PATERSON GROUP

Phase II – Environmental Site Assessment

1296 and 1300 Carling Avenue

Ottawa, Ontario

Prepared for Ambassador Realty Inc.

Report: PE3966-3

October 10, 2025

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EXECUTIVE SUMMARY

Paterson Group was retained by Ambassador Realty Inc. to carry out a Phase II – Environmental Site Assessment (Phase II ESA) for 1296 and 1300 Carling Avenue, in the City of Ottawa, Ontario. The purpose of the Phase II ESA was to address potentially contaminating activities (PCAs) that were identified during the Phase I ESA and were considered to result in areas of potential environmental concern (APECs) on the subject site (Phase II Property).

A previous Phase I-II ESA was carried out in 2017 by Paterson on the Phase II Property for due diligence purposes, which involved drilling five boreholes (BH1 through BH5), three of which were instrumented with groundwater monitoring wells (BH1, BH2, and BH4). No soil or groundwater impacts were identified at that time, however, it was recommended by Paterson that additional sampling be completed to support the eventual filing of a Record of Site Condition, based on the proposed change in land use from commercial to residential.

The subsurface investigation for the current investigation was carried out on July 18, 21, and 22, 2025, and consisted of drilling six boreholes (BH1-24 to BH6-24) across the Phase II Property. The boreholes were advanced to depths ranging from 2.16 m to 21.13 m below the existing ground surface. Bedrock was not confirmed during this subsurface investigation. Upon completion, two boreholes (BH3-25 and BH6-25) were instrumented with groundwater monitoring wells in order to access the groundwater table.

In general, the subsurface soil profile encountered at the borehole locations consists of asphalt over a brown silty sand or silty clay and crushed stone fill material, underlain by silty clay to clayey silt with some sand and/or trace gravel, followed by sandy glacial till to the maximum investigated depth (21.13 m).

During the current field sampling program, the groundwater was measured at depths ranging from approximately 3.62 to 5.05 m below the existing ground surface (bgs). Based on the recovered groundwater levels, groundwater was calculated to flow in a northwesterly direction.

A total of 16 soil samples and two duplicate samples were submitted for laboratory analysis of metals (including As, Se, Sb), benzene, toluene, ethylbenzene, toluene, and xylenes (BTEX), petroleum hydrocarbons fractions F_1 to F_4 (PHCs), electrical conductivity (EC), and sodium absorption ratio (SAR). Select samples were also submitted for analysis of mercury (Hg), hexavalent chromium (Cr(VI)), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and/or polychlorinated biphenyls (PCBs). Soil samples were submitted to target APECs identified in the Phase I ESA, as well as for preliminary excess soil quality purposes. Three soil samples from the previous

investigation that were submitted for laboratory analysis of BTEX and PHCs were also considered in the analysis of results.

Based on the analytical test results, soil on the Phase II Property is impacted with PAHs and PHCs in the upper fill material in BH4-25 above the MECP Table 3 standards. Elevated levels of barium, cobalt and/or vanadium were identified in BH3-25-SS3, BH4-25-SS4, BH5-25-AU1, and BH5-25-SS2B, however, these exceedances were identified in native silty clay material across the Phase II Property, and are considered to be the result of naturally elevated metals commonly present in post-glacial Champlain Sea clay deposits that characterize the greater Ottawa area. As such, barium, cobalt, and vanadium are not considered to be contaminants of concern on the Phase II Property. The remainder of the analytical soil results comply with the MECP Table 3 standards.

Three groundwater samples and one duplicate sample were submitted for laboratory analysis of metals (including As, Se, Sb), mercury (Hg), hexavalent chromium (Cr(VI)), benzene, toluene, ethylbenzene, toluene, and xylenes (BTEX), petroleum hydrocarbons fractions F_1 to F_4 (PHCs), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and/or polychlorinated biphenyls (PCBs) parameters as part of this investigation. Three groundwater samples from the previous investigation that were submitted for laboratory analysis of BTEX and PHCs, with two samples also submitted for VOCs analysis, were also considered in the analysis of results.

Based on the analytical results, groundwater on the Phase II Property is marginally impacted with metals (silver), identified in one location (BH2-17).

Recommendations

Soil

Based on the analytical results, the upper fill material present at BH4-25 contains PAH and PHC parameters which exceed site standards. Based on the sampling to date, this contamination is considered to be confined to the fill material within this localized area.

It is our understanding that the Phase II Property will be redeveloped for residential use in the near future. If a generic Record of Site Condition is to be filed for the Phase II Property, impacted soil will need to be remediated in order to meet the generic site condition standards. It is recommended that Paterson personnel be present on-site during remediation activities to direct the excavation and segregation of impacted soil, as well as to conduct confirmatory sampling as required. This contaminated soil will require disposal at a licensed waste disposal facility. Prior to off-site disposal of impacted soil at a licensed waste disposal facility, a leachate analysis of a representative sample of contaminated soil must be conducted in accordance with Ontario Regulation 347/558.

Additionally, any excess soil generated on site must be handed in accordance with O. Reg. 406/19: On-Site and Excess Soil Management. Additional excess soil testing and reporting requirements may be required in accordance with O. Reg. 406/19 depending on the volume of excess soil generated during redevelopment.

Groundwater

The groundwater within the overburden in BH2-17, along the west-central property boundary, is impacted with metals (silver). It is recommended that this monitoring well be resampled to confirm that the groundwater is impacted prior to redevelopment. If impacts are noted during subsequent monitoring events, it is recommended that a groundwater remediation program is carried out in conjunction with the soil remediation program during redevelopment of the site.

Monitoring Wells

It is recommended that the monitoring wells installed on the Phase II ESA Property remain viable for future monitoring. If the monitoring wells installed on the Phase II Property are not going to be used in the future, or will be destroyed during site redevelopment, they should be abandoned according to O.Reg. 903 (Ontario Water Resources Act).

1.0 INTRODUCTION

At the request of Ambassador Realty Inc., Paterson Group (Paterson) carried out a Phase II – Environmental Site Assessment (Phase II ESA) for the property encompassing the municipal addresses 1296 and 1300 Carling Avenue, in the City of Ottawa, Ontario (the Phase II Property).

The purpose of this Phase II ESA has been to address the areas of potential environmental concern (APECs) identified on the Phase II Property as a result the findings of the Phase I ESA.

1.1 Site Description

Address:	1296 and 1300 Carling Avenue, Ottawa, Ontario.
Legal Description:	Part of Lots 20, 21, 22 & 23 and Part of Block 8, Registered Plan No 221 (Nepean), City of Ottawa.
Location:	The Phase I Property is located on the south side of Carling Avenue, approximately 150 m east of Archibald Street, in the City of Ottawa, Ontario. Refer to Figure 1 - Key Plan in the Figures section following the text. Refer to Figure 1 - Key Plan for the site location.
Latitude and Longitude:	45° 23' 36" N, 75° 45' 28" W

Site Description:

Configuration:	Irregular
Site Area:	0.40 ha (approximately)
Zoning:	AM10 – Arterial Mainstreet Zone
Current Use:	The Phase I Property is currently occupied by two multi-tenant commercial buildings and associated parking area. The current land use as defined by O.Reg. 153/04 is “commercial use”.
Services:	The Phase I Property is located in a municipally serviced area.

1.2 Property Ownership

The Phase II Property is currently owned by Ambassador Realty Inc. Paterson was retained to complete this Phase II ESA by Mr. Arthur Loeb, whose office can be contacted at 185 Somerset Street West, Ottawa, or through their head office by telephone at (613) 233-01104.

1.3 Applicable Site Condition Standard

The site condition standards for the subject property were obtained from Table 3 of the document entitled, *"Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act"*, prepared by the Ministry of the Environment, Conservation and Parks (MECP), and dated April 15, 2011. The selected MECP standards are based on the following considerations:

- ❒ Full-depth conditions;
- ❒ Coarse-grained soil conditions;
- ❒ Non-potable groundwater conditions;
- ❒ Residential land use.

Grain-size analysis was not conducted as part of this assessment, and as such, the coarse-grained soil standards were selected as a conservative approach.

2.0 BACKGROUND INFORMATION

2.1 Physical Setting

The Phase II Property is currently occupied by two three-storey multi-tenant commercial buildings and associated parking and landscaped area. The Phase II Property is considered to be Commercial Use.

The site topography and regional topography slope gently down to the north, in the general direction of the Ottawa River. Water drainage on the Phase II Property consists of sheet flow to catch basins within the parking areas and along the adjacent streets, with some infiltration in grassed areas.

2.2 Previous Investigations

- *"Phase I - II Environmental Site Assessment, 1296 and 1300 Carling Avenue, Ottawa, Ontario,"* prepared by Paterson Group Inc. (Paterson), dated March 7, 2017.

A Phase I – II ESA was previously carried out on the Phase I Property in 2017 for due diligence purposes. Based on the findings of the historical research, potential environmental concerns were identified as a result of former off-site activities including automotive service garages, retail fuel outlets, industrial bottling activities, and underground storage tanks. A subsurface investigation was recommended and subsequently carried out to assess potential soil and groundwater impacts.

The subsurface investigation was carried out on February 25, 2017, and consisted of the placement of 5 boreholes on the Phase I Property (BH1 to BH5), three of which were instrumented with groundwater monitoring wells.

The soil profile encountered consisted of a layer of asphaltic concrete overlying a thin layer of sand and gravel fill, followed by silty clay to clayey silt overlying a coarse till material (primarily sand and gravel) to the depth investigated (5.33 m maximum depth). A thin layer of topsoil was encountered at BH5, beneath the fill. The depth of fill ranged from to 0.20 m to 0.60 m. Bedrock was not encountered in any of the borehole locations.

Three soil samples were submitted to Paracel Laboratories for analytical testing of benzene, toluene, ethylbenzene and xylene (BTEX), and petroleum hydrocarbon fractions F1 to F4 (PHCs) parameters. Groundwater samples recovered from BH1, BH2, and BH4 were submitted for analysis of VOC or BTEX and PHC parameters. All of the analytical results comply with the MECP Table 3 commercial standards. The results also comply with the MECP Table 3 residential standards.

3.0 SCOPE OF INVESTIGATION

3.1 Overview of Site Investigation

The subsurface investigation for this assessment was carried out in conjunction with a geotechnical investigation on July 18, 21, and 22, 2025, and consisted of drilling six boreholes (BH1-24 to BH6-24) across the Phase II Property.

The boreholes were advanced to depths ranging from 2.16 m to 21.13 m below the existing ground surface. Bedrock was not confirmed during this subsurface investigation.

Upon completion, two boreholes (BH3-25 and BH6-25) were instrumented with groundwater monitoring wells in order to access the groundwater table. The groundwater was measured at depths ranging from approximately 3.62 to 5.05 m below the existing ground surface (including existing monitoring wells BH1-17, BH2-17, BH4-17) on July 30, 2025.

3.2 Media Investigated

During the course of this subsurface investigation, soil and groundwater samples were obtained from the Phase II Property and submitted for laboratory analysis. The rationale for sampling and analyzing these media is based on the contaminants of potential concern identified in the Phase I ESA.

The contaminants of potential concern for the soil and/or groundwater on the Phase II Property include the following:

Soil

- Benzene, Toluene, Ethylbenzene, Xylenes (BTEX);
- Volatile Organic Compounds (VOCs);
- Petroleum Hydrocarbons fractions F_1 to F_4 (PHCs);
- Metals (including As, Sb, Se);
- Mercury (Hg);
- Cr(VI);
- Polycyclic Aromatic Hydrocarbons (PAHs);
- Polychlorinated Biphenyls (PCBs);

Groundwater

- Benzene, Toluene, Ethylbenzene, Xylenes (BTEX);
- Volatile Organic Compounds (VOCs);
- Petroleum Hydrocarbons fractions F_1 to F_4 (PHCs);
- Metals (including As, Se, Sb);
- Polycyclic Aromatic Hydrocarbons (PAHs);
- Polychlorinated Biphenyls (PCBs).

3.3 Phase I ESA Conceptual Site Model

Geological and Hydrogeological Setting

Based on the available mapping information, the bedrock beneath the Phase II Property consists of interbedded limestone and dolomite of the Gull River Formation. The surficial geology reportedly consists of offshore marine sediments with an overburden thickness of 5 to 10 m.

Groundwater is anticipated to flow in a northwesterly direction towards the Ottawa River.

Water Bodies and Areas of Natural and Scientific Interest

No water bodies or areas of natural and scientific interest are present on the Phase II Property or within the Study Area.

The nearest named water body is the Ottawa River, located approximately 2.3 km northwest of the Phase II Property at its closest point.

Drinking Water Wells

Based on the availability of municipal services, no potable drinking water wells are anticipated to remain in use within the Study Area.

Existing Buildings and Structures

Two buildings currently exist on the Phase II Property. Both buildings, addressed 1296 and 1300 Carling Avenue respectively, are three-storey multi-tenant commercial office buildings, with one basement level, constructed in approximately the early 1960s.

Current and Future Property Use

The current land use is considered to be Commercial Use. Based on the most recent drawings provided to Paterson, the Phase II Property is proposed to be redeveloped with a high-rise mixed-use building (commercial and residential), with associated access lanes, pedestrian pathways, and landscaped areas. Since the property is proposed to be redeveloped for a more sensitive land use (commercial to residential use), a record of site condition (RSC) will need to be filed with the MECP.

Neighbouring Land Use

The surrounding land uses within the Study Area consist primarily of residential, and commercial uses. Current land use is depicted on Drawing PE3966-3 – Surrounding Land Use Plan, in the Figures section of this report.

Potentially Contaminating Activities and Areas of Potential Environmental Concern

As per Section 7.1 of the Phase I ESA report, 16 potentially contaminating activities (PCAs) resulting in areas of potential environmental concern (APECs) were identified with respect to the Phase II Property. These APECs include:

- ❑ APEC 1 (PCA 1 on Drawing PE3966-2, Item 30 “Importation of Fill Material of Unknown Quality”)

Based on a review of aerial photographs, as well as past subsurface investigations, fill material of unknown quality was imported to the Phase II Property during previous development. It is unclear both where this fill material originated from, as well as the chemical quality of this material. As such, the importation of fill material of unknown quality is considered to represent an APEC on the Phase II Property (APEC 1).

APEC 1 is considered to extend across the entire Phase II Property.

- ❑ APEC 2 (PCA 2 on Drawing PE3966-2, No Item Number “Application of Road Salt”)

Based on the reviewed air photos, the asphaltic concrete covered areas of the Phase II Property were used for vehicle traffic, parking, and storage in the past. It is likely that de-icing agents (salt) were applied to the surface for winter operations. As such, the application of road salt across the Phase II Property is considered to represent an APEC on the Phase I Property (APEC 2).

The exemption in Section 49.1 of O.Reg. 153/04 is being relied upon for APEC 2, which states that “The qualified person has determined, based on a phase one environmental site assessment or a phase two environmental site assessment, that a substance has been applied to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both.”

APEC 2 is situated in the northern and central portion of the Phase II Property.

- ❑ APEC 3 (PCA 3 on Drawing PE3966-2, Item 55 “Former Interior Oil Transformer and Oil Circuit Breaker”)

This APEC is related to a former interior oil transformer and circuit breaker on the Phase II Property. The former presence of an interior oil transformer and oil circuit breaker are considered to represent an APEC potentially impacting soil and groundwater on the Phase II Property.

APEC 3 is situated on the northeastern portion of the Phase II Property.

- ❑ APEC 4 (PCA 4 on Drawing PE3966-2, Item 28 “Former Off-Site Underground Storage Tank”)

This APEC is related to the former presence of an underground storage tank on property adjacent west of the Phase II Property. This former UST is an off-site PCA considered to represent an APEC potentially impacting soil and groundwater on the Phase II Property.

APEC 4 is situated in the west-central portion of the Phase II Property.

- ❑ APEC 5 (PCA 5 on Drawing PE3966-2, Item NA “Former Off-Site Soda Bottling Facility”)

This APEC is related to the former industrial bottling facility on the property adjacent west of the Phase II Property. This former activity is considered to represent an APEC potentially impacting soil and groundwater on the Phase II Property.

APEC 5 is situated in the west-central portion of the Phase II Property.

- ❑ APEC 6 (PCA 6 on Drawing PE3966-2, Item 28 “Existing Off-Site Diesel Generator and Aboveground Storage Tank”)

This APEC is related to the presence of a diesel generator and aboveground storage tank situated on the property adjacent to the west of the Phase II Property. This AST and generator is an off-site PCA considered to represent an APEC potentially impacting soil and groundwater on the Phase II Property.

APEC 6 is situated in the west-central portion of the Phase II Property.

- ❑ APEC 7 (PCA 12 on Drawing PE3966-2, Item 55 “Existing Off-Site Pad Mounted Transformer”)

This APEC is related to the presence of a pad mounted transformer situated on the property adjacent to the west of the Phase II Property. This transformer is an off-site PCA considered to represent an APEC potentially impacting soil and groundwater on the Phase II Property.

APEC 7 is situated in the west-central portion of the Phase II Property.

- ❑ APEC 8 (PCA 13 on Drawing PE3966-2, Item 27 “Former Off-Site Automotive Service Garage”)

This APEC is related to the former presence of an automotive service garage situated on the property approximately 30 m southeast of the Phase II Property. This former garage is an off-site PCA considered to represent an APEC potentially impacting soil and groundwater on the Phase II Property.

APEC 8 is situated in the south-eastern portion of the Phase II Property.

- ❑ APEC 9 (PCA 14 on Drawing PE3966-2, Item NA “Former Printing and Publishing”)

This APEC is related to former commercial publishing activity on the Phase II Property. This former activity is considered to represent an APEC potentially impacting soil and groundwater on the Phase II Property.

APEC 9 is situated in the north-eastern portion of the Phase II Property.

- ❑ APEC 10 (PCA 15 on Drawing PE3966-2, Item 28 “Existing Hydraulic Elevator”)

This APEC is related to an existing hydraulic elevator on the Phase II Property. This hydraulic equipment is an on-site PCA considered to represent an APEC potentially impacting soil and groundwater on the Phase II Property.

APEC 10 is situated in the north-eastern portion of the Phase II Property.

- ❑ APEC 11 (PCA 16 on Drawing PE3966-2, Item 28 “Existing Hydraulic Freight Elevator”)

This APEC is related to an existing hydraulic freight elevator on the Phase II Property. This hydraulic equipment is an on-site PCA considered to represent an APEC potentially impacting soil and groundwater on the Phase II Property.

APEC 11 is situated in the north-eastern portion of the Phase II Property.

Other off-site PCAs were identified within the Study Area but were deemed not to be of any environmental concern to the Phase II Property based on their separation distances, their down-gradient or cross-gradient orientation with respect to the Phase II Property, or the nature or contents of the reviewed records.

Contaminants of Potential Concern

The contaminants of potential concern (CPCs) associated with the aforementioned APECs are considered to be:

Soil

- ❒ Benzene, Toluene, Ethylbenzene, Xylenes (BTEX);
- ❒ Volatile Organic Compounds (VOCs);
- ❒ Petroleum Hydrocarbons fractions F_1 to F_4 (PHCs);
- ❒ Metals;
- ❒ Hydride Forming Metals (As, Sb, Se);
- ❒ Mercury (Hg);
- ❒ Cr(VI);
- ❒ Polycyclic Aromatic Hydrocarbons (PAHs);
- ❒ Polychlorinated Biphenyls (PCBs);

Groundwater

- ❒ Benzene, Toluene, Ethylbenzene, Xylenes (BTEX);
- ❒ Volatile Organic Compounds (VOCs);
- ❒ Petroleum Hydrocarbons fractions F_1 to F_4 (PHCs);
- ❒ Metals;
- ❒ Hydride Forming Metals (As, Sb, Se);
- ❒ Polycyclic Aromatic Hydrocarbons (PAHs);
- ❒ Polychlorinated Biphenyls (PCBs).

These CPCs have the potential to be present in the soil matrix and/or the groundwater situated beneath the Phase II Property.

Assessment of Uncertainty and/or Absence of Information

The information available for review as part of the preparation of the Phase I ESA is considered to be sufficient to conclude that there are PCAs and APECs associated with the Phase II Property.

The presence of any PCAs was confirmed by a variety of independent sources, and as such, the conclusions of this report are not affected by uncertainty which may be present with respect to the individual sources.

3.4 Deviations from the Sampling and Analysis Plan

No deviations from the Sampling and Analysis were made during the course of this Phase II ESA.

3.5 Physical Impediments

No physical impediments were encountered during the course of the field drilling program.

4.0 INVESTIGATION METHOD

4.1 Subsurface Investigation

The subsurface investigation for this assessment was carried out on July 18, 21, and 22, 2025, and consisted of drilling six boreholes (BH1-25 to BH6-25) across the Phase II Property.

The boreholes were advanced to depths ranging from 2.16 m to 21.13 m below the existing ground surface. Bedrock was not confirmed during this subsurface investigation.

Upon completion, two boreholes (BH3-25 and BH6-25) were instrumented with groundwater monitoring wells in order to access the groundwater table. The groundwater was measured at depths ranging from 3.62 to 5.05 m below the existing ground surface (including existing monitoring wells BH1-17, BH2-17, BH4-17) on July 30, 2025.

Under the full-time supervision of Paterson personnel, the boreholes were drilled using a track-mounted drill rig provided by George Downing Estate Drilling of Hawkesbury, Ontario. The locations of the boreholes are illustrated on Drawing PE3966-4 – Test Hole Location Plan, appended to this report.

4.2 Soil Sampling

Soil sampling protocols were followed using the MECP document entitled, *"Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario"*, dated May 1996.

The samples were recovered using a stainless-steel split spoon, while wearing protective gloves (changed after each sample), and immediately placed into plastic bags. If significant contamination was encountered, the samples were instead placed into glass jars. Sampling equipment was routinely washed in soapy water and rinsed with methylhydrate after each split spoon to prevent any cross contamination of the samples. The samples were also stored in coolers to reduce analyte volatilization during transportation.

A total of 58 soil samples and 10 rock core samples were obtained from the boreholes by means of auger and split spoon sampling and diamond bit rock coring. The depths at which auger, split spoon, and rock core samples were obtained from the boreholes are shown as "**AU**", "**SS**", and "**RC**" respectively, on the Soil Profile and Test Data Sheets, appended to this report.

4.3 Field Screening Measurements

All soil samples collected were subjected to a preliminary screening procedure, which included visual screening for colour and evidence of metals, as well as soil vapour screening with a Photo Ionization Detector.

The recovered soil samples were placed immediately into airtight plastic bags with nominal headspace. All lumps of soil inside the bags were broken by hand, and the soil was allowed to come to room temperature prior to conducting the vapour survey, ensuring consistency of readings between samples. To measure the soil vapours, the analyser probe was inserted into the nominal headspace above the sample. The sample was then agitated and manipulated gently by hand as the measurement was taken. The peak reading registered within the first 15 seconds was recorded as the vapour measurement. The parts per million (ppm) scale was used to measure concentrations of organic vapours.

The results of the vapour survey are presented on the Soil Profile and Test Data Sheets, appended to this report.

4.4 Groundwater Monitoring Well Installation

Two groundwater monitoring wells were installed on the Phase II Property as part of this assessment. These monitoring wells were constructed using 50 mm diameter Schedule 40 threaded PVC risers and screens. A sand pack consisting of silica sand was placed around the screen with a bentonite seal placed above to minimize cross-contamination. A summary of the monitoring well construction details are listed in Table 1 below.

Table 1
Monitoring Well Construction Details

Well ID	Ground Surface Elevation (m ASL)	Total Depth (m BGS)	Screened Interval (m BGS)	Sand Pack (m BGS)	Bentonite Seal (m BGS)
BH1-17	74.90	5.33	2.28 - 5.33	1.98 - 5.33	0 - 1.98
BH2-17	74.16	5.18	1.52 - 4.57	1.22 - 4.57	0 - 1.22
BH4-17	73.74	5.33	2.28 - 5.33	1.98 - 5.33	0 - 1.98
BH3-25	74.03	5.28	2.23 - 5.28	1.93 - 5.28	0 - 1.93
BH6-25	73.98	6.83	3.05 - 6.10	2.75 - 6.10	0 - 2.75

Upon completion, the groundwater monitoring wells were developed using a dedicated inertial lift pump, with a minimum of three well volumes being removed from the wells at the time of installation. The wells were developed until the appearance of the water was noted to have stabilized. In addition, the ground surface elevations of each borehole were subsequently surveyed with respect to a known geodetic elevation.

4.5 Field Measurement of Water Quality Parameters

Groundwater monitoring and sampling was conducted on-site on July 30, 2025. Previous monitoring well sampling was also completed on March 3, 2017. At these times, water quality parameters were measured in the field using a multi-parameter analyzer. Parameters measured in the field included temperature, pH and electrical conductivity.

Field parameters were measured after each well volume purged. Wells were purged prior to sampling until at least three well volumes had been removed or the field parameters were relatively stable. Stabilized field parameter values are included in Appendix 1.

4.6 Groundwater Sampling

Groundwater sampling protocols were followed using the MECP document entitled, *"Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario"*, dated May 1996.

Standing water was purged from each monitoring well prior to the recovery of the groundwater samples using dedicated sampling equipment. The samples were then stored in coolers to reduce possible analyte volatilization during their transportation. Further details of our standard operating procedure for groundwater sampling are provided in the Sampling and Analysis Plan, appended to this report.

4.7 Analytical Testing

Soil and groundwater samples submitted for analytical testing are presented in Tables 2 and 3 in Appendix 1.

Paracel Laboratories (Paracel), of Ottawa, Ontario, performed the laboratory analysis on the samples submitted for analytical testing. Paracel is a member of the Standards Council of Canada/Canadian Association for Laboratory Accreditation (SCC/CALA) and is accredited and certified by the SCC/CALA for specific tests registered with the association.

4.8 Residue Management

All soil cuttings, purge water and equipment cleaning fluids were retained on-site.

4.9 Elevation Surveying

The ground surface elevations at each borehole location were surveyed using a GPS device by Paterson personnel and referenced to a geodetic datum.

4.10 Quality Assurance and Quality Control Measures

A summary of the quality assurance and quality control (QA/QC) measures, undertaken as part of this assessment, is provided in the Sampling and Analysis Plan in Appendix 1.

5.0 REVIEW AND EVALUATION

5.1 Geology

In general, the subsurface soil profile encountered at the borehole locations consists of asphalt over a brown silty sand or silty clay and crushed stone fill material, underlain by silty clay to clayey silt with some sand and/or trace gravel, followed by sandy till. Bedrock was not confirmed during the field drilling program, to the maximum investigated depth (21.13 m).

Site geology details are provided in the Soil Profile and Test Data Sheets in Appendix 1.

5.2 Groundwater Elevations, Flow Direction, and Hydraulic Gradient

Groundwater levels were measured using an electronic water level meter on July 30, 2025. The groundwater levels are summarized below in Table 3.

Table 2
Groundwater Level Measurements

Test Hole ID	Ground Surface Elevation (masl)	Water Level Depth (m)	Water Level Elevation (masl)	Date of Measurement
BH1-17	74.90	5.05	69.85	30-Jul-2025
BH2-17	74.16	4.19	69.97	30-Jul-2025
BH4-17	73.74	4.50	69.24	30-Jul-2025
BH3-25	74.03	3.62	70.41	30-Jul-2025
BH6-25	73.98	4.21	69.77	30-Jul-2025

The groundwater at the Phase II Property was measured within the overburden at depths of 3.62 to 5.05 m below the existing ground surface.

No unusual visual observations were identified within the recovered groundwater samples.

Using the groundwater elevations recorded during the sampling event, groundwater contour mapping was completed as part of this assessment. According to the mapped contour data, illustrated on Drawing PE3966-4 – Test Hole Location Plan in the appendix, the groundwater flow on the Phase II Property was calculated to be in a northwest direction. A horizontal hydraulic gradient of approximately 0.03 m/m was also calculated as part of this assessment. It should be noted that groundwater levels are expected to fluctuate throughout the year with seasonal variations.

5.3 Fine/Coarse Soil Texture

Grain size analysis was not completed as part of this investigation. As a result, the coarse-grained soil standards were chosen as a conservative approach.

5.4 Field Screening

Field screening of the soil samples collected during the current drilling program resulted in organic vapour readings ranging from 0.0 ppm to 0.5 ppm, indicating that there is a negligible potential for the presence of volatile substances. Field screening results of each individual soil sample are provided on the Soil Profile and Test Data Sheets appended to this report.

5.5 Soil Quality

A total of 16 soil samples and two duplicate samples were submitted for laboratory analysis of metals (including As, Se, Sb), benzene, toluene, ethylbenzene, toluene, and xylenes (BTEX), petroleum hydrocarbons fractions F_1 to F_4 (PHCs), electrical conductivity (EC), and sodium absorption ratio (SAR). Select samples were also submitted for analysis of mercury (Hg), hexavalent chromium (Cr(VI)), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and/or polychlorinated biphenyls (PCBs). Three soil samples from the previous investigation were submitted for laboratory analysis of BTEX and PHC, and were also considered in the analysis of results. The results of the analytical testing are presented in the Laboratory Certificates of Analysis included in Appendix 1.

PHCs

16 soil samples were submitted for analysis of PHC parameters. One sample, BH4-25-AU1, exceeded the MECP Table 3 standards for PHCs (F4 gravimetric). All remaining PHC parameter concentrations in the soil samples analyzed are in compliance with the MECP Table 3 standards.

PHC parameter concentrations in soil exceed the MECP Table 3 standards in BH4-25.

The analytical results where PHCs exceed or meet the applicable site condition standards in soil on the Phase II Property are shown on the following drawings:

- ❑ Drawing PE3966-8 – Analytical Testing Plan – Soil (BTEX, PHCs, VOCs)
- ❑ Drawing PE3966-8A – Cross Section A-A' – Soil (BTEX, PHCs, VOCs)
- ❑ Drawing PE3966-8B – Cross Section B-B' – Soil (BTEX, PHCs, VOCs)

BTEX

16 soil samples were submitted for analysis of BTEX parameters. All BTEX parameter concentrations in the soil samples analyzed are in compliance with the MECP Table 3 standards.

The analytical results for BTEX in soil on the Phase II Property are shown on the following drawings:

- ❑ Drawing PE3966-8 – Analytical Testing Plan – Soil (BTEX, PHCs, VOCs)
- ❑ Drawing PE3966-8A – Cross Section A-A' – Soil (BTEX, PHCs, VOCs)
- ❑ Drawing PE3966-8B – Cross Section B-B' – Soil (BTEX, PHCs, VOCs)

VOCs

Three soil samples were submitted for analysis of VOC parameters. All VOC parameter concentrations in the soil samples analyzed are in compliance with the MECP Table 3 standards.

The analytical results for VOCs in soil on the Phase II Property are shown on the following drawings:

- ❑ Drawing PE3966-8 – Analytical Testing Plan – Soil (BTEX, PHCs, VOCs)
- ❑ Drawing PE3966-8A – Cross Section A-A' – Soil (BTEX, PHCs, VOCs)
- ❑ Drawing PE3966-8B – Cross Section B-B' – Soil (BTEX, PHCs, VOCs)

PAHs

Seven soil samples were submitted for analysis of PAH parameters. One sample, BH4-25-AU1, exceeded the MECP Table 3 standards for PAHs (benzo[a]pyrene and fluoranthene). The remaining PAH concentrations in the soil samples analyzed are in compliance with the selected MECP Table 3 Coarse-Grained Residential Soil Standards.

PAH parameter concentrations in soil exceed the MECP Table 3 standards in BH4-25.

The analytical results where PAHs exceed or meet the applicable site condition standards in soil on the Phase II Property are shown on the following drawings:

- ❑ Drawing PE3966-7 – Analytical Testing Plan – Soil (PAHs, PCBs)
- ❑ Drawing PE3966-7A – Cross Section A-A' – Soil (PAHs, PCBs)
- ❑ Drawing PE3966-7B – Cross Section B-B' – Soil (PAHs, PCBs)

PCBs

Two soil samples were submitted for analysis of total PCBs. All PCB concentrations in the soil samples analyzed are in compliance with the MECP Table 3 standards.

The analytical results for PCBS in soil on the Phase II Property are shown on the following drawings:

- ❑ Drawing PE3966-7 – Analytical Testing Plan – Soil (PAHs, PCBs)
- ❑ Drawing PE3966-7A – Cross Section A-A' – Soil (PAHs, PCBs)
- ❑ Drawing PE3966-7B – Cross Section B-B' – Soil (PAHs, PCBs)

Metals (including Hydride Forming Metals As, Se, Sb)

16 soil samples were submitted for analysis of metals parameters (including As, Se, Sb). Metals concentrations, including barium, cobalt, and/or vanadium were identified above the MECP Table 3 standards in samples BH3-25-SS3, BH4-25-SS4, BH5-25-AU1, and BH5-25-SS2B. These exceedances were identified within the native silty clay deposits across the Phase II Property, and within fill deposits containing clay and are considered to be the result of geologic processes and not anthropogenic sources, and are therefore not considered to be contaminants of concern. The remaining metals concentrations in the soil samples analyzed are in compliance with the MECP Table 3 standards. As such, metals parameter concentrations on the Phase II Property are considered to be in compliance with the MECP Table 3 standards.

The analytical results where metals and As, Se, Sb were analyzed on the Phase II Property are shown on the following drawings:

- ❑ Drawing PE3966-5 – Analytical Testing Plan – Soil (Metals (Including As, Se, Sb), Mercury, Cr(VI))

- ❑ Drawing PE3966-5A – Cross Section A-A' – Soil (Metals (Including As, Se, Sb), Mercury, Cr(VI))
- ❑ Drawing PE3966-5B – Cross Section B-B' – Soil (Metals (Including As, Se, Sb), Mercury, Cr(VI))

Mercury and Cr(VI)

Four soil samples were submitted for analysis of mercury and Cr(VI) parameters. All mercury and Cr(VI) parameter concentrations in the soil samples analyzed are in compliance with the selected MECP Table 3 standards.

The analytical results where mercury and Cr(VI) were analyzed on the Phase II Property are shown on the following drawings:

- ❑ Drawing PE3966-5 – Analytical Testing Plan – Soil (Metals (Including As, Se, Sb), Mercury, Cr(VI))
- ❑ Drawing PE3966-5A – Cross Section A-A' – Soil (Metals (Including As, Se, Sb), Mercury, Cr(VI))
- ❑ Drawing PE3966-5B – Cross Section B-B' – Soil (Metals (Including As, Se, Sb), Mercury, Cr(VI))

EC and SAR

16 soil samples were submitted for analysis of EC and SAR parameters. Relying on Section 49.1 of O.Reg. 153/04, EC and SAR on the Phase II Property are deemed not to be exceeded for the purpose of Part XV.1 of the Act. As such, EC and SAR are not considered to be contaminants of concern on the Phase II Property.

The analytical results for EC and SAR in soil on the Phase II Property are shown on the following drawings:

- ❑ Drawing PE3966-6 – Analytical Testing Plan – Soil (EC and SAR)
- ❑ Drawing PE3966-6A – Cross Section A-A' – Soil (EC and SAR)
- ❑ Drawing PE3966-6B – Cross Section B-B' – Soil (EC and SAR)

Summary of Soil Results

Based on the analytical results, soil on the Phase II Property is contaminated with PAHs and PHCs. These exceedances were limited to the shallow fill material in BH4-25.

Elevated concentrations of barium, cobalt, and vanadium were identified across the Phase II Property within the native silty clay material and clayey fill. These are considered to be the result of naturally elevated metals commonly present in post-glacial Champlain Sea clay deposits that characterize the greater Ottawa area, and are not considered to be contaminants of concern.

The results of the analytical testing are presented in the laboratory Certificates of Analysis included in Appendix 1.

5.6 Groundwater Quality

Three groundwater samples and one duplicate sample were submitted for laboratory analysis of metals (including As, Se, Sb), mercury, Cr(VI), BTEX, PHCs, VOCs, PAHs, and/or total PCB parameters as part of this investigation. The analytical results from three groundwater samples from the previous investigation, submitted for laboratory analysis of BTEX and PHCs, with two samples also submitted for VOCs analysis, were also included in the analysis of results. The results of the analytical testing are presented in the laboratory Certificates of Analysis included in Appendix 1.

BTEX and PHCs

Three groundwater samples were submitted for laboratory analysis of BTEX parameters, with two groundwater samples also submitted for analysis of PHC parameters. All BTEX and PHC parameter concentrations in the groundwater samples analyzed are in compliance with the selected MECP Table 3 standards.

The analytical results for BTEX and PHCs in groundwater on the Phase II Property are shown on the following drawings:

- ❑ Drawing PE3966-9 – Groundwater (Metals, BTEX, PHCs, VOCs, PCBs, PAHs)
- ❑ Drawing PE3966-9A – Cross Section A-A' – Groundwater Groundwater (Metals, BTEX, PHCs, VOCs, PCBs, PAHs)
- ❑ Drawing PE3966-9B – Cross Section B-B' – Groundwater Groundwater (Metals, BTEX, PHCs, VOCs, PCBs, PAHs)

VOCs

Three groundwater samples were submitted for laboratory analysis of VOC parameters. All VOC parameter concentrations in the groundwater samples analyzed are in compliance with the MECP Table 3 standards.

The analytical results for VOCs in groundwater on the Phase II Property are shown on the following drawings:

- ❑ Drawing PE3966-9 – Groundwater (Metals, BTEX, PHCs, VOCs, PCBs, PAHs)
- ❑ Drawing PE3966-9A – Cross Section A-A' – Groundwater (Metals, BTEX, PHCs, VOCs, PCBs, PAHs)
- ❑ Drawing PE3966-9B – Cross Section B-B' – Groundwater (Metals, BTEX, PHCs, VOCs, PCBs, PAHs)

PAHs

Two groundwater samples were submitted for laboratory analysis of PAH parameters. All PAH parameter concentrations in the groundwater samples analyzed are in compliance with the MECP Table 3 standards.

The analytical results for PAHs in groundwater on the Phase II Property are shown on the following drawings:

- ❑ Drawing PE3966-9 – Groundwater (Metals, BTEX, PHCs, VOCs, PCBs, PAHs)
- ❑ Drawing PE3966-9A – Cross Section A-A' – Groundwater (Metals, BTEX, PHCs, VOCs, PCBs, PAHs)
- ❑ Drawing PE3966-9B – Cross Section B-B' – Groundwater (Metals, BTEX, PHCs, VOCs, PCBs, PAHs)

Metals (including As, Se, Sb)

One groundwater sample was submitted for laboratory analysis of metals parameters (including As, Se, Sb). The results for the groundwater sample analyzed (BH2-17-GW) exceeded the MECP Table 3 standards for silver.

Metals (including As, Se, Sb) parameter concentrations in groundwater exceed the MECP Table 3 standards in BH2-17.

The analytical results for metals (including As, Se, Sb) in groundwater on the Phase II Property are shown on the following drawings:

- ❑ Drawing PE3966-9 – Groundwater (Metals, BTEX, PHCs, VOCs, PCBs, PAHs)
- ❑ Drawing PE3966-9A – Cross Section A-A' – Groundwater (Metals, BTEX, PHCs, VOCs, PCBs, PAHs)

- ❑ Drawing PE3966-9B – Cross Section B-B' – Groundwater (Metals, BTEX, PHCs, VOCs, PCBs, PAHs)

PCBs

One groundwater sample was submitted for laboratory analysis of total PCBs. Total PCB concentrations in the groundwater sample analyzed are in compliance with the MECP Table 3 standards.

The analytical results for PCBs in groundwater on the Phase II Property are shown on the following drawings:

- ❑ Drawing PE3966-9 – Groundwater (Metals, BTEX, PHCs, VOCs, PCBs, PAHs)
- ❑ Drawing PE3966-9A – Cross Section A-A' – Groundwater (Metals, BTEX, PHCs, VOCs, PCBs, PAHs)
- ❑ Drawing PE3966-9B – Cross Section B-B' – Groundwater (Metals, BTEX, PHCs, VOCs, PCBs, PAHs)

Summary of Groundwater Results

Based on the analytical results, groundwater on the Phase II Property is contaminated with metals (silver). This concentration was identified in BH2-17.

The results of the analytical testing are presented in the laboratory Certificates of Analysis included in Appendix 1.

5.7 Quality Assurance and Quality Control Results

All samples submitted as part of this Phase II ESA were handled in accordance with the analytical protocols with respect to holding time, preservation method, storage requirement, and container type.

As per Subsection 47(3) of O. Reg. 153/04, as amended by the Environmental Protection Act, the certificates of analysis have been received for each sample submitted for laboratory analysis and have been appended to this report.

As per the Sampling and Analysis Plan, two duplicate soil samples were obtained from soil samples BH3-25-SS3 and BH5-25-SS2B for BTEX, PHCs, metals, EC, and SAR analysis; and groundwater sample from BH6-25-GW for VOCs analysis. The relative percent difference (RPD) calculations for the original and duplicate

samples are presented in Table 7 in the laboratory Certificates of Analysis section included in Appendix 1.

The RPD calculated for the parameters detected fell within of the acceptable range of 20% with the exception of some metals concentrations, considered to be due to the result of low parameter values causing higher relative percent differences, as well as the natural variations in metals concentrations in soil. As a result, the data quality objectives outlined in the Sampling and Analysis Plan, appended to this report, are considered to have been met.

Based on the results of the QA/QC analysis, the quality of the field data collected during this Phase II ESA is considered to be sufficient to meet the overall objectives of this assessment.

5.8 Phase II Conceptual Site Model

The following section has been prepared in accordance with the requirements of O. Reg. 153/04 amended by the Environmental Protection Act. For the purposes of the proposed uses of this Phase II Property, the Phase II Conceptual Site Model was prepared with consideration for O.Reg. 153/04 only. Conclusions and recommendations are discussed in a subsequent section.

Site Description

Potentially Contaminating Activity and Areas of Potential Environmental Concern

As described in Section 7.1 of the Phase I ESA report, as well as Section 3.3 of this report, the following PCAs, as defined by Table 2 of O. Reg. 153/04, are considered to result in APECs on the Phase II Property:

Table of Areas of Potential Environmental Concern

Area of potential environmental concern	Location of area of potential environmental concern on phase one property	Potentially contaminating activity	Location of PCA (on-site or off-site)	Contaminants of potential concern	Media potentially impacted (Groundwater, soil and/or sediment)
APEC 1 (Importation of Fill Material of Unknown Quality)	Across Entire Phase I Property	PCA ID 30: Importation of Fill Material of Unknown Quality	On-site	BTEX PHCs PAHs Metals (Including As, Sb, Se) CrVI Hg	Soil
APEC 2[1] (Application of Road Salt)	Across Entire Phase I Property	No PCA ID: Application of de-icing salt for the safety of vehicular or pedestrian traffic under conditions of snow or ice	On-site	EC SAR	Soil
APEC 3 (Former Interior Oil Transformer and Oil Circuit Breaker)	Northeastern portion of Phase I Property	PCA ID 55: Transformer Manufacturing, Processing, and Use	On-site	PCBs PHCs PAHs	Soil
				PCBs PHCs	Groundwater
APEC 4 (Former Off-site Underground Storage Tank)	Central portion of Phase I Property, along the western property boundary	PCA ID 28: Gasoline and Associated Products Storage in Fixed Tanks	Off-site	BTEX PHCs VOCs PAHs	Soil and Groundwater
APEC 5 (Former Off-site Soda Bottling Facility)	Central portion of Phase I Property, along the western property boundary	No PCA ID: Former Industrial Activity	Off-site	BTEX PHCs VOCs	Soil
				BTEX PHCs VOCs Metals (Including As, Sb, Se)	Groundwater

Table of Areas of Potential Environmental Concern

Area of potential environmental concern	Location of area of potential environmental concern on phase one property	Potentially contaminating activity	Location of PCA (on-site or off-site)	Contaminants of potential concern	Media potentially impacted (Groundwater, soil and/or sediment)
APEC 6 (Existing Off-site Diesel Generator and Aboveground Storage Tank)	Central portion of Phase I Property, along the western property boundary	PCA ID 28: Gasoline and Associated Products Storage in Fixed Tanks	Off-site	BTEX PHCs VOCs PAHs	Soil and Groundwater
APEC 7 (Existing Off-site Pad Mounted Transformer)	Central portion of Phase I Property, along the western property boundary	PCA ID 55: Transformer Manufacturing, Processing, and Use	Off-site	PHCs PAHs	Soil
				PHCs PAHs	Groundwater
APEC 8 (Former Off-site Automotive Service Garage)	Southeastern portion of the Phase II Property	PCA ID 28: Gasoline and Associated Products Storage in Fixed Tanks	Off-site	BTEX PHCs VOCs	Soil and Groundwater
APEC 9 (Former Printing and Publishing)	Northeastern portion of the Phase I Property	PCA ID 31: Ink Manufacturing, Processing, and Bulk Storage	On-site	VOCs	Soil and Groundwater
APEC 10 (Existing Hydraulic Elevator)	Northeastern portion of the Phase I Property	PCA ID 28: Gasoline and Associated Products Storage in Fixed Tanks	On-site	PHCs	Soil and Groundwater
APEC 11 (Existing Hydraulic Freight Elevator)	Northeastern portion of the Phase I Property	PCA ID 28: Gasoline and Associated Products Storage in Fixed Tanks	On-site	PHCs	Soil and Groundwater

[1] – The exemption in Section 49.1 of O.Reg. 153/04 is being relied upon for APEC 2, which states that "The qualified person has determined, based on a phase one environmental site assessment or a phase two environmental site assessment, that a substance has been applied to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both."

Contaminants of Potential Concern (CPCs)

The contaminants of potential concern (CPCs) associated with the aforementioned APECs are considered to be:

Soil

- ❒ Benzene, Toluene, Ethylbenzene, Xylenes (BTEX);
- ❒ Volatile Organic Compounds (VOCs);
- ❒ Petroleum Hydrocarbons, F_1-F_4 (PHCs);
- ❒ Polycyclic Aromatic Hydrocarbons (PAHs);
- ❒ Metals;
- ❒ Hydride Forming Metals (As, Sb, Se);
- ❒ Mercury (Hg);
- ❒ Hexavalent Chromium (Cr(VI));
- ❒ Polychlorinated Biphenyls (PCBs);

Groundwater

- ❒ Benzene, Toluene, Ethylbenzene, Xylenes (BTEX);
- ❒ Volatile Organic Compounds (VOCs);
- ❒ Petroleum Hydrocarbons, F_1-F_4 (PHCs);
- ❒ Polycyclic Aromatic Hydrocarbons (PAHs);
- ❒ Metals;
- ❒ Hydride Forming Metals (As, Sb, Se);
- ❒ Polychlorinated Biphenyls (PCBs).

These CPCs have the potential to be present in the soil matrix and/or the groundwater situated beneath the Phase II Property.

Subsurface Structures and Utilities

The Phase I Property is situated in a municipally serviced area. Based on public and private locates received in June to July 2025, underground utility services on the property include water and sewer services which enter the site from Carling Avenue between the two subject buildings; natural gas pipelines which extend from Carling along the east building face and enter towards the rear of each building, a buried Bell conduit extending south of the 1300 Carling Avenue building, and an underground high voltage cable extending south of the 1296 Carling Avenue building.

Physical Setting

Site Stratigraphy

The stratigraphy of the Phase II Property generally consists of:

- ❒ Asphalt surface, approximately 0.03 to 0.05 m thick;
- ❒ Fill material consisting primarily of silty sand and crushed stone with some clay, extending to a maximum encountered depth of 2.21 m below the existing ground surface;
- ❒ Silty clay to clayey silt with some sand and/or trace gravel; encountered below the fill material, and extending to a maximum encountered depth of 4.24 m below the existing ground surface;
- ❒ Glacial till consisting of silty sand with some gravel, trace cobbles, boulders and clay, extending to a maximum encountered depth of 21.13 m below the existing ground surface, and becoming grey between approximately 1.45 to 3.12 m below the existing ground surface.

The site stratigraphy, from ground surface to the deepest aquifer or aquitard investigated, is provided in the Soil Profile and Test Data Sheets in Appendix 1.

Hydrogeological Characteristics

The groundwater at the Phase II Property was encountered within the silty sand and/or glacial till at measured depths ranging from 3.62 to 5.05 m below the existing ground surface.

Based on the measured groundwater levels, the groundwater was calculated to flow in a northwestern direction.

Approximate Depth to Bedrock

Bedrock was not confirmed during this subsurface investigation to the maximum investigated depth of 21.13 m. Based on the available mapping information, the bedrock beneath the Phase II Property consists of interbedded limestone and dolomite of the Gull River Formation. The surficial geology reportedly consists of offshore marine sediments with an overburden thickness of 5 to 10 m (not accurate for the Phase II Property, based on the current investigation).

Approximate Depth to Water Table

The depth to the water table is approximately 3.62 to 5.05 m below the existing ground surface.

Sections 41 and 43.1 of Ontario Regulation 153/04

Section 41 of the Regulation does not apply to the Phase II Property, as the Phase II Property is not within 30 m of an environmentally sensitive area.

Section 43.1 of the Regulation does not apply to the Phase II Property in that the Phase II Property is not a Shallow Soil Property and is not within 30 m of a water body.

Existing Buildings and Structures

Two buildings currently exist on the Phase II Property. Both buildings, addressed 1296 and 1300 Carling Avenue respectively, are three-storey multi-tenant commercial office buildings, with one basement level.

Environmental Condition

Areas Where Contaminants are Present

Based on the findings of this assessment, soil (fill material) from sample BH4-24-AU1 (within APEC 1), is contaminated with PAH and PHC parameters.

Based on the analytical test results, the groundwater in BH2-17 within APEC 5 in (former off-site soda bottling facility) is contaminated with metals (silver).

Types of Contaminants

Based on the findings of the Phase II ESA, the following contaminants of concern (CPCs) are considered to be present on the Phase II Property:

<u>Soil:</u>

- PAHs
  - Benzo[a]pyrene
  - Fluoranthene
- PHCs
  - PHCs F4 (Gravimetric)

Groundwater:

- Metals
  - Silver

Contaminated Media

Based on the findings of this assessment, soil (fill material) on the Phase II Property is contaminated with PAHs and PHCs above the MECP Table 3 standards.

Groundwater on the Phase II Property is contaminated with metals (silver) above the MECP Table 3 standards.

What Is Known About Areas Where Contaminants Are Present

Fill material present on the Phase II Property, between the two on-site buildings (within APEC 1) is impacted with PAH and PHC parameters above the MECP Table 3 standards. The origin of these contaminants is unknown, but is likely to be the result of asphaltic concrete fragments within the soil sample introduced from drilling operations, or could be the result of the importation of fill material of unknown quality.

These impacts are considered to be localized within the fill material (extending from ground surface to approximately 0.7 m bgs based on the test hole data).

Groundwater marginally impacted with metals (silver) was identified on the west-central portion of the Phase I Property. While the exact origin of this contamination is unknown, it may be the result of high sediment levels present in the groundwater at the time of sampling.

Distribution and Migration of Contaminants

Based on the results of the analytical testing results, the migration and distribution of the contaminants present above the applicable site standards appear to the limited to the immediate areas of the impacts.

Discharge of Contaminants

It is unknown where PAH and PHC concentrations identified in the fill at BH4-25-AU1 originated from, but they are likely to be the result of asphaltic concrete fragments within the soil sample introduced from drilling operations, or the result of the importation of fill material of unknown quality on-site.

It is unknown where metals concentrations identified in the groundwater at BH2-17 originated but it may be the result of high sediment levels present in the groundwater at the time of sampling.

Climatic and Meteorological Conditions

In general, climatic and meteorological conditions have the potential to affect contaminant distribution. Two ways by which climatic and meteorological conditions may affect contaminant distribution include the downward leaching of contaminants via the infiltration of precipitation, and the migration of contaminants via groundwater levels and/or flow, which may fluctuate seasonally.

It is our opinion that climatic and meteorological conditions have not influenced contaminant transport on the Phase II Property in the past.

Potential for Vapour Intrusion

Given that the Phase II Property will be redeveloped in the near future, all contaminated soil will be removed from the site. As a result, there is no potential for any current or future vapour intrusion on the Phase II Property.

6.0 CONCLUSIONS

Assessment

Paterson Group was retained by Ambassador Realty Inc. to carry out a Phase II – Environmental Site Assessment (Phase II ESA) for 1296 and 1300 Carling Avenue, in the City of Ottawa, Ontario. The purpose of the Phase II ESA was to address potentially contaminating activities (PCAs) that were identified during the Phase I ESA and were considered to result in areas of potential environmental concern (APECs) on the subject site (Phase II Property).

A previous Phase I-II ESA was carried out in 2017 by Paterson on the Phase II Property for due diligence purposes, which involved drilling five boreholes (BH1 through BH5), three of which were instrumented with groundwater monitoring wells (BH1, BH2, and BH4). No soil or groundwater impacts were identified at that time, however, it was recommended by Paterson that additional sampling be completed to support the eventual filing of a Record of Site Condition, based on the proposed change in land use from commercial to residential.

The subsurface investigation for the current investigation was carried out on July 18, 21, and 22, 2025, and consisted of drilling six boreholes (BH1-24 to BH6-24) across the Phase II Property. The boreholes were advanced to depths ranging from 2.16 m to 21.13 m below the existing ground surface. Bedrock was not confirmed during this subsurface investigation. Upon completion, two boreholes (BH3-25 and BH6-25) were instrumented with groundwater monitoring wells in order to access the groundwater table.

In general, the subsurface soil profile encountered at the borehole locations consists of asphalt over a brown silty sand or silty clay and crushed stone fill material, underlain by silty clay to clayey silt with some sand and/or trace gravel, followed by sandy glacial till to the maximum investigated depth (21.13 m).

During the current field sampling program, the groundwater was measured at depths ranging from approximately 3.62 to 5.05 m below the existing ground surface (bgs). Based on the recovered groundwater levels, groundwater was calculated to flow in a northwesterly direction.

A total of 16 soil samples and two duplicate samples were submitted for laboratory analysis of metals (including As, Se, Sb), benzene, toluene, ethylbenzene, toluene, and xylenes (BTEX), petroleum hydrocarbons fractions F_1 to F_4 (PHCs), electrical conductivity (EC), and sodium absorption ratio (SAR). Select samples were also submitted for analysis of mercury (Hg), hexavalent chromium (Cr(VI)), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and/or polychlorinated biphenyls (PCBs). Soil samples were submitted to target APECs identified in the Phase I ESA, as well as for preliminary excess soil quality purposes. Three soil samples from the previous investigation that were submitted for laboratory analysis of BTEX and PHCs were also considered in the analysis of results.

Based on the analytical test results, soil on the Phase II Property is impacted with PAHs and PHCs in the upper fill material in BH4-25 above the MECP Table 3 standards. Elevated levels of barium, cobalt and/or vanadium were identified in BH3-25-SS3, BH4-25-SS4, BH5-25-AU1, and BH5-25-SS2B, however, these exceedances were identified in native silty clay material across the Phase II Property, and are considered to be the result of naturally elevated metals commonly present in post-glacial Champlain Sea clay deposits that characterize the greater Ottawa area. As such, barium, cobalt, and vanadium are not

considered to be contaminants of concern on the Phase II Property. The remainder of the analytical soil results comply with the MECP Table 3 standards.

Three groundwater samples and one duplicate sample were submitted for laboratory analysis of metals (including As, Se, Sb), mercury (Hg), hexavalent chromium (Cr(VI)), benzene, toluene, ethylbenzene, toluene, and xylenes (BTEX), petroleum hydrocarbons fractions F_1 to F_4 (PHCs), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and/or polychlorinated biphenyls (PCBs) parameters as part of this investigation. Three groundwater samples from the previous investigation that were submitted for laboratory analysis of BTEX and PHCs, with two samples also submitted for VOCs analysis, were also considered in the analysis of results.

Based on the analytical results, groundwater on the Phase II Property is marginally impacted with metals (silver), identified in one location (BH2-17).

Recommendations

Soil

Based on the analytical results, the upper fill material present at BH4-25 contains PAH and PHC parameters which exceed site standards. Based on the sampling to date, this contamination is considered to be confined to the fill material within this localized area.

It is our understanding that the Phase II Property will be redeveloped for residential use in the near future. If a generic Record of Site Condition is to be filed for the Phase II Property, impacted soil will need to be remediated in order to meet the generic site condition standards. It is recommended that Paterson personnel be present on-site during remediation activities to direct the excavation and segregation of impacted soil, as well as to conduct confirmatory sampling as required. This contaminated soil will require disposal at a licensed waste disposal facility. Prior to off-site disposal of impacted soil at a licensed waste disposal facility, a leachate analysis of a representative sample of contaminated soil must be conducted in accordance with Ontario Regulation 347/558.

Additionally, any excess soil generated on site must be handed in accordance with O. Reg. 406/19: On-Site and Excess Soil Management. Additional excess soil testing and reporting requirements may be required in accordance with O. Reg. 406/19 depending on the volume of excess soil generated during redevelopment.

Groundwater

The groundwater within the overburden in BH2-17, along the west-central property boundary, is impacted with metals (silver). It is recommended that this monitoring well be resampled to confirm that the groundwater is impacted prior to redevelopment. If impacts are noted during subsequent monitoring events, it is recommended that a groundwater remediation program is carried out in conjunction with the soil remediation program during redevelopment of the site.

Monitoring Wells

It is recommended that the monitoring wells installed on the Phase II ESA Property remain viable for future monitoring. If the monitoring wells installed on the Phase II Property are not going to be used in the future, or will be destroyed during site redevelopment, they should be abandoned according to O.Reg. 903 (Ontario Water Resources Act).

7.0 STATEMENT OF LIMITATIONS

This Phase II – Environmental Site Assessment report has been prepared in general accordance with O. Reg. 153/04, as amended, and CSA Z769-00 (reaffirmed 2022). The conclusions presented herein are based on information gathered from a limited sampling and testing program. The test results represent conditions at specific test locations at the time of the field program.

The client should be aware that any information pertaining to soils and all test hole logs are furnished as a matter of general information only and test hole descriptions or logs are not to be interpreted as descriptive of conditions at locations other than those of the test holes themselves.

Should any conditions be encountered at the Phase II Property and/or historical information that differ from our findings, we request that we be notified immediately in order to allow for a reassessment.

This report was prepared for the sole use of Ambassador Realty Inc. Permission and notification from the above noted party and Paterson Group will be required prior to the release of this report to any other party.

Paterson Group Inc.

Jesse Andrechek, P.Eng., QP$_{ESA}$

Mark D'Arcy, P.Eng., QP$_{ESA}$

Report Distribution:

- Ambassador Realty Inc.
- Paterson Group Inc.

FIGURES

FIGURE 1 – KEY PLAN

DRAWING PE3966-2 – SITE PLAN

DRAWING PE3966-3 – SURROUNDING LAND USE PLAN

DRAWING PE3966-4 – TEST HOLE LOCATION PLAN

DRAWING PE3966-5 – ANALYTICAL TESTING PLAN – SOIL (METALS (INCLUDING As, Sb, Se), MERCURY, Cr(VI))

DRAWING PE3966-5A – CROSS SECTION A-A' – SOIL (METALS (INCLUDING As, Sb, Se), MERCURY, Cr(VI))

DRAWING PE3966-5B – CROSS SECTION B-B' – SOIL (METALS (INCLUDING As, Sb, Se), MERCURY, Cr(VI))

DRAWING PE3966-6 – ANALYTICAL TESTING PLAN – SOIL (EC, SAR)

DRAWING PE3966-6A – CROSS SECTION A-A' – SOIL (EC, SAR)

DRAWING PE3966-6B – CROSS SECTION B-B' – SOIL (EC, SAR)

DRAWING PE3966-7 – ANALYTICAL TESTING PLAN – SOIL (PAHs, PCBs)

DRAWING PE3966-7A – CROSS SECTION A-A' – SOIL (PAHs, PCBs)

DRAWING PE3966-7B – CROSS SECTION B-B' – SOIL (PAHs, PCBs)

DRAWING PE3966-8 – ANALYTICAL TESTING PLAN – SOIL (BTEX, PHCs, VOCs)

DRAWING PE3966-8A – CROSS SECTION A-A' – SOIL (BTEX, PHCs, VOCs)

DRAWING PE3966-8B – CROSS SECTION B-B' – SOIL (BTEX, PHCs, VOCs)

DRAWING PE3966-9 – ANALYTICAL TESTING PLAN – GROUNDWATER (METALS (INCLUDING As, Sb, Se), PAHs, PCBs, BTEX, PHCs, VOCs)

DRAWING PE3966-9A – CROSS SECTION A-A' – GROUNDWATER (METALS (INCLUDING As, Sb, Se), PAHs, PCBs, BTEX, PHCs, VOCs)

DRAWING PE3966-9B – CROSS SECTION B-B' – GROUNDWATER (METALS (INCLUDING As, Sb, Se), PAHs, PCBs, BTEX, PHCs, VOCs)

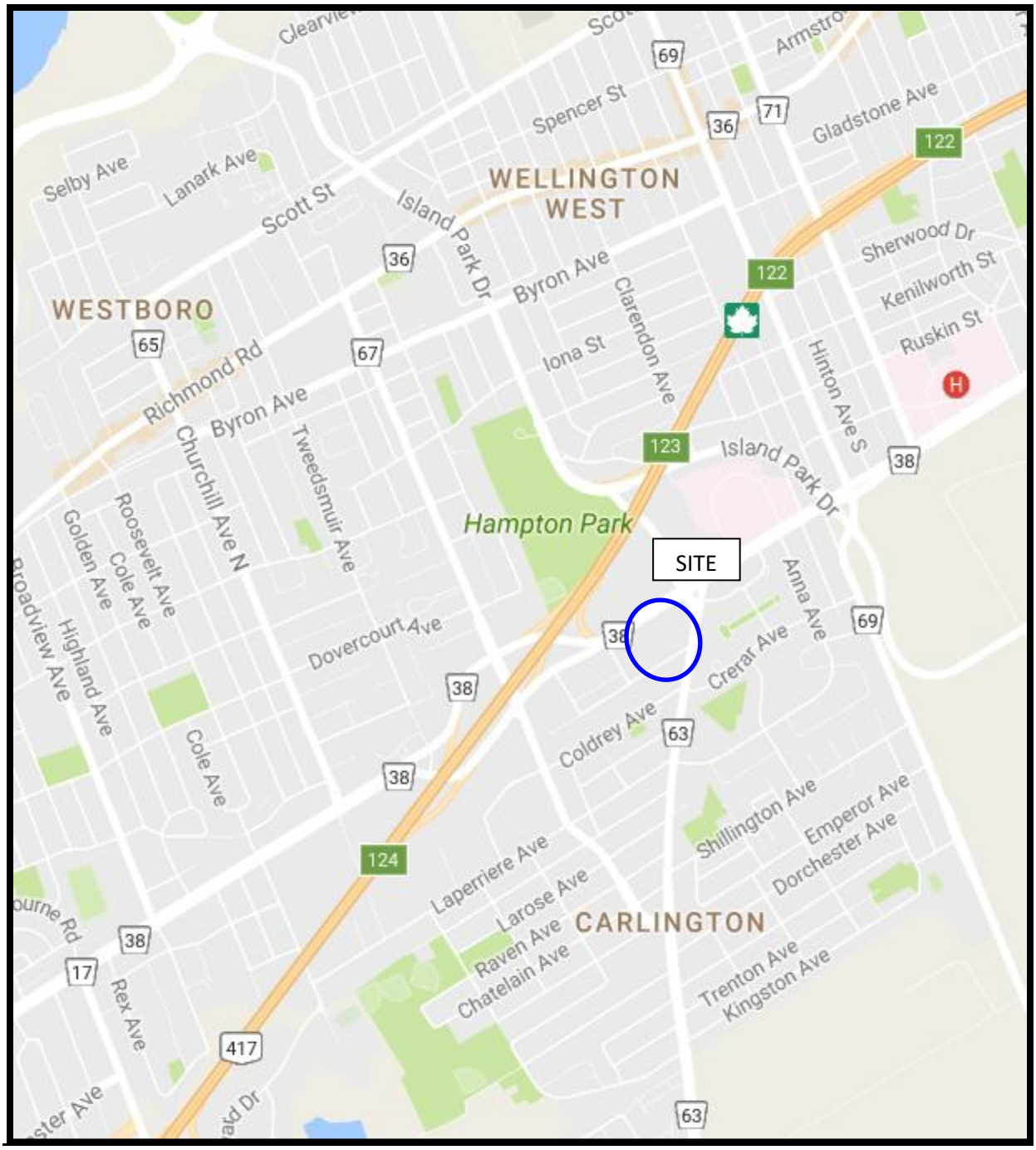
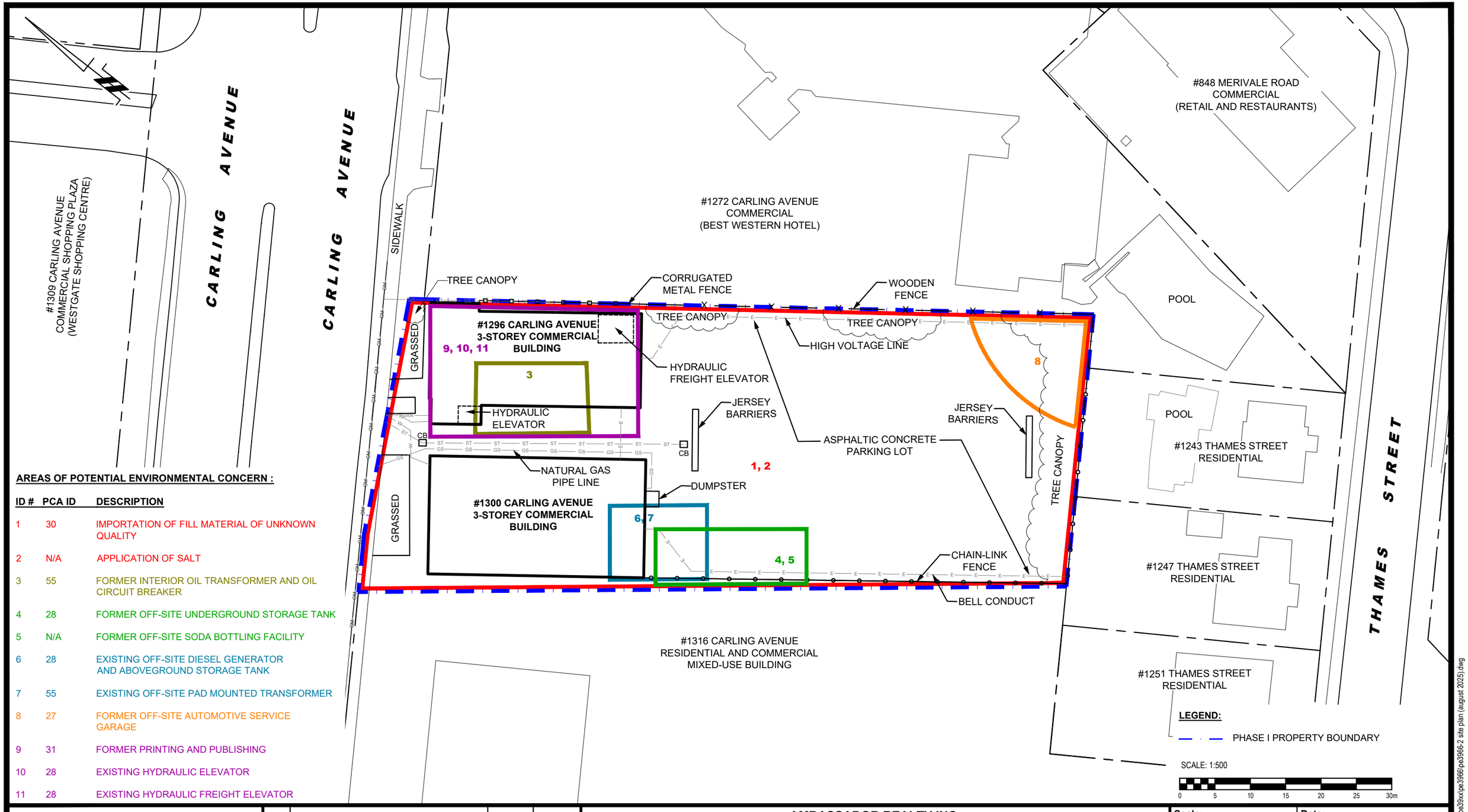


Figure 1

KEY PLAN

PATERSON GROUP



AREAS OF POTENTIAL ENVIRONMENTAL CONCERN :

ID #	PCA ID	DESCRIPTION
1	30	IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
2	N/A	APPLICATION OF SALT
3	55	FORMER INTERIOR OIL TRANSFORMER AND OIL CIRCUIT BREAKER
4	28	FORMER OFF-SITE UNDERGROUND STORAGE TANK
5	N/A	FORMER OFF-SITE SODA BOTTLING FACILITY
6	28	EXISTING OFF-SITE DIESEL GENERATOR AND ABOVEGROUND STORAGE TANK
7	55	EXISTING OFF-SITE PAD MOUNTED TRANSFORMER
8	27	FORMER OFF-SITE AUTOMOTIVE SERVICE GARAGE
9	31	FORMER PRINTING AND PUBLISHING
10	28	EXISTING HYDRAULIC ELEVATOR
11	28	EXISTING HYDRAULIC FREIGHT ELEVATOR

PATERSON GROUP
9 AURIGA DRIVE
OTTAWA, ON
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TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

AMBASSADOR REALTY INC.

PHASE I - ENVIRONMENTAL SITE ASSESSMENT
1296 AND 1300 CARLING AVENUE

OTTAWA, ONTARIO

Title:

SITE PLAN

Scale: 1:500	**Date:** 08/2025
Drawn by: GK	**Report No.:** PE3966-3
Checked by: JA	**Dwg. No.:** PE3966-2
Approved by: MD	**Revision No.:**

11x17

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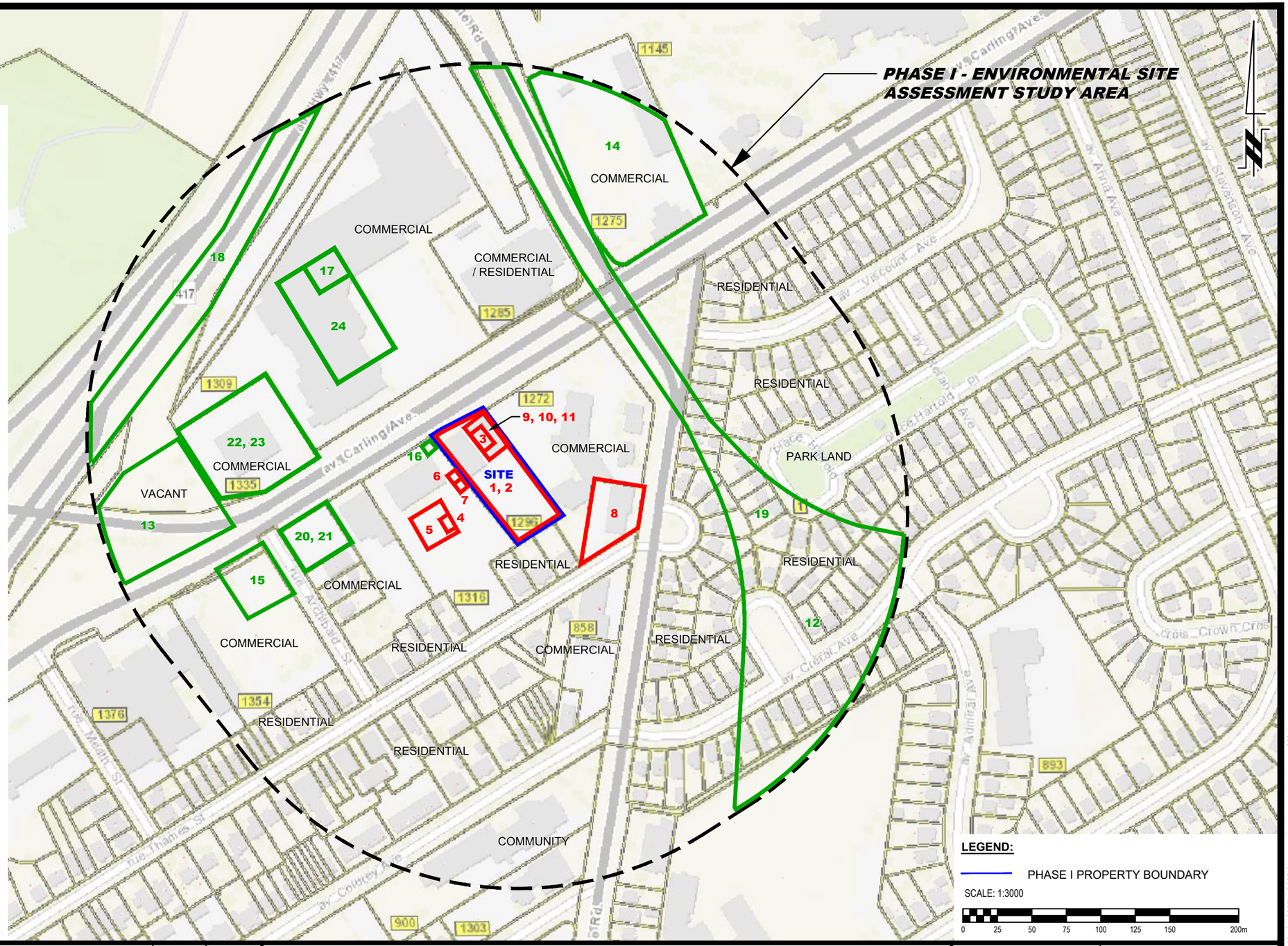
POTENTIALLY CONTAMINATING ACTIVITIES :

ID #	PCA ID	DESCRIPTION
1	30	IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
2	N/A	APPLICATION OF SALT
3	55	FORMER INTERIOR OIL TRANSFORMER AND OIL CIRCUIT BREAKER
4	28	FORMER OFF-SITE UNDERGROUND STORAGE TANK
5	N/A	FORMER OFF-SITE SODA BOTTLING FACILITY
6	28	EXISTING OFF-SITE DIESEL GENERATOR AND ABOVEGROUND STORAGE TANK
7	55	EXISTING OFF-SITE PAD MOUNTED TRANSFORMER
8	27	FORMER OFF-SITE AUTOMOTIVE SERVICE GARAGE
9	31	FORMER PRINTING AND PUBLISHING
10	28	EXISTING HYDRAULIC ELEVATOR
11	28	EXISTING HYDRAULIC FREIGHT ELEVATOR
12	59	FORMER OFF-SITE LUMBER YARD
13	52	FORMER OFF-SITE ROADWAY MAINTENANCE YARD WITH 2XUSTS
14	18	OFF-SITE ELECTRICAL SUBSTATION
15	28	FORMER OFF-SITE RETAIL FUEL OUTLET
16	15	EXISTING OFF-SITE PAD MOUNTED TRANSFORMER (C. 2013-2014)
17	37	FORMER OFF-SITE COMMERCIAL DRY CLEANING
18	46	FORMER OFF-SITE RAIL TRACKS
19	46	FORMER OFF-SITE SPUR LINES
20	27	FORMER OFF-SITE AUTOMOTIVE SERVICE GARAGE
21	28	FORMER OFF-SITE RETAIL FUEL OUTLET
22	28	FORMER OFF-SITE RETAIL FUEL OUTLET
23	28	FORMER OFF-SITE BULK OIL DEPOT
24	28	FORMER OFF-SITE BULK OIL AND GASOLINE DEPOT



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NO.	REVISIONS	DATE	INITIAL

AMBASSADOR REALTY INC.

PHASE I - ENVIRONMENTAL SITE ASSESSMENT
1296 AND 1300 CARLING AVENUE

OTTAWA, **ONTARIO**

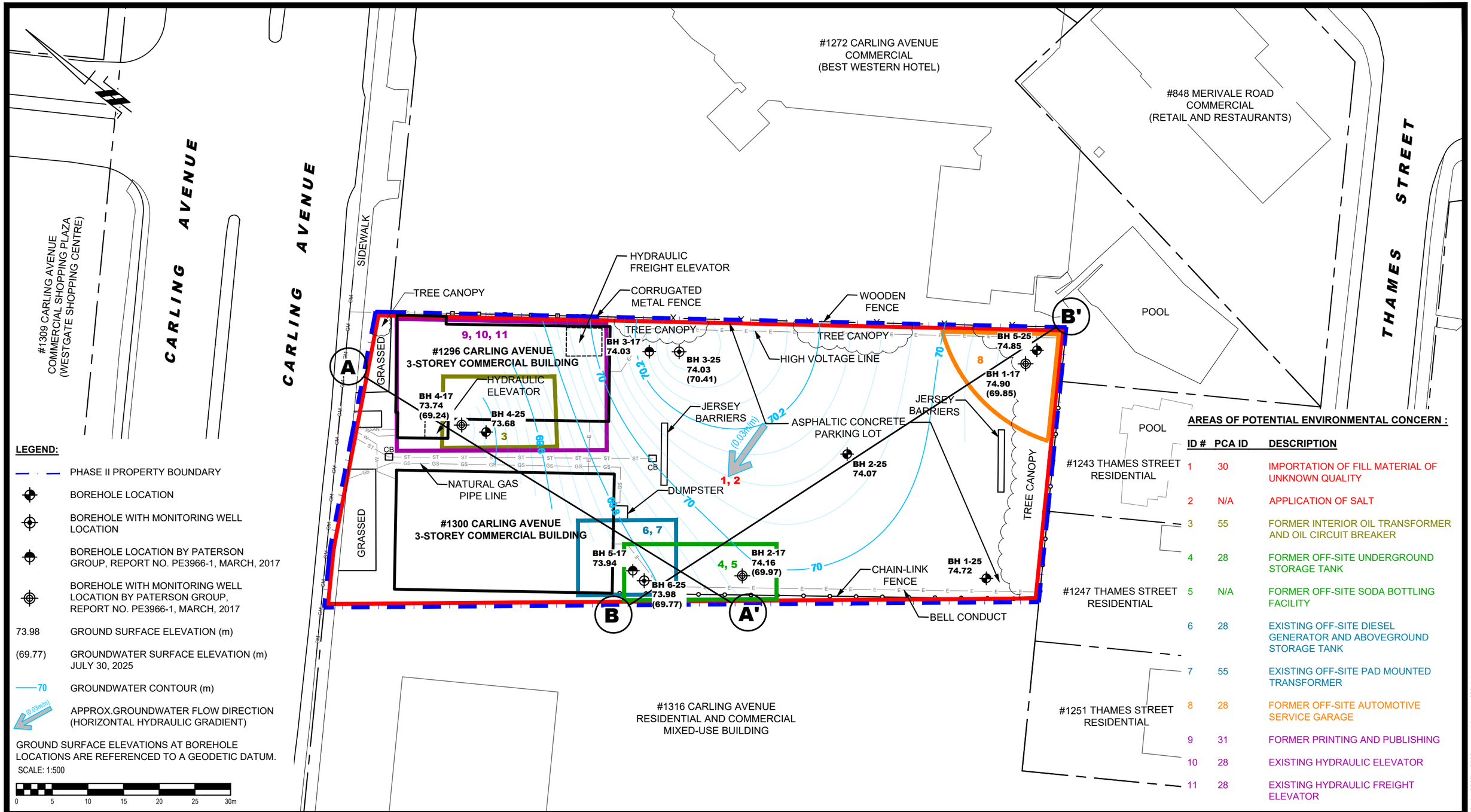
Title:

SURROUNDING LAND USE PLAN

Scale: 1:3000	**Date:** 08/2025
Drawn by: GK	**Report No.:** PE3966-3
Checked by: JA	**Dwg. No.:** PE3966-3
Approved by: MD	**Revision No.:**

p:\autocad drawings\environmental\pe39xx\pe3966\pe3966-3 surrounding land use plan (august 2025).dwg

11x17



LEGEND:

- PHASE II PROPERTY BOUNDARY
- BOREHOLE LOCATION
- BOREHOLE WITH MONITORING WELL LOCATION
- BOREHOLE LOCATION BY PATERSON GROUP, REPORT NO. PE3966-1, MARCH, 2017
- BOREHOLE WITH MONITORING WELL LOCATION BY PATERSON GROUP, REPORT NO. PE3966-1, MARCH, 2017
- 73.98 GROUND SURFACE ELEVATION (m)
- (69.77) GROUNDWATER SURFACE ELEVATION (m) JULY 30, 2025
- 70 GROUNDWATER CONTOUR (m)
- APPROX.GROUNDWATER FLOW DIRECTION (HORIZONTAL HYDRAULIC GRADIENT)

GROUND SURFACE ELEVATIONS AT BOREHOLE LOCATIONS ARE REFERENCED TO A GEODETIC DATUM.

SCALE: 1:500

0 5 10 15 20 25 30m

AREAS OF POTENTIAL ENVIRONMENTAL CONCERN :

ID #	PCA ID	DESCRIPTION
1	30	IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
2	N/A	APPLICATION OF SALT
3	55	FORMER INTERIOR OIL TRANSFORMER AND OIL CIRCUIT BREAKER
4	28	FORMER OFF-SITE UNDERGROUND STORAGE TANK
5	N/A	FORMER OFF-SITE SODA BOTTLING FACILITY
6	28	EXISTING OFF-SITE DIESEL GENERATOR AND ABOVEGROUND STORAGE TANK
7	55	EXISTING OFF-SITE PAD MOUNTED TRANSFORMER
8	28	FORMER OFF-SITE AUTOMOTIVE SERVICE GARAGE
9	31	FORMER PRINTING AND PUBLISHING
10	28	EXISTING HYDRAULIC ELEVATOR
11	28	EXISTING HYDRAULIC FREIGHT ELEVATOR

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NO.	REVISIONS	DATE	INITIAL

AMBASSADOR REALTY INC.

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
1296 AND 1300 CARLING AVENUE

OTTAWA, **ONTARIO**

Title:

TEST HOLE LOCATION PLAN

Scale: 1:500	Date: 10/2025
Drawn by: YA	Report No.: PE3966-3
Checked by: JA	Dwg. No.: PE3966-4
Approved by: MSD	Revision No.:

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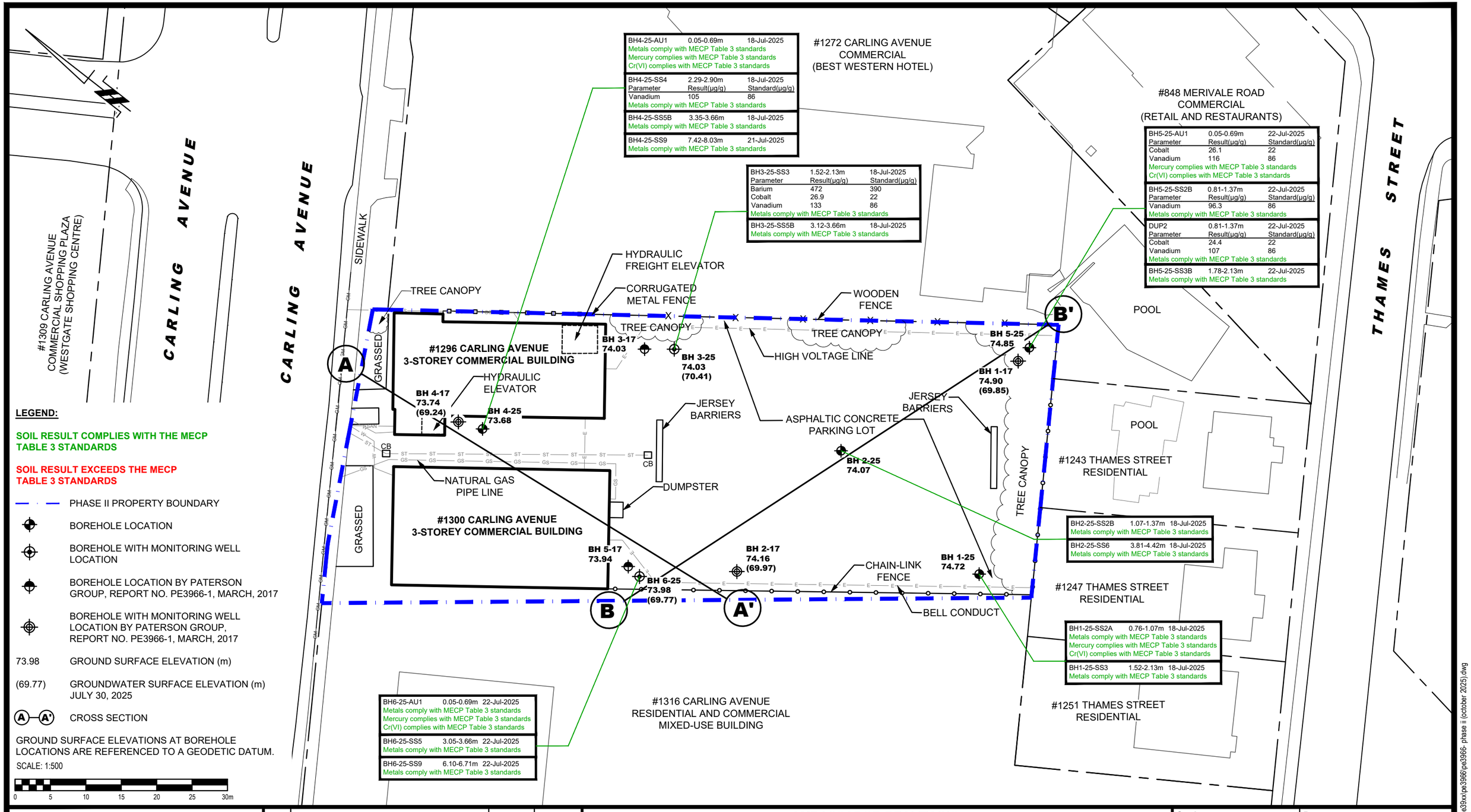
11x17



LEGEND:

SOIL RESULT COMPLIES WITH THE MECP TABLE 3 STANDARDS

SOIL RESULT EXCEEDS THE MECP TABLE 3 STANDARDS

- PHASE II PROPERTY BOUNDARY
- BOREHOLE LOCATION
- BOREHOLE WITH MONITORING WELL LOCATION
- BOREHOLE LOCATION BY PATERSON GROUP, REPORT NO. PE3966-1, MARCH, 2017
- BOREHOLE WITH MONITORING WELL LOCATION BY PATERSON GROUP, REPORT NO. PE3966-1, MARCH, 2017
- 73.98 GROUND SURFACE ELEVATION (m)
- (69.77) GROUNDWATER SURFACE ELEVATION (m) JULY 30, 2025
- A—A' CROSS SECTION

GROUND SURFACE ELEVATIONS AT BOREHOLE LOCATIONS ARE REFERENCED TO A GEODETIC DATUM.

SCALE: 1:500

0 5 10 15 20 25 30m

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NO.	REVISIONS	DATE	INITIAL

AMBASSADOR REALTY INC.

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
1296 AND 1300 CARLING AVENUE

OTTAWA, ONTARIO

Title:
ANALYTICAL TESTING PLAN - SOIL (METALS (INCLUDING As, Sb, Se), MERCURY, Cr(VI))

Scale: 1:500	**Date:** 10/2025
Drawn by: YA	**Report No.:** PE3966-3
Checked by: JA	**Dwg. No.:** PE3966-5
Approved by: MSD	**Revision No.:**

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BH4-25-AU1	0.05-0.69m	18-Jul-2025
Metals comply with MECP Table 3 standards		
Mercury complies with MECP Table 3 standards		
Cr(VI) complies with MECP Table 3 standards		

BH4-25-SS4	2.29-2.90m	18-Jul-2025
Parameter	Result(µg/g)	Standard(µg/g)
Vanadium	105	86
Metals comply with MECP Table 3 standards		

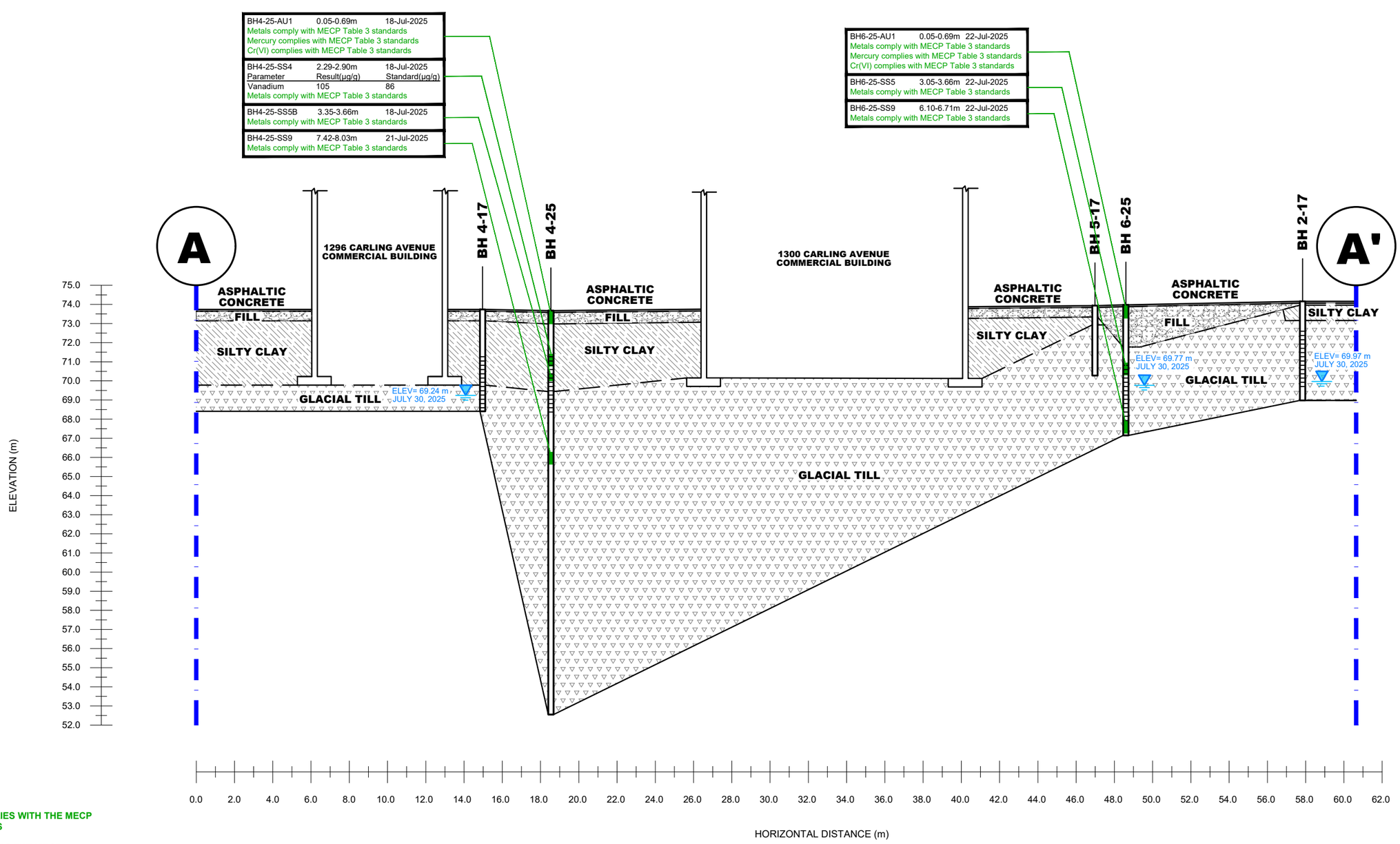
BH4-25-SS5B	3.35-3.66m	18-Jul-2025
Metals comply with MECP Table 3 standards		

BH4-25-SS9	7.42-8.03m	21-Jul-2025
Metals comply with MECP Table 3 standards		

BH6-25-AU1	0.05-0.69m	22-Jul-2025
Metals comply with MECP Table 3 standards		
Mercury complies with MECP Table 3 standards		
Cr(VI) complies with MECP Table 3 standards		

BH6-25-SS5	3.05-3.66m	22-Jul-2025
Metals comply with MECP Table 3 standards		

BH6-25-SS9	6.10-6.71m	22-Jul-2025
Metals comply with MECP Table 3 standards		



LEGEND:

SOIL RESULT COMPLIES WITH THE MECP TABLE 3 STANDARDS

SOIL RESULT EXCEEDS THE MECP TABLE 3 STANDARDS

PHASE II PROPERTY BOUNDARY

PATERSON GROUP
9 AURIGA DRIVE
OTTAWA, ON
K2E 7T9
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NO.	REVISIONS	DATE	INITIAL

AMBASSADOR REALTY INC.

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
1296 AND 1300 CARLING AVENUE

OTTAWA, ONTARIO

Title: CROSS SECTION A-A' - SOIL (METALS (INCLUDING As, Sb, Se), MERCURY, Cr(VI))

Scale:	Date:
AS SHOWN	10/2025
Drawn by: YA	Report No.: PE3966-3
Checked by: JA	Dwg. No.: PE3966-5A
Approved by: MSD	Revision No.:

11x17

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BH6-25-AU1	0.05-0.69m	22-Jul-2025
Metals comply with MECP Table 3 standards		
Mercury complies with MECP Table 3 standards		
Cr(VI) complies with MECP Table 3 standards		

BH6-25-SS5	3.05-3.66m	22-Jul-2025
Metals comply with MECP Table 3 standards		

BH6-25-SS9	6.10-6.71m	22-Jul-2025
Metals comply with MECP Table 3 standards		

BH2-25-SS2B	1.07-1.37m	18-Jul-2025
Metals comply with MECP Table 3 standards		

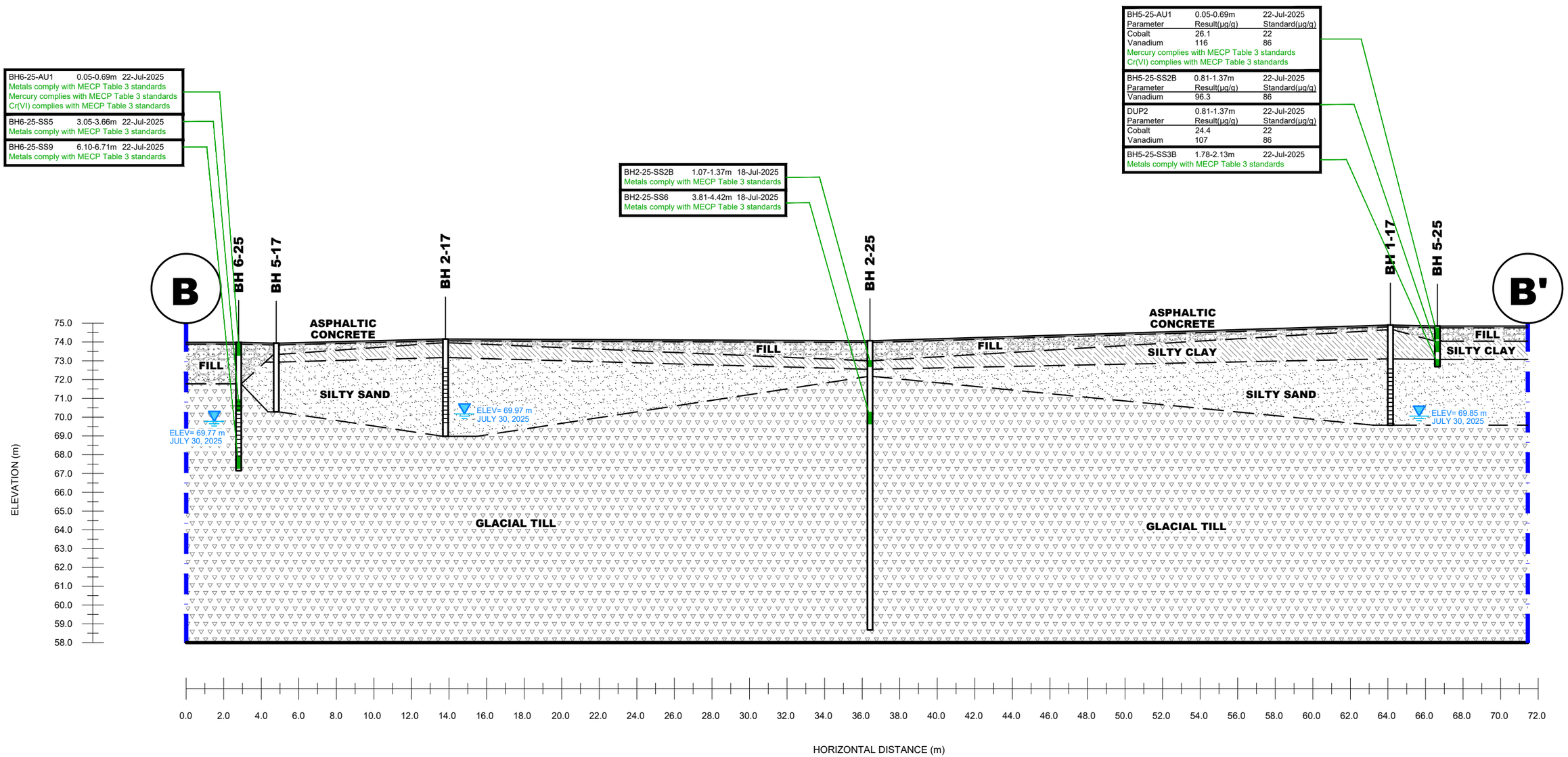
BH2-25-SS6	3.81-4.42m	18-Jul-2025
Metals comply with MECP Table 3 standards		

BH5-25-AU1	0.05-0.69m	22-Jul-2025
Parameter	Result(µg/g)	Standard(µg/g)
Cobalt	26.1	22
Vanadium	116	86
Mercury complies with MECP Table 3 standards		
Cr(VI) complies with MECP Table 3 standards		

BH5-25-SS2B	0.81-1.37m	22-Jul-2025
Parameter	Result(µg/g)	Standard(µg/g)
Vanadium	96.3	86

DUP2	0.81-1.37m	22-Jul-2025
Parameter	Result(µg/g)	Standard(µg/g)
Cobalt	24.4	22
Vanadium	107	86

BH5-25-SS3B	1.78-2.13m	22-Jul-2025
Metals comply with MECP Table 3 standards		



LEGEND:

SOIL RESULT COMPLIES WITH THE MECP TABLE 3 STANDARDS

SOIL RESULT EXCEEDS THE MECP TABLE 3 STANDARDS

— · — PHASE II PROPERTY BOUNDARY

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NO.	REVISIONS	DATE	INITIAL

AMBASSADOR REALTY INC.

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
1296 AND 1300 CARLING AVENUE

OTTAWA, ONTARIO

Title: CROSS SECTION B-B' - SOIL (METALS (INCLUDING As, Sb, Se), MERCURY, Cr(VI))

Scale: AS SHOWN	Date: 10/2025
Drawn by: YA	Report No.: PE3966-3
Checked by: JA	Dwg. No.: PE3966-5B
Approved by: MSD	Revision No.:

11x17

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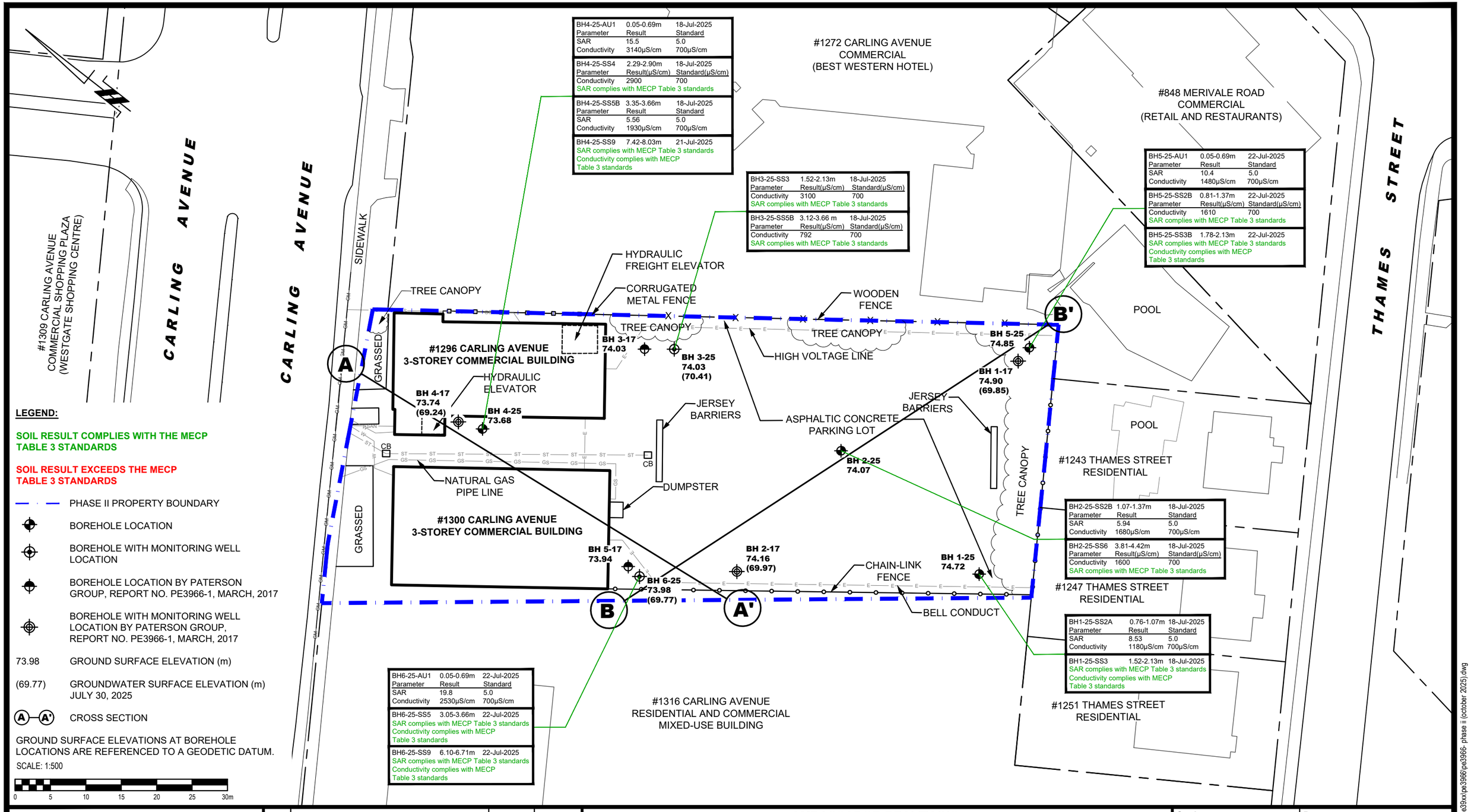

BH4-25-AU1	0.05-0.69m	18-Jul-2025
Parameter	Result	Standard
SAR	15.5	5.0
Conductivity	3140µS/cm	700µS/cm

BH4-25-SS4	2.29-2.90m	18-Jul-2025
Parameter	Result(µS/cm)	Standard(µS/cm)
Conductivity	2900	700

SAR complies with MECP Table 3 standards

BH4-25-SS5B	3.35-3.66m	18-Jul-2025
Parameter	Result	Standard
SAR	5.56	5.0
Conductivity	1930µS/cm	700µS/cm

BH4-25-SS9	7.42-8.03m	21-Jul-2025

SAR complies with MECP Table 3 standards
Conductivity complies with MECP Table 3 standards

BH3-25-SS3	1.52-2.13m	18-Jul-2025
Parameter	Result(µS/cm)	Standard(µS/cm)
Conductivity	3100	700

SAR complies with MECP Table 3 standards

BH3-25-SS5B	3.12-3.66 m	18-Jul-2025
Parameter	Result(µS/cm)	Standard(µS/cm)
Conductivity	792	700

SAR complies with MECP Table 3 standards

BH5-25-AU1	0.05-0.69m	22-Jul-2025
Parameter	Result	Standard
SAR	10.4	5.0
Conductivity	1480µS/cm	700µS/cm

BH5-25-SS2B	0.81-1.37m	22-Jul-2025
Parameter	Result(µS/cm)	Standard(µS/cm)
Conductivity	1610	700

SAR complies with MECP Table 3 standards

BH5-25-SS3B	1.78-2.13m	22-Jul-2025

SAR complies with MECP Table 3 standards
Conductivity complies with MECP Table 3 standards

BH2-25-SS2B	1.07-1.37m	18-Jul-2025
Parameter	Result	Standard
SAR	5.94	5.0
Conductivity	1680µS/cm	700µS/cm

BH2-25-SS6	3.81-4.42m	18-Jul-2025
Parameter	Result(µS/cm)	Standard(µS/cm)
Conductivity	1600	700

SAR complies with MECP Table 3 standards

BH1-25-SS2A	0.76-1.07m	18-Jul-2025
Parameter	Result	Standard
SAR	8.53	5.0
Conductivity	1180µS/cm	700µS/cm

BH1-25-SS3	1.52-2.13m	18-Jul-2025

SAR complies with MECP Table 3 standards
Conductivity complies with MECP Table 3 standards

BH6-25-AU1	0.05-0.69m	22-Jul-2025
Parameter	Result	Standard
SAR	19.8	5.0
Conductivity	2530µS/cm	700µS/cm

BH6-25-SS5	3.05-3.66m	22-Jul-2025

SAR complies with MECP Table 3 standards
Conductivity complies with MECP Table 3 standards

BH6-25-SS9	6.10-6.71m	22-Jul-2025

SAR complies with MECP Table 3 standards
Conductivity complies with MECP Table 3 standards

LEGEND:

SOIL RESULT COMPLIES WITH THE MECP TABLE 3 STANDARDS

SOIL RESULT EXCEEDS THE MECP TABLE 3 STANDARDS

- PHASE II PROPERTY BOUNDARY
- BOREHOLE LOCATION
- BOREHOLE WITH MONITORING WELL LOCATION
- BOREHOLE LOCATION BY PATERSON GROUP, REPORT NO. PE3966-1, MARCH, 2017
- BOREHOLE WITH MONITORING WELL LOCATION BY PATERSON GROUP, REPORT NO. PE3966-1, MARCH, 2017
- 73.98 GROUND SURFACE ELEVATION (m)
- (69.77) GROUNDWATER SURFACE ELEVATION (m) JULY 30, 2025
- A—A' CROSS SECTION

GROUND SURFACE ELEVATIONS AT BOREHOLE LOCATIONS ARE REFERENCED TO A GEODETIC DATUM.

SCALE: 1:500

0 5 10 15 20 25 30m

PATERSON GROUP
9 AURIGA DRIVE
OTTAWA, ON
K2E 7T9
TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

AMBASSADOR REALTY INC.

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
1296 AND 1300 CARLING AVENUE

OTTAWA, **ONTARIO**

Title: **ANALYTICAL TESTING PLAN - SOIL (EC, SAR)**

Scale: 1:500	Date: 10/2025
Drawn by: YA	Report No.: PE3966-3
Checked by: JA	Dwg. No.: PE3966-6
Approved by: MSD	Revision No.:

11x17

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BH4-25-AU1	0.05-0.69m	18-Jul-2025
Parameter	Result	Standard
SAR	15.5	5.0
Conductivity	3140µS/cm	700µS/cm

BH4-25-SS4	2.29-2.90m	18-Jul-2025
Parameter	Result(µS/cm)	Standard(µS/cm)
Conductivity	2900	700

SAR complies with MECP Table 3 standards

BH4-25-SS5B	3.35-3.66m	18-Jul-2025
Parameter	Result	Standard
SAR	5.56	5.0
Conductivity	1930µS/cm	700µS/cm

BH4-25-SS9	7.42-8.03m	21-Jul-2025

SAR complies with MECP Table 3 standards
Conductivity complies with MECP
Table 3 standards

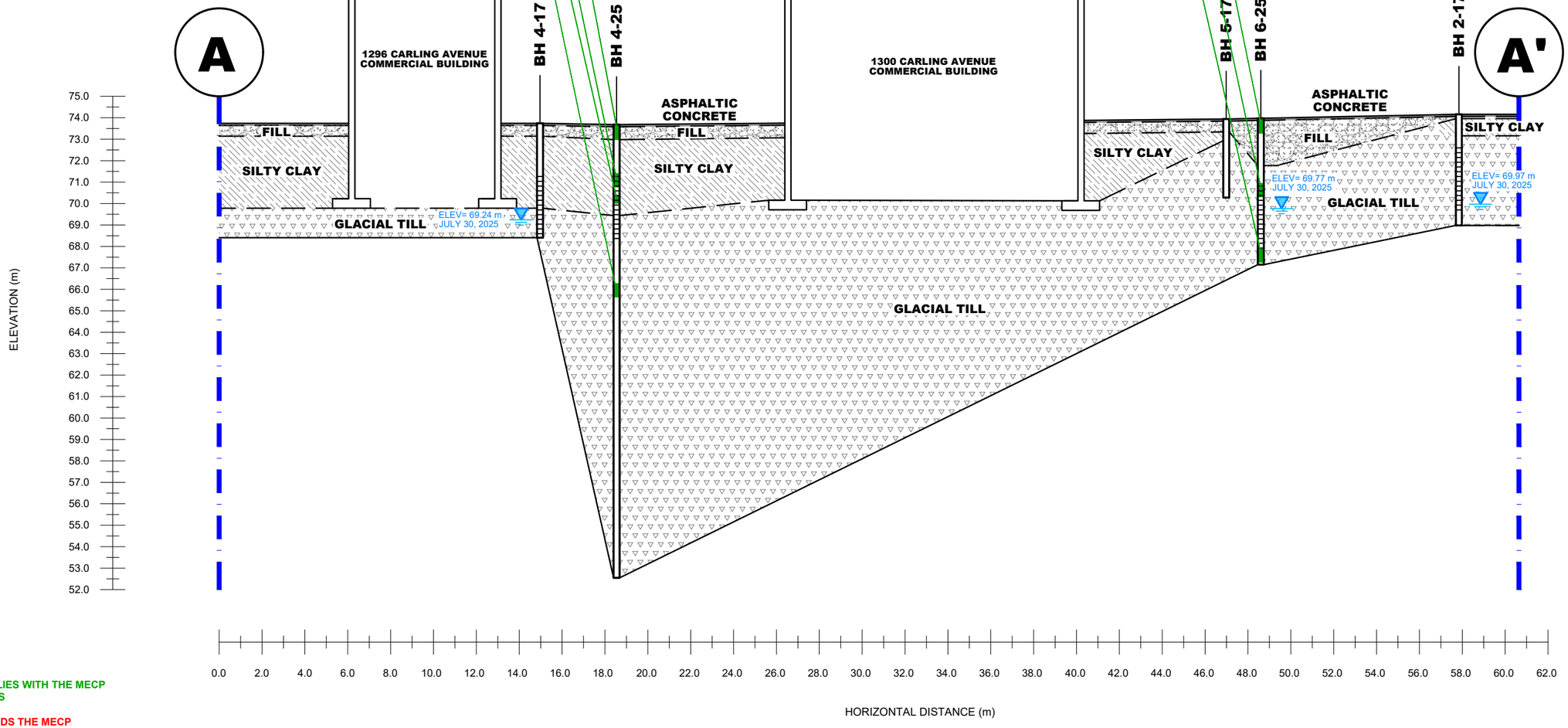
BH6-25-AU1	0.05-0.69m	22-Jul-2025
Parameter	Result	Standard
SAR	19.8	5.0
Conductivity	2530µS/cm	700µS/cm

BH6-25-SS5	3.05-3.66m	22-Jul-2025

SAR complies with MECP Table 3 standards
Conductivity complies with MECP
Table 3 standards

BH6-25-SS9	6.10-6.71m	22-Jul-2025

SAR complies with MECP Table 3 standards
Conductivity complies with MECP
Table 3 standards



LEGEND:

SOIL RESULT COMPLIES WITH THE MECP TABLE 3 STANDARDS

SOIL RESULT EXCEEDS THE MECP TABLE 3 STANDARDS

PHASE II PROPERTY BOUNDARY

PATERSON GROUP
9 AURIGA DRIVE
OTTAWA, ON
K2E 7T9
TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

AMBASSADOR REALTY INC.

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
1296 AND 1300 CARLING AVENUE

OTTAWA, ONTARIO

Title: **CROSS SECTION A-A' - SOIL (EC, SAR)**

Scale: AS SHOWN	Date: 10/2025
Drawn by: YA	Report No.: PE3966-3
Checked by: JA	Dwg. No.: PE3966-6A
Approved by: MSD	Revision No.:

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BH6-25-AU1	0.05-0.69m	22-Jul-2025
Parameter	Result	Standard
SAR	19.8	5.0
Conductivity	2530µS/cm	700µS/cm

BH6-25-SS5	3.05-3.66m	22-Jul-2025

SAR complies with MECP Table 3 standards
Conductivity complies with MECP
Table 3 standards

BH6-25-SS9	6.10-6.71m	22-Jul-2025

SAR complies with MECP Table 3 standards
Conductivity complies with MECP
Table 3 standards

BH2-25-SS2B	1.07-1.37m	18-Jul-2025
Parameter	Result	Standard
SAR	5.94	5.0
Conductivity	1680µS/cm	700µS/cm

BH2-25-SS6	3.81-4.42m	18-Jul-2025
Parameter	Result(µS/cm)	Standard(µS/cm)
Conductivity	1600	700

SAR complies with MECP Table 3 standards

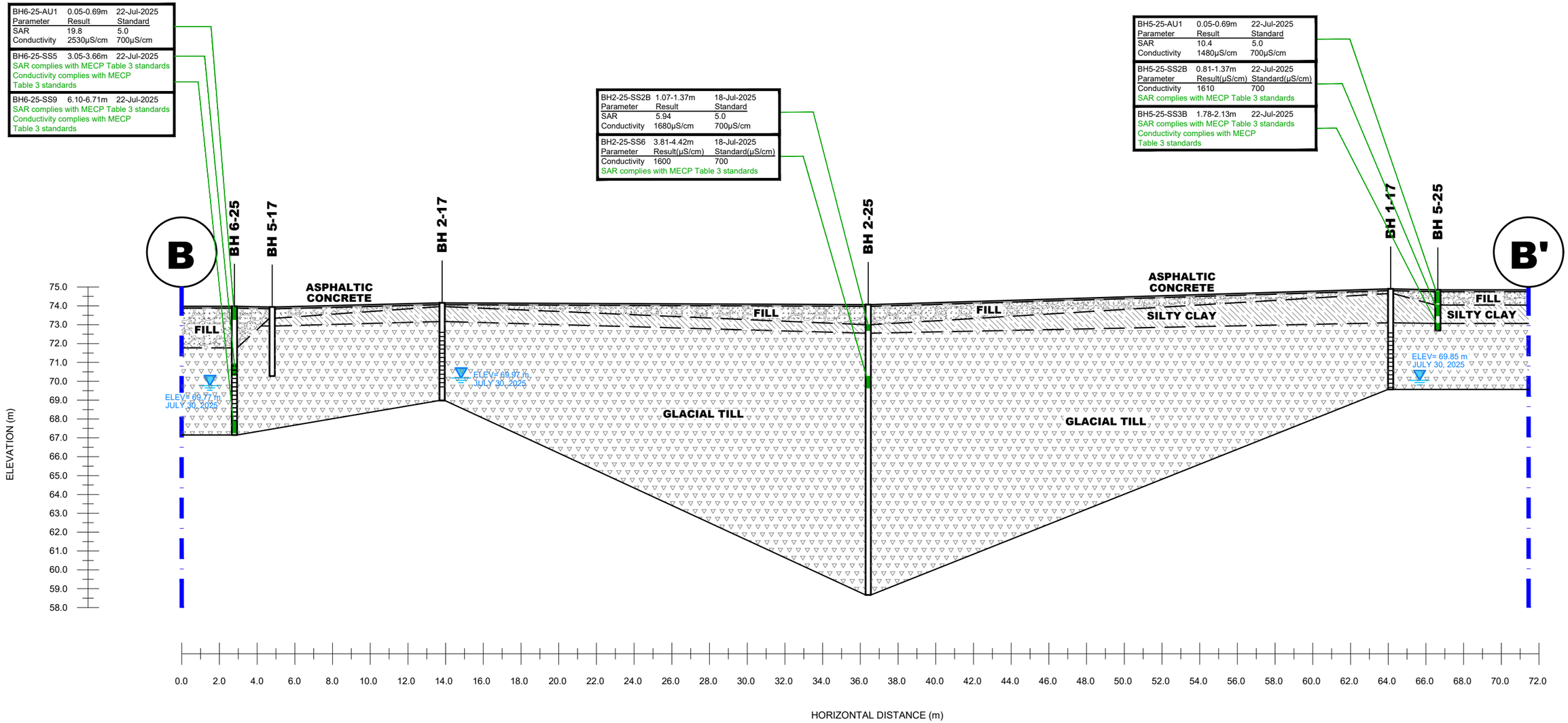
BH5-25-AU1	0.05-0.69m	22-Jul-2025
Parameter	Result	Standard
SAR	10.4	5.0
Conductivity	1480µS/cm	700µS/cm

BH5-25-SS2B	0.81-1.37m	22-Jul-2025
Parameter	Result(µS/cm)	Standard(µS/cm)
Conductivity	1610	700

SAR complies with MECP Table 3 standards

BH5-25-SS3B	1.78-2.13m	22-Jul-2025

SAR complies with MECP Table 3 standards
Conductivity complies with MECP
Table 3 standards



LEGEND:

SOIL RESULT COMPLIES WITH THE MECP TABLE 3 STANDARDS

SOIL RESULT EXCEEDS THE MECP TABLE 3 STANDARDS

PHASE II PROPERTY BOUNDARY

PATERSON GROUP
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K2E 7T9
TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

AMBASSADOR REALTY INC.

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
1296 AND 1300 CARLING AVENUE

OTTAWA, ONTARIO

Title: **CROSS SECTION B-B' - SOIL (EC, SAR)**

Scale: AS SHOWN	Date: 10/2025
Drawn by: YA	Report No.: PE3966-3
Checked by: JA	Dwg. No.: PE3966-6B
Approved by: MSD	Revision No.:

11x17

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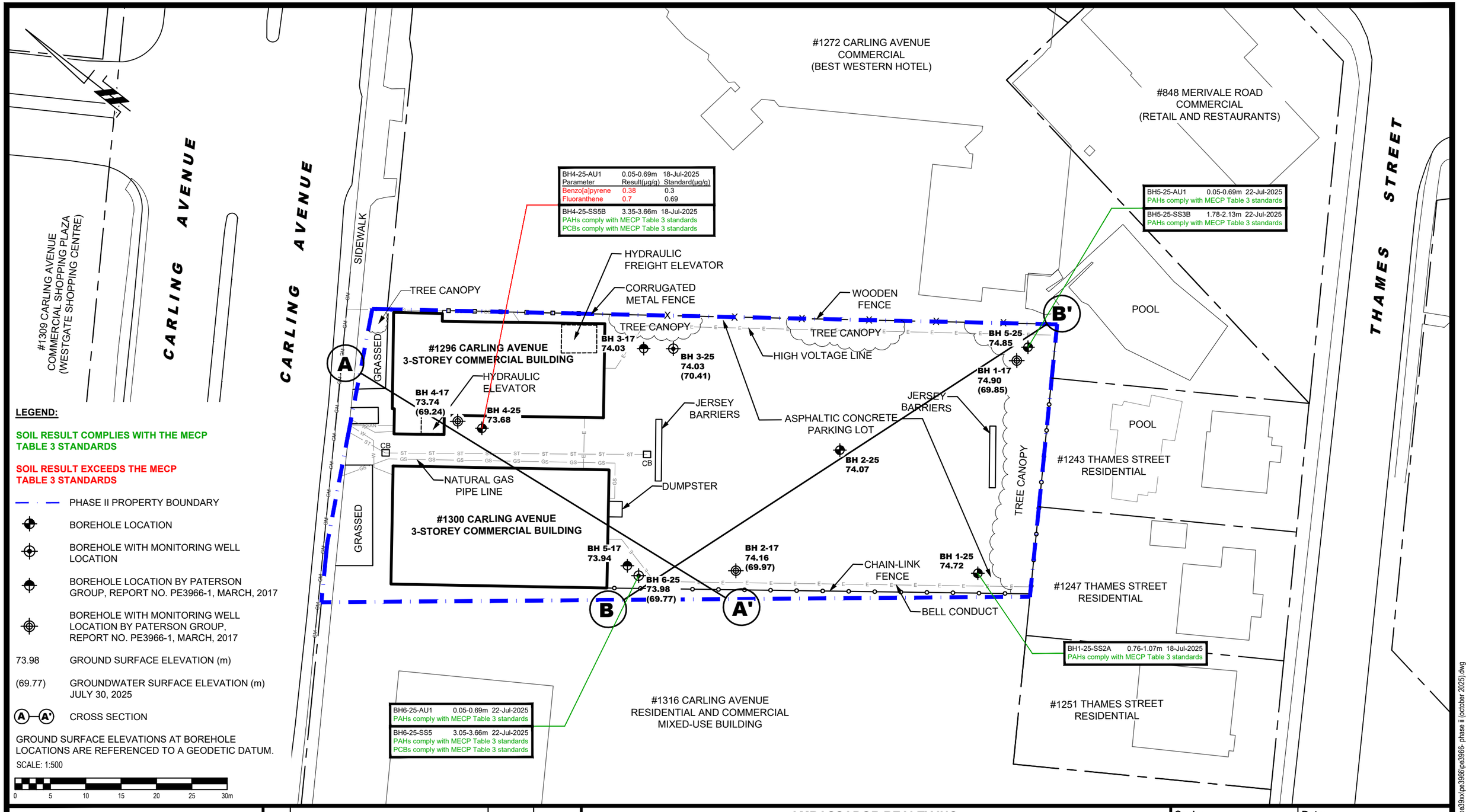

LEGEND:

SOIL RESULT COMPLIES WITH THE MECP TABLE 3 STANDARDS

SOIL RESULT EXCEEDS THE MECP TABLE 3 STANDARDS

- PHASE II PROPERTY BOUNDARY
- BOREHOLE LOCATION
- BOREHOLE WITH MONITORING WELL LOCATION
- BOREHOLE LOCATION BY PATERSON GROUP, REPORT NO. PE3966-1, MARCH, 2017
- BOREHOLE WITH MONITORING WELL LOCATION BY PATERSON GROUP, REPORT NO. PE3966-1, MARCH, 2017
- 73.98 GROUND SURFACE ELEVATION (m)
- (69.77) GROUNDWATER SURFACE ELEVATION (m) JULY 30, 2025
- A—A' CROSS SECTION

GROUND SURFACE ELEVATIONS AT BOREHOLE LOCATIONS ARE REFERENCED TO A GEODETIC DATUM.

SCALE: 1:500

0 5 10 15 20 25 30m

PATERSON GROUP
9 AURIGA DRIVE
OTTAWA, ON
K2E 7T9
TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

AMBASSADOR REALTY INC.

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
1296 AND 1300 CARLING AVENUE

OTTAWA, ONTARIO

Title:

ANALYTICAL TESTING PLAN - SOIL (PAHs, PCBs)

Scale: 1:500	**Date:** 10/2025
Drawn by: YA	**Report No.:** PE3966-3
Checked by: JA	**Dwg. No.:** PE3966-7
Approved by: MSD	**Revision No.:**

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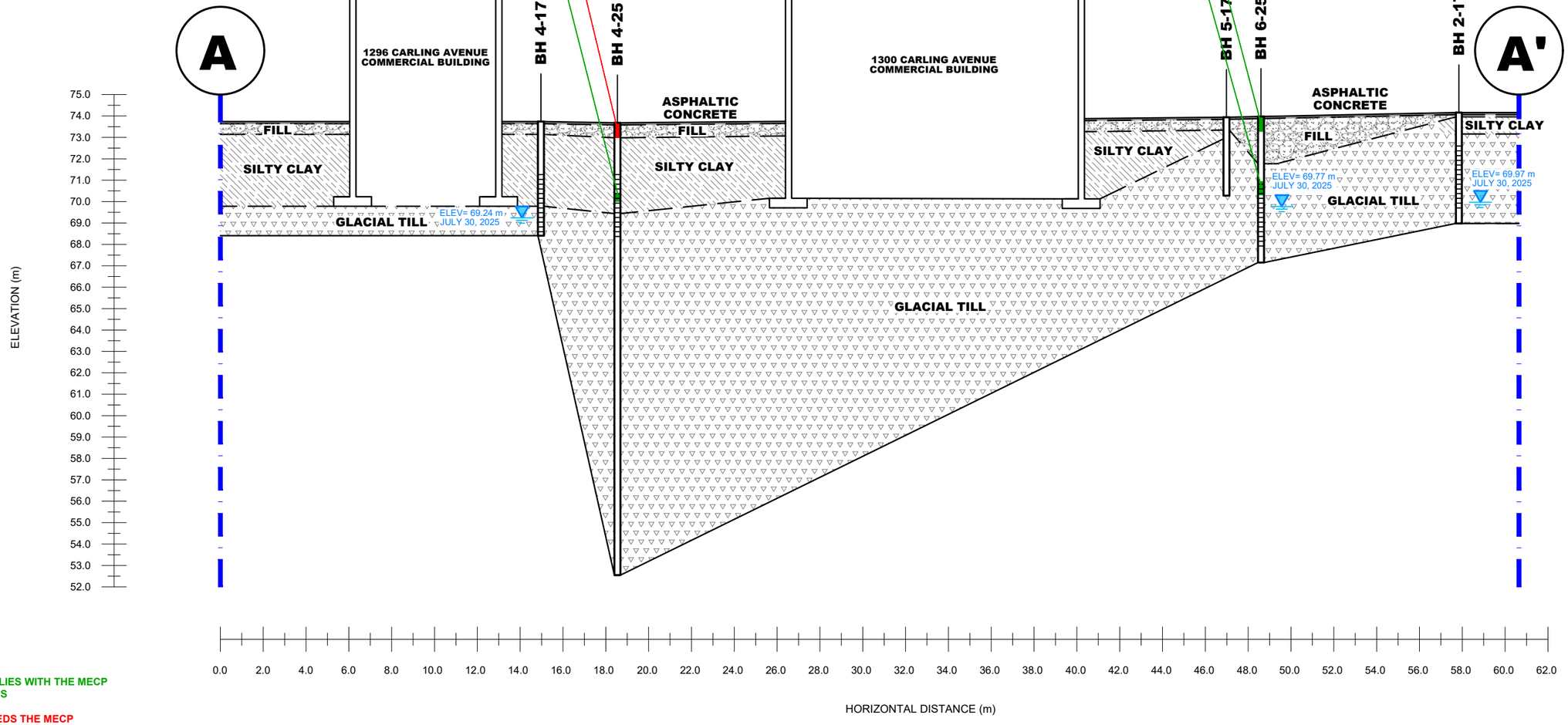
BH4-25-AU1	0.05-0.69m	18-Jul-2025
Parameter	Result(µg/g)	Standard(µg/g)
Benzo[a]pyrene	0.38	0.3
Fluoranthene	0.7	0.69
BH4-25-SS5B	3.35-3.66m	18-Jul-2025
PAHs comply with MECP Table 3 standards		
PCBs comply with MECP Table 3 standards		

BH6-25-AU1	0.05-0.69m	22-Jul-2025
PAHs comply with MECP Table 3 standards		
BH6-25-SS5	3.05-3.66m	22-Jul-2025
PAHs comply with MECP Table 3 standards		
PCBs comply with MECP Table 3 standards		



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OTTAWA, ON
K2E 7T9
TEL: (613) 226-7381

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PHASE II - ENVIRONMENTAL SITE ASSESSMENT
1296 AND 1300 CARLING AVENUE

OTTAWA, ONTARIO

Title: CROSS SECTION A-A' - SOIL (PAHs, PCBs)

Scale: AS SHOWN	Date: 10/2025
Drawn by: YA	Report No.: PE3966-3
Checked by: JA	Dwg. No.: PE3966-7A
Approved by: MSD	Revision No.:

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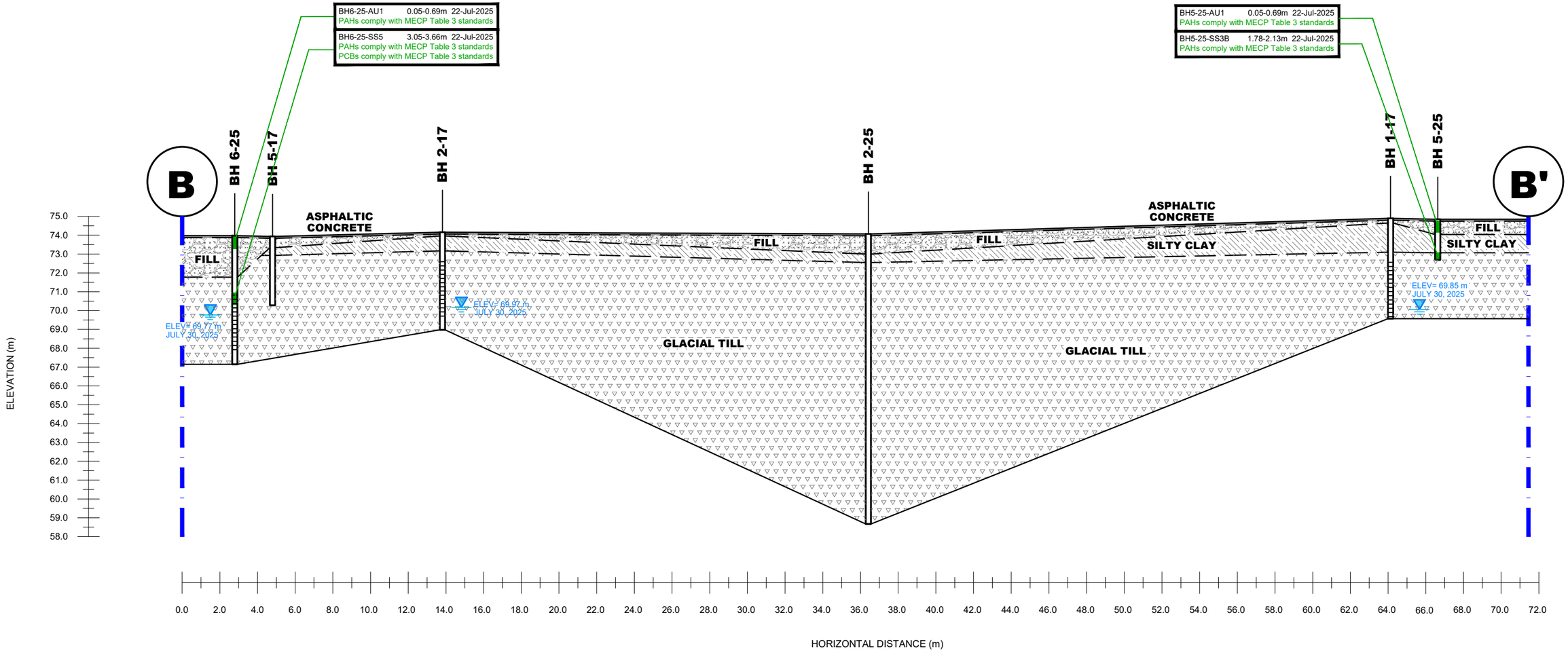

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PHASE II PROPERTY BOUNDARY

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K2E 7T9
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AMBASSADOR REALTY INC.

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
1296 AND 1300 CARLING AVENUE

OTTAWA, ONTARIO

Title: **CROSS SECTION B-B' - SOIL (PAHs, PCBs)**

Scale: AS SHOWN	**Date:** 10/2025
Drawn by: YA	**Report No.:** PE3966-3
Checked by: JA	**Dwg. No.:** PE3966-7B
Approved by: MSD	**Revision No.:**

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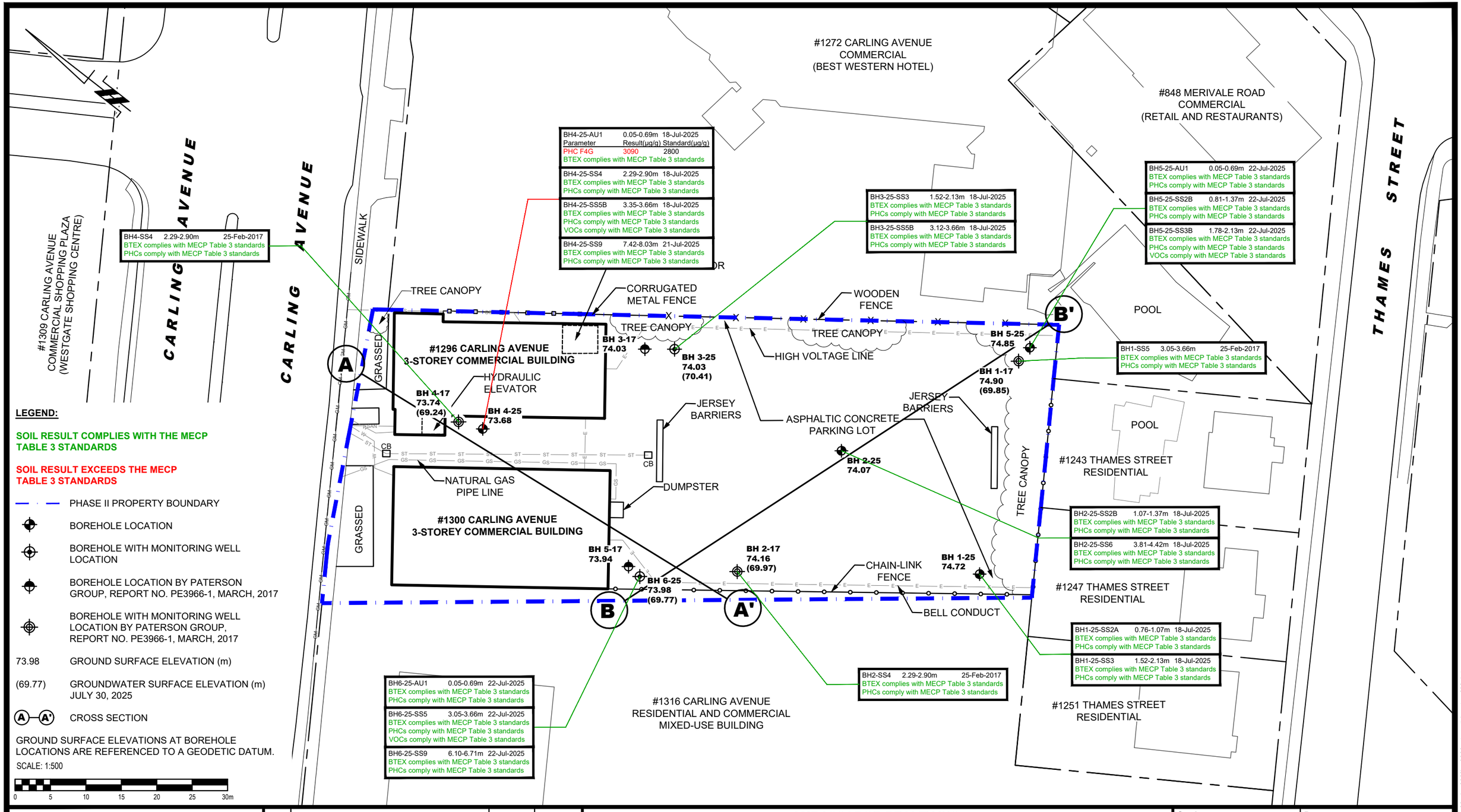

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- A—A' CROSS SECTION

GROUND SURFACE ELEVATIONS AT BOREHOLE LOCATIONS ARE REFERENCED TO A GEODETIC DATUM.

SCALE: 1:500

0 5 10 15 20 25 30m

PATERSON GROUP
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NO.	REVISIONS	DATE	INITIAL

AMBASSADOR REALTY INC.

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
1296 AND 1300 CARLING AVENUE

OTTAWA, ONTARIO

Title: **ANALYTICAL TESTING PLAN - SOIL (BTEX, PHCs, VOCs)**

Scale: 1:500	Date: 10/2025
Drawn by: YA	Report No.: PE3966-3
Checked by: JA	Dwg. No.: PE3966-8
Approved by: MSD	Revision No.:

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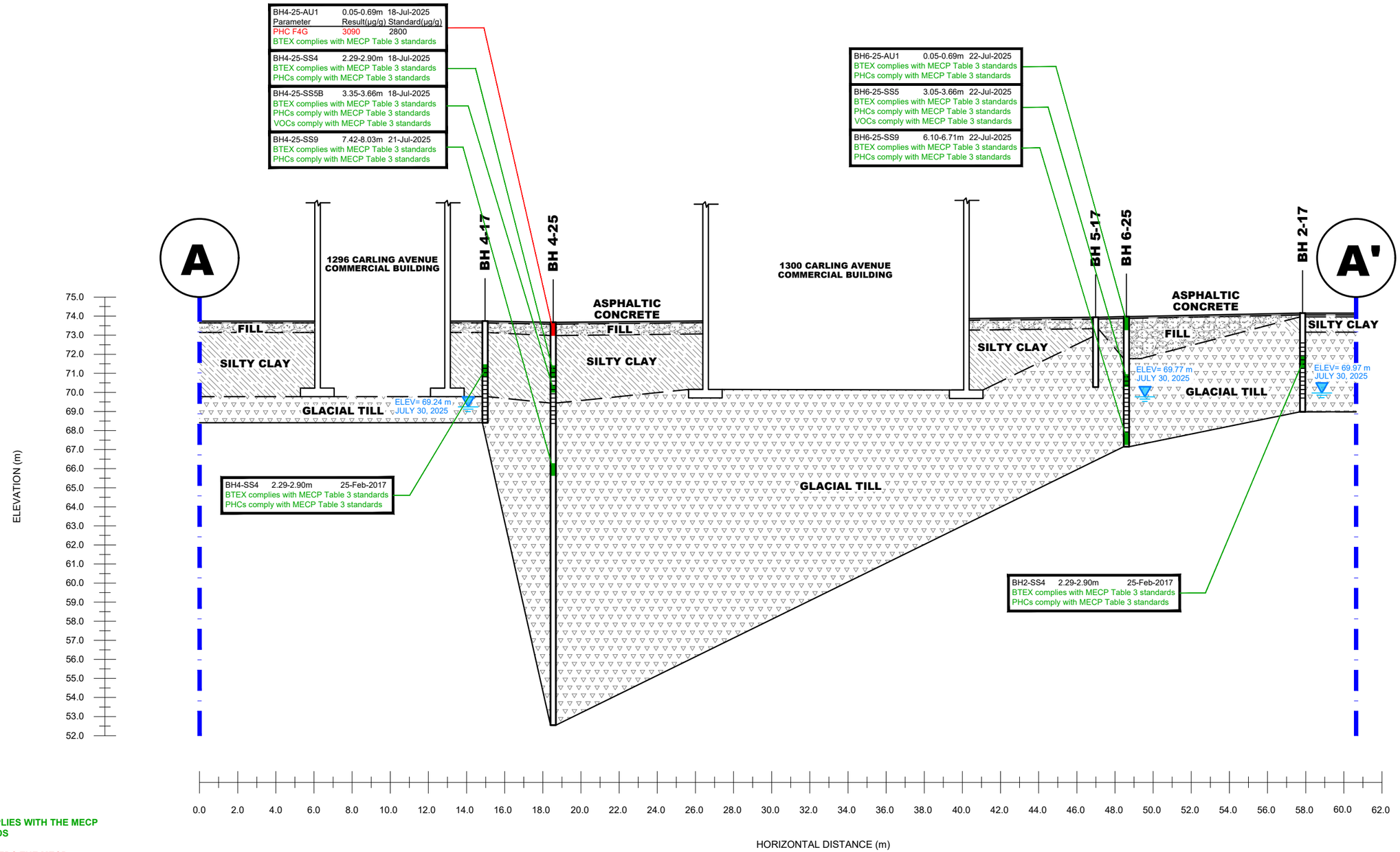

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PHASE II PROPERTY BOUNDARY

PATERSON GROUP
9 AURIGA DRIVE
OTTAWA, ON
K2E 7T9
TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

AMBASSADOR REALTY INC.

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
1296 AND 1300 CARLING AVENUE

OTTAWA, ONTARIO

Title: CROSS SECTION A-A' - SOIL (BTEX, PHCs , VOCs)

Scale: AS SHOWN	Date: 10/2025
Drawn by: YA	Report No.: PE3966-3
Checked by: JA	Dwg. No.: PE3966-8A
Approved by: MSD	Revision No.:

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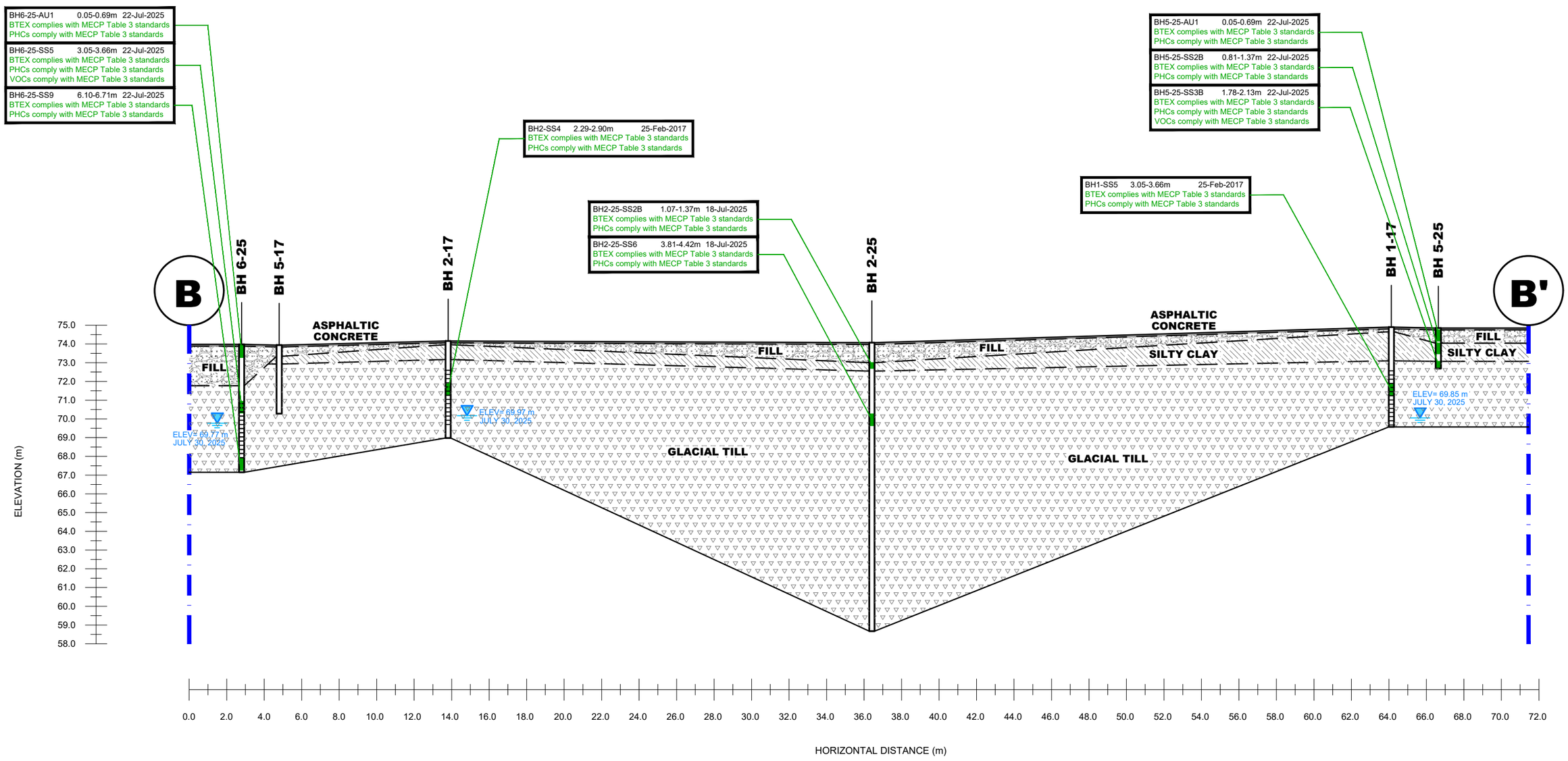

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PHASE II PROPERTY BOUNDARY

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9 AURIGA DRIVE
OTTAWA, ON
K2E 7T9
TEL: (613) 226-7381

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AMBASSADOR REALTY INC.

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
1296 AND 1300 CARLING AVENUE

OTTAWA, ONTARIO

Title: **CROSS SECTION B-B' - SOIL (BTEX, PHCs , VOCs)**

Scale: AS SHOWN	Date: 10/2025
Drawn by: YA	Report No.: PE3966-3
Checked by: JA	Dwg. No.: PE3966-8B
Approved by: MSD	Revision No.:

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11x17

#1309 CARLING AVENUE
COMMERCIAL SHOPPING PLAZA
(WESTGATE SHOPPING CENTRE)

CARLING AVENUE

CARLING AVENUE

SIDEWALK

GRASSED

GRASSED

#1272 CARLING AVENUE
COMMERCIAL
(BEST WESTERN HOTEL)

#848 MERIVALE ROAD
COMMERCIAL
(RETAIL AND RESTAURANTS)

THAMES STREET

BH4-GW1 2.28-5.33m 03-Mar-2017
VOCs comply with MECP Table 3 standards
BTEX complies with MECP Table 3 standards
PHCs comply with MECP Table 3 standards

BH4-17-GW 2.28-5.33m 30-Jul-2025
VOCs comply with MECP Table 3 standards
BTEX complies with MECP Table 3 standards
PHCs comply with MECP Table 3 standards
PCBs comply with MECP Table 3 standards

HYDRAULIC
FREIGHT ELEVATOR

TREE CANOPY

CORRUGATED
METAL FENCE

WOODEN
FENCE

TREE CANOPY

TREE CANOPY

HIGH VOLTAGE LINE

A

B'

POOL

#1296 CARLING AVENUE
3-STOREY COMMERCIAL BUILDING

BH 3-17
74.03

BH 3-25
74.03
(70.41)

BH 5-25
74.85

BH1-GW1 2.28-5.33m 03-Mar-2017
VOCs comply with MECP Table 3 standards
BTEX complies with MECP Table 3 standards
PHCs comply with MECP Table 3 standards

BH 1-17
74.90
(69.85)

HYDRAULIC
ELEVATOR

BH 4-17
73.74
(69.24)

BH 4-25
73.68

JERSEY
BARRIERS

JERSEY
BARRIERS

ASPHALTIC CONCRETE
PARKING LOT

POOL

BH 2-25
74.07

CB

CB

NATURAL GAS
PIPE LINE

DUMPSTER

TREE CANOPY

#1243 THAMES STREET
RESIDENTIAL

#1300 CARLING AVENUE
3-STOREY COMMERCIAL BUILDING

BH 5-17
73.94

BH 6-25
73.98
(69.77)

BH 2-17
74.16
(69.97)

CHAIN-LINK
FENCE

BH 1-25
74.72

B

A'

BELL CONDUCT

#1247 THAMES STREET
RESIDENTIAL

BH2-GW1 1.52-4.57m 03-Mar-2017
BTEX complies with MECP Table 3 standards
PHCs comply with MECP Table 3 standards

BH2-17-GW 1.52-4.57m 30-Jul-2025

Parameter	Result(µg/L)	Standard(µg/L)
Silver	2.2	1.5

VOCs comply with MECP Table 3 standards
BTEX complies with MECP Table 3 standards
PAHs comply with MECP Table 3 standards

BH6-25-GW 3.05-6.10m 30-Jul-2025
VOCs comply with MECP Table 3 standards
BTEX complies with MECP Table 3 standards
PHCs comply with MECP Table 3 standards
PAHs comply with MECP Table 3 standards

#1316 CARLING AVENUE
RESIDENTIAL AND COMMERCIAL
MIXED-USE BUILDING

#1251 THAMES STREET
RESIDENTIAL

LEGEND:

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0 5 10 15 20 25 30m

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NO.	REVISIONS	DATE	INITIAL

AMBASSADOR REALTY INC.

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
1296 AND 1300 CARLING AVENUE

OTTAWA, ONTARIO

Title: ANALYTICAL TESTING PLAN - GROUNDWATER
(METALS (INCLUDING As, Sb, Se), BTEX, PHCs, VOCs, PCBs, PAHs)

Scale: 1:500	Date: 10/2025
Drawn by: YA	Report No.: PE3966-3
Checked by: JA	Dwg. No.: PE3966-9
Approved by: MSD	Revision No.:

11x17

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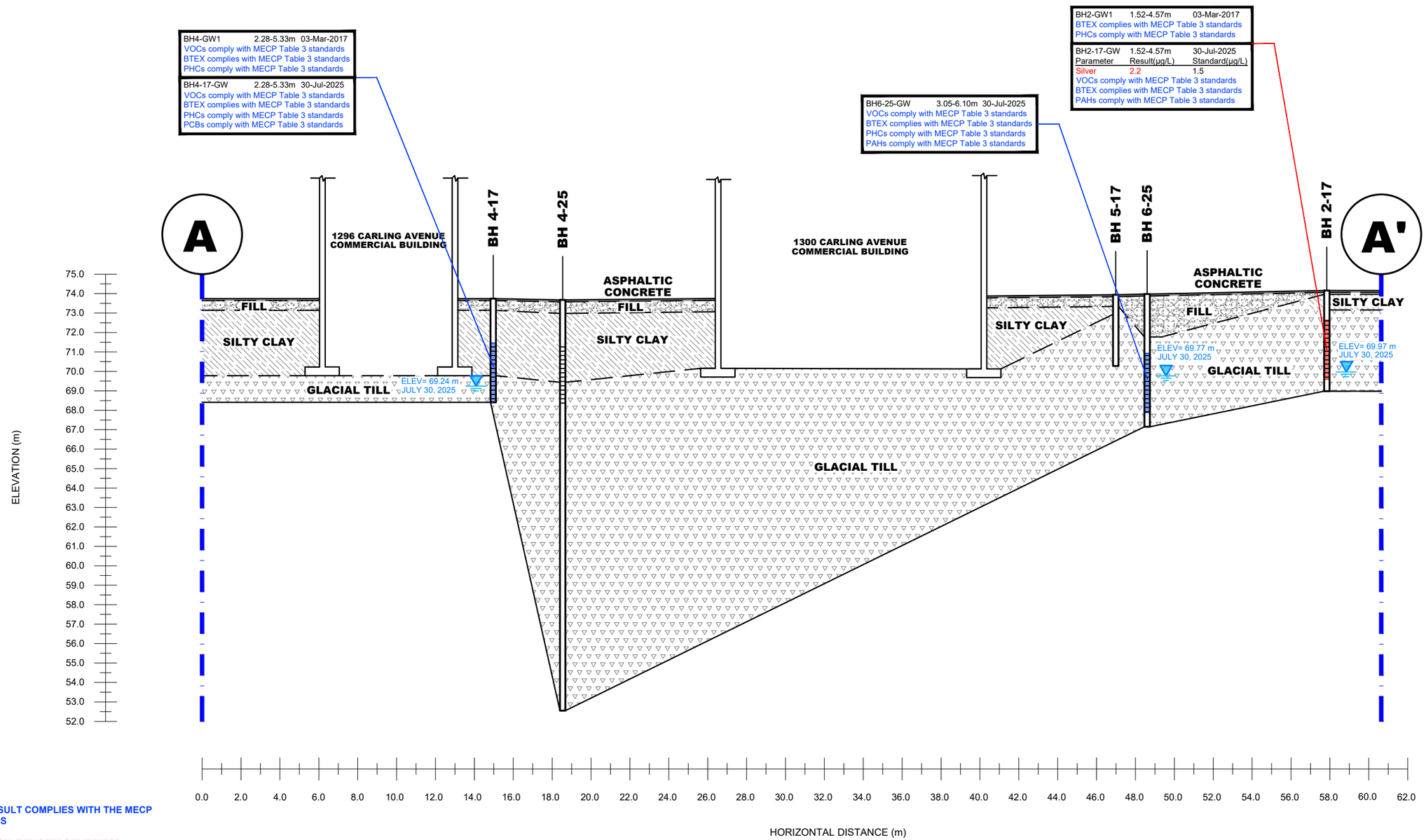

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PHASE II PROPERTY BOUNDARY

PATERSON GROUP
9 AURIGA DRIVE
OTTAWA, ON
K2E 7T9
TEL: (613) 226-7381

NO.	REVISIONS	DATE	INITIAL

AMBASSADOR REALTY INC.

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
1296 AND 1300 CARLING AVENUE

OTTAWA, ONTARIO

Title: **CROSS SECTION A-A' - GROUNDWATER**
(METALS (INCLUDING As, Sb, Se), BTEX, PHCs, VOCs, PCBs, PAHs)

Scale: AS SHOWN	Date: 10/2025
Drawn by: YA	Report No.: PE3966-3
Checked by: JA	Dwg. No.: PE3966-9A
Approved by: MSD	Revision No.:

11x17

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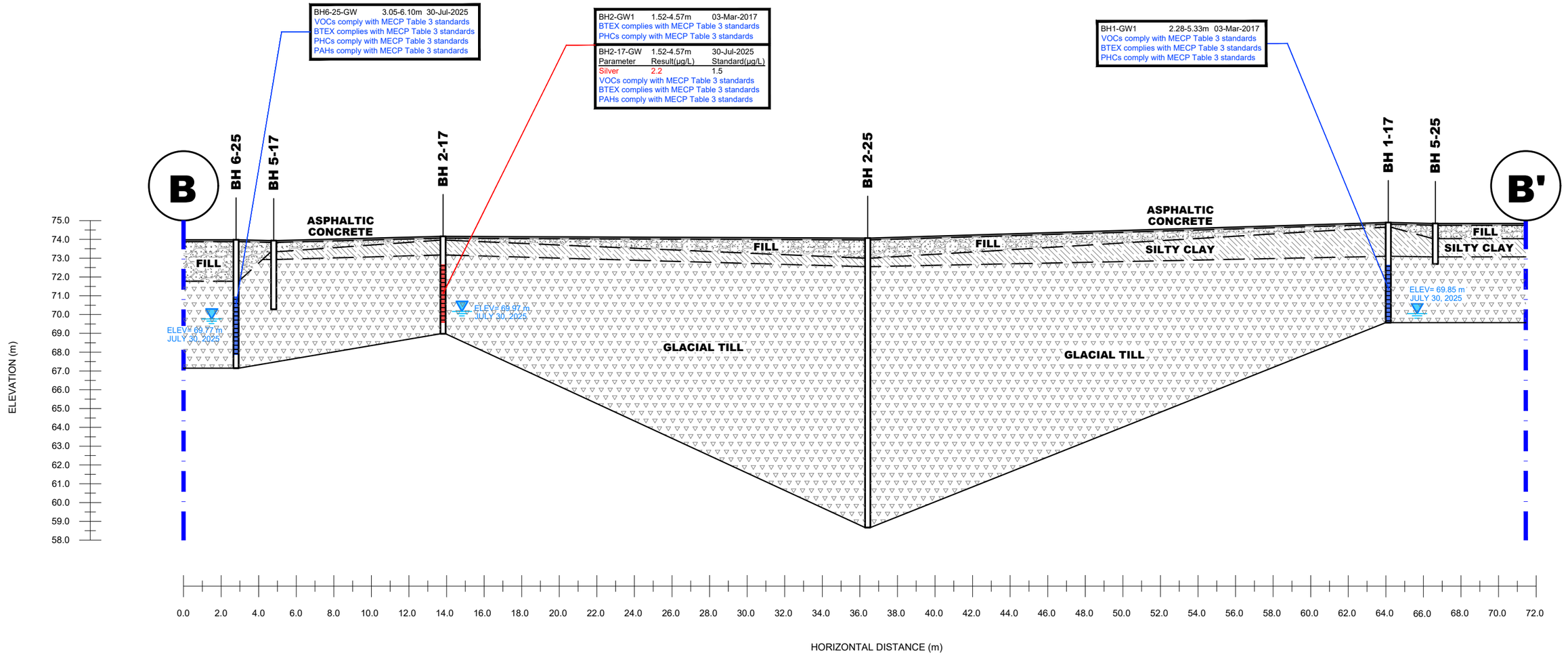

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PHASE II - ENVIRONMENTAL SITE ASSESSMENT
1296 AND 1300 CARLING AVENUE

OTTAWA, ONTARIO

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CROSS SECTION B-B' - GROUNDWATER
(METALS (INCLUDING As, Sb, Se), BTEX, PHCs, VOCs, PCBs, PAHs)

Scale: AS SHOWN	Date: 10/2025
Drawn by: YA	Report No.: PE3966-3
Checked by: JA	Dwg. No.: PE3966-9B
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APPENDIX 1

SAMPLING AND ANALYSIS PLAN

SOIL PROFILE AND TEST DATA SHEETS

SYMBOLS AND TERMS

LABORATORY CERTIFICATES OF ANALYSIS

PATERSON GROUP

Sampling & Analysis Plan

1296 and 1300 Carling Avenue
Ottawa, Ontario

Prepared for Ambassador Realty Inc.

Report: PE3966-3
July 22, 2025

TABLE OF CONTENTS

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1.0 SAMPLING PROGRAM

Paterson Group Inc. (Paterson) was engaged by Ambassador Realty Inc. to conduct a Phase II – Environmental Site Assessment (Phase II ESA) for the property encompassing the municipal addresses 1296 and 1300 Carling Avenue, in the City of Ottawa, Ontario (Phase II Property).

Based on the findings of the Phase I ESA, the following subsurface investigation program was developed.

Borehole	Location & Rationale	Proposed Depth & Rationale
BH1-25	Assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), and excess soil quality for off-site reuse	6 m into overburden; to assess overburden soils.
BH2-25	Assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), and excess soil quality for off-site reuse	6 m into overburden; to assess overburden soils.
BH3-25	Assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), and excess soil quality for off-site reuse	6 m into overburden; to assess overburden soils, and to intercept the groundwater table for the purpose of installing a monitoring well for geotechnical purposes.
BH4-25	Assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former printing and publishing (APEC 14), existing hydraulic elevator (APEC 15), and existing hydraulic freight elevator (APEC 16), and excess soil quality for off-site reuse	6 m into overburden; to assess overburden soils.
BH5-25	Assess fill material of unknown quality (APEC 1) and application of road salt (APEC 2), former off-site automotive service garage (APEC 13), and excess soil quality for off-site reuse	6m into overburden, to assess overburden soils.
BH6-25	Assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former off-site underground storage tank (APEC 4), former off-site soda bottling facility (APEC 5), former off-site automotive service garage (APEC 6), former off-site retail fuel outlets (APECs 7 and 8), former off-site bulk oil depot (APEC 9), former off-site bulk oil and gasoline depot (APEC 10), existing off-site diesel generator and AST (APEC 11), existing off-site pad mounted transformer (APEC 12), and excess soil quality for off-site reuse	6 m into overburden; to assess overburden soils, and to intercept the groundwater table for the purpose of installing a monitoring well.

Borehole locations are shown on Drawing PE3966-4 – Test Hole Location Plan, appended to the main report.

At each borehole, split-spoon samples of the overburden soils will be obtained at 0.76 m (2'6") intervals. All soil samples will be retained, and samples will be selected for submission following a preliminary screening analysis.

Following the borehole drilling, groundwater monitoring wells will be installed in two six of the boreholes as indicated to allow for the collection of groundwater samples, unless contamination is otherwise encountered. All soil samples will be retained, and samples will be selected for submission following a preliminary screening analysis.

2.0 ANALYTICAL TESTING PROGRAM

The analytical testing program for soil at the Phase II Property is based on the following general considerations:

- ❒ At least one sample from each test hole should be submitted, in order to delineate the horizontal extent of contamination across the site.
- ❒ At least one sample from each stratigraphic unit should be submitted, in order to delineate the vertical extent of contamination at the site.
- ❒ In test holes where there is visual or olfactory evidence of contamination, or where organic vapour meter or photoionization detector readings indicate the presence of contamination, the ‘worst-case’ sample from each borehole should be submitted for comparison with MECP site condition standards.
- ❒ In test holes with evidence of contamination as described above, a sample should be submitted from the stratigraphic unit below the ‘worst-case’ sample to determine whether the contaminant(s) have migrated downward.
- ❒ Parameters analyzed should be consistent with the Contaminants of Potential Concern identified in the Phase I ESA.

The analytical testing program for soil at the Phase II Property is based on the following general considerations:

- ❒ Groundwater monitoring wells should be installed in all boreholes with visual or olfactory evidence of soil contamination, in stratigraphic units where soil contamination was encountered, where those stratigraphic units are at or below the water table (i.e. a water sample can be obtained).
- ❒ Groundwater monitoring well screens should straddle the water table at sites where the contaminants of concern are suspected to be LNAPLs.

- ❒ At least one groundwater monitoring well should be installed in a stratigraphic unit below the suspected contamination, where said stratigraphic unit is water-bearing.

- ❒ Parameters analyzed should be consistent with the Contaminants of Concern identified in the Phase I ESA and with the contaminants identified in the soil samples.

3.0 STANDARD OPERATING PROCEDURES

3.1 Environmental Drilling Procedure

Purpose

The purpose of environmental boreholes is to identify and/or delineate contamination within the soil and/or to install groundwater monitoring wells in order to identify contamination within the groundwater.

Equipment

The following is a list of equipment that is in addition to regular drilling equipment stated in the geotechnical drilling SOP:

- ❒ Glass soil sample jars
- ❒ two buckets
- ❒ cleaning brush (toilet brush works well)
- ❒ dish detergent
- ❒ methyl hydrate
- ❒ water (if not available on site - water jugs available in trailer)
- ❒ latex or nitrile gloves (depending on suspected contaminant)
- ❒ RKI Eagle organic vapour meter or MiniRae photoionization detector (depending on contamination suspected)

Determining Borehole Locations

If conditions on site are not as suspected, and planned borehole locations cannot be drilled, **call the office to discuss**. Alternative borehole locations will be determined in conversation with the field technician and supervising engineer.

After drilling is completed, a plan with the borehole locations must be provided. Distances and orientations of boreholes with respect to site features (buildings, roadways, etc.) must be provided. Distances should be measured using a measuring tape or wheel rather than paced off. Ground surface elevations at each

borehole should be surveyed relative to a geodetic benchmark, if one is available, or a temporary site benchmark which can be tied in at a later date if necessary.

Drilling Procedure

The actual drilling procedure for environmental boreholes is the same as geotechnical boreholes (see SOP for drilling and sampling) with a few exceptions as follows:

- ❒ Continuous split spoon samples (every 0.6 m or 2') or semi-continuous (every 0.76 m or 2'6") are required.
- ❒ Make sure samples are well sealed in plastic bags with no holes prior to screening and are kept cool but unfrozen.
- ❒ If sampling for VOCs, BTEX, or PHCs F_1, a soil core from each soil sample, which may be analyzed, must be taken and placed in the laboratory-provided methanol vial.
- ❒ Note all and any odours or discolouration of samples.
- ❒ Split spoon samplers must be washed between samples.
- ❒ If obvious contamination is encountered, continue sampling until vertical extent of contamination is delineated.
- ❒ As a general rule, environmental boreholes should be deep enough to intercept the groundwater table (unless this is impossible/impractical - call project manager to discuss).
- ❒ If at all possible, soil samples should be submitted to a preliminary screening procedure on site, either using a RKI Eagle, PID, etc. depending on type of suspected contamination.

Spoon Washing Procedure

All sampling equipment (spilt spoons, etc.) must be washed between samples in order to prevent cross contamination of soil samples.

- ❒ Obtain two buckets of water (preferably hot if available)
- ❒ Add a small amount of dish soap to one bucket
- ❒ Scrub spoons with brush in soapy water, inside and out, including tip
- ❒ Rinse in clean water
- ❒ Apply a small amount of methyl hydrate to the inside of the spoon. (A spray bottle or water bottle with a small hole in the cap works well)
- ❒ Allow to dry (takes seconds)
- ❒ Rinse with distilled water, a spray bottle works well.

The methyl hydrate eliminates any soap residue that may be on the spoon and is especially important when dealing with suspected VOCs.

Screening Procedure

The RKI Eagle is used to screen most soil samples, particularly where petroleum hydrocarbon contamination is suspected. The MiniRae is used when VOCs are suspected, however it also can be useful for detecting petroleum. These tools are for screening purposes only and cannot be used in place of laboratory testing. Vapour results obtained from the RKI Eagle and the PID are relative and must be interpreted.

Screening equipment should be calibrated on an approximately monthly basis, more frequently if heavily used.

- ❒ Samples should be brought to room temperature; this is specifically important in colder weather. Soil must not be frozen.
- ❒ Turn instrument on and allow to come to zero - calibrate if necessary
- ❒ If using RKI Eagle, ensure instrument is in methane elimination mode unless otherwise directed.
- ❒ Ensure measurement units are ppm (parts per million) initially. RKI Eagle will automatically switch to %LEL (lower explosive limit) if higher concentrations are encountered.
- ❒ Break up large lumps of soil in the sample bag, taking care not to puncture bag.
- ❒ Insert probe into soil bag, creating a seal with your hand around the opening.
- ❒ Gently manipulate soil in bag while observing instrument readings.
- ❒ Record the highest value obtained in the first 15 to 25 seconds
- ❒ Make sure to indicate scale (ppm or LEL); also note which instrument was used (RKI Eagle 1 or 2, or MiniRae).
- ❒ Jar samples and refrigerate as per Sampling and Analysis Plan.

3.2 Monitoring Well Installation Procedure

Equipment

- ❒ 5’ x 2” threaded sections of Schedule 40 PVC slotted well screen (5’ x 1 ¼” if installing in cored hole in bedrock)
- ❒ 5’ x 2” threaded sections of Schedule 40 PVC riser pipe (5’ x 1 ¼” if installing in cored hole in bedrock)
- ❒ Threaded end-cap
- ❒ Slip-cap or J-plug
- ❒ Asphalt cold patch or concrete

- ❒ Silica Sand
- ❒ Bentonite chips (Holeplug)
- ❒ Steel flushmount casing

Procedure

- ❒ Drill borehole to required depth, using drilling and sampling procedures described above.
- ❒ If borehole is deeper than required monitoring well, backfill with bentonite chips to required depth. This should only be done on wells where contamination is not suspected, in order to prevent downward migration of contamination.
- ❒ Only one monitoring well should be installed per borehole.
- ❒ Monitoring wells should not be screened across more than one stratigraphic unit to prevent potential migration of contaminants between units.
- ❒ Where LNAPLs are the suspected contaminants of concern, monitoring wells should be screened straddling the water table in order to capture any free product floating on top of the water table.
- ❒ Thread the end cap onto a section of screen. Thread second section of screen if required. Thread risers onto screen. Lower into borehole to required depth. Ensure slip-cap or J-plug is inserted to prevent backfill materials entering well.
- ❒ As drillers remove augers, backfill borehole annulus with silica sand until the level of sand is approximately 0.3 m above the top of the screen.
- ❒ Backfill with holeplug until at least 0.3 m of holeplug is present above the top of the silica sand.
- ❒ Backfill remainder of borehole with holeplug or with auger cuttings (if contamination is not suspected).
- ❒ Install flushmount casing. Seal space between flushmount and borehole annulus with concrete, cold patch, or holeplug to match surrounding ground surface.

3.3 Monitoring Well Sampling Procedure

Equipment

- ❒ Water level meter or interface probe on hydrocarbon/LNAPL sites
- ❒ Spray bottles containing water and methanol to clean water level tape or interface probe
- ❒ Peristaltic pump
- ❒ Polyethylene tubing for peristaltic pump
- ❒ Flexible tubing for peristaltic pump
- ❒ Latex or nitrile gloves (depending on suspected contaminant)

- ❒ Allen keys and/or 9/16” socket wrench to remove well caps
- ❒ Graduated bucket with volume measurements
- ❒ pH/Temperature/Conductivity combo pen
- ❒ Laboratory-supplied sample bottles

Sampling Procedure

- ❒ Locate well and use socket wrench or Allan key to open metal flush mount protector cap. Remove plastic well cap.
- ❒ Measure water level, with respect to existing ground surface, using water level meter or interface probe. If using interface probe on suspected NAPL site, measure the thickness of free product.
- ❒ Measure total depth of well.
- ❒ Clean water level tape or interface probe using methanol and water. Change gloves between wells.
- ❒ Calculate volume of standing water within well and record.
- ❒ Insert polyethylene tubing into well and attach to peristaltic pump. Turn on peristaltic pump and purge into graduated bucket. Purge at least three well volumes of water from the well. Measure and record field chemistry. Continue to purge, measuring field chemistry after every well volume purged, until appearance or field chemistry stabilizes.
- ❒ Note appearance of purge water, including colour, opacity (clear, cloudy, silty), sheen, presence of LNAPL, and odour. Note any other unusual features (particulate matter, effervescence (bubbling) of dissolved gas, etc.).
- ❒ Fill required sample bottles. If sampling for metals, attach 75-micron filter to discharge tube and filter metals sample. If sampling for VOCs, use low flow rate to ensure continuous stream of non-turbulent flow into sample bottles. Ensure no headspace is present in VOC vials.
- ❒ Replace well cap and flushmount casing cap.

4.0 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

The QA/QC program for this Phase II ESA is as follows:

- ❒ All non-dedicated sampling equipment (split spoons) will be decontaminated according to the SOPs listed above.

- ❒ All groundwater sampling equipment is dedicated (polyethylene and flexible peristaltic tubing is replaced for each well).

- ❒ Where groundwater samples are to be analyzed for VOCs, one laboratory-provided trip blank will be submitted for analysis.

- ❒ Approximately one (1) field duplicate will be submitted for every ten (10) samples submitted for laboratory analysis. A minimum of one (1) field duplicate per project will be submitted. Field duplicates will be submitted for soil and groundwater samples
- ❒ Where combo pens are used to measure field chemistry, they will be calibrated on an approximately monthly basis, according to frequency of use.

5.0 DATA QUALITY OBJECTIVES

The purpose of setting data quality objectives (DQOs) is to ensure that the level of uncertainty in data collected during the Phase II ESA is low enough that decision-making is not affected, and that the overall objectives of the investigation are met.

The quality of data is assessed by comparing field duplicates with original samples. If the relative percent difference (RPD) between the duplicate and the sample is within 20%, the data are considered to be of sufficient quality so as not to affect decision-making. The RPD is calculated as follows:

$$RPD = \left| \frac{x_1 - x_2}{(x_1 + x_2)/2} \right| \times 100\%$$

Where x_1 is the concentration of a given parameter in an original sample and x_2 is the concentration of that same parameter in the field duplicate sample.

For the purpose of calculating the RPD, it is desirable to select field duplicates from samples for which parameters are present in concentrations above laboratory detection limits, i.e. samples which are expected to be contaminated. If parameters are below laboratory detection limits for selected samples or duplicates, the RPD may be calculated using a concentration equal to one half the laboratory detection limit.

It is also important to consider data quality in the overall context of the project. For example, if the DQOs are not met for a given sample, yet the concentrations of contaminants in both the sample and the duplicate exceed the MOE site remediation standards by a large margin, the decision-making usefulness of the sample may not be considered to be impaired. The proximity of other samples which meet the DQOs must also be considered in developing the Phase II Conceptual Site Model; often there are enough data available to produce a reliable Phase II Conceptual Site Model even if DQOs are not met for certain individual samples.

These considerations are discussed in the body of the report.

6.0 PHYSICAL IMPEDIMENTS

Physical impediments to the Sampling and Analysis plan may include:

- ❒ The location of underground utilities
- ❒ Poor recovery of split-spoon soil samples
- ❒ Insufficient groundwater volume for groundwater samples
- ❒ Breakage of sampling containers following sampling or while in transit to the laboratory
- ❒ Elevated detection limits due to matrix interference (generally related to soil colour or presence of organic material)
- ❒ Elevated detection limits due to high concentrations of certain parameters, necessitating dilution of samples in laboratory
- ❒ Equipment breakdowns
- ❒ Winter conditions
- ❒ Other site-specific impediments

Site-specific impediments to the Sampling and Analysis plan are discussed in the body of the Phase II ESA report.

SOIL PROFILE AND TEST DATA

Phase II Environmental Site Assessment

1296 & 1300 Carling Avenue, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 364816.33 **NORTHING:** 5027533.84 **ELEVATION:** 74.72

PROJECT: Proposed Mixed-Use Development

ADVANCED BY: CME-55 Low Clearance Drill

REMARKS:

DATE: July 18, 2025

FILE NO. : PE3966

HOLE NO. : BH 1-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE ANALYTICAL TESTS	GASTECH (ppm) / GASTECH (% LEL) / PID (ppm) / PID (% LEL)	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
ASPHALT 0.03m [74.69m]									
FILL: Brown silty clay, with sand, crushed stone and gravel 1.07m [73.65m]									
Hard to very stiff, brown **SILTY CLAY**, some sand, trace gravel 1.52m [73.20m]									
GLACIAL TILL: Loose to compact, brown silty sand, some gravel, trace cobbles and boulders		1	AU 1				0.1		74
			SS 2	67	3-4-6-5 10		0.0		
		2	SS 3	58	2-6-12-9 18		0.0		73
			SS 4		1-2-3-3 5		0.0		72
3.78m [70.94m]		3	SS 5		3-3-3-50 6		0.0		71
End of Borehole		4							70
Practical refusal to augering at 3.78 m depth		5							69
		6							68
		7							67
		8							66
		9							65
		10							

SOIL PROFILE AND TEST DATA

Phase II Environmental Site Assessment

1296 & 1300 Carling Avenue, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 364818.04 **NORTHING:** 5027559.93 **ELEVATION:** 74.06

PROJECT: Proposed Mixed-Use Development

ADVANCED BY: CME-55 Low Clearance Drill

REMARKS:

DATE: July 18, 2025

FILE NO. : PE3966

HOLE NO. : BH 2-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE ANALYTICAL TESTS	GASTECH (ppm) / GASTECH (% LEL) / PID (ppm) / PID (% LEL)	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE							50 100 150 200 / 20 40 60 80		74
ASPHALT 0.05m [74.02m]			AU 1				0.0		
FILL: Brown silty clay, with sand and crushed stone 0.69m [73.38m]		1	SS 2	79	2-3-8-14 11		0.0		73
Brown **SILTY CLAY**, trace gravel 1.07m [73.00m]							0.0		
Compact, brown **SILTY SAND**, some gravel 1.45m [72.61m]		2	SS 3	37	9-11-11-16 22		0.0		72
GLACIAL TILL: Loose to very dense, grey silty sand, some gravel and clay, trace cobbles and boulders			SS 4	50	3-4-8-6 12		0.0		
		3	SS 5	75	3-4-5-3 9		0.0		71
		4	SS 6	58	3-6-9-6 15		0.1		70
		5	SS 7	67	7-20-11-50 31		0.0		69
			RC 1	82					
		6	SS 8	54	3-3-2-4 5		0.2		68
		7	SS 9	67	0-4-2-1 6		0.2		67
			SS 10	37	1-3-3-2 6		0.2		
		8	SS 11	50	1-1-3-4 4		0.2		66
		9	SS 12	37	9-4-5-5 9		0.1		65
			SS 13	50	21-14-9-14 23		0.2		
		10	RC 2						

SOIL PROFILE AND TEST DATA

Phase II Environmental Site Assessment

1296 & 1300 Carling Avenue, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 364818.04 **NORTHING:** 5027559.93 **ELEVATION:** 74.06

PROJECT: Proposed Mixed-Use Development

ADVANCED BY: CME-55 Low Clearance Drill

REMARKS:

DATE: July 18, 2025

FILE NO. : PE3966

HOLE NO. : BH 2-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE ANALYTICAL TESTS	GASTECH (ppm) / GASTECH (% LEL) / PID (ppm) / PID (% LEL)	PIEZOMETER CONSTRUCTION	ELEVATION (m)
		10	RC 2	100					64
		11	RC 3	17					63
		12	SS 14	47	20-9-11-12 20		▲ 0.2		62
		13							61
		14	RC 4	7					60
15.39m [58.67m]		15	SS 15	100	17-30-50-/ 80/0.18		▲ 0.3		59
End of Borehole		16							58
		17							57
		18							56
		19							55
		20							

GASTECH (ppm) / GASTECH (% LEL): 50 100 150 200

PID (ppm) / PID (% LEL): 20 40 60 80

SOIL PROFILE AND TEST DATA

Phase II Environmental Site Assessment

1296 & 1300 Carling Avenue, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 364814.84 **NORTHING:** 5027587.32 **ELEVATION:** 74.03

PROJECT: Proposed Mixed-Use Development

ADVANCED BY: CME-55 Low Clearance Drill

REMARKS:

DATE: July 18, 2025

FILE NO. : PE3966

HOLE NO. : BH 3-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE ANALYTICAL TESTS	GASTECH (ppm) / GASTECH (% LEL) / PID (ppm) / PID (% LEL)	MONITORING WELL CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
ASPHALT 0.05m [73.98m]									
FILL: Brown silty sand 0.91m [73.12m]			AU 1		3-5-5-6 10		0.0		
Stiff, brown **SILTY CLAY** 2.21m [71.82m]		1	SS 2	71	3-5-5-6 10		0.1		73
		2	SS 3	83	5-3-3-3 6		0.0		72
Stiff, brown **CLAYEY SILT**, some sand, trace gravel 3.12m [70.91m]			SS 4	92	P		0.0	2.24m	
		3					0.0		71
GLACIAL TILL: Loose to very dense, grey silty sand, some clay and gravel, trace cobbles and boulders 5.28m [68.75m]			SS 5	79	1-2-2-8 4		0.0	3.62 m – 2025-07-30	
		4	SS 6	25	0-2-3-2 5		0.0		70
		5	SS 7	4	18-20-22-21 42		0.0	5.28m	69
End of Borehole									
(GWL at 3.62 m depth - July 30, 2025)		6							68
		7							67
		8							66
		9							65
		10							

SOIL PROFILE AND TEST DATA

Phase II Environmental Site Assessment

1296 & 1300 Carling Avenue, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 364789.31 **NORTHING:** 5027601.71 **ELEVATION:** 73.68

PROJECT: Proposed Mixed-Use Development

ADVANCED BY: CME-55 Low Clearance Drill

REMARKS:

DATE: July 18, 2025

FILE NO. : PE3966

HOLE NO. : BH 4-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE ANALYTICAL TESTS	GASTECH (ppm) / GASTECH (% LEL) / PID (ppm) / PID (% LEL)	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
ASPHALT 0.05m [73.63m]			AU 1				0.0		73
FILL: Brown silty sand, some clay and crushed stone 0.69m [72.99m]									
Very stiff to firm, brown **SILTY CLAY**		1	SS 2	83	2-3-5-5 8		0.0		
		2	SS 3	75	P		0.1		72
			SS 4	83	P		0.1		
3.35m [70.33m]		3	SS 5	100	0-1-1-1 2		0.0		71
Firm, grey **SILTY CLAY**, trace to some sand and gravel			SS 6	33	1-50-/-/ 50/0.13		0.0		
4.24m [69.44m]		4	RC 1	62			0.0		70
GLACIAL TILL: Loose to very dense, grey silty sand, with gravel, trace clay, cobbles and boulders		5	RC 2	20					69
		6	SS 7	42	5-8-5-4 13		0.0		68
		7	SS 8	37	10-5-3-3 8		0.0		67
			SS 9	42	12-11-6-4 17		0.1		
		8	SS 10	12	5-3-4-3 7		0.2		66
		9	SS 11	46	4-7-14-5 21		0.3		65
		10	SS 12						64

SOIL PROFILE AND TEST DATA

Phase II Environmental Site Assessment

1296 & 1300 Carling Avenue, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 364789.31 **NORTHING:** 5027601.71 **ELEVATION:** 73.68

PROJECT: Proposed Mixed-Use Development

ADVANCED BY: CME-55 Low Clearance Drill

REMARKS:

DATE: July 18, 2025

FILE NO. : PE3966

HOLE NO. : BH 4-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE ANALYTICAL TESTS	GASTECH (ppm) / GASTECH (% LEL) 50 100 150 200 / PID (ppm) / PID (% LEL) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
		10	SS 12	4	10-10-7-10 17		0.1		63
		11	SS 13	12	17-12-6-20 18		0.3		62
			SS 14	8	50-/-/-/		0.0		
			RC 3	51	50/0.05				
		12	SS 15	25	7-9-12-11 21		0.2		61
		13	SS 16	33	17-15-20-9 35		0.2		60
			SS 17	58	42-18-21-30 39		0.2		
		14	SS 18	54	3-18-24-27 42		0.1		59
		15	SS 19	86	36-30-40-50 70		0.1		58
		16							57
		17							56
		18	RC 4	27					55
		19	RC 5	24					54
		20	RC 6						

SOIL PROFILE AND TEST DATA

Phase II Environmental Site Assessment

1296 & 1300 Carling Avenue, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 364789.31 **NORTHING:** 5027601.71 **ELEVATION:** 73.68

PROJECT: Proposed Mixed-Use Development

ADVANCED BY: CME-55 Low Clearance Drill

REMARKS:

DATE: July 18, 2025

FILE NO. : PE3966

HOLE NO. : BH 4-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE ANALYTICAL TESTS	GASTECH (ppm) / GASTECH (% LEL) 50 100 150 200 / PID (ppm) / PID (% LEL) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
21.13m [52.55m]		20	RC 6	12					53
		21							
End of Borehole		22							52
		23							51
		24							50
		25							49
		26							48
		27							47
		28							46
		29							45
		30							44

SOIL PROFILE AND TEST DATA

Phase II Environmental Site Assessment

1296 & 1300 Carling Avenue, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 364845.87 **NORTHING:** 5027547.94 **ELEVATION:** 74.85

PROJECT: Proposed Mixed-Use Development

ADVANCED BY: CME-55 Low Clearance Drill

REMARKS:

DATE: July 22, 2025

FILE NO. : PE3966

HOLE NO. : BH 5-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE ANALYTICAL TESTS	GASTECH (ppm) / GASTECH (% LEL) / PID (ppm) / PID (% LEL)	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
ASPHALT 0.05m [74.80m]									
FILL: Brown silty clay, some sand and crushed stone 0.81m [74.04m]									
Very stiff, brown **SILTY CLAY**		1	AU 1				0.2		74
			SS 2	87	3-5-8-6		0.3		
1.78m [73.07m]					13		0.3		
GLACIAL TILL: Loose, brown silty sand, with gravel, some clay, trace cobbles and boulders		2	SS 3	96	P		0.4		73
2.16m [72.69m]							0.5		
End of Borehole		3							72
Practical refusal to augering at 2.16 m depth		4							71
		5							70
		6							69
		7							68
		8							67
		9							66
		10							65

SOIL PROFILE AND TEST DATA

Phase II Environmental Site Assessment

1296 & 1300 Carling Avenue, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 364786.53 **NORTHING:** 5027571.42 **ELEVATION:** 73.98

PROJECT: Proposed Mixed-Use Development

ADVANCED BY: CME-55 Low Clearance Drill

REMARKS:

DATE: July 22, 2025

FILE NO. : PE3966

HOLE NO. : BH 6-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	SAMPLE ANALYTICAL TESTS	GASTECH (ppm) / GASTECH (% LEL) / PID (ppm) / PID (% LEL)	MONITORING WELL CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
ASPHALT 0.05m [73.93m]									
FILL: Brown silty clay, with sand, some crushed stone 0.69m [73.29m]									
FILL: Brown silty sand, some clay and gravel 2.21m [71.77m]		1	AU 1				0.3		73
			SS 2	21	3-4-7-6 11		0.2		
		2	SS 3	46	6-8-6-5 14		0.3		72
GLACIAL TILL Loose to compact, grey silty sand, some gravel, trace clay, cobbles, and boulders			SS 4	62	2-3-3-5 6		0.3		
		3	SS 5	54	1-3-3-4 6		0.3	3.05m	71
		4	SS 6	50	3-6-8-7 14		0.3	4.21 m 2025-07-30	70
		5	SS 7	17	6-6-6-5 12		0.2		69
			SS 8	71	2-5-3-6 8		0.3		
6.83m [67.15m]		6	SS 9	67	4-5-5-7 10		0.4	6.10m	68
End of Borehole		7							67
Practical refusal to augering at 6.83 m depth		8							66
(GWL at 4.21 m depth - July 30, 2025)		9							65
		10							64

patersongroup Consulting Engineers

154 Colonnade Road South, Ottawa, Ontario K2E 7J5

SOIL PROFILE AND TEST DATA

Phsae II - Environmental Site Assessment
1296 and 1300 Carling Avenue
Ottawa, Ontario

DATUM TBM - Top spindle of fire hydrant located near the northwest corner of 1296 Carling Avenue. Assumed elevation = 100.00m.

FILE NO. PE3966

REMARKS

HOLE NO. BH 1

BORINGS BY CME 55 Power Auger **DATE** February 25, 2017

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	100.15
Asphaltic concrete 0.05							
FILL: Crushed stone 0.25		AU	1				
Very stiff, brown **SILTY CLAY,** trace sand seams		SS	2	100	6	1	99.15
1.80		SS	3	88	8	2	98.15
Loose, brown **SILTY SAND-GRAVEL,** trace clay		SS	4	0	7		
- compact to dense and grey by 2.7m depth						3	97.15
		SS	5	17	12		
		SS	6	75	17	4	96.15
		SS	7	64	50+		
- occasional boulders by 4.9m depth						5	95.15
5.33							
End of Borehole							
(GWL @ 1.79m - March 3, 2017)							

Photo Ionization Detector
● Volatile Organic Rdg. (ppm)

○ **Lower Explosive Limit %**

20 40 60 80

100 200 300 400 500

RKI Eagle Rdg. (ppm)

▲ Full Gas Resp. △ Methane Elim.

Monitoring Well Construction

patersongroup Consulting Engineers

154 Colonnade Road South, Ottawa, Ontario K2E 7J5

SOIL PROFILE AND TEST DATA

Phsae II - Environmental Site Assessment
1296 and 1300 Carling Avenue
Ottawa, Ontario

DATUM TBM - Top spindle of fire hydrant located near the northwest corner of 1296 Carling Avenue. Assumed elevation = 100.00m.

FILE NO. PE3966

REMARKS

HOLE NO. BH 2

BORINGS BY CME 55 Power Auger **DATE** February 25, 2017

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	99.41
Asphaltic concrete 0.05							
FILL: Crushed stone with sand and clay 0.20		AU	1				
Very stiff, brown **SILTY CLAY**							
0.99		SS	2	92	10	1	98.41
		SS	3	75	10	2	97.41
Loose to compact, brown **SILTY SAND-GRAVEL,** some clay, occasional cobbles							
- grey by 2.3m depth		SS	4	71	9	3	96.41
		SS	5	75	8		
		SS	6	83	21	4	95.41
		SS	7	62	12	5	94.41
5.18							
End of Borehole							
(GWL @ 1.09m - March 3, 2017)							

Photo Ionization Detector
● Volatile Organic Rdg. (ppm)

○ **Lower Explosive Limit %**

20 40 60 80

100 200 300 400 500

RKI Eagle Rdg. (ppm)

▲ Full Gas Resp. △ Methane Elim.

Monitoring Well Construction

patersongroup Consulting Engineers

154 Colonnade Road South, Ottawa, Ontario K2E 7J5

SOIL PROFILE AND TEST DATA

Phsae II - Environmental Site Assessment
1296 and 1300 Carling Avenue
Ottawa, Ontario

DATUM TBM - Top spindle of fire hydrant located near the northwest corner of 1296 Carling Avenue. Assumed elevation = 100.00m.

FILE NO. PE3966

REMARKS

HOLE NO. BH 3

BORINGS BY CME 55 Power Auger **DATE** February 25, 2017

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)	Photo Ionization Detector: Volatile Organic Rdg. (ppm) / Lower Explosive Limit %	Monitoring Well Construction
GROUND SURFACE									
Asphaltic concrete 0.05						0	99.28		
FILL: Crushed stone with sand and clay 0.25		AU	1						
		SS	2	100	8	1	98.28		
Very stiff to stiff, brown **SILTY CLAY,** trace sand seams		SS	3	100	5	2	97.28		
		SS	4	100	2				
3.00						3	96.28		
Firm, grey **CLAYEY SILT,** some sand and gravel		SS	5	96	2				
3.66									
End of Borehole									

Photo Ionization Detector: ● Volatile Organic Rdg. (ppm); ○ Lower Explosive Limit %

20 40 60 80

100 200 300 400 500

RKI Eagle Rdg. (ppm)

▲ Full Gas Resp. △ Methane Elim.

patersongroup Consulting Engineers

154 Colonnade Road South, Ottawa, Ontario K2E 7J5

SOIL PROFILE AND TEST DATA

Phsae II - Environmental Site Assessment
1296 and 1300 Carling Avenue
Ottawa, Ontario

DATUM TBM - Top spindle of fire hydrant located near the northwest corner of 1296 Carling Avenue. Assumed elevation = 100.00m.

FILE NO. PE3966

REMARKS

HOLE NO. BH 4

BORINGS BY CME 55 Power Auger **DATE** February 25, 2017

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE							
Asphaltic concrete 0.05						0	98.99
FILL: Crushed stone with silt and sand 0.60		AU	1				
		SS	2	67	7	1	97.99
Very stiff to firm, brown **SILTY CLAY,** trace sand seams		SS	3	100	4	2	96.99
		SS	4	100	2		
		SS	5	100	2	3	95.99
3.96							
- grey by 4.0m depth		SS	6	71	6	4	94.99
Loose to dense, grey **SILTY SAND-GRAVEL** with clay, occasional cobbles and boulders		SS	7	21	50	5	93.99
5.33							
End of Borehole							
(GWL @ 3.72m - March 3, 2017)							

Photo Ionization Detector

● Volatile Organic Rdg. (ppm)

○ **Lower Explosive Limit %**

20 40 60 80

100 200 300 400 500

RKI Eagle Rdg. (ppm)

▲ Full Gas Resp. △ Methane Elim.

Monitoring Well Construction

patersongroup Consulting Engineers

154 Colonnade Road South, Ottawa, Ontario K2E 7J5

SOIL PROFILE AND TEST DATA

Phsae II - Environmental Site Assessment
1296 and 1300 Carling Avenue
Ottawa, Ontario

DATUM TBM - Top spindle of fire hydrant located near the northwest corner of 1296 Carling Avenue. Assumed elevation = 100.00m.

FILE NO. **PE3966**

REMARKS

HOLE NO. **BH 5**

BORINGS BY CME 55 Power Auger **DATE** February 25, 2017

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)	Photo Ionization Detector: Volatile Organic Rdg. (ppm) / Lower Explosive Limit %	Monitoring Well Construction
GROUND SURFACE									
Asphaltic concrete 0.05						0	99.19		
FILL: Crushed stone with silt and sand 0.25		AU	1						
TOPSOIL 0.60									
Very stiff, brown **SILTY CLAY**									
1.01		SS	2	96	12	1	98.19		
		SS	3	67	11	2	97.19		
Loose, brown **SILTY SAND-GRAVEL,** some clay									
- grey by 2.3m depth		SS	4	62	7	3	96.19		
		SS	5	50	6				
3.66									
End of Borehole									

Photo Ionization Detector: ● Volatile Organic Rdg. (ppm); ○ Lower Explosive Limit %

20 40 60 80

100 200 300 400 500

RKI Eagle Rdg. (ppm)

▲ Full Gas Resp. △ Methane Elim.

SYMBOLS AND TERMS

SOIL DESCRIPTION

Behavioural properties, such as structure and strength, take precedence over particle gradation in describing soils. Terminology describing soil structure are as follows:

Desiccated	-	having visible signs of weathering by oxidation of clay minerals, shrinkage cracks, etc.
Fissured	-	having cracks, and hence a blocky structure.
Varved	-	composed of regular alternating layers of silt and clay.
Stratified	-	composed of alternating layers of different soil types, e.g. silt and sand or silt and clay.
Well-Graded	-	Having wide range in grain sizes and substantial amounts of all intermediate particle sizes (see Grain Size Distribution).
Uniformly-Graded	-	Predominantly of one grain size (see Grain Size Distribution).

The standard terminology to describe the relative strength of cohesionless soils is the compactness condition, usually inferred from the results of the Standard Penetration Test (SPT) 'N' value. The SPT N value is the number of blows of a 63.5 kg hammer, falling 760 mm, required to drive a 51 mm O.D. split spoon sampler 300 mm into the soil after an initial penetration of 150 mm. An SPT N value of "P" denotes that the split-spoon sampler was pushed 300 mm into the soil without the use of a falling hammer.

Compactness Condition	'N' Value	Relative Density %
Very Loose	<4	<15
Loose	4-10	15-35
Compact	10-30	35-65
Dense	30-50	65-85
Very Dense	>50	>85

The standard terminology to describe the strength of cohesive soils is the consistency, which is based on the undisturbed undrained shear strength as measured by the in situ or laboratory shear vane tests, unconfined compression tests, or occasionally by the Standard Penetration Test (SPT). Note that the typical correlations of undrained shear strength to SPT N value (tabulated below) tend to underestimate the consistency for sensitive silty clays, so Paterson reviews the applicable split spoon samples in the laboratory to provide a more representative consistency value based on tactile examination.

Consistency	Undrained Shear Strength (kPa)	'N' Value
Very Soft	<12	<2
Soft	12-25	2-4
Firm	25-50	4-8
Stiff	50-100	8-15
Very Stiff	100-200	15-30
Hard	>200	>30

SYMBOLS AND TERMS (continued)

SOIL DESCRIPTION (continued)

Cohesive soils can also be classified according to their "sensitivity". The sensitivity, S_t, is the ratio between the undisturbed undrained shear strength and the remoulded undrained shear strength of the soil. The classes of sensitivity may be defined as follows:

Low Sensitivity:	$S_t < 2$
Medium Sensitivity:	$2 < S_t < 4$
Sensitive:	$4 < S_t < 8$
Extra Sensitive:	$8 < S_t < 16$
Quick Clay:	$S_t > 16$

ROCK DESCRIPTION

The structural description of the bedrock mass is based on the Rock Quality Designation (RQD).

The RQD classification is based on a modified core recovery percentage in which all pieces of sound core over 100 mm long are counted as recovery. The smaller pieces are considered to be a result of closely-spaced discontinuities (resulting from shearing, jointing, faulting, or weathering) in the rock mass and are not counted. RQD is ideally determined from NQ or larger size core. However, it can be used on smaller core sizes, such as BQ, if the bulk of the fractures caused by drilling stresses (called "mechanical breaks") are easily distinguishable from the normal in situ fractures.

RQD %	**ROCK QUALITY**
90-100	Excellent, intact, very sound
75-90	Good, massive, moderately jointed or sound
50-75	Fair, blocky and seamy, fractured
25-50	Poor, shattered and very seamy or blocky, severely fractured
0-25	Very poor, crushed, very severely fractured

SAMPLE TYPES

SS	-	Split spoon sample (obtained in conjunction with the performing of the Standard Penetration Test (SPT))
TW	-	Thin wall tube or Shelby tube, generally recovered using a piston sampler
G	-	"Grab" sample from test pit or surface materials
AU	-	Auger sample or bulk sample
WS	-	Wash sample
RC	-	Rock core sample (Core bit size BQ, NQ, HQ, etc.). Rock core samples are obtained with the use of standard diamond drilling bits.

SYMBOLS AND TERMS (continued)

PLASTICITY LIMITS AND GRAIN SIZE DISTRIBUTION

WC%	-	Natural water content or water content of sample, %
LL	-	Liquid Limit, % (water content above which soil behaves as a liquid)
PL	-	Plastic Limit, % (water content above which soil behaves plastically)
PI	-	Plasticity Index, % (difference between LL and PL)
Dxx	-	Grain size at which xx% of the soil, by weight, is of finer grain sizes These grain size descriptions are not used below 0.075 mm grain size
D10	-	Grain size at which 10% of the soil is finer (effective grain size)
D60	-	Grain size at which 60% of the soil is finer
Cc	-	Concavity coefficient = $(D30)^2 / (D10 \times D60)$
Cu	-	Uniformity coefficient = D60 / D10

Cc and Cu are used to assess the grading of sands and gravels:
Well-graded gravels have: $1 < Cc < 3$ and $Cu > 4$
Well-graded sands have: $1 < Cc < 3$ and $Cu > 6$
Sands and gravels not meeting the above requirements are poorly-graded or uniformly-graded.
Cc and Cu are not applicable for the description of soils with more than 10% silt and clay (more than 10% finer than 0.075 mm or the #200 sieve)

CONSOLIDATION TEST

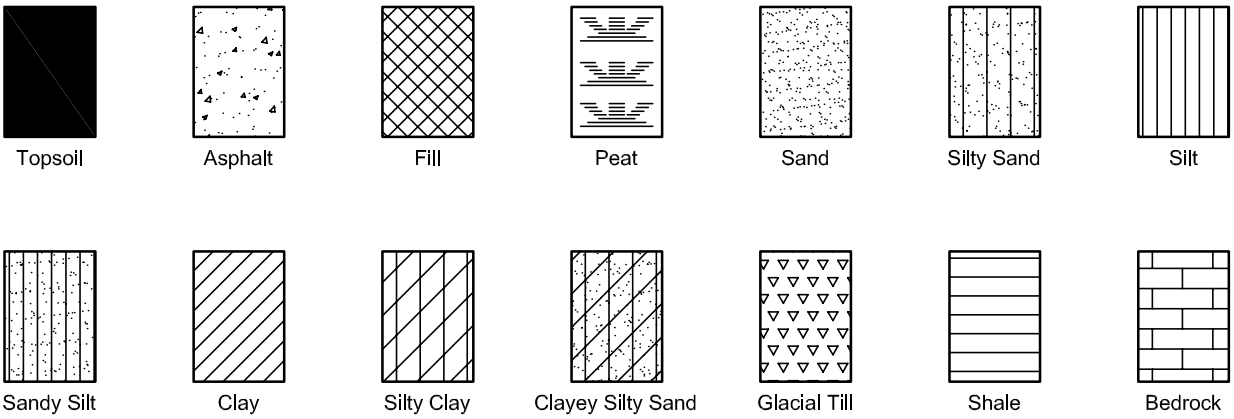
p'_o	-	Present effective overburden pressure at sample depth
p'_c	-	Preconsolidation pressure of (maximum past pressure on) sample
Ccr	-	Recompression index (in effect at pressures below p'_c)
Cc	-	Compression index (in effect at pressures above p'_c)
OC Ratio		Overconsolidaton ratio = p'_c / p'_o
Void Ratio		Initial sample void ratio = volume of voids / volume of solids
Wo	-	Initial water content (at start of consolidation test)

PERMEABILITY TEST

k	-	Coefficient of permeability or hydraulic conductivity is a measure of the ability of water to flow through the sample. The value of k is measured at a specified unit weight for (remoulded) cohesionless soil samples, because its value will vary with the unit weight or density of the sample during the test.

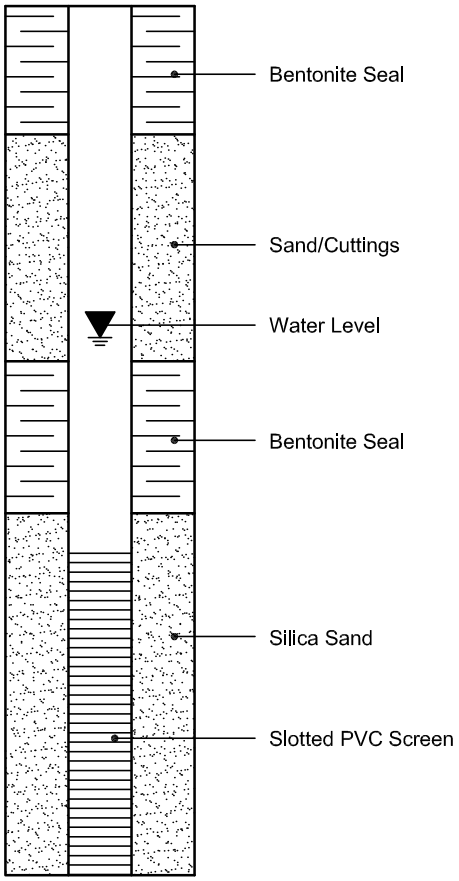
SYMBOLS AND TERMS (continued)

STRATA PLOT



MONITORING WELL AND PIEZOMETER CONSTRUCTION

MONITORING WELL CONSTRUCTION



PIEZOMETER CONSTRUCTION

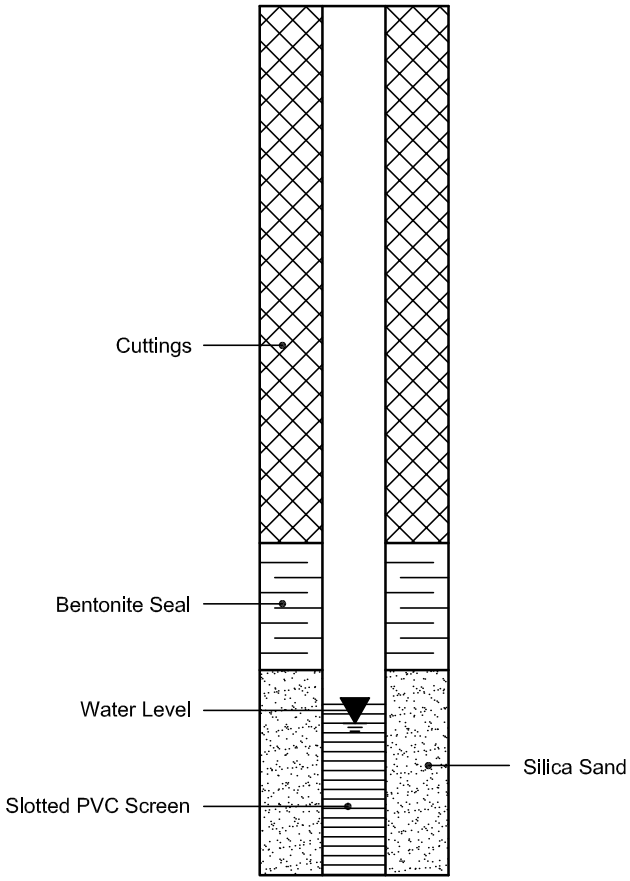


Table 1: Test Hole Summary Details

Test Hole ID	Date of Construction	Well Diameter (mm)	Ground Surface Elevation (masl)	Test Hole Depth (m)	Test Hole Bottom Elevation (masl)	Well Screen Length (m)	Well Screen Interval (mbgs)	Well Screen Interval (masl)	Geologic Media Intercepted by Well Screen
BH1-17	25-Feb-2017	50	74.90	5.33	69.57	3.05	2.28 - 5.33	72.62 - 69.57	Silty Sand
BH2-17	25-Feb-2017	50	74.16	5.18	68.98	3.05	1.52 - 4.57	72.64 - 69.59	Silty Sand
BH3-17	25-Feb-2017	-	74.03	3.66	70.37	-	-	-	-
BH4-17	25-Feb-2017	50	73.74	5.33	68.41	3.05	2.28 - 5.33	71.46 - 68.41	Silty Clay to Silty Sand
BH5-17	25-Feb-2017	-	73.94	3.66	70.28	-	-	-	-
BH1-25	18-Jul-2025	-	74.72	3.78	70.94	-	-	-	-
BH2-25	18-Jul-2025	-	74.07	15.39	58.68	-	-	-	-
BH3-25	18-Jul-2025	50	74.03	5.28	68.75	3.05	2.23 - 5.28	71.8 - 68.75	Clayey Silt to Silty Sand
BH4-25	18-Jul-2025	-	73.68	21.13	52.55	-	-	-	-
BH5-25	22-Jul-2025	-	74.85	2.16	72.69	-	-	-	-
BH6-25	22-Jul-2025	50	73.98	6.83	67.15	3.05	3.05 - 6.1	70.93 - 67.88	Silty Sand

Table 2: Soil Testing Summary

Sample ID and Laboratory ID	Sample Depth (mbgs)	Sampling Date	Rationale	PID Vapour Reading (ppm)	Parameter Groups Analyzed									
					PHCs	BTEX	VOCs	PAHs	PCBs	Metals	Hg	Cr^{VI}	EC	SAR
BH1-SS5 1709090-01	3.05 - 3.66	25-Feb-2017	Assess former off-site automotive service garage (APEC 8)	10 (Gastech)	✓	✓								
BH2-SS4 1709090-02	2.29 - 2.90	25-Feb-2017	Assess former off-site underground storage tank (APEC 4) and off-site soda bottling facility (APEC 5)	10 (Gastech)	✓	✓								
BH4-SS4 1709090-03	2.29 - 2.90	25-Feb-2017	Assess former printing and publishing (APEC 9), existing hydraulic elevator (APEC 10), existing hydraulic freight elevator (APEC 11)	10 (Gastech)	✓	✓								
BH1-25-SS2A 2530089-01	0.76 - 1.07	18-Jul-2025	Assess fill material of unknown quality (APEC 1), and preliminary excess soil testing	0.0	✓	✓		✓		✓	✓	✓	✓	✓
BH1-25-SS3 2530089-02	1.52 - 2.13	18-Jul-2025	Preliminary excess soil testing	0.0	✓	✓				✓			✓	✓
BH2-25-SS2B 2530089-03	1.07 - 1.37	18-Jul-2025	Preliminary excess soil testing	0.0	✓	✓				✓			✓	✓
BH2-25-SS6 2530089-04	3.81 - 4.42	18-Jul-2025	Preliminary excess soil testing	0.1	✓	✓				✓			✓	✓
BH3-25-SS3 2530089-05	1.52 - 2.13	18-Jul-2025	Preliminary excess soil testing	0.0	✓	✓				✓			✓	✓
BH3-25-SS5B 2530089-06	3.12 - 3.66	18-Jul-2025	Preliminary excess soil testing	0.0	✓	✓				✓			✓	✓
BH4-25-AU1 2530089-07	0.05 - 0.69	18-Jul-2025	Assess fill material of unknown quality (APEC 1), and preliminary excess soil testing	0.0	✓	✓		✓		✓	✓	✓	✓	✓
BH4-25-SS4 2530089-08	2.29 - 2.90	18-Jul-2025	Assess former interior oil transformer and circuit breaker (APEC 3), former printing and publishing (APEC 9), existing hydraulic elevator (APEC 10), existing hydraulic freight elevator (APEC 11), and preliminary excess soil testing	0.1	✓	✓				✓			✓	✓
BH4-25-SS5B 2530089-09	3.35 - 3.66	18-Jul-2025	Assess former interior oil transformer and circuit breaker (APEC 3), former printing and publishing (APEC 9), existing hydraulic elevator (APEC 10), existing hydraulic freight elevator (APEC 11), and preliminary excess soil testing	0.0	✓	✓	✓	✓	✓	✓			✓	✓
DUP1 (DUP of BH3-25-SS3) 2530089-10	1.52 - 2.13	18-Jul-2025	QA/QC purposes	0.0	✓	✓				✓			✓	✓
BH4-25-SS9 2530308-01	7.42 - 8.03	21-Jul-2025	Assess former printing and publishing (APEC 9), existing hydraulic elevator (APEC 10), existing hydraulic freight elevator (APEC 11), and preliminary excess soil testing	0.1	✓	✓				✓			✓	✓
BH5-25-AU1 2530308-02	0.05 - 0.69	22-Jul-2025	Assess fill material of unknown quality (APEC 1), and preliminary excess soil testing	0.2	✓	✓		✓		✓	✓	✓	✓	✓
BH5-25-SS2B 2530308-03	0.81 - 1.37	22-Jul-2025	Preliminary excess soil testing	0.3	✓	✓				✓			✓	✓
BH5-25-SS3B 2530308-04	1.78 - 2.13	22-Jul-2025	Assess former off-site automotive service garage (APEC 8), and preliminary excess soil testing	0.5	✓	✓	✓	✓		✓			✓	✓
BH6-25-AU1 2530308-05	0.05 - 0.69	22-Jul-2025	Assess fill material of unknown quality (APEC 1), existing off-site diesel generator and AST (APEC 6), existing off-site pad mounted transformer (APEC 7), and preliminary excess soil testing	0.3	✓	✓		✓		✓	✓	✓	✓	✓
BH6-25-SS5 2530308-06	3.05 - 3.66	22-Jul-2025	Assess former off-site underground storage tank (APEC 4), former off-site soda bottling facility (APEC 5), existing off-site diesel generator and AST (APEC 6), existing off-site pad mounted transformer (APEC 7), and preliminary excess soil testing	0.3	✓	✓	✓	✓	✓	✓			✓	✓
BH6-25-SS9 2530308-07	6.10 - 6.71	22-Jul-2025	Preliminary excess soil testing	0.4	✓	✓				✓			✓	✓
DUP2 (DUP of BH5-25-SS2B) 2530308-08	0.81 - 1.37	22-Jul-2025	QA/QC purposes	0.3	✓	✓				✓			✓	✓

Table 3: Groundwater Testing Summary

Sample ID and Laboratory ID	Sample Depth (mbgs)	Sampling Date	Rationale	Parameter Groups Analyzed					
				PHCs	BTEX	VOCs	PAHs	PCBs	Metals
BH1-GW1 1709437-01	2.28 - 5.33	3-Mar-2017	Assess former off-site automotive service garage (APEC 8)	✓	✓	✓			
BH2-GW1 1709437-02	1.52 - 4.57	3-Mar-2017	Assess former off-site underground storage tank (APEC 4), and former off-site soda bottling facility (APEC 5)	✓	✓				
BH4-GW1 1709437-03	2.28 - 5.33	3-Mar-2017	Assess former printing and publishing (APEC 9), existing hydraulic elevator (APEC 10), and existing hydraulic freight elevator (APEC 11)	✓	✓	✓			
BH2-17-GW 2531332-01	1.52 - 4.57	30-Jul-2025	Assess former off-site underground storage tank (APEC 4) and former off-site soda bottling facility (APEC 5)			✓	✓		✓
BH4-17-GW 2531332-02	2.28 - 5.33	30-Jul-2025	Assess former interior oil transformer and circuit breaker (APEC 3), former printing and publishing (APEC 9), existing hydraulic elevator (APEC 10), and existing hydraulic freight elevator (APEC 11)	✓	✓	✓		✓	
BH6-25-GW 2531332-03	3.05 - 6.1	30-Jul-2025	Assess former off-site underground storage tank (APEC 4), former off-site soda bottling facility (APEC 5), existing off-site diesel generator (APEC 6), and existing off-site pad mounted transformer (APEC 7)	✓	✓	✓	✓		
Dup-1 (DUP of BH6-25-GW) 2531332-04	3.05 - 6.1	30-Jul-2025	QA/QC purposes			✓			

Table 4: Soil Analytical Test Results

Parameter	Units	Regulation	BH1-SS5 1709090-01	BH2-SS4 1709090-02	BH4-SS4 1709090-03	BH1-25-SS2A 2530089-01	BH1-25-SS3 2530089-02	BH2-25-SS2B 2530089-03	BH2-25-SS6 2530089-04	BH3-25-SS3 2530089-05	BH3-25-SS5B 2530089-06	BH4-25-AU1 2530089-07	BH4-25-SS4 2530089-08	BH4-25-SS5B 2530089-09	DUP1 (DUP of BH3-25-SS3) 2530089-10	BH4-25-SS9 2530308-01	BH5-25-AU1 2530308-02	BH5-25-SS2B 2530308-03	BH5-25-SS3B 2530308-04	BH6-25-AU1 2530308-05	BH6-25-SS5 2530308-06	BH6-25-SS9 2530308-07	DUP2 (DUP of BH5-25-SS2B) 2530308-08
Sample Depth (m)		Reg 153/04 - Table 3 Residential, coarse	3.05 - 3.66	2.29 - 2.90	2.29 - 2.90	0.76 - 1.07	1.52 - 2.13	1.07 - 1.37	3.81 - 4.42	1.52 - 2.13	3.12 - 3.66	0.05 - 0.69	2.29 - 2.90	3.35 - 3.66	1.52 - 2.13	7.42 - 8.03	0.05 - 0.69	0.81 - 1.37	1.78 - 2.13	0.05 - 0.69	3.05 - 3.66	6.10 - 6.71	0.81 - 1.37
Sample Date			25-Feb-2017	25-Feb-2017	25-Feb-2017	18-Jul-2025	18-Jul-2025	18-Jul-2025	18-Jul-2025	18-Jul-2025	18-Jul-2025	18-Jul-2025	18-Jul-2025	18-Jul-2025	18-Jul-2025	21-Jul-2025	22-Jul-2025	22-Jul-2025	22-Jul-2025	22-Jul-2025	22-Jul-2025	22-Jul-2025	22-Jul-2025
Physical Characteristics																							
% Solids	% by Wt.		91.1	92.4	58.3	79.9	90.2	91.7	92	65.2	89.4	82.9	62.3	72.2	71.1	90.2	73.6	72.5	86.6	81.8	90.6	91	71.6
General Inorganics																							
SAR	N/A	5.0	-	-	-	8.53	1.87	5.94	2.7	2.6	1.38	15.5	2.25	5.56	2.16	0.18	10.4	4.49	1.85	19.8	0.96	0.3	5.42
Conductivity	uS/cm	700	-	-	-	1180	517	1680	1600	3100	792	3140	2900	1930	2540	332	1480	1610	637	2530	320	249	1830
pH	N/A	5-9 (surf); 5-11 (subsurf)	-	-	-	7.59	-	7.89	7.87	-	-	-	7.71	-	-	-	-	-	-	-	-	-	-
Metals																							
Antimony	ug/g dry	7.5	-	-	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Arsenic	ug/g dry	18	-	-	-	2.8	1.9	2	1.7	3.1	1.7	2.4	3	1.9	2.5	1.5	3.6	3	1.8	2.3	1.7	1.3	2.7
Barium	ug/g dry	390	-	-	-	255	77.3	59.4	51.2	472	90.8	304	379	147	276	86	358	342	67.7	275	88.5	99.1	387
Beryllium	ug/g dry	4.0	-	-	-	0.8	ND (0.5)	ND (0.5)	ND (0.5)	1	ND (0.5)	0.6	0.9	0.5	0.7	ND (0.5)	0.9	0.9	ND (0.5)	0.5	ND (0.5)	ND (0.5)	0.8
Boron	ug/g dry	120	-	-	-	10.2	16.2	15.6	12.2	5.3	14	10.2	8.5	8	5.3	8	5.2	6.4	9.3	6.2	12.6	9.7	ND (5.0)
Cadmium	ug/g dry	1.2	-	-	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Chromium (VI)	ug/g dry	8.0	-	-	-	0.3	N/A	N/A	N/A	N/A	N/A	ND (0.2)	N/A	N/A	N/A	N/A	0.7	N/A	N/A	0.6	N/A	N/A	N/A
Chromium	ug/g dry	160	-	-	-	55.7	19.1	17.2	14.3	133	20	59.5	86.3	34.2	77.5	10.8	128	87.4	19.3	61.2	13.5	12.2	116
Cobalt	ug/g dry	22	-	-	-	16.9	6.6	7.8	5.5	26.9	6.9	12.5	21.2	9.5	17.1	4.8	26.1	19.7	6.2	11.7	6.3	5.3	24.4
Copper	ug/g dry	140	-	-	-	36.1	12.4	13.6	12.5	58.3	13.1	19.1	43.4	22.1	40.9	9.7	60.6	45.7	14.8	23.1	12.4	8.9	55.1
Lead	ug/g dry	120	-	-	-	6.2	4.7	4.6	3.4	6.6	4.4	12.2	6.9	4.4	5.2	2.8	8.3	6.7	3.8	22.4	4.3	3.5	6.4
Mercury	ug/g dry	0.27	-	-	-	ND (0.1)	N/A	N/A	N/A	N/A	N/A	ND (0.1)	N/A	N/A	N/A	N/A	ND (0.1)	N/A	N/A	0.1	N/A	N/A	N/A
Molybdenum	ug/g dry	6.9	-	-	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	1.1	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Nickel	ug/g dry	100	-	-	-	37.3	12.5	13.5	10	74	13.5	31	49.1	19.7	44.5	7.8	74.4	49.6	12.9	31.4	10.3	8.6	66
Selenium	ug/g dry	2.4	-	-	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Silver	ug/g dry	20	-	-	-	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)
Thallium	ug/g dry	1.0	-	-	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Uranium	ug/g dry	23	-	-	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Vanadium	ug/g dry	86	-	-	-	73	25.1	26.6	21.2	133	27.5	57	105	49.7	82.6	19.5	116	96.3	33.5	67.7	19.5	21.9	107
Zinc	ug/g dry	340	-	-	-	78.7	20.8	ND (20.0)	ND (20.0)	166	21.4	66.4	126	52.9	100	ND (20.0)	132	117	25.7	80	ND (20.0)	ND (20.0)	130
VOCs																							
Acetone	ug/g dry	16	-	-	-	-	-	-	-	-	-	-	-	ND (0.50)	-	-	-	-	ND (0.50)	-	ND (0.50)	-	-
Benzene	ug/g dry	0.21	-	-	-	-	-	-	-	-	-	-	-	ND (0.02)	-	-	-	-	ND (0.02)	-	ND (0.02)	-	-
Bromodichloromethane	ug/g dry	13	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
Bromoform	ug/g dry	0.27	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
Bromomethane	ug/g dry	0.05	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
Carbon Tetrachloride	ug/g dry	0.05	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
Chlorobenzene	ug/g dry	2.4	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
Chloroform	ug/g dry	0.05	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
Dibromochloromethane	ug/g dry	9.4	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
Dichlorodifluoromethane	ug/g dry	16	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
1,2-Dichlorobenzene	ug/g dry	3.4	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
1,3-Dichlorobenzene	ug/g dry	4.8	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
1,4-Dichlorobenzene	ug/g dry	0.083	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
1,1-Dichloroethane	ug/g dry	3.5	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
1,2-Dichloroethane	ug/g dry	0.05	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
1,1-Dichloroethylene	ug/g dry	0.05	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
cis-1,2-Dichloroethylene	ug/g dry	3.4	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
trans-1,2-Dichloroethylene	ug/g dry	0.084	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
1,2-Dichloropropane	ug/g dry	0.05	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
cis-1,3-Dichloropropylene	ug/g dry	0.05	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
trans-1,3-Dichloropropylene	ug/g dry	0.05	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
1,3-Dichloropropene, total	ug/g dry	0.05	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
Ethylbenzene	ug/g dry	2.0	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
Ethylene dibromide (dibromoethane, 1	ug/g dry	0.05	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
Hexane	ug/g dry	2.8	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
Methyl Ethyl Ketone (2-Butanone)	ug/g dry	16	-	-	-	-	-	-	-	-	-	-	-	ND (0.50)	-	-	-	-	ND (0.50)	-	ND (0.50)	-	-
Methyl Isobutyl Ketone	ug/g dry	1.7	-	-	-	-	-	-	-	-	-	-	-	ND (0.50)	-	-	-	-	ND (0.50)	-	ND (0.50)	-	-
Methyl tert-butyl ether	ug/g dry	0.75	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
Methylene Chloride	ug/g dry	0.1	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
Styrene	ug/g dry	0.7	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
1,1,1,2-Tetrachloroethane	ug/g dry	0.058	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
1,1,2,2-Tetrachloroethane	ug/g dry	0.05	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
Tetrachloroethylene	ug/g dry	0.28	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
Toluene	ug/g dry	2.3	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
1,1,1-Trichloroethane	ug/g dry	0.38	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
1,1,2-Trichloroethane	ug/g dry	0.05	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
Trichloroethylene	ug/g dry	0.061	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
Trichlorofluoromethane	ug/g dry	4.0	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
Vinyl Chloride	ug/g dry	0.02	-	-	-	-	-	-	-	-	-	-	-	ND (0.02)	-	-	-	-	ND (0.02)	-	ND (0.02)	-	-
m/p-Xylene	ug/g dry	3.1	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
o-Xylene	ug/g dry	3.1	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
Xylenes, total	ug/g dry	3.1	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-
BTEX																							
Benzene	ug/g dry	0.21	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)
Ethylbenzene	ug/g dry	2.0	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Toluene	ug/g dry	2.3	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
m/p-Xylene	ug/g dry	3.1	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
o-Xylene	ug/g dry	3.1	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Xylenes, total	ug/g dry	3.1	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
PHCs																							
F1 PHCs (C6-C10)	ug/g dry	55	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)
F2 PHCs (C10-C16)	ug/g dry	98	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)
F3 PHCs (C16-C34)	ug/g dry	300	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	ND (8)	143	ND (8)	ND (8)	ND (8)	ND (8)	35	106	ND (8)	43	ND (8)	ND (8)	ND (8)
F4 PHCs (C34-C50)	ug/g dry	2800	ND (6)	ND (6)	ND (6)	ND (6)	ND (6)	ND (6)	ND (6)	ND (6)	ND (6)	559	ND (6)	ND (6)	ND (6)	ND (6)	84	346	ND (6)	209	ND (6)	ND (6)	ND (6)
F4G PHCs (gravimetric)	ug/g dry	2800	-	-	-	-	-	-	-	-	-	3090	-	-	-	-	-	662	-	293	-	-	-
PAHs																							
Acenaphthene	ug/g dry	7.9	-	-	-	ND (0.02)	-	-	-	-	-	ND (0.02)	-	ND (0.02)	-	-	ND (0.02)	-	ND (0.02)	ND (0.02)	ND (0.02)	-	-
Acenaphthylene	ug/g dry	0.15	-	-	-	ND (0.02)	-	-	-	-	-	0.05	-	ND (0.02)	-	-	ND (0.02)	-	ND (0.02)	ND (0.02)	ND (0.02)	-	-
Anthracene	ug/g dry	0.67	-	-	-	ND (0.02)	-	-	-	-	-	0.07	-	ND (0.02)	-	-	ND (0.02)	-	ND (0.02)	ND (0.02)	ND (0.02)	-	-
Benzo[a]anthracene	ug/g dry	0.5	-	-	-	ND (0.02)	-	-	-	-	-	0.38	-	ND (0.02)	-	-	ND (0.02)	-	ND (0.02)	ND (0.02)	ND (0.02)	-	-
Benzo[a]pyrene	ug/g dry	0.3	-	-	-	ND (0.02)	-	-	-	-	-	0.38	-	ND (0.02)	-	-	ND (0.02)	-	ND (0.02)	ND (0.02)	ND (0.02)	-	-
Benzo[b]fluoranthene	ug/g dry	0.78	-	-	-	ND (0.02)	-	-	-	-	-	0.47	-	ND (0.02)	-	-	ND (0.02)	-	ND (0.02)	ND (0.02)	ND (0.02)	-	-
Benzo[g,h,i]perylene	ug/g dry	6.6	-	-	-	ND (0.02)	-	-	-	-	-	0.16	-	ND (0.02)	-	-	ND (0.02)	-	ND (0.02)	ND (0.02)	ND (0.02)	-	-
Benzo[k]fluoranthene	ug/g dry	0.78	-	-	-	ND (0.02)	-	-	-	-	-	0.16	-	ND (0.02)	-	-	ND (0.02)	-	ND (0.02)	ND (0.02)	ND (0.02)	-	-
Chrysene	ug/g dry	7.0	-	-	-	ND (0.02)	-	-	-	-	-	0.4	-	ND (0.02)	-	-	ND (0.02)	-	ND (0.02)	ND (0.02)	ND (0.02)	-	-
Dibenzo[a,h]anthracene	ug/g dry	0.1	-	-	-	ND (0.02)	-	-	-	-	-	ND (0.02)	-	ND (0.02)	-	-	ND (0.02)	-	ND (0.02)	ND (0.02)	ND (0.02)	-	-
Fluoranthene	ug/g dry	0.69	-	-	-	ND (0.02)	-	-	-	-	-	0.7	-	ND (0.02)	-	-	ND (0.02)	-	ND (0.02)	ND (0.02)	ND (0.02)	-	-
Fluorene	ug/g dry	62	-	-	-	ND (0.02)	-	-	-	-	-	ND (0.02)	-	ND (0.02)	-	-	ND (0.02)	-	ND (0.02)	ND (0.02)	ND (0.02)	-	-
Indeno [1,2,3-cd] pyrene	ug/g dry	0.38	-	-	-	ND (0.02)	-	-	-	-	-	0.21	-	ND (0.02)	-	-	ND (0.02)	-	ND (0.02)	ND (0.02)	ND (0.02)	-	-
1-Methylnaphthalene	ug/g dry	0.99	-	-	-	ND (0.02)	-	-	-	-	-	ND (0.02)	-	ND (0.02)	-	-	ND (0.02)	-	ND (0.02)	ND (0.02)	ND (0.02)	-	-
2-Methylnaphthalene	ug/g dry	0.99	-	-	-	ND (0.02)	-	-	-	-	-	ND (0.02)	-	ND (0.02)	-	-	ND (0.02)	-	ND (0.02)	ND (0.02)	ND (0.02)	-	-
Methylnaphthalene (1&2)	ug/g dry	0.99	-	-	-	ND (0.04)	-	-	-	-	-	ND (0.04)	-	ND (0.04)	-	-	ND (0.04)	-	ND (0.04)	ND (0.04)	ND (0.04)	-	-
Naphthalene	ug/g dry	0.6	-	-	-	ND (0.01)	-	-	-	-	-	ND (0.01)	-	ND (0.01)	-	-	ND (0.01)	-	ND (0.01)	ND (0.01)	ND (0.01)	-	-
Phenanthrene	ug/g dry	6.2	-	-	-	ND (0.02)	-	-	-	-	-	0.24	-	ND (0.02)	-	-	ND (0.02)	-	ND (0.02)	ND (0.02)	ND (0.02)	-	-
Pyrene	ug/g dry	78	-	-	-	ND (0.02)	-	-	-	-	-	0.55	-	ND (0.02)	-	-	ND (0.02)	-	ND (0.02)	ND (0.02)	ND (0.02)	-	-
PCBs																							
PCBs, total	ug/g dry	0.35	-	-	-	-	-	-	-	-	-	-	-	ND (0.05)	-	-	-	-	-	-	ND (0.05)	-	-

2.00 Result exceeds Reg 153/04 - Table 3 Residential, coarse Standards
ND (0.2) MDL exceeds Reg 153/04 - Table 3 Residential, coarse Standards
ND (0.2) No concentrations identified above the MDL
- Parameter not analysed
NV No value given for indicated parameter

Parameter	Units	Regulation	BH1-GW1 1709437-01	BH2-GW1 1709437-02	BH4-GW1 1709437-03	BH2-17-GW 2531332-01	BH4-17-GW 2531332-02	BH6-25-GW 2531332-03	Dup-1 (DUP of BH6-25-GW) 2531332-04
Sample Depth (m)		Reg 153/04 - Table 3 Non-Potable	2.28 - 5.33	1.52 - 4.57	2.28 - 5.33	1.52 - 4.57	2.28 - 5.33	3.05 - 6.1	3.05 - 6.1
Sample Date		Groundwater, coarse	3-Mar-2017	3-Mar-2017	3-Mar-2017	30-Jul-2025	30-Jul-2025	30-Jul-2025	30-Jul-2025
Metals									
Antimony	ug/L	20000	-	-	-	ND (0.5)	-	-	-
Arsenic	ug/L	1900	-	-	-	ND (1)	-	-	-
Barium	ug/L	29000	-	-	-	70	-	-	-
Beryllium	ug/L	67	-	-	-	ND (0.5)	-	-	-
Boron	ug/L	45000	-	-	-	53	-	-	-
Cadmium	ug/L	2.7	-	-	-	ND (0.1)	-	-	-
Chromium	ug/L	810	-	-	-	ND (1)	-	-	-
Cobalt	ug/L	66	-	-	-	3	-	-	-
Copper	ug/L	87	-	-	-	11.4	-	-	-
Lead	ug/L	25	-	-	-	ND (0.1)	-	-	-
Molybdenum	ug/L	9200	-	-	-	1.5	-	-	-
Nickel	ug/L	490	-	-	-	11	-	-	-
Selenium	ug/L	63	-	-	-	ND (1)	-	-	-
Silver	ug/L	1.5	-	-	-	2.2	-	-	-
Sodium	ug/L	2300000	-	-	-	727000	-	-	-
Thallium	ug/L	510	-	-	-	ND (0.1)	-	-	-
Uranium	ug/L	420	-	-	-	1.2	-	-	-
Vanadium	ug/L	250	-	-	-	1.4	-	-	-
Zinc	ug/L	1100	-	-	-	12	-	-	-
Volatiles									
Acetone	ug/L	130000	ND (5.0)	-	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
Benzene	ug/L	44	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Bromodichloromethane	ug/L	85000	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Bromoform	ug/L	380	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Bromomethane	ug/L	5.6	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Carbon Tetrachloride	ug/L	0.79	ND (0.2)	-	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)
Chlorobenzene	ug/L	630	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Chloroform	ug/L	2.4	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Dibromochloromethane	ug/L	82000	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Dichlorodifluoromethane	ug/L	4400	ND (1.0)	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,2-Dichlorobenzene	ug/L	4600	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
1,3-Dichlorobenzene	ug/L	9600	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
1,4-Dichlorobenzene	ug/L	8.0	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
1,1-Dichloroethane	ug/L	320	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
1,2-Dichloroethane	ug/L	1.6	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
1,1-Dichloroethylene	ug/L	1.6	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
cis-1,2-Dichloroethylene	ug/L	1.6	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
trans-1,2-Dichloroethylene	ug/L	1.6	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
1,2-Dichloropropane	ug/L	16	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
cis-1,3-Dichloropropylene	ug/L	5.2	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
trans-1,3-Dichloropropylene	ug/L	5.2	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
1,3-Dichloropropene, total	ug/L	5.2	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Ethylbenzene	ug/L	2300	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Ethylene dibromide (dibromoethane, 1	ug/L	0.25	ND (0.2)	-	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)
Hexane	ug/L	51	ND (1.0)	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Methyl Ethyl Ketone (2-Butanone)	ug/L	470000	ND (5.0)	-	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
Methyl Isobutyl Ketone	ug/L	140000	ND (5.0)	-	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
Methyl tert-butyl ether	ug/L	190	ND (2.0)	-	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Methylene Chloride	ug/L	610	ND (5.0)	-	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
Styrene	ug/L	1300	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
1,1,1,2-Tetrachloroethane	ug/L	3.3	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
1,1,2,2-Tetrachloroethane	ug/L	3.2	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Tetrachloroethylene	ug/L	1.6	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Toluene	ug/L	18000	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
1,1,1-Trichloroethane	ug/L	640	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
1,1,2-Trichloroethane	ug/L	4.7	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Trichloroethylene	ug/L	1.6	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Trichlorofluoromethane	ug/L	2500	ND (1.0)	-	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Vinyl Chloride	ug/L	0.5	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
m/p-Xylene	ug/L	4200	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
o-Xylene	ug/L	4200	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Xylenes, total	ug/L	4200	ND (0.5)	-	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
BTEX									
Benzene	ug/L	44	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Ethylbenzene	ug/L	2300	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Toluene	ug/L	18000	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
m/p-Xylene	ug/L	4200	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
o-Xylene	ug/L	4200	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Xylenes, total	ug/L	4200	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Hydrocarbons									
F1 PHCs (C6-C10)	ug/L	750	ND (25)	ND (25)	ND (25)	-	ND (25)	ND (25)	-
F2 PHCs (C10-C16)	ug/L	150	ND (100)	ND (100)	ND (100)	-	ND (100)	ND (100)	-
F3 PHCs (C16-C34)	ug/L	500	ND (100)	ND (100)	ND (100)	-	ND (100)	ND (100)	-
F4 PHCs (C34-C50)	ug/L	500	ND (100)	ND (100)	ND (100)	-	ND (100)	ND (100)	-
Semi-Volatiles									
Acenaphthene	ug/L	600	-	-	-	ND (0.05)	-	ND (0.05)	-
Acenaphthylene	ug/L	1.8	-	-	-	ND (0.05)	-	ND (0.05)	-
Anthracene	ug/L	2.4	-	-	-	ND (0.01)	-	ND (0.01)	-
Benzo[a]anthracene	ug/L	4.7	-	-	-	ND (0.01)	-	ND (0.01)	-
Benzo[a]pyrene	ug/L	0.81	-	-	-	ND (0.01)	-	ND (0.01)	-
Benzo[b]fluoranthene	ug/L	0.75	-	-	-	ND (0.05)	-	ND (0.05)	-
Benzo[g,h,i]perylene	ug/L	0.2	-	-	-	ND (0.05)	-	ND (0.05)	-
Benzo[k]fluoranthene	ug/L	0.4	-	-	-	ND (0.05)	-	ND (0.05)	-
Chrysene	ug/L	1.0	-	-	-	ND (0.05)	-	ND (0.05)	-
Dibenzo[a,h]anthracene	ug/L	0.52	-	-	-	ND (0.05)	-	ND (0.05)	-
Fluoranthene	ug/L	130	-	-	-	ND (0.01)	-	ND (0.01)	-
Fluorene	ug/L	400	-	-	-	ND (0.05)	-	ND (0.05)	-
Indeno [1,2,3-cd] pyrene	ug/L	0.2	-	-	-	ND (0.05)	-	ND (0.05)	-
1-Methylnaphthalene	ug/L	1800	-	-	-	ND (0.05)	-	ND (0.05)	-
2-Methylnaphthalene	ug/L	1800	-	-	-	ND (0.05)	-	ND (0.05)	-
Methylnaphthalene (1&2)	ug/L	1800	-	-	-	ND (0.10)	-	ND (0.10)	-
Naphthalene	ug/L	1400	-	-	-	ND (0.05)	-	ND (0.05)	-
Phenanthrene	ug/L	580	-	-	-	ND (0.05)	-	ND (0.05)	-
Pyrene	ug/L	68	-	-	-	ND (0.01)	-	ND (0.01)	-
PCBs									
PCBs, total	ug/L	7.8	-	-	-	-	ND (0.05)	-	-

2.00 Result exceeds Reg 153/04 - Table 3 Non-Potable Groundwater, coarse Standards
ND (0.2) MDL exceeds Reg 153/04 - Table 3 Non-Potable Groundwater, coarse Standards
ND (0.2) No concentrations identified above the MDL
- Parameter not analysed
NV No value given for indicated parameter

Table 6A: Maximum Concentrations
Soil

Parameter	Sample ID / Depth (m)	Units	Reg 153/04 - Table 3 Residential, coarse Standards	Concentration
SAR	BH6-25-AU1 2530308-05 - 0.05 - 0.69	N/A	5.0	19.8
Conductivity	BH4-25-AU1 2530089-07 - 0.05 - 0.69	uS/cm	700	3140
pH	BH2-25-SS2B 2530089-03 - 1.07 - 1.37	N/A	5-9 (surf); 5-11 (subsurf)	7.89
Antimony	BH1-25-SS2A 2530089-01 - 0.76 - 1.07	ug/g dry	7.5	ND (1.0)
Arsenic	BH5-25-AU1 2530308-02 - 0.05 - 0.69	ug/g dry	18	3.6
Barium	BH3-25-SS3 2530089-05 - 1.52 - 2.13	ug/g dry	390	472
Beryllium	BH3-25-SS3 2530089-05 - 1.52 - 2.13	ug/g dry	4.0	1
Boron	BH1-25-SS3 2530089-02 - 1.52 - 2.13	ug/g dry	120	16.2
Cadmium	BH1-25-SS2A 2530089-01 - 0.76 - 1.07	ug/g dry	1.2	ND (0.5)
Chromium (VI)	BH5-25-AU1 2530308-02 - 0.05 - 0.69	ug/g dry	8.0	0.7
Chromium	BH3-25-SS3 2530089-05 - 1.52 - 2.13	ug/g dry	160	133
Cobalt	BH3-25-SS3 2530089-05 - 1.52 - 2.13	ug/g dry	22	26.9
Copper	BH5-25-AU1 2530308-02 - 0.05 - 0.69	ug/g dry	140	60.6
Lead	BH6-25-AU1 2530308-05 - 0.05 - 0.69	ug/g dry	120	22.4
Mercury	BH6-25-AU1 2530308-05 - 0.05 - 0.69	ug/g dry	0.27	ND (0.1)
Molybdenum	BH4-25-SS4 2530089-08 - 2.29 - 2.90	ug/g dry	6.9	1.1
Nickel	BH5-25-AU1 2530308-02 - 0.05 - 0.69	ug/g dry	100	74.4
Selenium	BH1-25-SS2A 2530089-01 - 0.76 - 1.07	ug/g dry	2.4	ND (1.0)
Silver	BH1-25-SS2A 2530089-01 - 0.76 - 1.07	ug/g dry	20	ND (0.3)
Thallium	BH1-25-SS2A 2530089-01 - 0.76 - 1.07	ug/g dry	1.0	ND (1.0)
Uranium	BH1-25-SS2A 2530089-01 - 0.76 - 1.07	ug/g dry	23	ND (1.0)
Vanadium	BH3-25-SS3 2530089-05 - 1.52 - 2.13	ug/g dry	86	133
Zinc	BH3-25-SS3 2530089-05 - 1.52 - 2.13	ug/g dry	340	166
Acetone	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	16	ND (0.50)
Benzene	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	0.21	ND (0.02)
Bromodichloromethane	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	13	ND (0.05)
Bromoform	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	0.27	ND (0.05)
Bromomethane	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	0.05	ND (0.05)
Carbon Tetrachloride	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	0.05	ND (0.05)
Chlorobenzene	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	2.4	ND (0.05)
Chloroform	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	0.05	ND (0.05)
Dibromochloromethane	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	9.4	ND (0.05)
Dichlorodifluoromethane	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	16	ND (0.05)
1,2-Dichlorobenzene	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	3.4	ND (0.05)
1,3-Dichlorobenzene	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	4.8	ND (0.05)
1,4-Dichlorobenzene	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	0.083	ND (0.05)
1,1-Dichloroethane	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	3.5	ND (0.05)
1,2-Dichloroethane	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	0.05	ND (0.05)
1,1-Dichloroethylene	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	0.05	ND (0.05)
cis-1,2-Dichloroethylene	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	3.4	ND (0.05)
trans-1,2-Dichloroethylene	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	0.084	ND (0.05)
1,2-Dichloropropane	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	0.05	ND (0.05)
cis-1,3-Dichloropropylene	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	0.05	ND (0.05)
trans-1,3-Dichloropropylene	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	0.05	ND (0.05)

Parameter	Sample ID / Depth (m)	Units	Reg 153/04 - Table 3 Residential, coarse Standards	Concentration
1,3-Dichloropropene, total	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	0.05	ND (0.05)
Ethylbenzene	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	2.0	ND (0.05)
Ethylene dibromide (dibromoethane, 1,2-)	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	0.05	ND (0.05)
Hexane	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	2.8	ND (0.05)
Methyl Ethyl Ketone (2-Butanone)	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	16	ND (0.50)
Methyl Isobutyl Ketone	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	1.7	ND (0.50)
Methyl tert-butyl ether	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	0.75	ND (0.05)
Methylene Chloride	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	0.1	ND (0.05)
Styrene	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	0.7	ND (0.05)
1,1,1,2-Tetrachloroethane	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	0.058	ND (0.05)
1,1,2,2-Tetrachloroethane	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	0.05	ND (0.05)
Tetrachloroethylene	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	0.28	ND (0.05)
Toluene	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	2.3	ND (0.05)
1,1,1-Trichloroethane	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	0.38	ND (0.05)
1,1,2-Trichloroethane	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	0.05	ND (0.05)
Trichloroethylene	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	0.061	ND (0.05)
Trichlorofluoromethane	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	4.0	ND (0.05)
Vinyl Chloride	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	0.02	ND (0.02)
m/p-Xylene	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	3.1	ND (0.05)
o-Xylene	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	3.1	ND (0.05)
Xylenes, total	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	3.1	ND (0.05)
Benzene	BH1-SS5 1709090-01 - 3.05 - 3.66	ug/g dry	0.21	ND (0.02)
Ethylbenzene	BH1-SS5 1709090-01 - 3.05 - 3.66	ug/g dry	2.0	ND (0.05)
Toluene	BH1-SS5 1709090-01 - 3.05 - 3.66	ug/g dry	2.3	ND (0.05)
m/p-Xylene	BH1-SS5 1709090-01 - 3.05 - 3.66	ug/g dry	3.1	ND (0.05)
o-Xylene	BH1-SS5 1709090-01 - 3.05 - 3.66	ug/g dry	3.1	ND (0.05)
Xylenes, total	BH1-SS5 1709090-01 - 3.05 - 3.66	ug/g dry	3.1	ND (0.05)
F1 PHCs (C6-C10)	BH1-SS5 1709090-01 - 3.05 - 3.66	ug/g dry	55	ND (7)
F2 PHCs (C10-C16)	BH1-SS5 1709090-01 - 3.05 - 3.66	ug/g dry	98	ND (4)
F3 PHCs (C16-C34)	BH4-25-AU1 2530089-07 - 0.05 - 0.69	ug/g dry	300	143
F4 PHCs (C34-C50)	BH4-25-AU1 2530089-07 - 0.05 - 0.69	ug/g dry	2800	559
Acenaphthene	BH1-25-SS2A 2530089-01 - 0.76 - 1.07	ug/g dry	7.9	ND (0.02)
Acenaphthylene	BH4-25-AU1 2530089-07 - 0.05 - 0.69	ug/g dry	0.15	0.05
Anthracene	BH4-25-AU1 2530089-07 - 0.05 - 0.69	ug/g dry	0.67	0.07
Benzo[a]anthracene	BH4-25-AU1 2530089-07 - 0.05 - 0.69	ug/g dry	0.5	0.38
Benzo[a]pyrene	BH4-25-AU1 2530089-07 - 0.05 - 0.69	ug/g dry	0.3	0.38
Benzo[b]fluoranthene	BH4-25-AU1 2530089-07 - 0.05 - 0.69	ug/g dry	0.78	0.47
Benzo[g,h,i]perylene	BH4-25-AU1 2530089-07 - 0.05 - 0.69	ug/g dry	6.6	0.16
Benzo[k]fluoranthene	BH4-25-AU1 2530089-07 - 0.05 - 0.69	ug/g dry	0.78	0.16
Chrysene	BH4-25-AU1 2530089-07 - 0.05 - 0.69	ug/g dry	7.0	0.4
Dibenzo[a,h]anthracene	BH1-25-SS2A 2530089-01 - 0.76 - 1.07	ug/g dry	0.1	ND (0.02)
Fluoranthene	BH4-25-AU1 2530089-07 - 0.05 - 0.69	ug/g dry	0.69	0.7
Fluorene	BH1-25-SS2A 2530089-01 - 0.76 - 1.07	ug/g dry	62	ND (0.02)

Parameter	Sample ID / Depth (m)	Units	Reg 153/04 - Table 3 Residential, coarse Standards	Concentration
Indeno [1,2,3-cd] pyrene	BH4-25-AU1 2530089-07 - 0.05 - 0.69	ug/g dry	0.38	0.21
1-Methylnaphthalene	BH1-25-SS2A 2530089-01 - 0.76 - 1.07	ug/g dry	0.99	ND (0.02)
2-Methylnaphthalene	BH1-25-SS2A 2530089-01 - 0.76 - 1.07	ug/g dry	0.99	ND (0.02)
Methylnaphthalene (1&2)	BH1-25-SS2A 2530089-01 - 0.76 - 1.07	ug/g dry	0.99	ND (0.04)
Naphthalene	BH1-25-SS2A 2530089-01 - 0.76 - 1.07	ug/g dry	0.6	ND (0.01)
Phenanthrene	BH4-25-AU1 2530089-07 - 0.05 - 0.69	ug/g dry	6.2	0.24
Pyrene	BH4-25-AU1 2530089-07 - 0.05 - 0.69	ug/g dry	78	0.55
PCBs, total	BH4-25-SS5B 2530089-09 - 3.35 - 3.66	ug/g dry	0.35	ND (0.05)
Note: ND (x) = parameter analysed was reported non-detect				

Table 6B: Maximum Concentrations Groundwater

Parameter	Sample ID / Screen Interval (m)	Units	Reg 153/04 - Table 3 Non-Potable Groundwater, coarse Standards	Concentration
Antimony	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	20000	ND (0.5)
Arsenic	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	1900	ND (1)
Barium	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	29000	70
Beryllium	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	67	ND (0.5)
Boron	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	45000	53
Cadmium	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	2.7	ND (0.1)
Chromium	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	810	ND (1)
Cobalt	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	66	3
Copper	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	87	11.4
Lead	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	25	ND (0.1)
Molybdenum	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	9200	1.5
Nickel	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	490	11
Selenium	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	63	ND (1)
Silver	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	1.5	2.2
Sodium	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	2300000	727000
Thallium	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	510	ND (0.1)
Uranium	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	420	1.2
Vanadium	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	250	1.4
Zinc	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	1100	12
Acetone	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	130000	ND (5.0)
Benzene	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	44	ND (0.5)
Bromodichloromethane	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	85000	ND (0.5)
Bromoform	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	380	ND (0.5)
Bromomethane	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	5.6	ND (0.5)
Carbon Tetrachloride	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	0.79	ND (0.2)
Chlorobenzene	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	630	ND (0.5)
Chloroform	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	2.4	ND (0.5)
Dibromochloromethane	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	82000	ND (0.5)
Dichlorodifluoromethane	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	4400	ND (1.0)
1,2-Dichlorobenzene	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	4600	ND (0.5)
1,3-Dichlorobenzene	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	9600	ND (0.5)
1,4-Dichlorobenzene	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	8.0	ND (0.5)
1,1-Dichloroethane	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	320	ND (0.5)
1,2-Dichloroethane	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	1.6	ND (0.5)
1,1-Dichloroethylene	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	1.6	ND (0.5)
cis-1,2-Dichloroethylene	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	1.6	ND (0.5)
trans-1,2-Dichloroethylene	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	1.6	ND (0.5)
1,2-Dichloropropane	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	16	ND (0.5)
cis-1,3-Dichloropropylene	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	5.2	ND (0.5)
trans-1,3-Dichloropropylene	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	5.2	ND (0.5)
1,3-Dichloropropene, total	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	5.2	ND (0.5)
Ethylbenzene	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	2300	ND (0.5)
Ethylene dibromide (dibromoe	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	0.25	ND (0.2)
Hexane	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	51	ND (1.0)
Methyl Ethyl Ketone (2-Butano	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	470000	ND (5.0)
Methyl Isobutyl Ketone	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	140000	ND (5.0)
Methyl tert-butyl ether	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	190	ND (2.0)

Parameter	Sample ID / Screen Interval (m)	Units	Reg 153/04 - Table 3 Non-Potable Groundwater, coarse Standards	Concentration
Methylene Chloride	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	610	ND (5.0)
Styrene	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	1300	ND (0.5)
1,1,1,2-Tetrachloroethane	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	3.3	ND (0.5)
1,1,2,2-Tetrachloroethane	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	3.2	ND (0.5)
Tetrachloroethylene	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	1.6	ND (0.5)
Toluene	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	18000	ND (0.5)
1,1,1-Trichloroethane	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	640	ND (0.5)
1,1,2-Trichloroethane	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	4.7	ND (0.5)
Trichloroethylene	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	1.6	ND (0.5)
Trichlorofluoromethane	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	2500	ND (1.0)
Vinyl Chloride	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	0.5	ND (0.5)
m/p-Xylene	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	4200	ND (0.5)
o-Xylene	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	4200	ND (0.5)
Xylenes, total	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	4200	ND (0.5)
Benzene	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	44	ND (0.5)
Ethylbenzene	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	2300	ND (0.5)
Toluene	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	18000	ND (0.5)
m/p-Xylene	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	4200	ND (0.5)
o-Xylene	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	4200	ND (0.5)
Xylenes, total	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	4200	ND (0.5)
F1 PHCs (C6-C10)	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	750	ND (25)
F2 PHCs (C10-C16)	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	150	ND (100)
F3 PHCs (C16-C34)	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	500	ND (100)
F4 PHCs (C34-C50)	BH1-GW1 1709437-01 - 2.28 - 5.33	ug/L	500	ND (100)
Acenaphthene	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	600	ND (0.05)
Acenaphthylene	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	1.8	ND (0.05)
Anthracene	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	2.4	ND (0.01)
Benzo[a]anthracene	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	4.7	ND (0.01)
Benzo[a]pyrene	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	0.81	ND (0.01)
Benzo[b]fluoranthene	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	0.75	ND (0.05)
Benzo[g,h,i]perylene	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	0.2	ND (0.05)
Benzo[k]fluoranthene	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	0.4	ND (0.05)
Chrysene	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	1.0	ND (0.05)
Dibenzo[a,h]anthracene	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	0.52	ND (0.05)
Fluoranthene	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	130	ND (0.01)
Fluorene	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	400	ND (0.05)
Indeno [1,2,3-cd] pyrene	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	0.2	ND (0.05)
1-Methylnaphthalene	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	1800	ND (0.05)
2-Methylnaphthalene	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	1800	ND (0.05)
Methylnaphthalene (1&2)	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	1800	ND (0.10)
Naphthalene	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	1400	ND (0.05)
Phenanthrene	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	580	ND (0.05)
Pyrene	BH2-17-GW 2531332-01 - 1.52 - 4.57	ug/L	68	ND (0.01)
PCBs, total	BH4-17-GW 2531332-02 - 2.28 - 5.33	ug/L	7.8	ND (0.05)
Note: ND (x) = parameter analysed was reported non-detect				

Table 7: QA/QC Calculations
Relative Percent Difference

Parameter	MDL	BH3-25-SS3 2530089-05	DUP1 (DUP of BH3-25-SS3) 2530089-10	RPD (%)	QA/QC Result
General Inorganics					
SAR	0.01	2.60	2.16	18.5%	Within the acceptable range
Conductivity	5.0	3100	2540	19.9%	Within the acceptable range
Metals					
Antimony	1.0	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
Arsenic	1.0	3.1	2.5	21.4%	Outside the acceptable range
Barium	1.0	472.0	276.0	52.4%	Outside the acceptable range
Beryllium	0.5	1	0.7	35.3%	Outside the acceptable range
Boron	5.0	5.3	5.3	0.0%	Within the acceptable range
Cadmium	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Chromium	5.0	133.0	77.5	52.7%	Outside the acceptable range
Cobalt	1.0	26.9	17.1	44.5%	Outside the acceptable range
Copper	5.0	58.3	40.9	35.1%	Outside the acceptable range
Lead	1.0	6.6	5.2	23.7%	Outside the acceptable range
Molybdenum	1.0	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
Nickel	5.0	74	44.5	49.8%	Outside the acceptable range
Selenium	1.0	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
Silver	0.3	ND (0.3)	ND (0.3)	0.0%	Within the acceptable range
Thallium	1.0	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
Uranium	1.0	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
Vanadium	10	133.0	82.6	46.8%	Outside the acceptable range
Zinc	20	166	100	49.6%	Outside the acceptable range
BTEX					
Benzene	0.02	ND (0.02)	ND (0.02)	0.0%	Within the acceptable range
Ethylbenzene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Toluene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
m/p-Xylene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
o-Xylene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Xylenes, total	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
PHCs					
F1 PHCs (C6-C10)	7	ND (7)	ND (7)	0.0%	Within the acceptable range
F2 PHCs (C10-C16)	4	ND (4)	ND (4)	0.0%	Within the acceptable range
F3 PHCs (C16-C34)	8	ND (8)	ND (8)	0.0%	Within the acceptable range
F4 PHCs (C34-C50)	6	ND (6)	ND (6)	0.0%	Within the acceptable range

Table 7: QA/QC Calculations
Relative Percent Difference

Parameter	MDL	BH5-25-SS2B 2530308-03	DUP2 (DUP of BH5-25-SS2B) 2530308-08	RPD (%)	QA/QC Result
General Inorganics					
SAR	0.01	4.49	5.42	18.8%	Within the acceptable range
Conductivity	5.0	1610	1830	12.8%	Within the acceptable range
Metals					
Antimony	1.0	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
Arsenic	1.0	3	2.7	10.5%	Within the acceptable range
Barium	1.0	342	387	12.3%	Within the acceptable range
Beryllium	0.5	0.9	0.8	11.8%	Within the acceptable range
Boron	5.0	6.4	ND (5.0)	24.6%	Outside the acceptable range
Cadmium	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Chromium	5.0	87.4	116	28.1%	Outside the acceptable range
Cobalt	1.0	19.7	24.4	21.3%	Outside the acceptable range
Copper	5.0	45.7	55.1	18.7%	Within the acceptable range
Lead	1.0	6.7	6.4	4.6%	Within the acceptable range
Molybdenum	1.0	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
Nickel	5.0	49.6	66	28.4%	Outside the acceptable range
Selenium	1.0	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
Silver	0.3	ND (0.3)	ND (0.3)	0.0%	Within the acceptable range
Thallium	1.0	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
Uranium	1.0	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
Vanadium	10	96.3	107	10.5%	Within the acceptable range
Zinc	20	117	130	10.5%	Within the acceptable range
BTEX					
Benzene	0.02	ND (0.02)	ND (0.02)	0.0%	Within the acceptable range
Ethylbenzene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Toluene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
m/p-Xylene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
o-Xylene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Xylenes, total	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
PHCs					
F1 PHCs (C6-C10)	7	ND (7)	ND (7)	0.0%	Within the acceptable range
F2 PHCs (C10-C16)	4	ND (4)	ND (4)	0.0%	Within the acceptable range
F3 PHCs (C16-C34)	8	106	ND (8)	171.9%	Outside the acceptable range
F4 PHCs (C34-C50)	6	346	ND (6)	193.2%	Outside the acceptable range
F4G PHCs (gravimetric)	6	662	ND (6)	196.4%	Outside the acceptable range

Table 8: Groundwater Levels

Test Hole ID	Ground Surface Elevation (masl)	Water Level Depth (mbgs)	Water Level Elevation (masl)	Date of Measurement
BH1-17	74.90	1.79	73.11	3-Mar-2017
BH2-17	74.16	1.09	73.07	3-Mar-2017
BH4-17	73.74	3.72	70.02	3-Mar-2017
BH1-17	74.90	5.05	69.85	30-Jul-2025
BH2-17	74.16	4.19	69.97	30-Jul-2025
BH4-17	73.74	4.50	69.24	30-Jul-2025
BH3-25	74.03	3.62	70.41	30-Jul-2025
BH6-25	73.98	4.21	69.77	30-Jul-2025

Table 9: Stabilized Water Quality Parameters

Test Hole ID	Temperature (˚C)	Conductivity (µS)	pH	Date of Measurement
BH1-17	5.5	328	8.7	3-Mar-2017
BH2-17	8.5	248	7.6	3-Mar-2017
BH4-17	9.9	471	8.0	3-Mar-2017
BH4-17	NA	1223	7.1	30-Jul-2025
BH6-25	NA	3310	7.1	30-Jul-2025

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Certificate of Analysis

Paterson Group Consulting Engineers (Ottawa)
9 Auriga Drive
Ottawa, ON K2E 7T9
Attn: Jesse Andrechek

Report Date: 8-Aug-2025
Order Date: 21-Jul-2025

Client PO: 63622
Project: PE3966
Custody:

Revised Report

Order #: 2530089

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

Paracel ID	Client ID
2530089-01	BH1-25-SS2A
2530089-02	BH1-25-SS3
2530089-03	BH2-25-SS2B
2530089-04	BH2-25-SS6
2530089-05	BH3-25-SS3
2530089-06	BH3-25-SS5B
2530089-07	BH4-25-AU1
2530089-08	BH4-25-SS4
2530089-09	BH4-25-SS5B
2530089-10	DUP1

Approved By:

Mark Foto, M.Sc.
Laboratory Director

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	23-Jul-25	23-Jul-25
Chromium, hexavalent - soil	MOE E3056 - Extraction, colourimetric	25-Jul-25	25-Jul-25
Conductivity	MOE E3138 - probe @25 °C, water ext	23-Jul-25	23-Jul-25
Mercury by CVAA	EPA 7471B - CVAA, digestion	25-Jul-25	25-Jul-25
PCBs, total	SW846 8082A - GC-ECD	23-Jul-25	23-Jul-25
pH, soil	MOE E3137 - probe @25 °C, CaCl2 ext	23-Jul-25	23-Jul-25
PHC F1	CWS Tier 1 - P&T GC-FID	23-Jul-25	23-Jul-25
PHC F4G (gravimetric)	CWS Tier 1 - Extraction Gravimetric	25-Jul-25	25-Jul-25
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	23-Jul-25	24-Jul-25
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	25-Jul-25	25-Jul-25
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	24-Jul-25	24-Jul-25
REG 153: VOCs by P&T GC/MS	EPA 8260 - P&T GC-MS	23-Jul-25	23-Jul-25
SAR	Calculated	23-Jul-25	23-Jul-25
Solids, %	CWS Tier 1 - Gravimetric	22-Jul-25	23-Jul-25

Certificate of Analysis

Report Date: 08-Aug-2025

Client: **Paterson Group Consulting Engineers (Ottawa)**

Order Date: 21-Jul-2025

Client PO: 63622

Project Description: PE3966

	Client ID:	BH1-25-SS2A	BH1-25-SS3	BH2-25-SS2B	BH2-25-SS6	-	-
	Sample Date:	18-Jul-25 00:00	18-Jul-25 00:00	18-Jul-25 00:00	18-Jul-25 00:00		
	Sample ID:	2530089-01	2530089-02	2530089-03	2530089-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Physical Characteristics							
% Solids	0.1 % by Wt.	79.9	90.2	91.7	92.0	-	-
General Inorganics							
SAR	0.01 N/A	8.53	1.87	5.94	2.70	-	-
Conductivity	5 uS/cm	1180	517	1680	1600	-	-
pH	0.05 pH Units	7.59	-	7.89	7.87	-	-
Metals							
Antimony	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Arsenic	1.0 ug/g	2.8	1.9	2.0	1.7	-	-
Barium	1.0 ug/g	255	77.3	59.4	51.2	-	-
Beryllium	0.5 ug/g	0.8	<0.5	<0.5	<0.5	-	-
Boron	5.0 ug/g	10.2	16.2	15.6	12.2	-	-
Cadmium	0.5 ug/g	<0.5	<0.5	<0.5	<0.5	-	-
Chromium	5.0 ug/g	55.7	19.1	17.2	14.3	-	-
Chromium (VI)	0.2 ug/g	0.3	-	-	-	-	-
Cobalt	1.0 ug/g	16.9	6.6	7.8	5.5	-	-
Copper	5.0 ug/g	36.1	12.4	13.6	12.5	-	-
Lead	1.0 ug/g	6.2	4.7	4.6	3.4	-	-
Mercury	0.1 ug/g	<0.1	-	-	-	-	-
Molybdenum	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Nickel	5.0 ug/g	37.3	12.5	13.5	10.0	-	-
Selenium	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Silver	0.3 ug/g	<0.3	<0.3	<0.3	<0.3	-	-
Thallium	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Uranium	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Vanadium	10.0 ug/g	73.0	25.1	26.6	21.2	-	-

Certificate of Analysis

Report Date: 08-Aug-2025

Client: **Paterson Group Consulting Engineers (Ottawa)**

Order Date: 21-Jul-2025

Client PO: **63622**

Project Description: **PE3966**

	Client ID:	BH1-25-SS2A	BH1-25-SS3	BH2-25-SS2B	BH2-25-SS6	-	-
	Sample Date:	18-Jul-25 00:00	18-Jul-25 00:00	18-Jul-25 00:00	18-Jul-25 00:00		
	Sample ID:	2530089-01	2530089-02	2530089-03	2530089-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Metals							
Zinc	20.0 ug/g	78.7	20.8	<20.0	<20.0	-	-
Volatiles							
Benzene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	-	-
Ethylbenzene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Toluene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
m,p-Xylenes	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
o-Xylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Xylenes, total	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Toluene-d8	Surrogate	116%	109%	114%	112%	-	-
Hydrocarbons							
F1 PHCs (C6-C10)	7 ug/g	<7	<7	<7	<7	-	-
F2 PHCs (C10-C16)	4 ug/g	<4	<4	<4	<4	-	-
F3 PHCs (C16-C34)	8 ug/g	<8	<8	<8	<8	-	-
F4 PHCs (C34-C50)	6 ug/g	<6	<6	<6	<6	-	-
Semi-Volatiles							
Acenaphthene	0.02 ug/g	<0.02	-	-	-	-	-
Acenaphthylene	0.02 ug/g	<0.02	-	-	-	-	-
Anthracene	0.02 ug/g	<0.02	-	-	-	-	-
Benzo [a] anthracene	0.02 ug/g	<0.02	-	-	-	-	-
Benzo [a] pyrene	0.02 ug/g	<0.02	-	-	-	-	-
Benzo [b] fluoranthene	0.02 ug/g	<0.02	-	-	-	-	-
Benzo [g,h,i] perylene	0.02 ug/g	<0.02	-	-	-	-	-
Benzo [k] fluoranthene	0.02 ug/g	<0.02	-	-	-	-	-
Chrysene	0.02 ug/g	<0.02	-	-	-	-	-
Dibenzo [a,h] anthracene	0.02 ug/g	<0.02	-	-	-	-	-

	Client ID:	BH1-25-SS2A	BH1-25-SS3	BH2-25-SS2B	BH2-25-SS6	-	-
	Sample Date:	18-Jul-25 00:00	18-Jul-25 00:00	18-Jul-25 00:00	18-Jul-25 00:00		
	Sample ID:	2530089-01	2530089-02	2530089-03	2530089-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Semi-Volatiles							
Fluoranthene	0.02 ug/g	<0.02	-	-	-	-	-
Fluorene	0.02 ug/g	<0.02	-	-	-	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g	<0.02	-	-	-	-	-
1-Methylnaphthalene	0.02 ug/g	<0.02	-	-	-	-	-
2-Methylnaphthalene	0.02 ug/g	<0.02	-	-	-	-	-
Methylnaphthalene (1&2)	0.04 ug/g	<0.04	-	-	-	-	-
Naphthalene	0.01 ug/g	<0.01	-	-	-	-	-
Phenanthrene	0.02 ug/g	<0.02	-	-	-	-	-
Pyrene	0.02 ug/g	<0.02	-	-	-	-	-
2-Fluorobiphenyl	Surrogate	66.3%	-	-	-	-	-
Terphenyl-d14	Surrogate	66.3%	-	-	-	-	-

	Client ID:	BH3-25-SS3	BH3-25-SS5B	BH4-25-AU1	BH4-25-SS4	-	-
	Sample Date:	18-Jul-25 00:00	18-Jul-25 00:00	18-Jul-25 00:00	18-Jul-25 00:00		
	Sample ID:	2530089-05	2530089-06	2530089-07	2530089-08		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Physical Characteristics							
% Solids	0.1 % by Wt.	65.2	89.4	82.9	62.3	-	-
General Inorganics							
SAR	0.01 N/A	2.60	1.38	15.5	2.25	-	-
Conductivity	5 uS/cm	3100	792	3140	2900	-	-
pH	0.05 pH Units	-	-	-	7.71	-	-
Metals							
Antimony	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Arsenic	1.0 ug/g	3.1	1.7	2.4	3.0	-	-
Barium	1.0 ug/g	472	90.8	304	379	-	-
Beryllium	0.5 ug/g	1.0	<0.5	0.6	0.9	-	-
Boron	5.0 ug/g	5.3	14.0	10.2	8.5	-	-
Cadmium	0.5 ug/g	<0.5	<0.5	<0.5	<0.5	-	-
Chromium	5.0 ug/g	133	20.0	59.5	86.3	-	-
Chromium (VI)	0.2 ug/g	-	-	<0.2	-	-	-
Cobalt	1.0 ug/g	26.9	6.9	12.5	21.2	-	-
Copper	5.0 ug/g	58.3	13.1	19.1	43.4	-	-
Lead	1.0 ug/g	6.6	4.4	12.2	6.9	-	-
Mercury	0.1 ug/g	-	-	<0.1	-	-	-
Molybdenum	1.0 ug/g	<1.0	<1.0	<1.0	1.1	-	-
Nickel	5.0 ug/g	74.0	13.5	31.0	49.1	-	-
Selenium	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Silver	0.3 ug/g	<0.3	<0.3	<0.3	<0.3	-	-
Thallium	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Uranium	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Vanadium	10.0 ug/g	133	27.5	57.0	105	-	-

Certificate of Analysis

Report Date: 08-Aug-2025

Client: **Paterson Group Consulting Engineers (Ottawa)**

Order Date: 21-Jul-2025

Client PO: **63622**

Project Description: **PE3966**

	Client ID:	BH3-25-SS3	BH3-25-SS5B	BH4-25-AU1	BH4-25-SS4	-	-
	Sample Date:	18-Jul-25 00:00	18-Jul-25 00:00	18-Jul-25 00:00	18-Jul-25 00:00		
	Sample ID:	2530089-05	2530089-06	2530089-07	2530089-08		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Metals							
Zinc	20.0 ug/g	166	21.4	66.4	126	-	-
Volatiles							
Benzene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	-	-
Ethylbenzene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Toluene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
m,p-Xylenes	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
o-Xylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Xylenes, total	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Toluene-d8	Surrogate	121%	113%	115%	125%	-	-
Hydrocarbons							
F1 PHCs (C6-C10)	7 ug/g	<7	<7	<7	<7	-	-
F2 PHCs (C10-C16)	4 ug/g	<4	<4	<4	<4	-	-
F3 PHCs (C16-C34)	8 ug/g	<8	<8	143	<8	-	-
F4 PHCs (C34-C50)	6 ug/g	<6	<6	559 [1]	<6	-	-
F4G PHCs (gravimetric)	50 ug/g	-	-	3090	-	-	-
Semi-Volatiles							
Acenaphthene	0.02 ug/g	-	-	<0.02	-	-	-
Acenaphthylene	0.02 ug/g	-	-	0.05	-	-	-
Anthracene	0.02 ug/g	-	-	0.07	-	-	-
Benzo [a] anthracene	0.02 ug/g	-	-	0.38	-	-	-
Benzo [a] pyrene	0.02 ug/g	-	-	0.38	-	-	-
Benzo [b] fluoranthene	0.02 ug/g	-	-	0.47	-	-	-
Benzo [g,h,i] perylene	0.02 ug/g	-	-	0.16	-	-	-
Benzo [k] fluoranthene	0.02 ug/g	-	-	0.16	-	-	-
Chrysene	0.02 ug/g	-	-	0.40	-	-	-

	Client ID:	BH3-25-SS3	BH3-25-SS5B	BH4-25-AU1	BH4-25-SS4	-	-
	Sample Date:	18-Jul-25 00:00	18-Jul-25 00:00	18-Jul-25 00:00	18-Jul-25 00:00		
	Sample ID:	2530089-05	2530089-06	2530089-07	2530089-08		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Semi-Volatiles							
Dibenzo [a,h] anthracene	0.02 ug/g	-	-	<0.02	-	-	-
Fluoranthene	0.02 ug/g	-	-	0.70	-	-	-
Fluorene	0.02 ug/g	-	-	<0.02	-	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g	-	-	0.21	-	-	-
1-Methylnaphthalene	0.02 ug/g	-	-	<0.02	-	-	-
2-Methylnaphthalene	0.02 ug/g	-	-	<0.02	-	-	-
Methylnaphthalene (1&2)	0.04 ug/g	-	-	<0.04	-	-	-
Naphthalene	0.01 ug/g	-	-	<0.01	-	-	-
Phenanthrene	0.02 ug/g	-	-	0.24	-	-	-
Pyrene	0.02 ug/g	-	-	0.55	-	-	-
2-Fluorobiphenyl	Surrogate	-	-	76.6%	-	-	-
Terphenyl-d14	Surrogate	-	-	81.2%	-	-	-

	Client ID:	BH4-25-SS5B	DUP1			-	-
	Sample Date:	18-Jul-25 00:00	18-Jul-25 00:00				
	Sample ID:	2530089-09	2530089-10				
	Matrix:	Soil	Soil				
	MDL/Units						
Physical Characteristics							
% Solids	0.1 % by Wt.	72.2	71.1	-	-	-	-
General Inorganics							
SAR	0.01 N/A	5.56	2.16	-	-	-	-
Conductivity	5 uS/cm	1930	2540	-	-	-	-
Metals							
Antimony	1.0 ug/g	<1.0	<1.0	-	-	-	-
Arsenic	1.0 ug/g	1.9	2.5	-	-	-	-
Barium	1.0 ug/g	147	276	-	-	-	-
Beryllium	0.5 ug/g	0.5	0.7	-	-	-	-
Boron	5.0 ug/g	8.0	5.3	-	-	-	-
Cadmium	0.5 ug/g	<0.5	<0.5	-	-	-	-
Chromium	5.0 ug/g	34.2	77.5	-	-	-	-
Cobalt	1.0 ug/g	9.5	17.1	-	-	-	-
Copper	5.0 ug/g	22.1	40.9	-	-	-	-
Lead	1.0 ug/g	4.4	5.2	-	-	-	-
Molybdenum	1.0 ug/g	<1.0	<1.0	-	-	-	-
Nickel	5.0 ug/g	19.7	44.5	-	-	-	-
Selenium	1.0 ug/g	<1.0	<1.0	-	-	-	-
Silver	0.3 ug/g	<0.3	<0.3	-	-	-	-
Thallium	1.0 ug/g	<1.0	<1.0	-	-	-	-
Uranium	1.0 ug/g	<1.0	<1.0	-	-	-	-
Vanadium	10.0 ug/g	49.7	82.6	-	-	-	-
Zinc	20.0 ug/g	52.9	100	-	-	-	-
Volatiles							
Acetone	0.50 ug/g	<0.50	-	-	-	-	-

	Client ID:	BH4-25-SS5B	DUP1			-	-
	Sample Date:	18-Jul-25 00:00	18-Jul-25 00:00				
	Sample ID:	2530089-09	2530089-10				
	Matrix:	Soil	Soil				
	MDL/Units						
Volatiles							
Benzene	0.02 ug/g	<0.02	-	-	-	-	-
Bromodichloromethane	0.05 ug/g	<0.05	-	-	-	-	-
Bromoform	0.05 ug/g	<0.05	-	-	-	-	-
Bromomethane	0.05 ug/g	<0.05	-	-	-	-	-
Carbon Tetrachloride	0.05 ug/g	<0.05	-	-	-	-	-
Chlorobenzene	0.05 ug/g	<0.05	-	-	-	-	-
Chloroform	0.05 ug/g	<0.05	-	-	-	-	-
Dibromochloromethane	0.05 ug/g	<0.05	-	-	-	-	-
Dichlorodifluoromethane	0.05 ug/g	<0.05	-	-	-	-	-
1,2-Dichlorobenzene	0.05 ug/g	<0.05	-	-	-	-	-
1,3-Dichlorobenzene	0.05 ug/g	<0.05	-	-	-	-	-
1,4-Dichlorobenzene	0.05 ug/g	<0.05	-	-	-	-	-
1,1-Dichloroethane	0.05 ug/g	<0.05	-	-	-	-	-
1,2-Dichloroethane	0.05 ug/g	<0.05	-	-	-	-	-
1,1-Dichloroethylene	0.05 ug/g	<0.05	-	-	-	-	-
cis-1,2-Dichloroethylene	0.05 ug/g	<0.05	-	-	-	-	-
trans-1,2-Dichloroethylene	0.05 ug/g	<0.05	-	-	-	-	-
1,2-Dichloropropane	0.05 ug/g	<0.05	-	-	-	-	-
cis-1,3-Dichloropropylene	0.05 ug/g	<0.05	-	-	-	-	-
trans-1,3-Dichloropropylene	0.05 ug/g	<0.05	-	-	-	-	-
1,3-Dichloropropene, total	0.05 ug/g	<0.05	-	-	-	-	-
Ethylene dibromide (dibromoethane,	0.05 ug/g	<0.05	-	-	-	-	-
Ethylbenzene	0.05 ug/g	<0.05	-	-	-	-	-
Hexane	0.05 ug/g	<0.05	-	-	-	-	-
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g	<0.50	-	-	-	-	-

	Client ID:	BH4-25-SS5B	DUP1			-	-
	Sample Date:	18-Jul-25 00:00	18-Jul-25 00:00				
	Sample ID:	2530089-09	2530089-10				
	Matrix:	Soil	Soil				
	MDL/Units						
Volatiles							
Methyl Isobutyl Ketone	0.50 ug/g	<0.50	-	-	-	-	-
Methyl tert-butyl ether	0.05 ug/g	<0.05	-	-	-	-	-
Methylene Chloride	0.05 ug/g	<0.05	-	-	-	-	-
Styrene	0.05 ug/g	<0.05	-	-	-	-	-
1,1,1,2-Tetrachloroethane	0.05 ug/g	<0.05	-	-	-	-	-
1,1,2,2-Tetrachloroethane	0.05 ug/g	<0.05	-	-	-	-	-
Tetrachloroethylene	0.05 ug/g	<0.05	-	-	-	-	-
Toluene	0.05 ug/g	<0.05	-	-	-	-	-
1,1,1-Trichloroethane	0.05 ug/g	<0.05	-	-	-	-	-
1,1,2-Trichloroethane	0.05 ug/g	<0.05	-	-	-	-	-
Trichloroethylene	0.05 ug/g	<0.05	-	-	-	-	-
Trichlorofluoromethane	0.05 ug/g	<0.05	-	-	-	-	-
Vinyl chloride	0.02 ug/g	<0.02	-	-	-	-	-
m,p-Xylenes	0.05 ug/g	<0.05	-	-	-	-	-
o-Xylene	0.05 ug/g	<0.05	-	-	-	-	-
Xylenes, total	0.05 ug/g	<0.05	-	-	-	-	-
4-Bromofluorobenzene	Surrogate	111%	-	-	-	-	-
Dibromofluoromethane	Surrogate	87.0%	-	-	-	-	-
Toluene-d8	Surrogate	124%	-	-	-	-	-
Benzene	0.02 ug/g	-	<0.02	-	-	-	-
Ethylbenzene	0.05 ug/g	-	<0.05	-	-	-	-
Toluene	0.05 ug/g	-	<0.05	-	-	-	-
m,p-Xylenes	0.05 ug/g	-	<0.05	-	-	-	-
o-Xylene	0.05 ug/g	-	<0.05	-	-	-	-
Xylenes, total	0.05 ug/g	-	<0.05	-	-	-	-

	Client ID:	BH4-25-SS5B	DUP1			-	-
	Sample Date:	18-Jul-25 00:00	18-Jul-25 00:00				
	Sample ID:	2530089-09	2530089-10				
	Matrix:	Soil	Soil				
	MDL/Units						
Volatiles							
Toluene-d8	Surrogate	-	119%	-	-	-	-
Hydrocarbons							
F1 PHCs (C6-C10)	7 ug/g	<7	<7	-	-	-	-
F2 PHCs (C10-C16)	4 ug/g	<4	<4	-	-	-	-
F3 PHCs (C16-C34)	8 ug/g	<8	<8	-	-	-	-
F4 PHCs (C34-C50)	6 ug/g	<6	<6	-	-	-	-
Semi-Volatiles							
Acenaphthene	0.02 ug/g	<0.02	-	-	-	-	-
Acenaphthylene	0.02 ug/g	<0.02	-	-	-	-	-
Anthracene	0.02 ug/g	<0.02	-	-	-	-	-
Benzo [a] anthracene	0.02 ug/g	<0.02	-	-	-	-	-
Benzo [a] pyrene	0.02 ug/g	<0.02	-	-	-	-	-
Benzo [b] fluoranthene	0.02 ug/g	<0.02	-	-	-	-	-
Benzo [g,h,i] perylene	0.02 ug/g	<0.02	-	-	-	-	-
Benzo [k] fluoranthene	0.02 ug/g	<0.02	-	-	-	-	-
Chrysene	0.02 ug/g	<0.02	-	-	-	-	-
Dibenzo [a,h] anthracene	0.02 ug/g	<0.02	-	-	-	-	-
Fluoranthene	0.02 ug/g	<0.02	-	-	-	-	-
Fluorene	0.02 ug/g	<0.02	-	-	-	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g	<0.02	-	-	-	-	-
1-Methylnaphthalene	0.02 ug/g	<0.02	-	-	-	-	-
2-Methylnaphthalene	0.02 ug/g	<0.02	-	-	-	-	-
Methylnaphthalene (1&2)	0.04 ug/g	<0.04	-	-	-	-	-
Naphthalene	0.01 ug/g	<0.01	-	-	-	-	-
Phenanthrene	0.02 ug/g	<0.02	-	-	-	-	-

	Client ID:	BH4-25-SS5B	DUP1			-	-
	Sample Date:	18-Jul-25 00:00	18-Jul-25 00:00				
	Sample ID:	2530089-09	2530089-10				
	Matrix:	Soil	Soil				
	MDL/Units						
Semi-Volatiles							
Pyrene	0.02 ug/g	<0.02	-	-	-	-	-
2-Fluorobiphenyl	Surrogate	51.1%	-	-	-	-	-
Terphenyl-d14	Surrogate	62.0%	-	-	-	-	-
PCBs							
PCBs, total	0.05 ug/g	<0.05	-	-	-	-	-
Decachlorobiphenyl	Surrogate	105%	-	-	-	-	-

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics								
Conductivity	ND	5	uS/cm					
Hydrocarbons								
F1 PHCs (C6-C10)	ND	7	ug/g					
F2 PHCs (C10-C16)	ND	4	ug/g					
F3 PHCs (C16-C34)	ND	8	ug/g					
F4 PHCs (C34-C50)	ND	6	ug/g					
F4G PHCs (gravimetric)	ND	50	ug/g					
Metals								
Antimony	ND	1.0	ug/g					
Arsenic	ND	1.0	ug/g					
Barium	ND	1.0	ug/g					
Beryllium	ND	0.5	ug/g					
Boron	ND	5.0	ug/g					
Cadmium	ND	0.5	ug/g					
Chromium (VI)	ND	0.2	ug/g					
Chromium	ND	5.0	ug/g					
Cobalt	ND	1.0	ug/g					
Copper	ND	5.0	ug/g					
Lead	ND	1.0	ug/g					
Mercury	ND	0.1	ug/g					
Molybdenum	ND	1.0	ug/g					
Nickel	ND	5.0	ug/g					
Selenium	ND	1.0	ug/g					
Silver	ND	0.3	ug/g					
Thallium	ND	1.0	ug/g					
Uranium	ND	1.0	ug/g					
Vanadium	ND	10.0	ug/g					
Zinc	ND	20.0	ug/g					
PCBs								
PCBs, total	ND	0.05	ug/g					
Surrogate: Decachlorobiphenyl	*0.0601*		*%*	*120*	*60-140*			
Semi-Volatiles								

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Acenaphthene	ND	0.02	ug/g					
Acenaphthylene	ND	0.02	ug/g					
Anthracene	ND	0.02	ug/g					
Benzo [a] anthracene	ND	0.02	ug/g					
Benzo [a] pyrene	ND	0.02	ug/g					
Benzo [b] fluoranthene	ND	0.02	ug/g					
Benzo [g,h,i] perylene	ND	0.02	ug/g					
Benzo [k] fluoranthene	ND	0.02	ug/g					
Chrysene	ND	0.02	ug/g					
Dibenzo [a,h] anthracene	ND	0.02	ug/g					
Fluoranthene	ND	0.02	ug/g					
Fluorene	ND	0.02	ug/g					
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g					
1-Methylnaphthalene	ND	0.02	ug/g					
2-Methylnaphthalene	ND	0.02	ug/g					
Methylnaphthalene (1&2)	ND	0.04	ug/g					
Naphthalene	ND	0.01	ug/g					
Phenanthrene	ND	0.02	ug/g					
Pyrene	ND	0.02	ug/g					
Surrogate: 2-Fluorobiphenyl	*0.726*		*%*	*54.5*	*50-140*			
Surrogate: Terphenyl-d14	*0.890*		*%*	*66.8*	*50-140*			
Volatiles								
Acetone	ND	0.50	ug/g					
Benzene	ND	0.02	ug/g					
Bromodichloromethane	ND	0.05	ug/g					
Bromoform	ND	0.05	ug/g					
Bromomethane	ND	0.05	ug/g					
Carbon Tetrachloride	ND	0.05	ug/g					
Chlorobenzene	ND	0.05	ug/g					
Chloroform	ND	0.05	ug/g					
Dibromochloromethane	ND	0.05	ug/g					
Dichlorodifluoromethane	ND	0.05	ug/g					

Method Quality Control: Blank

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

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: 4-Bromofluorobenzene	*8.23*		*%*	*103*	*50-140*			
Surrogate: Dibromofluoromethane	*6.29*		*%*	*78.6*	*50-140*			
Surrogate: Toluene-d8	*8.37*		*%*	*105*	*50-140*			
Benzene	ND	0.02	ug/g					
Ethylbenzene	ND	0.05	ug/g					
Toluene	ND	0.05	ug/g					
m,p-Xylenes	ND	0.05	ug/g					
o-Xylene	ND	0.05	ug/g					
Xylenes, total	ND	0.05	ug/g					
Surrogate: Toluene-d8	*8.37*		*%*	*105*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
SAR	0.80	0.01	N/A	0.84			4.9	30	
Conductivity	434	5	uS/cm	445			2.6	5	
pH	7.54	0.05	pH Units	7.59			0.7	2.3	
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g	ND			NC	30	
F3 PHCs (C16-C34)	ND	8	ug/g	ND			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g	ND			NC	30	
Metals									
Antimony	ND	1.0	ug/g	ND			NC	30	
Arsenic	ND	1.0	ug/g	ND			NC	30	
Barium	23.9	1.0	ug/g	20.7			14.7	30	
Beryllium	ND	0.5	ug/g	ND			NC	30	
Boron	ND	5.0	ug/g	ND			NC	30	
Cadmium	ND	0.5	ug/g	ND			NC	30	
Chromium (VI)	0.3	0.2	ug/g	0.3			10.5	35	
Chromium	15.5	5.0	ug/g	13.7			12.2	30	
Cobalt	2.7	1.0	ug/g	2.4			10.7	30	
Copper	6.1	5.0	ug/g	5.5			11.6	30	
Lead	2.5	1.0	ug/g	2.2			10.1	30	
Mercury	ND	0.1	ug/g	ND			NC	30	
Molybdenum	ND	1.0	ug/g	ND			NC	30	
Nickel	7.6	5.0	ug/g	6.6			13.0	30	
Selenium	ND	1.0	ug/g	ND			NC	30	
Silver	ND	0.3	ug/g	ND			NC	30	
Thallium	ND	1.0	ug/g	ND			NC	30	
Uranium	ND	1.0	ug/g	ND			NC	30	
Vanadium	14.4	10.0	ug/g	13.0			10.3	30	
Zinc	51.5	20.0	ug/g	45.3			12.8	30	
PCBs									

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
PCBs, total	ND	0.05	ug/g	ND			NC	40	
Surrogate: Decachlorobiphenyl	*0.0827*		*%*		*126*	*60-140*			
Physical Characteristics									
% Solids	82.4	0.1	% by Wt.	79.9			3.1	25	
Semi-Volatiles									
Acenaphthene	ND	0.02	ug/g	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g	ND			NC	40	
Anthracene	ND	0.02	ug/g	ND			NC	40	
Benzo [a] anthracene	ND	0.02	ug/g	ND			NC	40	
Benzo [a] pyrene	ND	0.02	ug/g	ND			NC	40	
Benzo [b] fluoranthene	ND	0.02	ug/g	ND			NC	40	
Benzo [g,h,i] perylene	ND	0.02	ug/g	ND			NC	40	
Benzo [k] fluoranthene	ND	0.02	ug/g	ND			NC	40	
Chrysene	ND	0.02	ug/g	ND			NC	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g	ND			NC	40	
Fluoranthene	ND	0.02	ug/g	ND			NC	40	
Fluorene	ND	0.02	ug/g	ND			NC	40	
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g	ND			NC	40	
1-Methylnaphthalene	ND	0.02	ug/g	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g	ND			NC	40	
Naphthalene	ND	0.01	ug/g	ND			NC	40	
Phenanthrene	ND	0.02	ug/g	ND			NC	40	
Pyrene	ND	0.02	ug/g	ND			NC	40	
Surrogate: 2-Fluorobiphenyl	*0.739*		*%*		*50.0*	*50-140*			
Surrogate: Terphenyl-d14	*1.19*		*%*		*80.6*	*50-140*			
Volatiles									
Acetone	ND	0.50	ug/g	ND			NC	50	
Benzene	ND	0.02	ug/g	ND			NC	50	
Bromodichloromethane	ND	0.05	ug/g	ND			NC	50	
Bromoform	ND	0.05	ug/g	ND			NC	50	
Bromomethane	ND	0.05	ug/g	ND			NC	50	

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Carbon Tetrachloride	ND	0.05	ug/g	ND			NC	50	
Chlorobenzene	ND	0.05	ug/g	ND			NC	50	
Chloroform	ND	0.05	ug/g	ND			NC	50	
Dibromochloromethane	ND	0.05	ug/g	ND			NC	50	
Dichlorodifluoromethane	ND	0.05	ug/g	ND			NC	50	
1,2-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,3-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,4-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,1-Dichloroethane	ND	0.05	ug/g	ND			NC	50	
1,2-Dichloroethane	ND	0.05	ug/g	ND			NC	50	
1,1-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
cis-1,2-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
trans-1,2-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
1,2-Dichloropropane	ND	0.05	ug/g	ND			NC	50	
cis-1,3-Dichloropropylene	ND	0.05	ug/g	ND			NC	50	
trans-1,3-Dichloropropylene	ND	0.05	ug/g	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g	ND			NC	50	
Ethylene dibromide (dibromoethane, 1,2-)	ND	0.05	ug/g	ND			NC	50	
Hexane	ND	0.05	ug/g	ND			NC	50	
Methyl Ethyl Ketone (2-Butanone)	ND	0.50	ug/g	ND			NC	50	
Methyl Isobutyl Ketone	ND	0.50	ug/g	ND			NC	50	
Methyl tert-butyl ether	ND	0.05	ug/g	ND			NC	50	
Methylene Chloride	ND	0.05	ug/g	ND			NC	50	
Styrene	ND	0.05	ug/g	ND			NC	50	
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g	ND			NC	50	
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g	ND			NC	50	
Tetrachloroethylene	ND	0.05	ug/g	ND			NC	50	
Toluene	ND	0.05	ug/g	ND			NC	50	
1,1,1-Trichloroethane	ND	0.05	ug/g	ND			NC	50	
1,1,2-Trichloroethane	ND	0.05	ug/g	ND			NC	50	
Trichloroethylene	ND	0.05	ug/g	ND			NC	50	

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Trichlorofluoromethane	ND	0.05	ug/g	ND			NC	50	
Vinyl chloride	ND	0.02	ug/g	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g	ND			NC	50	
o-Xylene	ND	0.05	ug/g	ND			NC	50	
Surrogate: 4-Bromofluorobenzene	*8.62*		*%*		*101*	*50-140*			
Surrogate: Dibromofluoromethane	*6.38*		*%*		*74.6*	*50-140*			
Surrogate: Toluene-d8	*9.32*		*%*		*109*	*50-140*			
Benzene	ND	0.02	ug/g	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g	ND			NC	50	
Toluene	ND	0.05	ug/g	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g	ND			NC	50	
o-Xylene	ND	0.05	ug/g	ND			NC	50	
Surrogate: Toluene-d8	*9.32*		*%*		*109*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	163	7	ug/g	ND	95.0	85-115			
F2 PHCs (C10-C16)	83	4	ug/g	ND	82.6	60-140			
F3 PHCs (C16-C34)	225	8	ug/g	ND	91.6	60-140			
F4 PHCs (C34-C50)	121	6	ug/g	ND	78.1	60-140			
F4G PHCs (gravimetric)	820	50	ug/g	ND	82.0	80-120			
Metals									
Antimony	48.0	1.0	ug/g	ND	95.8	70-130			
Arsenic	47.5	1.0	ug/g	ND	94.4	70-130			
Barium	54.2	1.0	ug/g	8.3	91.8	70-130			
Beryllium	52.0	0.5	ug/g	ND	104	70-130			
Boron	51.7	5.0	ug/g	ND	102	70-130			
Cadmium	48.6	0.5	ug/g	ND	97.1	70-130			
Chromium (VI)	5.2	0.2	ug/g	0.3	78.0	48-112			
Chromium	55.2	5.0	ug/g	5.5	99.4	70-130			
Cobalt	51.4	1.0	ug/g	1.0	101	70-130			
Copper	52.8	5.0	ug/g	ND	101	70-130			
Lead	47.8	1.0	ug/g	ND	93.8	70-130			
Mercury	1.54	0.1	ug/g	ND	103	70-130			
Molybdenum	48.5	1.0	ug/g	ND	96.7	70-130			
Nickel	52.3	5.0	ug/g	ND	99.3	70-130			
Selenium	46.7	1.0	ug/g	ND	92.9	70-130			
Silver	44.7	0.3	ug/g	ND	89.4	70-130			
Thallium	48.6	1.0	ug/g	ND	97.1	70-130			
Uranium	50.3	1.0	ug/g	ND	100	70-130			
Vanadium	54.6	10.0	ug/g	ND	98.8	70-130			
Zinc	63.8	20.0	ug/g	ND	91.3	70-130			
PCBs									
PCBs, total	0.474	0.05	ug/g	ND	90.1	60-140			
Surrogate: Decachlorobiphenyl	*0.0783*		*%*		*119*	*60-140*			
Semi-Volatiles									

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Acenaphthene	0.132	0.02	ug/g	ND	71.4	50-140			
Acenaphthylene	0.112	0.02	ug/g	ND	60.8	50-140			
Anthracene	0.110	0.02	ug/g	ND	59.4	50-140			
Benzo [a] anthracene	0.144	0.02	ug/g	ND	77.9	50-140			
Benzo [a] pyrene	0.107	0.02	ug/g	ND	57.8	50-140			
Benzo [b] fluoranthene	0.141	0.02	ug/g	ND	76.2	50-140			
Benzo [g,h,i] perylene	0.127	0.02	ug/g	ND	68.8	50-140			
Benzo [k] fluoranthene	0.125	0.02	ug/g	ND	67.9	50-140			
Chrysene	0.149	0.02	ug/g	ND	80.7	50-140			
Dibenzo [a,h] anthracene	0.129	0.02	ug/g	ND	70.1	50-140			
Fluoranthene	0.148	0.02	ug/g	ND	80.1	50-140			
Fluorene	0.127	0.02	ug/g	ND	68.7	50-140			
Indeno [1,2,3-cd] pyrene	0.170	0.02	ug/g	ND	92.3	50-140			
1-Methylnaphthalene	0.130	0.02	ug/g	ND	70.2	50-140			
2-Methylnaphthalene	0.149	0.02	ug/g	ND	80.8	50-140			
Naphthalene	0.107	0.01	ug/g	ND	58.1	50-140			
Phenanthrene	0.141	0.02	ug/g	ND	76.5	50-140			
Pyrene	0.151	0.02	ug/g	ND	81.6	50-140			
Surrogate: 2-Fluorobiphenyl	*0.783*		*%*		*53.0*	*50-140*			
Surrogate: Terphenyl-d14	*1.08*		*%*		*72.9*	*50-140*			
Volatiles									
Acetone	6.21	0.50	ug/g	ND	62.1	50-140			
Benzene	4.12	0.02	ug/g	ND	103	60-130			
Bromodichloromethane	3.31	0.05	ug/g	ND	82.8	60-130			
Bromoform	4.71	0.05	ug/g	ND	118	60-130			
Bromomethane	4.11	0.05	ug/g	ND	103	50-140			
Carbon Tetrachloride	3.75	0.05	ug/g	ND	93.9	60-130			
Chlorobenzene	4.17	0.05	ug/g	ND	104	60-130			
Chloroform	3.51	0.05	ug/g	ND	87.8	60-130			
Dibromochloromethane	4.39	0.05	ug/g	ND	110	60-130			
Dichlorodifluoromethane	5.11	0.05	ug/g	ND	128	50-140			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
1,2-Dichlorobenzene	4.51	0.05	ug/g	ND	113	60-130			
1,3-Dichlorobenzene	4.46	0.05	ug/g	ND	111	60-130			
1,4-Dichlorobenzene	4.61	0.05	ug/g	ND	115	60-130			
1,1-Dichloroethane	3.36	0.05	ug/g	ND	84.0	60-130			
1,2-Dichloroethane	3.62	0.05	ug/g	ND	90.4	60-130			
1,1-Dichloroethylene	3.05	0.05	ug/g	ND	76.2	60-130			
cis-1,2-Dichloroethylene	3.18	0.05	ug/g	ND	79.4	60-130			
trans-1,2-Dichloroethylene	3.20	0.05	ug/g	ND	80.0	60-130			
1,2-Dichloropropane	3.94	0.05	ug/g	ND	98.4	60-130			
cis-1,3-Dichloropropylene	3.72	0.05	ug/g	ND	92.9	60-130			
trans-1,3-Dichloropropylene	3.94	0.05	ug/g	ND	98.5	60-130			
Ethylbenzene	4.35	0.05	ug/g	ND	109	60-130			
Ethylene dibromide (dibromoethane, 1,2-)	3.44	0.05	ug/g	ND	86.1	60-130			
Hexane	3.47	0.05	ug/g	ND	86.6	60-130			
Methyl Ethyl Ketone (2-Butanone)	6.44	0.50	ug/g	ND	64.4	50-140			
Methyl Isobutyl Ketone	10.6	0.50	ug/g	ND	106	50-140			
Methyl tert-butyl ether	8.80	0.05	ug/g	ND	88.0	50-140			
Methylene Chloride	3.99	0.05	ug/g	ND	99.8	60-130			
Styrene	4.17	0.05	ug/g	ND	104	60-130			
1,1,1,2-Tetrachloroethane	3.71	0.05	ug/g	ND	92.9	60-130			
1,1,2,2-Tetrachloroethane	3.64	0.05	ug/g	ND	90.9	60-130			
Tetrachloroethylene	4.21	0.05	ug/g	ND	105	60-130			
Toluene	4.34	0.05	ug/g	ND	108	60-130			
1,1,1-Trichloroethane	3.47	0.05	ug/g	ND	86.7	60-130			
1,1,2-Trichloroethane	3.63	0.05	ug/g	ND	90.7	60-130			
Trichloroethylene	3.72	0.05	ug/g	ND	93.1	60-130			
Trichlorofluoromethane	3.18	0.05	ug/g	ND	79.5	50-140			
Vinyl chloride	4.69	0.02	ug/g	ND	117	50-140			
m,p-Xylenes	9.34	0.05	ug/g	ND	117	60-130			
o-Xylene	4.68	0.05	ug/g	ND	117	60-130			
Surrogate: 4-Bromofluorobenzene	*7.78*		*%*		*97.2*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: Dibromofluoromethane	*7.85*		*%*		*98.2*	*50-140*			
Surrogate: Toluene-d8	*8.84*		*%*		*110*	*50-140*			
Benzene	4.12	0.02	ug/g	ND	103	60-130			
Ethylbenzene	4.35	0.05	ug/g	ND	109	60-130			
Toluene	4.34	0.05	ug/g	ND	108	60-130			
m,p-Xylenes	9.34	0.05	ug/g	ND	117	60-130			
o-Xylene	4.68	0.05	ug/g	ND	117	60-130			
Surrogate: Toluene-d8	*8.84*		*%*		*110*	*50-140*			

Qualifier Notes:

Sample Qualifiers :

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

Applies to Samples: BH4-25-AU1

Sample Data Revisions:

None

Certificate of Analysis

Report Date: 08-Aug-2025

Client: **Paterson Group Consulting Engineers (Ottawa)**

Order Date: 21-Jul-2025

Client PO: 63622

Project Description: PE3966

Work Order Revisions / Comments:

Revision 1 - This report includes additional BTEX data on samples 1 and 7 that was missing on original report.

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis unlesss otherwise noted.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.

- F1 range corrected for BTEX.

- F2 to F3 ranges corrected for appropriate PAHs where available.

- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.

- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.

- When reported, data for F4G has been processed using a silica gel cleanup.

PARACEL LABORATORIES LTD.

Paracel ID: 2530089

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2530084	

Client Name: Paterson
Contact Name: Jesse Andrechek
Address: 9 Auriga Drive
Telephone: 613-286-7381

Project Ref: PE3966.
Quote #:
PO #: 63622
E-mail: jandrechek@patersongroup.ca, cderidder@patersongroup.ca, mdury@patersongroup.ca

Page 1 of 1

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

☒ REG 153/04 ☒ REG 406/19
☐ Table 1 ☐ Agri/Other ☐ Med/Fine
☐ Table 2 ☐ Res/Park ☐ Coarse
☐ Table 3 ☐ Ind/Comm
☐ Table___
For RSC: ☐ Yes ☐ No

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

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

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Field Filtered	Sample Taken: Date	Sample Taken: Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	EC/SAR	pH	PCBs	
1	BH1-25-SS2A	S	/	2	/	07/18/25	/	X		X	X	X	X		X	X		
2	BH1-25-SS3																	
3	BH2-25-SS2B															X		
4	BH2-25-SS6															X		
5	BH3-25-SS3																	
6	BH3-25-SS5B																	
7	BH4-25-AU1									X		X	X					
8	BH4-25-SS4															X		
9	BH4-25-SS5B								X	X							X	
10	DUP1																	

Comments:

Method of Delivery: SWIFT

Relinquished By (Sign): CdR	Received at Depot:	Received at Lab: WTJ	Verified By: JM
Relinquished By (Print): Carson de Ridder	Date/Time:	Date/Time: 21/07/25; 15:40	Date/Time: July 21/25 1720
Date/Time: July 21st, 2025.	Temperature: °C	Temperature: 18.8°C	pH Verified: ☐ By:

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Certificate of Analysis

Paterson Group Consulting Engineers (Ottawa)
9 Auriga Drive
Ottawa, ON K2E 7T9
Attn: Jesse Andrechek

Client PO: 63644
Project: PE3966
Custody:

Report Date: 29-Jul-2025
Order Date: 23-Jul-2025

Order #: 2530308

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

Paracel ID	Client ID
2530308-01	BH4-25-SS9
2530308-02	BH5-25-AU1
2530308-03	BH5-25-SS2B
2530308-04	BH5-25-SS3B
2530308-05	BH6-25-AU1
2530308-06	BH6-25-SS5
2530308-07	BH6-25-SS9
2530308-08	DUP2

Approved By:

Mark Foto, M.Sc.
Laboratory Director

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	25-Jul-25	25-Jul-25
Chromium, hexavalent - soil	MOE E3056 - Extraction, colourimetric	25-Jul-25	25-Jul-25
Conductivity	MOE E3138 - probe @25 °C, water ext	25-Jul-25	25-Jul-25
Mercury by CVAA	EPA 7471B - CVAA, digestion	25-Jul-25	25-Jul-25
PCBs, total	SW846 8082A - GC-ECD	24-Jul-25	24-Jul-25
PHC F1	CWS Tier 1 - P&T GC-FID	25-Jul-25	25-Jul-25
PHC F4G (gravimetric)	CWS Tier 1 - Extraction Gravimetric	28-Jul-25	28-Jul-25
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	25-Jul-25	25-Jul-25
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	25-Jul-25	25-Jul-25
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	24-Jul-25	27-Jul-25
REG 153: VOCs by P&T GC/MS	EPA 8260 - P&T GC-MS	25-Jul-25	25-Jul-25
SAR	Calculated	25-Jul-25	25-Jul-25
Solids, %	CWS Tier 1 - Gravimetric	24-Jul-25	25-Jul-25

	Client ID:	BH4-25-SS9	BH5-25-AU1	BH5-25-SS2B	BH5-25-SS3B	-	-
	Sample Date:	21-Jul-25 09:00	22-Jul-25 09:00	22-Jul-25 09:00	22-Jul-25 09:00		
	Sample ID:	2530308-01	2530308-02	2530308-03	2530308-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Physical Characteristics							
% Solids	0.1 % by Wt.	90.2	73.6	72.5	86.6	-	-
General Inorganics							
SAR	0.01 N/A	0.18	10.4	4.49	1.85	-	-
Conductivity	5 uS/cm	332	1480	1610	637	-	-
Metals							
Antimony	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Arsenic	1.0 ug/g	1.5	3.6	3.0	1.8	-	-
Barium	1.0 ug/g	86.0	358	342	67.7	-	-
Beryllium	0.5 ug/g	<0.5	0.9	0.9	<0.5	-	-
Boron	5.0 ug/g	8.0	5.2	6.4	9.3	-	-
Cadmium	0.5 ug/g	<0.5	<0.5	<0.5	<0.5	-	-
Chromium (VI)	0.2 ug/g	-	0.7	-	-	-	-
Chromium	5.0 ug/g	10.8	128	87.4	19.3	-	-
Cobalt	1.0 ug/g	4.8	26.1	19.7	6.2	-	-
Copper	5.0 ug/g	9.7	60.6	45.7	14.8	-	-
Lead	1.0 ug/g	2.8	8.3	6.7	3.8	-	-
Mercury	0.1 ug/g	-	<0.1	-	-	-	-
Molybdenum	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Nickel	5.0 ug/g	7.8	74.4	49.6	12.9	-	-
Selenium	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Silver	0.3 ug/g	<0.3	<0.3	<0.3	<0.3	-	-
Thallium	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Uranium	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Vanadium	10.0 ug/g	19.5	116	96.3	33.5	-	-
Zinc	20.0 ug/g	<20.0	132	117	25.7	-	-

	Client ID:	BH4-25-SS9	BH5-25-AU1	BH5-25-SS2B	BH5-25-SS3B	-	-
	Sample Date:	21-Jul-25 09:00	22-Jul-25 09:00	22-Jul-25 09:00	22-Jul-25 09:00		
	Sample ID:	2530308-01	2530308-02	2530308-03	2530308-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Volatiles							
Acetone	0.50 ug/g	-	-	-	<0.50	-	-
Benzene	0.02 ug/g	-	-	-	<0.02	-	-
Bromodichloromethane	0.05 ug/g	-	-	-	<0.05	-	-
Bromoform	0.05 ug/g	-	-	-	<0.05	-	-
Bromomethane	0.05 ug/g	-	-	-	<0.05	-	-
Carbon Tetrachloride	0.05 ug/g	-	-	-	<0.05	-	-
Chlorobenzene	0.05 ug/g	-	-	-	<0.05	-	-
Chloroform	0.05 ug/g	-	-	-	<0.05	-	-
Dibromochloromethane	0.05 ug/g	-	-	-	<0.05	-	-
Dichlorodifluoromethane	0.05 ug/g	-	-	-	<0.05	-	-
1,2-Dichlorobenzene	0.05 ug/g	-	-	-	<0.05	-	-
1,3-Dichlorobenzene	0.05 ug/g	-	-	-	<0.05	-	-
1,4-Dichlorobenzene	0.05 ug/g	-	-	-	<0.05	-	-
1,1-Dichloroethane	0.05 ug/g	-	-	-	<0.05	-	-
1,2-Dichloroethane	0.05 ug/g	-	-	-	<0.05	-	-
1,1-Dichloroethylene	0.05 ug/g	-	-	-	<0.05	-	-
cis-1,2-Dichloroethylene	0.05 ug/g	-	-	-	<0.05	-	-
trans-1,2-Dichloroethylene	0.05 ug/g	-	-	-	<0.05	-	-
1,2-Dichloropropane	0.05 ug/g	-	-	-	<0.05	-	-
cis-1,3-Dichloropropylene	0.05 ug/g	-	-	-	<0.05	-	-
trans-1,3-Dichloropropylene	0.05 ug/g	-	-	-	<0.05	-	-
1,3-Dichloropropene, total	0.05 ug/g	-	-	-	<0.05	-	-
Ethylene dibromide (dibromoethane,	0.05 ug/g	-	-	-	<0.05	-	-
Ethylbenzene	0.05 ug/g	-	-	-	<0.05	-	-
Hexane	0.05 ug/g	-	-	-	<0.05	-	-

	Client ID:	BH4-25-SS9	BH5-25-AU1	BH5-25-SS2B	BH5-25-SS3B	-	-
	Sample Date:	21-Jul-25 09:00	22-Jul-25 09:00	22-Jul-25 09:00	22-Jul-25 09:00		
	Sample ID:	2530308-01	2530308-02	2530308-03	2530308-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Volatiles							
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g	-	-	-	<0.50	-	-
Methyl Isobutyl Ketone	0.50 ug/g	-	-	-	<0.50	-	-
Methyl tert-butyl ether	0.05 ug/g	-	-	-	<0.05	-	-
Methylene Chloride	0.05 ug/g	-	-	-	<0.05	-	-
Styrene	0.05 ug/g	-	-	-	<0.05	-	-
1,1,1,2-Tetrachloroethane	0.05 ug/g	-	-	-	<0.05	-	-
1,1,2,2-Tetrachloroethane	0.05 ug/g	-	-	-	<0.05	-	-
Tetrachloroethylene	0.05 ug/g	-	-	-	<0.05	-	-
Toluene	0.05 ug/g	-	-	-	<0.05	-	-
1,1,1-Trichloroethane	0.05 ug/g	-	-	-	<0.05	-	-
1,1,2-Trichloroethane	0.05 ug/g	-	-	-	<0.05	-	-
Trichloroethylene	0.05 ug/g	-	-	-	<0.05	-	-
Trichlorofluoromethane	0.05 ug/g	-	-	-	<0.05	-	-
Vinyl chloride	0.02 ug/g	-	-	-	<0.02	-	-
m,p-Xylenes	0.05 ug/g	-	-	-	<0.05	-	-
o-Xylene	0.05 ug/g	-	-	-	<0.05	-	-
Xylenes, total	0.05 ug/g	-	-	-	<0.05	-	-
4-Bromofluorobenzene	Surrogate	-	-	-	97.6%	-	-
Toluene-d8	Surrogate	-	-	-	113%	-	-
Dibromofluoromethane	Surrogate	-	-	-	115%	-	-
Benzene	0.02 ug/g	<0.02	<0.02	<0.02	-	-	-
Ethylbenzene	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
Toluene	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
m,p-Xylenes	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
o-Xylene	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-

	Client ID:	BH4-25-SS9	BH5-25-AU1	BH5-25-SS2B	BH5-25-SS3B	-	-
	Sample Date:	21-Jul-25 09:00	22-Jul-25 09:00	22-Jul-25 09:00	22-Jul-25 09:00		
	Sample ID:	2530308-01	2530308-02	2530308-03	2530308-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Volatiles							
Xylenes, total	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
Toluene-d8	Surrogate	111%	119%	118%	-	-	-
Hydrocarbons							
F1 PHCs (C6-C10)	7 ug/g	<7	<7	<7	<7	-	-
F2 PHCs (C10-C16)	4 ug/g	<4	<4	<4	<4	-	-
F3 PHCs (C16-C34)	8 ug/g	<8	35	106	<8	-	-
F4 PHCs (C34-C50)	6 ug/g	<6	84	346 [1]	<6	-	-
F4G PHCs (gravimetric)	50 ug/g	-	-	662	-	-	-
Semi-Volatiles							
Acenaphthene	0.02 ug/g	-	<0.02	-	<0.02	-	-
Acenaphthylene	0.02 ug/g	-	<0.02	-	<0.02	-	-
Anthracene	0.02 ug/g	-	<0.02	-	<0.02	-	-
Benzo [a] anthracene	0.02 ug/g	-	<0.02	-	<0.02	-	-
Benzo [a] pyrene	0.02 ug/g	-	<0.02	-	<0.02	-	-
Benzo [b] fluoranthene	0.02 ug/g	-	<0.02	-	<0.02	-	-
Benzo [g,h,i] perylene	0.02 ug/g	-	<0.02	-	<0.02	-	-
Benzo [k] fluoranthene	0.02 ug/g	-	<0.02	-	<0.02	-	-
Chrysene	0.02 ug/g	-	<0.02	-	<0.02	-	-
Dibenzo [a,h] anthracene	0.02 ug/g	-	<0.02	-	<0.02	-	-
Fluoranthene	0.02 ug/g	-	<0.02	-	<0.02	-	-
Fluorene	0.02 ug/g	-	<0.02	-	<0.02	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g	-	<0.02	-	<0.02	-	-
1-Methylnaphthalene	0.02 ug/g	-	<0.02	-	<0.02	-	-
2-Methylnaphthalene	0.02 ug/g	-	<0.02	-	<0.02	-	-
Methylnaphthalene (1&2)	0.04 ug/g	-	<0.04	-	<0.04	-	-

	Client ID:	BH4-25-SS9	BH5-25-AU1	BH5-25-SS2B	BH5-25-SS3B	-	-
	Sample Date:	21-Jul-25 09:00	22-Jul-25 09:00	22-Jul-25 09:00	22-Jul-25 09:00		
	Sample ID:	2530308-01	2530308-02	2530308-03	2530308-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Semi-Volatiles							
Naphthalene	0.01 ug/g	-	<0.01	-	<0.01	-	-
Phenanthrene	0.02 ug/g	-	<0.02	-	<0.02	-	-
Pyrene	0.02 ug/g	-	<0.02	-	<0.02	-	-
2-Fluorobiphenyl	Surrogate	-	66.4%	-	51.1%	-	-
Terphenyl-d14	Surrogate	-	75.0%	-	67.3%	-	-

	Client ID:	BH6-25-AU1	BH6-25-SS5	BH6-25-SS9	DUP2	-	-
	Sample Date:	22-Jul-25 09:00	22-Jul-25 09:00	22-Jul-25 09:00	22-Jul-25 09:00		
	Sample ID:	2530308-05	2530308-06	2530308-07	2530308-08		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Physical Characteristics							
% Solids	0.1 % by Wt.	81.8	90.6	91.0	71.6	-	-
General Inorganics							
SAR	0.01 N/A	19.8	0.96	0.30	5.42	-	-
Conductivity	5 uS/cm	2530	320	249	1830	-	-
Metals							
Antimony	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Arsenic	1.0 ug/g	2.3	1.7	1.3	2.7	-	-
Barium	1.0 ug/g	275	88.5	99.1	387	-	-
Beryllium	0.5 ug/g	0.5	<0.5	<0.5	0.8	-	-
Boron	5.0 ug/g	6.2	12.6	9.7	<5.0	-	-
Cadmium	0.5 ug/g	<0.5	<0.5	<0.5	<0.5	-	-
Chromium (VI)	0.2 ug/g	0.6	-	-	-	-	-
Chromium	5.0 ug/g	61.2	13.5	12.2	116	-	-
Cobalt	1.0 ug/g	11.7	6.3	5.3	24.4	-	-
Copper	5.0 ug/g	23.1	12.4	8.9	55.1	-	-
Lead	1.0 ug/g	22.4	4.3	3.5	6.4	-	-
Mercury	0.1 ug/g	0.1	-	-	-	-	-
Molybdenum	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Nickel	5.0 ug/g	31.4	10.3	8.6	66.0	-	-
Selenium	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Silver	0.3 ug/g	<0.3	<0.3	<0.3	<0.3	-	-
Thallium	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Uranium	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Vanadium	10.0 ug/g	67.7	19.5	21.9	107	-	-
Zinc	20.0 ug/g	80.0	<20.0	<20.0	130	-	-

	Client ID:	BH6-25-AU1	BH6-25-SS5	BH6-25-SS9	DUP2	-	-
	Sample Date:	22-Jul-25 09:00	22-Jul-25 09:00	22-Jul-25 09:00	22-Jul-25 09:00		
	Sample ID:	2530308-05	2530308-06	2530308-07	2530308-08		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Volatiles							
Acetone	0.50 ug/g	-	<0.50	-	-	-	-
Benzene	0.02 ug/g	-	<0.02	-	-	-	-
Bromodichloromethane	0.05 ug/g	-	<0.05	-	-	-	-
Bromoform	0.05 ug/g	-	<0.05	-	-	-	-
Bromomethane	0.05 ug/g	-	<0.05	-	-	-	-
Carbon Tetrachloride	0.05 ug/g	-	<0.05	-	-	-	-
Chlorobenzene	0.05 ug/g	-	<0.05	-	-	-	-
Chloroform	0.05 ug/g	-	<0.05	-	-	-	-
Dibromochloromethane	0.05 ug/g	-	<0.05	-	-	-	-
Dichlorodifluoromethane	0.05 ug/g	-	<0.05	-	-	-	-
1,2-Dichlorobenzene	0.05 ug/g	-	<0.05	-	-	-	-
1,3-Dichlorobenzene	0.05 ug/g	-	<0.05	-	-	-	-
1,4-Dichlorobenzene	0.05 ug/g	-	<0.05	-	-	-	-
1,1-Dichloroethane	0.05 ug/g	-	<0.05	-	-	-	-
1,2-Dichloroethane	0.05 ug/g	-	<0.05	-	-	-	-
1,1-Dichloroethylene	0.05 ug/g	-	<0.05	-	-	-	-
cis-1,2-Dichloroethylene	0.05 ug/g	-	<0.05	-	-	-	-
trans-1,2-Dichloroethylene	0.05 ug/g	-	<0.05	-	-	-	-
1,2-Dichloropropane	0.05 ug/g	-	<0.05	-	-	-	-
cis-1,3-Dichloropropylene	0.05 ug/g	-	<0.05	-	-	-	-
trans-1,3-Dichloropropylene	0.05 ug/g	-	<0.05	-	-	-	-
1,3-Dichloropropene, total	0.05 ug/g	-	<0.05	-	-	-	-
Ethylbenzene	0.05 ug/g	-	<0.05	-	-	-	-
Ethylene dibromide (dibromoethane,	0.05 ug/g	-	<0.05	-	-	-	-
Hexane	0.05 ug/g	-	<0.05	-	-	-	-

	Client ID:	BH6-25-AU1	BH6-25-SS5	BH6-25-SS9	DUP2	-	-
	Sample Date:	22-Jul-25 09:00	22-Jul-25 09:00	22-Jul-25 09:00	22-Jul-25 09:00		
	Sample ID:	2530308-05	2530308-06	2530308-07	2530308-08		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Volatiles							
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g	-	<0.50	-	-	-	-
Methyl Isobutyl Ketone	0.50 ug/g	-	<0.50	-	-	-	-
Methyl tert-butyl ether	0.05 ug/g	-	<0.05	-	-	-	-
Methylene Chloride	0.05 ug/g	-	<0.05	-	-	-	-
Styrene	0.05 ug/g	-	<0.05	-	-	-	-
1,1,1,2-Tetrachloroethane	0.05 ug/g	-	<0.05	-	-	-	-
1,1,2,2-Tetrachloroethane	0.05 ug/g	-	<0.05	-	-	-	-
Tetrachloroethylene	0.05 ug/g	-	<0.05	-	-	-	-
Toluene	0.05 ug/g	-	<0.05	-	-	-	-
1,1,1-Trichloroethane	0.05 ug/g	-	<0.05	-	-	-	-
1,1,2-Trichloroethane	0.05 ug/g	-	<0.05	-	-	-	-
Trichloroethylene	0.05 ug/g	-	<0.05	-	-	-	-
Trichlorofluoromethane	0.05 ug/g	-	<0.05	-	-	-	-
Vinyl chloride	0.02 ug/g	-	<0.02	-	-	-	-
m,p-Xylenes	0.05 ug/g	-	<0.05	-	-	-	-
o-Xylene	0.05 ug/g	-	<0.05	-	-	-	-
Xylenes, total	0.05 ug/g	-	<0.05	-	-	-	-
4-Bromofluorobenzene	Surrogate	-	96.1%	-	-	-	-
Toluene-d8	Surrogate	-	110%	-	-	-	-
Dibromofluoromethane	Surrogate	-	111%	-	-	-	-
Benzene	0.02 ug/g	<0.02	-	<0.02	<0.02	-	-
Ethylbenzene	0.05 ug/g	<0.05	-	<0.05	<0.05	-	-
Toluene	0.05 ug/g	<0.05	-	<0.05	<0.05	-	-
m,p-Xylenes	0.05 ug/g	<0.05	-	<0.05	<0.05	-	-
o-Xylene	0.05 ug/g	<0.05	-	<0.05	<0.05	-	-

Certificate of Analysis

Report Date: 29-Jul-2025

Client: **Paterson Group Consulting Engineers (Ottawa)**

Order Date: 23-Jul-2025

Client PO: **63644**

Project Description: **PE3966**

	Client ID:	BH6-25-AU1	BH6-25-SS5	BH6-25-SS9	DUP2	-	-
	Sample Date:	22-Jul-25 09:00	22-Jul-25 09:00	22-Jul-25 09:00	22-Jul-25 09:00		
	Sample ID:	2530308-05	2530308-06	2530308-07	2530308-08		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Volatiles							
Xylenes, total	0.05 ug/g	<0.05	-	<0.05	<0.05	-	-
Toluene-d8	Surrogate	115%	-	110%	117%	-	-
Hydrocarbons							
F1 PHCs (C6-C10)	7 ug/g	<7	<7	<7	<7	-	-
F2 PHCs (C10-C16)	4 ug/g	<4	<4	<4	<4	-	-
F3 PHCs (C16-C34)	8 ug/g	43	<8	<8	<8	-	-
F4 PHCs (C34-C50)	6 ug/g	209 [1]	<6	<6	<6	-	-
F4G PHCs (gravimetric)	50 ug/g	293	-	-	-	-	-
Semi-Volatiles							
Acenaphthene	0.02 ug/g	<0.02	<0.02	-	-	-	-
Acenaphthylene	0.02 ug/g	<0.02	<0.02	-	-	-	-
Anthracene	0.02 ug/g	<0.02	<0.02	-	-	-	-
Benzo [a] anthracene	0.02 ug/g	<0.02	<0.02	-	-	-	-
Benzo [a] pyrene	0.02 ug/g	<0.02	<0.02	-	-	-	-
Benzo [b] fluoranthene	0.02 ug/g	<0.02	<0.02	-	-	-	-
Benzo [g,h,i] perylene	0.02 ug/g	<0.02	<0.02	-	-	-	-
Benzo [k] fluoranthene	0.02 ug/g	<0.02	<0.02	-	-	-	-
Chrysene	0.02 ug/g	<0.02	<0.02	-	-	-	-
Dibenzo [a,h] anthracene	0.02 ug/g	<0.02	<0.02	-	-	-	-
Fluoranthene	0.02 ug/g	<0.02	<0.02	-	-	-	-
Fluorene	0.02 ug/g	<0.02	<0.02	-	-	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g	<0.02	<0.02	-	-	-	-
1-Methylnaphthalene	0.02 ug/g	<0.02	<0.02	-	-	-	-
2-Methylnaphthalene	0.02 ug/g	<0.02	<0.02	-	-	-	-
Methylnaphthalene (1&2)	0.04 ug/g	<0.04	<0.04	-	-	-	-

	Client ID:	BH6-25-AU1	BH6-25-SS5	BH6-25-SS9	DUP2	-	-
	Sample Date:	22-Jul-25 09:00	22-Jul-25 09:00	22-Jul-25 09:00	22-Jul-25 09:00		
	Sample ID:	2530308-05	2530308-06	2530308-07	2530308-08		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Semi-Volatiles							
Naphthalene	0.01 ug/g	<0.01	<0.01	-	-	-	-
Phenanthrene	0.02 ug/g	<0.02	<0.02	-	-	-	-
Pyrene	0.02 ug/g	<0.02	<0.02	-	-	-	-
2-Fluorobiphenyl	Surrogate	58.0%	54.1%	-	-	-	-
Terphenyl-d14	Surrogate	76.4%	63.7%	-	-	-	-
PCBs							
PCBs, total	0.05 ug/g	-	<0.05	-	-	-	-
Decachlorobiphenyl	Surrogate	-	101%	-	-	-	-

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics								
Conductivity	ND	5	uS/cm					
Hydrocarbons								
F1 PHCs (C6-C10)	ND	7	ug/g					
F2 PHCs (C10-C16)	ND	4	ug/g					
F3 PHCs (C16-C34)	ND	8	ug/g					
F4 PHCs (C34-C50)	ND	6	ug/g					
F4G PHCs (gravimetric)	ND	50	ug/g					
Metals								
Antimony	ND	1.0	ug/g					
Arsenic	ND	1.0	ug/g					
Barium	ND	1.0	ug/g					
Beryllium	ND	0.5	ug/g					
Boron	ND	5.0	ug/g					
Cadmium	ND	0.5	ug/g					
Chromium (VI)	ND	0.2	ug/g					
Chromium	ND	5.0	ug/g					
Cobalt	ND	1.0	ug/g					
Copper	ND	5.0	ug/g					
Lead	ND	1.0	ug/g					
Mercury	ND	0.1	ug/g					
Molybdenum	ND	1.0	ug/g					
Nickel	ND	5.0	ug/g					
Selenium	ND	1.0	ug/g					
Silver	ND	0.3	ug/g					
Thallium	ND	1.0	ug/g					
Uranium	ND	1.0	ug/g					
Vanadium	ND	10.0	ug/g					
Zinc	ND	20.0	ug/g					
PCBs								
PCBs, total	ND	0.05	ug/g					
Surrogate: Decachlorobiphenyl	*0.0601*		*%*	*120*	*60-140*			
Semi-Volatiles								

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Acenaphthene	ND	0.02	ug/g					
Acenaphthylene	ND	0.02	ug/g					
Anthracene	ND	0.02	ug/g					
Benzo [a] anthracene	ND	0.02	ug/g					
Benzo [a] pyrene	ND	0.02	ug/g					
Benzo [b] fluoranthene	ND	0.02	ug/g					
Benzo [g,h,i] perylene	ND	0.02	ug/g					
Benzo [k] fluoranthene	ND	0.02	ug/g					
Chrysene	ND	0.02	ug/g					
Dibenzo [a,h] anthracene	ND	0.02	ug/g					
Fluoranthene	ND	0.02	ug/g					
Fluorene	ND	0.02	ug/g					
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g					
1-Methylnaphthalene	ND	0.02	ug/g					
2-Methylnaphthalene	ND	0.02	ug/g					
Methylnaphthalene (1&2)	ND	0.04	ug/g					
Naphthalene	ND	0.01	ug/g					
Phenanthrene	ND	0.02	ug/g					
Pyrene	ND	0.02	ug/g					
Surrogate: 2-Fluorobiphenyl	*0.715*		*%*	*53.6*	*50-140*			
Surrogate: Terphenyl-d14	*0.960*		*%*	*72.0*	*50-140*			
Volatiles								
Acetone	ND	0.50	ug/g					
Benzene	ND	0.02	ug/g					
Bromodichloromethane	ND	0.05	ug/g					
Bromoform	ND	0.05	ug/g					
Bromomethane	ND	0.05	ug/g					
Carbon Tetrachloride	ND	0.05	ug/g					
Chlorobenzene	ND	0.05	ug/g					
Chloroform	ND	0.05	ug/g					
Dibromochloromethane	ND	0.05	ug/g					
Dichlorodifluoromethane	ND	0.05	ug/g					

Method Quality Control: Blank

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

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: 4-Bromofluorobenzene	*7.24*		*%*	*90.5*	*50-140*			
Surrogate: Dibromofluoromethane	*8.64*		*%*	*108*	*50-140*			
Surrogate: Toluene-d8	*8.32*		*%*	*104*	*50-140*			
Benzene	ND	0.02	ug/g					
Ethylbenzene	ND	0.05	ug/g					
Toluene	ND	0.05	ug/g					
m,p-Xylenes	ND	0.05	ug/g					
o-Xylene	ND	0.05	ug/g					
Xylenes, total	ND	0.05	ug/g					
Surrogate: Toluene-d8	*8.32*		*%*	*104*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
SAR	0.47	0.01	N/A	0.45			4.4	30	
Conductivity	280	5	uS/cm	277			1.1	5	
Hydrocarbons									
F2 PHCs (C10-C16)	ND	4	ug/g	ND			NC	30	
F3 PHCs (C16-C34)	ND	8	ug/g	ND			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g	ND			NC	30	
Metals									
Antimony	ND	1.0	ug/g	ND			NC	30	
Arsenic	3.7	1.0	ug/g	3.6			2.9	30	
Barium	362	1.0	ug/g	358			1.2	30	
Beryllium	0.9	0.5	ug/g	0.9			2.0	30	
Boron	5.1	5.0	ug/g	5.2			1.2	30	
Cadmium	ND	0.5	ug/g	ND			NC	30	
Chromium (VI)	ND	0.2	ug/g	ND			NC	35	
Chromium	126	5.0	ug/g	128			1.9	30	
Cobalt	26.1	1.0	ug/g	26.1			0.1	30	
Copper	59.9	5.0	ug/g	60.6			1.2	30	
Lead	8.6	1.0	ug/g	8.3			3.0	30	
Mercury	ND	0.1	ug/g	ND			NC	30	
Molybdenum	ND	1.0	ug/g	ND			NC	30	
Nickel	73.1	5.0	ug/g	74.4			1.8	30	
Selenium	ND	1.0	ug/g	ND			NC	30	
Silver	ND	0.3	ug/g	ND			NC	30	
Thallium	ND	1.0	ug/g	ND			NC	30	
Uranium	ND	1.0	ug/g	ND			NC	30	
Vanadium	111	10.0	ug/g	116			4.3	30	
Zinc	128	20.0	ug/g	132			3.7	30	
PCBs									
PCBs, total	ND	0.05	ug/g	ND			NC	40	
Surrogate: Decachlorobiphenyl	*0.0827*		*%*		*126*	*60-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Physical Characteristics									
% Solids	70.7	0.1	% by Wt.	71.0			0.5	25	
Semi-Volatiles									
Acenaphthene	ND	0.02	ug/g	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g	ND			NC	40	
Anthracene	ND	0.02	ug/g	ND			NC	40	
Benzo [a] anthracene	ND	0.02	ug/g	ND			NC	40	
Benzo [a] pyrene	ND	0.02	ug/g	ND			NC	40	
Benzo [b] fluoranthene	ND	0.02	ug/g	ND			NC	40	
Benzo [g,h,i] perylene	ND	0.02	ug/g	ND			NC	40	
Benzo [k] fluoranthene	ND	0.02	ug/g	ND			NC	40	
Chrysene	ND	0.02	ug/g	ND			NC	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g	ND			NC	40	
Fluoranthene	ND	0.02	ug/g	ND			NC	40	
Fluorene	ND	0.02	ug/g	ND			NC	40	
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g	ND			NC	40	
1-Methylnaphthalene	ND	0.02	ug/g	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g	ND			NC	40	
Naphthalene	ND	0.01	ug/g	ND			NC	40	
Phenanthrene	ND	0.02	ug/g	ND			NC	40	
Pyrene	ND	0.02	ug/g	ND			NC	40	
Surrogate: 2-Fluorobiphenyl	*0.875*		*%*		*53.3*	*50-140*			
Surrogate: Terphenyl-d14	*1.14*		*%*		*69.1*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	149	7	ug/g	ND	86.5	85-115			
F2 PHCs (C10-C16)	95	4	ug/g	ND	97.6	60-140			
F3 PHCs (C16-C34)	253	8	ug/g	ND	106	60-140			
F4 PHCs (C34-C50)	157	6	ug/g	ND	103	60-140			
F4G PHCs (gravimetric)	860	50	ug/g	ND	86.0	80-120			
Metals									
Antimony	46.4	1.0	ug/g	ND	92.8	70-130			
Arsenic	52.3	1.0	ug/g	1.4	102	70-130			
Barium	199	1.0	ug/g	143	111	70-130			
Beryllium	51.9	0.5	ug/g	ND	103	70-130			
Boron	53.6	5.0	ug/g	ND	103	70-130			
Cadmium	47.7	0.5	ug/g	ND	95.3	70-130			
Chromium (VI)	4.8	0.2	ug/g	ND	97.0	66-118			
Chromium	107	5.0	ug/g	51.3	112	70-130			
Cobalt	64.6	1.0	ug/g	10.5	108	70-130			
Copper	76.7	5.0	ug/g	24.2	105	70-130			
Lead	52.5	1.0	ug/g	3.3	98.3	70-130			
Mercury	1.62	0.1	ug/g	ND	108	70-130			
Molybdenum	51.6	1.0	ug/g	ND	103	70-130			
Nickel	82.8	5.0	ug/g	29.8	106	70-130			
Selenium	49.4	1.0	ug/g	ND	98.5	70-130			
Silver	42.7	0.3	ug/g	ND	85.4	70-130			
Thallium	48.3	1.0	ug/g	ND	96.3	70-130			
Uranium	53.2	1.0	ug/g	ND	106	70-130			
Vanadium	102	10.0	ug/g	46.3	112	70-130			
Zinc	101	20.0	ug/g	52.9	96.5	70-130			
PCBs									
PCBs, total	0.474	0.05	ug/g	ND	90.1	60-140			
Surrogate: Decachlorobiphenyl	*0.0783*		*%*		*119*	*60-140*			
Semi-Volatiles									

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Acenaphthene	0.104	0.02	ug/g	ND	50.6	50-140			
Acenaphthylene	0.103	0.02	ug/g	ND	50.4	50-140			
Anthracene	0.104	0.02	ug/g	ND	50.6	50-140			
Benzo [a] anthracene	0.119	0.02	ug/g	ND	57.8	50-140			
Benzo [a] pyrene	0.103	0.02	ug/g	ND	50.2	50-140			
Benzo [b] fluoranthene	0.127	0.02	ug/g	ND	62.0	50-140			
Benzo [g,h,i] perylene	0.109	0.02	ug/g	ND	53.3	50-140			
Benzo [k] fluoranthene	0.135	0.02	ug/g	ND	65.7	50-140			
Chrysene	0.119	0.02	ug/g	ND	57.8	50-140			
Dibenzo [a,h] anthracene	0.111	0.02	ug/g	ND	54.0	50-140			
Fluoranthene	0.121	0.02	ug/g	ND	59.1	50-140			
Fluorene	0.103	0.02	ug/g	ND	50.2	50-140			
Indeno [1,2,3-cd] pyrene	0.118	0.02	ug/g	ND	57.3	50-140			
1-Methylnaphthalene	0.103	0.02	ug/g	ND	50.1	50-140			
2-Methylnaphthalene	0.130	0.02	ug/g	ND	63.1	50-140			
Naphthalene	0.103	0.01	ug/g	ND	50.1	50-140			
Phenanthrene	0.123	0.02	ug/g	ND	60.2	50-140			
Pyrene	0.122	0.02	ug/g	ND	59.5	50-140			
Surrogate: 2-Fluorobiphenyl	*0.725*		*%*		*44.2*	*50-140*			*S-GC*
Surrogate: Terphenyl-d14	*1.05*		*%*		*63.8*	*50-140*			
Volatiles									
Acetone	8.71	0.50	ug/g	ND	87.1	50-140			
Benzene	3.83	0.02	ug/g	ND	95.8	60-130			
Bromodichloromethane	3.16	0.05	ug/g	ND	79.0	60-130			
Bromoform	2.65	0.05	ug/g	ND	66.3	60-130			
Bromomethane	4.56	0.05	ug/g	ND	114	50-140			
Carbon Tetrachloride	3.10	0.05	ug/g	ND	77.6	60-130			
Chlorobenzene	3.25	0.05	ug/g	ND	81.2	60-130			
Chloroform	3.15	0.05	ug/g	ND	78.9	60-130			
Dibromochloromethane	3.25	0.05	ug/g	ND	81.3	60-130			
Dichlorodifluoromethane	3.03	0.05	ug/g	ND	75.7	50-140			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
1,2-Dichlorobenzene	3.42	0.05	ug/g	ND	85.6	60-130			
1,3-Dichlorobenzene	3.39	0.05	ug/g	ND	84.6	60-130			
1,4-Dichlorobenzene	3.41	0.05	ug/g	ND	85.2	60-130			
1,1-Dichloroethane	3.49	0.05	ug/g	ND	87.3	60-130			
1,2-Dichloroethane	3.09	0.05	ug/g	ND	77.3	60-130			
1,1-Dichloroethylene	3.51	0.05	ug/g	ND	87.8	60-130			
cis-1,2-Dichloroethylene	3.02	0.05	ug/g	ND	75.6	60-130			
trans-1,2-Dichloroethylene	3.34	0.05	ug/g	ND	83.5	60-130			
1,2-Dichloropropane	3.59	0.05	ug/g	ND	89.8	60-130			
cis-1,3-Dichloropropylene	3.06	0.05	ug/g	ND	76.6	60-130			
trans-1,3-Dichloropropylene	2.86	0.05	ug/g	ND	71.6	60-130			
Ethylbenzene	3.65	0.05	ug/g	ND	91.2	60-130			
Ethylene dibromide (dibromoethane, 1,2-)	2.95	0.05	ug/g	ND	73.7	60-130			
Hexane	4.03	0.05	ug/g	ND	101	60-130			
Methyl Ethyl Ketone (2-Butanone)	10.8	0.50	ug/g	ND	108	50-140			
Methyl Isobutyl Ketone	9.61	0.50	ug/g	ND	96.1	50-140			
Methyl tert-butyl ether	11.0	0.05	ug/g	ND	110	50-140			
Methylene Chloride	3.80	0.05	ug/g	ND	95.1	60-130			
Styrene	3.05	0.05	ug/g	ND	76.4	60-130			
1,1,1,2-Tetrachloroethane	3.15	0.05	ug/g	ND	78.8	60-130			
1,1,2,2-Tetrachloroethane	2.85	0.05	ug/g	ND	71.3	60-130			
Tetrachloroethylene	3.32	0.05	ug/g	ND	83.1	60-130			
Toluene	3.69	0.05	ug/g	ND	92.2	60-130			
1,1,1-Trichloroethane	2.97	0.05	ug/g	ND	74.3	60-130			
1,1,2-Trichloroethane	3.21	0.05	ug/g	ND	80.2	60-130			
Trichloroethylene	3.58	0.05	ug/g	ND	89.6	60-130			
Trichlorofluoromethane	4.10	0.05	ug/g	ND	103	50-140			
Vinyl chloride	4.35	0.02	ug/g	ND	109	50-140			
m,p-Xylenes	7.48	0.05	ug/g	ND	93.5	60-130			
o-Xylene	3.87	0.05	ug/g	ND	96.8	60-130			
Surrogate: 4-Bromofluorobenzene	*7.22*		*%*		*90.3*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: Dibromofluoromethane	*8.40*		*%*		*105*	*50-140*			
Surrogate: Toluene-d8	*8.21*		*%*		*103*	*50-140*			
Benzene	3.83	0.02	ug/g	ND	95.8	60-130			
Ethylbenzene	3.65	0.05	ug/g	ND	91.2	60-130			
Toluene	3.69	0.05	ug/g	ND	92.2	60-130			
m,p-Xylenes	7.48	0.05	ug/g	ND	93.5	60-130			
o-Xylene	3.87	0.05	ug/g	ND	96.8	60-130			
Surrogate: Toluene-d8	*8.21*		*%*		*103*	*50-140*			

Qualifier Notes:

Sample Qualifiers :

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

Applies to Samples: BH5-25-SS2B, BH6-25-AU1

QC Qualifiers:

S-GC Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the remaining surrogate.

Sample Data Revisions:

None

Certificate of Analysis

Report Date: 29-Jul-2025

Client: **Paterson Group Consulting Engineers (Ottawa)**

Order Date: 23-Jul-2025

Client PO: 63644

Project Description: PE3966

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Soil results are reported on a dry weight basis unlesss otherwise noted.

Where %Solids is reported, moisture loss includes the loss of volatile hydrocarbons.

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.

- F1 range corrected for BTEX.

- F2 to F3 ranges corrected for appropriate PAHs where available.

- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.

- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.

- When reported, data for F4G has been processed using a silica gel cleanup.

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Paracel ID: 2530308

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
25 30 308	

Client Name: Paterson
Contact Name: Jesse Andrechek
Address: 9 Auriga Drive
Telephone: 613-226-7381

Project Ref: PE3966
Quote #:
PO #: 63644
E-mail: jandrechek, mdurcy, cderidder } @patersongroup.ca

Page 1 of 1

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

☒ REG 153/04 ☒ REG 406/19
☐ Table 1 ☐ Agri/Other ☐ Med/Fine
☐ Table 2 ☐ Res/Park ☐ Coarse
☐ Table 3 ☐ Ind/Comm
☐ Table ___
For RSC: ☐ Yes ☐ No

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

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

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Field Filtered	Sample Taken: Date	Sample Taken: Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	EC/SAR	PCBs		
1	BH4-25-SS9	S	/	2		07/21/25	/	X			X				X			
2	BH5-25-AU1					07/22/25				X		X	X					
3	BH5-25-SS2B																	
4	BH5-25-SS3B								X	X								
5	BH6-25-AU1									X		X	X					
6	BH6-25-SS5								X	X						X		
7	BH6-25-SS9																	
8	DUP2																	
9																		
10																		

Required Analysis

Comments:

Method of Delivery: Paracel Courier

Relinquished By (Sign): CdR	Received at Depot:	Received at Lab:	Verified By:
Relinquished By (Print): Carson de Ridder	Date/Time:	Date/Time: Jul 23/1630	Date/Time: Jul 24/13:15
Date/Time: July 23rd, 2025	Temperature: °C	Temperature: 16.4	pH Verified: ☐ By:

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Certificate of Analysis

Paterson Group Consulting Engineers (Ottawa)
9 Auriga Drive
Ottawa, ON K2E 7T9
Attn: Jesse Andrechek

Client PO: 63709
Project: PE3966
Custody:

Report Date: 5-Aug-2025
Order Date: 30-Jul-2025

Order #: 2531332

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

Paracel ID	Client ID
2531332-01	BH2-17-GW
2531332-02	BH4-17-GW
2531332-03	BH6-25-GW
2531332-04	Dup-1

Approved By:

Mark Foto, M.Sc.
Laboratory Director

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Metals, ICP-MS	EPA 200.8 - ICP-MS	31-Jul-25	31-Jul-25
PCBs, total	EPA 608 - GC-ECD	1-Aug-25	1-Aug-25
PHC F1	CWS Tier 1 - P&T GC-FID	31-Jul-25	31-Jul-25
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	31-Jul-25	31-Jul-25
REG 153: PAHs by GC-MS	EPA 625 - GC-MS, extraction	31-Jul-25	31-Jul-25
REG 153: VOCs by P&T GC/MS	EPA 624 - P&T GC-MS	31-Jul-25	31-Jul-25

Certificate of Analysis

Report Date: 05-Aug-2025

Client: **Paterson Group Consulting Engineers (Ottawa)**

Order Date: 30-Jul-2025

Client PO: 63709

Project Description: PE3966

	Client ID:	BH2-17-GW	BH4-17-GW	BH6-25-GW	Dup-1	-	-
	Sample Date:	30-Jul-25 09:00	30-Jul-25 09:00	30-Jul-25 09:00	30-Jul-25 09:00		
	Sample ID:	2531332-01	2531332-02	2531332-03	2531332-04		
	Matrix:	Ground Water	Ground Water	Ground Water	Ground Water		
	MDL/Units						
Metals							
Antimony	0.5 ug/L	<0.5	-	-	-	-	-
Arsenic	1 ug/L	<1	-	-	-	-	-
Barium	1 ug/L	70	-	-	-	-	-
Beryllium	0.5 ug/L	<0.5	-	-	-	-	-
Boron	10 ug/L	53	-	-	-	-	-
Cadmium	0.1 ug/L	<0.1	-	-	-	-	-
Chromium	1 ug/L	<1	-	-	-	-	-
Cobalt	0.5 ug/L	3.0	-	-	-	-	-
Copper	0.5 ug/L	11.4	-	-	-	-	-
Lead	0.1 ug/L	<0.1	-	-	-	-	-
Molybdenum	0.5 ug/L	1.5	-	-	-	-	-
Nickel	1 ug/L	11	-	-	-	-	-
Selenium	1 ug/L	<1	-	-	-	-	-
Silver	0.1 ug/L	2.2	-	-	-	-	-
Sodium	200 ug/L	727000	-	-	-	-	-
Thallium	0.1 ug/L	<0.1	-	-	-	-	-
Uranium	0.1 ug/L	1.2	-	-	-	-	-
Vanadium	0.5 ug/L	1.4	-	-	-	-	-
Zinc	5 ug/L	12	-	-	-	-	-
Volatiles							
Acetone	5.0 ug/L	<5.0	<5.0	<5.0	<5.0	-	-
Benzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Bromodichloromethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Bromoform	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Bromomethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-

	Client ID:	BH2-17-GW	BH4-17-GW	BH6-25-GW	Dup-1	-	-
	Sample Date:	30-Jul-25 09:00	30-Jul-25 09:00	30-Jul-25 09:00	30-Jul-25 09:00		
	Sample ID:	2531332-01	2531332-02	2531332-03	2531332-04		
	Matrix:	Ground Water	Ground Water	Ground Water	Ground Water		
	MDL/Units						
Volatiles							
Carbon Tetrachloride	0.2 ug/L	<0.2	<0.2	<0.2	<0.2	-	-
Chlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Chloroform	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Dibromochloromethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Dichlorodifluoromethane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0	-	-
1,2-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,3-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,4-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,2-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
cis-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
trans-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,2-Dichloropropane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
cis-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
trans-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,3-Dichloropropene, total	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Ethylene dibromide (dibromoethane,	0.2 ug/L	<0.2	<0.2	<0.2	<0.2	-	-
Ethylbenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Hexane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0	-	-
Methyl Ethyl Ketone (2-Butanone)	5.0 ug/L	<5.0	<5.0	<5.0	<5.0	-	-
Methyl Isobutyl Ketone	5.0 ug/L	<5.0	<5.0	<5.0	<5.0	-	-
Methyl tert-butyl ether	2.0 ug/L	<2.0	<2.0	<2.0	<2.0	-	-
Methylene Chloride	5.0 ug/L	<5.0	<5.0	<5.0	<5.0	-	-
Styrene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-

Certificate of Analysis

Report Date: 05-Aug-2025

Client: **Paterson Group Consulting Engineers (Ottawa)**

Order Date: 30-Jul-2025

Client PO: **63709**

Project Description: **PE3966**

	Client ID:	BH2-17-GW	BH4-17-GW	BH6-25-GW	Dup-1	-	-
	Sample Date:	30-Jul-25 09:00	30-Jul-25 09:00	30-Jul-25 09:00	30-Jul-25 09:00		
	Sample ID:	2531332-01	2531332-02	2531332-03	2531332-04		
	Matrix:	Ground Water	Ground Water	Ground Water	Ground Water		
	MDL/Units						
Volatiles							
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1,2,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Tetrachloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Toluene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1,1-Trichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1,2-Trichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Trichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Trichlorofluoromethane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0	-	-
Vinyl chloride	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
m,p-Xylenes	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
o-Xylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Xylenes, total	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
4-Bromofluorobenzene	Surrogate	98.6%	95.6%	96.7%	96.7%	-	-
Dibromofluoromethane	Surrogate	88.4%	91.0%	89.3%	86.4%	-	-
Toluene-d8	Surrogate	103%	101%	101%	102%	-	-
Hydrocarbons							
F1 PHCs (C6-C10)	25 ug/L	-	<25	<25	-	-	-
F2 PHCs (C10-C16)	100 ug/L	-	<100	<100	-	-	-
F3 PHCs (C16-C34)	100 ug/L	-	<100	<100	-	-	-
F4 PHCs (C34-C50)	100 ug/L	-	<100	<100	-	-	-
Semi-Volatiles							
Acenaphthene	0.05 ug/L	<0.05	-	<0.05	-	-	-
Acenaphthylene	0.05 ug/L	<0.05	-	<0.05	-	-	-
Anthracene	0.01 ug/L	<0.01	-	<0.01	-	-	-
Benzo [a] anthracene	0.01 ug/L	<0.01	-	<0.01	-	-	-

Certificate of Analysis

Report Date: 05-Aug-2025

Client: **Paterson Group Consulting Engineers (Ottawa)**

Order Date: 30-Jul-2025

Client PO: 63709

Project Description: PE3966

	Client ID:	BH2-17-GW	BH4-17-GW	BH6-25-GW	Dup-1	-	-
	Sample Date:	30-Jul-25 09:00	30-Jul-25 09:00	30-Jul-25 09:00	30-Jul-25 09:00		
	Sample ID:	2531332-01	2531332-02	2531332-03	2531332-04		
	Matrix:	Ground Water	Ground Water	Ground Water	Ground Water		
	MDL/Units						
Semi-Volatiles							
Benzo [a] pyrene	0.01 ug/L	<0.01	-	<0.01	-	-	-
Benzo [b] fluoranthene	0.05 ug/L	<0.05	-	<0.05	-	-	-
Benzo [g,h,i] perylene	0.05 ug/L	<0.05	-	<0.05	-	-	-
Benzo [k] fluoranthene	0.05 ug/L	<0.05	-	<0.05	-	-	-
Chrysene	0.05 ug/L	<0.05	-	<0.05	-	-	-
Dibenzo [a,h] anthracene	0.05 ug/L	<0.05	-	<0.05	-	-	-
Fluoranthene	0.01 ug/L	<0.01	-	<0.01	-	-	-
Fluorene	0.05 ug/L	<0.05	-	<0.05	-	-	-
Indeno [1,2,3-cd] pyrene	0.05 ug/L	<0.05	-	<0.05	-	-	-
1-Methylnaphthalene	0.05 ug/L	<0.05	-	<0.05	-	-	-
2-Methylnaphthalene	0.05 ug/L	<0.05	-	<0.05	-	-	-
Methylnaphthalene (1&2)	0.10 ug/L	<0.10	-	<0.10	-	-	-
Naphthalene	0.05 ug/L	<0.05	-	<0.05	-	-	-
Phenanthrene	0.05 ug/L	<0.05	-	<0.05	-	-	-
Pyrene	0.01 ug/L	<0.01	-	<0.01	-	-	-
2-Fluorobiphenyl	Surrogate	59.6%	-	58.7%	-	-	-
Terphenyl-d14	Surrogate	76.3%	-	76.3%	-	-	-
PCBs							
PCBs, total	0.05 ug/L	-	<0.05	-	-	-	-
Decachlorobiphenyl	Surrogate	-	83.5%	-	-	-	-

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons								
F1 PHCs (C6-C10)	ND	25	ug/L					
F2 PHCs (C10-C16)	ND	100	ug/L					
F3 PHCs (C16-C34)	ND	100	ug/L					
F4 PHCs (C34-C50)	ND	100	ug/L					
Metals								
Antimony	ND	0.5	ug/L					
Arsenic	ND	1	ug/L					
Barium	ND	1	ug/L					
Beryllium	ND	0.5	ug/L					
Boron	ND	10	ug/L					
Cadmium	ND	0.1	ug/L					
Chromium	ND	1	ug/L					
Cobalt	ND	0.5	ug/L					
Copper	ND	0.5	ug/L					
Lead	ND	0.1	ug/L					
Molybdenum	ND	0.5	ug/L					
Nickel	ND	1	ug/L					
Selenium	ND	1	ug/L					
Silver	ND	0.1	ug/L					
Sodium	ND	200	ug/L					
Thallium	ND	0.1	ug/L					
Uranium	ND	0.1	ug/L					
Vanadium	ND	0.5	ug/L					
Zinc	ND	5	ug/L					
PCBs								
PCBs, total	ND	0.05	ug/L					
Surrogate: Decachlorobiphenyl	*0.236*		*%*	*94.4*	*60-140*			
Volatiles								
Acetone	ND	5.0	ug/L					
Benzene	ND	0.5	ug/L					
Bromodichloromethane	ND	0.5	ug/L					
Bromoform	ND	0.5	ug/L					

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Bromomethane	ND	0.5	ug/L					
Carbon Tetrachloride	ND	0.2	ug/L					
Chlorobenzene	ND	0.5	ug/L					
Chloroform	ND	0.5	ug/L					
Dibromochloromethane	ND	0.5	ug/L					
Dichlorodifluoromethane	ND	1.0	ug/L					
1,2-Dichlorobenzene	ND	0.5	ug/L					
1,3-Dichlorobenzene	ND	0.5	ug/L					
1,4-Dichlorobenzene	ND	0.5	ug/L					
1,1-Dichloroethane	ND	0.5	ug/L					
1,2-Dichloroethane	ND	0.5	ug/L					
1,1-Dichloroethylene	ND	0.5	ug/L					
cis-1,2-Dichloroethylene	ND	0.5	ug/L					
trans-1,2-Dichloroethylene	ND	0.5	ug/L					
1,2-Dichloropropane	ND	0.5	ug/L					
cis-1,3-Dichloropropylene	ND	0.5	ug/L					
trans-1,3-Dichloropropylene	ND	0.5	ug/L					
1,3-Dichloropropene, total	ND	0.5	ug/L					
Ethylbenzene	ND	0.5	ug/L					
Ethylene dibromide (dibromoethane, 1,2-)	ND	0.2	ug/L					
Hexane	ND	1.0	ug/L					
Methyl Ethyl Ketone (2-Butanone)	ND	5.0	ug/L					
Methyl Isobutyl Ketone	ND	5.0	ug/L					
Methyl tert-butyl ether	ND	2.0	ug/L					
Methylene Chloride	ND	5.0	ug/L					
Styrene	ND	0.5	ug/L					
1,1,1,2-Tetrachloroethane	ND	0.5	ug/L					
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L					
Tetrachloroethylene	ND	0.5	ug/L					
Toluene	ND	0.5	ug/L					
1,1,1-Trichloroethane	ND	0.5	ug/L					
1,1,2-Trichloroethane	ND	0.5	ug/L					
Trichloroethylene	ND	0.5	ug/L					

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Trichlorofluoromethane	ND	1.0	ug/L					
Vinyl chloride	ND	0.5	ug/L					
m,p-Xylenes	ND	0.5	ug/L					
o-Xylene	ND	0.5	ug/L					
Xylenes, total	ND	0.5	ug/L					
Surrogate: 4-Bromofluorobenzene	*80.7*		*%*	*101*	*50-140*			
Surrogate: Dibromofluoromethane	*62.5*		*%*	*78.1*	*50-140*			
Surrogate: Toluene-d8	*81.0*		*%*	*101*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	25	ug/L	ND			NC	30	
Metals									
Antimony	ND	0.5	ug/L	ND			NC	20	
Arsenic	ND	1	ug/L	ND			NC	20	
Barium	68.5	1	ug/L	70.5			2.9	20	
Beryllium	ND	0.5	ug/L	ND			NC	20	
Boron	49	10	ug/L	53			6.6	20	
Cadmium	ND	0.1	ug/L	ND			NC	20	
Chromium	ND	1	ug/L	ND			NC	20	
Cobalt	3.09	0.5	ug/L	2.98			3.4	20	
Copper	11.8	0.5	ug/L	11.4			3.9	20	
Lead	ND	0.1	ug/L	ND			NC	20	
Molybdenum	1.52	0.5	ug/L	1.51			0.5	20	
Nickel	10.9	1	ug/L	10.8			1.1	20	
Selenium	ND	1	ug/L	ND			NC	20	
Silver	1.86	0.1	ug/L	2.18			15.7	20	
Sodium	714000	2000	ug/L	727000			1.7	20	
Thallium	ND	0.1	ug/L	ND			NC	20	
Uranium	1.2	0.1	ug/L	1.2			0.7	20	
Vanadium	1.51	0.5	ug/L	1.42			6.3	20	
Zinc	12	5	ug/L	12			2.5	20	
Volatiles									
Acetone	ND	5.0	ug/L	ND			NC	30	
Benzene	ND	0.5	ug/L	ND			NC	30	
Bromodichloromethane	1.14	0.5	ug/L	1.02			11.1	30	
Bromoform	ND	0.5	ug/L	ND			NC	30	
Bromomethane	ND	0.5	ug/L	ND			NC	30	
Carbon Tetrachloride	ND	0.2	ug/L	ND			NC	30	
Chlorobenzene	ND	0.5	ug/L	ND			NC	30	
Chloroform	1.56	0.5	ug/L	1.33			15.9	30	

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Dibromochloromethane	1.48	0.5	ug/L	1.16			24.2	30	
Dichlorodifluoromethane	ND	1.0	ug/L	ND			NC	30	
1,2-Dichlorobenzene	ND	0.5	ug/L	ND			NC	30	
1,3-Dichlorobenzene	ND	0.5	ug/L	ND			NC	30	
1,4-Dichlorobenzene	ND	0.5	ug/L	ND			NC	30	
1,1-Dichloroethane	ND	0.5	ug/L	ND			NC	30	
1,2-Dichloroethane	ND	0.5	ug/L	ND			NC	30	
1,1-Dichloroethylene	ND	0.5	ug/L	ND			NC	30	
cis-1,2-Dichloroethylene	ND	0.5	ug/L	ND			NC	30	
trans-1,2-Dichloroethylene	ND	0.5	ug/L	ND			NC	30	
1,2-Dichloropropane	ND	0.5	ug/L	ND			NC	30	
cis-1,3-Dichloropropylene	ND	0.5	ug/L	ND			NC	30	
trans-1,3-Dichloropropylene	ND	0.5	ug/L	ND			NC	30	
Ethylbenzene	ND	0.5	ug/L	ND			NC	30	
Ethylene dibromide (dibromoethane, 1,2-)	ND	0.2	ug/L	ND			NC	30	
Hexane	ND	1.0	ug/L	ND			NC	30	
Methyl Ethyl Ketone (2-Butanone)	ND	5.0	ug/L	ND			NC	30	
Methyl Isobutyl Ketone	ND	5.0	ug/L	ND			NC	30	
Methyl tert-butyl ether	ND	2.0	ug/L	ND			NC	30	
Methylene Chloride	ND	5.0	ug/L	ND			NC	30	
Styrene	ND	0.5	ug/L	ND			NC	30	
1,1,1,2-Tetrachloroethane	ND	0.5	ug/L	ND			NC	30	
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L	ND			NC	30	
Tetrachloroethylene	ND	0.5	ug/L	ND			NC	30	
Toluene	ND	0.5	ug/L	ND			NC	30	
1,1,1-Trichloroethane	ND	0.5	ug/L	ND			NC	30	
1,1,2-Trichloroethane	ND	0.5	ug/L	ND			NC	30	
Trichloroethylene	ND	0.5	ug/L	ND			NC	30	
Trichlorofluoromethane	ND	1.0	ug/L	ND			NC	30	
Vinyl chloride	ND	0.5	ug/L	ND			NC	30	
m,p-Xylenes	ND	0.5	ug/L	ND			NC	30	

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
o-Xylene	ND	0.5	ug/L	ND			NC	30	
Surrogate: 4-Bromofluorobenzene	*80.4*		*%*		*100*	*50-140*			
Surrogate: Dibromofluoromethane	*68.6*		*%*		*85.7*	*50-140*			
Surrogate: Toluene-d8	*82.6*		*%*		*103*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	1720	25	ug/L	ND	100	85-115			
F2 PHCs (C10-C16)	1600	100	ug/L	ND	100	60-140			
F3 PHCs (C16-C34)	4130	100	ug/L	ND	105	60-140			
F4 PHCs (C34-C50)	2460	100	ug/L	ND	99.1	60-140			
Metals									
Antimony	41.1	0.5	ug/L	ND	81.4	80-120			
Arsenic	46.5	1	ug/L	ND	92.8	80-120			
Barium	115	1	ug/L	70.5	89.2	80-120			
Beryllium	33.7	0.5	ug/L	ND	67.3	80-120			QM-07
Boron	76	10	ug/L	53	46.4	80-120			QM-07
Cadmium	39.3	0.1	ug/L	ND	78.6	80-120			QM-07
Chromium	51.7	1	ug/L	ND	103	80-120			
Cobalt	50.8	0.5	ug/L	2.98	95.7	80-120			
Copper	52.3	0.5	ug/L	11.4	81.9	80-120			
Lead	30.5	0.1	ug/L	ND	60.8	80-120			QM-07
Molybdenum	51.5	0.5	ug/L	1.51	100	80-120			
Nickel	54.4	1	ug/L	10.8	87.2	80-120			
Selenium	41.6	1	ug/L	ND	82.8	80-120			
Silver	36.4	0.1	ug/L	2.18	68.4	80-120			QM-07
Sodium	9430	200	ug/L	ND	94.3	80-120			
Thallium	35.6	0.1	ug/L	0.10	71.1	80-120			QM-07
Uranium	33.9	0.1	ug/L	1.2	65.5	80-120			QM-07
Vanadium	56.8	0.5	ug/L	1.42	111	80-120			
Zinc	44	5	ug/L	12	63.7	80-120			QM-07
PCBs									
PCBs, total	0.794	0.05	ug/L	ND	79.4	65-135			
Surrogate: Decachlorobiphenyl	*0.244*		*%*		*97.7*	*60-140*			
Volatiles									
Acetone	74.2	5.0	ug/L	ND	74.2	50-140			
Benzene	41.7	0.5	ug/L	ND	104	60-130			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Bromodichloromethane	39.2	0.5	ug/L	ND	98.1	60-130			
Bromoform	38.8	0.5	ug/L	ND	96.9	60-130			
Bromomethane	48.0	0.5	ug/L	ND	120	50-140			
Carbon Tetrachloride	40.3	0.2	ug/L	ND	101	60-130			
Chlorobenzene	44.0	0.5	ug/L	ND	110	60-130			
Chloroform	42.5	0.5	ug/L	ND	106	60-130			
Dibromochloromethane	41.0	0.5	ug/L	ND	102	60-130			
Dichlorodifluoromethane	48.4	1.0	ug/L	ND	121	50-140			
1,2-Dichlorobenzene	40.2	0.5	ug/L	ND	101	60-130			
1,3-Dichlorobenzene	41.9	0.5	ug/L	ND	105	60-130			
1,4-Dichlorobenzene	40.8	0.5	ug/L	ND	102	60-130			
1,1-Dichloroethane	44.2	0.5	ug/L	ND	110	60-130			
1,2-Dichloroethane	40.3	0.5	ug/L	ND	101	60-130			
1,1-Dichloroethylene	47.6	0.5	ug/L	ND	119	60-130			
cis-1,2-Dichloroethylene	44.0	0.5	ug/L	ND	110	60-130			
trans-1,2-Dichloroethylene	46.0	0.5	ug/L	ND	115	60-130			
1,2-Dichloropropane	41.2	0.5	ug/L	ND	103	60-130			
cis-1,3-Dichloropropylene	36.4	0.5	ug/L	ND	91.0	60-130			
trans-1,3-Dichloropropylene	37.6	0.5	ug/L	ND	93.9	60-130			
Ethylbenzene	42.2	0.5	ug/L	ND	106	60-130			
Ethylene dibromide (dibromoethane, 1,2-)	35.6	0.2	ug/L	ND	88.9	60-130			
Hexane	38.3	1.0	ug/L	ND	95.7	60-130			
Methyl Ethyl Ketone (2-Butanone)	88.3	5.0	ug/L	ND	88.3	50-140			
Methyl Isobutyl Ketone	81.5	5.0	ug/L	ND	81.5	50-140			
Methyl tert-butyl ether	97.5	2.0	ug/L	ND	97.5	50-140			
Methylene Chloride	48.6	5.0	ug/L	ND	121	60-130			
Styrene	40.8	0.5	ug/L	ND	102	60-130			
1,1,1,2-Tetrachloroethane	40.3	0.5	ug/L	ND	101	60-130			
1,1,2,2-Tetrachloroethane	34.0	0.5	ug/L	ND	85.0	60-130			
Tetrachloroethylene	44.6	0.5	ug/L	ND	112	60-130			
Toluene	45.3	0.5	ug/L	ND	113	60-130			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
1,1,1-Trichloroethane	42.8	0.5	ug/L	ND	107	60-130			
1,1,2-Trichloroethane	35.4	0.5	ug/L	ND	88.5	60-130			
Trichloroethylene	34.1	0.5	ug/L	ND	85.2	60-130			
Trichlorofluoromethane	49.9	1.0	ug/L	ND	125	60-130			
Vinyl chloride	41.4	0.5	ug/L	ND	103	50-140			
m,p-Xylenes	84.9	0.5	ug/L	ND	106	60-130			
o-Xylene	42.0	0.5	ug/L	ND	105	60-130			
Surrogate: 4-Bromofluorobenzene	*76.2*		*%*		*95.3*	*50-140*			
Surrogate: Dibromofluoromethane	*79.2*		*%*		*99.0*	*50-140*			
Surrogate: Toluene-d8	*81.5*		*%*		*102*	*50-140*			

Qualifier Notes:

QC Qualifiers:

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

Sample Data Revisions:

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

CCME PHC additional information:

- The method for the analysis of PHCs complies with the Reference Method for the CWS PHC and is validated for use in the laboratory. All prescribed quality criteria identified in the method has been met.

- F1 range corrected for BTEX.

- F2 to F3 ranges corrected for appropriate PAHs where available.

- The gravimetric heavy hydrocarbons (F4G) are not to be added to C6 to C50 hydrocarbons.

- In the case where F4 and F4G are both reported, the greater of the two results is to be used for comparison to CWS PHC criteria.

- When reported, data for F4G has been processed using a silica gel cleanup.

PARACEL LABORATORIES LTD.

Paracel ID: 2531332

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

Client Name: Paterson Group	Project Ref: PE3966
Contact Name:	Quote #:
Address: 9 Auriga Dr.	PO #: 63709
Telephone: (613) 226-7381	E-mail: jandrecheck@patersongroup.ca cgreen@patersongroup.ca

Page 1 of 1

Turnaround Time

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

☑ REG 153/04 ☐ REG 406/19

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

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

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

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken Date	Sample Taken Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	PCBs
1	BH2-17-GW	GW		3	07/30/2025			X	X	X	X	X		
2	BH4-17-GW	↓		4	↓		X	X						X
3	BH6-25-GW	↓		4	↓		X	X	X					
4	DUP-1	↓		2	↓			X						
5														
6														
7														
8														
9														
10														

Comments: Just metals by ICP for BH2-17-GW

Method of Delivery: Paracel Courier

Relinquished By (Sign):	Received By Driver/Depot:	Received at Lab: KTJ	Verified By: JM
Relinquished By (Print): Christopher Green	Date/Time:	Date/Time: 30/07/25 16:55	Date/Time: 31/7/25 1014
Date/Time: 07/30/2025	Temperature: °C	Temperature: 12.1°C	pH Verified: ☐ By:

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Certificate of Analysis

Paterson Group Consulting Engineers

154 Colonnade Road South
Nepean, ON K2E 7J5
Attn: Mark D'Arcy

Client PO: 21478
Project: PE3966
Custody: 111561

Report Date: 3-Mar-2017
Order Date: 27-Feb-2017

Order #: 1709090

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

Paracel ID	Client ID
1709090-01	BH1-SS5
1709090-02	BH2-SS4
1709090-03	BH4-SS4

Approved By:

Mark Foto, M.Sc.
Lab Supervisor

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	1-Mar-17	1-Mar-17
PHC F1	CWS Tier 1 - P&T GC-FID	1-Mar-17	1-Mar-17
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	28-Feb-17	28-Feb-17
Solids, %	Gravimetric, calculation	2-Mar-17	2-Mar-17

Certificate of Analysis

Client: Paterson Group Consulting Engineers

Client PO: 21478

Report Date: 03-Mar-2017

Order Date: 27-Feb-2017

Project Description: PE3966

	Client ID:	BH1-SS5	BH2-SS4	BH4-SS4	-
	Sample Date:	25-Feb-17	25-Feb-17	25-Feb-17	-
	Sample ID:	1709090-01	1709090-02	1709090-03	-
	MDL/Units	Soil	Soil	Soil	-
Physical Characteristics					
% Solids	0.1 % by Wt.	91.1	92.4	58.3	-
Volatiles					
Benzene	0.02 ug/g dry	<0.02	<0.02	<0.02	-
Ethylbenzene	0.05 ug/g dry	<0.05	<0.05	<0.05	-
Toluene	0.05 ug/g dry	<0.05	<0.05	<0.05	-
m,p-Xylenes	0.05 ug/g dry	<0.05	<0.05	<0.05	-
o-Xylene	0.05 ug/g dry	<0.05	<0.05	<0.05	-
Xylenes, total	0.05 ug/g dry	<0.05	<0.05	<0.05	-
Toluene-d8	Surrogate	88.4%	85.5%	82.5%	-
Hydrocarbons					
F1 PHCs (C6-C10)	7 ug/g dry	<7	<7	<7	-
F2 PHCs (C10-C16)	4 ug/g dry	<4	<4	<4	-
F3 PHCs (C16-C34)	8 ug/g dry	<8	<8	<8	-
F4 PHCs (C34-C50)	6 ug/g dry	<6	<6	<6	-

Certificate of Analysis
Client: Paterson Group Consulting Engineers
Client PO: 21478

Report Date: 03-Mar-2017
Order Date: 27-Feb-2017
Project Description: PE3966

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
Volatiles									
Benzene	ND	0.02	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: Toluene-d8	*2.68*		*ug/g*		*83.8*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND				40	
F2 PHCs (C10-C16)	2290	4	ug/g dry	2600			12.5	30	
F3 PHCs (C16-C34)	975	8	ug/g dry	1090			11.3	30	
F4 PHCs (C34-C50)	ND	6	ug/g dry	ND				30	
Physical Characteristics									
% Solids	91.5	0.1	% by Wt.	91.1			0.5	25	
Volatiles									
Benzene	ND	0.02	ug/g dry	ND				50	
Ethylbenzene	ND	0.05	ug/g dry	ND				50	
Toluene	0.086	0.05	ug/g dry	ND			0.0	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND				50	
o-Xylene	ND	0.05	ug/g dry	ND				50	
Surrogate: Toluene-d8	*1.43*		*ug/g dry*		*83.1*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	190	7	ug/g		95.0	80-120			
Volatiles									
Benzene	3.22	0.02	ug/g		80.4	60-130			
Ethylbenzene	4.55	0.05	ug/g		114	60-130			
Toluene	4.33	0.05	ug/g		108	60-130			
m,p-Xylenes	9.45	0.05	ug/g		118	60-130			
o-Xylene	4.88	0.05	ug/g		122	60-130			
Surrogate: Toluene-d8	*2.61*		*ug/g*		*81.7*	*50-140*			

Qualifier Notes:

None

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

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

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

CCME PHC additional information:

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

Paracel ID: 1709090

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e. paracel@paracellabs.com

Chain of Custody
(Lab Use Only)
№ 111561

Page __ of __

Client Name: PATTERSON GROUP INC	Project Reference: PE3966	**Turnaround Time:**
Contact Name: MARK D'ARCY	Quote #	☐ 1 Day ☐ 3 Day
Address: 154 COLONNADE ROAD SOUTH	PO # 21478	☐ 2 Day ☒ Regular
Telephone: (613) 226-7381	Email Address: MDARCY@PATTERSONGROUP.CA	Date Required:

Criteria: ☒ O. Reg. 153/04 (As Amended) Table 3 ☐ RSC Filing ☐ O. Reg. 558/00 ☐ PWQO ☐ CCME ☐ SUB (Storm) ☐ SUB (Sanitary) Municipality: _____ ☐ Other: _____

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

Required Analyses

	Paracel Order Number: 1709090	Matrix	Air Volume	# of Containers	Sample Taken Date	Sample Taken Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)							
	Sample ID/Location Name																			
1	BH1-SS5	S	/	2	Feb. 25/17		X							120+Vial						
2	BH2-SS4	"		"	"		X							↓						
3	BH4-SS4	"		"	"		X													
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Comments:

Method of Delivery: Hand

Relinquished By (Sign):	Received by Driver/Depot: T. Sloose	Received at Lab: L. Lavoie	Verified By: Rachel Subject
Relinquished By (Print): SEAN LOUGHRIDGE	Date/Time: 27/02/17 12:05	Date/Time: Feb 27/17 4:05pm	Date/Time: Feb 27/17
Date/Time: Feb. 25, 2017	Temperature: ____ °C	Temperature: 8.1 °C	pH Verified ☒ By: N/A 4:57

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Certificate of Analysis

Paterson Group Consulting Engineers

154 Colonnade Road South
Nepean, ON K2E 7J5
Attn: Mark D'Arcy

Client PO: 21646
Project: PE3966
Custody: 111557

Report Date: 8-Mar-2017
Order Date: 3-Mar-2017

Order #: 1709437

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

Paracel ID	Client ID
1709437-01	BH1-GW1
1709437-02	BH2-GW1
1709437-03	BH4-GW1

Approved By:

Mark Foto, M.Sc.
Lab Supervisor

Certificate of Analysis
Client: Paterson Group Consulting Engineers
Client PO: 21646

Report Date: 08-Mar-2017
Order Date: 3-Mar-2017
Project Description: PE3966

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 624 - P&T GC-MS	7-Mar-17	7-Mar-17
PHC F1	CWS Tier 1 - P&T GC-FID	7-Mar-17	7-Mar-17
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	6-Mar-17	7-Mar-17
REG 153: VOCs by P&T GC/MS	EPA 624 - P&T GC-MS	7-Mar-17	7-Mar-17

Certificate of Analysis
Client: Paterson Group Consulting Engineers
Client PO: 21646

Report Date: 08-Mar-2017
Order Date: 3-Mar-2017
Project Description: PE3966

	Client ID:	BH1-GW1	BH2-GW1	BH4-GW1	-
	Sample Date:	03-Mar-17	03-Mar-17	03-Mar-17	-
	Sample ID:	1709437-01	1709437-02	1709437-03	-
	MDL/Units	Water	Water	Water	-
Volatiles					
Acetone	5.0 ug/L	<5.0	-	<5.0	-
Benzene	0.5 ug/L	<0.5	-	<0.5	-
Bromodichloromethane	0.5 ug/L	<0.5	-	<0.5	-
Bromoform	0.5 ug/L	<0.5	-	<0.5	-
Bromomethane	0.5 ug/L	<0.5	-	<0.5	-
Carbon Tetrachloride	0.2 ug/L	<0.2	-	<0.2	-
Chlorobenzene	0.5 ug/L	<0.5	-	<0.5	-
Chloroform	0.5 ug/L	<0.5	-	<0.5	-
Dibromochloromethane	0.5 ug/L	<0.5	-	<0.5	-
Dichlorodifluoromethane	1.0 ug/L	<1.0	-	<1.0	-
1,2-Dichlorobenzene	0.5 ug/L	<0.5	-	<0.5	-
1,3-Dichlorobenzene	0.5 ug/L	<0.5	-	<0.5	-
1,4-Dichlorobenzene	0.5 ug/L	<0.5	-	<0.5	-
1,1-Dichloroethane	0.5 ug/L	<0.5	-	<0.5	-
1,2-Dichloroethane	0.5 ug/L	<0.5	-	<0.5	-
1,1-Dichloroethylene	0.5 ug/L	<0.5	-	<0.5	-
cis-1,2-Dichloroethylene	0.5 ug/L	<0.5	-	<0.5	-
trans-1,2-Dichloroethylene	0.5 ug/L	<0.5	-	<0.5	-
1,2-Dichloropropane	0.5 ug/L	<0.5	-	<0.5	-
cis-1,3-Dichloropropylene	0.5 ug/L	<0.5	-	<0.5	-
trans-1,3-Dichloropropylene	0.5 ug/L	<0.5	-	<0.5	-
1,3-Dichloropropene, total	0.5 ug/L	<0.5	-	<0.5	-
Ethylbenzene	0.5 ug/L	<0.5	-	<0.5	-
Ethylene dibromide (dibromoethan	0.2 ug/L	<0.2	-	<0.2	-
Hexane	1.0 ug/L	<1.0	-	<1.0	-
Methyl Ethyl Ketone (2-Butanone)	5.0 ug/L	<5.0	-	<5.0	-
Methyl Isobutyl Ketone	5.0 ug/L	<5.0	-	<5.0	-
Methyl tert-butyl ether	2.0 ug/L	<2.0	-	<2.0	-
Methylene Chloride	5.0 ug/L	<5.0	-	<5.0	-
Styrene	0.5 ug/L	<0.5	-	<0.5	-
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5	-	<0.5	-
1,1,2,2-Tetrachloroethane	0.5 ug/L	<0.5	-	<0.5	-
Tetrachloroethylene	0.5 ug/L	<0.5	-	<0.5	-
Toluene	0.5 ug/L	<0.5	-	<0.5	-
1,1,1-Trichloroethane	0.5 ug/L	<0.5	-	<0.5	-

Certificate of Analysis
Client: Paterson Group Consulting Engineers
Client PO: 21646

Report Date: 08-Mar-2017
Order Date: 3-Mar-2017
Project Description: PE3966

	Client ID:	BH1-GW1	BH2-GW1	BH4-GW1	-
	Sample Date:	03-Mar-17	03-Mar-17	03-Mar-17	-
	Sample ID:	1709437-01	1709437-02	1709437-03	-
	MDL/Units	Water	Water	Water	-
1,1,2-Trichloroethane	0.5 ug/L	<0.5	-	<0.5	-
Trichloroethylene	0.5 ug/L	<0.5	-	<0.5	-
Trichlorofluoromethane	1.0 ug/L	<1.0	-	<1.0	-
Vinyl chloride	0.5 ug/L	<0.5	-	<0.5	-
m,p-Xylenes	0.5 ug/L	<0.5	-	<0.5	-
o-Xylene	0.5 ug/L	<0.5	-	<0.5	-
Xylenes, total	0.5 ug/L	<0.5	-	<0.5	-
4-Bromofluorobenzene	Surrogate	93.3%	-	91.4%	-
Dibromofluoromethane	Surrogate	103%	-	102%	-
Toluene-d8	Surrogate	104%	-	105%	-
Benzene	0.5 ug/L	-	<0.5	-	-
Ethylbenzene	0.5 ug/L	-	<0.5	-	-
Toluene	0.5 ug/L	-	<0.5	-	-
m,p-Xylenes	0.5 ug/L	-	<0.5	-	-
o-Xylene	0.5 ug/L	-	<0.5	-	-
Xylenes, total	0.5 ug/L	-	<0.5	-	-
Toluene-d8	Surrogate	-	103%	-	-
Hydrocarbons					
F1 PHCs (C6-C10)	25 ug/L	<25	<25	<25	-
F2 PHCs (C10-C16)	100 ug/L	<100	<100	<100	-
F3 PHCs (C16-C34)	100 ug/L	<100	<100	<100	-
F4 PHCs (C34-C50)	100 ug/L	<100	<100	<100	-
F1 + F2 PHCs	125 ug/L	-	<125	-	-
F1 + F2 PHCs	125 ug/L	<125	-	<125	-
F3 + F4 PHCs	200 ug/L	-	<200	-	-
F3 + F4 PHCs	200 ug/L	<200	-	<200	-

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	25	ug/L						
F2 PHCs (C10-C16)	ND	100	ug/L						
F3 PHCs (C16-C34)	ND	100	ug/L						
F4 PHCs (C34-C50)	ND	100	ug/L						
Volatiles									
Acetone	ND	5.0	ug/L						
Benzene	ND	0.5	ug/L						
Bromodichloromethane	ND	0.5	ug/L						
Bromoform	ND	0.5	ug/L						
Bromomethane	ND	0.5	ug/L						
Carbon Tetrachloride	ND	0.2	ug/L						
Chlorobenzene	ND	0.5	ug/L						
Chloroform	ND	0.5	ug/L						
Dibromochloromethane	ND	0.5	ug/L						
Dichlorodifluoromethane	ND	1.0	ug/L						
1,2-Dichlorobenzene	ND	0.5	ug/L						
1,3-Dichlorobenzene	ND	0.5	ug/L						
1,4-Dichlorobenzene	ND	0.5	ug/L						
1,1-Dichloroethane	ND	0.5	ug/L						
1,2-Dichloroethane	ND	0.5	ug/L						
1,1-Dichloroethylene	ND	0.5	ug/L						
cis-1,2-Dichloroethylene	ND	0.5	ug/L						
trans-1,2-Dichloroethylene	ND	0.5	ug/L						
1,2-Dichloropropane	ND	0.5	ug/L						
cis-1,3-Dichloropropylene	ND	0.5	ug/L						
trans-1,3-Dichloropropylene	ND	0.5	ug/L						
1,3-Dichloropropene, total	ND	0.5	ug/L						
Ethylbenzene	ND	0.5	ug/L						
Ethylene dibromide (dibromoethane	ND	0.2	ug/L						
Hexane	ND	1.0	ug/L						
Methyl Ethyl Ketone (2-Butanone)	ND	5.0	ug/L						
Methyl Isobutyl Ketone	ND	5.0	ug/L						
Methyl tert-butyl ether	ND	2.0	ug/L						
Methylene Chloride	ND	5.0	ug/L						
Styrene	ND	0.5	ug/L						
1,1,1,2-Tetrachloroethane	ND	0.5	ug/L						
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L						
Tetrachloroethylene	ND	0.5	ug/L						
Toluene	ND	0.5	ug/L						
1,1,1-Trichloroethane	ND	0.5	ug/L						
1,1,2-Trichloroethane	ND	0.5	ug/L						
Trichloroethylene	ND	0.5	ug/L						
Trichlorofluoromethane	ND	1.0	ug/L						
Vinyl chloride	ND	0.5	ug/L						
m,p-Xylenes	ND	0.5	ug/L						
o-Xylene	ND	0.5	ug/L						
Xylenes, total	ND	0.5	ug/L						
Surrogate: 4-Bromofluorobenzene	*78.6*		*ug/L*		*98.3*	*50-140*			
Surrogate: Dibromofluoromethane	*82.5*		*ug/L*		*103*	*50-140*			
Surrogate: Toluene-d8	*82.0*		*ug/L*		*103*	*50-140*			
Benzene	ND	0.5	ug/L						
Ethylbenzene	ND	0.5	ug/L						
Toluene	ND	0.5	ug/L						
m,p-Xylenes	ND	0.5	ug/L						
o-Xylene	ND	0.5	ug/L						
Xylenes, total	ND	0.5	ug/L						
Surrogate: Toluene-d8	*82.0*		*ug/L*		*103*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	25	ug/L	ND				30	
Volatiles									
Acetone	ND	5.0	ug/L	ND				30	
Benzene	ND	0.5	ug/L	ND				30	
Bromodichloromethane	ND	0.5	ug/L	ND				30	
Bromoform	ND	0.5	ug/L	ND				30	
Bromomethane	ND	0.5	ug/L	ND				30	
Carbon Tetrachloride	ND	0.2	ug/L	ND				30	
Chlorobenzene	ND	0.5	ug/L	ND				30	
Chloroform	ND	0.5	ug/L	ND				30	
Dibromochloromethane	ND	0.5	ug/L	ND				30	
Dichlorodifluoromethane	ND	1.0	ug/L	ND				30	
1,2-Dichlorobenzene	ND	0.5	ug/L	ND				30	
1,3-Dichlorobenzene	ND	0.5	ug/L	ND				30	
1,4-Dichlorobenzene	ND	0.5	ug/L	ND				30	
1,1-Dichloroethane	ND	0.5	ug/L	ND				30	
1,2-Dichloroethane	ND	0.5	ug/L	ND				30	
1,1-Dichloroethylene	ND	0.5	ug/L	ND				30	
cis-1,2-Dichloroethylene	ND	0.5	ug/L	ND				30	
trans-1,2-Dichloroethylene	ND	0.5	ug/L	ND				30	
1,2-Dichloropropane	ND	0.5	ug/L	ND				30	
cis-1,3-Dichloropropylene	ND	0.5	ug/L	ND				30	
trans-1,3-Dichloropropylene	ND	0.5	ug/L	ND				30	
Ethylbenzene	ND	0.5	ug/L	ND				30	
Ethylene dibromide (dibromoethane	ND	0.2	ug/L	ND				30	
Hexane	ND	1.0	ug/L	ND				30	
Methyl Ethyl Ketone (2-Butanone)	ND	5.0	ug/L	ND				30	
Methyl Isobutyl Ketone	ND	5.0	ug/L	ND				30	
Methyl tert-butyl ether	ND	2.0	ug/L	ND				30	
Methylene Chloride	ND	5.0	ug/L	ND				30	
Styrene	ND	0.5	ug/L	ND				30	
1,1,1,2-Tetrachloroethane	ND	0.5	ug/L	ND				30	
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L	ND				30	
Tetrachloroethylene	ND	0.5	ug/L	ND				30	
Toluene	ND	0.5	ug/L	ND				30	
1,1,1-Trichloroethane	ND	0.5	ug/L	ND				30	
1,1,2-Trichloroethane	ND	0.5	ug/L	ND				30	
Trichloroethylene	ND	0.5	ug/L	ND				30	
Trichlorofluoromethane	ND	1.0	ug/L	ND				30	
Vinyl chloride	ND	0.5	ug/L	ND				30	
m,p-Xylenes	ND	0.5	ug/L	ND				30	
o-Xylene	ND	0.5	ug/L	ND				30	
Surrogate: 4-Bromofluorobenzene	*77.7*		*ug/L*		*97.1*	*50-140*			
Surrogate: Dibromofluoromethane	*80.0*		*ug/L*		*100*	*50-140*			
Surrogate: Toluene-d8	*82.2*		*ug/L*		*103*	*50-140*			
Benzene	ND	0.5	ug/L	ND				30	
Ethylbenzene	ND	0.5	ug/L	ND				30	
Toluene	ND	0.5	ug/L	ND				30	
m,p-Xylenes	ND	0.5	ug/L	ND				30	
o-Xylene	ND	0.5	ug/L	ND				30	
Surrogate: Toluene-d8	*82.2*		*ug/L*		*103*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	1990	25	ug/L		99.4	68-117			
F2 PHCs (C10-C16)	1690	100	ug/L		94.1	60-140			
F3 PHCs (C16-C34)	3530	100	ug/L		95.0	60-140			
F4 PHCs (C34-C50)	2380	100	ug/L		96.0	60-140			
Volatiles									
Acetone	80.1	5.0	ug/L		80.1	50-140			
Benzene	27.3	0.5	ug/L		68.3	60-130			
Bromodichloromethane	26.8	0.5	ug/L		66.9	60-130			
Bromoform	32.0	0.5	ug/L		79.9	60-130			
Bromomethane	24.9	0.5	ug/L		62.2	50-140			
Carbon Tetrachloride	31.2	0.2	ug/L		77.9	60-130			
Chlorobenzene	31.2	0.5	ug/L		78.1	60-130			
Chloroform	28.2	0.5	ug/L		70.4	60-130			
Dibromochloromethane	28.7	0.5	ug/L		71.6	60-130			
Dichlorodifluoromethane	21.4	1.0	ug/L		53.5	50-140			
1,2-Dichlorobenzene	32.3	0.5	ug/L		80.7	60-130			
1,3-Dichlorobenzene	35.6	0.5	ug/L		89.1	60-130			
1,4-Dichlorobenzene	29.9	0.5	ug/L		74.7	60-130			
1,1-Dichloroethane	26.3	0.5	ug/L		65.7	60-130			
1,2-Dichloroethane	27.9	0.5	ug/L		69.7	60-130			
1,1-Dichloroethylene	24.5	0.5	ug/L		61.4	60-130			
cis-1,2-Dichloroethylene	30.2	0.5	ug/L		75.6	60-130			
trans-1,2-Dichloroethylene	27.0	0.5	ug/L		67.6	60-130			
1,2-Dichloropropane	29.0	0.5	ug/L		72.4	60-130			
cis-1,3-Dichloropropylene	28.9	0.5	ug/L		72.3	60-130			
trans-1,3-Dichloropropylene	30.1	0.5	ug/L		75.4	60-130			
Ethylbenzene	33.2	0.5	ug/L		83.0	60-130			
Ethylene dibromide (dibromoethane	31.4	0.2	ug/L		78.6	60-130			
Hexane	30.9	1.0	ug/L		77.2	60-130			
Methyl Ethyl Ketone (2-Butanone)	86.8	5.0	ug/L		86.8	50-140			
Methyl Isobutyl Ketone	96.5	5.0	ug/L		96.5	50-140			
Methyl tert-butyl ether	77.4	2.0	ug/L		77.4	50-140			
Methylene Chloride	33.8	5.0	ug/L		84.6	60-130			
Styrene	31.2	0.5	ug/L		78.0	60-130			
1,1,1,2-Tetrachloroethane	27.2	0.5	ug/L		68.0	60-130			
1,1,2,2-Tetrachloroethane	35.9	0.5	ug/L		89.8	60-130			
Tetrachloroethylene	29.9	0.5	ug/L		74.8	60-130			
Toluene	29.0	0.5	ug/L		72.4	60-130			
1,1,1-Trichloroethane	25.9	0.5	ug/L		64.6	60-130			
1,1,2-Trichloroethane	31.5	0.5	ug/L		78.8	60-130			
Trichloroethylene	30.0	0.5	ug/L		74.9	60-130			
Trichlorofluoromethane	27.1	1.0	ug/L		67.8	60-130			
Vinyl chloride	24.8	0.5	ug/L		62.0	50-140			
m,p-Xylenes	63.9	0.5	ug/L		79.9	60-130			
o-Xylene	31.1	0.5	ug/L		77.8	60-130			
Surrogate: 4-Bromofluorobenzene	*92.1*		*ug/L*		*115*	*50-140*			
Benzene	27.3	0.5	ug/L		68.3	60-130			
Ethylbenzene	33.2	0.5	ug/L		83.0	60-130			
Toluene	29.0	0.5	ug/L		72.4	60-130			
m,p-Xylenes	63.9	0.5	ug/L		79.9	60-130			
o-Xylene	31.1	0.5	ug/L		77.8	60-130			

Qualifier Notes:

None

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

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

CCME PHC additional information:

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

Paracel ID: 1709437

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e. paracel@paracellabs.com

Chain of Custody
(Lab Use Only)
№ 111557

Page 1 of 1

Client Name: Paterson Group.	Project Reference: PE3966	**Turnaround Time:**	
Contact Name: Mark D'Arcy	Quote #	☐ 1 Day	☐ 3 Day
Address: 154 Colonnade Rd. S.	PO # 21646	☐ 2 Day	☒ Regular
Telephone: 613-226-7381	Email Address: MDarcy@PatersonGroup.ca AGraham@PatersonGroup.ca	Date Required:	

Criteria: ☒ O. Reg. 153/04 (As Amended) Table __ ☐ RSC Filing ☐ O. Reg. 558/00 ☐ PWQO ☐ CCME ☐ SUB (Storm) ☐ SUB (Sanitary) Municipality: _____ ☐ Other: _____

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

Required Analyses

	Paracel Order Number: 1709437 / Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken Date	Sample Taken Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	VOCs/F1+PHCs(F2-F4)
1	BH1-GW1	GW		3	March 3.17	~~16:30~~								X
2	BH2-GW1	GW		3	↓	~~12:26~~	X							
3	BH4-GW1	GW		3	↓	~~12:30~~								X
4														
5														
6														
7														
8														
9														
10														

Comments:

Method of Delivery: Courier

Relinquished By (Sign):	Received by Driver/Depot: M. Krouse	Received at Lab:	Verified By: Rachel Subject
Relinquished By (Print): Ryan Thatcher	Date/Time: 03/03/17 3:30	Date/Time: Mar 3/17 5:05pm	Date/Time: Mar 3/17
Date/Time: March 3, 17 / 2:30 pm.	Temperature: ____ °C 11.1	Temperature: 11.1 °C	pH Verified [A] By: N/A 5:18