE: NOVEMBER 2024	FIGURE NUMBER: 14B



Sample Location	MW18
Sample Designation	MW18-SS2
Sample Depth (mbgs)	0.76 - 1.37
Electrical Conductivity (mS/cm)	**1.74**
Sodium Adsorption Ratio (No Units)	**9.96**

Sample Location	MW19
Sample Designation	MW19-SS2
Sample Depth (mbgs)	0.76 - 1.37
Electrical Conductivity (mS/cm)	**0.779**
Sodium Adsorption Ratio (No Units)	**6.47**

N

LEGEND

x—x	CROSS-SECTION
ǂ	WELL SCREEN
●	MEASURED GROUNDWATER ELEVATION
▩	FILL
▨	SANDY CLAY
▤	LIMESTONE
▦	SILTY SAND

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PINCHIN

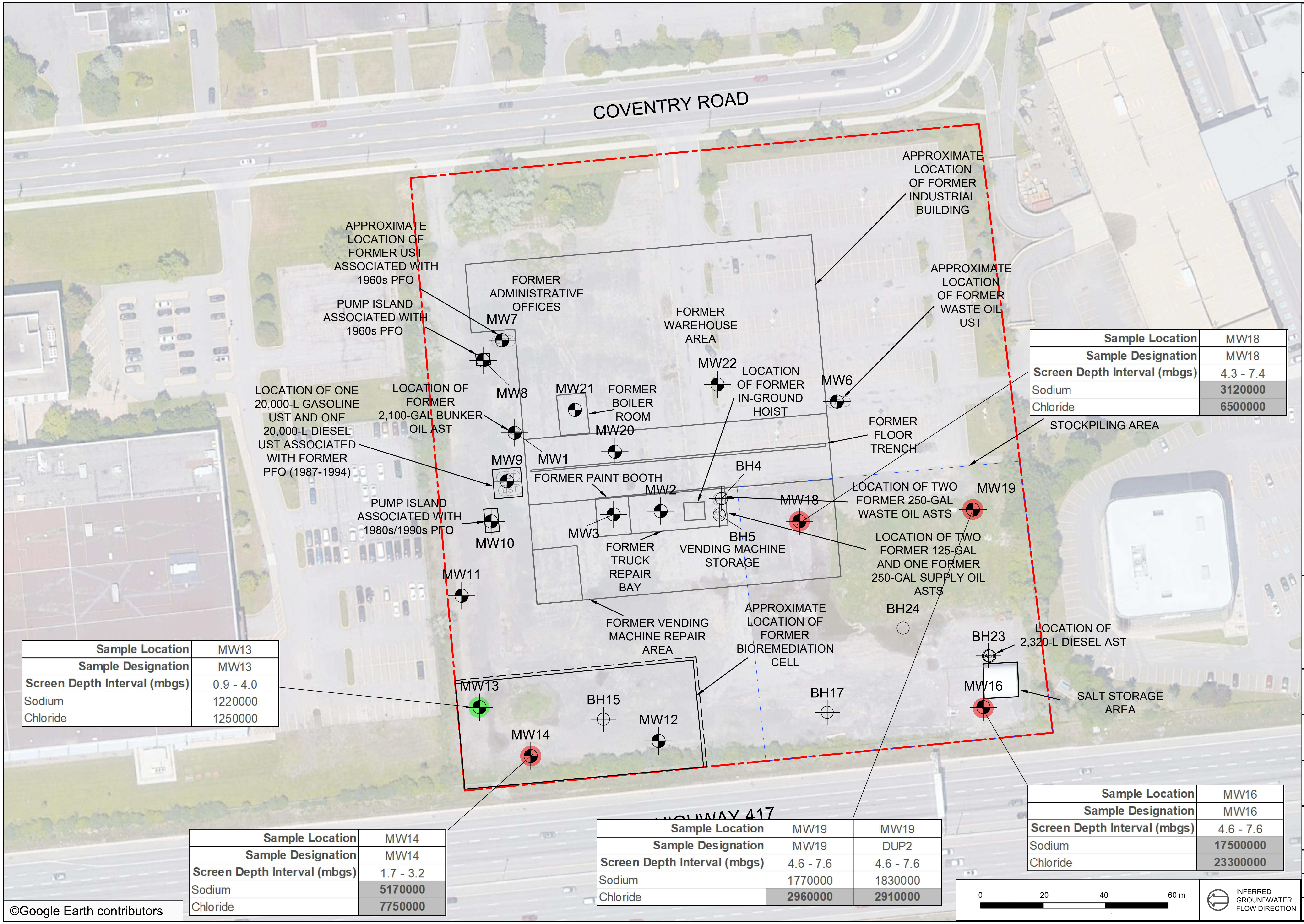
PROJECT NAME:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME:
MORGUARD CORPORATION

PROJECT LOCATION:
500 COVENTRY ROAD,
OTTAWA, ONTARIO

FIGURE NAME:
CROSS-SECTION B - B' SHOWING EC/SAR EXCEEDANCES IN SOIL

PROJECT NUMBER: 319674.002	SCALE: AS SHOWN
DRAWN BY: NJ	REVIEWED BY: AK
DATE: NOVEMBER 2024	FIGURE NUMBER: 14C



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Sample Location	MW18
Sample Designation	MW18
Screen Depth Interval (mbgs)	4.3 - 7.4
Sodium	3120000
Chloride	6500000

Sample Location	MW13
Sample Designation	MW13
Screen Depth Interval (mbgs)	0.9 - 4.0
Sodium	1220000
Chloride	1250000

Sample Location	MW14
Sample Designation	MW14
Screen Depth Interval (mbgs)	1.7 - 3.2
Sodium	5170000
Chloride	7750000

Sample Location	MW19	MW19
Sample Designation	MW19	DUP2
Screen Depth Interval (mbgs)	4.6 - 7.6	4.6 - 7.6
Sodium	1770000	1830000
Chloride	2960000	2910000

Sample Location	MW16
Sample Designation	MW16
Screen Depth Interval (mbgs)	4.6 - 7.6
Sodium	17500000
Chloride	23300000

LEGEND

🟥	SITE BOUNDARY
🟩	LIMITS OF FORMER REMEDIAL EXCAVATIONS (BY OTHERS)
┼┼┼┼┼	RAILWAY LINE
AST	ABOVEGROUND STORAGE TANK
AST	FORMER ABOVEGROUND STORAGE TANK
UST	UNDERGROUND STORAGE TANK
UST	FORMER UNDERGROUND STORAGE TANK
⊕	BOREHOLE
⊕	MONITORING WELL
🔴	EXCEEDS APPLICABLE STANDARDS/CRITERIA
🟢	MEETS APPLICABLE STANDARDS/CRITERIA

	Table 3 Standards
Sodium	2300000
Chloride	2300000

PINCHIN

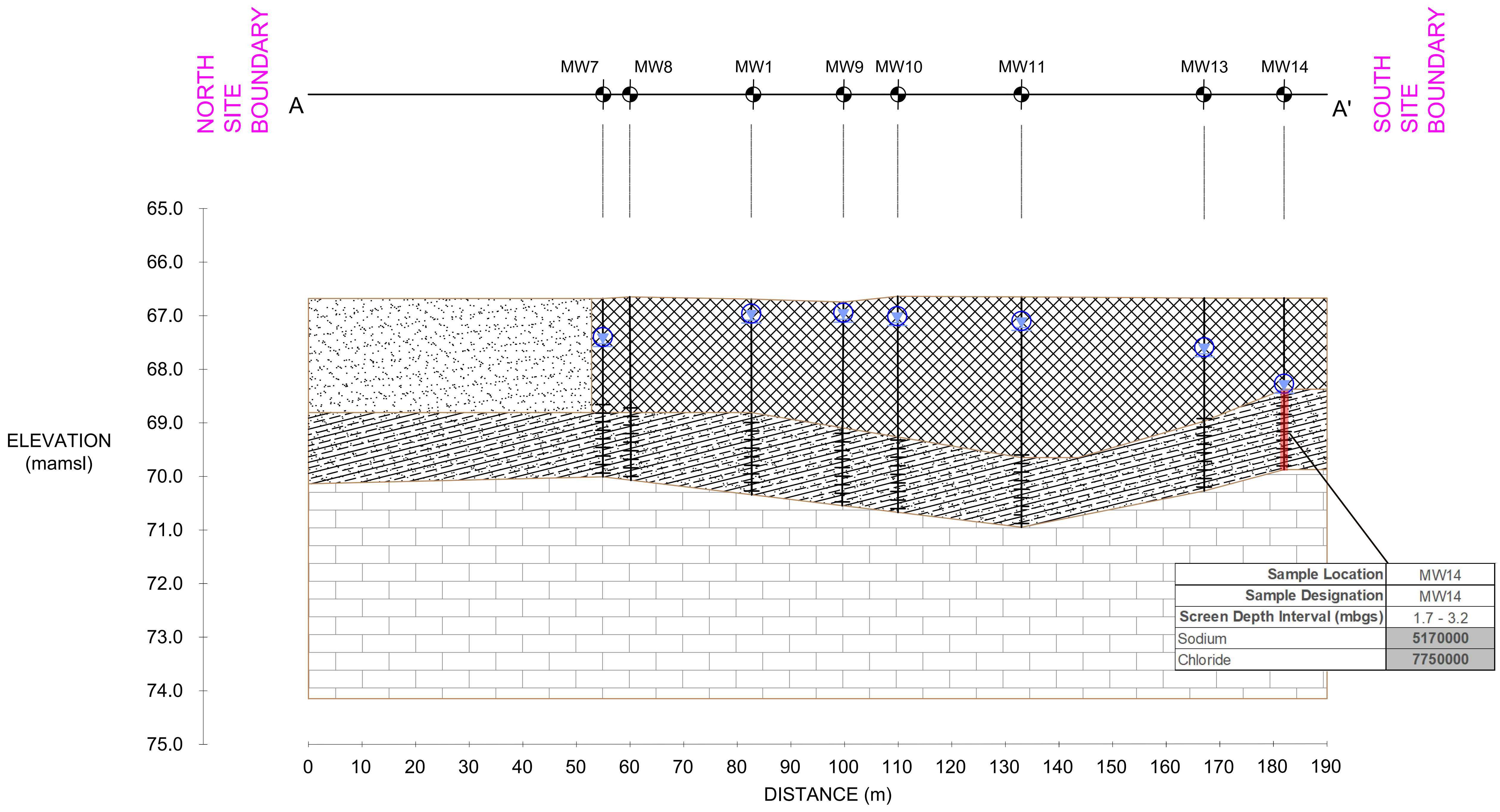
PROJECT NAME:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME:
MORGUARD CORPORATION

PROJECT LOCATION:
500 COVENTRY ROAD,
OTTAWA, ONTARIO

FIGURE NAME:
PLAN VIEW SHOWING SODIUM AND CHLORIDE EXCEEDANCES IN GROUNDWATER

PROJECT NUMBER: 319674.002	SCALE: AS SHOWN
DRAWN BY: NJ	REVIEWED BY: AK
DATE: NOVEMBER 2024	FIGURE NUMBER: 15A



Sample Location	MW14
Sample Designation	MW14
Screen Depth Interval (mbgs)	1.7 - 3.2
Sodium	**5170000**
Chloride	**7750000**

N

LEGEND

x——x	CROSS-SECTION
ǂ	WELL SCREEN
⊙	MEASURED GROUNDWATER ELEVATION
▩	FILL
▨	SANDY CLAY
▦	LIMESTONE
▒	SILTY SAND

LEGEND IS COLOUR DEPENDENT.
NON-COLOUR COPIES MAY ALTER
INTERPRETATION.

PINCHIN

PROJECT NAME:
PHASE TWO
ENVIRONMENTAL
SITE ASSESSMENT

CLIENT NAME:
MORGUARD CORPORATION

PROJECT LOCATION:
500 COVENTRY ROAD,
OTTAWA, ONTARIO

FIGURE NAME:
CROSS-SECTION A - A' SHOWING
SODIUM AND CHLORIDE
CONCENTRATIONS IN GROUNDWATER

PROJECT NUMBER:
319674.002

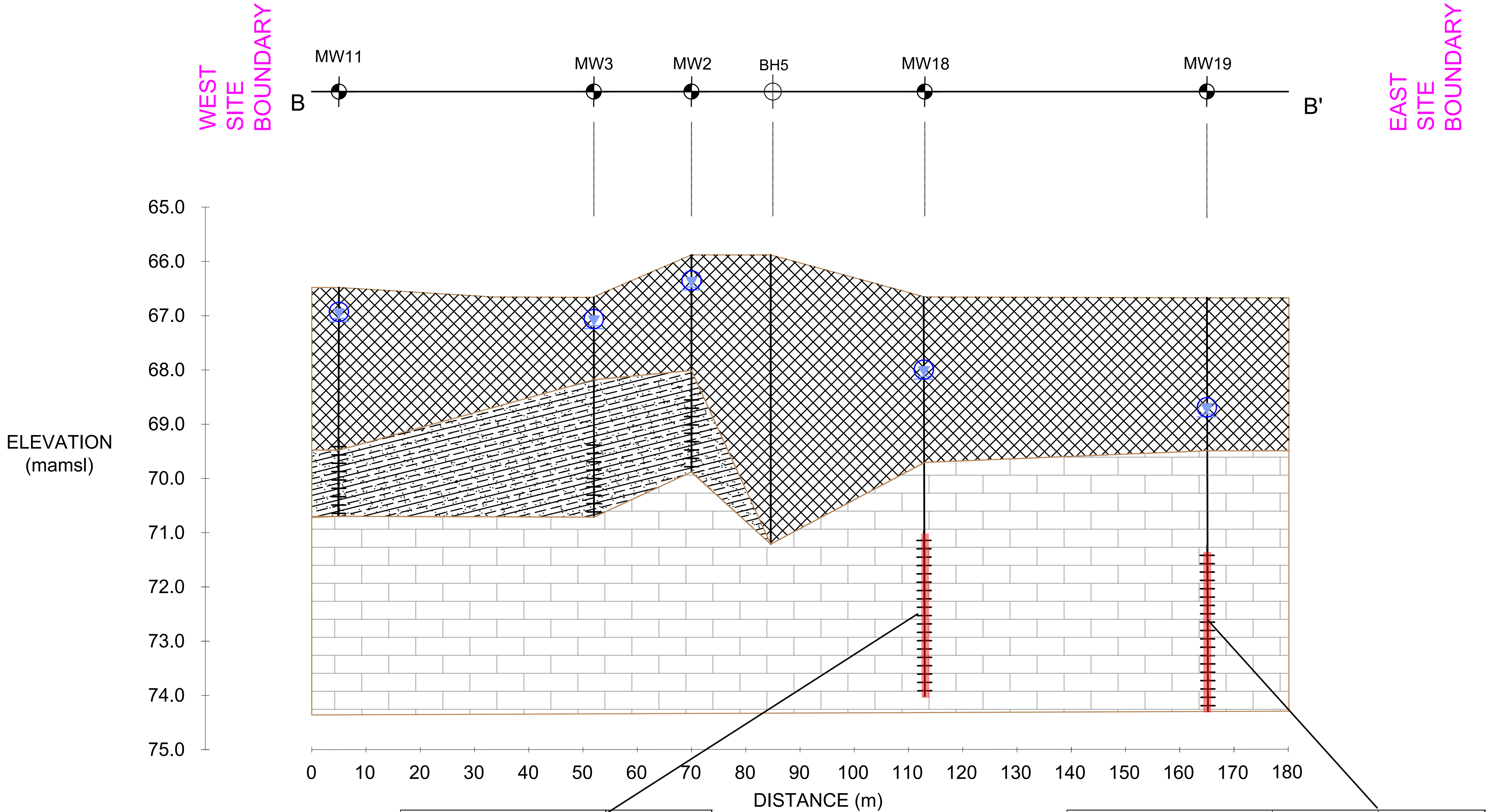
SCALE:
AS SHOWN

DRAWN BY:
NJ

REVIEWED BY:
AK

DATE:
NOVEMBER 2024

FIGURE NUMBER:
15B



Sample Location	MW18
Sample Designation	MW18
Screen Depth Interval (mbgs)	4.3 - 7.4
Sodium	**3120000**
Chloride	**6500000**

Sample Location	MW19	MW19
Sample Designation	MW19	DUP2
Screen Depth Interval (mbgs)	4.6 - 7.6	4.6 - 7.6
Sodium	1770000	1830000
Chloride	**2960000**	**2910000**

N

LEGEND

- CROSS-SECTION
- ǂ WELL SCREEN
- ● MEASURED GROUNDWATER ELEVATION
- ▩ FILL
- ▨ SANDY CLAY
- ▤ LIMESTONE
- ▦ SILTY SAND

LEGEND IS COLOUR DEPENDENT. NON-COLOUR COPIES MAY ALTER INTERPRETATION.

PINCHIN

PROJECT NAME:
PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

CLIENT NAME:
MORGUARD CORPORATION

PROJECT LOCATION:
500 COVENTRY ROAD, OTTAWA, ONTARIO

FIGURE NAME:
CROSS-SECTION B - B' SHOWING SODIUM AND CHLORIDE CONCENTRATIONS IN GROUNDWATER

PROJECT NUMBER:	SCALE:
319674.002	AS SHOWN
DRAWN BY:	REVIEWED BY:
NJ	AK
DATE:	FIGURE NUMBER:
NOVEMBER 2024	15C

Table 1 - Table of Current and Past Uses of the Phase One Property

Year	Name of Owner	Description of Property Use	Property Use	Other Observations from Aerial Photographs, Fire Insurance Plans, etc.
Pre-1810	Crown	Assumed to be vacant, undeveloped land	Agricultural or other use	None.
1810-1832	Daniel Burritt	Assumed to be vacant, undeveloped land	Agricultural or other use	None.
1832-1849	Lewis P. Sherwood	Assumed to be vacant, undeveloped land	Agricultural or other use	None.
1849-1893	John Whillans and Mary Whillans	Assumed to be vacant, undeveloped land	Agricultural or other use	None.
1893-1896	Thomas Whillans, John Whillans and Mary Whillans	Assumed to be vacant, undeveloped land	Agricultural or other use	None.
1893-1901	Thomas Whillans, Robert Whillans, John Whillans, John Whillans Sr., and Mary Whillans	Assumed to be vacant, undeveloped land	Agricultural or other use	None.
1901-1937	Thomas Whillans and Zephyrien Robert Sr.	Assumed to be vacant, undeveloped land	Agricultural or other use	Based on the 1933 aerial photograph, the Phase One Property existed as undeveloped vacant land.
1937-1940	Horace Whillian and Zephyrien Robert Sr.	Assumed to be vacant, undeveloped land	Agricultural or other use	None.
1940-1946	Horace Whillian and Zephyrien Robert Jr.	Assumed to be vacant, undeveloped land	Agricultural or other use	None.

Year	Name of Owner	Description of Property Use	Property Use	Other Observations from Aerial Photographs, Fire Insurance Plans, etc.
1946-1947	Joseph W. Barclays and Zephyrien Robert Jr.	Assumed to be vacant, undeveloped land	Agricultural or other use	None.
1947-1954	Zephyrien Robert Jr. and The Roman Catholic Episcopal Corporation of Ottawa	Assumed to be vacant, undeveloped land	Agricultural or other use	None.
1951-1954	Federal District Commission, Zephyrien Robert Jr. and The Roman Catholic Episcopal Corporation of Ottawa	Assumed to be vacant, undeveloped land	Agricultural or other use	None.
1954-1957	Federal District Commission, Zephyrien Robert Jr. and Her Majesty the Queen in Right of Canada	Assumed to be vacant, undeveloped land	Agricultural or other use	None.
1957-1959	Federal District Commission, Alphonse Robert and Her Majesty the Queen in Right of Canada	Assumed to be vacant, undeveloped land	Agricultural or other use	Based on the 1958 aerial photograph, the Phase One Property was undeveloped vacant land.
1959-1959	Federal District Commission, Ernest Robert and Her Majesty the Queen in Right of Canada	Assumed to be vacant, undeveloped land	Agricultural or other use	None.

Year	Name of Owner	Description of Property Use	Property Use	Other Observations from Aerial Photographs, Fire Insurance Plans, etc.
1959-1960	Federal District Commission, A. P. Freiman Limited and Her Majesty the Queen in Right of Canada	Assumed to be vacant, undeveloped land	Agricultural or other use	None.
1960-1961	National Capital Commission	Assumed to be vacant, undeveloped land	Agricultural or other use	None.
1961-1987	Coca-Cola Limited (became T.C.C. Bottling Limited and then Coca-Cola Bottling Limited)	One single-storey industrial bottling facility, truck repair and maintenance garage, and private fuel outlet	Industrial use	Based on the 1962 aerial photograph, the Phase One Property is occupied with an industrial building and a private fuel outlet (PFO). From 1963 to 1979, the city directories listed the Phase One Property as being occupied by 'Coca-Cola Ltd. Carbonated Beverages'.
1987-1995	157050 Canada Limited	One single-storey industrial bottling facility, truck repair and maintenance garage, and private fuel outlet	Industrial use	In 1988, the city directories listed the Phase One Property as being occupied by 'Coca-Cola Ltd. Carbonated Beverages' and 'T.C.C. Bottling Limited'. Based on the 1991 aerial photograph, the Phase One Property is occupied by a different/new PFO located slightly south of the former PFO.
1995-2000	Kaysush Developments Ltd.	One single-storey industrial bottling facility, truck repair and maintenance garage, and private fuel outlet	Industrial use	The Phase One Property was not listed in available city directories between 1995 and 2000.
2000-Present	1339895 Ontario Limited	Parking lot and snow dump	Commercial use	The Phase One Property was not listed in available city directories between 2000 and 2010. The industrial building was not present in the 2002 aerial photograph; the Phase One Property appeared to be occupied by an asphalt paved parking lot.

Notes:

1 - for each owner, specify one of the following types of property use (as defined in O.Reg. 153/04) that applies: Agriculture or

other use
Commercial use
Community use Industrial use
Institutional use Parkland use
Residential use

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

Table 2 - Table of Potentially Contaminating Activities

PCA Designation	Location of Potentially Contaminating Activity	Potentially Contaminating Activity	Location of PCA (On-Site or Off-Site)	Distance from Phase One Property (metres)	Location Relative to Inferred Groundwater Flow Direction[1]	Contributing to an APEC at the Site (Yes/No)	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
PCA-1	One former 2,100 gallon bunker oil AST located along the west exterior elevation of the former Site Building	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	On-Site	NA – On-Site PCA	NA - On-Site PCA	Yes	Soil
PCA-2	Former engine (truck) repair and maintenance garage located in the south end interior of the former Site Building	Item 27 - Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles	On-Site	NA – On-Site PCA	NA – On-Site PCA	Yes	Soil
PCA-3	Two former 250 gallon waste oil ASTs located within the former vehicle and equipment maintenance area within the former Site Building	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	On-Site	NA – On-Site PCA	NA - On-Site PCA	Yes	Soil
PCA-4	Two former 125 gallon and one 250 gallon supply oil ASTs located within the former vehicle and equipment maintenance area within the former Site Building	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	On-Site	NA – On-Site PCA	NA - On-Site PCA	Yes	Soil
PCA-5	One former waste oil UST was located on the east exterior portion of the Phase One Property and removed in 2004	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	On-Site	NA – On-Site PCA	NA – On-Site PCA	YES	Soil and Groundwater
PCA-6	Former private fuel outlet located on the west side Phase One Property (circa 1962)	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	On-Site	NA – On-Site PCA	NA - On-Site PCA	Yes	Soil and Groundwater
PCA-7	Former private retail fuel outlet with a 20,000-L gasoline UST and a 20,000-L diesel UST (1987-1994), and associated UST fuel release in 1994 as documented in the Ontario Spills database	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	On-Site	NA – On-Site PCA	NA - On-Site PCA	Yes	Soil and Groundwater
PCA-8	Importation of fill of unknown quality used to backfill the remediation excavations, located on the western and portions of the Phase One Property	Item 30 - Importation of Fill Material of Unknown Quality	On-Site	NA – On-Site PCA	NA - On-Site PCA	Yes	Soil
PCA-9	Importation of fill of unknown quality used to backfill the remediation excavations, located on the eastern portion of the Phase One Property	Item 30 - Importation of Fill Material of Unknown Quality	On-Site	NA – On-Site PCA	NA - On-Site PCA	Yes	Soil

PCA Designation	Location of Potentially Contaminating Activity	Potentially Contaminating Activity	Location of PCA (On-Site or Off-Site)	Distance from Phase One Property (metres)	Location Relative to Inferred Groundwater Flow Direction[1]	Contributing to an APEC at the Site (Yes/No)	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
PCA-10	Fill of unknown quality from ex-situ bioremediation cell located on the southwestern portion of the Phase One Property	Item 30 - Importation of Fill Material of Unknown Quality	On-Site	NA – On-Site PCA	NA - On-Site PCA	Yes	Soil and Groundwater
PCA-11	Existing bulk storage of road salt and (former) stockpiling of snow on the Phase One Property	Item 48 - Salt Manufacturing, Processing and Bulk Storage	On-Site	NA – On-Site PCA	NA - On-Site PCA	Yes	Soil and Groundwater
PCA-12	Historical industrial operations associated with the on-Site Coca-Cola distribution plant	Other – Industrial Operations	On-Site	NA – On-Site PCA	NA - On-Site PCA	Yes	Soil and Groundwater
PCA-13	Current presence of a 2,320-L diesel AST	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	On-Site	NA – On-Site PCA	NA - On-Site PCA	Yes	Soil and Groundwater
PCA-14	Historical PCB storage at 1200 St. Laurent Boulevard	Item 55 - Transformer Manufacturing, Processing and Use	Off-Site	20	Transgradient	No	Not Applicable
PCA-15	Blue Line Taxi Co. Ltd., located at 455 Coventry Road, historically operated as an automotive repair and maintenance facility	Item 27 - Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles	Off-Site	110	Upgradient/ Transgradient	No	Not Applicable
PCA-16	The Retail Fuel Storage Tanks database indicated that Blue Line Taxi Co. Ltd., located at 455 Coventry Road was registered as a PFO equipped with one 31,822-L gasoline UST, one 7,000-L gasoline UST, three 22,730-L gasoline USTs and one 31,822-L diesel UST	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	Off-Site	110	Upgradient/ Transgradient	No	Not Applicable
PCA-17	The National PCB Inventory indicated that the west adjacent property was registered as having stored PCBs or PCB-containing equipment (including transformers, capacitors, ballasts, soil and free liquids)	Item 55 - Transformer Manufacturing, Processing and Use	Off-Site	60	Transgradient	No	Not Applicable
PCA-18	Two railway lines were observed to be oriented in an east-west direction approximately 330 m south of the Phase One Property, south of Highway 417	Item 46 - Rail Yards, Tracks and Spurs	Off-Site	330	Downgradient	No	Not Applicable

PCA Designation	Location of Potentially Contaminating Activity	Potentially Contaminating Activity	Location of PCA (On-Site or Off-Site)	Distance from Phase One Property (metres)	Location Relative to Inferred Groundwater Flow Direction^1	Contributing to an APEC at the Site (Yes/No)	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
PCA-19	The Retail Fuel Storage Tanks database indicated that Bell Canada located at 465 - 469 Coventry Road had 22,700-L gasoline UST and a 22,700-L UST (unknown contents) registered to the Site in 1991 and 1993, respectively	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	Off-Site	115	Upgradient/ Transgradient	No	Not Applicable
PCA-20	An automotive repair/servicing facility was observed at 469 Coventry Road, approximately 110 m northwest of the Phase One Property, during the Phase One Site reconnaissance	Item 27 - Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles	Off-Site	110	Transgradient/ Downgradient	No	Not Applicable
PCA-21	Dominion Loose-Leaf Company Ltd. (a commercial printing business) was listed in the City of Ottawa's HLUI database at 525 Coventry Road, approximately 65 m north of the Phase One Property	Item 31 - Ink Manufacturing, Processing and Bulk Storage	Off-Site	65	Transgradient/ Downgradient	No	Not Applicable
PCA-22	A registered UST was listed in the City of Ottawa's HLUI database at 401Coventry Road, approximately 215 m northwest of the Phase One Property	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	Off-Site	215	Transgradient/ Downgradient	No	Not Applicable
PCA-23	An automotive repair/servicing garage was listed in the City of Ottawa's HLUI database at 401Coventry Road, approximately 215 m northwest of the Phase One Property	Item 27 - Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles	Off-Site	215	Transgradient/ Downgradient	No	Not Applicable
PCA 24 to PCA-28	Two pad-mounted, three pole-mounted oil-cooled transformers and one hydro station are located within 250 m of the Phase One Property	Item 55 - Transformer Manufacturing, Processing and Use	Off-Site	250	Transgradient/ Downgradient	No	Not Applicable

Notes:

APEC – Area of Potential Environmental Concern

PCA – Potentially Contaminating Activity

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

TABLE 3
SOIL BULK ANALYTICAL RESULTS
Morguard REIT c/o Morguard Investments Limited
500 Coventry Road, Ottawa, Ontario

Sample Location	**MECP Table 3 SCS (R/P/I-C)**	MW16	MW16	MW16	MW16	MW17	MW17	MW17	MW17	MW18
Sample Designation		MW16-SS1	MW16-SS2	MW16-SS3	DUP-1	MW17-SS2	DUP-2	MW17-SS3	MW17-SS5	MW18-SS2
Sample Collection Date (dd/mm/yyyy)		04/08/2024	04/08/2024	04/08/2024	04/08/2024	04/09/2024	04/09/2024	04/09/2024	04/09/2024	04/08/2024
Laboratory Certificate No.		24Z137710	24Z137710	24Z137710	24Z137710	24Z137710	24Z137710	24Z137710	24Z137710	24Z137710
Date of Laboratory Analysis (dd/mm/yyyy-dd/mm/yyyy)		12/04/2024	12/04/2024 - 15/04/2024	12/04/2024 - 15/04/2024	12/04/2024 - 15/04/2024	12/04/2024 - 15/04/2024	12/04/2024 - 15/04/2024	12/04/2024	12/04/2024	12/04/2024 - 15/04/2024
Laboratory Sample No.		5791682	5791683	5791691	5791740	5791702	5791742	5791708	5791710	5791711
Sample Depth (mbgs)		0 - 0.61	0.76 - 1.37	1.52 - 2.13	1.52 - 2.13	0.76 - 1.37	0.76 - 1.37	1.52 - 2.13	2.74 - 3.35	0.76 - 1.37
Miscellaneous Parameters										
pH (pH Units)	NV	7.18	-	-	-	-	-	-	-	7.51
Sieve #200 <0.075 mm (%)	NV	-	-	-	-	-	-	-	26.7	-
Sieve #200 >0.075 mm (%)	NV	-	-	-	-	-	-	-	73.3	-
Soil Texture	NV	-	-	-	-	-	-	-	COARSE	-
Petroleum Hydrocarbons (PHCs)										
PHCs F1 (C_6 - C_{10})	55	-	-	<5	-	<5	<5	-	-	-
PHCs F2 (>C_{10} - C_{16})	98	-	-	<10	-	<10	<10	-	-	-
PHCs F3 (>C_{16} - C_{34})	300	-	-	<50	-	<50	<50	-	-	-
PHCs F4 (>C_{34} - C_{50})	2800	-	-	<50	-	<50	<50	-	-	-
Volatile Organic Compounds										
Acetone	16	-	-	-	-	-	-	-	-	-
Benzene	0.21	-	-	<0.02	-	<0.02	<0.02	-	-	-
Bromodichloromethane	13	-	-	-	-	-	-	-	-	-
Bromoform	0.27	-	-	-	-	-	-	-	-	-
Bromomethane	0.05	-	-	-	-	-	-	-	-	-
Carbon Tetrachloride	0.05	-	-	-	-	-	-	-	-	-
Chlorobenzene	2.4	-	-	-	-	-	-	-	-	-
Chloroform	0.05	-	-	-	-	-	-	-	-	-
Dibromochloromethane	9.4	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	3.4	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	4.8	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	0.083	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	16	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	3.5	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	0.05	-	-	-	-	-	-	-	-	-
1,1-Dichloroethylene	0.05	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethylene	3.4	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethylene	0.084	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	0.05	-	-	-	-	-	-	-	-	-
1,3-Dichloropropene (Total)	0.05	-	-	-	-	-	-	-	-	-
Ethylbenzene	2	-	-	<0.05	-	<0.05	<0.05	-	-	-
Ethylene Dibromide	0.05	-	-	-	-	-	-	-	-	-
Hexane	2.8	-	-	-	-	-	-	-	-	-
Methyl Ethyl Ketone	16	-	-	-	-	-	-	-	-	-
Methyl Isobutyl Ketone	1.7	-	-	-	-	-	-	-	-	-
Methyl t-Butyl Ether (MTBE)	0.75	-	-	-	-	-	-	-	-	-
Methylene Chloride	0.1	-	-	-	-	-	-	-	-	-
Styrene	0.7	-	-	-	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	0.058	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	0.05	-	-	-	-	-	-	-	-	-
Tetrachloroethylene	0.28	-	-	-	-	-	-	-	-	-
Toluene	2.3	-	-	<0.05	-	<0.05	<0.05	-	-	-
1,1,1-Trichloroethane	0.38	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	0.05	-	-	-	-	-	-	-	-	-
Trichloroethylene	0.061	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	4	-	-	-	-	-	-	-	-	-
Vinyl Chloride	0.02	-	-	-	-	-	-	-	-	-
Xylenes (Total)	3.1	-	-	<0.05	-	<0.05	<0.05	-	-	-
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	7.9	-	-	<0.05	<0.05	<0.05	-	-	-	-
Acenaphthylene	0.15	-	-	<0.05	<0.05	<0.05	-	-	-	-
Anthracene	0.67	-	-	<0.05	<0.05	<0.05	-	-	-	-
Benzo(a)anthracene	0.5	-	-	<0.05	<0.05	<0.05	-	-	-	-
Benzo(a)pyrene	0.3	-	-	<0.05	<0.05	<0.05	-	-	-	-
Benzo(b)fluoranthene	0.78	-	-	<0.05	<0.05	<0.05	-	-	-	-
Benzo(ghi)perylene	6.6	-	-	<0.05	<0.05	<0.05	-	-	-	-
Benzo(k)fluoranthene	0.78	-	-	<0.05	<0.05	<0.05	-	-	-	-
Chrysene	7	-	-	<0.05	<0.05	<0.05	-	-	-	-
Dibenzo(a,h)anthracene	0.1	-	-	<0.05	<0.05	<0.05	-	-	-	-
Fluoranthene	0.69	-	-	<0.05	<0.05	<0.05	-	-	-	-
Fluorene	62	-	-	<0.05	<0.05	<0.05	-	-	-	-
Indeno(1,2,3-cd)pyrene	0.38	-	-	<0.05	<0.05	<0.05	-	-	-	-
1- & 2-Methylnaphthalene	0.99	-	-	<0.05	<0.05	<0.05	-	-	-	-
Naphthalene	0.6	-	-	<0.05	<0.05	<0.05	-	-	-	-
Phenanthrene	6.2	-	-	<0.05	<0.05	<0.05	-	-	-	-
Pyrene	78	-	-	<0.05	<0.05	<0.05	-	-	-	-
Metals										
Antimony	7.5	-	<0.8	-	-	<0.8	-	-	-	<0.8
Arsenic	18	-	5	-	-	3	-	-	-	1
Barium	390	-	80.3	-	-	126	-	-	-	43.3
Beryllium	4	-	<0.5	-	-	<0.5	-	-	-	<0.5
Boron (Total)	120	-	9	-	-	5	-	-	-	<5
Boron (Hot Water Soluble)	1.5	-	0.13	-	-	0.12	-	-	-	0.17
Cadmium	1.2	-	<0.5	-	-	<0.5	-	-	-	<0.5
Chromium (Total)	160	-	24	-	-	41	-	-	-	26
Chromium (Hexavalent)	8	-	<0.2	-	-	<0.2	-	-	-	<0.2
Cobalt	22	-	10.7	-	-	10.2	-	-	-	5.7
Copper	140	-	28.5	-	-	19.9	-	-	-	13
Lead	120	-	10	-	-	11	-	-	-	4
Mercury	0.27	-	<0.10	-	-	<0.10	-	-	-	<0.10
Molybdenum	6.9	-	2.2	-	-	1.1	-	-	-	1.7
Nickel	100	-	34	-	-	28	-	-	-	15
Selenium	2.4	-	<0.8	-	-	<0.8	-	-	-	<0.8
Silver	20	-	<0.5	-	-	<0.5	-	-	-	<0.5
Thallium	1	-	<0.5	-	-	<0.5	-	-	-	<0.5
Uranium	23	-	1.06	-	-	1.12	-	-	-	0.7
Vanadium	86	-	35.2	-	-	43.8	-	-	-	27.6
Zinc	340	-	53	-	-	48	-	-	-	25
Inorganics										
Cyanide (Free)	0.051	-	-	-	-	-	-	-	-	-
Electrical Conductivity (mS/cm)	0.7	-	**7.6**	-	-	**1.04**	-	**1.39**	**1.89**	**1.74**
Sodium Adsorption Ratio (No Units)	5	-	**44.9**	-	-	**6.51**	-	**12.8**	**10**	**9.96**
Polychlorinated Biphenyls (PCBs)										
PCBs (Total)	0.35	-	-	-	-	-	-	-	-	-

Notes:

MECP Table 3 SCS (R/P/I-C):
Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011, Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition, for Residential/Parkland/Institutional Property Use and Coarse-Textured Soils.

BOLD	Exceeds SCS
Units	All units in micrograms per gram, unless otherwise noted
mbgs	metres below ground surface
mS/cm	milliSiemens per centimetre
NA	Not Applicable

TABLE 3

SOIL BULK ANALYTICAL RESULTS

Morguard REIT c/o Morguard Investments Limitec
500 Coventry Road, Ottawa, Ontario

Sample Location	**MECP Table 3 SCS (R/P/I-C)**	MW18	MW19	MW19	BH23	BH24	BH24	MW8	MW8	MW7
Sample Designation		MW18-SS4	MW19-SS2	MW19-SS3	BH23-SS1	MW24-SS2	MW24-SS3	MW8-S2	MW8-S5	MW7-S2
Sample Collection Date (dd/mm/yyyy)		04/08/2024	04/09/2024	04/09/2024	04/09/2024	04/09/2024	04/09/2024	04/25/2024	04/25/2024	04/25/2024
Laboratory Certificate No.		24Z137710	24Z137710	24Z137710	24Z137710	24Z137710	PM4184	24Z143509	24Z143509	24Z143509
Date of Laboratory Analysis (dd/mm/yyyy-dd/mm/yyyy)		12/04/2024 - 16/04/2024	12/04/2024 - 15/04/2024	12/04/2024 - 15/04/2024	12/04/2024 - 15/04/2024	12/04/2024 - 15/04/2024	16/04/2024	30/04/2024 - 02/05/2024	30/04/2024 - 02/05/2024	30/04/2024 - 02/05/2024
Laboratory Sample No.		5791727	5791733	5791735	5791736	5791737	51538	5823908	5823909	5823910
Sample Depth (mbgs)		2.29 - 2.90	0.76 - 1.37	1.52 - 2.13	0 - 0.91	0.76 - 1.37	1.52 - 2.13	0.76 - 1.52	3.05 - 3.66	0.76 - 1.52
Miscellaneous Parameters										
pH (pH Units)	NV	-	-	-	-	-	-	-	7.15	-
Sieve #200 <0.075 mm (%)	NV	26.0	-	-	-	-	34.1	-	-	-
Sieve #200 >0.075 mm (%)	NV	74.0	-	-	-	-	65.9	-	-	-
Soil Texture	NV	COARSE	-	-	-	-	COARSE	-	-	-
Petroleum Hydrocarbons (PHCs)										
PHCs F1 (C_6 - C_{10})	55	<5	-	<5	<5	<5	-	<5	<5	<5
PHCs F2 (>C_{10} - C_{16})	98	28	-	15	<10	<10	-	<10	35	<10
PHCs F3 (>C_{16} - C_{34})	300	<50	-	<50	<50	<50	-	<50	<50	<50
PHCs F4 (>C_{34} - C_{50})	2800	<50	-	<50	<50	<50	-	<50	<50	<50
Volatile Organic Compounds										
Acetone	16	<0.50	-	-	-	-	-	<0.50	<0.50	<0.50
Benzene	0.21	<0.02	-	<0.02	<0.02	<0.02	-	<0.02	<0.02	<0.02
Bromodichloromethane	13	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05
Bromoform	0.27	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05
Bromomethane	0.05	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05
Carbon Tetrachloride	0.05	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05
Chlorobenzene	2.4	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05
Chloroform	0.05	<0.04	-	-	-	-	-	<0.04	<0.04	<0.04
Dibromochloromethane	9.4	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	3.4	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	4.8	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	0.083	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05
Dichlorodifluoromethane	16	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05
1,1-Dichloroethane	3.5	<0.02	-	-	-	-	-	<0.02	<0.02	<0.02
1,2-Dichloroethane	0.05	<0.03	-	-	-	-	-	<0.03	<0.03	<0.03
1,1-Dichloroethylene	0.05	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05
cis-1,2-Dichloroethylene	3.4	<0.02	-	-	-	-	-	<0.02	<0.02	<0.02
trans-1,2-Dichloroethylene	0.084	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05
1,2-Dichloropropane	0.05	<0.03	-	-	-	-	-	<0.03	<0.03	<0.03
1,3-Dichloropropene (Total)	0.05	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05
Ethylbenzene	2	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
Ethylene Dibromide	0.05	<0.04	-	-	-	-	-	<0.04	<0.04	<0.04
Hexane	2.8	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05
Methyl Ethyl Ketone	16	<0.50	-	-	-	-	-	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	1.7	<0.50	-	-	-	-	-	<0.50	<0.50	<0.50
Methyl t-Butyl Ether (MTBE)	0.75	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05
Methylene Chloride	0.1	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05
Styrene	0.7	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	0.058	<0.04	-	-	-	-	-	<0.04	<0.04	<0.04
1,1,2,2-Tetrachloroethane	0.05	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05
Tetrachloroethylene	0.28	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05
Toluene	2.3	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
1,1,1-Trichloroethane	0.38	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05
1,1,2-Trichloroethane	0.05	<0.04	-	-	-	-	-	<0.04	<0.04	<0.04
Trichloroethylene	0.061	<0.03	-	-	-	-	-	<0.03	<0.03	<0.03
Trichlorofluoromethane	4	<0.05	-	-	-	-	-	<0.05	<0.05	<0.05
Vinyl Chloride	0.02	<0.02	-	-	-	-	-	<0.02	<0.02	<0.02
Xylenes (Total)	3.1	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	7.9	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
Acenaphthylene	0.15	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
Anthracene	0.67	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
Benzo(a)anthracene	0.5	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
Benzo(a)pyrene	0.3	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	0.78	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
Benzo(ghi)perylene	6.6	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	0.78	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
Chrysene	7	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
Dibenzo(a,h)anthracene	0.1	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
Fluoranthene	0.69	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
Fluorene	62	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	0.38	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
1- & 2-Methylnaphthalene	0.99	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
Naphthalene	0.6	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
Phenanthrene	6.2	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
Pyrene	78	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
Metals										
Antimony	7.5	-	<0.8	-	<0.8	<0.8	-	<0.8	<0.8	<0.8
Arsenic	18	-	3	-	6	5	-	4	5	1
Barium	390	-	59.7	-	83.6	106	-	82.7	130	24.4
Beryllium	4	-	<0.5	-	<0.5	<0.5	-	<0.5	0.6	<0.5
Boron (Total)	120	-	5	-	9	9	-	8	11	<5
Boron (Hot Water Soluble)	1.5	-	<0.10	-	0.18	-	-	<0.10	0.23	0.3
Cadmium	1.2	-	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	<0.5
Chromium (Total)	160	-	21	-	21	21	-	15	19	16
Chromium (Hexavalent)	8	-	<0.2	-	<0.2	-	-	<0.2	<0.2	<0.2
Cobalt	22	-	7	-	9.1	10.7	-	11	9.3	3.4
Copper	140	-	19.3	-	21	24.8	-	18.4	23.6	5.9
Lead	120	-	8	-	10	9	-	7	10	2
Mercury	0.27	-	<0.10	-	<0.10	-	-	<0.10	<0.10	<0.10
Molybdenum	6.9	-	1.4	-	1.9	2.5	-	2.8	3.7	0.7
Nickel	100	-	23	-	27	32	-	28	28	8
Selenium	2.4	-	<0.8	-	<0.8	<0.8	-	<0.8	<0.8	<0.8
Silver	20	-	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	<0.5
Thallium	1	-	<0.5	-	<0.5	<0.5	-	<0.5	<0.5	<0.5
Uranium	23	-	0.84	-	1.02	1.05	-	0.81	1.63	0.57
Vanadium	86	-	28.4	-	33.5	34.4	-	22.6	29.1	17.6
Zinc	340	-	39	-	42	51	-	37	43	13
Inorganics										
Cyanide (Free)	0.051	-	-	-	-	-	-	-	<0.040	-
Electrical Conductivity (mS/cm)	0.7	-	**0.779**	-	-	**2.9**	-	-	0.659	-
Sodium Adsorption Ratio (No Units)	5	-	**6.47**	-	-	**11.8**	-	-	1.34	-
Polychlorinated Biphenyls (PCBs)										
PCBs (Total)	0.35	<0.1	-	-	-	-	-	-	-	-

Notes:

MECP Table 3 SCS (R/P/I-C):
Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011, Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition, for Residential/Parkland/Institutional Property Use and Coarse-Textured Soils

BOLD	Exceeds SCS
Units	All units in micrograms per gram, unless otherwise noted
mbgs	metres below ground surface
mS/cm	milliSiemens per centimetre
NA	Not Applicable

PINCHIN

TABLE 3
SOIL BULK ANALYTICAL RESULTS
Morguard REIT c/o Morguard Investments Limitec
500 Coventry Road, Ottawa, Ontario

Sample Location	MECP Table 3 SCS (R/P/I-C)	MW7	MW21	MW21	MW20	MW20	MW9	MW9	MW1	MW2
Sample Designation		MW7-S5	MW21-S2	MW21-S4	MW20-S5	DUP3	MW9-S1/S2	MW9-S4/S5	MW1-S2	MW2-S5
Sample Collection Date (dd/mm/yyyy)		04/25/2024	04/25/2024	04/25/2024	04/25/2024	04/25/2024	04/25/2024	04/25/2024	04/25/2024	04/30/2024
Laboratory Certificate No.		24Z143509	24Z143509	24Z143509	24Z143509	24Z143509	24Z143509	24Z143509	24Z143509	24Z146545
Date of Laboratory Analysis (dd/mm/yyyy-dd/mm/yyyy)		30/04/2024 - 02/05/2024	30/04/2024 - 02/05/2024	30/04/2024 - 02/05/2024	30/04/2024 - 02/05/2024	30/04/2024 - 02/05/2024	30/04/2024 - 02/05/2024	30/04/2024 - 02/05/2024	30/04/2024 - 02/05/2024	06/05/2024 - 07/05/2024
Laboratory Sample No.		5823911	5823912	5823913	5823914	5823915	5823920	5823921	5823917	5836677
Sample Depth (mbgs)		3.05 - 3.51	0.76 - 1.52	2.29 - 3.05	3.05 - 3.81	3.05 - 3.81	0 - 1.52	3.81 - 4.88	0.76 - 1.52	3.05 - 4.00
Miscellaneous Parameters										
pH (pH Units)	NV	7.17	-	-	-	-	-	7.23	-	-
Sieve #200 <0.075 mm (%)	NV	-	-	-	-	-	-		-	-
Sieve #200 >0.075 mm (%)	NV	-	-	-	-	-	-		-	-
Soil Texture	NV	-	-	-	-	-	-		-	-
Petroleum Hydrocarbons (PHCs)										
PHCs F1 (C_6 - C_{10})	55	<5	<5	<5	<5	<5	7	<5	<5	<5
PHCs F2 (>C_{10} - C_{16})	98	30	<10	32	29	26	<10	<10	<10	49
PHCs F3 (>C_{16} - C_{34})	300	<50	<50	<50	<50	<50	<50	<50	<50	<50
PHCs F4 (>C_{34} - C_{50})	2800	<50	<50	<50	<50	<50	<50	<50	<50	<50
Volatile Organic Compounds										
Acetone	16	<0.50	-	<0.50	<0.50	<0.50	-	<0.50	-	<0.50
Benzene	0.21	<0.02	<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
Bromoform	0.27	<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
Carbon Tetrachloride	0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.05
Chlorobenzene	2.4	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.05
Chloroform	0.05	<0.04	-	<0.04	<0.04	<0.04	-	<0.04	-	<0.04
Dibromochloromethane	9.4	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.05
1,2-Dichlorobenzene	3.4	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.05
1,3-Dichlorobenzene	4.8	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.05
1,4-Dichlorobenzene	0.083	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.05
Dichlorodifluoromethane	16	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.05
1,1-Dichloroethane	3.5	<0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.02
1,2-Dichloroethane	0.05	<0.03	-	<0.03	<0.03	<0.03	-	<0.03	-	<0.03
1,1-Dichloroethylene	0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.05
cis-1,2-Dichloroethylene	3.4	<0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.02
trans-1,2-Dichloroethylene	0.084	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.05
1,2-Dichloropropane	0.05	<0.03	-	<0.03	<0.03	<0.03	-	<0.03	-	<0.03
1,3-Dichloropropene (Total)	0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.05
Ethylbenzene	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	0.05	<0.04	-	<0.04	<0.04	<0.04	-	<0.04	-	<0.04
Hexane	2.8	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.05
Methyl Ethyl Ketone	16	<0.50	-	<0.50	<0.50	<0.50	-	<0.50	-	<0.50
Methyl Isobutyl Ketone	1.7	<0.50	-	<0.50	<0.50	<0.50	-	<0.50	-	<0.50
Methyl t-Butyl Ether (MTBE)	0.75	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.05
Methylene Chloride	0.1	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.05
Styrene	0.7	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.05
1,1,1,2-Tetrachloroethane	0.058	<0.04	-	<0.04	<0.04	<0.04	-	<0.04	-	<0.04
1,1,2,2-Tetrachloroethane	0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.05
Tetrachloroethylene	0.28	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.05
Toluene	2.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1-Trichloroethane	0.38	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.05
1,1,2-Trichloroethane	0.05	<0.04	-	<0.04	<0.04	<0.04	-	<0.04	-	<0.04
Trichloroethylene	0.061	<0.03	-	<0.03	<0.03	<0.03	-	<0.03	-	<0.03
Trichlorofluoromethane	4	<0.05	-	<0.05	<0.05	<0.05	-	<0.05	-	<0.05
Vinyl Chloride	0.02	<0.02	-	<0.02	<0.02	<0.02	-	<0.02	-	<0.02
Xylenes (Total)	3.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	7.9	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	0.15	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	0.67	<0.05	-	<0.05	<0.05	<0.05	0.07	<0.05	<0.05	<0.05
Benzo(a)anthracene	0.5	<0.05	-	<0.05	<0.05	<0.05	0.10	<0.05	<0.05	<0.05
Benzo(a)pyrene	0.3	<0.05	-	<0.05	<0.05	<0.05	0.09	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	0.78	<0.05	-	<0.05	<0.05	<0.05	0.15	<0.05	<0.05	<0.05
Benzo(ghi)perylene	6.6	<0.05	-	<0.05	<0.05	<0.05	0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	0.78	<0.05	-	<0.05	<0.05	<0.05	0.08	<0.05	<0.05	<0.05
Chrysene	7	<0.05	-	<0.05	<0.05	<0.05	0.13	<0.05	<0.05	<0.05
Dibenzo(a,h)anthracene	0.1	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	0.69	<0.05	-	<0.05	<0.05	<0.05	0.40	<0.05	<0.05	<0.05
Fluorene	62	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	0.38	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1- & 2-Methylnaphthalene	0.99	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Naphthalene	0.6	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	6.2	<0.05	-	<0.05	<0.05	<0.05	0.22	<0.05	<0.05	<0.05
Pyrene	78	<0.05	-	<0.05	<0.05	<0.05	0.33	<0.05	<0.05	<0.05
Metals										
Antimony	7.5	<0.8	-	<0.8	<0.8	<0.8	<0.8	<0.8	-	<0.8
Arsenic	18	5	-	4	5	5	3	1	-	6
Barium	390	135	-	110	139	152	86.8	13.8	-	159
Beryllium	4	0.5	-	<0.5	0.6	0.5	<0.5	<0.5	-	0.6
Boron (Total)	120	7	-	8	10	9	8	<5	-	10
Boron (Hot Water Soluble)	1.5	0.21	-	0.26	0.3	0.24	0.61	0.55	-	0.17
Cadmium	1.2	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5
Chromium (Total)	160	19	-	15	21	19	18	17	-	16
Chromium (Hexavalent)	8	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2
Cobalt	22	10.8	-	7.2	10.2	9.1	6.3	3.6	-	8.6
Copper	140	25.5	-	18.8	24.4	22.4	14.3	5.1	-	23.1
Lead	120	10	-	8	10	9	11	2	-	10
Mercury	0.27	<0.10	-	<0.10	<0.10	<0.10	<0.10	<0.10	-	<0.10
Molybdenum	6.9	3.2	-	2.4	2.8	2.6	1.5	<0.5	-	2.8
Nickel	100	29	-	20	27	25	15	8	-	25
Selenium	2.4	<0.8	-	<0.8	<0.8	<0.8	<0.8	<0.8	-	<0.8
Silver	20	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5
Thallium	1	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5
Uranium	23	1.43	-	1.18	1.35	1.22	0.8	0.54	-	1.45
Vanadium	86	26.8	-	21.1	29.6	27.6	22.4	20.3	-	23.1
Zinc	340	42	-	31	46	38	29	15	-	40
Inorganics										
Cyanide (Free)	0.051	<0.040	-	-	-	-	-	<0.040	-	-
Electrical Conductivity (mS/cm)	0.7	0.615	-	-	-	-	-	**2.91**	-	-
Sodium Adsorption Ratio (No Units)	5	1.86	-	-	-	-	-	**18.7**	-	-
Polychlorinated Biphenyls (PCBs)										
PCBs (Total)	0.35	-	-	<0.1	<0.1	<0.1	-	-	<0.1	<0.1

Notes:

MECP Table 3 SCS (R/P/I-C):
Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011, Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition, for Residential/Parkland/Institutional Property Use and Coarse-Textured Soils

BOLD	Exceeds SCS
Units	All units in micrograms per gram, unless otherwise noted
mbgs	metres below ground surface
mS/cm	milliSiemens per centimetre
NA	Not Applicable

TABLE 3
SOIL BULK ANALYTICAL RESULTS
Morguard REIT c/o Morguard Investments Limitec
500 Coventry Road, Ottawa, Ontario

Sample Location	MECP Table 3 SCS (R/P/I-C)	MW2	MW3	MW6	MW10	MW10	MW22	MW13	MW13	MW14
Sample Designation		DUP-4	MW3- S4	MW6-S4	MW10-S3	MW10-S5	MW22-S3	MW13-S2	MW13-S5	MW14-S2
Sample Collection Date (dd/mm/yyyy)		04/30/2024	04/30/2024	04/30/2024	04/30/2024	04/30/2024	04/30/2024	05/01/2024	05/01/2024	05/01/2024
Laboratory Certificate No.		24Z146545	24Z146545	24Z146545	24Z146545	24Z146545	24Z146545	24Z146545	24Z146545	24Z146545
Date of Laboratory Analysis (dd/mm/yyyy-dd/mm/yyyy)		06/05/2024 - 07/05/2024	06/05/2024 - 08/05/2024	06/05/2024 - 09/05/2024	06/05/2024 - 08/05/2024	06/05/2024 - 08/05/2024	06/05/2024 - 09/05/2024	06/05/2024 - 07/05/2024	06/05/2024 - 08/05/2024	06/05/2024 - 07/05/2024
Laboratory Sample No.		5836706	5836681	5836694	5836695	5836696	5836703	5836730	5836732	5836733
Sample Depth (mbgs)		3.05 - 4.00	2.29 - 3.05	2.29 - 2.90	1.52 - 2.29	3.05 - 3.81	1.52 - 2.29	0.76 - 1.52	3.05 - 3.96	0.76 - 1.52
Miscellaneous Parameters										
pH (pH Units)	NV	-	-	-	-	-	-	-	-	-
Sieve #200 <0.075 mm (%)	NV	-	-	-	-	-	-	-	-	-
Sieve #200 >0.075 mm (%)	NV	-	-	-	-	-	-	-	-	-
Soil Texture	NV	-	-	-	-	-	-	-	-	-
Petroleum Hydrocarbons (PHCs)										
PHCs F1 (C_6 - C_{10})	55	<5	<5	<5	<5	<5	<5	<5	13	<5
PHCs F2 (>C_{10} - C_{16})	98	52	14	21	23	49	25	<10	50	<10
PHCs F3 (>C_{16} - C_{34})	300	<50	<50	<50	<50	<50	<50	<50	58	89
PHCs F4 (>C_{34} - C_{50})	2800	<50	<50	<50	<50	<50	<50	<50	<50	<50
Volatile Organic Compounds										
Acetone	16	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	-	<0.50
Benzene	0.21	<0.02	<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
Bromoform	0.27	<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
Carbon Tetrachloride	0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05
Chlorobenzene	2.4	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05
Chloroform	0.05	<0.04	<0.04	<0.04	-	<0.04	<0.04	<0.04	-	<0.04
Dibromochloromethane	9.4	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05
1,2-Dichlorobenzene	3.4	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05
1,3-Dichlorobenzene	4.8	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05
1,4-Dichlorobenzene	0.083	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05
Dichlorodifluoromethane	16	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05
1,1-Dichloroethane	3.5	<0.02	<0.02	<0.02	-	<0.02	<0.02	<0.02	-	<0.02
1,2-Dichloroethane	0.05	<0.03	<0.03	<0.03	-	<0.03	<0.03	<0.03	-	<0.03
1,1-Dichloroethylene	0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05
cis-1,2-Dichloroethylene	3.4	<0.02	<0.02	<0.02	-	<0.02	<0.02	<0.02	-	<0.02
trans-1,2-Dichloroethylene	0.084	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05
1,2-Dichloropropane	0.05	<0.03	<0.03	<0.03	-	<0.03	<0.03	<0.03	-	<0.03
1,3-Dichloropropene (Total)	0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05
Ethylbenzene	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	0.05	<0.04	<0.04	<0.04	-	<0.04	<0.04	<0.04	-	<0.04
Hexane	2.8	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05
Methyl Ethyl Ketone	16	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	-	<0.50
Methyl Isobutyl Ketone	1.7	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	-	<0.50
Methyl t-Butyl Ether (MTBE)	0.75	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05
Methylene Chloride	0.1	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05
Styrene	0.7	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05
1,1,1,2-Tetrachloroethane	0.058	<0.04	<0.04	<0.04	-	<0.04	<0.04	<0.04	-	<0.04
1,1,2,2-Tetrachloroethane	0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05
Tetrachloroethylene	0.28	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05
Toluene	2.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1-Trichloroethane	0.38	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05
1,1,2-Trichloroethane	0.05	<0.04	<0.04	<0.04	-	<0.04	<0.04	<0.04	-	<0.04
Trichloroethylene	0.061	<0.03	<0.03	<0.03	-	<0.03	<0.03	<0.03	-	<0.03
Trichlorofluoromethane	4	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	-	<0.05
Vinyl Chloride	0.02	<0.02	<0.02	<0.02	-	<0.02	<0.02	<0.02	-	<0.02
Xylenes (Total)	3.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	7.9	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	-
Acenaphthylene	0.15	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	-
Anthracene	0.67	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	-
Benzo(a)anthracene	0.5	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	-
Benzo(a)pyrene	0.3	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	-
Benzo(b)fluoranthene	0.78	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	-
Benzo(ghi)perylene	6.6	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	-
Benzo(k)fluoranthene	0.78	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	-
Chrysene	7	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	-
Dibenzo(a,h)anthracene	0.1	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	-
Fluoranthene	0.69	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	-
Fluorene	62	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	-
Indeno(1,2,3-cd)pyrene	0.38	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	-
1- & 2-Methylnaphthalene	0.99	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	-
Naphthalene	0.6	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	-
Phenanthrene	6.2	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	-
Pyrene	78	-	<0.05	<0.05	<0.05	<0.05	<0.05	-	<0.05	-
Metals										
Antimony	7.5	-	<0.8	<0.8	<0.8	-	<0.8	<0.8	-	<0.8
Arsenic	18	-	3	5	7	-	5	4	-	4
Barium	390	-	62.6	101	59.3	-	85.6	56.4	-	65.4
Beryllium	4	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	<0.5
Boron (Total)	120	-	<5	7	8	-	8	<5	-	6
Boron (Hot Water Soluble)	1.5	-	<0.10	0.14	0.17	-	<0.10	0.29	-	0.27
Cadmium	1.2	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	<0.5
Chromium (Total)	160	-	15	17	14	-	15	26	-	15
Chromium (Hexavalent)	8	-	<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2
Cobalt	22	-	7.2	7.9	6.9	-	5.9	5.6	-	5.3
Copper	140	-	16.3	19.1	18.4	-	15.1	9.4	-	16.9
Lead	120	-	93	10	8	-	7	6	-	13
Mercury	0.27	-	<0.10	<0.10	<0.10	-	<0.10	<0.10	-	<0.10
Molybdenum	6.9	-	1.9	1.6	1.8	-	2.2	0.5	-	1.2
Nickel	100	-	19	20	20	-	16	13	-	13
Selenium	2.4	-	<0.8	<0.8	<0.8	-	<0.8	<0.8	-	<0.8
Silver	20	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	<0.5
Thallium	1	-	<0.5	<0.5	<0.5	-	<0.5	<0.5	-	<0.5
Uranium	23	-	0.73	0.77	0.82	-	1.23	0.6	-	0.66
Vanadium	86	-	20.2	24.1	22.2	-	23.2	29.3	-	20.1
Zinc	340	-	33	32	40	-	30	26	-	42
Inorganics										
Cyanide (Free)	0.051	-	-	-	-	-	-	-	-	-
Electrical Conductivity (mS/cm)	0.7	-	-	-	-	-	-	-	-	-
Sodium Adsorption Ratio (No Units)	5	-	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls (PCBs)										
PCBs (Total)	0.35	-	-	<0.1	-	-	-	-	-	-

Notes:

MECP Table 3 SCS (R/P/I-C):
Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011, Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition, for Residential/Parkland/Institutional Property Use and Coarse-Textured Soils

BOLD	Exceeds SCS
Units	All units in micrograms per gram, unless otherwise noted
mbgs	metres below ground surface
mS/cm	milliSiemens per centimetre
NA	Not Applicable

TABLE 3
SOIL BULK ANALYTICAL RESULTS
Morguard REIT c/o Morguard Investments Limitec
500 Coventry Road, Ottawa, Ontario

Sample Location	**MECP Table 3 SCS (R/P/I-C)**	MW14	MW14	BH15	BH15	MW11	MW11	BH4	BH5	MW12
Sample Designation		MW14-S3	DUP-5	BH15-S2	BH15-S5	MW11-S2	MW11-S6	BH4-S2	BH5-S4	MW12-S3
Sample Collection Date (dd/mm/yyyy)		05/01/2024	05/01/2024	05/01/2024	05/01/2024	04/30/2024	04/30/2024	04/30/2024	04/30/2024	05/01/2024
Laboratory Certificate No.		24Z146545	24Z146545	24Z146545	24Z146545	24Z146545	24Z146545	24Z146545	24Z146545	24Z146545
Date of Laboratory Analysis (dd/mm/yyyy-dd/mm/yyyy)		06/05/2024 - 08/05/2024	06/05/2024 - 08/05/2024	06/05/2024 - 08/05/2024	06/05/2024 - 08/05/2024	06/05/2024 - 08/05/2024	06/05/2024 - 08/05/2024	06/05/2024 - 08/05/2024	06/05/2024 - 08/05/2024	06/05/2024 - 08/05/2024
Laboratory Sample No.		5836734	5836737	5836735	5836736	5836697	5836700	5836685	5836693	5836721
Sample Depth (mbgs)		1.52 - 2.29	1.52 - 2.29	0.76 - 1.52	3.05 - 3.81	0.76 - 1.52	3.81 - 4.27	0.76 - 1.52	2.29 - 3.05	1.52 - 2.29
Miscellaneous Parameters										
pH (pH Units)	NV	-	-	-	-	-	-	-	-	-
Sieve #200 <0.075 mm (%)	NV	-	-	-	-	-	-	-	-	-
Sieve #200 >0.075 mm (%)	NV	-	-	-	-	-	-	-	-	-
Soil Texture	NV	-	-	-	-	-	-	-	-	-
Petroleum Hydrocarbons (PHCs)										
PHCs F1 (C_6 - C_{10})	55	50	**71**	<5	9	10	<5	14	<5	<5
PHCs F2 (>C_{10} - C_{16})	98	**310**	**183**	<10	38	<10	53	42	<10	<10
PHCs F3 (>C_{16} - C_{34})	300	111	116	<50	<50	<50	54	<50	<50	<50
PHCs F4 (>C_{34} - C_{50})	2800	<50	<50	<50	<50	<50	<50	<50	<50	<50
Volatile Organic Compounds										
Acetone	16	-	-	<0.50	-	<0.50	<0.50	-	-	-
Benzene	0.21	**0.73**	**0.66**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromodichloromethane	13	-	-	<0.05	-	<0.05	<0.05	-	-	-
Bromoform	0.27	-	-	<0.05	-	<0.05	<0.05	-	-	-
Bromomethane	0.05	-	-	<0.05	-	<0.05	<0.05	-	-	-
Carbon Tetrachloride	0.05	-	-	<0.05	-	<0.05	<0.05	-	-	-
Chlorobenzene	2.4	-	-	<0.05	-	<0.05	<0.05	-	-	-
Chloroform	0.05	-	-	<0.04	-	<0.04	<0.04	-	-	-
Dibromochloromethane	9.4	-	-	<0.05	-	<0.05	<0.05	-	-	-
1,2-Dichlorobenzene	3.4	-	-	<0.05	-	<0.05	<0.05	-	-	-
1,3-Dichlorobenzene	4.8	-	-	<0.05	-	<0.05	<0.05	-	-	-
1,4-Dichlorobenzene	0.083	-	-	<0.05	-	<0.05	<0.05	-	-	-
Dichlorodifluoromethane	16	-	-	<0.05	-	<0.05	<0.05	-	-	-
1,1-Dichloroethane	3.5	-	-	<0.02	-	<0.02	<0.02	-	-	-
1,2-Dichloroethane	0.05	-	-	<0.03	-	<0.03	<0.03	-	-	-
1,1-Dichloroethylene	0.05	-	-	<0.05	-	<0.05	<0.05	-	-	-
cis-1,2-Dichloroethylene	3.4	-	-	<0.02	-	<0.02	<0.02	-	-	-
trans-1,2-Dichloroethylene	0.084	-	-	<0.05	-	<0.05	<0.05	-	-	-
1,2-Dichloropropane	0.05	-	-	<0.03	-	<0.03	<0.03	-	-	-
1,3-Dichloropropene (Total)	0.05	-	-	<0.05	-	<0.05	<0.05	-	-	-
Ethylbenzene	2	**3.93**	**3.68**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	0.05	-	-	<0.04	-	<0.04	<0.04	-	-	-
Hexane	2.8	-	-	<0.05	-	<0.05	<0.05	-	-	-
Methyl Ethyl Ketone	16	-	-	<0.50	-	<0.50	<0.50	-	-	-
Methyl Isobutyl Ketone	1.7	-	-	<0.50	-	<0.50	<0.50	-	-	-
Methyl t-Butyl Ether (MTBE)	0.75	-	-	<0.05	-	<0.05	<0.05	-	-	-
Methylene Chloride	0.1	-	-	<0.05	-	<0.05	<0.05	-	-	-
Styrene	0.7	-	-	<0.05	-	<0.05	<0.05	-	-	-
1,1,1,2-Tetrachloroethane	0.058	-	-	<0.04	-	<0.04	<0.04	-	-	-
1,1,2,2-Tetrachloroethane	0.05	-	-	<0.05	-	<0.05	**0.45**	-	-	-
Tetrachloroethylene	0.28	-	-	<0.05	-	<0.05	<0.05	-	-	-
Toluene	2.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1-Trichloroethane	0.38	-	-	<0.05	-	<0.05	<0.05	-	-	-
1,1,2-Trichloroethane	0.05	-	-	<0.04	-	<0.04	<0.04	-	-	-
Trichloroethylene	0.061	-	-	<0.03	-	<0.03	<0.03	-	-	-
Trichlorofluoromethane	4	-	-	<0.05	-	<0.05	<0.05	-	-	-
Vinyl Chloride	0.02	-	-	<0.02	-	<0.02	<0.02	-	-	-
Xylenes (Total)	3.1	<0.05	<0.05	<0.05	<0.05	0.45	<0.05	<0.05	<0.05	<0.05
Polycyclic Aromatic Hydrocarbons										
Acenaphthene	7.9	0.08	0.05	0.21	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	0.15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	0.67	0.05	<0.05	0.37	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)anthracene	0.5	<0.05	<0.05	**0.67**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	0.3	<0.05	<0.05	**0.37**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	0.78	<0.05	<0.05	0.56	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(ghi)perylene	6.6	<0.05	<0.05	0.18	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	0.78	<0.05	<0.05	0.38	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	7	<0.05	<0.05	0.62	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenzo(a,h)anthracene	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	0.69	0.06	0.06	**1.61**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	62	0.23	0.11	0.19	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	0.38	<0.05	<0.05	0.16	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1- & 2-Methylnaphthalene	0.99	**2.41**	0.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Naphthalene	0.6	0.59	0.26	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	6.2	0.48	0.23	1.44	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	78	0.07	0.06	1.19	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Metals										
Antimony	7.5	-	-	<0.8	-	-	<0.8	-	-	-
Arsenic	18	-	-	3	-	-	6	-	-	-
Barium	390	-	-	40	-	-	152	-	-	-
Beryllium	4	-	-	<0.5	-	-	0.6	-	-	-
Boron (Total)	120	-	-	<5	-	-	13	-	-	-
Boron (Hot Water Soluble)	1.5	-	-	0.36	-	-	-	-	-	-
Cadmium	1.2	-	-	<0.5	-	-	<0.5	-	-	-
Chromium (Total)	160	-	-	17	-	-	15	-	-	-
Chromium (Hexavalent)	8	-	-	<0.2	-	-	-	-	-	-
Cobalt	22	-	-	4.5	-	-	8.2	-	-	-
Copper	140	-	-	8	-	-	25.6	-	-	-
Lead	120	-	-	3	-	-	10	-	-	-
Mercury	0.27	-	-	<0.10	-	-	-	-	-	-
Molybdenum	6.9	-	-	<0.5	-	-	3.2	-	-	-
Nickel	100	-	-	10	-	-	25	-	-	-
Selenium	2.4	-	-	<0.8	-	-	<0.8	-	-	-
Silver	20	-	-	<0.5	-	-	<0.5	-	-	-
Thallium	1	-	-	<0.5	-	-	<0.5	-	-	-
Uranium	23	-	-	<0.50	-	-	1.76	-	-	-
Vanadium	86	-	-	20.2	-	-	23.8	-	-	-
Zinc	340	-	-	20	-	-	32	-	-	-
Inorganics										
Cyanide (Free)	0.051	-	-	-	-	-	-	-	-	-
Electrical Conductivity (mS/cm)	0.7	-	-	-	-	-	-	-	-	-
Sodium Adsorption Ratio (No Units)	5	-	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls (PCBs)										
PCBs (Total)	0.35	-	-	-	-	-	-	<0.1	<0.1	-

Notes:
MECP Table 3 SCS (R/P/I-C):
Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011, Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition, for Residential/Parkland/Institutional Property Use and Coarse-Textured Soils.

BOLD	Exceeds SCS
Units	All units in micrograms per gram, unless otherwise noted
mbgs	metres below ground surface
mS/cm	milliSiemens per centimetre
NA	Not Applicable

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TABLE 4

GROUNDWATER MONITORING WELL ELEVATIONS AND CONSTRUCTION DETAILS

Morguard REIT c/o Morguard Investments Limited

500 Coventry Road, Ottawa, Ontario

Monitoring Well	Top of Pipe Elevation (mamsl)	Ground Surface Elevation (mamsl)	Well Construction Details						
			Total Well Depth (mbgs)	Stick-Up Height (metres)	Well Diameter (centimetres)	Screen Slot Size	Monitoring Well Screen Interval (mbgs)	Screen length (metres)	Sealant thickness (metres)
MW1	66.80	66.90	3.5	-0.10	5.1	010	2.0 - 3.5	1.5	1.7
MW2	65.79	65.88	4.0	-0.09	5.1	010	0.9 - 4.0	3.1	0.6
MW3	66.51	66.62	4.1	-0.11	5.1	010	1.1 - 4.1	3.1	0.8
MW6	66.18	66.29	2.9	-0.11	5.1	010	0.9 - 2.9	2.0	0.6
MW7	66.64	66.78	3.5	-0.14	5.1	010	2.0 - 3.5	1.5	1.7
MW9	67.34	67.44	4.9	-	5.1	010	1.8 - 4.9	3.1	1.5
MW10	66.27	66.37	3.8	-0.10	5.1	010	1.7 - 3.8	2.1	1.4
MW11	66.38	66.48	4.3	-0.10	5.1	010	1.2 - 4.3	3.1	0.9
MW12	66.85	66.95	3.7	-0.10	5.1	010	1.5 - 3.7	2.2	1.2
MW13	-	-	4.0	0.96	5.1	010	0.9 - 4.0	3.1	0.6
MW14	66.67	66.73	3.2	-0.06	5.1	010	1.7 - 3.2	1.5	1.4
MW16	66.90	67.00	8.0	-0.10	5.1	010	4.6 - 7.6	3.1	4.3
MW18	66.45	66.55	7.4	-0.10	5.1	010	4.3 - 7.4	3.1	4.0
MW19	67.78	67.03	7.6	0.75	5.1	010	4.6 - 7.6	3.1	4.3
MW20	67.66	67.76	3.8	-0.10	5.1	010	1.7 - 3.8	2.1	1.4
MW21	67.68	67.74	4.1	-0.06	5.1	010	1.1 - 4.1	3.1	0.8
MW22	67.69	67.79	2.7	-0.10	5.1	010	1.2 - 2.7	1.5	0.9
MW23	66.72	66.82	6.1	-0.10	5.1	010	3.0 - 6.0	3.1	2.7

Notes:

mamsl	metres above mean sea level
mbgs	metres below ground surface

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TABLE 5
GROUNDWATER MONITORING DATA
Morguard REIT c/o Morguard Investments Limited
500 Coventry Road, Ottawa, Ontario

Monitoring Well	Monitoring Well Screen Interval (mbgs)	Top of Pipe Elevation (mamsl)	Ground Surface Elevation (mamsl)	Stick-Up Height (metres)	Date of Monitoring (dd/mm/yyyy)	Measured Depth to Groundwater from Top of Pipe (mbtop)	Calculated Depth to Groundwater from Surface (mbgs)	Groundwater Elevation (mamsl)	Visual / Olfactory Observations
MW1	2.0 - 3.5	66.80	66.90	-0.10	08/05/2024	0.17	0.27	66.63	No sheen or odours
MW2	0.9 - 4.0	65.79	65.88	-0.09	08/05/2024	0.38	0.47	65.41	No sheen or odours
MW3	1.1 - 4.1	66.51	66.62	-0.11	08/05/2024	0.29	0.40	66.22	No sheen or odours
MW6	0.9 - 2.9	66.18	66.29	-0.11	08/05/2024	0.25	0.36	65.93	No sheen or odours
MW7	2.0 - 3.5	66.64	66.78	-0.14	08/05/2024	0.58	0.72	66.06	No sheen or odours
MW9	1.8 - 4.9	67.34	67.44	-0.10	08/05/2024	0.10	0.20	67.24	No sheen or odours
MW10	1.7 - 3.8	66.27	66.37	-0.10	08/05/2024	0.27	0.37	66.00	No sheen or odours
MW11	1.2 - 4.3	66.38	66.48	-0.10	08/05/2024	0.35	0.45	66.03	No sheen or odours
MW12	1.5 - 3.7	66.85	66.95	-0.10	08/05/2024	1.08	1.18	65.77	No sheen or odours
MW13	0.9 - 4.0	-	-	0.96	08/05/2024	1.88	0.92	-	No sheen or odours
MW14	1.7 - 3.2	66.67	66.73	-0.06	08/05/2024	1.54	1.60	65.13	No sheen or odours
MW16	4.6 - 7.6	66.90	67.00	-0.10	17/04/2024	2.86	2.96	64.04	No sheen or odours
MW18	4.3 - 7.4	66.45	66.55	-0.10	17/04/2024	1.24	1.34	65.21	No sheen or odours
MW19	4.6 - 7.6	67.78	67.03	0.75	17/04/2024	2.77	2.02	65.01	No sheen or odours
MW20	1.7 - 3.8	67.66	67.76	-0.10	08/05/2024	0.80	0.90	66.86	No sheen or odours
MW21	1.1 - 4.1	67.68	67.74	-0.06	08/05/2024	0.31	0.37	67.37	No sheen or odours
MW22	1.2 - 2.7	67.69	67.79	-0.10	08/05/2024	0.38	0.48	67.31	No sheen or odours
MW23	3.0 - 6.0	66.72	66.82	-0.10	17/04/2024	2.93	3.03	63.79	No sheen or odours

Minimum =	0.20	63.79
Maximum =	3.03	67.37

Notes:

mamsl	metres above mean sea level
mbgs	metres below ground surface
mbtop	metres below top of pipe
NM	Not Measured

TABLE 6

GROUNDWATER MONITORING - NON-AQUEOUS PHASE LIQUIDS

Morguard REIT c/o Morguard Investments Limited

500 Coventry Road, Ottawa, Ontario

Monitoring Well	Top of Pipe Elevation (mamsl)	Date of Monitoring (dd/mm/yyyy)	LNAPL					DNAPL				
			Measured Depth to Bottom of LNAPL from Top of Pipe (metres)	Measured Depth to Top of LNAPL from Top of Pipe (metres)	LNAPL Thickness (metres)	Top of LNAPL Elevation (mamsl)	Bottom of LNAPL Elevation (mamsl)	Measured Depth to Bottom of DNAPL from Top of Pipe (metres)	Measured Depth to Top of DNAPL from Top of Pipe (metres)	DNAPL Thickness (metres)	Top of DNAPL Elevation (mamsl)	Bottom of DNAPL Elevation (mamsl)
MW1	66.80	08/05/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW2	65.79	08/05/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW3	66.51	08/05/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW6	66.18	08/05/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW7	66.64	08/05/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW9	67.34	08/05/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW10	66.27	08/05/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW11	66.38	08/05/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW12	66.85	08/05/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW13	-	08/05/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW14	66.67	08/05/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW16	66.90	17/04/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW18	66.45	17/04/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW19	67.78	17/04/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW20	67.66	08/05/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW21	67.68	08/05/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW22	67.69	08/05/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW23	66.72	17/04/2024	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

DNAPL	Dense Non-Aqueous Phase Liquid
LNAPL	Light Non-Aqueous Phase Liquid
mamsl	Metres Above Mean Sea Level
mbgs	Metres Below Ground Surface
ND	Not Detected

TABLE 7
GROUNDWATER ANALYTICAL RESULTS
Morguard REIT c/o Morguard Investments Limited
500 Coventry Road, Ottawa, Ontario

Sample Location	**MECP Table 3 SCS (C)**	MW20	MW20	MW21	MW6	MW2	MW1	MW9	MW22	MW19	MW19
Sample Designation		MW20	DUP1	MW21	MW6	MW2	MW1	MW9	MW22	MW19	DUP2
Sample Collection Date (dd/mm/yyyy)		05/13/2024	05/13/2024	05/13/2024	05/13/2024	05/13/2024	05/13/2024	05/13/2024	05/13/2024	05/13/2024	05/13/2024
Laboratory Certificate No.		24Z250512	24Z250512	24Z250512	24Z250512	24Z250512	24Z250512	24Z250512	24Z250512	24Z250512	24Z250512
Date of Laboratory Analysis (dd/mm/yyyy)		16/05/2024 - 21/05/2014	16/05/2024 - 21/05/2014	16/05/2024 - 21/05/2014	17/05/2024 - 21/05/2014	16/05/2024 - 21/05/2014	16/05/2024 - 21/05/2014	16/05/2024 - 21/05/2014	16/05/2024 - 21/05/2014	15/05/2024 - 21/05/2014	15/05/2024 - 21/05/2014
Laboratory Sample No.		5861463	5861636	5861556	5861603	5861620	5861624	5861638	5861849	5861869	5861887
Well Screen Depth Interval (mbgs)		1.7 - 3.8	1.7 - 3.8	1.1 - 4.1	0.9 - 2.9	0.9 - 4.0	2.0 - 3.5	1.8 - 4.9	1.2 - 2.7	4.6 - 7.6	4.6 - 7.6
Petroleum Hydrocarbons (PHCs)											
PHCs F1 (C_6 - C_{10})	750	<25	<25	<25	<25	<25	<25	<25	<25	-	-
PHCs F2 (>C_{10} - C_{16})	150	<100	<100	<100	<100	<100	<100	<100	<100	-	-
PHCs F3 (>C_{16} - C_{34})	500	<100	<100	<100	<100	<100	<100	<100	<100	-	-
PHCs F4 (>C_{34} - C_{50})	500	<100	<100	<100	<100	<100	<100	<100	<100	-	-
Volatile Organic Compounds											
Acetone	130000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-
Benzene	44	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.82	<0.20	-	-
Bromodichloromethane	85000	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	-
Bromoform	380	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-	-
Bromomethane	5.6	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	-
Carbon Tetrachloride	0.79	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	-
Chlorobenzene	630	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-	-
Chloroform	2.4	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	-
Dibromochloromethane	82000	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-	-
1,2-Dichlorobenzene	4600	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-	-
1,3-Dichlorobenzene	9600	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-	-
1,4-Dichlorobenzene	8	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-	-
Dichlorodifluoromethane	4400	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	-	-
1,1-Dichloroethane	320	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	-	-
1,2-Dichloroethane	1.6	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	-
1,1-Dichloroethylene	1.6	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	-	-
cis-1,2-Dichloroethylene	1.6	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	-
trans-1,2-Dichloroethylene	1.6	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	-
1,2-Dichloropropane	16	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	-
1,3-Dichloropropene (Total)	5.2	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	-	-
Ethylbenzene	2300	<0.10	<0.10	0.13	<0.10	<0.10	<0.10	<0.10	<0.10	-	-
Ethylene Dibromide	0.25	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-	-
Hexane	51	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	-
Methyl Ethyl Ketone	470000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-
Methyl Isobutyl Ketone	140000	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-
Methyl t-Butyl Ether (MTBE)	190	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	-
Methylene Chloride	610	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	-	-
Styrene	1300	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-	-
1,1,1,2-Tetrachloroethane	3.3	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-	-
1,1,2,2-Tetrachloroethane	3.2	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-	-
Tetrachloroethylene	1.6	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	-
Toluene	18000	<0.20	<0.20	1.23	<0.20	<0.20	1..52	<0.20	<0.20	-	-
1,1,1-Trichloroethane	640	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	-	-
1,1,2-Trichloroethane	4.7	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	-
Trichloroethylene	1.6	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	-
Trichlorofluoromethane	2500	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	-	-
Vinyl Chloride	0.5	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	-	-
Xylenes (Total)	4200	<0.20	<0.20	0.56	<0.20	<0.20	0.48	<0.20	<0.20	-	-
Polycyclic Aromatic Hydrocarbons											
Acenaphthene	600	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	-
Acenaphthylene	1.8	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	-
Anthracene	2.4	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-	-
Benzo(a)anthracene	4.7	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	-
Benzo(a)pyrene	0.81	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-
Benzo(b)fluoranthene	0.75	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-	-
Benzo(ghi)perylene	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	-
Benzo(k)fluoranthene	0.4	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-	-
Chrysene	1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-	-
Dibenzo(a,h)anthracene	0.52	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	-
Fluoranthene	130	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	-
Fluorene	400	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	-
Indeno(1,2,3-cd)pyrene	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	-
1- & 2-Methylnaphthalene	1800	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	-
Naphthalene	1400	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	-
Phenanthrene	580	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-	-
Pyrene	68	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	-
Metals											
Antimony	20000	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	-	-
Arsenic	1900	11.4	8.5	14.7	-	8.3	13.7	14.7	9.7	-	-
Barium	29000	122	128	419	-	121	53.8	282	40.3	-	-
Beryllium	67	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	<0.50	-	-
Boron (Total)	45000	174	158	805	-	118	205	434	85.4	-	-
Cadmium	2.7	<0.20	<0.20	<0.20	-	0.24	<0.20	0.5	<0.20	-	-
Chromium (Total)	810	<2.0	<2.0	<2.0	-	<2.0	<2.0	<2.0	<2.0	-	-
Chromium (Hexavalent)	140	<2.000	<2.000		-	<2.000			<2.000	-	-
Cobalt	66	2.96	2.5	0.68	-	3.31	1.32	1.51	3.25	-	-
Copper	87	<1.0	<1.0	2.6	-	1.8	<1.0	<1.0	3.8	-	-
Lead	25	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	<0.50	-	-
Mercury	0.29	<0.02	<0.02		-	<0.02			<0.02	-	-
Molybdenum	9200	40.6	37.7	25.8	-	11.2	12.1	10.6	45.5	-	-
Nickel	490	23.7	25	4.7	-	13.8	17.7	5.3	7.7	-	-
Selenium	63	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	-	-
Silver	1.5	<0.20	<0.20	<0.20	-	<0.20	<0.20	<0.20	<0.20	-	-
Sodium	2300000	-	-	-	-	-	-	-	-	1770000	1830000
Thallium	510	<0.30	<0.30	<0.30	-	<0.30	<0.30	<0.30	<0.30	-	-
Uranium	420	10.4	9.18	0.55	-	1.32	1.74	1.34	3	-	-
Vanadium	250	0.48	0.57	0.92	-	1.27	0.52	0.46	<0.40	-	-
Zinc	1100	7.2	5.1	9.9	-	<5.0	5.6	5.4	5.6	-	-
Inorganics											
Chloride	2300000	-	-	-	-	-	-	-	-	**2960000**	**2910000**
Cyanide (Free)	66	-	-	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls (PCBs)											
PCBs (Total)	7.8	<0.1	<0.1	-	<0.1	<0.1	-	-	<0.1	-	-

Notes:

MECP Table 3 SCS (C) :

Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011, Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition, for All Types of Property Use and Coarse-Textured Soils

BOLD	Exceeds SCS
BOLD	Reportable Detection Limit Exceeds SCS
Units	All units in micrograms per litre, unless otherwise noted
mbgs	metres below ground surface
NA	Not Applicable
NV	No Value
TEQ	Toxic Equivalency Quotient

TABLE 7
GROUNDWATER ANALYTICAL RESULTS
Morguard REIT c/o Morguard Investments Limited
500 Coventry Road, Ottawa, Ontario

Sample Location	**MECP Table 3 SCS (C)**	MW3	MW3	MW10	MW18	MW11	MW12	MW13	MW14	MW16	NA
Sample Designation		MW3	DUP3	MW10	MW18	MW11	MW12	MW13	MW14	MW16	Trip Blank
Sample Collection Date (dd/mm/yyyy)		05/23/2024	05/23/2024	05/23/2024	05/23/2024	05/23/2024	05/23/2024	05/23/2024	05/23/2024	05/23/2024	05/13/2024
Laboratory Certificate No.		24Z154227	24Z154227	24Z154227	24Z154227	24Z154227	24Z154227	24Z154227	24Z154227	24Z154227	24Z154227
Date of Laboratory Analysis (dd/mm/yyyy)		28/05/2024 - 30/05/2014	28/05/2024 - 30/05/2014	28/05/2024 - 29/05/2014	28/05/2024 - 30/05/2014	28/05/2024 - 30/05/2014	28/05/2024	28/05/2024 - 29/05/2014	28/05/2024 - 30/05/2014	28/05/2024 - 30/05/2014	29/05/2024
Laboratory Sample No.		5883555	5883566	5883567	5883593	5883521	5883539	5883507	5883546	5883552	5861992
Well Screen Depth Interval (mbgs)		1.1 - 4.1	1.1 - 4.1	1.7 - 3.8	4.3 - 7.4	1.2 - 4.3	1.5 - 3.7	0.9 - 4.0	1.7 - 3.2	4.6 - 7.6	-
Petroleum Hydrocarbons (PHCs)											
PHCs F1 (C_6 - C_{10})	750	<25	<25	<25	<25	<25	<25	<25	254	-	-
PHCs F2 (>C_{10} - C_{16})	150	<100	<100	<100	<100	<100	<100	<100	120	-	-
PHCs F3 (>C_{16} - C_{34})	500	<100	<100	<100	<100	<100	<100	<100	<100	-	-
PHCs F4 (>C_{34} - C_{50})	500	<100	<100	<100	<100	<100	<100	<100	<100	-	-
Volatile Organic Compounds											
Acetone	130000	<1.0	<1.0	<1.0	<1.0	-	-	<1.0	-	-	<1.0
Benzene	44	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	26.9	-	<0.20
Bromodichloromethane	85000	<0.20	<0.20	<0.20	<0.20	-	-	<0.20	-	-	<0.20
Bromoform	380	<0.10	<0.10	<0.10	<0.10	-	-	<0.10	-	-	<0.10
Bromomethane	5.6	<0.20	<0.20	<0.20	<0.20	-	-	<0.20	-	-	<0.20
Carbon Tetrachloride	0.79	<0.20	<0.20	<0.20	<0.20	-	-	<0.20	-	-	<0.20
Chlorobenzene	630	<0.10	<0.10	<0.10	<0.10	-	-	<0.10	-	-	<0.10
Chloroform	2.4	<0.20	<0.20	<0.20	<0.20	-	-	<0.20	-	-	<0.20
Dibromochloromethane	82000	<0.10	<0.10	<0.10	<0.10	-	-	<0.10	-	-	<0.10
1,2-Dichlorobenzene	4600	<0.10	<0.10	<0.10	<0.10	-	-	<0.10	-	-	<0.10
1,3-Dichlorobenzene	9600	<0.10	<0.10	<0.10	<0.10	-	-	<0.10	-	-	<0.10
1,4-Dichlorobenzene	8	<0.10	<0.10	<0.10	<0.10	-	-	<0.10	-	-	<0.10
Dichlorodifluoromethane	4400	<0.40	<0.40	<0.40	<0.40	-	-	<0.40	-	-	<0.40
1,1-Dichloroethane	320	<0.30	<0.30	<0.30	<0.30	-	-	<0.30	-	-	<0.30
1,2-Dichloroethane	1.6	<0.20	<0.20	<0.20	<0.20	-	-	<0.20	-	-	<0.20
1,1-Dichloroethylene	1.6	<0.30	<0.30	<0.30	<0.30	-	-	<0.30	-	-	<0.30
cis-1,2-Dichloroethylene	1.6	<0.20	<0.20	<0.20	<0.20	-	-	<0.20	-	-	<0.20
trans-1,2-Dichloroethylene	1.6	<0.20	<0.20	<0.20	<0.20	-	-	<0.20	-	-	<0.20
1,2-Dichloropropane	16	<0.20	<0.20	<0.20	<0.20	-	-	<0.20	-	-	<0.20
1,3-Dichloropropene (Total)	5.2	<0.30	<0.30	<0.30	<0.30	-	-	<0.30	-	-	<0.30
Ethylbenzene	2300	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	41.3	-	<0.10
Ethylene Dibromide	0.25	<0.10	<0.10	<0.10	<0.10	-	-	<0.10	-	-	<0.10
Hexane	51	<0.20	<0.20	<0.20	<0.20	-	-	<0.20	-	-	<0.20
Methyl Ethyl Ketone	470000	<1.0	<1.0	<1.0	<1.0	-	-	<1.0	-	-	<1.0
Methyl Isobutyl Ketone	140000	<1.0	<1.0	<1.0	<1.0	-	-	<1.0	-	-	<1.0
Methyl t-Butyl Ether (MTBE)	190	<0.20	<0.20	<0.20	<0.20	-	-	<0.20	-	-	<0.20
Methylene Chloride	610	<0.30	<0.30	<0.30	<0.30	-	-	<0.30	-	-	<0.30
Styrene	1300	<0.10	<0.10	<0.10	<0.10	-	-	<0.10	-	-	<0.10
1,1,1,2-Tetrachloroethane	3.3	<0.10	<0.10	<0.10	<0.10	-	-	<0.10	-	-	<0.10
1,1,2,2-Tetrachloroethane	3.2	<0.10	<0.10	<0.10	<0.10	-	-	<0.10	-	-	<0.10
Tetrachloroethylene	1.6	<0.20	<0.20	<0.20	<0.20	-	-	<0.20	-	-	<0.20
Toluene	18000	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.99	-	<0.20
1,1,1-Trichloroethane	640	<0.30	<0.30	<0.30	<0.30	-	-	<0.30	-	-	<0.30
1,1,2-Trichloroethane	4.7	<0.20	<0.20	<0.20	<0.20	-	-	<0.20	-	-	<0.20
Trichloroethylene	1.6	<0.20	<0.20	<0.20	<0.20	-	-	<0.20	-	-	<0.20
Trichlorofluoromethane	2500	<0.40	<0.40	<0.40	<0.40	-	-	<0.40	-	-	<0.40
Vinyl Chloride	0.5	<0.17	<0.17	<0.17	<0.17	-	-	<0.17	-	-	<0.17
Xylenes (Total)	4200	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	9.56	-	<0.20
Polycyclic Aromatic Hydrocarbons											
Acenaphthene	600	<0.20	<0.20	<0.20	<0.20	-	-	-	-	-	-
Acenaphthylene	1.8	<0.20	<0.20	<0.20	<0.20	-	-	-	-	-	-
Anthracene	2.4	<0.10	<0.10	<0.10	<0.10	-	-	-	-	-	-
Benzo(a)anthracene	4.7	<0.20	<0.20	<0.20	<0.20	-	-	-	-	-	-
Benzo(a)pyrene	0.81	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-
Benzo(b)fluoranthene	0.75	<0.10	<0.10	<0.10	<0.10	-	-	-	-	-	-
Benzo(ghi)perylene	0.2	<0.20	<0.20	<0.20	<0.20	-	-	-	-	-	-
Benzo(k)fluoranthene	0.4	<0.10	<0.10	<0.10	<0.10	-	-	-	-	-	-
Chrysene	1	<0.10	<0.10	<0.10	<0.10	-	-	-	-	-	-
Dibenzo(a,h)anthracene	0.52	<0.20	<0.20	<0.20	<0.20	-	-	-	-	-	-
Fluoranthene	130	<0.20	<0.20	<0.20	<0.20	-	-	-	-	-	-
Fluorene	400	<0.20	<0.20	<0.20	<0.20	-	-	-	-	-	-
Indeno(1,2,3-cd)pyrene	0.2	<0.20	<0.20	<0.20	<0.20	-	-	-	-	-	-
1- & 2-Methylnaphthalene	1800	<0.20	<0.20	<0.20	<0.20	-	-	-	-	-	-
Naphthalene	1400	<0.20	<0.20	<0.20	<0.20	-	-	-	-	-	-
Phenanthrene	580	<0.10	<0.10	<0.10	<0.10	-	-	-	-	-	-
Pyrene	68	<0.20	<0.20	<0.20	<0.20	-	-	-	-	-	-
Metals											
Antimony	20000	<1.0	<1.0	<1.0	<1.0	-	-	<1.0	-	-	-
Arsenic	1900	<1.0	1.4	<1.0	<1.0	-	-	<1.0	-	-	-
Barium	29000	229	244	242	180	-	-	107	-	-	-
Beryllium	67	<0.50	<0.50	<0.50	<0.50	-	-	<0.50	-	-	-
Boron (Total)	45000	101	105	103	281	-	-	92.6	-	-	-
Cadmium	2.7	<0.20	<0.20	<0.20	<0.20	-	-	<0.20	-	-	-
Chromium (Total)	810	<2.0	<2.0	<2.0	<2.0	-	-	<2.0	-	-	-
Chromium (Hexavalent)	140	<2.000	<2.000			-	-		-	-	-
Cobalt	66	0.81	0.81	1.3	<0.50	-	-	1.69	-	-	-
Copper	87	<1.0	<1.0	1.2	1.8	-	-	2.6	-	-	-
Lead	25	<0.50	<0.50	<0.50	<0.50	-	-	<0.50	-	-	-
Mercury	0.29	<0.02	<0.02			-	-		-	-	-
Molybdenum	9200	11.6	12.1	11.1	2.09	-	-	6.16	-	-	-
Nickel	490	6.6	5.7	2.7	2.9	-	-	4.1	-	-	-
Selenium	63	1.3	<1.0	2.2	1.3	-	-	1.6	-	-	-
Silver	1.5	<0.20	<0.20	<0.20	<0.20	-	-	<0.20	-	-	-
Sodium	2300000	-	-	-	**3120000**	-	-	1220000	**5170000**	**17500000**	-
Thallium	510	<0.30	<0.30	<0.30	<0.30	-	-	<0.30	-	-	-
Uranium	420	<0.50	<0.50	1.71	0.58	-	-	2.58	-	-	-
Vanadium	250	0.53	<0.40	0.68	0.46	-	-	1.35	-	-	-
Zinc	1100	<5.0	6.4	<5.0	<5.0	-	-	5.8	-	-	-
Inorganics											
Chloride	2300000	-	-	-	**6500000**	-	-	1250000	**7750000**	**23300000**	-
Cyanide (Free)	66	-	-	-	-	-	-	-	-	-	-
Polychlorinated Biphenyls (PCBs)											
PCBs (Total)	7.8	<0.1	<0.1	-	-	-	-	-	-	-	-

Notes:

MECP Table 3 SCS (C) :

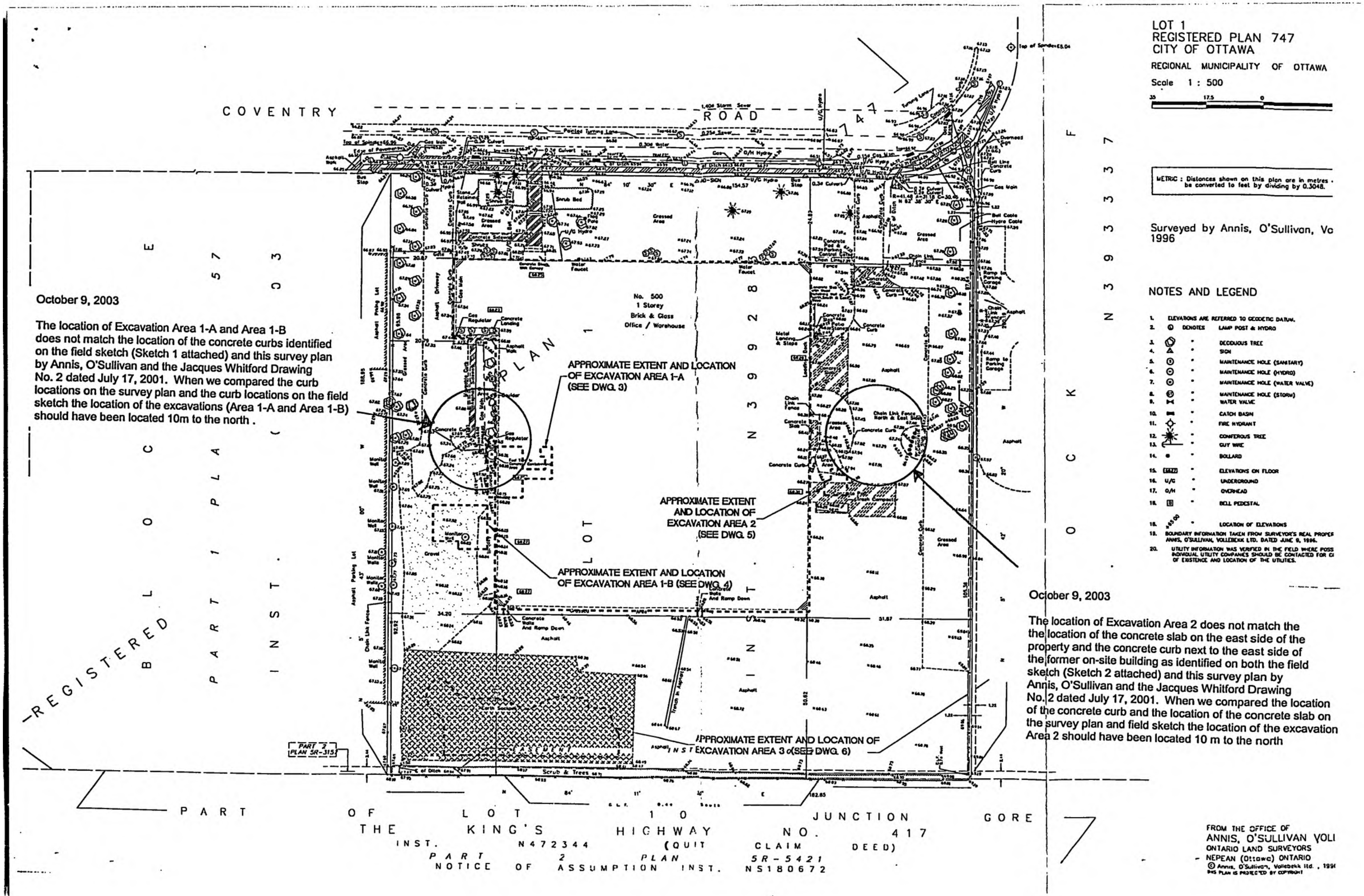
Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, April 15, 2011, Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition, for All Types of Property Use and Coarse-Textured Soils

BOLD	Exceeds SCS
BOLD	Reportable Detection Limit Exceeds SCS
Units	All units in micrograms per litre, unless otherwise noted
mbgs	metres below ground surface
NA	Not Applicable
NV	No Value
TEQ	Toxic Equivalency Quotient

10.0 APPENDICES

APPENDIX A

Legal Survey



LOT 1
REGISTERED PLAN 747
CITY OF OTTAWA

REGIONAL MUNICIPALITY OF OTTAWA

Scale 1 : 500

35 17.5 0

METRIC : Distances shown on this plan are in metres . be converted to feet by dividing by 0.3048.

Surveyed by Annis, O'Sullivan, Vo
1996

NOTES AND LEGEND

1. ELEVATIONS ARE REFERRED TO GEODETIC DATUM.
2. ⊙ DENOTES LAMP POST & HYDRO
3. ⬠ " DECIDUOUS TREE
4. △ " SIGN
5. ⓢ " MAINTENANCE HOLE (SANITARY)
6. ⊖ " MAINTENANCE HOLE (HYDRO)
7. ⊙ " MAINTENANCE HOLE (WATER VALVE)
8. Ⓢ " MAINTENANCE HOLE (STORM)
9. ⋈ " WATER VALVE
10. ▬ " CATCH BASIN
11. ⌖ " FIRE HYDRANT
12. ✳ " CONIFEROUS TREE
13. ↼ " GUY WIRE
14. ● " BOLLARD
15. ▭ " ELEVATIONS ON FLOOR
16. U/G " UNDERGROUND
17. O/H " OVERHEAD
18. ⊡ " BELL PEDESTAL
18. ×65.00 " LOCATION OF ELEVATIONS
19. BOUNDARY INFORMATION TAKEN FROM SURVEYOR'S REAL PROPEF ANNIS, O'SULLIVAN, VOLLEBEKK LTD. DATED JUNE 9, 1996.
20. UTILITY INFORMATION WAS VERIFIED IN THE FIELD WHERE POSS INDIVIDUAL UTILITY COMPANIES SHOULD BE CONTACTED FOR CI OF EXISTENCE AND LOCATION OF THE UTILITIES.

October 9, 2003

The location of Excavation Area 1-A and Area 1-B does not match the location of the concrete curbs identified on the field sketch (Sketch 1 attached) and this survey plan by Annis, O'Sullivan and the Jacques Whitford Drawing No. 2 dated July 17, 2001. When we compared the curb locations on the survey plan and the curb locations on the field sketch the location of the excavations (Area 1-A and Area 1-B) should have been located 10m to the north .

APPROXIMATE EXTENT AND LOCATION OF EXCAVATION AREA 1-A (SEE DWG. 3)

APPROXIMATE EXTENT AND LOCATION OF EXCAVATION AREA 2 (SEE DWG. 5)

APPROXIMATE EXTENT AND LOCATION OF EXCAVATION AREA 1-B (SEE DWG. 4)

APPROXIMATE EXTENT AND LOCATION OF EXCAVATION AREA 3 (SEE DWG. 6)

October 9, 2003

The location of Excavation Area 2 does not match the the location of the concrete slab on the east side of the property and the concrete curb next to the east side of the former on-site building as identified on both the field sketch (Sketch 2 attached) and this survey plan by Annis, O'Sullivan and the Jacques Whitford Drawing No. 2 dated July 17, 2001. When we compared the location of the concrete curb and the location of the concrete slab on the survey plan and field sketch the location of the excavation Area 2 should have been located 10 m to the north

FROM THE OFFICE OF
ANNIS, O'SULLIVAN VOLI
ONTARIO LAND SURVEYORS
NEPEAN (Ottawa) ONTARIO

APPENDIX B

Sampling and Analysis Plan

Sampling and Analysis Plan for Phase Two Environmental Site Assessment

500 Coventry Road
Ottawa, Ontario

Prepared for:

Morguard REIT c/o Morguard Investments Limited
55 City Centre Drive, Suite 800
Mississauga, ON L5B 1M3

March 20, 2024

Pinchin File: 319674.001

Issued To:	**Morguard REIT c/o Morguard Investments Limited**
Contact:	
Issued On:	**March 20, 2024**
Pinchin File:	**319674.001**
Issuing Office:	**Kanata, ON**
Primary Pinchin Contact:	**Alicia McDonald, P.Eng., QP_{ESA}** **613.840.6147** **amcdonald@pinchin.com**

Author: Alicia McDonald, P.Eng., QP_{ESA}
Senior Project Manager

Reviewer: Scott Mather, P.Eng., QP_{ESA}
Director, Eastern Ontario

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APPENDICES

FIGURES

TABLES

1.0 INTRODUCTION

Pinchin Ltd. (Pinchin) has prepared this Sampling and Analysis Plan (SAP) for the Phase Two Environmental Site Assessment (ESA) to be performed at the property located at 500 Coventry Road in Ottawa, Ontario (hereafter referred to as the Site or Phase Two Property). The Phase Two Property is approximately 3.5 hectares in size and exists as vacant land partially utilized as a parking lot and snow stockpiling area for the St. Laurent Shopping Centre. A Key Map showing the Phase Two Property location is provided on Figure 1 (all Figures are located in Appendix I).

The Phase Two ESA will be conducted at the request of Morguard REIT c/o Morguard Investments Limited (Client) in relation to the future redevelopment of the Phase Two Property from commercial to residential land use. A Record of Site Condition (RSC) submittal to the Ontario Ministry of the Environment, Conservation and Parks (MECP) is a mandatory requirement when a land use changes to a more sensitive land use and as such, to support the RSC submission, the Phase Two ESA will be 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 362/23 on January 1, 2024 (O. Reg. 153/04).

This SAP provides the scope of work and procedures for completing the field investigation for the Phase Two ESA. The Phase Two ESA will be performed in accordance with the scope of work, and terms and conditions described in the proposal entitled *"Phase Two Environmental Site Assessment, 500 Coventry Road, Ottawa, Ontario"*, prepared for the Client, dated March 20, 2024.

2.0 AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

The objectives of the Phase Two ESA will be to assess soil and groundwater quality at the Phase Two Property in relation to 13 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 findings of which are provided in the draft report entitled "*Phase One Environmental Site Assessment Report, 500 Coventry Road, Ottawa, Ontario",* prepared for the Client. The APECs and corresponding PCAs and COPCs are summarized in Table 1 (all Tables are located in Appendix II) and shown on Figures 2 to 4.

3.0 SCOPE OF WORK

The information obtained from the Phase One ESA, in particular the Phase One Conceptual Site Model, was used to determine the environmental media requiring investigation during the Phase Two ESA (i.e., soil and groundwater), the locations and depths for sample collection, and the parameters to be analyzed for the samples submitted from each APEC. The Phase Two ESA scope of work will include the advancement of 24 boreholes, 18 of which will be completed as groundwater monitoring wells. The proposed borehole and groundwater monitoring well locations are provided on Figure 5.

Table 2 in Appendix II provides a detailed summary of the proposed Phase Two ESA scope of work, including:

- Boreholes and/or groundwater monitoring wells to be completed within each APEC and the COPCs to be analyzed for samples collected in each APEC.
- Media to be sampled at each sampling location, the sampling system (see Section 7.0), the soil sampling depth intervals, monitoring well screen intervals and the sampling frequency.
- Number of samples per borehole or groundwater monitoring well to be collected and submitted for laboratory analysis.

Note that the soil sampling depth intervals (i.e., borehole depths), monitoring well screen intervals and sampling frequency are based on Pinchin's current knowledge of subsurface conditions, including the estimated depth to groundwater of 2 to 3 metres below ground surface (mbgs), and may be revised based on the actual subsurface conditions encountered.

Additional scope of work items include the following:

- Submission of up to three surface soil samples (0 to 1.5 mbgs) and up to three subsurface soil samples (deeper than 1.5 mbgs) for pH analysis.
- Submission of up to three soil samples for grain size analysis.
- Elevation surveying of the ground surface elevations of all monitoring well locations, and the top of pipe elevations for all groundwater monitoring wells.
- Depth to water measurements of all newly-installed and existing groundwater monitoring wells, including assessment for non-aqueous phase liquid. Depth to water measurements will be made during well development and groundwater sampling, and one month following groundwater sampling.
- Completion of groundwater sampling using low-flow purging and sampling methods as per SOP-EDR023 (see Section 6.0), unless well yields are too low to permit this method to be used. For well(s) where low flow sampling cannot be employed, groundwater sampling will be conducted using the well volume method described in SOP-EDR008.

4.0 DATA QUALITY OBJECTIVES

The data quality objectives (DQOs) for the Phase Two ESA will be to obtain unbiased analytical data that are representative of actual soil and groundwater conditions at the Phase Two Property. This will be accomplished by implementing a quality assurance/quality control (QA/QC) program, as described in Section 5.0, and by completing the field work in accordance with Pinchin's standard operating procedures (SOPs), as described in Section 6.0. Pinchin's SOPs are based in part on the MECP's *"Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario"*, dated December 1996 and the Association of Professional Geoscientists of Ontario document entitled *"Guidance for Environmental Site Assessments under Ontario Regulation 153/04 (as amended)"*, dated April 2011.

The DQOs are intended to minimize uncertainty in the analytical data set such that the data are considered reliable enough to not affect the conclusions and recommendations of the Phase Two ESA and to meet the overall objective of the Phase Two ESA, which is to assess the environmental quality of the Phase Two Property in relation to the identified APECs.

5.0 QUALITY ASSURANCE/QUALITY CONTROL PROGRAM

5.1 Non-Dedicated Sampling and Monitoring Equipment Cleaning

Based on the proposed scope of work, the following non-dedicated sampling and monitoring equipment will be used during completion of the Phase Two ESA:

- Interface probe.
- Water level tape.
- Spatula for soil sampling.
- Hollow-stem augers.
- Split-spoon samplers.
- Submersible pump.
- Flow-through cell for groundwater sampling.

All of the above-listed equipment will be cleaned prior to initial use and between samples or sampling locations, as appropriate, following the equipment cleaning procedures described in SOP-EDR009. Any non-dedicated sampling or monitoring equipment not listed above that is used during the Phase Two ESA will also be cleaned in accordance with SOP-EDR009.

5.2 Trip Blanks

A trip blank is a set of VOC sample vials filled by the analytical laboratory with VOC-free distilled water and shipped with the groundwater sample containers. Trip blanks will be stored with the sample containers provided by the analytical laboratory during travel to the Phase Two Property, while on the Phase Two Property, and during travel from the Phase Two Property back to the analytical laboratory. The sample containers comprising a trip blank will not be opened in the field.

One trip blank will accompany each submission to the laboratory. Each trip blank will be submitted for analysis of VOCs. Based on the scope of work and anticipated field work schedule for the Phase Two ESA, it is estimated that analysis of one trip blank will be required. Additional trip blanks will be submitted if there are additional laboratory submissions.

5.3 Field Duplicate Samples

Field duplicate soil and groundwater samples will be collected for laboratory analysis in accordance with SOP-EDR025 at a frequency of one sample for every ten samples submitted for laboratory analysis, with a minimum of one sample per media sampled per COPC.

5.4 Calibration Checks on Field Instruments

5.4.1 Field Screening Instruments

The photoionization detector (PID) and combustible gas indicator (CGI) used for the field screening of soil samples will be calibrated in accordance with the procedures described in SOP-EDR003. Calibration checks will also be made at the frequency specified in SOP-EDR003.

Records of the calibration and calibration checks of the PID and CGI, including any calibration sheets provided by the equipment supplier, will be retained in Pinchin's project file.

5.4.2 Water Quality Measurement Instruments

Water quality instruments used to measure field parameters during groundwater sampling will be calibrated in accordance with the procedures described in SOP-EDR016. Calibration checks will also be made at the frequency specified in SOP-EDR016.

Records of the calibration and calibration checks of the probes/instruments used for water quality parameter measurements, including any calibration sheets provided by the equipment supplier, will be retained in Pinchin's project file.

6.0 STANDARD OPERATING PROCEDURES

The proposed field investigation for the Phase Two ESA will require the following SOPs to be followed:

- Borehole drilling (SOP-EDR006).
- Soil sampling (SOP-EDR013 and SOP-EDR019).
- Field screening (SOP-EDR003).
- Monitoring well installation (SOP-EDR007).
- Monitoring well development (SOP-EDR017).
- Field measurement of water quality indicators (SOP-EDR016).
- Groundwater sampling (SOP-EDR008 and/or SOP-EDR023).
- QA/QC sampling (SOP-EDR025).
- Non-dedicated field equipment decontamination (SOP-EDR009).
- Vertical elevation surveying (SOP-EDR026).

The above-referenced SOPs are provided in Appendix III. Each SOP includes a section describing the specific requirements for Phase Two ESAs completed to support the filing of an RSC in accordance with O. Reg. 153/04.

Any deviations from the SOPs will be summarized in the Phase Two ESA report.

7.0 SAMPLING SYSTEM

The borehole and monitoring well locations in all APECs will be selected following a judgemental sampling system. Boreholes and monitoring wells will be placed at locations where the potential for COPCs to be present is considered the highest (i.e., “worst case”).

The sampling system that will be used for each APEC is summarized in Table 2.

8.0 PHYSICAL IMPEDIMENTS

Pinchin does not anticipate any physical impediments that will limit access to the Phase Two Property during completion of the Phase Two ESA.

9.0 TERMS AND LIMITATIONS

This Sampling and Analysis Plan (SAP) has been prepared to summarize the general scope of work and field procedures to be followed for the Phase Two ESA that will be performed for Morguard REIT c/o Morguard Investments Limited (Client) in order to investigate potential environmental impacts at 500 Coventry Road, Ottawa, Ontario (Site). The term recognized environmental condition means the presence or likely presence of any hazardous substance on a property under conditions that indicate an existing release, past release, or a material threat of a release of a hazardous substance into structures on the property or into the ground, groundwater, or surface water of the property. The Phase Two ESA will not quantify the extent of the current and/or recognized environmental condition or the cost of any remediation.

Conclusions derived from the Phase Two ESA will be specific to the immediate area of study and cannot be extrapolated extensively away from sample locations. Samples will be 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 the 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.

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

This SAP 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 SAP, 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 SAP, 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 SAP 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 SAP, 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.

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Template: RSC Sampling and Analysis Plan, EDR, July 18, 2024

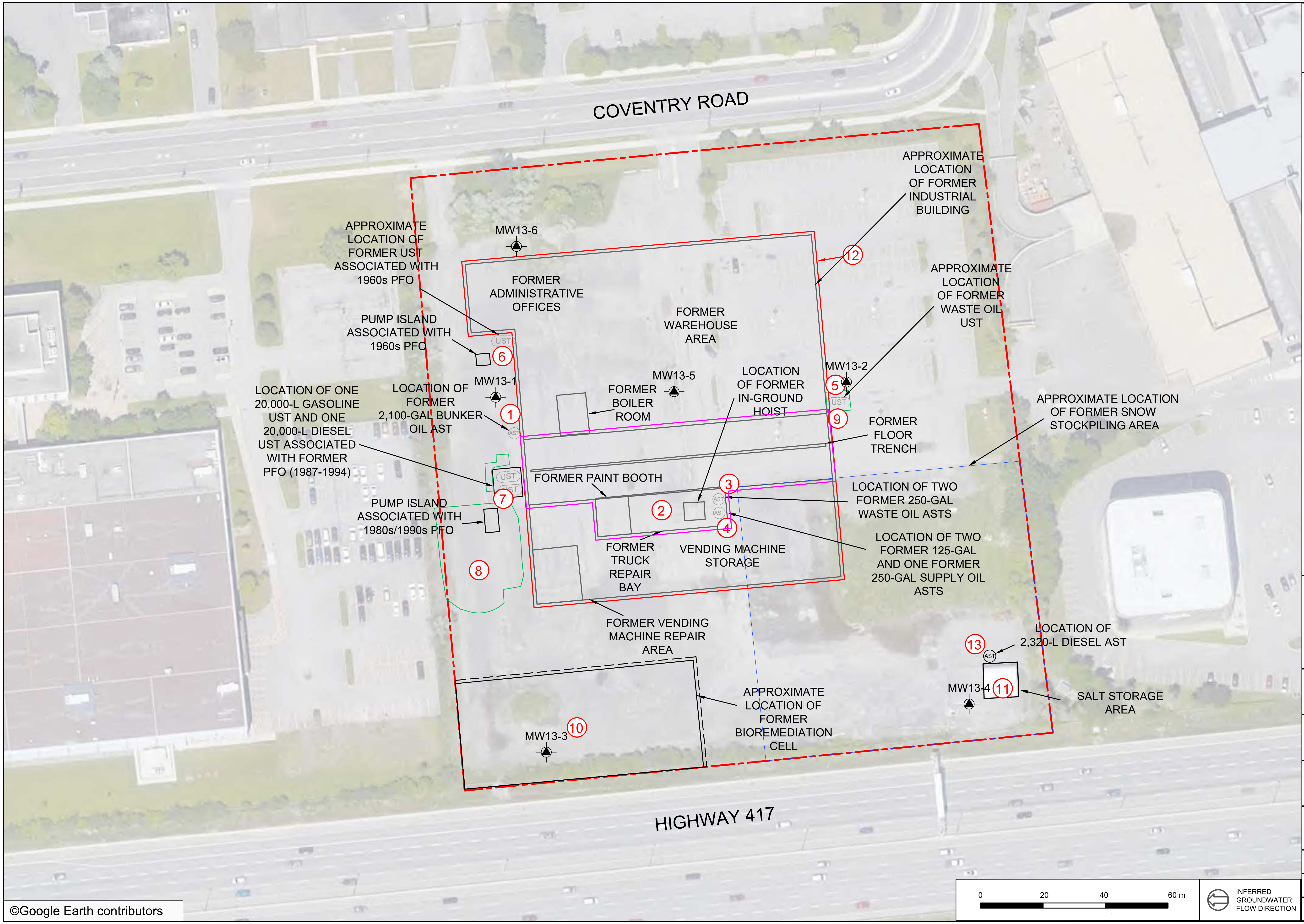
APPENDIX I

Figures

PINCHIN

PROJECT NAME:	SAMPLING AND ANALYSIS PLAN
CLIENT NAME:	MORGUARD CORPORATION
PROJECT LOCATION:	500 COVENTRY ROAD, OTTAWA, ONTARIO
FIGURE NAME:	KEY MAP
FIGURE NUMBER	1

PROJECT NUMBER:	SCALE:	DRAWN BY:	REVIEWED BY:	DATE:
319674.001	1:15,000	NJ	AK	MARCH 2024



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LEGEND

-·-	SITE BOUNDARY
—	LIMITS OF FORMER REMEDIAL EXCAVATIONS (BY OTHERS)
┼┼┼┼	RAILWAY LINE
AST	ABOVEGROUND STORAGE TANK
AST	FORMER ABOVEGROUND STORAGE TANK
UST	UNDERGROUND STORAGE TANK
UST	FORMER UNDERGROUND STORAGE TANK
P	PARKING
⊕	MONITORING WELL BY OTHERS
#	PCA CONTRIBUTES TO AN APEC
#	PCA DOES NOT CONTRIBUTE TO AN APEC
PCA	POTENTIALLY CONTAMINATING ACTIVITY

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PINCHIN

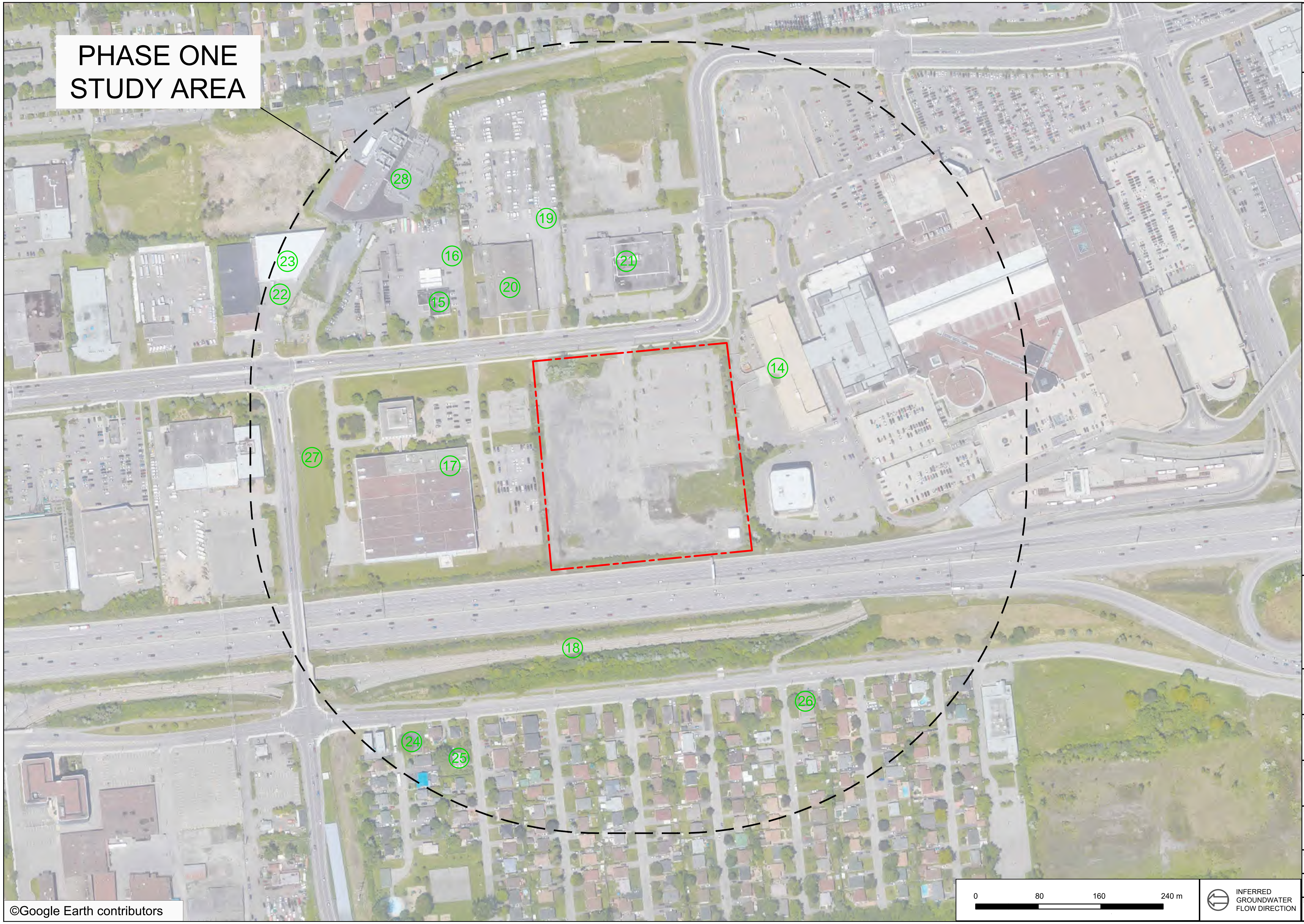
PROJECT NAME: SAMPLING AND ANALYSIS PLAN

CLIENT NAME: MORGUARD CORPORATION

PROJECT LOCATION: 500 COVENTRY ROAD, OTTAWA, ONTARIO

FIGURE NAME: POTENTIALLY CONTAMINATING ACTIVITIES (ON-SITE)

PROJECT NUMBER: 319674.001	SCALE: AS SHOWN
DRAWN BY: NJ	REVIEWED BY: AK
DATE: MARCH 2024	FIGURE NUMBER: 2



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LEGEND

- ‒ · ‒ SITE BOUNDARY
- - - - PHASE ONE STUDY AREA BOUNDARY
- Ⓐ# PCA CONTRIBUTES TO AN APEC
- Ⓐ# PCA DOES NOT CONTRIBUTE TO AN APEC
- PCA POTENTIALLY CONTAMINATING ACTIVITY

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PINCHIN

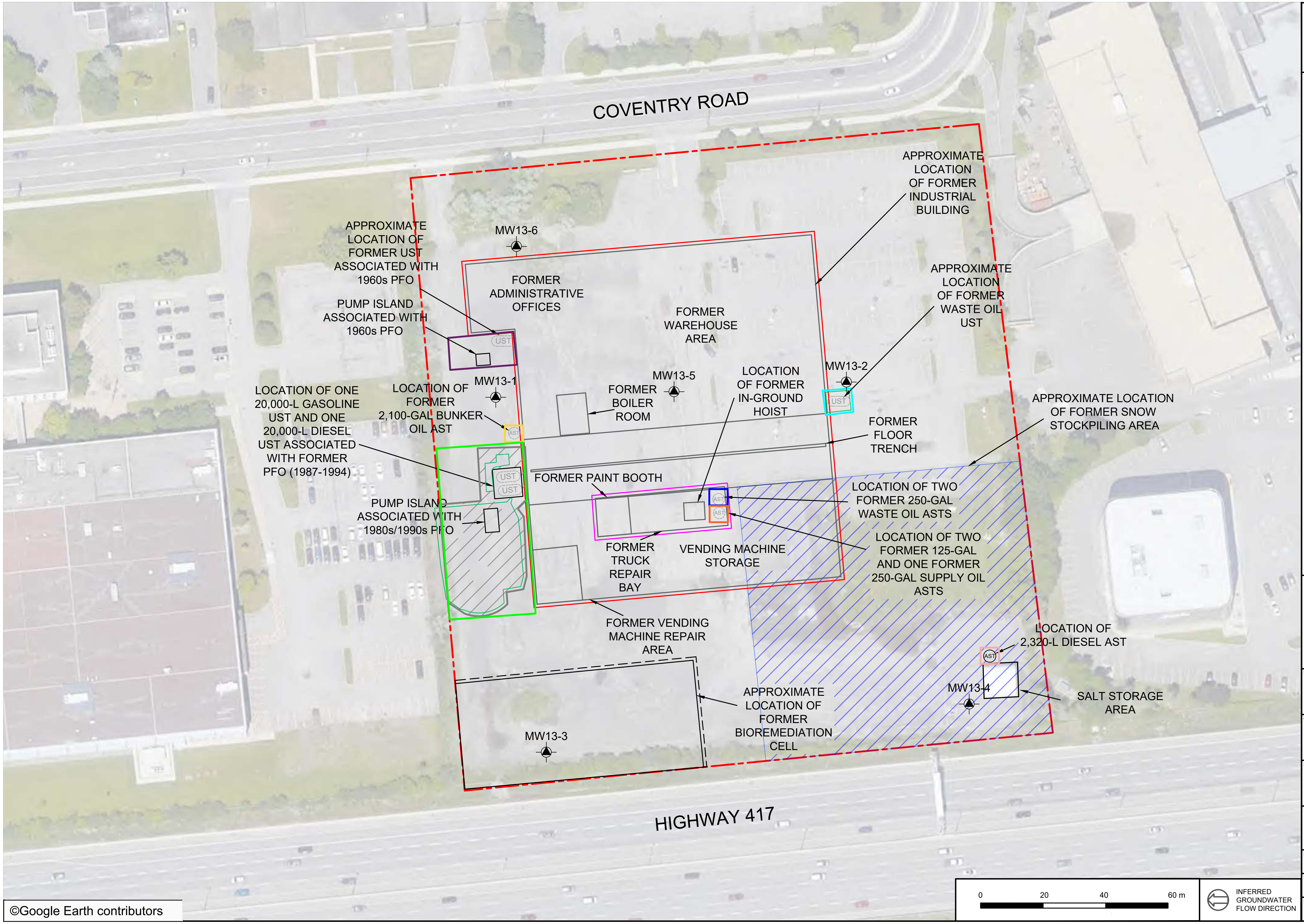
PROJECT NAME:
SAMPLING AND ANALYSIS PLAN

CLIENT NAME:
MORGUARD CORPORATION

PROJECT LOCATION:
500 COVENTRY ROAD,
OTTAWA, ONTARIO

FIGURE NAME:
POTENTIALLY CONTAMINATING ACTIVITIES (OFF-SITE)

PROJECT NUMBER: 319674.001	SCALE: AS SHOWN
DRAWN BY: NJ	REVIEWED BY: AK
DATE: MARCH 2024	FIGURE NUMBER: 3



N

LEGEND

- —·— SITE BOUNDARY
- —— LIMITS OF FORMER REMEDIAL EXCAVATIONS (BY OTHERS)
- ┼┼┼┼ RAILWAY LINE
- (AST) ABOVEGROUND STORAGE TANK
- (AST) FORMER ABOVEGROUND STORAGE TANK
- (UST) UNDERGROUND STORAGE TANK
- (UST) FORMER UNDERGROUND STORAGE TANK
- ☐ APEC-1
- ☐ APEC-2
- ☐ APEC-3
- ☐ APEC-4
- ☐ APEC-5 AND APEC-9
- ☐ APEC-6
- ☐ APEC-7
- ▨ APEC-8
- ☐ APEC-10
- ▨ APEC-11
- ☐ APEC-12
- ☐ APEC-13

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PINCHIN

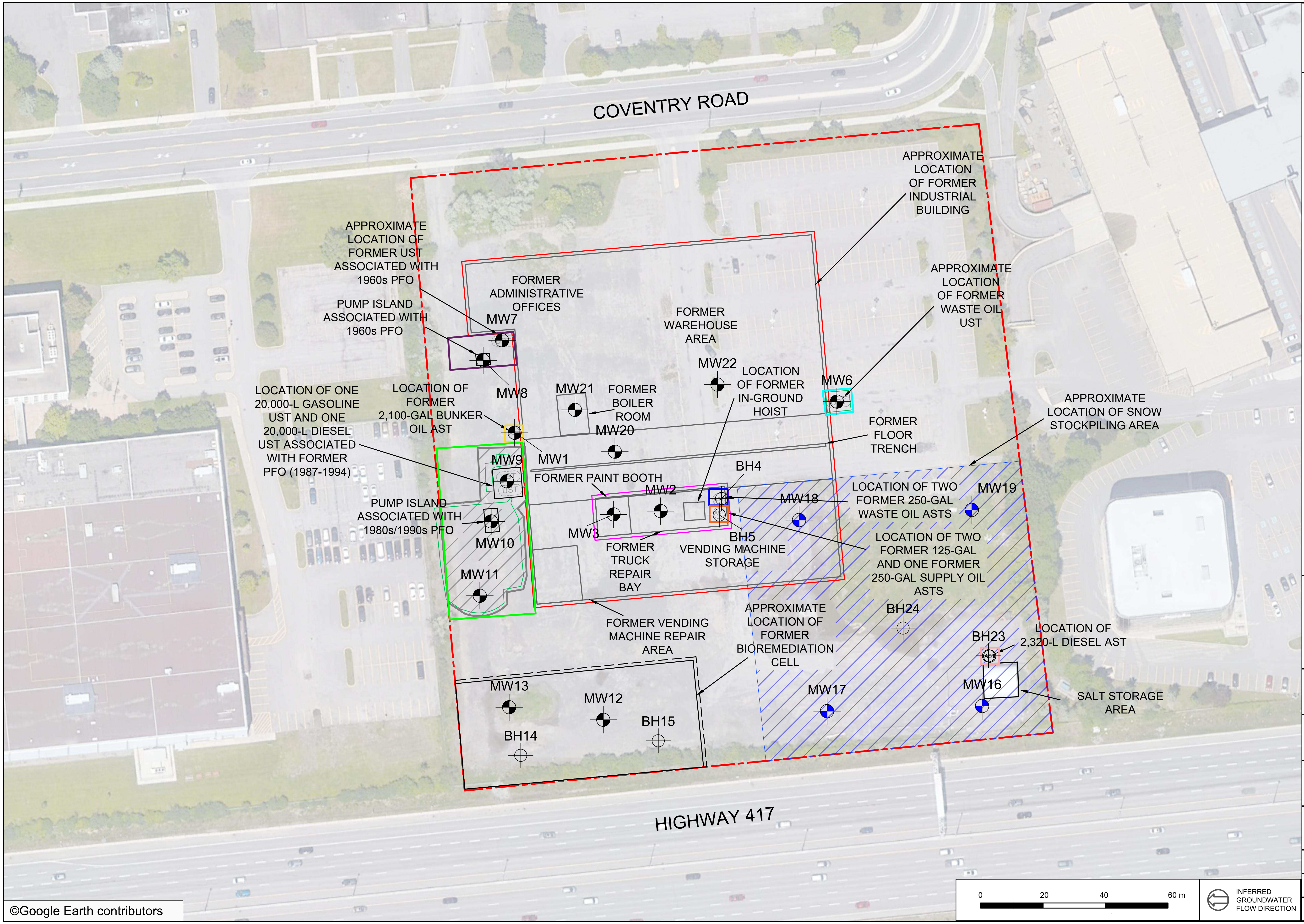
PROJECT NAME:
SAMPLING AND ANALYSIS PLAN

CLIENT NAME:
MORGUARD CORPORATION

PROJECT LOCATION:
500 COVENTRY ROAD,
OTTAWA, ONTARIOP

FIGURE NAME:
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

PROJECT NUMBER: 319674	SCALE: AS SHOWN
DRAWN BY: NJ	REVIEWED BY: AK
DATE: MARCH 2024	FIGURE NUMBER: 4



N

LEGEND

- SITE BOUNDARY
- LIMITS OF FORMER REMEDIAL EXCAVATIONS (BY OTHERS)
- RAILWAY LINE
- AST ABOVEGROUND STORAGE TANK
- AST FORMER ABOVEGROUND STORAGE TANK
- UST UNDERGROUND STORAGE TANK
- UST FORMER UNDERGROUND STORAGE TANK
- ☐ APEC-1
- ☐ APEC-2
- ☐ APEC-3
- ☐ APEC-4
- ☐ APEC-5 AND APEC-9
- ☐ APEC-6
- ☐ APEC-7
- ▨ APEC-8
- ☐ APEC-10
- ▨ APEC-11
- ☐ APEC-12
- ☐ APEC-13
- ⌖ PROPOSED BOREHOLE
- PROPOSED MONITORING WELL (PHASE TWO ESA ONLY)
- PROPOSED MONITORING WELL (PHASE TWO ESA & GEOTECHNICAL INVESTIGATION)

PINCHIN

PROJECT NAME:
SAMPLING AND ANALYSIS PLAN

CLIENT NAME:
MORGUARD CORPORATION

PROJECT LOCATION:
500 COVENTRY ROAD,
OTTAWA, ONTARIO

FIGURE NAME:
PROPOSED BOREHOLE AND MONITORING WELL LOCATION PLAN

PROJECT NUMBER: 319674.001	SCALE: AS SHOWN
DRAWN BY: NJ	REVIEWED BY: AK
DATE: MARCH 2024	FIGURE NUMBER: 5

APPENDIX II

Tables

Table 1 - Table of Areas of Potential Environmental Concern

Area of Potential Environmental Concern[1]	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity[2]	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern[3]	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
APEC-1 Former presence of a 2,100-gallon bunker oil AST.	Located along the west exterior wall of the former Site Building situating on the Phase One Property.	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHCs BTEX PAHs PCBs	Soil and Groundwater
APEC-2 Former presence of a motor vehicle (truck) repair garage.	Located in the south end of the former Site Building of the Phase One Property.	Item 27 - Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles	On-Site	PHCs BTEX PAHs VOCs Metals As, Sb, Se B-HWS Cr (VI) Hg PCBs	Soil and Groundwater
APEC-3 Former presence of two 250-gallon waste oil ASTs.	Located in the south end of the former Site Building of the Phase One Property.	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHCs BTEX PAHs VOCs PCBs	Soil
APEC-4 Former presence of one 250 gal and two 125-gallon supply oil ASTs.	Located within the former vehicle and equipment maintenance area within the former Site Building situating on the Phase One Property.	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHCs BTEX PAHs	Soil

Area of Potential Environmental Concern[1]	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity[2]	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern[3]	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
APEC-5 Former presence of a waste oil UST.	Located on the east exterior portion of the Phase One Property and removed in 2004	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHCs BTEX PAHs VOCs PCBs	Soil and Groundwater
APEC-6 Former presence of a Private Fuel Outlet (circa 1962).	Located on the western side of the Phase One Property.	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHCs BTEX PAHs VOCs Metals	Soil and Groundwater
APEC-7 Former presence of a Private Fuel Outlet, which including a pump island, one 20,000-litre gasoline UST, and one 20,000-litre diesel UST (circa 1987-1990), and associated UST fuel release in 1994 as documented in the Ontario Spills database.	Located on the western side of the Phase One Property	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHCs BTEX PAHs VOCs Metals	Soil and Groundwater
APEC-8 Importation of fill material of unknown quality to backfill remediation excavations.	Located on the southern and western portions of the Phase One Property	Item 30 - Importation of Fill Material of Unknown Quality	On-Site	PHCs BTEX PAHs Metals As, Sb, Se B-HWS Cr (VI) Hg	Soil

Area of Potential Environmental Concern[1]	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity[2]	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern[3]	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
APEC-9 Fill material of unknown quality.	Located on the central and southern portions of the Phase One Property.	Item 30 - Importation of Fill Material of Unknown Quality	On-Site	PHCs BTEX PAHs Metals As, Sb, Se B-HWS Cr (VI) Hg	Soil
APEC-10 Unknown quality of soil used for the former ex-situ bioremediation cell.	Located on the southwest portion of the Phase One Property.	Other – On-Site Bioremediation	On-Site	PHCs BTEX	Soil and Groundwater
APEC-11 Bulk storage of road salt and (former) stockpiling of snow.	Located on the southern portion of the Phase One Property.	Item 48 - Salt Manufacturing, Processing and Bulk Storage	On-Site	Electrical conductivity, SAR Na, Cl-	Soil and Groundwater
APEC-12 Historical operations and storage of supplies, and waste associated with an Industrial site (Coca-Cola distribution plant).	Located on the central portion of the Phase One Property around the footprint of the former Site Building.	Other - Industrial Operations	On-Site	PHCs BTEX PAHs VOCs PCBs Metals As, Sb, Se B-HWS Cr (VI) Hg Glycol	Soil and Groundwater

Area of Potential Environmental Concern[1]	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity[2]	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern[3]	Media Potentially Impacted (Ground Water, Soil and/or Sediment)
APEC 13 Presence of a 2,320-L diesel AST.	Located on the southeast portion of the Phase One Property, adjacent to the salt storage areas	Item 28 - Gasoline and Associated Products Storage in Fixed Tanks	On-Site	PHCs BTEX PAHs VOCs Metals As, Sb, Se B-HWS Cr (VI) Hg	Soil and Groundwater

Notes:

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

(a) identification of past or present uses on, in or under the phase one property, and

(b) identification of potentially contaminating activity.

2 - Potentially contaminating activity means a use or activity set out in Column A of Table 2 of Schedule D that is occurring or has occurred in a phase one study area

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

List of Method Groups:

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

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

Table 2 - Phase Two Scope of Work Summary

Sampling Location	APEC	Media Sampled	COPCs PHCs	BTEX	VOCs	PAHs	PCBs	Metals	Hydrides (As, Sb, Se)	Boron (HWS)	Chromium VI	Mercury	Sodium	Chloride	Cyanide	EC	SAR	Number of Samples Submitted for Analysis	Soil Sampling Depth Interval (mbgs)	Screen Interval (mbgs)	Sampling Frequency	Sampling System	Rationale/Notes
MW1	1	Soil	●	●		●	●											1	0 - 4.5	NA	Continous/Soil cores every 1.5 m	Judgemental	Assess soil and groundwater quality in relation to a former on-Site 2,100-gal AST containing bunker oil (PCA-1)
		Groundwater	●	●		●	●											1	NA	2.5 - 4.5	NA	Judgemental	
MW2	2	Soil	●	●	●	●	●	●	●	●	●	●						1	0 - 4.5	NA	Continous/Soil cores every 1.5 m	Judgemental	Assess soil and groundwater quality in relation to a former on-Site motor vehicle (truck)repair and maintence garage (PCA-2)
		Groundwater	●	●	●	●	●												NA	2.5 - 4.5	NA	Judgemental	
MW3	2	Soil	●	●	●			●			●	●						1	0 - 4.5	NA	Continous/Soil cores every 1.5 m	Judgemental	Assess soil and groundwater quality in relation to a former on-Site motor vehicle (truck) repair and maintence garage (PCA-2)
		Groundwater	●	●	●			●			●	●						1	NA	2.5 - 4.5	NA	Judgemental	
BH4	3	Soil	●	●	●	●	●											2	0 - 4.5	NA	Continous/Soil cores every 1.5 m	Judgemental	Assess soil quality in relation to two former on-Site 250-gal waste oil ASTs (PCA-3)
BH5	4	Soil	●	●	●	●	●											1	0 - 4.5	NA	Continous/Soil cores every 1.5 m	Judgemental	Assess soil quality in relation to a former on-Site 250-gal and 125-gal ASTs containing supply/engine oil (PCA-4)
MW6	5	Soil	●	●	●	●	●																Assess soil quality in relation to a former on-Site waste oil UST (PCA-5)
		Groundwater	●	●	●	●	●						●	●									
	9	Soil	●	●		●		●	●	●	●	●				●	●						Assess soil quality in relation to backfill material of unknown quality used for the remediation excavations (PCA-8).
MW7	6	Soil	●	●	●	●	●											1					Assess soil and groundwater quality in relation to a former on-Site waste oil UST (PCA-5)
		Groundwater	●	●	●	●	●						●	●									
	9	Soil	●	●		●		●	●	●	●	●				●	●	1					Assess soil quality in relation to backfill material of unknown quality used for the remediation excavations (PCA-8).
MW8	6	Soil	●	●	●	●		●										4					Assess soil and groundwater quality in relation to a former on-Site private fuel outlet from 1962 (PCA-6)
		Groundwater	●	●	●	●		●										1					
	9	Soil	●	●		●		●	●	●	●	●						1					Assess soil quality in relation to fill material of unknown quality (PCA-9)
MW9	7	Soil	●	●	●	●		●															Assess soil and groundwater quality in relation to a former on-Site private fuel outlet containing two 20,000-L fuel UST, pump island (circa 1987-1994), and associated UST fuel release in 1994 as documented in the Ontario Spills database (PCA-7)
		Groundwater	●	●	●	●		●															
	8	Soil	●	●		●		●	●	●	●	●											Assess soil quality in relation to backfill material of unknown quality used for the remediation excavations (PCA-8).
MW10	7	Soil	●	●	●	●		●															Assess soil and groundwater quality in relation to a former on-Site private fuel outlet containing two 20,000-L fuel UST, pump island (circa 1987-1994), and associated UST fuel release in 1994 as documented in the Ontario Spills database (PCA-7)
		Groundwater	●	●	●	●		●															
	8	Soil	●	●		●		●	●	●	●	●											Assess soil quality in relation to backfill material of unknown quality used for the remediation excavations (PCA-8).
MW11	8	Soil	●	●		●		●	●	●	●	●											Assess soil quality in relation to backfill material of unknown quality used for the remediation excavations (PCA-8).
MW12	10	Soil	●	●												●	●						Assess soil and groundwater quality from the former on-Site operation of an ex-situ bioremediation cell (PCA-10)
		Groundwater	●	●									●	●									
BH/MW13	10	Soil	●	●																			Assess soil and groundwater quality from the former on-Site operation of an ex-situ bioremediation cell (PCA-10)
		Groundwater	●	●																			
BH/MW14	10	Soil	●																				
		Groundwater	●																				
BH/MW15	10	Soil	●	●																			Assess soil and groundwater quality from the former on-Site operation of an ex-situ bioremediation cell (PCA-10)
		Groundwater	●	●																			
MW16	11	Soil														●	●						Assess soil and groundwater quality due to the bulk stroage of road salt (PCA-11)
		Groundwater											●	●									
MW17	11	Soil														●	●						Assess soil and groundwater quality due to the bulk stroage of road salt (PCA-11)
		Groundwater											●	●									
MW18	11	Soil														●	●						Assess soil and groundwater quality due to the bulk stroage of road salt (PCA-11)
		Groundwater											●	●									
	12	Soil	●	●	●	●	●	●	●	●	●	●											Assess soil and groundwater quality due to the historial operations, storage of suppliesd/chemicals and waste assocaited with an Industrial site (Coca-Cola bottling and distribution facility (PCA-12)
		Groundwater	●	●	●	●	●	●	●	●	●	●											
MW19	11	Soil														●	●						Assess soil and groundwater quality due to the bulk stroage of road salt (PCA-11)
		Groundwater											●	●									
MW20	12	Soil	●	●	●	●	●	●	●	●	●	●											Assess soil and groundwater quality due to the historial operations, storage of suppliesd/chemicals and waste assocaited with an Industrial site (Coca-Cola bottling and distribution facility (PCA-12)
		Groundwater	●	●	●	●	●	●	●	●	●	●											
MW21	12	Soil	●	●	●	●	●	●	●	●	●	●											Assess soil and groundwater quality due to the historial operations, storage of suppliesd/chemicals and waste assocaited with an Industrial site (Coca-Cola bottling and distribution facility (PCA-12)
		Groundwater	●	●	●	●	●	●	●	●	●	●											
MW22	12	Soil	●	●	●	●	●	●	●	●	●	●											Assess soil and groundwater quality due to the historial operations, storage of suppliesd/chemicals and waste assocaited with an Industrial site (Coca-Cola bottling and distribution facility (PCA-12)
		Groundwater	●	●	●	●	●	●	●	●	●	●											
BH23	13	Soil	●	●		●																	Assess soil quality due to the exisiting on-Site diesel fuel AST (PCA-13)
	13	Groundwater	●	●		●																	
MW24	11	Soil														●	●						Assess soil and groundwater quality due to the bulk stroage of road salt (PCA-11)
		Groundwater											●	●									

PHCs	Petroleum Hydrocarbons (Fraction 1 to Fraction 4)
BTEX	Benzene, Toluene, Ethylbenzene and Xylenes
VOCs	Volatile Organic Compounds
PAHs	Polycyclic Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
As, Sb, Se	Arsenic, Antimony, Selenium
Boron (HWS)	Hot Water Soluble Boron
Chromium VI	Hexavalent Chromium
ABNs	Acid/Base/Neutral Compounds
OCPs	Organochlorine Pesticides
EC	Electrical Conductivity
SAR	Sodium Adsorption Ratio

APEC	Area of Potential Environmental Concern
COPCs	Contaminants of Potential Concern
m	Metres
mbgs	Metres Below Ground Surface
NA	Not Applicable
PCA	Potentially Contaminating Activity
SOP	Standard Operating Procedure
UST	Underground Storage Tank
mbfs	Metres Below Floor Surface

APPENDIX III

Pinchin Standard Operating Procedures

SOP – EDR003 – REV005 – FIELD SCREENING OF SOIL SAMPLES

Title:	Field Screening of Soil Samples
Practice:	EDR
First Effective Date:	June 16, 2009
Version:	005
Version Date:	May 6, 2022
Author:	Robert MacKenzie
Authorized by:	Terry Duffy

TABLE OF CONTENTS

1.0 VERSION HISTORY

Version	Date	Summary of Changes	Author
Original	June 16, 2009	N/A	MEM
001	November 26, 2010	Update approval signature	FG
002	September 25, 2013	Revised SOP to reflect current practices/Added section on O.Reg. 153/04 compliance	RLM
003	April 29, 2016	Updated Section 4.0/Modified time between readings to 1 hour	RLM
004	April 28, 2017	Removed reference to Pinchin West/In Section 5.2, clarified that soil vapour measurements do not need to be made within one hour of sampling during winter conditions	RLM
005	May 6, 2022	Annual update Update Corp Health & Safety wording and links, update formatting as required	Terry Duffy Abby Mitchell

2.0 SCOPE AND APPLICATION

This Standard Operating Procedure (SOP) presents the quantitative and qualitative methods to be used by Pinchin field personnel for field screening soil samples for potential impacts during field investigations.

The quantitative part of field screening consists of the measurement of vapour concentrations in soil sample headspace in order to assess the potential for volatile constituents to be present in the soil. The soil vapour readings obtained from these measurements are then used to assist in selecting potential “worst case” soil samples for submission to the laboratory for analysis. There are no regulatory standards for comparison with soil headspace vapour readings and we are using the general principle that the sample with the highest soil headspace vapour concentration from a group of samples is often the most likely to be impacted by volatile constituents.

The qualitative part of field screening includes assessing the soil for visual or olfactory indicators of potential contamination and is used in conjunction with the soil headspace vapour readings to select “worst case” soil samples to be submitted for laboratory analysis.

Note that soil vapour measurements have limited value when selecting “worst case” soil samples for laboratory analysis of non-volatile parameters such as metals. Visual observations of the presence of staining and debris (e.g., brick fragments and other building materials, coal ash, etc.), along with sample depth and likely migration pathways are to be factored into selecting the samples. The sample with the highest soil headspace vapour reading is not automatically selected under these circumstances.

Soil samples collected for soil vapour measurement must not be submitted for laboratory analysis except for analysis of non-volatile parameters (i.e., metals and inorganics) or grain size analysis.

This SOP also applies to the field screening of sediment samples but for simplicity, only soil samples are referred to below.

3.0 DISTRIBUTION

This is an on-line document. Paper copies are valid only on the day they are printed. Refer to the author if you are in any doubt about the accuracy of this document.

This SOP will be distributed to all Pinchin staff and others as follows:

1. Posted to the SOP section of the Environmental Due Diligence and Remediation (EDR) Practice Line on the Pinchin Orchard; and
2. Distributed to senior staff at Le Groupe Gesfor Poirier for distribution as appropriate.

4.0 PROCEDURE

4.1 Equipment and Supplies

1. Resealable plastic bags (e.g., Ziploc®);

   Note: that small capacity bags (e.g., 500 millilitre capacity) are preferred over larger sized bags. When conducting headspace screening of a set of soil samples, the size of bag used should be consistent throughout in order to maintain the same approximate headspace volume in each bag;

2. Combustible gas indicator (CGI) capable of operating in methane-elimination and/or photo-ionization detector (PID);
3. (The Project Manager will be responsible for selecting the appropriate instrument(s) for each project. CGIs (e.g., RKI Eagle or Gastechtor) are acceptable for screening of petroleum hydrocarbons (PHCs) and related compounds, whereas PIDs (e.g., MiniRAE) are acceptable for screening for volatile organic compounds (VOCs), including chlorinated solvents, but can also be used when screening for PHCs. For many projects, it will be appropriate to employ both a CGI and a PID); and
4. Calibration equipment (e.g., calibration gas, regulators, tubing, calibration bags, etc. as provided by the equipment supplier).

4.1.1 PPE Requirements

Known PPE that will be required when completing the work of this SOP include:

1. Standard field PPE (hard hat, hi-vis vest/clothing, safety glasses and boots, nitrile gloves);

2. If handling samples containing sharp debris (glass, metal), leather gloves should be worn over the nitrile gloves;
3. In dusty Site conditions, and/or where strong vapours occur or are anticipated, a respirator with appropriate filter cartridges should be used.

4.2 Documentation

4.2.1 Project Hazard Assessment (PHA)

Project Supervisor(s) and field staff must complete a Project Hazard Assessment (PHA) prior to conducting field work in accordance with the Pinchin Health and Safety Program Section 3.2 Project Hazard Assessments.

4.3 Soil Headspace Vapour Measurement Procedure

The procedure for conducting soil headspace vapour measurements for soil sample headspace is as follows:

1. Unless pre-calibrated by the equipment supplier, calibrate the CGI/PID as per the instrument manufacturer's instructions before commencing soil vapour measurements. Record the date and time of calibration, and type and concentration of the calibration gas used in the field logbook or field forms;
2. Label the plastic bag with the sample number;
3. Create a split soil sample by splitting the sample core vertically (i.e., along the longitudinal axis) with one half used for soil headspace vapour measurement and the other half used to fill sample jars for laboratory analysis of volatile parameters (e.g., VOCs and PHCs (F1 fraction)). In other words, the depth interval of the soil subjected to soil headspace vapour measurements should be the same as the depth interval from which samples for volatile parameters are collected. This procedure doesn't apply to grab samples but is to be completed when soil cores are obtained, such as sampling with dual tube samplers, split-spoon samplers and hand augers. For grab samples, soil used for laboratory analysis and soil headspace vapour measurements should be collected from proximal locations;
4. Place the soil into the plastic bag until the bag is approximately one-quarter full as soon as possible after the sampling device is retrieved/opened;
5. Seal the bag and break apart the soil by manually kneading the soil in the sealed bag;
6. Allow the soil sample to equilibrate at ambient temperature for a minimum of 5 minutes but no longer than one hour before taking a soil headspace vapour measurement. The exception to this is that during winter conditions, the soil samples should be placed in a heated environment (e.g., building interior) to warm up for a minimum of 15 minutes

before taking soil vapour measurements (do not place directly under/over heater vent). In this case, the soil vapour measurements do not need to be completed within one hour of sample collection;

7. Do not store the bagged soil samples in direct sunlight prior to taking soil headspace vapour measurements;
8. When conducting soil headspace vapour measurements with a CGI, make sure it is switched to methane elimination mode;
9. When completing soil headspace vapour measurements of a soil sample using both a PID and CGI, the vapour measurement using the PID should be made first;
10. Immediately before taking a soil headspace vapour measurement, gently agitate the bag and then create a small opening in the top of the bag. Insert the tip of the CGI/PID into the headspace of the bag and quickly reseal the bag around the tip to minimize leakage. If there is any water inside the bag, ensure that the tip does not contact the water;
11. Record the maximum vapour concentration measured within the first 10 seconds after inserting the tip of the CGI/PID into the bag. Note any anomalies that occur during the taking of the measurement (e.g., if the readings displayed by the instrument progressively increase and do not reach an obvious peak);
12. Remove the tip of the CGI/PID from the bag and reseal the bag immediately in case additional soil headspace vapour measurements are needed. If the soil headspace vapour is measured for a sample using a PID and an additional measurement with a CGI is required, wait a minimum of five minutes after the bag is resealed before taking the measurement with the CGI;
13. Before completing the next soil headspace vapour measurement, allow the CGI/PID to reach “zero” or “baseline”. If the CGI/PID does not return to “zero” or “baseline” it should be recalibrated before further soil headspace vapour measurements are made;
14. At the discretion of the Project Manager, a calibration check of the CGI/PID should be completed at least once per day or at a frequency of once per 100 soil headspace vapour measurements (for projects where numerous soil headspace vapour measurements are made on a daily basis such as a large remediation project); and
15. A calibration check is made by measuring the concentration of a sample of the calibration gas with the CGI/PID without making any adjustments to the instrument beforehand and comparing the measured concentration with the known concentration. The comparison of the measured concentration versus the actual concentration of the calibration gas indicates how much the instrument’s calibration may have been altered during soil headspace vapour measurements, which is known as “instrument drift”. Should the calibration check show instrument drift of more than 10%, the CGI/PID needs to be

recalibrated before completing further soil headspace vapour measurements. Record all pertinent information for the calibration check (e.g., date and time, initial measured concentration, calibration gas type and concentration) in the field logbook or field forms.

4.4 Visual Screening

Visual screening consists of examining the soil sample for potential indicators of contamination as per the following:

1. Visually examine the soil sample, including breaking apart a portion of the sample;
2. Note any indications of a mottled appearance, dark discolouration or staining, free-phase product, or unusual colour;
3. Note any indications of non-soil constituents, such as brick, asphalt, wood or concrete fragments, coal fragments, coal ash, etc.; and
4. Record the findings of the visual screening in the field logbook or field forms. If there is no visual evidence of impacts this should be noted.

4.5 Olfactory Screening

Record in the field logbook or field forms the presence of any odours noted during sample collection and visual screening. Field staff are not expected to directly smell soil samples to assess the presence/absence of odours.

If it is possible to identify the likely type of odour (e.g., PHC-like, solvent-like, etc.) then this information should be recorded along with a comment on the severity of the odour (e.g., slight, strong, etc.). If the odour cannot be readily identified, it should be described in the field notes as “unidentified odour”.

If no odours are observed, this information should also be recorded in the field logbook or field forms.

4.6 Additional Considerations for Ontario Regulation 153/04 Phase Two ESA Compliance

When completing a Phase Two Environmental Assessment (ESA) in accordance with Ontario Regulation 153/04, the following additional procedures must be undertaken:

1. Calibration of the CGI/PID must be completed at the beginning of each field day and calibration checks must be made either at the end of each field day or after every 100 soil vapour readings (whichever occurs first); and
2. Thorough records of the CGI/PID calibration and calibration checks must be kept, including any calibration sheets provided by the equipment supplier. The Quality Assurance/Quality Control section of the Phase Two ESA report requires a discussion of field screening instrument calibration, and equipment calibration records must be appended to the Phase Two ESA report.

4.7 Health and Safety

4.7.1 Pinchin's Corporate Health and Safety Program

1. All work activities under this SOP will be completed in a safe manner following the requirements of Pinchin's Corporate Health and Safety Program, client site requirements and current legislation.
2. Pinchin Employees conducting work under this SOP must meet the job competency requirements as outlined in Section 2.03 Job Competency of the Pinchin's Corporate Health and Safety Program.

4.7.2 Training Requirements

Training requirements for this SOP include, but may not be limited to, the following:

1. Site Orientation as required by client.
2. Specific training as outlined in Pinchin's Corporate Health and Safety Program Section 2.04 Health and Safety Training.

4.7.3 Qualified Person

Where technical occupational health and safety assistance is required in evaluating hazards and determining controls, a Qualified Person should be engaged following Pinchin's Corporate Health and Safety Program Section 3.2 Project Hazard Assessments.

4.7.4 INMIR – Incident/Near Miss Reporting and Investigation – Resulting in No Injury

If, while working on-Site and following this SOP, an event or hazard that did not result in injury, illness or damage is encountered **it is expected** that the NEAR MISS is reported by filling in the appropriate information using INMIR – Incident/Near Miss Reporting and Investigation form on Survey123 platform

4.7.5 INMIR – Incident/Near Miss Reporting and Investigation – Resulting in Injury and or Loss

If, while working on a site and following this SOP, there is an incident resulting in loss (personal injury, property damage) fill in the appropriate information using INMIR – Incident/Near Miss Reporting and Investigation form on Survey123 platform.

5.0 TRAINING

The Practice Leader is responsible for identifying the training needs of EDR staff and ensuring that staff are trained and competent before undertaking work assignments.

All trained personnel are responsible for identifying coaching or re-training needs (if they are uncomfortable with work assignments that have been assigned).

The careful application of *Health & Safety Training* by each employee is an integral part of all activities and is assumed as part of this SOP.

6.0 MAINTENANCE OF SOP

This SOP will be reviewed annually by the National Practice Leader**.**

7.0 REFERENCES

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.

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Template: Master SOP Template – November 11, 2021

SOP – EDR006 – REV005 – BOREHOLE DRILLING

Title:	Borehole Drilling
Practice:	EDR
First Effective Date:	November 25, 2010
Version:	004
Version Date:	November 19, 2020
Author:	Francesco Gagliardi and Robert MacKenzie
Authorized by:	Terry Duffy

TABLE OF CONTENTS

1.0 VERSION HISTORY

Version	Date	Summary of Changes	Author
Original	November 25, 2010	N/A	FG
001	November 22, 2013	Streamlined text to reflect most common current practices/Removed sections covered by other SOPs	RM
002	April 29, 2016	Updated Section 4.0	RM
003	April 28, 2017	Removed reference to Pinchin West	RM
004	January 30, 2020	Annual Review	TJD
005	November 19, 2020	Formatting updates	RM

2.0 SCOPE AND APPLICATION

This Standard Operating Procedure (SOP) presents a description of the methods employed for the completion of boreholes and the collection of subsurface soil samples.

Boreholes are typically completed to determine geologic conditions for hydrogeological evaluation, to allow the installation of monitoring wells, and to allow for the collection of subsurface soil samples for laboratory analysis.

Several methods are available for the collection of shallow subsurface soil samples using hand-held equipment (e.g., hand augers, post-hole augers). However, the use of a drill rig, equipped with direct-push tooling, solid-stem augers and/or hollow-stem augers, is the most common method used by Pinchin to advance boreholes and will be the focus of this SOP.

A detailed discussion of all the various drilling rigs and drilling methods (e.g., direct push, augering, sonic drilling, air/water/mud rotary drilling, etc.) is beyond the scope of this SOP. The Project Manager will be responsible for determining the appropriate drill rig and drilling method for the site investigation.

The majority of the site investigations completed by Pinchin involve relatively straightforward drilling within the overburden within a one aquifer system. In some situations, such as when multiple aquifers are spanned by a borehole, when drilling into bedrock or when there are known impacts in the shallow subsurface, drilling using telescoped casing methods may be appropriate. Telescoped casing and bedrock drilling methods are beyond the scope of this SOP. In these situations, the Project Manager, in consultation with the drilling contractor, will be required to confirm the drilling requirements and procedures.

3.0 OVERVIEW

Not applicable.

4.0 DISTRIBUTION

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5.0 PROCEDURE

5.1 General

The overall borehole drilling program is to be managed in accordance with SOP-EDR005. In particular, utility locates must be completed in accordance with SOP-EDR021 before any drilling activities commence.

All non-dedicated drilling and sample collection equipment must be decontaminated in accordance with SOP-EDR009.

5.2 Prior Planning and Preparation

The planning requirements for borehole drilling programs are covered in detail in SOP-EDR005.

As noted above, the type of drilling rig and drilling method will be determined by the Project Manager when scoping out the site investigation. In some cases, a switch in drilling rig and/or drilling method may be required depending on site conditions. For example, if competent bedrock is encountered in the subsurface at a depth above the water table, bedrock coring would be required to advance the borehole deep enough to install a monitoring well.

5.3 Borehole Drilling Procedures

Once the final location for a proposed boring has been selected and utility clearances are complete, one last visual check of the immediate area should be performed before drilling proceeds. This last visual check should confirm the locations of any adjacent utilities (subsurface or overhead) and verification of adequate clearance.

In some instances, in particular where there is uncertainty regarding the location of buried utilities or the borehole is being completed near a buried utility, the use of a hydro-excavating (hydro-vac) unit will be required to advance the borehole to a depth below the bottom of the utility. The hydro-vac uses a combination of high-pressure water and high-suction vacuum (in the form of a vacuum truck) to excavate soil. This is also known as “daylighting”. The need to use a hydro-vac will be determined by the Project Manager.

If it is necessary to relocate any proposed borehole due to terrain, utilities, access, etc., the Project Manager must be notified, and an alternate location will be selected.

5.4 Borehole Nomenclature

If a borehole is advanced strictly for the purpose of soil sampling and no monitoring well is installed, the borehole should be identified as “BHxx”. If a monitoring well is installed in a borehole, the borehole should be identified as “MWxx”.

To avoid confusion, for site investigations involving both boreholes and monitoring wells, the numerical identifiers are to be sequential (e.g., there should not be a BH01 and MW01 for the same project).

When completing supplemental drilling programs, the borehole number should start at either the next sequential number after the last borehole number used in the first stage, or label them as ‘100 series’, ‘200 series’, etc. as appropriate (e.g., BH101, MW102, etc. for the first series of additional boreholes).

It is also acceptable to add the 2 digit year either before or after the borehole or monitoring well name (e.g., 17-MW101 or MW101-17).

5.5 Borehole Advancement

Each borehole will be advanced incrementally to permit intermittent or continuous sampling as specified by the Project Manager. Typically, the sampling frequency is one sample for every 2.5 or 5 feet (0.75 or 1.5 metres) the borehole is advanced. At the discretion of the Project Manager, soil samples may be collected at a lower frequency in homogeneous soil or at a higher frequency if changes in stratigraphy or other visual observations warrant it.

5.6 Direct-Push Drilling

This method is most commonly used at Pinchin to obtain representative samples of the subsurface soil material at a site. Direct-push drilling is achieved by driving a steel sampler into the subsurface at 1.5 metre intervals until the desired depth is achieved. The samplers are advanced by the drilling rig by means of a hydraulic hammer. For each soil sample run, a dedicated PVC sample liner is placed within the steel sampler which collects the soil as the sampler is advanced. After each sample run, a new sampler is assembled, and it is advanced deeper down the open borehole.

There are generally two methods of direct-push drilling which are used:

- Dual-tube sampling; and
- Macro-core sampling.

A dual-tube sampler consists of an 8.25 centimetre (cm) inner diameter steel tooling (outer tube), equipped with a steel cutting-shoe affixed to the advancing end. A smaller diameter steel tooling, consisting of a 5.75 cm inner diameter (inner tube), fits within the outer tube and contains a PVC sample liner within. These two tubes form the completed dual-tube sampler. The completed dual-tube sampler has a length of 1.5 metres.

A macro-core sampler consists of the smaller inner tube (mentioned above) used independently. The macro-core sampler measures approximately 1.5 metres in length.

The difference in drilling methods used is typically determined by soil conditions. Where soil conditions consist of tight or dense soil types (e.g., silts or clays), the macro-core sampling method may be used as this method provides less resistance to advancing the sampler. In soil types that are less resistive (e.g., loose sands), the dual-tube sampler may be used.

5.7 Auger Drilling (Split-Spoon)

The auger drilling method for borehole advancement and sampling involves using an auger drill rig to advance the borehole to the desired sampling depth and sampling with a split-spoon sampler. Borehole advancement with hollow stem augers is the preferred drilling method when sampling with split-spoon samplers as it minimizes the potential from sloughed material to reach the bottom of a borehole and possibly cross-contaminate samples when the split-spoon is driven beyond the bottom of the borehole. Solid stem augers can be used when drilling at sites with cohesive soils (e.g., silty clay), provided that the borehole remains open after the augers are removed from the ground prior to driving the split-spoon sampler.

The split-spoon sampler consists of an 18- or 24-inch (0.45 or 0.60 metres) long, 2-inch (5.1 cm) outside diameter tube, which comes apart lengthwise into two halves.

Once the borehole is advanced to the target depth, the sampler is driven continuously for either 18 or 24 inches (0.45 or 0.60 metres) by a 140-pound (63.5 kilogram) hammer. The hammer may be lifted and dropped by either the cathead and rope method, or by using an automatic or semi-automatic drop system.

The number of blows applied in each 6-inch (0.15 metre) increment is counted until one of the following occurs:

- A total of 50 blows have been applied during any one of the 6-inch (0.15 metre) increments described above;
- A total of 100 blows have been applied;

- There is no advancement of the sampler during the application of ten successive blows of the hammer (i.e., the spoon is "bouncing" on a cobble or bedrock); or
- The sampler has advanced the complete 18 or 24 inches (0.45 or 0.60 metre) without the limiting blow counts occurring as described above.

On the field form, record the number of blows required to drive each 6-inch (0.15 metre) increment of penetration. The first 6 inches is considered to be a seating drive.

The sum of the number of blows required for the second and third 6 inches (0.15 metres) of penetration is termed the "standard penetration resistance" or the "N-value". This information is typically provided on the borehole logs included in our site investigation reports.

The drill rods are then removed from the borehole and the split-spoon sampler unthreaded from the drill rods.

Caution must be used when drilling with augers below the groundwater table, particularly in sandy or silty soils. These soils tend to heave or "blow back" up the borehole due to the difference in hydraulic pressure between the inside of the borehole and the undisturbed formation soil. If blowback occurs, the drilling contractor will introduce water or drilling mud into the borehole or inside of the hollow-stem augers (if used) to equalize the hydraulic pressure and permit drilling deeper to proceed.

Heaving conditions and the use of water or drilling mud must be noted on the field logs, including the approximate volume of water or drilling mud used.

5.8 Auger Drilling (Direct Sampling)

In some jurisdictions (e.g., BC, Manitoba) it may be acceptable to collect soil samples directly from auger flights when using solid stem augers.

When sampling directly from auger flights, care must be exercised not to collect soils that were in direct contact with the auger or that were smeared along the edge of the borehole.

5.9 Borehole Advancement in Bedrock

It is sometimes possible to advance augers through weathered bedrock but borehole advancement through competent bedrock requires alternate drilling procedures. Bedrock drilling can be accomplished by advancing core barrels or tri-cone bits using air rotary or water rotary drilling methods. A description of the various bedrock drilling procedures is beyond the scope of this SOP.

The bedrock drilling method selected will depend in part on the type of bedrock, the borehole depth required, whether bedrock core logging is required, whether telescoped casing is required, etc. The Project Manager, in consultation with the drilling contractor, will determine the best method for advancing boreholes in competent bedrock.

5.10 Borehole Soil Sample Logging and Collection

The following describes the methods for logging and collection of samples from a split-spoon or direct-push sampler but can be adapted for sample collection from augers:

1. After the driller opens the split-spoon sampler or PVC liner, measure the length of the soil core retained in the sampler in inches or centimetres. Be sure to be consistent in the use of metric or imperial units, and that the units used are clearly noted in the field notes. The percentage of soil retained versus the length of the sampler is known as "sample recovery" and this information is presented on the borehole logs within our Phase II ESA reports;
2. Dedicated, disposable nitrile gloves are to be worn during soil logging and sampling;
3. When using a dual-tube or macro-core sampler with direct-push drilling, there is usually sufficient sample recovery to permit the collection of two soil samples from each sample run. In this case, if the sample recovery is greater than 2.5 feet (0.75 metres), divide the recovered soil into two depth intervals and log/collect a sample from each interval. Split-spoon samplers typically are not long enough nor provide enough sample to divide a sample run into two. However, if a recovered sample contains distinct stratigraphic units (e.g., fill material and native material, obviously impacted soil and non-impacted soil), the distinct units are to be sampled separately. It is especially important that potentially impacted soil (e.g., fill material, obviously impacted soil) is not mixed with potentially unimpacted soil (e.g., native soil, soil without obvious impacts) to form one sample;
4. Discard the top several centimetres in each core as this material is the most likely to have sloughed off the borehole wall and may not be representative of the soil from the intended depth interval;
5. To minimize the potential for cross-contamination, scrape the exterior of the soil core with a clean, stainless-steel putty knife, trowel or similar device to remove any smeared soil. Note that is not practical and can be skipped if the soil is non-cohesive (e.g., loose sand);
6. Split the soil core longitudinally along the length of the sampler and to the extent practical, collect the soil samples for laboratory analysis from the centre of the core (i.e., soil that has not contacted the sampler walls). When sampling directly from augers, soils in direct contact with the auger or soils retained on the augers that may have been in contact with the edge of the borehole should not be collected;

   Collect soil samples for potential volatile parameter analysis and field screening (in that order) as soon as possible after the core is opened. The length of time between opening the sampler and sample collection for these parameters should not exceed 2 minutes. It is important to follow this as it minimizes the potential for volatile constituents in the soil to be lost. See SOP-EDR003 for additional details regarding the collection of soil samples for field screening;

7. Drillers are not to open the split-spoon sampler or PVC liner until instructed to do so. If drilling and sample retrieval is occurring at a rate faster than Pinchin staff are able to sample and log the soil cores, the drillers are to be instructed to slow down or stop until further notice. This will prevent a back log of soil cores from accumulating and minimize the exposure of the soil cores to ambient conditions. This is particularly important when sampling for VOCs;
8. Collect soil samples for the remaining parameters to be analyzed;
9. Soil samples are to be labelled and handled in accordance with SOP-EDR013;
10. Record the parameters sampled for, the type(s) and number of sample containers, and the time and date of sample collection in the field notes;
11. Determine the soil texture in accordance with SOP-EDR019 and record this information in the field notes;
12. Soil samples collected for soil headspace vapour measurement must not be submitted for laboratory analysis except for analysis of non-volatile parameters (i.e., metals and inorganics) or grain size analysis;
13. Immediately following collection, place each sample container in a cooler containing ice bags or ice packs; and
14. After the maximum borehole drilling depth is reached, measure the borehole depth with a weighted measuring tape and record the total depth in the field notes if the borehole diameter is large enough to permit measurement.

5.11 Borehole Backfilling.

Following completion of each borehole in which a well is not installed, it must be properly backfilled with bentonite and/or bentonite grout by the drilling contractor. The drilling contractor is to be consulted to confirm the proper borehole abandonment procedures required by the local regulations (e.g., Ontario Regulation 903 (as amended) for Ontario sites).

Drill cuttings are not be used to backfill boreholes.

Record the borehole backfilling method and materials used in the field notes.

5.12 Borehole Location Documentation

For each borehole, complete the following to document its location:

1. Photograph the completed borehole location. Close up photographs of the borehole are to be taken as well as more distant photographs that show the location of site landmarks relative to the borehole so that the photograph can be used to locate the borehole in the future; and
2. Using a measuring tape or measuring wheel, measure the distance between the borehole and a nearby landmark (e.g., corner of the nearest building) and provide a borehole location sketch in the field notes. Measurements are to be made at right angles relative to the orientation of the landmark or to a fixed axis (e.g., relative to true north). If required by the Project Manager, measure the UTM coordinates of the borehole with a hand-held GPS device.

5.13 Field Notes

The field notes must document all drilling equipment used, sample depths and measurements collected during the borehole drilling activities. The field notes must be legible and concise such that the entire borehole drilling and soil sampling event can be reconstructed later for future reference. The field notes are to be recorded on the field forms or in a field book.

5.14 Additional Considerations for O. Reg. 153/04 Phase Two ESA Compliance

None. Following this SOP will be sufficient to comply with the Ontario Regulation 153/04 requirements for Phase Two Environmental Site Assessments.

5.15 Health and Safety

All work activities under this SOP will be completed in a safe manner following the requirements of Pinchin's Occupational Health and Safety Program, client site requirements and current legislation.

Pinchin Employees conducting work under this SOP must meet the job competency requirements as outlined in Section 2.3 Job Competency of the Pinchin Health and Safety Program.

Where technical occupational health and safety assistance is required in evaluating hazards and determining controls, a Qualified Person should be engaged following Pinchin Health and Safety Program Section 3.2 Project Hazard Assessments.

If, while working on a site and following this SOP, there is an incident resulting in loss (personal injury, property damage) or a near miss (potential loss), fill in and submit the appropriate incident form (3.3.1.) or near miss form (3.3.2).

6.0 TRAINING

The Practice Leader is responsible for identifying the training needs of EDR staff and ensuring that staff are trained and competent before undertaking work assignments.

All trained personnel are responsible for identifying coaching or re-training needs (if they are uncomfortable with work assignments that have been assigned).

The careful application of Health & Safety Training by each employee is an integral part of all activities and is assumed as part of this SOP.

7.0 MAINTENANCE OF SOP

1 Year.

8.0 REFERENCES

Canadian Standards Association, *Phase II Environmental Site Assessment, CSA Standard Z769-00 (R2018)*, dated 2000 and reaffirmed in 2018.

Association of Professional Geoscientists of Ontario, *Guidance for Environmental Site Assessments under Ontario Regulation 153/04 (as amended)*, April 2011.

9.0 APPENDICES

None.

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Template: Master SOP Template – February 2014

SOP – EDR007 – REV006 – MONITORING WELL DESIGN AND CONSTRUCTION

Title:	Monitoring Well Design and Construction
Practice:	EDR
First Effective Date:	August 03, 2009
Version:	006
Version Date:	November 19, 2020
Author:	Robert MacKenzie
Authorized by:	Terry Duffy

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1.0 VERSION HISTORY

Version	Date	Summary of Changes	Author
Original	August 03, 2009	N/A	MEM
001	November 26, 2010	Update approval signatures	FG
002	November 15, 2013	Streamlined to cross reference AAPGO guidance document/Added section on O. Reg. 153/04 compliance	RLM
003	April 29, 2016	Updated Section 4.0/Added procedure for outer casing installation in Ontario	RLM
004	April 28, 2017	Remove reference to Pinchin West/Added note to Section 5.2 about placing a reference mark at the top of the well pipe/Added note to Section 5.3 that O.Reg.153/04 requires well screens to intersect the water table when assessing groundwater for petroleum hydrocarbon impacts during a Phase Two ESA	RLM
005	January 30, 2020	Yearly Review	TJD
006	November 19, 2020	Formatting updates	RM

2.0 SCOPE AND APPLICATION

Monitoring wells are installed in overburden and bedrock to enable the collection of groundwater samples from water bearing formations at project sites. For some projects, monitoring wells are also used to monitor for combustible gases in the subsurface.

A monitoring well consists of two parts: the well screen and the well casing (also known as the well riser). The well screen allows groundwater to enter the well from the formation adjacent to the well so that it can be sampled. The well casing allows access to the well from the ground surface.

In Ontario, the regulatory requirements for monitoring well installation are provided in Ontario Regulation 903. All drilling contractors who install groundwater monitoring wells in Ontario must be licensed with the Ontario Ministry of the Environment and Climate Change (MOECC). In addition, for any well installed at a depth of greater than 3.0 metres below ground surface, a Water Well Record must be prepared by the drilling contractor and submitted to the MOECC and the well owner (typically our client).

The design and construction of soil vapour monitoring wells is beyond the scope of this SOP and is described in SOP-EDR018.

3.0 OVERVIEW

Not applicable.

4.0 DISTRIBUTION

This is an on-line document. Paper copies are valid only on the day they are printed. Refer to the author if you are in any doubt about the accuracy of this document.

This SOP will be distributed to all Pinchin staff and others as follows:

- Posted to the SOP section of the Environmental Due Diligence and Remediation (EDR) Practice Line on the Pinchin Orchard; and
- Distributed to senior staff at Le Groupe Gesfor Poirier for distribution as appropriate.

5.0 PROCEDURE

5.1 General Considerations

5.1.1 Borehole and Well Diameters

The borehole diameter must be sufficient in size to accommodate the well casing, sand pack and seal materials. In Ontario, the borehole diameter and annular space surrounding the monitoring well must meet the requirements of Ontario Regulation 903. Other provinces have similar requirements that must be considered. It is the Project Manager's responsibility to be aware of specific provincial requirements. Wherever possible, 2-inch (5.1. centimetre) interior diameter monitoring wells should be installed as they permit the use of most sampling and monitoring devices, and will generally provide greater water volume for sampling, especially in low permeability soils. Monitoring wells with interior diameters between 1-inch (2.5 centimetres) and 1.5-inches (3.8 centimetres) are also considered acceptable in some jurisdictions but the use of monitoring wells smaller than 1-inch (2.5 centimetres) is not permitted unless approved by the Project Manager.

5.1.2 Screen Length and Placement

Well screens typically range in length from 1.5 to 3.0 metres. Saturated well screen lengths beyond 1.8 metres, including sand pack, should be avoided in British Columbia, as per British Columbia Ministry of Environment Technical Guidance 8.

Wells screens must not straddle more than one hydrostratigraphic unit and should not be placed such that a preferential pathway for contaminant migration is created between two hydrostratigraphic units. In particular, a well screen must not straddle the overburden/bedrock interface, and the well screen, sand pack and seal must be situated entirely within either the overburden or the bedrock. An exception to this if the well is installed for assessing dense non-aqueous phase liquid (DNAPL), the penetration into the bedrock is minimal, and bedrock fractures are isolated from the sand pack. This type of well installation must only be completed under the guidance of staff with the appropriate geological expertise to ensure it is done correctly.

When determining the well screen length and depth of screen placement for a project, the following should be considered by the Project Manager:

- When assessing for the presence of light non-aqueous phase liquid (LNAPL) at the water table, longer well screens are preferred due to seasonal fluctuations in the water table and the well screen should intersect the water table whenever possible;
- When assessing for the presence of DNAPL, the well screen should be positioned at the bottom of the aquifer immediately above the aquitard;
- When assessing geochemical parameters, shorter well screens may be preferable to reduce the potential for mixing of water from distinct vertical geochemical zones;
- The use of long well screens within the saturated zone may result in the mixing of impacted and unimpacted groundwater from different depths within the aquifer, with the resulting dilution effect biasing the groundwater concentrations low; and
- Nested wells can be used to determine contaminant stratification within an aquifer or assess multiple aquifers, as long as the wells and individual aquifers are properly sealed off from each other within the borehole.

5.1.3 Well Screen/Casing Materials

Polyvinyl chloride (PVC) is the standard material used to construct groundwater monitoring wells. However, some organic compounds if present at excessive concentrations can degrade PVC, and stainless-steel or Teflon well materials may be considered for use by the Project Manager at such project sites.

A filter sock must not be placed over a well screen.

5.1.4 Well Screen Slot Size and Sand Pack

The slot size of the well screen will be determined by the size of the filter pack used. Pinchin typically uses No. 10 slot screen and #1 silica sand to form the sand pack around the well screen. When investigating a site with fine-grained soil, it may be appropriate to use a finer sand pack and smaller slot size to act as a “filter” to prevent as much fine-grained soil from entering the well as possible. The Project Manager should consult with the drilling contractor to determine the most appropriate screen slot size and sand pack size.

5.1.5 Bentonite Seal

The annular space above the sand pack in all wells is to be filled with bentonite. The purpose of placing the bentonite is create a seal above the sand pack that prevents a connection between other water bearing zones within the subsurface and/or water infiltration from the surface.

5.1.6 Surface Completions

A protective steel casing and lockable cap are to be installed at each well to protect the well and prevent tampering. Protective casings come in two varieties: aboveground casings (commonly known as monument casings) and flush-mount casings.

Aboveground casings have the advantage of having better visibility and can be located more easily, especially during winter, are less likely to need repair, and have fewer problems related to water intrusion and frost heave of the casing.

Flush-mount casings are usually the only available option for wells installed in areas of high vehicular or pedestrian traffic. Also, some clients prefer flush-mount casings for aesthetic reasons as they are less obtrusive.

When installing a well in a high vehicular traffic area such as a roadway, the flush-mount casing must have sufficient strength to avoid damage when run over by vehicles. Flush-mount casings with brass lids should not be installed in high vehicular traffic areas as they are easily damaged to the point where they can no longer be opened.

5.2 Well Installation Procedures

Note that Pinchin field staff are not trained, nor have the necessary licensing, to install monitoring wells. This task is to be performed by the drilling contractor in accordance with the applicable regulatory requirements (e.g., Ontario Regulation 903 (as amended) in Ontario). Pinchin field staff will assist the drilling contractor by specifying the general design of the monitoring well but will not perform the actual installation. The primary role of Pinchin field staff during well installation is to document the installation (e.g., measuring and/or recording the well length, screen length, depth to top of sand pack, etc.) as outlined below.

The following presents the general procedure for the completion of overburden and bedrock monitoring well installations after the borehole has been advanced to the appropriate depth:

1. Assemble the well by threading sufficient lengths of screen and riser materials together, and placing a threaded cap or slip-on cap at the bottom of the well. Well materials are to be kept in their plastic sleeves until immediately prior to well installation, and are not to be placed on the ground unless the ground surface is covered by clean plastic sheeting. Well materials should not be stored near potentially contaminated materials (e.g., soil cuttings;

   Dedicated, disposable nitrile gloves are to be worn by all personnel handling the well materials and are to be replaced if they become contaminated during well installation. Confirm the length of the well screen, well riser and total length of well. This is especially important if the screen and/or riser are trimmed to fit the borehole depth or desired screen interval. Record the length of the well screen, the length of the well casing, the total length of the well (including the bottom cap), the type of bottom cap used, and the interior diameter of the well screen/well casing in the field notes;
2. Prior to placing the assembled well into the borehole, measure the depth from ground surface to the bottom of the borehole and record this depth in the field notes;

3. When possible, place a minimum of 0.15 metres of filter pack into the bottom of the borehole to provide a firm base for the well. Note that the placement of such a filter pack base may not be appropriate when investigating a site where DNAPLs are suspected as the filter pack base may act as a DNAPL "sump" beneath the well and the DNAPL may go undetected when monitoring the well;
4. Place the assembled well into the open borehole or within the interior of the hollow stem augers. If trimming of the well casing is required, measure the length of the trimmed piece and record this information in the field notes. Before installing the sand pack, place a J-plug or slip cap on the top of the well to prevent sand and seal materials from entering the well when backfilling the annular space between the well and the borehole walls;
5. Install the sand pack around the exterior of the well screen and extend it to between 0.3 and 0.6 metres above the top of the well screen. The sand pack should be installed slowly, and with a tremie pipe if possible, to minimize the potential for bridging of the sand pack. When installing a sand pack in a borehole that has been drilled with hollow stem augers, the sand pack should be installed in lifts of approximately 0.5 metres. After placement of each lift, the augers are withdrawn from the ground by approximately 0.5 metres and the process repeated until the sand pack is placed to the required depth. Measure the depth to the top of the sand pack and record this depth in the field notes;
6. Install a bentonite seal comprised of granular and/or powdered bentonite above the sand pack to within approximately 0.6 metres of the ground surface. The bentonite should be installed slowly, and with a tremie pipe if possible, to minimize the potential for bridging of the seal. For the portion of the seal located above the water table, distilled water is to be poured into the borehole for each lift placed above the water table (approximately 0.3 to 0.6 metres per lift) to hydrate the seal. Approximately 1 to 2 litres of distilled water per lift is considered sufficient to hydrate the seal. Measure the depth to the top of the bentonite seal and record this depth in the field notes;
7. Record whether the seal was hydrated during installation and over which depth interval. Note that in some jurisdictions very long bentonite seals can be broken up with sand intervals. This reduces the potential for ground heaving due to bentonite shrinking and swelling but the sand intervals must not connect hydraulically separated aquifers;
8. (Ontario only) If the well is to be installed with a flush-mount protective casing, an outer casing comprised of a short length (10 to 15 cm) of PVC riser, or PVC coupling, that is slightly larger in diameter than the well casing needs to be installed around the well casing into the top of the bentonite seal, with the gap between the two casings sealed with bentonite. The top of the outer casing needs to be flush with or slightly below the top of the well casing. For example, if a 2-inch diameter well is installed, then a 10 to 15 cm

length of 3-inch or 4-inch diameter riser or coupling placed around the 2-inch diameter well casing will suffice provided that bentonite is placed between the two casings. The flush-mount protective casing is then installed around the two casings. The outer casing does not need to be capped, and we only need to cap the well casing with a J-plug or slip cap;

9. (Ontario only) If the well is to be installed with a stick up protected by a monument casing, the procedure for installing the outer casing is essentially the same, except that the outer casing will extend from 10 to 15 cm below ground to above the ground surface, preferably flush with or slightly below the top of the well casing if the design of the monument casing permits it;
10. Place a protective well casing (monument or flush-mount) around the well casing and cement it in place;
11. Using a permanent marker, mark a point on the top of the well casing that will serve as a reference point for all future depth to water and elevation survey measurements. Measure the depth to groundwater in the well at the time of completion. Note the depth to water and time of measurement in the field notes;
12. Place a lockable J-plug on the well casing and ensure that the J-plug is tightened sufficiently to prevent surface water from infiltrating into the well if the well has a flush-mount completion. Place a lock on the J-plug for a flush-mount completion or on the lockable cap for an aboveground completion if required by the Project Manager. A PVC slip cap can also be used, especially for an aboveground completion;
13. Photograph the completed well installation. Close up photographs of the well are to be taken as well as more distant photographs that show the location of site landmarks relative to the well so that the photograph can be used to locate the well in the future; and
14. Using a measuring tape or measuring wheel, measure the distance between the well and a nearby landmark (e.g., corner of the nearest building) and provide a well location sketch in the field notes. Measurements are to be made at right angles relative to the orientation of the landmark or to a fixed axis (e.g., relative to true north). If required by the Project Manager, measure the UTM coordinates of the well with a hand-held GPS device.

5.3 Additional Considerations for O. Reg. 153/04 Phase Two ESA Compliance

Ontario Regulation 153/04 mandates that well screens must not exceed 3.1 metres in length. In addition, whenever the Phase Two ESA includes the assessment of petroleum hydrocarbon impacts in groundwater, the well screen in each well must intersect the water table.

5.4 Health and Safety

All work activities under this SOP will be completed in a safe manner following the requirements of Pinchin's Occupational Health and Safety Program, client site requirements and current legislation.

Pinchin Employees conducting work under this SOP must meet the job competency requirements as outlined in Section 2.3 Job Competency of the Pinchin Health and Safety Program.

Where technical occupational health and safety assistance is required in evaluating hazards and determining controls, a Qualified Person should be engaged following Pinchin Health and Safety Program Section 3.2 Project Hazard Assessments.

If, while working on a site and following this SOP, there is an incident resulting in loss (personal injury, property damage) or a near miss (potential loss), fill in and submit the appropriate incident form (3.3.1.) or near miss form (3.3.2).

6.0 TRAINING

The Practice Leader is responsible for identifying the training needs of EDR staff and ensuring that staff are trained and competent before undertaking work assignments.

All trained personnel are responsible for identifying coaching or re-training needs (if they are uncomfortable with work assignments that have been assigned).

The careful application of *Health & Safety Training* by each employee is an integral part of all activities and is assumed as part of this SOP.

7.0 MAINTENANCE OF SOP

1 Year.

8.0 REFERENCES

Association of Professional Geoscientists of Ontario, *Guidance for Environmental Site Assessments under Ontario Regulation 153/04 (as amended),* April 2011.

British Columbia Ministry of the Environment, *Technical Guidance 8: Groundwater Investigation and Characterization*, July 2010.

9.0 APPENDICES

None.

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Template: Master SOP Template – February 2014

SOP – EDR009 – REV004 – FIELD DECONTAMINATION OF NON-DEDICATED MONITORING AND SAMPLING EQUIPMENT

Title:	Field Decontamination of Non-Dedicated Monitoring and Sampling Equipment
Practice:	EDR
First Effective Date:	August 03, 2009
Version:	004
Version Date:	January 3, 2018
Author:	Robert MacKenzie
Authorized by:	Robert MacKenzie
Signature:	

TABLE OF CONTENTS

1.0 VERSION HISTORY

Version	Date	Summary of Changes	Author
Original	August 02, 2009	N/A	MEM
001	November 26, 2010	Updated Approval Signature/Added reference to Ontario Regulation 511/09	FG
002	September 20, 2013	Revised majority of text to reflect current practices/Focused on equipment cleaning and removed reference to personnel decontamination/Added section on O. Reg. 153/04 requirements/Revised reference list	RLM
003	April 29, 2016	Updated Section 4.0/Removed methanol as optional cleaning reagent	RLM
004	April 28, 2017	Removed reference to Pinchin West/In Section 5.2.2, modified requirements for cleaning water level tapes and interface probes/In Section 5.2.3, modified requirements for cleaning electrical or retrieval cables for pumps	RLM
004	January 3, 2018	Reviewed and confirmed current	RLM

2.0 SCOPE AND APPLICATION

This Standard Operating Procedure (SOP) presents the general requirements for field decontamination of non-dedicated equipment used for monitoring of environmental media and the collection of environmental samples (i.e., equipment that is re-used between monitoring and sampling locations). Note that the procedures described in this SOP also apply to pumps used for well development.

3.0 OVERVIEW

The main purpose of non-dedicated monitoring and sampling equipment decontamination is to minimize the potential for cross-contamination during monitoring/sampling activities completed for site investigations. Cross-contamination can occur when equipment used to monitor/sample contaminated soil, groundwater or sediment is reused at another monitoring/sampling location without cleaning. This can result in the transfer of contaminants from a “dirty” monitoring/sampling location to a “clean” monitoring/sampling location, causing possible positive bias of subsequent samples. Positive sample bias can result in reported analytical results that are not representative of actual site conditions and, if significant cross-contamination occurs, can result in reported exceedances of the applicable regulatory standards for samples that would have met the standards had cross-contamination not occurred.

Site investigations completed by Pinchin typically use the following non-dedicated monitoring/sampling equipment:

- Manually operated equipment (e.g., water level tapes/interface probes using during groundwater monitoring and sampling, knifes/spatulas used for soil sampling, hand augers);
- Pumps for groundwater monitoring well development, purging and/or sampling (e.g., bladder pumps, submersible pumps); and
- Downhole drilling/sampling equipment (e.g., split-spoon samplers, augers).

The above list is not all inclusive and other non-dedicated monitoring/sampling equipment may be employed during a site investigation that requires decontamination. For example, it may be appropriate to decontaminate the bucket of a backhoe used for test pitting between test pit locations. The Project Manager will be responsible for identifying the additional monitoring/sampling equipment that requires decontamination and instructing field staff regarding the procedure to be followed for cleaning this equipment.

When conducting field monitoring and sampling work in the field, it is not always possible to judge whether a monitoring/sampling location is uncontaminated. Because of this, it is important that all non-dedicated monitoring/sampling equipment be properly cleaned before initial use and between uses to minimize the potential for cross-contamination to occur.

4.0 DISTRIBUTION

This is an on-line document. Paper copies are valid only on the day they are printed. Refer to the author if you are in any doubt about the accuracy of this document.

This SOP will be distributed to all Pinchin staff and others as follows:

- Posted to the SOP section of the Environmental Due Diligence and Remediation (EDR) Practice Line on the Pinchin Orchard; and
- Distributed to senior staff at Le Groupe Gesfor Poirier and Pinchin LeBlanc for distribution as appropriate.

5.0 PROCEDURE

5.1 Equipment and Supplies

The following is a list of equipment needed to perform the decontamination of non-dedicated monitoring and sampling equipment in accordance with this SOP:

- Personal Protective Equipment (PPE);
- Potable tap water;
- Distilled water (store bought);

- Volatile organic compound (VOC)-free deionized distilled water (supplied by the analytical laboratory);
- Laboratory grade, phosphate-free soap;
- Wash buckets (minimum of three);
- Scrub brushes;
- Paper towels; and
- Buckets or drums with resealable lids for containing liquids generated by equipment cleaning.

Other equipment required to clean drilling equipment (e.g., steam cleaner, power washer, tub for containing wash water, etc.) is typically provided by the drilling subcontractor. The Project Manager is responsible for ensuring that the drilling subcontractor brings the required cleaning equipment to the project site. Prior to mobilization, the Project Manager should also assess the availability of a potable water supply for drilling equipment cleaning at the project site. When no accessible potable water supply is available at a project site, the drilling subcontractor will need to bring a potable water supply to the site in the drill rig water supply tank or separate support vehicle, or arrange to have a third-party supplier deliver potable water to the site.

5.2 Procedure

5.2.1 General Procedures and Considerations

The following general procedures and considerations apply to all decontamination of non-dedicated monitoring/sampling equipment activities:

- Personnel will dress in suitable PPE to reduce personal exposure during equipment decontamination activities;
- In addition to cleaning between monitoring/sampling locations, all non-dedicated monitoring/sampling equipment must be cleaned before initial use. Field staff should not assume that the equipment was properly cleaned by the last person to use it;
- Prior to starting a drilling program, the downhole drilling equipment (e.g., augers) must be inspected and any “dirty” equipment must not be used in the drilling program or it must be cleaned prior to use; and
- All liquids and solids generated by the cleaning of non-dedicated monitoring/sampling equipment are to be containerized and managed in accordance with the procedures outlined in SOP-EDR020 – Investigation Derived Wastes.

5.2.2 Decontamination of Manually Operated Monitoring/Sampling Equipment

The procedure for decontaminating manually operated monitoring/sampling equipment is as follows:

- Wash the equipment in a bucket filled with a mixture of phosphate-free soap/potable water, while using a brush to remove any obvious contamination and/or adhered soil;
- Rinse the equipment thoroughly in a bucket filled with potable water;
- Rinse the equipment thoroughly using a spray bottle filled with distilled water, capturing the rinsate in a bucket; and
- Allow the equipment to air dry. If there is insufficient time to allow the equipment to air dry before reusing, or the equipment cleaning is occurring during winter conditions, the equipment should be dried after the final rinse with a clean paper towel.

At the discretion of the Project Manager, it may be acceptable to use spray bottles, rather than buckets, for lightly contaminated equipment or if no obvious contaminants are present.

Should soil or obvious contaminants remain on the equipment after cleaning, the above procedure must be repeated until the soil or contaminants have been removed. The equipment should not be reused if repeated cleanings do not remove the soil or contaminants.

The above equipment cleaning procedure applies to, but is not limited to, the following non-dedicated monitoring/sampling equipment:

- Knives/spatulas used for soil sampling;
- Hand augers;
- Water level tapes and interface probes (both the end probe and portion of the tape that entered the well);
- The exterior of submersible pumps and interior/exterior of bladder pumps (including the portion of the electrical or retrieval cables that contact groundwater in a well); and
- Various pieces of drilling equipment, including split-spoon samplers, hollow stem auger centre plugs, continuous sampling tubes, and the reusable portions of dual-tube samplers.

At the discretion of the Project Manager, the distilled water used for the final equipment rinse will be VOC-free deionized distilled water supplied by the analytical laboratory. For example, the use of VOC-free distilled water would be appropriate for a project where trace VOCs are being investigated and it is important to minimize the potential for cross-contamination and positive bias of VOC sample results.

For tapes associated with water level tapes and interface probes, if they were submerged in a monitoring well water free of non-aqueous phase liquids or obvious contamination, the tape can be cleaned at the discretion of the Project Manager by pulling the tape through a towel dampened with phosphate-free soap/potable water as the tape is retrieved. The end probe should then be cleaned as described above.

5.2.3 Decontamination of Groundwater Sampling Pumps

The exterior of each bladder or submersible pump that is used for well development, well purging and/or groundwater sampling, and the portion of any electrical or retrieval cables that entered the well, are to be cleaned following the procedure described above for decontaminating manually operated monitoring/sampling equipment.

Submersible pumps are not designed to be disassembled in the field and cleaning of the interior of this type of pump requires flushing of cleaning solutions through the pump. After cleaning the exterior of the pump, the minimum decontamination requirement for a submersible pump is the flushing of a phosphate-free soap/potable water mixture contained in a bucket through the pump (i.e., pumping the mixture through the pump and capturing the pump outflow in the same bucket or a separate bucket), followed by flushing distilled water contained in a separate bucket through the pump and capturing the pump outflow in the same bucket or separate bucket. Note that store bought distilled water is acceptable for this purpose.

At the discretion of the Project Manager and depending on the requirements of the project, the final step in the process is a final flush with laboratory-supplied VOC-free distilled water.

The following summarizes the flushing sequence for decontaminating the interior of a submersible pump:

- Soap/water mixture*;
- Distilled water (store bought)*; and
- Distilled water (laboratory supplied VOC-free distilled water - to be confirmed by the Project Manager).

* Minimum requirement.

Bladder pumps are designed for disassembly in the field to facilitate the replacement of the bladders. The internal parts of a bladder pump are to be cleaned in accordance with the procedure described above for decontaminating manually operated monitoring/sampling equipment. Whenever possible, bladders are to be disposed of between well locations. However, if it is necessary to reuse a bladder, it must be cleaned in accordance with the procedure for cleaning manually operated monitoring/sampling equipment. It should be noted that bladders are difficult to clean and the decontamination procedure needs to be thorough.

Flushing of a bladder pump with distilled water after cleaning and reassembly is not required unless specified by the Project Manager.

5.2.4 Decontamination of Downhole Drilling Equipment

Hollow stem and solid stem augers used for borehole advancement are to be decontaminated by the drilling contractor using the following procedure:

- Wherever possible, all augers used for borehole drilling should be cleaned before initial use and between borehole locations by steam cleaning or power washing with potable water. However, the minimum requirements for auger cleaning are as follows:
  - Use a brush or shovel to remove excess soil from all used augers; and
  - Any augers that may come into contact with groundwater are to be decontaminated by steam cleaning or power washing with potable water. An auger must not be used for the balance of the drilling program if obvious contaminants or residual soil remain on the auger following decontamination, unless subsequent cleaning efforts remove these materials.

As noted previously, downhole drilling equipment used for soil sample retrieval (e.g., split-spoon samplers, continuous sampling tubes and the reusable portions of dual-tube samplers used with direct push rigs) and the hollow stem auger centre plug are to be decontaminated following the procedure outlined above for cleaning manually operated monitoring/sampling equipment.

5.3 Decontamination Records

Field personnel will be responsible for documenting the decontamination of non-dedicated monitoring/sampling equipment and drilling equipment in their field log book or field forms. The documentation should include the type of equipment cleaned and the frequency of cleaning, the methods and reagents used for equipment cleaning, and how fluids generated by the equipment cleaning were stored.

5.4 Additional Considerations for Ontario Regulation 153/04 Phase Two ESA Compliance

When completing a Phase Two Environmental Assessment (ESA) in accordance with Ontario Regulation 153/04, the following additional procedures must be undertaken:

- All augers must have excess soil removed by a brush or shovel and be steam cleaned or power washed before initial use and between borehole locations regardless of whether they contact the groundwater or not (i.e., the minimum requirements listed above for auger cleaning are not sufficient); and

- Thorough records of the frequency and cleaning materials used for the decontamination of non-dedicated monitoring/sampling equipment and downhole drilling equipment must be kept. The Quality Assurance/Quality Control section of the Phase Two ESA report requires a summary of what steps were taken to minimize the potential for cross-contamination during the Phase Two ESA. The handling and disposal of fluids generated by equipment decontamination must also be well documented in the field for inclusion in the Phase Two ESA report.

6.0 TRAINING

The Practice Leader is responsible for identifying the training needs of EDR staff and ensuring that staff are trained and competent before undertaking work assignments.

All trained personnel are responsible for identifying coaching or re-training needs (if they are uncomfortable with work assignments that have been assigned).

The careful application of *Health & Safety Training* by each employee is an integral part of all activities and is assumed as part of this SOP.

7.0 MAINTENANCE OF SOP

1 Year.

8.0 REFERENCES

Association of Professional Geoscientists of Ontario, *Guidance for Environmental Site Assessments under Ontario Regulation 153/04 (as amended),* April 2011.

9.0 APPENDICES

None.

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Template: Master SOP Template – February 2014

SOP – EDR013 – REV004 – SAMPLE HANDLING DOCUMENTATION

Title:	Sample Handling Documentation
Practice:	EDR
First Effective Date:	August 03, 2009
Version:	004
Version Date:	January 3, 2018
Author:	Mark McCormack and Robert MacKenzie
Authorized by:	Robert MacKenzie
Signature:	

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1.0 VERSION HISTORY

Version	Date	Summary of Changes	Author
Original	August 03, 2009	N/A	MEM
001	November 26, 2010	Updated Approval Signature/Added reference to Ontario Regulation 511/09	FG
002	September 12, 2013	Updated text/Added tables from MOE lab protocol/Streamlined reference section/Added O. Reg. 153/04 compliance section	RLM
003	April 29, 2016	Updated Section 4.0/Aligned document retention with PEP	RLM
004	April 28, 2017	Removed reference to Pinchin West	RLM
004	January 3, 2018	Reviewed and confirmed current	RLM

2.0 SCOPE AND APPLICATION

This Standard Operating Procedure (SOP) presents the general requirements for sample handling and documentation practices.

3.0 OVERVIEW

Not applicable.

4.0 DISTRIBUTION

This is an on-line document. Paper copies are valid only on the day they are printed. Refer to the author if you are in any doubt about the accuracy of this document.

This SOP will be distributed to all Pinchin staff and others as follows:

- Posted to the SOP section of the Environmental Due Diligence and Remediation (EDR) Practice Line on the Pinchin Orchard; and
- Distributed to senior staff at Le Groupe Gesfor Poirier and Pinchin LeBlanc for distribution as appropriate.

5.0 PROCEDURE

5.1 Equipment Required

- Laboratory-supplied sample containers;
- Field log book or field forms; and
- Laboratory-supplied Chain-of-Custody forms.

5.2 Procedures

5.2.1 *Sample Labelling*

Sample labels are to be filled out in the field at the time of sampling as completely as possible by field personnel. All sample labels shall be filled out using waterproof ink. At a minimum, each label shall contain the following information:

- Sample identifier, consisting of sample location (borehole number, monitoring well number, surface sample location, etc.) and sample number (if appropriate). For example, the second soil sample collected during borehole advancement at borehole BH3 would be labelled “BH3-2”;
- Pinchin project number;
- Date and time of sample collection;
- Company name (i.e., Pinchin); and
- Type of analysis.

5.2.2 *Sample Containers, Preservation and Holding Times*

The sample containers, sample preservation and holding times for projects in Ontario are to be those specified in Table A (for soil and sediment) and Table B (groundwater) from the Ontario Ministry of the Environment Climate Change (MOECC, formerly the Ontario Ministry of the Environment) 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, amended as of July 1, 2011. These tables are attached and form part of this SOP.

With reference to the attached Tables A and B, field personnel must use the sample containers appropriate for the parameters being sampled for, undertake any required field preservation or filtration and observe the sample holding times.

Each province has its own preservation and holding time regulations or guidance, which are generally similar. It is the Project Manager’s responsibility to ensure that field staff are aware of, and can meet, the requirements in the province they are working in.

5.2.3 *Sample Documentation*

The following sections describe documentation required in the field notes and on the Chain-of-Custody forms.

Field Notes

Documentation of observations and data from the field will provide information on sample collection and also provide a permanent record of field activities. The observations and data will be recorded using a pen with permanent ink in the field log book or on field forms.

The information in the field book or field forms will, at a minimum, include the following:

- Site name;
- Name of field personnel;
- Sample location (borehole number, monitoring well number, surface sample location, etc.);
- Sample number;
- Date and time of sample collection;
- Description of sample;
- Matrix sampled;
- Sample depth (if applicable);
- Method of field preservation (if applicable);
- Whether filtration was completed for water samples;
- Analysis requested;
- Field observations;
- Results of any field measurements (e.g., field screening measurements, depth to water, etc.); and
- Volumes purged (if applicable).

In addition to the above, other pertinent information is to be recorded in the field log book or field forms depending on the type of sampling being completed (e.g., field parameter measurements and pumping rates for low flow sampling) as required by the SOP for the particular sampling activity.

Sufficient information should be recorded to allow the sampling event to be reconstructed without relying on the sampler’s memory.

All field notes are to be scanned and saved to the project folder on the server immediately upon returning from the field.

Sample Chain-of-Custody

Sample Chain-of-Custody maintains the traceability of the samples from the time they are collected until the analytical data are issued by the laboratory. Initial information concerning collection of the samples will be recorded in the field log book or field forms as described above. Information on the custody, transfer, handling and shipping of samples will be recorded on a Chain-of-Custody for each sample submission.

All signed Chain-of-Custody forms will be photocopied or duplicate copies retained prior to sample shipment. A Chain-of-Custody should be laboratory-specific and will typically be supplied by the laboratory with the sample containers requested for the project. The sampler will be responsible for fully filling out the Chain-of-Custody for each sample submission.

The Chain-of-Custody will be signed by the sampler when the sampler relinquishes the samples to anyone else (i.e., courier or laboratory). Until samples are picked up by the courier or delivered to the laboratory, they must be stored in a secure area. The following information needs to be provided on the Chain-of-Custody at a minimum:

- Company name;
- Name, address, phone number, fax number and e-mail address of the main contact for the submission (typically the Project Manager);
- Project information (project number, site address, quotation number, rush turnaround number, etc.);
- Regulatory standards or criteria applicable to the samples (including whether the samples are for regulated drinking water or whether the samples are for a Record of Site Condition);
- Sample identifiers;
- Date and time of sample collection;
- Matrix (e.g., soil, groundwater, sediment, etc.);
- Field preservation information (e.g., whether groundwater samples for metals analysis were field filtered);
- Analyses required;
- Number of sample containers per sample;
- Analytical turnaround required (i.e., standard or rush turnaround);
- Sampler’s name and signature;
- Date and time that custody of the samples was transferred;

- Name and signature of person accepting custody of the samples from Pinchin, and date and time of custody transfer; and
- Method of shipment (if applicable).

The person responsible for delivery of the samples to the laboratory or transfer to a courier will sign the Chain-of-Custody, retain a duplicate copy or photocopy of the Chain-of-Custody so it can be scanned and saved to the project file, document the method of shipment, and send the original copy of the Chain-of Custody with the samples.

5.3 Additional Considerations for Ontario Regulation. 153/04 Phase Two ESA Compliance

Custody seals must be placed on all coolers containing samples prior to transfer to a courier or delivery to the laboratory. The laboratory will comment on the presence/absence of custody seals in the Certificate-of-Analysis for each submission and this information must be discussed in the Quality Assurance/Quality Control section of the Phase Two Environmental Site Assessment report.

6.0 TRAINING

The Practice Leader is responsible for identifying the training needs of EDR staff and ensuring that staff are trained and competent before undertaking work assignments.

All trained personnel are responsible for identifying coaching or re-training needs (if they are uncomfortable with work assignments that have been assigned).

The careful application of *Health & Safety Training* by each employee is an integral part of all activities and is assumed as part of this SOP.

7.0 MAINTENANCE OF SOP

1 Year.

8.0 REFERENCES

Ontario Ministry of the Environment and Climate Change, *Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act*, March 9, 2004, as amended as of July 1, 2011.

9.0 APPENDICES

Appendix I Tables A and B From Ontario MOECC Laboratory Protocol

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Template: Master SOP Template – February 2014

APPENDIX I

Tables A and B From Ontario MOECC Laboratory Protocol

TABLE A: SOIL AND SEDIMENT Sample Handling and Storage Requirements

SOIL Inorganic Parameters	**Container[1]**	**Field Preservation**	**Storage Temp.[2]**	**Preserved Holding Time[3]**	**Unpreserved Holding Time[3]**
Chloride, electrical conductivity	glass, HDPE or PET	none	5 ± 3 °C		30 days as received (without lab drying); indefinite when dried at the lab
Cyanide (CN^-)	glass wide-mouth jar, Teflon™ lined lid	protect from light	5 ± 3 °C		14 days
Fraction organic carbon (FOC)	glass jar, Teflon™ lined lid	none	5 ± 3 °C		28 days as received(without lab drying); indefinite storage time when dried
Hexavalent chromium	glass, HDPE	none	5 ± 3 °C		30 days as received
Metals (includes hydride-forming metals, SAR, HWS boron, calcium, magnesium, sodium)	glass, HDPE	none	5 ± 3 °C		180 days as received (without lab drying); indefinite when dried at the lab
Mercury, methyl mercury	glass, HDPE or PET	none	5 ± 3 °C		28 days
pH	glass, HDPE or PET	none	5 ± 3 °C		30 days as received
SOIL Organic Parameters	**Container [1,5,6,7,20]**	**Field Preservation**	**Storage Temp.[2]**	**Preserved Holding Time[3]**	**Unpreserved Holding Time[3]**
BTEX [8], PHCs (F1)[8], THMs, VOCs[7] **NB: SEE FOOTNOTE #20**	40–60 mL glass vial (charged with methanol preservative, pre-weighed)[6]AND glass jar (for moisture content) [hermetic samplers are an acceptable alternative [5, 18]]	methanol (aqueous $NaHSO_4$ is an acceptable alternative for bromomethane)[6, 7, 18,20]	5 ± 3 °C	14 days	hermetic samples: stabilize with methanol preservative within 48 hours of sampling[18]
1,4-Dioxane[9, 15]	when processed as a VOC sample: same as per VOCs above; when processed as an extractable: same as per ABNs below; (consult laboratory)[9,15,18]		5 ± 3 °C	14 days	when processed as a VOC sample: same as per VOCs above; when processed as an extractable: same as per ABNs below; (consult laboratory)[18]
PHCs (F2–F4)	glass wide-mouth jar, Teflon™ lined lid	none	5 ± 3 °C		14 days
ABNs, CPs, OCs, PAHs	glass wide-mouth jar, Teflon™ lined lid	none	5 ± 3 °C		60 days
Dioxins and furans, PCBs	glass wide-mouth jar Teflon™ lined lid	none	5 ± 3 °C		indefinite storage time

HDPE = high density polyethylene; PET = polyethylene terephthalate; HWS = hot water soluble boron; THM = trihalomethanes; VOC = volatile organic compounds; BTEX = benzene, toluene, ethylbenzene, xylenes; PHCs = petroleum hydrocarbons; CPs = chlorophenols; PCBs = polychlorinated biphenyls; OCs = organochlorine pesticides

[1–20] footnotes immediately follow Table B

TABLE B: GROUND WATER Sample Handling and Storage Requirement

GROUND WATER Inorganic Parameters	**Container**[10]	**Field Preservation**	**Storage Temperature**[2]	**Preserved Holding Time**[3]	**Unpreserved Holding Time**[3]
Chloride, electrical conductivity, pH	HDPE or glass	none	5 ± 3 °C		28 days
Cyanide (CN^-)	HDPE or glass	NaOH to a pH > 12	5 ± 3 °C	14 days	must be field preserved
Hexavalent chromium	HDPE or glass	field filter followed by buffer solution to a pH 9.3–9.7 [17]	5 ± 3 °C	28 days[17]	24 hours[17]
Metals (includes hydride-forming metals, calcium, magnesium, sodium)	HDPE or Teflon™ [10]	field filter followed by HNO_3 to pH < 2[11]	room temperature when preserved	60 days	must be field preserved
Mercury	glass or Teflon™ [10]	field filter followed by HCl to pH < 2[11]	room temperature when preserved	28 days	must be field preserved
Methyl mercury	glass or Teflon™	DO NOT FILTER HCl or H_2SO_4 to pH <2[12]	5 ± 3 °C	28 days	DO NOT FILTER must be field preserved[12]
GROUND WATER Organic Parameters[10, 13, 14]	**Container**[10, 13, 14]	**Field Preservation**	**Storage Temperature**[2]	**Preserved Holding Time**[3]	**Unpreserved Holding Time**[3]
BTEX, PHCs (F1),THMs, VOCs;	40–60 mL glass vials (minimum of 2)[14] (no headspace)	$NaHSO_4$ or HCl to a pH < 2[16]	5 ± 3 °C	14 days	7 days
1,4-Dioxane[9, 15]	when processed as a VOC sample: same as per VOCs above; when processed as an extractable: same as per ABNs below; (consult laboratory)[9, 15]		5 ± 3 °C	14 days	14 days
PHCs (F2–F4)	1L amber glass bottle, Teflon™ lined lid	$NaHSO_4$ or HCl to a pH < 2[16]	5 ± 3 °C	40 days	7 days
ABNs, CP, OCs, PAHs[19], PCBs	1L amber glass bottle, Teflon™ lined lid	none	5 ± 3 °C		14 days
Dioxins and furans	1L amber glass bottle, Teflon™ lined lid	None	5 ± 3 °C		indefinite storage time

HDPE = high density polyethylene;THM = trihalomethanes; VOC = volatile organic compounds; BTEX = benzene, toluene, ethylbenzene, xylenes; PHCs = petroleum hydrocarbons; CPs = chlorophenols; PCBs = polychlorinated biphenyls; OCs = organochlorine pesticides

[1] One soil container is generally sufficient for inorganic analysis and another for extractable organics. A separate container is required for BTEX, THM, VOC and PHC (F1) moisture analysis.

[2] Storage temperature refers to storage at the laboratory. Samples should be cooled and transported as soon as possible after collection.

[3] Holding time refers to the time delay between time of sample collection and time stabilization/analysis is initiated. For samples stabilized with methanol, the hold time for the recovered methanol extract is up to 40 days.

[4] PET can not be used for samples requiring antimony analysis.

[5] As an alternative, the USEPA has investigated hermetic sample devices that take and seal a single core sample. The sample is submitted as is to the laboratory where it is extruded into an extracting solvent. Samples must be received at the laboratory within 48 hours of sampling. (Note that replicate samples are necessary for bisulphate and methanol extraction for all samples plus laboratory duplicates and spikes.) Consult the laboratory for the number of samples required.

[6] The USEPA has approved field preservation. Pre-weighed vials containing known weights of methanol preservative (or aqueous sodium bisulphate if used for bromomethane) are sent to the field. Sample cores (approximately 5 g) are extruded directly into the vial. The vials are sealed, and submitted directly to the laboratory. In practice, this technique requires great care to prevent losses of methanol due to leaking vials or through splashing. Consult the laboratory for the number of containers required.

[7] Methanol-preserved samples may elevate the detection limit for bromomethane (VOC); a separate bisulphate-preserved sample or hermetically sealed sample may be submitted at the time of sampling if bromomethane is a chemical of concern – contact the laboratory to determine if a separate sample should be collected.

[8] For BTEX and PHC (F1) pre-charging the soil sampling container with methanol preservative is an accepted deviation from the CCME method.

[9] 1,4-Dioxane may be analyzed with the ABNs or VOCs; sample container requirements used for ABNs or VOCs are both acceptable. If 1,4-dioxane is to be analyzed with ABNs, follow the ABN sample container requirements; similarly if it is to be analyzed with VOCs, follow VOC sample container requirements. Consult the laboratory for the container type and the total number required (see also footnote #15).

[10] Samples containing visual sediment at the time of analysis should be documented and noted on the Certificate of Analysis or written report as results may be biased high due to the inclusion of sediment in the extraction.

[11] Field filter with 0.45µm immediately prior to adding preservative or filling pre-charged container.

[12] Sample directly into a HCl or H_2SO_4 preserved container, or add acid to an unfiltered sample immediately after sample collection in the field.

[13] Aqueous organic samples should be protected from light. If amber bottles are not available, glass should be wrapped in foil.

[14] Separate containers are required for each organic water analysis. Consult the laboratory for required volumes. Chloride and electrical conductivity can be taken from the same container.

[15] For 1,4-dioxane in soil and sediment, no preservative is required if processed as an ABN, however. Methanol is an acceptable alternative if processed as a VOC. For 1,4-dioxane in groundwater, no preservative is required, however, $NaHSO_4$ or HCl are acceptable alternatives.

[16] Preserved to reduce biodegradation, however effervescence/degassing may occur in some ground water samples. In this case, rinse preservative out three times with sample and submit to the laboratory as unpreserved.

[17] To achieve the 28-day holding time, use the ammonium sulfate buffer solution [i.e., $(NH_4)_2SO_4/NH_4OH$] or $(NH_4)_2SO_4/NH_4OH/NaOH$ + NaOH] as specified in EPA Method 218.6 (revision 3.3, 1994) or Standard Methods 3500-Cr Chromium (2009).Using only NaOH without the ammonium sulfate buffer to adjust the pH would require analysis within 24 hours of sampling.

[18] Alternatively, to achieve a longer hold time, hermetic samples may be frozen within 48 hours of sampling as per ASTM method D6418 – 09; however, storage stability must be validated by the laboratory with no more than 10% losses.

[19] For benzo(a)pyrene in ground water samples filtration prior to analysis on a duplicate sample is permitted.

[20] For VOC, BTEX, F1 PHCs, 1,4 dioxane soil samples collected before July 1, 2011, the following sampling and handling requirements are also permitted.

SOIL Organic Parameters	Container	Preservative	Storage Temperature	Preserved Holding Time	Unpreserved Holding Time
VOC, BTEX, F1 PHCs, 1,4-dioxane*	glass jar, Teflon lined lid, no headspace, separate container required Hermetic samplers are an acceptable alternative	none field preservation with aqueous sodium bisulphate and methanol is an acceptable alternative	5 ± 3C	See notations 1-3 below	Stabilize by extraction or freezing within 48 hrs of receipt at the laboratory (7days from sampling). Frozen or field preserved samples must be extracted within 14 days of sampling.

*Special care must be used when sampling for VOC, BTEX and F1 in soil and sediment. Studies have shown that substantial losses can occur through volatilization and bacterial degradation. There are several allowable options for field collection of samples. Each is discussed below. Consult SW846, Method 5035A for additional detail. The laboratory is required to stabilize the sample on the day of receipt, either by extraction or freezing.

1. Collection in soil containers: To minimize volatilization losses, minimize sample handling and mixing during the process of filling the sample container. The bottle should be filled with headspace and voids minimized. Care is required to ensure that no soil remains on the threads of the jar, preventing a tight seal and allowing volatilization losses. To minimize losses through bacterial degradation, commence cooling of the samples immediately and transport the samples to the lab as soon as possible, ideally on the day of sampling. Samples must be received at the laboratory within 48 hours of sampling. Freezing can be used to extend the hold time to 14 days, however the practice is difficult to implement in the field and can cause sample breakage.
2. As an alternative, the USEPA has investigated hermetic sample devices that take and seal a single core sample. The sampler is submitted as is to the laboratory where it is extruded into the extracting solvent. Samples must be received at the laboratory within 48 hours of sampling. This technique minimizes volatilization losses and is worth consideration for critical sites. (Note that replicate samplers are necessary for bisulphate and methanol extraction for all samples plus lab duplicates and spikes). Consult the laboratory for the number of samplers required.

3 The USEPA has also approved field preservation. Pre-weighed vials containing known weights of methanol and aqueous sodium bisulphate preservative are sent to the field. Sample cores (≈5 g) are extruded directly into the vial. The vials are sealed, and submitted directly to the laboratory. In practice, this technique requires great care to implement successfully. Losses due to leaking vials, through splashing and effervescence (aqueous bisulphate) can easily occur and make the sample unusable. Consult the laboratory for the number of containers required.

SOP – EDR016 – REV003 – FIELD MEASUREMENT OF WATER QUALITY PARAMETERS

Title:	Field Measurement of Water Quality Parameters
Practice:	EDR
First Effective Date:	November 24, 2010
Version:	003
Version Date:	January 3, 2018
Author:	Paresh Patel
Authorized by:	Robert MacKenzie
Signature:	

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1.0 VERSION HISTORY

Version	Date	Summary of Changes	Author
Original	November 24, 2010	N/A	PDP
001	October 31, 2013	Cross-referenced low flow sampling SOP/Added section on O. Reg. 153/04 compliance	RLM
002	April 29, 2016	Updated Section 4.0	RLM
003	April 28, 2017	Removed reference to Pinchin West	RLM
003	January 3, 2018	Reviewed and confirmed current	RLM

2.0 SCOPE AND APPLICATION

This Standard Operating Procedure (SOP) describes the standard procedures for measuring water quality parameters during water sampling, and covers the calibration and use of multi-parameter and single-parameter probes for monitoring in situ water quality parameters in streams, down hole in monitoring wells and in flow-through cells. Water quality parameters may include temperature, pH, dissolved oxygen (DO), oxidation reduction potential (ORP), conductivity and turbidity.

Measurements of water quality parameters are typically made for two main purposes: to provide information on water geochemistry to assist in designing in situ remediation programs and to assess whether representative formation groundwater is being sampled during low flow purging and sampling. They can also be used to assess whether well development is complete in certain situations (see SOP-EDR018).

3.0 OVERVIEW

Not applicable.

4.0 DISTRIBUTION

This is an on-line document. Paper copies are valid only on the day they are printed. Refer to the author if you are in any doubt about the accuracy of this document.

This SOP will be distributed to all Pinchin staff and others as follows:

- Posted to the SOP section of the Environmental Due Diligence and Remediation (EDR) Practice Line on the Pinchin Orchard; and
- Distributed to senior staff at Le Groupe Gesfor Poirier and Pinchin LeBlanc for distribution as appropriate.

5.0 PROCEDURE

5.1 Equipment and Reagents Required

- Single or multi-parameter probes for monitoring water quality parameters;
- Calibration solutions for calibrating the probes to the standard values;
- Field book or field forms;
- Distilled water;
- Beaker or bucket;
- Stirrer for DO measurement (optional); and
- Flow-through cell (optional).

5.2 Probe Measurement Accuracy

The probes utilized for measuring water quality parameters shall be capable of producing measurement accuracy greater or equal to the following specifications:

Temperature:	± 0.5 degrees Celsius (°C)
Conductivity:	± 1 microSiemens per centimetre (µS/cm)
pH:	±0.1 pH unit
Dissolved Oxygen:	±0.2 milligrams per litre (mg/L) up to20 mg/L
	± 0.6 mg/L greater than 20 mg/L
Turbidity:	±1% up to 100 Nephelometric Turbidity Units (NTU)
	±3% up to 100-400 NTU
	±5% up to 400-3,000 NTU
ORP:	± 20 millivolts (mV)

5.3 Probe Calibration

Calibrate the water quality probes used for field parameter measurement in accordance with the manufacturer's specifications. Wherever possible, arrange for the equipment rental company to calibrate the water quality probes and provide a calibration sheet that contains information such as calibration date and calibration measurements for each parameter. If the water quality probes are used for more than one day, a calibration check must be performed using standard calibration solutions at the start of each day at a minimum. If the calibration check shows deviations from the standard values that exceed the ranges provided below, the probe(s) that exceed the ranges must be calibrated prior to further use:

pH	±0.1 pH units
Specific Conductance	±3%
Temperature	±3%

DO	±10%
ORP	±10 mV
Turbidity	±10%

A calibration check should also be performed if the parameter measurements suggest that calibration drift has occurred. Document all calibration activities in the field notes, including date and time of calibration/calibration check, calibration solutions used, probe readings, and make, model and serial number of the instrument(s). Note that if the water quality probe manufacturer recommends more frequent calibration/calibration checks than specified above, the manufacturer's recommendations are to be followed.

Extra care must be taken to calibrate a multi-parameter probe to prevent cross-contamination. Specifically, following immersion of the probes into each calibration standard, all probes should be thoroughly rinsed in distilled water and the excess water shaken off or blotted dry with a lint-free wipe. Conductivity standards are much more sensitive to cross contamination/dilution than other standards, and prior to immersion in a conductivity standard, all probes should be thoroughly rinsed and completely dried with lint-free wipes. Besides being easily diluted, conductivity also affects other parameters (specifically DO), and the conductivity probe should always be the first probe calibrated. The following order for calibration of a multi-parameter probe is to be followed:

1. Specific Conductance;
2. pH;
3. DO; and
4. Turbidity.

There is no recommended order for calibration of other parameters.

5.4 Single-Parameter Probes

Prior to conducting field measurements, probe sensors must be allowed to equilibrate to the temperature of the water being monitored. Probe sensors have equilibrated adequately when the temperature reading has stabilized. Deployment of single-parameter probes will follow the following procedures:

5.4.1 Temperature

Whenever possible the temperature shall be measured in situ (i.e., within a stream, direct deployment in a monitoring well). When temperature cannot be measured in situ, it can be measured in a beaker or bucket. The following conditions must be met when measuring temperature within a beaker or bucket:

- The beaker or bucket shall be large enough to allow full immersion of the temperature probe. The beaker or bucket is to be rinsed with water from the well or stream being measured prior to obtaining the measurement;

- The probe must be placed in the beaker or bucket immediately before the temperature changes due to ambient conditions;
- The beaker or bucket must be shaded from direct sunlight and strong breezes before and during temperature measurement; and
- The probe must be allowed to equilibrate for at least 1 minute before temperature is recorded.

5.4.2 pH

Preferably, pH is measured in situ at the centroid of flow and at the mid-depth of a stream, or the mid-point of the well screen in a well. The pH probe must be allowed to equilibrate according to the manufacturer's recommendations before the pH value is recorded without removing the probe from the water.

If the pH cannot be measured in situ, it should be measured in a bucket or beaker using the procedures outlined above for measuring temperature.

5.4.3 Dissolved Oxygen

As for pH, it is preferable to measure DO in situ at the centroid of flow and at the mid-depth of a stream, or the mid-point of the well screen in a well. The DO probe must be allowed to equilibrate according to manufacturer's recommendations before the DO value is recorded without removing the probe from the water.

If DO cannot be measured in situ, it should be measured in a bucket or beaker using the procedures outlined above for measuring temperature.

Some types of DO probes require a sufficient flow of fresh water across the membrane to maintain the accuracy and precision of the DO measurement. When taking DO measurements in a bucket or beaker, either employ a stirrer, or physically move the probe in a gentle motion. Moving the probe in a gentle motion should also be completed when measuring DO in situ down hole in a monitoring well.

5.4.4 ORP

ORP shall be measured using the procedures outlined above for measuring pH. Note that changes in temperature directly affect ORP values and ORP should be measured as soon as possible after the probe has stabilized.

5.4.5 Turbidity

In situ turbidity shall be measured using the procedures outlined above for measuring pH.

If turbidity cannot be measured in situ, it can be measured with a probe in a bucket or beaker using the procedures outlined above for measuring temperature. Note that some turbidity measuring instruments do not use a probe, and a sample of the water is collected in a small vial that is inserted into the instrument which then measures the turbidity of the water.

5.4.6 Multi-Parameter Probe Use With A Flow-Through Cell

A multi-parameter probe and a flow-through cell are typically employed when undertaking low flow purging and sampling of groundwater. SOP-EDR023 describes the procedures to be followed when using a multi-parameter probe and a flow-through cell.

5.5 Additional Considerations for Ontario Regulation 153/04 Phase Two ESA Compliance

When completing a Phase Two Environmental Assessment (ESA) in accordance with Ontario Regulation 153/04, the following additional procedures must be undertaken:

- Thorough records of the calibration and calibration checks of the probes/instruments used for water quality parameter measurement must be kept, including any calibration sheets provided by the equipment supplier. The Quality Assurance/Quality Control section of the Phase Two ESA report requires a discussion of field equipment calibration, and equipment calibration records must be appended to the Phase Two ESA report; and
- If groundwater samples collected for a Phase Two ESA are not collected using low flow purging and sampling, which mandates the measurement of water quality parameters, water quality parameters must be measured (pH, temperature and specific conductance at a minimum) and the measurements included in the Phase Two ESA report. Ontario Regulation 153/04 does not provide specifics as to when or how these water quality parameter measurements are to be made but one set of measurements made at the conclusion of purging prior to sampling is the minimum requirement. These measurements can be made by filling a clean bucket or beaker with purge water and immersing the probes in the purge water.

6.0 TRAINING

The Practice Leader is responsible for identifying the training needs of EDR staff and ensuring that staff are trained and competent before undertaking work assignments.

All trained personnel are responsible for identifying coaching or re-training needs (if they are uncomfortable with work assignments that have been assigned).

The careful application of *Health & Safety Training* by each employee is an integral part of all activities and is assumed as part of this SOP.

7.0 MAINTENANCE OF SOP

1 Year.

8.0 REFERENCES

New Jersey Department of Environmental Protection, *Field Sampling Procedures Manual,* August 2005.

Commonwealth of Kentucky – Department of Environmental Protection, *Standard Operating Procedure – In Situ Water Quality Measurements and Meter Calibration,* January 1, 2009.

U.S Environmental Protection Agency – Science and Ecosystem Support Division, Athens, Georgia, *In Situ Water Quality Monitoring,* December 7, 2009.

U.S. Geological Survey, *National Field Manual for the Collection of Water-Quality Data: U.S. Geological Survey Techniques of Water-Resources Investigations, Book 9, Chapters A1-A9,* Various dates.

9.0 APPENDICES

None.

I:\2018 SOP Updates\SOP - EDR016 - REV003 - Field Measurement of Water Quality Parameters.docx

Template: Master SOP Template – February 2014

SOP – EDR017 – REV006 – MONITORING WELL DEVELOPMENT

Title:	Monitoring Well Development
Practice:	EDR
First Effective Date:	November 23, 2010
Version:	006
Version Date:	January 3, 2018
Author:	Paresh Patel and Robert MacKenzie
Authorized by:	Robert MacKenzie
Signature:	

TABLE OF CONTENTS

1.0 VERSION HISTORY

Version	Date	Summary of Changes	Author
Original	November 23, 2010	N/A	PDP
001	June 15, 2013	Streamlined background section/Focused procedure on tasks that can be completed by Pinchin personnel/Provided step-by-step summary of field procedure	RLM
002	January 22, 2015	Incorporated procedures specific to Pinchin West into SOP	RLM
003	February 9, 2016	Revised overall procedure to include initial determination of well yield/Added reference to revised well development field forms/Provided guidance on assessing field parameter stabilization when developing wells where water or air were used during drilling	RLM
004	April 29, 2016	Updated Section 4.0	RLM
005	April 28, 2017	Removed references to Pinchin West	RLM
006	January 3, 2018	Modified Section 3.0 to allow well development to occur immediately after well installation under certain circumstances.	RLM

2.0 SCOPE AND APPLICATION

This Standard Operating Procedure (SOP) describes the standard procedures for groundwater monitoring well development and provides a description of the equipment required and field methods.

All groundwater monitoring wells are to be developed following installation prior to groundwater sampling or the completion of hydraulic conductivity testing. In addition, previously installed groundwater monitoring wells that have not been purged in over one year should be redeveloped prior to additional sampling or hydraulic conductivity testing if there is evidence of sediment impacting the monitoring well (e.g., the depth to bottom of well measurement indicates sediment accumulation) or at the discretion of the Project Manager.

This SOP pertains to monitoring well development that can be undertaken by Pinchin personnel. Monitoring well development completed by drilling rigs is beyond the scope of this SOP.

3.0 OVERVIEW

The main objective of groundwater monitoring well development is to ensure that groundwater sampled from a well is representative of the groundwater in the formation adjacent to the well and that hydraulic conductivity testing provides data representative of the hydraulic characteristics of the adjacent formation.

The specific goals of well development include the following:

- Rectifying the clogging or smearing of formation materials that may have occurred during drilling of the borehole;
- Retrieving lost drilling fluids;
- Improving well efficiency (i.e., the hydraulic connection between the sand pack and the formation);
- Restoring groundwater properties that may have been altered during the drilling process (e.g., volatilization of volatile parameters due to frictional heating during auger advancement or use of air rotary drilling methods); and
- Grading the filter pack to effectively trap fine particles that may otherwise interfere with water quality analysis.

Monitoring well development should not be completed until at least 24 hours have elapsed following monitoring well installation to permit enough time for the well seal to set up, unless both of the following conditions are met:

- The well seal is entirely above the water table; and
- Surface runoff (e.g., from heavy rainfall or snow melt) is not occurring at the well location at the time of development.

Any deviation from this procedure must be approved by the Project Manager before proceeding.

4.0 DISTRIBUTION

This is an on-line document. Paper copies are valid only on the day they are printed. Refer to the author if you are in any doubt about the accuracy of this document.

This SOP will be distributed to all Pinchin staff and others as follows:

- Posted to the SOP section of the Environmental Due Diligence and Remediation (EDR) Practice Line on the Pinchin Orchard; and
- Distributed to senior staff at Le Groupe Gesfor Poirier and Pinchin LeBlanc for distribution as appropriate.

5.0 PROCEDURE

5.1 Equipment and Supplies

- Inertial pump (e.g., Waterra tubing and foot valve);
- Surge block for use with an inertial pump (Optional);
- Submersible pump (including pump controller and power supply) (Optional);
- Disposable bailer (Optional);
- Graduated pail (to contain purge water and permit the volume of groundwater purged to be tracked);
- Pails or drums for purge water storage prior to disposal;
- Well keys (if wells are locked);
- Tools to open monitoring well (T-bar, socket set, Allen keys, etc.);
- Interface probe;
- Equipment cleaning supplies (see SOP-EDR009);
- Field parameter measurement equipment (see SOP-EDR016) (Optional);
- Disposable nitrile gloves; and
- Field forms.

Pinchin typically employs inertial pumps or bailers for well development because they can be dedicated to each well. However, the use of submersible pumps is a viable alternative for developing deep wells with high well volumes at the discretion of the Project Manager.

5.2 Procedures

The well development procedures employed will be determined by the hydraulic conductivity of the formation in which the groundwater monitoring well is installed. For this SOP, a high yield well is defined as a well that cannot be purged to dryness when pumping continuously at a rate of up to 2 litres per minute (L/min) and a low yield well is defined as a well that can be purged to dryness when pumping continuously at a rate of up to 2 L/min or less. This threshold represents a “normal” pumping rate when hand pumping with an inertial pump.

The initial stage of well development (Stage 1) will apply to all wells and will involve the removal of up to one well volume, followed by an evaluation of the well yield. The procedures followed for Stage 2 of well development will be contingent on whether the well is determined to be a low yield or high yield well.

5.2.1 Well Development for Low and High Yield Wells - Stage 1

The initial procedure for developing a low yield or high yield monitoring well is as follows:

1. Decontaminate all non-dedicated monitoring and pumping equipment that will be used, including the interface probe and submersible pump (if used), in accordance with the procedures described in SOP-EDR009;
2. Review the well construction details provided in the borehole log, previous field notes or well construction summary table from a previous report. Determine the well depth, well stick up, screen length, depth to the top of the sand pack and diameter of the borehole annulus. If the well depth is unavailable, measure it with the interface probe;
3. Measure the initial water level (i.e., static water level) from the reference point on the well (which should be marked at the top of the well pipe) with an interface probe. If measurable free-phase product is present on the water table, record the depth to the top of the free-phase product and the depth to the free-phase product/water boundary (i.e., water level), and discuss this with the Project Manager before proceeding further;
4. Calculate the well volume. **Note that for the purpose of this SOP, there are two definitions of well volume depending on the province in which the project is being conducted.** For Ontario and Manitoba, the well volume is defined as the volume of water within the wetted length of the well pipe (well pipe volume) plus the volume of water within the wetted length of the sand pack (sand pack volume). For British Columbia, Alberta and Saskatchewan, the well volume is defined as the volume of water within the wetted length of the well pipe (well pipe volume) only.

   The volume of water in the well pipe is calculated as follows:

   Well Pipe Volume (litres) = h_w x π r_w^2 x 1,000 litres per cubic metre (L/m^3)

   Where $\pi = 3.14$

   h_w = the height of the water column in the monitoring well in metres (wetted length)

   r_w = the radius of the monitoring well in metres (i.e., half the interior diameter of the well)

   The volume of the sand pack in the monitoring well is calculated as follows:

   Sand Pack Volume (litres) = h_w x [(0.3 π r_b^2 x 1,000 L/m^3) – (0.3 π r_w^2 x 1,000 L/m^3)]

   Where 0.3 = the assumed porosity of the sand pack

h_w = the height of the water column in the monitoring well in metres (wetted length)

$\pi = 3.14$

r_b = the radius of the borehole annulus in metres

r_w = the radius of the monitoring well in metres

For Ontario and Manitoba projects, the following table provides well volumes in litres/metre for typical well installations:

Borehole Annulus Diameter (Inches/Metres)	Well Interior Diameter (Inches)	Well Pipe Volume (Litres/Metre)*	Well Volume (Litres/Metre)*
4/0.1	1.25	0.8	2.9
	1.5	1.1	3.2
	2	2.0	3.8
6/0.15	1.25	0.8	5.9
	1.5	1.1	6.1
	2	2.0	6.7
8.25/0.21	1.5	1.1	11.2
	2	2.0	11.8
10.25/0.26	1.5	1.1	16.7
	2	2.0	17.3

* Litres to be removed per metre of standing water in the well (wetted length).

If the borehole annulus and well interior diameters match one of those listed above, to determine the volume of one well volume simply multiply the number in the last column of the table by the wetted length in the well. For example, if a 2-inch diameter well installed in a 8.25-inch diameter borehole has 2.2 metres of standing water, one well volume equals 26.0 litres (2.2 metres x 11.8 litres/metre).

Note that the above well volume calculations apply only to wells where the water level in the well is below the top of the sand pack. If the water level is above the top of the sand pack, then the well volume is the volume of water in the sand pack and well pipe within the sand pack interval, plus the volume of water in the well pipe (i.e., well pipe volume) above the top of the sand pack.

For example, assume a 2-inch diameter well has been installed in a 8.25-inch diameter borehole to a depth of 6.0 metres below ground surface (mbgs), with a 3.05 metre long screen. The sand pack extends from 6.0 mbgs to 2.5 mbgs and the water level is at 1.85 mbgs. One well volume equals ([6.0 metres – 2.5 metres] x 11.8 litres/metre) + ([2.5 metres – 1.85 metres] x 2.0 litres/metre) or 42.6 litres.

For British Columbia, Alberta and Saskatchewan projects, the well volume is calculated using the conversion factor listed in the third column of the above table. For example, if there are 2.5 metres of standing water in a 1.5-inch diameter well, one well volume equals 2.75 litres (2.5 metres x 1.1 litres/metre);

5. Lower the pump into the well until the pump intake is approximately 0.3 metres above the bottom of the well. Remove half a well volume while pumping at a rate of approximately 1 to 2 L/min. Measure the depth to water after the half a well volume is removed. Record the approximate purge volume, pump intake depth and any pertinent visual/olfactory observations (e.g., sheen, odour, free-phase product, sediment content, clarity, colour, etc.); and
6. Move the pump intake upward to the middle of the water column (or middle of the screened interval if the static water level in the well is above the top of the screen). Remove half a well volume (for a cumulative total of 1 well volume) or purge until dry while pumping at a rate of approximately 1 to 2 L/min, whichever occurs first. Measure the depth to water after the half a well volume is removed unless dry. Record the approximate purge volume, pump intake depth and any pertinent visual/olfactory observations. Note that if suction is broken (indicating that drawdown to the pump intake depth has occurred), move the pump intake to the bottom of the well and continue purging.

After completing Step 6, review the water level data to assess whether the well is a low yield or high yield well. If the well is purged dry or close to dryness, or significant drawdown has occurred, then the well is a low yield well. If little or no drawdown has occurred then the well is a high yield well. Some judgement will be required by field personnel when classifying the well yield if moderate drawdown has occurred during removal of the first well volume.

5.2.2 Well Development for High Yield Wells - Stage 2

The procedure for the second stage of developing a high yield monitoring well is as follows:

1. Move the pump intake upward to near the top of the screened interval (or near the top of the water column if the water level is currently below the top of the screen). Remove half a well volume (for a cumulative total of 1.5 well volumes) while pumping at the maximum practical rate that is greater than 2 L/min. Record the approximate purge volume, pump

intake depth and any pertinent visual/olfactory observations (e.g., sheen, odour, free-phase product, sediment content, clarity, colour, etc.);

2. Note that if the wetted length is short within a well (e.g., 1.5 metres or less), there will not be enough separation between pump intake depths to warrant pumping from three depths (i.e., near the bottom, middle and top of the water column). In this case, pumping from two depths (i.e., near the bottom and top of the water column) is sufficient;
3. Lower the pump intake until it is approximately 0.3 metres above the bottom of the well. Remove half a well volume (for a cumulative total of 2 well volumes) while pumping at the maximum practical rate that is greater than 2 L/min. Record the approximate purge volume, pump intake depth and any pertinent visual/olfactory observations;
4. Move the pump intake upward to the middle of the water column (or middle of the screened interval if the water level in the well is above the top of the screen). Remove half a well volume (for a cumulative total of 2.5 well volumes) while pumping at the maximum practical rate that is greater than 2 L/min. Record the approximate purge volume, pump intake depth and any pertinent visual/olfactory observations;
5. Move the pump intake upward to near the top of the screened interval (or near the top of the water column if the water level is currently below the top of the screen). Remove half a well volume (for a cumulative total of 3 well volumes) while pumping at the maximum practical rate that is greater than 2 L/min. Record the approximate purge volume, pump intake depth and any pertinent visual/olfactory observations;
6. If the purge water contains high sediment content after the removal of 3 well volumes, well development should continue by removing additional well volumes following the same procedure as above until the sediment content visibly decreases. If the purge water continues to have high sediment content after the removal of 2 additional well volumes (i.e., 5 well volumes in total), contact the Project Manager to discuss whether well development should continue. A cap of 10 well volumes removed is considered sufficient for high yield well development regardless of sediment content; and
7. Record the water level at the conclusion of well development.

Note that at the discretion of the Project Manager, when developing a monitoring well using an inertial pump, a surge block can be attached to the foot valve before completing Step 1 (i.e., the first time groundwater is pumped from near the top of the screened interval or water column) and then leaving it on the foot valve for the remainder of well development. A surge block is used to increase the turbulence created by pumping and enhance the removal of fine-grained material from the sand pack.

Note that the use of a bailer to develop a high yield well with a wetted interval greater than 2 metres is not recommended given that the depth from which groundwater is removed is difficult to control. However, a bailer can be used as a substitute for a surge block by raising and lowering it through the screened interval for approximately 5 to 10 minutes before the start of Step 1.

5.2.3 Well Development for Low Yield Wells - Stage 2

The procedure for the second stage of developing a low yield monitoring well is as follows:

1. Position the pump intake at the bottom of the well and purge the well to dryness if it was not purged to dryness during completion of Stage 1 at the maximum practical rate that is greater than 2 L/min. Allow sufficient time for the well to recover to at least 90% of the initial static water level or allow the well to recover for a period of time designated by the Project Manager; and
2. Repeat Step 1 until the well has been purged to dryness a minimum of 3 times. An exception to this is that if recovery is slow, and especially if sediment content is low, repeat purging (i.e., purging the well to dryness more than once) may not be necessary and the need for additional purging is to be discussed with the Project Manager. If the purge water contains high sediment content after purging to dryness 3 times, well development should continue by purging the well to dryness until the sediment content visibly decreases. If the purge water continues to have high sediment content after purging the well to dryness 2 additional times (i.e., purging the well to dryness 5 times in total), contact the Project Manager to discuss whether well development should continue. A cap of purging a well to dryness 10 times is considered sufficient for low yield well development regardless of sediment content.

As per the procedure for high yield well development, a surge block can be attached to the foot valve to increase the effectiveness of the pumping action. If a surge block is used, pumping should commence at the top of the water column in the well (instead of near the bottom of the well as described above) with the pump intake progressively lowered as the water level in the well decreases.

Note that bailers can be used in lieu of an inertial pump for the development of a low yield well. The turbulence created in a well by the act of dropping a bailer into it and then removing it full of groundwater can be effective in removing fine-grained material from the sand pack. If a bailer is left in a well, it should be “hung” above the water table to facilitate future water level monitoring.

5.2.4 Removal of Water Lost During Well Installation

When water has been used during well installation (e.g., for bedrock coring, to control heaving sands), the total volume of water required to be purged from a well during development will be equal to 3 times the estimated volume of water lost during drilling plus the volume of water that would normally be removed during well development.

For example, for a high yield well where 25 litres of water were lost during drilling and the well volume is 10 litres, the minimum amount of water to be purged during development is 105 litres (i.e., 3 times the volume of water lost during drilling [75 litres] plus a minimum of 3 well volumes [30 litres]).

For a low yield well, the well will need to be purged to dryness enough times to remove a volume equivalent to 3 times the volume of water lost during drilling plus the volume of water that would normally be removed during well development.

As an alternative to removing 3 times the volume of water lost during drilling, field parameter stabilization during well development can be used to assess whether sufficient water has been removed. For example, the conductivity of drill water (which is usually tap water) is typically much lower than groundwater, and conductivity measurements can act as a guide during development as to whether the water being removed is formation groundwater or drill water.

For assessing field parameter stability when developing a high yield well, field parameter measurements of pH, conductivity, temperature and oxidation-reduction potential are to be made after every half well volume is removed and stability is considered achieved if the field parameters are all within ±10% over 3 consecutive readings. Note that a minimum of 3 well volumes must be removed even if field parameter stabilization is achieved prior to the removal of 3 well volumes to comply with the minimum well purging requirements of this SOP (i.e., removal of a minimum of 3 well volumes from a high yield well).

For assessing field parameter stability when developing a low yield well, field parameter measurements of pH, conductivity, temperature and oxidation-reduction potential are to be made once each time a well is purged to dryness, approximately halfway through purging. For example, if based on the current water level it is estimated that 10 litres will be removed before a well is purged to dryness, the field parameters are to be measured after 5 litres have been removed. Stability is considered achieved if the field parameters are all within ±10% over 3 consecutive readings. After stabilization is achieved, continue to purge the well to dryness a final time at which point development is complete.

A second alternative would be to allow sufficient time for the drill water to dissipate into the formation. The appropriate amount of time will depend on the amount of water lost to the formation and the formation characteristics, but will be a minimum of one week. A Senior Project

Manager or Senior Technical Reviewer will be responsible for determining the suitability of this approach and the required length of time. At the discretion of the Senior Project Manager or Senior Technical Reviewer, field parameter measurements may be made during pre-sampling purging to assess whether the drill water has dissipated by the time of sampling.

Note that it can be difficult to estimate the amount of water lost during drilling. If the driller's water tank is accessible, measure the water levels in the water tank before and after drilling the well and then estimate the volume of water used during drilling using the water tank dimensions and subtract this volume from the volume of water recovered at the end of drilling from this volume to estimate the volume of water lost. If this is not possible, ask the driller to estimate the approximate volume of water lost during drilling.

For some well installations, determining even an approximate volume of water lost during drilling is not possible. In this situation, field parameter stabilization should be used as a guide in deciding how much water to remove during well development.

5.2.5 Development of Monitoring Wells Installed Using Air Rotary Drilling Methods

When developing a monitoring well installed using an air rotary drilling procedure, field parameter stabilization must be used to assess whether sufficient water has been removed and the field parameters measured must include dissolved oxygen. This is particularly important when the contaminants of concern at a site include volatile organic compounds (VOCs) as the use of compressed air during the drilling process can result in sparging of VOCs from the groundwater, resulting in groundwater samples that are biased low with respect to VOC concentrations.

The well development procedure is the same as described in Section 5.2.4, except that the field parameters measured are to include pH, conductivity, temperature, oxidation-reduction potential and dissolved oxygen. The criterion for determining field parameter stabilization for dissolved oxygen is ±10% over 3 consecutive readings or 3 consecutive readings with concentrations less than 0.5 milligrams per litre.

5.2.6 Assessing Field Parameter Stabilization

When determining whether field parameter stabilization has occurred over 3 consecutive readings (except for dissolved oxygen when using the less than 0.5 milligrams per litre over 3 consecutive readings criterion), the following procedure is to be followed:

1. For each parameter, use the first of the 3 readings and calculate 10% of this reading; and
2. The range that the next 2 readings must be within is ± 10% of the first reading.

For example, if the temperature of the first of 3 consecutive readings is 10º C, the next 2 readings must fall between 9 and 11 º C for temperature to be considered stable.

5.3 Well Development Record

Well development is to be documented through the completion in full of the following field forms located in the Pinchin Orchard:

- EDR-GW-Well Development-S1-Low/High Yield Well (completed for Stage 1 for both low and high yield wells);
- EDR-GW-Well Development-S2-Low Yield Well (completed for Stage 2 for low yield wells); and/or
- EDR-GW-Well Development-S2-High Yield Well (completed for Stage 2 for high yield wells).

Any deviations from this SOP along with the rationale for these deviations must be recorded on the EDR-GW-Well Development-S1-Low/High Yield Well form.

5.4 Additional Considerations for O. Reg. 153/04 Phase Two ESA Compliance

When developing a low yield well, the well must be purged to dryness a minimum of 3 times regardless of the recovery time unless reduced purging is authorized by the Qualified Person responsible for the Phase Two ESA.

6.0 TRAINING

The Practice Leader is responsible for identifying the training needs of EDR staff and ensuring that staff are trained and competent before undertaking work assignments.

All trained personnel are responsible for identifying coaching or re-training needs (if they are uncomfortable with work assignments that have been assigned).

The careful application of *Health & Safety Training* by each employee is an integral part of all activities and is assumed as part of this SOP.

7.0 MAINTENANCE OF SOP

1 Year.

8.0 REFERENCES

Association of Professional Geoscientists of Ontario, "*Guidance for Environmental Site Assessments under Ontario Regulation 153/04 (as amended)*", April 2011.

9.0 APPENDICES

None.

SOP – EDR019 – REV004 – SOIL SAMPLE LOGGING

Title:	Soil Sample Logging
Practice:	EDR
First Effective Date:	August 03, 2013
Version:	004
Version Date:	January 3, 2018
Author:	Francesco Gagliardi and Robert MacKenzie
Authorized by:	Robert MacKenzie
Signature:	

TABLE OF CONTENTS

1.0 VERSION HISTORY

Version	Date	Summary of Changes	Author
Original	November 26, 2010	N/A	FG
001	October 31, 2013	Streamlined SOP to focus only on soil sample logging/Added O. Reg. 153/04 compliance section	RLM
002	April 29, 2016	Updated Section 4.0	RLM
003	April 28, 2017	Removed reference to Pinchin West	RLM
004	January 3, 2018	Modified percentages of minor constituents in Section 5.1.3/Clarified when geotechnical terms can be used for soil logging in Section 5.2	RLM

2.0 SCOPE AND APPLICATION

This Standard Operating Procedure (SOP) presents the methods used to describe the physical characteristics of soil samples collected during site investigations.

The methods and equipment used for retrieving soil samples are provided in other SOPs (e.g., SOP-EDR007 – Borehole Drilling) and will not be repeated herein.

3.0 OVERVIEW

Not applicable.

4.0 DISTRIBUTION

This is an on-line document. Paper copies are valid only on the day they are printed. Refer to the author if you are in any doubt about the accuracy of this document.

This SOP will be distributed to all Pinchin staff and others as follows:

- Posted to the SOP section of the Environmental Due Diligence and Remediation (EDR) Practice Line on the Pinchin Orchard; and
- Distributed to senior staff at Le Groupe Gesfor Poirier and Pinchin LeBlanc for distribution as appropriate.

5.0 PROCEDURE

5.1 General Procedures

For each soil sample collected during a site investigation, the following information is to be recorded in the field log book or field forms in the order presented below:

- Depth;
- Primary soil texture;
- Colour;
- Minor constituents*;
- Noticeable odours;
- Noticeable staining;
- Noticeable free-phase product/sheen*; and
- Moisture content.

*These constituents only need to be noted if they are actually present in the sample.

5.1.1 Primary Soil Texture

The primary soil texture should be determined using the attached flow chart as a guide to help classify the soil.

5.1.2 Colour

Describe the primary colour of the soil sample (e.g., brown, grey, black, green, white, yellow, red). The relative lightness or darkness of the primary colour can be described using the adjectives “light” or “dark” as appropriate. Soil that exhibits different shades or tints is to be described by using two colours (e.g., brown-grey). If the soil sample contains spots of a different colour, this is to be described as “mottling” (e.g., grey with green mottling).

5.1.3 Minor Constituents

Note the presence of minor constituents in the soil that are “natural” materials (e.g., gravel, cobbles, sand, oxidation, etc.) or “man-made” materials (e.g., asphalt, brick, concrete, coal or glass fragments, coal ash, etc.). Gravel comprises particles between 5 millimetres (mm) and 75 mm in diameter. Cobbles comprise particles greater than 75 mm in diameter (approximately the size of a man’s fist) and boulders are particles greater than 150 mm in diameter (approximately the size of man’s head).

When the percentage of the minor constituents in the soil is between approximately 1 and 10%, the adjective used to describe the relative amount of the minor constituent is “trace” (e.g., silty sand with trace brick fragments).

When the percentage of minor constituents of soil is between approximately 10 and 20%, the adjective used to describe the relative amount of the minor constituent is “some” (e.g., silty sand with some concrete fragments).

When the percentage of the “natural” minor soil constituents is between approximately 20 and 35%, the minor soil type is described by adding a ‘y’ or ‘ey’ to the soil type (e.g., silty, sandy, clayey).

When the percentage of the “natural” minor soil constituents is also greater than 35%, the minor soil type is described by using “and” the soil type (e.g., sand and gravel, sand and silt).

When the percentage of the “man-made” minor soil constituents is between approximately 30 and 50%, describe the soil as per the normal procedure and add “with” the minor constituent type(s) (e.g., silty sand with coal ash and brick fragments).

5.1.4 Noticeable Odours

Field staff are not expected to directly smell soil samples to assess the presence/absence of odours.

If it is possible to identify the likely type of odour then this information should be recorded along with a comment on the severity of the odour (e.g., slight, strong, etc.). Identification of specific chemical compounds, such as petroleum hydrocarbons (PHCs) or solvents is acceptable; however, this identification should be referenced as “xxxx-like” (e.g., PHC-like, solvent-like, etc.). This principle also applies when describing staining and free-phase product.

If the odour cannot be readily identified, it should be described in the field notes as “unidentified odour”. If no noticeable odours are observed, this needs to be recorded in the field notes as “no odour”.

5.1.5 Noticeable Staining

Describe the colour and possible source of the staining (e.g., black PHC-like staining).

If no noticeable staining is observed, this needs to be recorded in the field notes as “no staining”.

5.1.6 Noticeable Free-Phase Product/Sheen

Describe the colour, odour, possible composition and relative viscosity (if sufficient product is present to assess) of the product (e.g., dark brown, viscous, motor oil-like product). Identification of the composition of the product is acceptable but needs to be described as PHC-like, motor oil-like. Alternatively, the product can be described as “resembling” a substance (e.g., “resembling motor oil”).

The presence of any observed iridescent sheen is to be recorded in the field notes. Note that the presence of an iridescent sheen by itself in the soil does not constitute the presence of free-phase product but may be an indicator that free-phase product is present within the vicinity of the borehole.

5.1.7 Moisture Content

Describe the moisture content of the soil sample using one of the following three terms:

- Dry – no visible evidence of water and the soil is dry to the touch;
- Moist – visible evidence of water but the soil is relatively dry to the touch. Do not use the term “damp” to describe this type of soil; and
- Wet – visible evidence of water and the soil is wet to the touch. Free water is evident when sandy soil is squeezed. Do not use the term “saturated” to describe this type of soil.

5.1.8 Recording Soil Sample Descriptions in Field Notes

Recording the information in the field notes consistently in the above order will make it easier to prepare the borehole logs for the site investigation report.

Example soil sample descriptions are as follows:

- Sand, grey, trace gravel, PHC-like odours, free-phase PHC-like product, wet;
- Silty sand, brownish-grey, some gravel, trace asphalt and brick fragments, no odours or staining, moist; and
- Silty clay, brown, trace gravel, no odours or staining, moist to wet at 2.4 mbgs.

5.2 General Considerations

Where any physical properties change within a soil sample, the depth at which this transition takes place needs to be recorded. For example, for a soil sample collected from 1.8 to 2.4 metres below ground surface (mbgs), if the upper 0.3 metres has no odours but PHC-like odours are present below this depth then the field notes need to state “no odours from 1.8 to 2.1 mbgs, PHC-like odours from 2.1 to 2.4 mbgs”.

Some soil samples will contain a thin seam of a different soil type, such as a sand seam within a silty clay. The depth interval of any such seam is to be recorded in the field notes, and the material comprising the seam should be described separately using the logging procedure outlined above.

Unless soil sampling is being completed as part of a combined environmental/geotechnical investigation and EDR staff logging the soil samples have the appropriate geotechnical training, avoid the use of geotechnical terms (e.g., stiff, dense, high plasticity, etc.) when logging soil samples. If any geotechnical terms are inadvertently included in the field notes by staff who have not had geotechnical training, they must not be included in the borehole logs provided in our report.

5.3 Additional Considerations for Ontario Regulation 153/04 Phase Two ESA Compliance

None. Following this SOP will be sufficient to comply with the Ontario Regulation 153/04 requirements for Phase Two ESAs with respect to field logging. Risk assessments completed in accordance with Ontario Regulation 153/04 will typically require soil samples to be submitted to a laboratory for full soil texture analysis, but this is beyond the scope of field logging.

6.0 TRAINING

The Practice Leader is responsible for identifying the training needs of EDR staff and ensuring that staff are trained and competent before undertaking work assignments.

All trained personnel are responsible for identifying coaching or re-training needs (if they are uncomfortable with work assignments that have been assigned).

The careful application of *Health & Safety Training* by each employee is an integral part of all activities and is assumed as part of this SOP.

7.0 MAINTENANCE OF SOP

1 Year.

8.0 REFERENCES

American Society for Testing and Materials, *ASTM D2487-11 - Standard Practice for Classification of Soils for Engineering Purposes (United Soil Classification System)*, 2011.

Association of Professional Geoscientists of Ontario, *Guidance for Environmental Site Assessments under Ontario Regulation 153/04 (as amended)*, April 2011.

9.0 APPENDICES

Appendix 1	Soil Texture by Feel Chart

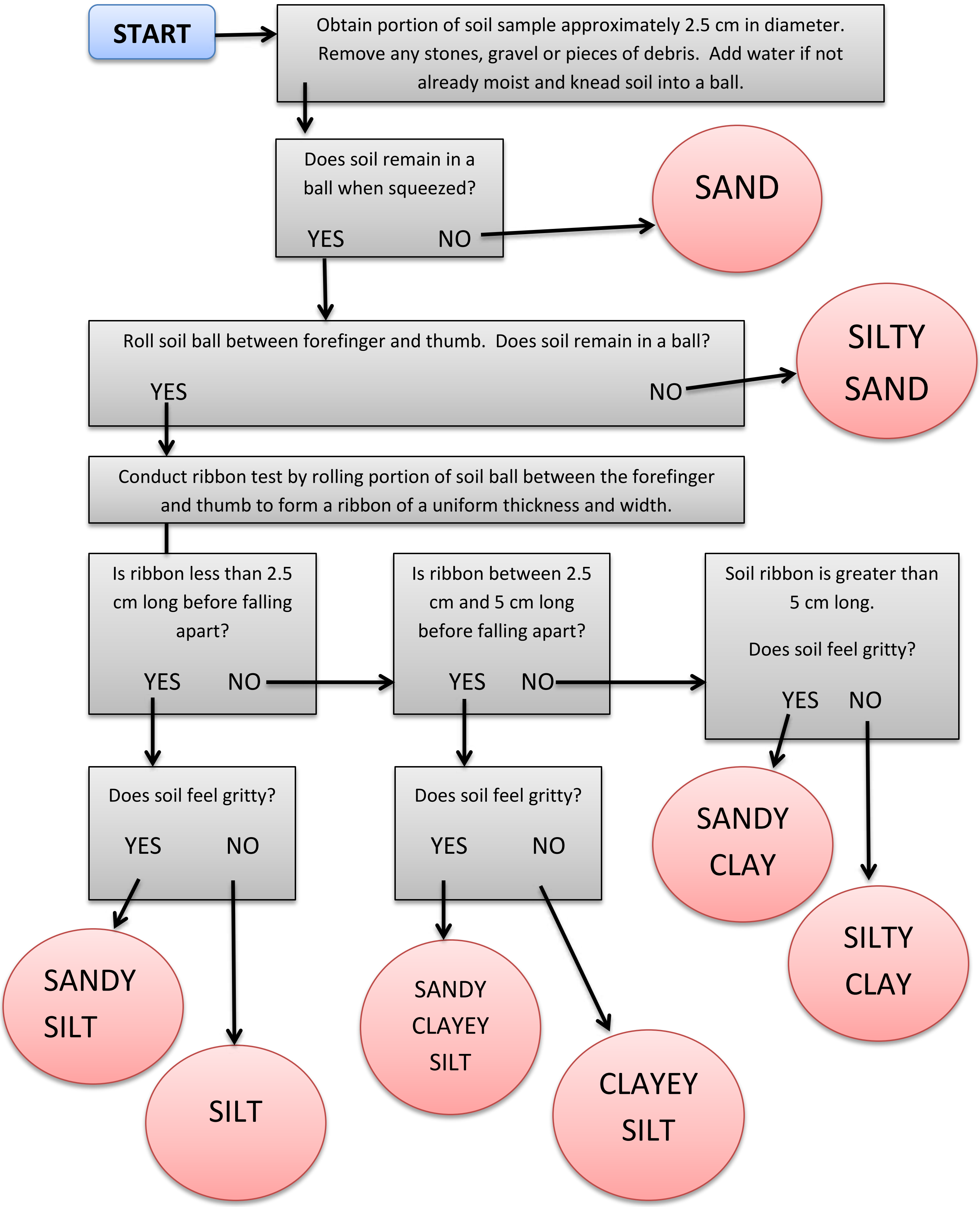
I:\2018 SOP Updates\SOP - EDR019 - REV004 - Soil Sampling Logging.docx

Template: Master SOP Template – February 2014

APPENDIX I

Soil Texture by Feel Chart

Key to Soil Texture by Feel



SOP – EDR023 – REV006 – LOW FLOW GROUNDWATER SAMPLING

Title:	Low Flow Groundwater Sampling
Practice:	EDR
First Effective Date:	July 08, 2011
Version:	006
Version Date:	January 3, 2018
Author:	Paresh Patel and Robert MacKenzie
Authorized by:	Robert MacKenzie
Signature:	

TABLE OF CONTENTS

1.0 VERSION HISTORY

Version	Date	Summary of Changes	Author
Original	July 08, 2011	N/A	PDP
001	April 15, 2013	Streamlined background section/Provided step-by-step summary of field procedure/Added O. Reg. 153/04 compliance items	RLM
002	September 11, 2013	Added centrifugal submersible pump to list of pumps suitable for low flow sampling	RLM
003	January 26, 2015	Adjusted well development, sampling and field parameter measurement procedures to reflect Pinchin West practices.	RLM
004	April 29, 2016	Updated Section 4.0/Updated Section 5.3 to reflect current field documentation requirements and new document retention policy	RLM
005	April 28, 2017	Removed reference to Pinchin West/In Section 5.2, removed the requirement to complete a post-sampling water level and total purge volume, and added requirement to record pump intake depth at the time of sampling	RLM
006	January 3, 2018	Minor wording changes throughout	RLM

2.0 SCOPE AND APPLICATION

This Standard Operating Procedure (SOP) describes the standard procedures for collecting groundwater samples from monitoring wells using low flow (low stress) sampling techniques and provides a description of the equipment required and field procedures.

Low flow sampling provides an alternative to the conventional groundwater purge and sampling technique using inertial pumps, submersible pumps and/or bailers, and emphasizes the need to minimize hydraulic stress at the well-aquifer interface by maintaining low water level drawdown, and by using low pumping rates during purging and sampling. Rather than removing a specified number of well volumes or purging a well to dryness a specified number of times prior to sampling, purging is completed at a low pumping rate until first, a stable water level is achieved, and second, field parameters such as pH, temperature, dissolved oxygen (DO), oxidation-reduction potential (ORP), specific conductance and turbidity, which are monitored during purging, have stabilized indicating that representative formation groundwater is being purged. It is important that water level and field parameter stabilization are achieved prior to groundwater sampling as this indicates that fresh formation water is being purged and not stagnant groundwater from within the well itself.

Low flow groundwater sampling methods work best for moderate to high yield wells (i.e., wells installed in permeable soils such as sand, silty sand and some silts). For low yield wells (e.g., wells installed in silty clay), low flow groundwater sampling may not be suitable and alternate purging and sampling procedures will be required (see SOP-EDR008 for low yield well sampling procedures).

Conventional sampling can result in sediment entrainment in samples which can result in “positive bias” (i.e., reported concentrations greater than actual groundwater concentrations). This is particularly an issue with petroleum hydrocarbons (PHCs) in the F3 and F4 fraction ranges and polycyclic aromatic hydrocarbons (PAHs) and low flow sampling as per this SOP is strongly recommended when sampling for these parameters unless the hybrid sampling method described in SOP-EDR008 is employed.

This SOP is based primarily on the procedures described in the United States Environmental Protection Agency Region 1 document *“Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells”*, revised January 19, 2010.

3.0 OVERVIEW

The low flow sampling technique can be implemented for any size of monitoring well that can accommodate a positive lift pump or tubing assembly. Note that low flow sampling can be conducted for bedrock monitoring wells without well screens (i.e., with an open interval below the well casing) but for simplicity the screen interval or open interval will be referred to collectively in this SOP as the “screen interval”.

Advantages of the low flow sampling technique over conventional groundwater sampling techniques include:

- Minimal disturbance at the sampling point, reducing the potential for sediment to be entrained during the purging process which can result in positive bias (elevated and unrepresentative concentrations) of parameters such as heavy fraction range PHCs and PAHs;
- Reduced operator variability resulting in greater operator control;
- Reduced purge water volumes resulting in reduced investigation derived waste disposal costs; and
- Improved sample consistency resulting in more representative (unbiased) and reproducible sample results.

Disadvantages of the low flow sampling technique over conventional groundwater sampling techniques include:

- Purging and sampling typically requires more time than conventional sampling methods;
- Use of non-dedicated equipment (e.g., submersible pumps) that requires cleaning before initial use and between monitoring well locations; and
- Overall project costs for low flow groundwater sampling programs are typically higher than groundwater sampling programs completed using conventional sampling methods.

It is imperative that the monitoring wells to be sampled are properly developed prior to conducting low flow groundwater sampling. This often includes redevelopment of previously installed wells that have not been sampled for a prolonged period of time (i.e., more than one year). During well development or redevelopment, the hydraulic characteristics of each well should be assessed to provide guidance on the suitability of using the low flow groundwater sampling procedure. Well development procedures are provided in SOP-EDR017.

When groundwater conditions are known, sample the background monitoring wells (i.e., outside of the impacted groundwater area) and wells with low concentrations of contaminants of concern first prior to sampling wells with known impacts. Leave impacted wells to the last to minimize the potential for cross contamination.

In Ontario and Manitoba, or where otherwise specified by provincial guidance documents, a peristaltic pump is not to be used for the collection of groundwater samples for analysis of volatile parameters (i.e., volatile organic compounds (VOCs) and PHCs F1 Fraction). When sampling for volatile parameters using low flow groundwater sampling methods, a bladder pump or centrifugal pump (collectively referred to herein as “submersible pumps”) must be used. A “hybrid” groundwater purging and sampling procedure using a peristaltic pump to undertake low flow groundwater sampling for non-volatile parameters as described in this SOP followed by conventional purging and sampling methods for volatile parameters is an acceptable alternative to using a bladder pump or centrifugal pump.

Peristaltic pumps cannot be used where the suction lift (i.e., vertical distance between the pump and ground level) is more than 8.5 metres (28 feet).

It is very important to maintain consistency in applying low flow groundwater sampling procedures to purging and sampling for each monitoring well and for each sampling event. Any deviation from the field procedures described in this SOP can induce variability in the analytical results.

Our primary objective is to obtain unbiased groundwater samples whose analytical results are representative of actual groundwater quality at the property being investigated.

4.0 DISTRIBUTION

This is an on-line document. Paper copies are valid only on the day they are printed. Refer to the author if you are in any doubt about the accuracy of this document.

This SOP will be distributed to all Pinchin staff and others as follows:

- Posted to the SOP section of the Environmental Due Diligence and Remediation (EDR) Practice Line on the Pinchin Orchard; and
- Distributed to senior staff at Le Groupe Gesfor Poirier and Pinchin LeBlanc for distribution as appropriate.

5.0 PROCEDURE

5.1 Equipment and Supplies

5.1.1 Documents and Information Gathering

The following documents and information are required to complete low flow groundwater sampling:

- A copy of the proposal or work plan;
- Monitoring well construction details;
- A copy of this SOP;
- Field data from the last sampling event (if available);
- Operation, maintenance and calibration manuals for the multi-parameter water quality meter;
- A site-specific Health and Safety Plan (as per the project requirements); and
- Client or site representative's contact details.

5.1.2 Extraction Devices and Tubing

This SOP will not discuss in detail the various pumps and tubing options that are available for completing low flow groundwater sampling. The following section provides some general guidelines for the use of this equipment and it is recommended that the equipment supplier be consulted when selecting the appropriate pump and tubing, taking into account site-specific parameters (e.g., well depth, well diameter, site accessibility) and the parameters that will be sampled.

5.1.3 Extraction Devices

For purging and sampling using the low flow sampling procedure, submersible pumps (e.g., centrifugal, bladder) and peristaltic pumps are the most commonly used extraction devices. Regardless of the type of extraction device used, the low flow sampling procedure requires precise control over the flow rate during purging and sample collection. A battery-operated pump controller is required to operate submersible pumps and to control the extraction flow rate. Peristaltic pumps have built-in flow rate adjusters.

Submersible pumps with internal parts constructed of stainless-steel or Teflon are preferred. If the internal parts are constructed of other materials, adequate information must be provided by the equipment supplier to show that the substituted materials do not leach contaminants nor cause interference to the analytical procedures to be used. The use of any such substituted materials must be approved by the Project Manager prior to the field program.

If a bladder pump is selected for the collection of samples for volatile parameters analysis, it should be capable of delivering a water volume sufficient to fill a VOC sample vial in one pulse.

5.1.4 Tubing

Teflon, Teflon-lined polyethylene or polyethylene 1/4-inch interior diameter (ID) or 3/8-inch ID tubing is to be used to connect to the pump and the flow-through cell. In the winter time, the use of 3/8-inch ID tubing is recommended to avoid groundwater freezing in the tubing during severe cold weather conditions.

If the tubing is constructed of other materials (other than mentioned above), adequate information must be provided to show that the substitute materials do not leach contaminants nor cause interference with the analytical procedures. The use of any such substituted materials must be approved by the Project Manager prior to the field program.

Direct sunlight and hot ambient air temperatures may cause groundwater in the tubing to heat up and de-gas resulting in loss of volatile parameters. When sampling under these conditions, the length of the tubing between the top of the monitoring well and the flow-through cell should be kept as short as possible to minimize exposure to sunlight or ambient air and heating of the groundwater.

5.1.5 Groundwater Monitoring, Purging and Sampling

The following equipment is required to complete the low flow purging and sampling procedure described in this SOP:

- Well keys;
- Interface probe;
- Assorted tools (e.g., knife, screwdriver, etc.);
- Equipment cleaning reagents required as per SOP-EDR009 (e.g., distilled water, phosphate-free detergent, etc.);
- Multi-parameter water quality meter (including calibration solutions);
- Graduated cylinder, graduated measuring cup or graduated bucket;
- Stopwatch;

- Flow-through cell;
- Peristaltic pump, centrifugal pump or bladder pump;
- Tubing;
- Pails or drums for storing purge water;
- Paper towels or wipes;
- Calculator;
- Field forms (see Section 5.3) and/or field notebook (hereafter the “field notes”);
- Waterproof and permanent markers;
- Disposable gloves and appropriate personal protective equipment based on site-specific conditions;
- Cooler and ice packs;
- Sample bottles and labels. Several extra sample bottles of each type should be available in case of breakage or other problems; and
- Laboratory Chain of Custody forms.

The following equipment may be used during well sampling, in addition to the above:

- Disposable field filtration units/filters (if appropriate).

5.2 Low Flow Groundwater Sampling Procedures

The following is the summary of the procedures to be followed for low flow groundwater sampling:

1. Develop the monitoring wells to be sampled (if required) prior to sampling by removing between three and five well volumes or by purging them to dryness between one and three times. Further details regarding well development are provided in SOP-EDR017. Well development is to be completed for all newly installed wells prior to low flow sampling and may be required for previously installed monitoring wells that have not been sampled in more than one year. Ideally, well development should occur at least one day prior to low flow sampling. At the discretion of the Project Manager, low flow sampling can occur on the same day as the well is developed but the well must be allowed to fully recover to its original static level prior to the start of purging;
2. Decontaminate all non-dedicated monitoring and sampling equipment that will be used, including the interface probe, submersible pump (if used), water quality meter probes and flow-through cell in accordance with the procedures described in SOP-EDR009;

3. Calibrate the water quality meter used for field parameter measurement in accordance with the manufacturer's specifications. Wherever possible, arrange for the equipment rental company to calibrate the water quality meter and provide a calibration sheet that contains information such as calibration date and calibration measurements for each parameter. If the water quality meter is to be used for more than a one day, a calibration check shall be performed using standard calibration solutions at the start of each day at a minimum. If the calibration check shows deviations from the standard values that exceed the ranges provided in bullet 10 below, the instrument shall be calibrated prior to further use. A calibration check should also be performed during the course of purging and sampling if the parameter measurements suggest that calibration drift has occurred. Document all calibration activities in the field notes, including date and time of calibration/calibration check, calibration solutions used, probe readings and make, model and serial number of the water quality meter. Note that if the water quality meter manufacturer recommends more frequent calibration/calibration checks than specified above, the manufacturer's recommendations are to be followed. See SOP-EDR016 for additional procedures regarding water quality meter calibration.

   Extra care must be taken when calibrating the multi-parameter probe to prevent cross-contamination. Specifically, following immersion of the probes into each calibration standard, all probes should be thoroughly rinsed in distilled or de-ionized water and the excess water shaken off or blotted dry with a lint-free wipe. Conductivity standards are much more sensitive to cross contamination/dilution than other standards. Besides being easily diluted, conductivity standards also affect other parameters (specifically DO), and the conductivity probe should always be the first probe calibrated. The following order for calibration of a multi-parameter probe is to be followed:

   - Specific Conductance;
   - pH;
   - DO;
   - Turbidity; and
   - All other parameters (there is no recommended order for these parameters).

4. Review the well construction details provided in the well development forms, borehole logs or well construction summary table from a previous report. Determine the well depth, well stick up, length of the screen interval, and depth to the top of the screen interval. If the well depth is unavailable, measure it with the interface probe;

Measure the initial water level (i.e., static water level) from the reference point on the well (which should be marked at the top of the well casing) with an interface probe. If measurable free-phase product is present in the well, discuss this with the Project Manager before proceeding further. Using the known well depth, confirm that at least 0.6 metres of water is present within the well. If less than 0.6 metres of water is present, low flow sampling may not be appropriate and the Project Manager is to be contacted before proceeding further;

5. Following decontamination, slowly install the pump or tubing (for peristaltic pumps) to the appropriate depth within the well. Do not connect the pump discharge tubing to the flow-through cell at this time. If the water level in the well is above the top of the screen interval, the pump or tubing intake depth will be the mid-point of the screen interval. If the water level is below the top of the screen interval, the pump or tubing intake will be set at the mid-point of the wetted interval (i.e., the distance between the static water level and the bottom of the well) or 0.6 metres from the bottom of the well, whichever is a greater distance from the bottom of the well. Pumping from within 0.6 metres of the bottom of the well has a higher potential to entrain sediment from the bottom of the well and is not to be completed unless authorized by the Project Manager.

   The pump intake depth may vary from that described above at the discretion of the Project Manager depending on the specific purpose of the groundwater sampling program. For example, if chlorinated solvents that are denser than water are being assessed, it may be desirable to position the pump intake as close to the bottom of the well as possible, or if PHC-related parameters which are lighter than water are being assessed, it may be preferable to position the pump intake as close to the water table as possible. Pump intake depth should be confirmed with the Project Manager prior to the field program;

6. Turn on the pump and discharge groundwater into a purge bucket. Purge initially at a flow rate of approximately 250 millilitres/minute (mL/min). Increase or decrease the flow rate until the water level in the well reaches a steady state condition (i.e., a stabilized water level). The goal is to purge at as high a pumping rate as the well will sustain and still maintain a stabilized water level; however, purging rates should not exceed 500 mL/min during purging and sampling. Also, it is important that during the early phase of purging, emphasis should be put on minimizing pumping stress (i.e., rapid fluctuations in pumping rates).

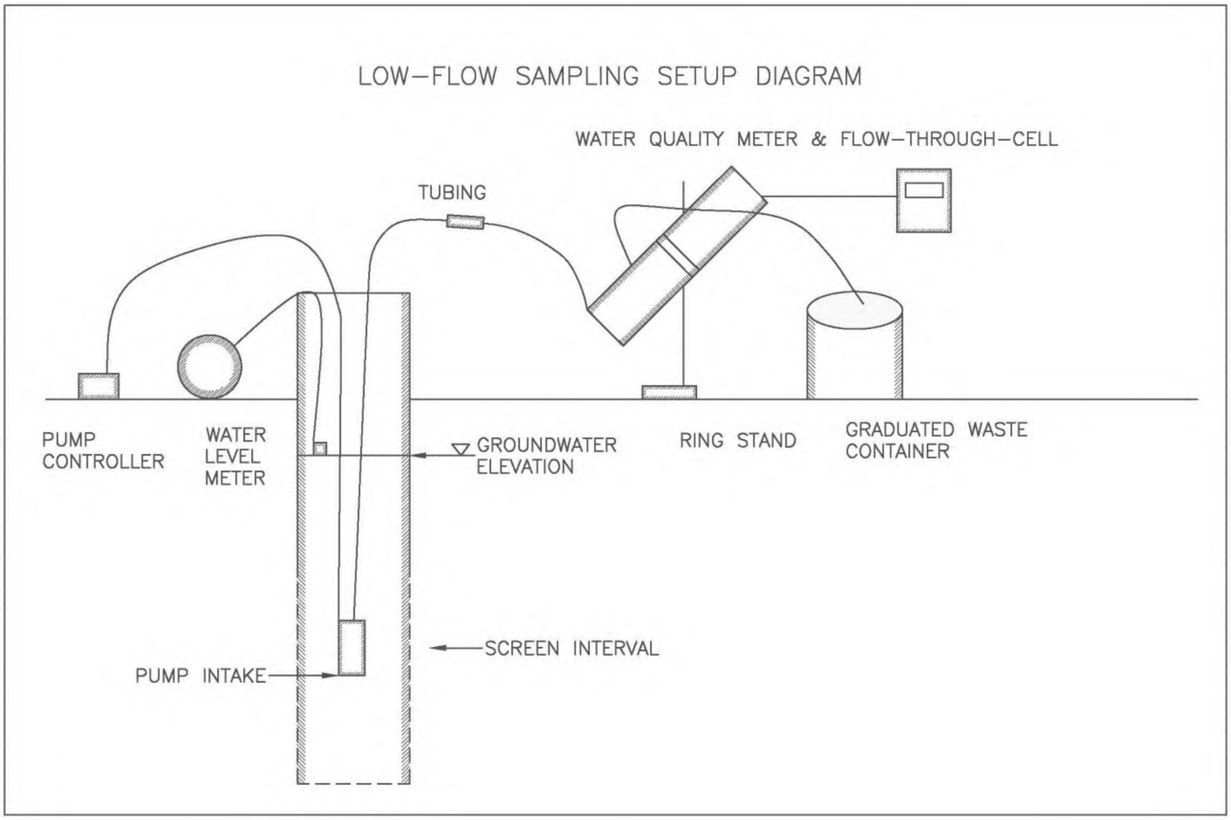
Whenever possible, purge at a pumping rate low enough to keep the total drawdown in the well to less than 10 centimetres although this may not be achievable for low to moderate yield wells. Once a steady state condition is achieved, the purge rate must be maintained constant and should not be changed. Determine the flow rate using a graduated bucket, graduated measuring cup or graduated cylinder and a stop watch. If the well is purged dry even after reducing the flow rate to the minimum practical purging rate of approximately 50 mL/min to 100 mL/min, then low flow sampling procedures will not work for the well and the sampling procedure described in SOP-EDR008 for sampling low yield wells is to be followed. During purging and sampling, it is important to keep the pump intake below the water level in the well at all times to avoid aeration of the groundwater;

7. If the visual appearance of the groundwater is highly turbid once a stabilized water level is achieved, continue to discharge purged water directly into the purge bucket until the groundwater clears, as highly turbid groundwater may foul the flow-through cell. Once the turbidity clears up, connect the flow-through cell to the pump discharge tubing. If the groundwater remains highly turbid after approximately 15 minutes of purging, contact the Project Manager to discuss whether sampling should occur. Further well development may be required to remove excess sediment from the monitoring well before sampling can proceed;
8. Confirm the volume of the flow-through cell excluding the volume of the water quality meter probes. If this information is not readily available, fill the cell with water with the water quality probes inserted and empty its contents into a graduated cylinder or measuring cup to determine the volume. After connecting the discharge tubing to the flow-through cell, continue purging until the flow-through cell is full and turn on the multi-parameter meter. Record the initial field parameter readings in the field notes. At a minimum, the field parameters that are to be monitored are pH, specific conductance, temperature, DO and ORP. The monitoring of turbidity is also a minimum requirement in Ontario and Manitoba. Field parameter readings are to be obtained at a frequency of no less than once every 5 minutes. Obtaining field parameter readings at a spacing of greater than 5 minutes apart may be required if the volume of the flow-through cell is large or pumping occurs at a low rate (e.g., 50 or 100 mL/min). For example, if the flow-through cell has a volume of 300 mL and the pumping rate is 50 mL/min, it will take 6 minutes for the volume of water equivalent to the flow-through cell volume to pass through the cell and field parameter readings should be taken 6 minutes apart. If the pumping rate for the same flow-through cell is 100 mL/min, although it will take only 3

minutes for the volume of water equivalent to the flow-through cell volume to pass through the cell, field parameter readings are to be taken at 5 minute intervals.

Figure 1 shows a typical low flow groundwater sampling set up using a submersible pump. The set up when using a peristaltic pump is similar except that the only part of the extraction system in the well is tubing that is connected to the peristaltic pump at the ground surface (i.e., there is no pump mechanism within the well), and a second section of tubing connects the discharge of the peristaltic pump to the flow-through cell.

Figure 1: Low Flow Sampling Set Up Diagram



Reference: USEPA Region I EQASOP-GW 001, July 30, 1996, Revised January 19, 2010.

Air bubbles in the flow-through cell can result in inaccurate field parameter measurements, in particular for DO. If air bubbles appear in the flow-through cell, check that the discharge tubing is properly connected to the flow-through cell and check that the pump intake is located below the water table by confirming the pump intake depth and checking the water level in the well. If air bubbles persist in the flow-through cell, position the flow-through cell at a 45-degree angle with the ports facing upwards. This configuration should keep any gas bubbles entering the cell away from the multimeter probes and allow the air bubbles to exit the cell easily;

9. Regardless of the frequency of field parameter readings, purging is to be completed until field parameter stabilization is achieved, which occurs when the field parameter measurements for <u>all</u> of the parameters are within the following ranges for <u>three consecutive</u> sets of readings:

pH	±0.1 pH units
Specific Conductance	±3%
Temperature	±3%
DO	±10% for values greater than 0.5 milligrams per litres (mg/L), or three consecutive values less than 0.5 mg/L
ORP	±10 millivolts
Turbidity	±10% for values greater than 5 Nephelometric Turbidity Units (NTUs), or three consecutive values less than 5 NTU

10. Check the water level in the well during purging a minimum of once every 10 minutes to confirm that steady state conditions are being maintained. Although not mandatory, more frequent water level measurements can be made (e.g., at the time of each set of water quality parameters). Reduce the pumping rate if the water level measurements indicate that drawdown is occurring. Confirm the new pumping rate as per Step 7 and record it in the field notes;
11. Record the time of all water level and field parameter measurements in the field notes;
12. Should field parameter stabilization not occur within one hour of the start of purging, contact the Project Manager to discuss whether to continue purging to attempt to achieve field parameter stabilization or whether to proceed with groundwater sample collection. The Project Manager will consider the total volume of water purged to this point and may

deem it suitable to collect the groundwater sample if, for example, three or more well volumes in total have been purged despite the lack of field parameter stability. Note that achieving stabilization of some parameters is more important with respect to certain contaminant types. For example, the stabilization of DO readings is important for volatile parameter sampling because fluctuations in DO concentrations may indicate that the groundwater is being aerated during the purging process which could result in volatile loss from the groundwater samples;

13. Following field parameter stabilization, disconnect the tubing from the flow-through cell and collect the groundwater samples by filling the appropriate laboratory-supplied sample containers directly from the discharge tubing. Note that it is important not to sample groundwater that has passed through the flow-through cell. If pumping at a moderate to high pumping (i.e., > 200 mL/min), the pumping rate should be reduced to prevent overfilling or the splashing of preservatives out of the sample containers. The order of sample collection should be most volatile parameters to least volatile parameters as follows:

    - VOCs and PHCs F1 Fraction;
    - PHCs F2-F4 Fraction;
    - PAHs and Base/Neutral/Acid Extractables;
    - Metals and Inorganics; and
    - Polychlorinated Biphenyls and Organochlorine Pesticides.

    Special Notes for Volatile Parameter Sampling

    When collecting samples for volatile parameter analysis (i.e., VOCs and PHCs F1 Fraction), the tubing must be filled completely and must not contain air bubbles prior to sample collection. If this is observed, increase the pumping rate slightly prior to sample collection until the tubing is filled and/or there are no longer any air bubbles, and then collect the sample. When collecting the groundwater samples for volatile parameter analysis, the sample vials should be tilted to avoid agitation and bubbling to minimize the potential for volatilization.

    Special Notes for Metals Sampling

    Groundwater samples collected for metals analysis will require filtering prior to preservation if dissolved metals concentrations are sought. Depending on the type and diameter of the discharge tubing used, in-line filters can be used for field filtering. Disposable filtration kits (e.g., Nalgene 0.45 micron filters) can also be used for field filtering. When collecting samples in containers that are pre-charged with preservatives, care must be taken not to overfill the containers as some of the preservative may be lost which will result in the sample not being properly preserved. Also, sample containers for metals analysis typically have a fill line marked on the container and the container must not be filled to above this line as this will cause dilution of the preservative and the sample may not be properly preserved.

If field filtering cannot be completed, then the groundwater samples are to be collected in sample containers that do not contain preservatives, and the analytical laboratory is to be instructed to filter and preserve the samples immediately upon receipt. The procedure and necessary equipment required to filter and preserve metals samples using the low flow methods should be discussed with the Project Manager prior to mobilization to the field; and

14. Record the pump intake depth at the time of sample collection. Remove the pump and/or tubing from the well and decontaminate the sampling equipment.

5.3 Fieldwork Records

The purging and sampling of a monitoring well using the low flow groundwater sampling procedure described in this SOP are to be documented through the completion in full of the following field forms located in the Pinchin Orchard:

- EDR-GW-Low Flow Sampling; and
- EDR-GW-Water Quality Parameters.

Any deviations from this SOP along with the rationale for these deviations must be recorded on the forms.

Upon completion of the sampling event, the field notes must be submitted to the Project Manager for review. The field notes must also be scanned and a copy of the scan placed in the project folder on the server.

5.4 Additional Considerations for O. Reg. 153/04 Phase Two ESA Compliance

When completing a Phase Two Environmental Assessment (ESA) in accordance with Ontario Regulation 153/04, the following must be undertaken:

- Calibration checks <u>must</u> be made for the water quality meter used for field parameter measurements at the frequency specified in Step 3 of Section 5.2. Records of the calibration checks must be kept and appended to the Phase Two ESA report;

- At least one field duplicate groundwater sample must be collected for every ten samples submitted for analysis. The frequency is one for one to 10 samples, two for 11 to 20 samples, etc. for all parameters analyzed. For example, even if only one groundwater sample is collected for PAHs analysis, a duplicate of this sample must be collected; and
- When sampling for VOCs, one trip blank sample must be submitted to the laboratory for VOCs analysis for each submission to the laboratory. In other words, if a groundwater sampling program lasts three days and samples are submitted to the laboratory at the end of each day, there must be a total of three trip blanks submitted with the samples (i.e., one per day of sampling). Note that analysis of trip blank samples for other volatile parameters (e.g., PHCs (F1 Fraction)) is not mandatory but can be completed at the discretion of the Qualified Person.

In addition, low flow groundwater sampling using a bladder pump or centrifugal pump should be completed whenever well yields are high enough to permit it for all Phase Two ESAs undertaken to support the filing of a Record of Site Condition. This will minimize potential issues the Ministry of the Environment and Climate Change may have regarding the representativeness of the groundwater analytical data.

6.0 TRAINING

The Practice Leader is responsible for identifying the training needs of EDR staff and ensuring that staff are trained and competent before undertaking work assignments.

All trained personnel are responsible for identifying coaching or re-training needs (if they are uncomfortable with work assignments that have been assigned).

The careful application of *Health & Safety Training* by each employee is an integral part of all activities and is assumed as part of this SOP.

7.0 MAINTENANCE OF SOP

1 Year.

8.0 REFERENCES

U.S. Environmental Protection Agency Region I, *Low Stress ('low flow') Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells,* EQASOP-GW 001, July 30, 1996, Revised January 19, 2010.

9.0 APPENDICES

None.

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Template: Master SOP Template – February 2014

SOP – EDR025 – REV004 – QA/QC SAMPLING

Title:	QA/QC Sampling
Practice:	EDR
First Effective Date:	January 17, 2014
Version:	004
Version Date:	January 3, 2018
Author:	Robert MacKenzie
Authorized by:	Robert MacKenzie
Signature:	

TABLE OF CONTENTS

1.0 VERSION HISTORY

Version	Date	Summary of Changes	Author
Original	January 17, 2014	N/A	RLM
001	June 26, 2014	Amended blind duplicate sampling requirements	RLM
002	April 29, 2016	Updated Section 4.0/Amended O.Reg. 153/04 trip blank requirements	RLM
003	April 28, 2017	Removed reference to Pinchin West	RLM
004	January 3, 2018	In Section 5.2.6, clarified order of regular investigative sample and duplicate sample collection	RLM

2.0 SCOPE AND APPLICATION

This Standard Operating Procedure (SOP) describes the standard procedures for collecting soil, water and sediment samples for quality assurance/quality control (QA/QC) purposes.

A QA/QC program is essentially a management system that ensures that quality standards are met within a stated level of confidence. The QC component of the program comprises daily activities in the field and laboratory that are used to control the quality of both the samples collected and the sample analytical data. The QA component of the program is made up of measures used to determine whether the QC activities are effective.

When completing a site investigation, one of our primary goals is to obtain analytical data that are representative of actual soil, water and/or sediment conditions at the site. The completion of a QA/QC program, consisting of the collection and analysis of various QA/QC samples, provides information for use in evaluating the accuracy of the analytical data used to assess the environmental quality of the site.

The type and number of samples comprising the QA/QC program will be determined by the Project Manager on a site-by-site basis, but will typically include at a minimum a trip blank when collecting water samples for volatile parameter analysis and duplicate soil, water or sediment samples. Other types of QA/QC samples may be collected (e.g., equipment or field blanks) to meet project-specific requirements at the discretion of the Project Manager or to meet regulatory requirements.

The QA/QC sampling requirements and procedures for indoor air, soil vapour and sorbent tube samples are described in SOP-EDR012, SOP-EDR018 and SOP-EDR027, respectively.

3.0 OVERVIEW

The types of samples collected for the QA/QC program during site investigations may include the following:

- Trip blanks;
- Field blanks;
- Equipment blanks; and
- Field duplicates.

Trip blanks are used to assess whether ambient air conditions may have resulted in positive bias of water samples collected for volatile parameter analysis during transportation of the sample containers to and from a project site. Note that the term “positive bias” means that reported sample concentrations are greater than actual in situ sample concentrations due to some form of “cross-contamination”.

Field blanks are collected to assess whether ambient air conditions may have resulted in positive bias of samples collected at a project site for volatile parameter analysis at the time of sampling.

Equipment blanks are collected to assess the efficiency of non-dedicated monitoring/sampling equipment cleaning procedures.

Duplicate samples are collected to assess whether field sampling and laboratory analytical methods are suitable and reproducible.

The analytical results of the QA/QC samples are reviewed by the Project Manager to assess whether any data quality issues are evident which may affect the interpretation of the soil, water and/or sediment sample analytical data.

4.0 DISTRIBUTION

This is an on-line document. Paper copies are valid only on the day they are printed. Refer to the author if you are in any doubt about the accuracy of this document.

This SOP will be distributed to all Pinchin staff and others as follows:

- Posted to the SOP section of the Environmental Due Diligence and Remediation (EDR) Practice Line on the Pinchin Orchard; and
- Distributed to senior staff at Le Groupe Gesfor Poirier and Pinchin LeBlanc for distribution as appropriate.

5.0 PROCEDURE

5.1 Equipment and Supplies

The equipment/supplies required for QA/QC sample collection are the same as that used for regular investigative sampling, except for the following:

- Volatile organic compound (VOC)-free distilled water supplied by the analytical laboratory for use in the collection of field blanks and/or equipment blanks;
- Additional sample jars supplied by the analytical laboratory for the collection of field blanks, equipment blanks and field duplicates; and
- Trip blanks supplied by the analytical laboratory.

5.2 QA/QC Sampling Procedures

5.2.1 General Procedures for QA/QC Blank Sampling

The analytical laboratory that will be completing the analysis of the regular investigative samples and QA/QC samples for a project must supply the water used to collect field blanks and equipment blanks. Water provided by another analytical laboratory or store-bought distilled water must not be used.

5.2.2 Trip Blanks

A trip blank is a set of VOC sample vials filled by the analytical laboratory with VOC-free distilled water and shipped with the sample containers. A trip blank is to be stored with the sample containers provided by the analytical laboratory during travel to the project site, while on the project site, and during travel from the project site back to the analytical laboratory. The sample containers comprising a trip blank are not to be opened in the field.

For some projects, submissions of volatile parameter samples to the analytical laboratory over several days will be required. In this case, a trip blank sample should accompany each submission to the laboratory. If this situation is anticipated, the Project Manager must request that the analytical laboratory provide sufficient trip blanks so that a trip blank can accompany the submission of each set of samples to the laboratory.

Trip blanks are to be analyzed for the same volatile parameters (i.e., VOCs and/or petroleum hydrocarbons (PHCs) (F1 fraction)) as the regular investigative samples. For example, if the groundwater sampling program includes analysis of VOCs and PHCs (F1-F4 fractions), then the trip blank(s) require analysis of VOCs and PHCs (F1 fraction). If the groundwater sampling program only includes VOC analysis, then the trip blank(s) require analysis of VOCs only.

Unless specified by the Project Manager, trip blanks are not required for soil and sediment sampling, or for water sampling involving only non-volatile parameters. At the discretion of the Project Manager and to meet project-specific requirements, trip blanks for non-volatile parameters can be prepared and analyzed using the same principles as for volatile parameter trip blanks.

5.2.3 Field Blanks

A field blank is a set of VOC sample vials filled during a sampling event at a project site with VOC-free distilled water supplied by the analytical laboratory and submitted for analysis of volatile parameters (i.e., VOCs and/or PHCs (F1 fraction)).

Field blanks are to be collected at a sample location considered “worst case” with respect to ambient air conditions (e.g., adjacent to and downwind of the pump island of an active retail fuel outlet, inside an active on-the-premises dry cleaner, etc.). At project sites where there is no obvious “worst case” ambient air location, the field blank can be collected at a sampling location picked randomly. The field blank collection location and rationale for selecting it must be documented in the field notes.

If a groundwater sampling event at a project site occurs over more than one day, a field blank is to be collected for each day of sampling.

Some project sites may have an isolated area where the ambient air conditions are significantly poorer than the remainder of the site and a field blank collected from this area may not be representative of conditions elsewhere on the site. In this case, at the discretion of the Project Manager, the collection of two field blanks may be appropriate, with one field blank collected from the poor ambient air area and one field blank collected from a location outside of this area.

Unless specified by the Project Manager, field blanks are not required for soil and sediment sampling, or for water sampling involving only non-volatile parameters. At the discretion of the Project Manager and to meet project-specific requirements, field blanks for non-volatile parameters can be collected and analyzed using the same principles as for volatile parameter field blanks.

5.2.4 Equipment Blanks

An equipment blank is collected by pouring VOC-free distilled water supplied by the analytical laboratory either over or through non-dedicated sampling/monitoring equipment that has been cleaned following sampling/monitoring using the procedures outlined in SOP-EDR009. The resulting rinsate is then captured in sample containers appropriate for the intended analysis. Note that the surface over which the distilled water is poured must be the surface from which samples are collected from or that is in contact with the medium being monitored. For example, if an equipment blank is being collected from a split-spoon sampler, the distilled water must be poured through the interior of the sampler, and not the exterior of the sampler.

The Project Manager will be responsible for determining the sampling/monitoring equipment from which equipment blanks will be obtained, the number of equipment blanks and the parameters to be analyzed. Regarding the latter, the parameters analyzed for equipment blanks are typically the parameters of concern for a given project site.

5.2.5 Evaluation of Blank Sample Results

The Project Manager will evaluate the results of the blank sample analysis to assess whether these results show that bias may have been introduced to investigative samples collected during the field sampling activities. Judgement by the Project Manager will be required to assess whether the blank sample results have any effect on the interpretation of the investigative sample results. This is assessed on a case-by-case basis, but the following general principles can be applied:

- If all soil, groundwater and/or sediment samples collected for a site investigation meet the applicable environmental standards/criteria, the presence of detectable or elevated parameter concentrations in the blanks has no effect on the interpretation of the investigative sample results;
- If parameters have detectable or elevated concentrations in the blank samples but none of these parameters are present in the regular investigative samples at concentrations exceeding the applicable environmental standards/criteria, the blank sample results have no effect on the interpretation of the investigative sample results;
- If parameters have detectable or elevated parameter concentrations in the blank samples and one or more of these parameters are present in the regular investigative samples at concentrations exceeding the applicable environmental standards/criteria, then positive bias of the regular investigative samples may have occurred. The Project Manager will need to assess a number of variables, including the relative parameter concentrations in the blank and regular investigative samples, to determine whether the regular investigative sample data are considered representative and usable for assessing the environmental quality of the site. If the regular investigative sample data are questionable, then resampling may be required; and
- If the regular investigative samples have exceedances of the applicable environmental standards/criteria and the blank samples have non-detectable parameter concentrations, the blank sample results have no effect on the interpretation of the investigative sample results.

5.2.6 General Procedures for QA/QC Duplicate Sampling

Whenever possible, duplicate samples are to be collected from "worst case" sample locations. The reason for this is that Relative Percent Differences (RPDs) are calculated using the analytical results of the duplicate and regular investigative samples to evaluate the suitability and reproducibility of field sampling and laboratory analytical methods. However, RPDs for a given parameter can only be calculated if there are detectable concentrations in both samples, and "worst case" sample locations are the most likely to have detectable levels of parameters of concern. The calculation and evaluation of RPDs is discussed at the end of this section.

When filling sample containers, the order of collection is to fill the sample container for a particular parameter or parameters for the regular investigative sample first and then fill the sample container for the same parameter or parameters for the duplicate sample second. For example, if groundwater was being sampled for PAHs and metals and a duplicate sample was required, the order of filling the sample containers would regular investigative sample for PAHs, duplicate sample for PAHs, regular investigative sample for metals and duplicate sample for metals.

5.2.7 Field Duplicate Samples – Soil/Sediment

Soils/sediments are frequently heterogeneous because they are typically deposited in horizontal layers over time, causing both small scale and large scale grain size variations that can often result in significant variations in contaminant concentrations between layers. Because of this, it is important that duplicate soil/sediment samples be collected from the same vertical depths as the regular investigative samples in sample cores or at discrete sampling locations (e.g., grab samples).

When collecting a duplicate soil/sediment sample from a sampling device that provides a soil core (e.g., dual-tube sampler, split-spoon sampler), the soil core is to be split in half vertically (i.e., longitudinally). A portion of one half of the core is used for the regular investigative sample and a portion of the other half of the core is used for the duplicate sample. The portion of each core placed in sample jars for analysis must be obtained from the same depth interval within the cores.

When collecting a duplicate soil/sediment sample from a grab sample (e.g., excavation floor or sidewall), the field duplicate sample must be collected as close as possible to the regular investigative sample location at the sample depth and within the same soil layer.

There are no special procedures for collecting field duplicates of composite soil/sediment samples given that the soil/sediment is homogenized during the composite sample collection procedure.

A field duplicate soil/sediment sample must be collected at the same time as the regular investigative sample. Retroactively splitting a soil/sediment sample to obtain a field duplicate sample is not permitted.

5.2.8 Field Duplicate Samples – Surface Water/Potable Water/Groundwater

There are no special procedures for collecting surface water/potable water/groundwater field duplicate samples with the following exceptions:

- When collecting a duplicate water sample for metals analysis and field filtering is required, a new filter is to be used to collect the duplicate sample unless the groundwater has a low sediment content; and
- When collecting a duplicate surface water sample, the sample containers for the same parameter(s) should be immersed in the surface water body at the same location and at the same time whenever possible.

5.2.9 Duplicate Sample Labelling

The duplicate sample should have the term “DUP” in the sample identifier to distinguish it as a duplicate sample.

5.2.10 Evaluation of Duplicate Sample Results

Duplicate sample results are evaluated by calculating RPDs using the following equation:

$$\text{RPD} = \frac{\text{Absolute Value (Original Concentration – Duplicate Concentration)}}{\text{(Original Concentration + Duplicate Concentration)/2}} \text{ X } 100\%$$

RPDs are not calculated unless the parameter concentrations in both the regular investigative sample and duplicate sample are detectable concentrations above the corresponding practical quantitation limit (PQL) for the parameter, which is equal to five times the lowest laboratory reportable detection limit (RDL).

For example, if the RDL for a parameter is 0.1 parts per million (ppm), and the concentration in the regular investigative sample is 0.4 ppm and the concentration in the duplicate sample is 0.6 ppm, the RPD cannot be calculated because the concentration in the regular investigative sample (0.4 ppm) is less than the PQL of 0.5 ppm (5 times the RDL of 0.1 ppm).

Also, if the regular investigative sample concentration is 2 ppm and the duplicate sample concentration is <1 ppm, then the RPD cannot be calculated regardless of the PQL since detectable concentrations were not reported for both samples.

Calculated RPDs for the regular investigative and field duplicate samples are compared to established performance standards to evaluate the suitability and reproducibility of field sampling and laboratory analytical methods. In Ontario, the Ontario Ministry of the Environment and Climate Change (formerly the Ontario Ministry of the Environment) provides duplicate sample performance standards in the document *Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the*

Environmental Protection Act, dated March 9, 2004, amended as of July 1, 2011. Although these performance standards only strictly apply to laboratory duplicate samples, they are considered suitable for comparison to field duplicate samples. Other provinces provide their own similar guidance.

When calculated RPDs exceed the performance standards, the Project Manager will evaluate whether these results have any effect on the interpretation of the investigative sample results. This is judged on a case-by-case basis, but in many situations RPD values above the performance standards can be attributed to small scale heterogeneity inherent in soil samples or variations in the quantity of sediment in groundwater or surface water samples, and are not indicative of poor field sampling or laboratory procedures. The results of internal laboratory QA/QC sampling may provide additional information as to the precision of the data. Furthermore, if all soil, water and/or sediment samples collected for a site investigation meet the applicable environmental standards/criteria, the apparent lack of precision shown by elevated RPD values should not affect the interpretation of the investigative sample results.

Sometimes a regular investigative sample will meet the applicable environmental standards/criteria and its corresponding duplicate sample will fail the applicable environmental standards/criteria (or vice versa). In Ontario, it is permitted to average the parameter concentrations of two samples provided they are collected at the same time and from the same sample location and depth. The resulting average parameter concentrations are then compared with the applicable standards to determine whether the sample meets or fails the standards. This approach is not acceptable in all jurisdictions. In situations where averaging is not acceptable to the regulatory agency, the “worst case” sample result is to be used in assessing the environmental condition of the project site.

5.3 Fieldwork Records

The field notes must include the following information with respect to QA/QC samples:

- The date and time of sampling for all blank/duplicate samples;
- The sample location for field blanks and the rationale for selecting the field blank locations;
- The type of equipment from which a rinsate was collected for equipment blanks and the parameters to be analyzed; and
- The corresponding regular investigative sample location/sample interval for duplicate samples and the parameters to be analyzed.

5.4 Additional Considerations for Ontario Regulation 153/04 Phase Two ESA Compliance

When completing a Phase Two ESA in accordance with Ontario Regulation 153/04, the QA/QC sampling program must consist of the following as a minimum:

- At least one field duplicate soil, sediment or groundwater sample must be collected for every ten samples submitted for analysis. The frequency is one duplicate sample for one to 10 regular investigative samples, two duplicate samples for 11 to 20 samples, etc. for all parameters analyzed. For example, even if only one groundwater sample is collected for PAHs analysis, a duplicate of this sample must be collected.

When sampling for VOCs, one trip blank sample must be submitted to the laboratory for VOCs analysis for each submission to the laboratory. In other words, if a groundwater sampling program lasts three days and samples are submitted to the laboratory at the end of each day, there must be a total of three trip blanks submitted with the samples (i.e., one per day of sampling). Note that analysis of trip blank samples for other volatile parameters (e.g., PHCs (F1 Fraction)) is not mandatory but can be completed at the discretion of the Qualified Person.

6.0 TRAINING

The Practice Leader is responsible for identifying the training needs of EDR staff and ensuring that staff are trained and competent before undertaking work assignments.

All trained personnel are responsible for identifying coaching or re-training needs (if they are uncomfortable with work assignments that have been assigned).

The careful application of *Health & Safety Training* by each employee is an integral part of all activities and is assumed as part of this SOP.

7.0 MAINTENANCE OF SOP

1 Year.

8.0 REFERENCES

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 and Climate Change, *Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act*, March 9, 2004, as amended as of July 1, 2011.

Water, Air and Climate Change Branch, Ministry of Water, Land and Air Protection, Province of British Columbia, *British Columbia Field Sampling Manual*, 2003.

9.0 APPENDICES

None.

I:\2018 SOP Updates\SOP - EDR025 - REV004 - QA QC Sampling.docx

Template: Master SOP Template – February 2014

SOP – EDR026 – REV005 – VERTICAL ELEVATION SURVEYING

Title:	Vertical Elevation Survey
Practice:	EDR
First Effective Date:	April 3, 2014
Version:	005
Version Date:	January 3, 2018
Author:	Kathryn Matheson and Robert MacKenzie
Authorized by:	Robert MacKenzie
Signature:	

TABLE OF CONTENTS

1.0 VERSION HISTORY

Version	Date	Summary of Changes	Author
Original	April 2, 2014	N/A	KM
001	April 22, 2014	Text and figure edits	KM/RM
002	January 22, 2015	Added instruction regarding need to include a least one TP in a survey	RM
003	April 29, 2016	Updated Section 4.0	RM
004	April 28, 2017	Removed reference to Pinchin West	RM
005	January 3, 2018	Minor wording changes throughout	RM

2.0 SCOPE AND APPLICATION

This Standard Operating Procedure (SOP) presents a description of the methods employed for the completion of vertical elevation surveys of monitoring wells.

Relative vertical elevation surveys are typically completed on sites where three or more monitoring wells have been installed in order to allow for the triangulation of groundwater flow direction. The relative vertical elevation surveys completed by Pinchin are typically not used to determine elevations relative to sea level. However, if elevations relative to sea level are needed, a local benchmark with a known geodetic elevation is required.

Two methods are available for the completion of vertical elevation surveys: completion of the survey using a manual scope and survey rod (which requires a two-person team); or completion of the survey using a laser level. The use of a laser level and associated sensor is the most common surveying method used by Pinchin and will be the focus of this SOP. With minor modifications, this SOP can also be used for “conventional” surveying using a manual scope, survey rod and two-person team.

3.0 OVERVIEW

Not applicable.

4.0 DISTRIBUTION

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5.0 PROCEDURE

The following terms are used in the completion of a vertical elevation survey:

Temporary Benchmark (TBM): A permanent landmark either on the site, or in a nearby location, which is used as an elevation reference and can be located again if required, including during winter. For our purposes, the benchmark is assigned an arbitrary elevation of 100.00 metres (m). If a geodetic benchmark is available and will be used instead, the elevation of this benchmark relative to sea level is used in lieu of 100.00 m.

Turning Point (TP): A temporary benchmark used to provide a reference point so that the tripod and laser level can be moved to a new location.

Backsight (BS): A reading taken on a point of known or assigned elevation (This will always be the first reading to determine the Height of the Instrument (HI)).

Foresight (FS): A reading taken on a point where the elevation is unknown.

Intermediate Sight (IS): A reading taken that is not a part of the main circuit of the survey. These points are not used as TPs or benchmark readings. Monitoring well elevations are usually recorded as IS.

5.1 Equipment and Supplies

5.1.1 Documents and Information Gathering

- A copy of the Site plan with monitoring well locations;
- A copy of Pinchin's Elevation Survey Sheet obtained from the Pinchin Orchard;
- A copy of this SOP;
- A site-specific Health and Safety Plan (as per the project requirements); and
- Client or site representative's contact details.

5.1.2 Vertical Survey Equipment

- Laser level and associated sensor;
- Tri-pod;
- Survey rod;
- Interface probe and equipment cleaning materials (Optional if water level measurements are required);
- Well keys;
- Tools to open monitoring wells (T-bar, socket set, Allen keys, etc.);

- Extra batteries; and
- Field forms or field log book.

5.2 Theory

Vertical elevation surveys use a benchmark to determine the relative or actual elevation of select points (i.e., monitoring wells). For relative elevation surveys, the benchmark is given an arbitrary elevation of 100.00 m and is used to calculate the relative elevations of the monitoring wells. If a geodetic benchmark is available, the elevation of this benchmark may be used to calculate the actual elevations of the monitoring wells relative to sea level.

BS, FS and IS are measured using a laser level mounted on a tripod. The laser level shoots a beam at a survey rod which is equipped with a sensor. With the rod standing vertically on top of the point to be measured, the field technician moves the laser receiver up the rod until the receiver indicates it is in the right position. The measurement is then read off the rod and recorded on the survey sheet. This process is repeated until measurements are obtained at all required locations.

Vertical elevation surveys are typically completed on a site in the following situations:

- At least three monitoring wells have been installed on-site and determining inferred groundwater flow direction is required;
- The casing or pipe elevation of a well has changed. This could be due to repairs, damage or frost heave;
- New monitoring well(s) have been installed on the site. Note that in this situation, the new monitoring well(s) may be “tied in” to the existing survey by using the original TBM or to at least three of the previously surveyed wells as reference points. If this is not possible, then an entirely new survey must be completed that includes all new and previously installed wells; and
- The survey error exceeds the allowable error.

5.3 Vertical Elevation Survey

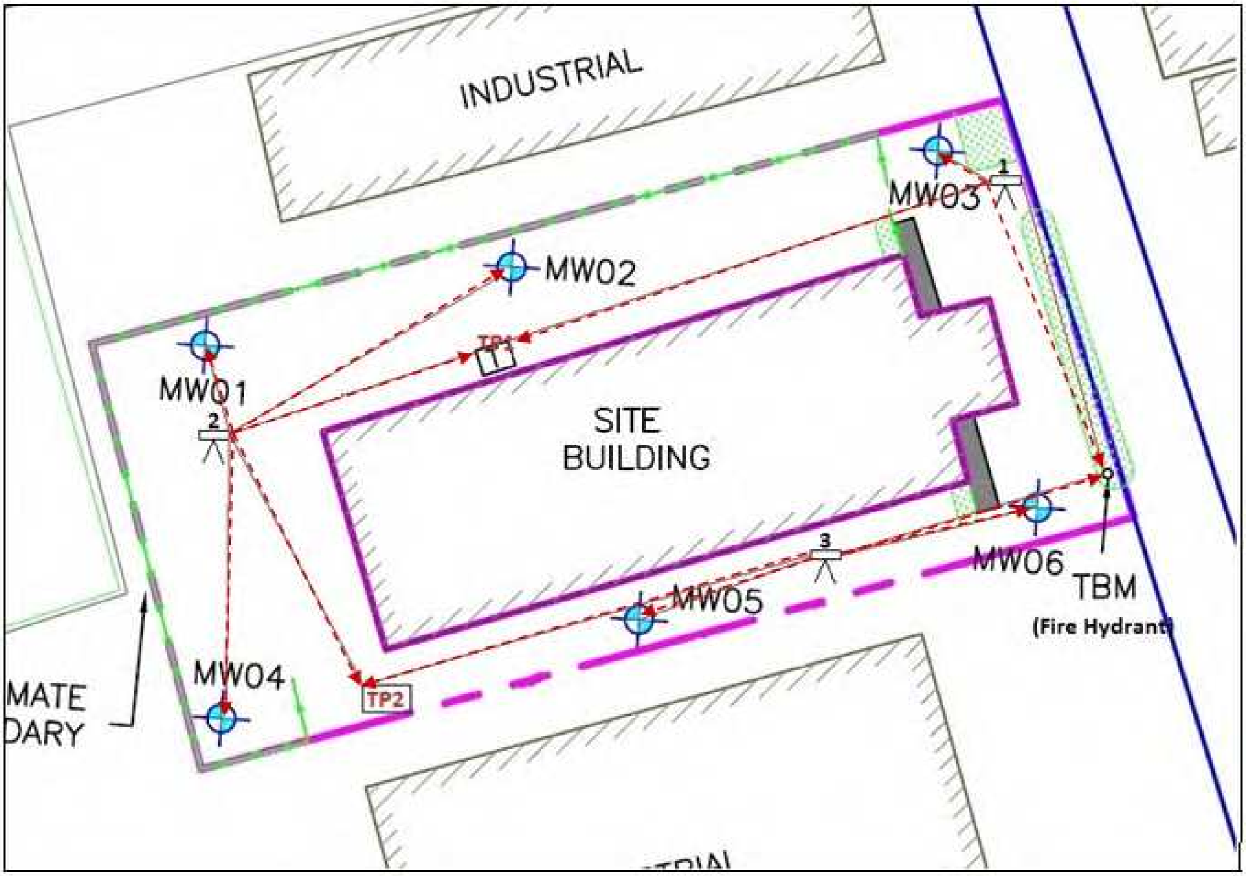
The following general procedures and considerations apply to all vertical elevation surveys:

- Prior to use, turn on the laser level and receiver to ensure the batteries are fully charged; and
- Check equipment calibration (Equipment rentals should come with a calibration sheet for the survey equipment).

The following presents the general procedure for vertical elevation surveying:

1. Open all wells and, if required by the Project Manager, monitor the depth to groundwater from the top of the well casing with the interface probe. If the wells are flushmount installations located in an area with vehicle or pedestrian traffic, place a traffic cone or the original well cover over top of each well after it is opened so that the open well doesn't get run over or pedestrians do not trip over the open well.

   Select a permanent fixture to be the TBM whose elevation **should not change over time.** All elevations will be relative to this spot. Good choices for a TBM include concrete pads, gas shut offs, corners of catch basins or fire hydrants. The TBM will be assigned an arbitrary reference elevation of 100.00 m for ease of calculation. *Note: if using a fire hydrant as the TBM, do not use the bolts on the top or sides of the hydrant. If the hydrant is used in the future, the elevation of those bolts may change. Ideally, new personnel should be able to come to the site and reproduce or continue the survey using the same TBM at a later date;*
2. Using the Site Plan, plan the route for the survey. The ideal route requires as few TPs as possible as moving the tri-pod increases the chance of error in the measurements. However, at least one TP is required to create a survey loop and allow the error to be assessed unless a calibrated, self-levelling survey instrument is being used. The survey route must start by taking a BS to the TBM, followed by an IS to each of the well locations. The last shot of the survey will be a FS to the TBM location. Figure 1 below shows an example of a survey route;



3. Once the survey layout is complete, walk the survey route to ensure it is free of obstructions. Next, set up the tripod in a secure location where it is not likely to tip or be knocked over;
4. Hold the survey rod vertically on top of the TBM. Use the leveling bubble on the sensor to ensure the rod is level, and then move the sensor up the rod until it signals it is in the correct position. Record the BS of the TBM on the survey sheet;
5. Use the same method to record IS for the monitoring wells. Record an IS for both the top of casing and grade level for each monitoring well location. The top of casing elevation is to be measured with the survey rod placed at the reference point marked at the time of well installation. If no reference point is marked on the well, one should be added and used for all subsequent elevation survey and depth to groundwater measurements. All FS, BS and IS are to be recorded to the nearest 0.001 m;
6. If it is necessary to move the tri-pod, record the FS to the TP. Next, move the tripod to the new location and shoot a BS back to the TP (see Figure 2). **Make sure the location of the TP does not change between shooting the FS and the BS**;

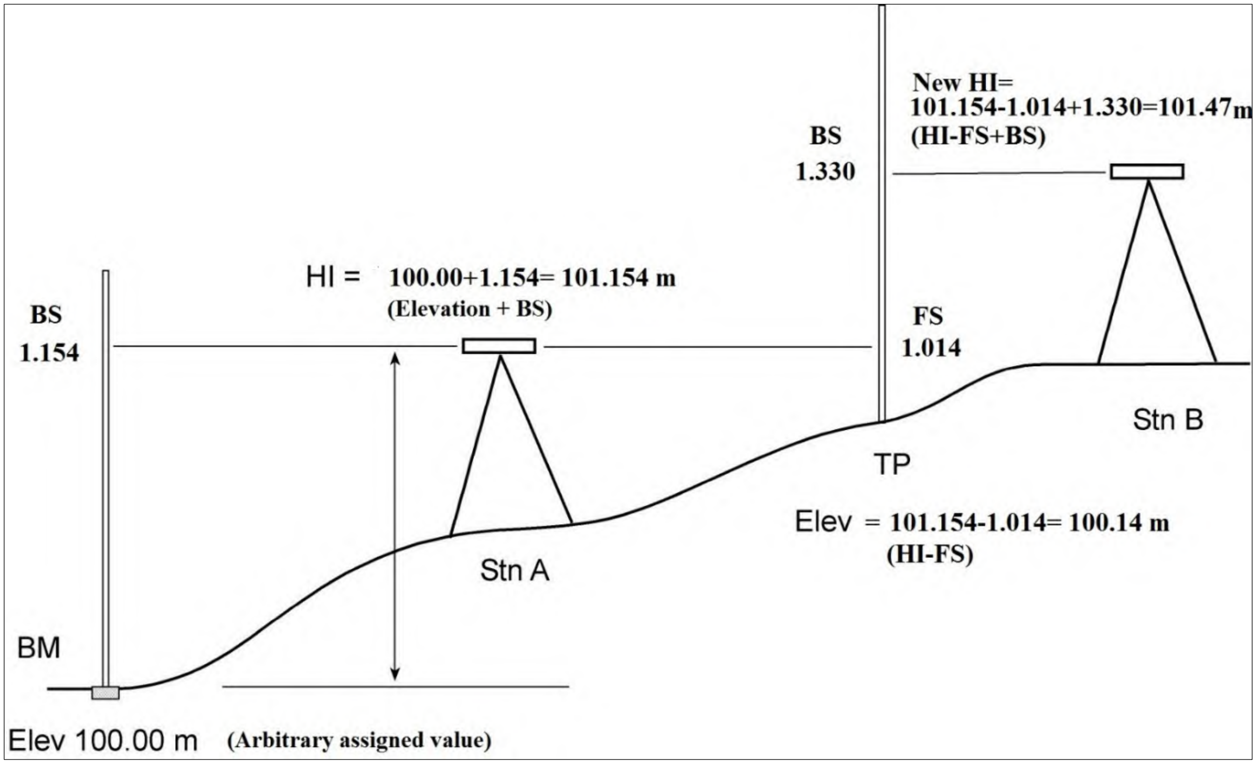


Figure 1: Survey set up from TBM with one TP.

7. Repeat steps 5 and 6 until a top of casing and grade IS have been recorded for all monitoring wells;
8. Record a final FS reading back to the TBM to close the survey; and
9. Perform a field calculation to ensure the survey error is within acceptable limits. The calculated difference between the sum of the FS and the sum of the BS values should be approximately equal. The difference between these values will be equal to the error. If the difference between these values is greater than the allowable error (see Section 5.4), the survey will have to be repeated. If the error is acceptable, the survey is complete and you may leave the site. The remaining calculations may be completed at the office.

5.4 Allowable Error

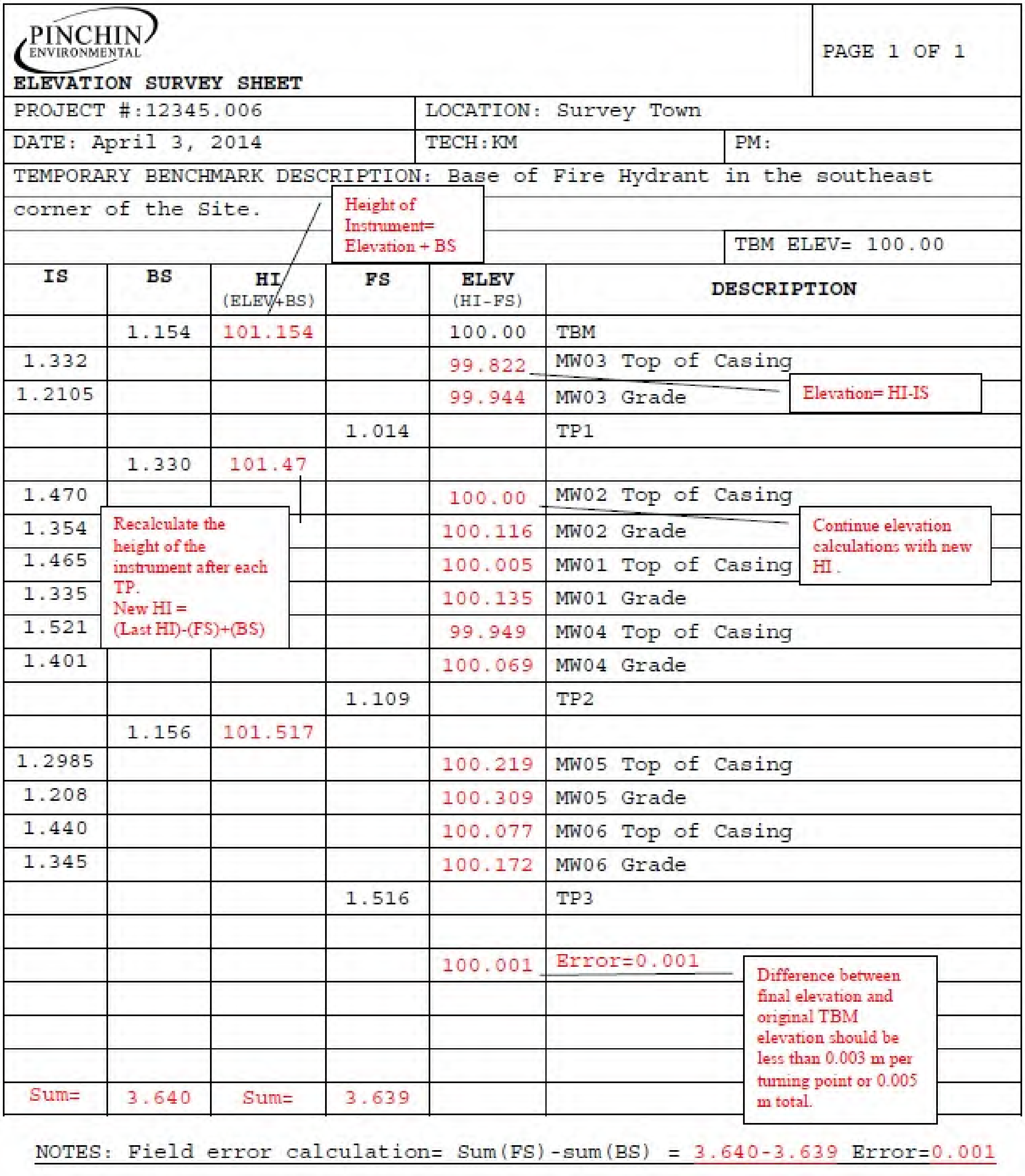
The acceptable error limit is 3 millimetres (mm) (0.003 m) per TP, with a maximum allowable error of 5 mm per survey. If the total error per survey exceeds 0.003 m per TP or 0.005 m per survey, the survey must be repeated. Common sources of error include:

- Tripod movement;
- Errors in reading the survey rod; and
- Not keeping the TP location consistent between FS and BS readings.

As noted in Section 5.3, an error check must be performed **before leaving the site** to ensure the survey error is within acceptable limits.

5.5 Calculations

Once the survey is complete, calculate the relative elevations of each surveyed point. This can be done in the field or at the office. Calculate each elevation by subtracting the IS values from the height of the instrument. A new HI will need to be calculated following each TP. The following is an example of the survey calculations for the survey layout shown in Figure 1.



PINCHIN ENVIRONMENTAL

ELEVATION SURVEY SHEET

PAGE 1 OF 1

PROJECT #:12345.006

LOCATION: Survey Town

DATE: April 3, 2014

TECH:KM

PM:

TEMPORARY BENCHMARK DESCRIPTION: Base of Fire Hydrant in the southeast corner of the Site.

TBM ELEV= 100.00

Height of Instrument= Elevation + BS

IS	BS	HI (ELEV+BS)	FS	ELEV (HI-FS)	DESCRIPTION
	1.154	101.154		100.00	TBM
1.332				99.822	MW03 Top of Casing
1.2105				99.944	MW03 Grade
			1.014		TP1
	1.330	101.47			
1.470				100.00	MW02 Top of Casing
1.354				100.116	MW02 Grade
1.465				100.005	MW01 Top of Casing
1.335				100.135	MW01 Grade
1.521				99.949	MW04 Top of Casing
1.401				100.069	MW04 Grade
			1.109		TP2
	1.156	101.517			
1.2985				100.219	MW05 Top of Casing
1.208				100.309	MW05 Grade
1.440				100.077	MW06 Top of Casing
1.345				100.172	MW06 Grade
			1.516		TP3
				100.001	Error=0.001
Sum=	3.640	Sum=	3.639		

Elevation= HI-IS

Recalculate the height of the instrument after each TP. New HI = (Last HI)-(FS)+(BS)

Continue elevation calculations with new HI.

Difference between final elevation and original TBM elevation should be less than 0.003 m per turning point or 0.005 m total.

NOTES: Field error calculation= Sum(FS)-sum(BS) = 3.640-3.639 Error=0.001

5.6 Horizontal Survey

A horizontal survey should be completed on every site in conjunction with the vertical elevation survey if not already completed during the borehole drilling/well installation program. To complete a horizontal survey, measure the distance of each of the well locations relative to a nearby permanent or semi-permanent landmark (e.g., corner of the nearest building, fire hydrant, etc.) using a measuring wheel or tape. Measurements are to be made at 90 degree angles relative to the orientation of the landmark, and parallel or perpendicular to the long or short axis of the landmark or to a fixed axis (i.e., relative to true north) as appropriate. Record these measurements in a field book or on the site plan. If required by the Project Manager, measure the UTM coordinates of the well location with a hand-held GPS device.

5.7 General Considerations

When surveying a site where one or more well locations are located inside a building and inaccessible to survey, it is acceptable to survey the concrete foundation of the building in place of the well. If this method is used this must be noted on the survey sheet.

A higher error factor may be acceptable on very large sites and sites where a large number of TPs are used. These situations should be discussed with the Project Manager.

On sites with large elevation changes, the use of a scope and manual survey rod in place of the laser level may be more appropriate. This method requires a two-person team and allows the surveying of sites with large elevation changes without the use of unnecessary TPs. This method should be discussed with the Project Manager prior to use to ensure it meets project budget requirements.

5.8 Additional Considerations for Ontario Regulation 153/04 Phase Two ESA Compliance

When completing a Phase Two Environmental Assessment in accordance with Ontario Regulation 153/04, all surveying work must be undertaken by a licensed Ontario Land Surveyor and this SOP is not applicable.

6.0 TRAINING

The Practice Leader is responsible for identifying the training needs of EDR staff and ensuring that staff are trained and competent before undertaking work assignments.

All trained personnel are responsible for identifying coaching or re-training needs (if they are uncomfortable with work assignments that have been assigned).

The careful application of *Health & Safety Training* by each employee is an integral part of all activities and is assumed as part of this SOP.

7.0 MAINTENANCE OF SOP

1 Year.

8.0 REFERENCES

Canadian Standards Association, *Environmental Investigation Methodology for Contaminated Sites*, 2005.

9.0 APPENDICES

None.

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Template: Master SOP Template – February 2014

APPENDIX C

Borehole Logs

Log of Borehole: MW1

Project #: 319674 **Logged By:** AM

Project: Phase Two Environmental Site Assessment

Client: Morguard REIT c/o Morguard Investments Limited

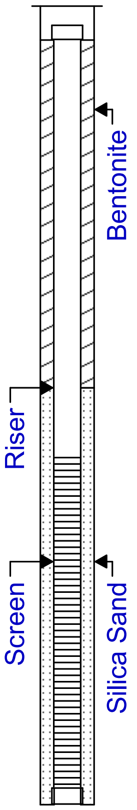
Location: 500 Coventry Road, Ottawa, Ontario

Drill Date: April 25, 2024

SUBSURFACE PROFILE

Description	Measured Depth (m)
Ground Surface	0.00
Asphalt	0.00
Silty Sand Brown, loose, dry, no odour or staining	
Brown, packed, dry, no odour or staining	-0.76 0.76
Sandy Clay Brown/grey, hard packed, moist, no odour or staining	-2.29 2.29
End of Borehole	-3.51 3.51

Monitoring Well Details



SAMPLE

Recovery (%)	Sample ID	Soil Vapour Concentration* (ppm) CGI/PID	Laboratory Analysis
25	SS1	60/0	
25	SS2	50/0	PHCs (F1-F4), PAHs, PCBs, and BTEX
50		35/0	
50	SS3	25/0	
70		15/0	

Contractor: Strata Drilling Group

Drilling Method: Direct Push

Well Casing Size: 2 Inch

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

Grade Elevation: N/A

Top of Casing Elevation: N/A

Sheet: 1 of 1

PINCHIN

Log of Borehole: MW2

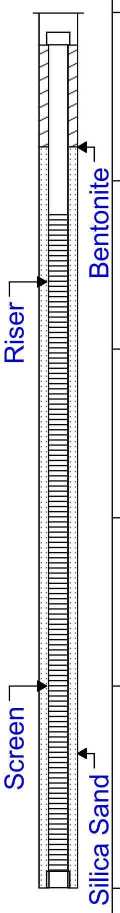
Project #: 319674.001 **Logged By:** MK

Project: Phase Two Environmental Site Assessment

Client: Morguard REIT

Location: 500 Coventry Road, Ottawa, Ontario

Drill Date: April 30, 2024

SUBSURFACE PROFILE					SAMPLE			
Depth	Symbol	Description	Measured Depth (m)	Monitoring Well Details	Recovery (%)	Sample ID	Soil Vapour Concentration* (ppm) PID	Laboratory Analysis
ft m		Floor Surface	0.00					
	▨	***Fill*** Brown sand with silt and gravel, compact, damp	0.76		0	SS1	NA	
	▨	Brown sandy silt with gravel, trace clay	1.52		100	SS2	40/0	
	▨	Sandy silt with some gravel, trace clay, wet, dense	2.29		50	SS3	30/0	
	▨	***Silty Clay*** Brown, with gravel and sand, slight PHC-like odours	2.74		100	SS4	40/0	
	▨	Dark brown, PHC-like odours, dense	3.96		100	SS5	45/0	PHCs, VOCs, PAH, Metals
		End of Borehole						

Contractor: Strata Drilling Group

Drilling Method: Direct Push / Split Spoon

Well Casing Size: 50 mm

Note:
* Soil vapour concentrations measured using a photoionization detector (PID).

Grade Elevation: ___ masl

Top of Casing Elevation: ___ masl

Sheet: 1 of 1

Log of Borehole: MW3

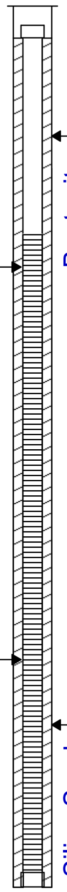
Project #: 319674.001 **Logged By:** MK

Project: Phase Two Environmental Site Assessment

Client: Morguard REIT

Location: 500 Coventry Road, Ottawa, Ontario

Drill Date: April 30, 2024

SUBSURFACE PROFILE					SAMPLE			
Depth	Symbol	Description	Measured Depth (m)	Monitoring Well Details	Recovery (%)	Sample ID	Soil Vapour Concentration* (ppm) PID	Laboratory Analysis
ft m		Floor Surface	0.00	 				
			0.76		0	SS0	NA	
	▨	***Fill*** Sandy silt with gravel, trace clay	1.52		75	SS2	20/0	
	░	***Sandy Clay*** Brown with silt, dense	2.44		90	SS3	30/0	
	░	Brownish grey	4.11		100	SS4	40/0	
					90	SS5	40/0	PHCs, VOCs, PAH, Metals
					-			
		End of Borehole						

Contractor: Strata Drilling Group

Drilling Method: Direct Push / Split Spoon

Well Casing Size: 50 mm

Note:
* Soil vapour concentrations measured using a photoionization detector (PID).

Grade Elevation: ___ masl

Top of Casing Elevation: ___ masl

Sheet: 1 of 1

Log of Borehole: BH4

Project #: 319674.001 **Logged By:** MK

Project: Phase Two Environmental Site Assessment

Client: Morguard REIT

Location: 500 Coventry Road, Ottawa, Ontario

Drill Date: April 30, 2024

SUBSURFACE PROFILE					SAMPLE			
Depth	Symbol	Description	Measured Depth (m)	Monitoring Well Details	Recovery (%)	Sample ID	Soil Vapour Concentration* (ppm) PID	Laboratory Analysis
ft m		Floor Surface	0.00	No Monitoring Well Installed				BTEX, PHCs, PAH, PCBs
0 0	■	**Asphalt** With gravel	0.30		0	SS1	NA	
1 – 5 1	▩	**Fill** Brown clayey sand, some silt, dense	1.52		100	SS2	20/0	
5 – 7 2	▩	Sandy gravel	2.29		20	SS3	NA	
8 – 10 3	▨	**Clayey Silt** Dark with sand and gravel, slight odours	3.20		100 -	SS4 -	20/0 -	
11 – 14 4		End of Borehole						

Contractor: Strata Drilling Group

Drilling Method: Direct Push / Split Spoon

Well Casing Size: 50 mm

Note:
* Soil vapour concentrations measured using a photoionization detector (PID).

Grade Elevation: ___ masl

Top of Casing Elevation: ___ masl

Sheet: 1 of 1

Log of Borehole: BH5

Project #: 319674.001 **Logged By:** MK

Project: Phase Two Environmental Site Assessment

Client: Morguard REIT

Location: 500 Coventry Road, Ottawa, Ontario

Drill Date: April 30, 2024

SUBSURFACE PROFILE					SAMPLE			
Depth (ft / m)	Symbol	Description	Measured Depth (m)	Monitoring Well Details	Recovery (%)	Sample ID	Soil Vapour Concentration* (ppm) PID	Laboratory Analysis
		Floor Surface	0.00	No Monitoring Well Installed				
	■	***Asphalt*** With gravel	0.76		20	SS1	NA	
	▩	***Fill*** Brownish grey sandy silt with some clay and gravel	1.52		100	SS2	15/0	BTEX, PHCs, PAH, PCBs
	▩	Greavelly sand	2.29		0	SS3	NA	
	▒	***Silty Sand*** Dark brown, trace clay, PHC-like odours, dense			100	SS4	35/0	
	▒		3.96		30	SS5	10/0	
	▩	***Fill*** Gravelly sand with silt, trace clay			100	SS6	25/0	
	▩		5.33		0	SS7	35/0	
		End of Borehole						

Contractor: Strata Drilling Group

Drilling Method: Direct Push / Split Spoon

Well Casing Size: 50 mm

Note:
* Soil vapour concentrations measured using a photoionization detector (PID).

Grade Elevation: ___ masl

Top of Casing Elevation: ___ masl

Sheet: 1 of 1

Log of Borehole: MW6

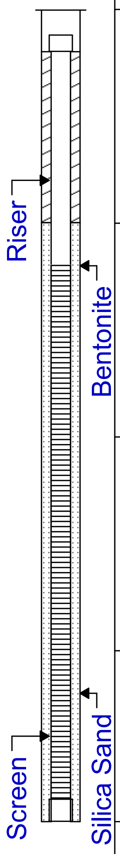
Project #: 319674.001 **Logged By:** MK

Project: Phase Two Environmental Site Assessment

Client: Morguard REIT

Location: 500 Coventry Road, Ottawa, Ontario

Drill Date: April 30, 2024

SUBSURFACE PROFILE					SAMPLE			
Depth	Symbol	Description	Measured Depth (m)	Monitoring Well Details	Recovery (%)	Sample ID	Soil Vapour Concentration* (ppm) PID	Laboratory Analysis
ft m		Floor Surface	0.00					
0 0 1 2	■	***Asphalt***	0.76		0	SS0	NA	
3 1 4	▨	***Fill*** Silty sand, some gravel with trace clay, wet	1.52		60	SS2	20/0	
5 6 2 7	░	***Sandy Clay*** Brown with silt, dense			NA	SS3	30/0	
8 9			2.90		60	SS4	40/0	PHCs, VOCs, PAH, Metals
3 10 11 12 13		End of Borehole						

Contractor: Strata Drilling Group

Drilling Method: Direct Push / Split Spoon

Well Casing Size: 50 mm

Note:
* Soil vapour concentrations measured using a photoionization detector (PID).

Grade Elevation: ___ masl

Top of Casing Elevation: ___ masl

Sheet: 1 of 1

Log of Borehole: MW7

Project #: 319674 **Logged By:** AM

Project: Phase Two Environmental Site Assessment

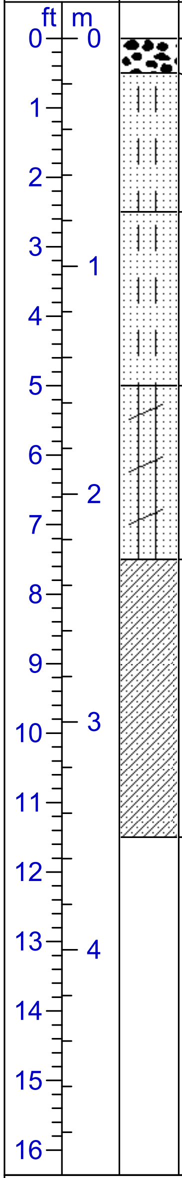
Client: Morguard REIT c/o Morguard Investments Limited

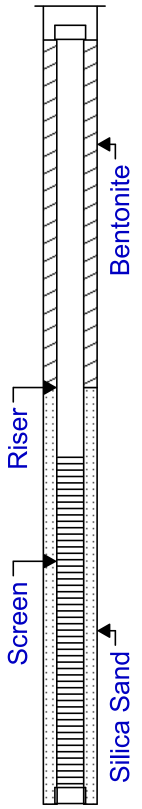
Location: 500 Coventry Road, Ottawa, Ontario

Drill Date: April 25, 2024

SUBSURFACE PROFILE / SAMPLE

Description	Measured Depth (m)	Recovery (%)	Sample ID	Soil Vapour Concentration* (ppm) CGI/PID	Laboratory Analysis
Ground Surface	0.00				
Gravel (Fill)	0.00				
Silty Sand Brown, dry-moist, no odour or staining	-0.76	60	SS1	0/0	
Brown, moist-wet, no odour or staining	0.76 -1.52	60	SS2	0/0	PHCs (F1-F4), PAHs, BTEX, and Metals (Inc. Boron, HWS, CrVI, Hg)
Silty, Sand and Clay Brown, Wet, no odour or staining	1.52 -2.29	60	SS3	0/0	
Sandy Clay Dark brown, wet, gravel chuncs, no odour or staining	2.29	60	SS4	0/0	
	-3.51	100	SS5	5/0	PHCs (F1-F4), PAHs, BTEX, VOCs, and Metals
End of Borehole	3.51				





Contractor: Strata Drilling Group

Drilling Method: Direct Push

Well Casing Size: 2 Inch

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

Grade Elevation: N/A

Top of Casing Elevation: N/A

Sheet: 1 of 1

Log of Borehole: MW8

Project #: 319674 **Logged By:** AM

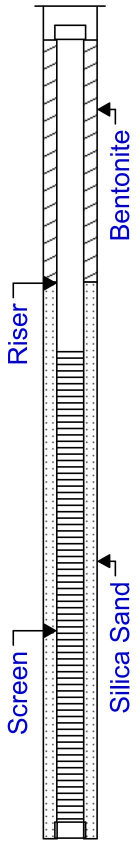
Project: Phase Two Environmental Site Assessment

Client: Morguard REIT c/o Morguard Investments Limited

Location: 500 Coventry Road, Ottawa, Ontario

Drill Date: April 25, 2024

SUBSURFACE PROFILE					SAMPLE			
Depth (ft / m)	Symbol	Description	Measured Depth (m)	Monitoring Well Details	Recovery (%)	Sample ID	Soil Vapour Concentration* (ppm) CGI/PID	Laboratory Analysis
0 / 0		Ground Surface	0.00					
		Sand and Gravel Brown, hard packed, trace asphalt, dry, no odour or staining	0.00		50	SS1	25/0	
					50	SS2	15/0	PHCs (F1-F4), PAHs, BTEX, and Metals (Incl. Boron, HWS, CrVI, Hg)
			-2.29		50	SS3	0/1	
		Sandy Clay Dark brown/grey, gravel chunks, no odour or staining	2.29 -3.05		50	SS4	0/0	
		Dark brown/grey, dry-moist, no odour or staining	3.05 -3.66		100	SS5	0/0	PHCs (F1-F4), PAHs, BTEX, VOCs, and Metals
		End of Borehole	3.66					



Contractor: Strata Drilling Group

Drilling Method: Direct Push

Well Casing Size: 2 Inch

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

Grade Elevation: N/A

Top of Casing Elevation: N/A

Sheet: 1 of 1

Log of Borehole: MW9

Project #: 319674 **Logged By:** AM

Project: Phase Two Environmental Site Assessment

Client: Morguard REIT c/o Morguard Investments Limited

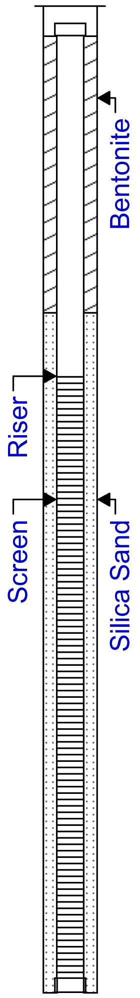
Location: 500 Coventry Road, Ottawa, Ontario

Drill Date: April 25, 2024

SUBSURFACE PROFILE

Description	Measured Depth (m)
Ground Surface	0.00
Asphalt	0.00
Sand and Gravel Fill Dry, loose, no odour or staining	-0.76
Moist-wet, loose, no odour or staining	0.76
	-3.05
Loose, wet, PHC odours, no staining	3.05 -3.51
Silty Sand Brown, wet, PHC odours, no staining	3.51 -4.57
Saturated, PHC odour, no staining	4.57 -4.88
End of Borehole	4.88

Monitoring Well Details



SAMPLE

Recovery (%)	Sample ID	Soil Vapour Concentration* (ppm) CGI/PID	Laboratory Analysis
25	SS1	25/0	PHCs (F1-F4), PAHs, BTEX, and Metals (Incl. Boron, HWS, CrVI, Hg)
25	SS2	15/0	
15	SS3	20/0	PHCs (F1-F4), PAHs, BTEX, VOCs, and Metals
15	SS4	40/0	
40	SS5	15/0	

Contractor: Strata Drilling Group

Drilling Method: Direct Push

Well Casing Size: 2 Inch

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

Grade Elevation: N/A

Top of Casing Elevation: N/A

Sheet: 1 of 1

Log of Borehole: MW10

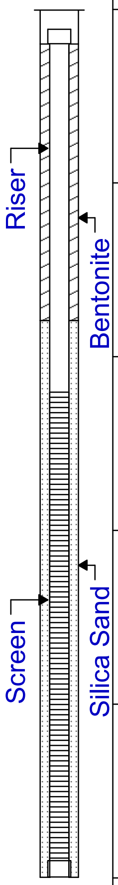
Project #: 319674.001 **Logged By:** MK

Project: Phase Two Environmental Site Assessment

Client: Morguard REIT

Location: 500 Coventry Road, Ottawa, Ontario

Drill Date: April 30, 2024

SUBSURFACE PROFILE					SAMPLE			
Depth ft m	Symbol	Description	Measured Depth (m)	Monitoring Well Details	Recovery (%)	Sample ID	Soil Vapour Concentration* (ppm) PID	Laboratory Analysis
0		Floor Surface	0.00					
0–2	■	**Asphalt** With granular fill	0.76		0	SS0	NA	
3–4 (1)	▩	**Fill** Yellowish brown, sandy silt with gravel, trace clay	1.52		60	SS2	25/0	PHCs, VOCs, PAH, Metals
5–7 (2)	▩	Brown silty sand with some clay, wet	2.29		30	SS3	25/0	
8–12 (3)	▧	**Clayey Silt** Dark, trace gravel	3.81		100	SS4	35/0	
					50	SS5	40/1	BTEX, PHCs, PAH
13–16 (4)		End of Borehole						

Contractor: Strata Drilling Group

Drilling Method: Direct Push / Split Spoon

Well Casing Size: 50 mm

Note:
* Soil vapour concentrations measured using a photoionization detector (PID).

Grade Elevation: ___ masl

Top of Casing Elevation: ___ masl

Sheet: 1 of 1

Log of Borehole: MW11

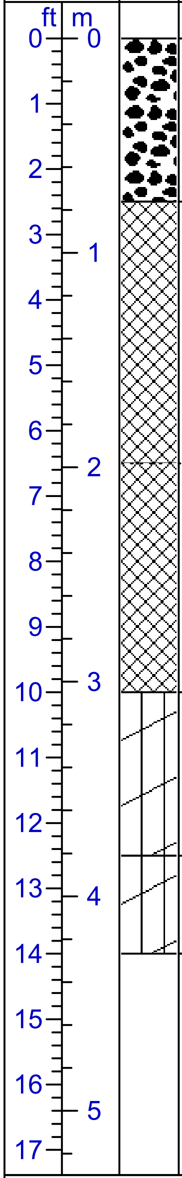
Project #: 319674.001 **Logged By:** MK

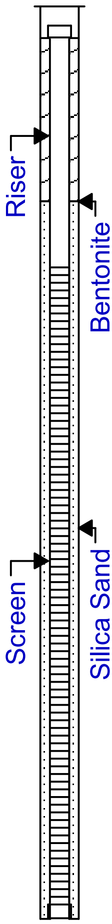
Project: Phase Two Environmental Site Assessment

Client: Morguard REIT

Location: 500 Coventry Road, Ottawa, Ontario

Drill Date: April 30, 2024





SUBSURFACE PROFILE					SAMPLE			
Depth	Symbol	Description	Measured Depth (m)	Monitoring Well Details	Recovery (%)	Sample ID	Soil Vapour Concentration* (ppm) PID	Laboratory Analysis
		Floor Surface	0.00					
		Gravel	0.76		NA	SS0	NA	
		Fill Sandy gravel, trace clay			20	SS2	240/1	PHCs, VOCs, PAH, Metals
			1.98		10	SS3	NA	
		Sandy silt with gravel, trace clay	3.05		100	SS4	20/0	
		Clayey Silt Dark, PHC-like odours	3.81		100	SS5	45/0	BTEX, PHCs, PAH
		Strong PHC-like odours	4.27		100	SS6	45/0	
		End of Borehole						

Contractor: Strata Drilling Group

Drilling Method: Direct Push / Split Spoon

Well Casing Size: 50 mm

Note:
* Soil vapour concentrations measured using a photoionization detector (PID).

Grade Elevation: ___ masl

Top of Casing Elevation: ___ masl

Sheet: 1 of 1

Log of Borehole: MW12

Project #: 319674.001 **Logged By:** MK

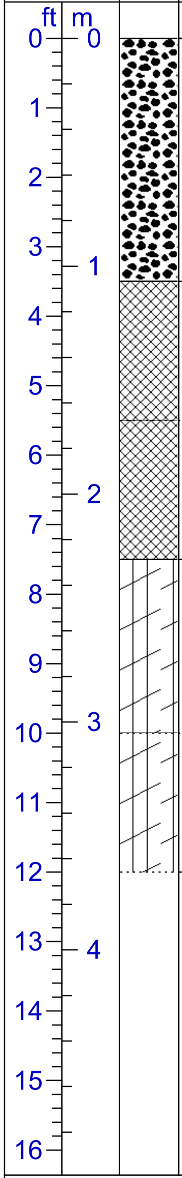
Project: Phase Two Environmental Site Assessment

Client: Morguard REIT

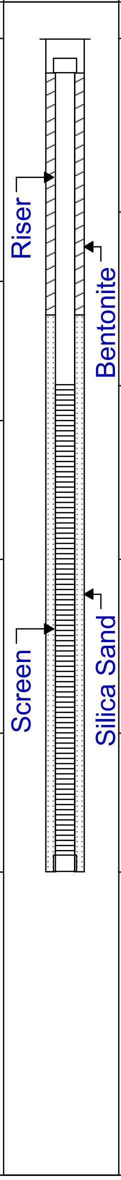
Location: 500 Coventry Road, Ottawa, Ontario

Drill Date: April 30, 2024

SUBSURFACE PROFILE



Description	Measured Depth (m)
Floor Surface	0.00
Gravel (Fill) Some silty sand, asphalt	1.07
Fill Sandy silt, fine	1.68
Sandy silt with gravel, trace clay	2.29
Clayey Silt Some cobbles and sand	3.05
Dense, dark, faint PHC-like odours	3.66
End of Borehole	



SAMPLE

Recovery (%)	Sample ID	Soil Vapour Concentration* (ppm) PID	Laboratory Analysis
20	SS1	20/0	
100	SS2	20/0 25/0	
30	SS3	95/0	BTEX, PHCs, PAH
100	SS4	25/0	
100	SS5	30/0	

Contractor: Strata Drilling Group

Drilling Method: Direct Push / Split Spoon

Well Casing Size: 50 mm

Note:
* Soil vapour concentrations measured using a photoionization detector (PID).

Grade Elevation: ___ masl

Top of Casing Elevation: ___ masl

Sheet: 1 of 1

Log of Borehole: MW13

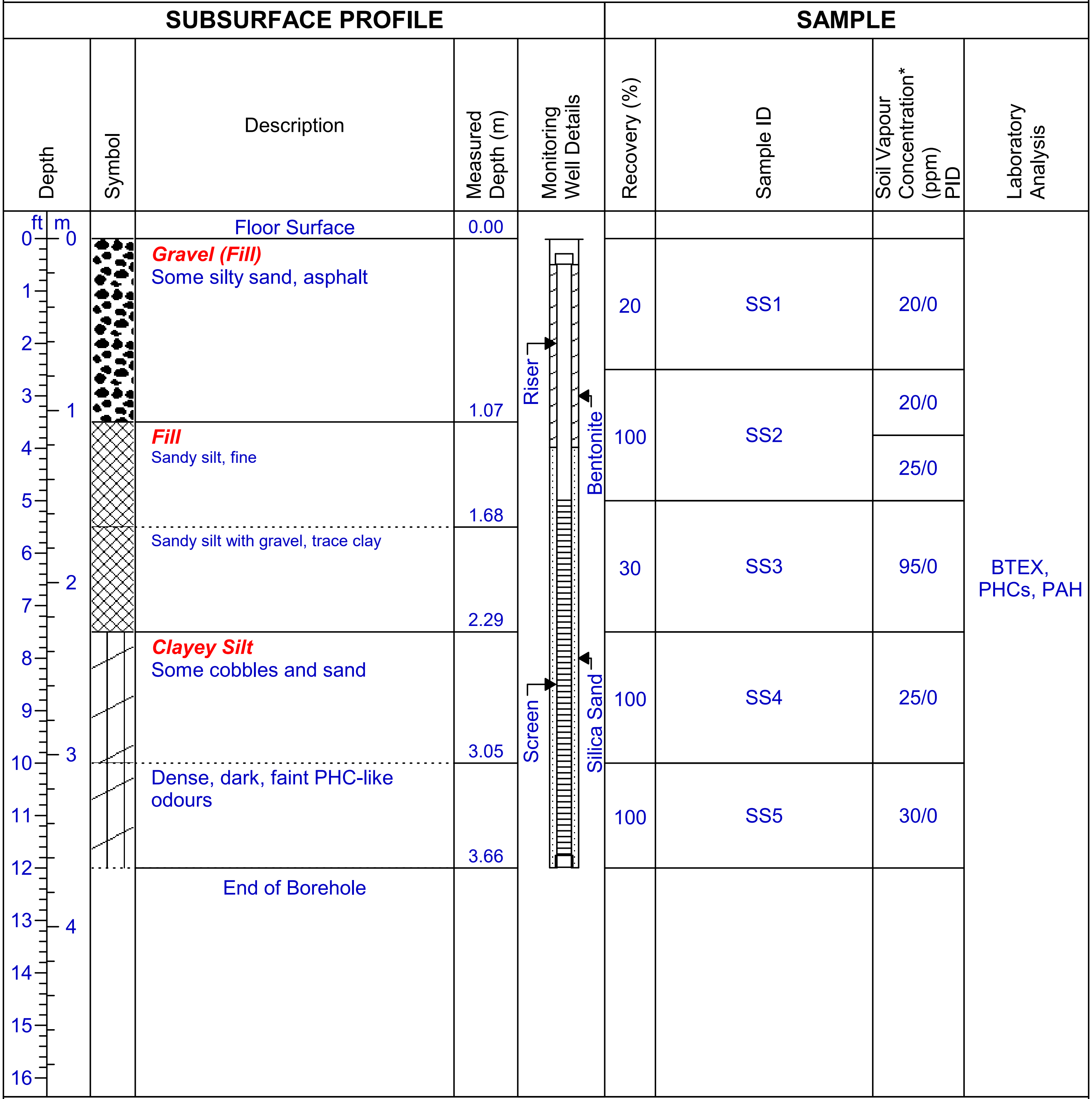
Project #: 319674.001 **Logged By:** MK

Project: Phase Two Environmental Site Assessment

Client: Morguard REIT

Location: 500 Coventry Road, Ottawa, Ontario

Drill Date: April 30, 2024



Description	Measured Depth (m)
Floor Surface	0.00
Gravel (Fill) Some silty sand, asphalt	1.07
Fill Sandy silt, fine	1.68
Sandy silt with gravel, trace clay	2.29
Clayey Silt Some cobbles and sand	3.05
Dense, dark, faint PHC-like odours	3.66
End of Borehole	

Recovery (%)	Sample ID	Soil Vapour Concentration* (ppm) PID	Laboratory Analysis
20	SS1	20/0	
100	SS2	20/0 25/0	
30	SS3	95/0	BTEX, PHCs, PAH
100	SS4	25/0	
100	SS5	30/0	

Contractor: Strata Drilling Group

Drilling Method: Direct Push / Split Spoon

Well Casing Size: 50 mm

Note:
* Soil vapour concentrations measured using a photoionization detector (PID).

Grade Elevation: ___ masl

Top of Casing Elevation: ___ masl

Sheet: 1 of 1

Log of Borehole: MW14

Project #: 319674.001 **Logged By:** MK

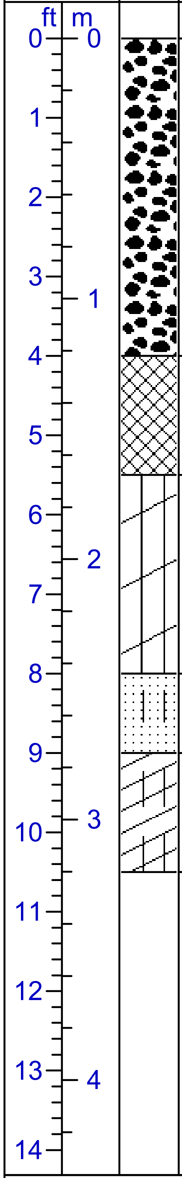
Project: Phase Two Environmental Site Assessment

Client: Morguard REIT

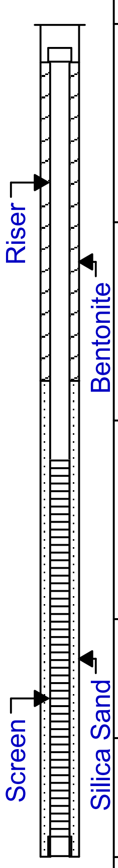
Location: 500 Coventry Road, Ottawa, Ontario

Drill Date: April 30, 2024

SUBSURFACE PROFILE



Description	Measured Depth (m)
Floor Surface	0.00
Gravel (Fill) Broken asphalt and concrete	1.22
Fill Silty sandy gravel	1.68
Clayey Silt Dense, stained, strong PHC-like odours	2.44
Silty Sand Grey, wet	2.74
Silty Clay Dark, wet	3.20
End of Borehole	



SAMPLE

Recovery (%)	Sample ID	Soil Vapour Concentration* (ppm) PID	Laboratory Analysis
0	SS1	5/0	
70	SS2	40/1	PHCs, VOCs, Metals
60	SS3	95/24	BTEX, PHCs, PAH
-	SS4	20/0	
-	SS4	35/0	

Contractor: Strata Drilling Group

Drilling Method: Direct Push / Split Spoon

Well Casing Size: 50 mm

Note:
* Soil vapour concentrations measured using a photoionization detector (PID).

Grade Elevation: ___ masl

Top of Casing Elevation: ___ masl

Sheet: 1 of 1

Log of Borehole: BH15

Project #: 319674.001 **Logged By:** MK

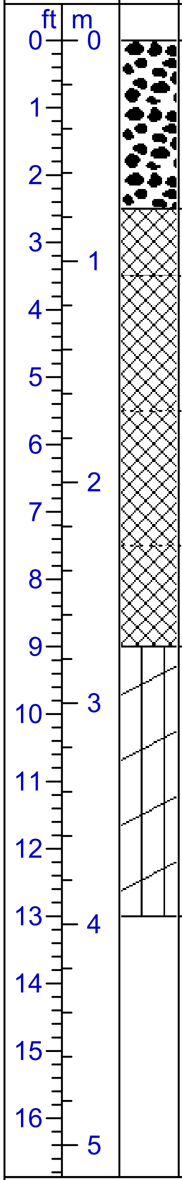
Project: Phase Two Environmental Site Assessment

Client: Morguard REIT

Location: 500 Coventry Road, Ottawa, Ontario

Drill Date: April 30, 2024

SUBSURFACE PROFILE



Description	Measured Depth (m)	Monitoring Well Details
Floor Surface	0.00	No Monitoring Well Installed
Gravel (Fill)	0.76	
Fill Grey sand gravel and silt	1.07	
Brown sandy silt and trace clay, wet	1.68	
Coarse to fine sand, trace silt	2.29	
Sand, some silt	2.74	
Clayey Silt Dark, dense	3.96	
End of Borehole		

SAMPLE

Recovery (%)	Sample ID	Soil Vapour Concentration* (ppm) PID	Laboratory Analysis
5	SS1	NA	
100	SS2	20/0	BTEX, PHCs, PAH, PCBs
30	SS3	30/0	
100	SS4	35/0	
20	SS5	70/0	PHCs, BTEX, PAH

Contractor: Strata Drilling Group

Drilling Method: Direct Push / Split Spoon

Well Casing Size: NA

Note:
* Soil vapour concentrations measured using a photoionization detector (PID).

Grade Elevation: ___ masl

Top of Casing Elevation: ___ masl

Sheet: 1 of 1

Log of Borehole: MW16

Project #: 319674.001 **Logged By:** MK

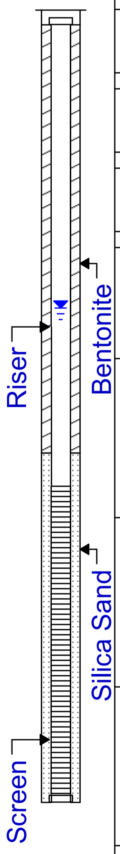
Project: Phase Two Environmental Site Assessment

Client: Morguard REIT

Location: 500 Coventry Road, Ottawa, Ontario

Drill Date: April 8, 2024

SUBSURFACE PROFILE			SAMPLE			
Description	Measured Depth (m)	Monitoring Well Details	Recovery (%)	Sample ID	Soil Vapour Concentration* (ppm) PID	Laboratory Analysis
Floor Surface	0.00					
Fill Brown sand with gravel, trace silt, compact, damp	0.76		60	SS1	40/0	
Silt with clay and sand, trace gravel	1.52		60	SS2	20/0	EC/SAR, Metals
Silt with Sand and Clay Brown silt with sand and clay, damp, compact	2.29		70	SS3	55/0	BTEX, PHCs, PAHs
Bedrock - Cored	3.35			RC1		
	4.88			RC2		
	6.50			RC3		
	8.03			RC4		
End of Borehole						



Contractor: Strata Drilling Group

Drilling Method: Direct Push / Split Spoon

Well Casing Size: 50 mm

Note:
* Soil vapour concentrations measured using a photoionization detector (PID).

Grade Elevation: ___ masl

Top of Casing Elevation: ___ masl

Sheet: 1 of 1

Log of Borehole: BH17

Project #: 319674.001 **Logged By:** MK

Project: Phase Two Environmental Site Assessment

Client: Morguard REIT

Location: 500 Coventry Road, Ottawa, Ontario

Drill Date: April 9, 2024

SUBSURFACE PROFILE					SAMPLE			
Depth	Symbol	Description	Measured Depth (m)	Monitoring Well Details	Recovery (%)	Sample ID	Soil Vapour Concentration* (ppm) PID	Laboratory Analysis
ft m		Floor Surface	0.00	No Monitoring Well Installed				EC/SAR. Metals, PHCs, BTEX, PAHs
	▨	**Fill** Brown sand with silt and gravel, compact, damp	0.30		60	SS1	0/0	
	▨	Silt with clay, sand and gravel	1.52		80	SS2	85/0	
	▨	Wet; minimal recovery	2.13		30	SS3	85/0	
	●	**Silty Sand and Gravel Till** Brown silty sand and gravel with clay, dense, wet			40	SS4	80/0	
	●				80	SS5	80/0	
	●		3.56		20	SS6		
		End of Borehole						

Contractor: Strata Drilling Group

Drilling Method: Direct Push / Split Spoon

Well Casing Size: NA

Note:
* Soil vapour concentrations measured using a photoionization detector (PID).

Grade Elevation: ___ masl

Top of Casing Elevation: ___ masl

Sheet: 1 of 1

Log of Borehole: MW18

Project #: 319674.001 **Logged By:** MK

Project: Phase Two Environmental Site Assessment **Client:** Morguard REIT

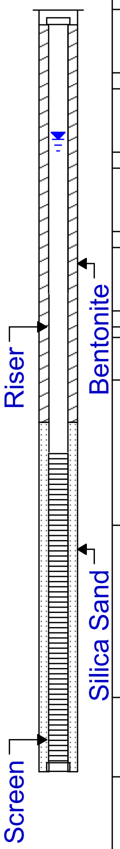
Location: 500 Coventry Road, Ottawa, Ontario

Drill Date: April 8, 2024

SUBSURFACE PROFILE / SAMPLE

Description	Measured Depth (m)	Recovery (%)	Sample ID	Soil Vapour Concentration* (ppm) PID	Laboratory Analysis
Ground Surface	0.00				
Fill Grey sand with gravel and silt, compact, wet	0.76	50	SS1	65/0	
Brown silt with sand, compact, moist; sampler refusal on boulder	1.52	10	SS2	35/0	EC/SAR. pH
No recovery	2.29	0	SS3	NA	
Dark grey silt with clay, trace sand and gravel, compact, wet	3.05	40	SS4	70/0	VOCs, PHCs, PAHs, PCBs
Shale Black shale, with clay seams	3.56		RC1	30/0	
Bedrock - Cored	4.95		RC2		
	6.61		RC3		
	7.36		RC4		
End of Borehole					

Monitoring Well Details



Contractor: Strata Drilling Group

Drilling Method: Direct Push / Split Spoon

Well Casing Size: 50 mm

Note:
* Soil vapour concentrations measured using a photoionization detector (PID).

Grade Elevation: ___ masl

Top of Casing Elevation: ___ masl

Sheet: 1 of 1

Log of Borehole: MW19

Project #: 319674.001 **Logged By:** MK

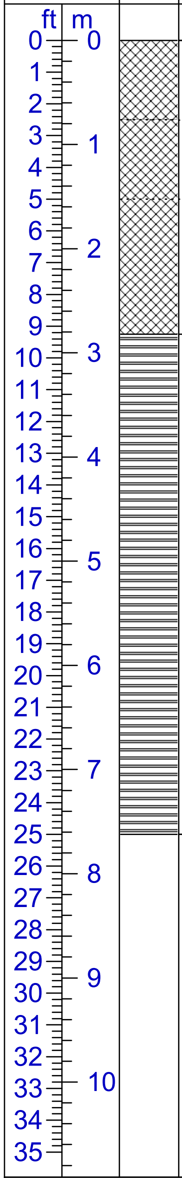
Project: Phase Two Environmental Site Assessment

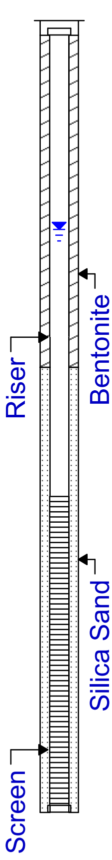
Client: Morguard REIT

Location: 500 Coventry Road, Ottawa, Ontario

Drill Date: April 9, 2024

SUBSURFACE PROFILE		SAMPLE			
Description	Measured Depth (m)	Recovery (%)	Sample ID	Soil Vapour Concentration* (ppm) PID	Laboratory Analysis
Floor Surface	0.00				
Fill Brown sand with silt and gravel, compact, damp	0.76	60	SS1	10/0	
Silt with clay and sand, trace gravel, moist to wet	1.52	60	SS2	35/0	EC/SAR, Metals
Clay with gravel and sand, damp		70	SS3	50/0	BTEX, PHCs, PAHs
	2.82	10	SS4		
Bedrock Bedrock - Cored	7.62				
End of Borehole Borehole terminated at 7.62 mbgs.					





Water level = 2.02 mbgs, as measured on April 17, 2024

Contractor: Strata Drilling Group

Drilling Method: Direct Push / Split Spoon

Well Casing Size: 50 mm

Note:
* Soil vapour concentrations measured using a photoionization detector (PID).

Grade Elevation: ___ masl

Top of Casing Elevation: ___ masl

Sheet: 1 of 1

Log of Borehole: MW20

Project #: 319674 **Logged By:** AM

Project: Phase Two Environmental Site Assessment

Client: Morguard REIT c/o Morguard Investments Limited

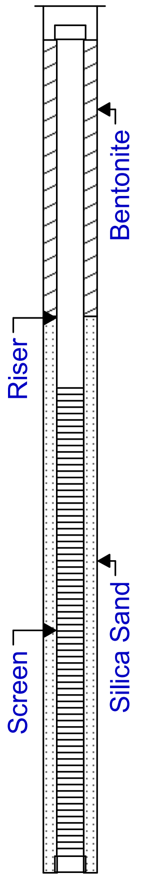
Location: 500 Coventry Road, Ottawa, Ontario

Drill Date: April 25, 2024

SUBSURFACE PROFILE

Description	Measured Depth (m)
Ground Surface	0.00
Asphalt	0.00
Silty Sand Fill and Gravel Brown, dry, no odour or staining	-1.52
Sandy Clay Brown/Grey, dry-moist, hard packed, no odour or staining	1.52 -2.29
Clayey Sand Brown/dark grey, no odour or staining	2.29
End of Borehole	

Monitoring Well Details



SAMPLE

Recovery (%)	Sample ID	Soil Vapour Concentration* (ppm) CGI/PID	Laboratory Analysis
80	SS1	30/0	
80	SS2	40/0	
100	SS3	40/0	
100	SS4	45/0	
100	SS5	45/0	PHCs (F1-F4), PAHs, VOCs, BTEX, and Metals (Incl. Boron, HWS, CrVI, Hg)

Contractor: Strata Drilling Group

Drilling Method: Direct Push

Well Casing Size: 2 Inch

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

Grade Elevation: N/A

Top of Casing Elevation: N/A

Sheet: 1 of 1

Log of Borehole: MW21

Project #: 319674 **Logged By:** AM

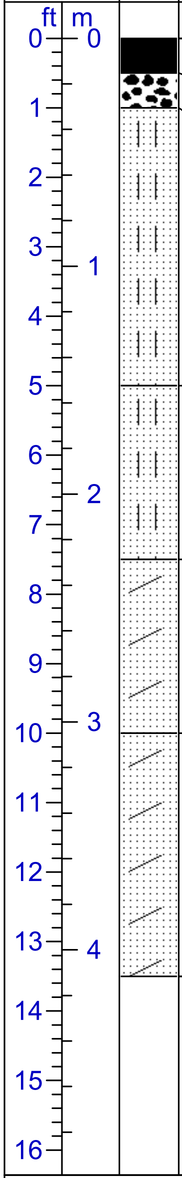
Project: Phase Two Environmental Site Assessment

Client: Morguard REIT c/o Morguard Investments Limited

Location: 500 Coventry Road, Ottawa, Ontario

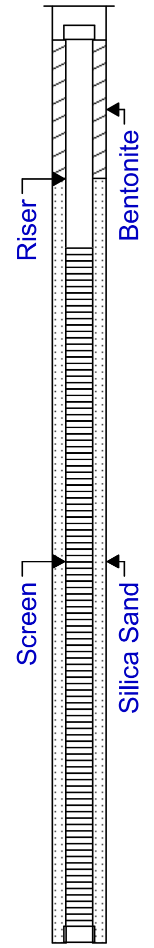
Drill Date: April 25, 2024

SUBSURFACE PROFILE



Description	Measured Depth (m)
Ground Surface	0.00
Asphalt	0.00
Gravel (Fill)	
Silty Sand Brown, dry-moist, trace gravel, hint PHC odour, no staining	-1.52
Brown, dry-moist, trace gravel, no odour or staining	1.52 -2.29
Sandy Clay Brown-grey, moist-wet, no odour or staining	2.29 -3.05
Grey, hard packed, no odour or staining	3.05 -4.11
End of Borehole	4.11

Monitoring Well Details



SAMPLE

Recovery (%)	Sample ID	Soil Vapour Concentration* (ppm) CGI/PID	Laboratory Analysis
	SS1	0/0	
	SS2	0/0	
	SS3	0/0	
	SS4	0/0	PHCs (F1-F4), PAHS, PCBs, VOCs, BTEX, and Metals (Incl. Boron, HWS, CrVI, Hg)
	SS5	0/0	
	SS6	0/0	

Contractor: Strata Drilling Group

Drilling Method: Direct Push

Well Casing Size: 2 Inch

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

Grade Elevation: N/A

Top of Casing Elevation: N/A

Sheet: 1 of 1

Log of Borehole: MW22

Project #: 319674.001 **Logged By:** MK

Project: Phase Two Environmental Site Assessment

Client: Morguard REIT

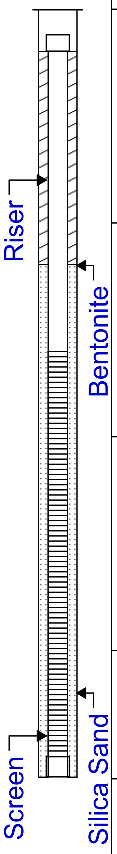
Location: 500 Coventry Road, Ottawa, Ontario

Drill Date: April 30, 2024

SUBSURFACE PROFILE

Depth	Symbol	Description	Measured Depth (m)
0 ft / 0 m		Floor Surface	0.00
0–3 ft	■	***Asphalt*** with gravel fill	0.91
3–5 ft (1 m)	▩	***Fill*** Gravelly sand, with some silty clay	1.52
5–9 ft (2 m)	░	***Sandy Clay*** Some gravel	2.74
		End of Borehole	

Monitoring Well Details



SAMPLE

Recovery (%)	Sample ID	Soil Vapour Concentration* (ppm) PID	Laboratory Analysis
0	SS1	NA	
40	SS2	10/0	
70	SS3	25/0	
100	SS4	20/0	PHC, PAH, VOC, Glycol, Metals

Contractor: Strata Drilling Group

Drilling Method: Direct Push / Split Spoon

Well Casing Size: 50 mm

Note:
* Soil vapour concentrations measured using a photoionization detector (PID).

Grade Elevation: ___ masl

Top of Casing Elevation: ___ masl

Sheet: 1 of 1

Log of Borehole: MW23

Project #: 319674.001 **Logged By:** MK

Project: Phase Two Environmental Site Assessment

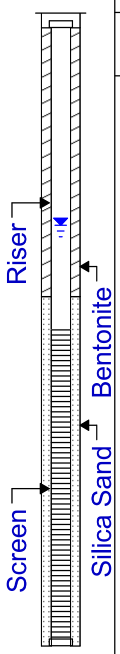
Client: Morguard REIT

Location: 500 Coventry Road, Ottawa, Ontario

Drill Date: April 9, 2024

SUBSURFACE PROFILE					SAMPLE			
Depth	Symbol	Description	Measured Depth (m)	Monitoring Well Details	Recovery (%)	Sample ID	Soil Vapour Concentration* (ppm) PID	Laboratory Analysis
ft / m 0 / 0		Floor Surface	0.00					BTEX, PHCs, PAHs, Metals
	▩	**Fill** Brown sand and gravel, some silt, trace clay	0.91		75	SS1	0/0	
	▤	**Shale** Augered through shale for the well install	6.10					
		End of Borehole Borehole terminated at 6.1 mbgs, sampler refusal was encountered at 0.9 mbgs.		Water level = 2.03 mbgs, as measured on April 17, 2024				

Depth scale: ft 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35; m 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10



Contractor: Strata Drilling Group

Drilling Method: Direct Push / Split Spoon

Well Casing Size: 50 mm

Note:
* Soil vapour concentrations measured using a photoionization detector (PID).

Grade Elevation: ___ masl

Top of Casing Elevation: ___ masl

Sheet: 1 of 1

Log of Borehole: BH24

Project #: 319674.001 **Logged By:** MK

Project: Phase Two Environmental SIte Assessment

Client: Morguard REIT

Location: 500 Coventry Road, Ottawa, Ontario

Drill Date: April 8, 2024

SUBSURFACE PROFILE					SAMPLE			
Depth	Symbol	Description	Measured Depth (m)	Monitoring Well Details	Recovery (%)	Sample ID	Soil Vapour Concentration* (ppm) PID	Laboratory Analysis
ft 0 m 0		Floor Surface	0.00					
1 2	▨	**Fill** Brown sand with gravel, trace silt, dense, damp to moist		No Monitoring Well Installed	50	SS1	30/0	
3 1 4 5	▨	Silt with clay and sand, trace gravel, compact, moist to wet	0.76		60	SS2	20/0	EC/SAR, Metals, BTEX, PHCs, PAH
6					40	SS3	25/0	
2 7 8 9 3 10 11 12 13 4 14 15 16		End of Borehole Borehole terminated at 1.8 mbgs, upon sampler refusal on possible bedrock.	1.83					

Contractor: Strata Drilling Group

Drilling Method: Direct Push / Split Spoon

Well Casing Size: 50 mm

Note:
* Soil vapour concentrations measured using a photoionization detector (PID).

Grade Elevation: ___ masl

Top of Casing Elevation: ___ masl

Sheet: 1 of 1

APPENDIX D

Laboratory Certificates of Analysis

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

CLIENT NAME: PINCHIN LTD.
1 HINES ROAD SUITE 200
KANATA, ON K2K 3C7
(613) 592-3387

ATTENTION TO: Mandy Witteman

PROJECT: 319674.001

AGAT WORK ORDER: 24Z137710

SOIL ANALYSIS REVIEWED BY: Nivine Basily, Inorganic Team Lead

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Apr 16, 2024

PAGES (INCLUDING COVER): 41

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

Notes

Certificate of Analysis

AGAT WORK ORDER: 24Z137710

PROJECT: 319674.001

CLIENT NAME: PINCHIN LTD.

SAMPLING SITE:500 Coventry Rd.

ATTENTION TO: Mandy Witteman

SAMPLED BY:Mandy Witteman

O. Reg. 153(511) - All Metals (Soil)

DATE RECEIVED: 2024-04-09

DATE REPORTED: 2024-04-16

			SAMPLE DESCRIPTION:	MW16-SS2	MW17-SS2	MW18-SS2	MW19-SS2	BH23-SS1
			SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil
			DATE SAMPLED:	2024-04-08	2024-04-09	2024-04-08	2024-04-09	2024-04-09
Parameter	**Unit**	**G / S**	**RDL**	**5791683**	**5791702**	**5791711**	**5791733**	**5791736**
Antimony	µg/g		0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g		1	5	3	1	3	6
Barium	µg/g		2.0	80.3	126	43.3	59.7	83.6
Beryllium	µg/g		0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Boron	µg/g		5	9	5	<5	5	9
Boron (Hot Water Soluble)	µg/g		0.10	0.13	0.12	0.17	<0.10	0.18
Cadmium	µg/g		0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g		5	24	41	26	21	21
Cobalt	µg/g		0.8	10.7	10.2	5.7	7.0	9.1
Copper	µg/g		1.0	28.5	19.9	13.0	19.3	21.0
Lead	µg/g		1	10	11	4	8	10
Molybdenum	µg/g		0.5	2.2	1.1	1.7	1.4	1.9
Nickel	µg/g		1	34	28	15	23	27
Selenium	µg/g		0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	µg/g		0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g		0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g		0.50	1.06	1.12	0.70	0.84	1.02
Vanadium	µg/g		2.0	35.2	43.8	27.6	28.4	33.5
Zinc	µg/g		5	53	48	25	39	42
Chromium, Hexavalent	µg/g		0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Mercury	µg/g		0.10	<0.10	<0.10	<0.10	<0.10	<0.10

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Analysis performed at AGAT Toronto (unless marked by *)

NIVINE BASILY

Certified By:

AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 24Z137710

PROJECT: 319674.001

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

CLIENT NAME: PINCHIN LTD.

SAMPLING SITE:500 Coventry Rd.

ATTENTION TO: Mandy Witteman

SAMPLED BY:Mandy Witteman

O. Reg. 153(511) - Metals (Including Hydrides) (Soil)

DATE RECEIVED: 2024-04-09

DATE REPORTED: 2024-04-16

			SAMPLE DESCRIPTION:	MW24-SS2
			SAMPLE TYPE:	Soil
			DATE SAMPLED:	2024-04-09
Parameter	**Unit**	**G / S**	**RDL**	**5791737**
Antimony	µg/g		0.8	<0.8
Arsenic	µg/g		1	5
Barium	µg/g		2.0	106
Beryllium	µg/g		0.5	<0.5
Boron	µg/g		5	9
Cadmium	µg/g		0.5	<0.5
Chromium	µg/g		5	21
Cobalt	µg/g		0.8	10.7
Copper	µg/g		1.0	24.8
Lead	µg/g		1	9
Molybdenum	µg/g		0.5	2.5
Nickel	µg/g		1	32
Selenium	µg/g		0.8	<0.8
Silver	µg/g		0.5	<0.5
Thallium	µg/g		0.5	<0.5
Uranium	µg/g		0.50	1.05
Vanadium	µg/g		2.0	34.4
Zinc	µg/g		5	51

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Analysis performed at AGAT Toronto (unless marked by *)

ASSOCIATION OF THE CHEMICAL PROFESSION OF ONTARIO
CHARTERED
NIVINE BASILY
CHEMIST

Certified By:

Certificate of Analysis

AGAT WORK ORDER: 24Z137710

PROJECT: 319674.001

CLIENT NAME: PINCHIN LTD.

SAMPLING SITE:500 Coventry Rd.

ATTENTION TO: Mandy Witteman

SAMPLED BY:Mandy Witteman

O. Reg. 153(511) - ORPs (Soil)

DATE RECEIVED: 2024-04-09

DATE REPORTED: 2024-04-16

			SAMPLE DESCRIPTION:	MW16-SS2	MW17-SS2	MW17-SS3	MW17-SS5	MW18-SS2	MW19-SS2	MW24-SS2
			SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil
			DATE SAMPLED:	2024-04-08	2024-04-09	2024-04-09	2024-04-09	2024-04-08	2024-04-09	2024-04-09
Parameter	**Unit**	**G / S**	**RDL**	**5791683**	**5791702**	**5791708**	**5791710**	**5791711**	**5791733**	**5791737**
Electrical Conductivity (2:1)	mS/cm		0.005	7.60	1.04	1.39	1.89	1.74	0.779	2.90
Sodium Adsorption Ratio (2:1) (Calc.)	N/A		N/A	44.9	6.51	12.8	10.0	9.96	6.47	11.8

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5791683-5791737 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by *)

NIVINE BASILY

Certified By:

Certificate of Analysis

AGAT WORK ORDER: 24Z137710
PROJECT: 319674.001

CLIENT NAME: PINCHIN LTD.
SAMPLING SITE:500 Coventry Rd.

ATTENTION TO: Mandy Witteman
SAMPLED BY:Mandy Witteman

O. Reg. 153(511) - ORPs (pH) (Soil)

DATE RECEIVED: 2024-04-09

DATE REPORTED: 2024-04-16

			SAMPLE DESCRIPTION:	MW16-SS1	MW18-SS2
			SAMPLE TYPE:	Soil	Soil
			DATE SAMPLED:	2024-04-08	2024-04-08
Parameter	**Unit**	**G / S**	**RDL**	**5791682**	**5791711**
pH, 2:1 CaCl2 Extraction	pH Units		NA	7.18	7.51

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5791682-5791711 pH was determined on the 0.01M CaCl2 extract obtained from 2:1 leaching procedure (2 parts extraction fluid:1 part wet soil).

Analysis performed at AGAT Toronto (unless marked by *)

ASSOCIATION OF THE CHEMICAL PROFESSION OF ONTARIO
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CHEMIST

Certified By:

CLIENT NAME: PINCHIN LTD.

SAMPLING SITE:500 Coventry Rd.

ATTENTION TO: Mandy Witteman

SAMPLED BY:Mandy Witteman

O. Reg. 153(511) - PAHs (Soil)

DATE RECEIVED: 2024-04-09

DATE REPORTED: 2024-04-16

			SAMPLE DESCRIPTION:	MW16-SS3	MW17-SS2	MW18-SS4	MW19-SS3	BH23-SS1	MW24-SS2	DUP 1
			SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil
			DATE SAMPLED:	2024-04-08	2024-04-09	2024-04-08	2024-04-09	2024-04-09	2024-04-09	2024-04-08
Parameter	**Unit**	**G / S**	**RDL**	5791691	5791702	5791727	5791735	5791736	5791737	5791740
Naphthalene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benz(a)anthracene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2-and 1-methyl Naphthalene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	16.7	15.6	10.0	8.3	11.4	11.2	13.5
Surrogate	**Unit**	**Acceptable Limits**								
Naphthalene-d8	%	50-140		90	80	70	75	80	70	70
Acridine-d9	%	50-140		80	90	80	75	105	95	90
Terphenyl-d14	%	50-140		105	70	105	95	75	90	95

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5791691-5791740 Results are based on the dry weight of the soil.
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopnikolof

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CLIENT NAME: PINCHIN LTD.

SAMPLING SITE:500 Coventry Rd.

ATTENTION TO: Mandy Witteman

SAMPLED BY:Mandy Witteman

O. Reg. 153(511) - PCBs (Soil)

DATE RECEIVED: 2024-04-09

DATE REPORTED: 2024-04-16

			SAMPLE DESCRIPTION:	MW18-SS4
			SAMPLE TYPE:	Soil
			DATE SAMPLED:	2024-04-08
Parameter	**Unit**	**G / S**	**RDL**	**5791727**
Polychlorinated Biphenyls	µg/g		0.1	<0.1
Moisture Content	%		0.1	10.0
Surrogate	**Unit**	**Acceptable Limits**		
Decachlorobiphenyl	%	50-140		120

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5791727 Results are based on the dry weight of soil extracted.
PCB total is a calculated parameter. The calculated value is the sum of Aroclor 1242, Aroclor 1248, Aroclor 1254 and Aroclor 1260.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopukolof

Certificate of Analysis

AGAT WORK ORDER: 24Z137710
PROJECT: 319674.001

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CLIENT NAME: PINCHIN LTD.
SAMPLING SITE:500 Coventry Rd.
ATTENTION TO: Mandy Witteman
SAMPLED BY:Mandy Witteman

O. Reg. 153(511) - PHCs F1 - F4 (Soil)

DATE RECEIVED: 2024-04-09
DATE REPORTED: 2024-04-16

			SAMPLE DESCRIPTION:	DUP 2
			SAMPLE TYPE:	Soil
			DATE SAMPLED:	2024-04-09
Parameter	**Unit**	**G / S**	**RDL**	**5791742**
Benzene	µg/g		0.02	<0.02
Toluene	µg/g		0.05	<0.05
Ethylbenzene	µg/g		0.05	<0.05
m & p-Xylene	µg/g		0.05	<0.05
o-Xylene	µg/g		0.05	<0.05
Xylenes (Total)	µg/g		0.05	<0.05
F1 (C6 to C10)	µg/g		5	<5
F1 (C6 to C10) minus BTEX	µg/g		5	<5
F2 (C10 to C16)	µg/g		10	<10
F3 (C16 to C34)	µg/g		50	<50
F4 (C34 to C50)	µg/g		50	<50
Gravimetric Heavy Hydrocarbons	µg/g		50	NA
Moisture Content	%		0.1	14.2
Surrogate	**Unit**	**Acceptable Limits**		
Toluene-d8	% Recovery	60-140		69
Terphenyl	%	60-140		83

Certified By: NPopukolof

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CLIENT NAME: PINCHIN LTD.

SAMPLING SITE:500 Coventry Rd.

ATTENTION TO: Mandy Witteman

SAMPLED BY:Mandy Witteman

O. Reg. 153(511) - PHCs F1 - F4 (Soil)

DATE RECEIVED: 2024-04-09

DATE REPORTED: 2024-04-16

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5791742 Results are based on sample dry weight.
The C6-C10 fraction is calculated using Toluene response factor.
Xylenes is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Quality Control Data is available upon request.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopwkolof

Certificate of Analysis

AGAT WORK ORDER: 24Z137710

PROJECT: 319674.001

CLIENT NAME: PINCHIN LTD.

SAMPLING SITE:500 Coventry Rd.

ATTENTION TO: Mandy Witteman

SAMPLED BY:Mandy Witteman

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

DATE RECEIVED: 2024-04-09

DATE REPORTED: 2024-04-16

			SAMPLE DESCRIPTION:	MW18-SS4
			SAMPLE TYPE:	Soil
			DATE SAMPLED:	2024-04-08
Parameter	**Unit**	**G / S**	**RDL**	**5791727**
F1 (C6 to C10)	µg/g		5	<5
F1 (C6 to C10) minus BTEX	µg/g		5	<5
F2 (C10 to C16)	µg/g		10	28
F2 (C10 to C16) minus Naphthalene	µg/g		10	28
F3 (C16 to C34)	µg/g		50	<50
F3 (C16 to C34) minus PAHs	µg/g		50	<50
F4 (C34 to C50)	µg/g		50	<50
Gravimetric Heavy Hydrocarbons	µg/g		50	NA
Moisture Content	%		0.1	10.0
Surrogate	**Unit**	**Acceptable Limits**		
Toluene-d8	%	50-140		102
Terphenyl	%	60-140		120

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5791727 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopukolof

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CLIENT NAME: PINCHIN LTD.
SAMPLING SITE:500 Coventry Rd.
ATTENTION TO: Mandy Witteman
SAMPLED BY:Mandy Witteman

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

DATE RECEIVED: 2024-04-09 **DATE REPORTED: 2024-04-16**

			SAMPLE DESCRIPTION:	MW16-SS3	MW17-SS2	MW19-SS3	BH23-SS1	MW24-SS2
			SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil
			DATE SAMPLED:	2024-04-08	2024-04-09	2024-04-09	2024-04-09	2024-04-09
Parameter	**Unit**	**G / S**	**RDL**	5791691	5791702	5791735	5791736	5791737
Benzene	µg/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Toluene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
m & p-Xylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes (Total)	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 to C10)	µg/g		5	<5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g		5	<5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g		10	<10	<10	15	<10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10	<10	<10	15	<10	<10
F3 (C16 to C34)	µg/g		50	<50	<50	<50	<50	<50
F3 (C16 to C34) minus PAHs	µg/g		50	<50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g		50	<50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g		50	NA	NA	NA	NA	NA
Moisture Content	%		0.1	16.7	15.6	8.3	11.4	11.2
Surrogate	**Unit**	**Acceptable Limits**						
Toluene-d8	% Recovery	60-140		79	96	75	73	69
Terphenyl	%	60-140		80	92	100	97	85

Certified By: NPopukolof

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

DATE RECEIVED: 2024-04-09 **DATE REPORTED: 2024-04-16**

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5791691-5791737 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopukolof

Certificate of Analysis

AGAT WORK ORDER: 24Z137710
PROJECT: 319674.001

CLIENT NAME: PINCHIN LTD.
SAMPLING SITE:500 Coventry Rd.

ATTENTION TO: Mandy Witteman
SAMPLED BY:Mandy Witteman

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2024-04-09

DATE REPORTED: 2024-04-16

			SAMPLE DESCRIPTION:	MW18-SS4
			SAMPLE TYPE:	Soil
			DATE SAMPLED:	2024-04-08
Parameter	**Unit**	**G / S**	**RDL**	**5791727**
Dichlorodifluoromethane	µg/g		0.05	<0.05
Vinyl Chloride	ug/g		0.02	<0.02
Bromomethane	ug/g		0.05	<0.05
Trichlorofluoromethane	ug/g		0.05	<0.05
Acetone	ug/g		0.50	<0.50
1,1-Dichloroethylene	ug/g		0.05	<0.05
Methylene Chloride	ug/g		0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g		0.05	<0.05
Methyl tert-butyl Ether	ug/g		0.05	<0.05
1,1-Dichloroethane	ug/g		0.02	<0.02
Methyl Ethyl Ketone	ug/g		0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g		0.02	<0.02
Chloroform	ug/g		0.04	<0.04
1,2-Dichloroethane	ug/g		0.03	<0.03
1,1,1-Trichloroethane	ug/g		0.05	<0.05
Carbon Tetrachloride	ug/g		0.05	<0.05
Benzene	ug/g		0.02	<0.02
1,2-Dichloropropane	ug/g		0.03	<0.03
Trichloroethylene	ug/g		0.03	<0.03
Bromodichloromethane	ug/g		0.05	<0.05
Methyl Isobutyl Ketone	ug/g		0.50	<0.50
1,1,2-Trichloroethane	ug/g		0.04	<0.04
Toluene	ug/g		0.05	<0.05
Dibromochloromethane	ug/g		0.05	<0.05
Ethylene Dibromide	ug/g		0.04	<0.04
Tetrachloroethylene	ug/g		0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g		0.04	<0.04
Chlorobenzene	ug/g		0.05	<0.05
Ethylbenzene	ug/g		0.05	<0.05
m & p-Xylene	ug/g		0.05	<0.05

Certified By:

Certificate of Analysis

AGAT WORK ORDER: 24Z137710
PROJECT: 319674.001

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CLIENT NAME: PINCHIN LTD.
SAMPLING SITE:500 Coventry Rd.
ATTENTION TO: Mandy Witteman
SAMPLED BY:Mandy Witteman

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2024-04-09 **DATE REPORTED: 2024-04-16**

			SAMPLE DESCRIPTION:	MW18-SS4
			SAMPLE TYPE:	Soil
			DATE SAMPLED:	2024-04-08
Parameter	**Unit**	**G / S**	**RDL**	**5791727**
Bromoform	ug/g		0.05	<0.05
Styrene	ug/g		0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g		0.05	<0.05
o-Xylene	ug/g		0.05	<0.05
1,3-Dichlorobenzene	ug/g		0.05	<0.05
1,4-Dichlorobenzene	ug/g		0.05	<0.05
1,2-Dichlorobenzene	ug/g		0.05	<0.05
Xylenes (Total)	ug/g		0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g		0.05	<0.05
n-Hexane	µg/g		0.05	<0.05
Moisture Content	%		0.1	10.0
Surrogate	**Unit**	**Acceptable Limits**		
Toluene-d8	% Recovery	50-140		102
4-Bromofluorobenzene	% Recovery	50-140		100

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5791727 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopovkolof

Quality Assurance

CLIENT NAME: PINCHIN LTD.
PROJECT: 319674.001
SAMPLING SITE:500 Coventry Rd.

AGAT WORK ORDER: 24Z137710
ATTENTION TO: Mandy Witteman
SAMPLED BY:Mandy Witteman

Soil Analysis

RPT Date: Apr 16, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - All Metals (Soil)															
Antimony	5791683	5791683	<0.8	<0.8	NA	< 0.8	130%	70%	130%	101%	80%	120%	87%	70%	130%
Arsenic	5791683	5791683	5	5	NA	< 1	109%	70%	130%	100%	80%	120%	105%	70%	130%
Barium	5791683	5791683	80.3	79.0	1.6%	< 2.0	100%	70%	130%	97%	80%	120%	94%	70%	130%
Beryllium	5791683	5791683	<0.5	<0.5	NA	< 0.5	79%	70%	130%	107%	80%	120%	103%	70%	130%
Boron	5791683	5791683	9	9	NA	< 5	74%	70%	130%	99%	80%	120%	83%	70%	130%
Boron (Hot Water Soluble)	5791683	5791683	0.13	0.13	NA	< 0.10	95%	60%	140%	104%	70%	130%	100%	60%	140%
Cadmium	5791683	5791683	<0.5	<0.5	NA	< 0.5	96%	70%	130%	100%	80%	120%	105%	70%	130%
Chromium	5791683	5791683	24	24	NA	< 5	108%	70%	130%	113%	80%	120%	117%	70%	130%
Cobalt	5791683	5791683	10.7	10.6	0.5%	< 0.8	105%	70%	130%	105%	80%	120%	109%	70%	130%
Copper	5791683	5791683	28.5	28.8	0.9%	< 1.0	97%	70%	130%	109%	80%	120%	103%	70%	130%
Lead	5791683	5791683	10	10	3.0%	< 1	108%	70%	130%	112%	80%	120%	106%	70%	130%
Molybdenum	5791683	5791683	2.2	2.2	NA	< 0.5	99%	70%	130%	100%	80%	120%	99%	70%	130%
Nickel	5791683	5791683	34	34	0.2%	< 1	103%	70%	130%	104%	80%	120%	103%	70%	130%
Selenium	5791683	5791683	<0.8	<0.8	NA	< 0.8	137%	70%	130%	97%	80%	120%	98%	70%	130%
Silver	5791683	5791683	<0.5	<0.5	NA	< 0.5	109%	70%	130%	104%	80%	120%	107%	70%	130%
Thallium	5791683	5791683	<0.5	<0.5	NA	< 0.5	106%	70%	130%	97%	80%	120%	97%	70%	130%
Uranium	5791683	5791683	1.06	1.07	NA	< 0.50	113%	70%	130%	103%	80%	120%	111%	70%	130%
Vanadium	5791683	5791683	35.2	35.2	0.1%	< 2.0	118%	70%	130%	112%	80%	120%	115%	70%	130%
Zinc	5791683	5791683	53	51	3.5%	< 5	102%	70%	130%	107%	80%	120%	119%	70%	130%
Chromium, Hexavalent	5786500		<0.2	<0.2	NA	< 0.2	95%	70%	130%	96%	80%	120%	79%	70%	130%
Mercury	5791683	5791683	<0.10	<0.10	NA	< 0.10	106%	70%	130%	101%	80%	120%	108%	70%	130%

Comments: NA signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.

Matrix spike: More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

O. Reg. 153(511) - ORPs (Soil)															
Electrical Conductivity (2:1)	5793611		0.611	0.574	6.3%	< 0.005	110%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	5789471		0.407	0.370	9.6%	NA									

Comments: NA signifies Not Applicable.

O. Reg. 153(511) - ORPs (pH) (Soil)															
pH, 2:1 CaCl2 Extraction	5791680		6.57	6.83	4.0%	NA	100%	80%	120%						

Comments: NA signifies Not Applicable.
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

Quality Assurance

CLIENT NAME: PINCHIN LTD.

PROJECT: 319674.001

SAMPLING SITE:500 Coventry Rd.

AGAT WORK ORDER: 24Z137710

ATTENTION TO: Mandy Witteman

SAMPLED BY:Mandy Witteman

Soil Analysis (Continued)

RPT Date: Apr 16, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Certified By:

NIVINE BASILY

Quality Assurance

CLIENT NAME: PINCHIN LTD.
PROJECT: 319674.001
SAMPLING SITE:500 Coventry Rd.

AGAT WORK ORDER: 24Z137710
ATTENTION TO: Mandy Witteman
SAMPLED BY:Mandy Witteman

Trace Organics Analysis

RPT Date: Apr 16, 2024			**DUPLICATE**			**Method Blank**	**REFERENCE MATERIAL**			**METHOD BLANK SPIKE**			**MATRIX SPIKE**		
PARAMETER	**Batch**	**Sample Id**	**Dup #1**	**Dup #2**	**RPD**		**Measured Value**	**Acceptable Limits**		**Recovery**	**Acceptable Limits**		**Recovery**	**Acceptable Limits**	
								Lower	**Upper**		**Lower**	**Upper**		**Lower**	**Upper**
O. Reg. 153(511) - PHCs F1 - F4 (Soil)															
Benzene	5793479		<0.02	<0.02	NA	< 0.02	93%	60%	140%	94%	60%	140%	86%	60%	140%
Toluene	5793479		<0.05	<0.05	NA	< 0.05	89%	60%	140%	87%	60%	140%	93%	60%	140%
Ethylbenzene	5793479		<0.05	<0.05	NA	< 0.05	102%	60%	140%	98%	60%	140%	99%	60%	140%
m & p-Xylene	5793479		<0.05	<0.05	NA	< 0.05	102%	60%	140%	96%	60%	140%	90%	60%	140%
o-Xylene	5793479		<0.05	<0.05	NA	< 0.05	102%	60%	140%	98%	60%	140%	93%	60%	140%
F1 (C6 to C10)	5793479		<5	<5	NA	< 5	93%	60%	140%	94%	60%	140%	91%	60%	140%
O. Reg. 153(511) - PAHs (Soil)															
Naphthalene	5793561		<0.05	<0.05	NA	< 0.05	92%	50%	140%	80%	50%	140%	88%	50%	140%
Acenaphthylene	5793561		<0.05	<0.05	NA	< 0.05	84%	50%	140%	108%	50%	140%	75%	50%	140%
Acenaphthene	5793561		<0.05	<0.05	NA	< 0.05	100%	50%	140%	75%	50%	140%	78%	50%	140%
Fluorene	5793561		<0.05	<0.05	NA	< 0.05	137%	50%	140%	95%	50%	140%	98%	50%	140%
Phenanthrene	5793561		0.12	0.09	NA	< 0.05	125%	50%	140%	105%	50%	140%	69%	50%	140%
Anthracene	5793561		<0.05	<0.05	NA	< 0.05	77%	50%	140%	73%	50%	140%	73%	50%	140%
Fluoranthene	5793561		0.11	0.08	NA	< 0.05	138%	50%	140%	90%	50%	140%	71%	50%	140%
Pyrene	5793561		<0.05	<0.05	NA	< 0.05	96%	50%	140%	73%	50%	140%	68%	50%	140%
Benz(a)anthracene	5793561		<0.05	<0.05	NA	< 0.05	87%	50%	140%	103%	50%	140%	70%	50%	140%
Chrysene	5793561		<0.05	<0.05	NA	< 0.05	100%	50%	140%	73%	50%	140%	68%	50%	140%
Benzo(b)fluoranthene	5793561		0.07	0.06	NA	< 0.05	120%	50%	140%	105%	50%	140%	81%	50%	140%
Benzo(k)fluoranthene	5793561		<0.05	<0.05	NA	< 0.05	116%	50%	140%	85%	50%	140%	83%	50%	140%
Benzo(a)pyrene	5793561		<0.05	<0.05	NA	< 0.05	97%	50%	140%	80%	50%	140%	78%	50%	140%
Indeno(1,2,3-cd)pyrene	5793561		<0.05	<0.05	NA	< 0.05	78%	50%	140%	83%	50%	140%	83%	50%	140%
Dibenz(a,h)anthracene	5793561		<0.05	<0.05	NA	< 0.05	75%	50%	140%	78%	50%	140%	75%	50%	140%
Benzo(g,h,i)perylene	5793561		<0.05	<0.05	NA	< 0.05	106%	50%	140%	103%	50%	140%	73%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)															
Benzene	5793479		<0.02	<0.02	NA	< 0.02	93%	60%	140%	94%	60%	140%	86%	60%	140%
Toluene	5793479		<0.05	<0.05	NA	< 0.05	89%	60%	140%	87%	60%	140%	93%	60%	140%
Ethylbenzene	5793479		<0.05	<0.05	NA	< 0.05	102%	60%	140%	98%	60%	140%	99%	60%	140%
m & p-Xylene	5793479		<0.05	<0.05	NA	< 0.05	102%	60%	140%	96%	60%	140%	90%	60%	140%
o-Xylene	5793479		<0.05	<0.05	NA	< 0.05	102%	60%	140%	98%	60%	140%	93%	60%	140%
F1 (C6 to C10)	5793479		<5	<5	NA	< 5	93%	60%	140%	94%	60%	140%	91%	60%	140%
F2 (C10 to C16)	5789165		< 10	< 10	NA	< 10	120%	60%	140%	98%	60%	140%	83%	60%	140%
F3 (C16 to C34)	5789165		< 50	< 50	NA	< 50	124%	60%	140%	116%	60%	140%	115%	60%	140%
F4 (C34 to C50)	5789165		< 50	< 50	NA	< 50	68%	60%	140%	115%	60%	140%	63%	60%	140%
O. Reg. 153(511) - PCBs (Soil)															
Polychlorinated Biphenyls	5789274		< 0.1	< 0.1	NA	< 0.1	108%	50%	140%	98%	50%	140%	90%	50%	140%
O. Reg. 153(511) - VOCs (with PHC) (Soil)															
Dichlorodifluoromethane	5791508		<0.05	<0.05	NA	< 0.05	118%	50%	140%	122%	50%	140%	111%	50%	140%

Quality Assurance

CLIENT NAME: PINCHIN LTD.
PROJECT: 319674.001
SAMPLING SITE:500 Coventry Rd.

AGAT WORK ORDER: 24Z137710
ATTENTION TO: Mandy Witteman
SAMPLED BY:Mandy Witteman

Trace Organics Analysis (Continued)

RPT Date: Apr 16, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Vinyl Chloride	5791508		<0.02	<0.02	NA	< 0.02	92%	50%	140%	87%	50%	140%	94%	50%	140%
Bromomethane	5791508		<0.05	<0.05	NA	< 0.05	95%	50%	140%	90%	50%	140%	100%	50%	140%
Trichlorofluoromethane	5791508		<0.05	<0.05	NA	< 0.05	75%	50%	140%	81%	50%	140%	76%	50%	140%
Acetone	5791508		<0.50	<0.50	NA	< 0.50	81%	50%	140%	106%	50%	140%	111%	50%	140%
1,1-Dichloroethylene	5791508		<0.05	<0.05	NA	< 0.05	84%	50%	140%	80%	60%	130%	86%	50%	140%
Methylene Chloride	5791508		<0.05	<0.05	NA	< 0.05	104%	50%	140%	92%	60%	130%	100%	50%	140%
Trans- 1,2-Dichloroethylene	5791508		<0.05	<0.05	NA	< 0.05	86%	50%	140%	66%	60%	130%	60%	50%	140%
Methyl tert-butyl Ether	5791508		<0.05	<0.05	NA	< 0.05	98%	50%	140%	98%	60%	130%	62%	50%	140%
1,1-Dichloroethane	5791508		<0.02	<0.02	NA	< 0.02	92%	50%	140%	81%	60%	130%	69%	50%	140%
Methyl Ethyl Ketone	5791508		<0.50	<0.50	NA	< 0.50	93%	50%	140%	94%	50%	140%	111%	50%	140%
Cis- 1,2-Dichloroethylene	5791508		<0.02	<0.02	NA	< 0.02	92%	50%	140%	92%	60%	130%	88%	50%	140%
Chloroform	5791508		<0.04	<0.04	NA	< 0.04	92%	50%	140%	91%	60%	130%	89%	50%	140%
1,2-Dichloroethane	5791508		<0.03	<0.03	NA	< 0.03	95%	50%	140%	107%	60%	130%	93%	50%	140%
1,1,1-Trichloroethane	5791508		<0.05	<0.05	NA	< 0.05	80%	50%	140%	79%	60%	130%	69%	50%	140%
Carbon Tetrachloride	5791508		<0.05	<0.05	NA	< 0.05	75%	50%	140%	73%	60%	130%	67%	50%	140%
Benzene	5791508		<0.02	<0.02	NA	< 0.02	92%	50%	140%	89%	60%	130%	86%	50%	140%
1,2-Dichloropropane	5791508		<0.03	<0.03	NA	< 0.03	89%	50%	140%	86%	60%	130%	79%	50%	140%
Trichloroethylene	5791508		1.53	1.66	7.9%	< 0.03	90%	50%	140%	90%	60%	130%	65%	50%	140%
Bromodichloromethane	5791508		<0.05	<0.05	NA	< 0.05	86%	50%	140%	82%	60%	130%	81%	50%	140%
Methyl Isobutyl Ketone	5791508		<0.50	<0.50	NA	< 0.50	95%	50%	140%	93%	50%	140%	94%	50%	140%
1,1,2-Trichloroethane	5791508		<0.04	<0.04	NA	< 0.04	98%	50%	140%	92%	60%	130%	109%	50%	140%
Toluene	5791508		<0.05	<0.05	NA	< 0.05	97%	50%	140%	91%	60%	130%	106%	50%	140%
Dibromochloromethane	5791508		<0.05	<0.05	NA	< 0.05	84%	50%	140%	76%	60%	130%	89%	50%	140%
Ethylene Dibromide	5791508		<0.04	<0.04	NA	< 0.04	93%	50%	140%	86%	60%	130%	96%	50%	140%
Tetrachloroethylene	5791508		<0.05	<0.05	NA	< 0.05	93%	50%	140%	89%	60%	130%	100%	50%	140%
1,1,1,2-Tetrachloroethane	5791508		<0.04	<0.04	NA	< 0.04	84%	50%	140%	76%	60%	130%	83%	50%	140%
Chlorobenzene	5791508		<0.05	<0.05	NA	< 0.05	99%	50%	140%	94%	60%	130%	106%	50%	140%
Ethylbenzene	5791508		<0.05	<0.05	NA	< 0.05	93%	50%	140%	84%	60%	130%	96%	50%	140%
m & p-Xylene	5791508		<0.05	<0.05	NA	< 0.05	99%	50%	140%	91%	60%	130%	103%	50%	140%
Bromoform	5791508		<0.05	<0.05	NA	< 0.05	99%	50%	140%	91%	60%	130%	94%	50%	140%
Styrene	5791508		<0.05	<0.05	NA	< 0.05	91%	50%	140%	88%	60%	130%	92%	50%	140%
1,1,2,2-Tetrachloroethane	5791508		<0.05	<0.05	NA	< 0.05	97%	50%	140%	86%	60%	130%	84%	50%	140%
o-Xylene	5791508		<0.05	<0.05	NA	< 0.05	101%	50%	140%	93%	60%	130%	107%	50%	140%
1,3-Dichlorobenzene	5791508		<0.05	<0.05	NA	< 0.05	94%	50%	140%	94%	60%	130%	97%	50%	140%
1,4-Dichlorobenzene	5791508		<0.05	<0.05	NA	< 0.05	96%	50%	140%	96%	60%	130%	93%	50%	140%
1,2-Dichlorobenzene	5791508		<0.05	<0.05	NA	< 0.05	96%	50%	140%	99%	60%	130%	94%	50%	140%
n-Hexane	5791508		<0.05	<0.05	NA	< 0.05	70%	50%	140%	74%	60%	130%	107%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Quality Assurance

CLIENT NAME: PINCHIN LTD.
PROJECT: 319674.001
SAMPLING SITE:500 Coventry Rd.

AGAT WORK ORDER: 24Z137710
ATTENTION TO: Mandy Witteman
SAMPLED BY:Mandy Witteman

Trace Organics Analysis (Continued)

RPT Date: Apr 16, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Certified By:

QC Exceedance

CLIENT NAME: PINCHIN LTD.

AGAT WORK ORDER: 24Z137710

PROJECT: 319674.001

ATTENTION TO: Mandy Witteman

RPT Date: Apr 16, 2024		REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Sample Id	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
			Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - All Metals (Soil)										
Selenium	5791683	137%	70%	130%	97%	80%	120%	98%	70%	130%

Comments: NA signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.

Matrix spike: More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5791682	**MW16-SS1**	**Soil**	**08-APR-2024**	**09-APR-2024**

O. Reg. 153(511) - ORPs (pH) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
pH, 2:1 CaCl2 Extraction	12-APR-2024	12-APR-2024	XL

5791683	**MW16-SS2**	**Soil**	**08-APR-2024**	**09-APR-2024**

O. Reg. 153(511) - All Metals (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Antimony	12-APR-2024	12-APR-2024	SE
Arsenic	12-APR-2024	12-APR-2024	SE
Barium	12-APR-2024	12-APR-2024	SE
Beryllium	12-APR-2024	12-APR-2024	SE
Boron	12-APR-2024	12-APR-2024	SE
Boron (Hot Water Soluble)	12-APR-2024	12-APR-2024	ZK
Cadmium	12-APR-2024	12-APR-2024	SE
Chromium	12-APR-2024	12-APR-2024	SE
Cobalt	12-APR-2024	12-APR-2024	SE
Copper	12-APR-2024	12-APR-2024	SE
Lead	12-APR-2024	12-APR-2024	SE
Molybdenum	12-APR-2024	12-APR-2024	SE
Nickel	12-APR-2024	12-APR-2024	SE
Selenium	12-APR-2024	12-APR-2024	SE
Silver	12-APR-2024	12-APR-2024	SE
Thallium	12-APR-2024	12-APR-2024	SE
Uranium	12-APR-2024	12-APR-2024	SE
Vanadium	12-APR-2024	12-APR-2024	SE
Zinc	12-APR-2024	12-APR-2024	SE
Chromium, Hexavalent	15-APR-2024	15-APR-2024	RC
Mercury	12-APR-2024	12-APR-2024	SE

O. Reg. 153(511) - ORPs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Electrical Conductivity (2:1)	12-APR-2024	12-APR-2024	XL
Sodium Adsorption Ratio (2:1) (Calc.)	12-APR-2024	12-APR-2024	AA

5791691	**MW16-SS3**	**Soil**	**08-APR-2024**	**09-APR-2024**

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	15-APR-2024	15-APR-2024	NP

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5791691	**MW16-SS3**	**Soil**	**08-APR-2024**	**09-APR-2024**

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Acenaphthylene	15-APR-2024	15-APR-2024	NP
Acenaphthene	15-APR-2024	15-APR-2024	NP
Fluorene	15-APR-2024	15-APR-2024	NP
Phenanthrene	15-APR-2024	15-APR-2024	NP
Anthracene	15-APR-2024	15-APR-2024	NP
Fluoranthene	15-APR-2024	15-APR-2024	NP
Pyrene	15-APR-2024	15-APR-2024	NP
Benz(a)anthracene	15-APR-2024	15-APR-2024	NP
Chrysene	15-APR-2024	15-APR-2024	NP
Benzo(b)fluoranthene	15-APR-2024	15-APR-2024	NP
Benzo(k)fluoranthene	15-APR-2024	15-APR-2024	NP
Benzo(a)pyrene	15-APR-2024	15-APR-2024	NP
Indeno(1,2,3-cd)pyrene	15-APR-2024	15-APR-2024	NP
Dibenz(a,h)anthracene	15-APR-2024	15-APR-2024	NP
Benzo(g,h,i)perylene	15-APR-2024	15-APR-2024	NP
2-and 1-methyl Naphthalene	15-APR-2024	15-APR-2024	SYS
Naphthalene-d8	15-APR-2024	15-APR-2024	NP
Acridine-d9	15-APR-2024	15-APR-2024	NP
Terphenyl-d14	15-APR-2024	15-APR-2024	NP
Moisture Content	12-APR-2024	12-APR-2024	PD

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Benzene	12-APR-2024	12-APR-2024	VB
Toluene	12-APR-2024	12-APR-2024	VB
Ethylbenzene	12-APR-2024	12-APR-2024	VB
m & p-Xylene	12-APR-2024	12-APR-2024	VB
o-Xylene	12-APR-2024	12-APR-2024	VB
Xylenes (Total)	12-APR-2024	12-APR-2024	SYS
F1 (C6 to C10)	12-APR-2024	12-APR-2024	VB
F1 (C6 to C10) minus BTEX	12-APR-2024	12-APR-2024	SYS
Toluene-d8	12-APR-2024	12-APR-2024	VB
F2 (C10 to C16)	15-APR-2024	15-APR-2024	SS
F2 (C10 to C16) minus Naphthalene	15-APR-2024	15-APR-2024	SYS
F3 (C16 to C34)	15-APR-2024	15-APR-2024	SS
F3 (C16 to C34) minus PAHs	15-APR-2024	15-APR-2024	SYS
F4 (C34 to C50)	15-APR-2024	15-APR-2024	SS
Gravimetric Heavy Hydrocarbons			
Moisture Content	12-APR-2024	12-APR-2024	PD

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5791691	**MW16-SS3**	**Soil**	**08-APR-2024**	**09-APR-2024**

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Terphenyl	15-APR-2024	15-APR-2024	SS

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5791702	**MW17-SS2**	**Soil**	**09-APR-2024**	**09-APR-2024**

O. Reg. 153(511) - All Metals (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Antimony	12-APR-2024	12-APR-2024	SE
Arsenic	12-APR-2024	12-APR-2024	SE
Barium	12-APR-2024	12-APR-2024	SE
Beryllium	12-APR-2024	12-APR-2024	SE
Boron	12-APR-2024	12-APR-2024	SE
Boron (Hot Water Soluble)	12-APR-2024	12-APR-2024	ZK
Cadmium	12-APR-2024	12-APR-2024	SE
Chromium	12-APR-2024	12-APR-2024	SE
Cobalt	12-APR-2024	12-APR-2024	SE
Copper	12-APR-2024	12-APR-2024	SE
Lead	12-APR-2024	12-APR-2024	SE
Molybdenum	12-APR-2024	12-APR-2024	SE
Nickel	12-APR-2024	12-APR-2024	SE
Selenium	12-APR-2024	12-APR-2024	SE
Silver	12-APR-2024	12-APR-2024	SE
Thallium	12-APR-2024	12-APR-2024	SE
Uranium	12-APR-2024	12-APR-2024	SE
Vanadium	12-APR-2024	12-APR-2024	SE
Zinc	12-APR-2024	12-APR-2024	SE
Chromium, Hexavalent	15-APR-2024	15-APR-2024	RC
Mercury	12-APR-2024	12-APR-2024	SE

O. Reg. 153(511) - ORPs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Electrical Conductivity (2:1)	12-APR-2024	12-APR-2024	XL
Sodium Adsorption Ratio (2:1) (Calc.)	12-APR-2024	12-APR-2024	AA

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	15-APR-2024	15-APR-2024	NP
Acenaphthylene	15-APR-2024	15-APR-2024	NP
Acenaphthene	15-APR-2024	15-APR-2024	NP
Fluorene	15-APR-2024	15-APR-2024	NP

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5791702	**MW17-SS2**	**Soil**	**09-APR-2024**	**09-APR-2024**

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Phenanthrene	15-APR-2024	15-APR-2024	NP
Anthracene	15-APR-2024	15-APR-2024	NP
Fluoranthene	15-APR-2024	15-APR-2024	NP
Pyrene	15-APR-2024	15-APR-2024	NP
Benz(a)anthracene	15-APR-2024	15-APR-2024	NP
Chrysene	15-APR-2024	15-APR-2024	NP
Benzo(b)fluoranthene	15-APR-2024	15-APR-2024	NP
Benzo(k)fluoranthene	15-APR-2024	15-APR-2024	NP
Benzo(a)pyrene	15-APR-2024	15-APR-2024	NP
Indeno(1,2,3-cd)pyrene	15-APR-2024	15-APR-2024	NP
Dibenz(a,h)anthracene	15-APR-2024	15-APR-2024	NP
Benzo(g,h,i)perylene	15-APR-2024	15-APR-2024	NP
2-and 1-methyl Naphthalene	15-APR-2024	15-APR-2024	SYS
Naphthalene-d8	15-APR-2024	15-APR-2024	NP
Acridine-d9	15-APR-2024	15-APR-2024	NP
Terphenyl-d14	15-APR-2024	15-APR-2024	NP
Moisture Content	12-APR-2024	12-APR-2024	PD

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Benzene	12-APR-2024	12-APR-2024	VB
Toluene	12-APR-2024	12-APR-2024	VB
Ethylbenzene	12-APR-2024	12-APR-2024	VB
m & p-Xylene	12-APR-2024	12-APR-2024	VB
o-Xylene	12-APR-2024	12-APR-2024	VB
Xylenes (Total)	12-APR-2024	12-APR-2024	SYS
F1 (C6 to C10)	12-APR-2024	12-APR-2024	VB
F1 (C6 to C10) minus BTEX	12-APR-2024	12-APR-2024	SYS
Toluene-d8	12-APR-2024	12-APR-2024	VB
F2 (C10 to C16)	15-APR-2024	15-APR-2024	SS
F2 (C10 to C16) minus Naphthalene	15-APR-2024	15-APR-2024	SYS
F3 (C16 to C34)	15-APR-2024	15-APR-2024	SS
F3 (C16 to C34) minus PAHs	15-APR-2024	15-APR-2024	SYS
F4 (C34 to C50)	15-APR-2024	15-APR-2024	SS
Gravimetric Heavy Hydrocarbons			
Moisture Content	12-APR-2024	12-APR-2024	PD
Terphenyl	15-APR-2024	15-APR-2024	SS

5791708	**MW17-SS3**	**Soil**	**09-APR-2024**	**09-APR-2024**

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5791708	**MW17-SS3**	**Soil**	**09-APR-2024**	**09-APR-2024**

O. Reg. 153(511) - ORPs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Electrical Conductivity (2:1)	12-APR-2024	12-APR-2024	XL
Sodium Adsorption Ratio (2:1) (Calc.)	12-APR-2024	12-APR-2024	AA

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5791710	**MW17-SS5**	**Soil**	**09-APR-2024**	**09-APR-2024**

O. Reg. 153(511) - ORPs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Electrical Conductivity (2:1)	12-APR-2024	12-APR-2024	XL
Sodium Adsorption Ratio (2:1) (Calc.)	12-APR-2024	12-APR-2024	AA

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5791711	**MW18-SS2**	**Soil**	**08-APR-2024**	**09-APR-2024**

O. Reg. 153(511) - All Metals (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Antimony	12-APR-2024	12-APR-2024	SE
Arsenic	12-APR-2024	12-APR-2024	SE
Barium	12-APR-2024	12-APR-2024	SE
Beryllium	12-APR-2024	12-APR-2024	SE
Boron	12-APR-2024	12-APR-2024	SE
Boron (Hot Water Soluble)	12-APR-2024	12-APR-2024	ZK
Cadmium	12-APR-2024	12-APR-2024	SE
Chromium	12-APR-2024	12-APR-2024	SE
Cobalt	12-APR-2024	12-APR-2024	SE
Copper	12-APR-2024	12-APR-2024	SE
Lead	12-APR-2024	12-APR-2024	SE
Molybdenum	12-APR-2024	12-APR-2024	SE
Nickel	12-APR-2024	12-APR-2024	SE
Selenium	12-APR-2024	12-APR-2024	SE
Silver	12-APR-2024	12-APR-2024	SE
Thallium	12-APR-2024	12-APR-2024	SE
Uranium	12-APR-2024	12-APR-2024	SE
Vanadium	12-APR-2024	12-APR-2024	SE
Zinc	12-APR-2024	12-APR-2024	SE
Chromium, Hexavalent	15-APR-2024	15-APR-2024	RC
Mercury	12-APR-2024	12-APR-2024	SE

O. Reg. 153(511) - ORPs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5791711	**MW18-SS2**	**Soil**	**08-APR-2024**	**09-APR-2024**

O. Reg. 153(511) - ORPs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Electrical Conductivity (2:1)	12-APR-2024	12-APR-2024	XL
Sodium Adsorption Ratio (2:1) (Calc.)	12-APR-2024	12-APR-2024	AA

O. Reg. 153(511) - ORPs (pH) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
pH, 2:1 CaCl2 Extraction	12-APR-2024	12-APR-2024	XL

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5791727	**MW18-SS4**	**Soil**	**08-APR-2024**	**09-APR-2024**

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	15-APR-2024	15-APR-2024	NP
Acenaphthylene	15-APR-2024	15-APR-2024	NP
Acenaphthene	15-APR-2024	15-APR-2024	NP
Fluorene	15-APR-2024	15-APR-2024	NP
Phenanthrene	15-APR-2024	15-APR-2024	NP
Anthracene	15-APR-2024	15-APR-2024	NP
Fluoranthene	15-APR-2024	15-APR-2024	NP
Pyrene	15-APR-2024	15-APR-2024	NP
Benz(a)anthracene	15-APR-2024	15-APR-2024	NP
Chrysene	15-APR-2024	15-APR-2024	NP
Benzo(b)fluoranthene	15-APR-2024	15-APR-2024	NP
Benzo(k)fluoranthene	15-APR-2024	15-APR-2024	NP
Benzo(a)pyrene	15-APR-2024	15-APR-2024	NP
Indeno(1,2,3-cd)pyrene	15-APR-2024	15-APR-2024	NP
Dibenz(a,h)anthracene	15-APR-2024	15-APR-2024	NP
Benzo(g,h,i)perylene	15-APR-2024	15-APR-2024	NP
2-and 1-methyl Naphthalene	15-APR-2024	15-APR-2024	SYS
Naphthalene-d8	15-APR-2024	15-APR-2024	NP
Acridine-d9	15-APR-2024	15-APR-2024	NP
Terphenyl-d14	15-APR-2024	15-APR-2024	NP
Moisture Content	12-APR-2024	12-APR-2024	PD

O. Reg. 153(511) - PCBs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Polychlorinated Biphenyls	15-APR-2024	16-APR-2024	VDP
Decachlorobiphenyl	15-APR-2024	16-APR-2024	VDP
Moisture Content	12-APR-2024	12-APR-2024	PD

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5791727	**MW18-SS4**	**Soil**	**08-APR-2024**	**09-APR-2024**

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	13-APR-2024	13-APR-2024	CK
F1 (C6 to C10) minus BTEX	13-APR-2024	13-APR-2024	SYS
Toluene-d8	13-APR-2024	13-APR-2024	CK
F2 (C10 to C16)	15-APR-2024	15-APR-2024	SS
F2 (C10 to C16) minus Naphthalene	15-APR-2024	15-APR-2024	SYS
F3 (C16 to C34)	15-APR-2024	15-APR-2024	SS
F3 (C16 to C34) minus PAHs	15-APR-2024	15-APR-2024	SYS
F4 (C34 to C50)	15-APR-2024	15-APR-2024	SS
Gravimetric Heavy Hydrocarbons			
Moisture Content	12-APR-2024	12-APR-2024	PD
Terphenyl	15-APR-2024	15-APR-2024	SS

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	13-APR-2024	13-APR-2024	CK
Vinyl Chloride	13-APR-2024	13-APR-2024	CK
Bromomethane	13-APR-2024	13-APR-2024	CK
Trichlorofluoromethane	13-APR-2024	13-APR-2024	CK
Acetone	13-APR-2024	13-APR-2024	CK
1,1-Dichloroethylene	13-APR-2024	13-APR-2024	CK
Methylene Chloride	13-APR-2024	13-APR-2024	CK
Trans- 1,2-Dichloroethylene	13-APR-2024	13-APR-2024	CK
Methyl tert-butyl Ether	13-APR-2024	13-APR-2024	CK
1,1-Dichloroethane	13-APR-2024	13-APR-2024	CK
Methyl Ethyl Ketone	13-APR-2024	13-APR-2024	CK
Cis- 1,2-Dichloroethylene	13-APR-2024	13-APR-2024	CK
Chloroform	13-APR-2024	13-APR-2024	CK
1,2-Dichloroethane	13-APR-2024	13-APR-2024	CK
1,1,1-Trichloroethane	13-APR-2024	13-APR-2024	CK
Carbon Tetrachloride	13-APR-2024	13-APR-2024	CK
Benzene	13-APR-2024	13-APR-2024	CK
1,2-Dichloropropane	13-APR-2024	13-APR-2024	CK
Trichloroethylene	13-APR-2024	13-APR-2024	CK
Bromodichloromethane	13-APR-2024	13-APR-2024	CK
Methyl Isobutyl Ketone	13-APR-2024	13-APR-2024	CK
1,1,2-Trichloroethane	13-APR-2024	13-APR-2024	CK
Toluene	13-APR-2024	13-APR-2024	CK
Dibromochloromethane	13-APR-2024	13-APR-2024	CK
Ethylene Dibromide	13-APR-2024	13-APR-2024	CK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5791727	**MW18-SS4**	**Soil**	**08-APR-2024**	**09-APR-2024**

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Tetrachloroethylene	13-APR-2024	13-APR-2024	CK
1,1,1,2-Tetrachloroethane	13-APR-2024	13-APR-2024	CK
Chlorobenzene	13-APR-2024	13-APR-2024	CK
Ethylbenzene	13-APR-2024	13-APR-2024	CK
m & p-Xylene	13-APR-2024	13-APR-2024	CK
Bromoform	13-APR-2024	13-APR-2024	CK
Styrene	13-APR-2024	13-APR-2024	CK
1,1,2,2-Tetrachloroethane	13-APR-2024	13-APR-2024	CK
o-Xylene	13-APR-2024	13-APR-2024	CK
1,3-Dichlorobenzene	13-APR-2024	13-APR-2024	CK
1,4-Dichlorobenzene	13-APR-2024	13-APR-2024	CK
1,2-Dichlorobenzene	13-APR-2024	13-APR-2024	CK
Xylenes (Total)	13-APR-2024	13-APR-2024	SYS
1,3-Dichloropropene (Cis + Trans)	13-APR-2024	13-APR-2024	SYS
n-Hexane	13-APR-2024	13-APR-2024	CK
Toluene-d8	13-APR-2024	13-APR-2024	CK
4-Bromofluorobenzene	13-APR-2024	13-APR-2024	CK
Moisture Content	12-APR-2024	12-APR-2024	PD

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5791733	**MW19-SS2**	**Soil**	**09-APR-2024**	**09-APR-2024**

O. Reg. 153(511) - All Metals (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Antimony	12-APR-2024	12-APR-2024	SE
Arsenic	12-APR-2024	12-APR-2024	SE
Barium	12-APR-2024	12-APR-2024	SE
Beryllium	12-APR-2024	12-APR-2024	SE
Boron	12-APR-2024	12-APR-2024	SE
Boron (Hot Water Soluble)	12-APR-2024	12-APR-2024	ZK
Cadmium	12-APR-2024	12-APR-2024	SE
Chromium	12-APR-2024	12-APR-2024	SE
Cobalt	12-APR-2024	12-APR-2024	SE
Copper	12-APR-2024	12-APR-2024	SE
Lead	12-APR-2024	12-APR-2024	SE
Molybdenum	12-APR-2024	12-APR-2024	SE
Nickel	12-APR-2024	12-APR-2024	SE
Selenium	12-APR-2024	12-APR-2024	SE
Silver	12-APR-2024	12-APR-2024	SE
Thallium	12-APR-2024	12-APR-2024	SE

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5791733	**MW19-SS2**	**Soil**	**09-APR-2024**	**09-APR-2024**

O. Reg. 153(511) - All Metals (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Uranium	12-APR-2024	12-APR-2024	SE
Vanadium	12-APR-2024	12-APR-2024	SE
Zinc	12-APR-2024	12-APR-2024	SE
Chromium, Hexavalent	15-APR-2024	15-APR-2024	RC
Mercury	12-APR-2024	12-APR-2024	SE

O. Reg. 153(511) - ORPs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Electrical Conductivity (2:1)	12-APR-2024	12-APR-2024	XL
Sodium Adsorption Ratio (2:1) (Calc.)	12-APR-2024	12-APR-2024	AA

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5791735	**MW19-SS3**	**Soil**	**09-APR-2024**	**09-APR-2024**

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	15-APR-2024	15-APR-2024	NP
Acenaphthylene	15-APR-2024	15-APR-2024	NP
Acenaphthene	15-APR-2024	15-APR-2024	NP
Fluorene	15-APR-2024	15-APR-2024	NP
Phenanthrene	15-APR-2024	15-APR-2024	NP
Anthracene	15-APR-2024	15-APR-2024	NP
Fluoranthene	15-APR-2024	15-APR-2024	NP
Pyrene	15-APR-2024	15-APR-2024	NP
Benz(a)anthracene	15-APR-2024	15-APR-2024	NP
Chrysene	15-APR-2024	15-APR-2024	NP
Benzo(b)fluoranthene	15-APR-2024	15-APR-2024	NP
Benzo(k)fluoranthene	15-APR-2024	15-APR-2024	NP
Benzo(a)pyrene	15-APR-2024	15-APR-2024	NP
Indeno(1,2,3-cd)pyrene	15-APR-2024	15-APR-2024	NP
Dibenz(a,h)anthracene	15-APR-2024	15-APR-2024	NP
Benzo(g,h,i)perylene	15-APR-2024	15-APR-2024	NP
2-and 1-methyl Naphthalene	15-APR-2024	15-APR-2024	SYS
Naphthalene-d8	15-APR-2024	15-APR-2024	NP
Acridine-d9	15-APR-2024	15-APR-2024	NP
Terphenyl-d14	15-APR-2024	15-APR-2024	NP
Moisture Content	12-APR-2024	12-APR-2024	PD

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5791735	**MW19-SS3**	**Soil**	**09-APR-2024**	**09-APR-2024**

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Benzene	12-APR-2024	12-APR-2024	VB
Toluene	12-APR-2024	12-APR-2024	VB
Ethylbenzene	12-APR-2024	12-APR-2024	VB
m & p-Xylene	12-APR-2024	12-APR-2024	VB
o-Xylene	12-APR-2024	12-APR-2024	VB
Xylenes (Total)	12-APR-2024	12-APR-2024	SYS
F1 (C6 to C10)	12-APR-2024	12-APR-2024	VB
F1 (C6 to C10) minus BTEX	12-APR-2024	12-APR-2024	SYS
Toluene-d8	12-APR-2024	12-APR-2024	VB
F2 (C10 to C16)	15-APR-2024	15-APR-2024	SS
F2 (C10 to C16) minus Naphthalene	15-APR-2024	15-APR-2024	SYS
F3 (C16 to C34)	15-APR-2024	15-APR-2024	SS
F3 (C16 to C34) minus PAHs	15-APR-2024	15-APR-2024	SYS
F4 (C34 to C50)	15-APR-2024	15-APR-2024	SS
Gravimetric Heavy Hydrocarbons			
Moisture Content	12-APR-2024	12-APR-2024	PD
Terphenyl	15-APR-2024	15-APR-2024	SS

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5791736	**BH23-SS1**	**Soil**	**09-APR-2024**	**09-APR-2024**

O. Reg. 153(511) - All Metals (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Antimony	12-APR-2024	12-APR-2024	SE
Arsenic	12-APR-2024	12-APR-2024	SE
Barium	12-APR-2024	12-APR-2024	SE
Beryllium	12-APR-2024	12-APR-2024	SE
Boron	12-APR-2024	12-APR-2024	SE
Boron (Hot Water Soluble)	12-APR-2024	12-APR-2024	ZK
Cadmium	12-APR-2024	12-APR-2024	SE
Chromium	12-APR-2024	12-APR-2024	SE
Cobalt	12-APR-2024	12-APR-2024	SE
Copper	12-APR-2024	12-APR-2024	SE
Lead	12-APR-2024	12-APR-2024	SE
Molybdenum	12-APR-2024	12-APR-2024	SE
Nickel	12-APR-2024	12-APR-2024	SE
Selenium	12-APR-2024	12-APR-2024	SE
Silver	12-APR-2024	12-APR-2024	SE
Thallium	12-APR-2024	12-APR-2024	SE
Uranium	12-APR-2024	12-APR-2024	SE

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5791736	**BH23-SS1**	**Soil**	**09-APR-2024**	**09-APR-2024**

O. Reg. 153(511) - All Metals (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Vanadium	12-APR-2024	12-APR-2024	SE
Zinc	12-APR-2024	12-APR-2024	SE
Chromium, Hexavalent	15-APR-2024	15-APR-2024	RC
Mercury	12-APR-2024	12-APR-2024	SE

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	15-APR-2024	15-APR-2024	NP
Acenaphthylene	15-APR-2024	15-APR-2024	NP
Acenaphthene	15-APR-2024	15-APR-2024	NP
Fluorene	15-APR-2024	15-APR-2024	NP
Phenanthrene	15-APR-2024	15-APR-2024	NP
Anthracene	15-APR-2024	15-APR-2024	NP
Fluoranthene	15-APR-2024	15-APR-2024	NP
Pyrene	15-APR-2024	15-APR-2024	NP
Benz(a)anthracene	15-APR-2024	15-APR-2024	NP
Chrysene	15-APR-2024	15-APR-2024	NP
Benzo(b)fluoranthene	15-APR-2024	15-APR-2024	NP
Benzo(k)fluoranthene	15-APR-2024	15-APR-2024	NP
Benzo(a)pyrene	15-APR-2024	15-APR-2024	NP
Indeno(1,2,3-cd)pyrene	15-APR-2024	15-APR-2024	NP
Dibenz(a,h)anthracene	15-APR-2024	15-APR-2024	NP
Benzo(g,h,i)perylene	15-APR-2024	15-APR-2024	NP
2-and 1-methyl Naphthalene	15-APR-2024	15-APR-2024	SYS
Naphthalene-d8	15-APR-2024	15-APR-2024	NP
Acridine-d9	15-APR-2024	15-APR-2024	NP
Terphenyl-d14	15-APR-2024	15-APR-2024	NP
Moisture Content	12-APR-2024	12-APR-2024	PD

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Benzene	12-APR-2024	12-APR-2024	VB
Toluene	12-APR-2024	12-APR-2024	VB
Ethylbenzene	12-APR-2024	12-APR-2024	VB
m & p-Xylene	12-APR-2024	12-APR-2024	VB
o-Xylene	12-APR-2024	12-APR-2024	VB
Xylenes (Total)	12-APR-2024	12-APR-2024	SYS
F1 (C6 to C10)	12-APR-2024	12-APR-2024	VB
F1 (C6 to C10) minus BTEX	12-APR-2024	12-APR-2024	SYS

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5791736	**BH23-SS1**	**Soil**	**09-APR-2024**	**09-APR-2024**

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Toluene-d8	12-APR-2024	12-APR-2024	VB
F2 (C10 to C16)	15-APR-2024	15-APR-2024	SS
F2 (C10 to C16) minus Naphthalene	15-APR-2024	15-APR-2024	SYS
F3 (C16 to C34)	15-APR-2024	15-APR-2024	SS
F3 (C16 to C34) minus PAHs	15-APR-2024	15-APR-2024	SYS
F4 (C34 to C50)	15-APR-2024	15-APR-2024	SS
Gravimetric Heavy Hydrocarbons			
Moisture Content	12-APR-2024	12-APR-2024	PD
Terphenyl	15-APR-2024	15-APR-2024	SS

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5791737	**MW24-SS2**	**Soil**	**09-APR-2024**	**09-APR-2024**

O. Reg. 153(511) - Metals (Including Hydrides) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Antimony	12-APR-2024	12-APR-2024	SE
Arsenic	12-APR-2024	12-APR-2024	SE
Barium	12-APR-2024	12-APR-2024	SE
Beryllium	12-APR-2024	12-APR-2024	SE
Boron	12-APR-2024	12-APR-2024	SE
Cadmium	12-APR-2024	12-APR-2024	SE
Chromium	12-APR-2024	12-APR-2024	SE
Cobalt	12-APR-2024	12-APR-2024	SE
Copper	12-APR-2024	12-APR-2024	SE
Lead	12-APR-2024	12-APR-2024	SE
Molybdenum	12-APR-2024	12-APR-2024	SE
Nickel	12-APR-2024	12-APR-2024	SE
Selenium	12-APR-2024	12-APR-2024	SE
Silver	12-APR-2024	12-APR-2024	SE
Thallium	12-APR-2024	12-APR-2024	SE
Uranium	12-APR-2024	12-APR-2024	SE
Vanadium	12-APR-2024	12-APR-2024	SE
Zinc	12-APR-2024	12-APR-2024	SE

O. Reg. 153(511) - ORPs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Electrical Conductivity (2:1)	12-APR-2024	12-APR-2024	XL
Sodium Adsorption Ratio (2:1) (Calc.)	12-APR-2024	12-APR-2024	AA

O. Reg. 153(511) - PAHs (Soil)

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5791737	**MW24-SS2**	**Soil**	**09-APR-2024**	**09-APR-2024**

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	15-APR-2024	15-APR-2024	NP
Acenaphthylene	15-APR-2024	15-APR-2024	NP
Acenaphthene	15-APR-2024	15-APR-2024	NP
Fluorene	15-APR-2024	15-APR-2024	NP
Phenanthrene	15-APR-2024	15-APR-2024	NP
Anthracene	15-APR-2024	15-APR-2024	NP
Fluoranthene	15-APR-2024	15-APR-2024	NP
Pyrene	15-APR-2024	15-APR-2024	NP
Benz(a)anthracene	15-APR-2024	15-APR-2024	NP
Chrysene	15-APR-2024	15-APR-2024	NP
Benzo(b)fluoranthene	15-APR-2024	15-APR-2024	NP
Benzo(k)fluoranthene	15-APR-2024	15-APR-2024	NP
Benzo(a)pyrene	15-APR-2024	15-APR-2024	NP
Indeno(1,2,3-cd)pyrene	15-APR-2024	15-APR-2024	NP
Dibenz(a,h)anthracene	15-APR-2024	15-APR-2024	NP
Benzo(g,h,i)perylene	15-APR-2024	15-APR-2024	NP
2-and 1-methyl Naphthalene	15-APR-2024	15-APR-2024	SYS
Naphthalene-d8	15-APR-2024	15-APR-2024	NP
Acridine-d9	15-APR-2024	15-APR-2024	NP
Terphenyl-d14	15-APR-2024	15-APR-2024	NP
Moisture Content	12-APR-2024	12-APR-2024	PD

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Benzene	12-APR-2024	12-APR-2024	VB
Toluene	12-APR-2024	12-APR-2024	VB
Ethylbenzene	12-APR-2024	12-APR-2024	VB
m & p-Xylene	12-APR-2024	12-APR-2024	VB
o-Xylene	12-APR-2024	12-APR-2024	VB
Xylenes (Total)	12-APR-2024	12-APR-2024	SYS
F1 (C6 to C10)	12-APR-2024	12-APR-2024	VB
F1 (C6 to C10) minus BTEX	12-APR-2024	12-APR-2024	SYS
Toluene-d8	12-APR-2024	12-APR-2024	VB
F2 (C10 to C16)	15-APR-2024	15-APR-2024	SS
F2 (C10 to C16) minus Naphthalene	15-APR-2024	15-APR-2024	SYS
F3 (C16 to C34)	15-APR-2024	15-APR-2024	SS
F3 (C16 to C34) minus PAHs	15-APR-2024	15-APR-2024	SYS
F4 (C34 to C50)	15-APR-2024	15-APR-2024	SS
Gravimetric Heavy Hydrocarbons			

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5791737	**MW24-SS2**	**Soil**	**09-APR-2024**	**09-APR-2024**

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Moisture Content	12-APR-2024	12-APR-2024	PD
Terphenyl	15-APR-2024	15-APR-2024	SS

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5791740	**DUP 1**	**Soil**	**08-APR-2024**	**09-APR-2024**

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	15-APR-2024	15-APR-2024	NP
Acenaphthylene	15-APR-2024	15-APR-2024	NP
Acenaphthene	15-APR-2024	15-APR-2024	NP
Fluorene	15-APR-2024	15-APR-2024	NP
Phenanthrene	15-APR-2024	15-APR-2024	NP
Anthracene	15-APR-2024	15-APR-2024	NP
Fluoranthene	15-APR-2024	15-APR-2024	NP
Pyrene	15-APR-2024	15-APR-2024	NP
Benz(a)anthracene	15-APR-2024	15-APR-2024	NP
Chrysene	15-APR-2024	15-APR-2024	NP
Benzo(b)fluoranthene	15-APR-2024	15-APR-2024	NP
Benzo(k)fluoranthene	15-APR-2024	15-APR-2024	NP
Benzo(a)pyrene	15-APR-2024	15-APR-2024	NP
Indeno(1,2,3-cd)pyrene	15-APR-2024	15-APR-2024	NP
Dibenz(a,h)anthracene	15-APR-2024	15-APR-2024	NP
Benzo(g,h,i)perylene	15-APR-2024	15-APR-2024	NP
2-and 1-methyl Naphthalene	15-APR-2024	15-APR-2024	SYS
Naphthalene-d8	15-APR-2024	15-APR-2024	NP
Acridine-d9	15-APR-2024	15-APR-2024	NP
Terphenyl-d14	15-APR-2024	15-APR-2024	NP
Moisture Content	12-APR-2024	12-APR-2024	PD

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5791742	**DUP 2**	**Soil**	**09-APR-2024**	**09-APR-2024**

O. Reg. 153(511) - PHCs F1 - F4 (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Benzene	12-APR-2024	12-APR-2024	VB
Toluene	12-APR-2024	12-APR-2024	VB
Ethylbenzene	12-APR-2024	12-APR-2024	VB
m & p-Xylene	12-APR-2024	12-APR-2024	VB
o-Xylene	12-APR-2024	12-APR-2024	VB

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5791742	**DUP 2**	**Soil**	**09-APR-2024**	**09-APR-2024**

O. Reg. 153(511) - PHCs F1 - F4 (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Xylenes (Total)	12-APR-2024	12-APR-2024	SYS
F1 (C6 to C10)	12-APR-2024	12-APR-2024	VB
F1 (C6 to C10) minus BTEX	12-APR-2024	12-APR-2024	SYS
Toluene-d8	12-APR-2024	12-APR-2024	VB
F2 (C10 to C16)	15-APR-2024	15-APR-2024	SS
F3 (C16 to C34)	15-APR-2024	15-APR-2024	SS
F4 (C34 to C50)	15-APR-2024	15-APR-2024	SS
Gravimetric Heavy Hydrocarbons			
Moisture Content	12-APR-2024	12-APR-2024	PD
Terphenyl	15-APR-2024	15-APR-2024	SS

Method Summary

CLIENT NAME: PINCHIN LTD. **AGAT WORK ORDER: 24Z137710**

PROJECT: 319674.001 **ATTENTION TO: Mandy Witteman**

SAMPLING SITE:500 Coventry Rd. **SAMPLED BY:Mandy Witteman**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6075	modified from MSA PART 3, CH 14 and SM 2510 B	PC TITRATE
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl2 Extraction	INOR-93-6075	modified from EPA 9045D, MCKEAGUE 3.11 E3137	PC TITRATE

Method Summary

CLIENT NAME: PINCHIN LTD. **AGAT WORK ORDER: 24Z137710**
PROJECT: 319674.001 **ATTENTION TO: Mandy Witteman**
SAMPLING SITE:500 Coventry Rd. **SAMPLED BY:Mandy Witteman**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Polychlorinated Biphenyls	ORG-91-5113	modified from EPA SW-846 3570 & 8082A	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA SW-846 3541 & 8082A	GC/ECD
Benzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Toluene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Ethylbenzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
m & p-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
o-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Xylenes (Total)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
F1 (C6 to C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID

Method Summary

CLIENT NAME: PINCHIN LTD. **AGAT WORK ORDER: 24Z137710**
PROJECT: 319674.001 **ATTENTION TO: Mandy Witteman**
SAMPLING SITE:500 Coventry Rd. **SAMPLED BY:Mandy Witteman**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16) minus Naphthalene	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

Method Summary

CLIENT NAME: PINCHIN LTD. **AGAT WORK ORDER: 24Z137710**

PROJECT: 319674.001 **ATTENTION TO: Mandy Witteman**

SAMPLING SITE:500 Coventry Rd. **SAMPLED BY:Mandy Witteman**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS

AGAT Laboratories

Have feedback?
Scan here for a quick survey!

5835 Coopers Avenue
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Ph: 905.712.5100 Fax: 905.712.5122
webearth.agatlabs.com

Laboratory Use Only

Work Order #: 24Z137710

Cooler Quantity: one - no ice/packs

miss ~~Arrival~~ Temperatures: 2.3 | 2.5 | 2.9

Depot Temperatures: 23.6 | 23.4 | 23.5

Custody Seal Intact: ☐Yes ☐No ☐N/A

Notes: L / L

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Report Information:

Company: Pinchin

Contact: Mandy Witteman / Alicia Mcdon

Address:

Phone: Fax:

Reports to be sent to:

1. Email: amcdonald@pinchin.com
2. Email: mwitteman@pinchin

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04

Table *Indicate One*
☐Ind/Com
☐Res/Park
☐Agriculture

Soil Texture *(Check One)*
☐Coarse
☐Fine

☐ Regulation 406

Table *Indicate One*
☐Ind/Com
☐Res/Park
☐Agriculture

☐ Regulation 558

☐ CCME

☐ Sewer Use
☐Sanitary ☐Storm

Region

☐ Prov. Water Quality Objectives (PWQO)

☐ Other

Indicate One

Turnaround Time (TAT) Required:

Regular TAT ☐ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*

For 'Same Day' analysis, please contact your AGAT CSR

Project Information:

Project: 319674.001

Site Location: 500 Coventry Rd.

Sampled By: Mandy Witteman

AGAT Quote #: PO:

Please note: If quotation number is not provided, client will be billed full price for analysis.

Is this submission for a Record of Site Condition (RSC)?

☒ Yes ☐ No

Report Guideline on *Certificate of Analysis*

☐ Yes ☐ No

Legal Sample ☐

Invoice Information:

Bill To Same: Yes ☐ No ☐

Company: Pinchin.

Contact:

Address:

Email: ap@pinchin.com

Sample Matrix Legend

GW	Ground Water	**SD**	Sediment
O	Oil	**SW**	Surface Water
P	Paint	**R**	Rock/Shale
S	Soil		

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC Y / N	O. Reg 153 Metals & Inorganics	O. Reg 153 Metals - ☒CrVI, ☒Hg, ☒HWSB	O. Reg 153 BTEX, F1-F4 PHCs	VOC	PAHs	PCBs: Aroclors ☐	O. Reg 406 Regulation 406 Characterization Package pH, Metals, BTEX, F1-F4	O. Reg 406 EC, SAR	O. Reg 406 Regulation 406 SPLP Rainwater Leach mSPLP: ☐ Metals ☐ VOCs ☐ SVOCs ☐ OC	O. Reg 558 Landfill Disposal Characterization TCLP: TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	Corrosivity: ☐ Moisture ☐ Sulphide	pH.						Potentially Hazardous or High Concentration (Y/N)
1. MW16-SS1	Apr 8/24	AM PM	1	S														X						
2. MW16-SS2	↓	AM PM	1	↓				X						X										
3. MW16-SS3	↓	AM PM	3	↓					X		X													
4. MW17-SS2	Ap9/24	AM PM	3	↓				X	X		X			X										
5. MW17-SS3	↓	AM PM	1	↓	~~HOLD~~?									X										
6. MW17-SS5	↓	AM PM	1	↓										X										
7. MW18-SS2	Apr. 8/24	AM PM	1	↓				X						X				X						
8. MW18-SS4	↓	AM PM	3	↓					X	X	X	X												
9. MW19-SS2	Apr 9/24	AM PM	1	↓				X						X										
10. MW19-SS3	↓	AM PM	3	↓					X		X													
11. AH23-SS1	↓	AM PM	3	↓				X	X		X													

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Mandy Witteman	Apr 9/24	4PM	C. Griffith	04/09/24	16h45
			TL	Apr 10	9:10m
CC to Duro	04/10/24	15h00			

Page ____ of ____

Nº: T - 155322

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AGAT Laboratories

Have feedback?
Scan here for a quick survey!

5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
webearth.agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Laboratory Use Only

Work Order #: 24Z137710

Cooler Quantity: one - no ice / packs

miss ~~Arrival~~ Temperatures: 2.3 | 2.5 | 2.9

Depot Temperatures: 23.6 | 23.4 | 23.5

Custody Seal Intact: ☐ Yes ☐ No ☑ N/A

Notes: L 1 I

Report Information:

Company: Pinchin
Contact: Mandy Witteman
Address:
Phone: Fax:
Reports to be sent to:
1. Email: amcdonald@pinchin
2. Email: mwitteman@pinch

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04
Table *Indicate One*
☐ Ind/Com
☐ Res/Park
☐ Agriculture
Soil Texture *(Check One)*
☐ Coarse
☐ Fine

☐ Regulation 406
Table *Indicate One*
☐ Ind/Com
☐ Res/Park
☐ Agriculture
☐ Regulation 558
☐ CCME

☐ Sewer Use
☐ Sanitary ☐ Storm
Region
☐ Prov. Water Quality Objectives (PWQO)
☐ Other
Indicate One

Is this submission for a **Record of Site Condition (RSC)?**
☒ Yes ☐ No

Report Guideline on *Certificate of Analysis*
☐ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT ☐ 5 to 7 Business Days

Rush TAT **(Rush Surcharges Apply)**

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*

For 'Same Day' analysis, please contact your AGAT CSR

Project Information:

Project: 319674.001
Site Location:
Sampled By:
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Legal Sample ☐

Invoice Information:

Bill To Same: Yes ☐ No ☐

Company:
Contact:
Address:
Email:

Sample Matrix Legend

GW	Ground Water	SD	Sediment
O	Oil	SW	Surface Water
P	Paint	R	Rock/Shale
S	Soil		

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC Y / N	O. Reg 153						O. Reg 406			O. Reg 558								Potentially Hazardous or High Concentration (Y/N)
							Metals & Inorganics	Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	BTEX, F1-F4 PHCs	VOC	PAHs	PCBs: Aroclors ☐	Regulation 406 Characterization Package pH, Metals, BTEX, F1-F4	EC, SAR	Regulation 406 SPLP Rainwater Leach mSPLP: ☐ Metals ☐ VOCs ☐ SVOCs ☐ OC	Landfill Disposal Characterization TCLP: TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	Corrosivity: ☐ Moisture ☐ Sulphide							
1. MW24-SS2	Ap9/24	Pm AM PM	3	S				X	X		X			X										
2. DUP 1	Apr 9/24	PM AM PM	1	↓							X													
3. DUP 2	Apr 9/24	Pm AM PM	2	↓					X															
4.		AM PM																						
5.		AM PM																						
6.		AM PM																						
7.		AM PM																						
8.		AM PM																						
9.		AM PM																						
10.		AM PM																						
11.		AM PM																						

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time	
Mandy Witteman	Apr 9/24	~~4~~45pm	C. Cuthton	04/09/24	16h45	
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign): TL	Date Apr 10	Time 9:10Am	Page ____ of ____
Samples Relinquished By (Print Name and Sign): Cuito Deuo	Date 04/10/24	Time 15h00	Samples Received By (Print Name and Sign):	Date	Time	Nº: T - 155321

Pink Copy - Client | Yellow Copy - AGAT | White Copy- AGAT

5835 COOPERS AVENUE
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CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

CLIENT NAME: **PINCHIN LTD.**
1456 Centennial Drive, Unit 2
KINGSTON, ON K7P 0K4
(613) 541-1013

ATTENTION TO: **Alicia McDonald**

PROJECT: **319674.002**

AGAT WORK ORDER: **24Z143509**

SOIL ANALYSIS REVIEWED BY: **Nivine Basily, Inorganic Team Lead**

TRACE ORGANICS REVIEWED BY: **Neli Popnikolova, Senior Chemist**

DATE REPORTED: **May 02, 2024**

PAGES (INCLUDING COVER): **50**

VERSION*: **1**

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

Notes

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)
Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. Measurement Uncertainty is not taken into consideration when stating conformity with a specified requirement.

Certificate of Analysis

AGAT WORK ORDER: 24Z143509

PROJECT: 319674.002

CLIENT NAME: PINCHIN LTD.

SAMPLING SITE:

ATTENTION TO: Alicia McDonald

SAMPLED BY:

O. Reg. 153(511) - All Metals (Soil)

DATE RECEIVED: 2024-04-26

DATE REPORTED: 2024-05-02

			SAMPLE DESCRIPTION:	MW8-52	MW7-52	MW21-54	MW20-55	DUP3	MW9-51/52
			SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil
			DATE SAMPLED:	2024-04-25	2024-04-25	2024-04-25	2024-04-25 12:00	2024-04-25 12:00	2024-04-25 12:00
Parameter	**Unit**	**G / S**	**RDL**	**5823908**	**5823910**	**5823913**	**5823914**	**5823915**	**5823920**
Antimony	µg/g		0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g		1	4	1	4	5	5	3
Barium	µg/g		2.0	82.7	24.4	110	139	152	86.8
Beryllium	µg/g		0.5	<0.5	<0.5	<0.5	0.6	0.5	<0.5
Boron	µg/g		5	8	<5	8	10	9	8
Boron (Hot Water Soluble)	µg/g		0.10	<0.10	0.30	0.26	0.30	0.24	0.61
Cadmium	µg/g		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g		5	15	16	15	21	19	18
Cobalt	µg/g		0.8	11.0	3.4	7.2	10.2	9.1	6.3
Copper	µg/g		1.0	18.4	5.9	18.8	24.4	22.4	14.3
Lead	µg/g		1	7	2	8	10	9	11
Molybdenum	µg/g		0.5	2.8	0.7	2.4	2.8	2.6	1.5
Nickel	µg/g		1	28	8	20	27	25	15
Selenium	µg/g		0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	µg/g		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g		0.50	0.81	0.57	1.18	1.35	1.22	0.80
Vanadium	µg/g		2.0	22.6	17.6	21.1	29.6	27.6	22.4
Zinc	µg/g		5	37	13	31	46	38	29
Chromium, Hexavalent	µg/g		0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Mercury	µg/g		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Analysis performed at AGAT Toronto (unless marked by *)

ASSOCIATION OF THE CHEMICAL PROFESSION OF ONTARIO
CHARTERED
NIVINE BASILY
CHEMIST

Certified By:

CLIENT NAME: PINCHIN LTD.

SAMPLING SITE:

ATTENTION TO: Alicia McDonald

SAMPLED BY:

O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2024-04-26

DATE REPORTED: 2024-05-02

			SAMPLE DESCRIPTION:	MW8-55	MW7-55	MW9-54/55
			SAMPLE TYPE:	Soil	Soil	Soil
			DATE SAMPLED:	2024-04-25	2024-04-25	2024-04-25 12:00
Parameter	**Unit**	**G / S**	**RDL**	**5823909**	**5823911**	**5823921**
Antimony	µg/g		0.8	<0.8	<0.8	<0.8
Arsenic	µg/g		1	5	5	1
Barium	µg/g		2.0	130	135	13.8
Beryllium	µg/g		0.5	0.6	0.5	<0.5
Boron	µg/g		5	11	7	<5
Boron (Hot Water Soluble)	µg/g		0.10	0.23	0.21	0.55
Cadmium	µg/g		0.5	<0.5	<0.5	<0.5
Chromium	µg/g		5	19	19	17
Cobalt	µg/g		0.8	9.3	10.8	3.6
Copper	µg/g		1.0	23.6	25.5	5.1
Lead	µg/g		1	10	10	2
Molybdenum	µg/g		0.5	3.7	3.2	<0.5
Nickel	µg/g		1	28	29	8
Selenium	µg/g		0.8	<0.8	<0.8	<0.8
Silver	µg/g		0.5	<0.5	<0.5	<0.5
Thallium	µg/g		0.5	<0.5	<0.5	<0.5
Uranium	µg/g		0.50	1.63	1.43	0.54
Vanadium	µg/g		2.0	29.1	26.8	20.3
Zinc	µg/g		5	43	42	15
Chromium, Hexavalent	µg/g		0.2	<0.2	<0.2	<0.2
Cyanide, WAD	µg/g		0.040	<0.040	<0.040	<0.040
Mercury	µg/g		0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm		0.005	0.659	0.615	2.91
Sodium Adsorption Ratio (2:1) (Calc.)	N/A		N/A	1.34	1.86	18.7
pH, 2:1 CaCl2 Extraction	pH Units		NA	7.15	7.17	7.23

Certified By:

ASSOCIATION OF THE CHEMICAL PROFESSION OF ONTARIO
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Certificate of Analysis

AGAT WORK ORDER: 24Z143509

PROJECT: 319674.002

CLIENT NAME: PINCHIN LTD.

ATTENTION TO: Alicia McDonald

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2024-04-26

DATE REPORTED: 2024-05-02

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5823909-5823921 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by *)

NIVINE BASILY

Certified By:

Certificate of Analysis

AGAT WORK ORDER: 24Z143509
PROJECT: 319674.002

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MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
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FAX (905)712-5122
http://www.agatlabs.com

CLIENT NAME: PINCHIN LTD.
ATTENTION TO: Alicia McDonald
SAMPLING SITE:
SAMPLED BY:

O. Reg. 153(511) - PAHs (Soil)

DATE RECEIVED: 2024-04-26 **DATE REPORTED: 2024-05-02**

			SAMPLE DESCRIPTION:	MW8-52	MW8-55	MW7-52	MW7-55	MW21-54	MW20-55	DUP3	MW1-52
			SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
			DATE SAMPLED:	2024-04-25	2024-04-25	2024-04-25	2024-04-25	2024-04-25	2024-04-25 12:00	2024-04-25 12:00	2024-04-25 12:00
Parameter	**Unit**	**G / S**	**RDL**	**5823908**	**5823909**	**5823910**	**5823911**	**5823913**	**5823914**	**5823915**	**5823917**
Naphthalene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)anthracene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2-and 1-methyl Naphthalene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	10.3	9.4	15.7	9.0	6.2	7.4	6.8	8.9
Surrogate	**Unit**	**Acceptable Limits**									
Naphthalene-d8	%	50-140		105	95	105	80	75	75	70	90
Acridine-d9	%	50-140		105	105	85	115	110	95	105	100
Terphenyl-d14	%	50-140		95	110	110	110	90	95	100	95

Certified By: NPopukolof

O. Reg. 153(511) - PAHs (Soil)

DATE RECEIVED: 2024-04-26

DATE REPORTED: 2024-05-02

			SAMPLE DESCRIPTION:	MW9-51/52	MW9-54/55
			SAMPLE TYPE:	Soil	Soil
			DATE SAMPLED:	2024-04-25 12:00	2024-04-25 12:00
Parameter	**Unit**	**G / S**	**RDL**	**5823920**	**5823921**
Naphthalene	µg/g		0.05	<0.05	<0.05
Acenaphthylene	µg/g		0.05	<0.05	<0.05
Acenaphthene	µg/g		0.05	<0.05	<0.05
Fluorene	µg/g		0.05	<0.05	<0.05
Phenanthrene	µg/g		0.05	0.22	<0.05
Anthracene	µg/g		0.05	0.07	<0.05
Fluoranthene	µg/g		0.05	0.40	<0.05
Pyrene	µg/g		0.05	0.33	<0.05
Benzo(a)anthracene	µg/g		0.05	0.10	<0.05
Chrysene	µg/g		0.05	0.13	<0.05
Benzo(b)fluoranthene	µg/g		0.05	0.15	<0.05
Benzo(k)fluoranthene	µg/g		0.05	0.08	<0.05
Benzo(a)pyrene	µg/g		0.05	0.09	<0.05
Indeno(1,2,3-cd)pyrene	µg/g		0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g		0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g		0.05	0.05	<0.05
2-and 1-methyl Naphthalene	µg/g		0.05	<0.05	<0.05
Moisture Content	%		0.1	7.2	18.4
Surrogate	**Unit**	**Acceptable Limits**			
Naphthalene-d8	%	50-140		85	85
Acridine-d9	%	50-140		115	100
Terphenyl-d14	%	50-140		105	95

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5823908-5823921 Results are based on the dry weight of the soil.
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopukolof

CLIENT NAME: PINCHIN LTD. **ATTENTION TO: Alicia McDonald**
SAMPLING SITE: **SAMPLED BY:**

O. Reg. 153(511) - PCBs (Soil)

DATE RECEIVED: 2024-04-26 **DATE REPORTED: 2024-05-02**

			SAMPLE DESCRIPTION:	MW21-54	MW20-55	DUP3	MW1-52
			SAMPLE TYPE:	Soil	Soil	Soil	Soil
			DATE SAMPLED:	2024-04-25	2024-04-25 12:00	2024-04-25 12:00	2024-04-25 12:00
Parameter	**Unit**	**G / S**	**RDL**	**5823913**	**5823914**	**5823915**	**5823917**
Polychlorinated Biphenyls	µg/g		0.1	<0.1	<0.1	<0.1	<0.1
Moisture Content	%		0.1	6.2	7.4	6.8	8.9
Surrogate	**Unit**	**Acceptable Limits**					
Decachlorobiphenyl	%	50-140		108	100	120	104

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5823913-5823917 Results are based on the dry weight of soil extracted.
PCB total is a calculated parameter. The calculated value is the sum of Aroclor 1242, Aroclor 1248, Aroclor 1254 and Aroclor 1260.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopukolof

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
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FAX (905)712-5122
http://www.agatlabs.com

CLIENT NAME: PINCHIN LTD.
SAMPLING SITE:

ATTENTION TO: Alicia McDonald
SAMPLED BY:

O. Reg. 153(511) - PHCs F1 - F4 (Soil)

DATE RECEIVED: 2024-04-26

DATE REPORTED: 2024-05-02

			SAMPLE DESCRIPTION:	MW21-52
			SAMPLE TYPE:	Soil
			DATE SAMPLED:	2024-04-25
Parameter	**Unit**	**G / S**	**RDL**	**5823912**
Benzene	µg/g		0.02	<0.02
Toluene	µg/g		0.05	<0.05
Ethylbenzene	µg/g		0.05	<0.05
m & p-Xylene	µg/g		0.05	<0.05
o-Xylene	µg/g		0.05	<0.05
Xylenes (Total)	µg/g		0.05	<0.05
F1 (C6 to C10)	µg/g		5	<5
F1 (C6 to C10) minus BTEX	µg/g		5	<5
F2 (C10 to C16)	µg/g		10	<10
F3 (C16 to C34)	µg/g		50	<50
F4 (C34 to C50)	µg/g		50	<50
Gravimetric Heavy Hydrocarbons	µg/g		50	NA
Moisture Content	%		0.1	16.1
Surrogate	**Unit**	**Acceptable Limits**		
Toluene-d8	% Recovery	60-140		111
Terphenyl	%	60-140		85

Certified By: NPopukolof

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CLIENT NAME: PINCHIN LTD.

ATTENTION TO: Alicia McDonald

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - PHCs F1 - F4 (Soil)

DATE RECEIVED: 2024-04-26

DATE REPORTED: 2024-05-02

Comments:	RDL - Reported Detection Limit; G / S - Guideline / Standard
5823912	Results are based on sample dry weight. The C6-C10 fraction is calculated using Toluene response factor. Xylenes is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene. C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited. The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34. Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present. The chromatogram has returned to baseline by the retention time of nC50. Total C6 - C50 results are corrected for BTEX contribution. This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. nC6 and nC10 response factors are within 30% of Toluene response factor. nC10, nC16 and nC34 response factors are within 10% of their average. C50 response factor is within 70% of nC10 + nC16 + nC34 average. Linearity is within 15%. Extraction and holding times were met for this sample. Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client. Quality Control Data is available upon request.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopukolof

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

DATE RECEIVED: 2024-04-26 **DATE REPORTED: 2024-05-02**

			SAMPLE DESCRIPTION:	MW8-52	MW8-55	MW7-52	MW7-55	MW21-54	MW20-55	DUP3	MW9-54/55
			SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
			DATE SAMPLED:	2024-04-25	2024-04-25	2024-04-25	2024-04-25	2024-04-25	2024-04-25 12:00	2024-04-25 12:00	2024-04-25 12:00
Parameter	**Unit**	**G / S**	**RDL**	**5823908**	**5823909**	**5823910**	**5823911**	**5823913**	**5823914**	**5823915**	**5823921**
F1 (C6 to C10)	µg/g		5	<5	<5	<5	<5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g		5	<5	<5	<5	<5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g		10	<10	35	<10	30	32	29	26	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10	<10	35	<10	30	32	29	26	<10
F3 (C16 to C34)	µg/g		50	<50	<50	<50	<50	<50	<50	<50	<50
F3 (C16 to C34) minus PAHs	µg/g		50	<50	<50	<50	<50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g		50	<50	<50	<50	<50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g		50	NA	NA	NA	NA	NA	NA	NA	NA
Moisture Content	%		0.1	10.3	9.4	15.7	9.0	6.2	7.4	6.8	18.4
Surrogate	**Unit**	**Acceptable Limits**									
Toluene-d8	%	50-140		108	106	107	104	108	105	104	104
Terphenyl	%	60-140		89	84	98	77	95	73	77	80

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5823908-5823921 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

DATE RECEIVED: 2024-04-26

DATE REPORTED: 2024-05-02

			SAMPLE DESCRIPTION:	MW1-52	MW9-51/52
			SAMPLE TYPE:	Soil	Soil
			DATE SAMPLED:	2024-04-25 12:00	2024-04-25 12:00
Parameter	**Unit**	**G / S**	**RDL**	**5823917**	**5823920**
Benzene	µg/g		0.02	<0.02	<0.02
Toluene	µg/g		0.05	<0.05	<0.05
Ethylbenzene	µg/g		0.05	<0.05	<0.05
m & p-Xylene	µg/g		0.05	<0.05	<0.05
o-Xylene	µg/g		0.05	<0.05	<0.05
Xylenes (Total)	µg/g		0.05	<0.05	<0.05
F1 (C6 to C10)	µg/g		5	<5	7
F1 (C6 to C10) minus BTEX	µg/g		5	<5	7
F2 (C10 to C16)	µg/g		10	<10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10	<10	<10
F3 (C16 to C34)	µg/g		50	<50	<50
F3 (C16 to C34) minus PAHs	µg/g		50	<50	<50
F4 (C34 to C50)	µg/g		50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g		50	NA	NA
Moisture Content	%		0.1	8.9	7.2
Surrogate	**Unit**	**Acceptable Limits**			
Toluene-d8	% Recovery	60-140		105	107
Terphenyl	%	60-140		70	72

Certified By: NPopukolof

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

DATE RECEIVED: 2024-04-26

DATE REPORTED: 2024-05-02

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5823917-5823920 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopukolof

Certificate of Analysis

AGAT WORK ORDER: 24Z143509

PROJECT: 319674.002

CLIENT NAME: PINCHIN LTD.

SAMPLING SITE:

ATTENTION TO: Alicia McDonald

SAMPLED BY:

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2024-04-26

DATE REPORTED: 2024-05-02

			SAMPLE DESCRIPTION:	MW8-52	MW8-55	MW7-52	MW7-55	MW21-54	MW20-55	DUP3	MW9-54/55
			SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
			DATE SAMPLED:	2024-04-25	2024-04-25	2024-04-25	2024-04-25	2024-04-25	2024-04-25 12:00	2024-04-25 12:00	2024-04-25 12:00
Parameter	Unit	G / S	RDL	5823908	5823909	5823910	5823911	5823913	5823914	5823915	5823921
Dichlorodifluoromethane	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acetone	ug/g		0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g		0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Chloroform	ug/g		0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g		0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzene	ug/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g		0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g		0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g		0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g		0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Toluene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g		0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g		0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Certified By:

Certificate of Analysis

AGAT WORK ORDER: 24Z143509
PROJECT: 319674.002

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CLIENT NAME: PINCHIN LTD.
SAMPLING SITE:
ATTENTION TO: Alicia McDonald
SAMPLED BY:

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2024-04-26 **DATE REPORTED: 2024-05-02**

			SAMPLE DESCRIPTION:	MW8-52	MW8-55	MW7-52	MW7-55	MW21-54	MW20-55	DUP3	MW9-54/55
			SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
			DATE SAMPLED:	2024-04-25	2024-04-25	2024-04-25	2024-04-25	2024-04-25	2024-04-25 12:00	2024-04-25 12:00	2024-04-25 12:00
Parameter	**Unit**	**G / S**	**RDL**	**5823908**	**5823909**	**5823910**	**5823911**	**5823913**	**5823914**	**5823915**	**5823921**
m & p-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromoform	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes (Total)	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
n-Hexane	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	10.3	9.4	15.7	9.0	6.2	7.4	6.8	18.4
Surrogate	**Unit**	**Acceptable Limits**									
Toluene-d8	% Recovery	50-140		108	106	107	104	108	105	104	104
4-Bromofluorobenzene	% Recovery	50-140		99	96	94	92	95	108	104	96

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5823908-5823921 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopukoloff

Quality Assurance

CLIENT NAME: PINCHIN LTD.
PROJECT: 319674.002
SAMPLING SITE:

AGAT WORK ORDER: 24Z143509
ATTENTION TO: Alicia McDonald
SAMPLED BY:

Soil Analysis

RPT Date: May 02, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits Lower	Acceptable Limits Upper	Recovery	Acceptable Limits Lower	Acceptable Limits Upper	Recovery	Acceptable Limits Lower	Acceptable Limits Upper
O. Reg. 153(511) - Metals & Inorganics (Soil)															
Antimony	5823909	5823909	<0.8	<0.8	NA	< 0.8	127%	70%	130%	100%	80%	120%	78%	70%	130%
Arsenic	5823909	5823909	5	5	5.0%	< 1	95%	70%	130%	93%	80%	120%	97%	70%	130%
Barium	5823909	5823909	130	129	1.0%	< 2.0	101%	70%	130%	96%	80%	120%	108%	70%	130%
Beryllium	5823909	5823909	0.6	0.5	NA	< 0.5	103%	70%	130%	105%	80%	120%	111%	70%	130%
Boron	5823909	5823909	11	10	NA	< 5	88%	70%	130%	97%	80%	120%	100%	70%	130%
Boron (Hot Water Soluble)	5823909	5823909	0.23	0.24	NA	< 0.10	109%	60%	140%	106%	70%	130%	104%	60%	140%
Cadmium	5823909	5823909	<0.5	<0.5	NA	< 0.5	70%	70%	130%	103%	80%	120%	91%	70%	130%
Chromium	5823909	5823909	19	20	NA	< 5	99%	70%	130%	98%	80%	120%	107%	70%	130%
Cobalt	5823909	5823909	9.3	9.8	5.5%	< 0.8	97%	70%	130%	92%	80%	120%	97%	70%	130%
Copper	5823909	5823909	23.6	28.0	17.2%	< 1.0	93%	70%	130%	97%	80%	120%	90%	70%	130%
Lead	5823909	5823909	10	9	1.5%	< 1	96%	70%	130%	92%	80%	120%	91%	70%	130%
Molybdenum	5823909	5823909	3.7	3.8	3.5%	< 0.5	113%	70%	130%	99%	80%	120%	104%	70%	130%
Nickel	5823909	5823909	28	30	5.6%	< 1	98%	70%	130%	92%	80%	120%	88%	70%	130%
Selenium	5823909	5823909	<0.8	<0.8	NA	< 0.8	98%	70%	130%	100%	80%	120%	99%	70%	130%
Silver	5823909	5823909	<0.5	<0.5	NA	< 0.5	95%	70%	130%	92%	80%	120%	93%	70%	130%
Thallium	5823909	5823909	<0.5	<0.5	NA	< 0.5	129%	70%	130%	93%	80%	120%	92%	70%	130%
Uranium	5823909	5823909	1.63	1.54	NA	< 0.50	102%	70%	130%	89%	80%	120%	92%	70%	130%
Vanadium	5823909	5823909	29.1	29.9	2.7%	< 2.0	118%	70%	130%	83%	80%	120%	99%	70%	130%
Zinc	5823909	5823909	43	42	4.0%	< 5	100%	70%	130%	100%	80%	120%	81%	70%	130%
Chromium, Hexavalent	5814272		<0.2	<0.2	NA	< 0.2	95%	70%	130%	89%	80%	120%	79%	70%	130%
Cyanide, WAD	5820146		<0.040	<0.040	NA	< 0.040	102%	70%	130%	97%	80%	120%	93%	70%	130%
Mercury	5823909	5823909	<0.10	<0.10	NA	< 0.10	99%	70%	130%	95%	80%	120%	97%	70%	130%
Electrical Conductivity (2:1)	5823904		0.241	0.219	9.4%	< 0.005	108%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	5821419		10.4	10.8	3.4%	NA									
pH, 2:1 CaCl2 Extraction	5823703		6.90	7.12	3.1%	NA	101%	80%	120%						

Comments: NA signifies Not Applicable.
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.
Duplicate NA: results are under 5X the RDL and will not be calculated.

NIVINE BASILY

Certified By:

Quality Assurance

CLIENT NAME: PINCHIN LTD.
PROJECT: 319674.002
SAMPLING SITE:

AGAT WORK ORDER: 24Z143509
ATTENTION TO: Alicia McDonald
SAMPLED BY:

Trace Organics Analysis

RPT Date: May 02, 2024			**DUPLICATE**				**REFERENCE MATERIAL**			**METHOD BLANK SPIKE**			**MATRIX SPIKE**		
PARAMETER	**Batch**	**Sample Id**	**Dup #1**	**Dup #2**	**RPD**	**Method Blank**	**Measured Value**	**Acceptable Limits**		**Recovery**	**Acceptable Limits**		**Recovery**	**Acceptable Limits**	
								Lower	**Upper**		**Lower**	**Upper**		**Lower**	**Upper**
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)															
F1 (C6 to C10)	5818653		<5	<5	NA	< 5	121%	60%	140%	109%	60%	140%	94%	60%	140%
F2 (C10 to C16)	5818898		<10	<10	NA	< 10	111%	60%	140%	94%	60%	140%	88%	60%	140%
F3 (C16 to C34)	5818898		< 50	< 50	NA	< 50	109%	60%	140%	121%	60%	140%	115%	60%	140%
F4 (C34 to C50)	5818898		< 50	< 50	NA	< 50	81%	60%	140%	66%	60%	140%	120%	60%	140%
O. Reg. 153(511) - PAHs (Soil)															
Naphthalene	5823908	5823908	<0.05	<0.05	NA	< 0.05	97%	50%	140%	105%	50%	140%	88%	50%	140%
Acenaphthylene	5823908	5823908	<0.05	<0.05	NA	< 0.05	88%	50%	140%	100%	50%	140%	98%	50%	140%
Acenaphthene	5823908	5823908	<0.05	<0.05	NA	< 0.05	107%	50%	140%	78%	50%	140%	85%	50%	140%
Fluorene	5823908	5823908	<0.05	<0.05	NA	< 0.05	112%	50%	140%	105%	50%	140%	100%	50%	140%
Phenanthrene	5823908	5823908	<0.05	<0.05	NA	< 0.05	116%	50%	140%	103%	50%	140%	95%	50%	140%
Anthracene	5823908	5823908	<0.05	<0.05	NA	< 0.05	111%	50%	140%	95%	50%	140%	93%	50%	140%
Fluoranthene	5823908	5823908	<0.05	<0.05	NA	< 0.05	109%	50%	140%	108%	50%	140%	105%	50%	140%
Pyrene	5823908	5823908	<0.05	<0.05	NA	< 0.05	106%	50%	140%	108%	50%	140%	100%	50%	140%
Benzo(a)anthracene	5823908	5823908	<0.05	<0.05	NA	< 0.05	92%	50%	140%	78%	50%	140%	73%	50%	140%
Chrysene	5823908	5823908	<0.05	<0.05	NA	< 0.05	111%	50%	140%	93%	50%	140%	95%	50%	140%
Benzo(b)fluoranthene	5823908	5823908	<0.05	<0.05	NA	< 0.05	92%	50%	140%	73%	50%	140%	80%	50%	140%
Benzo(k)fluoranthene	5823908	5823908	<0.05	<0.05	NA	< 0.05	99%	50%	140%	88%	50%	140%	85%	50%	140%
Benzo(a)pyrene	5823908	5823908	<0.05	<0.05	NA	< 0.05	104%	50%	140%	83%	50%	140%	75%	50%	140%
Indeno(1,2,3-cd)pyrene	5823908	5823908	<0.05	<0.05	NA	< 0.05	90%	50%	140%	90%	50%	140%	85%	50%	140%
Dibenz(a,h)anthracene	5823908	5823908	<0.05	<0.05	NA	< 0.05	84%	50%	140%	80%	50%	140%	83%	50%	140%
Benzo(g,h,i)perylene	5823908	5823908	<0.05	<0.05	NA	< 0.05	110%	50%	140%	90%	50%	140%	80%	50%	140%
O. Reg. 153(511) - VOCs (with PHC) (Soil)															
Dichlorodifluoromethane	5818653		<0.05	<0.05	NA	< 0.05	96%	50%	140%	87%	50%	140%	79%	50%	140%
Vinyl Chloride	5818653		<0.02	<0.02	NA	< 0.02	100%	50%	140%	93%	50%	140%	102%	50%	140%
Bromomethane	5818653		<0.05	<0.05	NA	< 0.05	82%	50%	140%	89%	50%	140%	97%	50%	140%
Trichlorofluoromethane	5818653		<0.05	<0.05	NA	< 0.05	84%	50%	140%	77%	50%	140%	89%	50%	140%
Acetone	5818653		<0.50	<0.50	NA	< 0.50	112%	50%	140%	93%	50%	140%	98%	50%	140%
1,1-Dichloroethylene	5818653		<0.05	<0.05	NA	< 0.05	92%	50%	140%	88%	60%	130%	73%	50%	140%
Methylene Chloride	5818653		<0.05	<0.05	NA	< 0.05	99%	50%	140%	109%	60%	130%	96%	50%	140%
Trans- 1,2-Dichloroethylene	5818653		<0.05	<0.05	NA	< 0.05	85%	50%	140%	79%	60%	130%	69%	50%	140%
Methyl tert-butyl Ether	5818653		<0.05	<0.05	NA	< 0.05	62%	50%	140%	65%	60%	130%	104%	50%	140%
1,1-Dichloroethane	5818653		<0.02	<0.02	NA	< 0.02	62%	50%	140%	62%	60%	130%	86%	50%	140%
Methyl Ethyl Ketone	5818653		<0.50	<0.50	NA	< 0.50	110%	50%	140%	89%	50%	140%	85%	50%	140%
Cis- 1,2-Dichloroethylene	5818653		<0.02	<0.02	NA	< 0.02	92%	50%	140%	85%	60%	130%	74%	50%	140%
Chloroform	5818653		<0.04	<0.04	NA	< 0.04	101%	50%	140%	97%	60%	130%	79%	50%	140%
1,2-Dichloroethane	5818653		<0.03	<0.03	NA	< 0.03	99%	50%	140%	96%	60%	130%	91%	50%	140%
1,1,1-Trichloroethane	5818653		<0.05	<0.05	NA	< 0.05	69%	50%	140%	62%	60%	130%	90%	50%	140%
Carbon Tetrachloride	5818653		<0.05	<0.05	NA	< 0.05	91%	50%	140%	81%	60%	130%	73%	50%	140%

Quality Assurance

CLIENT NAME: PINCHIN LTD.
PROJECT: 319674.002
SAMPLING SITE:

AGAT WORK ORDER: 24Z143509
ATTENTION TO: Alicia McDonald
SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: May 02, 2024			**DUPLICATE**			**Method Blank**	**REFERENCE MATERIAL**			**METHOD BLANK SPIKE**			**MATRIX SPIKE**		
PARAMETER	**Batch**	**Sample Id**	**Dup #1**	**Dup #2**	**RPD**		**Measured Value**	**Acceptable Limits**		**Recovery**	**Acceptable Limits**		**Recovery**	**Acceptable Limits**	
								Lower	**Upper**		**Lower**	**Upper**		**Lower**	**Upper**
Benzene	5818653		<0.02	<0.02	NA	< 0.02	101%	50%	140%	97%	60%	130%	86%	50%	140%
1,2-Dichloropropane	5818653		<0.03	<0.03	NA	< 0.03	79%	50%	140%	77%	60%	130%	69%	50%	140%
Trichloroethylene	5818653		<0.03	<0.03	NA	< 0.03	97%	50%	140%	96%	60%	130%	99%	50%	140%
Bromodichloromethane	5818653		<0.05	<0.05	NA	< 0.05	88%	50%	140%	87%	60%	130%	79%	50%	140%
Methyl Isobutyl Ketone	5818653		<0.50	<0.50	NA	< 0.50	104%	50%	140%	89%	50%	140%	88%	50%	140%
1,1,2-Trichloroethane	5818653		<0.04	<0.04	NA	< 0.04	107%	50%	140%	102%	60%	130%	95%	50%	140%
Toluene	5818653		<0.05	<0.05	NA	< 0.05	98%	50%	140%	107%	60%	130%	88%	50%	140%
Dibromochloromethane	5818653		<0.05	<0.05	NA	< 0.05	89%	50%	140%	87%	60%	130%	78%	50%	140%
Ethylene Dibromide	5818653		<0.04	<0.04	NA	< 0.04	94%	50%	140%	93%	60%	130%	84%	50%	140%
Tetrachloroethylene	5818653		<0.05	<0.05	NA	< 0.05	99%	50%	140%	104%	60%	130%	102%	50%	140%
1,1,1,2-Tetrachloroethane	5818653		<0.04	<0.04	NA	< 0.04	98%	50%	140%	93%	60%	130%	86%	50%	140%
Chlorobenzene	5818653		<0.05	<0.05	NA	< 0.05	100%	50%	140%	96%	60%	130%	95%	50%	140%
Ethylbenzene	5818653		<0.05	<0.05	NA	< 0.05	98%	50%	140%	93%	60%	130%	76%	50%	140%
m & p-Xylene	5818653		<0.05	<0.05	NA	< 0.05	104%	50%	140%	100%	60%	130%	83%	50%	140%
Bromoform	5818653		<0.05	<0.05	NA	< 0.05	91%	50%	140%	97%	60%	130%	94%	50%	140%
Styrene	5818653		<0.05	<0.05	NA	< 0.05	82%	50%	140%	81%	60%	130%	68%	50%	140%
1,1,2,2-Tetrachloroethane	5818653		<0.05	<0.05	NA	< 0.05	84%	50%	140%	78%	60%	130%	93%	50%	140%
o-Xylene	5818653		<0.05	<0.05	NA	< 0.05	108%	50%	140%	104%	60%	130%	86%	50%	140%
1,3-Dichlorobenzene	5818653		<0.05	<0.05	NA	< 0.05	82%	50%	140%	101%	60%	130%	96%	50%	140%
1,4-Dichlorobenzene	5818653		<0.05	<0.05	NA	< 0.05	87%	50%	140%	101%	60%	130%	99%	50%	140%
1,2-Dichlorobenzene	5818653		<0.05	<0.05	NA	< 0.05	88%	50%	140%	99%	60%	130%	99%	50%	140%
n-Hexane	5818653		<0.05	<0.05	NA	< 0.05	96%	50%	140%	75%	60%	130%	78%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (Soil)															
Benzene	5819831		<0.02	<0.02	NA	< 0.02	103%	60%	140%	94%	60%	140%	99%	60%	140%
Toluene	5819831		<0.05	<0.05	NA	< 0.05	94%	60%	140%	103%	60%	140%	101%	60%	140%
Ethylbenzene	5819831		<0.05	<0.05	NA	< 0.05	81%	60%	140%	109%	60%	140%	91%	60%	140%
m & p-Xylene	5819831		<0.05	<0.05	NA	< 0.05	90%	60%	140%	94%	60%	140%	86%	60%	140%
o-Xylene	5819831		<0.05	<0.05	NA	< 0.05	89%	60%	140%	96%	60%	140%	108%	60%	140%
F1 (C6 to C10)	5819831		<5	<5	NA	< 5	98%	60%	140%	92%	60%	140%	94%	60%	140%
O. Reg. 153(511) - PCBs (Soil)															
Polychlorinated Biphenyls	5823913	5823913	< 0.1	< 0.1	NA	< 0.1	98%	50%	140%	93%	50%	140%	89%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

PARAMETER	**Batch**	**Sample Id**	**Dup #1**	**Dup #2**	**RPD**	**Method Blank**	**Measured Value**	**Lower**	**Upper**	**Recovery**	**Lower**	**Upper**	**Recovery**	**Lower**	**Upper**
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)															
Benzene	5819831		<0.02	<0.02	NA	< 0.02	103%	60%	140%	94%	60%	140%	99%	60%	140%
Toluene	5819831		<0.05	<0.05	NA	< 0.05	94%	60%	140%	103%	60%	140%	101%	60%	140%
Ethylbenzene	5819831		<0.05	<0.05	NA	< 0.05	81%	60%	140%	109%	60%	140%	91%	60%	140%
m & p-Xylene	5819831		<0.05	<0.05	NA	< 0.05	90%	60%	140%	94%	60%	140%	86%	60%	140%
o-Xylene	5819831		<0.05	<0.05	NA	< 0.05	89%	60%	140%	96%	60%	140%	108%	60%	140%

Quality Assurance

CLIENT NAME: PINCHIN LTD.
PROJECT: 319674.002
SAMPLING SITE:

AGAT WORK ORDER: 24Z143509
ATTENTION TO: Alicia McDonald
SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: May 02, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
F1 (C6 to C10)	5819831		<5	<5	NA	< 5	98%	60%	140%	92%	60%	140%	94%	60%	140%

Certified By: NPopnikolof

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823908	MW8-52	Soil	25-APR-2024	26-APR-2024

O. Reg. 153(511) - All Metals (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Antimony	30-APR-2024	30-APR-2024	JA
Arsenic	30-APR-2024	30-APR-2024	JA
Barium	30-APR-2024	30-APR-2024	JA
Beryllium	30-APR-2024	30-APR-2024	JA
Boron	30-APR-2024	30-APR-2024	JA
Boron (Hot Water Soluble)	30-APR-2024	30-APR-2024	AA
Cadmium	30-APR-2024	30-APR-2024	JA
Chromium	30-APR-2024	30-APR-2024	JA
Cobalt	30-APR-2024	30-APR-2024	JA
Copper	30-APR-2024	30-APR-2024	JA
Lead	30-APR-2024	30-APR-2024	JA
Molybdenum	30-APR-2024	30-APR-2024	JA
Nickel	30-APR-2024	30-APR-2024	JA
Selenium	30-APR-2024	30-APR-2024	JA
Silver	30-APR-2024	30-APR-2024	JA
Thallium	30-APR-2024	30-APR-2024	JA
Uranium	30-APR-2024	30-APR-2024	JA
Vanadium	30-APR-2024	30-APR-2024	JA
Zinc	30-APR-2024	30-APR-2024	JA
Chromium, Hexavalent	02-MAY-2024	02-MAY-2024	RC
Mercury	30-APR-2024	30-APR-2024	JA

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	01-MAY-2024	01-MAY-2024	JJ
Acenaphthylene	01-MAY-2024	01-MAY-2024	JJ
Acenaphthene	01-MAY-2024	01-MAY-2024	JJ
Fluorene	01-MAY-2024	01-MAY-2024	JJ
Phenanthrene	01-MAY-2024	01-MAY-2024	JJ
Anthracene	01-MAY-2024	01-MAY-2024	JJ
Fluoranthene	01-MAY-2024	01-MAY-2024	JJ
Pyrene	01-MAY-2024	01-MAY-2024	JJ
Benzo(a)anthracene	01-MAY-2024	01-MAY-2024	JJ
Chrysene	01-MAY-2024	01-MAY-2024	JJ
Benzo(b)fluoranthene	01-MAY-2024	01-MAY-2024	JJ
Benzo(k)fluoranthene	01-MAY-2024	01-MAY-2024	JJ
Benzo(a)pyrene	01-MAY-2024	01-MAY-2024	JJ
Indeno(1,2,3-cd)pyrene	01-MAY-2024	01-MAY-2024	JJ
Dibenz(a,h)anthracene	01-MAY-2024	01-MAY-2024	JJ

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823908	**MW8-52**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Benzo(g,h,i)perylene	01-MAY-2024	01-MAY-2024	JJ
2-and 1-methyl Naphthalene	01-MAY-2024	01-MAY-2024	SYS
Naphthalene-d8	01-MAY-2024	01-MAY-2024	JJ
Acridine-d9	01-MAY-2024	01-MAY-2024	JJ
Terphenyl-d14	01-MAY-2024	01-MAY-2024	JJ
Moisture Content	30-APR-2024	30-APR-2024	PD

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	02-MAY-2024	02-MAY-2024	CK
F1 (C6 to C10) minus BTEX	02-MAY-2024	02-MAY-2024	SYS
Toluene-d8	02-MAY-2024	02-MAY-2024	CK
F2 (C10 to C16)	01-MAY-2024	01-MAY-2024	SS
F2 (C10 to C16) minus Naphthalene	01-MAY-2024	01-MAY-2024	SYS
F3 (C16 to C34)	01-MAY-2024	01-MAY-2024	SS
F3 (C16 to C34) minus PAHs	01-MAY-2024	01-MAY-2024	SYS
F4 (C34 to C50)	01-MAY-2024	01-MAY-2024	SS
Gravimetric Heavy Hydrocarbons			
Moisture Content	30-APR-2024	30-APR-2024	PD
Terphenyl	01-MAY-2024	01-MAY-2024	SS

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	02-MAY-2024	02-MAY-2024	CK
Vinyl Chloride	02-MAY-2024	02-MAY-2024	CK
Bromomethane	02-MAY-2024	02-MAY-2024	CK
Trichlorofluoromethane	02-MAY-2024	02-MAY-2024	CK
Acetone	02-MAY-2024	02-MAY-2024	CK
1,1-Dichloroethylene	02-MAY-2024	02-MAY-2024	CK
Methylene Chloride	02-MAY-2024	02-MAY-2024	CK
Trans- 1,2-Dichloroethylene	02-MAY-2024	02-MAY-2024	CK
Methyl tert-butyl Ether	02-MAY-2024	02-MAY-2024	CK
1,1-Dichloroethane	02-MAY-2024	02-MAY-2024	CK
Methyl Ethyl Ketone	02-MAY-2024	02-MAY-2024	CK
Cis- 1,2-Dichloroethylene	02-MAY-2024	02-MAY-2024	CK
Chloroform	02-MAY-2024	02-MAY-2024	CK
1,2-Dichloroethane	02-MAY-2024	02-MAY-2024	CK
1,1,1-Trichloroethane	02-MAY-2024	02-MAY-2024	CK
Carbon Tetrachloride	02-MAY-2024	02-MAY-2024	CK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823908	**MW8-52**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Benzene	02-MAY-2024	02-MAY-2024	CK
1,2-Dichloropropane	02-MAY-2024	02-MAY-2024	CK
Trichloroethylene	02-MAY-2024	02-MAY-2024	CK
Bromodichloromethane	02-MAY-2024	02-MAY-2024	CK
Methyl Isobutyl Ketone	02-MAY-2024	02-MAY-2024	CK
1,1,2-Trichloroethane	02-MAY-2024	02-MAY-2024	CK
Toluene	02-MAY-2024	02-MAY-2024	CK
Dibromochloromethane	02-MAY-2024	02-MAY-2024	CK
Ethylene Dibromide	02-MAY-2024	02-MAY-2024	CK
Tetrachloroethylene	02-MAY-2024	02-MAY-2024	CK
1,1,1,2-Tetrachloroethane	02-MAY-2024	02-MAY-2024	CK
Chlorobenzene	02-MAY-2024	02-MAY-2024	CK
Ethylbenzene	02-MAY-2024	02-MAY-2024	CK
m & p-Xylene	02-MAY-2024	02-MAY-2024	CK
Bromoform	02-MAY-2024	02-MAY-2024	CK
Styrene	02-MAY-2024	02-MAY-2024	CK
1,1,2,2-Tetrachloroethane	02-MAY-2024	02-MAY-2024	CK
o-Xylene	02-MAY-2024	02-MAY-2024	CK
1,3-Dichlorobenzene	02-MAY-2024	02-MAY-2024	CK
1,4-Dichlorobenzene	02-MAY-2024	02-MAY-2024	CK
1,2-Dichlorobenzene	02-MAY-2024	02-MAY-2024	CK
Xylenes (Total)	02-MAY-2024	02-MAY-2024	SYS
1,3-Dichloropropene (Cis + Trans)	02-MAY-2024	02-MAY-2024	SYS
n-Hexane	02-MAY-2024	02-MAY-2024	CK
Toluene-d8	02-MAY-2024	02-MAY-2024	CK
4-Bromofluorobenzene	02-MAY-2024	02-MAY-2024	CK
Moisture Content	30-APR-2024	30-APR-2024	PD

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823909	**MW8-55**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - Metals & Inorganics (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Antimony	30-APR-2024	30-APR-2024	JA
Arsenic	30-APR-2024	30-APR-2024	JA
Barium	30-APR-2024	30-APR-2024	JA
Beryllium	30-APR-2024	30-APR-2024	JA
Boron	30-APR-2024	30-APR-2024	JA
Boron (Hot Water Soluble)	30-APR-2024	30-APR-2024	AA
Cadmium	30-APR-2024	30-APR-2024	JA

Time Markers

AGAT WORK ORDER: 24Z143509

PROJECT: 319674.002

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
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CLIENT NAME: PINCHIN LTD. **ATTENTION TO: Alicia McDonald**

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823909	**MW8-55**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - Metals & Inorganics (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Chromium	30-APR-2024	30-APR-2024	JA
Cobalt	30-APR-2024	30-APR-2024	JA
Copper	30-APR-2024	30-APR-2024	JA
Lead	30-APR-2024	30-APR-2024	JA
Molybdenum	30-APR-2024	30-APR-2024	JA
Nickel	30-APR-2024	30-APR-2024	JA
Selenium	30-APR-2024	30-APR-2024	JA
Silver	30-APR-2024	30-APR-2024	JA
Thallium	30-APR-2024	30-APR-2024	JA
Uranium	30-APR-2024	30-APR-2024	JA
Vanadium	30-APR-2024	30-APR-2024	JA
Zinc	30-APR-2024	30-APR-2024	JA
Chromium, Hexavalent	02-MAY-2024	02-MAY-2024	RC
Cyanide, WAD	01-MAY-2024	01-MAY-2024	BG
Mercury	30-APR-2024	30-APR-2024	JA
Electrical Conductivity (2:1)	30-APR-2024	30-APR-2024	XL
Sodium Adsorption Ratio (2:1) (Calc.)	30-APR-2024	30-APR-2024	XH
pH, 2:1 CaCl2 Extraction	01-MAY-2024	01-MAY-2024	XL

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	01-MAY-2024	01-MAY-2024	JJ
Acenaphthylene	01-MAY-2024	01-MAY-2024	JJ
Acenaphthene	01-MAY-2024	01-MAY-2024	JJ
Fluorene	01-MAY-2024	01-MAY-2024	JJ
Phenanthrene	01-MAY-2024	01-MAY-2024	JJ
Anthracene	01-MAY-2024	01-MAY-2024	JJ
Fluoranthene	01-MAY-2024	01-MAY-2024	JJ
Pyrene	01-MAY-2024	01-MAY-2024	JJ
Benzo(a)anthracene	01-MAY-2024	01-MAY-2024	JJ
Chrysene	01-MAY-2024	01-MAY-2024	JJ
Benzo(b)fluoranthene	01-MAY-2024	01-MAY-2024	JJ
Benzo(k)fluoranthene	01-MAY-2024	01-MAY-2024	JJ
Benzo(a)pyrene	01-MAY-2024	01-MAY-2024	JJ
Indeno(1,2,3-cd)pyrene	01-MAY-2024	01-MAY-2024	JJ
Dibenz(a,h)anthracene	01-MAY-2024	01-MAY-2024	JJ
Benzo(g,h,i)perylene	01-MAY-2024	01-MAY-2024	JJ
2-and 1-methyl Naphthalene	01-MAY-2024	01-MAY-2024	SYS
Naphthalene-d8	01-MAY-2024	01-MAY-2024	JJ

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823909	**MW8-55**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Acridine-d9	01-MAY-2024	01-MAY-2024	JJ
Terphenyl-d14	01-MAY-2024	01-MAY-2024	JJ
Moisture Content	30-APR-2024	30-APR-2024	PD

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	02-MAY-2024	02-MAY-2024	CK
F1 (C6 to C10) minus BTEX	02-MAY-2024	02-MAY-2024	SYS
Toluene-d8	02-MAY-2024	02-MAY-2024	CK
F2 (C10 to C16)	01-MAY-2024	01-MAY-2024	SS
F2 (C10 to C16) minus Naphthalene	01-MAY-2024	01-MAY-2024	SYS
F3 (C16 to C34)	01-MAY-2024	01-MAY-2024	SS
F3 (C16 to C34) minus PAHs	01-MAY-2024	01-MAY-2024	SYS
F4 (C34 to C50)	01-MAY-2024	01-MAY-2024	SS
Gravimetric Heavy Hydrocarbons			
Moisture Content	30-APR-2024	30-APR-2024	PD
Terphenyl	01-MAY-2024	01-MAY-2024	SS

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	02-MAY-2024	02-MAY-2024	CK
Vinyl Chloride	02-MAY-2024	02-MAY-2024	CK
Bromomethane	02-MAY-2024	02-MAY-2024	CK
Trichlorofluoromethane	02-MAY-2024	02-MAY-2024	CK
Acetone	02-MAY-2024	02-MAY-2024	CK
1,1-Dichloroethylene	02-MAY-2024	02-MAY-2024	CK
Methylene Chloride	02-MAY-2024	02-MAY-2024	CK
Trans- 1,2-Dichloroethylene	02-MAY-2024	02-MAY-2024	CK
Methyl tert-butyl Ether	02-MAY-2024	02-MAY-2024	CK
1,1-Dichloroethane	02-MAY-2024	02-MAY-2024	CK
Methyl Ethyl Ketone	02-MAY-2024	02-MAY-2024	CK
Cis- 1,2-Dichloroethylene	02-MAY-2024	02-MAY-2024	CK
Chloroform	02-MAY-2024	02-MAY-2024	CK
1,2-Dichloroethane	02-MAY-2024	02-MAY-2024	CK
1,1,1-Trichloroethane	02-MAY-2024	02-MAY-2024	CK
Carbon Tetrachloride	02-MAY-2024	02-MAY-2024	CK
Benzene	02-MAY-2024	02-MAY-2024	CK
1,2-Dichloropropane	02-MAY-2024	02-MAY-2024	CK
Trichloroethylene	02-MAY-2024	02-MAY-2024	CK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823909	**MW8-55**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Bromodichloromethane	02-MAY-2024	02-MAY-2024	CK
Methyl Isobutyl Ketone	02-MAY-2024	02-MAY-2024	CK
1,1,2-Trichloroethane	02-MAY-2024	02-MAY-2024	CK
Toluene	02-MAY-2024	02-MAY-2024	CK
Dibromochloromethane	02-MAY-2024	02-MAY-2024	CK
Ethylene Dibromide	02-MAY-2024	02-MAY-2024	CK
Tetrachloroethylene	02-MAY-2024	02-MAY-2024	CK
1,1,1,2-Tetrachloroethane	02-MAY-2024	02-MAY-2024	CK
Chlorobenzene	02-MAY-2024	02-MAY-2024	CK
Ethylbenzene	02-MAY-2024	02-MAY-2024	CK
m & p-Xylene	02-MAY-2024	02-MAY-2024	CK
Bromoform	02-MAY-2024	02-MAY-2024	CK
Styrene	02-MAY-2024	02-MAY-2024	CK
1,1,2,2-Tetrachloroethane	02-MAY-2024	02-MAY-2024	CK
o-Xylene	02-MAY-2024	02-MAY-2024	CK
1,3-Dichlorobenzene	02-MAY-2024	02-MAY-2024	CK
1,4-Dichlorobenzene	02-MAY-2024	02-MAY-2024	CK
1,2-Dichlorobenzene	02-MAY-2024	02-MAY-2024	CK
Xylenes (Total)	02-MAY-2024	02-MAY-2024	SYS
1,3-Dichloropropene (Cis + Trans)	02-MAY-2024	02-MAY-2024	SYS
n-Hexane	02-MAY-2024	02-MAY-2024	CK
Toluene-d8	02-MAY-2024	02-MAY-2024	CK
4-Bromofluorobenzene	02-MAY-2024	02-MAY-2024	CK
Moisture Content	30-APR-2024	30-APR-2024	PD

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823910	**MW7-52**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - All Metals (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Antimony	30-APR-2024	30-APR-2024	JA
Arsenic	30-APR-2024	30-APR-2024	JA
Barium	30-APR-2024	30-APR-2024	JA
Beryllium	30-APR-2024	30-APR-2024	JA
Boron	30-APR-2024	30-APR-2024	JA
Boron (Hot Water Soluble)	30-APR-2024	30-APR-2024	AA
Cadmium	30-APR-2024	30-APR-2024	JA
Chromium	30-APR-2024	30-APR-2024	JA
Cobalt	30-APR-2024	30-APR-2024	JA
Copper	30-APR-2024	30-APR-2024	JA

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823910	**MW7-52**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - All Metals (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Lead	30-APR-2024	30-APR-2024	JA
Molybdenum	30-APR-2024	30-APR-2024	JA
Nickel	30-APR-2024	30-APR-2024	JA
Selenium	30-APR-2024	30-APR-2024	JA
Silver	30-APR-2024	30-APR-2024	JA
Thallium	30-APR-2024	30-APR-2024	JA
Uranium	30-APR-2024	30-APR-2024	JA
Vanadium	30-APR-2024	30-APR-2024	JA
Zinc	30-APR-2024	30-APR-2024	JA
Chromium, Hexavalent	02-MAY-2024	02-MAY-2024	RC
Mercury	30-APR-2024	30-APR-2024	JA

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	01-MAY-2024	01-MAY-2024	JJ
Acenaphthylene	01-MAY-2024	01-MAY-2024	JJ
Acenaphthene	01-MAY-2024	01-MAY-2024	JJ
Fluorene	01-MAY-2024	01-MAY-2024	JJ
Phenanthrene	01-MAY-2024	01-MAY-2024	JJ
Anthracene	01-MAY-2024	01-MAY-2024	JJ
Fluoranthene	01-MAY-2024	01-MAY-2024	JJ
Pyrene	01-MAY-2024	01-MAY-2024	JJ
Benzo(a)anthracene	01-MAY-2024	01-MAY-2024	JJ
Chrysene	01-MAY-2024	01-MAY-2024	JJ
Benzo(b)fluoranthene	01-MAY-2024	01-MAY-2024	JJ
Benzo(k)fluoranthene	01-MAY-2024	01-MAY-2024	JJ
Benzo(a)pyrene	01-MAY-2024	01-MAY-2024	JJ
Indeno(1,2,3-cd)pyrene	01-MAY-2024	01-MAY-2024	JJ
Dibenz(a,h)anthracene	01-MAY-2024	01-MAY-2024	JJ
Benzo(g,h,i)perylene	01-MAY-2024	01-MAY-2024	JJ
2-and 1-methyl Naphthalene	01-MAY-2024	01-MAY-2024	SYS
Naphthalene-d8	01-MAY-2024	01-MAY-2024	JJ
Acridine-d9	01-MAY-2024	01-MAY-2024	JJ
Terphenyl-d14	01-MAY-2024	01-MAY-2024	JJ
Moisture Content	30-APR-2024	30-APR-2024	PD

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	02-MAY-2024	02-MAY-2024	CK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823910	**MW7-52**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10) minus BTEX	02-MAY-2024	02-MAY-2024	SYS
Toluene-d8	02-MAY-2024	02-MAY-2024	CK
F2 (C10 to C16)	01-MAY-2024	01-MAY-2024	SS
F2 (C10 to C16) minus Naphthalene	01-MAY-2024	01-MAY-2024	SYS
F3 (C16 to C34)	01-MAY-2024	01-MAY-2024	SS
F3 (C16 to C34) minus PAHs	01-MAY-2024	01-MAY-2024	SYS
F4 (C34 to C50)	01-MAY-2024	01-MAY-2024	SS
Gravimetric Heavy Hydrocarbons			
Moisture Content	30-APR-2024	30-APR-2024	PD
Terphenyl	01-MAY-2024	01-MAY-2024	SS

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	02-MAY-2024	02-MAY-2024	CK
Vinyl Chloride	02-MAY-2024	02-MAY-2024	CK
Bromomethane	02-MAY-2024	02-MAY-2024	CK
Trichlorofluoromethane	02-MAY-2024	02-MAY-2024	CK
Acetone	02-MAY-2024	02-MAY-2024	CK
1,1-Dichloroethylene	02-MAY-2024	02-MAY-2024	CK
Methylene Chloride	02-MAY-2024	02-MAY-2024	CK
Trans- 1,2-Dichloroethylene	02-MAY-2024	02-MAY-2024	CK
Methyl tert-butyl Ether	02-MAY-2024	02-MAY-2024	CK
1,1-Dichloroethane	02-MAY-2024	02-MAY-2024	CK
Methyl Ethyl Ketone	02-MAY-2024	02-MAY-2024	CK
Cis- 1,2-Dichloroethylene	02-MAY-2024	02-MAY-2024	CK
Chloroform	02-MAY-2024	02-MAY-2024	CK
1,2-Dichloroethane	02-MAY-2024	02-MAY-2024	CK
1,1,1-Trichloroethane	02-MAY-2024	02-MAY-2024	CK
Carbon Tetrachloride	02-MAY-2024	02-MAY-2024	CK
Benzene	02-MAY-2024	02-MAY-2024	CK
1,2-Dichloropropane	02-MAY-2024	02-MAY-2024	CK
Trichloroethylene	02-MAY-2024	02-MAY-2024	CK
Bromodichloromethane	02-MAY-2024	02-MAY-2024	CK
Methyl Isobutyl Ketone	02-MAY-2024	02-MAY-2024	CK
1,1,2-Trichloroethane	02-MAY-2024	02-MAY-2024	CK
Toluene	02-MAY-2024	02-MAY-2024	CK
Dibromochloromethane	02-MAY-2024	02-MAY-2024	CK
Ethylene Dibromide	02-MAY-2024	02-MAY-2024	CK
Tetrachloroethylene	02-MAY-2024	02-MAY-2024	CK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823910	**MW7-52**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
1,1,1,2-Tetrachloroethane	02-MAY-2024	02-MAY-2024	CK
Chlorobenzene	02-MAY-2024	02-MAY-2024	CK
Ethylbenzene	02-MAY-2024	02-MAY-2024	CK
m & p-Xylene	02-MAY-2024	02-MAY-2024	CK
Bromoform	02-MAY-2024	02-MAY-2024	CK
Styrene	02-MAY-2024	02-MAY-2024	CK
1,1,2,2-Tetrachloroethane	02-MAY-2024	02-MAY-2024	CK
o-Xylene	02-MAY-2024	02-MAY-2024	CK
1,3-Dichlorobenzene	02-MAY-2024	02-MAY-2024	CK
1,4-Dichlorobenzene	02-MAY-2024	02-MAY-2024	CK
1,2-Dichlorobenzene	02-MAY-2024	02-MAY-2024	CK
Xylenes (Total)	02-MAY-2024	02-MAY-2024	SYS
1,3-Dichloropropene (Cis + Trans)	02-MAY-2024	02-MAY-2024	SYS
n-Hexane	02-MAY-2024	02-MAY-2024	CK
Toluene-d8	02-MAY-2024	02-MAY-2024	CK
4-Bromofluorobenzene	02-MAY-2024	02-MAY-2024	CK
Moisture Content	30-APR-2024	30-APR-2024	PD

5823911	**MW7-55**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - Metals & Inorganics (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Antimony	30-APR-2024	30-APR-2024	JA
Arsenic	30-APR-2024	30-APR-2024	JA
Barium	30-APR-2024	30-APR-2024	JA
Beryllium	30-APR-2024	30-APR-2024	JA
Boron	30-APR-2024	30-APR-2024	JA
Boron (Hot Water Soluble)	30-APR-2024	30-APR-2024	AA
Cadmium	30-APR-2024	30-APR-2024	JA
Chromium	30-APR-2024	30-APR-2024	JA
Cobalt	30-APR-2024	30-APR-2024	JA
Copper	30-APR-2024	30-APR-2024	JA
Lead	30-APR-2024	30-APR-2024	JA
Molybdenum	30-APR-2024	30-APR-2024	JA
Nickel	30-APR-2024	30-APR-2024	JA
Selenium	30-APR-2024	30-APR-2024	JA
Silver	30-APR-2024	30-APR-2024	JA
Thallium	30-APR-2024	30-APR-2024	JA
Uranium	30-APR-2024	30-APR-2024	JA

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823911	MW7-55	Soil	25-APR-2024	26-APR-2024

O. Reg. 153(511) - Metals & Inorganics (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Vanadium	30-APR-2024	30-APR-2024	JA
Zinc	30-APR-2024	30-APR-2024	JA
Chromium, Hexavalent	02-MAY-2024	02-MAY-2024	RC
Cyanide, WAD	01-MAY-2024	01-MAY-2024	BG
Mercury	30-APR-2024	30-APR-2024	JA
Electrical Conductivity (2:1)	30-APR-2024	30-APR-2024	XL
Sodium Adsorption Ratio (2:1) (Calc.)	30-APR-2024	30-APR-2024	XH
pH, 2:1 CaCl2 Extraction	01-MAY-2024	01-MAY-2024	XL

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	01-MAY-2024	01-MAY-2024	JJ
Acenaphthylene	01-MAY-2024	01-MAY-2024	JJ
Acenaphthene	01-MAY-2024	01-MAY-2024	JJ
Fluorene	01-MAY-2024	01-MAY-2024	JJ
Phenanthrene	01-MAY-2024	01-MAY-2024	JJ
Anthracene	01-MAY-2024	01-MAY-2024	JJ
Fluoranthene	01-MAY-2024	01-MAY-2024	JJ
Pyrene	01-MAY-2024	01-MAY-2024	JJ
Benzo(a)anthracene	01-MAY-2024	01-MAY-2024	JJ
Chrysene	01-MAY-2024	01-MAY-2024	JJ
Benzo(b)fluoranthene	01-MAY-2024	01-MAY-2024	JJ
Benzo(k)fluoranthene	01-MAY-2024	01-MAY-2024	JJ
Benzo(a)pyrene	01-MAY-2024	01-MAY-2024	JJ
Indeno(1,2,3-cd)pyrene	01-MAY-2024	01-MAY-2024	JJ
Dibenz(a,h)anthracene	01-MAY-2024	01-MAY-2024	JJ
Benzo(g,h,i)perylene	01-MAY-2024	01-MAY-2024	JJ
2-and 1-methyl Naphthalene	01-MAY-2024	01-MAY-2024	SYS
Naphthalene-d8	01-MAY-2024	01-MAY-2024	JJ
Acridine-d9	01-MAY-2024	01-MAY-2024	JJ
Terphenyl-d14	01-MAY-2024	01-MAY-2024	JJ
Moisture Content	30-APR-2024	30-APR-2024	PD

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	02-MAY-2024	02-MAY-2024	CK
F1 (C6 to C10) minus BTEX	02-MAY-2024	02-MAY-2024	SYS
Toluene-d8	02-MAY-2024	02-MAY-2024	CK
F2 (C10 to C16)	01-MAY-2024	01-MAY-2024	SS

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823911	**MW7-55**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F2 (C10 to C16) minus Naphthalene	01-MAY-2024	01-MAY-2024	SYS
F3 (C16 to C34)	01-MAY-2024	01-MAY-2024	SS
F3 (C16 to C34) minus PAHs	01-MAY-2024	01-MAY-2024	SYS
F4 (C34 to C50)	01-MAY-2024	01-MAY-2024	SS
Gravimetric Heavy Hydrocarbons			
Moisture Content	30-APR-2024	30-APR-2024	PD
Terphenyl	01-MAY-2024	01-MAY-2024	SS

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	02-MAY-2024	02-MAY-2024	CK
Vinyl Chloride	02-MAY-2024	02-MAY-2024	CK
Bromomethane	02-MAY-2024	02-MAY-2024	CK
Trichlorofluoromethane	02-MAY-2024	02-MAY-2024	CK
Acetone	02-MAY-2024	02-MAY-2024	CK
1,1-Dichloroethylene	02-MAY-2024	02-MAY-2024	CK
Methylene Chloride	02-MAY-2024	02-MAY-2024	CK
Trans- 1,2-Dichloroethylene	02-MAY-2024	02-MAY-2024	CK
Methyl tert-butyl Ether	02-MAY-2024	02-MAY-2024	CK
1,1-Dichloroethane	02-MAY-2024	02-MAY-2024	CK
Methyl Ethyl Ketone	02-MAY-2024	02-MAY-2024	CK
Cis- 1,2-Dichloroethylene	02-MAY-2024	02-MAY-2024	CK
Chloroform	02-MAY-2024	02-MAY-2024	CK
1,2-Dichloroethane	02-MAY-2024	02-MAY-2024	CK
1,1,1-Trichloroethane	02-MAY-2024	02-MAY-2024	CK
Carbon Tetrachloride	02-MAY-2024	02-MAY-2024	CK
Benzene	02-MAY-2024	02-MAY-2024	CK
1,2-Dichloropropane	02-MAY-2024	02-MAY-2024	CK
Trichloroethylene	02-MAY-2024	02-MAY-2024	CK
Bromodichloromethane	02-MAY-2024	02-MAY-2024	CK
Methyl Isobutyl Ketone	02-MAY-2024	02-MAY-2024	CK
1,1,2-Trichloroethane	02-MAY-2024	02-MAY-2024	CK
Toluene	02-MAY-2024	02-MAY-2024	CK
Dibromochloromethane	02-MAY-2024	02-MAY-2024	CK
Ethylene Dibromide	02-MAY-2024	02-MAY-2024	CK
Tetrachloroethylene	02-MAY-2024	02-MAY-2024	CK
1,1,1,2-Tetrachloroethane	02-MAY-2024	02-MAY-2024	CK
Chlorobenzene	02-MAY-2024	02-MAY-2024	CK
Ethylbenzene	02-MAY-2024	02-MAY-2024	CK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823911	**MW7-55**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
m & p-Xylene	02-MAY-2024	02-MAY-2024	CK
Bromoform	02-MAY-2024	02-MAY-2024	CK
Styrene	02-MAY-2024	02-MAY-2024	CK
1,1,2,2-Tetrachloroethane	02-MAY-2024	02-MAY-2024	CK
o-Xylene	02-MAY-2024	02-MAY-2024	CK
1,3-Dichlorobenzene	02-MAY-2024	02-MAY-2024	CK
1,4-Dichlorobenzene	02-MAY-2024	02-MAY-2024	CK
1,2-Dichlorobenzene	02-MAY-2024	02-MAY-2024	CK
Xylenes (Total)	02-MAY-2024	02-MAY-2024	SYS
1,3-Dichloropropene (Cis + Trans)	02-MAY-2024	02-MAY-2024	SYS
n-Hexane	02-MAY-2024	02-MAY-2024	CK
Toluene-d8	02-MAY-2024	02-MAY-2024	CK
4-Bromofluorobenzene	02-MAY-2024	02-MAY-2024	CK
Moisture Content	30-APR-2024	30-APR-2024	PD

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823912	**MW21-52**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - PHCs F1 - F4 (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Benzene	30-APR-2024	30-APR-2024	VB
Toluene	30-APR-2024	30-APR-2024	VB
Ethylbenzene	30-APR-2024	30-APR-2024	VB
m & p-Xylene	30-APR-2024	30-APR-2024	VB
o-Xylene	30-APR-2024	30-APR-2024	VB
Xylenes (Total)	30-APR-2024	30-APR-2024	SYS
F1 (C6 to C10)	30-APR-2024	30-APR-2024	VB
F1 (C6 to C10) minus BTEX	30-APR-2024	30-APR-2024	SYS
Toluene-d8	30-APR-2024	30-APR-2024	VB
F2 (C10 to C16)	01-MAY-2024	01-MAY-2024	SS
F3 (C16 to C34)	01-MAY-2024	01-MAY-2024	SS
F4 (C34 to C50)	01-MAY-2024	01-MAY-2024	SS
Gravimetric Heavy Hydrocarbons			
Moisture Content	30-APR-2024	30-APR-2024	PD
Terphenyl	01-MAY-2024	01-MAY-2024	SS

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823913	**MW21-54**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - All Metals (Soil)

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823913	**MW21-54**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - All Metals (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Antimony	30-APR-2024	30-APR-2024	JA
Arsenic	30-APR-2024	30-APR-2024	JA
Barium	30-APR-2024	30-APR-2024	JA
Beryllium	30-APR-2024	30-APR-2024	JA
Boron	30-APR-2024	30-APR-2024	JA
Boron (Hot Water Soluble)	30-APR-2024	30-APR-2024	AA
Cadmium	30-APR-2024	30-APR-2024	JA
Chromium	30-APR-2024	30-APR-2024	JA
Cobalt	30-APR-2024	30-APR-2024	JA
Copper	30-APR-2024	30-APR-2024	JA
Lead	30-APR-2024	30-APR-2024	JA
Molybdenum	30-APR-2024	30-APR-2024	JA
Nickel	30-APR-2024	30-APR-2024	JA
Selenium	30-APR-2024	30-APR-2024	JA
Silver	30-APR-2024	30-APR-2024	JA
Thallium	30-APR-2024	30-APR-2024	JA
Uranium	30-APR-2024	30-APR-2024	JA
Vanadium	30-APR-2024	30-APR-2024	JA
Zinc	30-APR-2024	30-APR-2024	JA
Chromium, Hexavalent	02-MAY-2024	02-MAY-2024	RC
Mercury	30-APR-2024	30-APR-2024	JA

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	01-MAY-2024	01-MAY-2024	JJ
Acenaphthylene	01-MAY-2024	01-MAY-2024	JJ
Acenaphthene	01-MAY-2024	01-MAY-2024	JJ
Fluorene	01-MAY-2024	01-MAY-2024	JJ
Phenanthrene	01-MAY-2024	01-MAY-2024	JJ
Anthracene	01-MAY-2024	01-MAY-2024	JJ
Fluoranthene	01-MAY-2024	01-MAY-2024	JJ
Pyrene	01-MAY-2024	01-MAY-2024	JJ
Benzo(a)anthracene	01-MAY-2024	01-MAY-2024	JJ
Chrysene	01-MAY-2024	01-MAY-2024	JJ
Benzo(b)fluoranthene	01-MAY-2024	01-MAY-2024	JJ
Benzo(k)fluoranthene	01-MAY-2024	01-MAY-2024	JJ
Benzo(a)pyrene	01-MAY-2024	01-MAY-2024	JJ
Indeno(1,2,3-cd)pyrene	01-MAY-2024	01-MAY-2024	JJ
Dibenz(a,h)anthracene	01-MAY-2024	01-MAY-2024	JJ

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823913	**MW21-54**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Benzo(g,h,i)perylene	01-MAY-2024	01-MAY-2024	JJ
2-and 1-methyl Naphthalene	01-MAY-2024	01-MAY-2024	SYS
Naphthalene-d8	01-MAY-2024	01-MAY-2024	JJ
Acridine-d9	01-MAY-2024	01-MAY-2024	JJ
Terphenyl-d14	01-MAY-2024	01-MAY-2024	JJ
Moisture Content	30-APR-2024	30-APR-2024	PD

O. Reg. 153(511) - PCBs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Polychlorinated Biphenyls	01-MAY-2024	02-MAY-2024	VDP
Decachlorobiphenyl	01-MAY-2024	02-MAY-2024	VDP
Moisture Content	30-APR-2024	30-APR-2024	PD

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	02-MAY-2024	02-MAY-2024	CK
F1 (C6 to C10) minus BTEX	02-MAY-2024	02-MAY-2024	SYS
Toluene-d8	02-MAY-2024	02-MAY-2024	CK
F2 (C10 to C16)	01-MAY-2024	01-MAY-2024	SS
F2 (C10 to C16) minus Naphthalene	01-MAY-2024	01-MAY-2024	SYS
F3 (C16 to C34)	01-MAY-2024	01-MAY-2024	SS
F3 (C16 to C34) minus PAHs	01-MAY-2024	01-MAY-2024	SYS
F4 (C34 to C50)	01-MAY-2024	01-MAY-2024	SS
Gravimetric Heavy Hydrocarbons			
Moisture Content	30-APR-2024	30-APR-2024	PD
Terphenyl	01-MAY-2024	01-MAY-2024	SS

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	02-MAY-2024	02-MAY-2024	CK
Vinyl Chloride	02-MAY-2024	02-MAY-2024	CK
Bromomethane	02-MAY-2024	02-MAY-2024	CK
Trichlorofluoromethane	02-MAY-2024	02-MAY-2024	CK
Acetone	02-MAY-2024	02-MAY-2024	CK
1,1-Dichloroethylene	02-MAY-2024	02-MAY-2024	CK
Methylene Chloride	02-MAY-2024	02-MAY-2024	CK
Trans- 1,2-Dichloroethylene	02-MAY-2024	02-MAY-2024	CK
Methyl tert-butyl Ether	02-MAY-2024	02-MAY-2024	CK
1,1-Dichloroethane	02-MAY-2024	02-MAY-2024	CK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823913	**MW21-54**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Methyl Ethyl Ketone	02-MAY-2024	02-MAY-2024	CK
Cis- 1,2-Dichloroethylene	02-MAY-2024	02-MAY-2024	CK
Chloroform	02-MAY-2024	02-MAY-2024	CK
1,2-Dichloroethane	02-MAY-2024	02-MAY-2024	CK
1,1,1-Trichloroethane	02-MAY-2024	02-MAY-2024	CK
Carbon Tetrachloride	02-MAY-2024	02-MAY-2024	CK
Benzene	02-MAY-2024	02-MAY-2024	CK
1,2-Dichloropropane	02-MAY-2024	02-MAY-2024	CK
Trichloroethylene	02-MAY-2024	02-MAY-2024	CK
Bromodichloromethane	02-MAY-2024	02-MAY-2024	CK
Methyl Isobutyl Ketone	02-MAY-2024	02-MAY-2024	CK
1,1,2-Trichloroethane	02-MAY-2024	02-MAY-2024	CK
Toluene	02-MAY-2024	02-MAY-2024	CK
Dibromochloromethane	02-MAY-2024	02-MAY-2024	CK
Ethylene Dibromide	02-MAY-2024	02-MAY-2024	CK
Tetrachloroethylene	02-MAY-2024	02-MAY-2024	CK
1,1,1,2-Tetrachloroethane	02-MAY-2024	02-MAY-2024	CK
Chlorobenzene	02-MAY-2024	02-MAY-2024	CK
Ethylbenzene	02-MAY-2024	02-MAY-2024	CK
m & p-Xylene	02-MAY-2024	02-MAY-2024	CK
Bromoform	02-MAY-2024	02-MAY-2024	CK
Styrene	02-MAY-2024	02-MAY-2024	CK
1,1,2,2-Tetrachloroethane	02-MAY-2024	02-MAY-2024	CK
o-Xylene	02-MAY-2024	02-MAY-2024	CK
1,3-Dichlorobenzene	02-MAY-2024	02-MAY-2024	CK
1,4-Dichlorobenzene	02-MAY-2024	02-MAY-2024	CK
1,2-Dichlorobenzene	02-MAY-2024	02-MAY-2024	CK
Xylenes (Total)	02-MAY-2024	02-MAY-2024	SYS
1,3-Dichloropropene (Cis + Trans)	02-MAY-2024	02-MAY-2024	SYS
n-Hexane	02-MAY-2024	02-MAY-2024	CK
Toluene-d8	02-MAY-2024	02-MAY-2024	CK
4-Bromofluorobenzene	02-MAY-2024	02-MAY-2024	CK
Moisture Content	30-APR-2024	30-APR-2024	PD

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823914	**MW20-55**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - All Metals (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Antimony	30-APR-2024	30-APR-2024	JA

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823914	**MW20-55**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - All Metals (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Arsenic	30-APR-2024	30-APR-2024	JA
Barium	30-APR-2024	30-APR-2024	JA
Beryllium	30-APR-2024	30-APR-2024	JA
Boron	30-APR-2024	30-APR-2024	JA
Boron (Hot Water Soluble)	30-APR-2024	30-APR-2024	AA
Cadmium	30-APR-2024	30-APR-2024	JA
Chromium	30-APR-2024	30-APR-2024	JA
Cobalt	30-APR-2024	30-APR-2024	JA
Copper	30-APR-2024	30-APR-2024	JA
Lead	30-APR-2024	30-APR-2024	JA
Molybdenum	30-APR-2024	30-APR-2024	JA
Nickel	30-APR-2024	30-APR-2024	JA
Selenium	30-APR-2024	30-APR-2024	JA
Silver	30-APR-2024	30-APR-2024	JA
Thallium	30-APR-2024	30-APR-2024	JA
Uranium	30-APR-2024	30-APR-2024	JA
Vanadium	30-APR-2024	30-APR-2024	JA
Zinc	30-APR-2024	30-APR-2024	JA
Chromium, Hexavalent	02-MAY-2024	02-MAY-2024	RC
Mercury	30-APR-2024	30-APR-2024	JA

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	01-MAY-2024	01-MAY-2024	JJ
Acenaphthylene	01-MAY-2024	01-MAY-2024	JJ
Acenaphthene	01-MAY-2024	01-MAY-2024	JJ
Fluorene	01-MAY-2024	01-MAY-2024	JJ
Phenanthrene	01-MAY-2024	01-MAY-2024	JJ
Anthracene	01-MAY-2024	01-MAY-2024	JJ
Fluoranthene	01-MAY-2024	01-MAY-2024	JJ
Pyrene	01-MAY-2024	01-MAY-2024	JJ
Benzo(a)anthracene	01-MAY-2024	01-MAY-2024	JJ
Chrysene	01-MAY-2024	01-MAY-2024	JJ
Benzo(b)fluoranthene	01-MAY-2024	01-MAY-2024	JJ
Benzo(k)fluoranthene	01-MAY-2024	01-MAY-2024	JJ
Benzo(a)pyrene	01-MAY-2024	01-MAY-2024	JJ
Indeno(1,2,3-cd)pyrene	01-MAY-2024	01-MAY-2024	JJ
Dibenz(a,h)anthracene	01-MAY-2024	01-MAY-2024	JJ
Benzo(g,h,i)perylene	01-MAY-2024	01-MAY-2024	JJ

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823914	**MW20-55**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
2-and 1-methyl Naphthalene	01-MAY-2024	01-MAY-2024	SYS
Naphthalene-d8	01-MAY-2024	01-MAY-2024	JJ
Acridine-d9	01-MAY-2024	01-MAY-2024	JJ
Terphenyl-d14	01-MAY-2024	01-MAY-2024	JJ
Moisture Content	30-APR-2024	30-APR-2024	PD

O. Reg. 153(511) - PCBs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Polychlorinated Biphenyls	01-MAY-2024	02-MAY-2024	VDP
Decachlorobiphenyl	01-MAY-2024	02-MAY-2024	VDP
Moisture Content	30-APR-2024	30-APR-2024	PD

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	02-MAY-2024	02-MAY-2024	CK
F1 (C6 to C10) minus BTEX	02-MAY-2024	02-MAY-2024	SYS
Toluene-d8	02-MAY-2024	02-MAY-2024	CK
F2 (C10 to C16)	01-MAY-2024	01-MAY-2024	SS
F2 (C10 to C16) minus Naphthalene	01-MAY-2024	01-MAY-2024	SYS
F3 (C16 to C34)	01-MAY-2024	01-MAY-2024	SS
F3 (C16 to C34) minus PAHs	01-MAY-2024	01-MAY-2024	SYS
F4 (C34 to C50)	01-MAY-2024	01-MAY-2024	SS
Gravimetric Heavy Hydrocarbons			
Moisture Content	30-APR-2024	30-APR-2024	PD
Terphenyl	01-MAY-2024	01-MAY-2024	SS

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	02-MAY-2024	02-MAY-2024	CK
Vinyl Chloride	02-MAY-2024	02-MAY-2024	CK
Bromomethane	02-MAY-2024	02-MAY-2024	CK
Trichlorofluoromethane	02-MAY-2024	02-MAY-2024	CK
Acetone	02-MAY-2024	02-MAY-2024	CK
1,1-Dichloroethylene	02-MAY-2024	02-MAY-2024	CK
Methylene Chloride	02-MAY-2024	02-MAY-2024	CK
Trans- 1,2-Dichloroethylene	02-MAY-2024	02-MAY-2024	CK
Methyl tert-butyl Ether	02-MAY-2024	02-MAY-2024	CK
1,1-Dichloroethane	02-MAY-2024	02-MAY-2024	CK
Methyl Ethyl Ketone	02-MAY-2024	02-MAY-2024	CK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823914	**MW20-55**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Cis- 1,2-Dichloroethylene	02-MAY-2024	02-MAY-2024	CK
Chloroform	02-MAY-2024	02-MAY-2024	CK
1,2-Dichloroethane	02-MAY-2024	02-MAY-2024	CK
1,1,1-Trichloroethane	02-MAY-2024	02-MAY-2024	CK
Carbon Tetrachloride	02-MAY-2024	02-MAY-2024	CK
Benzene	02-MAY-2024	02-MAY-2024	CK
1,2-Dichloropropane	02-MAY-2024	02-MAY-2024	CK
Trichloroethylene	02-MAY-2024	02-MAY-2024	CK
Bromodichloromethane	02-MAY-2024	02-MAY-2024	CK
Methyl Isobutyl Ketone	02-MAY-2024	02-MAY-2024	CK
1,1,2-Trichloroethane	02-MAY-2024	02-MAY-2024	CK
Toluene	02-MAY-2024	02-MAY-2024	CK
Dibromochloromethane	02-MAY-2024	02-MAY-2024	CK
Ethylene Dibromide	02-MAY-2024	02-MAY-2024	CK
Tetrachloroethylene	02-MAY-2024	02-MAY-2024	CK
1,1,1,2-Tetrachloroethane	02-MAY-2024	02-MAY-2024	CK
Chlorobenzene	02-MAY-2024	02-MAY-2024	CK
Ethylbenzene	02-MAY-2024	02-MAY-2024	CK
m & p-Xylene	02-MAY-2024	02-MAY-2024	CK
Bromoform	02-MAY-2024	02-MAY-2024	CK
Styrene	02-MAY-2024	02-MAY-2024	CK
1,1,2,2-Tetrachloroethane	02-MAY-2024	02-MAY-2024	CK
o-Xylene	02-MAY-2024	02-MAY-2024	CK
1,3-Dichlorobenzene	02-MAY-2024	02-MAY-2024	CK
1,4-Dichlorobenzene	02-MAY-2024	02-MAY-2024	CK
1,2-Dichlorobenzene	02-MAY-2024	02-MAY-2024	CK
Xylenes (Total)	02-MAY-2024	02-MAY-2024	SYS
1,3-Dichloropropene (Cis + Trans)	02-MAY-2024	02-MAY-2024	SYS
n-Hexane	02-MAY-2024	02-MAY-2024	CK
Toluene-d8	02-MAY-2024	02-MAY-2024	CK
4-Bromofluorobenzene	02-MAY-2024	02-MAY-2024	CK
Moisture Content	30-APR-2024	30-APR-2024	PD

5823915	**DUP3**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - All Metals (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Antimony	30-APR-2024	30-APR-2024	JA
Arsenic	30-APR-2024	30-APR-2024	JA

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823915	**DUP3**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - All Metals (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Barium	30-APR-2024	30-APR-2024	JA
Beryllium	30-APR-2024	30-APR-2024	JA
Boron	30-APR-2024	30-APR-2024	JA
Boron (Hot Water Soluble)	30-APR-2024	30-APR-2024	AA
Cadmium	30-APR-2024	30-APR-2024	JA
Chromium	30-APR-2024	30-APR-2024	JA
Cobalt	30-APR-2024	30-APR-2024	JA
Copper	30-APR-2024	30-APR-2024	JA
Lead	30-APR-2024	30-APR-2024	JA
Molybdenum	30-APR-2024	30-APR-2024	JA
Nickel	30-APR-2024	30-APR-2024	JA
Selenium	30-APR-2024	30-APR-2024	JA
Silver	30-APR-2024	30-APR-2024	JA
Thallium	30-APR-2024	30-APR-2024	JA
Uranium	30-APR-2024	30-APR-2024	JA
Vanadium	30-APR-2024	30-APR-2024	JA
Zinc	30-APR-2024	30-APR-2024	JA
Chromium, Hexavalent	02-MAY-2024	02-MAY-2024	RC
Mercury	30-APR-2024	30-APR-2024	JA

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	01-MAY-2024	01-MAY-2024	JJ
Acenaphthylene	01-MAY-2024	01-MAY-2024	JJ
Acenaphthene	01-MAY-2024	01-MAY-2024	JJ
Fluorene	01-MAY-2024	01-MAY-2024	JJ
Phenanthrene	01-MAY-2024	01-MAY-2024	JJ
Anthracene	01-MAY-2024	01-MAY-2024	JJ
Fluoranthene	01-MAY-2024	01-MAY-2024	JJ
Pyrene	01-MAY-2024	01-MAY-2024	JJ
Benzo(a)anthracene	01-MAY-2024	01-MAY-2024	JJ
Chrysene	01-MAY-2024	01-MAY-2024	JJ
Benzo(b)fluoranthene	01-MAY-2024	01-MAY-2024	JJ
Benzo(k)fluoranthene	01-MAY-2024	01-MAY-2024	JJ
Benzo(a)pyrene	01-MAY-2024	01-MAY-2024	JJ
Indeno(1,2,3-cd)pyrene	01-MAY-2024	01-MAY-2024	JJ
Dibenz(a,h)anthracene	01-MAY-2024	01-MAY-2024	JJ
Benzo(g,h,i)perylene	01-MAY-2024	01-MAY-2024	JJ
2-and 1-methyl Naphthalene	01-MAY-2024	01-MAY-2024	SYS

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823915	DUP3	Soil	25-APR-2024	26-APR-2024

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene-d8	01-MAY-2024	01-MAY-2024	JJ
Acridine-d9	01-MAY-2024	01-MAY-2024	JJ
Terphenyl-d14	01-MAY-2024	01-MAY-2024	JJ
Moisture Content	30-APR-2024	30-APR-2024	PD

O. Reg. 153(511) - PCBs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Polychlorinated Biphenyls	01-MAY-2024	02-MAY-2024	VDP
Decachlorobiphenyl	01-MAY-2024	02-MAY-2024	VDP
Moisture Content	30-APR-2024	30-APR-2024	PD

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	02-MAY-2024	02-MAY-2024	CK
F1 (C6 to C10) minus BTEX	02-MAY-2024	02-MAY-2024	SYS
Toluene-d8	02-MAY-2024	02-MAY-2024	CK
F2 (C10 to C16)	01-MAY-2024	01-MAY-2024	SS
F2 (C10 to C16) minus Naphthalene	01-MAY-2024	01-MAY-2024	SYS
F3 (C16 to C34)	01-MAY-2024	01-MAY-2024	SS
F3 (C16 to C34) minus PAHs	01-MAY-2024	01-MAY-2024	SYS
F4 (C34 to C50)	01-MAY-2024	01-MAY-2024	SS
Gravimetric Heavy Hydrocarbons			
Moisture Content	30-APR-2024	30-APR-2024	PD
Terphenyl	01-MAY-2024	01-MAY-2024	SS

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	02-MAY-2024	02-MAY-2024	CK
Vinyl Chloride	02-MAY-2024	02-MAY-2024	CK
Bromomethane	02-MAY-2024	02-MAY-2024	CK
Trichlorofluoromethane	02-MAY-2024	02-MAY-2024	CK
Acetone	02-MAY-2024	02-MAY-2024	CK
1,1-Dichloroethylene	02-MAY-2024	02-MAY-2024	CK
Methylene Chloride	02-MAY-2024	02-MAY-2024	CK
Trans- 1,2-Dichloroethylene	02-MAY-2024	02-MAY-2024	CK
Methyl tert-butyl Ether	02-MAY-2024	02-MAY-2024	CK
1,1-Dichloroethane	02-MAY-2024	02-MAY-2024	CK
Methyl Ethyl Ketone	02-MAY-2024	02-MAY-2024	CK
Cis- 1,2-Dichloroethylene	02-MAY-2024	02-MAY-2024	CK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823915	**DUP3**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Chloroform	02-MAY-2024	02-MAY-2024	CK
1,2-Dichloroethane	02-MAY-2024	02-MAY-2024	CK
1,1,1-Trichloroethane	02-MAY-2024	02-MAY-2024	CK
Carbon Tetrachloride	02-MAY-2024	02-MAY-2024	CK
Benzene	02-MAY-2024	02-MAY-2024	CK
1,2-Dichloropropane	02-MAY-2024	02-MAY-2024	CK
Trichloroethylene	02-MAY-2024	02-MAY-2024	CK
Bromodichloromethane	02-MAY-2024	02-MAY-2024	CK
Methyl Isobutyl Ketone	02-MAY-2024	02-MAY-2024	CK
1,1,2-Trichloroethane	02-MAY-2024	02-MAY-2024	CK
Toluene	02-MAY-2024	02-MAY-2024	CK
Dibromochloromethane	02-MAY-2024	02-MAY-2024	CK
Ethylene Dibromide	02-MAY-2024	02-MAY-2024	CK
Tetrachloroethylene	02-MAY-2024	02-MAY-2024	CK
1,1,1,2-Tetrachloroethane	02-MAY-2024	02-MAY-2024	CK
Chlorobenzene	02-MAY-2024	02-MAY-2024	CK
Ethylbenzene	02-MAY-2024	02-MAY-2024	CK
m & p-Xylene	02-MAY-2024	02-MAY-2024	CK
Bromoform	02-MAY-2024	02-MAY-2024	CK
Styrene	02-MAY-2024	02-MAY-2024	CK
1,1,2,2-Tetrachloroethane	02-MAY-2024	02-MAY-2024	CK
o-Xylene	02-MAY-2024	02-MAY-2024	CK
1,3-Dichlorobenzene	02-MAY-2024	02-MAY-2024	CK
1,4-Dichlorobenzene	02-MAY-2024	02-MAY-2024	CK
1,2-Dichlorobenzene	02-MAY-2024	02-MAY-2024	CK
Xylenes (Total)	02-MAY-2024	02-MAY-2024	SYS
1,3-Dichloropropene (Cis + Trans)	02-MAY-2024	02-MAY-2024	SYS
n-Hexane	02-MAY-2024	02-MAY-2024	CK
Toluene-d8	02-MAY-2024	02-MAY-2024	CK
4-Bromofluorobenzene	02-MAY-2024	02-MAY-2024	CK
Moisture Content	30-APR-2024	30-APR-2024	PD

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823917	**MW1-52**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	01-MAY-2024	01-MAY-2024	JJ
Acenaphthylene	01-MAY-2024	01-MAY-2024	JJ
Acenaphthene	01-MAY-2024	01-MAY-2024	JJ

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823917	**MW1-52**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Fluorene	01-MAY-2024	01-MAY-2024	JJ
Phenanthrene	01-MAY-2024	01-MAY-2024	JJ
Anthracene	01-MAY-2024	01-MAY-2024	JJ
Fluoranthene	01-MAY-2024	01-MAY-2024	JJ
Pyrene	01-MAY-2024	01-MAY-2024	JJ
Benzo(a)anthracene	01-MAY-2024	01-MAY-2024	JJ
Chrysene	01-MAY-2024	01-MAY-2024	JJ
Benzo(b)fluoranthene	01-MAY-2024	01-MAY-2024	JJ
Benzo(k)fluoranthene	01-MAY-2024	01-MAY-2024	JJ
Benzo(a)pyrene	01-MAY-2024	01-MAY-2024	JJ
Indeno(1,2,3-cd)pyrene	01-MAY-2024	01-MAY-2024	JJ
Dibenz(a,h)anthracene	01-MAY-2024	01-MAY-2024	JJ
Benzo(g,h,i)perylene	01-MAY-2024	01-MAY-2024	JJ
2-and 1-methyl Naphthalene	01-MAY-2024	01-MAY-2024	SYS
Naphthalene-d8	01-MAY-2024	01-MAY-2024	JJ
Acridine-d9	01-MAY-2024	01-MAY-2024	JJ
Terphenyl-d14	01-MAY-2024	01-MAY-2024	JJ
Moisture Content	30-APR-2024	30-APR-2024	PD

O. Reg. 153(511) - PCBs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Polychlorinated Biphenyls	01-MAY-2024	02-MAY-2024	VDP
Decachlorobiphenyl	01-MAY-2024	02-MAY-2024	VDP
Moisture Content	30-APR-2024	30-APR-2024	PD

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Benzene	30-APR-2024	30-APR-2024	VB
Toluene	30-APR-2024	30-APR-2024	VB
Ethylbenzene	30-APR-2024	30-APR-2024	VB
m & p-Xylene	30-APR-2024	30-APR-2024	VB
o-Xylene	30-APR-2024	30-APR-2024	VB
Xylenes (Total)	30-APR-2024	30-APR-2024	SYS
F1 (C6 to C10)	30-APR-2024	30-APR-2024	VB
F1 (C6 to C10) minus BTEX	30-APR-2024	30-APR-2024	SYS
Toluene-d8	30-APR-2024	30-APR-2024	VB
F2 (C10 to C16)	01-MAY-2024	01-MAY-2024	SS
F2 (C10 to C16) minus Naphthalene	01-MAY-2024	01-MAY-2024	SYS
F3 (C16 to C34)	01-MAY-2024	01-MAY-2024	SS

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823917	**MW1-52**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F3 (C16 to C34) minus PAHs	01-MAY-2024	01-MAY-2024	SYS
F4 (C34 to C50)	01-MAY-2024	01-MAY-2024	SS
Gravimetric Heavy Hydrocarbons			
Moisture Content	30-APR-2024	30-APR-2024	PD
Terphenyl	01-MAY-2024	01-MAY-2024	SS

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823920	**MW9-51/52**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - All Metals (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Antimony	30-APR-2024	30-APR-2024	JA
Arsenic	30-APR-2024	30-APR-2024	JA
Barium	30-APR-2024	30-APR-2024	JA
Beryllium	30-APR-2024	30-APR-2024	JA
Boron	30-APR-2024	30-APR-2024	JA
Boron (Hot Water Soluble)	30-APR-2024	30-APR-2024	AA
Cadmium	30-APR-2024	30-APR-2024	JA
Chromium	30-APR-2024	30-APR-2024	JA
Cobalt	30-APR-2024	30-APR-2024	JA
Copper	30-APR-2024	30-APR-2024	JA
Lead	30-APR-2024	30-APR-2024	JA
Molybdenum	30-APR-2024	30-APR-2024	JA
Nickel	30-APR-2024	30-APR-2024	JA
Selenium	30-APR-2024	30-APR-2024	JA
Silver	30-APR-2024	30-APR-2024	JA
Thallium	30-APR-2024	30-APR-2024	JA
Uranium	30-APR-2024	30-APR-2024	JA
Vanadium	30-APR-2024	30-APR-2024	JA
Zinc	30-APR-2024	30-APR-2024	JA
Chromium, Hexavalent	02-MAY-2024	02-MAY-2024	RC
Mercury	30-APR-2024	30-APR-2024	JA

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	01-MAY-2024	01-MAY-2024	JJ
Acenaphthylene	01-MAY-2024	01-MAY-2024	JJ
Acenaphthene	01-MAY-2024	01-MAY-2024	JJ
Fluorene	01-MAY-2024	01-MAY-2024	JJ
Phenanthrene	01-MAY-2024	01-MAY-2024	JJ

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823920	**MW9-51/52**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Anthracene	01-MAY-2024	01-MAY-2024	JJ
Fluoranthene	01-MAY-2024	01-MAY-2024	JJ
Pyrene	01-MAY-2024	01-MAY-2024	JJ
Benzo(a)anthracene	01-MAY-2024	01-MAY-2024	JJ
Chrysene	01-MAY-2024	01-MAY-2024	JJ
Benzo(b)fluoranthene	01-MAY-2024	01-MAY-2024	JJ
Benzo(k)fluoranthene	01-MAY-2024	01-MAY-2024	JJ
Benzo(a)pyrene	01-MAY-2024	01-MAY-2024	JJ
Indeno(1,2,3-cd)pyrene	01-MAY-2024	01-MAY-2024	JJ
Dibenz(a,h)anthracene	01-MAY-2024	01-MAY-2024	JJ
Benzo(g,h,i)perylene	01-MAY-2024	01-MAY-2024	JJ
2-and 1-methyl Naphthalene	01-MAY-2024	01-MAY-2024	SYS
Naphthalene-d8	01-MAY-2024	01-MAY-2024	JJ
Acridine-d9	01-MAY-2024	01-MAY-2024	JJ
Terphenyl-d14	01-MAY-2024	01-MAY-2024	JJ
Moisture Content	30-APR-2024	30-APR-2024	PD

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Benzene	30-APR-2024	30-APR-2024	VB
Toluene	30-APR-2024	30-APR-2024	VB
Ethylbenzene	30-APR-2024	30-APR-2024	VB
m & p-Xylene	30-APR-2024	30-APR-2024	VB
o-Xylene	30-APR-2024	30-APR-2024	VB
Xylenes (Total)	30-APR-2024	30-APR-2024	SYS
F1 (C6 to C10)	30-APR-2024	30-APR-2024	VB
F1 (C6 to C10) minus BTEX	30-APR-2024	30-APR-2024	SYS
Toluene-d8	30-APR-2024	30-APR-2024	VB
F2 (C10 to C16)	01-MAY-2024	01-MAY-2024	SS
F2 (C10 to C16) minus Naphthalene	01-MAY-2024	01-MAY-2024	SYS
F3 (C16 to C34)	01-MAY-2024	01-MAY-2024	SS
F3 (C16 to C34) minus PAHs	01-MAY-2024	01-MAY-2024	SYS
F4 (C34 to C50)	01-MAY-2024	01-MAY-2024	SS
Gravimetric Heavy Hydrocarbons			
Moisture Content	30-APR-2024	30-APR-2024	PD
Terphenyl	01-MAY-2024	01-MAY-2024	SS

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823921	**MW9-54/55**	**Soil**	**25-APR-2024**	**26-APR-2024**

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823921	**MW9-54/55**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - Metals & Inorganics (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Antimony	30-APR-2024	30-APR-2024	JA
Arsenic	30-APR-2024	30-APR-2024	JA
Barium	30-APR-2024	30-APR-2024	JA
Beryllium	30-APR-2024	30-APR-2024	JA
Boron	30-APR-2024	30-APR-2024	JA
Boron (Hot Water Soluble)	30-APR-2024	30-APR-2024	AA
Cadmium	30-APR-2024	30-APR-2024	JA
Chromium	30-APR-2024	30-APR-2024	JA
Cobalt	30-APR-2024	30-APR-2024	JA
Copper	30-APR-2024	30-APR-2024	JA
Lead	30-APR-2024	30-APR-2024	JA
Molybdenum	30-APR-2024	30-APR-2024	JA
Nickel	30-APR-2024	30-APR-2024	JA
Selenium	30-APR-2024	30-APR-2024	JA
Silver	30-APR-2024	30-APR-2024	JA
Thallium	30-APR-2024	30-APR-2024	JA
Uranium	30-APR-2024	30-APR-2024	JA
Vanadium	30-APR-2024	30-APR-2024	JA
Zinc	30-APR-2024	30-APR-2024	JA
Chromium, Hexavalent	02-MAY-2024	02-MAY-2024	RC
Cyanide, WAD	01-MAY-2024	01-MAY-2024	BG
Mercury	30-APR-2024	30-APR-2024	JA
Electrical Conductivity (2:1)	30-APR-2024	30-APR-2024	XL
Sodium Adsorption Ratio (2:1) (Calc.)	30-APR-2024	30-APR-2024	XH
pH, 2:1 CaCl2 Extraction	01-MAY-2024	01-MAY-2024	XL

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	01-MAY-2024	01-MAY-2024	JJ
Acenaphthylene	01-MAY-2024	01-MAY-2024	JJ
Acenaphthene	01-MAY-2024	01-MAY-2024	JJ
Fluorene	01-MAY-2024	01-MAY-2024	JJ
Phenanthrene	01-MAY-2024	01-MAY-2024	JJ
Anthracene	01-MAY-2024	01-MAY-2024	JJ
Fluoranthene	01-MAY-2024	01-MAY-2024	JJ
Pyrene	01-MAY-2024	01-MAY-2024	JJ
Benzo(a)anthracene	01-MAY-2024	01-MAY-2024	JJ
Chrysene	01-MAY-2024	01-MAY-2024	JJ
Benzo(b)fluoranthene	01-MAY-2024	01-MAY-2024	JJ

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823921	**MW9-54/55**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Benzo(k)fluoranthene	01-MAY-2024	01-MAY-2024	JJ
Benzo(a)pyrene	01-MAY-2024	01-MAY-2024	JJ
Indeno(1,2,3-cd)pyrene	01-MAY-2024	01-MAY-2024	JJ
Dibenz(a,h)anthracene	01-MAY-2024	01-MAY-2024	JJ
Benzo(g,h,i)perylene	01-MAY-2024	01-MAY-2024	JJ
2-and 1-methyl Naphthalene	01-MAY-2024	01-MAY-2024	SYS
Naphthalene-d8	01-MAY-2024	01-MAY-2024	JJ
Acridine-d9	01-MAY-2024	01-MAY-2024	JJ
Terphenyl-d14	01-MAY-2024	01-MAY-2024	JJ
Moisture Content	30-APR-2024	30-APR-2024	PD

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	02-MAY-2024	02-MAY-2024	CK
F1 (C6 to C10) minus BTEX	02-MAY-2024	02-MAY-2024	SYS
Toluene-d8	02-MAY-2024	02-MAY-2024	CK
F2 (C10 to C16)	01-MAY-2024	01-MAY-2024	SS
F2 (C10 to C16) minus Naphthalene	01-MAY-2024	01-MAY-2024	SYS
F3 (C16 to C34)	01-MAY-2024	01-MAY-2024	SS
F3 (C16 to C34) minus PAHs	01-MAY-2024	01-MAY-2024	SYS
F4 (C34 to C50)	01-MAY-2024	01-MAY-2024	SS
Gravimetric Heavy Hydrocarbons			
Moisture Content	30-APR-2024	30-APR-2024	PD
Terphenyl	01-MAY-2024	01-MAY-2024	SS

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	02-MAY-2024	02-MAY-2024	CK
Vinyl Chloride	02-MAY-2024	02-MAY-2024	CK
Bromomethane	02-MAY-2024	02-MAY-2024	CK
Trichlorofluoromethane	02-MAY-2024	02-MAY-2024	CK
Acetone	02-MAY-2024	02-MAY-2024	CK
1,1-Dichloroethylene	02-MAY-2024	02-MAY-2024	CK
Methylene Chloride	02-MAY-2024	02-MAY-2024	CK
Trans- 1,2-Dichloroethylene	02-MAY-2024	02-MAY-2024	CK
Methyl tert-butyl Ether	02-MAY-2024	02-MAY-2024	CK
1,1-Dichloroethane	02-MAY-2024	02-MAY-2024	CK
Methyl Ethyl Ketone	02-MAY-2024	02-MAY-2024	CK
Cis- 1,2-Dichloroethylene	02-MAY-2024	02-MAY-2024	CK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5823921	**MW9-54/55**	**Soil**	**25-APR-2024**	**26-APR-2024**

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Chloroform	02-MAY-2024	02-MAY-2024	CK
1,2-Dichloroethane	02-MAY-2024	02-MAY-2024	CK
1,1,1-Trichloroethane	02-MAY-2024	02-MAY-2024	CK
Carbon Tetrachloride	02-MAY-2024	02-MAY-2024	CK
Benzene	02-MAY-2024	02-MAY-2024	CK
1,2-Dichloropropane	02-MAY-2024	02-MAY-2024	CK
Trichloroethylene	02-MAY-2024	02-MAY-2024	CK
Bromodichloromethane	02-MAY-2024	02-MAY-2024	CK
Methyl Isobutyl Ketone	02-MAY-2024	02-MAY-2024	CK
1,1,2-Trichloroethane	02-MAY-2024	02-MAY-2024	CK
Toluene	02-MAY-2024	02-MAY-2024	CK
Dibromochloromethane	02-MAY-2024	02-MAY-2024	CK
Ethylene Dibromide	02-MAY-2024	02-MAY-2024	CK
Tetrachloroethylene	02-MAY-2024	02-MAY-2024	CK
1,1,1,2-Tetrachloroethane	02-MAY-2024	02-MAY-2024	CK
Chlorobenzene	02-MAY-2024	02-MAY-2024	CK
Ethylbenzene	02-MAY-2024	02-MAY-2024	CK
m & p-Xylene	02-MAY-2024	02-MAY-2024	CK
Bromoform	02-MAY-2024	02-MAY-2024	CK
Styrene	02-MAY-2024	02-MAY-2024	CK
1,1,2,2-Tetrachloroethane	02-MAY-2024	02-MAY-2024	CK
o-Xylene	02-MAY-2024	02-MAY-2024	CK
1,3-Dichlorobenzene	02-MAY-2024	02-MAY-2024	CK
1,4-Dichlorobenzene	02-MAY-2024	02-MAY-2024	CK
1,2-Dichlorobenzene	02-MAY-2024	02-MAY-2024	CK
Xylenes (Total)	02-MAY-2024	02-MAY-2024	SYS
1,3-Dichloropropene (Cis + Trans)	02-MAY-2024	02-MAY-2024	SYS
n-Hexane	02-MAY-2024	02-MAY-2024	CK
Toluene-d8	02-MAY-2024	02-MAY-2024	CK
4-Bromofluorobenzene	02-MAY-2024	02-MAY-2024	CK
Moisture Content	30-APR-2024	30-APR-2024	PD

Method Summary

CLIENT NAME: PINCHIN LTD.
PROJECT: 319674.002
SAMPLING SITE:

AGAT WORK ORDER: 24Z143509
ATTENTION TO: Alicia McDonald
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Cyanide, WAD	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	SEGMENTED FLOW ANALYSIS
Electrical Conductivity (2:1)	INOR-93-6075	modified from MSA PART 3, CH 14 and SM 2510 B	PC TITRATE
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl2 Extraction	INOR-93-6075	modified from EPA 9045D, MCKEAGUE 3.11 E3137	PC TITRATE

Method Summary

CLIENT NAME: PINCHIN LTD. **AGAT WORK ORDER: 24Z143509**
PROJECT: 319674.002 **ATTENTION TO: Alicia McDonald**
SAMPLING SITE: **SAMPLED BY:**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Polychlorinated Biphenyls	ORG-91-5113	modified from EPA SW-846 3570 & 8082A	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA SW-846 3541 & 8082A	GC/ECD
Benzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Toluene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Ethylbenzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
m & p-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
o-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Xylenes (Total)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
F1 (C6 to C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID

Method Summary

CLIENT NAME: PINCHIN LTD. **AGAT WORK ORDER: 24Z143509**
PROJECT: 319674.002 **ATTENTION TO: Alicia McDonald**
SAMPLING SITE: **SAMPLED BY:**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16) minus Naphthalene	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

Method Summary

CLIENT NAME: PINCHIN LTD. **AGAT WORK ORDER: 24Z143509**
PROJECT: 319674.002 **ATTENTION TO: Alicia McDonald**
SAMPLING SITE: **SAMPLED BY:**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS

AGAT Laboratories

Have feedback? Scan here for a quick survey!

5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
webearth.agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Laboratory Use Only

Work Order #: 24Z143509

Cooler Quantity: one - ice packs
Arrival Temperatures: 2.8 | 2.9 | 2.6
Depot Temperatures: 3.7 | 4.1 | 5.1
Custody Seal Intact: ☐Yes ☐No ☒N/A
Notes: FREE ICE

Report Information:

Company: Pinchin
Contact: Alicia McDonald
Address:
Phone: Fax:
Reports to be sent to:
1. Email: amcdonald@pinchin.com
2. Email: jmccann@pinchin.com

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04
Table ____ Indicate One
☐Ind/Com
☐Res/Park
☐Agriculture
Soil Texture (Check One)
☐Coarse
☐Fine

☐ Regulation 406
Table ____ Indicate One
☐Ind/Com
☐Res/Park
☐Agriculture
☐ Regulation 558
☐ CCME

☐ Sewer Use
☐Sanitary ☐Storm
Region
☐ Prov. Water Quality Objectives (PWQO)
☐ Other
Indicate One

Turnaround Time (TAT) Required:

Regular TAT ☐ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply): 4 DAY TAT

Please provide prior notification for rush TAT
*TAT is exclusive of weekends and statutory holidays

For 'Same Day' analysis, please contact your AGAT CSR

Project Information:

Project: 319674.002
Site Location:
Sampled By:
AGAT Quote #: SO PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Is this submission for a **Record of Site Condition (RSC)?** ☒ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☐ Yes ☐ No

Legal Sample ☐

Invoice Information:

Bill To Same: Yes ☒ No ☐
Company:
Contact:
Address:
Email:

Sample Matrix Legend

GW	Ground Water	**SD**	Sediment
O	Oil	**SW**	Surface Water
P	Paint	**R**	Rock/Shale
S	Soil		

								O. Reg 153						O. Reg 406			O. Reg 558								
Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC Y / N	Metals & Inorganics	Metals - ☒CrVI, ☒Hg, ☒HWSB	BTEX, F1-F4 PHCs	VOC	PAHs	PCBs: Aroclors ☐	Regulation 406 Characterization Package pH, Metals, BTEX, F1-F4	EC, SAR	Regulation 406 SPLP Rainwater Leach mSPLP: ☐ Metals ☐ VOCs ☐ SVOCs ☐OC	Landfill Disposal Characterization TCLP: TCLP: ☐M&I ☐VOCs ☐ABNs ☐B(a)P☐PCBs	Corrosivity: ☐ Moisture ☐ Sulphide							Potentially Hazardous or High Concentration (Y/N)
1. mw9-S2	4/25/24	A AM PM	3	S			X	X	X	X	X													
2. mw8-S5		A AM PM	3				X	X	X	X	X													
3. mw7-S2		A AM PM	3					X	X	X	X													
4. Mw7-S5		A AM PM	3				X		X	X	X													
5. ~~mw9-S2~~ mw21-S2		A AM PM	2						X															
6. mw21-S4		A AM PM	4					X	X	X	X	X												
7. mw20-S5		P AM PM	3					X	X	X	X	X												
8. DUP 3		P AM PM	3					✓	✓	✓	✓	✓												
9. mw1-S2		P AM PM	3						X		X	X												
10. mw9-S1/S2		P AM PM	3					X	X		X													
11. mw9-S4/S5	4/25/24	P AM PM	3	S			X		X	X	X													

Samples Relinquished By (Print Name and Sign): J.McCann	Date 4/25/24	Time	Samples Received By (Print Name and Sign): C. Griffith	Date 04/26/24	Time 08h03
Samples Relinquished By (Print Name and Sign): CG to Rue	Date 04/26/24	Time 15h00	Samples Received By (Print Name and Sign):	Date 04/27/24	Time 11:07AM
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time

Page _____ of _____

Nº: T - 153783

Pink Copy - Client | Yellow Copy - AGAT | White Copy- AGAT

Document ID: DIV-78-1511.023

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MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

CLIENT NAME: PINCHIN LTD.
1 HINES ROAD SUITE 200
KANATA, ON   K2K 3C7
(613) 592-3387
ATTENTION TO: Alicia McDonald/Mandy Witteman
PROJECT: 319674.001
AGAT WORK ORDER: 24Z146545
SOIL ANALYSIS REVIEWED BY: Sukhwinder Randhawa, Inorganic Team Lead
TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist
DATE REPORTED: May 10, 2024
PAGES (INCLUDING COVER): 65
VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

Notes

Certificate of Analysis

AGAT WORK ORDER: 24Z146545

PROJECT: 319674.001

CLIENT NAME: PINCHIN LTD.

SAMPLING SITE:500 Coventry Rd.

ATTENTION TO: Alicia McDonald/Mandy Witteman

SAMPLED BY:Mandy W.

O. Reg. 153(511) - All Metals (Soil)

DATE RECEIVED: 2024-05-02

DATE REPORTED: 2024-05-10

			SAMPLE DESCRIPTION:	MW2-S5	MW3- S4	MW6-S4	MW10-S3	MW22-S3	MW13-S2	MW14-S2	BH15-S2
			SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
			DATE SAMPLED:	2024-04-30	2024-04-30	2024-04-30	2024-04-30	2024-04-30	2024-05-01 12:00	2024-05-01 12:00	2024-05-01 12:00
Parameter	**Unit**	**G / S**	**RDL**	**5836677**	**5836681**	**5836694**	**5836695**	**5836703**	**5836730**	**5836733**	**5836735**
Antimony	µg/g		0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g		1	6	3	5	7	5	4	4	3
Barium	µg/g		2.0	159	62.6	101	59.3	85.6	56.4	65.4	40.0
Beryllium	µg/g		0.5	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Boron	µg/g		5	10	<5	7	8	8	<5	6	<5
Boron (Hot Water Soluble)	µg/g		0.10	0.17	<0.10	0.14	0.17	<0.10	0.29	0.27	0.36
Cadmium	µg/g		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g		5	16	15	17	14	15	26	15	17
Cobalt	µg/g		0.8	8.6	7.2	7.9	6.9	5.9	5.6	5.3	4.5
Copper	µg/g		1.0	23.1	16.3	19.1	18.4	15.1	9.4	16.9	8.0
Lead	µg/g		1	10	93	10	8	7	6	13	3
Molybdenum	µg/g		0.5	2.8	1.9	1.6	1.8	2.2	0.5	1.2	<0.5
Nickel	µg/g		1	25	19	20	20	16	13	13	10
Selenium	µg/g		0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	µg/g		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g		0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g		0.50	1.45	0.73	0.77	0.82	1.23	0.60	0.66	<0.50
Vanadium	µg/g		2.0	23.1	20.2	24.1	22.2	23.2	29.3	20.1	20.2
Zinc	µg/g		5	40	33	32	40	30	26	42	20
Chromium, Hexavalent	µg/g		0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Mercury	µg/g		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Analysis performed at AGAT Toronto (unless marked by *)

ASSOCIATION OF THE CHEMICAL PROFESSION OF ONTARIO
CHARTERED
Sukhwinder Kaur Randhawa
CHEMIST

Certified By:

Certificate of Analysis

AGAT WORK ORDER: 24Z146545

PROJECT: 319674.001

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

CLIENT NAME: PINCHIN LTD.

ATTENTION TO: Alicia McDonald/Mandy Witteman

SAMPLING SITE:500 Coventry Rd.

SAMPLED BY:Mandy W.

O. Reg. 153(511) - Metals (Including Hydrides) (Soil)

DATE RECEIVED: 2024-05-02

DATE REPORTED: 2024-05-10

			SAMPLE DESCRIPTION:	MW11-S6
			SAMPLE TYPE:	Soil
			DATE SAMPLED:	2024-04-30
Parameter	**Unit**	**G / S**	**RDL**	**5836700**
Antimony	µg/g		0.8	<0.8
Arsenic	µg/g		1	6
Barium	µg/g		2.0	152
Beryllium	µg/g		0.5	0.6
Boron	µg/g		5	13
Cadmium	µg/g		0.5	<0.5
Chromium	µg/g		5	15
Cobalt	µg/g		0.8	8.2
Copper	µg/g		1.0	25.6
Lead	µg/g		1	10
Molybdenum	µg/g		0.5	3.2
Nickel	µg/g		1	25
Selenium	µg/g		0.8	<0.8
Silver	µg/g		0.5	<0.5
Thallium	µg/g		0.5	<0.5
Uranium	µg/g		0.50	1.76
Vanadium	µg/g		2.0	23.8
Zinc	µg/g		5	32

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

ASSOCIATION OF THE CHEMICAL PROFESSION OF ONTARIO
CHARTERED
Sukhwinder Kaur Randhawa
CHEMIST

skaur

Certificate of Analysis

AGAT WORK ORDER: 24Z146545

PROJECT: 319674.001

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
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http://www.agatlabs.com

CLIENT NAME: PINCHIN LTD.

SAMPLING SITE:500 Coventry Rd.

ATTENTION TO: Alicia McDonald/Mandy Witteman

SAMPLED BY:Mandy W.

Glycols Analysis in Soil

DATE RECEIVED: 2024-05-02

DATE REPORTED: 2024-05-10

			SAMPLE DESCRIPTION:	MW6-S4	MW22-S3
			SAMPLE TYPE:	Soil	Soil
			DATE SAMPLED:	2024-04-30	2024-04-30
Parameter	**Unit**	**G / S**	**RDL**	**5836694**	**5836703**
Propylene Glycol	mg/kg		10	<10	<10
Monoethylene Glycol	mg/kg		10	<10	<10
Diethylene Glycol	mg/kg		10	<10	<10
Triethylene Glycol	mg/kg		10	<10	<10
Tetraethylene Glycol	mg/kg		10	<10	<10
Surrogate	**Unit**	**Acceptable Limits**			
Heptanol	%	50-140		71	85

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5836694-5836703 Analysis by GC/FID.
Identification based on retention time relative to standards.
Results are based on the dry weight of the sample.
Samples are reported using dry weight detection limits, these limits may not have been met when moisture content is >30%.

Analysis performed at AGAT Calgary (unless marked by *)

Certified By: NPopnikolof

CLIENT NAME: PINCHIN LTD.
SAMPLING SITE:500 Coventry Rd.

ATTENTION TO: Alicia McDonald/Mandy Witteman
SAMPLED BY:Mandy W.

O. Reg. 153(511) - PAHs (Soil)

DATE RECEIVED: 2024-05-02

DATE REPORTED: 2024-05-10

			SAMPLE DESCRIPTION:	MW2-S5	MW3- S4	BH4-S2	BH5-S4	MW6-S4	MW10-S3	MW10-S5	MW11-S2
			SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
			DATE SAMPLED:	2024-04-30	2024-04-30	2024-04-30	2024-04-30	2024-04-30	2024-04-30	2024-04-30	2024-04-30
Parameter	**Unit**	**G / S**	**RDL**	5836677	5836681	5836685	5836693	5836694	5836695	5836696	5836697
Naphthalene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)anthracene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2-and 1-methyl Naphthalene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	7.9	11.0	8.7	9.5	7.8	12.9	9.6	11.3
Surrogate	**Unit**	**Acceptable Limits**									
Naphthalene-d8	%	50-140		70	80	75	95	70	70	75	85
Acridine-d9	%	50-140		100	90	85	80	80	85	80	85
Terphenyl-d14	%	50-140		95	95	95	95	70	80	100	85

Certified By:

CLIENT NAME: PINCHIN LTD.
SAMPLING SITE:500 Coventry Rd.

ATTENTION TO: Alicia McDonald/Mandy Witteman
SAMPLED BY:Mandy W.

O. Reg. 153(511) - PAHs (Soil)

DATE RECEIVED: 2024-05-02

DATE REPORTED: 2024-05-10

			SAMPLE DESCRIPTION:	MW11-S6	MW22-S3	MW12-S3	MW13-S5	MW14-S3	BH15-S2	BH15-S5	DUP5
			SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
			DATE SAMPLED:	2024-04-30	2024-04-30	2024-05-01 12:00	2024-05-01	2024-05-01	2024-05-01 12:00	2024-05-01 12:00	2024-05-01 12:00
Parameter	**Unit**	**G / S**	**RDL**	**5836700**	**5836703**	**5836721**	**5836732**	**5836734**	**5836735**	**5836736**	**5836737**
Naphthalene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	0.59	<0.05	<0.05	0.26
Acenaphthylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	0.08	0.21	<0.05	0.05
Fluorene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	0.23	0.19	<0.05	0.11
Phenanthrene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	0.48	1.44	<0.05	0.23
Anthracene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	0.05	0.37	<0.05	<0.05
Fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	0.06	1.61	<0.05	0.06
Pyrene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	0.07	1.19	<0.05	0.06
Benzo(a)anthracene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.67	<0.05	<0.05
Chrysene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.62	<0.05	<0.05
Benzo(b)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.56	<0.05	<0.05
Benzo(k)fluoranthene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.38	<0.05	<0.05
Benzo(a)pyrene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.37	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.16	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.18	<0.05	<0.05
2-and 1-methyl Naphthalene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	2.41	<0.05	<0.05	0.60
Moisture Content	%		0.1	7.8	9.2	11.9	9.1	10.0	13.7	8.7	11.0
Surrogate	**Unit**	**Acceptable Limits**									
Naphthalene-d8	%	50-140		75	70	75	85	70	85	90	90
Acridine-d9	%	50-140		75	85	85	75	110	80	100	90
Terphenyl-d14	%	50-140		90	95	100	95	90	100	110	100

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5836677-5836737 Results are based on the dry weight of the soil.
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopukoloff

Certificate of Analysis

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PROJECT: 319674.001

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CLIENT NAME: PINCHIN LTD.
SAMPLING SITE:500 Coventry Rd.
ATTENTION TO: Alicia McDonald/Mandy Witteman
SAMPLED BY:Mandy W.

O. Reg. 153(511) - PCBs (Soil)

DATE RECEIVED: 2024-05-02
DATE REPORTED: 2024-05-10

			SAMPLE DESCRIPTION:	MW2-S5	BH4-S2	BH5-S4	MW6-S4
			SAMPLE TYPE:	Soil	Soil	Soil	Soil
			DATE SAMPLED:	2024-04-30	2024-04-30	2024-04-30	2024-04-30
Parameter	**Unit**	**G / S**	**RDL**	**5836677**	**5836685**	**5836693**	**5836694**
Polychlorinated Biphenyls	µg/g		0.1	<0.1	<0.1	<0.1	<0.1
Moisture Content	%		0.1	7.9	8.7	9.5	7.8
Surrogate	**Unit**	**Acceptable Limits**					
Decachlorobiphenyl	%	50-140		116	104	96	112

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5836677-5836694 Results are based on the dry weight of soil extracted.
PCB total is a calculated parameter. The calculated value is the sum of Aroclor 1242, Aroclor 1248, Aroclor 1254 and Aroclor 1260.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopnukolof

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

DATE RECEIVED: 2024-05-02

DATE REPORTED: 2024-05-10

			SAMPLE DESCRIPTION:	MW2-S5	MW3- S4	MW6-S4	MW10-S5	MW11-S2	MW11-S6	MW22-S3	BH15-S2
			SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
			DATE SAMPLED:	2024-04-30	2024-04-30	2024-04-30	2024-04-30	2024-04-30	2024-04-30	2024-04-30	2024-05-01 12:00
Parameter	**Unit**	**G / S**	**RDL**	5836677	5836681	5836694	5836696	5836697	5836700	5836703	5836735
F1 (C6 to C10)	µg/g		5	<5	<5	<5	<5	10	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g		5	<5	<5	<5	<5	10	<5	<5	<5
F2 (C10 to C16)	µg/g		10	49	14	21	49	<10	53	25	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10	49	14	21	49	<10	53	25	<10
F3 (C16 to C34)	µg/g		50	<50	<50	<50	<50	<50	54	<50	<50
F3 (C16 to C34) minus PAHs	µg/g		50	<50	<50	<50	<50	<50	54	<50	<50
F4 (C34 to C50)	µg/g		50	<50	<50	<50	<50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g		50	NA	NA	NA	NA	NA	NA	NA	NA
Moisture Content	%		0.1	7.9	11.0	7.8	9.6	11.3	7.8	9.2	13.7
Surrogate	**Unit**	**Acceptable Limits**									
Toluene-d8	%	50-140		96	102	104	102	108	101	100	103
Terphenyl	%	60-140		75	89	84	80	83	86	90	97

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5836677-5836735 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

CLIENT NAME: PINCHIN LTD.

ATTENTION TO: Alicia McDonald/Mandy Witteman

SAMPLING SITE:500 Coventry Rd.

SAMPLED BY:Mandy W.

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

DATE RECEIVED: 2024-05-02

DATE REPORTED: 2024-05-10

			SAMPLE DESCRIPTION:	BH4-S2	BH5-S4	MW10-S3	MW12-S3	MW13-S5	MW14-S3	BH15-S5	DUP5
			SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
			DATE SAMPLED:	2024-04-30	2024-04-30	2024-04-30	2024-05-01 12:00	2024-05-01	2024-05-01	2024-05-01 12:00	2024-05-01 12:00
Parameter	**Unit**	**G / S**	**RDL**	**5836685**	**5836693**	**5836695**	**5836721**	**5836732**	**5836734**	**5836736**	**5836737**
Benzene	µg/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.73	<0.02	0.66
Toluene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	3.93	<0.05	3.68
m & p-Xylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes (Total)	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 to C10)	µg/g		5	14	<5	<5	<5	13	50	9	71
F1 (C6 to C10) minus BTEX	µg/g		5	14	<5	<5	<5	13	45	9	67
F2 (C10 to C16)	µg/g		10	42	<10	23	<10	50	310	38	183
F2 (C10 to C16) minus Naphthalene	µg/g		10	42	<10	23	<10	50	309	38	183
F3 (C16 to C34)	µg/g		50	<50	<50	<50	<50	58	111	<50	116
F3 (C16 to C34) minus PAHs	µg/g		50	<50	<50	<50	<50	58	110	<50	116
F4 (C34 to C50)	µg/g		50	<50	<50	<50	<50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g		50	NA	NA	NA	NA	NA	NA	NA	NA
Moisture Content	%		0.1	8.7	9.5	12.9	11.9	9.1	10.0	8.7	11.0
Surrogate	**Unit**	**Acceptable Limits**									
Toluene-d8	% Recovery	60-140		94	110	111	102	117	121	113	103
Terphenyl	%	60-140		92	72	90	85	90	82	80	78

Certified By:

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

DATE RECEIVED: 2024-05-02 **DATE REPORTED: 2024-05-10**

Comments:	RDL - Reported Detection Limit; G / S - Guideline / Standard
5836685-5836737	Results are based on sample dry weight. The C6-C10 fraction is calculated using toluene response factor. Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene. C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited. The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34. Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present. The chromatogram has returned to baseline by the retention time of nC50. Total C6 - C50 results are corrected for BTEX and PAH contributions. C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene. C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene). This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. nC10, nC16 and nC34 response factors are within 10% of their average. C50 response factor is within 70% of nC10 + nC16 + nC34 average. Linearity is within 15%. Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopukolof

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
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FAX (905)712-5122
http://www.agatlabs.com

CLIENT NAME: PINCHIN LTD.
SAMPLING SITE:500 Coventry Rd.

ATTENTION TO: Alicia McDonald/Mandy Witteman
SAMPLED BY:Mandy W.

O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)

DATE RECEIVED: 2024-05-02

DATE REPORTED: 2024-05-10

			SAMPLE DESCRIPTION:	DUP4	MW13-S2	MW14-S2
			SAMPLE TYPE:	Soil	Soil	Soil
			DATE SAMPLED:	2024-04-30	2024-05-01 12:00	2024-05-01 12:00
Parameter	**Unit**	**G / S**	**RDL**	**5836706**	**5836730**	**5836733**
F1 (C6 to C10)	µg/g		5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g		5	<5	<5	<5
F2 (C10 to C16)	µg/g		10	52	<10	<10
F3 (C16 to C34)	µg/g		50	<50	<50	89
F4 (C34 to C50)	µg/g		50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g		50	NA	NA	NA
Moisture Content	%		0.1	8.7	14.7	7.6
Surrogate	**Unit**	**Acceptable Limits**				
Toluene-d8	%	50-140		102	101	103
Terphenyl	%	60-140		76	84	95

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5836706-5836733 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified without the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopukolof

Certificate of Analysis

AGAT WORK ORDER: 24Z146545
PROJECT: 319674.001

CLIENT NAME: PINCHIN LTD.
SAMPLING SITE:500 Coventry Rd.

ATTENTION TO: Alicia McDonald/Mandy Witteman
SAMPLED BY:Mandy W.

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2024-05-02

DATE REPORTED: 2024-05-10

			SAMPLE DESCRIPTION:	MW2-S5	MW3- S4	MW6-S4	MW10-S5	MW11-S2	MW11-S6	MW22-S3	DUP4
			SAMPLE TYPE:	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
			DATE SAMPLED:	2024-04-30	2024-04-30	2024-04-30	2024-04-30	2024-04-30	2024-04-30	2024-04-30	2024-04-30
Parameter	**Unit**	**G / S**	**RDL**	5836677	5836681	5836694	5836696	5836697	5836700	5836703	5836706
Dichlorodifluoromethane	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acetone	ug/g		0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g		0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Chloroform	ug/g		0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g		0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzene	ug/g		0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g		0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g		0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g		0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g		0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Toluene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g		0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g		0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
m & p-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	0.31	<0.05	<0.05	<0.05

Certified By:

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2024-05-02

DATE REPORTED: 2024-05-10

		SAMPLE DESCRIPTION:		MW2-S5	MW3- S4	MW6-S4	MW10-S5	MW11-S2	MW11-S6	MW22-S3	DUP4
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2024-04-30	2024-04-30	2024-04-30	2024-04-30	2024-04-30	2024-04-30	2024-04-30	2024-04-30
Parameter	**Unit**	**G / S**	**RDL**	**5836677**	**5836681**	**5836694**	**5836696**	**5836697**	**5836700**	**5836703**	**5836706**
Bromoform	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.45	<0.05	<0.05
o-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	0.14	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes (Total)	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	0.45	<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
n-Hexane	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	7.9	11.0	7.8	9.6	11.3	7.8	9.2	8.7
Surrogate	**Unit**	**Acceptable Limits**									
Toluene-d8	% Recovery	50-140		96	102	104	102	108	101	100	102
4-Bromofluorobenzene	% Recovery	50-140		88	78	80	98	80	99	87	87

Certified By: NPopukolof

Certificate of Analysis

AGAT WORK ORDER: 24Z146545

PROJECT: 319674.001

CLIENT NAME: PINCHIN LTD.

SAMPLING SITE:500 Coventry Rd.

ATTENTION TO: Alicia McDonald/Mandy Witteman

SAMPLED BY:Mandy W.

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2024-05-02

DATE REPORTED: 2024-05-10

			SAMPLE DESCRIPTION:	MW13-S2	MW14-S2	BH15-S2
			SAMPLE TYPE:	Soil	Soil	Soil
			DATE SAMPLED:	2024-05-01 12:00	2024-05-01 12:00	2024-05-01 12:00
Parameter	Unit	G / S	RDL	5836730	5836733	5836735
Dichlorodifluoromethane	µg/g		0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g		0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g		0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g		0.05	<0.05	<0.05	<0.05
Acetone	ug/g		0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g		0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g		0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g		0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g		0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g		0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g		0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g		0.02	<0.02	<0.02	<0.02
Chloroform	ug/g		0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g		0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g		0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g		0.05	<0.05	<0.05	<0.05
Benzene	ug/g		0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g		0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g		0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g		0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g		0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g		0.04	<0.04	<0.04	<0.04
Toluene	ug/g		0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g		0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g		0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g		0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g		0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g		0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g		0.05	<0.05	<0.05	<0.05

Certified By: NPopukoloff

CLIENT NAME: PINCHIN LTD.

SAMPLING SITE:500 Coventry Rd.

ATTENTION TO: Alicia McDonald/Mandy Witteman

SAMPLED BY:Mandy W.

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2024-05-02

DATE REPORTED: 2024-05-10

			SAMPLE DESCRIPTION:	MW13-S2	MW14-S2	BH15-S2
			SAMPLE TYPE:	Soil	Soil	Soil
			DATE SAMPLED:	2024-05-01 12:00	2024-05-01 12:00	2024-05-01 12:00
Parameter	**Unit**	**G / S**	**RDL**	**5836730**	**5836733**	**5836735**
m & p-Xylene	ug/g		0.05	<0.05	<0.05	<0.05
Bromoform	ug/g		0.05	<0.05	<0.05	<0.05
Styrene	ug/g		0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g		0.05	<0.05	<0.05	<0.05
o-Xylene	ug/g		0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g		0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g		0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g		0.05	<0.05	<0.05	<0.05
Xylenes (Total)	ug/g		0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g		0.05	<0.05	<0.05	<0.05
n-Hexane	µg/g		0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	14.7	7.6	13.7
Surrogate	**Unit**	**Acceptable Limits**				
Toluene-d8	% Recovery	50-140		101	103	103
4-Bromofluorobenzene	% Recovery	50-140		76	76	75

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5836677-5836735 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Quality Assurance

CLIENT NAME: PINCHIN LTD.
PROJECT: 319674.001
SAMPLING SITE:500 Coventry Rd.

AGAT WORK ORDER: 24Z146545
ATTENTION TO: Alicia McDonald/Mandy Witteman
SAMPLED BY:Mandy W.

Soil Analysis

RPT Date: May 10, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - All Metals (Soil)															
Antimony	5836658		<0.8	<0.8	NA	< 0.8	131%	70%	130%	105%	80%	120%	91%	70%	130%
Arsenic	5836658		5	5	0.0%	< 1	99%	70%	130%	112%	80%	120%	104%	70%	130%
Barium	5836658		38.2	35.8	6.5%	< 2.0	100%	70%	130%	100%	80%	120%	104%	70%	130%
Beryllium	5836658		<0.5	<0.5	NA	< 0.5	99%	70%	130%	111%	80%	120%	126%	70%	130%
Boron	5836658		<5	<5	NA	< 5	84%	70%	130%	97%	80%	120%	102%	70%	130%
Boron (Hot Water Soluble)	5836677	5836677	0.17	0.20	NA	< 0.10	91%	60%	140%	97%	70%	130%	104%	60%	140%
Cadmium	5836658		<0.5	<0.5	NA	< 0.5	129%	70%	130%	98%	80%	120%	103%	70%	130%
Chromium	5836658		11	10	NA	< 5	91%	70%	130%	102%	80%	120%	98%	70%	130%
Cobalt	5836658		4.1	3.9	NA	< 0.8	87%	70%	130%	93%	80%	120%	101%	70%	130%
Copper	5836658		21.6	21.0	2.8%	< 1.0	90%	70%	130%	96%	80%	120%	104%	70%	130%
Lead	5836658		16	14	13.3%	< 1	95%	70%	130%	109%	80%	120%	98%	70%	130%
Molybdenum	5836658		1.3	<0.5	NA	< 0.5	94%	70%	130%	98%	80%	120%	104%	70%	130%
Nickel	5836658		8	8	0.0%	< 1	85%	70%	130%	89%	80%	120%	101%	70%	130%
Selenium	5836658		<0.8	<0.8	NA	< 0.8	107%	70%	130%	110%	80%	120%	111%	70%	130%
Silver	5836658		<0.5	<0.5	NA	< 0.5	92%	70%	130%	96%	80%	120%	98%	70%	130%
Thallium	5836658		<0.5	<0.5	NA	< 0.5	101%	70%	130%	112%	80%	120%	98%	70%	130%
Uranium	5836658		<0.50	<0.50	NA	< 0.50	95%	70%	130%	103%	80%	120%	102%	70%	130%
Vanadium	5836658		17.7	15.6	12.6%	< 2.0	113%	70%	130%	97%	80%	120%	94%	70%	130%
Zinc	5836658		60	61	1.7%	< 5	98%	70%	130%	100%	80%	120%	100%	70%	130%
Chromium, Hexavalent	5836695	5836695	<0.2	<0.2	NA	< 0.2	90%	70%	130%	92%	80%	120%	81%	70%	130%
Mercury	5836658		<0.10	<0.10	NA	< 0.10	98%	70%	130%	103%	80%	120%	96%	70%	130%

Comments: NA signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.
More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

O. Reg. 153(511) - Metals (Including Hydrides) (Soil)															
Antimony	5836658		<0.8	<0.8	NA	< 0.8	131%	70%	130%	105%	80%	120%	91%	70%	130%
Arsenic	5836658		5	5	0.0%	< 1	99%	70%	130%	112%	80%	120%	104%	70%	130%
Barium	5836658		38.2	35.8	6.5%	< 2.0	100%	70%	130%	100%	80%	120%	104%	70%	130%
Beryllium	5836658		<0.5	<0.5	NA	< 0.5	99%	70%	130%	111%	80%	120%	126%	70%	130%
Boron	5836658		<5	<5	NA	< 5	84%	70%	130%	97%	80%	120%	102%	70%	130%
Cadmium	5836658		<0.5	<0.5	NA	< 0.5	129%	70%	130%	98%	80%	120%	103%	70%	130%
Chromium	5836658		11	10	NA	< 5	91%	70%	130%	102%	80%	120%	98%	70%	130%
Cobalt	5836658		4.1	3.9	NA	< 0.8	87%	70%	130%	93%	80%	120%	101%	70%	130%
Copper	5836658		21.6	21.0	2.8%	< 1.0	90%	70%	130%	96%	80%	120%	104%	70%	130%
Lead	5836658		16	14	13.3%	< 1	95%	70%	130%	109%	80%	120%	98%	70%	130%
Molybdenum	5836658		1.3	<0.5	NA	< 0.5	94%	70%	130%	98%	80%	120%	104%	70%	130%
Nickel	5836658		8	8	0.0%	< 1	85%	70%	130%	89%	80%	120%	101%	70%	130%
Selenium	5836658		<0.8	<0.8	NA	< 0.8	107%	70%	130%	110%	80%	120%	111%	70%	130%

Quality Assurance

CLIENT NAME: PINCHIN LTD.
PROJECT: 319674.001
SAMPLING SITE:500 Coventry Rd.

AGAT WORK ORDER: 24Z146545
ATTENTION TO: Alicia McDonald/Mandy Witteman
SAMPLED BY:Mandy W.

Soil Analysis (Continued)

RPT Date: May 10, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Silver	5836658		<0.5	<0.5	NA	< 0.5	92%	70%	130%	96%	80%	120%	98%	70%	130%
Thallium	5836658		<0.5	<0.5	NA	< 0.5	101%	70%	130%	112%	80%	120%	98%	70%	130%
Uranium	5836658		<0.50	<0.50	NA	< 0.50	95%	70%	130%	103%	80%	120%	102%	70%	130%
Vanadium	5836658		17.7	15.6	12.6%	< 2.0	113%	70%	130%	97%	80%	120%	94%	70%	130%
Zinc	5836658		60	61	1.7%	< 5	98%	70%	130%	100%	80%	120%	100%	70%	130%

Comments: NA Signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.
More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

CHARTERED
Sukhwinder Kaur Randhawa
CHEMIST

SKaur

Certified By:

Quality Assurance

CLIENT NAME: PINCHIN LTD.
PROJECT: 319674.001
SAMPLING SITE:500 Coventry Rd.

AGAT WORK ORDER: 24Z146545
ATTENTION TO: Alicia McDonald/Mandy Witteman
SAMPLED BY:Mandy W.

Trace Organics Analysis

RPT Date: May 10, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits Lower	Acceptable Limits Upper	Recovery	Acceptable Limits Lower	Acceptable Limits Upper	Recovery	Acceptable Limits Lower	Acceptable Limits Upper
O. Reg. 153(511) - PCBs (Soil)															
Polychlorinated Biphenyls	5834172		< 0.1	< 0.1	NA	< 0.1	103%	50%	140%	108%	50%	140%	105%	50%	140%
O. Reg. 153(511) - PAHs (Soil)															
Naphthalene	5832514		<0.05	<0.05	NA	< 0.05	98%	50%	140%	110%	50%	140%	88%	50%	140%
Acenaphthylene	5832514		<0.05	<0.05	NA	< 0.05	86%	50%	140%	73%	50%	140%	88%	50%	140%
Acenaphthene	5832514		<0.05	<0.05	NA	< 0.05	105%	50%	140%	103%	50%	140%	95%	50%	140%
Fluorene	5832514		<0.05	<0.05	NA	< 0.05	113%	50%	140%	105%	50%	140%	100%	50%	140%
Phenanthrene	5832514		<0.05	<0.05	NA	< 0.05	119%	50%	140%	113%	50%	140%	108%	50%	140%
Anthracene	5832514		<0.05	<0.05	NA	< 0.05	119%	50%	140%	103%	50%	140%	98%	50%	140%
Fluoranthene	5832514		<0.05	<0.05	NA	< 0.05	118%	50%	140%	98%	50%	140%	98%	50%	140%
Pyrene	5832514		<0.05	<0.05	NA	< 0.05	116%	50%	140%	98%	50%	140%	95%	50%	140%
Benzo(a)anthracene	5832514		<0.05	<0.05	NA	< 0.05	138%	50%	140%	103%	50%	140%	103%	50%	140%
Chrysene	5832514		<0.05	<0.05	NA	< 0.05	110%	50%	140%	90%	50%	140%	78%	50%	140%
Benzo(b)fluoranthene	5832514		<0.05	<0.05	NA	< 0.05	105%	50%	140%	73%	50%	140%	73%	50%	140%
Benzo(k)fluoranthene	5832514		<0.05	<0.05	NA	< 0.05	102%	50%	140%	95%	50%	140%	90%	50%	140%
Benzo(a)pyrene	5832514		<0.05	<0.05	NA	< 0.05	104%	50%	140%	83%	50%	140%	90%	50%	140%
Indeno(1,2,3-cd)pyrene	5832514		<0.05	<0.05	NA	< 0.05	103%	50%	140%	73%	50%	140%	75%	50%	140%
Dibenz(a,h)anthracene	5832514		<0.05	<0.05	NA	< 0.05	105%	50%	140%	78%	50%	140%	73%	50%	140%
Benzo(g,h,i)perylene	5832514		<0.05	<0.05	NA	< 0.05	105%	50%	140%	80%	50%	140%	75%	50%	140%
O. Reg. 153(511) - PAHs (Soil)															
Naphthalene	5836737	5836737	0.26	0.30	14.3%	< 0.05	98%	50%	140%	110%	50%	140%	88%	50%	140%
Acenaphthylene	5836737	5836737	<0.05	<0.05	NA	< 0.05	86%	50%	140%	73%	50%	140%	88%	50%	140%
Acenaphthene	5836737	5836737	0.05	0.06	NA	< 0.05	105%	50%	140%	103%	50%	140%	95%	50%	140%
Fluorene	5836737	5836737	0.11	0.17	NA	< 0.05	113%	50%	140%	105%	50%	140%	100%	50%	140%
Phenanthrene	5836737	5836737	0.23	0.31	NA	< 0.05	119%	50%	140%	113%	50%	140%	108%	50%	140%
Anthracene	5836737	5836737	<0.05	<0.05	NA	< 0.05	119%	50%	140%	103%	50%	140%	98%	50%	140%
Fluoranthene	5836737	5836737	0.06	<0.05	NA	< 0.05	118%	50%	140%	98%	50%	140%	98%	50%	140%
Pyrene	5836737	5836737	0.06	<0.05	NA	< 0.05	116%	50%	140%	98%	50%	140%	95%	50%	140%
Benzo(a)anthracene	5836737	5836737	<0.05	<0.05	NA	< 0.05	138%	50%	140%	103%	50%	140%	103%	50%	140%
Chrysene	5836737	5836737	<0.05	<0.05	NA	< 0.05	110%	50%	140%	90%	50%	140%	78%	50%	140%
Benzo(b)fluoranthene	5836737	5836737	<0.05	<0.05	NA	< 0.05	105%	50%	140%	73%	50%	140%	73%	50%	140%
Benzo(k)fluoranthene	5836737	5836737	<0.05	<0.05	NA	< 0.05	102%	50%	140%	95%	50%	140%	90%	50%	140%
Benzo(a)pyrene	5836737	5836737	<0.05	<0.05	NA	< 0.05	104%	50%	140%	83%	50%	140%	90%	50%	140%
Indeno(1,2,3-cd)pyrene	5836737	5836737	<0.05	<0.05	NA	< 0.05	103%	50%	140%	73%	50%	140%	75%	50%	140%
Dibenz(a,h)anthracene	5836737	5836737	<0.05	<0.05	NA	< 0.05	105%	50%	140%	78%	50%	140%	73%	50%	140%
Benzo(g,h,i)perylene	5836737	5836737	<0.05	<0.05	NA	< 0.05	105%	50%	140%	80%	50%	140%	75%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

Quality Assurance

CLIENT NAME: PINCHIN LTD.
PROJECT: 319674.001
SAMPLING SITE:500 Coventry Rd.

AGAT WORK ORDER: 24Z146545
ATTENTION TO: Alicia McDonald/Mandy Witteman
SAMPLED BY:Mandy W.

Trace Organics Analysis (Continued)

RPT Date: May 10, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Benzene	5836024		<0.02	<0.02	NA	< 0.02	104%	60%	140%	109%	60%	140%	89%	60%	140%
Toluene	5836024		<0.05	<0.05	NA	< 0.05	107%	60%	140%	84%	60%	140%	91%	60%	140%
Ethylbenzene	5836024		<0.05	<0.05	NA	< 0.05	84%	60%	140%	83%	60%	140%	87%	60%	140%
m & p-Xylene	5836024		<0.05	<0.05	NA	< 0.05	93%	60%	140%	96%	60%	140%	92%	60%	140%
o-Xylene	5836024		<0.05	<0.05	NA	< 0.05	95%	60%	140%	100%	60%	140%	100%	60%	140%
F1 (C6 to C10)	5836024		<5	<5	NA	< 5	95%	60%	140%	93%	60%	140%	92%	60%	140%
O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)															
F1 (C6 to C10)	5836735	5836735	<5	<5	NA	< 5	119%	60%	140%	101%	60%	140%	94%	60%	140%
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)															
F1 (C6 to C10)	5836735	5836735	<5	<5	NA	< 5	119%	60%	140%	101%	60%	140%	94%	60%	140%
F2 (C10 to C16)	5836737	5836737	183	135	30.2%	< 10	106%	60%	140%	121%	60%	140%	118%	60%	140%
F3 (C16 to C34)	5836737	5836737	116	84	NA	< 50	105%	60%	140%	126%	60%	140%	105%	60%	140%
F4 (C34 to C50)	5836737	5836737	< 50	< 50	NA	< 50	80%	60%	140%	103%	60%	140%	120%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Soil)															
Dichlorodifluoromethane	5836735	5836735	<0.05	<0.05	NA	< 0.05	115%	50%	140%	88%	50%	140%	72%	50%	140%
Vinyl Chloride	5836735	5836735	<0.02	<0.02	NA	< 0.02	124%	50%	140%	89%	50%	140%	112%	50%	140%
Bromomethane	5836735	5836735	<0.05	<0.05	NA	< 0.05	122%	50%	140%	76%	50%	140%	119%	50%	140%
Trichlorofluoromethane	5836735	5836735	<0.05	<0.05	NA	< 0.05	126%	50%	140%	91%	50%	140%	98%	50%	140%
Acetone	5836735	5836735	<0.50	<0.50	NA	< 0.50	92%	50%	140%	108%	50%	140%	90%	50%	140%
1,1-Dichloroethylene	5836735	5836735	< 0.05	< 0.05	NA	< 0.05	84%	50%	140%	90%	60%	130%	91%	50%	140%
Methylene Chloride	5836735	5836735	<0.05	<0.05	NA	< 0.05	83%	50%	140%	97%	60%	130%	95%	50%	140%
Trans- 1,2-Dichloroethylene	5836735	5836735	<0.05	<0.05	NA	< 0.05	84%	50%	140%	104%	60%	130%	94%	50%	140%
Methyl tert-butyl Ether	5836735	5836735	<0.05	<0.05	NA	< 0.05	69%	50%	140%	98%	60%	130%	94%	50%	140%
1,1-Dichloroethane	5836735	5836735	<0.02	<0.02	NA	< 0.02	75%	50%	140%	91%	60%	130%	78%	50%	140%
Methyl Ethyl Ketone	5836735	5836735	<0.50	<0.50	NA	< 0.50	112%	50%	140%	109%	50%	140%	113%	50%	140%
Cis- 1,2-Dichloroethylene	5836735	5836735	<0.02	<0.02	NA	< 0.02	83%	50%	140%	86%	60%	130%	68%	50%	140%
Chloroform	5836735	5836735	<0.04	<0.04	NA	< 0.04	91%	50%	140%	103%	60%	130%	82%	50%	140%
1,2-Dichloroethane	5836735	5836735	<0.03	<0.03	NA	< 0.03	105%	50%	140%	82%	60%	130%	78%	50%	140%
1,1,1-Trichloroethane	5836735	5836735	<0.05	<0.05	NA	< 0.05	80%	50%	140%	90%	60%	130%	84%	50%	140%
Carbon Tetrachloride	5836735	5836735	<0.05	<0.05	NA	< 0.05	95%	50%	140%	91%	60%	130%	77%	50%	140%
Benzene	5836735	5836735	<0.02	<0.02	NA	< 0.02	91%	50%	140%	90%	60%	130%	95%	50%	140%
1,2-Dichloropropane	5836735	5836735	<0.03	<0.03	NA	< 0.03	84%	50%	140%	73%	60%	130%	93%	50%	140%
Trichloroethylene	5836735	5836735	<0.03	<0.03	NA	< 0.03	89%	50%	140%	96%	60%	130%	90%	50%	140%
Bromodichloromethane	5836735	5836735	<0.05	<0.05	NA	< 0.05	74%	50%	140%	88%	60%	130%	72%	50%	140%
Methyl Isobutyl Ketone	5836735	5836735	<0.50	<0.50	NA	< 0.50	88%	50%	140%	102%	50%	140%	101%	50%	140%
1,1,2-Trichloroethane	5836735	5836735	<0.04	<0.04	NA	< 0.04	76%	50%	140%	93%	60%	130%	96%	50%	140%
Toluene	5836735	5836735	<0.05	<0.05	NA	< 0.05	76%	50%	140%	102%	60%	130%	80%	50%	140%
Dibromochloromethane	5836735	5836735	<0.05	<0.05	NA	< 0.05	79%	50%	140%	95%	60%	130%	72%	50%	140%

Quality Assurance

CLIENT NAME: PINCHIN LTD.
PROJECT: 319674.001
SAMPLING SITE:500 Coventry Rd.

AGAT WORK ORDER: 24Z146545
ATTENTION TO: Alicia McDonald/Mandy Witteman
SAMPLED BY:Mandy W.

Trace Organics Analysis (Continued)

RPT Date: May 10, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Ethylene Dibromide	5836735	5836735	<0.04	<0.04	NA	< 0.04	76%	50%	140%	76%	60%	130%	75%	50%	140%
Tetrachloroethylene	5836735	5836735	< 0.05	< 0.05	NA	< 0.05	78%	50%	140%	80%	60%	130%	91%	50%	140%
1,1,1,2-Tetrachloroethane	5836735	5836735	<0.04	<0.04	NA	< 0.04	68%	50%	140%	82%	60%	130%	106%	50%	140%
Chlorobenzene	5836735	5836735	<0.05	<0.05	NA	< 0.05	95%	50%	140%	89%	60%	130%	95%	50%	140%
Ethylbenzene	5836735	5836735	<0.05	<0.05	NA	< 0.05	100%	50%	140%	101%	60%	130%	97%	50%	140%
m & p-Xylene	5836735	5836735	<0.05	<0.05	NA	< 0.05	98%	50%	140%	106%	60%	130%	95%	50%	140%
Bromoform	5836735	5836735	<0.05	<0.05	NA	< 0.05	67%	50%	140%	82%	60%	130%	69%	50%	140%
Styrene	5836735	5836735	<0.05	<0.05	NA	< 0.05	76%	50%	140%	78%	60%	130%	89%	50%	140%
1,1,2,2-Tetrachloroethane	5836735	5836735	<0.05	<0.05	NA	< 0.05	102%	50%	140%	106%	60%	130%	94%	50%	140%
o-Xylene	5836735	5836735	<0.05	<0.05	NA	< 0.05	100%	50%	140%	95%	60%	130%	81%	50%	140%
1,3-Dichlorobenzene	5836735	5836735	<0.05	<0.05	NA	< 0.05	65%	50%	140%	97%	60%	130%	99%	50%	140%
1,4-Dichlorobenzene	5836735	5836735	<0.05	<0.05	NA	< 0.05	65%	50%	140%	89%	60%	130%	95%	50%	140%
1,2-Dichlorobenzene	5836735	5836735	<0.05	<0.05	NA	< 0.05	84%	50%	140%	75%	60%	130%	97%	50%	140%
n-Hexane	5836735	5836735	<0.05	<0.05	NA	< 0.05	81%	50%	140%	92%	60%	130%	83%	50%	140%
Glycols Analysis in Soil															
Propylene Glycol	894	5826886	<10	<10	NA	< 10	112%	50%	140%	108%	50%	140%	135%	50%	140%
Monoethylene Glycol	894	5826886	9220	8770	5.0%	< 10	114%	50%	140%	111%	50%	140%	NA	50%	140%
Diethylene Glycol	894	5826886	<10	<10	NA	< 10	120%	50%	140%	110%	50%	140%	136%	50%	140%
Triethylene Glycol	894	5826886	<10	<10	NA	< 10	129%	50%	140%	120%	50%	140%	138%	50%	140%
Tetraethylene Glycol	894	5826886	<10	<10	NA	< 10	123%	50%	140%	103%	50%	140%	117%	50%	140%

Comments: Duplicate NA: results are less than 5X the RDL and RDP will not be calculated.
The sample spikes and dups are not from the same sample ID.

Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated.

Certified By:

QC Exceedance

CLIENT NAME: PINCHIN LTD. **AGAT WORK ORDER: 24Z146545**

PROJECT: 319674.001 **ATTENTION TO: Alicia McDonald/Mandy Witteman**

RPT Date: May 10, 2024		REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Sample Id	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
			Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - All Metals (Soil)										
Antimony		131%	70%	130%	105%	80%	120%	91%	70%	130%

Comments: NA signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.
More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

O. Reg. 153(511) - Metals (Including Hydrides) (Soil)										
Antimony		131%	70%	130%	105%	80%	120%	91%	70%	130%

Comments: NA Signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.
More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836677	**MW2-S5**	**Soil**	**30-APR-2024**	**02-MAY-2024**

O. Reg. 153(511) - All Metals (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Antimony	07-MAY-2024	07-MAY-2024	JA
Arsenic	07-MAY-2024	07-MAY-2024	JA
Barium	07-MAY-2024	07-MAY-2024	JA
Beryllium	07-MAY-2024	07-MAY-2024	JA
Boron	07-MAY-2024	07-MAY-2024	JA
Boron (Hot Water Soluble)	06-MAY-2024	06-MAY-2024	ZK
Cadmium	07-MAY-2024	07-MAY-2024	JA
Chromium	07-MAY-2024	07-MAY-2024	JA
Cobalt	07-MAY-2024	07-MAY-2024	JA
Copper	07-MAY-2024	07-MAY-2024	JA
Lead	07-MAY-2024	07-MAY-2024	JA
Molybdenum	07-MAY-2024	07-MAY-2024	JA
Nickel	07-MAY-2024	07-MAY-2024	JA
Selenium	07-MAY-2024	07-MAY-2024	JA
Silver	07-MAY-2024	07-MAY-2024	JA
Thallium	07-MAY-2024	07-MAY-2024	JA
Uranium	07-MAY-2024	07-MAY-2024	JA
Vanadium	07-MAY-2024	07-MAY-2024	JA
Zinc	07-MAY-2024	07-MAY-2024	JA
Chromium, Hexavalent	07-MAY-2024	07-MAY-2024	RC
Mercury	07-MAY-2024	07-MAY-2024	JA

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	07-MAY-2024	07-MAY-2024	NP
Acenaphthylene	07-MAY-2024	07-MAY-2024	NP
Acenaphthene	07-MAY-2024	07-MAY-2024	NP
Fluorene	07-MAY-2024	07-MAY-2024	NP
Phenanthrene	07-MAY-2024	07-MAY-2024	NP
Anthracene	07-MAY-2024	07-MAY-2024	NP
Fluoranthene	07-MAY-2024	07-MAY-2024	NP
Pyrene	07-MAY-2024	07-MAY-2024	NP
Benzo(a)anthracene	07-MAY-2024	07-MAY-2024	NP
Chrysene	07-MAY-2024	07-MAY-2024	NP
Benzo(b)fluoranthene	07-MAY-2024	07-MAY-2024	NP
Benzo(k)fluoranthene	07-MAY-2024	07-MAY-2024	NP
Benzo(a)pyrene	07-MAY-2024	07-MAY-2024	NP
Indeno(1,2,3-cd)pyrene	07-MAY-2024	07-MAY-2024	NP
Dibenz(a,h)anthracene	07-MAY-2024	07-MAY-2024	NP

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836677	**MW2-S5**	**Soil**	**30-APR-2024**	**02-MAY-2024**

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Benzo(g,h,i)perylene	07-MAY-2024	07-MAY-2024	NP
2-and 1-methyl Naphthalene	07-MAY-2024	07-MAY-2024	SYS
Naphthalene-d8	07-MAY-2024	07-MAY-2024	NP
Acridine-d9	07-MAY-2024	07-MAY-2024	NP
Terphenyl-d14	07-MAY-2024	07-MAY-2024	NP
Moisture Content	07-MAY-2024	07-MAY-2024	GU

O. Reg. 153(511) - PCBs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Polychlorinated Biphenyls	07-MAY-2024	07-MAY-2024	VDP
Decachlorobiphenyl	07-MAY-2024	07-MAY-2024	VDP
Moisture Content	07-MAY-2024	07-MAY-2024	GU

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	06-MAY-2024	06-MAY-2024	CK
F1 (C6 to C10) minus BTEX	06-MAY-2024	06-MAY-2024	SYS
Toluene-d8	06-MAY-2024	06-MAY-2024	CK
F2 (C10 to C16)	06-MAY-2024	06-MAY-2024	CA
F2 (C10 to C16) minus Naphthalene	06-MAY-2024	06-MAY-2024	SYS
F3 (C16 to C34)	06-MAY-2024	06-MAY-2024	CA
F3 (C16 to C34) minus PAHs	06-MAY-2024	06-MAY-2024	SYS
F4 (C34 to C50)	06-MAY-2024	06-MAY-2024	CA
Gravimetric Heavy Hydrocarbons	06-MAY-2024	06-MAY-2024	
Moisture Content	06-MAY-2024	06-MAY-2024	GU
Terphenyl	06-MAY-2024	06-MAY-2024	CA

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	06-MAY-2024	06-MAY-2024	CK
Vinyl Chloride	06-MAY-2024	06-MAY-2024	CK
Bromomethane	06-MAY-2024	06-MAY-2024	CK
Trichlorofluoromethane	06-MAY-2024	06-MAY-2024	CK
Acetone	06-MAY-2024	06-MAY-2024	CK
1,1-Dichloroethylene			
Methylene Chloride	06-MAY-2024	06-MAY-2024	CK
Trans- 1,2-Dichloroethylene	06-MAY-2024	06-MAY-2024	CK
Methyl tert-butyl Ether	06-MAY-2024	06-MAY-2024	CK
1,1-Dichloroethane	06-MAY-2024	06-MAY-2024	CK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836677	**MW2-S5**	**Soil**	**30-APR-2024**	**02-MAY-2024**

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Methyl Ethyl Ketone	06-MAY-2024	06-MAY-2024	CK
Cis- 1,2-Dichloroethylene	06-MAY-2024	06-MAY-2024	CK
Chloroform	06-MAY-2024	06-MAY-2024	CK
1,2-Dichloroethane	06-MAY-2024	06-MAY-2024	CK
1,1,1-Trichloroethane	06-MAY-2024	06-MAY-2024	CK
Carbon Tetrachloride	06-MAY-2024	06-MAY-2024	CK
Benzene	06-MAY-2024	06-MAY-2024	CK
1,2-Dichloropropane	06-MAY-2024	06-MAY-2024	CK
Trichloroethylene	06-MAY-2024	06-MAY-2024	CK
Bromodichloromethane	06-MAY-2024	06-MAY-2024	CK
Methyl Isobutyl Ketone	06-MAY-2024	06-MAY-2024	CK
1,1,2-Trichloroethane	06-MAY-2024	06-MAY-2024	CK
Toluene	06-MAY-2024	06-MAY-2024	CK
Dibromochloromethane	06-MAY-2024	06-MAY-2024	CK
Ethylene Dibromide	06-MAY-2024	06-MAY-2024	CK
Tetrachloroethylene			
1,1,1,2-Tetrachloroethane	06-MAY-2024	06-MAY-2024	CK
Chlorobenzene	06-MAY-2024	06-MAY-2024	CK
Ethylbenzene	06-MAY-2024	06-MAY-2024	CK
m & p-Xylene	06-MAY-2024	06-MAY-2024	CK
Bromoform	06-MAY-2024	06-MAY-2024	CK
Styrene	06-MAY-2024	06-MAY-2024	CK
1,1,2,2-Tetrachloroethane	06-MAY-2024	06-MAY-2024	CK
o-Xylene	06-MAY-2024	06-MAY-2024	CK
1,3-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
1,4-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
1,2-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
Xylenes (Total)	06-MAY-2024	06-MAY-2024	SYS
1,3-Dichloropropene (Cis + Trans)	06-MAY-2024	06-MAY-2024	SYS
n-Hexane	06-MAY-2024	06-MAY-2024	CK
Toluene-d8	06-MAY-2024	06-MAY-2024	CK
4-Bromofluorobenzene	06-MAY-2024	06-MAY-2024	CK
Moisture Content	15-FEB-2024	15-FEB-2024	GU

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836681	**MW3- S4**	**Soil**	**30-APR-2024**	**02-MAY-2024**

O. Reg. 153(511) - All Metals (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Antimony	07-MAY-2024	07-MAY-2024	JA

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836681	**MW3- S4**	**Soil**	**30-APR-2024**	**02-MAY-2024**

O. Reg. 153(511) - All Metals (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Arsenic	07-MAY-2024	07-MAY-2024	JA
Barium	07-MAY-2024	07-MAY-2024	JA
Beryllium	07-MAY-2024	07-MAY-2024	JA
Boron	07-MAY-2024	07-MAY-2024	JA
Boron (Hot Water Soluble)	06-MAY-2024	06-MAY-2024	ZK
Cadmium	07-MAY-2024	07-MAY-2024	JA
Chromium	07-MAY-2024	07-MAY-2024	JA
Cobalt	07-MAY-2024	07-MAY-2024	JA
Copper	07-MAY-2024	07-MAY-2024	JA
Lead	07-MAY-2024	07-MAY-2024	JA
Molybdenum	07-MAY-2024	07-MAY-2024	JA
Nickel	07-MAY-2024	07-MAY-2024	JA
Selenium	07-MAY-2024	07-MAY-2024	JA
Silver	07-MAY-2024	07-MAY-2024	JA
Thallium	07-MAY-2024	07-MAY-2024	JA
Uranium	07-MAY-2024	07-MAY-2024	JA
Vanadium	07-MAY-2024	07-MAY-2024	JA
Zinc	07-MAY-2024	07-MAY-2024	JA
Chromium, Hexavalent	07-MAY-2024	07-MAY-2024	RC
Mercury	07-MAY-2024	07-MAY-2024	JA

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	08-MAY-2024	08-MAY-2024	NP
Acenaphthylene	08-MAY-2024	08-MAY-2024	NP
Acenaphthene	08-MAY-2024	08-MAY-2024	NP
Fluorene	08-MAY-2024	08-MAY-2024	NP
Phenanthrene	08-MAY-2024	08-MAY-2024	NP
Anthracene	08-MAY-2024	08-MAY-2024	NP
Fluoranthene	08-MAY-2024	08-MAY-2024	NP
Pyrene	08-MAY-2024	08-MAY-2024	NP
Benzo(a)anthracene	08-MAY-2024	08-MAY-2024	NP
Chrysene	08-MAY-2024	08-MAY-2024	NP
Benzo(b)fluoranthene	08-MAY-2024	08-MAY-2024	NP
Benzo(k)fluoranthene	08-MAY-2024	08-MAY-2024	NP
Benzo(a)pyrene	08-MAY-2024	08-MAY-2024	NP
Indeno(1,2,3-cd)pyrene	08-MAY-2024	08-MAY-2024	NP
Dibenz(a,h)anthracene	08-MAY-2024	08-MAY-2024	NP
Benzo(g,h,i)perylene	08-MAY-2024	08-MAY-2024	NP

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836681	**MW3- S4**	**Soil**	**30-APR-2024**	**02-MAY-2024**

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
2-and 1-methyl Naphthalene	08-MAY-2024	08-MAY-2024	SYS
Naphthalene-d8	08-MAY-2024	08-MAY-2024	NP
Acridine-d9	08-MAY-2024	08-MAY-2024	NP
Terphenyl-d14	08-MAY-2024	08-MAY-2024	NP
Moisture Content	07-MAY-2024	07-MAY-2024	GU

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	06-MAY-2024	06-MAY-2024	CK
F1 (C6 to C10) minus BTEX	06-MAY-2024	06-MAY-2024	SYS
Toluene-d8	06-MAY-2024	06-MAY-2024	CK
F2 (C10 to C16)	06-MAY-2024	06-MAY-2024	CA
F2 (C10 to C16) minus Naphthalene	08-MAY-2024	08-MAY-2024	SYS
F3 (C16 to C34)	06-MAY-2024	06-MAY-2024	CA
F3 (C16 to C34) minus PAHs	08-MAY-2024	08-MAY-2024	SYS
F4 (C34 to C50)	06-MAY-2024	06-MAY-2024	CA
Gravimetric Heavy Hydrocarbons			
Moisture Content	15-FEB-2024	15-FEB-2024	GU
Terphenyl	06-MAY-2024	06-MAY-2024	CA

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	06-MAY-2024	06-MAY-2024	CK
Vinyl Chloride	06-MAY-2024	06-MAY-2024	CK
Bromomethane	06-MAY-2024	06-MAY-2024	CK
Trichlorofluoromethane	06-MAY-2024	06-MAY-2024	CK
Acetone	06-MAY-2024	06-MAY-2024	CK
1,1-Dichloroethylene			
Methylene Chloride	06-MAY-2024	06-MAY-2024	CK
Trans- 1,2-Dichloroethylene	06-MAY-2024	06-MAY-2024	CK
Methyl tert-butyl Ether	06-MAY-2024	06-MAY-2024	CK
1,1-Dichloroethane	06-MAY-2024	06-MAY-2024	CK
Methyl Ethyl Ketone	06-MAY-2024	06-MAY-2024	CK
Cis- 1,2-Dichloroethylene	06-MAY-2024	06-MAY-2024	CK
Chloroform	06-MAY-2024	06-MAY-2024	CK
1,2-Dichloroethane	06-MAY-2024	06-MAY-2024	CK
1,1,1-Trichloroethane	06-MAY-2024	06-MAY-2024	CK
Carbon Tetrachloride	06-MAY-2024	06-MAY-2024	CK
Benzene	06-MAY-2024	06-MAY-2024	CK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836681	**MW3- S4**	**Soil**	**30-APR-2024**	**02-MAY-2024**

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
1,2-Dichloropropane	06-MAY-2024	06-MAY-2024	CK
Trichloroethylene	06-MAY-2024	06-MAY-2024	CK
Bromodichloromethane	06-MAY-2024	06-MAY-2024	CK
Methyl Isobutyl Ketone	06-MAY-2024	06-MAY-2024	CK
1,1,2-Trichloroethane	06-MAY-2024	06-MAY-2024	CK
Toluene	06-MAY-2024	06-MAY-2024	CK
Dibromochloromethane	06-MAY-2024	06-MAY-2024	CK
Ethylene Dibromide	06-MAY-2024	06-MAY-2024	CK
Tetrachloroethylene			
1,1,1,2-Tetrachloroethane	06-MAY-2024	06-MAY-2024	CK
Chlorobenzene	06-MAY-2024	06-MAY-2024	CK
Ethylbenzene	06-MAY-2024	06-MAY-2024	CK
m & p-Xylene	06-MAY-2024	06-MAY-2024	CK
Bromoform	06-MAY-2024	06-MAY-2024	CK
Styrene	06-MAY-2024	06-MAY-2024	CK
1,1,2,2-Tetrachloroethane	06-MAY-2024	06-MAY-2024	CK
o-Xylene	06-MAY-2024	06-MAY-2024	CK
1,3-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
1,4-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
1,2-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
Xylenes (Total)	06-MAY-2024	06-MAY-2024	SYS
1,3-Dichloropropene (Cis + Trans)	06-MAY-2024	06-MAY-2024	SYS
n-Hexane	06-MAY-2024	06-MAY-2024	CK
Toluene-d8	06-MAY-2024	06-MAY-2024	CK
4-Bromofluorobenzene	06-MAY-2024	06-MAY-2024	CK
Moisture Content	15-FEB-2024	15-FEB-2024	GU

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836685	**BH4-S2**	**Soil**	**30-APR-2024**	**02-MAY-2024**

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	08-MAY-2024	08-MAY-2024	NP
Acenaphthylene	08-MAY-2024	08-MAY-2024	NP
Acenaphthene	08-MAY-2024	08-MAY-2024	NP
Fluorene	08-MAY-2024	08-MAY-2024	NP
Phenanthrene	08-MAY-2024	08-MAY-2024	NP
Anthracene	08-MAY-2024	08-MAY-2024	NP
Fluoranthene	08-MAY-2024	08-MAY-2024	NP
Pyrene	08-MAY-2024	08-MAY-2024	NP

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836685	**BH4-S2**	**Soil**	**30-APR-2024**	**02-MAY-2024**

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Benzo(a)anthracene	08-MAY-2024	08-MAY-2024	NP
Chrysene	08-MAY-2024	08-MAY-2024	NP
Benzo(b)fluoranthene	08-MAY-2024	08-MAY-2024	NP
Benzo(k)fluoranthene	08-MAY-2024	08-MAY-2024	NP
Benzo(a)pyrene	08-MAY-2024	08-MAY-2024	NP
Indeno(1,2,3-cd)pyrene	08-MAY-2024	08-MAY-2024	NP
Dibenz(a,h)anthracene	08-MAY-2024	08-MAY-2024	NP
Benzo(g,h,i)perylene	08-MAY-2024	08-MAY-2024	NP
2-and 1-methyl Naphthalene	08-MAY-2024	08-MAY-2024	SYS
Naphthalene-d8	08-MAY-2024	08-MAY-2024	NP
Acridine-d9	08-MAY-2024	08-MAY-2024	NP
Terphenyl-d14	08-MAY-2024	08-MAY-2024	NP
Moisture Content	07-MAY-2024	07-MAY-2024	GU

O. Reg. 153(511) - PCBs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Polychlorinated Biphenyls	07-MAY-2024	07-MAY-2024	VDP
Decachlorobiphenyl	07-MAY-2024	07-MAY-2024	VDP
Moisture Content	07-MAY-2024	07-MAY-2024	GU

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Benzene	06-MAY-2024	06-MAY-2024	VB
Toluene	06-MAY-2024	06-MAY-2024	VB
Ethylbenzene	06-MAY-2024	06-MAY-2024	VB
m & p-Xylene	06-MAY-2024	06-MAY-2024	VB
o-Xylene	06-MAY-2024	06-MAY-2024	VB
Xylenes (Total)	06-MAY-2024	06-MAY-2024	SYS
F1 (C6 to C10)	06-MAY-2024	06-MAY-2024	VB
F1 (C6 to C10) minus BTEX	06-MAY-2024	06-MAY-2024	SYS
Toluene-d8	06-MAY-2024	06-MAY-2024	VB
F2 (C10 to C16)	06-MAY-2024	06-MAY-2024	CA
F2 (C10 to C16) minus Naphthalene	08-MAY-2024	08-MAY-2024	SYS
F3 (C16 to C34)	06-MAY-2024	06-MAY-2024	CA
F3 (C16 to C34) minus PAHs	08-MAY-2024	08-MAY-2024	SYS
F4 (C34 to C50)	06-MAY-2024	06-MAY-2024	CA
Gravimetric Heavy Hydrocarbons	06-MAY-2024	06-MAY-2024	
Moisture Content	06-MAY-2024	06-MAY-2024	GU
Terphenyl	06-MAY-2024	06-MAY-2024	CA

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836693	**BH5-S4**	**Soil**	**30-APR-2024**	**02-MAY-2024**

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	08-MAY-2024	08-MAY-2024	NP
Acenaphthylene	08-MAY-2024	08-MAY-2024	NP
Acenaphthene	08-MAY-2024	08-MAY-2024	NP
Fluorene	08-MAY-2024	08-MAY-2024	NP
Phenanthrene	08-MAY-2024	08-MAY-2024	NP
Anthracene	08-MAY-2024	08-MAY-2024	NP
Fluoranthene	08-MAY-2024	08-MAY-2024	NP
Pyrene	08-MAY-2024	08-MAY-2024	NP
Benzo(a)anthracene	08-MAY-2024	08-MAY-2024	NP
Chrysene	08-MAY-2024	08-MAY-2024	NP
Benzo(b)fluoranthene	08-MAY-2024	08-MAY-2024	NP
Benzo(k)fluoranthene	08-MAY-2024	08-MAY-2024	NP
Benzo(a)pyrene	08-MAY-2024	08-MAY-2024	NP
Indeno(1,2,3-cd)pyrene	08-MAY-2024	08-MAY-2024	NP
Dibenz(a,h)anthracene	08-MAY-2024	08-MAY-2024	NP
Benzo(g,h,i)perylene	08-MAY-2024	08-MAY-2024	NP
2-and 1-methyl Naphthalene	08-MAY-2024	08-MAY-2024	SYS
Naphthalene-d8	08-MAY-2024	08-MAY-2024	NP
Acridine-d9	08-MAY-2024	08-MAY-2024	NP
Terphenyl-d14	08-MAY-2024	08-MAY-2024	NP
Moisture Content	07-MAY-2024	07-MAY-2024	GU

O. Reg. 153(511) - PCBs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Polychlorinated Biphenyls	07-MAY-2024	07-MAY-2024	VDP
Decachlorobiphenyl	07-MAY-2024	07-MAY-2024	VDP
Moisture Content	07-MAY-2024	07-MAY-2024	GU

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Benzene	06-MAY-2024	06-MAY-2024	VB
Toluene	06-MAY-2024	06-MAY-2024	VB
Ethylbenzene	06-MAY-2024	06-MAY-2024	VB
m & p-Xylene	06-MAY-2024	06-MAY-2024	VB
o-Xylene	06-MAY-2024	06-MAY-2024	VB
Xylenes (Total)	06-MAY-2024	06-MAY-2024	SYS
F1 (C6 to C10)	06-MAY-2024	06-MAY-2024	VB
F1 (C6 to C10) minus BTEX	06-MAY-2024	06-MAY-2024	SYS

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836693	**BH5-S4**	**Soil**	**30-APR-2024**	**02-MAY-2024**

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Toluene-d8	06-MAY-2024	06-MAY-2024	VB
F2 (C10 to C16)	06-MAY-2024	06-MAY-2024	CA
F2 (C10 to C16) minus Naphthalene	08-MAY-2024	08-MAY-2024	SYS
F3 (C16 to C34)	06-MAY-2024	06-MAY-2024	CA
F3 (C16 to C34) minus PAHs	08-MAY-2024	08-MAY-2024	SYS
F4 (C34 to C50)	06-MAY-2024	06-MAY-2024	CA
Gravimetric Heavy Hydrocarbons	06-MAY-2024	06-MAY-2024	
Moisture Content	06-MAY-2024	06-MAY-2024	GU
Terphenyl	06-MAY-2024	06-MAY-2024	CA

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836694	**MW6-S4**	**Soil**	**30-APR-2024**	**02-MAY-2024**

Glycols Analysis in Soil

Parameter	Date Prepared	Date Analyzed	Initials
Propylene Glycol	08-MAY-2024	09-MAY-2024	BD
Monoethylene Glycol	08-MAY-2024	09-MAY-2024	BD
Diethylene Glycol	08-MAY-2024	09-MAY-2024	BD
Triethylene Glycol	08-MAY-2024	09-MAY-2024	BD
Tetraethylene Glycol	08-MAY-2024	09-MAY-2024	BD
Heptanol	08-MAY-2024	09-MAY-2024	BD

O. Reg. 153(511) - All Metals (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Antimony	07-MAY-2024	07-MAY-2024	JA
Arsenic	07-MAY-2024	07-MAY-2024	JA
Barium	07-MAY-2024	07-MAY-2024	JA
Beryllium	07-MAY-2024	07-MAY-2024	JA
Boron	07-MAY-2024	07-MAY-2024	JA
Boron (Hot Water Soluble)	06-MAY-2024	06-MAY-2024	ZK
Cadmium	07-MAY-2024	07-MAY-2024	JA
Chromium	07-MAY-2024	07-MAY-2024	JA
Cobalt	07-MAY-2024	07-MAY-2024	JA
Copper	07-MAY-2024	07-MAY-2024	JA
Lead	07-MAY-2024	07-MAY-2024	JA
Molybdenum	07-MAY-2024	07-MAY-2024	JA
Nickel	07-MAY-2024	07-MAY-2024	JA
Selenium	07-MAY-2024	07-MAY-2024	JA
Silver	07-MAY-2024	07-MAY-2024	JA
Thallium	07-MAY-2024	07-MAY-2024	JA

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836694	**MW6-S4**	**Soil**	**30-APR-2024**	**02-MAY-2024**

O. Reg. 153(511) - All Metals (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Uranium	07-MAY-2024	07-MAY-2024	JA
Vanadium	07-MAY-2024	07-MAY-2024	JA
Zinc	07-MAY-2024	07-MAY-2024	JA
Chromium, Hexavalent	07-MAY-2024	07-MAY-2024	RC
Mercury	07-MAY-2024	07-MAY-2024	JA

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	08-MAY-2024	08-MAY-2024	NP
Acenaphthylene	08-MAY-2024	08-MAY-2024	NP
Acenaphthene	08-MAY-2024	08-MAY-2024	NP
Fluorene	08-MAY-2024	08-MAY-2024	NP
Phenanthrene	08-MAY-2024	08-MAY-2024	NP
Anthracene	08-MAY-2024	08-MAY-2024	NP
Fluoranthene	08-MAY-2024	08-MAY-2024	NP
Pyrene	08-MAY-2024	08-MAY-2024	NP
Benzo(a)anthracene	08-MAY-2024	08-MAY-2024	NP
Chrysene	08-MAY-2024	08-MAY-2024	NP
Benzo(b)fluoranthene	08-MAY-2024	08-MAY-2024	NP
Benzo(k)fluoranthene	08-MAY-2024	08-MAY-2024	NP
Benzo(a)pyrene	08-MAY-2024	08-MAY-2024	NP
Indeno(1,2,3-cd)pyrene	08-MAY-2024	08-MAY-2024	NP
Dibenz(a,h)anthracene	08-MAY-2024	08-MAY-2024	NP
Benzo(g,h,i)perylene	08-MAY-2024	08-MAY-2024	NP
2-and 1-methyl Naphthalene	08-MAY-2024	08-MAY-2024	SYS
Naphthalene-d8	08-MAY-2024	08-MAY-2024	NP
Acridine-d9	08-MAY-2024	08-MAY-2024	NP
Terphenyl-d14	08-MAY-2024	08-MAY-2024	NP
Moisture Content	07-MAY-2024	07-MAY-2024	GU

O. Reg. 153(511) - PCBs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Polychlorinated Biphenyls	07-MAY-2024	07-MAY-2024	VDP
Decachlorobiphenyl	07-MAY-2024	07-MAY-2024	VDP
Moisture Content	07-MAY-2024	07-MAY-2024	GU

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	06-MAY-2024	06-MAY-2024	CK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836694	**MW6-S4**	**Soil**	**30-APR-2024**	**02-MAY-2024**

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10) minus BTEX	06-MAY-2024	06-MAY-2024	SYS
Toluene-d8	06-MAY-2024	06-MAY-2024	CK
F2 (C10 to C16)	06-MAY-2024	06-MAY-2024	CA
F2 (C10 to C16) minus Naphthalene	08-MAY-2024	08-MAY-2024	SYS
F3 (C16 to C34)	06-MAY-2024	06-MAY-2024	CA
F3 (C16 to C34) minus PAHs	08-MAY-2024	08-MAY-2024	SYS
F4 (C34 to C50)	06-MAY-2024	06-MAY-2024	CA
Gravimetric Heavy Hydrocarbons			
Moisture Content	15-FEB-2024	15-FEB-2024	GU
Terphenyl	06-MAY-2024	06-MAY-2024	CA

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	06-MAY-2024	06-MAY-2024	CK
Vinyl Chloride	06-MAY-2024	06-MAY-2024	CK
Bromomethane	06-MAY-2024	06-MAY-2024	CK
Trichlorofluoromethane	06-MAY-2024	06-MAY-2024	CK
Acetone	06-MAY-2024	06-MAY-2024	CK
1,1-Dichloroethylene			
Methylene Chloride	06-MAY-2024	06-MAY-2024	CK
Trans- 1,2-Dichloroethylene	06-MAY-2024	06-MAY-2024	CK
Methyl tert-butyl Ether	06-MAY-2024	06-MAY-2024	CK
1,1-Dichloroethane	06-MAY-2024	06-MAY-2024	CK
Methyl Ethyl Ketone	06-MAY-2024	06-MAY-2024	CK
Cis- 1,2-Dichloroethylene	06-MAY-2024	06-MAY-2024	CK
Chloroform	06-MAY-2024	06-MAY-2024	CK
1,2-Dichloroethane	06-MAY-2024	06-MAY-2024	CK
1,1,1-Trichloroethane	06-MAY-2024	06-MAY-2024	CK
Carbon Tetrachloride	06-MAY-2024	06-MAY-2024	CK
Benzene	06-MAY-2024	06-MAY-2024	CK
1,2-Dichloropropane	06-MAY-2024	06-MAY-2024	CK
Trichloroethylene	06-MAY-2024	06-MAY-2024	CK
Bromodichloromethane	06-MAY-2024	06-MAY-2024	CK
Methyl Isobutyl Ketone	06-MAY-2024	06-MAY-2024	CK
1,1,2-Trichloroethane	06-MAY-2024	06-MAY-2024	CK
Toluene	06-MAY-2024	06-MAY-2024	CK
Dibromochloromethane	06-MAY-2024	06-MAY-2024	CK
Ethylene Dibromide	06-MAY-2024	06-MAY-2024	CK
Tetrachloroethylene			

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836694	**MW6-S4**	**Soil**	**30-APR-2024**	**02-MAY-2024**

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
1,1,1,2-Tetrachloroethane	06-MAY-2024	06-MAY-2024	CK
Chlorobenzene	06-MAY-2024	06-MAY-2024	CK
Ethylbenzene	06-MAY-2024	06-MAY-2024	CK
m & p-Xylene	06-MAY-2024	06-MAY-2024	CK
Bromoform	06-MAY-2024	06-MAY-2024	CK
Styrene	06-MAY-2024	06-MAY-2024	CK
1,1,2,2-Tetrachloroethane	06-MAY-2024	06-MAY-2024	CK
o-Xylene	06-MAY-2024	06-MAY-2024	CK
1,3-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
1,4-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
1,2-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
Xylenes (Total)	06-MAY-2024	06-MAY-2024	SYS
1,3-Dichloropropene (Cis + Trans)	06-MAY-2024	06-MAY-2024	SYS
n-Hexane	06-MAY-2024	06-MAY-2024	CK
Toluene-d8	06-MAY-2024	06-MAY-2024	CK
4-Bromofluorobenzene	06-MAY-2024	06-MAY-2024	CK
Moisture Content	15-FEB-2024	15-FEB-2024	GU

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836695	**MW10-S3**	**Soil**	**30-APR-2024**	**02-MAY-2024**

O. Reg. 153(511) - All Metals (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Antimony	07-MAY-2024	07-MAY-2024	JA
Arsenic	07-MAY-2024	07-MAY-2024	JA
Barium	07-MAY-2024	07-MAY-2024	JA
Beryllium	07-MAY-2024	07-MAY-2024	JA
Boron	07-MAY-2024	07-MAY-2024	JA
Boron (Hot Water Soluble)	06-MAY-2024	06-MAY-2024	ZK
Cadmium	07-MAY-2024	07-MAY-2024	JA
Chromium	07-MAY-2024	07-MAY-2024	JA
Cobalt	07-MAY-2024	07-MAY-2024	JA
Copper	07-MAY-2024	07-MAY-2024	JA
Lead	07-MAY-2024	07-MAY-2024	JA
Molybdenum	07-MAY-2024	07-MAY-2024	JA
Nickel	07-MAY-2024	07-MAY-2024	JA
Selenium	07-MAY-2024	07-MAY-2024	JA
Silver	07-MAY-2024	07-MAY-2024	JA
Thallium	07-MAY-2024	07-MAY-2024	JA
Uranium	07-MAY-2024	07-MAY-2024	JA

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836695	**MW10-S3**	**Soil**	**30-APR-2024**	**02-MAY-2024**

O. Reg. 153(511) - All Metals (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Vanadium	07-MAY-2024	07-MAY-2024	JA
Zinc	07-MAY-2024	07-MAY-2024	JA
Chromium, Hexavalent	07-MAY-2024	07-MAY-2024	RC
Mercury	07-MAY-2024	07-MAY-2024	JA

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	08-MAY-2024	08-MAY-2024	NP
Acenaphthylene	08-MAY-2024	08-MAY-2024	NP
Acenaphthene	08-MAY-2024	08-MAY-2024	NP
Fluorene	08-MAY-2024	08-MAY-2024	NP
Phenanthrene	08-MAY-2024	08-MAY-2024	NP
Anthracene	08-MAY-2024	08-MAY-2024	NP
Fluoranthene	08-MAY-2024	08-MAY-2024	NP
Pyrene	08-MAY-2024	08-MAY-2024	NP
Benzo(a)anthracene	08-MAY-2024	08-MAY-2024	NP
Chrysene	08-MAY-2024	08-MAY-2024	NP
Benzo(b)fluoranthene	08-MAY-2024	08-MAY-2024	NP
Benzo(k)fluoranthene	08-MAY-2024	08-MAY-2024	NP
Benzo(a)pyrene	08-MAY-2024	08-MAY-2024	NP
Indeno(1,2,3-cd)pyrene	08-MAY-2024	08-MAY-2024	NP
Dibenz(a,h)anthracene	08-MAY-2024	08-MAY-2024	NP
Benzo(g,h,i)perylene	08-MAY-2024	08-MAY-2024	NP
2-and 1-methyl Naphthalene	08-MAY-2024	08-MAY-2024	SYS
Naphthalene-d8	08-MAY-2024	08-MAY-2024	NP
Acridine-d9	08-MAY-2024	08-MAY-2024	NP
Terphenyl-d14	08-MAY-2024	08-MAY-2024	NP
Moisture Content	07-MAY-2024	07-MAY-2024	GU

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Benzene	06-MAY-2024	06-MAY-2024	VB
Toluene	06-MAY-2024	06-MAY-2024	VB
Ethylbenzene	06-MAY-2024	06-MAY-2024	VB
m & p-Xylene	06-MAY-2024	06-MAY-2024	VB
o-Xylene	06-MAY-2024	06-MAY-2024	VB
Xylenes (Total)	06-MAY-2024	06-MAY-2024	SYS
F1 (C6 to C10)	06-MAY-2024	06-MAY-2024	VB
F1 (C6 to C10) minus BTEX	06-MAY-2024	06-MAY-2024	SYS

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836695	MW10-S3	Soil	30-APR-2024	02-MAY-2024

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Toluene-d8	06-MAY-2024	06-MAY-2024	VB
F2 (C10 to C16)	06-MAY-2024	06-MAY-2024	CA
F2 (C10 to C16) minus Naphthalene	08-MAY-2024	08-MAY-2024	SYS
F3 (C16 to C34)	06-MAY-2024	06-MAY-2024	CA
F3 (C16 to C34) minus PAHs	08-MAY-2024	08-MAY-2024	SYS
F4 (C34 to C50)	06-MAY-2024	06-MAY-2024	CA
Gravimetric Heavy Hydrocarbons	06-MAY-2024	06-MAY-2024	
Moisture Content	06-MAY-2024	06-MAY-2024	GU
Terphenyl	06-MAY-2024	06-MAY-2024	CA

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836696	MW10-S5	Soil	30-APR-2024	02-MAY-2024

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	08-MAY-2024	08-MAY-2024	NP
Acenaphthylene	08-MAY-2024	08-MAY-2024	NP
Acenaphthene	08-MAY-2024	08-MAY-2024	NP
Fluorene	08-MAY-2024	08-MAY-2024	NP
Phenanthrene	08-MAY-2024	08-MAY-2024	NP
Anthracene	08-MAY-2024	08-MAY-2024	NP
Fluoranthene	08-MAY-2024	08-MAY-2024	NP
Pyrene	08-MAY-2024	08-MAY-2024	NP
Benzo(a)anthracene	08-MAY-2024	08-MAY-2024	NP
Chrysene	08-MAY-2024	08-MAY-2024	NP
Benzo(b)fluoranthene	08-MAY-2024	08-MAY-2024	NP
Benzo(k)fluoranthene	08-MAY-2024	08-MAY-2024	NP
Benzo(a)pyrene	08-MAY-2024	08-MAY-2024	NP
Indeno(1,2,3-cd)pyrene	08-MAY-2024	08-MAY-2024	NP
Dibenz(a,h)anthracene	08-MAY-2024	08-MAY-2024	NP
Benzo(g,h,i)perylene	08-MAY-2024	08-MAY-2024	NP
2-and 1-methyl Naphthalene	08-MAY-2024	08-MAY-2024	SYS
Naphthalene-d8	08-MAY-2024	08-MAY-2024	NP
Acridine-d9	08-MAY-2024	08-MAY-2024	NP
Terphenyl-d14	08-MAY-2024	08-MAY-2024	NP
Moisture Content	07-MAY-2024	07-MAY-2024	GU

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	06-MAY-2024	06-MAY-2024	CK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836696	**MW10-S5**	**Soil**	**30-APR-2024**	**02-MAY-2024**

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10) minus BTEX	06-MAY-2024	06-MAY-2024	SYS
Toluene-d8	06-MAY-2024	06-MAY-2024	CK
F2 (C10 to C16)	06-MAY-2024	06-MAY-2024	CA
F2 (C10 to C16) minus Naphthalene	08-MAY-2024	08-MAY-2024	SYS
F3 (C16 to C34)	06-MAY-2024	06-MAY-2024	CA
F3 (C16 to C34) minus PAHs	08-MAY-2024	08-MAY-2024	SYS
F4 (C34 to C50)	06-MAY-2024	06-MAY-2024	CA
Gravimetric Heavy Hydrocarbons			
Moisture Content	15-FEB-2024	15-FEB-2024	GU
Terphenyl	06-MAY-2024	06-MAY-2024	CA

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	06-MAY-2024	06-MAY-2024	CK
Vinyl Chloride	06-MAY-2024	06-MAY-2024	CK
Bromomethane	06-MAY-2024	06-MAY-2024	CK
Trichlorofluoromethane	06-MAY-2024	06-MAY-2024	CK
Acetone	06-MAY-2024	06-MAY-2024	CK
1,1-Dichloroethylene	07-MAY-2024	07-MAY-2024	CK
Methylene Chloride	06-MAY-2024	06-MAY-2024	CK
Trans- 1,2-Dichloroethylene	06-MAY-2024	06-MAY-2024	CK
Methyl tert-butyl Ether	06-MAY-2024	06-MAY-2024	CK
1,1-Dichloroethane	06-MAY-2024	06-MAY-2024	CK
Methyl Ethyl Ketone	06-MAY-2024	06-MAY-2024	CK
Cis- 1,2-Dichloroethylene	06-MAY-2024	06-MAY-2024	CK
Chloroform	06-MAY-2024	06-MAY-2024	CK
1,2-Dichloroethane	06-MAY-2024	06-MAY-2024	CK
1,1,1-Trichloroethane	06-MAY-2024	06-MAY-2024	CK
Carbon Tetrachloride	06-MAY-2024	06-MAY-2024	CK
Benzene	06-MAY-2024	06-MAY-2024	CK
1,2-Dichloropropane	06-MAY-2024	06-MAY-2024	CK
Trichloroethylene	06-MAY-2024	06-MAY-2024	CK
Bromodichloromethane	06-MAY-2024	06-MAY-2024	CK
Methyl Isobutyl Ketone	06-MAY-2024	06-MAY-2024	CK
1,1,2-Trichloroethane	06-MAY-2024	06-MAY-2024	CK
Toluene	06-MAY-2024	06-MAY-2024	CK
Dibromochloromethane	06-MAY-2024	06-MAY-2024	CK
Ethylene Dibromide	06-MAY-2024	06-MAY-2024	CK
Tetrachloroethylene	07-MAY-2024	07-MAY-2024	CK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836696	**MW10-S5**	**Soil**	**30-APR-2024**	**02-MAY-2024**

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
1,1,1,2-Tetrachloroethane	06-MAY-2024	06-MAY-2024	CK
Chlorobenzene	06-MAY-2024	06-MAY-2024	CK
Ethylbenzene	06-MAY-2024	06-MAY-2024	CK
m & p-Xylene	06-MAY-2024	06-MAY-2024	CK
Bromoform	06-MAY-2024	06-MAY-2024	CK
Styrene	06-MAY-2024	06-MAY-2024	CK
1,1,2,2-Tetrachloroethane	06-MAY-2024	06-MAY-2024	CK
o-Xylene	06-MAY-2024	06-MAY-2024	CK
1,3-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
1,4-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
1,2-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
Xylenes (Total)	06-MAY-2024	06-MAY-2024	SYS
1,3-Dichloropropene (Cis + Trans)	06-MAY-2024	06-MAY-2024	SYS
n-Hexane	06-MAY-2024	06-MAY-2024	CK
Toluene-d8	06-MAY-2024	06-MAY-2024	CK
4-Bromofluorobenzene	06-MAY-2024	06-MAY-2024	CK
Moisture Content	15-FEB-2024	15-FEB-2024	GU

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836697	**MW11-S2**	**Soil**	**30-APR-2024**	**02-MAY-2024**

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	08-MAY-2024	08-MAY-2024	NP
Acenaphthylene	08-MAY-2024	08-MAY-2024	NP
Acenaphthene	08-MAY-2024	08-MAY-2024	NP
Fluorene	08-MAY-2024	08-MAY-2024	NP
Phenanthrene	08-MAY-2024	08-MAY-2024	NP
Anthracene	08-MAY-2024	08-MAY-2024	NP
Fluoranthene	08-MAY-2024	08-MAY-2024	NP
Pyrene	08-MAY-2024	08-MAY-2024	NP
Benzo(a)anthracene	08-MAY-2024	08-MAY-2024	NP
Chrysene	08-MAY-2024	08-MAY-2024	NP
Benzo(b)fluoranthene	08-MAY-2024	08-MAY-2024	NP
Benzo(k)fluoranthene	08-MAY-2024	08-MAY-2024	NP
Benzo(a)pyrene	08-MAY-2024	08-MAY-2024	NP
Indeno(1,2,3-cd)pyrene	08-MAY-2024	08-MAY-2024	NP
Dibenz(a,h)anthracene	08-MAY-2024	08-MAY-2024	NP
Benzo(g,h,i)perylene	08-MAY-2024	08-MAY-2024	NP
2-and 1-methyl Naphthalene	08-MAY-2024	08-MAY-2024	SYS

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836697	**MW11-S2**	**Soil**	**30-APR-2024**	**02-MAY-2024**

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene-d8	08-MAY-2024	08-MAY-2024	NP
Acridine-d9	08-MAY-2024	08-MAY-2024	NP
Terphenyl-d14	08-MAY-2024	08-MAY-2024	NP
Moisture Content	07-MAY-2024	07-MAY-2024	GU

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	07-MAY-2024	07-MAY-2024	CK
F1 (C6 to C10) minus BTEX	07-MAY-2024	07-MAY-2024	SYS
Toluene-d8	06-MAY-2024	06-MAY-2024	CK
F2 (C10 to C16)	06-MAY-2024	06-MAY-2024	CA
F2 (C10 to C16) minus Naphthalene	08-MAY-2024	08-MAY-2024	SYS
F3 (C16 to C34)	06-MAY-2024	06-MAY-2024	CA
F3 (C16 to C34) minus PAHs	08-MAY-2024	08-MAY-2024	SYS
F4 (C34 to C50)	06-MAY-2024	06-MAY-2024	CA
Gravimetric Heavy Hydrocarbons			
Moisture Content	15-FEB-2024	15-FEB-2024	GU
Terphenyl	06-MAY-2024	06-MAY-2024	CA

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	06-MAY-2024	06-MAY-2024	CK
Vinyl Chloride	06-MAY-2024	06-MAY-2024	CK
Bromomethane	06-MAY-2024	06-MAY-2024	CK
Trichlorofluoromethane	06-MAY-2024	06-MAY-2024	CK
Acetone	06-MAY-2024	06-MAY-2024	CK
1,1-Dichloroethylene	07-MAY-2024	07-MAY-2024	CK
Methylene Chloride	06-MAY-2024	06-MAY-2024	CK
Trans- 1,2-Dichloroethylene	06-MAY-2024	06-MAY-2024	CK
Methyl tert-butyl Ether	06-MAY-2024	06-MAY-2024	CK
1,1-Dichloroethane	06-MAY-2024	06-MAY-2024	CK
Methyl Ethyl Ketone	06-MAY-2024	06-MAY-2024	CK
Cis- 1,2-Dichloroethylene	06-MAY-2024	06-MAY-2024	CK
Chloroform	06-MAY-2024	06-MAY-2024	CK
1,2-Dichloroethane	06-MAY-2024	06-MAY-2024	CK
1,1,1-Trichloroethane	06-MAY-2024	06-MAY-2024	CK
Carbon Tetrachloride	06-MAY-2024	06-MAY-2024	CK
Benzene	06-MAY-2024	06-MAY-2024	CK
1,2-Dichloropropane	06-MAY-2024	06-MAY-2024	CK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836697	**MW11-S2**	**Soil**	**30-APR-2024**	**02-MAY-2024**

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Trichloroethylene	06-MAY-2024	06-MAY-2024	CK
Bromodichloromethane	06-MAY-2024	06-MAY-2024	CK
Methyl Isobutyl Ketone	07-MAY-2024	07-MAY-2024	CK
1,1,2-Trichloroethane	07-MAY-2024	07-MAY-2024	CK
Toluene	07-MAY-2024	07-MAY-2024	CK
Dibromochloromethane	06-MAY-2024	06-MAY-2024	CK
Ethylene Dibromide	06-MAY-2024	06-MAY-2024	CK
Tetrachloroethylene	07-MAY-2024	07-MAY-2024	CK
1,1,1,2-Tetrachloroethane	06-MAY-2024	06-MAY-2024	CK
Chlorobenzene	06-MAY-2024	06-MAY-2024	CK
Ethylbenzene	06-MAY-2024	06-MAY-2024	CK
m & p-Xylene	07-MAY-2024	07-MAY-2024	CK
Bromoform	06-MAY-2024	06-MAY-2024	CK
Styrene	06-MAY-2024	06-MAY-2024	CK
1,1,2,2-Tetrachloroethane	06-MAY-2024	06-MAY-2024	CK
o-Xylene	07-MAY-2024	07-MAY-2024	CK
1,3-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
1,4-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
1,2-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
Xylenes (Total)	07-MAY-2024	07-MAY-2024	SYS
1,3-Dichloropropene (Cis + Trans)	06-MAY-2024	06-MAY-2024	SYS
n-Hexane	06-MAY-2024	06-MAY-2024	CK
Toluene-d8	06-MAY-2024	06-MAY-2024	CK
4-Bromofluorobenzene	06-MAY-2024	06-MAY-2024	CK
Moisture Content	15-FEB-2024	15-FEB-2024	GU

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836700	**MW11-S6**	**Soil**	**30-APR-2024**	**02-MAY-2024**

O. Reg. 153(511) - Metals (Including Hydrides) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Antimony	07-MAY-2024	07-MAY-2024	JA
Arsenic	07-MAY-2024	07-MAY-2024	JA
Barium	07-MAY-2024	07-MAY-2024	JA
Beryllium	07-MAY-2024	07-MAY-2024	JA
Boron	07-MAY-2024	07-MAY-2024	JA
Cadmium	07-MAY-2024	07-MAY-2024	JA
Chromium	07-MAY-2024	07-MAY-2024	JA
Cobalt	07-MAY-2024	07-MAY-2024	JA
Copper	07-MAY-2024	07-MAY-2024	JA

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836700	**MW11-S6**	**Soil**	**30-APR-2024**	**02-MAY-2024**

O. Reg. 153(511) - Metals (Including Hydrides) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Lead	07-MAY-2024	07-MAY-2024	JA
Molybdenum	07-MAY-2024	07-MAY-2024	JA
Nickel	07-MAY-2024	07-MAY-2024	JA
Selenium	07-MAY-2024	07-MAY-2024	JA
Silver	07-MAY-2024	07-MAY-2024	JA
Thallium	07-MAY-2024	07-MAY-2024	JA
Uranium	07-MAY-2024	07-MAY-2024	JA
Vanadium	07-MAY-2024	07-MAY-2024	JA
Zinc	07-MAY-2024	07-MAY-2024	JA

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	08-MAY-2024	08-MAY-2024	NP
Acenaphthylene	08-MAY-2024	08-MAY-2024	NP
Acenaphthene	08-MAY-2024	08-MAY-2024	NP
Fluorene	08-MAY-2024	08-MAY-2024	NP
Phenanthrene	08-MAY-2024	08-MAY-2024	NP
Anthracene	08-MAY-2024	08-MAY-2024	NP
Fluoranthene	08-MAY-2024	08-MAY-2024	NP
Pyrene	08-MAY-2024	08-MAY-2024	NP
Benzo(a)anthracene	08-MAY-2024	08-MAY-2024	NP
Chrysene	08-MAY-2024	08-MAY-2024	NP
Benzo(b)fluoranthene	08-MAY-2024	08-MAY-2024	NP
Benzo(k)fluoranthene	08-MAY-2024	08-MAY-2024	NP
Benzo(a)pyrene	08-MAY-2024	08-MAY-2024	NP
Indeno(1,2,3-cd)pyrene	08-MAY-2024	08-MAY-2024	NP
Dibenz(a,h)anthracene	08-MAY-2024	08-MAY-2024	NP
Benzo(g,h,i)perylene	08-MAY-2024	08-MAY-2024	NP
2-and 1-methyl Naphthalene	08-MAY-2024	08-MAY-2024	SYS
Naphthalene-d8	08-MAY-2024	08-MAY-2024	NP
Acridine-d9	08-MAY-2024	08-MAY-2024	NP
Terphenyl-d14	08-MAY-2024	08-MAY-2024	NP
Moisture Content	07-MAY-2024	07-MAY-2024	GU

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	06-MAY-2024	06-MAY-2024	CK
F1 (C6 to C10) minus BTEX	06-MAY-2024	06-MAY-2024	SYS
Toluene-d8	06-MAY-2024	06-MAY-2024	CK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836700	**MW11-S6**	**Soil**	**30-APR-2024**	**02-MAY-2024**

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F2 (C10 to C16)	06-MAY-2024	06-MAY-2024	CA
F2 (C10 to C16) minus Naphthalene	08-MAY-2024	08-MAY-2024	SYS
F3 (C16 to C34)	06-MAY-2024	06-MAY-2024	CA
F3 (C16 to C34) minus PAHs	08-MAY-2024	08-MAY-2024	SYS
F4 (C34 to C50)	06-MAY-2024	06-MAY-2024	CA
Gravimetric Heavy Hydrocarbons			
Moisture Content	15-FEB-2024	15-FEB-2024	GU
Terphenyl	06-MAY-2024	06-MAY-2024	CA

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	06-MAY-2024	06-MAY-2024	CK
Vinyl Chloride	06-MAY-2024	06-MAY-2024	CK
Bromomethane	06-MAY-2024	06-MAY-2024	CK
Trichlorofluoromethane	06-MAY-2024	06-MAY-2024	CK
Acetone	06-MAY-2024	06-MAY-2024	CK
1,1-Dichloroethylene	07-MAY-2024	07-MAY-2024	CK
Methylene Chloride	06-MAY-2024	06-MAY-2024	CK
Trans- 1,2-Dichloroethylene	06-MAY-2024	06-MAY-2024	CK
Methyl tert-butyl Ether	06-MAY-2024	06-MAY-2024	CK
1,1-Dichloroethane	06-MAY-2024	06-MAY-2024	CK
Methyl Ethyl Ketone	06-MAY-2024	06-MAY-2024	CK
Cis- 1,2-Dichloroethylene	06-MAY-2024	06-MAY-2024	CK
Chloroform	06-MAY-2024	06-MAY-2024	CK
1,2-Dichloroethane	06-MAY-2024	06-MAY-2024	CK
1,1,1-Trichloroethane	06-MAY-2024	06-MAY-2024	CK
Carbon Tetrachloride	06-MAY-2024	06-MAY-2024	CK
Benzene	06-MAY-2024	06-MAY-2024	CK
1,2-Dichloropropane	06-MAY-2024	06-MAY-2024	CK
Trichloroethylene	06-MAY-2024	06-MAY-2024	CK
Bromodichloromethane	06-MAY-2024	06-MAY-2024	CK
Methyl Isobutyl Ketone	07-MAY-2024	07-MAY-2024	CK
1,1,2-Trichloroethane	07-MAY-2024	07-MAY-2024	CK
Toluene	06-MAY-2024	06-MAY-2024	CK
Dibromochloromethane	06-MAY-2024	06-MAY-2024	CK
Ethylene Dibromide	06-MAY-2024	06-MAY-2024	CK
Tetrachloroethylene	07-MAY-2024	07-MAY-2024	CK
1,1,1,2-Tetrachloroethane	06-MAY-2024	06-MAY-2024	CK
Chlorobenzene	06-MAY-2024	06-MAY-2024	CK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836700	**MW11-S6**	**Soil**	**30-APR-2024**	**02-MAY-2024**

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Ethylbenzene	06-MAY-2024	06-MAY-2024	CK
m & p-Xylene	06-MAY-2024	06-MAY-2024	CK
Bromoform	06-MAY-2024	06-MAY-2024	CK
Styrene	06-MAY-2024	06-MAY-2024	CK
1,1,2,2-Tetrachloroethane	06-MAY-2024	06-MAY-2024	CK
o-Xylene	06-MAY-2024	06-MAY-2024	CK
1,3-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
1,4-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
1,2-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
Xylenes (Total)	06-MAY-2024	06-MAY-2024	SYS
1,3-Dichloropropene (Cis + Trans)	06-MAY-2024	06-MAY-2024	SYS
n-Hexane	06-MAY-2024	06-MAY-2024	CK
Toluene-d8	06-MAY-2024	06-MAY-2024	CK
4-Bromofluorobenzene	06-MAY-2024	06-MAY-2024	CK
Moisture Content	15-FEB-2024	15-FEB-2024	GU

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836703	**MW22-S3**	**Soil**	**30-APR-2024**	**02-MAY-2024**

Glycols Analysis in Soil

Parameter	Date Prepared	Date Analyzed	Initials
Propylene Glycol	08-MAY-2024	09-MAY-2024	BD
Monoethylene Glycol	08-MAY-2024	09-MAY-2024	BD
Diethylene Glycol	08-MAY-2024	09-MAY-2024	BD
Triethylene Glycol	08-MAY-2024	09-MAY-2024	BD
Tetraethylene Glycol	08-MAY-2024	09-MAY-2024	BD
Heptanol	08-MAY-2024	09-MAY-2024	BD

O. Reg. 153(511) - All Metals (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Antimony	07-MAY-2024	07-MAY-2024	JA
Arsenic	07-MAY-2024	07-MAY-2024	JA
Barium	07-MAY-2024	07-MAY-2024	JA
Beryllium	07-MAY-2024	07-MAY-2024	JA
Boron	07-MAY-2024	07-MAY-2024	JA
Boron (Hot Water Soluble)	06-MAY-2024	06-MAY-2024	ZK
Cadmium	07-MAY-2024	07-MAY-2024	JA
Chromium	07-MAY-2024	07-MAY-2024	JA
Cobalt	07-MAY-2024	07-MAY-2024	JA
Copper	07-MAY-2024	07-MAY-2024	JA

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836703	**MW22-S3**	**Soil**	**30-APR-2024**	**02-MAY-2024**

O. Reg. 153(511) - All Metals (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Lead	07-MAY-2024	07-MAY-2024	JA
Molybdenum	07-MAY-2024	07-MAY-2024	JA
Nickel	07-MAY-2024	07-MAY-2024	JA
Selenium	07-MAY-2024	07-MAY-2024	JA
Silver	07-MAY-2024	07-MAY-2024	JA
Thallium	07-MAY-2024	07-MAY-2024	JA
Uranium	07-MAY-2024	07-MAY-2024	JA
Vanadium	07-MAY-2024	07-MAY-2024	JA
Zinc	07-MAY-2024	07-MAY-2024	JA
Chromium, Hexavalent	07-MAY-2024	07-MAY-2024	RC
Mercury	07-MAY-2024	07-MAY-2024	JA

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	08-MAY-2024	08-MAY-2024	NP
Acenaphthylene	08-MAY-2024	08-MAY-2024	NP
Acenaphthene	08-MAY-2024	08-MAY-2024	NP
Fluorene	08-MAY-2024	08-MAY-2024	NP
Phenanthrene	08-MAY-2024	08-MAY-2024	NP
Anthracene	08-MAY-2024	08-MAY-2024	NP
Fluoranthene	08-MAY-2024	08-MAY-2024	NP
Pyrene	08-MAY-2024	08-MAY-2024	NP
Benzo(a)anthracene	08-MAY-2024	08-MAY-2024	NP
Chrysene	08-MAY-2024	08-MAY-2024	NP
Benzo(b)fluoranthene	08-MAY-2024	08-MAY-2024	NP
Benzo(k)fluoranthene	08-MAY-2024	08-MAY-2024	NP
Benzo(a)pyrene	08-MAY-2024	08-MAY-2024	NP
Indeno(1,2,3-cd)pyrene	08-MAY-2024	08-MAY-2024	NP
Dibenz(a,h)anthracene	08-MAY-2024	08-MAY-2024	NP
Benzo(g,h,i)perylene	08-MAY-2024	08-MAY-2024	NP
2-and 1-methyl Naphthalene	08-MAY-2024	08-MAY-2024	SYS
Naphthalene-d8	08-MAY-2024	08-MAY-2024	NP
Acridine-d9	08-MAY-2024	08-MAY-2024	NP
Terphenyl-d14	08-MAY-2024	08-MAY-2024	NP
Moisture Content	07-MAY-2024	07-MAY-2024	GU

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	06-MAY-2024	06-MAY-2024	CK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836703	**MW22-S3**	**Soil**	**30-APR-2024**	**02-MAY-2024**

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10) minus BTEX	06-MAY-2024	06-MAY-2024	SYS
Toluene-d8	06-MAY-2024	06-MAY-2024	CK
F2 (C10 to C16)	06-MAY-2024	06-MAY-2024	CA
F2 (C10 to C16) minus Naphthalene	08-MAY-2024	08-MAY-2024	SYS
F3 (C16 to C34)	06-MAY-2024	06-MAY-2024	CA
F3 (C16 to C34) minus PAHs	08-MAY-2024	08-MAY-2024	SYS
F4 (C34 to C50)	06-MAY-2024	06-MAY-2024	CA
Gravimetric Heavy Hydrocarbons			
Moisture Content	15-FEB-2024	15-FEB-2024	GU
Terphenyl	06-MAY-2024	06-MAY-2024	CA

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	06-MAY-2024	06-MAY-2024	CK
Vinyl Chloride	06-MAY-2024	06-MAY-2024	CK
Bromomethane	06-MAY-2024	06-MAY-2024	CK
Trichlorofluoromethane	06-MAY-2024	06-MAY-2024	CK
Acetone	06-MAY-2024	06-MAY-2024	CK
1,1-Dichloroethylene	07-MAY-2024	07-MAY-2024	CK
Methylene Chloride	06-MAY-2024	06-MAY-2024	CK
Trans- 1,2-Dichloroethylene	06-MAY-2024	06-MAY-2024	CK
Methyl tert-butyl Ether	06-MAY-2024	06-MAY-2024	CK
1,1-Dichloroethane	06-MAY-2024	06-MAY-2024	CK
Methyl Ethyl Ketone	06-MAY-2024	06-MAY-2024	CK
Cis- 1,2-Dichloroethylene	06-MAY-2024	06-MAY-2024	CK
Chloroform	06-MAY-2024	06-MAY-2024	CK
1,2-Dichloroethane	06-MAY-2024	06-MAY-2024	CK
1,1,1-Trichloroethane	06-MAY-2024	06-MAY-2024	CK
Carbon Tetrachloride	06-MAY-2024	06-MAY-2024	CK
Benzene	06-MAY-2024	06-MAY-2024	CK
1,2-Dichloropropane	06-MAY-2024	06-MAY-2024	CK
Trichloroethylene	06-MAY-2024	06-MAY-2024	CK
Bromodichloromethane	06-MAY-2024	06-MAY-2024	CK
Methyl Isobutyl Ketone	06-MAY-2024	06-MAY-2024	CK
1,1,2-Trichloroethane	06-MAY-2024	06-MAY-2024	CK
Toluene	06-MAY-2024	06-MAY-2024	CK
Dibromochloromethane	06-MAY-2024	06-MAY-2024	CK
Ethylene Dibromide	06-MAY-2024	06-MAY-2024	CK
Tetrachloroethylene	07-MAY-2024	07-MAY-2024	CK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836703	**MW22-S3**	**Soil**	**30-APR-2024**	**02-MAY-2024**

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
1,1,1,2-Tetrachloroethane	06-MAY-2024	06-MAY-2024	CK
Chlorobenzene	06-MAY-2024	06-MAY-2024	CK
Ethylbenzene	06-MAY-2024	06-MAY-2024	CK
m & p-Xylene	06-MAY-2024	06-MAY-2024	CK
Bromoform	06-MAY-2024	06-MAY-2024	CK
Styrene	06-MAY-2024	06-MAY-2024	CK
1,1,2,2-Tetrachloroethane	06-MAY-2024	06-MAY-2024	CK
o-Xylene	06-MAY-2024	06-MAY-2024	CK
1,3-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
1,4-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
1,2-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
Xylenes (Total)	06-MAY-2024	06-MAY-2024	SYS
1,3-Dichloropropene (Cis + Trans)	06-MAY-2024	06-MAY-2024	SYS
n-Hexane	06-MAY-2024	06-MAY-2024	CK
Toluene-d8	06-MAY-2024	06-MAY-2024	CK
4-Bromofluorobenzene	06-MAY-2024	06-MAY-2024	CK
Moisture Content	15-FEB-2024	15-FEB-2024	GU

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836706	**DUP4**	**Soil**	**30-APR-2024**	**02-MAY-2024**

O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	06-MAY-2024	06-MAY-2024	CK
F1 (C6 to C10) minus BTEX	06-MAY-2024	06-MAY-2024	SYS
Toluene-d8	06-MAY-2024	06-MAY-2024	CK
F2 (C10 to C16)	06-MAY-2024	06-MAY-2024	CA
F3 (C16 to C34)	06-MAY-2024	06-MAY-2024	CA
F4 (C34 to C50)	06-MAY-2024	06-MAY-2024	CA
Gravimetric Heavy Hydrocarbons			
Moisture Content	15-FEB-2024	15-FEB-2024	GU
Terphenyl	06-MAY-2024	06-MAY-2024	CA

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	06-MAY-2024	06-MAY-2024	CK
Vinyl Chloride	06-MAY-2024	06-MAY-2024	CK
Bromomethane	06-MAY-2024	06-MAY-2024	CK
Trichlorofluoromethane	06-MAY-2024	06-MAY-2024	CK
Acetone	06-MAY-2024	06-MAY-2024	CK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836706	**DUP4**	**Soil**	**30-APR-2024**	**02-MAY-2024**

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
1,1-Dichloroethylene	07-MAY-2024	07-MAY-2024	CK
Methylene Chloride	06-MAY-2024	06-MAY-2024	CK
Trans- 1,2-Dichloroethylene	06-MAY-2024	06-MAY-2024	CK
Methyl tert-butyl Ether	06-MAY-2024	06-MAY-2024	CK
1,1-Dichloroethane	06-MAY-2024	06-MAY-2024	CK
Methyl Ethyl Ketone	06-MAY-2024	06-MAY-2024	CK
Cis- 1,2-Dichloroethylene	06-MAY-2024	06-MAY-2024	CK
Chloroform	06-MAY-2024	06-MAY-2024	CK
1,2-Dichloroethane	06-MAY-2024	06-MAY-2024	CK
1,1,1-Trichloroethane	06-MAY-2024	06-MAY-2024	CK
Carbon Tetrachloride	06-MAY-2024	06-MAY-2024	CK
Benzene	06-MAY-2024	06-MAY-2024	CK
1,2-Dichloropropane	06-MAY-2024	06-MAY-2024	CK
Trichloroethylene	06-MAY-2024	06-MAY-2024	CK
Bromodichloromethane	06-MAY-2024	06-MAY-2024	CK
Methyl Isobutyl Ketone	06-MAY-2024	06-MAY-2024	CK
1,1,2-Trichloroethane	06-MAY-2024	06-MAY-2024	CK
Toluene	06-MAY-2024	06-MAY-2024	CK
Dibromochloromethane	06-MAY-2024	06-MAY-2024	CK
Ethylene Dibromide	06-MAY-2024	06-MAY-2024	CK
Tetrachloroethylene	07-MAY-2024	07-MAY-2024	CK
1,1,1,2-Tetrachloroethane	06-MAY-2024	06-MAY-2024	CK
Chlorobenzene	06-MAY-2024	06-MAY-2024	CK
Ethylbenzene	06-MAY-2024	06-MAY-2024	CK
m & p-Xylene	06-MAY-2024	06-MAY-2024	CK
Bromoform	06-MAY-2024	06-MAY-2024	CK
Styrene	06-MAY-2024	06-MAY-2024	CK
1,1,2,2-Tetrachloroethane	06-MAY-2024	06-MAY-2024	CK
o-Xylene	06-MAY-2024	06-MAY-2024	CK
1,3-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
1,4-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
1,2-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
Xylenes (Total)	06-MAY-2024	06-MAY-2024	SYS
1,3-Dichloropropene (Cis + Trans)	06-MAY-2024	06-MAY-2024	SYS
n-Hexane	06-MAY-2024	06-MAY-2024	CK
Toluene-d8	06-MAY-2024	06-MAY-2024	CK
4-Bromofluorobenzene	06-MAY-2024	06-MAY-2024	CK
Moisture Content	15-FEB-2024	15-FEB-2024	GU

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836721	**MW12-S3**	**Soil**	**01-MAY-2024**	**02-MAY-2024**

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	08-MAY-2024	08-MAY-2024	NP
Acenaphthylene	08-MAY-2024	08-MAY-2024	NP
Acenaphthene	08-MAY-2024	08-MAY-2024	NP
Fluorene	08-MAY-2024	08-MAY-2024	NP
Phenanthrene	08-MAY-2024	08-MAY-2024	NP
Anthracene	08-MAY-2024	08-MAY-2024	NP
Fluoranthene	08-MAY-2024	08-MAY-2024	NP
Pyrene	08-MAY-2024	08-MAY-2024	NP
Benzo(a)anthracene	08-MAY-2024	08-MAY-2024	NP
Chrysene	08-MAY-2024	08-MAY-2024	NP
Benzo(b)fluoranthene	08-MAY-2024	08-MAY-2024	NP
Benzo(k)fluoranthene	08-MAY-2024	08-MAY-2024	NP
Benzo(a)pyrene	08-MAY-2024	08-MAY-2024	NP
Indeno(1,2,3-cd)pyrene	08-MAY-2024	08-MAY-2024	NP
Dibenz(a,h)anthracene	08-MAY-2024	08-MAY-2024	NP
Benzo(g,h,i)perylene	08-MAY-2024	08-MAY-2024	NP
2-and 1-methyl Naphthalene	08-MAY-2024	08-MAY-2024	SYS
Naphthalene-d8	08-MAY-2024	08-MAY-2024	NP
Acridine-d9	08-MAY-2024	08-MAY-2024	NP
Terphenyl-d14	08-MAY-2024	08-MAY-2024	NP
Moisture Content	07-MAY-2024	07-MAY-2024	GU

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Benzene	06-MAY-2024	06-MAY-2024	VB
Toluene	06-MAY-2024	06-MAY-2024	VB
Ethylbenzene	06-MAY-2024	06-MAY-2024	VB
m & p-Xylene	06-MAY-2024	06-MAY-2024	VB
o-Xylene	06-MAY-2024	06-MAY-2024	VB
Xylenes (Total)	06-MAY-2024	06-MAY-2024	SYS
F1 (C6 to C10)	06-MAY-2024	06-MAY-2024	VB
F1 (C6 to C10) minus BTEX	06-MAY-2024	06-MAY-2024	SYS
Toluene-d8	06-MAY-2024	06-MAY-2024	VB
F2 (C10 to C16)	06-MAY-2024	06-MAY-2024	CA
F2 (C10 to C16) minus Naphthalene	08-MAY-2024	08-MAY-2024	SYS
F3 (C16 to C34)	06-MAY-2024	06-MAY-2024	CA
F3 (C16 to C34) minus PAHs	08-MAY-2024	08-MAY-2024	SYS
F4 (C34 to C50)	06-MAY-2024	06-MAY-2024	CA
Gravimetric Heavy Hydrocarbons	06-MAY-2024	06-MAY-2024	

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836721	**MW12-S3**	**Soil**	**01-MAY-2024**	**02-MAY-2024**

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Moisture Content	06-MAY-2024	06-MAY-2024	GU
Terphenyl	06-MAY-2024	06-MAY-2024	CA

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836730	**MW13-S2**	**Soil**	**01-MAY-2024**	**02-MAY-2024**

O. Reg. 153(511) - All Metals (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Antimony	07-MAY-2024	07-MAY-2024	JA
Arsenic	07-MAY-2024	07-MAY-2024	JA
Barium	07-MAY-2024	07-MAY-2024	JA
Beryllium	07-MAY-2024	07-MAY-2024	JA
Boron	07-MAY-2024	07-MAY-2024	JA
Boron (Hot Water Soluble)	06-MAY-2024	06-MAY-2024	ZK
Cadmium	07-MAY-2024	07-MAY-2024	JA
Chromium	07-MAY-2024	07-MAY-2024	JA
Cobalt	07-MAY-2024	07-MAY-2024	JA
Copper	07-MAY-2024	07-MAY-2024	JA
Lead	07-MAY-2024	07-MAY-2024	JA
Molybdenum	07-MAY-2024	07-MAY-2024	JA
Nickel	07-MAY-2024	07-MAY-2024	JA
Selenium	07-MAY-2024	07-MAY-2024	JA
Silver	07-MAY-2024	07-MAY-2024	JA
Thallium	07-MAY-2024	07-MAY-2024	JA
Uranium	07-MAY-2024	07-MAY-2024	JA
Vanadium	07-MAY-2024	07-MAY-2024	JA
Zinc	07-MAY-2024	07-MAY-2024	JA
Chromium, Hexavalent	07-MAY-2024	07-MAY-2024	RC
Mercury	07-MAY-2024	07-MAY-2024	JA

O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	06-MAY-2024	06-MAY-2024	CK
F1 (C6 to C10) minus BTEX	06-MAY-2024	06-MAY-2024	SYS
Toluene-d8	06-MAY-2024	06-MAY-2024	CK
F2 (C10 to C16)	06-MAY-2024	06-MAY-2024	CA
F3 (C16 to C34)	06-MAY-2024	06-MAY-2024	CA
F4 (C34 to C50)	06-MAY-2024	06-MAY-2024	CA
Gravimetric Heavy Hydrocarbons			
Moisture Content	15-FEB-2024	15-FEB-2024	GU

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836730	**MW13-S2**	**Soil**	**01-MAY-2024**	**02-MAY-2024**

O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Terphenyl	06-MAY-2024	06-MAY-2024	CA

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	06-MAY-2024	06-MAY-2024	CK
Vinyl Chloride	06-MAY-2024	06-MAY-2024	CK
Bromomethane	06-MAY-2024	06-MAY-2024	CK
Trichlorofluoromethane	06-MAY-2024	06-MAY-2024	CK
Acetone	06-MAY-2024	06-MAY-2024	CK
1,1-Dichloroethylene	07-MAY-2024	07-MAY-2024	CK
Methylene Chloride	06-MAY-2024	06-MAY-2024	CK
Trans- 1,2-Dichloroethylene	06-MAY-2024	06-MAY-2024	CK
Methyl tert-butyl Ether	06-MAY-2024	06-MAY-2024	CK
1,1-Dichloroethane	06-MAY-2024	06-MAY-2024	CK
Methyl Ethyl Ketone	06-MAY-2024	06-MAY-2024	CK
Cis- 1,2-Dichloroethylene	06-MAY-2024	06-MAY-2024	CK
Chloroform	06-MAY-2024	06-MAY-2024	CK
1,2-Dichloroethane	06-MAY-2024	06-MAY-2024	CK
1,1,1-Trichloroethane	06-MAY-2024	06-MAY-2024	CK
Carbon Tetrachloride	06-MAY-2024	06-MAY-2024	CK
Benzene	06-MAY-2024	06-MAY-2024	CK
1,2-Dichloropropane	06-MAY-2024	06-MAY-2024	CK
Trichloroethylene	06-MAY-2024	06-MAY-2024	CK
Bromodichloromethane	06-MAY-2024	06-MAY-2024	CK
Methyl Isobutyl Ketone	06-MAY-2024	06-MAY-2024	CK
1,1,2-Trichloroethane	06-MAY-2024	06-MAY-2024	CK
Toluene	06-MAY-2024	06-MAY-2024	CK
Dibromochloromethane	06-MAY-2024	06-MAY-2024	CK
Ethylene Dibromide	06-MAY-2024	06-MAY-2024	CK
Tetrachloroethylene	07-MAY-2024	07-MAY-2024	CK
1,1,1,2-Tetrachloroethane	06-MAY-2024	06-MAY-2024	CK
Chlorobenzene	06-MAY-2024	06-MAY-2024	CK
Ethylbenzene	06-MAY-2024	06-MAY-2024	CK
m & p-Xylene	06-MAY-2024	06-MAY-2024	CK
Bromoform	06-MAY-2024	06-MAY-2024	CK
Styrene	06-MAY-2024	06-MAY-2024	CK
1,1,2,2-Tetrachloroethane	06-MAY-2024	06-MAY-2024	CK
o-Xylene	06-MAY-2024	06-MAY-2024	CK
1,3-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836730	**MW13-S2**	**Soil**	**01-MAY-2024**	**02-MAY-2024**

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
1,4-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
1,2-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
Xylenes (Total)	06-MAY-2024	06-MAY-2024	SYS
1,3-Dichloropropene (Cis + Trans)	06-MAY-2024	06-MAY-2024	SYS
n-Hexane	06-MAY-2024	06-MAY-2024	CK
Toluene-d8	06-MAY-2024	06-MAY-2024	CK
4-Bromofluorobenzene	06-MAY-2024	06-MAY-2024	CK
Moisture Content	15-FEB-2024	15-FEB-2024	GU

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836732	**MW13-S5**	**Soil**	**01-MAY-2024**	**02-MAY-2024**

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	08-MAY-2024	08-MAY-2024	NP
Acenaphthylene	08-MAY-2024	08-MAY-2024	NP
Acenaphthene	08-MAY-2024	08-MAY-2024	NP
Fluorene	08-MAY-2024	08-MAY-2024	NP
Phenanthrene	08-MAY-2024	08-MAY-2024	NP
Anthracene	08-MAY-2024	08-MAY-2024	NP
Fluoranthene	08-MAY-2024	08-MAY-2024	NP
Pyrene	08-MAY-2024	08-MAY-2024	NP
Benzo(a)anthracene	08-MAY-2024	08-MAY-2024	NP
Chrysene	08-MAY-2024	08-MAY-2024	NP
Benzo(b)fluoranthene	08-MAY-2024	08-MAY-2024	NP
Benzo(k)fluoranthene	08-MAY-2024	08-MAY-2024	NP
Benzo(a)pyrene	08-MAY-2024	08-MAY-2024	NP
Indeno(1,2,3-cd)pyrene	08-MAY-2024	08-MAY-2024	NP
Dibenz(a,h)anthracene	08-MAY-2024	08-MAY-2024	NP
Benzo(g,h,i)perylene	08-MAY-2024	08-MAY-2024	NP
2-and 1-methyl Naphthalene	08-MAY-2024	08-MAY-2024	SYS
Naphthalene-d8	08-MAY-2024	08-MAY-2024	NP
Acridine-d9	08-MAY-2024	08-MAY-2024	NP
Terphenyl-d14	08-MAY-2024	08-MAY-2024	NP
Moisture Content	07-MAY-2024	07-MAY-2024	GU

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Benzene	06-MAY-2024	06-MAY-2024	VB
Toluene	06-MAY-2024	06-MAY-2024	VB

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836732	**MW13-S5**	**Soil**	**01-MAY-2024**	**02-MAY-2024**

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Ethylbenzene	06-MAY-2024	06-MAY-2024	VB
m & p-Xylene	06-MAY-2024	06-MAY-2024	VB
o-Xylene	06-MAY-2024	06-MAY-2024	VB
Xylenes (Total)	06-MAY-2024	06-MAY-2024	SYS
F1 (C6 to C10)	06-MAY-2024	06-MAY-2024	VB
F1 (C6 to C10) minus BTEX	06-MAY-2024	06-MAY-2024	SYS
Toluene-d8	06-MAY-2024	06-MAY-2024	VB
F2 (C10 to C16)	06-MAY-2024	06-MAY-2024	CA
F2 (C10 to C16) minus Naphthalene	08-MAY-2024	08-MAY-2024	SYS
F3 (C16 to C34)	06-MAY-2024	06-MAY-2024	CA
F3 (C16 to C34) minus PAHs	08-MAY-2024	08-MAY-2024	SYS
F4 (C34 to C50)	06-MAY-2024	06-MAY-2024	CA
Gravimetric Heavy Hydrocarbons	06-MAY-2024	06-MAY-2024	
Moisture Content	06-MAY-2024	06-MAY-2024	GU
Terphenyl	06-MAY-2024	06-MAY-2024	CA

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836733	**MW14-S2**	**Soil**	**01-MAY-2024**	**02-MAY-2024**

O. Reg. 153(511) - All Metals (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Antimony	07-MAY-2024	07-MAY-2024	JA
Arsenic	07-MAY-2024	07-MAY-2024	JA
Barium	07-MAY-2024	07-MAY-2024	JA
Beryllium	07-MAY-2024	07-MAY-2024	JA
Boron	07-MAY-2024	07-MAY-2024	JA
Boron (Hot Water Soluble)	06-MAY-2024	06-MAY-2024	ZK
Cadmium	07-MAY-2024	07-MAY-2024	JA
Chromium	07-MAY-2024	07-MAY-2024	JA
Cobalt	07-MAY-2024	07-MAY-2024	JA
Copper	07-MAY-2024	07-MAY-2024	JA
Lead	07-MAY-2024	07-MAY-2024	JA
Molybdenum	07-MAY-2024	07-MAY-2024	JA
Nickel	07-MAY-2024	07-MAY-2024	JA
Selenium	07-MAY-2024	07-MAY-2024	JA
Silver	07-MAY-2024	07-MAY-2024	JA
Thallium	07-MAY-2024	07-MAY-2024	JA
Uranium	07-MAY-2024	07-MAY-2024	JA
Vanadium	07-MAY-2024	07-MAY-2024	JA
Zinc	07-MAY-2024	07-MAY-2024	JA

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836733	**MW14-S2**	**Soil**	**01-MAY-2024**	**02-MAY-2024**

O. Reg. 153(511) - All Metals (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Chromium, Hexavalent	07-MAY-2024	07-MAY-2024	RC
Mercury	07-MAY-2024	07-MAY-2024	JA

O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	06-MAY-2024	06-MAY-2024	CK
F1 (C6 to C10) minus BTEX	06-MAY-2024	06-MAY-2024	SYS
Toluene-d8	06-MAY-2024	06-MAY-2024	CK
F2 (C10 to C16)	06-MAY-2024	06-MAY-2024	CA
F3 (C16 to C34)	06-MAY-2024	06-MAY-2024	CA
F4 (C34 to C50)	06-MAY-2024	06-MAY-2024	CA
Gravimetric Heavy Hydrocarbons			
Moisture Content	15-FEB-2024	15-FEB-2024	GU
Terphenyl	06-MAY-2024	06-MAY-2024	CA

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	06-MAY-2024	06-MAY-2024	CK
Vinyl Chloride	06-MAY-2024	06-MAY-2024	CK
Bromomethane	06-MAY-2024	06-MAY-2024	CK
Trichlorofluoromethane	06-MAY-2024	06-MAY-2024	CK
Acetone	06-MAY-2024	06-MAY-2024	CK
1,1-Dichloroethylene			
Methylene Chloride	06-MAY-2024	06-MAY-2024	CK
Trans- 1,2-Dichloroethylene	06-MAY-2024	06-MAY-2024	CK
Methyl tert-butyl Ether	06-MAY-2024	06-MAY-2024	CK
1,1-Dichloroethane	06-MAY-2024	06-MAY-2024	CK
Methyl Ethyl Ketone	06-MAY-2024	06-MAY-2024	CK
Cis- 1,2-Dichloroethylene	06-MAY-2024	06-MAY-2024	CK
Chloroform	06-MAY-2024	06-MAY-2024	CK
1,2-Dichloroethane	06-MAY-2024	06-MAY-2024	CK
1,1,1-Trichloroethane	06-MAY-2024	06-MAY-2024	CK
Carbon Tetrachloride	06-MAY-2024	06-MAY-2024	CK
Benzene	06-MAY-2024	06-MAY-2024	CK
1,2-Dichloropropane	06-MAY-2024	06-MAY-2024	CK
Trichloroethylene	06-MAY-2024	06-MAY-2024	CK
Bromodichloromethane	06-MAY-2024	06-MAY-2024	CK
Methyl Isobutyl Ketone	06-MAY-2024	06-MAY-2024	CK
1,1,2-Trichloroethane	06-MAY-2024	06-MAY-2024	CK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836733	**MW14-S2**	**Soil**	**01-MAY-2024**	**02-MAY-2024**

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Toluene	06-MAY-2024	06-MAY-2024	CK
Dibromochloromethane	06-MAY-2024	06-MAY-2024	CK
Ethylene Dibromide	06-MAY-2024	06-MAY-2024	CK
Tetrachloroethylene			
1,1,1,2-Tetrachloroethane	06-MAY-2024	06-MAY-2024	CK
Chlorobenzene	06-MAY-2024	06-MAY-2024	CK
Ethylbenzene	06-MAY-2024	06-MAY-2024	CK
m & p-Xylene	06-MAY-2024	06-MAY-2024	CK
Bromoform	06-MAY-2024	06-MAY-2024	CK
Styrene	06-MAY-2024	06-MAY-2024	CK
1,1,2,2-Tetrachloroethane	06-MAY-2024	06-MAY-2024	CK
o-Xylene	06-MAY-2024	06-MAY-2024	CK
1,3-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
1,4-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
1,2-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
Xylenes (Total)	06-MAY-2024	06-MAY-2024	SYS
1,3-Dichloropropene (Cis + Trans)	06-MAY-2024	06-MAY-2024	SYS
n-Hexane	06-MAY-2024	06-MAY-2024	CK
Toluene-d8	06-MAY-2024	06-MAY-2024	CK
4-Bromofluorobenzene	06-MAY-2024	06-MAY-2024	CK
Moisture Content	15-FEB-2024	15-FEB-2024	GU

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836734	**MW14-S3**	**Soil**	**01-MAY-2024**	**02-MAY-2024**

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	08-MAY-2024	08-MAY-2024	NP
Acenaphthylene	08-MAY-2024	08-MAY-2024	NP
Acenaphthene	08-MAY-2024	08-MAY-2024	NP
Fluorene	08-MAY-2024	08-MAY-2024	NP
Phenanthrene	08-MAY-2024	08-MAY-2024	NP
Anthracene	08-MAY-2024	08-MAY-2024	NP
Fluoranthene	08-MAY-2024	08-MAY-2024	NP
Pyrene	08-MAY-2024	08-MAY-2024	NP
Benzo(a)anthracene	08-MAY-2024	08-MAY-2024	NP
Chrysene	08-MAY-2024	08-MAY-2024	NP
Benzo(b)fluoranthene	08-MAY-2024	08-MAY-2024	NP
Benzo(k)fluoranthene	08-MAY-2024	08-MAY-2024	NP
Benzo(a)pyrene	08-MAY-2024	08-MAY-2024	NP

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836734	**MW14-S3**	**Soil**	**01-MAY-2024**	**02-MAY-2024**

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Indeno(1,2,3-cd)pyrene	08-MAY-2024	08-MAY-2024	NP
Dibenz(a,h)anthracene	08-MAY-2024	08-MAY-2024	NP
Benzo(g,h,i)perylene	08-MAY-2024	08-MAY-2024	NP
2-and 1-methyl Naphthalene	08-MAY-2024	08-MAY-2024	SYS
Naphthalene-d8	08-MAY-2024	08-MAY-2024	NP
Acridine-d9	08-MAY-2024	08-MAY-2024	NP
Terphenyl-d14	08-MAY-2024	08-MAY-2024	NP
Moisture Content	07-MAY-2024	07-MAY-2024	GU

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Benzene	06-MAY-2024	06-MAY-2024	VB
Toluene	06-MAY-2024	06-MAY-2024	VB
Ethylbenzene	06-MAY-2024	06-MAY-2024	VB
m & p-Xylene	06-MAY-2024	06-MAY-2024	VB
o-Xylene	06-MAY-2024	06-MAY-2024	VB
Xylenes (Total)	06-MAY-2024	06-MAY-2024	SYS
F1 (C6 to C10)	06-MAY-2024	06-MAY-2024	VB
F1 (C6 to C10) minus BTEX	06-MAY-2024	06-MAY-2024	SYS
Toluene-d8	06-MAY-2024	06-MAY-2024	VB
F2 (C10 to C16)	06-MAY-2024	06-MAY-2024	CA
F2 (C10 to C16) minus Naphthalene	08-MAY-2024	08-MAY-2024	SYS
F3 (C16 to C34)	06-MAY-2024	06-MAY-2024	CA
F3 (C16 to C34) minus PAHs	08-MAY-2024	08-MAY-2024	SYS
F4 (C34 to C50)	06-MAY-2024	06-MAY-2024	CA
Gravimetric Heavy Hydrocarbons	06-MAY-2024	06-MAY-2024	
Moisture Content	06-MAY-2024	06-MAY-2024	GU
Terphenyl	06-MAY-2024	06-MAY-2024	CA

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836735	**BH15-S2**	**Soil**	**01-MAY-2024**	**02-MAY-2024**

O. Reg. 153(511) - All Metals (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Antimony	07-MAY-2024	07-MAY-2024	JA
Arsenic	07-MAY-2024	07-MAY-2024	JA
Barium	07-MAY-2024	07-MAY-2024	JA
Beryllium	07-MAY-2024	07-MAY-2024	JA
Boron	07-MAY-2024	07-MAY-2024	JA
Boron (Hot Water Soluble)	06-MAY-2024	06-MAY-2024	ZK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836735	**BH15-S2**	**Soil**	**01-MAY-2024**	**02-MAY-2024**

O. Reg. 153(511) - All Metals (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Cadmium	07-MAY-2024	07-MAY-2024	JA
Chromium	07-MAY-2024	07-MAY-2024	JA
Cobalt	07-MAY-2024	07-MAY-2024	JA
Copper	07-MAY-2024	07-MAY-2024	JA
Lead	07-MAY-2024	07-MAY-2024	JA
Molybdenum	07-MAY-2024	07-MAY-2024	JA
Nickel	07-MAY-2024	07-MAY-2024	JA
Selenium	07-MAY-2024	07-MAY-2024	JA
Silver	07-MAY-2024	07-MAY-2024	JA
Thallium	07-MAY-2024	07-MAY-2024	JA
Uranium	07-MAY-2024	07-MAY-2024	JA
Vanadium	07-MAY-2024	07-MAY-2024	JA
Zinc	07-MAY-2024	07-MAY-2024	JA
Chromium, Hexavalent	07-MAY-2024	07-MAY-2024	RC
Mercury	07-MAY-2024	07-MAY-2024	JA

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	08-MAY-2024	08-MAY-2024	NP
Acenaphthylene	08-MAY-2024	08-MAY-2024	NP
Acenaphthene	08-MAY-2024	08-MAY-2024	NP
Fluorene	08-MAY-2024	08-MAY-2024	NP
Phenanthrene	08-MAY-2024	08-MAY-2024	NP
Anthracene	08-MAY-2024	08-MAY-2024	NP
Fluoranthene	08-MAY-2024	08-MAY-2024	NP
Pyrene	08-MAY-2024	08-MAY-2024	NP
Benzo(a)anthracene	08-MAY-2024	08-MAY-2024	NP
Chrysene	08-MAY-2024	08-MAY-2024	NP
Benzo(b)fluoranthene	08-MAY-2024	08-MAY-2024	NP
Benzo(k)fluoranthene	08-MAY-2024	08-MAY-2024	NP
Benzo(a)pyrene	08-MAY-2024	08-MAY-2024	NP
Indeno(1,2,3-cd)pyrene	08-MAY-2024	08-MAY-2024	NP
Dibenz(a,h)anthracene	08-MAY-2024	08-MAY-2024	NP
Benzo(g,h,i)perylene	08-MAY-2024	08-MAY-2024	NP
2-and 1-methyl Naphthalene	08-MAY-2024	08-MAY-2024	SYS
Naphthalene-d8	08-MAY-2024	08-MAY-2024	NP
Acridine-d9	08-MAY-2024	08-MAY-2024	NP
Terphenyl-d14	08-MAY-2024	08-MAY-2024	NP
Moisture Content	07-MAY-2024	07-MAY-2024	GU

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836735	**BH15-S2**	**Soil**	**01-MAY-2024**	**02-MAY-2024**

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	06-MAY-2024	06-MAY-2024	CK
F1 (C6 to C10) minus BTEX	06-MAY-2024	06-MAY-2024	SYS
Toluene-d8	06-MAY-2024	06-MAY-2024	CK
F2 (C10 to C16)	06-MAY-2024	06-MAY-2024	CA
F2 (C10 to C16) minus Naphthalene	08-MAY-2024	08-MAY-2024	SYS
F3 (C16 to C34)	06-MAY-2024	06-MAY-2024	CA
F3 (C16 to C34) minus PAHs	08-MAY-2024	08-MAY-2024	SYS
F4 (C34 to C50)	06-MAY-2024	06-MAY-2024	CA
Gravimetric Heavy Hydrocarbons			
Moisture Content	15-FEB-2024	15-FEB-2024	GU
Terphenyl	06-MAY-2024	06-MAY-2024	CA

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	06-MAY-2024	06-MAY-2024	CK
Vinyl Chloride	06-MAY-2024	06-MAY-2024	CK
Bromomethane	06-MAY-2024	06-MAY-2024	CK
Trichlorofluoromethane	06-MAY-2024	06-MAY-2024	CK
Acetone	06-MAY-2024	06-MAY-2024	CK
1,1-Dichloroethylene			
Methylene Chloride	06-MAY-2024	06-MAY-2024	CK
Trans- 1,2-Dichloroethylene	06-MAY-2024	06-MAY-2024	CK
Methyl tert-butyl Ether	06-MAY-2024	06-MAY-2024	CK
1,1-Dichloroethane	06-MAY-2024	06-MAY-2024	CK
Methyl Ethyl Ketone	06-MAY-2024	06-MAY-2024	CK
Cis- 1,2-Dichloroethylene	06-MAY-2024	06-MAY-2024	CK
Chloroform	06-MAY-2024	06-MAY-2024	CK
1,2-Dichloroethane	06-MAY-2024	06-MAY-2024	CK
1,1,1-Trichloroethane	06-MAY-2024	06-MAY-2024	CK
Carbon Tetrachloride	06-MAY-2024	06-MAY-2024	CK
Benzene	06-MAY-2024	06-MAY-2024	CK
1,2-Dichloropropane	06-MAY-2024	06-MAY-2024	CK
Trichloroethylene	06-MAY-2024	06-MAY-2024	CK
Bromodichloromethane	06-MAY-2024	06-MAY-2024	CK
Methyl Isobutyl Ketone	06-MAY-2024	06-MAY-2024	CK
1,1,2-Trichloroethane	06-MAY-2024	06-MAY-2024	CK
Toluene	06-MAY-2024	06-MAY-2024	CK
Dibromochloromethane	06-MAY-2024	06-MAY-2024	CK
Ethylene Dibromide	06-MAY-2024	06-MAY-2024	CK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836735	**BH15-S2**	**Soil**	**01-MAY-2024**	**02-MAY-2024**

O. Reg. 153(511) - VOCs (with PHC) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Tetrachloroethylene			
1,1,1,2-Tetrachloroethane	06-MAY-2024	06-MAY-2024	CK
Chlorobenzene	06-MAY-2024	06-MAY-2024	CK
Ethylbenzene	06-MAY-2024	06-MAY-2024	CK
m & p-Xylene	06-MAY-2024	06-MAY-2024	CK
Bromoform	06-MAY-2024	06-MAY-2024	CK
Styrene	06-MAY-2024	06-MAY-2024	CK
1,1,2,2-Tetrachloroethane	06-MAY-2024	06-MAY-2024	CK
o-Xylene	06-MAY-2024	06-MAY-2024	CK
1,3-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
1,4-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
1,2-Dichlorobenzene	06-MAY-2024	06-MAY-2024	CK
Xylenes (Total)	06-MAY-2024	06-MAY-2024	SYS
1,3-Dichloropropene (Cis + Trans)	06-MAY-2024	06-MAY-2024	SYS
n-Hexane	06-MAY-2024	06-MAY-2024	CK
Toluene-d8	06-MAY-2024	06-MAY-2024	CK
4-Bromofluorobenzene	06-MAY-2024	06-MAY-2024	CK
Moisture Content	15-FEB-2024	15-FEB-2024	GU

5836736	**BH15-S5**	**Soil**	**01-MAY-2024**	**02-MAY-2024**

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	08-MAY-2024	08-MAY-2024	NP
Acenaphthylene	08-MAY-2024	08-MAY-2024	NP
Acenaphthene	08-MAY-2024	08-MAY-2024	NP
Fluorene	08-MAY-2024	08-MAY-2024	NP
Phenanthrene	08-MAY-2024	08-MAY-2024	NP
Anthracene	08-MAY-2024	08-MAY-2024	NP
Fluoranthene	08-MAY-2024	08-MAY-2024	NP
Pyrene	08-MAY-2024	08-MAY-2024	NP
Benzo(a)anthracene	08-MAY-2024	08-MAY-2024	NP
Chrysene	08-MAY-2024	08-MAY-2024	NP
Benzo(b)fluoranthene	08-MAY-2024	08-MAY-2024	NP
Benzo(k)fluoranthene	08-MAY-2024	08-MAY-2024	NP
Benzo(a)pyrene	08-MAY-2024	08-MAY-2024	NP
Indeno(1,2,3-cd)pyrene	08-MAY-2024	08-MAY-2024	NP
Dibenz(a,h)anthracene	08-MAY-2024	08-MAY-2024	NP
Benzo(g,h,i)perylene	08-MAY-2024	08-MAY-2024	NP

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836736	**BH15-S5**	**Soil**	**01-MAY-2024**	**02-MAY-2024**

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
2-and 1-methyl Naphthalene	08-MAY-2024	08-MAY-2024	SYS
Naphthalene-d8	08-MAY-2024	08-MAY-2024	NP
Acridine-d9	08-MAY-2024	08-MAY-2024	NP
Terphenyl-d14	08-MAY-2024	08-MAY-2024	NP
Moisture Content	07-MAY-2024	07-MAY-2024	GU

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Benzene	06-MAY-2024	06-MAY-2024	VB
Toluene	06-MAY-2024	06-MAY-2024	VB
Ethylbenzene	06-MAY-2024	06-MAY-2024	VB
m & p-Xylene	06-MAY-2024	06-MAY-2024	VB
o-Xylene	06-MAY-2024	06-MAY-2024	VB
Xylenes (Total)	06-MAY-2024	06-MAY-2024	SYS
F1 (C6 to C10)	06-MAY-2024	06-MAY-2024	VB
F1 (C6 to C10) minus BTEX	06-MAY-2024	06-MAY-2024	SYS
Toluene-d8	06-MAY-2024	06-MAY-2024	VB
F2 (C10 to C16)	06-MAY-2024	06-MAY-2024	CA
F2 (C10 to C16) minus Naphthalene	08-MAY-2024	08-MAY-2024	SYS
F3 (C16 to C34)	06-MAY-2024	06-MAY-2024	CA
F3 (C16 to C34) minus PAHs	08-MAY-2024	08-MAY-2024	SYS
F4 (C34 to C50)	06-MAY-2024	06-MAY-2024	CA
Gravimetric Heavy Hydrocarbons	06-MAY-2024	06-MAY-2024	
Moisture Content	06-MAY-2024	06-MAY-2024	GU
Terphenyl	06-MAY-2024	06-MAY-2024	CA

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836737	**DUP5**	**Soil**	**01-MAY-2024**	**02-MAY-2024**

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	08-MAY-2024	08-MAY-2024	NP
Acenaphthylene	08-MAY-2024	08-MAY-2024	NP
Acenaphthene	08-MAY-2024	08-MAY-2024	NP
Fluorene	08-MAY-2024	08-MAY-2024	NP
Phenanthrene	08-MAY-2024	08-MAY-2024	NP
Anthracene	08-MAY-2024	08-MAY-2024	NP
Fluoranthene	08-MAY-2024	08-MAY-2024	NP
Pyrene	08-MAY-2024	08-MAY-2024	NP
Benzo(a)anthracene	08-MAY-2024	08-MAY-2024	NP

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5836737	**DUP5**	**Soil**	**01-MAY-2024**	**02-MAY-2024**

O. Reg. 153(511) - PAHs (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Chrysene	08-MAY-2024	08-MAY-2024	NP
Benzo(b)fluoranthene	08-MAY-2024	08-MAY-2024	NP
Benzo(k)fluoranthene	08-MAY-2024	08-MAY-2024	NP
Benzo(a)pyrene	08-MAY-2024	08-MAY-2024	NP
Indeno(1,2,3-cd)pyrene	08-MAY-2024	08-MAY-2024	NP
Dibenz(a,h)anthracene	08-MAY-2024	08-MAY-2024	NP
Benzo(g,h,i)perylene	08-MAY-2024	08-MAY-2024	NP
2-and 1-methyl Naphthalene	08-MAY-2024	08-MAY-2024	SYS
Naphthalene-d8	08-MAY-2024	08-MAY-2024	NP
Acridine-d9	08-MAY-2024	08-MAY-2024	NP
Terphenyl-d14	08-MAY-2024	08-MAY-2024	NP
Moisture Content	07-MAY-2024	07-MAY-2024	GU

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs) (Soil)

Parameter	Date Prepared	Date Analyzed	Initials
Benzene	06-MAY-2024	06-MAY-2024	VB
Toluene	06-MAY-2024	06-MAY-2024	VB
Ethylbenzene	06-MAY-2024	06-MAY-2024	VB
m & p-Xylene	06-MAY-2024	06-MAY-2024	VB
o-Xylene	06-MAY-2024	06-MAY-2024	VB
Xylenes (Total)	06-MAY-2024	06-MAY-2024	SYS
F1 (C6 to C10)	06-MAY-2024	06-MAY-2024	VB
F1 (C6 to C10) minus BTEX	06-MAY-2024	06-MAY-2024	SYS
Toluene-d8	06-MAY-2024	06-MAY-2024	VB
F2 (C10 to C16)	06-MAY-2024	06-MAY-2024	CA
F2 (C10 to C16) minus Naphthalene	08-MAY-2024	08-MAY-2024	SYS
F3 (C16 to C34)	06-MAY-2024	06-MAY-2024	CA
F3 (C16 to C34) minus PAHs	08-MAY-2024	08-MAY-2024	SYS
F4 (C34 to C50)	06-MAY-2024	06-MAY-2024	CA
Gravimetric Heavy Hydrocarbons	06-MAY-2024	06-MAY-2024	
Moisture Content	06-MAY-2024	06-MAY-2024	GU
Terphenyl	06-MAY-2024	06-MAY-2024	CA

Method Summary

CLIENT NAME: PINCHIN LTD.

PROJECT: 319674.001

SAMPLING SITE:500 Coventry Rd.

AGAT WORK ORDER: 24Z146545

ATTENTION TO: Alicia McDonald/Mandy Witteman

SAMPLED BY:Mandy W.

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS

Method Summary

CLIENT NAME: PINCHIN LTD.
PROJECT: 319674.001
SAMPLING SITE:500 Coventry Rd.

AGAT WORK ORDER: 24Z146545
ATTENTION TO: Alicia McDonald/Mandy Witteman
SAMPLED BY:Mandy W.

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Propylene Glycol	TO-1410	EPA SW-846 8015	GC/FID
Monoethylene Glycol	TO-1410	EPA SW-846 8015	GC/FID
Diethylene Glycol	TO-1410	EPA SW-846 8015	GC/FID
Triethylene Glycol	TO-1410	EPA SW-846 8015	GC/FID
Tetraethylene Glycol	TO-1410	EPA SW-846 8015	GC/FID
Heptanol	TO-1410	EPA SW-846 8015	GC/FID
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Polychlorinated Biphenyls	ORG-91-5113	modified from EPA SW-846 3570 & 8082A	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA SW-846 3541 & 8082A	GC/ECD
F1 (C6 to C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID

Method Summary

CLIENT NAME: PINCHIN LTD. **AGAT WORK ORDER: 24Z146545**

PROJECT: 319674.001 **ATTENTION TO: Alicia McDonald/Mandy Witteman**

SAMPLING SITE:500 Coventry Rd. **SAMPLED BY:Mandy W.**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Benzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Toluene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Ethylbenzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
m & p-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
o-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Xylenes (Total)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

Method Summary

CLIENT NAME: PINCHIN LTD.
PROJECT: 319674.001
SAMPLING SITE:500 Coventry Rd.

AGAT WORK ORDER: 24Z146545
ATTENTION TO: Alicia McDonald/Mandy Witteman
SAMPLED BY:Mandy W.

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS

AGAT Laboratories

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5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
webearth.agatlabs.com

Laboratory Use Only

Work Order #: 24Z146545

Cooler Quantity: one - no ice/packs

Arrival Temperatures: 20.6 | 20.7 | 20.6
2.1 | 2.0 | 2.3

Custody Seal Intact: ☐Yes ☐No ☐N/A

Notes: ice

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Report Information:

Company: Pinchin
Contact: alicia McDonald / mandy Witten
Address: 200 - 1 Hines Rd
Ottawa
Phone: 613.617.5936 Fax:
Reports to be sent to:
1. Email: amcdonald@pinchin
2. Email: mwitteman

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04
Table ___ *Indicate One*
☐Ind/Com
☒Res/Park
☐Agriculture
Soil Texture *(Check One)*
☐Coarse
☐Fine

☐ Regulation 406
Table ___ *Indicate One*
☐ Regulation 558
☐ CCME

☐ Sewer Use
☐Sanitary ☐Storm
___ Region
☐ Prov. Water Quality Objectives (PWQO)
☐ Other
___ *Indicate One*

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply): ___

Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*

For 'Same Day' analysis, please contact your AGAT CPM

Project Information:

Project: 500 Coventry Rd
Site Location: 319674-001
Sampled By: Mandy W.
AGAT Quote #: ___ PO: ___
Please note: If quotation number is not provided, client will be billed full price for analysis.

Is this submission for a Record of Site Condition? ☒ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☐ Yes ☐ No

Invoice Information:

Bill To Same: Yes ☐ No ☐
Company: Pinchin
Contact:
Address:
Email: ap@pinchin.com

Sample Matrix Legend

GW Ground Water
O Oil
P Paint
[✓ **S**] Soil
SD Sediment
SW Surface Water

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions
1. MW2 - S5	Apr 30/24	AM PM	4	S	
2. MW3 - S4		AM PM	4		
3. BH4 - S2		AM PM	3		
4. BH5 - S4		AM PM	3		
5. MW6 - S4		AM PM	5		
6. MW10 - S3		AM PM	4		
7. MW10 - S5		AM PM	4		* prioritize VOC + PHCs (F1-F4)
8. MW11 - S2		AM PM	3		
9. MW11 - S6		AM PM	4		
10. MW22 - S3		AM PM	5		
11. DUP 4		AM PM	3		

Sample	Field Filtered - Metals, Hg, CrVI, DOC Y / N	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☒ CrVI, ☐ Hg, ☒ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	VOC	PAHs	PCBs	PCBs: Aroclors ☐	O. Reg 558: Landfill Disposal Characterization TCLP: TCLP: ☐M&I ☐VOCs ☐ABNs ☐B(a)P ☐PCBs	O. Reg 406: Regulation 406 SPLP Rainwater Leach SPLP: ☐Metals ☐VOCs ☐SVOCs	O. Reg 406: Regulation 406 Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: ☐ Moisture ☐ Sulphide	Glycols	Metals (ICP)					Potentially Hazardous or High Concentration (Y/N)
1.			X	X	X	X	X												
2.			X	X	X	X													
3.				X		X	X												
4.				X		X	X												
5.			X	X	X	X	X						X						
6.			X	X		X													
7.				X	X	X													
8.				X	X	X													
9.				X	X	X								X					
10.			X	X	X	X							X						
11.				X	X														

Samples Relinquished By (Print Name and Sign): Mandy Witteman
Date: Time:

Samples Relinquished By (Print Name and Sign): " "
Date: Time:

Samples Relinquished By (Print Name and Sign): Apr 30/24
Date: Time:

Samples Received By (Print Name and Sign): C. Griffith
Date: 05/02/24 Time: 14h15

Samples Received By (Print Name and Sign): M. GRASIC
Date: May 3 Time: 9.00

Samples Received By (Print Name and Sign):
Date: Time:

Page 1 of ___

Nº: T - 148087

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Document ID: DN-78-1511.022

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Ph: 905.712.5100 Fax: 905.712.5122
webearth.agatlabs.com

Laboratory Use Only

Work Order #: 24Z146545

Cooler Quantity: one - no ice packs
Arrival Temperatures: 20.6 | 20.7 | 20.6
2.1 | 2.0 | 2.3
Custody Seal Intact: ☐Yes ☐No ☐N/A
Notes: ICE

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Report Information:

Company: Pinchin
Contact: Mandy + Alicea
Address: 200 - 1 Hines Rd.
Phone: 613.617.5936 Fax:
Reports to be sent to:
1. Email: mwitteman
2. Email: amcdonald

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04
Table ___ *Indicate One*
☐Ind/Com
☐Res/Park
☐Agriculture
Soil Texture *(Check One)*
☐Coarse
☐Fine

☐ Regulation 406
Table ___ *Indicate One*
☐ Regulation 558
☐ CCME

☐ Sewer Use
☐Sanitary ☐Storm
___ *Region*
☐ Prov. Water Quality Objectives (PWQO)
☐ Other
___ *Indicate One*

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply): ___

Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*

For 'Same Day' analysis, please contact your AGAT CPM

Project Information:

Project: 319674.00
Site Location: 500 Coventry Rd
Sampled By:
AGAT Quote #: PO:

Please note: If quotation number is not provided, client will be billed full price for analysis.

Is this submission for a Record of Site Condition?
☒ Yes ☐ No

Report Guideline on *Certificate of Analysis*
☐ Yes ☐ No

Invoice Information:

Bill To Same: Yes ☐ No ☐
Company: Pinchin account payable
Contact:
Address:
Email: ap@pinchin

Sample Matrix Legend

GW	Ground Water
O	Oil
P	Paint
S	Soil
SD	Sediment
SW	Surface Water

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC Y / N	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☑CrVI, ~~Hg~~, ☐HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: VOC	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: PCBs: Aroclors ☐	O. Reg 558: Landfill Disposal Characterization TCLP: TCLP: ☐M&I ☐VOCs ☐ABNs ☐B(a)P ☐PCBs	O. Reg 406: Regulation 406 SPLP Rainwater Leach SPLP: ☐Metals ☐VOCs ☐SVOCs	O. Reg 406: Regulation 406 Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: ☐ Moisture ☐ Sulphide							Potentially Hazardous or High Concentration (Y/N)
1. MW13-S3	May 1/24	3 AM PM		S					X		X													
2. MW13-S2		3 AM PM						X	X	X														
3. MW13-S5		3 AM PM							X		X													
4. MW14-S2		4 AM PM						X	X	X	X							Ignore PAHs						
5. MW14-S3		3 AM PM							X		X													
6. BH15-S2		4 AM PM						X	X	X	X													
7. BH15-S5		3 AM PM							X		X													
8. DUP5		3 AM PM							X		X													
9.		AM PM																						
10.		AM PM																						
11.		AM PM																						

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Mandy Witteman			C. Griffith	05/02/24	14h15
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign): M. GRASIC	Date May 3	Time 9:05
Samples Relinquished By (Print Name and Sign): May 1/24	Date	Time	Samples Received By (Print Name and Sign):	Date	Time

Page 2 of ___

Nº: T - 148088

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Document ID: DIV-78-1511.022 Any and all products and/or services provided by AGAT Labs are pursuant to the terms and conditions as set forth at **www.agatlabs.com/termsandconditions** unless otherwise agreed in a current written contractual document.

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CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

CLIENT NAME: PINCHIN LTD.
1456 Centennial Drive, Unit 2
KINGSTON, ON K7P 0K4
(613) 541-1013
ATTENTION TO: Alicia McDonald
PROJECT: 31964.002
AGAT WORK ORDER: 24Z150512
TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist
WATER ANALYSIS REVIEWED BY: Nivine Basily, Inorganic Team Lead
DATE REPORTED: May 22, 2024
PAGES (INCLUDING COVER): 44
VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

Notes

O. Reg. 153(511) - PAHs (Water)

DATE RECEIVED: 2024-05-14

DATE REPORTED: 2024-05-22

			SAMPLE DESCRIPTION:	MW20	MW21	MW6	MW2	MW1	DUP1	MW9	MW22
			SAMPLE TYPE:	Water	Water	Water	Water	Water	Water	Water	Water
			DATE SAMPLED:	2024-05-13	2024-05-13	2024-05-13	2024-05-13	2024-05-13	2024-05-13	2024-05-13	2024-05-13
Parameter	**Unit**	**G / S**	**RDL**	5861463	5861556	5861603	5861620	5861624	5861636	5861638	5861849
Naphthalene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthylene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Fluorene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Phenanthrene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Anthracene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Fluoranthene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Pyrene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzo(a)anthracene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chrysene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(b)fluoranthene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(a)pyrene	µg/L		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibenz(a,h)anthracene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzo(g,h,i)perylene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
2-and 1-methyl Napthalene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Sediment				1	1	1	3	3	1	3	3
Surrogate	**Unit**	**Acceptable Limits**									
Naphthalene-d8	%	50-140		85	95	122	81	108	91	101	101
Acridine-d9	%	50-140		85	94	78	77	72	66	74	68
Terphenyl-d14	%	50-140		105	72	103	97	77	112	96	88

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5861463-5861849 Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amount
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&(j)Fluoranthene isomers because the isomers co-elute on the GC column.
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopukolof

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

CLIENT NAME: PINCHIN LTD. **ATTENTION TO: Alicia McDonald**

SAMPLING SITE: **SAMPLED BY:**

O. Reg. 153(511) - PCBs (Water)

DATE RECEIVED: 2024-05-14 **DATE REPORTED: 2024-05-22**

			SAMPLE DESCRIPTION:	MW20	MW6	MW2	DUP1	MW22
			SAMPLE TYPE:	Water	Water	Water	Water	Water
			DATE SAMPLED:	2024-05-13	2024-05-13	2024-05-13	2024-05-13	2024-05-13
Parameter	**Unit**	**G / S**	**RDL**	**5861463**	**5861603**	**5861620**	**5861636**	**5861849**
Polychlorinated Biphenyls	µg/L		0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate	**Unit**	**Acceptable Limits**						
Decachlorobiphenyl	%	60-140		78	70	72	80	75

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5861463-5861849 PCB total is a calculated parameter. The calculated value is the sum of Aroclor 1242, Aroclor 1248, Aroclor 1254 and Aroclor 1260. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopukolof

AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 24Z150512
PROJECT: 31964.002

CLIENT NAME: PINCHIN LTD.
SAMPLING SITE:

ATTENTION TO: Alicia McDonald
SAMPLED BY:

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

DATE RECEIVED: 2024-05-14

DATE REPORTED: 2024-05-22

			SAMPLE DESCRIPTION:	MW20	MW21	MW6	MW2	MW1	DUP1	MW9	MW22
			SAMPLE TYPE:	Water	Water	Water	Water	Water	Water	Water	Water
			DATE SAMPLED:	2024-05-13	2024-05-13	2024-05-13	2024-05-13	2024-05-13	2024-05-13	2024-05-13	2024-05-13
Parameter	**Unit**	**G / S**	**RDL**	5861463	5861556	5861603	5861620	5861624	5861636	5861638	5861849
F1 (C6 to C10)	µg/L		25	<25	<25	<25	<25	<25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L		25	<25	<25	<25	<25	<25	<25	<25	<25
F2 (C10 to C16)	µg/L		100	<100	<100	<100	<100	<100	<100	<100	<100
F2 (C10 to C16) minus Naphthalene	µg/L		100	<100	<100	<100	<100	<100	<100	<100	<100
F3 (C16 to C34)	µg/L		100	<100	<100	<100	<100	<100	<100	<100	<100
F3 (C16 to C34) minus PAHs	µg/L		100	<100	<100	<100	<100	<100	<100	<100	<100
F4 (C34 to C50)	µg/L		100	<100	<100	<100	<100	<100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	NA	NA	NA	NA	NA	NA	NA
Sediment				1	1	1	3	3	1	3	3
Surrogate	**Unit**	**Acceptable Limits**									
Toluene-d8	%	50-140		118	129	118	109	118	112	121	110
Terphenyl	% Recovery	60-140		87	76	69	91	73	75	73	65

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5861463-5861849 The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amounts

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopukoloff

Certificate of Analysis

AGAT WORK ORDER: 24Z150512

PROJECT: 31964.002

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

CLIENT NAME: PINCHIN LTD.

ATTENTION TO: Alicia McDonald

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2024-05-14

DATE REPORTED: 2024-05-22

			SAMPLE DESCRIPTION:	Trip Blank
			SAMPLE TYPE:	Water
			DATE SAMPLED:	2024-05-13
Parameter	**Unit**	**G / S**	**RDL**	**5861992**
Dichlorodifluoromethane	µg/L		0.40	<0.40
Vinyl Chloride	µg/L		0.17	<0.17
Bromomethane	µg/L		0.20	<0.20
Trichlorofluoromethane	µg/L		0.40	<0.40
Acetone	µg/L		1.0	<1.0
1,1-Dichloroethylene	µg/L		0.30	<0.30
Methylene Chloride	µg/L		0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L		0.20	<0.20
Methyl tert-butyl ether	µg/L		0.20	<0.20
1,1-Dichloroethane	µg/L		0.30	<0.30
Methyl Ethyl Ketone	µg/L		1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L		0.20	<0.20
Chloroform	µg/L		0.20	<0.20
1,2-Dichloroethane	µg/L		0.20	<0.20
1,1,1-Trichloroethane	µg/L		0.30	<0.30
Carbon Tetrachloride	µg/L		0.20	<0.20
Benzene	µg/L		0.20	<0.20
1,2-Dichloropropane	µg/L		0.20	<0.20
Trichloroethylene	µg/L		0.20	<0.20
Bromodichloromethane	µg/L		0.20	<0.20
Methyl Isobutyl Ketone	µg/L		1.0	<1.0
1,1,2-Trichloroethane	µg/L		0.20	<0.20
Toluene	µg/L		0.20	<0.20
Dibromochloromethane	µg/L		0.10	<0.10
Ethylene Dibromide	µg/L		0.10	<0.10
Tetrachloroethylene	µg/L		0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L		0.10	<0.10
Chlorobenzene	µg/L		0.10	<0.10
Ethylbenzene	µg/L		0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20

Certified By: NPopukolof

O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2024-05-14 **DATE REPORTED: 2024-05-22**

			SAMPLE DESCRIPTION:	**Trip Blank**
			SAMPLE TYPE:	**Water**
			DATE SAMPLED:	**2024-05-13**
Parameter	**Unit**	**G / S**	**RDL**	**5861992**
Bromoform	µg/L		0.10	<0.10
Styrene	µg/L		0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L		0.10	<0.10
o-Xylene	µg/L		0.10	<0.10
1,3-Dichlorobenzene	µg/L		0.10	<0.10
1,4-Dichlorobenzene	µg/L		0.10	<0.10
1,2-Dichlorobenzene	µg/L		0.10	<0.10
1,3-Dichloropropene	µg/L		0.30	<0.30
Xylenes (Total)	µg/L		0.20	<0.20
n-Hexane	µg/L		0.20	<0.20
Surrogate	**Unit**	**Acceptable Limits**		
Toluene-d8	% Recovery	50-140		100
4-Bromofluorobenzene	% Recovery	50-140		85

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5861992 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

O. Reg. 153(511) - VOCs (with PHC) (Water)

DATE RECEIVED: 2024-05-14

DATE REPORTED: 2024-05-22

			SAMPLE DESCRIPTION:	MW20	MW21	MW6	MW2	MW1	DUP1	MW9	MW22
			SAMPLE TYPE:	Water	Water	Water	Water	Water	Water	Water	Water
			DATE SAMPLED:	2024-05-13	2024-05-13	2024-05-13	2024-05-13	2024-05-13	2024-05-13	2024-05-13	2024-05-13
Parameter	**Unit**	**G / S**	**RDL**	5861463	5861556	5861603	5861620	5861624	5861636	5861638	5861849
Dichlorodifluoromethane	µg/L		0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Vinyl Chloride	µg/L		0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L		0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Acetone	µg/L		1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L		0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L		0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L		0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L		1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chloroform	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L		0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.82	<0.20
1,2-Dichloropropane	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L		1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L		0.20	<0.20	1.23	<0.20	<0.20	1.52	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylbenzene	µg/L		0.10	<0.10	0.13	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20	0.38	<0.20	<0.20	0.33	<0.20	<0.20	<0.20

Certified By:

Certificate of Analysis

AGAT WORK ORDER: 24Z150512
PROJECT: 31964.002

CLIENT NAME: PINCHIN LTD.
SAMPLING SITE:

ATTENTION TO: Alicia McDonald
SAMPLED BY:

O. Reg. 153(511) - VOCs (with PHC) (Water)

DATE RECEIVED: 2024-05-14

DATE REPORTED: 2024-05-22

			SAMPLE DESCRIPTION:	MW20	MW21	MW6	MW2	MW1	DUP1	MW9	MW22
			SAMPLE TYPE:	Water	Water	Water	Water	Water	Water	Water	Water
			DATE SAMPLED:	2024-05-13	2024-05-13	2024-05-13	2024-05-13	2024-05-13	2024-05-13	2024-05-13	2024-05-13
Parameter	**Unit**	**G / S**	**RDL**	5861463	5861556	5861603	5861620	5861624	5861636	5861638	5861849
Bromoform	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Styrene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	0.18	<0.10	<0.10	0.15	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L		0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Xylenes (Total)	µg/L		0.20	<0.20	0.56	<0.20	<0.20	0.48	<0.20	<0.20	<0.20
n-Hexane	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Surrogate	**Unit**	**Acceptable Limits**									
Toluene-d8	% Recovery	50-140		118	129	118	109	118	112	121	110
4-Bromofluorobenzene	% Recovery	50-140		91	87	90	84	92	86	88	88

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5861463-5861849 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopnikolof

Certificate of Analysis

AGAT WORK ORDER: 24Z150512

PROJECT: 31964.002

CLIENT NAME: PINCHIN LTD.

ATTENTION TO: Alicia McDonald

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - All Metals (Water)

DATE RECEIVED: 2024-05-14

DATE REPORTED: 2024-05-22

			SAMPLE DESCRIPTION:	MW20	MW2	DUP1	MW22
			SAMPLE TYPE:	Water	Water	Water	Water
			DATE SAMPLED:	2024-05-13	2024-05-13	2024-05-13	2024-05-13
Parameter	**Unit**	**G / S**	**RDL**	**5861463**	**5861620**	**5861636**	**5861849**
Dissolved Antimony	µg/L		1.0	<1.0	<1.0	<1.0	<1.0
Dissolved Arsenic	µg/L		1.0	11.4	8.3	8.5	9.7
Dissolved Barium	µg/L		2.0	122	121	128	40.3
Dissolved Beryllium	µg/L		0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Boron	µg/L		10.0	174	118	158	85.4
Dissolved Cadmium	µg/L		0.20	<0.20	0.24	<0.20	<0.20
Dissolved Chromium	µg/L		2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Cobalt	µg/L		0.50	2.96	3.31	2.50	3.25
Dissolved Copper	µg/L		1.0	<1.0	1.8	<1.0	3.8
Dissolved Lead	µg/L		0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Molybdenum	µg/L		0.50	40.6	11.2	37.7	45.5
Dissolved Nickel	µg/L		1.0	23.7	13.8	25.0	7.7
Dissolved Selenium	µg/L		1.0	<1.0	<1.0	<1.0	<1.0
Dissolved Silver	µg/L		0.20	<0.20	<0.20	<0.20	<0.20
Dissolved Thallium	µg/L		0.30	<0.30	<0.30	<0.30	<0.30
Dissolved Uranium	µg/L		0.50	10.4	1.32	9.18	3.00
Dissolved Vanadium	µg/L		0.40	0.48	1.27	0.57	<0.40
Dissolved Zinc	µg/L		5.0	7.2	<5.0	5.1	5.6
Mercury	µg/L		0.02	<0.02	<0.02	<0.02	<0.02
Chromium VI	µg/L		2.000	<2.000	<2.000	<2.000	<2.000

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5861463-5861849 Metals analysis completed on a filtered sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

NIVINE BASILY

CLIENT NAME: PINCHIN LTD.

ATTENTION TO: Alicia McDonald

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

DATE RECEIVED: 2024-05-14

DATE REPORTED: 2024-05-22

			SAMPLE DESCRIPTION:	MW21	MW1	MW9
			SAMPLE TYPE:	Water	Water	Water
			DATE SAMPLED:	2024-05-13	2024-05-13	2024-05-13
Parameter	**Unit**	**G / S**	**RDL**	**5861556**	**5861624**	**5861638**
Dissolved Antimony	µg/L		1.0	<1.0	<1.0	<1.0
Dissolved Arsenic	µg/L		1.0	14.7	13.7	14.7
Dissolved Barium	µg/L		2.0	419	53.8	282
Dissolved Beryllium	µg/L		0.50	<0.50	<0.50	<0.50
Dissolved Boron	µg/L		10.0	805	205	434
Dissolved Cadmium	µg/L		0.20	<0.20	<0.20	0.50
Dissolved Chromium	µg/L		2.0	<2.0	<2.0	<2.0
Dissolved Cobalt	µg/L		0.50	0.68	1.32	1.51
Dissolved Copper	µg/L		1.0	2.6	<1.0	<1.0
Dissolved Lead	µg/L		0.50	<0.50	<0.50	<0.50
Dissolved Molybdenum	µg/L		0.50	25.8	12.1	10.6
Dissolved Nickel	µg/L		1.0	4.7	17.7	5.3
Dissolved Selenium	µg/L		1.0	<1.0	<1.0	<1.0
Dissolved Silver	µg/L		0.20	<0.20	<0.20	<0.20
Dissolved Thallium	µg/L		0.30	<0.30	<0.30	<0.30
Dissolved Uranium	µg/L		0.50	0.55	1.74	1.34
Dissolved Vanadium	µg/L		0.40	0.92	0.52	0.46
Dissolved Zinc	µg/L		5.0	9.9	5.6	5.4

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5861556-5861638 Metals analysis completed on a filtered sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

NIVINE BASILY

CLIENT NAME: PINCHIN LTD.

ATTENTION TO: Alicia McDonald

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - ORPs (Water)

DATE RECEIVED: 2024-05-14

DATE REPORTED: 2024-05-22

			SAMPLE DESCRIPTION:	MW19	DUP2
			SAMPLE TYPE:	Water	Water
			DATE SAMPLED:	2024-05-13	2024-05-13
Parameter	**Unit**	**G / S**	**RDL**	**5861869**	**5861887**
Dissolved Sodium	µg/L		500	1770000	1830000
Chloride	µg/L		244	2960000	2910000

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

5861869-5861887 Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto (unless marked by *)

NIVINE BASILY

Certified By:

Quality Assurance

CLIENT NAME: PINCHIN LTD.
PROJECT: 31964.002
SAMPLING SITE:

AGAT WORK ORDER: 24Z150512
ATTENTION TO: Alicia McDonald
SAMPLED BY:

Trace Organics Analysis

RPT Date: May 22, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PCBs (Water)															
Polychlorinated Biphenyls	5861636		< 0.1	< 0.1	NA	< 0.1	98%	50%	140%	90%	50%	140%	85%	50%	140%
O. Reg. 153(511) - PAHs (Water)															
Naphthalene	5855936		<0.20	<0.20	NA	< 0.20	99%	50%	140%	77%	50%	140%	78%	50%	140%
Acenaphthylene	5855936		<0.20	<0.20	NA	< 0.20	98%	50%	140%	97%	50%	140%	64%	50%	140%
Acenaphthene	5855936		<0.20	<0.20	NA	< 0.20	105%	50%	140%	72%	50%	140%	78%	50%	140%
Fluorene	5855936		<0.20	<0.20	NA	< 0.20	95%	50%	140%	72%	50%	140%	74%	50%	140%
Phenanthrene	5855936		<0.10	<0.10	NA	< 0.10	113%	50%	140%	91%	50%	140%	95%	50%	140%
Anthracene	5855936		<0.10	<0.10	NA	< 0.10	104%	50%	140%	78%	50%	140%	78%	50%	140%
Fluoranthene	5855936		<0.20	<0.20	NA	< 0.20	101%	50%	140%	87%	50%	140%	81%	50%	140%
Pyrene	5855936		<0.20	<0.20	NA	< 0.20	101%	50%	140%	87%	50%	140%	81%	50%	140%
Benzo(a)anthracene	5855936		<0.20	<0.20	NA	< 0.20	72%	50%	140%	96%	50%	140%	70%	50%	140%
Chrysene	5855936		<0.10	<0.10	NA	< 0.10	115%	50%	140%	77%	50%	140%	73%	50%	140%
Benzo(b)fluoranthene	5855936		<0.10	<0.10	NA	< 0.10	85%	50%	140%	79%	50%	140%	98%	50%	140%
Benzo(k)fluoranthene	5855936		<0.10	<0.10	NA	< 0.10	114%	50%	140%	115%	50%	140%	111%	50%	140%
Benzo(a)pyrene	5855936		<0.01	<0.01	NA	< 0.01	71%	50%	140%	74%	50%	140%	88%	50%	140%
Indeno(1,2,3-cd)pyrene	5855936		<0.20	<0.20	NA	< 0.20	73%	50%	140%	70%	50%	140%	83%	50%	140%
Dibenz(a,h)anthracene	5855936		<0.20	<0.20	NA	< 0.20	69%	50%	140%	73%	50%	140%	73%	50%	140%
Benzo(g,h,i)perylene	5855936		<0.20	<0.20	NA	< 0.20	90%	50%	140%	75%	50%	140%	77%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)															
F1 (C6 to C10)	5867766		<25	<25	NA	< 25	90%	60%	140%	98%	60%	140%	102%	60%	140%
F2 (C10 to C16)	5859541		<100	<100	NA	< 100	68%	60%	140%	63%	60%	140%	61%	60%	140%
F3 (C16 to C34)	5859541		<100	<100	NA	< 100	82%	60%	140%	75%	60%	140%	64%	60%	140%
F4 (C34 to C50)	5859541		<100	<100	NA	< 100	86%	60%	140%	89%	60%	140%	89%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Water)															
Dichlorodifluoromethane	5867766		<0.40	<0.40	NA	< 0.40	86%	50%	140%	72%	50%	140%	66%	50%	140%
Vinyl Chloride	5867766		<0.17	<0.17	NA	< 0.17	115%	50%	140%	105%	50%	140%	116%	50%	140%
Bromomethane	5867766		<0.20	<0.20	NA	< 0.20	104%	50%	140%	114%	50%	140%	91%	50%	140%
Trichlorofluoromethane	5867766		<0.40	<0.40	NA	< 0.40	108%	50%	140%	111%	50%	140%	109%	50%	140%
Acetone	5867766		<1.0	<1.0	NA	< 1.0	69%	50%	140%	79%	50%	140%	77%	50%	140%
1,1-Dichloroethylene	5867766		<0.30	<0.30	NA	< 0.30	64%	50%	140%	119%	60%	130%	90%	50%	140%
Methylene Chloride	5867766		<0.30	<0.30	NA	< 0.30	111%	50%	140%	105%	60%	130%	103%	50%	140%
trans- 1,2-Dichloroethylene	5867766		<0.20	<0.20	NA	< 0.20	90%	50%	140%	100%	60%	130%	100%	50%	140%
Methyl tert-butyl ether	5867766		<0.20	<0.20	NA	< 0.20	70%	50%	140%	61%	60%	130%	88%	50%	140%
1,1-Dichloroethane	5867766		<0.30	<0.30	NA	< 0.30	72%	50%	140%	64%	60%	130%	101%	50%	140%
Methyl Ethyl Ketone	5867766		<1.0	<1.0	NA	< 1.0	90%	50%	140%	95%	50%	140%	73%	50%	140%
cis- 1,2-Dichloroethylene	5867766		<0.20	<0.20	NA	< 0.20	72%	50%	140%	88%	60%	130%	102%	50%	140%
Chloroform	5867766		<0.20	<0.20	NA	< 0.20	103%	50%	140%	92%	60%	130%	116%	50%	140%
1,2-Dichloroethane	5867766		<0.20	<0.20	NA	< 0.20	93%	50%	140%	76%	60%	130%	100%	50%	140%

Quality Assurance

CLIENT NAME: PINCHIN LTD.
PROJECT: 31964.002
SAMPLING SITE:

AGAT WORK ORDER: 24Z150512
ATTENTION TO: Alicia McDonald
SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: May 22, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,1,1-Trichloroethane	5867766		<0.30	<0.30	NA	< 0.30	73%	50%	140%	75%	60%	130%	91%	50%	140%
Carbon Tetrachloride	5867766		<0.20	<0.20	NA	< 0.20	101%	50%	140%	104%	60%	130%	112%	50%	140%
Benzene	5867766		0.58	0.56	NA	< 0.20	90%	50%	140%	86%	60%	130%	106%	50%	140%
1,2-Dichloropropane	5867766		<0.20	<0.20	NA	< 0.20	80%	50%	140%	70%	60%	130%	89%	50%	140%
Trichloroethylene	5867766		<0.20	<0.20	NA	< 0.20	95%	50%	140%	89%	60%	130%	101%	50%	140%
Bromodichloromethane	5867766		<0.20	<0.20	NA	< 0.20	83%	50%	140%	71%	60%	130%	98%	50%	140%
Methyl Isobutyl Ketone	5867766		<1.0	<1.0	NA	< 1.0	86%	50%	140%	82%	50%	140%	102%	50%	140%
1,1,2-Trichloroethane	5867766		<0.20	<0.20	NA	< 0.20	113%	50%	140%	108%	60%	130%	112%	50%	140%
Toluene	5867766		<0.20	<0.20	NA	< 0.20	107%	50%	140%	117%	60%	130%	113%	50%	140%
Dibromochloromethane	5867766		<0.10	<0.10	NA	< 0.10	83%	50%	140%	74%	60%	130%	77%	50%	140%
Ethylene Dibromide	5867766		<0.10	<0.10	NA	< 0.10	97%	50%	140%	92%	60%	130%	99%	50%	140%
Tetrachloroethylene	5867766		<0.20	<0.20	NA	< 0.20	118%	50%	140%	112%	60%	130%	102%	50%	140%
1,1,1,2-Tetrachloroethane	5867766		<0.10	<0.10	NA	< 0.10	103%	50%	140%	91%	60%	130%	97%	50%	140%
Chlorobenzene	5867766		<0.10	<0.10	NA	< 0.10	116%	50%	140%	104%	60%	130%	108%	50%	140%
Ethylbenzene	5867766		<0.10	<0.10	NA	< 0.10	95%	50%	140%	90%	60%	130%	87%	50%	140%
m & p-Xylene	5867766		<0.20	<0.20	NA	< 0.20	103%	50%	140%	97%	60%	130%	93%	50%	140%
Bromoform	5867766		<0.10	<0.10	NA	< 0.10	105%	50%	140%	90%	60%	130%	101%	50%	140%
Styrene	5867766		<0.10	<0.10	NA	< 0.10	74%	50%	140%	61%	60%	130%	65%	50%	140%
1,1,2,2-Tetrachloroethane	5867766		<0.10	<0.10	NA	< 0.10	110%	50%	140%	100%	60%	130%	78%	50%	140%
o-Xylene	5867766		<0.10	<0.10	NA	< 0.10	108%	50%	140%	100%	60%	130%	97%	50%	140%
1,3-Dichlorobenzene	5867766		<0.10	<0.10	NA	< 0.10	108%	50%	140%	90%	60%	130%	96%	50%	140%
1,4-Dichlorobenzene	5867766		<0.10	<0.10	NA	< 0.10	112%	50%	140%	100%	60%	130%	104%	50%	140%
1,2-Dichlorobenzene	5867766		<0.10	<0.10	NA	< 0.10	115%	50%	140%	92%	60%	130%	100%	50%	140%
n-Hexane	5867766		<0.20	<0.20	NA	< 0.20	72%	50%	140%	79%	60%	130%	99%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By:

Quality Assurance

CLIENT NAME: PINCHIN LTD. **AGAT WORK ORDER: 24Z150512**
PROJECT: 31964.002 **ATTENTION TO: Alicia McDonald**
SAMPLING SITE: **SAMPLED BY:**

Water Analysis

RPT Date: May 22, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - ORPs (Water)															
Dissolved Sodium	5859405		167000	164000	1.8%	< 50	96%	70%	130%	98%	80%	120%	110%	70%	130%
Chloride	5855904		101000	100000	1.0%	< 100	95%	70%	130%	99%	80%	120%	101%	70%	130%
O. Reg. 153(511) - Metals (Including Hydrides) (Water)															
Dissolved Antimony	5859405		<1.0	<1.0	NA	< 1.0	100%	70%	130%	102%	80%	120%	102%	70%	130%
Dissolved Arsenic	5859405		<1.0	<1.0	NA	< 1.0	92%	70%	130%	101%	80%	120%	105%	70%	130%
Dissolved Barium	5859405		34.5	33.3	3.5%	< 2.0	105%	70%	130%	99%	80%	120%	98%	70%	130%
Dissolved Beryllium	5859405		<0.50	<0.50	NA	< 0.50	92%	70%	130%	106%	80%	120%	110%	70%	130%
Dissolved Boron	5859405		29.3	31.7	NA	< 10.0	98%	70%	130%	107%	80%	120%	108%	70%	130%
Dissolved Cadmium	5859405		0.24	<0.20	NA	< 0.20	100%	70%	130%	98%	80%	120%	93%	70%	130%
Dissolved Chromium	5859405		6.2	4.0	NA	< 2.0	97%	70%	130%	105%	80%	120%	92%	70%	130%
Dissolved Cobalt	5859405		<0.50	<0.50	NA	< 0.50	97%	70%	130%	90%	80%	120%	87%	70%	130%
Dissolved Copper	5859405		<1.0	1.6	NA	< 1.0	99%	70%	130%	101%	80%	120%	86%	70%	130%
Dissolved Lead	5859405		<0.50	<0.50	NA	< 0.50	91%	70%	130%	95%	80%	120%	93%	70%	130%
Dissolved Molybdenum	5859405		3.34	4.02	18.5%	< 0.50	98%	70%	130%	102%	80%	120%	96%	70%	130%
Dissolved Nickel	5859405		1.6	<1.0	NA	< 1.0	98%	70%	130%	92%	80%	120%	95%	70%	130%
Dissolved Silver	5859405		<0.20	<0.20	NA	< 0.20	98%	70%	130%	93%	80%	120%	86%	70%	130%
Dissolved Thallium	5859405		<0.30	<0.30	NA	< 0.30	86%	70%	130%	88%	80%	120%	87%	70%	130%
Dissolved Uranium	5859405		0.88	0.92	NA	< 0.50	90%	70%	130%	94%	80%	120%	96%	70%	130%
Dissolved Vanadium	5859405		0.87	0.45	NA	< 0.40	99%	70%	130%	93%	80%	120%	96%	70%	130%
Dissolved Zinc	5859405		<5.0	<5.0	NA	< 5.0	101%	70%	130%	97%	80%	120%	92%	70%	130%

Comments: NA signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.

O. Reg. 153(511) - All Metals (Water)															
Dissolved Antimony	5859405		< 1.0	< 1.0	NA	< 1.0	100%	70%	130%	102%	80%	120%	102%	70%	130%
Dissolved Arsenic	5859405		< 1.0	< 1.0	NA	< 1.0	92%	70%	130%	101%	80%	120%	105%	70%	130%
Dissolved Barium	5859405		34.5	33.3	3.5%	< 2.0	105%	70%	130%	99%	80%	120%	98%	70%	130%
Dissolved Beryllium	5859405		< 0.50	< 0.50	NA	< 0.50	92%	70%	130%	106%	80%	120%	110%	70%	130%
Dissolved Boron	5859405		29.3	31.7	NA	< 10.0	98%	70%	130%	107%	80%	120%	108%	70%	130%
Dissolved Cadmium	5859405		0.24	<0.20	NA	< 0.20	100%	70%	130%	98%	80%	120%	93%	70%	130%
Dissolved Chromium	5859405		6.2	4.0	NA	< 2.0	97%	70%	130%	105%	80%	120%	92%	70%	130%
Dissolved Cobalt	5859405		< 0.50	< 0.50	NA	< 0.50	97%	70%	130%	90%	80%	120%	87%	70%	130%
Dissolved Copper	5859405		<1.0	1.6	NA	< 1.0	99%	70%	130%	101%	80%	120%	86%	70%	130%
Dissolved Lead	5859405		< 0.50	< 0.50	NA	< 0.50	91%	70%	130%	95%	80%	120%	93%	70%	130%
Dissolved Molybdenum	5859405		3.34	4.02	18.5%	< 0.50	98%	70%	130%	102%	80%	120%	96%	70%	130%
Dissolved Nickel	5859405		1.6	<1.0	NA	< 1.0	98%	70%	130%	92%	80%	120%	95%	70%	130%
Dissolved Selenium	5859405		< 1.0	< 1.0	NA	< 1.0	100%	70%	130%	100%	80%	120%	105%	70%	130%
Dissolved Silver	5859405		< 0.20	< 0.20	NA	< 0.20	98%	70%	130%	93%	80%	120%	86%	70%	130%

Quality Assurance

CLIENT NAME: PINCHIN LTD.
PROJECT: 31964.002
SAMPLING SITE:

AGAT WORK ORDER: 24Z150512
ATTENTION TO: Alicia McDonald
SAMPLED BY:

Water Analysis (Continued)

RPT Date: May 22, 2024			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Dissolved Thallium	5859405		< 0.30	< 0.30	NA	< 0.30	86%	70%	130%	88%	80%	120%	87%	70%	130%
Dissolved Uranium	5859405		0.88	0.92	NA	< 0.50	90%	70%	130%	94%	80%	120%	96%	70%	130%
Dissolved Vanadium	5859405		0.87	0.45	NA	< 0.40	99%	70%	130%	93%	80%	120%	96%	70%	130%
Dissolved Zinc	5859405		< 5.0	< 5.0	NA	< 5.0	101%	70%	130%	97%	80%	120%	92%	70%	130%
Mercury	5864189		<0.02	<0.02	NA	< 0.02	102%	70%	130%	103%	80%	120%	92%	70%	130%

Comments: NA signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.

NIVINE BASILY

Certified By:

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5861463	MW20	Water	13-MAY-2024	14-MAY-2024

O. Reg. 153(511) - All Metals (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Antimony	16-MAY-2024	16-MAY-2024	CC
Dissolved Arsenic	16-MAY-2024	16-MAY-2024	CC
Dissolved Barium	16-MAY-2024	16-MAY-2024	CC
Dissolved Beryllium	16-MAY-2024	16-MAY-2024	CC
Dissolved Boron	16-MAY-2024	16-MAY-2024	CC
Dissolved Cadmium	16-MAY-2024	16-MAY-2024	CC
Dissolved Chromium	16-MAY-2024	16-MAY-2024	CC
Dissolved Cobalt	16-MAY-2024	16-MAY-2024	CC
Dissolved Copper	16-MAY-2024	16-MAY-2024	CC
Dissolved Lead	16-MAY-2024	16-MAY-2024	CC
Dissolved Molybdenum	16-MAY-2024	16-MAY-2024	CC
Dissolved Nickel	16-MAY-2024	16-MAY-2024	CC
Dissolved Selenium	16-MAY-2024	16-MAY-2024	CC
Dissolved Silver	16-MAY-2024	16-MAY-2024	CC
Dissolved Thallium	16-MAY-2024	16-MAY-2024	CC
Dissolved Uranium	16-MAY-2024	16-MAY-2024	CC
Dissolved Vanadium	16-MAY-2024	16-MAY-2024	CC
Dissolved Zinc	16-MAY-2024	16-MAY-2024	CC
Mercury	17-MAY-2024	17-MAY-2024	DL
Chromium VI	16-MAY-2024	16-MAY-2024	WZ

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	18-MAY-2024	18-MAY-2024	JJ
Acenaphthylene	18-MAY-2024	18-MAY-2024	JJ
Acenaphthene	18-MAY-2024	18-MAY-2024	JJ
Fluorene	18-MAY-2024	18-MAY-2024	JJ
Phenanthrene	18-MAY-2024	18-MAY-2024	JJ
Anthracene	18-MAY-2024	18-MAY-2024	JJ
Fluoranthene	18-MAY-2024	18-MAY-2024	JJ
Pyrene	18-MAY-2024	18-MAY-2024	JJ
Benzo(a)anthracene	18-MAY-2024	18-MAY-2024	JJ
Chrysene	18-MAY-2024	18-MAY-2024	JJ
Benzo(b)fluoranthene	18-MAY-2024	18-MAY-2024	JJ
Benzo(k)fluoranthene	18-MAY-2024	18-MAY-2024	JJ
Benzo(a)pyrene	18-MAY-2024	18-MAY-2024	JJ
Indeno(1,2,3-cd)pyrene	18-MAY-2024	18-MAY-2024	JJ
Dibenz(a,h)anthracene	18-MAY-2024	18-MAY-2024	JJ
Benzo(g,h,i)perylene	18-MAY-2024	18-MAY-2024	JJ

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5861463	**MW20**	**Water**	**13-MAY-2024**	**14-MAY-2024**

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
2-and 1-methyl Napthalene	18-MAY-2024	18-MAY-2024	SYS
Naphthalene-d8	18-MAY-2024	18-MAY-2024	JJ
Acridine-d9	18-MAY-2024	18-MAY-2024	JJ
Terphenyl-d14	18-MAY-2024	18-MAY-2024	JJ
Sediment	17-MAY-2024	17-MAY-2024	NH

O. Reg. 153(511) - PCBs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Polychlorinated Biphenyls	17-MAY-2024	17-MAY-2024	LSP
Decachlorobiphenyl	17-MAY-2024	17-MAY-2024	LSP

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	21-MAY-2024	21-MAY-2024	MK
F1 (C6 to C10) minus BTEX	21-MAY-2024	21-MAY-2024	SYS
Toluene-d8	21-MAY-2024	21-MAY-2024	MK
F2 (C10 to C16)	18-MAY-2024	18-MAY-2024	CA
F2 (C10 to C16) minus Naphthalene	18-MAY-2024	18-MAY-2024	SYS
F3 (C16 to C34)	18-MAY-2024	18-MAY-2024	CA
F3 (C16 to C34) minus PAHs	18-MAY-2024	18-MAY-2024	SYS
F4 (C34 to C50)	18-MAY-2024	18-MAY-2024	CA
Gravimetric Heavy Hydrocarbons			
Terphenyl	18-MAY-2024	18-MAY-2024	CA
Sediment	17-MAY-2024	17-MAY-2024	NH

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	21-MAY-2024	21-MAY-2024	MK
Vinyl Chloride	21-MAY-2024	21-MAY-2024	MK
Bromomethane	21-MAY-2024	21-MAY-2024	MK
Trichlorofluoromethane	21-MAY-2024	21-MAY-2024	MK
Acetone	21-MAY-2024	21-MAY-2024	MK
1,1-Dichloroethylene	21-MAY-2024	21-MAY-2024	MK
Methylene Chloride	21-MAY-2024	21-MAY-2024	MK
trans- 1,2-Dichloroethylene	21-MAY-2024	21-MAY-2024	MK
Methyl tert-butyl ether	21-MAY-2024	21-MAY-2024	MK
1,1-Dichloroethane	21-MAY-2024	21-MAY-2024	MK
Methyl Ethyl Ketone	21-MAY-2024	21-MAY-2024	MK
cis- 1,2-Dichloroethylene	21-MAY-2024	21-MAY-2024	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5861463	**MW20**	**Water**	**13-MAY-2024**	**14-MAY-2024**

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Chloroform	21-MAY-2024	21-MAY-2024	MK
1,2-Dichloroethane	21-MAY-2024	21-MAY-2024	MK
1,1,1-Trichloroethane	21-MAY-2024	21-MAY-2024	MK
Carbon Tetrachloride	21-MAY-2024	21-MAY-2024	MK
Benzene	21-MAY-2024	21-MAY-2024	MK
1,2-Dichloropropane	21-MAY-2024	21-MAY-2024	MK
Trichloroethylene	21-MAY-2024	21-MAY-2024	MK
Bromodichloromethane	21-MAY-2024	21-MAY-2024	MK
Methyl Isobutyl Ketone	21-MAY-2024	21-MAY-2024	MK
1,1,2-Trichloroethane	21-MAY-2024	21-MAY-2024	MK
Toluene	21-MAY-2024	21-MAY-2024	MK
Dibromochloromethane	21-MAY-2024	21-MAY-2024	MK
Ethylene Dibromide	21-MAY-2024	21-MAY-2024	MK
Tetrachloroethylene	21-MAY-2024	21-MAY-2024	MK
1,1,1,2-Tetrachloroethane	21-MAY-2024	21-MAY-2024	MK
Chlorobenzene	21-MAY-2024	21-MAY-2024	MK
Ethylbenzene	21-MAY-2024	21-MAY-2024	MK
m & p-Xylene	21-MAY-2024	21-MAY-2024	MK
Bromoform	21-MAY-2024	21-MAY-2024	MK
Styrene	21-MAY-2024	21-MAY-2024	MK
1,1,2,2-Tetrachloroethane	21-MAY-2024	21-MAY-2024	MK
o-Xylene	21-MAY-2024	21-MAY-2024	MK
1,3-Dichlorobenzene	21-MAY-2024	21-MAY-2024	MK
1,4-Dichlorobenzene	21-MAY-2024	21-MAY-2024	MK
1,2-Dichlorobenzene	21-MAY-2024	21-MAY-2024	MK
1,3-Dichloropropene	21-MAY-2024	21-MAY-2024	SYS
Xylenes (Total)	21-MAY-2024	21-MAY-2024	SYS
n-Hexane	21-MAY-2024	21-MAY-2024	MK
Toluene-d8	21-MAY-2024	21-MAY-2024	MK
4-Bromofluorobenzene	21-MAY-2024	21-MAY-2024	MK

5861556	**MW21**	**Water**	**13-MAY-2024**	**14-MAY-2024**

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Antimony	16-MAY-2024	16-MAY-2024	CC
Dissolved Arsenic	16-MAY-2024	16-MAY-2024	CC
Dissolved Barium	16-MAY-2024	16-MAY-2024	CC
Dissolved Beryllium	16-MAY-2024	16-MAY-2024	CC

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5861556	**MW21**	**Water**	**13-MAY-2024**	**14-MAY-2024**

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Boron	16-MAY-2024	16-MAY-2024	CC
Dissolved Cadmium	16-MAY-2024	16-MAY-2024	CC
Dissolved Chromium	16-MAY-2024	16-MAY-2024	CC
Dissolved Cobalt	16-MAY-2024	16-MAY-2024	CC
Dissolved Copper	16-MAY-2024	16-MAY-2024	CC
Dissolved Lead	16-MAY-2024	16-MAY-2024	CC
Dissolved Molybdenum	16-MAY-2024	16-MAY-2024	CC
Dissolved Nickel	16-MAY-2024	16-MAY-2024	CC
Dissolved Selenium	16-MAY-2024	16-MAY-2024	CC
Dissolved Silver	16-MAY-2024	16-MAY-2024	CC
Dissolved Thallium	16-MAY-2024	16-MAY-2024	CC
Dissolved Uranium	16-MAY-2024	16-MAY-2024	CC
Dissolved Vanadium	16-MAY-2024	16-MAY-2024	CC
Dissolved Zinc	16-MAY-2024	16-MAY-2024	CC

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	18-MAY-2024	18-MAY-2024	JJ
Acenaphthylene	18-MAY-2024	18-MAY-2024	JJ
Acenaphthene	18-MAY-2024	18-MAY-2024	JJ
Fluorene	18-MAY-2024	18-MAY-2024	JJ
Phenanthrene	18-MAY-2024	18-MAY-2024	JJ
Anthracene	18-MAY-2024	18-MAY-2024	JJ
Fluoranthene	18-MAY-2024	18-MAY-2024	JJ
Pyrene	18-MAY-2024	18-MAY-2024	JJ
Benzo(a)anthracene	18-MAY-2024	18-MAY-2024	JJ
Chrysene	18-MAY-2024	18-MAY-2024	JJ
Benzo(b)fluoranthene	18-MAY-2024	18-MAY-2024	JJ
Benzo(k)fluoranthene	18-MAY-2024	18-MAY-2024	JJ
Benzo(a)pyrene	18-MAY-2024	18-MAY-2024	JJ
Indeno(1,2,3-cd)pyrene	18-MAY-2024	18-MAY-2024	JJ
Dibenz(a,h)anthracene	18-MAY-2024	18-MAY-2024	JJ
Benzo(g,h,i)perylene	18-MAY-2024	18-MAY-2024	JJ
2-and 1-methyl Napthalene	18-MAY-2024	18-MAY-2024	SYS
Naphthalene-d8	18-MAY-2024	18-MAY-2024	JJ
Acridine-d9	18-MAY-2024	18-MAY-2024	JJ
Terphenyl-d14	18-MAY-2024	18-MAY-2024	JJ
Sediment	17-MAY-2024	17-MAY-2024	NH

Time Markers

AGAT WORK ORDER: 24Z150512

PROJECT: 31964.002

5835 COOPERS AVENUE
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CLIENT NAME: PINCHIN LTD. **ATTENTION TO: Alicia McDonald**

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5861556	**MW21**	**Water**	**13-MAY-2024**	**14-MAY-2024**

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	21-MAY-2024	21-MAY-2024	MK
F1 (C6 to C10) minus BTEX	21-MAY-2024	21-MAY-2024	SYS
Toluene-d8	21-MAY-2024	21-MAY-2024	MK
F2 (C10 to C16)	18-MAY-2024	18-MAY-2024	CA
F2 (C10 to C16) minus Naphthalene	18-MAY-2024	18-MAY-2024	SYS
F3 (C16 to C34)	18-MAY-2024	18-MAY-2024	CA
F3 (C16 to C34) minus PAHs	18-MAY-2024	18-MAY-2024	SYS
F4 (C34 to C50)	18-MAY-2024	18-MAY-2024	CA
Gravimetric Heavy Hydrocarbons			
Terphenyl	18-MAY-2024	18-MAY-2024	CA
Sediment	17-MAY-2024	17-MAY-2024	NH

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	21-MAY-2024	21-MAY-2024	MK
Vinyl Chloride	21-MAY-2024	21-MAY-2024	MK
Bromomethane	21-MAY-2024	21-MAY-2024	MK
Trichlorofluoromethane	21-MAY-2024	21-MAY-2024	MK
Acetone	21-MAY-2024	21-MAY-2024	MK
1,1-Dichloroethylene	21-MAY-2024	21-MAY-2024	MK
Methylene Chloride	21-MAY-2024	21-MAY-2024	MK
trans- 1,2-Dichloroethylene	21-MAY-2024	21-MAY-2024	MK
Methyl tert-butyl ether	21-MAY-2024	21-MAY-2024	MK
1,1-Dichloroethane	21-MAY-2024	21-MAY-2024	MK
Methyl Ethyl Ketone	21-MAY-2024	21-MAY-2024	MK
cis- 1,2-Dichloroethylene	21-MAY-2024	21-MAY-2024	MK
Chloroform	21-MAY-2024	21-MAY-2024	MK
1,2-Dichloroethane	21-MAY-2024	21-MAY-2024	MK
1,1,1-Trichloroethane	21-MAY-2024	21-MAY-2024	MK
Carbon Tetrachloride	21-MAY-2024	21-MAY-2024	MK
Benzene	21-MAY-2024	21-MAY-2024	MK
1,2-Dichloropropane	21-MAY-2024	21-MAY-2024	MK
Trichloroethylene	21-MAY-2024	21-MAY-2024	MK
Bromodichloromethane	21-MAY-2024	21-MAY-2024	MK
Methyl Isobutyl Ketone	21-MAY-2024	21-MAY-2024	MK
1,1,2-Trichloroethane	21-MAY-2024	21-MAY-2024	MK
Toluene	21-MAY-2024	21-MAY-2024	MK
Dibromochloromethane	21-MAY-2024	21-MAY-2024	MK
Ethylene Dibromide	21-MAY-2024	21-MAY-2024	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5861556	**MW21**	**Water**	**13-MAY-2024**	**14-MAY-2024**

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Tetrachloroethylene	21-MAY-2024	21-MAY-2024	MK
1,1,1,2-Tetrachloroethane	21-MAY-2024	21-MAY-2024	MK
Chlorobenzene	21-MAY-2024	21-MAY-2024	MK
Ethylbenzene	21-MAY-2024	21-MAY-2024	MK
m & p-Xylene	21-MAY-2024	21-MAY-2024	MK
Bromoform	21-MAY-2024	21-MAY-2024	MK
Styrene	21-MAY-2024	21-MAY-2024	MK
1,1,2,2-Tetrachloroethane	21-MAY-2024	21-MAY-2024	MK
o-Xylene	21-MAY-2024	21-MAY-2024	MK
1,3-Dichlorobenzene	21-MAY-2024	21-MAY-2024	MK
1,4-Dichlorobenzene	21-MAY-2024	21-MAY-2024	MK
1,2-Dichlorobenzene	21-MAY-2024	21-MAY-2024	MK
1,3-Dichloropropene	21-MAY-2024	21-MAY-2024	SYS
Xylenes (Total)	21-MAY-2024	21-MAY-2024	SYS
n-Hexane	21-MAY-2024	21-MAY-2024	MK
Toluene-d8	21-MAY-2024	21-MAY-2024	MK
4-Bromofluorobenzene	21-MAY-2024	21-MAY-2024	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5861603	**MW6**	**Water**	**13-MAY-2024**	**14-MAY-2024**

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	18-MAY-2024	18-MAY-2024	JJ
Acenaphthylene	18-MAY-2024	18-MAY-2024	JJ
Acenaphthene	18-MAY-2024	18-MAY-2024	JJ
Fluorene	18-MAY-2024	18-MAY-2024	JJ
Phenanthrene	18-MAY-2024	18-MAY-2024	JJ
Anthracene	18-MAY-2024	18-MAY-2024	JJ
Fluoranthene	18-MAY-2024	18-MAY-2024	JJ
Pyrene	18-MAY-2024	18-MAY-2024	JJ
Benzo(a)anthracene	18-MAY-2024	18-MAY-2024	JJ
Chrysene	18-MAY-2024	18-MAY-2024	JJ
Benzo(b)fluoranthene	18-MAY-2024	18-MAY-2024	JJ
Benzo(k)fluoranthene	18-MAY-2024	18-MAY-2024	JJ
Benzo(a)pyrene	18-MAY-2024	18-MAY-2024	JJ
Indeno(1,2,3-cd)pyrene	18-MAY-2024	18-MAY-2024	JJ
Dibenz(a,h)anthracene	18-MAY-2024	18-MAY-2024	JJ
Benzo(g,h,i)perylene	18-MAY-2024	18-MAY-2024	JJ
2-and 1-methyl Napthalene	18-MAY-2024	18-MAY-2024	SYS

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5861603	**MW6**	**Water**	**13-MAY-2024**	**14-MAY-2024**

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene-d8	18-MAY-2024	18-MAY-2024	JJ
Acridine-d9	18-MAY-2024	18-MAY-2024	JJ
Terphenyl-d14	18-MAY-2024	18-MAY-2024	JJ
Sediment	17-MAY-2024	17-MAY-2024	NH

O. Reg. 153(511) - PCBs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Polychlorinated Biphenyls	17-MAY-2024	17-MAY-2024	LSP
Decachlorobiphenyl	17-MAY-2024	17-MAY-2024	LSP

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	21-MAY-2024	21-MAY-2024	MK
F1 (C6 to C10) minus BTEX	21-MAY-2024	21-MAY-2024	SYS
Toluene-d8	21-MAY-2024	21-MAY-2024	MK
F2 (C10 to C16)	18-MAY-2024	18-MAY-2024	CA
F2 (C10 to C16) minus Naphthalene	18-MAY-2024	18-MAY-2024	SYS
F3 (C16 to C34)	18-MAY-2024	18-MAY-2024	CA
F3 (C16 to C34) minus PAHs	18-MAY-2024	18-MAY-2024	SYS
F4 (C34 to C50)	18-MAY-2024	18-MAY-2024	CA
Gravimetric Heavy Hydrocarbons			
Terphenyl	18-MAY-2024	18-MAY-2024	CA
Sediment	17-MAY-2024	17-MAY-2024	NH

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	21-MAY-2024	21-MAY-2024	MK
Vinyl Chloride	21-MAY-2024	21-MAY-2024	MK
Bromomethane	21-MAY-2024	21-MAY-2024	MK
Trichlorofluoromethane	21-MAY-2024	21-MAY-2024	MK
Acetone	21-MAY-2024	21-MAY-2024	MK
1,1-Dichloroethylene	21-MAY-2024	21-MAY-2024	MK
Methylene Chloride	21-MAY-2024	21-MAY-2024	MK
trans- 1,2-Dichloroethylene	21-MAY-2024	21-MAY-2024	MK
Methyl tert-butyl ether	21-MAY-2024	21-MAY-2024	MK
1,1-Dichloroethane	21-MAY-2024	21-MAY-2024	MK
Methyl Ethyl Ketone	21-MAY-2024	21-MAY-2024	MK
cis- 1,2-Dichloroethylene	21-MAY-2024	21-MAY-2024	MK
Chloroform	21-MAY-2024	21-MAY-2024	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5861603	**MW6**	**Water**	**13-MAY-2024**	**14-MAY-2024**

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
1,2-Dichloroethane	21-MAY-2024	21-MAY-2024	MK
1,1,1-Trichloroethane	21-MAY-2024	21-MAY-2024	MK
Carbon Tetrachloride	21-MAY-2024	21-MAY-2024	MK
Benzene	21-MAY-2024	21-MAY-2024	MK
1,2-Dichloropropane	21-MAY-2024	21-MAY-2024	MK
Trichloroethylene	21-MAY-2024	21-MAY-2024	MK
Bromodichloromethane	21-MAY-2024	21-MAY-2024	MK
Methyl Isobutyl Ketone	21-MAY-2024	21-MAY-2024	MK
1,1,2-Trichloroethane	21-MAY-2024	21-MAY-2024	MK
Toluene	21-MAY-2024	21-MAY-2024	MK
Dibromochloromethane	21-MAY-2024	21-MAY-2024	MK
Ethylene Dibromide	21-MAY-2024	21-MAY-2024	MK
Tetrachloroethylene	21-MAY-2024	21-MAY-2024	MK
1,1,1,2-Tetrachloroethane	21-MAY-2024	21-MAY-2024	MK
Chlorobenzene	21-MAY-2024	21-MAY-2024	MK
Ethylbenzene	21-MAY-2024	21-MAY-2024	MK
m & p-Xylene	21-MAY-2024	21-MAY-2024	MK
Bromoform	21-MAY-2024	21-MAY-2024	MK
Styrene	21-MAY-2024	21-MAY-2024	MK
1,1,2,2-Tetrachloroethane	21-MAY-2024	21-MAY-2024	MK
o-Xylene	21-MAY-2024	21-MAY-2024	MK
1,3-Dichlorobenzene	21-MAY-2024	21-MAY-2024	MK
1,4-Dichlorobenzene	21-MAY-2024	21-MAY-2024	MK
1,2-Dichlorobenzene	21-MAY-2024	21-MAY-2024	MK
1,3-Dichloropropene	21-MAY-2024	21-MAY-2024	SYS
Xylenes (Total)	21-MAY-2024	21-MAY-2024	SYS
n-Hexane	21-MAY-2024	21-MAY-2024	MK
Toluene-d8	21-MAY-2024	21-MAY-2024	MK
4-Bromofluorobenzene	21-MAY-2024	21-MAY-2024	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5861620	**MW2**	**Water**	**13-MAY-2024**	**14-MAY-2024**

O. Reg. 153(511) - All Metals (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Antimony	16-MAY-2024	16-MAY-2024	CC
Dissolved Arsenic	16-MAY-2024	16-MAY-2024	CC
Dissolved Barium	16-MAY-2024	16-MAY-2024	CC
Dissolved Beryllium	16-MAY-2024	16-MAY-2024	CC
Dissolved Boron	16-MAY-2024	16-MAY-2024	CC

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5861620	**MW2**	**Water**	**13-MAY-2024**	**14-MAY-2024**

O. Reg. 153(511) - All Metals (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Cadmium	16-MAY-2024	16-MAY-2024	CC
Dissolved Chromium	16-MAY-2024	16-MAY-2024	CC
Dissolved Cobalt	16-MAY-2024	16-MAY-2024	CC
Dissolved Copper	16-MAY-2024	16-MAY-2024	CC
Dissolved Lead	16-MAY-2024	16-MAY-2024	CC
Dissolved Molybdenum	16-MAY-2024	16-MAY-2024	CC
Dissolved Nickel	16-MAY-2024	16-MAY-2024	CC
Dissolved Selenium	16-MAY-2024	16-MAY-2024	CC
Dissolved Silver	16-MAY-2024	16-MAY-2024	CC
Dissolved Thallium	16-MAY-2024	16-MAY-2024	CC
Dissolved Uranium	16-MAY-2024	16-MAY-2024	CC
Dissolved Vanadium	16-MAY-2024	16-MAY-2024	CC
Dissolved Zinc	16-MAY-2024	16-MAY-2024	CC
Mercury	17-MAY-2024	17-MAY-2024	DL
Chromium VI	16-MAY-2024	16-MAY-2024	WZ

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	18-MAY-2024	18-MAY-2024	JJ
Acenaphthylene	18-MAY-2024	18-MAY-2024	JJ
Acenaphthene	18-MAY-2024	18-MAY-2024	JJ
Fluorene	18-MAY-2024	18-MAY-2024	JJ
Phenanthrene	18-MAY-2024	18-MAY-2024	JJ
Anthracene	18-MAY-2024	18-MAY-2024	JJ
Fluoranthene	18-MAY-2024	18-MAY-2024	JJ
Pyrene	18-MAY-2024	18-MAY-2024	JJ
Benzo(a)anthracene	18-MAY-2024	18-MAY-2024	JJ
Chrysene	18-MAY-2024	18-MAY-2024	JJ
Benzo(b)fluoranthene	18-MAY-2024	18-MAY-2024	JJ
Benzo(k)fluoranthene	18-MAY-2024	18-MAY-2024	JJ
Benzo(a)pyrene	18-MAY-2024	18-MAY-2024	JJ
Indeno(1,2,3-cd)pyrene	18-MAY-2024	18-MAY-2024	JJ
Dibenz(a,h)anthracene	18-MAY-2024	18-MAY-2024	JJ
Benzo(g,h,i)perylene	18-MAY-2024	18-MAY-2024	JJ
2-and 1-methyl Napthalene	18-MAY-2024	18-MAY-2024	SYS
Naphthalene-d8	18-MAY-2024	18-MAY-2024	JJ
Acridine-d9	18-MAY-2024	18-MAY-2024	JJ
Terphenyl-d14	18-MAY-2024	18-MAY-2024	JJ
Sediment	17-MAY-2024	17-MAY-2024	NH

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5861620	**MW2**	**Water**	**13-MAY-2024**	**14-MAY-2024**

O. Reg. 153(511) - PCBs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Polychlorinated Biphenyls	17-MAY-2024	17-MAY-2024	LSP
Decachlorobiphenyl	17-MAY-2024	17-MAY-2024	LSP

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	21-MAY-2024	21-MAY-2024	MK
F1 (C6 to C10) minus BTEX	21-MAY-2024	21-MAY-2024	SYS
Toluene-d8	21-MAY-2024	21-MAY-2024	MK
F2 (C10 to C16)	18-MAY-2024	18-MAY-2024	CA
F2 (C10 to C16) minus Naphthalene	18-MAY-2024	18-MAY-2024	SYS
F3 (C16 to C34)	18-MAY-2024	18-MAY-2024	CA
F3 (C16 to C34) minus PAHs	18-MAY-2024	18-MAY-2024	SYS
F4 (C34 to C50)	18-MAY-2024	18-MAY-2024	CA
Gravimetric Heavy Hydrocarbons			
Terphenyl	18-MAY-2024	18-MAY-2024	CA
Sediment	17-MAY-2024	17-MAY-2024	NH

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	21-MAY-2024	21-MAY-2024	MK
Vinyl Chloride	21-MAY-2024	21-MAY-2024	MK
Bromomethane	21-MAY-2024	21-MAY-2024	MK
Trichlorofluoromethane	21-MAY-2024	21-MAY-2024	MK
Acetone	21-MAY-2024	21-MAY-2024	MK
1,1-Dichloroethylene	21-MAY-2024	21-MAY-2024	MK
Methylene Chloride	21-MAY-2024	21-MAY-2024	MK
trans- 1,2-Dichloroethylene	21-MAY-2024	21-MAY-2024	MK
Methyl tert-butyl ether	21-MAY-2024	21-MAY-2024	MK
1,1-Dichloroethane	21-MAY-2024	21-MAY-2024	MK
Methyl Ethyl Ketone	21-MAY-2024	21-MAY-2024	MK
cis- 1,2-Dichloroethylene	21-MAY-2024	21-MAY-2024	MK
Chloroform	21-MAY-2024	21-MAY-2024	MK
1,2-Dichloroethane	21-MAY-2024	21-MAY-2024	MK
1,1,1-Trichloroethane	21-MAY-2024	21-MAY-2024	MK
Carbon Tetrachloride	21-MAY-2024	21-MAY-2024	MK
Benzene	21-MAY-2024	21-MAY-2024	MK
1,2-Dichloropropane	21-MAY-2024	21-MAY-2024	MK
Trichloroethylene	21-MAY-2024	21-MAY-2024	MK
Bromodichloromethane	21-MAY-2024	21-MAY-2024	MK

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Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5861620	**MW2**	**Water**	**13-MAY-2024**	**14-MAY-2024**

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Methyl Isobutyl Ketone	21-MAY-2024	21-MAY-2024	MK
1,1,2-Trichloroethane	21-MAY-2024	21-MAY-2024	MK
Toluene	21-MAY-2024	21-MAY-2024	MK
Dibromochloromethane	21-MAY-2024	21-MAY-2024	MK
Ethylene Dibromide	21-MAY-2024	21-MAY-2024	MK
Tetrachloroethylene	21-MAY-2024	21-MAY-2024	MK
1,1,1,2-Tetrachloroethane	21-MAY-2024	21-MAY-2024	MK
Chlorobenzene	21-MAY-2024	21-MAY-2024	MK
Ethylbenzene	21-MAY-2024	21-MAY-2024	MK
m & p-Xylene	21-MAY-2024	21-MAY-2024	MK
Bromoform	21-MAY-2024	21-MAY-2024	MK
Styrene	21-MAY-2024	21-MAY-2024	MK
1,1,2,2-Tetrachloroethane	21-MAY-2024	21-MAY-2024	MK
o-Xylene	21-MAY-2024	21-MAY-2024	MK
1,3-Dichlorobenzene	21-MAY-2024	21-MAY-2024	MK
1,4-Dichlorobenzene	21-MAY-2024	21-MAY-2024	MK
1,2-Dichlorobenzene	21-MAY-2024	21-MAY-2024	MK
1,3-Dichloropropene	21-MAY-2024	21-MAY-2024	SYS
Xylenes (Total)	21-MAY-2024	21-MAY-2024	SYS
n-Hexane	21-MAY-2024	21-MAY-2024	MK
Toluene-d8	21-MAY-2024	21-MAY-2024	MK
4-Bromofluorobenzene	21-MAY-2024	21-MAY-2024	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5861624	**MW1**	**Water**	**13-MAY-2024**	**14-MAY-2024**

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Antimony	16-MAY-2024	16-MAY-2024	CC
Dissolved Arsenic	16-MAY-2024	16-MAY-2024	CC
Dissolved Barium	16-MAY-2024	16-MAY-2024	CC
Dissolved Beryllium	16-MAY-2024	16-MAY-2024	CC
Dissolved Boron	16-MAY-2024	16-MAY-2024	CC
Dissolved Cadmium	16-MAY-2024	16-MAY-2024	CC
Dissolved Chromium	16-MAY-2024	16-MAY-2024	CC
Dissolved Cobalt	16-MAY-2024	16-MAY-2024	CC
Dissolved Copper	16-MAY-2024	16-MAY-2024	CC
Dissolved Lead	16-MAY-2024	16-MAY-2024	CC
Dissolved Molybdenum	16-MAY-2024	16-MAY-2024	CC
Dissolved Nickel	16-MAY-2024	16-MAY-2024	CC

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5861624	MW1	Water	13-MAY-2024	14-MAY-2024

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Selenium	16-MAY-2024	16-MAY-2024	CC
Dissolved Silver	16-MAY-2024	16-MAY-2024	CC
Dissolved Thallium	16-MAY-2024	16-MAY-2024	CC
Dissolved Uranium	16-MAY-2024	16-MAY-2024	CC
Dissolved Vanadium	16-MAY-2024	16-MAY-2024	CC
Dissolved Zinc	16-MAY-2024	16-MAY-2024	CC

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	18-MAY-2024	18-MAY-2024	JJ
Acenaphthylene	18-MAY-2024	18-MAY-2024	JJ
Acenaphthene	18-MAY-2024	18-MAY-2024	JJ
Fluorene	18-MAY-2024	18-MAY-2024	JJ
Phenanthrene	18-MAY-2024	18-MAY-2024	JJ
Anthracene	18-MAY-2024	18-MAY-2024	JJ
Fluoranthene	18-MAY-2024	18-MAY-2024	JJ
Pyrene	18-MAY-2024	18-MAY-2024	JJ
Benzo(a)anthracene	18-MAY-2024	18-MAY-2024	JJ
Chrysene	18-MAY-2024	18-MAY-2024	JJ
Benzo(b)fluoranthene	18-MAY-2024	18-MAY-2024	JJ
Benzo(k)fluoranthene	18-MAY-2024	18-MAY-2024	JJ
Benzo(a)pyrene	18-MAY-2024	18-MAY-2024	JJ
Indeno(1,2,3-cd)pyrene	18-MAY-2024	18-MAY-2024	JJ
Dibenz(a,h)anthracene	18-MAY-2024	18-MAY-2024	JJ
Benzo(g,h,i)perylene	18-MAY-2024	18-MAY-2024	JJ
2-and 1-methyl Napthalene	18-MAY-2024	18-MAY-2024	SYS
Naphthalene-d8	18-MAY-2024	18-MAY-2024	JJ
Acridine-d9	18-MAY-2024	18-MAY-2024	JJ
Terphenyl-d14	18-MAY-2024	18-MAY-2024	JJ
Sediment	17-MAY-2024	17-MAY-2024	NH

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	21-MAY-2024	21-MAY-2024	MK
F1 (C6 to C10) minus BTEX	21-MAY-2024	21-MAY-2024	SYS
Toluene-d8	21-MAY-2024	21-MAY-2024	MK
F2 (C10 to C16)	19-MAY-2024	19-MAY-2024	CA
F2 (C10 to C16) minus Naphthalene	19-MAY-2024	19-MAY-2024	SYS
F3 (C16 to C34)	19-MAY-2024	19-MAY-2024	CA

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5861624	**MW1**	**Water**	**13-MAY-2024**	**14-MAY-2024**

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
F3 (C16 to C34) minus PAHs	19-MAY-2024	19-MAY-2024	SYS
F4 (C34 to C50)	19-MAY-2024	19-MAY-2024	CA
Gravimetric Heavy Hydrocarbons			
Terphenyl	19-MAY-2024	19-MAY-2024	CA
Sediment	17-MAY-2024	17-MAY-2024	NH

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	21-MAY-2024	21-MAY-2024	MK
Vinyl Chloride	21-MAY-2024	21-MAY-2024	MK
Bromomethane	21-MAY-2024	21-MAY-2024	MK
Trichlorofluoromethane	21-MAY-2024	21-MAY-2024	MK
Acetone	21-MAY-2024	21-MAY-2024	MK
1,1-Dichloroethylene	21-MAY-2024	21-MAY-2024	MK
Methylene Chloride	21-MAY-2024	21-MAY-2024	MK
trans- 1,2-Dichloroethylene	21-MAY-2024	21-MAY-2024	MK
Methyl tert-butyl ether	21-MAY-2024	21-MAY-2024	MK
1,1-Dichloroethane	21-MAY-2024	21-MAY-2024	MK
Methyl Ethyl Ketone	21-MAY-2024	21-MAY-2024	MK
cis- 1,2-Dichloroethylene	21-MAY-2024	21-MAY-2024	MK
Chloroform	21-MAY-2024	21-MAY-2024	MK
1,2-Dichloroethane	21-MAY-2024	21-MAY-2024	MK
1,1,1-Trichloroethane	21-MAY-2024	21-MAY-2024	MK
Carbon Tetrachloride	21-MAY-2024	21-MAY-2024	MK
Benzene	21-MAY-2024	21-MAY-2024	MK
1,2-Dichloropropane	21-MAY-2024	21-MAY-2024	MK
Trichloroethylene	21-MAY-2024	21-MAY-2024	MK
Bromodichloromethane	21-MAY-2024	21-MAY-2024	MK
Methyl Isobutyl Ketone	21-MAY-2024	21-MAY-2024	MK
1,1,2-Trichloroethane	21-MAY-2024	21-MAY-2024	MK
Toluene	21-MAY-2024	21-MAY-2024	MK
Dibromochloromethane	21-MAY-2024	21-MAY-2024	MK
Ethylene Dibromide	21-MAY-2024	21-MAY-2024	MK
Tetrachloroethylene	21-MAY-2024	21-MAY-2024	MK
1,1,1,2-Tetrachloroethane	21-MAY-2024	21-MAY-2024	MK
Chlorobenzene	21-MAY-2024	21-MAY-2024	MK
Ethylbenzene	21-MAY-2024	21-MAY-2024	MK
m & p-Xylene	21-MAY-2024	21-MAY-2024	MK
Bromoform	21-MAY-2024	21-MAY-2024	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5861624	**MW1**	**Water**	**13-MAY-2024**	**14-MAY-2024**

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Styrene	21-MAY-2024	21-MAY-2024	MK
1,1,2,2-Tetrachloroethane	21-MAY-2024	21-MAY-2024	MK
o-Xylene	21-MAY-2024	21-MAY-2024	MK
1,3-Dichlorobenzene	21-MAY-2024	21-MAY-2024	MK
1,4-Dichlorobenzene	21-MAY-2024	21-MAY-2024	MK
1,2-Dichlorobenzene	21-MAY-2024	21-MAY-2024	MK
1,3-Dichloropropene	21-MAY-2024	21-MAY-2024	SYS
Xylenes (Total)	21-MAY-2024	21-MAY-2024	SYS
n-Hexane	21-MAY-2024	21-MAY-2024	MK
Toluene-d8	21-MAY-2024	21-MAY-2024	MK
4-Bromofluorobenzene	21-MAY-2024	21-MAY-2024	MK

5861636	**DUP1**	**Water**	**13-MAY-2024**	**14-MAY-2024**

O. Reg. 153(511) - All Metals (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Antimony	16-MAY-2024	16-MAY-2024	CC
Dissolved Arsenic	16-MAY-2024	16-MAY-2024	CC
Dissolved Barium	16-MAY-2024	16-MAY-2024	CC
Dissolved Beryllium	16-MAY-2024	16-MAY-2024	CC
Dissolved Boron	16-MAY-2024	16-MAY-2024	CC
Dissolved Cadmium	16-MAY-2024	16-MAY-2024	CC
Dissolved Chromium	16-MAY-2024	16-MAY-2024	CC
Dissolved Cobalt	16-MAY-2024	16-MAY-2024	CC
Dissolved Copper	16-MAY-2024	16-MAY-2024	CC
Dissolved Lead	16-MAY-2024	16-MAY-2024	CC
Dissolved Molybdenum	16-MAY-2024	16-MAY-2024	CC
Dissolved Nickel	16-MAY-2024	16-MAY-2024	CC
Dissolved Selenium	16-MAY-2024	16-MAY-2024	CC
Dissolved Silver	16-MAY-2024	16-MAY-2024	CC
Dissolved Thallium	16-MAY-2024	16-MAY-2024	CC
Dissolved Uranium	16-MAY-2024	16-MAY-2024	CC
Dissolved Vanadium	16-MAY-2024	16-MAY-2024	CC
Dissolved Zinc	16-MAY-2024	16-MAY-2024	CC
Mercury	17-MAY-2024	17-MAY-2024	DL
Chromium VI	16-MAY-2024	16-MAY-2024	WZ

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5861636	**DUP1**	**Water**	**13-MAY-2024**	**14-MAY-2024**

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	18-MAY-2024	18-MAY-2024	JJ
Acenaphthylene	18-MAY-2024	18-MAY-2024	JJ
Acenaphthene	18-MAY-2024	18-MAY-2024	JJ
Fluorene	18-MAY-2024	18-MAY-2024	JJ
Phenanthrene	18-MAY-2024	18-MAY-2024	JJ
Anthracene	18-MAY-2024	18-MAY-2024	JJ
Fluoranthene	18-MAY-2024	18-MAY-2024	JJ
Pyrene	18-MAY-2024	18-MAY-2024	JJ
Benzo(a)anthracene	18-MAY-2024	18-MAY-2024	JJ
Chrysene	18-MAY-2024	18-MAY-2024	JJ
Benzo(b)fluoranthene	18-MAY-2024	18-MAY-2024	JJ
Benzo(k)fluoranthene	18-MAY-2024	18-MAY-2024	JJ
Benzo(a)pyrene	18-MAY-2024	18-MAY-2024	JJ
Indeno(1,2,3-cd)pyrene	18-MAY-2024	18-MAY-2024	JJ
Dibenz(a,h)anthracene	18-MAY-2024	18-MAY-2024	JJ
Benzo(g,h,i)perylene	18-MAY-2024	18-MAY-2024	JJ
2-and 1-methyl Napthalene	18-MAY-2024	18-MAY-2024	SYS
Naphthalene-d8	18-MAY-2024	18-MAY-2024	JJ
Acridine-d9	18-MAY-2024	18-MAY-2024	JJ
Terphenyl-d14	18-MAY-2024	18-MAY-2024	JJ
Sediment	17-MAY-2024	17-MAY-2024	NH

O. Reg. 153(511) - PCBs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Polychlorinated Biphenyls	17-MAY-2024	17-MAY-2024	LSP
Decachlorobiphenyl	17-MAY-2024	17-MAY-2024	LSP

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	21-MAY-2024	21-MAY-2024	MK
F1 (C6 to C10) minus BTEX	21-MAY-2024	21-MAY-2024	SYS
Toluene-d8	21-MAY-2024	21-MAY-2024	MK
F2 (C10 to C16)	19-MAY-2024	19-MAY-2024	CA
F2 (C10 to C16) minus Naphthalene	19-MAY-2024	19-MAY-2024	SYS
F3 (C16 to C34)	19-MAY-2024	19-MAY-2024	CA
F3 (C16 to C34) minus PAHs	19-MAY-2024	19-MAY-2024	SYS
F4 (C34 to C50)	19-MAY-2024	19-MAY-2024	CA
Gravimetric Heavy Hydrocarbons			
Terphenyl	19-MAY-2024	19-MAY-2024	CA

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5861636	**DUP1**	**Water**	**13-MAY-2024**	**14-MAY-2024**

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Sediment	17-MAY-2024	17-MAY-2024	NH

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	21-MAY-2024	21-MAY-2024	MK
Vinyl Chloride	21-MAY-2024	21-MAY-2024	MK
Bromomethane	21-MAY-2024	21-MAY-2024	MK
Trichlorofluoromethane	21-MAY-2024	21-MAY-2024	MK
Acetone	21-MAY-2024	21-MAY-2024	MK
1,1-Dichloroethylene	21-MAY-2024	21-MAY-2024	MK
Methylene Chloride	21-MAY-2024	21-MAY-2024	MK
trans- 1,2-Dichloroethylene	21-MAY-2024	21-MAY-2024	MK
Methyl tert-butyl ether	21-MAY-2024	21-MAY-2024	MK
1,1-Dichloroethane	21-MAY-2024	21-MAY-2024	MK
Methyl Ethyl Ketone	21-MAY-2024	21-MAY-2024	MK
cis- 1,2-Dichloroethylene	21-MAY-2024	21-MAY-2024	MK
Chloroform	21-MAY-2024	21-MAY-2024	MK
1,2-Dichloroethane	21-MAY-2024	21-MAY-2024	MK
1,1,1-Trichloroethane	21-MAY-2024	21-MAY-2024	MK
Carbon Tetrachloride	21-MAY-2024	21-MAY-2024	MK
Benzene	21-MAY-2024	21-MAY-2024	MK
1,2-Dichloropropane	21-MAY-2024	21-MAY-2024	MK
Trichloroethylene	21-MAY-2024	21-MAY-2024	MK
Bromodichloromethane	21-MAY-2024	21-MAY-2024	MK
Methyl Isobutyl Ketone	21-MAY-2024	21-MAY-2024	MK
1,1,2-Trichloroethane	21-MAY-2024	21-MAY-2024	MK
Toluene	21-MAY-2024	21-MAY-2024	MK
Dibromochloromethane	21-MAY-2024	21-MAY-2024	MK
Ethylene Dibromide	21-MAY-2024	21-MAY-2024	MK
Tetrachloroethylene	21-MAY-2024	21-MAY-2024	MK
1,1,1,2-Tetrachloroethane	21-MAY-2024	21-MAY-2024	MK
Chlorobenzene	21-MAY-2024	21-MAY-2024	MK
Ethylbenzene	21-MAY-2024	21-MAY-2024	MK
m & p-Xylene	21-MAY-2024	21-MAY-2024	MK
Bromoform	21-MAY-2024	21-MAY-2024	MK
Styrene	21-MAY-2024	21-MAY-2024	MK
1,1,2,2-Tetrachloroethane	21-MAY-2024	21-MAY-2024	MK
o-Xylene	21-MAY-2024	21-MAY-2024	MK
1,3-Dichlorobenzene	21-MAY-2024	21-MAY-2024	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5861636	**DUP1**	**Water**	**13-MAY-2024**	**14-MAY-2024**

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
1,4-Dichlorobenzene	21-MAY-2024	21-MAY-2024	MK
1,2-Dichlorobenzene	21-MAY-2024	21-MAY-2024	MK
1,3-Dichloropropene	21-MAY-2024	21-MAY-2024	SYS
Xylenes (Total)	21-MAY-2024	21-MAY-2024	SYS
n-Hexane	21-MAY-2024	21-MAY-2024	MK
Toluene-d8	21-MAY-2024	21-MAY-2024	MK
4-Bromofluorobenzene	21-MAY-2024	21-MAY-2024	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5861638	**MW9**	**Water**	**13-MAY-2024**	**14-MAY-2024**

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Antimony	16-MAY-2024	16-MAY-2024	CC
Dissolved Arsenic	16-MAY-2024	16-MAY-2024	CC
Dissolved Barium	16-MAY-2024	16-MAY-2024	CC
Dissolved Beryllium	16-MAY-2024	16-MAY-2024	CC
Dissolved Boron	16-MAY-2024	16-MAY-2024	CC
Dissolved Cadmium	16-MAY-2024	16-MAY-2024	CC
Dissolved Chromium	16-MAY-2024	16-MAY-2024	CC
Dissolved Cobalt	16-MAY-2024	16-MAY-2024	CC
Dissolved Copper	16-MAY-2024	16-MAY-2024	CC
Dissolved Lead	16-MAY-2024	16-MAY-2024	CC
Dissolved Molybdenum	16-MAY-2024	16-MAY-2024	CC
Dissolved Nickel	16-MAY-2024	16-MAY-2024	CC
Dissolved Selenium	16-MAY-2024	16-MAY-2024	CC
Dissolved Silver	16-MAY-2024	16-MAY-2024	CC
Dissolved Thallium	16-MAY-2024	16-MAY-2024	CC
Dissolved Uranium	16-MAY-2024	16-MAY-2024	CC
Dissolved Vanadium	16-MAY-2024	16-MAY-2024	CC
Dissolved Zinc	16-MAY-2024	16-MAY-2024	CC

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	18-MAY-2024	18-MAY-2024	JJ
Acenaphthylene	18-MAY-2024	18-MAY-2024	JJ
Acenaphthene	18-MAY-2024	18-MAY-2024	JJ
Fluorene	18-MAY-2024	18-MAY-2024	JJ
Phenanthrene	18-MAY-2024	18-MAY-2024	JJ
Anthracene	18-MAY-2024	18-MAY-2024	JJ

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5861638	**MW9**	**Water**	**13-MAY-2024**	**14-MAY-2024**

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Fluoranthene	18-MAY-2024	18-MAY-2024	JJ
Pyrene	18-MAY-2024	18-MAY-2024	JJ
Benzo(a)anthracene	18-MAY-2024	18-MAY-2024	JJ
Chrysene	18-MAY-2024	18-MAY-2024	JJ
Benzo(b)fluoranthene	18-MAY-2024	18-MAY-2024	JJ
Benzo(k)fluoranthene	18-MAY-2024	18-MAY-2024	JJ
Benzo(a)pyrene	18-MAY-2024	18-MAY-2024	JJ
Indeno(1,2,3-cd)pyrene	18-MAY-2024	18-MAY-2024	JJ
Dibenz(a,h)anthracene	18-MAY-2024	18-MAY-2024	JJ
Benzo(g,h,i)perylene	18-MAY-2024	18-MAY-2024	JJ
2-and 1-methyl Napthalene	18-MAY-2024	18-MAY-2024	SYS
Naphthalene-d8	18-MAY-2024	18-MAY-2024	JJ
Acridine-d9	18-MAY-2024	18-MAY-2024	JJ
Terphenyl-d14	18-MAY-2024	18-MAY-2024	JJ
Sediment	17-MAY-2024	17-MAY-2024	NH

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	21-MAY-2024	21-MAY-2024	MK
F1 (C6 to C10) minus BTEX	21-MAY-2024	21-MAY-2024	SYS
Toluene-d8	21-MAY-2024	21-MAY-2024	MK
F2 (C10 to C16)	19-MAY-2024	19-MAY-2024	CA
F2 (C10 to C16) minus Naphthalene	19-MAY-2024	19-MAY-2024	SYS
F3 (C16 to C34)	19-MAY-2024	19-MAY-2024	CA
F3 (C16 to C34) minus PAHs	19-MAY-2024	19-MAY-2024	SYS
F4 (C34 to C50)	19-MAY-2024	19-MAY-2024	CA
Gravimetric Heavy Hydrocarbons			
Terphenyl	19-MAY-2024	19-MAY-2024	CA
Sediment	17-MAY-2024	17-MAY-2024	NH

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	21-MAY-2024	21-MAY-2024	MK
Vinyl Chloride	21-MAY-2024	21-MAY-2024	MK
Bromomethane	21-MAY-2024	21-MAY-2024	MK
Trichlorofluoromethane	21-MAY-2024	21-MAY-2024	MK
Acetone	21-MAY-2024	21-MAY-2024	MK
1,1-Dichloroethylene	21-MAY-2024	21-MAY-2024	MK
Methylene Chloride	21-MAY-2024	21-MAY-2024	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5861638	**MW9**	**Water**	**13-MAY-2024**	**14-MAY-2024**

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
trans- 1,2-Dichloroethylene	21-MAY-2024	21-MAY-2024	MK
Methyl tert-butyl ether	21-MAY-2024	21-MAY-2024	MK
1,1-Dichloroethane	21-MAY-2024	21-MAY-2024	MK
Methyl Ethyl Ketone	21-MAY-2024	21-MAY-2024	MK
cis- 1,2-Dichloroethylene	21-MAY-2024	21-MAY-2024	MK
Chloroform	21-MAY-2024	21-MAY-2024	MK
1,2-Dichloroethane	21-MAY-2024	21-MAY-2024	MK
1,1,1-Trichloroethane	21-MAY-2024	21-MAY-2024	MK
Carbon Tetrachloride	21-MAY-2024	21-MAY-2024	MK
Benzene	21-MAY-2024	21-MAY-2024	MK
1,2-Dichloropropane	21-MAY-2024	21-MAY-2024	MK
Trichloroethylene	21-MAY-2024	21-MAY-2024	MK
Bromodichloromethane	21-MAY-2024	21-MAY-2024	MK
Methyl Isobutyl Ketone	21-MAY-2024	21-MAY-2024	MK
1,1,2-Trichloroethane	21-MAY-2024	21-MAY-2024	MK
Toluene	21-MAY-2024	21-MAY-2024	MK
Dibromochloromethane	21-MAY-2024	21-MAY-2024	MK
Ethylene Dibromide	21-MAY-2024	21-MAY-2024	MK
Tetrachloroethylene	21-MAY-2024	21-MAY-2024	MK
1,1,1,2-Tetrachloroethane	21-MAY-2024	21-MAY-2024	MK
Chlorobenzene	21-MAY-2024	21-MAY-2024	MK
Ethylbenzene	21-MAY-2024	21-MAY-2024	MK
m & p-Xylene	21-MAY-2024	21-MAY-2024	MK
Bromoform	21-MAY-2024	21-MAY-2024	MK
Styrene	21-MAY-2024	21-MAY-2024	MK
1,1,2,2-Tetrachloroethane	21-MAY-2024	21-MAY-2024	MK
o-Xylene	21-MAY-2024	21-MAY-2024	MK
1,3-Dichlorobenzene	21-MAY-2024	21-MAY-2024	MK
1,4-Dichlorobenzene	21-MAY-2024	21-MAY-2024	MK
1,2-Dichlorobenzene	21-MAY-2024	21-MAY-2024	MK
1,3-Dichloropropene	21-MAY-2024	21-MAY-2024	SYS
Xylenes (Total)	21-MAY-2024	21-MAY-2024	SYS
n-Hexane	21-MAY-2024	21-MAY-2024	MK
Toluene-d8	21-MAY-2024	21-MAY-2024	MK
4-Bromofluorobenzene	21-MAY-2024	21-MAY-2024	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5861849	**MW22**	**Water**	**13-MAY-2024**	**14-MAY-2024**

O. Reg. 153(511) - All Metals (Water)

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5861849	MW22	Water	13-MAY-2024	14-MAY-2024

O. Reg. 153(511) - All Metals (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Antimony	16-MAY-2024	16-MAY-2024	CC
Dissolved Arsenic	16-MAY-2024	16-MAY-2024	CC
Dissolved Barium	16-MAY-2024	16-MAY-2024	CC
Dissolved Beryllium	16-MAY-2024	16-MAY-2024	CC
Dissolved Boron	16-MAY-2024	16-MAY-2024	CC
Dissolved Cadmium	16-MAY-2024	16-MAY-2024	CC
Dissolved Chromium	16-MAY-2024	16-MAY-2024	CC
Dissolved Cobalt	16-MAY-2024	16-MAY-2024	CC
Dissolved Copper	16-MAY-2024	16-MAY-2024	CC
Dissolved Lead	16-MAY-2024	16-MAY-2024	CC
Dissolved Molybdenum	16-MAY-2024	16-MAY-2024	CC
Dissolved Nickel	16-MAY-2024	16-MAY-2024	CC
Dissolved Selenium	16-MAY-2024	16-MAY-2024	CC
Dissolved Silver	16-MAY-2024	16-MAY-2024	CC
Dissolved Thallium	16-MAY-2024	16-MAY-2024	CC
Dissolved Uranium	16-MAY-2024	16-MAY-2024	CC
Dissolved Vanadium	16-MAY-2024	16-MAY-2024	CC
Dissolved Zinc	16-MAY-2024	16-MAY-2024	CC
Mercury	17-MAY-2024	17-MAY-2024	DL
Chromium VI	16-MAY-2024	16-MAY-2024	WZ

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	18-MAY-2024	18-MAY-2024	JJ
Acenaphthylene	18-MAY-2024	18-MAY-2024	JJ
Acenaphthene	18-MAY-2024	18-MAY-2024	JJ
Fluorene	18-MAY-2024	18-MAY-2024	JJ
Phenanthrene	18-MAY-2024	18-MAY-2024	JJ
Anthracene	18-MAY-2024	18-MAY-2024	JJ
Fluoranthene	18-MAY-2024	18-MAY-2024	JJ
Pyrene	18-MAY-2024	18-MAY-2024	JJ
Benzo(a)anthracene	18-MAY-2024	18-MAY-2024	JJ
Chrysene	18-MAY-2024	18-MAY-2024	JJ
Benzo(b)fluoranthene	18-MAY-2024	18-MAY-2024	JJ
Benzo(k)fluoranthene	18-MAY-2024	18-MAY-2024	JJ
Benzo(a)pyrene	18-MAY-2024	18-MAY-2024	JJ
Indeno(1,2,3-cd)pyrene	18-MAY-2024	18-MAY-2024	JJ
Dibenz(a,h)anthracene	18-MAY-2024	18-MAY-2024	JJ
Benzo(g,h,i)perylene	18-MAY-2024	18-MAY-2024	JJ

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5861849	**MW22**	**Water**	**13-MAY-2024**	**14-MAY-2024**

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
2-and 1-methyl Napthalene	18-MAY-2024	18-MAY-2024	SYS
Naphthalene-d8	18-MAY-2024	18-MAY-2024	JJ
Acridine-d9	18-MAY-2024	18-MAY-2024	JJ
Terphenyl-d14	18-MAY-2024	18-MAY-2024	JJ
Sediment	17-MAY-2024	17-MAY-2024	NH

O. Reg. 153(511) - PCBs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Polychlorinated Biphenyls	17-MAY-2024	17-MAY-2024	LSP
Decachlorobiphenyl	17-MAY-2024	17-MAY-2024	LSP

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	21-MAY-2024	21-MAY-2024	MK
F1 (C6 to C10) minus BTEX	21-MAY-2024	21-MAY-2024	SYS
Toluene-d8	21-MAY-2024	21-MAY-2024	MK
F2 (C10 to C16)	19-MAY-2024	19-MAY-2024	CA
F2 (C10 to C16) minus Naphthalene	19-MAY-2024	19-MAY-2024	SYS
F3 (C16 to C34)	19-MAY-2024	19-MAY-2024	CA
F3 (C16 to C34) minus PAHs	19-MAY-2024	19-MAY-2024	SYS
F4 (C34 to C50)	19-MAY-2024	19-MAY-2024	CA
Gravimetric Heavy Hydrocarbons			
Terphenyl	19-MAY-2024	19-MAY-2024	CA
Sediment	17-MAY-2024	17-MAY-2024	NH

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	21-MAY-2024	21-MAY-2024	MK
Vinyl Chloride	21-MAY-2024	21-MAY-2024	MK
Bromomethane	21-MAY-2024	21-MAY-2024	MK
Trichlorofluoromethane	21-MAY-2024	21-MAY-2024	MK
Acetone	21-MAY-2024	21-MAY-2024	MK
1,1-Dichloroethylene	21-MAY-2024	21-MAY-2024	MK
Methylene Chloride	21-MAY-2024	21-MAY-2024	MK
trans- 1,2-Dichloroethylene	21-MAY-2024	21-MAY-2024	MK
Methyl tert-butyl ether	21-MAY-2024	21-MAY-2024	MK
1,1-Dichloroethane	21-MAY-2024	21-MAY-2024	MK
Methyl Ethyl Ketone	21-MAY-2024	21-MAY-2024	MK
cis- 1,2-Dichloroethylene	21-MAY-2024	21-MAY-2024	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5861849	**MW22**	**Water**	**13-MAY-2024**	**14-MAY-2024**

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Chloroform	21-MAY-2024	21-MAY-2024	MK
1,2-Dichloroethane	21-MAY-2024	21-MAY-2024	MK
1,1,1-Trichloroethane	21-MAY-2024	21-MAY-2024	MK
Carbon Tetrachloride	21-MAY-2024	21-MAY-2024	MK
Benzene	21-MAY-2024	21-MAY-2024	MK
1,2-Dichloropropane	21-MAY-2024	21-MAY-2024	MK
Trichloroethylene	21-MAY-2024	21-MAY-2024	MK
Bromodichloromethane	21-MAY-2024	21-MAY-2024	MK
Methyl Isobutyl Ketone	21-MAY-2024	21-MAY-2024	MK
1,1,2-Trichloroethane	21-MAY-2024	21-MAY-2024	MK
Toluene	21-MAY-2024	21-MAY-2024	MK
Dibromochloromethane	21-MAY-2024	21-MAY-2024	MK
Ethylene Dibromide	21-MAY-2024	21-MAY-2024	MK
Tetrachloroethylene	21-MAY-2024	21-MAY-2024	MK
1,1,1,2-Tetrachloroethane	21-MAY-2024	21-MAY-2024	MK
Chlorobenzene	21-MAY-2024	21-MAY-2024	MK
Ethylbenzene	21-MAY-2024	21-MAY-2024	MK
m & p-Xylene	21-MAY-2024	21-MAY-2024	MK
Bromoform	21-MAY-2024	21-MAY-2024	MK
Styrene	21-MAY-2024	21-MAY-2024	MK
1,1,2,2-Tetrachloroethane	21-MAY-2024	21-MAY-2024	MK
o-Xylene	21-MAY-2024	21-MAY-2024	MK
1,3-Dichlorobenzene	21-MAY-2024	21-MAY-2024	MK
1,4-Dichlorobenzene	21-MAY-2024	21-MAY-2024	MK
1,2-Dichlorobenzene	21-MAY-2024	21-MAY-2024	MK
1,3-Dichloropropene	21-MAY-2024	21-MAY-2024	SYS
Xylenes (Total)	21-MAY-2024	21-MAY-2024	SYS
n-Hexane	21-MAY-2024	21-MAY-2024	MK
Toluene-d8	21-MAY-2024	21-MAY-2024	MK
4-Bromofluorobenzene	21-MAY-2024	21-MAY-2024	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5861869	**MW19**	**Water**	**13-MAY-2024**	**14-MAY-2024**

O. Reg. 153(511) - ORPs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Sodium	21-MAY-2024	21-MAY-2024	CC
Chloride	15-MAY-2024	15-MAY-2024	LC

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5861887	**DUP2**	**Water**	**13-MAY-2024**	**14-MAY-2024**

O. Reg. 153(511) - ORPs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Sodium	21-MAY-2024	21-MAY-2024	CC
Chloride	15-MAY-2024	15-MAY-2024	LC

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5861992	**Trip Blank**	**Water**	**13-MAY-2024**	**14-MAY-2024**

O. Reg. 153(511) - VOCs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	21-MAY-2024	21-MAY-2024	MK
Vinyl Chloride	21-MAY-2024	21-MAY-2024	MK
Bromomethane	21-MAY-2024	21-MAY-2024	MK
Trichlorofluoromethane	21-MAY-2024	21-MAY-2024	MK
Acetone	21-MAY-2024	21-MAY-2024	MK
1,1-Dichloroethylene	21-MAY-2024	21-MAY-2024	MK
Methylene Chloride	21-MAY-2024	21-MAY-2024	MK
trans- 1,2-Dichloroethylene	21-MAY-2024	21-MAY-2024	MK
Methyl tert-butyl ether	21-MAY-2024	21-MAY-2024	MK
1,1-Dichloroethane	21-MAY-2024	21-MAY-2024	MK
Methyl Ethyl Ketone	21-MAY-2024	21-MAY-2024	MK
cis- 1,2-Dichloroethylene	21-MAY-2024	21-MAY-2024	MK
Chloroform	21-MAY-2024	21-MAY-2024	MK
1,2-Dichloroethane	21-MAY-2024	21-MAY-2024	MK
1,1,1-Trichloroethane	21-MAY-2024	21-MAY-2024	MK
Carbon Tetrachloride	21-MAY-2024	21-MAY-2024	MK
Benzene	21-MAY-2024	21-MAY-2024	MK
1,2-Dichloropropane	21-MAY-2024	21-MAY-2024	MK
Trichloroethylene	21-MAY-2024	21-MAY-2024	MK
Bromodichloromethane	21-MAY-2024	21-MAY-2024	MK
Methyl Isobutyl Ketone	21-MAY-2024	21-MAY-2024	MK
1,1,2-Trichloroethane	21-MAY-2024	21-MAY-2024	MK
Toluene	21-MAY-2024	21-MAY-2024	MK
Dibromochloromethane	21-MAY-2024	21-MAY-2024	MK
Ethylene Dibromide	21-MAY-2024	21-MAY-2024	MK
Tetrachloroethylene	21-MAY-2024	21-MAY-2024	MK
1,1,1,2-Tetrachloroethane	21-MAY-2024	21-MAY-2024	MK
Chlorobenzene	21-MAY-2024	21-MAY-2024	MK
Ethylbenzene	21-MAY-2024	21-MAY-2024	MK
m & p-Xylene	21-MAY-2024	21-MAY-2024	MK
Bromoform	21-MAY-2024	21-MAY-2024	MK
Styrene	21-MAY-2024	21-MAY-2024	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5861992	**Trip Blank**	**Water**	**13-MAY-2024**	**14-MAY-2024**

O. Reg. 153(511) - VOCs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
1,1,2,2-Tetrachloroethane	21-MAY-2024	21-MAY-2024	MK
o-Xylene	21-MAY-2024	21-MAY-2024	MK
1,3-Dichlorobenzene	21-MAY-2024	21-MAY-2024	MK
1,4-Dichlorobenzene	21-MAY-2024	21-MAY-2024	MK
1,2-Dichlorobenzene	21-MAY-2024	21-MAY-2024	MK
1,3-Dichloropropene	21-MAY-2024	21-MAY-2024	SYS
Xylenes (Total)	21-MAY-2024	21-MAY-2024	SYS
n-Hexane	21-MAY-2024	21-MAY-2024	MK
Toluene-d8	21-MAY-2024	21-MAY-2024	MK
4-Bromofluorobenzene	21-MAY-2024	21-MAY-2024	MK

Method Summary

CLIENT NAME: PINCHIN LTD. **AGAT WORK ORDER: 24Z150512**
PROJECT: 31964.002 **ATTENTION TO: Alicia McDonald**
SAMPLING SITE: **SAMPLED BY:**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluorene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Chrysene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
2-and 1-methyl Napthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Sediment			N/A
Polychlorinated Biphenyls	ORG-91-5112	modified from EPA SW-846 3510 & 8082A	GC/ECD
Decachlorobiphenyl	ORG-91-5112	modified from EPA SW-846 3510 & 8082A	GC/ECD
F1 (C6 to C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	P&T GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID

Method Summary

CLIENT NAME: PINCHIN LTD.
AGAT WORK ORDER: 24Z150512
PROJECT: 31964.002
ATTENTION TO: Alicia McDonald
SAMPLING SITE:
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

Method Summary

CLIENT NAME: PINCHIN LTD.
PROJECT: 31964.002
SAMPLING SITE:

AGAT WORK ORDER: 24Z150512
ATTENTION TO: Alicia McDonald
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

Method Summary

CLIENT NAME: PINCHIN LTD.
PROJECT: 31964.002
SAMPLING SITE:

AGAT WORK ORDER: 24Z150512
ATTENTION TO: Alicia McDonald
SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Mercury	MET-93-6100	modified from EPA 245.2 and SM 3112 B	CVAAS
Chromium VI	INOR-93-6073	modified from SM 3500-CR B	LACHAT FIA
Dissolved Sodium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP/MS
Chloride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH

miss ① 4.3, 4.2, 4.0 ② 4.9, 5.0, 5.8

AGAT Laboratories

Have feedback? Scan here for a quick survey!

5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
webearth.agatlabs.com

Laboratory Use Only

Work Order #: 24Z150512

Cooler Quantity: Two-Ice packs

Arrival Temperatures: ① 10.6 10.2 10.3 ② 7.1 7.2 7.1

Custody Seal Intact: ☐Yes ☐No ☐N/A

Notes: 13/I

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Report Information:

Company: Pinchin Ltd.
Contact: Alicia McDonald
Address: 1456 Centennial Drive, Suite 2
KINGSTON
Phone: Fax:
Reports to be sent to:
1. Email: amcdonald@pinchin.com
2. Email: jmccann@pinchin.com

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table ____ *Indicate One*
☐Ind/Com
☐Res/Park
☐Agriculture
Soil Texture *(Check One)*
☐Coarse
☐Fine

☐ Regulation 406
Table ____ *Indicate One*
☐ Regulation 558
☐ CCME

☐ Sewer Use
☐Sanitary ☐Storm
____ *Region*
☐ Prov. Water Quality Objectives (PWQO)
☐ Other
____ *Indicate One*

Is this submission for a Record of Site Condition?
☒ Yes ☐ No

Report Guideline on Certificate of Analysis
☐ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT ☐ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply): **4 DAYS**

Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*

For 'Same Day' analysis, please contact your AGAT CPM

Project Information:

Project: 319674.002
Site Location:
Sampled By:
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company:
Contact:
Address:
Email:

Sample Matrix Legend

GW	Ground Water
O	Oil
P	Paint
S	Soil
SD	Sediment
SW	Surface Water

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC Y/N	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☒CrVI, ☒Hg, ☐HWSB	O. Reg 153: BTEX, F1-F4 PHCs	VOC	PAHs	PCBs	PCBs: Aroclors ☐	O. Reg 558: Landfill Disposal Characterization TCLP: TCLP: ☐M&I ☐VOCs ☐ABNs ☐B(a)P ☐PCBs	O. Reg 406: Regulation 406 SPLP Rainwater Leach SPLP: ☐Metals ☐VOCs ☐SVOCs	O. Reg 406: Regulation 406 Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: ☐Moisture ☐ Sulphide	Sodium	Chloride	Metals incl Hydrides	CrVI	Mercury		Potentially Hazardous or High Concentration (Y/N)
1. MW20	5/13/24	A AM PM	14	GW		Y		X	X	X	X	X								X	X	X		
2. MW21		A AM PM	11	GW		Y			X	X	X									X				
3. MW6		P AM PM	9	GW					X	X	X	X												
4. MW2		P AM PM	14	GW		Y		X	X	X	X	X								X	X	X		
5. MW1		A AM PM	9	GW		Y	X		X	X	X													
6. DUP1		A AM PM	14	GW		Y		X	X	X	X	X								X	X	X		
7. MW9		P AM PM	8	GW		Y	X		X	X	X													
8. MW22		P AM PM	13	GW		Y		X	X	X	X	X								X	X	X		
9. MW19		P AM PM	2	GW		Y												X	X					
10. DUP2	5/13/24	P AM PM	2	GW		Y												X	X					
11. TRIP BLANK		AM PM	3							X														

Samples Relinquished By (Print Name and Sign): J McCann	Date 5/13/24	Time 6030	Samples Received By (Print Name and Sign):	Date 05/14/24	Time 08h30	
Samples Relinquished By (Print Name and Sign):	Date 05/14/24	Time 15h00	Samples Received By (Print Name and Sign):	Date May 15	Time 8:30 am	Page ____ of ____
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time	Nº:

5835 COOPERS AVENUE
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CANADA L4Z 1Y2
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FAX (905)712-5122
http://www.agatlabs.com

CLIENT NAME: **PINCHIN LTD.**
1456 Centennial Drive, Unit 2
KINGSTON, ON K7P 0K4
(613) 541-1013
ATTENTION TO: **Alicia McDonald**
PROJECT: **319674.002**
AGAT WORK ORDER: **24Z154227**
TRACE ORGANICS REVIEWED BY: **Neli Popnikolova, Senior Chemist**
WATER ANALYSIS REVIEWED BY: **Nivine Basily, Inorganic Team Lead**
DATE REPORTED: **May 30, 2024**
PAGES (INCLUDING COVER): **41**
VERSION*: **1**

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

Notes

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http://www.agatlabs.com

CLIENT NAME: PINCHIN LTD.
ATTENTION TO: Alicia McDonald
SAMPLING SITE:
SAMPLED BY:

O. Reg. 153(511) - PAHs (Water)

DATE RECEIVED: 2024-05-24
DATE REPORTED: 2024-05-30

			SAMPLE DESCRIPTION:	MW3	DUP-3	MW10	MW18
			SAMPLE TYPE:	Water	Water	Water	Water
			DATE SAMPLED:	2024-05-23	2024-05-23	2024-05-23	2024-05-23
Parameter	**Unit**	**G / S**	**RDL**	5883555	5883566	5883567	5883593
Naphthalene	µg/L	6400	0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthylene	µg/L	1.8	0.20	<0.20	<0.20	<0.20	<0.20
Acenaphthene	µg/L	1700	0.20	<0.20	<0.20	<0.20	<0.20
Fluorene	µg/L	400	0.20	<0.20	<0.20	<0.20	<0.20
Phenanthrene	µg/L	580	0.10	<0.10	<0.10	<0.10	<0.10
Anthracene	µg/L	2.4	0.10	<0.10	<0.10	<0.10	<0.10
Fluoranthene	µg/L	130	0.20	<0.20	<0.20	<0.20	<0.20
Pyrene	µg/L	68	0.20	<0.20	<0.20	<0.20	<0.20
Benzo(a)anthracene	µg/L	4.7	0.20	<0.20	<0.20	<0.20	<0.20
Chrysene	µg/L	1	0.10	<0.10	<0.10	<0.10	<0.10
Benzo(b)fluoranthene	µg/L	0.75	0.10	<0.10	<0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.4	0.10	<0.10	<0.10	<0.10	<0.10
Benzo(a)pyrene	µg/L	0.81	0.01	<0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20
Dibenz(a,h)anthracene	µg/L	0.52	0.20	<0.20	<0.20	<0.20	<0.20
Benzo(g,h,i)perylene	µg/L	0.2	0.20	<0.20	<0.20	<0.20	<0.20
2-and 1-methyl Napthalene	µg/L	1800	0.20	<0.20	<0.20	<0.20	<0.20
Sediment				3	3	3	3
Surrogate	**Unit**	**Acceptable Limits**					
Naphthalene-d8	%	50-140		83	73	71	73
Acridine-d9	%	50-140		121	78	86	81
Terphenyl-d14	%	50-140		116	82	91	78

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5883555-5883593 Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amount
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&(j)Fluoranthene isomers because the isomers co-elute on the GC column.
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopukolof

CLIENT NAME: PINCHIN LTD.

SAMPLING SITE:

ATTENTION TO: Alicia McDonald

SAMPLED BY:

O. Reg. 153(511) - PCBs (Water)

DATE RECEIVED: 2024-05-24

DATE REPORTED: 2024-05-30

			SAMPLE DESCRIPTION:	**MW3**	**DUP-3**
			SAMPLE TYPE:	**Water**	**Water**
			DATE SAMPLED:	**2024-05-23**	**2024-05-23**
Parameter	**Unit**	**G / S**	**RDL**	**5883555**	**5883566**
Polychlorinated Biphenyls	µg/L	15	0.1	<0.1	<0.1
Surrogate	**Unit**	**Acceptable Limits**			
Decachlorobiphenyl	%	60-140		84	76

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5883555-5883566 PCB total is a calculated parameter. The calculated value is the sum of Aroclor 1242, Aroclor 1248, Aroclor 1254 and Aroclor 1260.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopukolof

CLIENT NAME: PINCHIN LTD.
SAMPLING SITE:

ATTENTION TO: Alicia McDonald
SAMPLED BY:

O. Reg. 153(511) - PHCs F1 - F4 (Water)

DATE RECEIVED: 2024-05-24

DATE REPORTED: 2024-05-30

			SAMPLE DESCRIPTION:	MW11	MW12	MW14
			SAMPLE TYPE:	Water	Water	Water
			DATE SAMPLED:	2024-05-23	2024-05-23	2024-05-23
Parameter	**Unit**	**G / S**	**RDL**	**5883521**	**5883539**	**5883546**
Benzene	µg/L	430	0.20	<0.20	<0.20	26.9
Toluene	µg/L	18000	0.20	<0.20	<0.20	0.99
Ethylbenzene	µg/L	2300	0.10	<0.10	<0.10	41.3
m & p-Xylene	µg/L		0.20	<0.20	<0.20	1.89
o-Xylene	µg/L		0.10	<0.10	<0.10	7.67
Xylenes (Total)	µg/L	4200	0.20	<0.20	<0.20	9.56
F1 (C6 to C10)	µg/L	750	25	<25	<25	254
F1 (C6 to C10) minus BTEX	µg/L	750	25	<25	<25	175
F2 (C10 to C16)	µg/L	150	100	<100	<100	120
F3 (C16 to C34)	µg/L	500	100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	NA	NA
Sediment				1	1	1
Surrogate	**Unit**	**Acceptable Limits**				
Toluene-d8	% Recovery	60-140		84	92	84
Terphenyl	% Recovery	60-140		89	78	77

Certified By: NPopnukolof

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TEL (905)712-5100
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CLIENT NAME: PINCHIN LTD. **ATTENTION TO: Alicia McDonald**
SAMPLING SITE: **SAMPLED BY:**

O. Reg. 153(511) - PHCs F1 - F4 (Water)

DATE RECEIVED: 2024-05-24 **DATE REPORTED: 2024-05-30**

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5883521-5883546 The C6-C10 fraction is calculated using Toluene response factor.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153/04, results are considered valid without determining the PAH contribution if not requested by the client.
NA = Not Applicable

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amounts

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopukolof

Certificate of Analysis

AGAT WORK ORDER: 24Z154227

PROJECT: 319674.002

CLIENT NAME: PINCHIN LTD.

SAMPLING SITE:

ATTENTION TO: Alicia McDonald

SAMPLED BY:

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

DATE RECEIVED: 2024-05-24

DATE REPORTED: 2024-05-30

			SAMPLE DESCRIPTION:	**MW3**	**DUP-3**	**MW10**	**MW18**
			SAMPLE TYPE:	**Water**	**Water**	**Water**	**Water**
			DATE SAMPLED:	**2024-05-23**	**2024-05-23**	**2024-05-23**	**2024-05-23**
Parameter	**Unit**	**G / S**	**RDL**	**5883555**	**5883566**	**5883567**	**5883593**
F1 (C6 to C10)	µg/L	750	25	<25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	750	25	<25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100	<100	<100
F2 (C10 to C16) minus Naphthalene	µg/L		100	<100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100	<100	<100
F3 (C16 to C34) minus PAHs	µg/L		100	<100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	NA	NA	NA
Sediment				3	3	3	3
Surrogate	**Unit**	**Acceptable Limits**					
Toluene-d8	%	50-140		106	108	106	106
Terphenyl	% Recovery	60-140		79	72	88	89

Certified By:

CLIENT NAME: PINCHIN LTD. **ATTENTION TO: Alicia McDonald**

SAMPLING SITE: **SAMPLED BY:**

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

DATE RECEIVED: 2024-05-24 **DATE REPORTED: 2024-05-30**

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5883555-5883593 The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amounts

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopukolof

CLIENT NAME: PINCHIN LTD.
SAMPLING SITE:

ATTENTION TO: Alicia McDonald
SAMPLED BY:

O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Water)

DATE RECEIVED: 2024-05-24

DATE REPORTED: 2024-05-30

			SAMPLE DESCRIPTION:	MW13
			SAMPLE TYPE:	Water
			DATE SAMPLED:	2024-05-23
Parameter	**Unit**	**G / S**	**RDL**	**5883507**
F1 (C6 to C10)	µg/L	750	25	<25
F1 (C6 to C10) minus BTEX	µg/L	750	25	<25
F2 (C10 to C16)	µg/L	150	100	<100
F3 (C16 to C34)	µg/L	500	100	<100
F4 (C34 to C50)	µg/L	500	100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA
Sediment				1
Surrogate	**Unit**	**Acceptable Limits**		
Toluene-d8	%	50-140		108
Terphenyl	% Recovery	60-140		91

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5883507 The C6-C10 fraction is calculated using Toluene response factor.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153/04, results are considered valid without determining the PAH contribution if not requested by the client.
NA = Not Applicable

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amounts

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Certificate of Analysis

AGAT WORK ORDER: 24Z154227
PROJECT: 319674.002

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CLIENT NAME: PINCHIN LTD.
ATTENTION TO: Alicia McDonald
SAMPLING SITE:
SAMPLED BY:

O. Reg. 153(511) - PHCs F1/BTEX (Water)

DATE RECEIVED: 2024-05-24
DATE REPORTED: 2024-05-30

			SAMPLE DESCRIPTION:	Trip Blank
			SAMPLE TYPE:	Water
			DATE SAMPLED:	2024-05-23
Parameter	**Unit**	**G / S**	**RDL**	**5883602**
Benzene	µg/L	430	0.20	<0.20
Toluene	µg/L	18000	0.20	<0.20
Ethylbenzene	µg/L	2300	0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20
o-Xylene	µg/L		0.10	<0.10
Xylenes (Total)	µg/L	4200	0.20	<0.20
F1 (C6 to C10)	µg/L	750	25	<25
F1 (C6 to C10) minus BTEX	µg/L	750	25	<25
Surrogate	**Unit**	**Acceptable Limits**		
Toluene-d8	% Recovery	60-140		103

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5883602 The C6-C10 fraction is calculated using Toluene response factor.
Total C6-C10 results are corrected for BTEX contributions.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
Extraction and holding times were met for this sample.
NA = Not Applicable

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopukoloff

Certificate of Analysis

AGAT WORK ORDER: 24Z154227
PROJECT: 319674.002

CLIENT NAME: PINCHIN LTD.
SAMPLING SITE:

ATTENTION TO: Alicia McDonald
SAMPLED BY:

O. Reg. 153(511) - VOCs (with PHC) (Water)

DATE RECEIVED: 2024-05-24

DATE REPORTED: 2024-05-30

			SAMPLE DESCRIPTION:	MW13	MW3	DUP-3	MW10	MW18	Trip Blank
			SAMPLE TYPE:	Water	Water	Water	Water	Water	Water
			DATE SAMPLED:	2024-05-23	2024-05-23	2024-05-23	2024-05-23	2024-05-23	2024-05-23
Parameter	**Unit**	**G / S**	**RDL**	**5883507**	**5883555**	**5883566**	**5883567**	**5883593**	**5883602**
Dichlorodifluoromethane	µg/L	4400	0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Vinyl Chloride	µg/L	1.7	0.17	<0.17	<0.17	<0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	56	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	2500	0.40	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40
Acetone	µg/L	130000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	17	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	5500	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	1400	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	3100	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	1500000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Chloroform	µg/L	22	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	12	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	6700	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	8.4	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Benzene	µg/L	430	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	140	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	85000	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	580000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	30	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Toluene	µg/L	18000	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	82000	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.83	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	28	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	630	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Ethylbenzene	µg/L	2300	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

Certified By:

Certificate of Analysis

AGAT WORK ORDER: 24Z154227
PROJECT: 319674.002

5835 COOPERS AVENUE
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CLIENT NAME: PINCHIN LTD.
SAMPLING SITE:

ATTENTION TO: Alicia McDonald
SAMPLED BY:

O. Reg. 153(511) - VOCs (with PHC) (Water)

DATE RECEIVED: 2024-05-24

DATE REPORTED: 2024-05-30

			SAMPLE DESCRIPTION:	MW13	MW3	DUP-3	MW10	MW18	Trip Blank
			SAMPLE TYPE:	Water	Water	Water	Water	Water	Water
			DATE SAMPLED:	2024-05-23	2024-05-23	2024-05-23	2024-05-23	2024-05-23	2024-05-23
Parameter	**Unit**	**G / S**	**RDL**	**5883507**	**5883555**	**5883566**	**5883567**	**5883593**	**5883602**
Bromoform	µg/L	770	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Styrene	µg/L	9100	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	15	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	9600	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	67	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	9600	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	45	0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Xylenes (Total)	µg/L	4200	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
n-Hexane	µg/L	520	0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Surrogate	**Unit**	**Acceptable Limits**							
Toluene-d8	% Recovery	50-140		108	106	108	106	106	103
4-Bromofluorobenzene	% Recovery	50-140		103	100	103	104	100	92

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5883507-5883602 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopukolof

Certificate of Analysis

AGAT WORK ORDER: 24Z154227
PROJECT: 319674.002

CLIENT NAME: PINCHIN LTD.
SAMPLING SITE:

ATTENTION TO: Alicia McDonald
SAMPLED BY:

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

DATE RECEIVED: 2024-05-24

DATE REPORTED: 2024-05-30

			SAMPLE DESCRIPTION:	MW13	MW3	DUP-3	MW10	MW18
			SAMPLE TYPE:	Water	Water	Water	Water	Water
			DATE SAMPLED:	2024-05-23	2024-05-23	2024-05-23	2024-05-23	2024-05-23
Parameter	**Unit**	**G / S**	**RDL**	**5883507**	**5883555**	**5883566**	**5883567**	**5883593**
Dissolved Antimony	µg/L	20000	1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Dissolved Arsenic	µg/L	1900	1.0	<1.0	<1.0	1.4	<1.0	<1.0
Dissolved Barium	µg/L	29000	2.0	107	229	244	242	180
Dissolved Beryllium	µg/L	67	0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Boron	µg/L	45000	10.0	92.6	101	105	103	281
Dissolved Cadmium	µg/L	2.7	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dissolved Chromium	µg/L	810	2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Cobalt	µg/L	66	0.50	1.69	0.81	0.81	1.30	<0.50
Dissolved Copper	µg/L	87	1.0	2.6	<1.0	<1.0	1.2	1.8
Dissolved Lead	µg/L	25	0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Molybdenum	µg/L	9200	0.50	6.16	11.6	12.1	11.1	2.09
Dissolved Nickel	µg/L	490	1.0	4.1	6.6	5.7	2.7	2.9
Dissolved Selenium	µg/L	63	1.0	1.6	1.3	<1.0	2.2	1.3
Dissolved Silver	µg/L	1.5	0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Dissolved Thallium	µg/L	510	0.30	<0.30	<0.30	<0.30	<0.30	<0.30
Dissolved Uranium	µg/L	420	0.50	2.58	<0.50	<0.50	1.71	0.58
Dissolved Vanadium	µg/L	250	0.40	1.35	0.53	<0.40	0.68	0.46
Dissolved Zinc	µg/L	1100	5.0	5.8	<5.0	6.4	<5.0	<5.0

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5883507-5883593 Metals analysis completed on a filtered sample.

Analysis performed at AGAT Toronto (unless marked by *)

ASSOCIATION OF THE CHEMICAL PROFESSION OF ONTARIO
CHARTERED
NIVINE BASILY
CHEMIST

Certified By:

Results relate only to the items tested. Results apply to samples as received.

AGAT Laboratories

Certificate of Analysis

AGAT WORK ORDER: 24Z154227

PROJECT: 319674.002

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CLIENT NAME: PINCHIN LTD.

ATTENTION TO: Alicia McDonald

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - ORPs (Water)

DATE RECEIVED: 2024-05-24

DATE REPORTED: 2024-05-30

			SAMPLE DESCRIPTION:	MW13		MW14		MW16		MW18
			SAMPLE TYPE:	Water		Water		Water		Water
			DATE SAMPLED:	2024-05-23		2024-05-23		2024-05-23		2024-05-23
Parameter	**Unit**	**G / S**	**RDL**	**5883507**	**RDL**	**5883546**	**RDL**	**5883552**	**RDL**	**5883593**
Dissolved Sodium	µg/L	2300000	500	1220000	1000	**5170000**	2500	**17500000**	500	**3120000**
Chloride	µg/L	2300000	122	1250000	488	**7750000**	1220	**23300000**	488	**6500000**

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5883507-5883593 Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

NIVINE BASILY

CLIENT NAME: PINCHIN LTD.

ATTENTION TO: Alicia McDonald

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - ORPs (Water) -Cr.6, Hg

DATE RECEIVED: 2024-05-24

DATE REPORTED: 2024-05-30

			SAMPLE DESCRIPTION:	MW3	DUP-3
			SAMPLE TYPE:	Water	Water
			DATE SAMPLED:	2024-05-23	2024-05-23
Parameter	**Unit**	**G / S**	**RDL**	**5883555**	**5883566**
Mercury	µg/L	2.8	0.02	<0.02	<0.02
Chromium VI	µg/L	140	2.000	<2.000	<2.000

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 3: Full Depth Generic Site Condition Standards in a Non-Potable Ground Water Condition - Non-Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Analysis performed at AGAT Toronto (unless marked by *)

CHARTERED
NIVINE BASILY
CHEMIST

Certified By:

Quality Assurance

CLIENT NAME: PINCHIN LTD.
PROJECT: 319674.002
SAMPLING SITE:

AGAT WORK ORDER: 24Z154227
ATTENTION TO: Alicia McDonald
SAMPLED BY:

Trace Organics Analysis

RPT Date: May 30, 2024			**DUPLICATE**			**Method Blank**	**REFERENCE MATERIAL**			**METHOD BLANK SPIKE**			**MATRIX SPIKE**		
PARAMETER	**Batch**	**Sample Id**	**Dup #1**	**Dup #2**	**RPD**		**Measured Value**	**Acceptable Limits**		**Recovery**	**Acceptable Limits**		**Recovery**	**Acceptable Limits**	
								Lower	**Upper**		**Lower**	**Upper**		**Lower**	**Upper**
O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Water)															
F1 (C6 to C10)	5882800		<25	<25	NA	< 25	97%	60%	140%	95%	60%	140%	95%	60%	140%
F2 (C10 to C16)	5883005		<100	<100	NA	< 100	91%	60%	140%	77%	60%	140%	71%	60%	140%
F3 (C16 to C34)	5883005		<100	<100	NA	< 100	103%	60%	140%	94%	60%	140%	67%	60%	140%
F4 (C34 to C50)	5883005		<100	<100	NA	< 100	96%	60%	140%	114%	60%	140%	113%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Water)															
Dichlorodifluoromethane	5882800		<0.40	<0.40	NA	< 0.40	91%	50%	140%	70%	50%	140%	102%	50%	140%
Vinyl Chloride	5882800		<0.17	<0.17	NA	< 0.17	117%	50%	140%	88%	50%	140%	84%	50%	140%
Bromomethane	5882800		<0.20	<0.20	NA	< 0.20	97%	50%	140%	76%	50%	140%	77%	50%	140%
Trichlorofluoromethane	5882800		<0.40	<0.40	NA	< 0.40	93%	50%	140%	73%	50%	140%	64%	50%	140%
Acetone	5882800		<1.0	<1.0	NA	< 1.0	78%	50%	140%	87%	50%	140%	97%	50%	140%
1,1-Dichloroethylene	5882800		<0.30	<0.30	NA	< 0.30	61%	50%	140%	94%	60%	130%	93%	50%	140%
Methylene Chloride	5882800		<0.30	<0.30	NA	< 0.30	108%	50%	140%	116%	60%	130%	112%	50%	140%
trans- 1,2-Dichloroethylene	5882800		<0.20	<0.20	NA	< 0.20	65%	50%	140%	105%	60%	130%	107%	50%	140%
Methyl tert-butyl ether	5882800		<0.20	<0.20	NA	< 0.20	74%	50%	140%	80%	60%	130%	103%	50%	140%
1,1-Dichloroethane	5882800		<0.30	<0.30	NA	< 0.30	68%	50%	140%	101%	60%	130%	108%	50%	140%
Methyl Ethyl Ketone	5882800		<1.0	<1.0	NA	< 1.0	90%	50%	140%	101%	50%	140%	102%	50%	140%
cis- 1,2-Dichloroethylene	5882800		<0.20	<0.20	NA	< 0.20	80%	50%	140%	104%	60%	130%	110%	50%	140%
Chloroform	5882800		<0.20	<0.20	NA	< 0.20	80%	50%	140%	83%	60%	130%	112%	50%	140%
1,2-Dichloroethane	5882800		<0.20	<0.20	NA	< 0.20	90%	50%	140%	89%	60%	130%	104%	50%	140%
1,1,1-Trichloroethane	5882800		<0.30	<0.30	NA	< 0.30	70%	50%	140%	95%	60%	130%	102%	50%	140%
Carbon Tetrachloride	5882800		<0.20	<0.20	NA	< 0.20	66%	50%	140%	85%	60%	130%	94%	50%	140%
Benzene	5882800		<0.20	<0.20	NA	< 0.20	78%	50%	140%	101%	60%	130%	116%	50%	140%
1,2-Dichloropropane	5882800		<0.20	<0.20	NA	< 0.20	83%	50%	140%	99%	60%	130%	111%	50%	140%
Trichloroethylene	5882800		<0.20	<0.20	NA	< 0.20	81%	50%	140%	102%	60%	130%	117%	50%	140%
Bromodichloromethane	5882800		<0.20	<0.20	NA	< 0.20	78%	50%	140%	88%	60%	130%	113%	50%	140%
Methyl Isobutyl Ketone	5882800		<1.0	<1.0	NA	< 1.0	78%	50%	140%	114%	50%	140%	114%	50%	140%
1,1,2-Trichloroethane	5882800		<0.20	<0.20	NA	< 0.20	109%	50%	140%	119%	60%	130%	115%	50%	140%
Toluene	5882800		<0.20	<0.20	NA	< 0.20	103%	50%	140%	116%	60%	130%	113%	50%	140%
Dibromochloromethane	5882800		<0.10	<0.10	NA	< 0.10	88%	50%	140%	99%	60%	130%	114%	50%	140%
Ethylene Dibromide	5882800		<0.10	<0.10	NA	< 0.10	98%	50%	140%	113%	60%	130%	109%	50%	140%
Tetrachloroethylene	5882800		<0.20	<0.20	NA	< 0.20	103%	50%	140%	117%	60%	130%	105%	50%	140%
1,1,1,2-Tetrachloroethane	5882800		<0.10	<0.10	NA	< 0.10	99%	50%	140%	107%	60%	130%	110%	50%	140%
Chlorobenzene	5882800		<0.10	<0.10	NA	< 0.10	105%	50%	140%	110%	60%	130%	110%	50%	140%
Ethylbenzene	5882800		<0.10	<0.10	NA	< 0.10	101%	50%	140%	107%	60%	130%	116%	50%	140%
m & p-Xylene	5882800		<0.20	<0.20	NA	< 0.20	103%	50%	140%	112%	60%	130%	113%	50%	140%
Bromoform	5882800		<0.10	<0.10	NA	< 0.10	89%	50%	140%	97%	60%	130%	112%	50%	140%
Styrene	5882800		<0.10	<0.10	NA	< 0.10	87%	50%	140%	95%	60%	130%	112%	50%	140%
1,1,2,2-Tetrachloroethane	5882800		<0.10	<0.10	NA	< 0.10	104%	50%	140%	114%	60%	130%	103%	50%	140%
o-Xylene	5882800		<0.10	<0.10	NA	< 0.10	104%	50%	140%	113%	60%	130%	108%	50%	140%

Quality Assurance

CLIENT NAME: PINCHIN LTD.
PROJECT: 319674.002
SAMPLING SITE:

AGAT WORK ORDER: 24Z154227
ATTENTION TO: Alicia McDonald
SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: May 30, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	5882800		<0.10	<0.10	NA	< 0.10	115%	50%	140%	116%	60%	130%	111%	50%	140%
1,4-Dichlorobenzene	5882800		<0.10	<0.10	NA	< 0.10	105%	50%	140%	113%	60%	130%	112%	50%	140%
1,2-Dichlorobenzene	5882800		<0.10	<0.10	NA	< 0.10	110%	50%	140%	113%	60%	130%	112%	50%	140%
n-Hexane	5882800		<0.20	<0.20	NA	< 0.20	109%	50%	140%	99%	60%	130%	66%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (Water)															
Benzene	5880267		<0.20	<0.20	NA	< 0.20	101%	60%	140%	103%	60%	140%	102%	60%	140%
Toluene	5880267		<0.20	<0.20	NA	< 0.20	85%	60%	140%	85%	60%	140%	93%	60%	140%
Ethylbenzene	5880267		<0.10	<0.10	NA	< 0.10	99%	60%	140%	99%	60%	140%	104%	60%	140%
m & p-Xylene	5880267		<0.20	<0.20	NA	< 0.20	96%	60%	140%	98%	60%	140%	103%	60%	140%
o-Xylene	5880267		<0.10	<0.10	NA	< 0.10	96%	60%	140%	98%	60%	140%	105%	60%	140%
F1 (C6 to C10)	5880267		<25	<25	NA	< 25	89%	60%	140%	97%	60%	140%	100%	60%	140%
F2 (C10 to C16)	5883005		<100	<100	NA	< 100	91%	60%	140%	77%	60%	140%	71%	60%	140%
F3 (C16 to C34)	5883005		<100	<100	NA	< 100	103%	60%	140%	94%	60%	140%	67%	60%	140%
F4 (C34 to C50)	5883005		<100	<100	NA	< 100	96%	60%	140%	114%	60%	140%	113%	60%	140%
O. Reg. 153(511) - PAHs (Water)															
Naphthalene	5883160		<0.20	<0.20	NA	< 0.20	92%	50%	140%	101%	50%	140%	75%	50%	140%
Acenaphthylene	5883160		<0.20	<0.20	NA	< 0.20	80%	50%	140%	86%	50%	140%	81%	50%	140%
Acenaphthene	5883160		<0.20	<0.20	NA	< 0.20	104%	50%	140%	90%	50%	140%	78%	50%	140%
Fluorene	5883160		<0.20	<0.20	NA	< 0.20	116%	50%	140%	98%	50%	140%	96%	50%	140%
Phenanthrene	5883160		0.33	0.33	NA	< 0.10	124%	50%	140%	108%	50%	140%	114%	50%	140%
Anthracene	5883160		<0.10	<0.10	NA	< 0.10	125%	50%	140%	102%	50%	140%	98%	50%	140%
Fluoranthene	5883160		0.33	0.22	NA	< 0.20	120%	50%	140%	105%	50%	140%	104%	50%	140%
Pyrene	5883160		0.33	0.33	NA	< 0.20	118%	50%	140%	102%	50%	140%	102%	50%	140%
Benzo(a)anthracene	5883160		<0.20	<0.20	NA	< 0.20	125%	50%	140%	108%	50%	140%	95%	50%	140%
Chrysene	5883160		0.11	<0.10	NA	< 0.10	110%	50%	140%	86%	50%	140%	87%	50%	140%
Benzo(b)fluoranthene	5883160		0.11	<0.10	NA	< 0.10	120%	50%	140%	97%	50%	140%	91%	50%	140%
Benzo(k)fluoranthene	5883160		0.11	<0.10	NA	< 0.10	112%	50%	140%	110%	50%	140%	91%	50%	140%
Benzo(a)pyrene	5883160		0.06	<0.01	NA	< 0.01	56%	50%	140%	103%	50%	140%	90%	50%	140%
Indeno(1,2,3-cd)pyrene	5883160		<0.20	<0.20	NA	< 0.20	77%	50%	140%	73%	50%	140%	80%	50%	140%
Dibenz(a,h)anthracene	5883160		<0.20	<0.20	NA	< 0.20	78%	50%	140%	72%	50%	140%	78%	50%	140%
Benzo(g,h,i)perylene	5883160		<0.20	<0.20	NA	< 0.20	93%	50%	140%	78%	50%	140%	75%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)															
F1 (C6 to C10)	5882800		<25	<25	NA	< 25	97%	60%	140%	95%	60%	140%	0%	60%	140%
F2 (C10 to C16)	5883005		<100	<100	NA	< 100	91%	60%	140%	77%	60%	140%	71%	60%	140%
F3 (C16 to C34)	5883005		<100	<100	NA	< 100	103%	60%	140%	94%	60%	140%	67%	60%	140%
F4 (C34 to C50)	5883005		<100	<100	NA	< 100	96%	60%	140%	114%	60%	140%	113%	60%	140%
O. Reg. 153(511) - PCBs (Water)															
Polychlorinated Biphenyls	5880188		< 0.1	< 0.1	NA	< 0.1	104%	50%	140%	99%	50%	140%	97%	50%	140%

Quality Assurance

CLIENT NAME: PINCHIN LTD. **AGAT WORK ORDER: 24Z154227**
PROJECT: 319674.002 **ATTENTION TO: Alicia McDonald**
SAMPLING SITE: **SAMPLED BY:**

Trace Organics Analysis (Continued)

RPT Date: May 30, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By:

Quality Assurance

CLIENT NAME: PINCHIN LTD.
PROJECT: 319674.002
SAMPLING SITE:

AGAT WORK ORDER: 24Z154227
ATTENTION TO: Alicia McDonald
SAMPLED BY:

Water Analysis

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

RPT Date: May 30, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Dissolved Antimony	5883507	5883507	<1.0	<1.0	NA	< 1.0	102%	70%	130%	99%	80%	120%	99%	70%	130%
Dissolved Arsenic	5883507	5883507	<1.0	<1.0	NA	< 1.0	106%	70%	130%	105%	80%	120%	111%	70%	130%
Dissolved Barium	5883507	5883507	107	106	0.9%	< 2.0	101%	70%	130%	100%	80%	120%	105%	70%	130%
Dissolved Beryllium	5883507	5883507	<0.50	<0.50	NA	< 0.50	102%	70%	130%	107%	80%	120%	100%	70%	130%
Dissolved Boron	5883507	5883507	92.6	93.0	0.4%	< 10.0	100%	70%	130%	105%	80%	120%	97%	70%	130%
Dissolved Cadmium	5883507	5883507	<0.20	<0.20	NA	< 0.20	100%	70%	130%	100%	80%	120%	95%	70%	130%
Dissolved Chromium	5883507	5883507	<2.0	<2.0	NA	< 2.0	99%	70%	130%	102%	80%	120%	103%	70%	130%
Dissolved Cobalt	5883507	5883507	1.69	1.48	NA	< 0.50	103%	70%	130%	104%	80%	120%	101%	70%	130%
Dissolved Copper	5883507	5883507	2.6	2.6	NA	< 1.0	101%	70%	130%	99%	80%	120%	95%	70%	130%
Dissolved Lead	5883507	5883507	<0.50	<0.50	NA	< 0.50	98%	70%	130%	98%	80%	120%	91%	70%	130%
Dissolved Molybdenum	5883507	5883507	6.16	6.22	1.0%	< 0.50	101%	70%	130%	95%	80%	120%	99%	70%	130%
Dissolved Nickel	5883507	5883507	4.1	2.5	NA	< 1.0	102%	70%	130%	103%	80%	120%	97%	70%	130%
Dissolved Selenium	5883507	5883507	1.6	<1.0	NA	< 1.0	100%	70%	130%	96%	80%	120%	95%	70%	130%
Dissolved Silver	5883507	5883507	<0.20	<0.20	NA	< 0.20	103%	70%	130%	101%	80%	120%	93%	70%	130%
Dissolved Thallium	5883507	5883507	<0.30	<0.30	NA	< 0.30	101%	70%	130%	102%	80%	120%	95%	70%	130%
Dissolved Uranium	5883507	5883507	2.58	2.66	3.1%	< 0.50	93%	70%	130%	107%	80%	120%	104%	70%	130%
Dissolved Vanadium	5883507	5883507	1.35	0.97	NA	< 0.40	102%	70%	130%	106%	80%	120%	111%	70%	130%
Dissolved Zinc	5883507	5883507	5.8	8.5	NA	< 5.0	107%	70%	130%	103%	80%	120%	96%	70%	130%

Comments: NA signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.

O. Reg. 153(511) - ORPs (Water)

PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Lower	Upper	Recovery	Lower	Upper	Recovery	Lower	Upper
Dissolved Sodium	5883507	5883507	1220000	1170000	4.2%	< 50	97%	70%	130%	103%	80%	120%	NA	70%	130%
Chloride	5887761		24400	24200	0.8%	< 100	92%	70%	130%	100%	80%	120%	101%	70%	130%

Comments: NA signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.

Matrix spike NA: Spike level < native concentration. Matrix spike acceptance limits do not apply and are not calculated.

O. Reg. 153(511) - ORPs (Water) -Cr.6, Hg

PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Lower	Upper	Recovery	Lower	Upper	Recovery	Lower	Upper
Mercury	5883555	5883555	<0.02	<0.02	NA	< 0.02	99%	70%	130%	104%	80%	120%	86%	70%	130%
Chromium VI	5880818		<2.000	<2.000	NA	< 2	103%	70%	130%	104%	80%	120%	101%	70%	130%

Comments: NA signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.

NIVINE BASILY

Certified By:

QC Exceedance

CLIENT NAME: PINCHIN LTD. **AGAT WORK ORDER: 24Z154227**

PROJECT: 319674.002 **ATTENTION TO: Alicia McDonald**

RPT Date: May 30, 2024		**REFERENCE MATERIAL**			**METHOD BLANK SPIKE**			**MATRIX SPIKE**		
PARAMETER	**Sample Id**	**Measured Value**	**Acceptable Limits**		**Recovery**	**Acceptable Limits**		**Recovery**	**Acceptable Limits**	
			Lower	**Upper**		**Lower**	**Upper**		**Lower**	**Upper**
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)										
F1 (C6 to C10)		97%	60%	140%	95%	60%	140%	0%	60%	140%

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5883507	**MW13**	**Water**	**23-MAY-2024**	**24-MAY-2024**

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Antimony	28-MAY-2024	28-MAY-2024	DW
Dissolved Arsenic	28-MAY-2024	28-MAY-2024	DW
Dissolved Barium	28-MAY-2024	28-MAY-2024	DW
Dissolved Beryllium	28-MAY-2024	28-MAY-2024	DW
Dissolved Boron	28-MAY-2024	28-MAY-2024	DW
Dissolved Cadmium	28-MAY-2024	28-MAY-2024	DW
Dissolved Chromium	28-MAY-2024	28-MAY-2024	DW
Dissolved Cobalt	28-MAY-2024	28-MAY-2024	DW
Dissolved Copper	28-MAY-2024	28-MAY-2024	DW
Dissolved Lead	28-MAY-2024	28-MAY-2024	DW
Dissolved Molybdenum	28-MAY-2024	28-MAY-2024	DW
Dissolved Nickel	28-MAY-2024	28-MAY-2024	DW
Dissolved Selenium	28-MAY-2024	28-MAY-2024	DW
Dissolved Silver	28-MAY-2024	28-MAY-2024	DW
Dissolved Thallium	28-MAY-2024	28-MAY-2024	DW
Dissolved Uranium	28-MAY-2024	28-MAY-2024	DW
Dissolved Vanadium	28-MAY-2024	28-MAY-2024	DW
Dissolved Zinc	28-MAY-2024	28-MAY-2024	DW

O. Reg. 153(511) - ORPs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Sodium	28-MAY-2024	28-MAY-2024	DW
Chloride	28-MAY-2024	28-MAY-2024	LC

O. Reg. 153(511) - PHCs F1 - F4 (with VOC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	29-MAY-2024	29-MAY-2024	MK
F1 (C6 to C10) minus BTEX	29-MAY-2024	29-MAY-2024	SYS
Toluene-d8	29-MAY-2024	29-MAY-2024	MK
F2 (C10 to C16)	28-MAY-2024	28-MAY-2024	CA
F3 (C16 to C34)	28-MAY-2024	28-MAY-2024	CA
F4 (C34 to C50)	28-MAY-2024	28-MAY-2024	CA
Gravimetric Heavy Hydrocarbons			
Terphenyl	28-MAY-2024	28-MAY-2024	CA
Sediment	28-MAY-2024	28-MAY-2024	NH

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	29-MAY-2024	29-MAY-2024	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5883507	**MW13**	**Water**	**23-MAY-2024**	**24-MAY-2024**

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Vinyl Chloride	29-MAY-2024	29-MAY-2024	MK
Bromomethane	29-MAY-2024	29-MAY-2024	MK
Trichlorofluoromethane	29-MAY-2024	29-MAY-2024	MK
Acetone	29-MAY-2024	29-MAY-2024	MK
1,1-Dichloroethylene	29-MAY-2024	29-MAY-2024	MK
Methylene Chloride	29-MAY-2024	29-MAY-2024	MK
trans- 1,2-Dichloroethylene	29-MAY-2024	29-MAY-2024	MK
Methyl tert-butyl ether	29-MAY-2024	29-MAY-2024	MK
1,1-Dichloroethane	29-MAY-2024	29-MAY-2024	MK
Methyl Ethyl Ketone	29-MAY-2024	29-MAY-2024	MK
cis- 1,2-Dichloroethylene	29-MAY-2024	29-MAY-2024	MK
Chloroform	29-MAY-2024	29-MAY-2024	MK
1,2-Dichloroethane	29-MAY-2024	29-MAY-2024	MK
1,1,1-Trichloroethane	29-MAY-2024	29-MAY-2024	MK
Carbon Tetrachloride	29-MAY-2024	29-MAY-2024	MK
Benzene	29-MAY-2024	29-MAY-2024	MK
1,2-Dichloropropane	29-MAY-2024	29-MAY-2024	MK
Trichloroethylene	29-MAY-2024	29-MAY-2024	MK
Bromodichloromethane	29-MAY-2024	29-MAY-2024	MK
Methyl Isobutyl Ketone	29-MAY-2024	29-MAY-2024	MK
1,1,2-Trichloroethane	29-MAY-2024	29-MAY-2024	MK
Toluene	29-MAY-2024	29-MAY-2024	MK
Dibromochloromethane	29-MAY-2024	29-MAY-2024	MK
Ethylene Dibromide	29-MAY-2024	29-MAY-2024	MK
Tetrachloroethylene	29-MAY-2024	29-MAY-2024	MK
1,1,1,2-Tetrachloroethane	29-MAY-2024	29-MAY-2024	MK
Chlorobenzene	29-MAY-2024	29-MAY-2024	MK
Ethylbenzene	29-MAY-2024	29-MAY-2024	MK
m & p-Xylene	29-MAY-2024	29-MAY-2024	MK
Bromoform	29-MAY-2024	29-MAY-2024	MK
Styrene	29-MAY-2024	29-MAY-2024	MK
1,1,2,2-Tetrachloroethane	29-MAY-2024	29-MAY-2024	MK
o-Xylene	29-MAY-2024	29-MAY-2024	MK
1,3-Dichlorobenzene	29-MAY-2024	29-MAY-2024	MK
1,4-Dichlorobenzene	29-MAY-2024	29-MAY-2024	MK
1,2-Dichlorobenzene	29-MAY-2024	29-MAY-2024	MK
1,3-Dichloropropene	29-MAY-2024	29-MAY-2024	SYS
Xylenes (Total)	29-MAY-2024	29-MAY-2024	SYS
n-Hexane	29-MAY-2024	29-MAY-2024	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5883507	**MW13**	**Water**	**23-MAY-2024**	**24-MAY-2024**

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Toluene-d8	29-MAY-2024	29-MAY-2024	MK
4-Bromofluorobenzene	29-MAY-2024	29-MAY-2024	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5883521	**MW11**	**Water**	**23-MAY-2024**	**24-MAY-2024**

O. Reg. 153(511) - PHCs F1 - F4 (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Benzene	28-MAY-2024	28-MAY-2024	VB
Toluene	28-MAY-2024	28-MAY-2024	VB
Ethylbenzene	28-MAY-2024	28-MAY-2024	VB
m & p-Xylene	28-MAY-2024	28-MAY-2024	VB
o-Xylene	28-MAY-2024	28-MAY-2024	VB
Xylenes (Total)	28-MAY-2024	28-MAY-2024	SYS
F1 (C6 to C10)	28-MAY-2024	28-MAY-2024	VB
F1 (C6 to C10) minus BTEX	28-MAY-2024	28-MAY-2024	SYS
Toluene-d8	28-MAY-2024	28-MAY-2024	VB
F2 (C10 to C16)	28-MAY-2024	28-MAY-2024	CA
F3 (C16 to C34)	28-MAY-2024	28-MAY-2024	CA
F4 (C34 to C50)	28-MAY-2024	28-MAY-2024	CA
Gravimetric Heavy Hydrocarbons			
Terphenyl	28-MAY-2024	28-MAY-2024	CA
Sediment	28-MAY-2024	28-MAY-2024	NH

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5883539	**MW12**	**Water**	**23-MAY-2024**	**24-MAY-2024**

O. Reg. 153(511) - PHCs F1 - F4 (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Benzene	28-MAY-2024	28-MAY-2024	VB
Toluene	28-MAY-2024	28-MAY-2024	VB
Ethylbenzene	28-MAY-2024	28-MAY-2024	VB
m & p-Xylene	28-MAY-2024	28-MAY-2024	VB
o-Xylene	28-MAY-2024	28-MAY-2024	VB
Xylenes (Total)	28-MAY-2024	28-MAY-2024	SYS
F1 (C6 to C10)	28-MAY-2024	28-MAY-2024	VB
F1 (C6 to C10) minus BTEX	28-MAY-2024	28-MAY-2024	SYS
Toluene-d8	28-MAY-2024	28-MAY-2024	VB
F2 (C10 to C16)	28-MAY-2024	28-MAY-2024	CA
F3 (C16 to C34)	28-MAY-2024	28-MAY-2024	CA

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5883539	**MW12**	**Water**	**23-MAY-2024**	**24-MAY-2024**

O. Reg. 153(511) - PHCs F1 - F4 (Water)

Parameter	Date Prepared	Date Analyzed	Initials
F4 (C34 to C50)	28-MAY-2024	28-MAY-2024	CA
Gravimetric Heavy Hydrocarbons			
Terphenyl	28-MAY-2024	28-MAY-2024	CA
Sediment	28-MAY-2024	28-MAY-2024	NH

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5883546	**MW14**	**Water**	**23-MAY-2024**	**24-MAY-2024**

O. Reg. 153(511) - ORPs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Sodium	30-MAY-2024	30-MAY-2024	DW
Chloride	28-MAY-2024	28-MAY-2024	LC

O. Reg. 153(511) - PHCs F1 - F4 (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Benzene	28-MAY-2024	28-MAY-2024	VB
Toluene	28-MAY-2024	28-MAY-2024	VB
Ethylbenzene	28-MAY-2024	28-MAY-2024	VB
m & p-Xylene	28-MAY-2024	28-MAY-2024	VB
o-Xylene	28-MAY-2024	28-MAY-2024	VB
Xylenes (Total)	28-MAY-2024	28-MAY-2024	SYS
F1 (C6 to C10)	28-MAY-2024	28-MAY-2024	VB
F1 (C6 to C10) minus BTEX	28-MAY-2024	28-MAY-2024	SYS
Toluene-d8	28-MAY-2024	28-MAY-2024	VB
F2 (C10 to C16)	28-MAY-2024	28-MAY-2024	CA
F3 (C16 to C34)	28-MAY-2024	28-MAY-2024	CA
F4 (C34 to C50)	28-MAY-2024	28-MAY-2024	CA
Gravimetric Heavy Hydrocarbons			
Terphenyl	28-MAY-2024	28-MAY-2024	CA
Sediment	28-MAY-2024	28-MAY-2024	NH

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5883552	**MW16**	**Water**	**23-MAY-2024**	**24-MAY-2024**

O. Reg. 153(511) - ORPs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Sodium	30-MAY-2024	30-MAY-2024	DW
Chloride	28-MAY-2024	28-MAY-2024	LC

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5883555	**MW3**	**Water**	**23-MAY-2024**	**24-MAY-2024**

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5883555	**MW3**	**Water**	**23-MAY-2024**	**24-MAY-2024**

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Antimony	28-MAY-2024	28-MAY-2024	DW
Dissolved Arsenic	28-MAY-2024	28-MAY-2024	DW
Dissolved Barium	28-MAY-2024	28-MAY-2024	DW
Dissolved Beryllium	28-MAY-2024	28-MAY-2024	DW
Dissolved Boron	28-MAY-2024	28-MAY-2024	DW
Dissolved Cadmium	28-MAY-2024	28-MAY-2024	DW
Dissolved Chromium	28-MAY-2024	28-MAY-2024	DW
Dissolved Cobalt	28-MAY-2024	28-MAY-2024	DW
Dissolved Copper	28-MAY-2024	28-MAY-2024	DW
Dissolved Lead	28-MAY-2024	28-MAY-2024	DW
Dissolved Molybdenum	28-MAY-2024	28-MAY-2024	DW
Dissolved Nickel	28-MAY-2024	28-MAY-2024	DW
Dissolved Selenium	28-MAY-2024	28-MAY-2024	DW
Dissolved Silver	28-MAY-2024	28-MAY-2024	DW
Dissolved Thallium	28-MAY-2024	28-MAY-2024	DW
Dissolved Uranium	28-MAY-2024	28-MAY-2024	DW
Dissolved Vanadium	28-MAY-2024	28-MAY-2024	DW
Dissolved Zinc	28-MAY-2024	28-MAY-2024	DW

O. Reg. 153(511) - ORPs (Water) -Cr.6, Hg

Parameter	Date Prepared	Date Analyzed	Initials
Mercury	28-MAY-2024	28-MAY-2024	DL
Chromium VI	30-MAY-2024	30-MAY-2024	WZ

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	29-MAY-2024	29-MAY-2024	NP
Acenaphthylene	29-MAY-2024	29-MAY-2024	NP
Acenaphthene	29-MAY-2024	29-MAY-2024	NP
Fluorene	29-MAY-2024	29-MAY-2024	NP
Phenanthrene	29-MAY-2024	29-MAY-2024	NP
Anthracene	29-MAY-2024	29-MAY-2024	NP
Fluoranthene	29-MAY-2024	29-MAY-2024	NP
Pyrene	29-MAY-2024	29-MAY-2024	NP
Benzo(a)anthracene	29-MAY-2024	29-MAY-2024	NP
Chrysene	29-MAY-2024	29-MAY-2024	NP
Benzo(b)fluoranthene	29-MAY-2024	29-MAY-2024	NP
Benzo(k)fluoranthene	29-MAY-2024	29-MAY-2024	NP
Benzo(a)pyrene	29-MAY-2024	29-MAY-2024	NP

CLIENT NAME: PINCHIN LTD. **ATTENTION TO: Alicia McDonald**

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5883555	**MW3**	**Water**	**23-MAY-2024**	**24-MAY-2024**

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Indeno(1,2,3-cd)pyrene	29-MAY-2024	29-MAY-2024	NP
Dibenz(a,h)anthracene	29-MAY-2024	29-MAY-2024	NP
Benzo(g,h,i)perylene	29-MAY-2024	29-MAY-2024	NP
2-and 1-methyl Napthalene	29-MAY-2024	29-MAY-2024	SYS
Naphthalene-d8	29-MAY-2024	29-MAY-2024	NP
Acridine-d9	29-MAY-2024	29-MAY-2024	NP
Terphenyl-d14	29-MAY-2024	29-MAY-2024	NP
Sediment	28-MAY-2024	28-MAY-2024	AT

O. Reg. 153(511) - PCBs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Polychlorinated Biphenyls	28-MAY-2024	30-MAY-2024	VDP
Decachlorobiphenyl	28-MAY-2024	30-MAY-2024	VDP

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	29-MAY-2024	29-MAY-2024	MK
F1 (C6 to C10) minus BTEX	29-MAY-2024	29-MAY-2024	SYS
Toluene-d8	29-MAY-2024	29-MAY-2024	MK
F2 (C10 to C16)	28-MAY-2024	28-MAY-2024	CA
F2 (C10 to C16) minus Naphthalene	29-MAY-2024	29-MAY-2024	SYS
F3 (C16 to C34)	28-MAY-2024	28-MAY-2024	CA
F3 (C16 to C34) minus PAHs	29-MAY-2024	29-MAY-2024	SYS
F4 (C34 to C50)	28-MAY-2024	28-MAY-2024	CA
Gravimetric Heavy Hydrocarbons			
Terphenyl	28-MAY-2024	28-MAY-2024	CA
Sediment	28-MAY-2024	28-MAY-2024	AT

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	29-MAY-2024	29-MAY-2024	MK
Vinyl Chloride	29-MAY-2024	29-MAY-2024	MK
Bromomethane	29-MAY-2024	29-MAY-2024	MK
Trichlorofluoromethane	29-MAY-2024	29-MAY-2024	MK
Acetone	29-MAY-2024	29-MAY-2024	MK
1,1-Dichloroethylene	29-MAY-2024	29-MAY-2024	MK
Methylene Chloride	29-MAY-2024	29-MAY-2024	MK
trans- 1,2-Dichloroethylene	29-MAY-2024	29-MAY-2024	MK
Methyl tert-butyl ether	29-MAY-2024	29-MAY-2024	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5883555	**MW3**	**Water**	**23-MAY-2024**	**24-MAY-2024**

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
1,1-Dichloroethane	29-MAY-2024	29-MAY-2024	MK
Methyl Ethyl Ketone	29-MAY-2024	29-MAY-2024	MK
cis- 1,2-Dichloroethylene	29-MAY-2024	29-MAY-2024	MK
Chloroform	29-MAY-2024	29-MAY-2024	MK
1,2-Dichloroethane	29-MAY-2024	29-MAY-2024	MK
1,1,1-Trichloroethane	29-MAY-2024	29-MAY-2024	MK
Carbon Tetrachloride	29-MAY-2024	29-MAY-2024	MK
Benzene	29-MAY-2024	29-MAY-2024	MK
1,2-Dichloropropane	29-MAY-2024	29-MAY-2024	MK
Trichloroethylene	29-MAY-2024	29-MAY-2024	MK
Bromodichloromethane	29-MAY-2024	29-MAY-2024	MK
Methyl Isobutyl Ketone	29-MAY-2024	29-MAY-2024	MK
1,1,2-Trichloroethane	29-MAY-2024	29-MAY-2024	MK
Toluene	29-MAY-2024	29-MAY-2024	MK
Dibromochloromethane	29-MAY-2024	29-MAY-2024	MK
Ethylene Dibromide	29-MAY-2024	29-MAY-2024	MK
Tetrachloroethylene	29-MAY-2024	29-MAY-2024	MK
1,1,1,2-Tetrachloroethane	29-MAY-2024	29-MAY-2024	MK
Chlorobenzene	29-MAY-2024	29-MAY-2024	MK
Ethylbenzene	29-MAY-2024	29-MAY-2024	MK
m & p-Xylene	29-MAY-2024	29-MAY-2024	MK
Bromoform	29-MAY-2024	29-MAY-2024	MK
Styrene	29-MAY-2024	29-MAY-2024	MK
1,1,2,2-Tetrachloroethane	29-MAY-2024	29-MAY-2024	MK
o-Xylene	29-MAY-2024	29-MAY-2024	MK
1,3-Dichlorobenzene	29-MAY-2024	29-MAY-2024	MK
1,4-Dichlorobenzene	29-MAY-2024	29-MAY-2024	MK
1,2-Dichlorobenzene	29-MAY-2024	29-MAY-2024	MK
1,3-Dichloropropene	29-MAY-2024	29-MAY-2024	SYS
Xylenes (Total)	29-MAY-2024	29-MAY-2024	SYS
n-Hexane	29-MAY-2024	29-MAY-2024	MK
Toluene-d8	29-MAY-2024	29-MAY-2024	MK
4-Bromofluorobenzene	29-MAY-2024	29-MAY-2024	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5883566	**DUP-3**	**Water**	**23-MAY-2024**	**24-MAY-2024**

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Antimony	28-MAY-2024	28-MAY-2024	DW

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5883566	**DUP-3**	**Water**	**23-MAY-2024**	**24-MAY-2024**

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Arsenic	28-MAY-2024	28-MAY-2024	DW
Dissolved Barium	28-MAY-2024	28-MAY-2024	DW
Dissolved Beryllium	28-MAY-2024	28-MAY-2024	DW
Dissolved Boron	28-MAY-2024	28-MAY-2024	DW
Dissolved Cadmium	28-MAY-2024	28-MAY-2024	DW
Dissolved Chromium	28-MAY-2024	28-MAY-2024	DW
Dissolved Cobalt	28-MAY-2024	28-MAY-2024	DW
Dissolved Copper	28-MAY-2024	28-MAY-2024	DW
Dissolved Lead	28-MAY-2024	28-MAY-2024	DW
Dissolved Molybdenum	28-MAY-2024	28-MAY-2024	DW
Dissolved Nickel	28-MAY-2024	28-MAY-2024	DW
Dissolved Selenium	28-MAY-2024	28-MAY-2024	DW
Dissolved Silver	28-MAY-2024	28-MAY-2024	DW
Dissolved Thallium	28-MAY-2024	28-MAY-2024	DW
Dissolved Uranium	28-MAY-2024	28-MAY-2024	DW
Dissolved Vanadium	28-MAY-2024	28-MAY-2024	DW
Dissolved Zinc	28-MAY-2024	28-MAY-2024	DW

O. Reg. 153(511) - ORPs (Water) -Cr.6, Hg

Parameter	Date Prepared	Date Analyzed	Initials
Mercury	28-MAY-2024	28-MAY-2024	DL
Chromium VI	30-MAY-2024	30-MAY-2024	WZ

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	29-MAY-2024	29-MAY-2024	NP
Acenaphthylene	29-MAY-2024	29-MAY-2024	NP
Acenaphthene	29-MAY-2024	29-MAY-2024	NP
Fluorene	29-MAY-2024	29-MAY-2024	NP
Phenanthrene	29-MAY-2024	29-MAY-2024	NP
Anthracene	29-MAY-2024	29-MAY-2024	NP
Fluoranthene	29-MAY-2024	29-MAY-2024	NP
Pyrene	29-MAY-2024	29-MAY-2024	NP
Benzo(a)anthracene	29-MAY-2024	29-MAY-2024	NP
Chrysene	29-MAY-2024	29-MAY-2024	NP
Benzo(b)fluoranthene	29-MAY-2024	29-MAY-2024	NP
Benzo(k)fluoranthene	29-MAY-2024	29-MAY-2024	NP
Benzo(a)pyrene	29-MAY-2024	29-MAY-2024	NP
Indeno(1,2,3-cd)pyrene	29-MAY-2024	29-MAY-2024	NP

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5883566	**DUP-3**	**Water**	**23-MAY-2024**	**24-MAY-2024**

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dibenz(a,h)anthracene	29-MAY-2024	29-MAY-2024	NP
Benzo(g,h,i)perylene	29-MAY-2024	29-MAY-2024	NP
2-and 1-methyl Napthalene	29-MAY-2024	29-MAY-2024	SYS
Naphthalene-d8	29-MAY-2024	29-MAY-2024	NP
Acridine-d9	29-MAY-2024	29-MAY-2024	NP
Terphenyl-d14	29-MAY-2024	29-MAY-2024	NP
Sediment	28-MAY-2024	28-MAY-2024	AT

O. Reg. 153(511) - PCBs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Polychlorinated Biphenyls	28-MAY-2024	30-MAY-2024	VDP
Decachlorobiphenyl	28-MAY-2024	30-MAY-2024	VDP

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	29-MAY-2024	29-MAY-2024	MK
F1 (C6 to C10) minus BTEX	29-MAY-2024	29-MAY-2024	SYS
Toluene-d8	29-MAY-2024	29-MAY-2024	MK
F2 (C10 to C16)	28-MAY-2024	28-MAY-2024	CA
F2 (C10 to C16) minus Naphthalene	29-MAY-2024	29-MAY-2024	SYS
F3 (C16 to C34)	28-MAY-2024	28-MAY-2024	CA
F3 (C16 to C34) minus PAHs	29-MAY-2024	29-MAY-2024	SYS
F4 (C34 to C50)	28-MAY-2024	28-MAY-2024	CA
Gravimetric Heavy Hydrocarbons			
Terphenyl	28-MAY-2024	28-MAY-2024	CA
Sediment	28-MAY-2024	28-MAY-2024	AT

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	29-MAY-2024	29-MAY-2024	MK
Vinyl Chloride	29-MAY-2024	29-MAY-2024	MK
Bromomethane	29-MAY-2024	29-MAY-2024	MK
Trichlorofluoromethane	29-MAY-2024	29-MAY-2024	MK
Acetone	29-MAY-2024	29-MAY-2024	MK
1,1-Dichloroethylene	29-MAY-2024	29-MAY-2024	MK
Methylene Chloride	29-MAY-2024	29-MAY-2024	MK
trans- 1,2-Dichloroethylene	29-MAY-2024	29-MAY-2024	MK
Methyl tert-butyl ether	29-MAY-2024	29-MAY-2024	MK
1,1-Dichloroethane	29-MAY-2024	29-MAY-2024	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5883566	**DUP-3**	**Water**	**23-MAY-2024**	**24-MAY-2024**

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Methyl Ethyl Ketone	29-MAY-2024	29-MAY-2024	MK
cis- 1,2-Dichloroethylene	29-MAY-2024	29-MAY-2024	MK
Chloroform	29-MAY-2024	29-MAY-2024	MK
1,2-Dichloroethane	29-MAY-2024	29-MAY-2024	MK
1,1,1-Trichloroethane	29-MAY-2024	29-MAY-2024	MK
Carbon Tetrachloride	29-MAY-2024	29-MAY-2024	MK
Benzene	29-MAY-2024	29-MAY-2024	MK
1,2-Dichloropropane	29-MAY-2024	29-MAY-2024	MK
Trichloroethylene	29-MAY-2024	29-MAY-2024	MK
Bromodichloromethane	29-MAY-2024	29-MAY-2024	MK
Methyl Isobutyl Ketone	29-MAY-2024	29-MAY-2024	MK
1,1,2-Trichloroethane	29-MAY-2024	29-MAY-2024	MK
Toluene	29-MAY-2024	29-MAY-2024	MK
Dibromochloromethane	29-MAY-2024	29-MAY-2024	MK
Ethylene Dibromide	29-MAY-2024	29-MAY-2024	MK
Tetrachloroethylene	29-MAY-2024	29-MAY-2024	MK
1,1,1,2-Tetrachloroethane	29-MAY-2024	29-MAY-2024	MK
Chlorobenzene	29-MAY-2024	29-MAY-2024	MK
Ethylbenzene	29-MAY-2024	29-MAY-2024	MK
m & p-Xylene	29-MAY-2024	29-MAY-2024	MK
Bromoform	29-MAY-2024	29-MAY-2024	MK
Styrene	29-MAY-2024	29-MAY-2024	MK
1,1,2,2-Tetrachloroethane	29-MAY-2024	29-MAY-2024	MK
o-Xylene	29-MAY-2024	29-MAY-2024	MK
1,3-Dichlorobenzene	29-MAY-2024	29-MAY-2024	MK
1,4-Dichlorobenzene	29-MAY-2024	29-MAY-2024	MK
1,2-Dichlorobenzene	29-MAY-2024	29-MAY-2024	MK
1,3-Dichloropropene	29-MAY-2024	29-MAY-2024	SYS
Xylenes (Total)	29-MAY-2024	29-MAY-2024	SYS
n-Hexane	29-MAY-2024	29-MAY-2024	MK
Toluene-d8	29-MAY-2024	29-MAY-2024	MK
4-Bromofluorobenzene	29-MAY-2024	29-MAY-2024	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5883567	**MW10**	**Water**	**23-MAY-2024**	**24-MAY-2024**

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Antimony	28-MAY-2024	28-MAY-2024	DW
Dissolved Arsenic	28-MAY-2024	28-MAY-2024	DW

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5883567	**MW10**	**Water**	**23-MAY-2024**	**24-MAY-2024**

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Barium	28-MAY-2024	28-MAY-2024	DW
Dissolved Beryllium	28-MAY-2024	28-MAY-2024	DW
Dissolved Boron	28-MAY-2024	28-MAY-2024	DW
Dissolved Cadmium	28-MAY-2024	28-MAY-2024	DW
Dissolved Chromium	28-MAY-2024	28-MAY-2024	DW
Dissolved Cobalt	28-MAY-2024	28-MAY-2024	DW
Dissolved Copper	28-MAY-2024	28-MAY-2024	DW
Dissolved Lead	28-MAY-2024	28-MAY-2024	DW
Dissolved Molybdenum	28-MAY-2024	28-MAY-2024	DW
Dissolved Nickel	28-MAY-2024	28-MAY-2024	DW
Dissolved Selenium	28-MAY-2024	28-MAY-2024	DW
Dissolved Silver	28-MAY-2024	28-MAY-2024	DW
Dissolved Thallium	28-MAY-2024	28-MAY-2024	DW
Dissolved Uranium	28-MAY-2024	28-MAY-2024	DW
Dissolved Vanadium	28-MAY-2024	28-MAY-2024	DW
Dissolved Zinc	28-MAY-2024	28-MAY-2024	DW

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	29-MAY-2024	29-MAY-2024	NP
Acenaphthylene	29-MAY-2024	29-MAY-2024	NP
Acenaphthene	29-MAY-2024	29-MAY-2024	NP
Fluorene	29-MAY-2024	29-MAY-2024	NP
Phenanthrene	29-MAY-2024	29-MAY-2024	NP
Anthracene	29-MAY-2024	29-MAY-2024	NP
Fluoranthene	29-MAY-2024	29-MAY-2024	NP
Pyrene	29-MAY-2024	29-MAY-2024	NP
Benzo(a)anthracene	29-MAY-2024	29-MAY-2024	NP
Chrysene	29-MAY-2024	29-MAY-2024	NP
Benzo(b)fluoranthene	29-MAY-2024	29-MAY-2024	NP
Benzo(k)fluoranthene	29-MAY-2024	29-MAY-2024	NP
Benzo(a)pyrene	29-MAY-2024	29-MAY-2024	NP
Indeno(1,2,3-cd)pyrene	29-MAY-2024	29-MAY-2024	NP
Dibenz(a,h)anthracene	29-MAY-2024	29-MAY-2024	NP
Benzo(g,h,i)perylene	29-MAY-2024	29-MAY-2024	NP
2-and 1-methyl Napthalene	29-MAY-2024	29-MAY-2024	SYS
Naphthalene-d8	29-MAY-2024	29-MAY-2024	NP
Acridine-d9	29-MAY-2024	29-MAY-2024	NP
Terphenyl-d14	29-MAY-2024	29-MAY-2024	NP

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5883567	**MW10**	**Water**	**23-MAY-2024**	**24-MAY-2024**

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Sediment	28-MAY-2024	28-MAY-2024	AT

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	29-MAY-2024	29-MAY-2024	MK
F1 (C6 to C10) minus BTEX	29-MAY-2024	29-MAY-2024	SYS
Toluene-d8	29-MAY-2024	29-MAY-2024	MK
F2 (C10 to C16)	28-MAY-2024	28-MAY-2024	CA
F2 (C10 to C16) minus Naphthalene	29-MAY-2024	29-MAY-2024	SYS
F3 (C16 to C34)	28-MAY-2024	28-MAY-2024	CA
F3 (C16 to C34) minus PAHs	29-MAY-2024	29-MAY-2024	SYS
F4 (C34 to C50)	28-MAY-2024	28-MAY-2024	CA
Gravimetric Heavy Hydrocarbons			
Terphenyl	28-MAY-2024	28-MAY-2024	CA
Sediment	28-MAY-2024	28-MAY-2024	AT

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	29-MAY-2024	29-MAY-2024	MK
Vinyl Chloride	29-MAY-2024	29-MAY-2024	MK
Bromomethane	29-MAY-2024	29-MAY-2024	MK
Trichlorofluoromethane	29-MAY-2024	29-MAY-2024	MK
Acetone	29-MAY-2024	29-MAY-2024	MK
1,1-Dichloroethylene	29-MAY-2024	29-MAY-2024	MK
Methylene Chloride	29-MAY-2024	29-MAY-2024	MK
trans- 1,2-Dichloroethylene	29-MAY-2024	29-MAY-2024	MK
Methyl tert-butyl ether	29-MAY-2024	29-MAY-2024	MK
1,1-Dichloroethane	29-MAY-2024	29-MAY-2024	MK
Methyl Ethyl Ketone	29-MAY-2024	29-MAY-2024	MK
cis- 1,2-Dichloroethylene	29-MAY-2024	29-MAY-2024	MK
Chloroform	29-MAY-2024	29-MAY-2024	MK
1,2-Dichloroethane	29-MAY-2024	29-MAY-2024	MK
1,1,1-Trichloroethane	29-MAY-2024	29-MAY-2024	MK
Carbon Tetrachloride	29-MAY-2024	29-MAY-2024	MK
Benzene	29-MAY-2024	29-MAY-2024	MK
1,2-Dichloropropane	29-MAY-2024	29-MAY-2024	MK
Trichloroethylene	29-MAY-2024	29-MAY-2024	MK
Bromodichloromethane	29-MAY-2024	29-MAY-2024	MK
Methyl Isobutyl Ketone	29-MAY-2024	29-MAY-2024	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5883567	**MW10**	**Water**	**23-MAY-2024**	**24-MAY-2024**

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
1,1,2-Trichloroethane	29-MAY-2024	29-MAY-2024	MK
Toluene	29-MAY-2024	29-MAY-2024	MK
Dibromochloromethane	29-MAY-2024	29-MAY-2024	MK
Ethylene Dibromide	29-MAY-2024	29-MAY-2024	MK
Tetrachloroethylene	29-MAY-2024	29-MAY-2024	MK
1,1,1,2-Tetrachloroethane	29-MAY-2024	29-MAY-2024	MK
Chlorobenzene	29-MAY-2024	29-MAY-2024	MK
Ethylbenzene	29-MAY-2024	29-MAY-2024	MK
m & p-Xylene	29-MAY-2024	29-MAY-2024	MK
Bromoform	29-MAY-2024	29-MAY-2024	MK
Styrene	29-MAY-2024	29-MAY-2024	MK
1,1,2,2-Tetrachloroethane	29-MAY-2024	29-MAY-2024	MK
o-Xylene	29-MAY-2024	29-MAY-2024	MK
1,3-Dichlorobenzene	29-MAY-2024	29-MAY-2024	MK
1,4-Dichlorobenzene	29-MAY-2024	29-MAY-2024	MK
1,2-Dichlorobenzene	29-MAY-2024	29-MAY-2024	MK
1,3-Dichloropropene	29-MAY-2024	29-MAY-2024	SYS
Xylenes (Total)	29-MAY-2024	29-MAY-2024	SYS
n-Hexane	29-MAY-2024	29-MAY-2024	MK
Toluene-d8	29-MAY-2024	29-MAY-2024	MK
4-Bromofluorobenzene	29-MAY-2024	29-MAY-2024	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5883593	**MW18**	**Water**	**23-MAY-2024**	**24-MAY-2024**

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Antimony	28-MAY-2024	28-MAY-2024	DW
Dissolved Arsenic	28-MAY-2024	28-MAY-2024	DW
Dissolved Barium	28-MAY-2024	28-MAY-2024	DW
Dissolved Beryllium	28-MAY-2024	28-MAY-2024	DW
Dissolved Boron	28-MAY-2024	28-MAY-2024	DW
Dissolved Cadmium	28-MAY-2024	28-MAY-2024	DW
Dissolved Chromium	28-MAY-2024	28-MAY-2024	DW
Dissolved Cobalt	28-MAY-2024	28-MAY-2024	DW
Dissolved Copper	28-MAY-2024	28-MAY-2024	DW
Dissolved Lead	28-MAY-2024	28-MAY-2024	DW
Dissolved Molybdenum	28-MAY-2024	28-MAY-2024	DW
Dissolved Nickel	28-MAY-2024	28-MAY-2024	DW
Dissolved Selenium	28-MAY-2024	28-MAY-2024	DW

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5883593	**MW18**	**Water**	**23-MAY-2024**	**24-MAY-2024**

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Silver	28-MAY-2024	28-MAY-2024	DW
Dissolved Thallium	28-MAY-2024	28-MAY-2024	DW
Dissolved Uranium	28-MAY-2024	28-MAY-2024	DW
Dissolved Vanadium	28-MAY-2024	28-MAY-2024	DW
Dissolved Zinc	28-MAY-2024	28-MAY-2024	DW

O. Reg. 153(511) - ORPs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Sodium	30-MAY-2024	30-MAY-2024	DW
Chloride	28-MAY-2024	28-MAY-2024	LC

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	29-MAY-2024	29-MAY-2024	NP
Acenaphthylene	29-MAY-2024	29-MAY-2024	NP
Acenaphthene	29-MAY-2024	29-MAY-2024	NP
Fluorene	29-MAY-2024	29-MAY-2024	NP
Phenanthrene	29-MAY-2024	29-MAY-2024	NP
Anthracene	29-MAY-2024	29-MAY-2024	NP
Fluoranthene	29-MAY-2024	29-MAY-2024	NP
Pyrene	29-MAY-2024	29-MAY-2024	NP
Benzo(a)anthracene	29-MAY-2024	29-MAY-2024	NP
Chrysene	29-MAY-2024	29-MAY-2024	NP
Benzo(b)fluoranthene	29-MAY-2024	29-MAY-2024	NP
Benzo(k)fluoranthene	29-MAY-2024	29-MAY-2024	NP
Benzo(a)pyrene	29-MAY-2024	29-MAY-2024	NP
Indeno(1,2,3-cd)pyrene	29-MAY-2024	29-MAY-2024	NP
Dibenz(a,h)anthracene	29-MAY-2024	29-MAY-2024	NP
Benzo(g,h,i)perylene	29-MAY-2024	29-MAY-2024	NP
2-and 1-methyl Napthalene	29-MAY-2024	29-MAY-2024	SYS
Naphthalene-d8	29-MAY-2024	29-MAY-2024	NP
Acridine-d9	29-MAY-2024	29-MAY-2024	NP
Terphenyl-d14	29-MAY-2024	29-MAY-2024	NP
Sediment	28-MAY-2024	28-MAY-2024	AT

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	29-MAY-2024	29-MAY-2024	MK
F1 (C6 to C10) minus BTEX	29-MAY-2024	29-MAY-2024	SYS

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5883593	**MW18**	**Water**	**23-MAY-2024**	**24-MAY-2024**

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Toluene-d8	29-MAY-2024	29-MAY-2024	MK
F2 (C10 to C16)	28-MAY-2024	28-MAY-2024	CA
F2 (C10 to C16) minus Naphthalene	29-MAY-2024	29-MAY-2024	SYS
F3 (C16 to C34)	28-MAY-2024	28-MAY-2024	CA
F3 (C16 to C34) minus PAHs	29-MAY-2024	29-MAY-2024	SYS
F4 (C34 to C50)	28-MAY-2024	28-MAY-2024	CA
Gravimetric Heavy Hydrocarbons			
Terphenyl	28-MAY-2024	28-MAY-2024	CA
Sediment	28-MAY-2024	28-MAY-2024	AT

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	29-MAY-2024	29-MAY-2024	MK
Vinyl Chloride	29-MAY-2024	29-MAY-2024	MK
Bromomethane	29-MAY-2024	29-MAY-2024	MK
Trichlorofluoromethane	29-MAY-2024	29-MAY-2024	MK
Acetone	29-MAY-2024	29-MAY-2024	MK
1,1-Dichloroethylene	29-MAY-2024	29-MAY-2024	MK
Methylene Chloride	29-MAY-2024	29-MAY-2024	MK
trans- 1,2-Dichloroethylene	29-MAY-2024	29-MAY-2024	MK
Methyl tert-butyl ether	29-MAY-2024	29-MAY-2024	MK
1,1-Dichloroethane	29-MAY-2024	29-MAY-2024	MK
Methyl Ethyl Ketone	29-MAY-2024	29-MAY-2024	MK
cis- 1,2-Dichloroethylene	29-MAY-2024	29-MAY-2024	MK
Chloroform	29-MAY-2024	29-MAY-2024	MK
1,2-Dichloroethane	29-MAY-2024	29-MAY-2024	MK
1,1,1-Trichloroethane	29-MAY-2024	29-MAY-2024	MK
Carbon Tetrachloride	29-MAY-2024	29-MAY-2024	MK
Benzene	29-MAY-2024	29-MAY-2024	MK
1,2-Dichloropropane	29-MAY-2024	29-MAY-2024	MK
Trichloroethylene	29-MAY-2024	29-MAY-2024	MK
Bromodichloromethane	29-MAY-2024	29-MAY-2024	MK
Methyl Isobutyl Ketone	29-MAY-2024	29-MAY-2024	MK
1,1,2-Trichloroethane	29-MAY-2024	29-MAY-2024	MK
Toluene	29-MAY-2024	29-MAY-2024	MK
Dibromochloromethane	29-MAY-2024	29-MAY-2024	MK
Ethylene Dibromide	29-MAY-2024	29-MAY-2024	MK
Tetrachloroethylene	29-MAY-2024	29-MAY-2024	MK
1,1,1,2-Tetrachloroethane	29-MAY-2024	29-MAY-2024	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5883593	**MW18**	**Water**	**23-MAY-2024**	**24-MAY-2024**

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Chlorobenzene	29-MAY-2024	29-MAY-2024	MK
Ethylbenzene	29-MAY-2024	29-MAY-2024	MK
m & p-Xylene	29-MAY-2024	29-MAY-2024	MK
Bromoform	29-MAY-2024	29-MAY-2024	MK
Styrene	29-MAY-2024	29-MAY-2024	MK
1,1,2,2-Tetrachloroethane	29-MAY-2024	29-MAY-2024	MK
o-Xylene	29-MAY-2024	29-MAY-2024	MK
1,3-Dichlorobenzene	29-MAY-2024	29-MAY-2024	MK
1,4-Dichlorobenzene	29-MAY-2024	29-MAY-2024	MK
1,2-Dichlorobenzene	29-MAY-2024	29-MAY-2024	MK
1,3-Dichloropropene	29-MAY-2024	29-MAY-2024	SYS
Xylenes (Total)	29-MAY-2024	29-MAY-2024	SYS
n-Hexane	29-MAY-2024	29-MAY-2024	MK
Toluene-d8	29-MAY-2024	29-MAY-2024	MK
4-Bromofluorobenzene	29-MAY-2024	29-MAY-2024	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5883602	**Trip Blank**	**Water**	**23-MAY-2024**	**24-MAY-2024**

O. Reg. 153(511) - PHCs F1/BTEX (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Benzene	29-MAY-2024	29-MAY-2024	MK
Toluene	29-MAY-2024	29-MAY-2024	MK
Ethylbenzene	29-MAY-2024	29-MAY-2024	MK
m & p-Xylene	29-MAY-2024	29-MAY-2024	MK
o-Xylene	29-MAY-2024	29-MAY-2024	MK
Xylenes (Total)	29-MAY-2024	29-MAY-2024	SYS
F1 (C6 to C10)	29-MAY-2024	29-MAY-2024	MK
F1 (C6 to C10) minus BTEX	29-MAY-2024	29-MAY-2024	SYS
Toluene-d8	29-MAY-2024	29-MAY-2024	MK

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	29-MAY-2024	29-MAY-2024	MK
Vinyl Chloride	29-MAY-2024	29-MAY-2024	MK
Bromomethane	29-MAY-2024	29-MAY-2024	MK
Trichlorofluoromethane	29-MAY-2024	29-MAY-2024	MK
Acetone	29-MAY-2024	29-MAY-2024	MK
1,1-Dichloroethylene	29-MAY-2024	29-MAY-2024	MK
Methylene Chloride	29-MAY-2024	29-MAY-2024	MK

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Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5883602	**Trip Blank**	**Water**	**23-MAY-2024**	**24-MAY-2024**

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
trans- 1,2-Dichloroethylene	29-MAY-2024	29-MAY-2024	MK
Methyl tert-butyl ether	29-MAY-2024	29-MAY-2024	MK
1,1-Dichloroethane	29-MAY-2024	29-MAY-2024	MK
Methyl Ethyl Ketone	29-MAY-2024	29-MAY-2024	MK
cis- 1,2-Dichloroethylene	29-MAY-2024	29-MAY-2024	MK
Chloroform	29-MAY-2024	29-MAY-2024	MK
1,2-Dichloroethane	29-MAY-2024	29-MAY-2024	MK
1,1,1-Trichloroethane	29-MAY-2024	29-MAY-2024	MK
Carbon Tetrachloride	29-MAY-2024	29-MAY-2024	MK
Benzene	29-MAY-2024	29-MAY-2024	MK
1,2-Dichloropropane	29-MAY-2024	29-MAY-2024	MK
Trichloroethylene	29-MAY-2024	29-MAY-2024	MK
Bromodichloromethane	29-MAY-2024	29-MAY-2024	MK
Methyl Isobutyl Ketone	29-MAY-2024	29-MAY-2024	MK
1,1,2-Trichloroethane	29-MAY-2024	29-MAY-2024	MK
Toluene	29-MAY-2024	29-MAY-2024	MK
Dibromochloromethane	29-MAY-2024	29-MAY-2024	MK
Ethylene Dibromide	29-MAY-2024	29-MAY-2024	MK
Tetrachloroethylene	29-MAY-2024	29-MAY-2024	MK
1,1,1,2-Tetrachloroethane	29-MAY-2024	29-MAY-2024	MK
Chlorobenzene	29-MAY-2024	29-MAY-2024	MK
Ethylbenzene	29-MAY-2024	29-MAY-2024	MK
m & p-Xylene	29-MAY-2024	29-MAY-2024	MK
Bromoform	29-MAY-2024	29-MAY-2024	MK
Styrene	29-MAY-2024	29-MAY-2024	MK
1,1,2,2-Tetrachloroethane	29-MAY-2024	29-MAY-2024	MK
o-Xylene	29-MAY-2024	29-MAY-2024	MK
1,3-Dichlorobenzene	29-MAY-2024	29-MAY-2024	MK
1,4-Dichlorobenzene	29-MAY-2024	29-MAY-2024	MK
1,2-Dichlorobenzene	29-MAY-2024	29-MAY-2024	MK
1,3-Dichloropropene	29-MAY-2024	29-MAY-2024	SYS
Xylenes (Total)	29-MAY-2024	29-MAY-2024	SYS
n-Hexane	29-MAY-2024	29-MAY-2024	MK
Toluene-d8	29-MAY-2024	29-MAY-2024	MK
4-Bromofluorobenzene	29-MAY-2024	29-MAY-2024	MK

Method Summary

CLIENT NAME: PINCHIN LTD. **AGAT WORK ORDER: 24Z154227**
PROJECT: 319674.002 **ATTENTION TO: Alicia McDonald**
SAMPLING SITE: **SAMPLED BY:**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluorene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Chrysene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
2-and 1-methyl Napthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Sediment			N/A
Polychlorinated Biphenyls	ORG-91-5112	modified from EPA SW-846 3510 & 8082A	GC/ECD
Decachlorobiphenyl	ORG-91-5112	modified from EPA SW-846 3510 & 8082A	GC/ECD
Benzene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
Toluene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
Ethylbenzene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
m & p-Xylene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
o-Xylene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
Xylenes (Total)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
F1 (C6 to C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL - 5010	MOE E3421	(P&T)GC/MS
Toluene-d8	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS

Method Summary

CLIENT NAME: PINCHIN LTD. **AGAT WORK ORDER: 24Z154227**
PROJECT: 319674.002 **ATTENTION TO: Alicia McDonald**
SAMPLING SITE: **SAMPLED BY:**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	P&T GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
Benzene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Toluene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5010	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F1 (C6 to C10)	VOL-91-5010	modified from MOE E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE E3421	(P&T)GC/FID
Toluene-d8	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

Method Summary

CLIENT NAME: PINCHIN LTD. **AGAT WORK ORDER: 24Z154227**
PROJECT: 319674.002 **ATTENTION TO: Alicia McDonald**
SAMPLING SITE: **SAMPLED BY:**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

Method Summary

CLIENT NAME: PINCHIN LTD. **AGAT WORK ORDER: 24Z154227**

PROJECT: 319674.002 **ATTENTION TO: Alicia McDonald**

SAMPLING SITE: **SAMPLED BY:**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Sodium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP/MS
Chloride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Mercury	MET-93-6100	modified from EPA 245.2 and SM 3112 B	CVAAS
Chromium VI	INOR-93-6073	modified from SM 3500-CR B	LACHAT FIA

M:ss ① 4.5,4.9,5.0 ② 3.3,3.2,3.9

AGAT Laboratories

Have feedback?
Scan here for a quick survey!

5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
webearth.agatlabs.com

Laboratory Use Only

Work Order #: 24Z154227

Cooler Quantity: ~~[illegible]~~ ice packs

Arrival Temperatures: ~~① 18.8 | 19.0 | 18.9~~ CG ~~② 7.8 | 7.5 | 7.7~~ CG ① 11.7/11.8/11.5

Custody Seal Intact: ☐Yes ☐No ☐N/A

Notes:

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Report Information:

Company: Pinchin Ltd.
Contact: Alicia McDonald
Address: 1456 Centennial Drive, Suite 2
KINGSTON
Phone: 613 840 6147 Fax:
Reports to be sent to:
1. Email: amcdonald@pinchin.com
2. Email: jmccann@pinchin.com

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table 3 *Indicate One*
☐Ind/Com
☒Res/Park
☐Agriculture
Soil Texture *(Check One)*
☐Coarse
☒Fine

☐ Regulation 406
Table ____ *Indicate One*
☐ Regulation 558
☐ CCME

☐ Sewer Use
☐Sanitary ☐Storm
Region
☐ Prov. Water Quality Objectives (PWQO)
☐ Other
Indicate One

Is this submission for a **Record of Site Condition?**
☒ Yes ☐ No

Report Guideline on *Certificate of Analysis*
☒ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply): **4 DAYS**

Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*

For 'Same Day' analysis, please contact your AGAT CPM

Project Information:

Project: 319674.002
Site Location:
Sampled By: JM / AM
AGAT Quote #: S.O. 2024 PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company:
Contact:
Address:
Email:

Sample Matrix Legend

GW	Ground Water
O	Oil
P	Paint
S	Soil
SD	Sediment
SW	Surface Water

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC Y / N	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	VOC	PAHs	PCBs	PCBs: Aroclors ☐	O. Reg 558: Landfill Disposal Characterization TCLP: TCLP: ☐M&I ☐VOCs ☐ABNs ☐B(a)P ☐PCBs	O. Reg 406: Regulation 406 SPLP Rainwater Leach SPLP: ☐Metals ☐VOCs ☐SVOCs	O. Reg 406: Regulation 406 Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: ☐ Moisture ☐ Sulphide	Sodium	Chloride	Metals incl Hydrides	CrVI	Mercury		Potentially Hazardous or High Concentration (Y/N)
1. MW13	May 23/24	AM PM		GW			~~✓~~	✓	✓	✓	✓							✓	✓					
2. MW11		AM PM			Rinsed preservative out of PHC bottles (MW11)				✓									✓	✓					
3. MW12		AM PM							✓									✓	✓					
4. MW14		AM PM							✓															
5. MW16		AM PM																✓	✓					
6. MW3		AM PM							✓	✓	✓		✓							✓	✓	✓		
7. DUP-3		AM PM							✓	✓	✓		✓							✓	✓	✓		
8. MW10		AM PM						✓	✓	✓	✓													
9. MW18		AM PM						✓	✓	✓	✓							✓	✓					
10.		AM PM																						
11.		AM PM																						

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
A McDonald	May 23/24	7:45 Am	C. Griffith	05/24/24	08h00
CC to Ruo	05/24/24	15h00		May 25	11 h

Page 1 of 1

Nº:

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

CLIENT NAME: **PINCHIN LTD.**
1 HINES ROAD SUITE 200
KANATA, ON K2K 3C7
(613) 592-3387
ATTENTION TO: **Ester Wilson**
PROJECT: **319674.002**
AGAT WORK ORDER: **24Z165629**
TRACE ORGANICS REVIEWED BY: **Pinkal Patel, Report Reviewer**
WATER ANALYSIS REVIEWED BY: **Yris Verastegui, Inorganic Team Lead**
DATE REPORTED: **Jun 28, 2024**
PAGES (INCLUDING COVER): **26**
VERSION*: **1**

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

Notes

Disclaimer:

- *All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.*
- *All samples will be disposed of within 30 days after receipt unless a Long Term Storage Agreement is signed and returned. Some specialty analysis may be exempt, please contact your Client Project Manager for details.*
- *AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.*
- *This Certificate shall not be reproduced except in full, without the written approval of the laboratory.*
- *The test results reported herewith relate only to the samples as received by the laboratory.*
- *Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.*
- *All reportable information is available on request from AGAT Laboratories, in accordance with ISO/IEC 17025:2017, ISO/IEC 17025:2005 (Quebec), DR-12-PALA and/or NELAP Standards.*
- *This document is signed by an authorized signatory who meets the requirements of the MELCCFP, CALA, CCN and NELAP.*
- *For environmental samples in the Province of Quebec: The analysis is performed on and results apply to samples as received. A temperature above 6°C upon receipt, as indicated in the Sample Reception Notification (SRN), could indicate the integrity of the samples has been compromised if the delay between sampling and submission to the laboratory could not be minimized.*

Member of: Association of Professional Engineers and Geoscientists of Alberta (APEGA)
Western Enviro-Agricultural Laboratory Association (WEALA)
Environmental Services Association of Alberta (ESAA)

AGAT Laboratories is accredited to ISO/IEC 17025 by the Canadian Association for Laboratory Accreditation Inc. (CALA) and/or Standards Council of Canada (SCC) for specific tests listed on the scope of accreditation. AGAT Laboratories (Mississauga) is also accredited by the Canadian Association for Laboratory Accreditation Inc. (CALA) for specific drinking water tests. Accreditations are location and parameter specific. A complete listing of parameters for each location is available from www.cala.ca and/or www.scc.ca. The tests in this report may not necessarily be included in the scope of accreditation. Measurement Uncertainty is not taken into consideration when stating conformity with a specified requirement.

AGAT WORK ORDER: 24Z165629

PROJECT: 319674.002

CLIENT NAME: PINCHIN LTD.

SAMPLING SITE:500 Coventry Rd.

ATTENTION TO: Ester Wilson

SAMPLED BY:E. Wilson

O. Reg. 153(511) - PAHs (Water)

DATE RECEIVED: 2024-06-22

DATE REPORTED: 2024-06-28

			SAMPLE DESCRIPTION:	MW7- GW2	DUP-4
			SAMPLE TYPE:	Water	Water
			DATE SAMPLED:	2024-06-21	2024-06-21
Parameter	**Unit**	**G / S**	**RDL**	**5955712**	**5955713**
Naphthalene	µg/L	7	0.20	<0.20	<0.20
Acenaphthylene	µg/L	1	0.20	<0.20	<0.20
Acenaphthene	µg/L	4.1	0.20	<0.20	<0.20
Fluorene	µg/L	120	0.20	<0.20	<0.20
Phenanthrene	µg/L	0.1	0.10	<0.10	<0.10
Anthracene	µg/L	0.1	0.10	<0.10	<0.10
Fluoranthene	µg/L	0.4	0.20	<0.20	<0.20
Pyrene	µg/L	0.2	0.20	<0.20	<0.20
Benzo(a)anthracene	µg/L	0.2	0.20	<0.20	<0.20
Chrysene	µg/L	0.1	0.10	<0.10	<0.10
Benzo(b)fluoranthene	µg/L	0.1	0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.1	0.10	<0.10	<0.10
Benzo(a)pyrene	µg/L	0.01	0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.20	<0.20	<0.20
Dibenz(a,h)anthracene	µg/L	0.2	0.20	<0.20	<0.20
Benzo(g,h,i)perylene	µg/L	0.2	0.20	<0.20	<0.20
2-and 1-methyl Napthalene	µg/L	2	0.20	<0.20	<0.20
Sediment				1	3
Surrogate	**Unit**	**Acceptable Limits**			
Naphthalene-d8	%	50-140		100	110
Acridine-d9	%	50-140		92	85
Terphenyl-d14	%	50-140		90	85

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5955712-5955713 Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amount
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&(j)Fluoranthene isomers because the isomers co-elute on the GC column.
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Pinkal Patel

Certified By:

Certificate of Analysis

AGAT WORK ORDER: 24Z165629
PROJECT: 319674.002

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CANADA L4Z 1Y2
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FAX (905)712-5122
http://www.agatlabs.com

CLIENT NAME: PINCHIN LTD.
ATTENTION TO: Ester Wilson
SAMPLING SITE:500 Coventry Rd.
SAMPLED BY:E. Wilson

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

DATE RECEIVED: 2024-06-22
DATE REPORTED: 2024-06-28

			SAMPLE DESCRIPTION:	MW7- GW2	DUP-4
			SAMPLE TYPE:	Water	Water
			DATE SAMPLED:	2024-06-21	2024-06-21
Parameter	**Unit**	**G / S**	**RDL**	**5955712**	**5955713**
F1 (C6 to C10)	µg/L	420	25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	420	25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100
F2 (C10 to C16) minus Naphthalene	µg/L		100	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100
F3 (C16 to C34) minus PAHs	µg/L		100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	NA
Sediment				1	3
Surrogate	**Unit**	**Acceptable Limits**			
Toluene-d8	%	50-140		98	96
Terphenyl	% Recovery	60-140		101	112

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5955712-5955713 The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amounts

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Pinkal Patel

Certificate of Analysis

AGAT WORK ORDER: 24Z165629

PROJECT: 319674.002

CLIENT NAME: PINCHIN LTD.

SAMPLING SITE:500 Coventry Rd.

ATTENTION TO: Ester Wilson

SAMPLED BY:E. Wilson

O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2024-06-22

DATE REPORTED: 2024-06-28

			SAMPLE DESCRIPTION:	MW11-GW2	Trip Blank
			SAMPLE TYPE:	Water	Water
			DATE SAMPLED:	2024-06-21	2024-06-21
Parameter	**Unit**	**G / S**	**RDL**	**5955711**	**5955714**
Dichlorodifluoromethane	µg/L	590	0.40	<0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	150	0.40	<0.40	<0.40
Acetone	µg/L	2700	1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	<0.30
Methylene Chloride	µg/L	5	0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	0.5	0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	400	1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	0.5	0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	0.5	0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20	<0.20
Bromodichloromethane	µg/L	2	0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	640	1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20
Toluene	µg/L	0.8	0.20	<0.20	<0.20
Dibromochloromethane	µg/L	2	0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10
Chlorobenzene	µg/L	0.5	0.10	<0.10	<0.10
Ethylbenzene	µg/L	0.5	0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20	<0.20

Pinkal Patel

Certified By:

Certificate of Analysis

AGAT WORK ORDER: 24Z165629

PROJECT: 319674.002

5835 COOPERS AVENUE
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http://www.agatlabs.com

CLIENT NAME: PINCHIN LTD.

SAMPLING SITE:500 Coventry Rd.

ATTENTION TO: Ester Wilson

SAMPLED BY:E. Wilson

O. Reg. 153(511) - VOCs (Water)

DATE RECEIVED: 2024-06-22

DATE REPORTED: 2024-06-28

			SAMPLE DESCRIPTION:	MW11-GW2	Trip Blank
			SAMPLE TYPE:	Water	Water
			DATE SAMPLED:	2024-06-21	2024-06-21
Parameter	**Unit**	**G / S**	**RDL**	**5955711**	**5955714**
Bromoform	µg/L	5	0.10	<0.10	<0.10
Styrene	µg/L	0.5	0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20	<0.20	<0.20
n-Hexane	µg/L	5	0.20	<0.20	<0.20
Surrogate	**Unit**	**Acceptable Limits**			
Toluene-d8	% Recovery	50-140		97	99
4-Bromofluorobenzene	% Recovery	50-140		84	85

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5955711-5955714 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Pinkal Patel

Certificate of Analysis

AGAT WORK ORDER: 24Z165629

PROJECT: 319674.002

CLIENT NAME: PINCHIN LTD.

SAMPLING SITE:500 Coventry Rd.

ATTENTION TO: Ester Wilson

SAMPLED BY:E. Wilson

O. Reg. 153(511) - VOCs (with PHC) (Water)

DATE RECEIVED: 2024-06-22

DATE REPORTED: 2024-06-28

			SAMPLE DESCRIPTION:	MW7- GW2	DUP-4
			SAMPLE TYPE:	Water	Water
			DATE SAMPLED:	2024-06-21	2024-06-21
Parameter	**Unit**	**G / S**	**RDL**	**5955712**	**5955713**
Dichlorodifluoromethane	µg/L	590	0.40	<0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	150	0.40	<0.40	<0.40
Acetone	µg/L	2700	1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	0.5	0.30	<0.30	<0.30
Methylene Chloride	µg/L	5	0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	0.5	0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	400	1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20
Chloroform	µg/L	2	0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	0.5	0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	0.5	0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.2	0.20	<0.20	<0.20
Benzene	µg/L	0.5	0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	0.5	0.20	<0.20	<0.20
Trichloroethylene	µg/L	0.5	0.20	<0.20	<0.20
Bromodichloromethane	µg/L	2	0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	640	1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	0.5	0.20	<0.20	<0.20
Toluene	µg/L	0.8	0.20	<0.20	<0.20
Dibromochloromethane	µg/L	2	0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	0.5	0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10
Chlorobenzene	µg/L	0.5	0.10	<0.10	<0.10
Ethylbenzene	µg/L	0.5	0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20	<0.20

Certified By: Pinkal Patel

O. Reg. 153(511) - VOCs (with PHC) (Water)

DATE RECEIVED: 2024-06-22

DATE REPORTED: 2024-06-28

			SAMPLE DESCRIPTION:	MW7- GW2	DUP-4
			SAMPLE TYPE:	Water	Water
			DATE SAMPLED:	2024-06-21	2024-06-21
Parameter	**Unit**	**G / S**	**RDL**	**5955712**	**5955713**
Bromoform	µg/L	5	0.10	<0.10	<0.10
Styrene	µg/L	0.5	0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	0.5	0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	0.5	0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	<0.30
Xylenes (Total)	µg/L	72	0.20	<0.20	<0.20
n-Hexane	µg/L	5	0.20	<0.20	<0.20
Surrogate	**Unit**	**Acceptable Limits**			
Toluene-d8	% Recovery	50-140		98	96
4-Bromofluorobenzene	% Recovery	50-140		93	89

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5955712-5955713 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Pinkal Patel

5835 COOPERS AVENUE
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TEL (905)712-5100
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CLIENT NAME: PINCHIN LTD.
SAMPLING SITE:500 Coventry Rd.

ATTENTION TO: Ester Wilson
SAMPLED BY:E. Wilson

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

DATE RECEIVED: 2024-06-22

DATE REPORTED: 2024-06-28

			SAMPLE DESCRIPTION:	MW7- GW2	DUP-4
			SAMPLE TYPE:	Water	Water
			DATE SAMPLED:	2024-06-21	2024-06-21
Parameter	**Unit**	**G / S**	**RDL**	**5955712**	**5955713**
Dissolved Antimony	µg/L	1.5	1.0	<1.0	<1.0
Dissolved Arsenic	µg/L	13	1.0	<1.0	<1.0
Dissolved Barium	µg/L	610	2.0	198	198
Dissolved Beryllium	µg/L	0.5	0.50	<0.50	<0.50
Dissolved Boron	µg/L	1700	10.0	265	265
Dissolved Cadmium	µg/L	0.5	0.20	<0.20	<0.20
Dissolved Chromium	µg/L	11	2.0	<2.0	<2.0
Dissolved Cobalt	µg/L	3.8	0.50	0.71	0.67
Dissolved Copper	µg/L	5	1.0	2.4	2.5
Dissolved Lead	µg/L	1.9	0.50	<0.50	<0.50
Dissolved Molybdenum	µg/L	23	0.50	7.52	8.31
Dissolved Nickel	µg/L	14	1.0	6.3	6.6
Dissolved Selenium	µg/L	5	1.0	<1.0	2.4
Dissolved Silver	µg/L	0.3	0.20	<0.20	<0.20
Dissolved Thallium	µg/L	0.5	0.30	<0.30	<0.30
Dissolved Uranium	µg/L	8.9	0.50	1.76	1.75
Dissolved Vanadium	µg/L	3.9	0.40	<0.40	0.42
Dissolved Zinc	µg/L	160	5.0	8.4	11.4

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 1: Full Depth Background Site Condition Standards - Ground Water - All Types of Property Uses
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5955712-5955713 Metals analysis completed on a filtered sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Iris Verástegui

Quality Assurance

CLIENT NAME: PINCHIN LTD.
PROJECT: 319674.002
SAMPLING SITE:500 Coventry Rd.

AGAT WORK ORDER: 24Z165629
ATTENTION TO: Ester Wilson
SAMPLED BY:E. Wilson

Trace Organics Analysis

RPT Date: Jun 28, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - VOCs (Water)															
Dichlorodifluoromethane	5957361		<0.40	<0.40	NA	< 0.40	70%	50%	140%	85%	50%	140%	86%	50%	140%
Vinyl Chloride	5957361		<0.17	<0.17	NA	< 0.17	62%	50%	140%	91%	50%	140%	74%	50%	140%
Bromomethane	5957361		<0.20	<0.20	NA	< 0.20	125%	50%	140%	90%	50%	140%	78%	50%	140%
Trichlorofluoromethane	5957361		<0.40	<0.40	NA	< 0.40	113%	50%	140%	117%	50%	140%	86%	50%	140%
Acetone	5957361		<1.0	<1.0	NA	< 1.0	111%	50%	140%	112%	50%	140%	82%	50%	140%
1,1-Dichloroethylene	5957361		<0.30	<0.30	NA	< 0.30	69%	50%	140%	111%	60%	130%	106%	50%	140%
Methylene Chloride	5957361		<0.30	<0.30	NA	< 0.30	113%	50%	140%	106%	60%	130%	110%	50%	140%
trans- 1,2-Dichloroethylene	5957361		<0.20	<0.20	NA	< 0.20	76%	50%	140%	97%	60%	130%	101%	50%	140%
Methyl tert-butyl ether	5957361		<0.20	<0.20	NA	< 0.20	68%	50%	140%	91%	60%	130%	92%	50%	140%
1,1-Dichloroethane	5957361		<0.30	<0.30	NA	< 0.30	100%	50%	140%	111%	60%	130%	108%	50%	140%
Methyl Ethyl Ketone	5957361		<1.0	<1.0	NA	< 1.0	86%	50%	140%	84%	50%	140%	83%	50%	140%
cis- 1,2-Dichloroethylene	5957361		<0.20	<0.20	NA	< 0.20	90%	50%	140%	87%	60%	130%	85%	50%	140%
Chloroform	5957361		<0.20	<0.20	NA	< 0.20	109%	50%	140%	95%	60%	130%	87%	50%	140%
1,2-Dichloroethane	5957361		<0.20	<0.20	NA	< 0.20	109%	50%	140%	96%	60%	130%	114%	50%	140%
1,1,1-Trichloroethane	5957361		<0.30	<0.30	NA	< 0.30	85%	50%	140%	87%	60%	130%	86%	50%	140%
Carbon Tetrachloride	5957361		<0.20	<0.20	NA	< 0.20	101%	50%	140%	108%	60%	130%	98%	50%	140%
Benzene	5957361		<0.20	<0.20	NA	< 0.20	86%	50%	140%	81%	60%	130%	85%	50%	140%
1,2-Dichloropropane	5957361		<0.20	<0.20	NA	< 0.20	92%	50%	140%	69%	60%	130%	73%	50%	140%
Trichloroethylene	5957361		<0.20	<0.20	NA	< 0.20	103%	50%	140%	92%	60%	130%	92%	50%	140%
Bromodichloromethane	5957361		<0.20	<0.20	NA	< 0.20	117%	50%	140%	82%	60%	130%	82%	50%	140%
Methyl Isobutyl Ketone	5957361		<1.0	<1.0	NA	< 1.0	77%	50%	140%	71%	50%	140%	93%	50%	140%
1,1,2-Trichloroethane	5957361		<0.20	<0.20	NA	< 0.20	110%	50%	140%	85%	60%	130%	97%	50%	140%
Toluene	5957361		<0.20	<0.20	NA	< 0.20	108%	50%	140%	92%	60%	130%	94%	50%	140%
Dibromochloromethane	5957361		<0.10	<0.10	NA	< 0.10	109%	50%	140%	84%	60%	130%	82%	50%	140%
Ethylene Dibromide	5957361		<0.10	<0.10	NA	< 0.10	106%	50%	140%	83%	60%	130%	94%	50%	140%
Tetrachloroethylene	5957361		<0.20	<0.20	NA	< 0.20	117%	50%	140%	108%	60%	130%	104%	50%	140%
1,1,1,2-Tetrachloroethane	5957361		<0.10	<0.10	NA	< 0.10	105%	50%	140%	96%	60%	130%	97%	50%	140%
Chlorobenzene	5957361		<0.10	<0.10	NA	< 0.10	114%	50%	140%	94%	60%	130%	99%	50%	140%
Ethylbenzene	5957361		<0.10	<0.10	NA	< 0.10	113%	50%	140%	84%	60%	130%	88%	50%	140%
m & p-Xylene	5957361		<0.20	<0.20	NA	< 0.20	115%	50%	140%	89%	60%	130%	94%	50%	140%
Bromoform	5957361		<0.10	<0.10	NA	< 0.10	100%	50%	140%	100%	60%	130%	117%	50%	140%
Styrene	5957361		<0.10	<0.10	NA	< 0.10	104%	50%	140%	83%	60%	130%	93%	50%	140%
1,1,2,2-Tetrachloroethane	5957361		<0.10	<0.10	NA	< 0.10	103%	50%	140%	89%	60%	130%	105%	50%	140%
o-Xylene	5957361		<0.10	<0.10	NA	< 0.10	102%	50%	140%	88%	60%	130%	93%	50%	140%
1,3-Dichlorobenzene	5957361		<0.10	<0.10	NA	< 0.10	110%	50%	140%	100%	60%	130%	112%	50%	140%
1,4-Dichlorobenzene	5957361		<0.10	<0.10	NA	< 0.10	97%	50%	140%	102%	60%	130%	114%	50%	140%
1,2-Dichlorobenzene	5957361		<0.10	<0.10	NA	< 0.10	106%	50%	140%	99%	60%	130%	114%	50%	140%
n-Hexane	5957361		<0.20	<0.20	NA	< 0.20	85%	50%	140%	106%	60%	130%	83%	50%	140%

Quality Assurance

CLIENT NAME: PINCHIN LTD.
PROJECT: 319674.002
SAMPLING SITE:500 Coventry Rd.

AGAT WORK ORDER: 24Z165629
ATTENTION TO: Ester Wilson
SAMPLED BY:E. Wilson

Trace Organics Analysis (Continued)

RPT Date: Jun 28, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)															
F1 (C6 to C10)	5961449		<25	<25	NA	< 25	109%	60%	140%	108%	60%	140%	-4%	60%	140%
F2 (C10 to C16)	5952655		< 100	< 100	NA	< 100	108%	60%	140%	70%	60%	140%	70%	60%	140%
F3 (C16 to C34)	5952655		< 100	< 100	NA	< 100	104%	60%	140%	66%	60%	140%	62%	60%	140%
F4 (C34 to C50)	5952655		< 100	< 100	NA	< 100	67%	60%	140%	66%	60%	140%	78%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Water)															
Dichlorodifluoromethane	5961449		<0.40	<0.40	NA	< 0.40	118%	50%	140%	113%	50%	140%	77%	50%	140%
Vinyl Chloride	5961449		<0.17	<0.17	NA	< 0.17	113%	50%	140%	119%	50%	140%	110%	50%	140%
Bromomethane	5961449		<0.20	<0.20	NA	< 0.20	76%	50%	140%	78%	50%	140%	85%	50%	140%
Trichlorofluoromethane	5961449		<0.40	<0.40	NA	< 0.40	112%	50%	140%	112%	50%	140%	101%	50%	140%
Acetone	5961449		<1.0	<1.0	NA	< 1.0	77%	50%	140%	92%	50%	140%	114%	50%	140%
1,1-Dichloroethylene	5961449		<0.30	<0.30	NA	< 0.30	103%	50%	140%	118%	60%	130%	93%	50%	140%
Methylene Chloride	5961449		<0.30	<0.30	NA	< 0.30	94%	50%	140%	108%	60%	130%	104%	50%	140%
trans- 1,2-Dichloroethylene	5961449		<0.20	<0.20	NA	< 0.20	109%	50%	140%	104%	60%	130%	99%	50%	140%
Methyl tert-butyl ether	5961449		<0.20	<0.20	NA	< 0.20	70%	50%	140%	73%	60%	130%	68%	50%	140%
1,1-Dichloroethane	5961449		<0.30	<0.30	NA	< 0.30	106%	50%	140%	99%	60%	130%	117%	50%	140%
Methyl Ethyl Ketone	5961449		<1.0	<1.0	NA	< 1.0	93%	50%	140%	110%	50%	140%	92%	50%	140%
cis- 1,2-Dichloroethylene	5961449		<0.20	<0.20	NA	< 0.20	107%	50%	140%	103%	60%	130%	95%	50%	140%
Chloroform	5961449		<0.20	<0.20	NA	< 0.20	109%	50%	140%	102%	60%	130%	99%	50%	140%
1,2-Dichloroethane	5961449		<0.20	<0.20	NA	< 0.20	113%	50%	140%	113%	60%	130%	113%	50%	140%
1,1,1-Trichloroethane	5961449		<0.30	<0.30	NA	< 0.30	96%	50%	140%	88%	60%	130%	85%	50%	140%
Carbon Tetrachloride	5961449		<0.20	<0.20	NA	< 0.20	107%	50%	140%	101%	60%	130%	97%	50%	140%
Benzene	5961449		<0.20	<0.20	NA	< 0.20	100%	50%	140%	93%	60%	130%	94%	50%	140%
1,2-Dichloropropane	5961449		<0.20	<0.20	NA	< 0.20	91%	50%	140%	85%	60%	130%	87%	50%	140%
Trichloroethylene	5961449		<0.20	<0.20	NA	< 0.20	105%	50%	140%	94%	60%	130%	NA	50%	140%
Bromodichloromethane	5961449		<0.20	<0.20	NA	< 0.20	90%	50%	140%	87%	60%	130%	86%	50%	140%
Methyl Isobutyl Ketone	5961449		<1.0	<1.0	NA	< 1.0	95%	50%	140%	81%	50%	140%	93%	50%	140%
1,1,2-Trichloroethane	5961449		<0.20	<0.20	NA	< 0.20	108%	50%	140%	103%	60%	130%	105%	50%	140%
Toluene	5961449		<0.20	<0.20	NA	< 0.20	110%	50%	140%	99%	60%	130%	95%	50%	140%
Dibromochloromethane	5961449		<0.10	<0.10	NA	< 0.10	82%	50%	140%	74%	60%	130%	79%	50%	140%
Ethylene Dibromide	5961449		<0.10	<0.10	NA	< 0.10	99%	50%	140%	80%	60%	130%	87%	50%	140%
Tetrachloroethylene	5961449		<0.20	<0.20	NA	< 0.20	115%	50%	140%	99%	60%	130%	100%	50%	140%
1,1,1,2-Tetrachloroethane	5961449		<0.10	<0.10	NA	< 0.10	95%	50%	140%	82%	60%	130%	90%	50%	140%
Chlorobenzene	5961449		<0.10	<0.10	NA	< 0.10	111%	50%	140%	94%	60%	130%	100%	50%	140%
Ethylbenzene	5961449		<0.10	<0.10	NA	< 0.10	98%	50%	140%	86%	60%	130%	85%	50%	140%
m & p-Xylene	5961449		<0.20	<0.20	NA	< 0.20	106%	50%	140%	91%	60%	130%	91%	50%	140%
Bromoform	5961449		<0.10	<0.10	NA	< 0.10	100%	50%	140%	86%	60%	130%	118%	50%	140%
Styrene	5961449		<0.10	<0.10	NA	< 0.10	100%	50%	140%	90%	60%	130%	89%	50%	140%
1,1,2,2-Tetrachloroethane	5961449		<0.10	<0.10	NA	< 0.10	107%	50%	140%	91%	60%	130%	79%	50%	140%
o-Xylene	5961449		<0.10	<0.10	NA	< 0.10	106%	50%	140%	94%	60%	130%	94%	50%	140%

Quality Assurance

CLIENT NAME: PINCHIN LTD.
PROJECT: 319674.002
SAMPLING SITE:500 Coventry Rd.

AGAT WORK ORDER: 24Z165629
ATTENTION TO: Ester Wilson
SAMPLED BY:E. Wilson

Trace Organics Analysis (Continued)

RPT Date: Jun 28, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	5961449		<0.10	<0.10	NA	< 0.10	111%	50%	140%	94%	60%	130%	100%	50%	140%
1,4-Dichlorobenzene	5961449		<0.10	<0.10	NA	< 0.10	113%	50%	140%	94%	60%	130%	102%	50%	140%
1,2-Dichlorobenzene	5961449		<0.10	<0.10	NA	< 0.10	105%	50%	140%	93%	60%	130%	103%	50%	140%
n-Hexane	5961449		<0.20	<0.20	NA	< 0.20	87%	50%	140%	102%	60%	130%	103%	50%	140%
O. Reg. 153(511) - PAHs (Water)															
Naphthalene	5957329		<0.20	<0.20	NA	< 0.20	113%	50%	140%	80%	50%	140%	88%	50%	140%
Acenaphthylene	5957329		<0.20	<0.20	NA	< 0.20	104%	50%	140%	115%	50%	140%	78%	50%	140%
Acenaphthene	5957329		<0.20	<0.20	NA	< 0.20	100%	50%	140%	75%	50%	140%	96%	50%	140%
Fluorene	5957329		<0.20	<0.20	NA	< 0.20	103%	50%	140%	79%	50%	140%	103%	50%	140%
Phenanthrene	5957329		<0.10	<0.10	NA	< 0.10	101%	50%	140%	82%	50%	140%	100%	50%	140%
Anthracene	5957329		<0.10	<0.10	NA	< 0.10	80%	50%	140%	73%	50%	140%	68%	50%	140%
Fluoranthene	5957329		<0.20	<0.20	NA	< 0.20	71%	50%	140%	99%	50%	140%	81%	50%	140%
Pyrene	5957329		<0.20	<0.20	NA	< 0.20	74%	50%	140%	79%	50%	140%	73%	50%	140%
Benzo(a)anthracene	5957329		<0.20	<0.20	NA	< 0.20	76%	50%	140%	71%	50%	140%	81%	50%	140%
Chrysene	5957329		<0.10	<0.10	NA	< 0.10	78%	50%	140%	108%	50%	140%	107%	50%	140%
Benzo(b)fluoranthene	5957329		<0.10	<0.10	NA	< 0.10	77%	50%	140%	91%	50%	140%	84%	50%	140%
Benzo(k)fluoranthene	5957329		<0.10	<0.10	NA	< 0.10	88%	50%	140%	90%	50%	140%	90%	50%	140%
Benzo(a)pyrene	5957329		<0.01	<0.01	NA	< 0.01	100%	50%	140%	83%	50%	140%	66%	50%	140%
Indeno(1,2,3-cd)pyrene	5957329		<0.20	<0.20	NA	< 0.20	100%	50%	140%	73%	50%	140%	104%	50%	140%
Dibenz(a,h)anthracene	5957329		<0.20	<0.20	NA	< 0.20	98%	50%	140%	84%	50%	140%	69%	50%	140%
Benzo(g,h,i)perylene	5957329		<0.20	<0.20	NA	< 0.20	73%	50%	140%	77%	50%	140%	73%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: Pinkal Patel

Quality Assurance

CLIENT NAME: PINCHIN LTD.
PROJECT: 319674.002
SAMPLING SITE:500 Coventry Rd.

AGAT WORK ORDER: 24Z165629
ATTENTION TO: Ester Wilson
SAMPLED BY:E. Wilson

Water Analysis

RPT Date: Jun 28, 2024			DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals (Including Hydrides) (Water)															
Dissolved Antimony	5954499		<1.0	<1.0	NA	< 1.0	103%	70%	130%	103%	80%	120%	107%	70%	130%
Dissolved Arsenic	5954499		<1.0	<1.0	NA	< 1.0	100%	70%	130%	105%	80%	120%	107%	70%	130%
Dissolved Barium	5954499		122	122	0.0%	< 2.0	94%	70%	130%	102%	80%	120%	107%	70%	130%
Dissolved Beryllium	5954499		<0.50	<0.50	NA	< 0.50	107%	70%	130%	112%	80%	120%	112%	70%	130%
Dissolved Boron	5954499		43.6	42.5	NA	< 10.0	104%	70%	130%	107%	80%	120%	106%	70%	130%
Dissolved Cadmium	5954499		<0.20	<0.20	NA	< 0.20	99%	70%	130%	101%	80%	120%	107%	70%	130%
Dissolved Chromium	5954499		<2.0	<2.0	NA	< 2.0	100%	70%	130%	103%	80%	120%	111%	70%	130%
Dissolved Cobalt	5954499		<0.50	<0.50	NA	< 0.50	102%	70%	130%	105%	80%	120%	111%	70%	130%
Dissolved Copper	5954499		<1.0	<1.0	NA	< 1.0	101%	70%	130%	100%	80%	120%	108%	70%	130%
Dissolved Lead	5954499		<0.50	<0.50	NA	< 0.50	99%	70%	130%	98%	80%	120%	100%	70%	130%
Dissolved Molybdenum	5954499		<0.50	<0.50	NA	< 0.50	103%	70%	130%	105%	80%	120%	115%	70%	130%
Dissolved Nickel	5954499		<1.0	1.3	NA	< 1.0	102%	70%	130%	102%	80%	120%	120%	70%	130%
Dissolved Selenium	5954499		<1.0	<1.0	NA	< 1.0	100%	70%	130%	108%	80%	120%	114%	70%	130%
Dissolved Silver	5954499		<0.20	<0.20	NA	< 0.20	104%	70%	130%	106%	80%	120%	106%	70%	130%
Dissolved Thallium	5954499		<0.30	<0.30	NA	< 0.30	101%	70%	130%	100%	80%	120%	101%	70%	130%
Dissolved Uranium	5954499		<0.50	<0.50	NA	< 0.50	93%	70%	130%	102%	80%	120%	105%	70%	130%
Dissolved Vanadium	5954499		1.77	1.84	NA	< 0.40	104%	70%	130%	107%	80%	120%	116%	70%	130%
Dissolved Zinc	5954499		5.1	5.3	NA	< 5.0	100%	70%	130%	104%	80%	120%	113%	70%	130%

Comments: NA signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.

Certified By: Iris Verástegui

QC Exceedance

CLIENT NAME: PINCHIN LTD. **AGAT WORK ORDER: 24Z165629**

PROJECT: 319674.002 **ATTENTION TO: Ester Wilson**

RPT Date: Jun 28, 2024		REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Sample Id	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
			Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)										
F1 (C6 to C10)		109%	60%	140%	108%	60%	140%	-4%	60%	140%

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5955711	**MW11-GW2**	**Water**	**21-JUN-2024**	**22-JUN-2024**

O. Reg. 153(511) - VOCs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	25-JUN-2024	25-JUN-2024	MK
Vinyl Chloride	25-JUN-2024	25-JUN-2024	MK
Bromomethane	25-JUN-2024	25-JUN-2024	MK
Trichlorofluoromethane	25-JUN-2024	25-JUN-2024	MK
Acetone	25-JUN-2024	25-JUN-2024	MK
1,1-Dichloroethylene	25-JUN-2024	25-JUN-2024	MK
Methylene Chloride	25-JUN-2024	25-JUN-2024	MK
trans- 1,2-Dichloroethylene	25-JUN-2024	25-JUN-2024	MK
Methyl tert-butyl ether	25-JUN-2024	25-JUN-2024	MK
1,1-Dichloroethane	25-JUN-2024	25-JUN-2024	MK
Methyl Ethyl Ketone	25-JUN-2024	25-JUN-2024	MK
cis- 1,2-Dichloroethylene	25-JUN-2024	25-JUN-2024	MK
Chloroform	25-JUN-2024	25-JUN-2024	MK
1,2-Dichloroethane	25-JUN-2024	25-JUN-2024	MK
1,1,1-Trichloroethane	25-JUN-2024	25-JUN-2024	MK
Carbon Tetrachloride	25-JUN-2024	25-JUN-2024	MK
Benzene	25-JUN-2024	25-JUN-2024	MK
1,2-Dichloropropane	25-JUN-2024	25-JUN-2024	MK
Trichloroethylene	25-JUN-2024	25-JUN-2024	MK
Bromodichloromethane	25-JUN-2024	25-JUN-2024	MK
Methyl Isobutyl Ketone	25-JUN-2024	25-JUN-2024	MK
1,1,2-Trichloroethane	25-JUN-2024	25-JUN-2024	MK
Toluene	25-JUN-2024	25-JUN-2024	MK
Dibromochloromethane	25-JUN-2024	25-JUN-2024	MK
Ethylene Dibromide	25-JUN-2024	25-JUN-2024	MK
Tetrachloroethylene	25-JUN-2024	25-JUN-2024	MK
1,1,1,2-Tetrachloroethane	25-JUN-2024	25-JUN-2024	MK
Chlorobenzene	25-JUN-2024	25-JUN-2024	MK
Ethylbenzene	25-JUN-2024	25-JUN-2024	MK
m & p-Xylene	25-JUN-2024	25-JUN-2024	MK
Bromoform	25-JUN-2024	25-JUN-2024	MK
Styrene	25-JUN-2024	25-JUN-2024	MK
1,1,2,2-Tetrachloroethane	25-JUN-2024	25-JUN-2024	MK
o-Xylene	25-JUN-2024	25-JUN-2024	MK
1,3-Dichlorobenzene	25-JUN-2024	25-JUN-2024	MK
1,4-Dichlorobenzene	25-JUN-2024	25-JUN-2024	MK
1,2-Dichlorobenzene	25-JUN-2024	25-JUN-2024	MK
1,3-Dichloropropene	25-JUN-2024	25-JUN-2024	SYS
Xylenes (Total)	25-JUN-2024	25-JUN-2024	SYS

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5955711	**MW11-GW2**	**Water**	**21-JUN-2024**	**22-JUN-2024**

O. Reg. 153(511) - VOCs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
n-Hexane	25-JUN-2024	25-JUN-2024	MK
Toluene-d8	25-JUN-2024	25-JUN-2024	MK
4-Bromofluorobenzene	25-JUN-2024	25-JUN-2024	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5955712	**MW7- GW2**	**Water**	**21-JUN-2024**	**22-JUN-2024**

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Antimony	24-JUN-2024	24-JUN-2024	DW
Dissolved Arsenic	24-JUN-2024	24-JUN-2024	DW
Dissolved Barium	24-JUN-2024	24-JUN-2024	DW
Dissolved Beryllium	24-JUN-2024	24-JUN-2024	DW
Dissolved Boron	24-JUN-2024	24-JUN-2024	DW
Dissolved Cadmium	24-JUN-2024	24-JUN-2024	DW
Dissolved Chromium	24-JUN-2024	24-JUN-2024	DW
Dissolved Cobalt	24-JUN-2024	24-JUN-2024	DW
Dissolved Copper	24-JUN-2024	24-JUN-2024	DW
Dissolved Lead	24-JUN-2024	24-JUN-2024	DW
Dissolved Molybdenum	24-JUN-2024	24-JUN-2024	DW
Dissolved Nickel	24-JUN-2024	24-JUN-2024	DW
Dissolved Selenium	25-JUN-2024	25-JUN-2024	DW
Dissolved Silver	25-JUN-2024	25-JUN-2024	DW
Dissolved Thallium	24-JUN-2024	24-JUN-2024	DW
Dissolved Uranium	24-JUN-2024	24-JUN-2024	DW
Dissolved Vanadium	24-JUN-2024	24-JUN-2024	DW
Dissolved Zinc	24-JUN-2024	24-JUN-2024	DW

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	27-JUN-2024	27-JUN-2024	JJ
Acenaphthylene	27-JUN-2024	27-JUN-2024	JJ
Acenaphthene	27-JUN-2024	27-JUN-2024	JJ
Fluorene	27-JUN-2024	27-JUN-2024	JJ
Phenanthrene	27-JUN-2024	27-JUN-2024	JJ
Anthracene	27-JUN-2024	27-JUN-2024	JJ
Fluoranthene	27-JUN-2024	27-JUN-2024	JJ
Pyrene	27-JUN-2024	27-JUN-2024	JJ
Benzo(a)anthracene	27-JUN-2024	27-JUN-2024	JJ
Chrysene	27-JUN-2024	27-JUN-2024	JJ

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5955712	**MW7- GW2**	**Water**	**21-JUN-2024**	**22-JUN-2024**

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Benzo(b)fluoranthene	27-JUN-2024	27-JUN-2024	JJ
Benzo(k)fluoranthene	27-JUN-2024	27-JUN-2024	JJ
Benzo(a)pyrene	27-JUN-2024	27-JUN-2024	JJ
Indeno(1,2,3-cd)pyrene	27-JUN-2024	27-JUN-2024	JJ
Dibenz(a,h)anthracene	27-JUN-2024	27-JUN-2024	JJ
Benzo(g,h,i)perylene	27-JUN-2024	27-JUN-2024	JJ
2-and 1-methyl Napthalene	27-JUN-2024	27-JUN-2024	SYS
Naphthalene-d8	27-JUN-2024	27-JUN-2024	JJ
Acridine-d9	27-JUN-2024	27-JUN-2024	JJ
Terphenyl-d14	27-JUN-2024	27-JUN-2024	JJ
Sediment	25-JUN-2024	25-JUN-2024	NH

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	28-JUN-2024	28-JUN-2024	MK
F1 (C6 to C10) minus BTEX	28-JUN-2024	28-JUN-2024	SYS
Toluene-d8	28-JUN-2024	28-JUN-2024	MK
F2 (C10 to C16)	25-JUN-2024	25-JUN-2024	SS
F2 (C10 to C16) minus Naphthalene	27-JUN-2024	27-JUN-2024	SYS
F3 (C16 to C34)	25-JUN-2024	25-JUN-2024	SS
F3 (C16 to C34) minus PAHs	27-JUN-2024	27-JUN-2024	SYS
F4 (C34 to C50)	25-JUN-2024	25-JUN-2024	SS
Gravimetric Heavy Hydrocarbons			
Terphenyl	25-JUN-2024	25-JUN-2024	SS
Sediment	25-JUN-2024	25-JUN-2024	NH

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	28-JUN-2024	28-JUN-2024	MK
Vinyl Chloride	28-JUN-2024	28-JUN-2024	MK
Bromomethane	28-JUN-2024	28-JUN-2024	MK
Trichlorofluoromethane	28-JUN-2024	28-JUN-2024	MK
Acetone	28-JUN-2024	28-JUN-2024	MK
1,1-Dichloroethylene	28-JUN-2024	28-JUN-2024	MK
Methylene Chloride	28-JUN-2024	28-JUN-2024	MK
trans- 1,2-Dichloroethylene	28-JUN-2024	28-JUN-2024	MK
Methyl tert-butyl ether	28-JUN-2024	28-JUN-2024	MK
1,1-Dichloroethane	28-JUN-2024	28-JUN-2024	MK
Methyl Ethyl Ketone	28-JUN-2024	28-JUN-2024	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5955712	**MW7- GW2**	**Water**	**21-JUN-2024**	**22-JUN-2024**

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
cis- 1,2-Dichloroethylene	28-JUN-2024	28-JUN-2024	MK
Chloroform	28-JUN-2024	28-JUN-2024	MK
1,2-Dichloroethane	28-JUN-2024	28-JUN-2024	MK
1,1,1-Trichloroethane	28-JUN-2024	28-JUN-2024	MK
Carbon Tetrachloride	28-JUN-2024	28-JUN-2024	MK
Benzene	28-JUN-2024	28-JUN-2024	MK
1,2-Dichloropropane	28-JUN-2024	28-JUN-2024	MK
Trichloroethylene	28-JUN-2024	28-JUN-2024	MK
Bromodichloromethane	28-JUN-2024	28-JUN-2024	MK
Methyl Isobutyl Ketone	28-JUN-2024	28-JUN-2024	MK
1,1,2-Trichloroethane	28-JUN-2024	28-JUN-2024	MK
Toluene	28-JUN-2024	28-JUN-2024	MK
Dibromochloromethane	28-JUN-2024	28-JUN-2024	MK
Ethylene Dibromide	28-JUN-2024	28-JUN-2024	MK
Tetrachloroethylene	28-JUN-2024	28-JUN-2024	MK
1,1,1,2-Tetrachloroethane	28-JUN-2024	28-JUN-2024	MK
Chlorobenzene	28-JUN-2024	28-JUN-2024	MK
Ethylbenzene	28-JUN-2024	28-JUN-2024	MK
m & p-Xylene	28-JUN-2024	28-JUN-2024	MK
Bromoform	28-JUN-2024	28-JUN-2024	MK
Styrene	28-JUN-2024	28-JUN-2024	MK
1,1,2,2-Tetrachloroethane	28-JUN-2024	28-JUN-2024	MK
o-Xylene	28-JUN-2024	28-JUN-2024	MK
1,3-Dichlorobenzene	28-JUN-2024	28-JUN-2024	MK
1,4-Dichlorobenzene	28-JUN-2024	28-JUN-2024	MK
1,2-Dichlorobenzene	28-JUN-2024	28-JUN-2024	MK
1,3-Dichloropropene	28-JUN-2024	28-JUN-2024	SYS
Xylenes (Total)	28-JUN-2024	28-JUN-2024	SYS
n-Hexane	28-JUN-2024	28-JUN-2024	MK
Toluene-d8	28-JUN-2024	28-JUN-2024	MK
4-Bromofluorobenzene	28-JUN-2024	28-JUN-2024	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5955713	**DUP-4**	**Water**	**21-JUN-2024**	**22-JUN-2024**

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Antimony	24-JUN-2024	24-JUN-2024	DW
Dissolved Arsenic	24-JUN-2024	24-JUN-2024	DW
Dissolved Barium	24-JUN-2024	24-JUN-2024	DW

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5955713	**DUP-4**	**Water**	**21-JUN-2024**	**22-JUN-2024**

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dissolved Beryllium	24-JUN-2024	24-JUN-2024	DW
Dissolved Boron	24-JUN-2024	24-JUN-2024	DW
Dissolved Cadmium	24-JUN-2024	24-JUN-2024	DW
Dissolved Chromium	24-JUN-2024	24-JUN-2024	DW
Dissolved Cobalt	24-JUN-2024	24-JUN-2024	DW
Dissolved Copper	24-JUN-2024	24-JUN-2024	DW
Dissolved Lead	24-JUN-2024	24-JUN-2024	DW
Dissolved Molybdenum	24-JUN-2024	24-JUN-2024	DW
Dissolved Nickel	24-JUN-2024	24-JUN-2024	DW
Dissolved Selenium	24-JUN-2024	24-JUN-2024	DW
Dissolved Silver	25-JUN-2024	25-JUN-2024	DW
Dissolved Thallium	24-JUN-2024	24-JUN-2024	DW
Dissolved Uranium	24-JUN-2024	24-JUN-2024	DW
Dissolved Vanadium	24-JUN-2024	24-JUN-2024	DW
Dissolved Zinc	24-JUN-2024	24-JUN-2024	DW

O. Reg. 153(511) - PAHs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Naphthalene	28-JUN-2024	28-JUN-2024	JJ
Acenaphthylene	28-JUN-2024	28-JUN-2024	JJ
Acenaphthene	28-JUN-2024	28-JUN-2024	JJ
Fluorene	28-JUN-2024	28-JUN-2024	JJ
Phenanthrene	28-JUN-2024	28-JUN-2024	JJ
Anthracene	28-JUN-2024	28-JUN-2024	JJ
Fluoranthene	28-JUN-2024	28-JUN-2024	JJ
Pyrene	28-JUN-2024	28-JUN-2024	JJ
Benzo(a)anthracene	28-JUN-2024	28-JUN-2024	JJ
Chrysene	28-JUN-2024	28-JUN-2024	JJ
Benzo(b)fluoranthene	28-JUN-2024	28-JUN-2024	JJ
Benzo(k)fluoranthene	28-JUN-2024	28-JUN-2024	JJ
Benzo(a)pyrene	28-JUN-2024	28-JUN-2024	JJ
Indeno(1,2,3-cd)pyrene	28-JUN-2024	28-JUN-2024	JJ
Dibenz(a,h)anthracene	28-JUN-2024	28-JUN-2024	JJ
Benzo(g,h,i)perylene	28-JUN-2024	28-JUN-2024	JJ
2-and 1-methyl Napthalene	28-JUN-2024	28-JUN-2024	SYS
Naphthalene-d8	28-JUN-2024	28-JUN-2024	JJ
Acridine-d9	28-JUN-2024	28-JUN-2024	JJ
Terphenyl-d14	28-JUN-2024	28-JUN-2024	JJ
Sediment	25-JUN-2024	25-JUN-2024	NH

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5955713	DUP-4	Water	21-JUN-2024	22-JUN-2024

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
F1 (C6 to C10)	28-JUN-2024	28-JUN-2024	MK
F1 (C6 to C10) minus BTEX	28-JUN-2024	28-JUN-2024	SYS
Toluene-d8	28-JUN-2024	28-JUN-2024	MK
F2 (C10 to C16)	25-JUN-2024	25-JUN-2024	SS
F2 (C10 to C16) minus Naphthalene	28-JUN-2024	28-JUN-2024	SYS
F3 (C16 to C34)	25-JUN-2024	25-JUN-2024	SS
F3 (C16 to C34) minus PAHs	28-JUN-2024	28-JUN-2024	SYS
F4 (C34 to C50)	25-JUN-2024	25-JUN-2024	SS
Gravimetric Heavy Hydrocarbons			
Terphenyl	25-JUN-2024	25-JUN-2024	SS
Sediment	25-JUN-2024	25-JUN-2024	NH

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	28-JUN-2024	28-JUN-2024	MK
Vinyl Chloride	28-JUN-2024	28-JUN-2024	MK
Bromomethane	28-JUN-2024	28-JUN-2024	MK
Trichlorofluoromethane	28-JUN-2024	28-JUN-2024	MK
Acetone	28-JUN-2024	28-JUN-2024	MK
1,1-Dichloroethylene	28-JUN-2024	28-JUN-2024	MK
Methylene Chloride	28-JUN-2024	28-JUN-2024	MK
trans- 1,2-Dichloroethylene	28-JUN-2024	28-JUN-2024	MK
Methyl tert-butyl ether	28-JUN-2024	28-JUN-2024	MK
1,1-Dichloroethane	28-JUN-2024	28-JUN-2024	MK
Methyl Ethyl Ketone	28-JUN-2024	28-JUN-2024	MK
cis- 1,2-Dichloroethylene	28-JUN-2024	28-JUN-2024	MK
Chloroform	28-JUN-2024	28-JUN-2024	MK
1,2-Dichloroethane	28-JUN-2024	28-JUN-2024	MK
1,1,1-Trichloroethane	28-JUN-2024	28-JUN-2024	MK
Carbon Tetrachloride	28-JUN-2024	28-JUN-2024	MK
Benzene	28-JUN-2024	28-JUN-2024	MK
1,2-Dichloropropane	28-JUN-2024	28-JUN-2024	MK
Trichloroethylene	28-JUN-2024	28-JUN-2024	MK
Bromodichloromethane	28-JUN-2024	28-JUN-2024	MK
Methyl Isobutyl Ketone	28-JUN-2024	28-JUN-2024	MK
1,1,2-Trichloroethane	28-JUN-2024	28-JUN-2024	MK
Toluene	28-JUN-2024	28-JUN-2024	MK
Dibromochloromethane	28-JUN-2024	28-JUN-2024	MK
Ethylene Dibromide	28-JUN-2024	28-JUN-2024	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5955713	**DUP-4**	**Water**	**21-JUN-2024**	**22-JUN-2024**

O. Reg. 153(511) - VOCs (with PHC) (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Tetrachloroethylene	28-JUN-2024	28-JUN-2024	MK
1,1,1,2-Tetrachloroethane	28-JUN-2024	28-JUN-2024	MK
Chlorobenzene	28-JUN-2024	28-JUN-2024	MK
Ethylbenzene	28-JUN-2024	28-JUN-2024	MK
m & p-Xylene	28-JUN-2024	28-JUN-2024	MK
Bromoform	28-JUN-2024	28-JUN-2024	MK
Styrene	28-JUN-2024	28-JUN-2024	MK
1,1,2,2-Tetrachloroethane	28-JUN-2024	28-JUN-2024	MK
o-Xylene	28-JUN-2024	28-JUN-2024	MK
1,3-Dichlorobenzene	28-JUN-2024	28-JUN-2024	MK
1,4-Dichlorobenzene	28-JUN-2024	28-JUN-2024	MK
1,2-Dichlorobenzene	28-JUN-2024	28-JUN-2024	MK
1,3-Dichloropropene	28-JUN-2024	28-JUN-2024	SYS
Xylenes (Total)	28-JUN-2024	28-JUN-2024	SYS
n-Hexane	28-JUN-2024	28-JUN-2024	MK
Toluene-d8	28-JUN-2024	28-JUN-2024	MK
4-Bromofluorobenzene	28-JUN-2024	28-JUN-2024	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5955714	**Trip Blank**	**Water**	**21-JUN-2024**	**22-JUN-2024**

O. Reg. 153(511) - VOCs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
Dichlorodifluoromethane	25-JUN-2024	25-JUN-2024	MK
Vinyl Chloride	25-JUN-2024	25-JUN-2024	MK
Bromomethane	25-JUN-2024	25-JUN-2024	MK
Trichlorofluoromethane	25-JUN-2024	25-JUN-2024	MK
Acetone	25-JUN-2024	25-JUN-2024	MK
1,1-Dichloroethylene	25-JUN-2024	25-JUN-2024	MK
Methylene Chloride	25-JUN-2024	25-JUN-2024	MK
trans- 1,2-Dichloroethylene	25-JUN-2024	25-JUN-2024	MK
Methyl tert-butyl ether	25-JUN-2024	25-JUN-2024	MK
1,1-Dichloroethane	25-JUN-2024	25-JUN-2024	MK
Methyl Ethyl Ketone	25-JUN-2024	25-JUN-2024	MK
cis- 1,2-Dichloroethylene	25-JUN-2024	25-JUN-2024	MK
Chloroform	25-JUN-2024	25-JUN-2024	MK
1,2-Dichloroethane	25-JUN-2024	25-JUN-2024	MK
1,1,1-Trichloroethane	25-JUN-2024	25-JUN-2024	MK
Carbon Tetrachloride	25-JUN-2024	25-JUN-2024	MK
Benzene	25-JUN-2024	25-JUN-2024	MK

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
5955714	**Trip Blank**	**Water**	**21-JUN-2024**	**22-JUN-2024**

O. Reg. 153(511) - VOCs (Water)

Parameter	Date Prepared	Date Analyzed	Initials
1,2-Dichloropropane	25-JUN-2024	25-JUN-2024	MK
Trichloroethylene	25-JUN-2024	25-JUN-2024	MK
Bromodichloromethane	25-JUN-2024	25-JUN-2024	MK
Methyl Isobutyl Ketone	25-JUN-2024	25-JUN-2024	MK
1,1,2-Trichloroethane	25-JUN-2024	25-JUN-2024	MK
Toluene	25-JUN-2024	25-JUN-2024	MK
Dibromochloromethane	25-JUN-2024	25-JUN-2024	MK
Ethylene Dibromide	25-JUN-2024	25-JUN-2024	MK
Tetrachloroethylene	25-JUN-2024	25-JUN-2024	MK
1,1,1,2-Tetrachloroethane	25-JUN-2024	25-JUN-2024	MK
Chlorobenzene	25-JUN-2024	25-JUN-2024	MK
Ethylbenzene	25-JUN-2024	25-JUN-2024	MK
m & p-Xylene	25-JUN-2024	25-JUN-2024	MK
Bromoform	25-JUN-2024	25-JUN-2024	MK
Styrene	25-JUN-2024	25-JUN-2024	MK
1,1,2,2-Tetrachloroethane	25-JUN-2024	25-JUN-2024	MK
o-Xylene	25-JUN-2024	25-JUN-2024	MK
1,3-Dichlorobenzene	25-JUN-2024	25-JUN-2024	MK
1,4-Dichlorobenzene	25-JUN-2024	25-JUN-2024	MK
1,2-Dichlorobenzene	25-JUN-2024	25-JUN-2024	MK
1,3-Dichloropropene	25-JUN-2024	25-JUN-2024	SYS
Xylenes (Total)	25-JUN-2024	25-JUN-2024	SYS
n-Hexane	25-JUN-2024	25-JUN-2024	MK
Toluene-d8	25-JUN-2024	25-JUN-2024	MK
4-Bromofluorobenzene	25-JUN-2024	25-JUN-2024	MK

Method Summary

CLIENT NAME: PINCHIN LTD. **AGAT WORK ORDER: 24Z165629**
PROJECT: 319674.002 **ATTENTION TO: Ester Wilson**
SAMPLING SITE:500 Coventry Rd. **SAMPLED BY:E. Wilson**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluorene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Chrysene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
2-and 1-methyl Napthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Sediment			N/A
F1 (C6 to C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	P&T GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

Method Summary

CLIENT NAME: PINCHIN LTD. **AGAT WORK ORDER: 24Z165629**
PROJECT: 319674.002 **ATTENTION TO: Ester Wilson**
SAMPLING SITE:500 Coventry Rd. **SAMPLED BY:E. Wilson**

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

Method Summary

CLIENT NAME: PINCHIN LTD.
PROJECT: 319674.002
SAMPLING SITE:500 Coventry Rd.

AGAT WORK ORDER: 24Z165629
ATTENTION TO: Ester Wilson
SAMPLED BY:E. Wilson

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

Method Summary

CLIENT NAME: PINCHIN LTD.

PROJECT: 319674.002

SAMPLING SITE:500 Coventry Rd.

AGAT WORK ORDER: 24Z165629

ATTENTION TO: Ester Wilson

SAMPLED BY:E. Wilson

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS

AGAT Laboratories

Have feedback?
Scan here for a quick survey!

5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
webearth.agatlabs.com

Laboratory Use Only

Work Order #: 24Z165629

Cooler Quantity: i large

Arrival Temperatures: 3.6 | 2.1 | 2.7

Depot Temperatures: | |

Custody Seal Intact: ☑ Yes ☐ No ☐ N/A

Notes: bagged ice

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Report Information:

Company: Pinchin
Contact: E. Wilson
Address: 1 Hines
Kanata, ON
Phone: (613) 585-2041 Fax:
Reports to be sent to:
1. Email: ewilson@pinchin.com
2. Email: mwitteman@pinchin.com

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table 1 *Indicate One*
☐ Ind/Com
☐ Res/Park
☐ Agriculture
Soil Texture *(Check One)*
☐ Coarse
☐ Fine

☐ Regulation 406
Table *Indicate One*
☐ Ind/Com
☐ Res/Park
☐ Agriculture
☐ Regulation 558
☐ CCME

☐ Sewer Use
☐ Sanitary ☐ Storm
Region
☐ Prov. Water Quality Objectives (PWQO)
☐ Other
Indicate One

Is this submission for a Record of Site Condition (RSC)?
☐ Yes ☑ No

Report Guideline on Certificate of Analysis
☐ Yes ☑ No

Turnaround Time (TAT) Required:

Regular TAT ☑ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*

For 'Same Day' analysis, please contact your AGAT CSR

Project Information:

Project: 319674.002
Site Location: 500 Coventry Rd
Sampled By: E. Wilson
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Legal Sample ☐

Invoice Information:

Bill To Same: Yes ☐ No ☐

Company:
Contact:
Address:
Email:

Sample Matrix Legend

GW	Ground Water	**SD**	Sediment
O	Oil	**SW**	Surface Water
P	Paint	**R**	Rock/Shale
S	Soil		

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC Y / N	O. Reg 153 Metals & Inorganics	O. Reg 153 Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153 BTEX, F1-F4 PHCs	VOC	PAHs	PCBs: Aroclors ☐	O. Reg 406 Regulation 406 Characterization Package pH, Metals, BTEX, F1-F4	O. Reg 406 EC, SAR	O. Reg 406 Regulation 406 SPLP Rainwater Leach mSPLP: ☐ Metals ☐ VOCs ☐ SVOCs ☐ DG	O. Reg 558 Landfill Disposal Characterization TCLP: TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	Corrosivity: ☐ Moisture ☐ Sulphide								Potentially Hazardous or High Concentration (Y/N)
1. MW11 - GW2	June 21, 2024	AM PM	3	GW						✓															
2. MW7 - GW2	↓	AM PM	11	GW				✓	✓	✓	✓														
3. DWP-4		AM PM	11	GW				✓	✓	✓	✓														
4. Trip Blank		AM PM							✓	✓															
5.		AM PM																							
6.		AM PM																							
7.		AM PM																							
8.		AM PM																							
9.		AM PM																							
10.		AM PM																							
11.		AM PM																							

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Ester Wilson Ester Wilson	June 21, 2024	2:41 PM		June 22 2024	10:48am
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time

Page 1 of 1

Nº: T-158844

Pink Copy - Client | Yellow Copy - AGAT | White Copy- AGAT