PATERSON GROUP

Phase II – Environmental Site Assessment

335 and 339 Roosevelt Avenue,
379 and 389 Wilmont Avenue, and
344 Winston Avenue
Ottawa, Ontario

Prepared for Uniform Developments

Report: PE2144-5
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EXECUTIVE SUMMARY

Assessment

Paterson Group was retained by Uniform Developments Ltd. to carry out a Phase II – Environmental Site Assessment (Phase II ESA) for the property addressed 335 and 339 Roosevelt Avenue, 379 and 389 Wilmont Avenue, and 344 Winston Avenue, in the City of Ottawa, Ontario (Phase II Property). 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 Phase II Property.

The subsurface investigations for this assessment were conducted between May 25, 2020, and April 4th, 2025, and consisted of drilling 13 boreholes (BH1-20 to BH7-20, and BH1-25 to BH6-25) and excavating 14 test pits (TP1-25 to TP14-25) across the Phase II Property. It should be noted that the field investigations were carried out in conjunction with a geotechnical investigation. The boreholes were advanced to depths ranging from approximately 0.74 to 15.06 m below the ground surface (mbgs) and terminated within either the overburden or the bedrock unit. Upon completion, nine boreholes were instrumented with groundwater monitoring wells in order to access the groundwater table. Test pits were advanced to depths ranging from 0.45 to 3.0 m, the majority of which were terminated due to practical refusal to excavating.

In general, the subsurface soil profile encountered at the test hole locations consists of granular fill (sand and crushed stone) material underlain by an intermittent thin layer of sand and gravel. The bedrock surface was encountered in nine cored boreholes at depths ranging from approximately 0.5 m to 3.0 m below ground surface. During the current field sampling program, groundwater was measured at depths ranging from 2.47 m to 3.63 m below the existing ground surface.

Based on site specific information and the intended post-development property use, the MECP Table 7 Residential Coarse Standards for soil, and the MECP Table 7 Non-Potable Groundwater standards were considered to be the appropriate site condition standards.

A total of 27 soil samples and three duplicate samples were submitted for laboratory analysis of Benzene, Ethylbenzene, Toluene, and Xylenes (BTEX), Petroleum Hydrocarbons, Fractions F_1 to F_4 (PHCs), Volatile Organic Compounds (VOCs), metals, including hydride forming metals (metals, including As, Sb, Se), Mercury (Mercury), Hot Water Soluble Boron (B-HWS), Hexavalent Chromium (Cr(VI)), Polycyclic Aromatic Hydrocarbons (PAHs), Polychlorinated Biphenyls (PCBs), Electrical Conductivity (EC), and/or Sodium Adsorption Rate (SAR) parameters. One previous soil sample from 2010 was also compared to current standards.

Based on the analytical results, soil on the Phase II Property is contaminated with metals, *As, Sb, Se*, Mercury, B-HWS, PAHs, and PHCs. Parameter concentrations above the MECP Table 7 Residential standards for one or more of these method groups were identified at the following test hole locations: BH5 (2010), BH1-25, BH2-25, BH3-25, BH4-25, BH5-25, BH6-25, TP5-25, TP6-25, TP7-25, TP8-25, and TP13-25.

A total of 13 groundwater samples were submitted for laboratory analysis of BTEX, PHCs, VOCs, metals, mercury, Cr(VI), PAHs, and/or PCB parameters. Three groundwater samples analyzed in 2010 were also compared to current standards.

Based on the analytical results, groundwater on the Phase II Property is contaminated with BTEX and VOC parameters. Parameter concentrations above the MECP Table 7 Non-Potable standards for these method groups were identified at BH1-25.

Recommendations

Soil

Based on the analytical results, fill material at various locations across the Phase II Property is contaminated with various metals (including As, Se, Sb), mercury, B-HWS, PHCs, and various PAH parameters exceeding the MECP Table 7 Residential Standards.

It is our understanding that the Phase II Property will be redeveloped in the near future. If a generic Record of Site Condition is to be filed, 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 any 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.

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 will be required prior to future site excavation activities, in accordance with O. Reg. 406/19, depending on the volume of excess soil anticipated to be generated.

Groundwater

Impacted groundwater was identified in the northeast portion of the Phase II Property, for VOC and BTEX compounds. Prior to the development of this portion of the Phase II Property, it is recommended that impacted groundwater be further delineated. If this portion of the Phase II Property is to be developed at a later date, it is recommended that BH1-25 be retested for VOCs (including BTEX) at that time.

Depending upon the volume of impacted groundwater encountered, several options may be available to treat the groundwater. The removal of impacted groundwater from the site by a licensed pumping contractor would be a feasible option for smaller volumes, while an on-site treatment system would likely be more economical for larger volumes over a longer period of time. An on-site treatment system would discharge to the City of Ottawa sewer system. Prior to discharging treated groundwater to the municipal sewer system, a Sanitary Sewer Agreement will be required from the City of Ottawa's Sewer Use Program.

Monitoring Wells

It is recommended that the monitoring wells be maintained for future sampling purposes. The monitoring wells will be registered with the MECP under Ontario Regulation 903 (Ontario Water Resources Act). At such a time that the monitoring wells are no longer required, they must be decommissioned in accordance with O.Reg. 903.

1.0 INTRODUCTION

At the request of Uniform Developments Ltd. (Uniform), Paterson Group (Paterson) carried out a Phase II – Environmental Site Assessment (Phase II ESA) for the property addressed 335 and 339 Roosevelt Avenue, 379 and 389 Wilmont Avenue and 344 Winston Avenue, in the City of Ottawa, Ontario (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:	335 and 339 Roosevelt Avenue; 379 and 389 Wilmont Avenue, and 344 Winston Avenue, Ottawa, Ontario.
Location:	The Phase II Property is located on the north side of Wilmont Avenue, where it transects with Winston Avenue and bounded on the east side of Roosevelt Avenue, in the City of Ottawa, Ontario. Refer to Figure 1 - Key Plan in the Figures section following the text.
Latitude and Longitude:	45° 23' 36" N, 75° 45' 28" W
Configuration:	Irregular.
Area:	0.71 ha (approximately)
Zoning:	R5B – Residential 5th Density Zone O1 - Parks and Open Space Zone
Current Use:	The Phase I Property is currently mixed-use, and consists of residential use (municipal addresses 339 Roosevelt Avenue, 344 Winston Avenue, 379 and 389 Wilmont Avenue), and industrial use (unused lands, formerly industrial use at municipal address 335 Roosevelt Avenue). The current land uses as defined by O.Reg. 153/04 are “residential use” and “industrial use”.

Services:	The Phase II Property is located within a municipally serviced area.

1.2 Property Ownership

The Phase II Property is currently owned by Uniform Developments. Paterson was retained to complete this Phase II ESA by Mr. Annibale Ferro, whose office is located at at 117 Centrepointe Drive, Suite 300, Ottawa, Ontario, and can be contacted via telephone at (613) 225-0770.

1.3 Applicable Site Condition Standard

The site condition standards for the Phase II Property were obtained from Table 7 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:

- ❒ Shallow bedrock 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 developed with two residential dwellings, situated on the parcels with municipal addresses 339 Roosevelt Avenue and 344 Winston Avenue. The remainder of the site is vacant, roughly graded land.

The site topography slopes slightly downwards to the west, while the regional topography slopes gently down in a northwestern direction. The Phase II Property is generally considered to be at grade with respect to the surrounding properties.

Water drainage on the Phase II Property occurs primarily via surface run-off towards catch basins present on the adjacent streets, as well as via infiltration.

2.2 Previous Investigations

- *"Phase I & II Environmental Site Assessment, Commercial Property, 335 Roosevelt Avenue, Ottawa, Ontario,"* prepared by Paterson Group Inc. (Paterson), dated November 30, 2010.

A Phase I/II ESA was completed by Paterson Group in 2010 for a portion of the current Phase II Property. Based on the findings of the historical research, potential environmental concerns were identified as a result of a heating oil spill on the parcel with the municipal address 389 Wilmont Avenue, on the south-central portion of the subject property. Concerns were also identified with the historical and present use of the subject property as an aluminum products manufacturer and historical automotive service activities on the eastern portion of the subject property. A subsequent Phase II ESA was conducted to address the aforementioned potential environmental concerns.

The subsurface investigation was conducted in November of 2010 and consisted of the placement of five boreholes on the subject property (BH1 to BH5). BH1 was placed just outside the northeast corner of the building occupied by Fendor. BH3 was placed on the northeast corner of the subject property (near the Surface Medics building). BH5 was placed directly north of 389 Wilmont Ave, which at that time, was under remediation due to a former furnace oil spill. The remaining boreholes were placed at selected locations around the subject property for general coverage. Two boreholes, BH3 and BH5 were completed as monitoring wells.

The general soil profile consisted of a layer of asphaltic concrete or gravel overlying sand and gravel fill followed by clayey silt overlying limestone bedrock. The depth of fill ranged from to 0.46 m to 0.97 m. The depth to bedrock ranged from 0.60 m to 1.17 m. It was noted at the time of the program that some poor-quality fill material containing pieces of brick, glass, asphaltic concrete and slag was encountered in BH 5 at depths between 0.3 m and 0.9 m.

One soil sample from BH5 was submitted for metals analysis. Based on the analytical results, several metal parameter concentrations (antimony, arsenic, barium, cadmium and molybdenum) exceeded the 2004 MOE Table 1 Residential Standards (shallow bedrock). These metal parameters also exceed the current MECP Table 7 Residential Standards.

Three groundwater samples were submitted for BTEX, PHCs, and VOCs. Based on the analytical results, no detectable BTEX, PHC or VOC concentrations were

identified in the groundwater samples analyzed from BH1, BH5 and MW208. All groundwater results complied with the former and current standards.

Based on the findings of the 2010 Phase II ESA, it was recommended that a soil remediation program be conducted on the property to remove and dispose of the metal impacted fill material during redevelopment. The impacted fill material was recommended to be disposed of off-site at an approved waste disposal facility.

- *"Phase I - Environmental Site Assessment, 335 and 339 Roosevelt Avenue, 379 and 389 Wilmont Avenue, and 344 Winston Avenue, Ottawa, Ontario, Ottawa, Ontario,"* prepared by Paterson Group Inc. (Paterson), updated December 9, 2021.

- *"Phase II - Environmental Site Assessment, 335 Roosevelt Avenue, Ottawa, Ontario, Ottawa, Ontario,"* prepared by Paterson Group Inc. (Paterson), dated August 4, 2020.

Paterson Group completed interim Phase I and II Environmental Site Assessments for the Phase II Property in 2020 to 2021. The information contained in these past investigations have been incorporated into the current assessment.

3.0 SCOPE OF INVESTIGATION

3.1 Overview of Site Investigation

The initial subsurface investigation as part of this program occurred during the interim of May 25 to June 12, 2020. The field program consisted of drilling seven boreholes, three of which were instrumented with groundwater monitoring wells.

Additonal subsurface investigations were completed between April 1 and April 4, 2025. This portion of the subsurface investigation consisted of six boreholes advanced on the Phase II Property, all six of which were instrumented with groundwater monitoring wells, as well as the advancement of 14 test pits across the Phase II Property.

Boreholes were advanced to depths ranging from 0.74 to 15.06 m below the ground surface (mbgs), with deeper boreholes advanced into bedrock by means of rock coring. Test pits were advanced to depths ranging from 0.45 to 3.0 m, the majority of which were terminated due to practical refusal to excavating. It should be noted that the Phase II ESA subsurface investigation was completed in conjunction with a geotechnical program.

The bedrock surface was encountered in cored boreholes at depths ranging from approximately 0.5 m to 3.0 m below ground surface. During the current field sampling program, groundwater was measured at depths ranging from 2.47 m to 3.63 m below the existing ground surface.

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 (CPCs) with respect to the soil and groundwater beneath the Phase II Property include the following:

Soil

- ❒ Benzene, Toluene, Ethylbenzene, Xylenes (BTEX);
- ❒ Volatile Organic Compounds (VOCs);
- ❒ Petroleum Hydrocarbons (PHCs F_1-F_4);
- ❒ Polycyclic Aromatic Hydrocarbons (PAHs);
- ❒ Metals;
- ❒ As, Sb, Se;
- ❒ Mercury (Mercury);
- ❒ Hexavalent Chromium (Cr(VI));
- ❒ Boron, Hot Water Soluble (B-HWS);
- ❒ Polychlorinated Biphenyls (PCBs);
- ❒ Electrical Conductivity (EC);
- ❒ Sodium Adsorption Rate (SAR);

Groundwater

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

3.3 Phase I ESA Conceptual Site Model

Geological and Hydrogeological Setting

Based on the available mapping information, the bedrock on the Phase II Property is reported to consist of interbedded limestone and dolomite of the Gull River Formation. The surficial geology consists of till, with an overburden ranging from 1 to 2 m in thickness.

Groundwater is anticipated to be encountered within the bedrock, and flow in a westerly direction towards the Ottawa River.

This information is generally consistent with previous Phase II ESA and geotechnical investigations.

Water Bodies

No water bodies are present on the Phase I Property or within the Phase I Study Area. The nearest named water body is the Ottawa River, located approximately 255 m northwest of the Phase I Property at its closest point.

Areas of Natural Significance

No Areas of Natural and Scientific Interest (ANSIs) were identified to be present on the Phase II Property or within the Study Area.

Drinking Water Wells

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

Existing Buildings and Structures

The residential lots addressed 339 Roosevelt Avenue and 344 Winston Avenue on the Phase I Property are both presently occupied with single storey residential dwellings with a basement level. The dwelling at 339 Roosevelt Avenue was constructed circa 1910 with a vinyl exterior finish and sloped shingle style roof, while 344 Winston Avenue was constructed in 1969 with an exterior brick finish and attached double garage with a sloped shingle style roof. An aluminum sided storage shed is also present east of the dwelling on 339 Roosevelt Avenue. No other buildings or structures are present on the Phase I Property.

Current and Future Property Use

The Phase II Property consists of residential use land and industrial use land. Currently, it is being used for residential purposes or unused.

Based on our current understanding, the Phase II Property will be redeveloped with two multi-storey residential apartment buildings. As the property is proposed to be developed for residential use, a record of site condition (RSC) will need to be filed with the MECP for portion(s) of the Phase II Property that have been used for less sensitive land uses (industrial and/or commercial use).

Neighbouring Land Use

Land use within the Study Area consists of primarily residential use properties, with some commercial use property along Churchill Avenue and Richmond Road, further east and south, respectively. Current land use is depicted on Drawing PE2144-12 – 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, nine potentially contaminating activities (PCAs) resulting in areas of potential environmental concern (APECs) were identified on the Phase II Property. These APECs include:

APEC 1 (PCA 1 on Drawing PE2144-2, 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 I Property during previous development and/or as grading material for use as a commercial/industrial yard. The presence of the fill material is considered to represent an APEC potentially impacting soil on the Phase I Property.

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

APEC 2 (PCA 2 on Drawing PE2144-2, No Item Number “Application of Road Salt”)

This APEC is related to the potential application of salt or similar substance to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both. Based on our experience with road salting applications for the

purpose of safety in the City of Ottawa, de-icing agents would have been used for the purpose of safety under conditions of snow and ice on the former parking area, and walkways on the Phase II Property and adjacent roadways.

The use of road salt is considered to represent an APEC potentially impacting soil on the Phase I Property.

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.

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

APEC 3 (PCA 3 on Drawing PE2144-1, Item 34 "Former Window and Door Manufacturing")

This APEC is related to the former industrial manufacturing facility on the Phase I Property, including within two buildings on the Phase I Property, in the northeastern and northwestern portions of the Phase I Property. This PCA and APEC is related to metal fabrication. This former activity is considered to represent an APEC potentially impacting soil and groundwater on the Phase I Property.

APEC 3 is situated in the northeastern and northwestern portions of the Phase I Property.

APEC 4 (PCA 4 on Drawing PE2144-1, Item 33 "Former Metal Coating and Finishing")

This APEC is related to the former industrial manufacturing facility on the Phase I Property, including within two buildings on the Phase I Property, in the northeastern and northwestern portions of the Phase I Property. This PCA and APEC is related to metal treatment, coating, plating, and finishing. This former activity is considered to represent an APEC potentially impacting soil and groundwater on the Phase I Property.

APEC 4 is situated in the northeastern and northwestern portions of the Phase I Property.

APEC 5 (PCA 5 on Drawing PE2144-1, Item 27 "Former Automotive Service Garage")

This APEC is related to the former commercial automotive service garage on the Phase I Property. This former activity is considered to represent an APEC potentially impacting soil and groundwater on the Phase I Property.

APEC 5 is situated in the northeastern and northwestern portions of the Phase I Property.

APEC 6 (PCA 6 on Drawing PE2144-1, Item 55 "Former Pole Mounted Transformer")

This APEC is related to the former pole mounted transformer on on the Phase I Property. The former presence of a pole mounted transformer is considered to represent an APEC potentially impacting soil and groundwater on the Phase I Property.

APEC 6 is situated in the south-central portion of the Phase I Property.

APEC 7 (PCA 7 on Drawing PE2144-1, No Item Number "Former Furnace Oil Spill (c. 2005)")

This APEC is related to a former furnace oil spill that occurred in the south-central portion of the Phase I Property in 2005. This former spill is considered to represent an APEC potentially impacting soil and groundwater on the Phase I Property.

APEC 7 is situated in the south-central portion of the Phase I Property.

APEC 8 (PCA 8 on Drawing PE2144-1, Item 28 "Former Gasoline Storage Tanks")

This APEC is related to three former aboveground gasoline storage tanks present on the Phase I Property. The former presence of these gasoline storage tanks is considered to represent an APEC potentially impacting soil and groundwater on the Phase I Property.

APEC 8 is situated in the northeastern portion of the Phase I Property.

APEC 9 (PCA 9 on Drawing PE2144-1, Item 46 "Former Rail Tracks")

This APEC is related to the off-site presence of former rail tracks approximately 20m north of the Phase I Property. The former presence of these rail tracks is considered to represent an APEC potentially impacting groundwater on the Phase I Property.

APEC 9 is situated in the northern portion of the Phase I Property.

Other off-site PCAs were identified within the Phase I Study Area but were deemed not to be of any environmental concern to the Phase II Property based on their

separation distances, or their down-gradient or cross-gradient orientation with respect to the known groundwater flow to the west.

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 (PHCs F_1-F_4);
- ❒ Polycyclic Aromatic Hydrocarbons (PAHs);
- ❒ Metals;
- ❒ As, Sb, Se;
- ❒ Mercury (Mercury);
- ❒ Hexavalent Chromium (Cr(VI));
- ❒ Boron, Hot Water Soluble (B-HWS);
- ❒ Polychlorinated Biphenyls (PCBs);
- ❒ Electrical Conductivity (EC);
- ❒ Sodium Adsorption Rate (SAR);

Groundwater

- ❒ Benzene, Toluene, Ethylbenzene, Xylenes (BTEX);
- ❒ Volatile Organic Compounds (VOCs);
- ❒ Petroleum Hydrocarbons (PHCs F_1-F_4);
- ❒ Polycyclic Aromatic Hydrocarbons (PAHs);
- ❒ Metals;
- ❒ As, Sb, Se;
- ❒ Mercury (Mercury);
- ❒ Hexavalent Chromium (Cr(VI));
- ❒ 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, as indicated.

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 completed in two parts, between May 25, 2020 and April 4th 2025. The initial subsurface investigation occurred on May 25th 2020, and consisted of drilling four boreholes (BH1-20 to BH4-20) across the Phase II Property. Three additional boreholes (BH5-20 to BH7-20) were advanced on June 12, 2020.

An additional six boreholes (BH1-25 to BH6-25) were advanced on the Phase II Property on April 1st and 2nd, 2025. 14 test pits (TP1-25 to TP14-25) were also advanced on the Phase II Property on April 4, 2025.

It should be noted that the Phase II ESA field investigation was done in conjunction with a geotechnical assessment.

The boreholes were advanced to depths ranging from approximately 0.74 to 15.06 m below the existing ground surface.

Bedrock was encountered in 9 of the 13 boreholes advanced during this investigation, which was confirmed by means of rock coring.

Upon completion, the 9 boreholes advanced into bedrock were instrumented with groundwater monitoring wells in order to access the groundwater table. During the field sampling program, the groundwater was measured at depths ranging from approximately 2.47 m to 3.63 m below the existing ground surface.

Test pits were advanced to depths ranging from 0.45 to 1.05m below the existing ground surface and were terminated at practical refusal to augering (inferred bedrock surface), with the exception of TP5-25, which was advanced to a maximum depth of 3.0 m within the former building footprint of the dwelling addressed 389 Wilmont Avenue.

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 PE2144-13 – 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 48 soil samples and 43 rock core samples were obtained from the boreholes by means of auger and split spoon sampling, and diamond bit NQ rock coring. In addition, 35 soil samples were obtained by means of grab samples obtained from test pit sidewalls by means of a hydraulic excavator. The depths at which auger, split spoon, rock core samples, and grab samples were obtained from the test holes are shown as "**AU**", "**SS**", "**RC**", and "**G**" 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

Nine groundwater monitoring wells were installed on the Phase II Property as part of this assessment. These monitoring wells were constructed using 32 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 below in Table 1 as well as on the Soil Profile and Test Data Sheets provided in Appendix 1.

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.

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)
BH1-20	66.56	5.89	2.84 - 5.89	2.64 - 5.89	0.00 - 2.64
BH2-20	66.61	9.17	6.12 - 9.17	6.92 - 9.17	0.00 - 6.92
BH5-20	66.50	6.04	2.99 - 6.04	2.85 - 6.04	0.00 - 2.85
BH1-25	66.26	5.99	2.94 - 5.99	2.29 - 5.99	1.98 - 2.29
BH2-25	66.29	5.99	2.94 - 5.99	1.83 - 5.99	1.22 - 1.83
BH3-25	66.36	5.99	2.94 - 5.99	1.98 - 5.99	1.52 - 1.98
BH4-25	66.63	5.56	2.82 - 5.56	2.74 - 5.56	1.98 - 2.74
BH5-25	66.25	15.06	2.46 - 5.51	1.98 - 5.51	1.22 - 1.98
BH6-25	66.13	5.59	2.54 - 5.59	1.83 - 5.59	1.52 - 1.83

It should be noted that BH1-20, BH2-20, and BH5-20 were destroyed during site demolition activities in 2021.

4.5 Field Measurement of Water Quality Parameters

Groundwater monitoring and sampling was carried out on April 11, 2025. Select wells were resampled on April 25, 2025. During these events, 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 summarized below in Table 2 as well as on the Analytical Results Tables provided in Appendix 1.

Table 2
Measurement of Water Quality Parameters

Test Hole ID	Temperature (˚C)	Conductivity (µS)	pH	Date of Measurement
BH1-25	7.7	1271	7.0	11-Apr-2025
BH2-25	5.5	910	7.3	11-Apr-2025
BH3-25	8.3	1424	7.1	11-Apr-2025
BH4-25	6.9	1276	7.0	11-Apr-2025
BH5-25	6.2	920	7.5	11-Apr-2025
BH6-25	6.2	722	7.3	11-Apr-2025
BH1-25	9.7	1296	7.0	25-Apr-2025
BH2-25	9.6	1257	6.9	25-Apr-2025
BH3-25	10.1	1219	7.0	25-Apr-2025
BH4-25	9.2	1254	7.0	25-Apr-2025

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

The following soil and groundwater samples were submitted for laboratory analysis:

Table 3
Laboratory Testing Parameters for Submitted Soil Samples

Sample ID	Sample Depth (mbgs)	Sampling Date (dd-mm-yy)	Rationale	PID Vapour Reading (ppm)	Parameter Groups Analyzed										
					PHCs	BTEX	VOCs	PAHs	PCBs	Metals	Mercury	Cr^{VI}	B-HWS	EC	SAR
BH1-AU1 2022205-01	0.08-0.60	25-May-2020	To assess former window and door manufacturing (APEC 3), metal coating and finishing (APEC 4A), and former pole mounted transformer (APEC 6)	N/A	✓	✓	✓		✓	✓	✓	✓			
BH2-AU1 2022205-02	0.05-0.60	25-May-2020	To assess metal coating and finishing (APEC 4B)	N/A						✓	✓	✓			
BH2-SS2 2022205-03	0.76-0.84	25-May-2020	To assess former automotive service garage (APEC 5)	N/A	✓	✓									
BH3-SS2 2022205-04	0.76-1.14	25-May-2020	To assess metal coating and finishing (APEC 4B), and former automotive service garage (APEC 5)	N/A	✓	✓				✓	✓	✓			
BH5-AU1 2025184-01	0.0-0.60	12-Jun-2020	To delineate previous metals exceedance	N/A						✓	✓	✓			
BH5-SS2 2025184-02	0.76-0.94	12-Jun-2020	To assess former furnace oil spill (APEC 7)	N/A	✓	✓									
BH1-25-AU2 2514307-01	0.30-0.61	1-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), metal coating and finishing (APEC 4B), former automotive service garage (APEC 5), former gasoline storage tanks (APEC 8), and to assess excess soil quality for off-site reuse	2.9	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓

Table 3 Continued
Laboratory Testing Parameters for Submitted Soil Samples

BH2-25-AU1 2514307-02	0.0-0.61	1-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former furnace oil spill (APEC 7), to delineate previous metals exceedance in BH5 (2010), and to assess excess soil quality for off-site reuse	0.7	✓	✓	✓	✓		✓	✓	✓		✓	✓
BH3-25-AU1 2514307-03	0.0-0.61	1-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), metal coating and finishing (APEC 4B), former automotive service garage (APEC 5), and to assess excess soil quality for off-site reuse	2.6	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
BH4-25-AU2 2514307-04	0.30-0.61	1-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former furnace oil spill (APEC 7), and to assess excess soil quality for off-site reuse	6.6	✓	✓	✓	✓		✓	✓	✓		✓	✓
BH4-25-SS3+SS4 2514307-05	1.52-2.54	1-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former furnace oil spill (APEC 7), and to assess excess soil quality for off-site reuse	2.5, 1.8	✓	✓	✓	✓		✓	✓	✓		✓	✓
DUP1-25 (DUP of BH3-25-AU1) 2514307-06	0.0-0.61	1-Apr-2025	For laboratory QA/QC purposes	2.6	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
BH5-25-AU1 2514468-01	0.0-0.30	2-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former window and door manufacturing (APEC 3), metal coating and finishing (APEC 4A), and to assess excess soil quality for off-site reuse	1.3	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
BH5-25-AU2 2514468-02	0.30-0.61	2-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former window and door manufacturing (APEC 3), metal coating and finishing (APEC 4A), and to assess excess soil quality for off-site reuse	1.4	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓

Table 3 Continued
Laboratory Testing Parameters for Submitted Soil Samples

BH6-25-AU1 2514468-03	0.18-0.56	2-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former window and door manufacturing (APEC 3), metal coating and finishing (APEC 4A), and to assess excess soil quality for off-site reuse	3.1	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
TP1-25-G1 2515146-01	0.2-0.3	4-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), metal coating and finishing (APEC 4B), former automotive service garage (APEC 5), former gasoline storage tanks (APEC 8), and to assess excess soil quality for off-site reuse	0.5	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
TP2-25-G1 2515146-02	0.1-0.2	4-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), metal coating and finishing (APEC 4B), former automotive service garage (APEC 5), former gasoline storage tanks (APEC 8), and to assess excess soil quality for off-site reuse	0.8	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
TP3-25-G3 2515146-03	0.7-0.8	4-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), metal coating and finishing (APEC 4B), former automotive service garage (APEC 5), and to assess excess soil quality for off-site reuse	0.5	✓	✓		✓		✓	✓	✓		✓	✓
TP4-25-G2 2515146-04	0.8-0.9	4-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former furnace oil spill (APEC 7), and to assess excess soil quality for off-site reuse	0.3	✓	✓	✓	✓		✓	✓	✓		✓	✓
TP5-25-G4 2515146-05	2.1-2.2	4-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former furnace oil spill (APEC 7), and to assess excess soil quality for off-site reuse	0.5	✓	✓	✓	✓		✓	✓	✓		✓	✓
TP6-25-G1 2515146-06	0.7-0.8	4-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former furnace oil spill (APEC 7), and to assess excess soil quality for off-site reuse	0.4	✓	✓	✓	✓		✓	✓	✓		✓	✓

Table 3 Continued
Laboratory Testing Parameters for Submitted Soil Samples

TP7-25-G1 2515146-07	0.2-0.3	4-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former pole mounted transformer (APEC 6), and to assess excess soil quality for off-site reuse	0.5	✓	✓		✓	✓	✓	✓	✓		✓	✓
TP8-25-G1 2515146-08	0.2-0.3	4-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), and to assess excess soil quality for off-site reuse	0.5	✓	✓		✓		✓	✓	✓		✓	✓
TP9-25-G3 2515146-09	0.7-0.8	4-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), and to assess excess soil quality for off-site reuse	0.4	✓	✓	✓	✓		✓	✓	✓		✓	✓
TP11-25-G2 2515146-10	0.3-0.4	4-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former window and door manufacturing (APEC 3), metal coating and finishing (APEC 4A), and to assess excess soil quality for off-site reuse	0.4	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
TP12-25-G2 2515146-11	0.3-0.4	4-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former window and door manufacturing (APEC 3), metal coating and finishing (APEC 4A), and to assess excess soil quality for off-site reuse	0.3	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
TP13-25-G2 2515146-12	0.6-0.7	4-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former furnace oil spill (APEC 7), and to assess excess soil quality for off-site reuse	0.1	✓	✓	✓	✓		✓	✓	✓		✓	✓
TP14-25-G1 2515146-13	0.3-0.4	4-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), metal coating and finishing (APEC 4B), former automotive service garage (APEC 5), and to assess excess soil quality for off-site reuse	0.4	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
DUP2-25 (DUP of TP3-25-G3) 2515146-14	0.7-0.8	4-Apr-2025	For laboratory QA/QC purposes	0.5	✓	✓		✓		✓	✓	✓		✓	✓

Table 4
Laboratory Testing Parameters for Submitted Groundwater Samples

Sample ID	Sample Depth (mbgs)	Sampling Date (dd-mm-yy)	Rationale	Parameter Groups Analyzed							
				PHCs	BTEX	VOCs	PAHs	PCBs	Metals	Mercury	Cr^{VI}
BH1-20-GW1 2025338-01	2.84 - 5.89	16-Jun-2020	To assess former window and door manufacturing (APEC 3), metal coating and finishing (APEC 4A), and former pole mounted transformer (APEC 6)	✓	✓	✓		✓	✓	✓	✓
BH2-20-GW1 2025338-02	6.12 - 9.17	16-Jun-2020	To assess metal coating and finishing (APEC 4B), and former automotive service garage (APEC 5)	✓	✓	✓			✓	✓	✓
BH5-20-GW1 2025338-03	2.99 - 6.04	16-Jun-2020	To assess former furnace oil spill (APEC 7)	✓	✓	✓					
Dup1 (DUP of BH5-20-GW1) 2025338-04	2.99 - 6.04	16-Jun-2020	For laboratory QA/QC purposes	(F1)	✓						
BH1-25-GW 2516087-01	2.94 - 5.99	11-Apr-2025	To assess metal coating and finishing (APEC 4B), former automotive service garage (APEC 5), former gasoline storage tanks (APEC 8), and former off-site rail tracks (APEC 9)	✓	✓	✓	✓		✓	✓	✓
BH2-25-GW 2516087-02	2.94 - 5.99	11-Apr-2025	To assess former furnace oil spill (APEC 7)	✓	✓	✓	✓				
BH3-25-GW 2516087-03	2.94 - 5.99	11-Apr-2025	To assess metal coating and finishing (APEC 4B), and former automotive service garage (APEC 5)	✓	✓	✓	✓		✓	✓	✓
BH4-25-GW 2516087-04	2.82 - 5.56	11-Apr-2025	To assess former furnace oil spill (APEC 7)	✓	✓	✓	✓				
BH5-25-GW 2516087-05	2.46 - 5.51	11-Apr-2025	To assess former window and door manufacturing (APEC 3), metal coating and finishing (APEC 4A), and former off-site rail tracks (APEC 9)	✓	✓	✓	✓		✓	✓	✓
BH6-25-GW 2516087-06	2.54 - 5.59	11-Apr-2025	To assess former window and door manufacturing (APEC 3), and metal coating and finishing (APEC 4A)	✓	✓	✓	✓		✓	✓	✓

Table 4 Continued
Laboratory Testing Parameters for Submitted Groundwater Samples

DUP-1 (DUP of BH2-25-GW) 2516087-07	2.94 - 5.99	11-Apr-2025	For laboratory QA/QC purposes	✓	✓	✓	✓				
BH1-25-GW 2518043-01	2.94 - 5.99	25-Apr-2025	To confirm analytical results from previous testing			✓					
BH2-25-GW 2518043-02	2.94 - 5.99	25-Apr-2025	To confirm groundwater quality below identified soil exceedance						✓	✓	✓
BH3-25-GW 2518043-03	2.94 - 5.99	25-Apr-2025	To confirm analytical results from previous testing			✓					
BH4-25-GW 2518043-04	2.82 - 5.56	25-Apr-2025	To confirm groundwater quality below identified soil exceedance						✓	✓	✓
DUP1 (DUP of BH3-25-GW) 2518043-05	2.94 - 5.99	25-Apr-2025	For laboratory QA/QC purposes			✓					
BH1-20-GW1 2025338-01	2.84 - 5.89	16-Jun-2020	To assess former window and door manufacturing (APEC 3), metal coating and finishing (APEC 4A), and former pole mounted transformer (APEC 6)	✓	✓	✓		✓	✓	✓	✓
BH2-20-GW1 2025338-02	6.12 - 9.17	16-Jun-2020	To assess metal coating and finishing (APEC 4B), and former automotive service garage (APEC 5)	✓	✓	✓			✓	✓	✓
BH5-20-GW1 2025338-03	2.99 - 6.04	16-Jun-2020	To assess former furnace oil spill (APEC 7)	✓	✓	✓					

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 during the field program.

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 test hole locations consists of brown silty sand and crushed stone fill material, underlain by a thin intermittent layer of native silty sand with gravel. Bedrock consisting of interbedded limestone and dolomite was cored in nine boreholes during the field drilling program, with bedrock surface encountered at depths ranging from 0.56 to 2.59 m below the existing ground surface.

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 April 11, 2025, and on April 25, 2025. The measured groundwater levels are summarized below in Table 5.

Table 5
Groundwater Level Measurements

Test Hole ID	Ground Surface Elevation (masl)	Water Level Depth (m)	Water Level Elevation (masl)	Date of Measurement
BH1-25	66.26	2.76	63.50	11-Apr-2025
BH2-25	66.29	2.97	63.32	11-Apr-2025
BH3-25	66.36	3.63	62.73	11-Apr-2025
BH4-25	66.63	3.35	63.28	11-Apr-2025
BH5-25	66.25	3.60	62.65	11-Apr-2025
BH6-25	66.13	2.47	63.66	11-Apr-2025
BH1-25	66.26	2.49	63.77	25-Apr-2025
BH2-25	66.29	3.26	63.03	25-Apr-2025
BH3-25	66.36	3.58	62.78	25-Apr-2025
BH4-25	66.63	3.44	63.19	25-Apr-2025

The groundwater at the Phase II Property was encountered within the bedrock at depths ranging from 2.47 to 3.63 m below the existing ground surface.

No unusual visual or olfactory observations were noted with respect to the recovered groundwater samples.

Using the groundwater elevations recorded during the sampling event on April 11, 2025, groundwater contour mapping was completed as part of this assessment. According to the mapped contour data, illustrated on Drawing PE2144-13 – Test Hole Location Plan in the appendix, the groundwater on the Phase II Property was calculated to flow in a westerly direction. A horizontal hydraulic gradient of 0.02 m/m was calculated. 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 drilling program resulted in organic vapour readings ranging from 0.1 to 6.6 ppm, indicating that there is a low 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 27 soil samples and three duplicate samples were submitted for laboratory analysis of Benzene, Ethylbenzene, Toluene, and Xylenes (BTEX), Petroleum Hydrocarbons, Fractions F_1 to F_4 (PHCs), Volatile Organic Compounds (VOCs), metals, including hydride forming metals (metals, including As, Sb, Se), Mercury (Mercury), Hot Water Soluble Boron (B-HWS), Hexavalent Chromium (Cr(VI)), Polycyclic Aromatic Hydrocarbons (PAHs), Polychlorinated Biphenyls (PCBs), Electrical Conductivity (EC), and/or Sodium Adsorption Rate (SAR) parameters. One previous soil sample submitted for laboratory analysis in 2010 was also compared to current standards. The results of the analytical testing are presented in the laboratory Certificates of Analysis included in Appendix 1.

Metals, including As, Sb, Se

25 soil samples were submitted for analysis of metals parameters (including As, Sb, Se). Six samples exceeded the MECP Table 7 Residential standards for one or more parameters, including Antimony, Arsenic, Barium, Cadmium, Lead, Molybdenum, and/or Zinc (BH5-25-AU1, BH5-25-AU2, BH6-25-AU1, TP5-25-G4, TP7-25-G1, and TP8-25-G1). One sample from a previous investigation in 2010 (BH5A-G4) exceeds the current MECP Table 7 Residential standards for Arsenic, Barium, and Molybdenum. All remaining metals parameter concentrations are in compliance with the MECP Table 7 Residential standards.

Metals and/or As, Sb, Se concentrations in soil exceed the MECP Table 7 Residential standards in BH5 (2010), BH5-25, BH6-25, TP5-25, TP7-25, and TP8-25.

The analytical results where metals and/or As, Se, Sb exceeded the applicable site condition standards in soil on the Phase II Property are shown on the following drawings:

- ❑ Drawing PE2144-14 – Analytical Testing Plan – Soil (Metals, including As, Sb, Se)
- ❑ Drawing PE2144-14A – Cross Section A-A' – Soil (Metals, including As, Sb, Se)
- ❑ Drawing PE2144-14B – Cross Section B-B' – Soil (Metals, including As, Sb, Se)

Mercury

25 soil samples were submitted for analysis of mercury. Three samples exceeded the MECP Table 7 Residential standards for mercury (BH4-25-SS3+SS4, TP7-25-G1, and TP8-25-G1). All remaining mercury concentrations are in compliance with the MECP Table 7 Residential standards.

Mercury concentrations in soil exceed the MECP Table 7 Residential standards in BH4-25, TP7-25, and TP8-25.

The analytical results where mercury exceeded the applicable site condition standards in soil on the Phase II Property are shown on the following drawings:

- ❑ Drawing PE2144-15 – Analytical Testing Plan – Soil (Mercury)
- ❑ Drawing PE2144-15A – Cross Section A-A' – Soil (Mercury)
- ❑ Drawing PE2144-15B – Cross Section B-B' – Soil (Mercury)

Cr(VI)

25 soil samples were submitted for analysis of Cr(VI). No concentrations of Cr(VI) were detected above the laboratory detection limit. All Cr(VI) parameter concentrations in soil are in compliance with the MECP Table 7 Residential standards.

The analytical results for Cr(VI) in soil on the Phase II Property are shown on the following drawing:

- ❑ Drawing PE2144-16 – Analytical Testing Plan – Soil (Cr(VI))

B-HWS

10 soil samples were submitted for analysis of B-HWS. Two samples exceeded the MECP Table 7 Residential standards for B-HWS (BH5-25-AU1, and BH5-25-AU2). All remaining B-HWS concentrations are in compliance with the MECP Table 7 Residential standards.

B-HWS concentrations in soil exceed the MECP Table 7 Residential standards in BH5-25.

The analytical results where B-HWS exceeded the applicable site condition standards in soil on the Phase II Property are shown on the following drawings:

- ❑ Drawing PE2144-17 – Analytical Testing Plan – Soil (B-HWS)
- ❑ Drawing PE2144-17A – Cross Section A-A' – Soil (B-HWS)
- ❑ Drawing PE2144-17B – Cross Section B-B' – Soil (B-HWS)

PAHs

21 soil samples were submitted for analysis of PAH parameters. Nine samples exceeded the MECP Table 7 Residential standards for one or more PAH parameters including Anthracene, Benzo[a]anthracene, Benzo[a]pyrene, Benzo[b]fluoranthene, Benzo[k]fluoranthene, Fluoranthene, Indeno [1,2,3-cd] pyrene, Methylnaphthalene (1 & 2), Naphthalene, and/or Phenanthrene (BH1-25-AU2, BH2-25-AU1, BH5-25-AU1, BH5-25-AU2, BH6-25-AU1, TP6-25-G1, TP7-25-G1, TP8-25-G1, and TP13-25-G2). One sample had elevated detection limits above the MECP Table 7 Residential standards for Acenaphthylene, Benzo[a]pyrene, Dibenzo[a,h]anthracene, and Indeno [1,2,3-cd] pyrene (BH3-25-AU1, and the corresponding duplicate sample DUP1-25). All remaining PAH parameter concentrations are in compliance with the MECP Table 7 Residential standards.

PAH parameter concentrations in soil exceed the MECP Table 7 Residential standards in BH1-25, BH2-25, BH5-25, BH6-25, TP6-25, TP7-25, TP8-25, and TP13-25.

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

- ❑ Drawing PE2144-18 – Analytical Testing Plan – Soil (PAHs)
- ❑ Drawing PE2144-18A – Cross Section A-A' – Soil (PAHs)
- ❑ Drawing PE2144-18B – Cross Section B-B' – Soil (PAHs)

VOCs

19 soil samples were submitted for analysis of VOC parameters. All VOC parameter concentrations in soil are in compliance with the MECP Table 7 Residential standards.

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

- ❑ Drawing PE2144-19 – Analytical Testing Plan – Soil (VOCs)

BTEX

25 soil samples were submitted for analysis of BTEX parameters. All BTEX parameter concentrations in soil are in compliance with the MECP Table 7 Residential standards.

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

- ❑ Drawing PE2144-20 – Analytical Testing Plan – Soil (BTEX)

PHCs

25 soil samples were submitted for analysis of PHC parameters. One sample exceeded the MECP Table 7 Residential standards for PHCs F2, F3, and F4G (BH3-25-AU1, and the corresponding duplicate sample DUP1-25). All remaining PHC parameter concentrations are in compliance with the MECP Table 7 Residential standards.

PHC parameter concentrations in soil exceed the MECP Table 7 Residential standards in BH3-25.

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

- ❑ Drawing PE2144-21 – Analytical Testing Plan – Soil (PHCs)
- ❑ Drawing PE2144-21A – Cross Section A-A' – Soil (PHCs)
- ❑ Drawing PE2144-21B – Cross Section B-B' – Soil (PHCs)

PCBs

Two soil samples were submitted for analysis of total PCBs. No PCBs were detected in the analyzed soil samples. All PCB parameter concentrations in soil are in compliance with the MECP Table 7 Residential standards.

The analytical results for PCBs in soil on the Phase II Property are shown on the following drawing:

- ❑ Drawing PE2144-22 – Analytical Testing Plan – Soil (PCBs)

EC and SAR

21 soil samples were submitted for analysis of EC and SAR. Three samples exceeded the MECP Table 7 Residential standards for EC (BH4-25-SS3+SS4, TP5-25-G4, and TP7-25-G1). All remaining EC concentrations, and all SAR concentrations are in compliance with the MECP Table 7 Residential standards.

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. Parameters EC and SAR are not considered to be contaminants of concern to the Phase II ESA Property.

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

- ❑ Drawing PE2144-23 – Analytical Testing Plan – Soil (EC and SAR)
- ❑ Drawing PE2144-23A – Cross Section A-A' – Soil (EC and SAR)
- ❑ Drawing PE2144-23B – 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 metals, *As, Sb, Se*, Mercury, B-HWS, PAHs, and PHCs.

Parameter concentrations above the MECP Table 7 Residential standards for one or more of these method groups were identified at the following test hole locations: BH5 (2010), BH1-25, BH2-25, BH3-25, BH4-25, BH5-25, BH6-25, TP5-25, TP6-25, TP7-25, TP8-25, and TP13-25.

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

5.6 Groundwater Quality

A total of 13 groundwater samples and three duplicate sample were submitted for laboratory analysis of BTEX, PHCs, VOCs, metals, Mercury, Cr(VI), PAHs, and/or PCB parameters. Three groundwater samples analyzed in 2010 were also compared to current standards. The results of the analytical testing are presented in the laboratory Certificates of Analysis included in Appendix 1.

Metals, including As, Sb, Se, Mercury, and Cr(VI)

Eight groundwater samples were submitted for laboratory analysis of metals parameters, including As, Se, Sb, Mercury, and Cr(VI). All metals, As, Se, Sb, Mercury, and Cr(VI) parameter concentrations in groundwater are in compliance with the MECP Table 7 Non-Potable Groundwater Standards.

The analytical results for Metals, As, Se, Sb, Mercury, and Cr(VI) in groundwater on the Phase II Property are shown on the following drawing:

- Drawing PE2144-24 – Analytical Testing Plan – Groundwater (Metals (including As, Sb, Se), Mercury, Cr(VI))

PAHs

Six groundwater samples were submitted for laboratory analysis of PAH parameters. All PAH parameter concentrations in groundwater are in compliance with the MECP Table 7 Non-Potable Groundwater Standards.

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

- Drawing PE2144-25 – Analytical Testing Plan – Groundwater (PAHs)

VOCs

11 groundwater samples were submitted for laboratory analysis of VOC parameters. The sample obtained from BH1-25 exceeded the MECP Table 7 Non-Potable standards for 1,4-DCB. The well was subsequently resampled, and the results exceeded the MECP Table 7 Non-Potable standards for 1,4-DCB and Chlorobenzene. Groundwater at BH1-25 was identified to exceed the MECP Table 7 Non-Potable standards for VOCs.

Concentrations of chloroform exceeding the MECP Table 7 Non-Potable Groundwater Standards were identified in groundwater samples from the

monitoring wells installed in BH1-20, BH2-20, BH5-20, and BH3-25. Upon resampling, BH3-25 no longer exceeded the standards for chloroform. BH1-20, BH2-20, and BH5-20 were destroyed from on-site activities and could not be resampled. Municipally treated water was used for coring during the installation of these monitoring wells on-site, which were installed in bedrock. Chloroform was introduced to the groundwater through the use of municipally treated potable water during the drilling program. Chloroform is deemed not to exceed the applicable site condition standard as the source of chloroform is associated with water from a treated municipal water supply and all concentrations of chloroform in the groundwater samples on the Phase II Property were less than the 240 µg/L as listed in Table A of the MECP document entitled "Guidance for Addressing Chloroform at a Record of Site Condition Property."

VOC parameter concentrations in groundwater exceed the MECP Table 7 Non-Potable standards in BH1-25.

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

- ❑ Drawing PE2144-26 – Analytical Testing Plan – Groundwater (VOCs)
- ❑ Drawing PE2144-26A – Cross Section A-A' – Groundwater (VOCs)
- ❑ Drawing PE2144-26B – Cross Section B-B' – Groundwater (VOCs)

BTEX

11 groundwater samples were submitted for laboratory analysis of BTEX parameters. Two samples, both from BH1-25, exceeded the MECP Table 7 Residential standards for Benzene (BH1-25-GW [April 11th, 2025] and BH1-25-GW [April 25th, 2025]). It should be noted that BH5-20 previously marginally exceeded MECP Table 7 Residential standards for benzene and was destroyed before it could be resampled. This monitoring well was replicated with BH2-25. No BTEX concentrations were identified in the groundwater in BH2-25. As a result, groundwater is considered to be in compliance with the MECP Table 7 Residential standards in this area.

BTEX parameter concentrations in groundwater exceed the MECP Table 7 Non-Potable standards in BH1-25.

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

- ❑ Drawing PE2144-27 – Analytical Testing Plan – Groundwater (BTEX)
- ❑ Drawing PE2144-27A – Cross Section A-A' – Groundwater (BTEX)
- ❑ Drawing PE2144-27B – Cross Section B-B' – Groundwater (BTEX)

PHCs

Eight groundwater samples were submitted for laboratory analysis of PHC parameters. Three groundwater samples previously analyzed in 2010 were also compared to current standards. No PHC parameter concentrations were detected above the laboratory method detection limits in any of the samples analyzed. All PHC parameter concentrations in groundwater are in compliance with the MECP Table 7 Non-Potable Groundwater Standards.

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

- ❑ Drawing PE2144-28 – Analytical Testing Plan – Groundwater (PHCs)

PCBs

One groundwater sample was submitted for laboratory analysis of total PCBs. No PCB parameter concentrations were detected above the laboratory method detection limit in the sample analyzed. All PCB parameter concentrations in groundwater are in compliance with the MECP Table 7 Non-Potable Groundwater Standards.

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

- ❑ Drawing PE2144-29 – Analytical Testing Plan – Groundwater (PCBs)

Summary of Groundwater Results

Based on the analytical results, groundwater on the Phase II Property is contaminated with BTEX and VOC parameters.

Parameter concentrations above the MECP Table 7 Non-Potable standards for these method groups were identified at BH1-25.

The results of the analytical testing are presented in the laboratory Certificates of Analysis and Analytical Data Tables 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, duplicate soil samples were obtained from sample BH3-25-AU1 and TP3-25-G3, and duplicate groundwater samples were obtained from BH5-20-GW1, BH2-25-GW1, and BH1-25-GW and submitted for laboratory analysis. The relative percent difference (RPD) calculations for the original and duplicate samples are presented in the Analytical Data Tables included in Appendix 1.

The majority of the RPD calculated for the parameters detected fell within of the acceptable range of 20%, however some parameters exceeded this range as a result of the heterogeneous nature of the fill material analyzed, and/or low identified concentrations causing higher percent differences. As a result, it is the opinion of the QP that 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 2.2 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 6
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	Item 30: Importation of Fill Material of Unknown Quality	On-site	BTEX PHCs Metals As, Sb, Se CrVI Mercury PAHs	Soil
APEC 2 Application of Road Salt	Across Northern and Central Portion of Phase I Property	Item NA: Use of a substance applied to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both	On-site	EC SAR	Soil

Table 6 - Continued
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 3 Former Window and Door Manufacturing	Northwestern and Northeastern Portion of Phase I Property	Item 34: Metal Fabrication	On-site	BTEX PHCs Metals As, Sb, Se Mercury Cr(VI) B-HWS VOCs PAHs	Soil
				BTEX PHCs Metals As, Sb, Se Mercury Cr(VI) VOCs PAHs	Groundwater
APEC 4 Former Metal Coating and Finishing	Northwestern and Northeastern Portion of Phase I Property	Item 33: Metal Treatment, Coating, Plating and Finishing	On-site	BTEX PHCs Metals As, Sb, Se Mercury Cr(VI) B-HWS VOCs PAHs	Soil
				BTEX PHCs Metals As, Sb, Se Mercury Cr(VI) VOCs PAHs	Groundwater

Table 6 - Continued
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 5 Former Automotive Service Garage	Northeastern Portion of Phase I Property	Item 27: Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles	On-Site	BTEX PHCs Metals As, Sb, Se Mercury Cr(VI) VOCs PAHs	Soil
				BTEX PHCs VOCs PAHs	Groundwater
APEC 6 Former Pole Mounted Transformer	South-central Portion of Phase I Property	Item 55: Transformer Manufacturing, Processing and Use	On-Site	PCBs PHCs	Soil
				PCBs PHCs	Groundwater
APEC 7 Former Furnace Oil Spill (c. 2005)	South-central Portion of Phase I Property	Item NA: Reported Spill	On-Site	BTEX PHCs VOCs PAHs	Soil
				BTEX PHCs VOCs PAHs	Groundwater
APEC 8 Former Gasoline Storage Tanks	Northwestern Portion of Phase I Property	Item 28: Gasoline and Associated Products Storage in Fixed Tanks	On-Site	BTEX PHCs Metals VOCs	Soil
				BTEX PHCs Metals VOCs	Groundwater

Table 6 - Continued
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 9 Former Rail Tracks	Northern Portion of Phase I Property	Item 46: Rail Yards, Tracks and Spurs	Off-site: 20m North of Phase I Property	BTEX PHCs Metals As, Sb, Se Mercury Cr(VI) PAHs	Groundwater

Contaminants of Potential Concern (CPCs)

As detailed in Table 6 above, the following Contaminants of Potential Concern (CPCs) were identified with respect to the soil or groundwater on the Phase II Property:

Soil

- ❒ Benzene, Toluene, Ethylbenzene, Xylenes (BTEX);
- ❒ Volatile Organic Compounds (VOCs);
- ❒ Petroleum Hydrocarbons (PHCs F_1-F_4);
- ❒ Polycyclic Aromatic Hydrocarbons (PAHs);
- ❒ Metals;
- ❒ As, Sb, Se;
- ❒ Mercury (Mercury);
- ❒ Hexavalent Chromium (Cr(VI));
- ❒ Boron, Hot Water Soluble (B-HWS);
- ❒ Polychlorinated Biphenyls (PCBs);
- ❒ Electrical Conductivity (EC);
- ❒ Sodium Adsorption Rate (SAR);

Groundwater

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

Subsurface Structures and Utilities

Underground service locates were completed prior to the subsurface investigation. Underground utility services on the property include natural gas, water and sewer services which enter the site from Roosevelt Avenue, Wilmont Avenue and Winston Avenue.

Physical Setting

Site Stratigraphy

The stratigraphy of the Phase II Property generally consists of:

- ❒ Fill material, consisting primarily of silty sand and crushed stone, extending to a maximum depth of over 3.0 m below ground surface;
- ❒ Native Silty Sand, with gravel, encountered intermittently below the fill material and extending to bedrock surface;
- ❒ Bedrock, consisting of interbedded limestone and dolomite, encountered at depths ranging from 0.64 to over 3.0 m below 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 bedrock at depths ranging from 2.47 to 3.66 m below the existing ground surface.

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

Approximate Depth to Bedrock

Bedrock depth was confirmed by means of rock coring in nine boreholes during the field drilling program. Bedrock surface on the Phase II Property was measured between 0.56 to 2.59 m below ground surface. The Phase II Property is considered to be a Shallow Soil Property, as more than 1/3 of the area consists of soil equal to or less than 2 metres in depth beneath the soil surface.

Approximate Depth to Water Table

The depth to the water table is approximately 2.5 to 3.7 m below the existing ground surface based on recent groundwater sampling events. However, it should be noted that seasonal fluctuations will impact these values.

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, and the pH of the soil is between 5 and 9 (surface soils) and between 5 and 11 (subsurface soils).

Section 43.1 of the Regulation applies to the Phase II Property in that the Phase II Property is a Shallow Soil Property, as more than 1/3 of the area consists of soil equal to or less than 2 metres in depth beneath the soil surface. As such, MECP Table 7 standards for shallow soil sites has been applied to the Phase II Property.

Existing Buildings and Structures

The residential lots addressed 339 Roosevelt Avenue and 344 Winston Avenue on the Phase II Property are both occupied by single storey residential dwellings with a basement level. The dwelling at 339 Roosevelt Avenue was constructed circa 1910 with a vinyl exterior finish and sloped shingle style roof, while 344 Winston Avenue was constructed in 1969 with an exterior brick finish and attached double garage with a sloped shingle style roof. An aluminum sided storage shed is also present east of the dwelling on 339 Roosevelt Avenue.

No other buildings or structures are present on the Phase I Property.

Environmental Condition

Areas Where Contaminants are Present

Based on the findings of this assessment, fill material in the central and northwestern potions of the Phase II Property (municipal addresses 335 Roosevelt Avenue, and 389 Wilmont Avenue) is impacted with metals (including As, Sb, Se). Fill material in the central portion of the Phase II Property (municipal addresses 335 Roosevelt Avenue, and 389 Wilmont Avenue) is impacted with mercury. Fill material in the northwestern portion of the Phase II Property (former industrial building footprint on 335 Roosevelt Avenue) is impacted with B-HWS. Fill material in the central, northeastern, and northwestern portions of the Phase II Property (across municipal address 335 Roosevelt Avenue) is impacted with PAHs. Fill material in the northeastern portion of the Phase II Property (former automotive garage building footprint) is impacted with PHCs.

Fill material in the central portion of the Phase II Property (former section of Winston Avenue, and 389 Winston Avenue) has concentrations of EC above the site condition standards. This exceedance is considered to be the result of the use of road salt on the Phase II Property during snow and ice conditions and thus, as per Section 49.1 of O. Reg 153/04, is not considered to be a contaminant.

Groundwater in the northeastern portion of the Phase II Property, in the vicinity of the former gasoline storage tanks (APEC 8) identified in the Phase I ESA, is impacted with BTEX and VOC parameters.

Types of Contaminants

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

<u>Soil:</u>

- Metals (including As, Se, Sb)
  - Antimony
  - Arsenic
  - Barium
  - Cadmium
  - Lead
  - Molybdenum
  - Zinc

- PHCs
  - PHCs F2
  - PHCs F3
  - PHCs, F4 (gravimetric)
- PAHs
  - Acenaphthylene
  - Anthracene
  - Benzo[a]anthracene
  - Benzo[a]pyrene
  - Benzo[b]fluoranthene
  - Benzo[k]fluoranthene
  - Dibenzo[a,h]anthracene
  - Fluoranthene
  - Indeno [1,2,3-cd] pyrene
  - Methylnaphthalene (1 & 2)
  - Naphthalene
  - Phenanthrene
- Other Regulated Parameters
  - Mercury
  - B-HWS

Groundwater:

- BTEX
  - Benzene
- VOCs
  - 1,4-Dichlorobenzene
  - Chlorobenzene

Contaminated Media

Based on the findings of this assessment, soil (fill material) on the Phase II Property is contaminated with Metals, PAHs, PHCs, Mercury, and B-HWS above the MECP Table 7 Residential standards.

Groundwater is impacted with BTEX and VOCs above the MECP Table 7 Residential standards.

What Is Known About Areas Where Contaminants Are Present

Fill material present on the industrial portion of the property (335 Roosevelt Avenue), including within the former industrial building footprint, and within former storage areas and outbuildings, is impacted with metals, PAHs, Mercury, and B-HWS. While the exact origins of these contaminants are unknown, industrial

activities on-site, including window and door manufacturing, and metalwork including coating and finishing, as well as the importation of fill material of unknown quality are likely to have contributed to the presence of these contaminants.

Fill material within the former automotive service garage building footprint is impacted with heavier fraction PHCs. While the exact origins of these contaminants are unknown, they may have been the result of former spills related to former automotive servicing activities such as performing oil changes and the storage of petroleum products.

Fill material impacted with Mercury and lead is present in the former soil remediation area on the 389 Wilmont Avenue parcel on the Phase II Property. PAH impacts are also present within the fill material in various locations on the Phase I Property. While the exact origins of these contaminants are unknown, they are likely the result of the importation of fill material of unknown quality, including building demolition and site grading activities.

Groundwater impacted with VOCs and BTEX parameters is present in the northeast portion of the Phase I Property, including benzene and chlorinated benzenes. While the exact origins of these contaminants are unknown, they may be the result of spills related to the former gasoline storage tanks in this area, as well as historical activities related to the automotive service garage.

Distribution and Migration of Contaminants

Distribution of PAH, metals, and Mercury impacts above the MECP Table 7 Residential Soil Standards are limited to the soil (fill material) based on groundwater testing in combination with the low mobility of these contaminants. PHC impacts are considered to be limited to the fill material in BH3-25 as a result of the clean groundwater results in this borehole. As such, these contaminants are not suspected to have migrated into the water table.

VOC and BTEX contaminated groundwater is considered to be confined to the northeastern corner of the Phase II Property.

Discharge of Contaminants

It is unknown exactly where metals, As, Se, Sb, mercury, B-HWS, PAH, and PHC impacts originated in the soil, however, they may be the result of the importation of fill material of unknown quality including building demolition and site grading activities, and industrial and commercial activities on-site.

It is unknown where VOC and BTEX contamination in groundwater encountered at BH1-25 originated, but could be the result of spills related to the former gasoline storage tanks in this area, as well as historical activities related to the automotive service garage immediately to the south.

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.

Based on the clean groundwater results obtained during this investigation for metals, As, Se, Sb, mercury, Cr(VI), PHCs, and PAHs, no downward migration of contaminants is suspected to have occurred beyond the overburden (fill).

Based on clean nearby analytical testing, groundwater impacted with VOCs and BTEX parameters in BH1-25 is considered to be confined in the northeastern portion of the Phase II Property, and not anticipated to have migrated significantly from the origin point.

Potential for Vapour Intrusion

Given that the Phase II Property largely consists of undeveloped land, and will be redeveloped in the near future, all contaminated soil and groundwater 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 Uniform Developments Ltd. to carry out a Phase II – Environmental Site Assessment (Phase II ESA) for the property addressed 335 and 339 Roosevelt Avenue, 379 and 389 Wilmont Avenue, and 344 Winston Avenue, in the City of Ottawa, Ontario (Phase II Property). 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 Phase II Property.

The subsurface investigations for this assessment were conducted between May 25, 2020, and April 4th, 2025, and consisted of drilling 13 boreholes (BH1-20 to BH7-20, and BH1-25 to BH6-25) and excavating 14 test pits (TP1-25 to TP14-25) across the Phase II Property. It should be noted that the field investigations were carried out in conjunction with a geotechnical investigation. The boreholes were advanced to depths ranging from approximately 0.74 to 15.06 m below the ground surface (mbgs) and terminated within either the overburden or the bedrock unit. Upon completion, nine boreholes were instrumented with groundwater monitoring wells in order to access the groundwater table. Test pits were advanced to depths ranging from 0.45 to 3.0 m, the majority of which were terminated due to practical refusal to excavating.

In general, the subsurface soil profile encountered at the test hole locations consists of granular fill (sand and crushed stone) material underlain by an intermittent thin layer of sand and gravel. The bedrock surface was encountered in nine cored boreholes at depths ranging from approximately 0.5 m to 3.0 m below ground surface. During the current field sampling program, groundwater was measured at depths ranging from 2.47 m to 3.63 m below the existing ground surface.

Based on site specific information and the intended post-development property use, the MECP Table 7 Residential Coarse Standards for soil, and the MECP Table 7 Non-Potable Groundwater standards were considered to be the appropriate site condition standards.

A total of 27 soil samples and three duplicate samples were submitted for laboratory analysis of Benzene, Ethylbenzene, Toluene, and Xylenes (BTEX), Petroleum Hydrocarbons, Fractions F_1 to F_4 (PHCs), Volatile Organic Compounds (VOCs), metals, including hydride forming metals (metals, including As, Sb, Se), Mercury (Mercury), Hot Water Soluble Boron (B-HWS), Hexavalent Chromium (Cr(VI)), Polycyclic Aromatic Hydrocarbons (PAHs), Polychlorinated Biphenyls (PCBs), Electrical Conductivity (EC), and/or Sodium Adsorption Rate (SAR) parameters. One previous soil sample from 2010 was also compared to current standards.

Based on the analytical results, soil on the Phase II Property is contaminated with metals, *As, Sb, Se*, Mercury, B-HWS, PAHs, and PHCs. Parameter concentrations above the MECP Table 7 Residential standards for one or more of these method groups were identified at the following test hole locations: BH5 (2010), BH1-25,

BH2-25, BH3-25, BH4-25, BH5-25, BH6-25, TP5-25, TP6-25, TP7-25, TP8-25, and TP13-25.

A total of 13 groundwater samples were submitted for laboratory analysis of BTEX, PHCs, VOCs, metals, mercury, Cr(VI), PAHs, and/or PCB parameters. Three groundwater samples analyzed in 2010 were also compared to current standards.

Based on the analytical results, groundwater on the Phase II Property is contaminated with BTEX and VOC parameters. Parameter concentrations above the MECP Table 7 Non-Potable standards for these method groups were identified at BH1-25.

Recommendations

Soil

Based on the analytical results, fill material at various locations across the Phase II Property is contaminated with various metals (including As, Se, Sb), mercury, B-HWS, PHCs, and various PAH parameters exceeding the MECP Table 7 Residential Standards.

It is our understanding that the Phase II Property will be redeveloped in the near future. If a generic Record of Site Condition is to be filed, 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 any 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.

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 will be required prior to future site excavation activities, in accordance with O. Reg. 406/19, depending on the volume of excess soil anticipated to be generated.

Groundwater

Impacted groundwater was identified in the northeast portion of the Phase II Property, for VOC and BTEX compounds. Prior to the development of this portion of the Phase II Property, it is recommended that impacted groundwater be further

delineated. If this portion of the Phase II Property is to be developed at a later date, it is recommended that BH1-25 be retested for VOCs (including BTEX) at that time.

Depending upon the volume of impacted groundwater encountered, several options may be available to treat the groundwater. The removal of impacted groundwater from the site by a licensed pumping contractor would be a feasible option for smaller volumes, while an on-site treatment system would likely be more economical for larger volumes over a longer period of time. An on-site treatment system would discharge to the City of Ottawa sewer system. Prior to discharging treated groundwater to the municipal sewer system, a Sanitary Sewer Agreement will be required from the City of Ottawa's Sewer Use Program.

Monitoring Wells

It is recommended that the monitoring wells be maintained for future sampling purposes. The monitoring wells will be registered with the MECP under Ontario Regulation 903 (Ontario Water Resources Act). At such a time that the monitoring wells are no longer required, they must be decommissioned in accordance with O.Reg. 903.

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. 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 Uniform Developments Ltd. Permission and notification from the above noted parties 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:

- Uniform Developments Ltd.
- Paterson Group Inc.

FIGURES

FIGURE 1 – KEY PLAN

DRAWING PE2144-11 – SITE PLAN

DRAWING PE2144-12 – SURROUNDING LAND USE PLAN

DRAWING PE2144-13 – TEST HOLE LOCATION PLAN

DRAWING PE2144-14 – ANALYTICAL TESTING PLAN – SOIL (METALS, INCLUDING AS, SB, SE)

DRAWING PE2144-14A – CROSS SECTION A-A' – SOIL (METALS, INCLUDING AS, SB, SE)

DRAWING PE2144-14B – CROSS SECTION B-B' – SOIL (METALS, INCLUDING AS, SB, SE)

DRAWING PE2144-15 – ANALYTICAL TESTING PLAN – SOIL (MERCURY)

DRAWING PE2144-15A – CROSS SECTION A-A' – SOIL (MERCURY)

DRAWING PE2144-15B – CROSS SECTION B-B' – SOIL (MERCURY)

DRAWING PE2144-16 – ANALYTICAL TESTING PLAN – SOIL (CR(VI))

DRAWING PE2144-17 – ANALYTICAL TESTING PLAN – SOIL (B-HWS)

DRAWING PE2144-17A – CROSS SECTION A-A' – SOIL (B-HWS)

DRAWING PE2144-17B – CROSS SECTION B-B' – SOIL (B-HWS)

DRAWING PE2144-18 – ANALYTICAL TESTING PLAN – SOIL (PAHS)

DRAWING PE2144-18A – CROSS SECTION A-A' – SOIL (PAHS)

DRAWING PE2144-18B – CROSS SECTION B-B' – SOIL (PAHS)

DRAWING PE2144-19 – ANALYTICAL TESTING PLAN – SOIL (VOCs)

DRAWING PE2144-20 – ANALYTICAL TESTING PLAN – SOIL (BTEX)

DRAWING PE2144-21 – ANALYTICAL TESTING PLAN – SOIL (PHCs)

DRAWING PE2144-21A – CROSS SECTION A-A' – SOIL (PHCs)

DRAWING PE2144-21B – CROSS SECTION B-B' – SOIL (PHCs)

DRAWING PE2144-22 – ANALYTICAL TESTING PLAN – SOIL (PCBs)

DRAWING PE2144-23 – ANALYTICAL TESTING PLAN – SOIL (EC AND SAR)

DRAWING PE2144-23A – CROSS SECTION A-A' – SOIL (EC AND SAR)

DRAWING PE2144-23B – CROSS SECTION B-B' – SOIL (EC AND SAR)

DRAWING PE2144-24 – ANALYTICAL TESTING PLAN – GROUNDWATER (METALS (INCLUDING AS, SB, SE), MERCURY, CR(VI))

DRAWING PE2144-25 – ANALYTICAL TESTING PLAN – GROUNDWATER (PAHS)

DRAWING PE2144-26 – ANALYTICAL TESTING PLAN – GROUNDWATER (VOCs)

DRAWING PE2144-26A – CROSS SECTION A-A' – GROUNDWATER (VOCs)

DRAWING PE2144-26B – CROSS SECTION B-B' – GROUNDWATER (VOCs)

DRAWING PE2144-27 – ANALYTICAL TESTING PLAN – GROUNDWATER (BTEX)

DRAWING PE2144-27A – CROSS SECTION A-A' – GROUNDWATER (BTEX)

DRAWING PE2144-27B – CROSS SECTION B-B' – GROUNDWATER (BTEX)

DRAWING PE2144-28 – ANALYTICAL TESTING PLAN – GROUNDWATER (PHCs)

DRAWING PE2144-29 – ANALYTICAL TESTING PLAN – GROUNDWATER (PCBs)



FIGURE 1

KEY PLAN

AREAS OF POTENTIAL ENVIRONMENTAL CONCERN :

ID #	PCA ID	DESCRIPTION
1	30	IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
2	N/A	APPLICATION OF ROAD SALT
3	34	FORMER WINDOW AND DOOR MANUFACTURING
4 A,B	33	FORMER METAL COATING AND FINISHING
5	27	FORMER AUTOMOTIVE SERVICE GARAGE
6	55	FORMER POLE-MOUNTED TRANSFORMER
7	N/A	FORMER FURNACE OIL SPILL (c.2005)
8	28	FORMER GASOLINE STORAGE TANKS
9	46	FORMER RAIL TRACKS

WORKMAN AVENUE
OLRT
TRANSITWAY
ROOSEVELT AVENUE
WILMONT AVENUE
WINSTON AVE.
335 ROOSEVELT AVENUE
339 ROOSEVELT AVE. 2-STOREY RESIDENTIAL DWELLING
344 WINSTON AVENUE 2-STOREY RESIDENTIAL DWELLING
APEC 1, 2
APEC 3, 4A
APEC 4B
APEC 5
APEC 6
APEC 7
APEC 8
APEC 9
FORMER RESIDENTIAL DWELLING
FORMER GASOLINE STORAGE TANKS
FORMER WAREHOUSE / STORAGE BUILDING AND AUTOMOTIVE SERVICE GARAGE
GRAVEL SURFACE COVER
FORMER STORAGE SHED
FORMER WAREHOUSE / STORAGE BUILDING
FORMER BAY DOOR
SHAVINGS ROOM
FORMER BOILER
FORMER 1-STOREY INDUSTRIAL BUILDING
FORMER POLE-MOUNTED TRANSFORMER
FORMER SPILL FURNACE OIL
FORMER 2-STOREY RESIDENTIAL DWELLING
MACHINE SHOP
OFFICES
LANDSCAPED
WOOD DECK
TOOL SHED
FORMER 1-STOREY RESIDENTIAL DWELLING
GRAVEL DRIVEWAY
INTERLOCK
COVERED PORCH
SIDEWALK
379 WILMONT AVE.
389 WILMONT AVE.
2100 SCOTT STREET RESIDENTIAL APARTMENT BUILDING
377-359 WILMONT AVENUE RESIDENTIAL
342 ROOSEVELT AVENUE RESIDENTIAL
346 ROOSEVELT AVENUE RESIDENTIAL
345 ROOSEVELT AVENUE RESIDENTIAL
348 WINSTON AVENUE RESIDENTIAL
378 WILMONT AVENUE RESIDENTIAL

LEGEND:

PHASE I ESA PROPERTY BOUNDARY

SCALE: 1:600

0 5 10 15 20 25 30m

PATERSON GROUP
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NO.	REVISIONS	DATE	INITIAL

UNIFORM DEVELOPMENTS

PHASE I - ENVIRONMENTAL SITE ASSESSMENT

335, 339 ROOSEVELT AVENUE, 379, 389 WILMONT AVENUE AND 344 WINSTON AVENUE
OTTAWA, ONTARIO

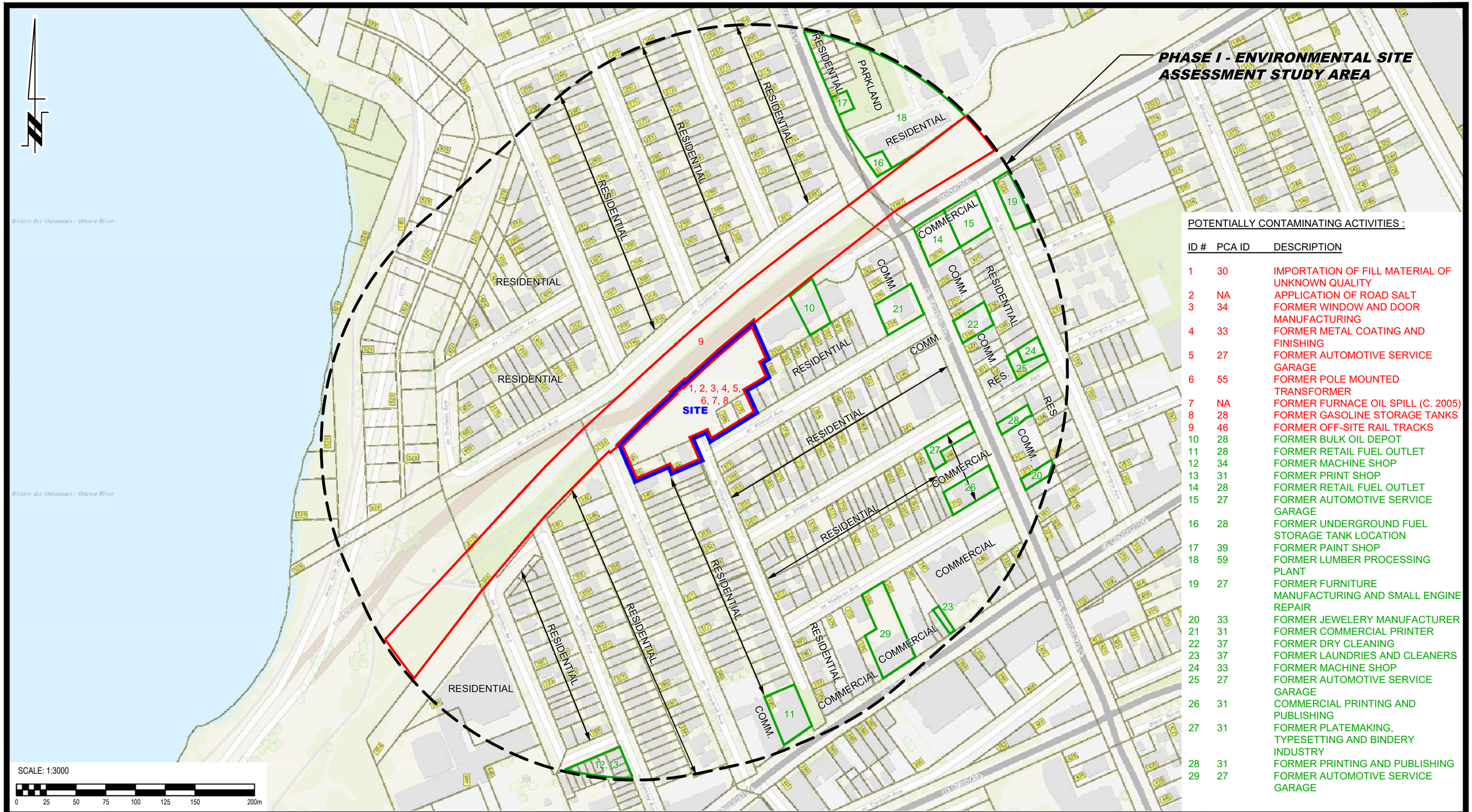
Title:

SITE PLAN

Scale: 1:600	Date: 05/2025
Drawn by: ZS	Report No.: PE2144-4
Checked by: JA	Dwg. No.: PE2144-11
Approved by: MSD	Revision No.:

11x17

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POTENTIALLY CONTAMINATING ACTIVITIES :

ID #	PCA ID	DESCRIPTION
1	30	IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
2	NA	APPLICATION OF ROAD SALT
3	34	FORMER WINDOW AND DOOR MANUFACTURING
4	33	FORMER METAL COATING AND FINISHING
5	27	FORMER AUTOMOTIVE SERVICE GARAGE
6	55	FORMER POLE MOUNTED TRANSFORMER
7	NA	FORMER FURNACE OIL SPILL (C. 2005)
8	28	FORMER GASOLINE STORAGE TANKS
9	46	FORMER OFF-SITE RAIL TRACKS
10	28	FORMER BULK OIL DEPOT
11	28	FORMER RETAIL FUEL OUTLET
12	34	FORMER MACHINE SHOP
13	31	FORMER PRINT SHOP
14	28	FORMER RETAIL FUEL OUTLET
15	27	FORMER AUTOMOTIVE SERVICE GARAGE
16	28	FORMER UNDERGROUND FUEL STORAGE TANK LOCATION
17	39	FORMER PAINT SHOP
18	59	FORMER LUMBER PROCESSING PLANT
19	27	FORMER FURNITURE MANUFACTURING AND SMALL ENGINE REPAIR
20	33	FORMER JEWELERY MANUFACTURER
21	31	FORMER COMMERCIAL PRINTER
22	37	FORMER DRY CLEANING
23	37	FORMER LAUNDRIES AND CLEANERS
24	33	FORMER MACHINE SHOP
25	27	FORMER AUTOMOTIVE SERVICE GARAGE
26	31	COMMERCIAL PRINTING AND PUBLISHING
27	31	FORMER PLATEMAKING, TYPESETTING AND BINDERY INDUSTRY
28	31	FORMER PRINTING AND PUBLISHING
29	27	FORMER AUTOMOTIVE SERVICE GARAGE

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UNIFORM DEVELOPMENTS

PHASE I - ENVIRONMENTAL SITE ASSESSMENT

335, 339 ROOSEVELT AVENUE, 379, 389 WILMONT AVENUE AND 344 WINSTON AVENUE
OTTAWA, ONTARIO

Title:

SURROUNDING LAND USE PLAN

Scale: 1:3000	Date: 05/2025
Drawn by: ZS	Report No.: PE2144-4
Checked by: JA	Dwg. No.: PE2144-12
Approved by: MSD	Revision No.:

11x17

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AREAS OF POTENTIAL ENVIRONMENTAL CONCERN :

ID #	PCA ID	DESCRIPTION
1	30	IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
2	N/A	APPLICATION OF ROAD SALT
3	34	FORMER WINDOW AND DOOR MANUFACTURING
4 A,B	33	FORMER METAL COATING AND FINISHING
5	27	FORMER AUTOMOTIVE SERVICE GARAGE
6	55	FORMER POLE-MOUNTED TRANSFORMER
7	N/A	FORMER FURNACE OIL SPILL (c.2005)
8	28	FORMER GASOLINE STORAGE TANKS
9	46	FORMER OFF-SITE RAIL TRACKS

WORKMAN AVENUE
OLRT
TRANSITWAY
ROOSEVELT AVENUE
WILMONT AVENUE
WINSTON AVE.
335 ROOSEVELT AVENUE
339 ROOSEVELT AVE. 2-STOREY RESIDENTIAL DWELLING
344 WINSTON AVENUE 2-STOREY RESIDENTIAL DWELLING
379 WILMONT AVE.
389 WILMONT AVE.
2100 SCOTT STREET RESIDENTIAL APARTMENT BUILDING
342 ROOSEVELT AVENUE RESIDENTIAL
346 ROOSEVELT AVENUE RESIDENTIAL
345 ROOSEVELT AVENUE RESIDENTIAL
348 WINSTON AVENUE RESIDENTIAL
378 WILMONT AVENUE RESIDENTIAL
FORMER RESIDENTIAL DWELLING
FORMER BAY DOOR
SHAVINGS ROOM
FORMER BOILER
FORMER 1-STOREY INDUSTRIAL BUILDING
MACHINE SHOP
OFFICES
FORMER BAY DOOR
FORMER GASOLINE STORAGE TANKS
FORMER WAREHOUSE / STORAGE BUILDING AND AUTOMOTIVE SERVICE GARAGE
FORMER STORAGE SHED
FORMER 2-STOREY RESIDENTIAL DWELLING
FORMER 1-STOREY RESIDENTIAL DWELLING
FORMER OIL SPILL
GRAVEL SURFACE COVER
GRAVEL SURFACE COVER
APEC 1, 2
APEC 3, 4A
APEC 4B
APEC 5
APEC 6
APEC 7
APEC 8
APEC 9
LANDSCAPED
WOOD DECK
COVERED PORCH
INTERLOCK
GRAVEL DRIVEWAY
TOOL SHED
FORMER 1-STOREY RESIDENTIAL DWELLING
SIDEWALK
BH 1 66.39
BH 2 66.37
BH 3 66.43
BH 4 66.64
BH 4-20 66.44
BH 5 66.50
BH 5-20 66.50
BH 5-25 66.25 [65.59] (62.65)
BH 6-20 66.54
BH 6-25 66.13 [65.57] (63.66)
BH 7-20 66.52
BH 1-20 66.56
BH 1-25 66.26 [65.62] (63.50)
BH 2-20 66.61
BH 2-25 66.29 [65.53] (63.32)
BH 3-20 66.76
BH 3-25 66.36 [65.50] (62.73)
BH 4-25 66.63 [64.04] (63.28)
TP 1-25 66.42
TP 2-25 66.21
TP 3-25 66.27
TP 4-25 66.78
TP 5-25 66.68
TP 6-25 66.36
TP 7-25 66.33
TP 8-25 66.18
TP 9-25 66.25
TP 10-25 66.18
TP 11-25 66.11
TP 12-25 66.24
TP 13-25 66.42
TP 14-25 66.41
MW 208
MW 209
MW 210
MW 211
MW 212
MW 05-2
MW 05-3
MW 05-4
MW 05-5
MW 05-6
MW 05-7
MW 05-8
MW 05-9
MW 101
MW103
MW104
63.4
63.2
63
62.8
(0.02m/m)

LEGEND:

- PHASE I, II, RSC PROPERTY BOUNDARY
- BOREHOLE WITH MONITORING WELL LOCATION (APRIL, 2025)
- TEST PIT LOCATION (APRIL, 2025)
- BOREHOLE LOCATION
- BOREHOLE WITH MONITORING WELL LOCATION (DESTROYED)
- MONITORING WELL LOCATION BY OTHERS (DESTROYED)
- 66.50 GROUND SURFACE ELEVATION (m)
- [65.62] BEDROCK SURFACE ELEVATION (m)
- (63.83) GROUNDWATER SURFACE ELEVATION (m) (APRIL 11, 2025)
- A—A' CROSS-SECTION LOCATION
- 63.2 GROUNDWATER CONTOUR (m)
- (0.02m/m) APPROX.GROUNDWATER FLOW DIRECTION (HORIZONTAL HYDRAULIC GRADIENT)

GROUND SURFACE ELEVATIONS AT TEST HOLE LOCATIONS ARE REFERENCED TO A GEODETIC DATUM

SCALE: 1:600

0 5 10 15 20 25 30m

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UNIFORM DEVELOPMENTS

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND
379 AND 389 WILMONT AVENUE

OTTAWA, ONTARIO

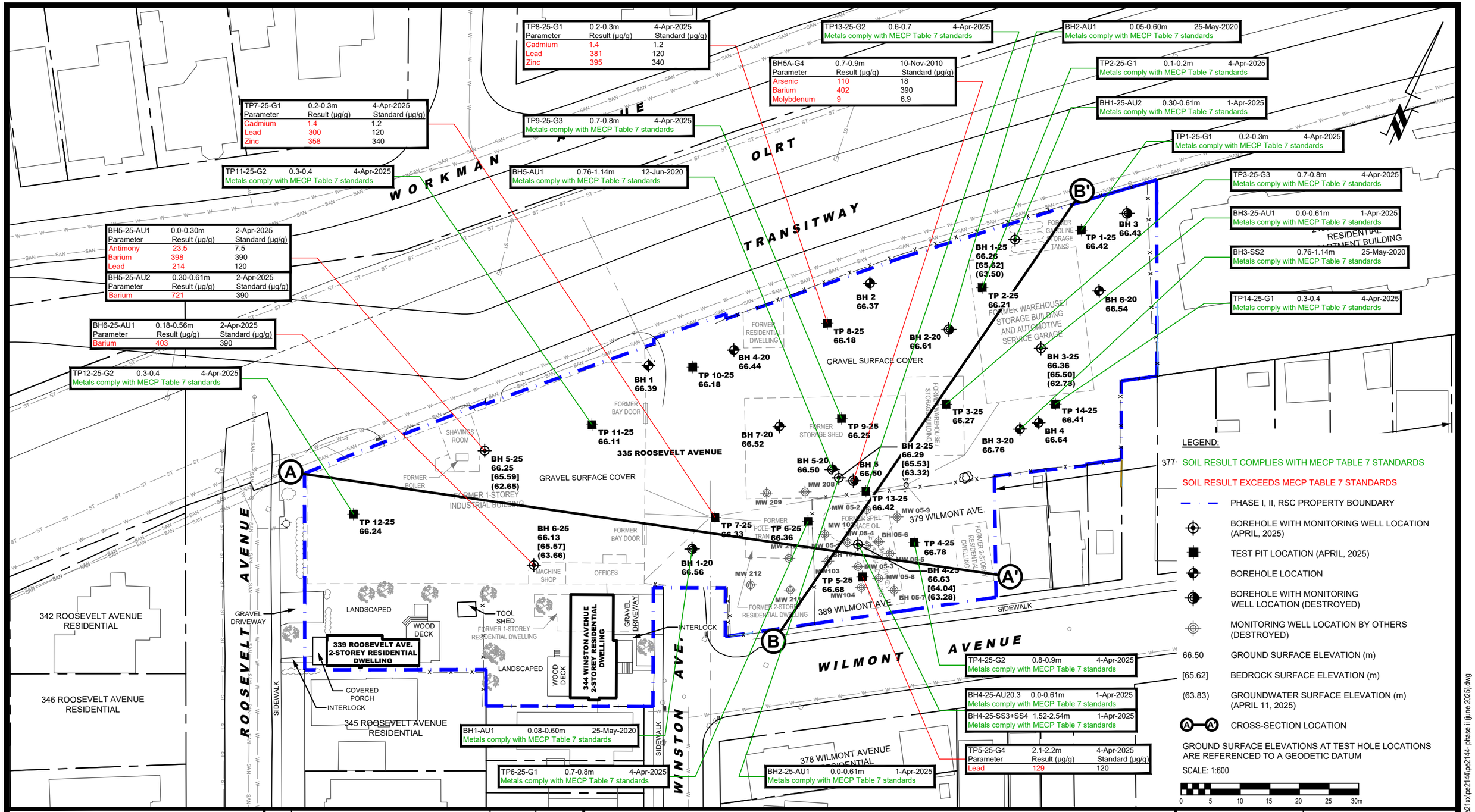
Title:

TEST HOLE LOCATION PLAN

Scale: 1:600	Date: 06/2025
Drawn by: YA	Report No.: PE2144-5
Checked by: JA	Dwg. No.: PE2144-13
Approved by: MSD	Revision No.:

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UNIFORM DEVELOPMENTS

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND 379 AND 389 WILMONT AVENUE

OTTAWA, ONTARIO

Title:

ANALYTICAL TESTING PLAN - SOIL (METALS (INCLUDING As, Sb, Se))

Scale: 1:600	Date: 06/2025
Drawn by: ZS	Report No.: PE2144-5
Checked by: JA	Dwg. No.: PE2144-14
Approved by: MSD	Revision No.:

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TP11-25-G2	0.3-0.4	4-Apr-2025
Metals comply with MECP Table 7 standards		

BH6-25-AU1	0.18-0.56m	2-Apr-2025
Parameter	Result (µg/g)	Standard (µg/g)
Barium	403	390

BH5-25-AU1	0.0-0.30m	2-Apr-2025
Parameter	Result (µg/g)	Standard (µg/g)
Antimony	23.5	7.5
Barium	398	390
Lead	214	120

BH5-25-AU2	0.30-0.61m	2-Apr-2025
Parameter	Result (µg/g)	Standard (µg/g)
Barium	721	390

TP12-25-G2	0.3-0.4	4-Apr-2025
Metals comply with MECP Table 7 standards		

TP7-25-G1	0.2-0.3m	4-Apr-2025
Parameter	Result (µg/g)	Standard (µg/g)
Cadmium	1.4	1.2
Lead	300	120
Zinc	358	340

BH1-AU1	0.08-0.60m	25-May-2020
Metals comply with MECP Table 7 standards		

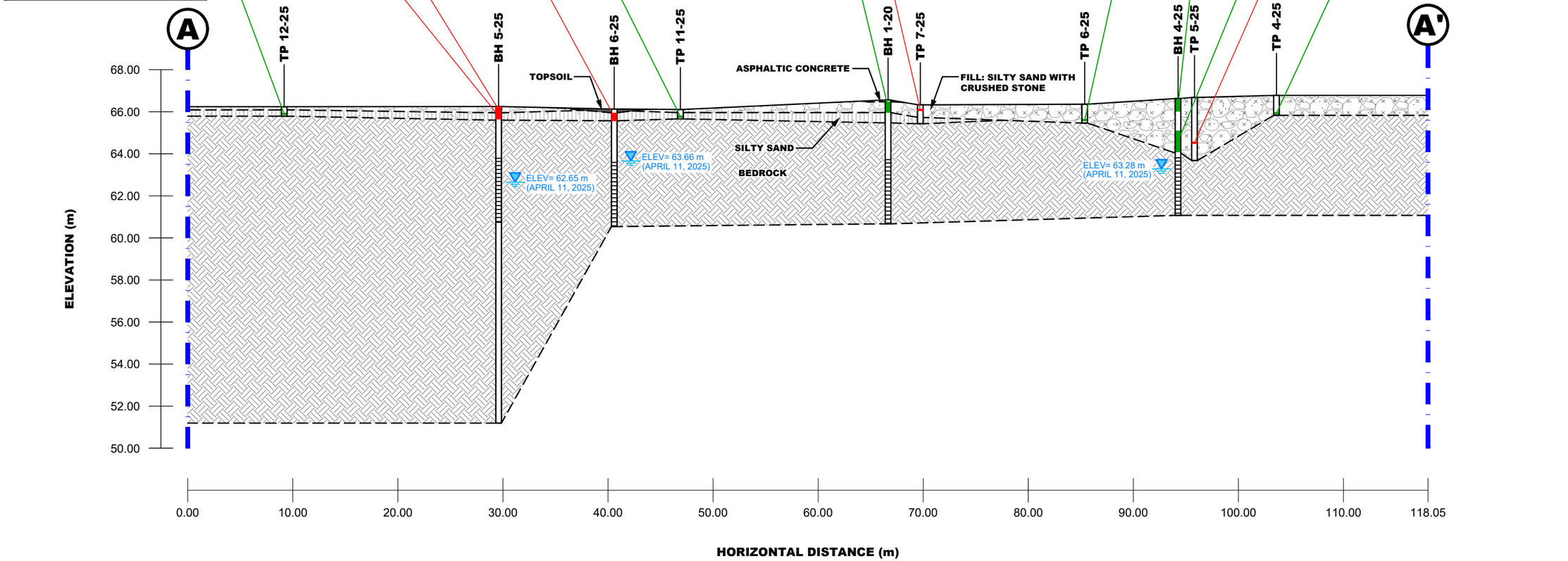
TP6-25-G1	0.7-0.8m	4-Apr-2025
Metals comply with MECP Table 7 standards		

BH4-25-AU20.3	0.0-0.61m	1-Apr-2025
Metals comply with MECP Table 7 standards		

BH4-25-SS3+SS4	1.52-2.54m	1-Apr-2025
Metals comply with MECP Table 7 standards		

TP5-25-G4	2.1-2.2m	4-Apr-2025
Parameter	Result (µg/g)	Standard (µg/g)
Lead	129	120

TP4-25-G2	0.8-0.9m	4-Apr-2025
Metals comply with MECP Table 7 standards		



LEGEND:

SOIL RESULT COMPLIES WITH MECP TABLE 7 STANDARDS

SOIL RESULT EXCEEDS MECP TABLE 7 STANDARDS

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UNIFORM DEVELOPMENTS

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND
379 AND 389 WILMONT AVENUE
OTTAWA, ONTARIO

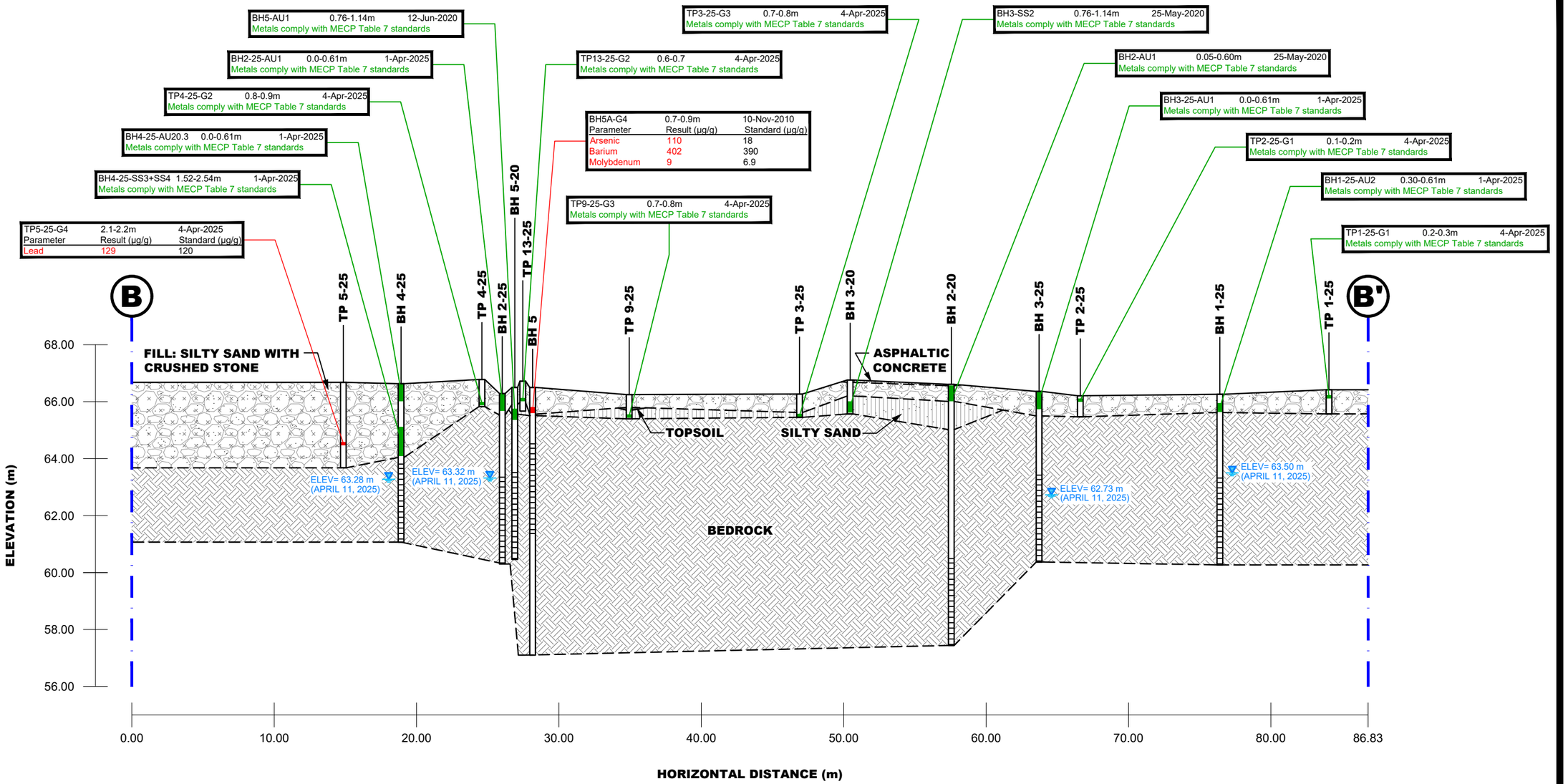
Title:

CROSS-SECTION A-A' - SOIL (METALS)

Scale: AS SHOWN	Date: 06/2025
Drawn by: ZS	Report No.: PE2144-5
Checked by: JA	Dwg. No.: PE2144-14A
Approved by: MSD	Revision No.:

11x17

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LEGEND:

SOIL RESULT COMPLIES WITH MECP TABLE 7 STANDARDS

SOIL RESULT EXCEEDS MECP TABLE 7 STANDARDS

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UNIFORM DEVELOPMENTS

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND
379 AND 389 WILMONT AVENUE

OTTAWA, ONTARIO

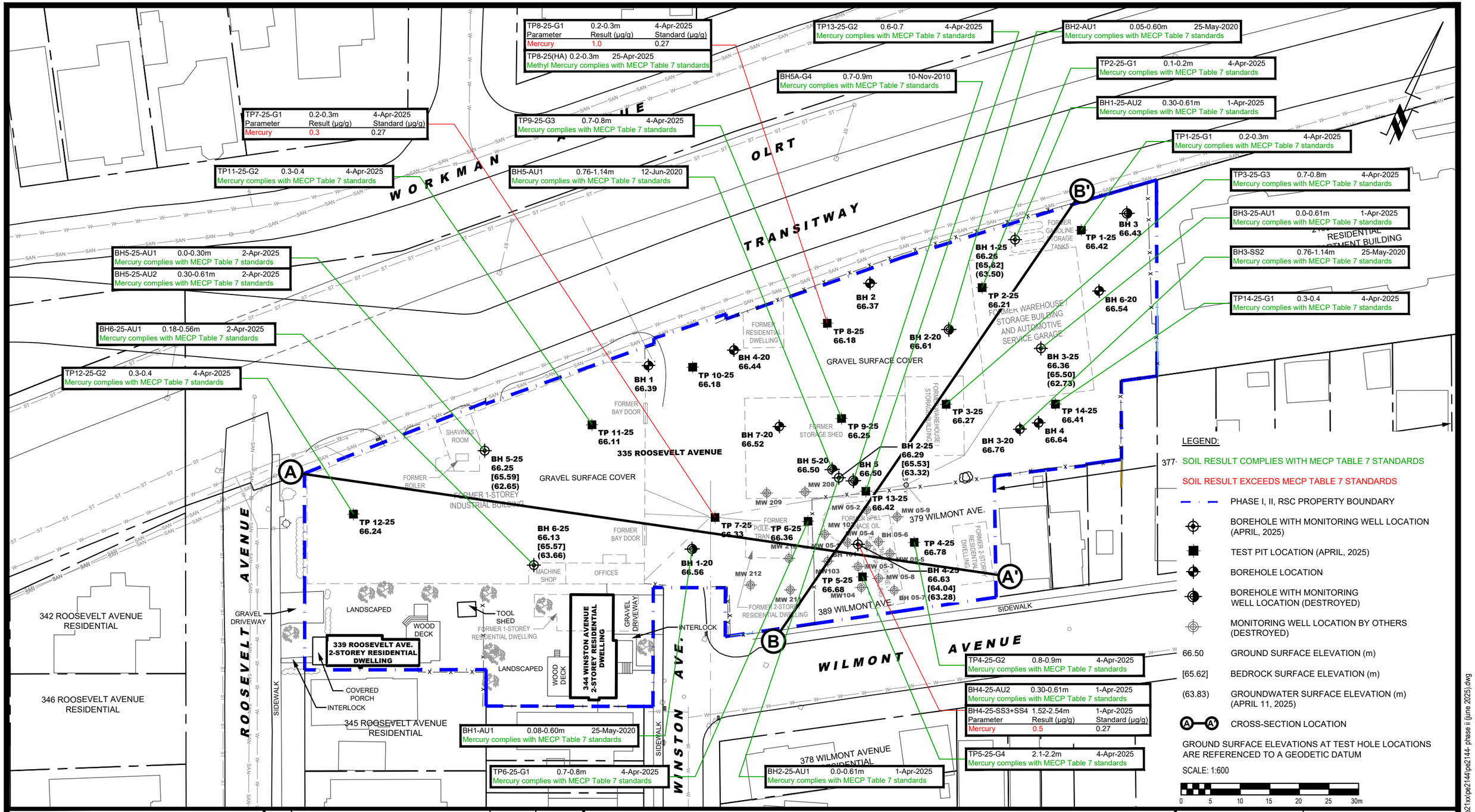
Title:

CROSS-SECTION B-B' - SOIL (METALS)

Scale: AS SHOWN	Date: 06/2025
Drawn by: ZS	Report No.: PE2144-5
Checked by: JA	Dwg. No.: PE2144-14B
Approved by: MSD	Revision No.:

11x17

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NO.	REVISIONS	DATE	INITIAL

UNIFORM DEVELOPMENTS

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND 379 AND 389 WILMONT AVENUE

OTTAWA, ONTARIO

Title:

ANALYTICAL TESTING PLAN - SOIL (MERCURY, METHYL MERCURY)

Scale: 1:600	Date: 06/2025
Drawn by: ZS	Report No.: PE2144-5
Checked by: JA	Dwg. No.: PE2144-15
Approved by: MSD	Revision No.:

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11x17

TP11-25-G2 0.3-0.4 4-Apr-2025
Mercury complies with MECP Table 7 standards

BH6-25-AU1 0.18-0.56m 2-Apr-2025
Mercury complies with MECP Table 7 standards

BH5-25-AU1 0.0-0.30m 2-Apr-2025
Mercury complies with MECP Table 7 standards

BH5-25-AU2 0.30-0.61m 2-Apr-2025
Mercury complies with MECP Table 7 standards

TP12-25-G2 0.3-0.4 4-Apr-2025
Mercury complies with MECP Table 7 standards

TP7-25-G1 0.2-0.3m 4-Apr-2025

Parameter	Result (µg/g)	Standard (µg/g)
Mercury	0.3	0.27

BH1-AU1 0.08-0.60m 25-May-2020
Mercury complies with MECP Table 7 standards

TP6-25-G1 0.7-0.8m 4-Apr-2025
Mercury complies with MECP Table 7 standards

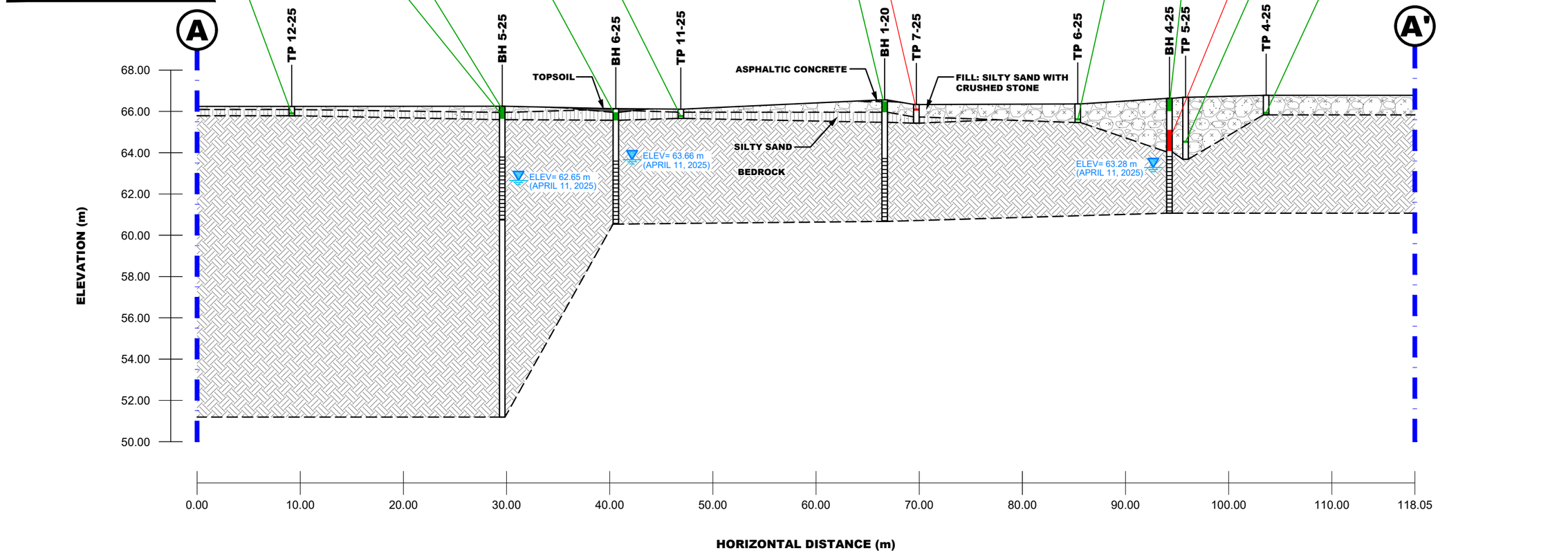
BH4-25-AU2 0.30-0.61m 1-Apr-2025
Mercury complies with MECP Table 7 standards

BH4-25-SS3+SS4 1.52-2.54m 1-Apr-2025

Parameter	Result (µg/g)	Standard (µg/g)
Mercury	0.5	0.27

TP5-25-G4 2.1-2.2m 4-Apr-2025
Mercury complies with MECP Table 7 standards

TP4-25-G2 0.8-0.9m 4-Apr-2025
Mercury complies with MECP Table 7 standards



LEGEND:

SOIL RESULT COMPLIES WITH MECP TABLE 7 STANDARDS

SOIL RESULT EXCEEDS MECP TABLE 7 STANDARDS

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UNIFORM DEVELOPMENTS

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND
379 AND 389 WILMONT AVENUE

OTTAWA, ONTARIO

Title:

CROSS-SECTION A-A' - SOIL (MERCURY, METHYL MURCURY)

Scale: AS SHOWN	Date: 06/2025
Drawn by: ZS	Report No.: PE2144-5
Checked by: JA	Dwg. No.: PE2144-15A
Approved by: MSD	Revision No.:

11x17

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BH5-AU1 0.76-1.14m 12-Jun-2020
Mercury complies with MECP Table 7 standards

BH2-25-AU1 0.0-0.61m 1-Apr-2025
Mercury complies with MECP Table 7 standards

TP4-25-G2 0.8-0.9m 4-Apr-2025
Mercury complies with MECP Table 7 standards

BH4-25-AU2 0.30-0.61m 1-Apr-2025
Mercury complies with MECP Table 7 standards

BH4-25-SS3+SS4 1.52-2.54m 1-Apr-2025

Parameter	Result (µg/g)	Standard (µg/g)
Mercury	0.5	0.27

TP5-25-G4 2.1-2.2m 4-Apr-2025
Mercury complies with MECP Table 7 standards

TP3-25-G3 0.7-0.8m 4-Apr-2025
Mercury complies with MECP Table 7 standards

TP13-25-G2 0.6-0.7 4-Apr-2025
Mercury complies with MECP Table 7 standards

BH5A-G4 0.7-0.9m 10-Nov-2010
Mercury complies with MECP Table 7 standards

TP9-25-G3 0.7-0.8m 4-Apr-2025
Mercury complies with MECP Table 7 standards

BH3-SS2 0.76-1.14m 25-May-2020
Mercury complies with MECP Table 7 standards

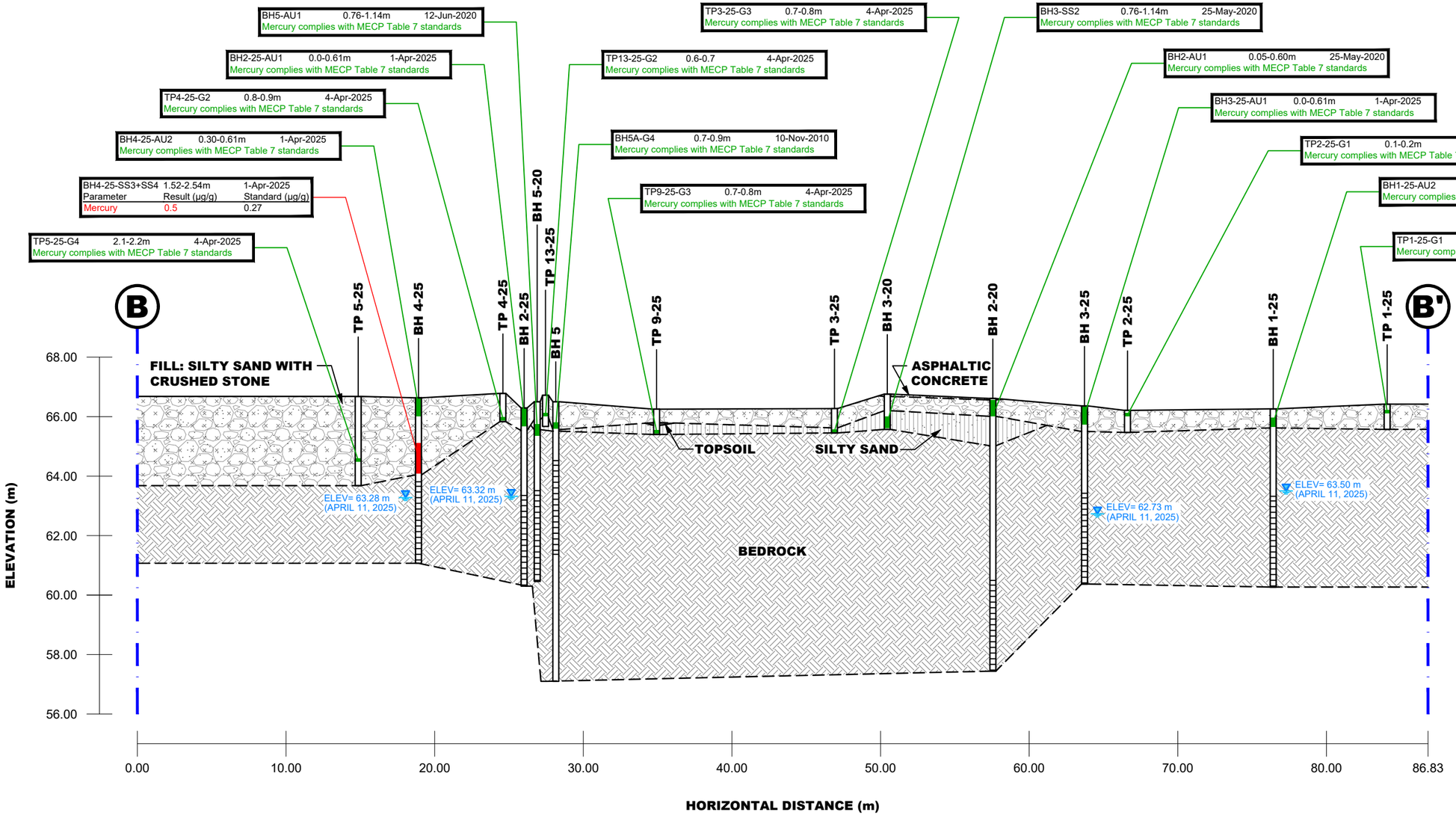
BH2-AU1 0.05-0.60m 25-May-2020
Mercury complies with MECP Table 7 standards

BH3-25-AU1 0.0-0.61m 1-Apr-2025
Mercury complies with MECP Table 7 standards

TP2-25-G1 0.1-0.2m 4-Apr-2025
Mercury complies with MECP Table 7 standards

BH1-25-AU2 0.30-0.61m 1-Apr-2025
Mercury complies with MECP Table 7 standards

TP1-25-G1 0.2-0.3m 4-Apr-2025
Mercury complies with MECP Table 7 standards



LEGEND:

SOIL RESULT COMPLIES WITH MECP TABLE 7 STANDARDS

SOIL RESULT EXCEEDS MECP TABLE 7 STANDARDS

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

NO.	REVISIONS	DATE	INITIAL

UNIFORM DEVELOPMENTS

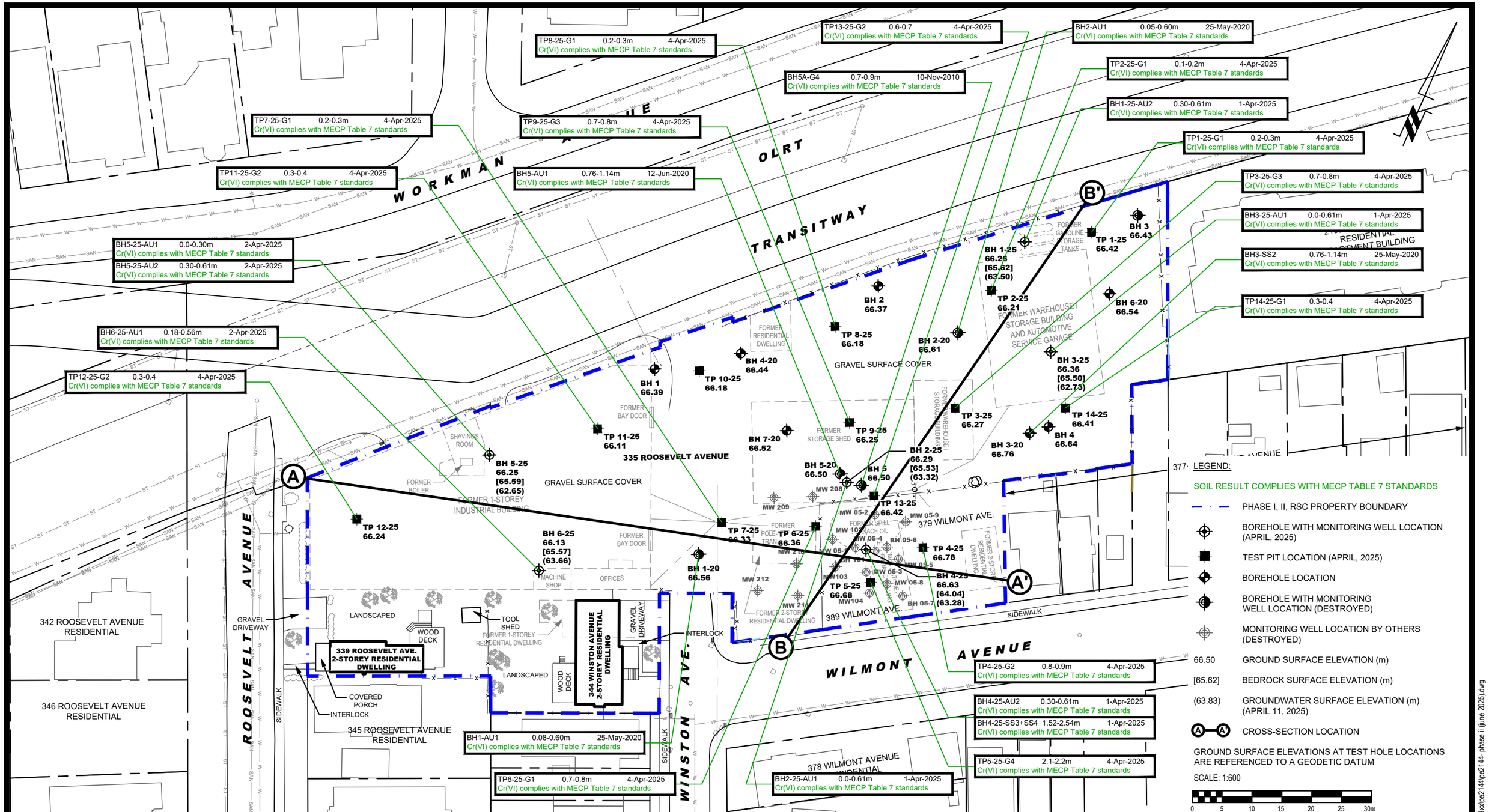
PHASE II - ENVIRONMENTAL SITE ASSESSMENT
335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND
379 AND 389 WILMONT AVENUE
OTTAWA, ONTARIO

Title:
CROSS-SECTION B-B' - SOIL (MERCURY, METHYL MURCURY)

Scale: AS SHOWN	Date: 06/2025
Drawn by: ZS	Report No.: PE2144-5
Checked by: JA	Dwg. No.: PE2144-15B
Approved by: MSD	Revision No.:

11x17

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PATERSON GROUP
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NO.	REVISIONS	DATE	INITIAL

UNIFORM DEVELOPMENTS

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND 379 AND 389 WILMONT AVENUE

OTTAWA, ONTARIO

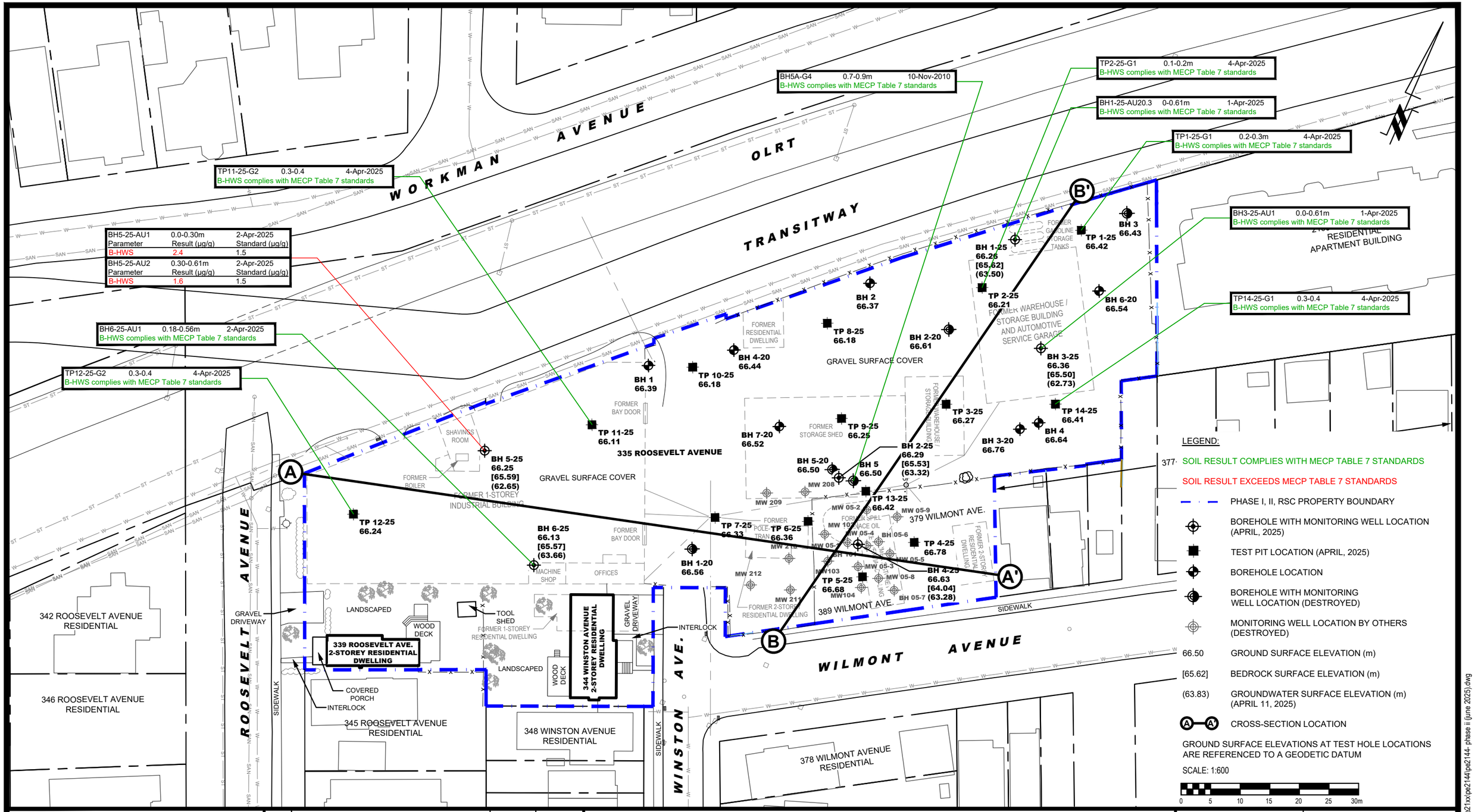
Title:

ANALYTICAL TESTING PLAN - SOIL (CR(VI))

Scale: 1:600	Date: 06/2025
Drawn by: ZS	Report No.: PE2144-5
Checked by: JA	Dwg. No.: PE2144-16
Approved by: MSD	Revision No.:

11x17

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NO.	REVISIONS	DATE	INITIAL

UNIFORM DEVELOPMENTS

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND 379 AND 389 WILMONT AVENUE

OTTAWA, ONTARIO

Title:

ANALYTICAL TESTING PLAN - SOIL (B-HWS)

Scale: 1:600	Date: 06/2025
Drawn by: ZS	Report No.: PE2144-5
Checked by: JA	Dwg. No.: PE2144-17
Approved by: MSD	Revision No.:

11x17

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BH6-25-AU1 0.18-0.56m 2-Apr-2025
B-HWS complies with MECP Table 7 standards

BH5-25-AU1 0.0-0.30m 2-Apr-2025

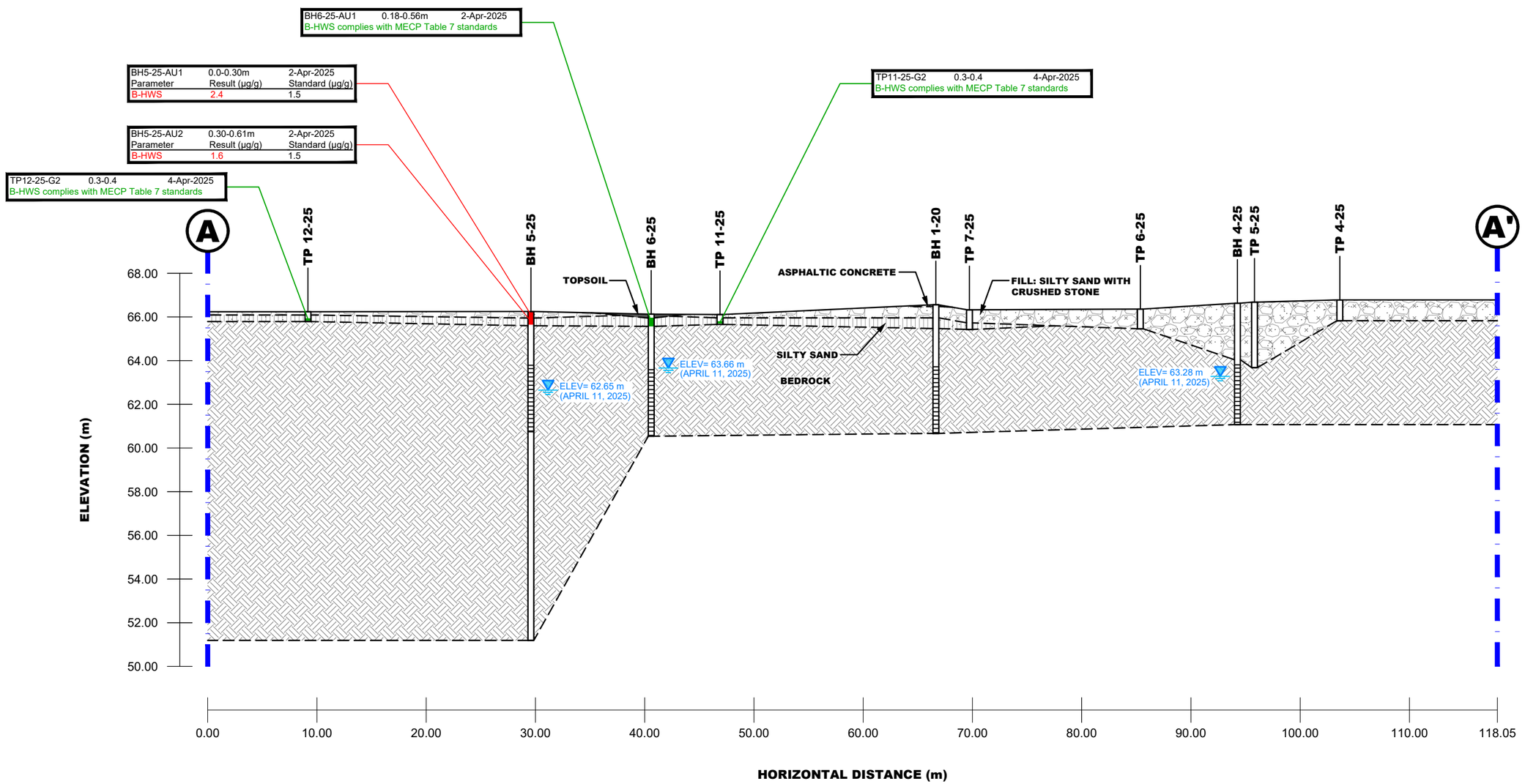
Parameter	Result (µg/g)	Standard (µg/g)
B-HWS	2.4	1.5

BH5-25-AU2 0.30-0.61m 2-Apr-2025

Parameter	Result (µg/g)	Standard (µg/g)
B-HWS	1.6	1.5

TP11-25-G2 0.3-0.4 4-Apr-2025
B-HWS complies with MECP Table 7 standards

TP12-25-G2 0.3-0.4 4-Apr-2025
B-HWS complies with MECP Table 7 standards



LEGEND:

SOIL RESULT COMPLIES WITH MECP TABLE 7 STANDARDS

SOIL RESULT EXCEEDS MECP TABLE 7 STANDARDS

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NO.	REVISIONS	DATE	INITIAL

UNIFORM DEVELOPMENTS

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND
379 AND 389 WILMONT AVENUE

OTTAWA, ONTARIO

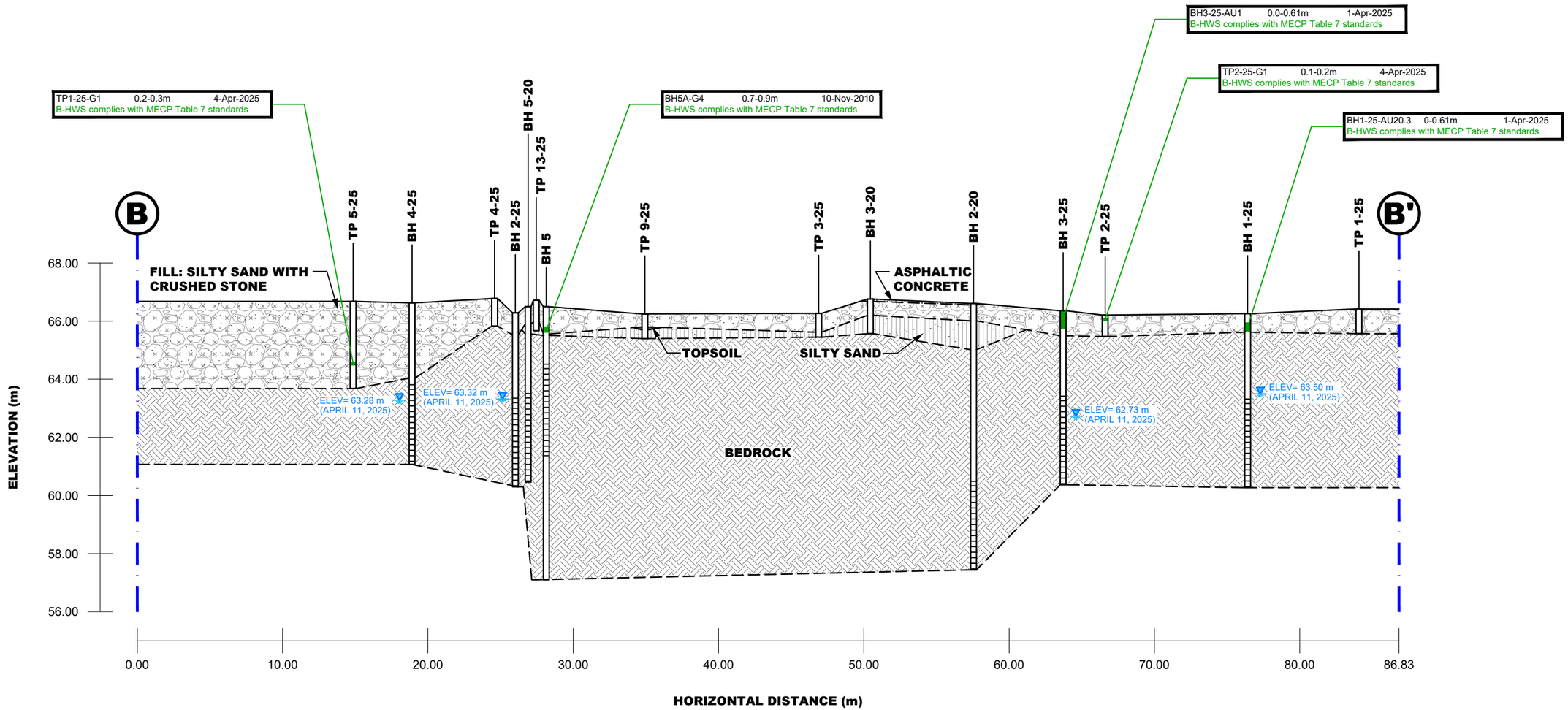
Title:

CROSS-SECTION A-A' - SOIL (B-HWS)

Scale: AS SHOWN	Date: 06/2025
Drawn by: ZS	Report No.: PE2144-5
Checked by: JA	Dwg. No.: PE2144-17A
Approved by: MSD	Revision No.:

11x17

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LEGEND:

SOIL RESULT COMPLIES WITH MECP TABLE 7 STANDARDS

SOIL RESULT EXCEEDS MECP TABLE 7 STANDARDS

PATERSON GROUP
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NO.	REVISIONS	DATE	INITIAL

UNIFORM DEVELOPMENTS

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND
379 AND 389 WILMONT AVENUE

OTTAWA, ONTARIO

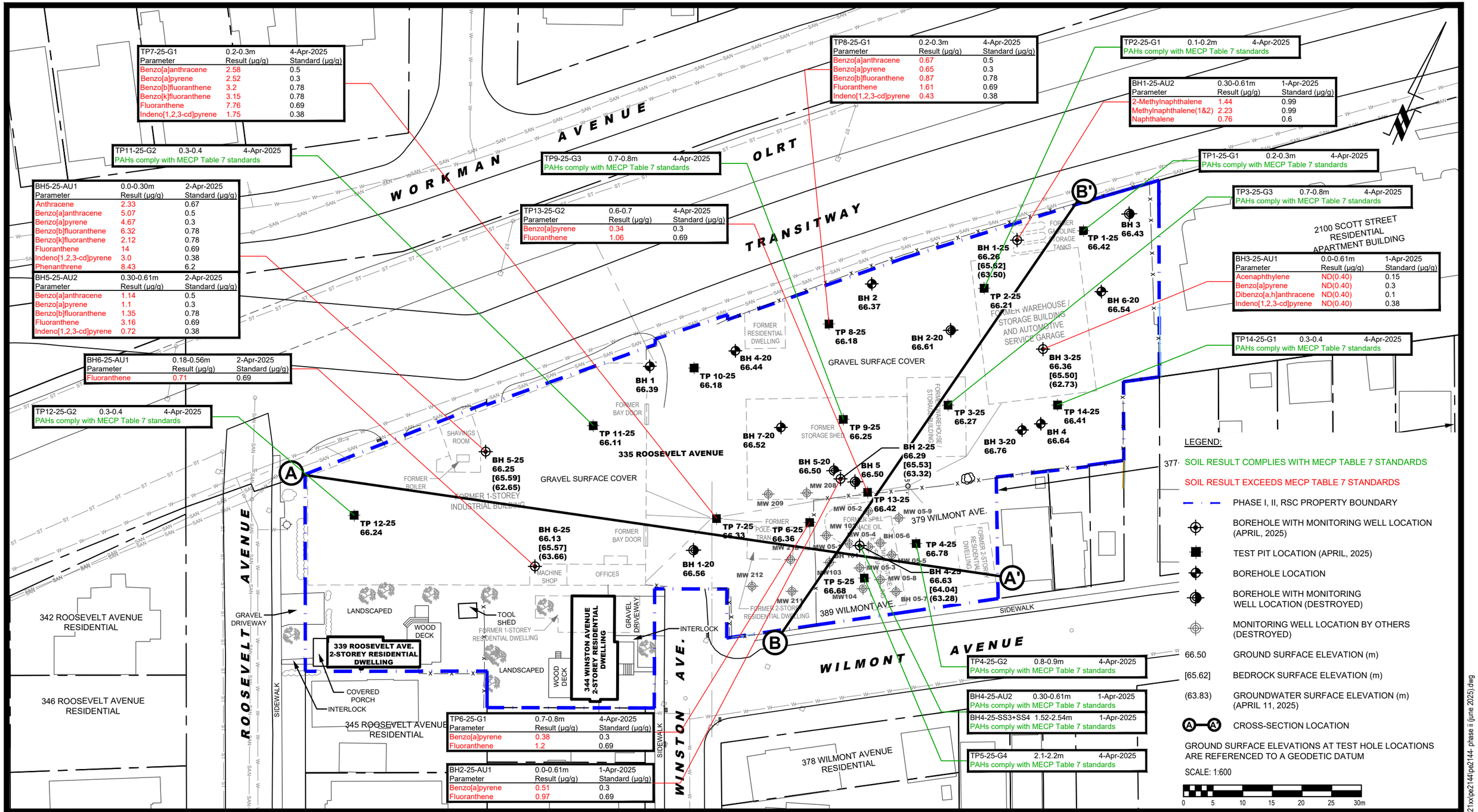
Title:

CROSS-SECTION B-B' - SOIL (B-HWS)

Scale: AS SHOWN	Date: 06/2025
Drawn by: ZS	Report No.: PE2144-5
Checked by: JA	Dwg. No.: PE2144-17B
Approved by: MSD	Revision No.:

11x17

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NO.	REVISIONS	DATE	INITIAL

UNIFORM DEVELOPMENTS

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND 379 AND 389 WILMONT AVENUE

OTTAWA, ONTARIO

Title:

ANALYTICAL TESTING PLAN - SOIL (PAHs)

Scale: 1:600	Date: 06/2025
Drawn by: ZS	Report No.: PE2144-5
Checked by: JA	Dwg. No.: PE2144-18
Approved by: MSD	Revision No.:

11x17

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BH5-25-AU1	0.0-0.30m	2-Apr-2025
Parameter	Result (µg/g)	Standard (µg/g)
Anthracene	2.33	0.67
Benzo[a]anthracene	5.07	0.5
Benzo[a]pyrene	4.67	0.3
Benzo[b]fluoranthene	6.32	0.78
Benzo[k]fluoranthene	2.12	0.78
Fluoranthene	14	0.69
Indeno[1,2,3-cd]pyrene	3.0	0.38
Phenanthrene	8.43	6.2

BH5-25-AU2	0.30-0.61m	2-Apr-2025
Parameter	Result (µg/g)	Standard (µg/g)
Benzo[a]anthracene	1.14	0.5
Benzo[a]pyrene	1.1	0.3
Benzo[b]fluoranthene	1.35	0.78
Fluoranthene	3.16	0.69
Indeno[1,2,3-cd]pyrene	0.72	0.38

TP12-25-G2 0.3-0.4 4-Apr-2025
PAHs comply with MECP Table 7 standards

BH6-25-AU1	0.18-0.56m	2-Apr-2025
Parameter	Result (µg/g)	Standard (µg/g)
Fluoranthene	0.71	0.69

TP11-25-G2 0.3-0.4 4-Apr-2025
PAHs comply with MECP Table 7 standards

TP7-25-G1	0.2-0.3m	4-Apr-2025
Parameter	Result (µg/g)	Standard (µg/g)
Benzo[a]anthracene	2.58	0.5
Benzo[a]pyrene	2.52	0.3
Benzo[b]fluoranthene	3.2	0.78
Benzo[k]fluoranthene	3.15	0.78
Fluoranthene	7.76	0.69
Indeno[1,2,3-cd]pyrene	1.75	0.38

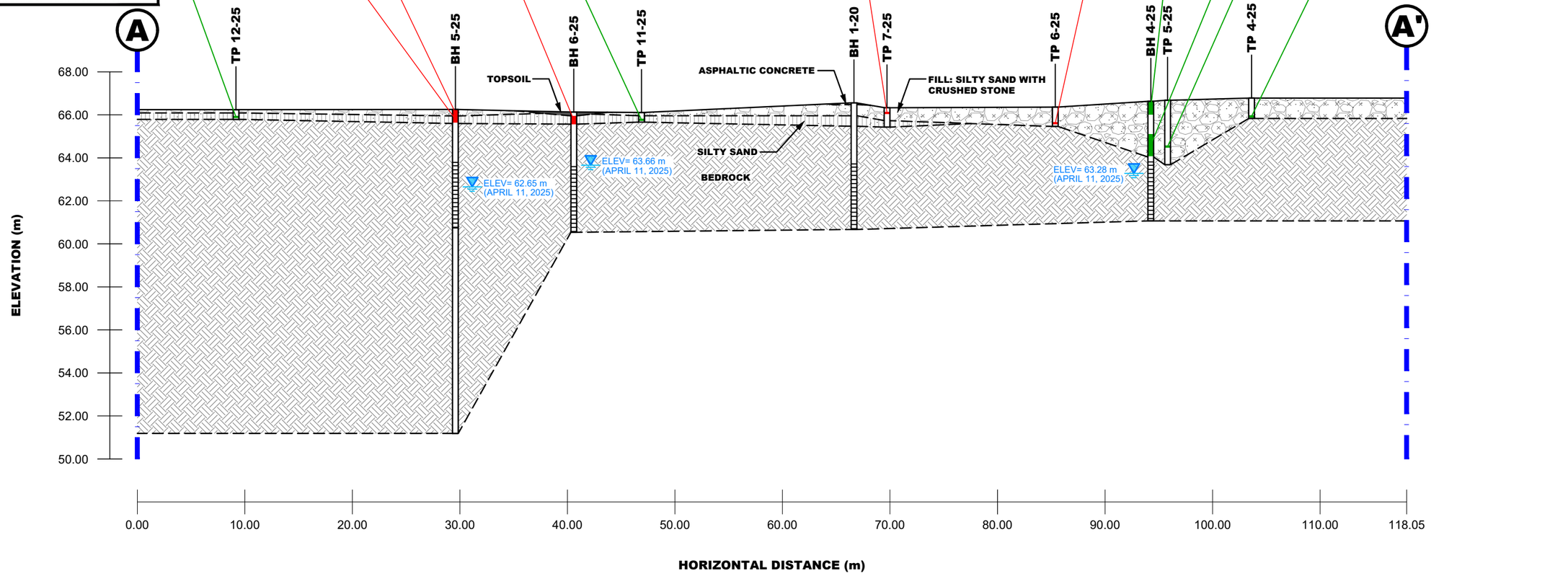
TP6-25-G1	0.7-0.8m	4-Apr-2025
Parameter	Result (µg/g)	Standard (µg/g)
Benzo[a]pyrene	0.38	0.3
Fluoranthene	1.2	0.69

BH4-25-AU2 0.30-0.61m 1-Apr-2025
PAHs comply with MECP Table 7 standards

BH4-25-SS3+SS4 1.52-2.54m 1-Apr-2025
PAHs comply with MECP Table 7 standards

TP5-25-G4 2.1-2.2m 4-Apr-2025
PAHs comply with MECP Table 7 standards

TP4-25-G2 0.8-0.9m 4-Apr-2025
PAHs comply with MECP Table 7 standards



LEGEND:

SOIL RESULT COMPLIES WITH MECP TABLE 7 STANDARDS

SOIL RESULT EXCEEDS MECP TABLE 7 STANDARDS

PATERSON GROUP
9 AURIGA DRIVE
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NO.	REVISIONS	DATE	INITIAL

UNIFORM DEVELOPMENTS

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND
379 AND 389 WILMONT AVENUE

OTTAWA, ONTARIO

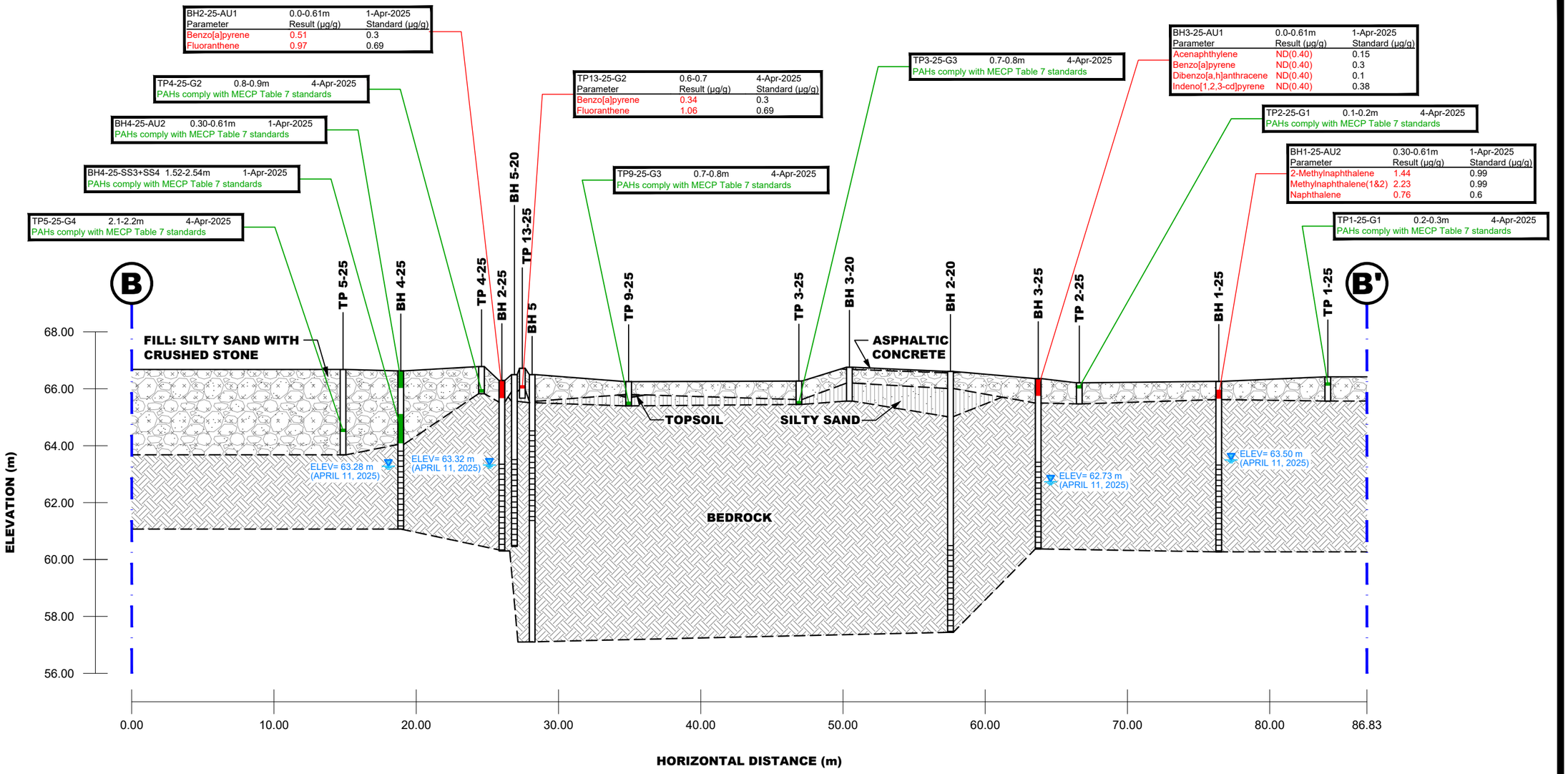
Title:

CROSS-SECTION A-A' - SOIL (PAHs)

Scale: AS SHOWN	Date: 06/2025
Drawn by: ZS	Report No.: PE2144-5
Checked by: JA	Dwg. No.: PE2144-18A
Approved by: MSD	Revision No.:

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LEGEND:

SOIL RESULT COMPLIES WITH MECP TABLE 7 STANDARDS

SOIL RESULT EXCEEDS MECP TABLE 7 STANDARDS

PATERSON GROUP
9 AURIGA DRIVE
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NO.	REVISIONS	DATE	INITIAL

UNIFORM DEVELOPMENTS

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND
379 AND 389 WILMONT AVENUE

OTTAWA, ONTARIO

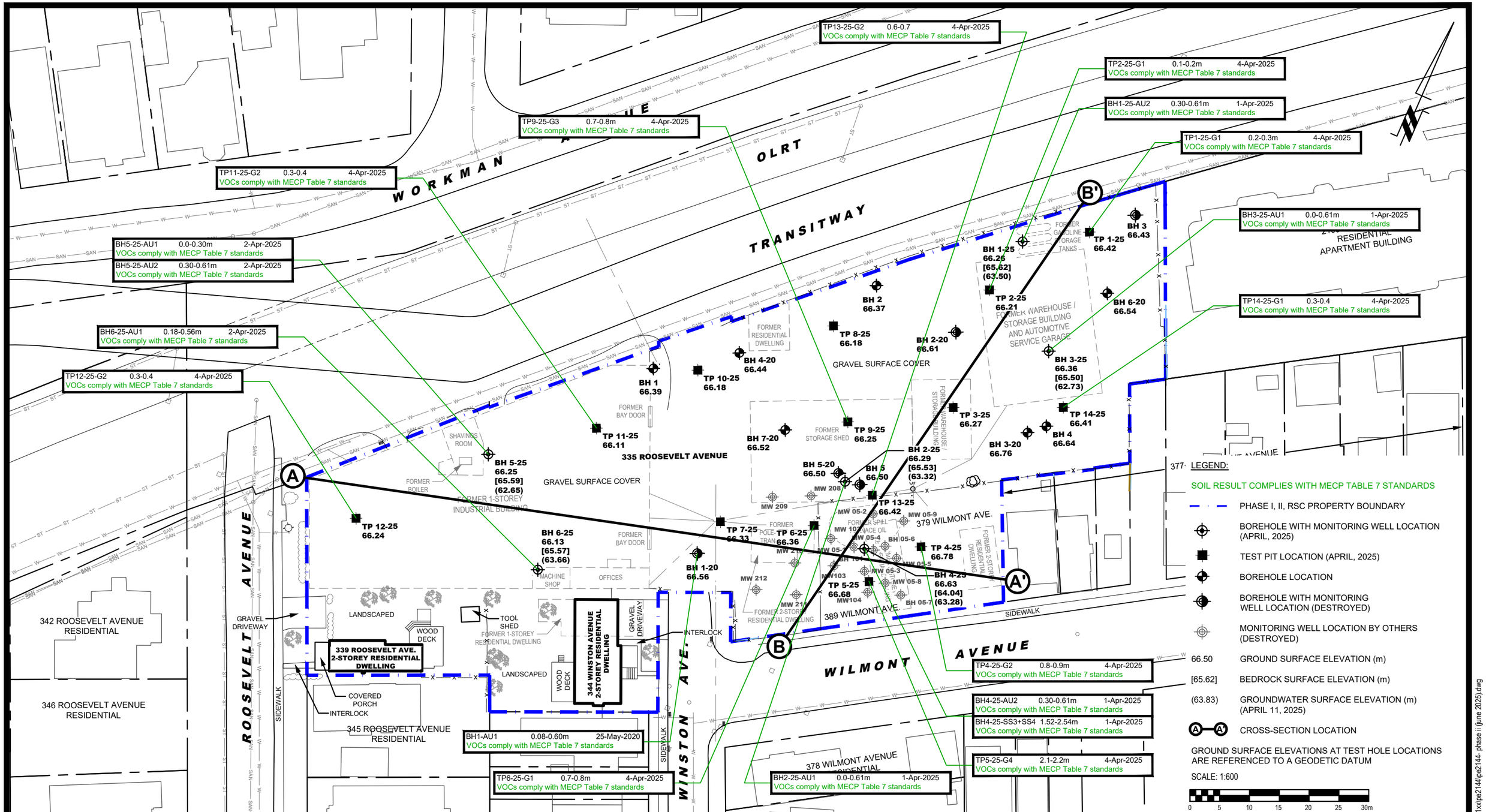
Title:

CROSS-SECTION B-B' - SOIL (PAHs)

Scale: AS SHOWN	Date: 06/2025
Drawn by: ZS	Report No.: PE2144-5
Checked by: JA	Dwg. No.: PE2144-18B
Approved by: MSD	Revision No.:

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NO.	REVISIONS	DATE	INITIAL

UNIFORM DEVELOPMENTS

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND 379 AND 389 WILMONT AVENUE

OTTAWA, ONTARIO

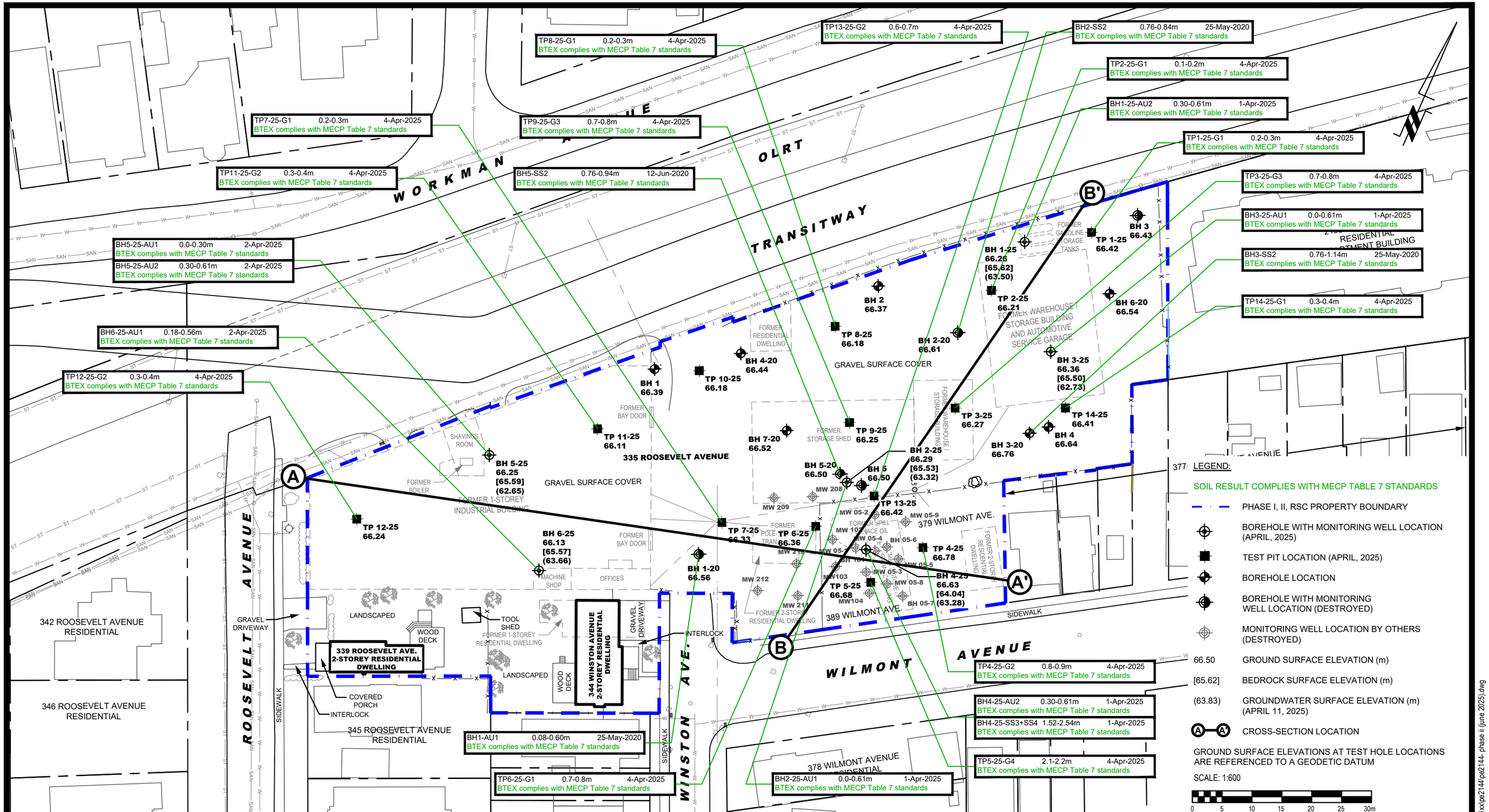
Title:

ANALYTICAL TESTING PLAN - SOIL (VOCs)

Scale: 1:600	Date: 06/2025
Drawn by: ZS	Report No.: PE2144-5
Checked by: JA	Dwg. No.: PE2144-19
Approved by: MSD	Revision No.:

11x17

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NO.	REVISIONS	DATE	INITIAL

UNIFORM DEVELOPMENTS

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND 379 AND 389 WILMONT AVENUE

OTTAWA, ONTARIO

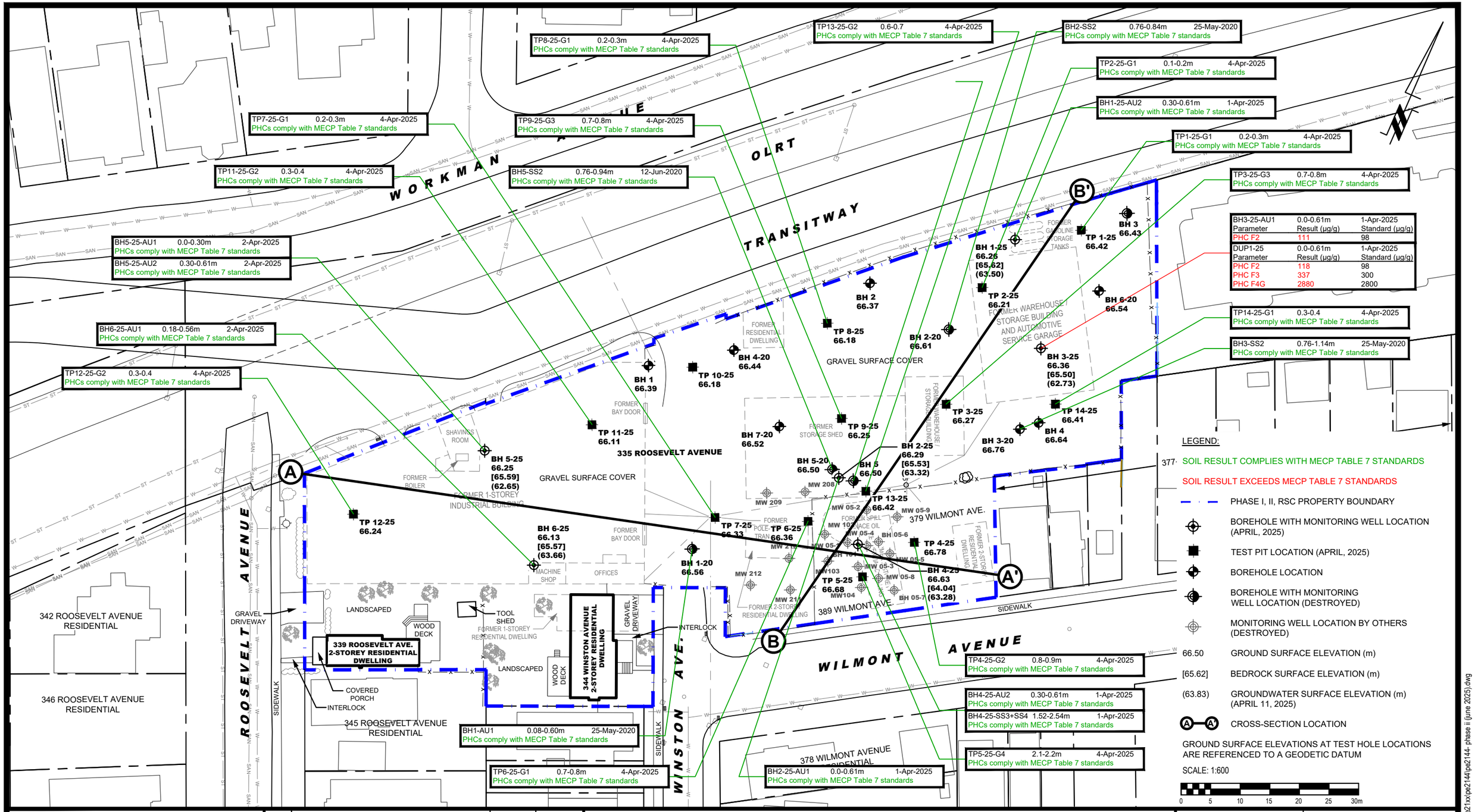
Title:

ANALYTICAL TESTING PLAN - SOIL (BTEX)

Scale: 1:600	Date: 06/2025
Drawn by: ZS	Report No.: PE2144-5
Checked by: JA	Dwg. No.: PE2144-20
Approved by: MSD	Revision No.:

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NO.	REVISIONS	DATE	INITIAL

UNIFORM DEVELOPMENTS

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND 379 AND 389 WILMONT AVENUE

OTTAWA, ONTARIO

Title:

ANALYTICAL TESTING PLAN - SOIL (PHCs)

Scale: 1:600	Date: 06/2025
Drawn by: ZS	Report No.: PE2144-5
Checked by: JA	Dwg. No.: PE2144-21
Approved by: MSD	Revision No.:

11x17

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TP11-25-G2 0.3-0.4 4-Apr-2025
PHCs comply with MECP Table 7 standards

TP7-25-G1 0.2-0.3m 4-Apr-2025
PHCs comply with MECP Table 7 standards

TP6-25-G1 0.7-0.8m 4-Apr-2025
PHCs comply with MECP Table 7 standards

BH6-25-AU1 0.18-0.56m 2-Apr-2025
PHCs comply with MECP Table 7 standards

BH1-AU1 0.08-0.60m 25-May-2020
PHCs comply with MECP Table 7 standards

BH4-25-AU2 0.30-0.61m 1-Apr-2025
PHCs comply with MECP Table 7 standards

BH5-25-AU1 0.0-0.30m 2-Apr-2025
PHCs comply with MECP Table 7 standards

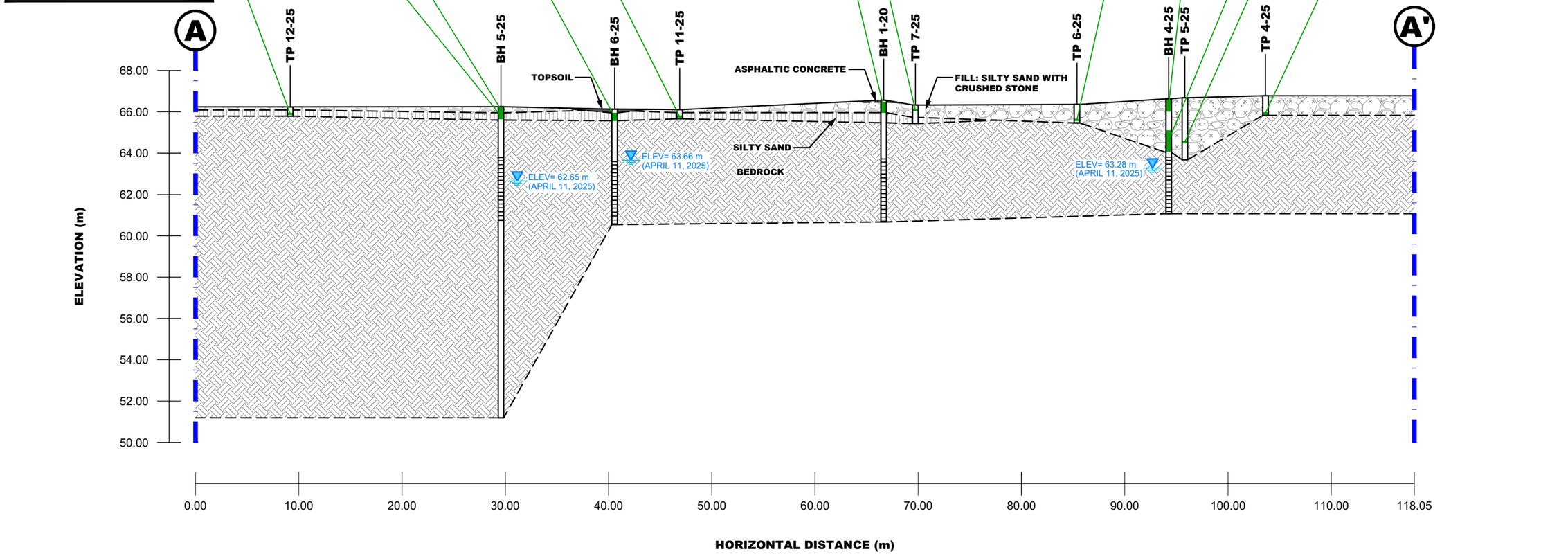
BH4-25-SS3+SS4 1.52-2.54m 1-Apr-2025
PHCs comply with MECP Table 7 standards

BH5-25-AU2 0.30-0.61m 2-Apr-2025
PHCs comply with MECP Table 7 standards

TP5-25-G4 2.1-2.2m 4-Apr-2025
PHCs comply with MECP Table 7 standards

TP12-25-G2 0.3-0.4 4-Apr-2025
PHCs comply with MECP Table 7 standards

TP4-25-G2 0.8-0.9m 4-Apr-2025
PHCs comply with MECP Table 7 standards



LEGEND:

SOIL RESULT COMPLIES WITH MECP TABLE 7 STANDARDS

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NO.	REVISIONS	DATE	INITIAL

UNIFORM DEVELOPMENTS

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND
379 AND 389 WILMONT AVENUE

OTTAWA, ONTARIO

Title:

CROSS-SECTION A-A' - SOIL (PHCs)

Scale: AS SHOWN	Date: 06/2025
Drawn by: ZS	Report No.: PE2144-5
Checked by: JA	Dwg. No.: PE2144-21A
Approved by: MSD	Revision No.:

11x17

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BH5-SS2 0.76-0.94m 12-Jun-2020
PHCs comply with MECP Table 7 standards

BH2-25-AU1 0.0-0.61m 1-Apr-2025
PHCs comply with MECP Table 7 standards

TP4-25-G2 0.8-0.9m 4-Apr-2025
PHCs comply with MECP Table 7 standards

BH4-25-AU2 0.30-0.61m 1-Apr-2025
PHCs comply with MECP Table 7 standards

BH4-25-SS3+SS4 1.52-2.54m 1-Apr-2025
PHCs comply with MECP Table 7 standards

TP5-25-G4 2.1-2.2m 4-Apr-2025
PHCs comply with MECP Table 7 standards

BH3-SS2 0.76-1.14m 25-May-2020
PHCs comply with MECP Table 7 standards

TP3-25-G3 0.7-0.8m 4-Apr-2025
PHCs comply with MECP Table 7 standards

TP13-25-G2 0.6-0.7 4-Apr-2025
PHCs comply with MECP Table 7 standards

TP9-25-G3 0.7-0.8m 4-Apr-2025
PHCs comply with MECP Table 7 standards

BH2-SS2 0.76-0.84m 25-May-2020
PHCs comply with MECP Table 7 standards

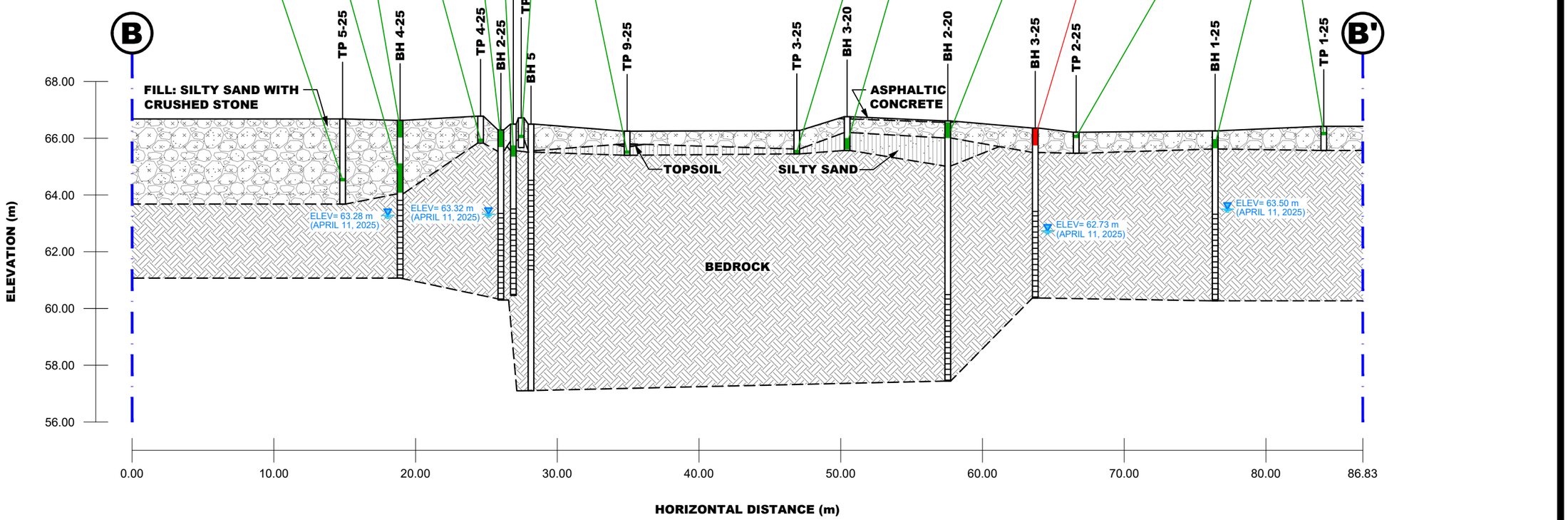
BH3-25-AU1	0.0-0.61m	1-Apr-2025
Parameter	Result (µg/g)	Standard (µg/g)
PHC F2	111	98

DUP1-25	0.0-0.61m	1-Apr-2025
Parameter	Result (µg/g)	Standard (µg/g)
PHC F2	118	98
PHC F3	337	300
PHC F4G	2880	2800

TP2-25-G1 0.1-0.2m 4-Apr-2025
PHCs comply with MECP Table 7 standards

BH1-25-AU2 0.30-0.61m 1-Apr-2025
PHCs comply with MECP Table 7 standards

TP1-25-G1 0.2-0.3m 4-Apr-2025
PHCs comply with MECP Table 7 standards



LEGEND:

SOIL RESULT COMPLIES WITH MECP TABLE 7 STANDARDS

SOIL RESULT EXCEEDS MECP TABLE 7 STANDARDS

PATERSON GROUP
9 AURIGA DRIVE
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NO.	REVISIONS	DATE	INITIAL

UNIFORM DEVELOPMENTS

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND
379 AND 389 WILMONT AVENUE

OTTAWA, ONTARIO

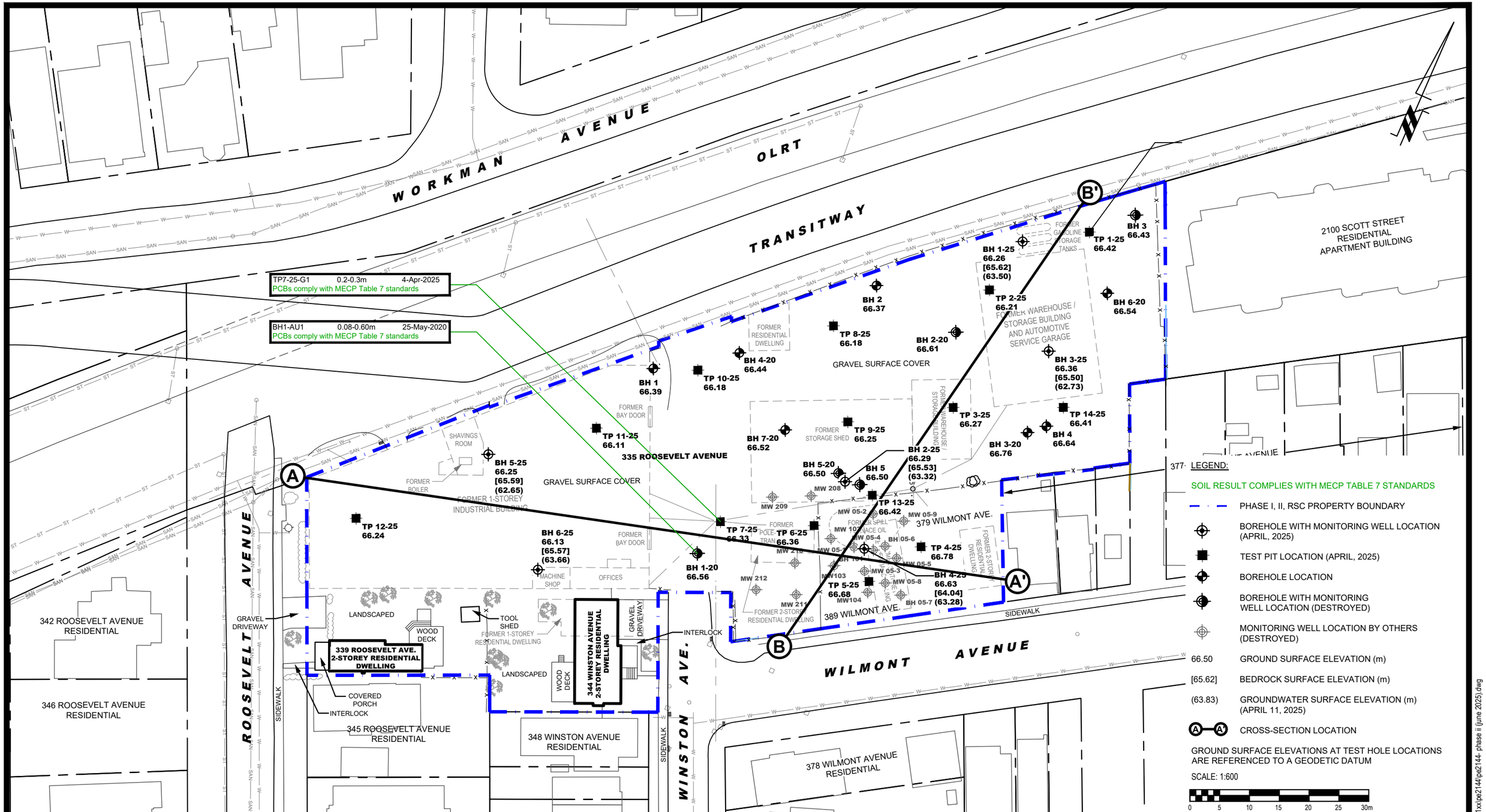
Title:

CROSS-SECTION B-B' - SOIL (PHCs)

Scale: AS SHOWN	Date: 06/2025
Drawn by: ZS	Report No.: PE2144-5
Checked by: JA	Dwg. No.: PE2144-21B
Approved by: MSD	Revision No.:

11x17

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377 LEGEND:

SOIL RESULT COMPLIES WITH MECP TABLE 7 STANDARDS

- PHASE I, II, RSC PROPERTY BOUNDARY
- BOREHOLE WITH MONITORING WELL LOCATION (APRIL, 2025)
- TEST PIT LOCATION (APRIL, 2025)
- BOREHOLE LOCATION
- BOREHOLE WITH MONITORING WELL LOCATION (DESTROYED)
- MONITORING WELL LOCATION BY OTHERS (DESTROYED)
- 66.50 GROUND SURFACE ELEVATION (m)
- [65.62] BEDROCK SURFACE ELEVATION (m)
- (63.83) GROUNDWATER SURFACE ELEVATION (m) (APRIL 11, 2025)
- A—A' CROSS-SECTION LOCATION

GROUND SURFACE ELEVATIONS AT TEST HOLE LOCATIONS ARE REFERENCED TO A GEODETIC DATUM

SCALE: 1:600

0 5 10 15 20 25 30m

PATERSON GROUP
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335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND 379 AND 389 WILMONT AVENUE

OTTAWA, ONTARIO

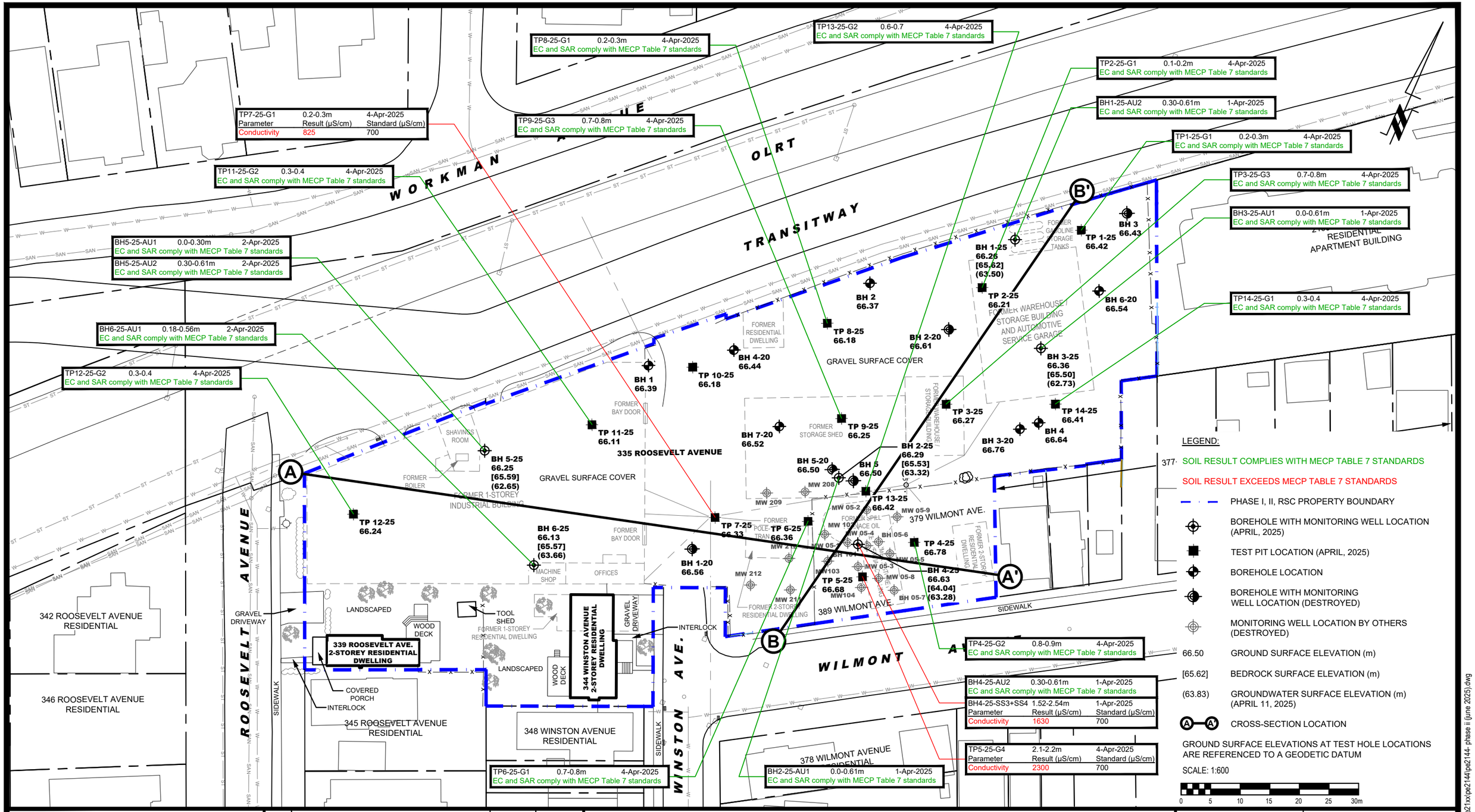
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ANALYTICAL TESTING PLAN - SOIL (PCBs)

Scale: 1:600	Date: 06/2025
Drawn by: ZS	Report No.: PE2144-5
Checked by: JA	Dwg. No.: PE2144-22
Approved by: MSD	Revision No.:

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OTTAWA, ON
K2E 7T9
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NO.	REVISIONS	DATE	INITIAL

UNIFORM DEVELOPMENTS

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND 379 AND 389 WILMONT AVENUE

OTTAWA, ONTARIO

Title:

ANALYTICAL TESTING PLAN - SOIL (EC & SAR)

Scale: 1:600	**Date:** 06/2025
Drawn by: ZS	**Report No.:** PE2144-5
Checked by: JA	**Dwg. No.:** PE2144-23
Approved by: MSD	**Revision No.:**

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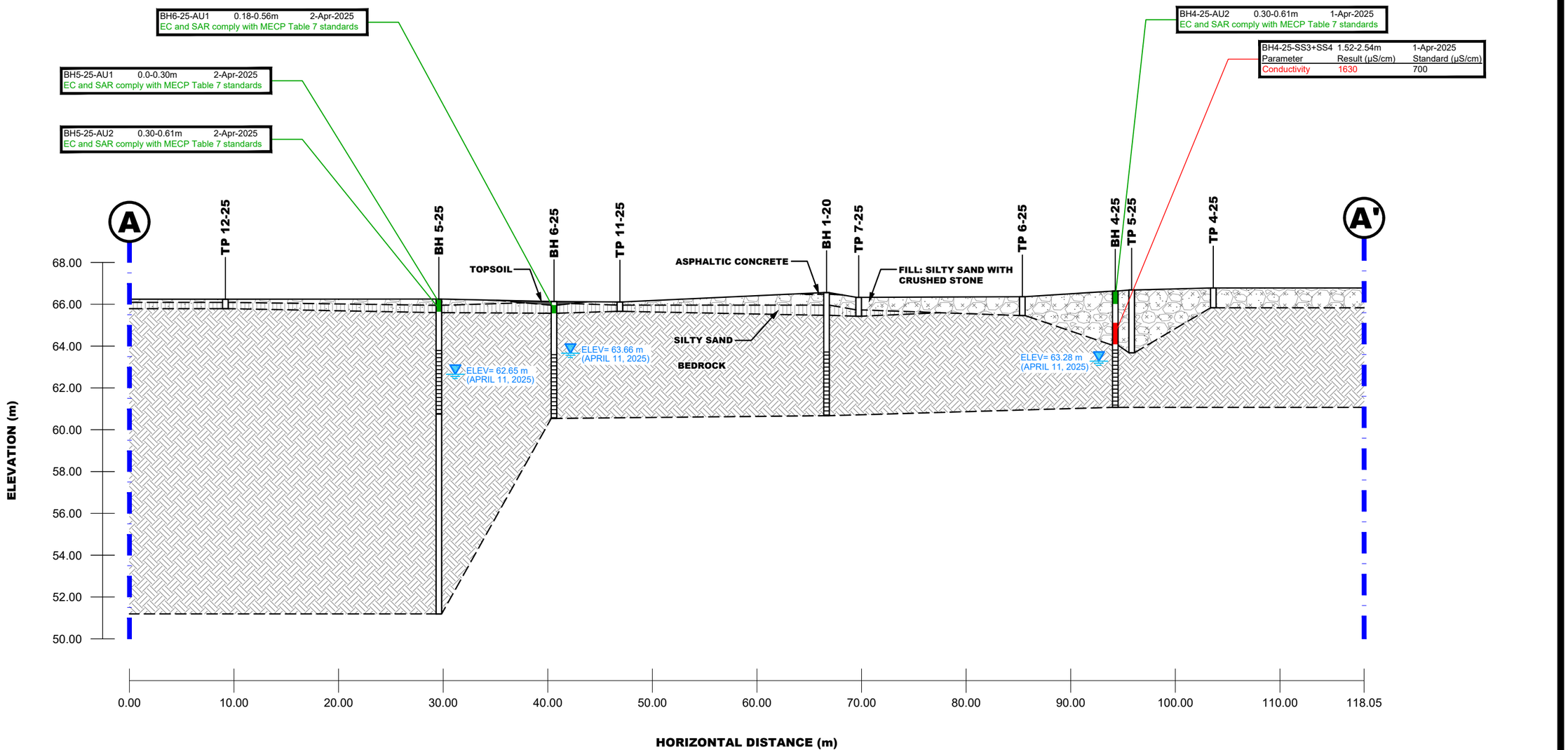
BH6-25-AU1 0.18-0.56m 2-Apr-2025
EC and SAR comply with MECP Table 7 standards

BH5-25-AU1 0.0-0.30m 2-Apr-2025
EC and SAR comply with MECP Table 7 standards

BH5-25-AU2 0.30-0.61m 2-Apr-2025
EC and SAR comply with MECP Table 7 standards

BH4-25-AU2 0.30-0.61m 1-Apr-2025
EC and SAR comply with MECP Table 7 standards

BH4-25-SS3+SS4	1.52-2.54m	1-Apr-2025
Parameter	Result (µS/cm)	Standard (µS/cm)
Conductivity	1630	700



LEGEND:

SOIL RESULT COMPLIES WITH MECP TABLE 7 STANDARDS

SOIL RESULT EXCEEDS MECP TABLE 7 STANDARDS

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379 AND 389 WILMONT AVENUE

OTTAWA, ONTARIO

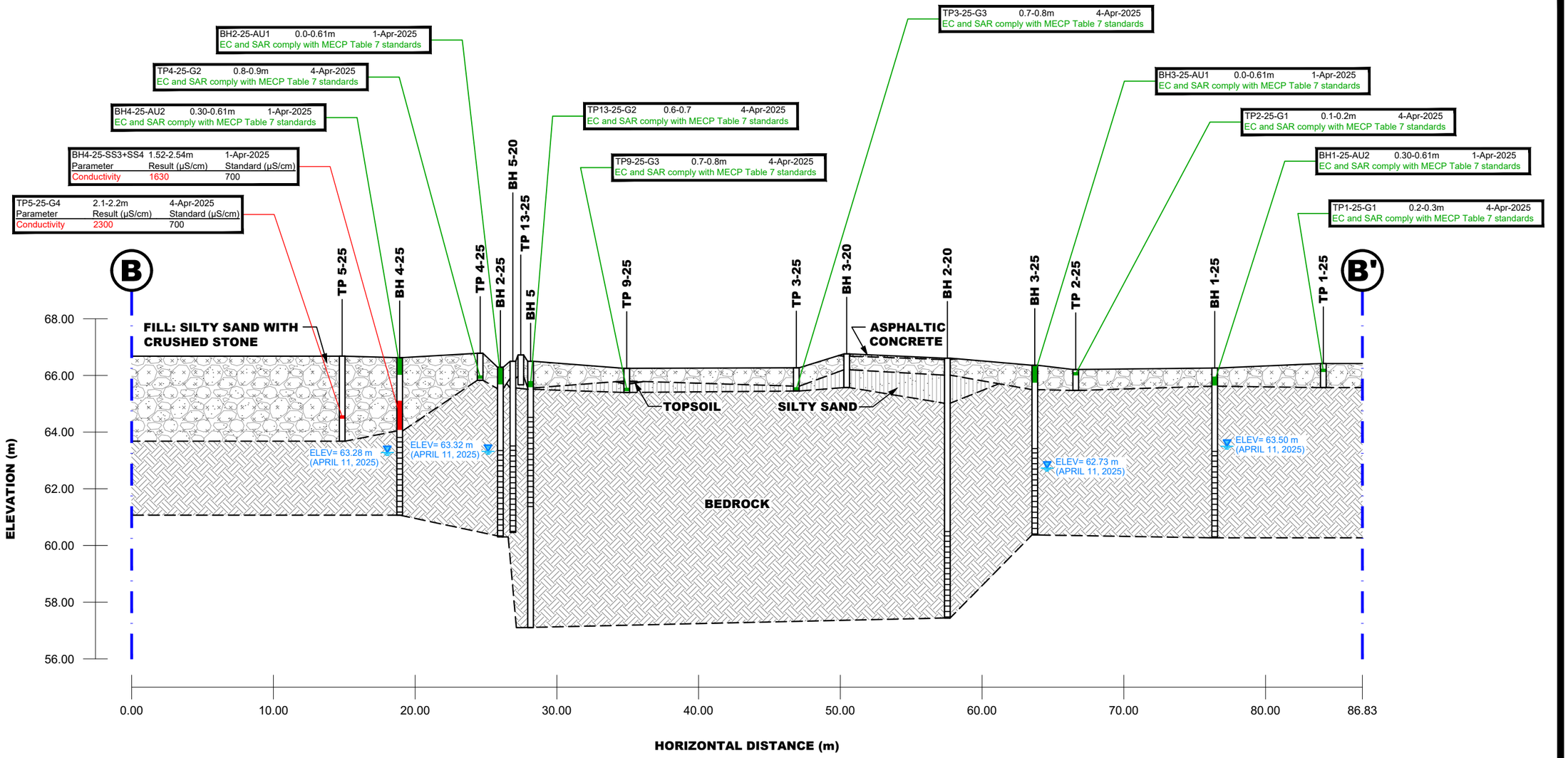
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Scale: AS SHOWN	Date: 06/2025
Drawn by: ZS	Report No.: PE2144-5
Checked by: JA	Dwg. No.: PE2144-23A
Approved by: MSD	Revision No.:

11x17

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LEGEND:

SOIL RESULT COMPLIES WITH MECP TABLE 7 STANDARDS

SOIL RESULT EXCEEDS MECP TABLE 7 STANDARDS

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335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND
379 AND 389 WILMONT AVENUE

OTTAWA, ONTARIO

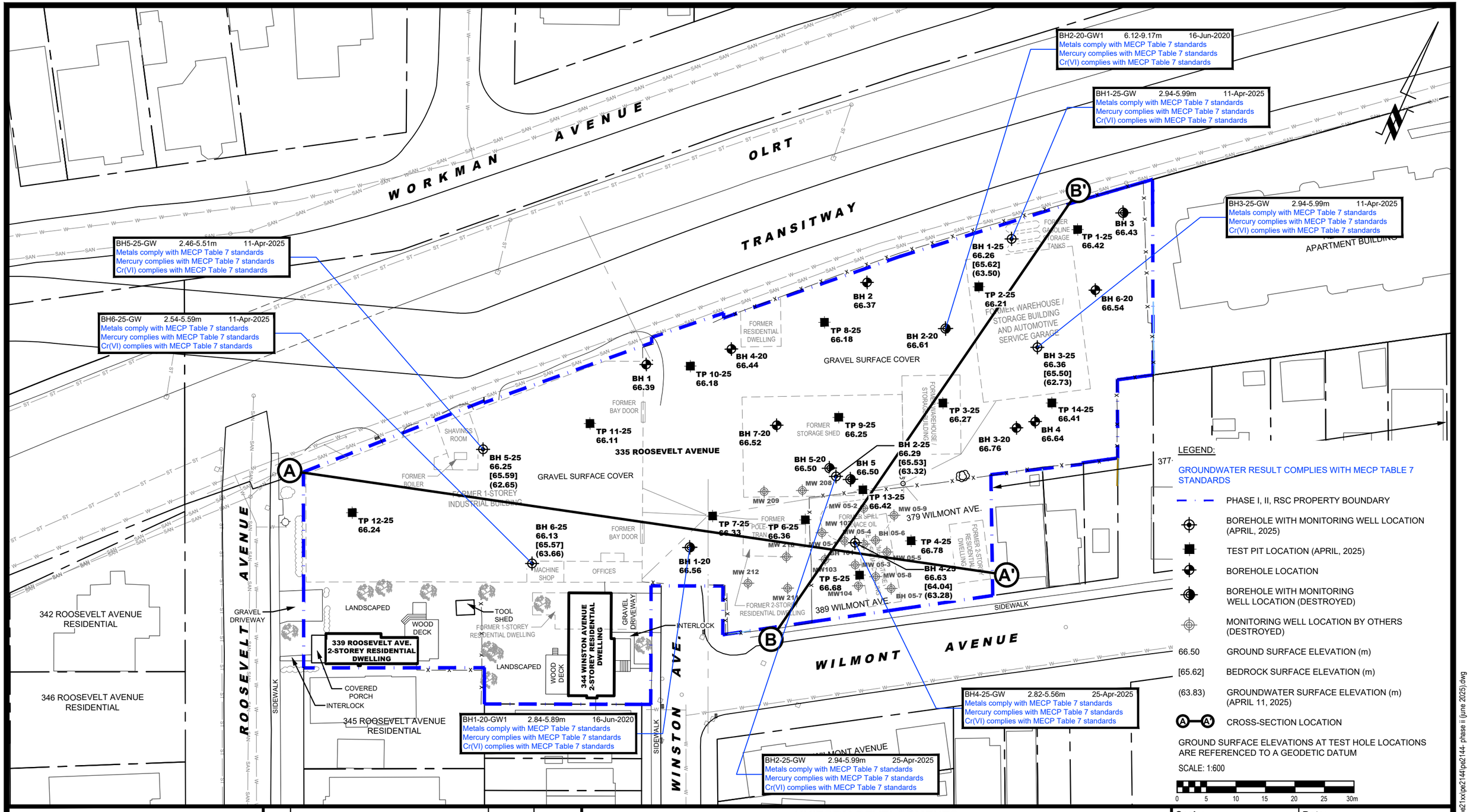
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Scale: AS SHOWN	Date: 06/2025
Drawn by: ZS	Report No.: PE2144-5
Checked by: JA	Dwg. No.: PE2144-23B
Approved by: MSD	Revision No.:

11x17

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LEGEND:

GROUNDWATER RESULT COMPLIES WITH MECP TABLE 7 STANDARDS

- PHASE I, II, RSC PROPERTY BOUNDARY
- BOREHOLE WITH MONITORING WELL LOCATION (APRIL, 2025)
- TEST PIT LOCATION (APRIL, 2025)
- BOREHOLE LOCATION
- BOREHOLE WITH MONITORING WELL LOCATION (DESTROYED)
- MONITORING WELL LOCATION BY OTHERS (DESTROYED)
- 66.50 GROUND SURFACE ELEVATION (m)
- [65.62] BEDROCK SURFACE ELEVATION (m)
- (63.83) GROUNDWATER SURFACE ELEVATION (m) (APRIL 11, 2025)
- A—A' CROSS-SECTION LOCATION

GROUND SURFACE ELEVATIONS AT TEST HOLE LOCATIONS ARE REFERENCED TO A GEODETIC DATUM

SCALE: 1:600

0 5 10 15 20 25 30m

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NO.	REVISIONS	DATE	INITIAL

UNIFORM DEVELOPMENTS

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND 379 AND 389 WILMONT AVENUE

OTTAWA, ONTARIO

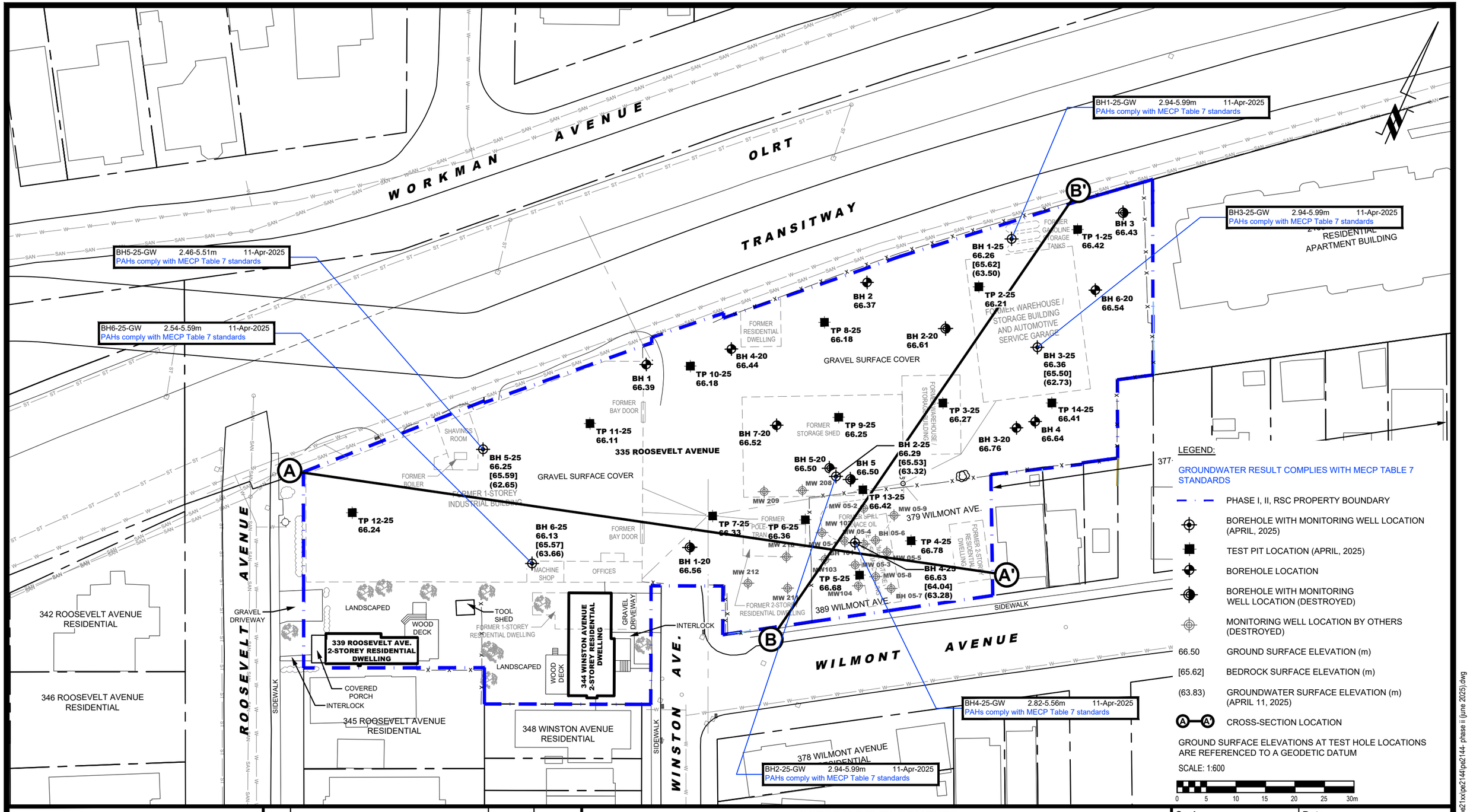
Title:

ANALYTICAL TESTING PLAN - GROUNDWATER
(Metals (including As, Sb, Se), Mercury, Cr(VI))

Scale: 1:600	Date: 06/2025
Drawn by: ZS	Report No.: PE2144-5
Checked by: JA	Dwg. No.: PE2144-24
Approved by: MSD	Revision No.:

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11x17



LEGEND:

GROUNDWATER RESULT COMPLIES WITH MECP TABLE 7 STANDARDS

- PHASE I, II, RSC PROPERTY BOUNDARY
- BOREHOLE WITH MONITORING WELL LOCATION (APRIL, 2025)
- TEST PIT LOCATION (APRIL, 2025)
- BOREHOLE LOCATION
- BOREHOLE WITH MONITORING WELL LOCATION (DESTROYED)
- MONITORING WELL LOCATION BY OTHERS (DESTROYED)
- 66.50 GROUND SURFACE ELEVATION (m)
- [65.62] BEDROCK SURFACE ELEVATION (m)
- (63.83) GROUNDWATER SURFACE ELEVATION (m) (APRIL 11, 2025)
- A—A' CROSS-SECTION LOCATION

GROUND SURFACE ELEVATIONS AT TEST HOLE LOCATIONS ARE REFERENCED TO A GEODETIC DATUM

SCALE: 1:600

0 5 10 15 20 25 30m

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UNIFORM DEVELOPMENTS

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND 379 AND 389 WILMONT AVENUE

OTTAWA, ONTARIO

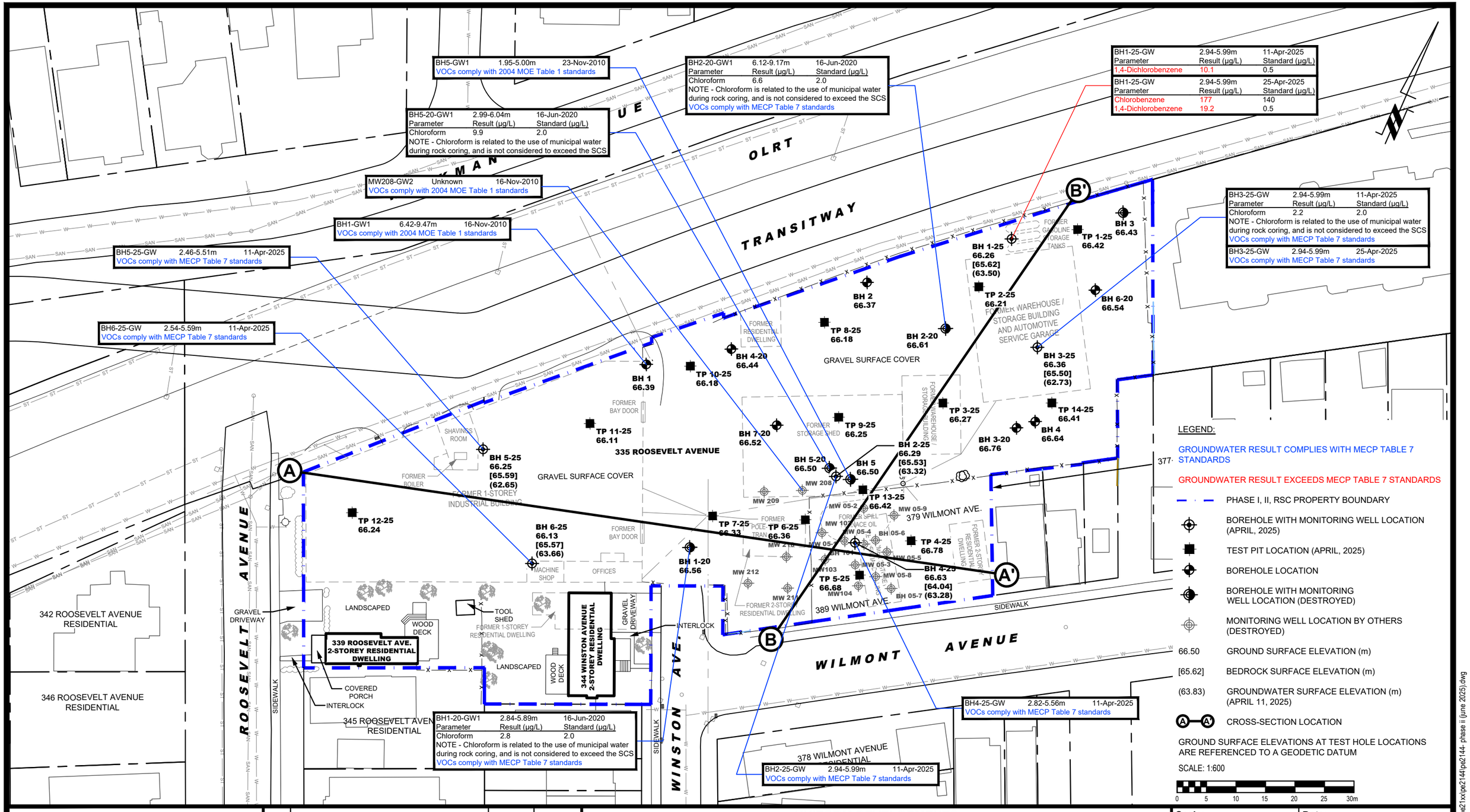
Title:

ANALYTICAL TESTING PLAN - GROUNDWATER (PAHs)

Scale: 1:600	Date: 06/2025
Drawn by: ZS	Report No.: PE2144-5
Checked by: JA	Dwg. No.: PE2144-25
Approved by: MSD	Revision No.:

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UNIFORM DEVELOPMENTS

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND 379 AND 389 WILMONT AVENUE

OTTAWA, ONTARIO

Title:

ANALYTICAL TESTING PLAN - GROUNDWATER (VOCs)

Scale: 1:600	Date: 06/2025
Drawn by: ZS	Report No.: PE2144-5
Checked by: JA	Dwg. No.: PE2144-26
Approved by: MSD	Revision No.:

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11x17

BH1-20-GW1	2.84-5.89m	16-Jun-2020
Parameter	Result (µg/L)	Standard (µg/L)
Chloroform	2.8	2.0

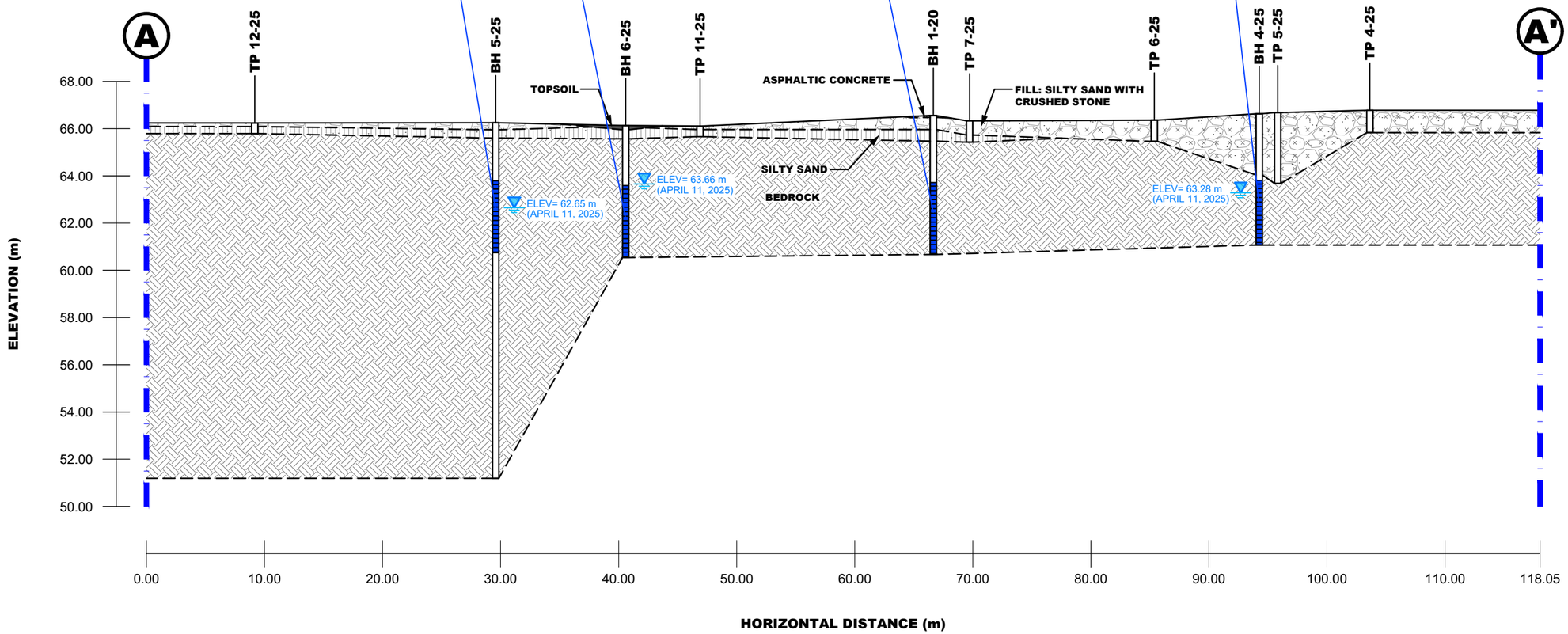
NOTE - Chloroform is related to the use of municipal water during rock coring, and is not considered to exceed the SCS

VOCs comply with MECP Table 7 standards

BH6-25-GW 2.54-5.59m 11-Apr-2025
VOCs comply with MECP Table 7 standards

BH4-25-GW 2.82-5.56m 11-Apr-2025
VOCs comply with MECP Table 7 standards

BH5-25-GW 2.46-5.51m 11-Apr-2025
VOCs comply with MECP Table 7 standards



LEGEND:

GROUNDWATER RESULT COMPLIES WITH MECP TABLE 7 STANDARDS

GROUNDWATER RESULT EXCEEDS MECP TABLE 7 STANDARDS

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NO.	REVISIONS	DATE	INITIAL

UNIFORM DEVELOPMENTS

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND
379 AND 389 WILMONT AVENUE
OTTAWA, ONTARIO

Title:

CROSS-SECTION A-A' - GROUNDWATER (VOCs)

Scale: AS SHOWN	Date: 06/2025
Drawn by: ZS	Report No.: PE2144-5
Checked by: JA	Dwg. No.: PE2144-26A
Approved by: MSD	Revision No.:

11x17

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BH1-20-GW1	2.84-5.89m	16-Jun-2020
Parameter	Result (µg/L)	Standard (µg/L)
Chloroform	2.8	2.0

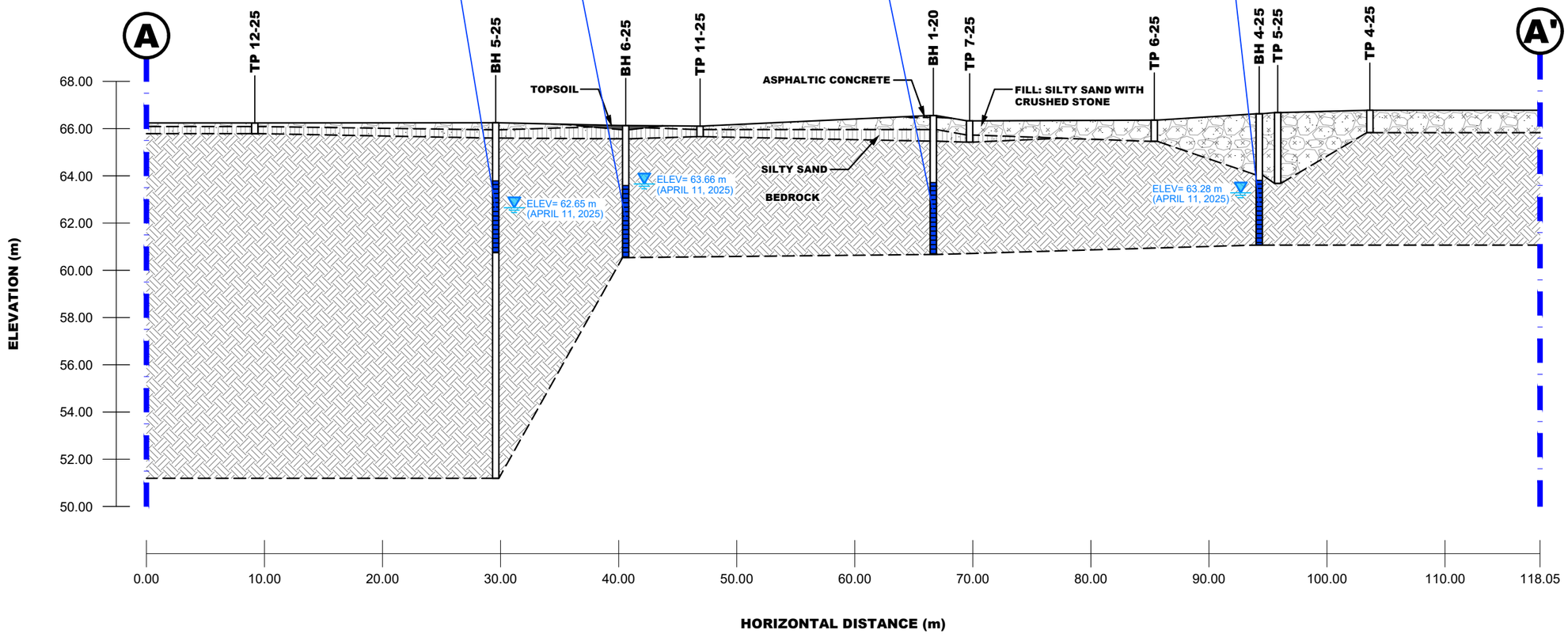
NOTE - Chloroform is related to the use of municipal water during rock coring, and is not considered to exceed the SCS

VOCs comply with MECP Table 7 standards

BH6-25-GW 2.54-5.59m 11-Apr-2025
VOCs comply with MECP Table 7 standards

BH4-25-GW 2.82-5.56m 11-Apr-2025
VOCs comply with MECP Table 7 standards

BH5-25-GW 2.46-5.51m 11-Apr-2025
VOCs comply with MECP Table 7 standards



LEGEND:

GROUNDWATER RESULT COMPLIES WITH MECP TABLE 7 STANDARDS

GROUNDWATER RESULT EXCEEDS MECP TABLE 7 STANDARDS

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NO.	REVISIONS	DATE	INITIAL

UNIFORM DEVELOPMENTS

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND
378 AND 389 WILMONT AVENUE
OTTAWA, ONTARIO

Title:
CROSS-SECTION A-A' - GROUNDWATER (VOCs)

Scale: AS SHOWN	Date: 05/2025
Drawn by: ZS	Report No.: PE2144-4
Checked by: JA	Dwg. No.: PE2144-26A
Approved by: MSD	Revision No.:

11x17

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BH5-20-GW1	2.99-6.04m	16-Jun-2020
Parameter	Result (µg/L)	Standard (µg/L)
Chloroform	9.9	2.0

NOTE - Chloroform is related to the use of municipal water during rock coring, and is not considered to exceed the SCS

BH3-25-GW	2.94-5.99m	11-Apr-2025
Parameter	Result (µg/L)	Standard (µg/L)
Chloroform	2.2	2.0

NOTE - Chloroform is related to the use of municipal water during rock coring, and is not considered to exceed the SCS

VOCs comply with MECP Table 7 standards

BH3-25-GW	2.94-5.99m	25-Apr-2025

VOCs comply with MECP Table 7 standards

BH2-25-GW 2.94-5.99m 11-Apr-2025
VOCs comply with MECP Table 7 standards

BH5-GW1 1.95-5.00m 23-Nov-2010
VOCs comply with 2004 MOE Table 1 standards

BH2-20-GW1	6.12-9.17m	16-Jun-2020
Parameter	Result (µg/L)	Standard (µg/L)
Chloroform	6.6	2.0

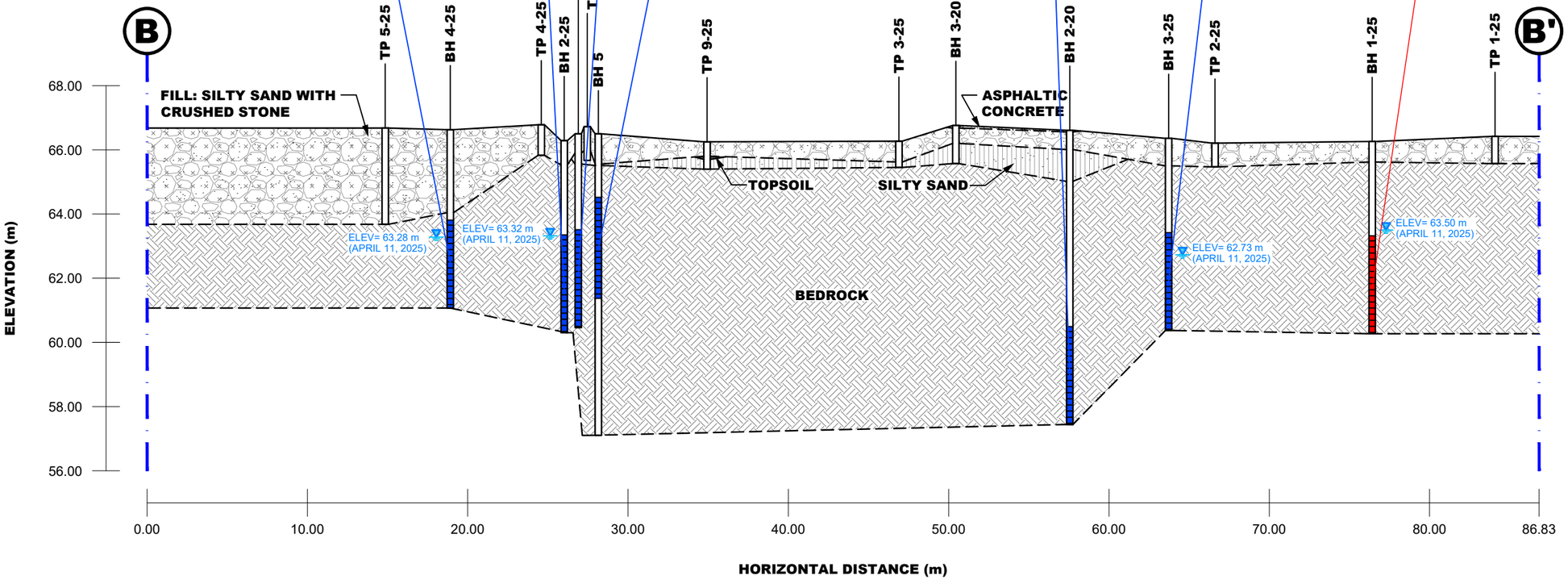
NOTE - Chloroform is related to the use of municipal water during rock coring, and is not considered to exceed the SCS

VOCs comply with MECP Table 7 standards

BH1-25-GW	2.94-5.99m	11-Apr-2025
Parameter	Result (µg/L)	Standard (µg/L)
1,4-Dichlorobenzene	10.1	0.5

BH1-25-GW	2.94-5.99m	25-Apr-2025
Parameter	Result (µg/L)	Standard (µg/L)
Chlorobenzene	177	140
1,4-Dichlorobenzene	19.2	0.5

BH4-25-GW 2.82-5.56m 11-Apr-2025
VOCs comply with MECP Table 7 standards



LEGEND:

GROUNDWATER RESULT COMPLIES WITH MECP TABLE 7 STANDARDS

GROUNDWATER RESULT EXCEEDS MECP TABLE 7 STANDARDS

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NO.	REVISIONS	DATE	INITIAL

UNIFORM DEVELOPMENTS

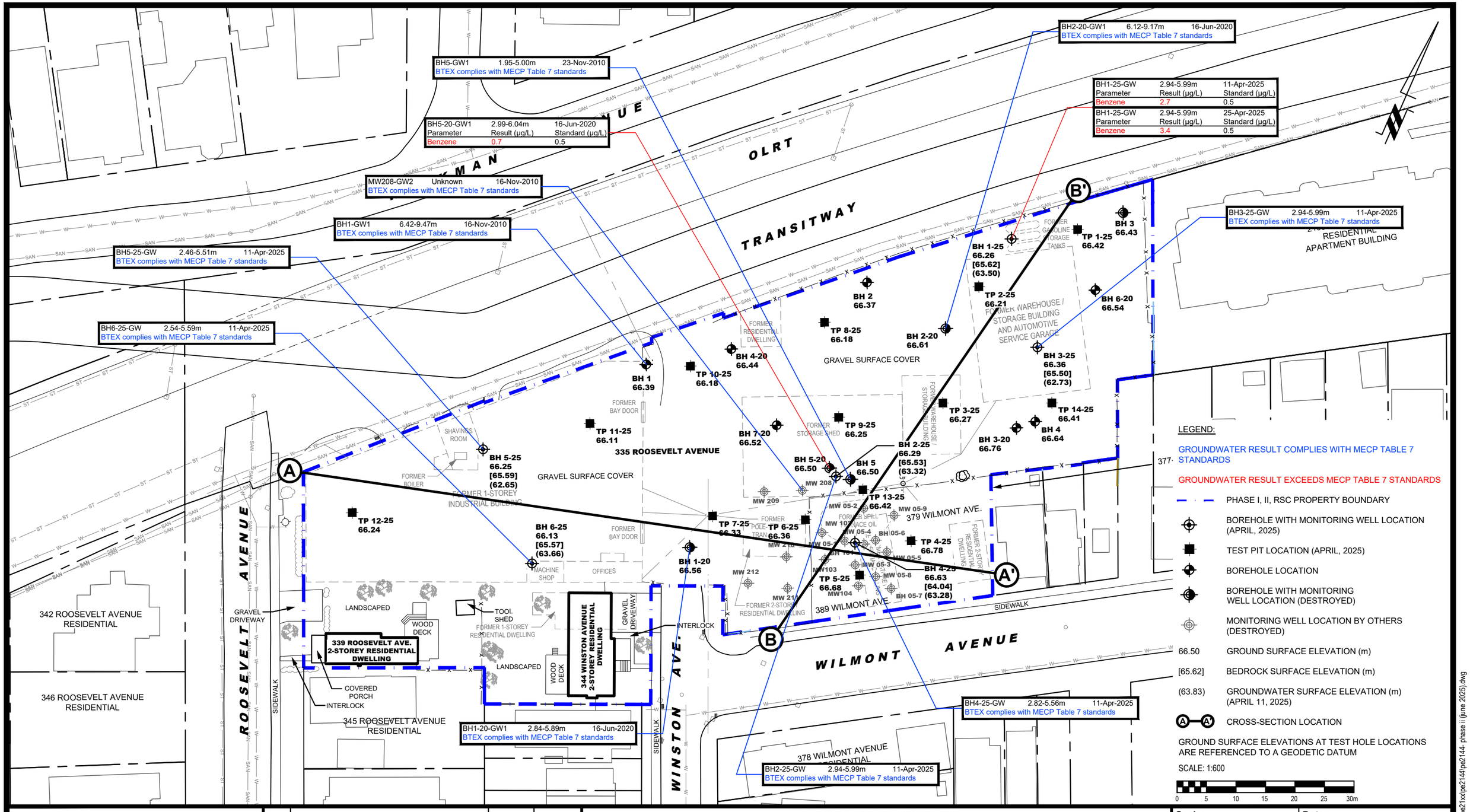
PHASE II - ENVIRONMENTAL SITE ASSESSMENT
335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND
379 AND 389 WILMONT AVENUE
OTTAWA, ONTARIO

Title:
CROSS-SECTION B-B' - GROUNDWATER (VOCs)

Scale: AS SHOWN	Date: 06/2025
Drawn by: ZS	Report No.: PE2144-5
Checked by: JA	Dwg. No.: PE2144-26B
Approved by: MSD	Revision No.:

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NO.	REVISIONS	DATE	INITIAL

UNIFORM DEVELOPMENTS

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
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OTTAWA, ONTARIO

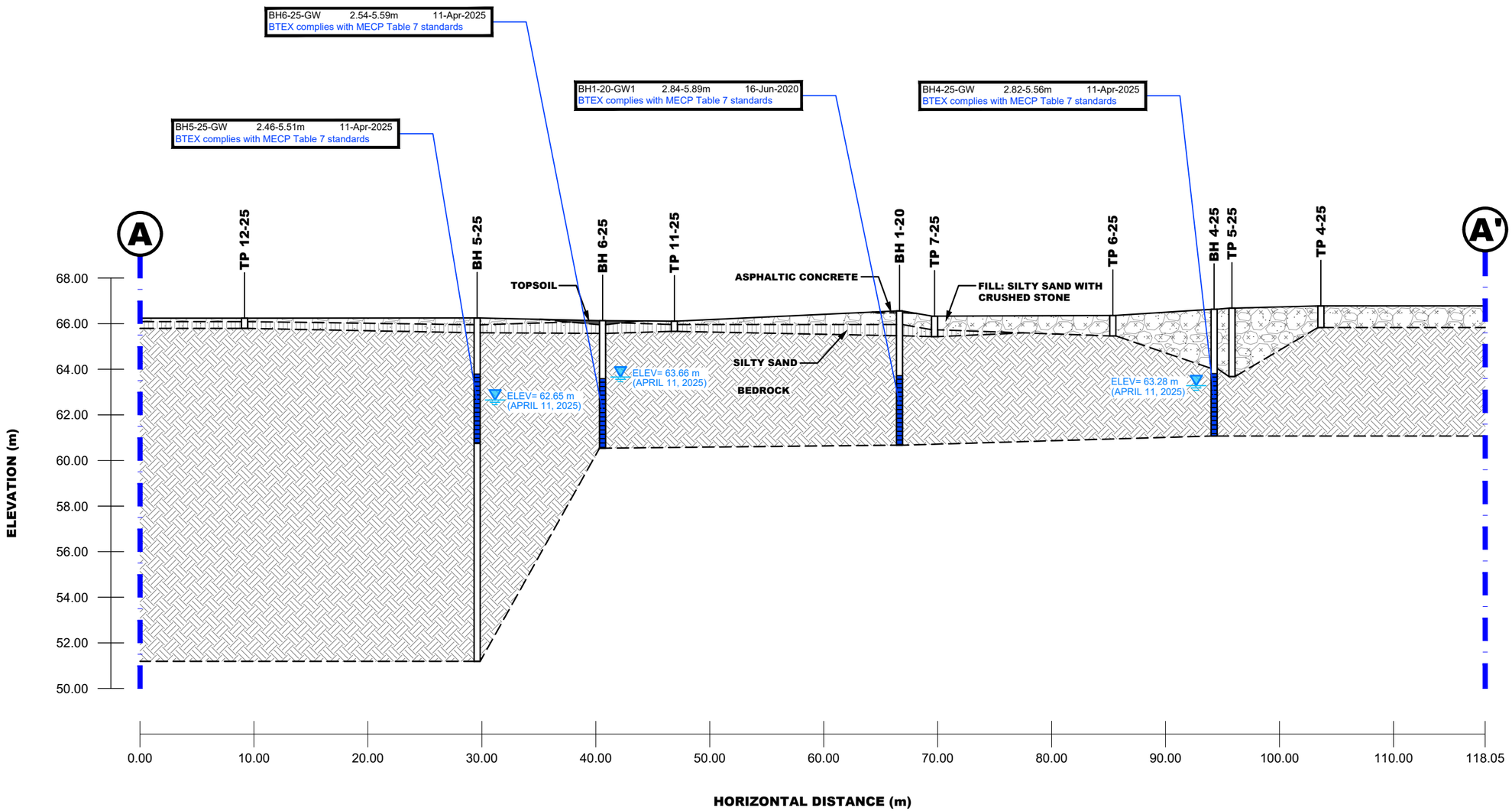
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Scale: 1:600	Date: 06/2025
Drawn by: ZS	Report No.: PE2144-5
Checked by: JA	Dwg. No.: PE2144-27
Approved by: MSD	Revision No.:

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LEGEND:

GROUNDWATER RESULT COMPLIES WITH MECP TABLE 7 STANDARDS

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NO.	REVISIONS	DATE	INITIAL

UNIFORM DEVELOPMENTS

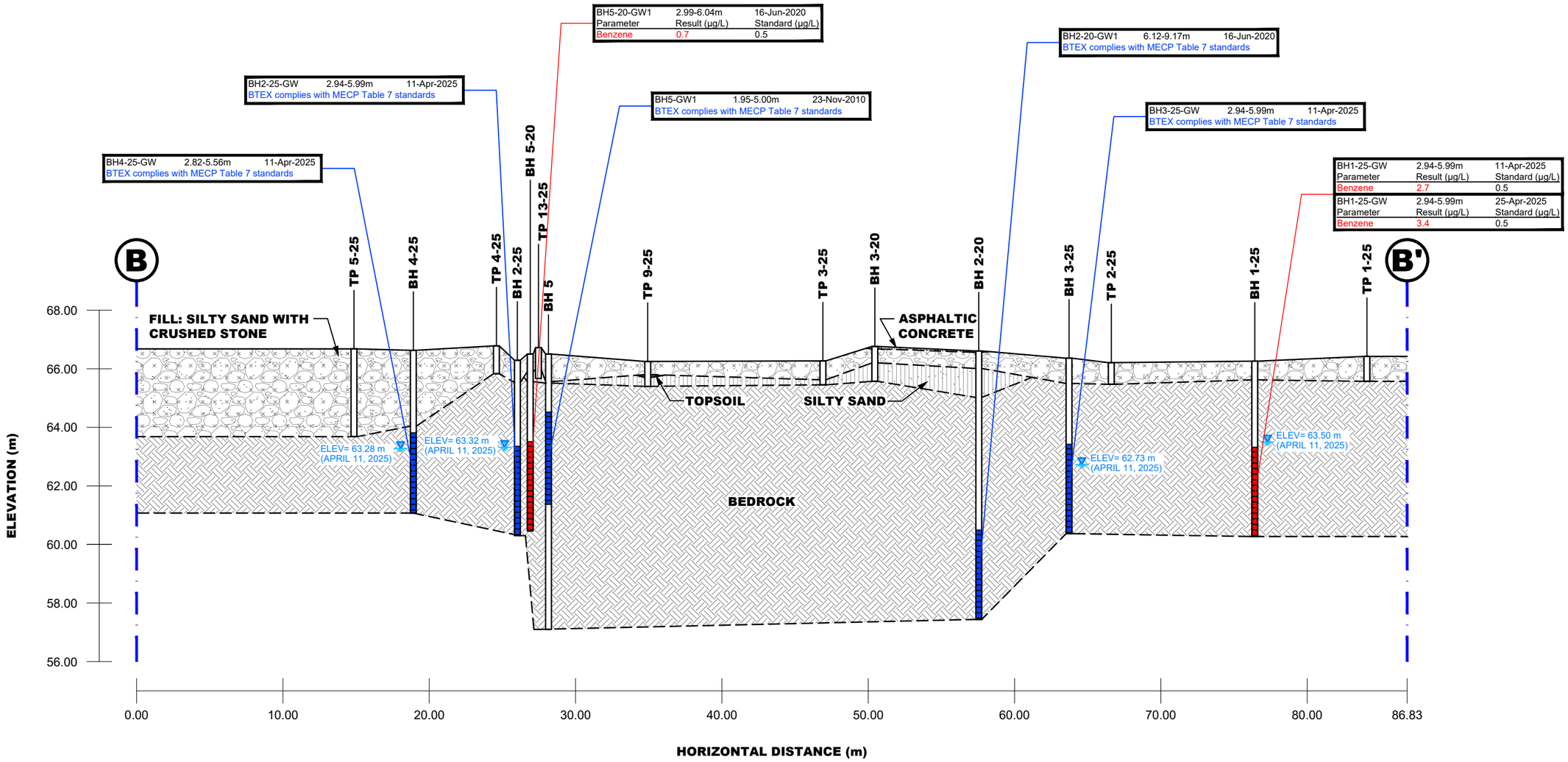
PHASE II - ENVIRONMENTAL SITE ASSESSMENT
335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND
379 AND 389 WILMONT AVENUE
OTTAWA, ONTARIO

Title: CROSS-SECTION A-A' - GROUNDWATER (BTEX)

Scale: AS SHOWN	Date: 06/2025
Drawn by: ZS	Report No.: PE2144-5
Checked by: JA	Dwg. No.: PE2144-27A
Approved by: MSD	Revision No.:

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LEGEND:

GROUNDWATER RESULT COMPLIES WITH MECP TABLE 7 STANDARDS

GROUNDWATER RESULT EXCEEDS MECP TABLE 7 STANDARDS

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NO.	REVISIONS	DATE	INITIAL

UNIFORM DEVELOPMENTS

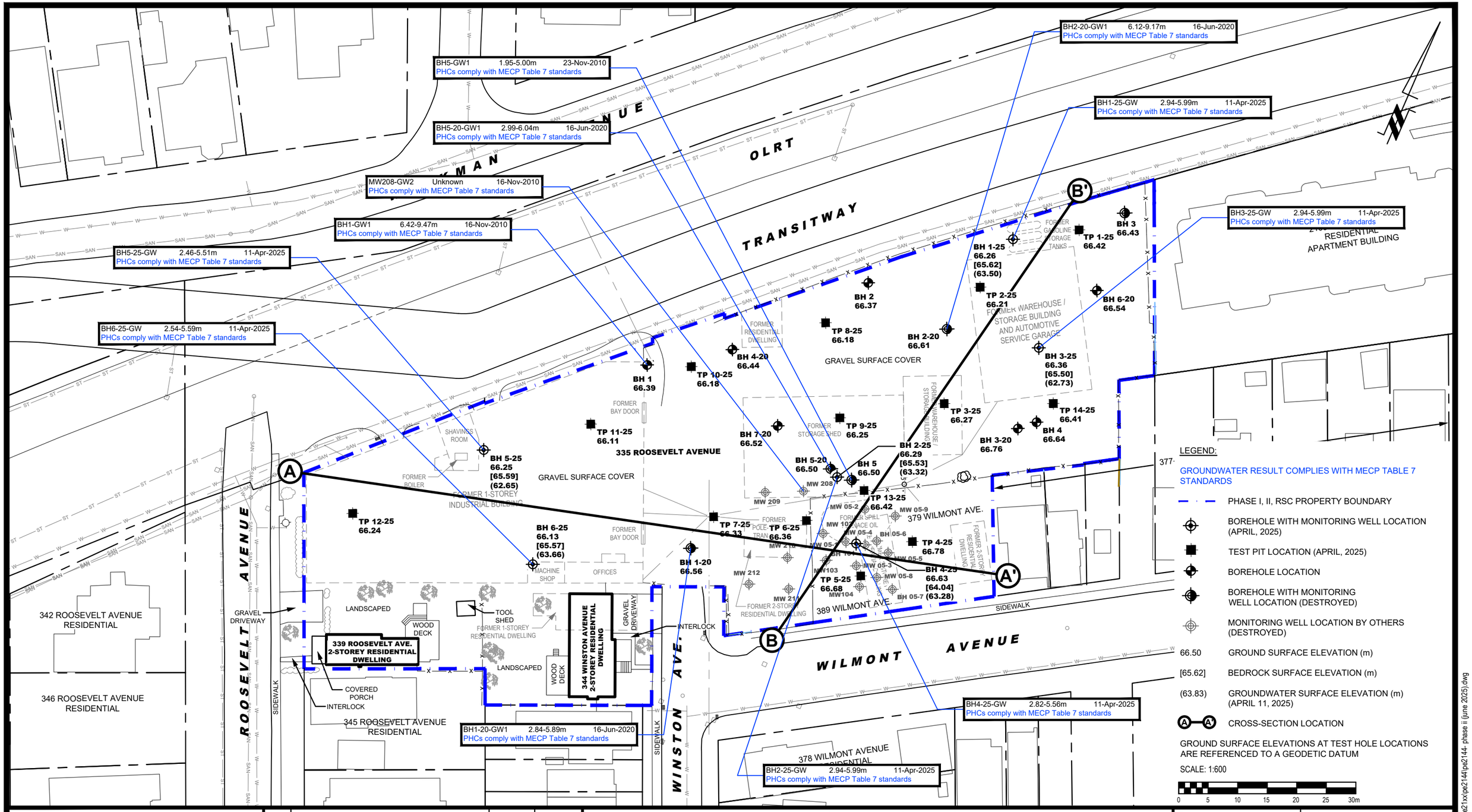
PHASE II - ENVIRONMENTAL SITE ASSESSMENT
335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND
379 AND 389 WILMONT AVENUE
OTTAWA, ONTARIO

Title: CROSS-SECTION B-B' - GROUNDWATER (BTEX)

Scale: AS SHOWN	Date: 06/2025
Drawn by: ZS	Report No.: PE2144-5
Checked by: JA	Dwg. No.: PE2144-27B
Approved by: MSD	Revision No.:

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NO.	REVISIONS	DATE	INITIAL

UNIFORM DEVELOPMENTS

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND 379 AND 389 WILMONT AVENUE

OTTAWA, ONTARIO

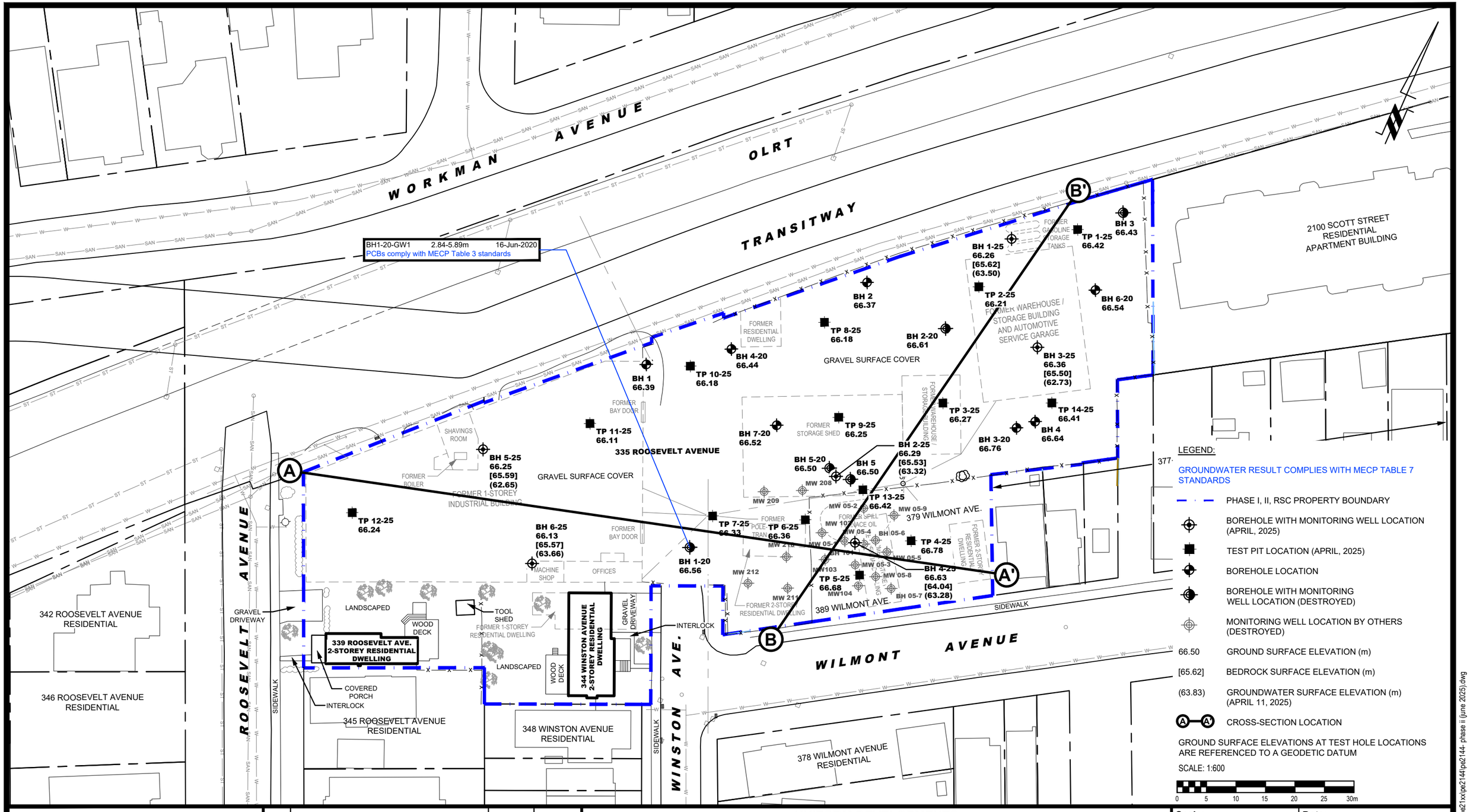
Title:

ANALYTICAL TESTING PLAN - GROUNDWATER (PHCs)

Scale: 1:600	Date: 06/2025
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Checked by: JA	Dwg. No.: PE2144-28
Approved by: MSD	Revision No.:

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NO.	REVISIONS	DATE	INITIAL

UNIFORM DEVELOPMENTS

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
335 & 339 ROOSEVELT AVENUE, 344 WINSTON AVENUE AND 379 AND 389 WILMONT AVENUE

OTTAWA, ONTARIO

Title:

ANALYTICAL TESTING PLAN - GROUNDWATER (PCBs)

Scale: 1:600	Date: 06/2025
Drawn by: ZS	Report No.: PE2144-5
Checked by: JA	Dwg. No.: PE2144-29
Approved by: MSD	Revision No.:

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APPENDIX 1

SAMPLING AND ANALYSIS PLAN

SOIL PROFILE AND TEST DATA SHEETS

SYMBOLS AND TERMS

LABORATORY CERTIFICATES OF ANALYSIS

Geotechnical Engineering

Environmental Engineering

Hydrogeology

Geological Engineering

Materials Testing

Building Science

Archaeological Services

Paterson Group Inc.

Consulting Engineers
154 Colonnade Road South
Ottawa (Nepean), Ontario
Canada K2E 7J5

Tel: (613) 226-7381
Fax: (613) 226-6344
www.patersongroup.ca

patersongroup

Sampling & Analysis Plan

Phase II Environmental Site Assessment
335 Roosevelt Avenue
Ottawa, Ontario

Prepared For

Uniform Developments

May 2020

Report: PE2144-SAP

Table of Contents

1.0 SAMPLING PROGRAM 1
2.0 ANALYTICAL TESTING PROGRAM 2
3.0 STANDARD OPERATING PROCEDURES 3
3.1 Environmental Drilling Procedure 3
3.2 Monitoring Well Installation Procedure 6
3.3 Monitoring Well Sampling Procedure 7
4.0 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) 8
5.0 DATA QUALITY OBJECTIVES 9
6.0 PHYSICAL IMPEDIMENTS TO SAMPLING & ANALYSIS PLAN 10

1.0 SAMPLING PROGRAM

Paterson was retained by Mr. Dan Tomka of Uniform Developments, to conduct a Phase II Environmental Site Assessment (ESA) for the property addressed 335 Roosevelt Avenue, in the City of Ottawa, Ontario.

The Phase II ESA was carried out to address the areas of potential environmental concern on the Phase II Property. The following subsurface investigation program was developed. A Geotechnical Investigation was conducted concurrently with the environmental subsurface investigation.

Borehole	Location & Rationale	Proposed Depth & Rationale
BH1-20	Place beneath the pole mounted transformer to assess APECs 1 and 5.	Borehole advanced to at least 5 m within the groundwater table to facilitate installation of groundwater monitoring wells.
BH2-20	Place on the western side of the eastern building to assess APECs 2 and 3.	Boreholes to be advanced to at least 9 m within the groundwater table to facilitate installation of groundwater monitoring wells.
BH3-20	Placed on the southeastern portion of the property for geotechnical purposes and to assess the quality of the fill material (APEC 4).	Boreholes to be advanced until practical refusal.
BH4-20	Placed on the northern portion of the property for geotechnical purposes and to assess the quality of the fill material (APEC 4).	Boreholes to be advanced until practical refusal.
BH5-20	Placed on the central portion of the property for geotechnical purposes and to assess APECs 4 and APEC 5.	Boreholes to be advanced to at least 6 m within the groundwater table to facilitate installation of groundwater monitoring wells.
BH6-20	Placed on the eastern property boundary of the property for geotechnical purposes and to assess APEC 4.	Boreholes to be advanced until practical refusal.
BH7-20	Placed on the central portion of the property boundary of the property for geotechnical purposes and to assess APEC 4.	Boreholes to be advanced until practical refusal.

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

Following borehole drilling, monitoring wells will be installed in selected boreholes (as above) for the measurement of water levels and the collection of groundwater samples. Borehole locations are shown on the Test Hole Location Plan appended to the main report.

2.0 ANALYTICAL TESTING PROGRAM

The analytical testing program for soil at the subject site is based on the following general considerations:

- ❒ At least one sample from each borehole 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 boreholes 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 MOECC site condition standards.
- ❒ In boreholes 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 groundwater at the subject site 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 should be measured using a measuring tape or wheel rather than paced off. Boreholes were located and surveyed in the field by Paterson.

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 F1, 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” [1.52 m x 50 mm] threaded sections of Schedule 40 PVC slotted well screen (5’ x 1 ¼” [1.52 m x 32 mm] if installing in cored hole in bedrock)
- ❒ 5’ x 2” [1.52 m x 50 mm] threaded sections of Schedule 40 PVC riser pipe (5’ x 1 ¼” [1.52 m x 32 mm] 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 metre 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 with every laboratory submission.
- ❒ 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 (0.5 x) 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 MECP 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 TO SAMPLING & ANALYSIS PLAN

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
- ❒ Drill rig 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.

PATERSON GROUP

Sampling & Analysis Plan

335 and 339 Roosevelt Avenue,
379 and 389 Wilmont Avenue, and
344 Winston Avenue
Ottawa, Ontario

Prepared for Uniform Developments

Report: PE2144-SAP.02
March 26, 2025

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1.0 SAMPLING PROGRAM

Paterson Group Inc. (Paterson) was commissioned by Uniform Developments Ltd. to conduct a Phase II – Environmental Site Assessment (Phase II ESA) for the property addressed 335 and 339 Roosevelt Avenue, 379 and 389 Wilmont Avenue, and 344 Winston 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	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), metal coating and finishing (APEC 4B), former automotive service garage (APEC 5), former gasoline storage tanks (APEC 8), former off-site rail tracks (APEC 9), and to assess excess soil quality for off-site reuse	6m into bedrock; to assess overburden soils, and to intercept the groundwater table for the purpose of installing a monitoring well.
BH2-25	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former furnace oil spill (APEC 7), to delineate previous metals exceedance in BH5 (2010), and to assess excess soil quality for off-site reuse	6m into bedrock; to assess overburden soils, and to intercept the groundwater table for the purpose of installing a monitoring well.
BH3-25	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), metal coating and finishing (APEC 4B), former automotive service garage (APEC 5), and to assess excess soil quality for off-site reuse	6m into bedrock; to assess overburden soils, and to intercept the groundwater table for the purpose of installing a monitoring well.
BH4-25	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former furnace oil spill (APEC 7), and to assess excess soil quality for off-site reuse	5.5m into bedrock; to assess overburden soils, and to intercept the groundwater table for the purpose of installing a monitoring well.
BH5-25	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former window and door manufacturing (APEC 3), metal coating and finishing (APEC 4A), former off-site rail tracks (APEC 9), and to assess excess soil quality for off-site reuse	15m into bedrock; for geotechnical analysis, to assess overburden soils, and to intercept the groundwater table for the purpose of installing a monitoring well.
BH6-25	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former window and door manufacturing (APEC 3), metal coating and finishing (APEC 4A), and to assess excess soil quality for off-site reuse	5.5m into bedrock; to assess overburden soils, and to intercept the groundwater table for the purpose of installing a monitoring well.
TP1-25	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), metal coating and finishing (APEC 4B), former automotive service garage (APEC 5), former gasoline storage tanks (APEC 8), and to assess excess soil quality for off-site reuse	3.0m or refusal, to assess overburden soils.

Borehole	Location & Rationale	Proposed Depth & Rationale
TP2-25	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), metal coating and finishing (APEC 4B), former automotive service garage (APEC 5), former gasoline storage tanks (APEC 8), and to assess excess soil quality for off-site reuse	3.0m or refusal, to assess overburden soils.
TP3-25	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), metal coating and finishing (APEC 4B), former automotive service garage (APEC 5), and to assess excess soil quality for off-site reuse	3.0m or refusal, to assess overburden soils.
TP4-25	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former furnace oil spill (APEC 7), and to assess excess soil quality for off-site reuse	3.0m or refusal, to assess overburden soils.
TP5-25	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former furnace oil spill (APEC 7), and to assess excess soil quality for off-site reuse	3.0m or refusal, to assess overburden soils.
TP6-25	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former furnace oil spill (APEC 7), and to assess excess soil quality for off-site reuse	3.0m or refusal, to assess overburden soils.
TP7-25	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former pole mounted transformer (APEC 6), and to assess excess soil quality for off-site reuse	3.0m or refusal, to assess overburden soils.
TP8-25	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), and to assess excess soil quality for off-site reuse	3.0m or refusal, to assess overburden soils.
TP9-25	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), and to assess excess soil quality for off-site reuse	3.0m or refusal, to assess overburden soils.
TP10-25	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former window and door manufacturing (APEC 3), metal coating and finishing (APEC 4A), and to assess excess soil quality for off-site reuse	3.0m or refusal, to assess overburden soils.
TP11-25	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former window and door manufacturing (APEC 3), metal coating and finishing (APEC 4A), and to assess excess soil quality for off-site reuse	3.0m or refusal, to assess overburden soils.
TP12-25	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former window and door manufacturing (APEC 3), metal coating and finishing (APEC 4A), and to assess excess soil quality for off-site reuse	3.0m or refusal, to assess overburden soils.
TP13-25	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former furnace oil spill (APEC 7), and to assess excess soil quality for off-site reuse	3.0m or refusal, to assess overburden soils.

Borehole	Location & Rationale	Proposed Depth & Rationale
TP14-25	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), metal coating and finishing (APEC 4B), former automotive service garage (APEC 5), and to assess excess soil quality for off-site reuse	3.0m or refusal, to assess overburden soils.

Borehole and test pit locations are shown on Drawing PE2144-13 – 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 all six of the boreholes as indicated to allow for the collection of groundwater samples.

At each test pit, grab samples will be obtained from each stratigraphic unit encountered in the test pits. 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 Environmental Test Pit Excavation Procedure

Purpose

The purpose of environmental test pits/excavations is to identify and/or delineate contamination within the soil.

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
- ❒ latex or nitrile gloves (depending on suspected contaminant)
- ❒ RKI Eagle organic vapour meter or MiniRae photoionization detector (depending on contamination suspected)

Determining Test Hole Locations

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

After drilling is completed a plan with the test pit/excavation locations must be provided. Distances and orientations of test pits/excavations 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. round 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.

Test Pitting Procedure

Soil samples will be collected approximately every metre to the depth of the bedrock surface from the excavator bucket. Attention will be paid so as to collect soil that has not come into contact with the excavator. Samples will be collected in intact, well-sealed plastic bags to be screened, and will be kept cool. Field personnel will note their observations, including any odours or discolouration of samples. Gloves will be changed, and any sampling equipment washed between samples to avoid cross-contamination.

The actual test pit/Excavation procedure for environmental is as follows:

- ❒ Sample soils in every stratigraphy level or in 1m intervals, whichever is less.
- ❒ 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 F1, a soil core from each soil sample which may be analysed must be taken and placed in the laboratory-provided methanol vial.
- ❒ Note all and any odours or discolouration of samples.
- ❒ If obvious contamination is encountered, continue sampling until vertical extent of contamination is delineated.
- ❒ 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.

Sampling Procedure

- ❒ Do not enter the test pits/excavations to collect samples unless it is safe to do so.
- ❒ Use excavator/backhoe to collect bulk samples from sidewalls and select undisturbed samples from the bucket.
- ❒ Collect samples with gloved hand.
- ❒ Note any stratigraphic layers and collect a sample from each layer.
- ❒ Note any visual or olfactory signs of impacted material and collect a sample from each location.
- ❒ Note all and any odours or discolouration of samples
- ❒ Seal all samples in the appropriate container onsite.

Soil 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.

3.3 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.

3.4 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.

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	9-Nov-2010	-	66.39	9.47	56.92	-	-	-	-
BH2	9-Nov-2010	-	66.37	9.42	56.95	-	-	-	-
BH3	9-Nov-2010	35	66.43	9.40	57.03	3.05	3.95 - 7.00	62.48 - 59.43	limestone bedrock
BH4	10-Nov-2010	-	66.64	9.37	57.27	-	-	-	-
BH5	10-Nov-2010	35	66.50	9.40	57.1	3.05	1.95 - 5.00	64.55 - 61.50	limestone bedrock
BH1-20	25-May-2020	35	66.56	5.89	60.67	3.05	2.84 - 5.89	63.72 - 60.67	limestone bedrock
BH2-20	25-May-2020	35	66.61	9.17	57.44	3.05	6.12 - 9.17	60.49 - 57.44	limestone bedrock
BH3-20	25-May-2020	-	66.76	1.19	65.57	-	-	-	-
BH4-20	25-May-2020	-	66.44	0.74	65.7	-	-	-	-
BH5-20	12-Jun-2020	35	66.50	6.04	60.46	3.05	2.99 - 6.04	63.51 - 60.46	limestone bedrock
BH6-20	12-Jun-2020	-	66.54	1.17	65.37	-	-	-	-
BH7-20	12-Jun-2020	-	66.52	0.94	65.58	-	-	-	-
BH1-25	1-Apr-2025	35	66.26	5.99	60.27	3.05	2.94 - 5.99	63.32 - 60.27	limestone bedrock
BH2-25	1-Apr-2025	35	66.29	5.99	60.3	3.05	2.94 - 5.99	63.35 - 60.3	limestone bedrock
BH3-25	1-Apr-2025	35	66.36	5.99	60.37	3.05	2.94 - 5.99	63.42 - 60.37	limestone bedrock
BH4-25	1-Apr-2025	35	66.63	5.56	61.07	2.74	2.82 - 5.56	63.81 - 61.07	limestone bedrock
BH5-25	2-Apr-2025	35	66.25	15.06	51.19	3.05	2.46 - 5.51	63.79 - 60.74	limestone bedrock
BH6-25	2-Apr-2025	35	66.13	5.59	60.54	3.05	2.54 - 5.59	63.59 - 60.54	limestone bedrock
TP1-25	4-Apr-2025	-	66.42	0.85	65.57	-	-	-	-
TP2-25	4-Apr-2025	-	66.21	0.74	65.47	-	-	-	-
TP3-25	4-Apr-2025	-	66.27	0.82	65.45	-	-	-	-
TP4-25	4-Apr-2025	-	66.78	0.95	65.83	-	-	-	-
TP5-25	4-Apr-2025	-	66.68	3.00	63.68	-	-	-	-
TP6-25	4-Apr-2025	-	66.36	0.90	65.46	-	-	-	-
TP7-25	4-Apr-2025	-	66.33	0.90	65.43	-	-	-	-
TP8-25	4-Apr-2025	-	66.18	0.65	65.53	-	-	-	-
TP9-25	4-Apr-2025	-	66.25	0.85	65.4	-	-	-	-
TP10-25	4-Apr-2025	-	66.18	0.60	65.58	-	-	-	-
TP11-25	4-Apr-2025	-	66.11	0.45	65.66	-	-	-	-
TP12-25	4-Apr-2025	-	66.24	0.45	65.79	-	-	-	-
TP13-25	4-Apr-2025	-	66.42	1.05	65.37	-	-	-	-
TP14-25	4-Apr-2025	-	66.41	1.00	65.41	-	-	-	-

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}	B-HWS	EC	SAR	pH
BH5A-G4 1046174-01	0.7-0.9	10-Nov-2010	NA - Previous investigation	<30 (Gastech)						✓	✓	✓	✓			
BH1-AU1 2022205-01	0.08-0.60	25-May-2020	To assess former window and door manufacturing (APEC 3), metal coating and finishing (APEC 4A), and former pole mounted transformer (APEC 6)	N/A	✓	✓	✓		✓	✓	✓	✓				
BH2-AU1 2022205-02	0.05-0.60	25-May-2020	To assess metal coating and finishing (APEC 4B)	N/A						✓	✓	✓				
BH2-SS2 2022205-03	0.76-0.84	25-May-2020	To assess former automotive service garage (APEC 5)	N/A	✓	✓										
BH3-SS2 2022205-04	0.76-1.14	25-May-2020	To assess metal coating and finishing (APEC 4B), and former automotive service garage (APEC 5)	N/A	✓	✓				✓	✓	✓				
BH5-AU1 2025184-01	0.0-0.60	12-Jun-2020	To delineate previous metals exceedance	N/A						✓	✓	✓				
BH5-SS2 2025184-02	0.76-0.94	12-Jun-2020	To assess former furnace oil spill (APEC 7)	N/A	✓	✓										
BH1-25-AU2 2514307-01	0.30-0.61	1-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), metal coating and finishing (APEC 4B), former automotive service garage (APEC 5), former gasoline storage tanks (APEC 8), and to assess excess soil quality for off-site reuse	2.9	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
BH2-25-AU1 2514307-02	0.0-0.61	1-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former furnace oil spill (APEC 7), to delineate previous metals exceedance in BH5 (2010), and to assess excess soil quality for off-site reuse	0.7	✓	✓	✓	✓		✓	✓	✓		✓	✓	
BH3-25-AU1 2514307-03	0.0-0.61	1-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), metal coating and finishing (APEC 4B), former automotive service garage (APEC 5), and to assess excess soil quality for off-site reuse	2.6	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	
BH4-25-AU2 2514307-04	0.30-0.61	1-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former furnace oil spill (APEC 7), and to assess excess soil quality for off-site reuse	6.6	✓	✓	✓	✓		✓	✓	✓		✓	✓	
BH4-25-SS3+SS4 2514307-05	1.52-2.54	1-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former furnace oil spill (APEC 7), and to assess excess soil quality for off-site reuse	2.5, 1.8	✓	✓	✓	✓		✓	✓	✓		✓	✓	
DUP1-25 (DUP of BH3-25-AU1) 2514307-06	0.0-0.61	1-Apr-2025	For laboratory QA/QC purposes	2.6	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	
BH5-25-AU1 2514468-01	0.0-0.30	2-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former window and door manufacturing (APEC 3), metal coating and finishing (APEC 4A), and to assess excess soil quality for off-site reuse	1.3	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	
BH5-25-AU2 2514468-02	0.30-0.61	2-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former window and door manufacturing (APEC 3), metal coating and finishing (APEC 4A), and to assess excess soil quality for off-site reuse	1.4	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	
BH6-25-AU1 2514468-03	0.18-0.56	2-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former window and door manufacturing (APEC 3), metal coating and finishing (APEC 4A), and to assess excess soil quality for off-site reuse	3.1	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	
TP1-25-G1 2515146-01	0.2-0.3	4-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), metal coating and finishing (APEC 4B), former automotive service garage (APEC 5), former gasoline storage tanks (APEC 8), and to assess excess soil quality for off-site reuse	0.5	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	
TP2-25-G1 2515146-02	0.1-0.2	4-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), metal coating and finishing (APEC 4B), former automotive service garage (APEC 5), former gasoline storage tanks (APEC 8), and to assess excess soil quality for off-site reuse	0.8	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	

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}	B-HWS	EC	SAR	pH
TP3-25-G3 2515146-03	0.7-0.8	4-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), metal coating and finishing (APEC 4B), former automotive service garage (APEC 5), and to assess excess soil quality for off-site reuse	0.5	✓	✓		✓		✓	✓	✓		✓	✓	✓
TP4-25-G2 2515146-04	0.8-0.9	4-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former furnace oil spill (APEC 7), and to assess excess soil quality for off-site reuse	0.3	✓	✓	✓	✓		✓	✓	✓		✓	✓	
TP5-25-G4 2515146-05	2.1-2.2	4-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former furnace oil spill (APEC 7), and to assess excess soil quality for off-site reuse	0.5	✓	✓	✓	✓		✓	✓	✓		✓	✓	
TP6-25-G1 2515146-06	0.7-0.8	4-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former furnace oil spill (APEC 7), and to assess excess soil quality for off-site reuse	0.4	✓	✓	✓	✓		✓	✓	✓		✓	✓	
TP7-25-G1 2515146-07	0.2-0.3	4-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former pole mounted transformer (APEC 6), and to assess excess soil quality for off-site reuse	0.5	✓	✓		✓	✓	✓	✓	✓		✓	✓	
TP8-25-G1 2515146-08	0.2-0.3	4-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), and to assess excess soil quality for off-site reuse	0.5	✓	✓		✓		✓	✓	✓		✓	✓	
TP9-25-G3 2515146-09	0.7-0.8	4-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), and to assess excess soil quality for off-site reuse	0.4	✓	✓	✓	✓		✓	✓	✓		✓	✓	✓
TP11-25-G2 2515146-10	0.3-0.4	4-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former window and door manufacturing (APEC 3), metal coating and finishing (APEC 4A), and to assess excess soil quality for off-site reuse	0.4	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	
TP12-25-G2 2515146-11	0.3-0.4	4-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former window and door manufacturing (APEC 3), metal coating and finishing (APEC 4A), and to assess excess soil quality for off-site reuse	0.3	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	
TP13-25-G2 2515146-12	0.6-0.7	4-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former furnace oil spill (APEC 7), and to assess excess soil quality for off-site reuse	0.1	✓	✓	✓	✓		✓	✓	✓		✓	✓	
TP14-25-G1 2515146-13	0.3-0.4	4-Apr-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), metal coating and finishing (APEC 4B), former automotive service garage (APEC 5), and to assess excess soil quality for off-site reuse	0.4	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	
DUP2-25 (DUP of TP3-25-G3) 2515146-14	0.7-0.8	4-Apr-2025	For laboratory QA/QC purposes	0.5	✓	✓		✓		✓	✓	✓		✓	✓	✓

Sample ID and Laboratory ID	Sample Depth (mbgs)	Sampling Date	Rationale	Parameter Groups Analyzed							
				PHCs	BTEX	VOCs	PAHs	PCBs	Metals	Hg	Cr^{VI}
BH1-GW1 1047141-01	6.42-9.47	16-Nov-2010	NA - Previous investigation	✓	✓	✓					
MW208-GW2 1047141-02	Unknown	16-Nov-2010	NA - Previous investigation	✓	✓	✓					
BH5-GW1 1048119-01	1.95 - 5.00	23-Nov-2010	NA - Previous investigation	✓	✓	✓					
BH1-20-GW1 2025338-01	2.84 - 5.89	16-Jun-2020	To assess former window and door manufacturing (APEC 3), metal coating and finishing (APEC 4A), and former pole mounted transformer (APEC 6)	✓	✓	✓		✓	✓	✓	✓
BH2-20-GW1 2025338-02	6.12 - 9.17	16-Jun-2020	To assess metal coating and finishing (APEC 4B), and former automotive service garage (APEC 5)	✓	✓	✓			✓	✓	✓
BH5-20-GW1 2025338-03	2.99 - 6.04	16-Jun-2020	To assess former furnace oil spill (APEC 7)	✓	✓	✓					
BH1-25-GW 2516087-01	2.94 - 5.99	11-Apr-2025	To assess metal coating and finishing (APEC 4B), former automotive service garage (APEC 5), former gasoline storage tanks (APEC 8), and former off-site rail tracks (APEC 9)	✓	✓	✓	✓		✓	✓	✓
BH2-25-GW 2516087-02	2.94 - 5.99	11-Apr-2025	To assess former furnace oil spill (APEC 7)	✓	✓	✓	✓				
BH3-25-GW 2516087-03	2.94 - 5.99	11-Apr-2025	To assess metal coating and finishing (APEC 4B), and former automotive service garage (APEC 5)	✓	✓	✓	✓		✓	✓	✓
BH4-25-GW 2516087-04	2.82 - 5.56	11-Apr-2025	To assess former furnace oil spill (APEC 7)	✓	✓	✓	✓				
BH5-25-GW 2516087-05	2.46 - 5.51	11-Apr-2025	To assess former window and door manufacturing (APEC 3), metal coating and finishing (APEC 4A), and former off-site rail tracks (APEC 9)	✓	✓	✓	✓		✓	✓	✓
BH6-25-GW 2516087-06	2.54 - 5.59	11-Apr-2025	To assess former window and door manufacturing (APEC 3), and metal coating and finishing (APEC 4A)	✓	✓	✓	✓		✓	✓	✓
BH1-25-GW 2518043-01	2.94 - 5.99	25-Apr-2025	To confirm analytical results from previous testing		✓	✓					
BH2-25-GW 2518043-02	2.94 - 5.99	25-Apr-2025	To confirm groundwater quality below identified soil exceedance						✓	✓	✓
BH3-25-GW 2518043-03	2.94 - 5.99	25-Apr-2025	To confirm analytical results from previous testing		✓	✓					
BH4-25-GW 2518043-04	2.82 - 5.56	25-Apr-2025	To confirm groundwater quality below identified soil exceedance						✓	✓	✓
DUP1 (DUP of BH1-25-GW) 2518043-05	2.94 - 5.99	25-Apr-2025	For laboratory QA/QC purposes		✓	✓					

Parameter	Units	Regulation	BH5A-G4 1046174-01	BH1-AU1 2022205-01	BH2-AU1 2022205-02	BH2-SS2 2022205-03	BH3-SS2 2022205-04	BH5-AU1 2025184-01	BH5-SS2 2025184-02	BH1-25-AU2 2514307-01	BH2-25-AU1 2514307-02	BH3-25-AU1 2514307-03
Sample Depth (m)		Reg 153/04 - Table 7 Residential,	0.7-0.9	0.08-0.60	0.05-0.60	0.76-0.84	0.76-1.14	0.0-0.60	0.76-0.94	0.30-0.61	0.0-0.61	0.0-0.61
Sample Date		coarse	10-Nov-2010	25-May-2020	25-May-2020	25-May-2020	25-May-2020	12-Jun-2020	12-Jun-2020	1-Apr-2025	1-Apr-2025	1-Apr-2025
Physical Characteristics												
% Solids	% by Wt.		89.5	97.3	89.6	87.5	87.5	N/A	N/A	88.2	80.9	84.7
General Inorganics												
SAR	N/A	5.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.14	0.38	0.28
Conductivity	uS/cm	700	N/A	N/A	N/A	N/A	N/A	N/A	N/A	344	224	496
pH	N/A	5-9 (surf); 5-11 (subsurf)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7.57	N/A	N/A
Metals, Hg, CrVI, B-HWS												
Antimony	ug/g dry	7.5	3	ND (1.0)	ND (1.0)	N/A	ND (1.0)	ND (1.0)	N/A	ND (1.0)	ND (1.0)	ND (1.0)
Arsenic	ug/g dry	18	110	2.4	2.7	N/A	3.4	6.5	N/A	5.6	4.2	3.4
Barium	ug/g dry	390	402	101	133	N/A	115	79	N/A	172	168	332
Beryllium	ug/g dry	4.0	ND (0.5)	ND (0.5)	ND (0.5)	N/A	0.5	ND (0.5)	N/A	0.6	0.6	0.5
Boron, available	ug/g dry	1.5	1.2	N/A	N/A	N/A	N/A	N/A	N/A	0.7	N/A	0.8
Boron	ug/g dry	120	NA	11.9	11.7	N/A	17.1	7	N/A	17.1	15.5	14.2
Cadmium	ug/g dry	1.2	1.1	ND (0.5)	ND (0.5)	N/A	ND (0.5)	ND (0.5)	N/A	ND (0.5)	ND (0.5)	ND (0.5)
Chromium (VI)	ug/g dry	8.0	ND (0.4)	ND (0.2)	ND (0.2)	N/A	ND (0.2)	ND (0.2)	N/A	ND (0.2)	ND (0.2)	ND (0.2)
Chromium	ug/g dry	160	30	12.8	12.8	N/A	18.6	20.3	N/A	19	19.8	17.1
Cobalt	ug/g dry	22	10	4.5	4.3	N/A	5.5	7.4	N/A	6.7	5.2	5.9
Copper	ug/g dry	140	64	13.1	14.1	N/A	16.2	24.8	N/A	41.2	30.9	20.6
Lead	ug/g dry	120	94	34.5	20.3	N/A	19.4	25.7	N/A	49.8	42.1	18.3
Mercury	ug/g dry	0.27	0.2	ND (0.1)	ND (0.1)	N/A	0.1	ND (0.1)	N/A	ND (0.1)	ND (0.1)	ND (0.1)
Molybdenum	ug/g dry	6.9	9	ND (1.0)	ND (1.0)	N/A	ND (1.0)	3.1	N/A	1.6	2.3	1.3
Nickel	ug/g dry	100	30	11.1	10.8	N/A	17.8	15.5	N/A	16.7	13.8	13.1
Selenium	ug/g dry	2.4	ND (1.0)	ND (1.0)	ND (1.0)	N/A	ND (1.0)	ND (1.0)	N/A	ND (1.0)	ND (1.0)	ND (1.0)
Silver	ug/g dry	20	0.4	ND (0.3)	ND (0.3)	N/A	ND (0.3)	ND (0.3)	N/A	ND (0.3)	ND (0.3)	ND (0.3)
Thallium	ug/g dry	1.0	ND (0.1)	ND (1.0)	ND (1.0)	N/A	ND (1.0)	ND (1.0)	N/A	ND (1.0)	ND (1.0)	ND (1.0)
Uranium	ug/g dry	23	NA	ND (1.0)	ND (1.0)	N/A	ND (1.0)	ND (1.0)	N/A	ND (1.0)	ND (1.0)	ND (1.0)
Vanadium	ug/g dry	86	42	24.7	17.6	N/A	19.1	34.3	N/A	22.8	22.9	21.1
Zinc	ug/g dry	340	124	36.7	36.8	N/A	48.9	95.1	N/A	64.5	85.3	42.8
VOCs												
Acetone	ug/g dry	16	N/A	ND (0.50)	N/A	N/A	N/A	N/A	N/A	ND (0.50)	ND (0.50)	ND (0.50)
Benzene	ug/g dry	0.21	N/A	ND (0.02)	N/A	N/A	N/A	N/A	N/A	0.12	ND (0.02)	0.08
Bromodichloromethane	ug/g dry	13	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
Bromoform	ug/g dry	0.27	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
Bromomethane	ug/g dry	0.05	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
Carbon Tetrachloride	ug/g dry	0.05	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
Chlorobenzene	ug/g dry	2.4	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
Chloroform	ug/g dry	0.05	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
Dibromochloromethane	ug/g dry	9.4	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
Dichlorodifluoromethane	ug/g dry	16	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
1,2-Dichlorobenzene	ug/g dry	3.4	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
1,3-Dichlorobenzene	ug/g dry	4.8	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
1,4-Dichlorobenzene	ug/g dry	0.083	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
1,1-Dichloroethane	ug/g dry	3.5	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
1,2-Dichloroethane	ug/g dry	0.05	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
1,1-Dichloroethylene	ug/g dry	0.05	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
cis-1,2-Dichloroethylene	ug/g dry	3.4	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
trans-1,2-Dichloroethylene	ug/g dry	0.084	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
1,2-Dichloropropane	ug/g dry	0.05	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
cis-1,3-Dichloropropylene	ug/g dry	0.05	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
trans-1,3-Dichloropropylene	ug/g dry	0.05	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
1,3-Dichloropropene, total	ug/g dry	0.05	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
Ethylbenzene	ug/g dry	2.0	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	0.08	ND (0.05)	ND (0.05)
Ethylene dibromide (dibromoethane, 1,	ug/g dry	0.05	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
Hexane	ug/g dry	2.8	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
Methyl Ethyl Ketone (2-Butanone)	ug/g dry	16	N/A	ND (0.50)	N/A	N/A	N/A	N/A	N/A	ND (0.50)	ND (0.50)	ND (0.50)
Methyl Isobutyl Ketone	ug/g dry	1.7	N/A	ND (0.50)	N/A	N/A	N/A	N/A	N/A	ND (0.50)	ND (0.50)	ND (0.50)
Methyl tert-butyl ether	ug/g dry	0.75	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
Methylene Chloride	ug/g dry	0.1	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
Styrene	ug/g dry	0.7	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
1,1,1,2-Tetrachloroethane	ug/g dry	0.058	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
1,1,2,2-Tetrachloroethane	ug/g dry	0.05	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
Tetrachloroethylene	ug/g dry	0.28	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
Toluene	ug/g dry	2.3	N/A	0.09	N/A	N/A	N/A	N/A	N/A	0.26	ND (0.05)	0.16
1,1,1-Trichloroethane	ug/g dry	0.38	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
1,1,2-Trichloroethane	ug/g dry	0.05	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
Trichloroethylene	ug/g dry	0.061	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
Trichlorofluoromethane	ug/g dry	4.0	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)
Vinyl Chloride	ug/g dry	0.02	N/A	ND (0.02)	N/A	N/A	N/A	N/A	N/A	ND (0.02)	ND (0.02)	ND (0.02)
m/p-Xylene	ug/g dry	3.1	N/A	0.11	N/A	N/A	N/A	N/A	N/A	0.4	0.06	0.21
o-Xylene	ug/g dry	3.1	N/A	0.07	N/A	N/A	N/A	N/A	N/A	0.24	ND (0.05)	0.11
Xylenes, total	ug/g dry	3.1	N/A	0.18	N/A	N/A	N/A	N/A	N/A	0.63	0.06	0.32
BTEX												
Benzene	ug/g dry	0.21	N/A	ND (0.02)	N/A	ND (0.02)	ND (0.02)	N/A	ND (0.02)	0.12	ND (0.02)	0.08
Ethylbenzene	ug/g dry	2.0	N/A	ND (0.05)	N/A	ND (0.05)	ND (0.05)	N/A	ND (0.05)	0.08	ND (0.05)	ND (0.05)
Toluene	ug/g dry	2.3	N/A	0.09	N/A	ND (0.05)	ND (0.05)	N/A	ND (0.05)	0.26	ND (0.05)	0.16
m/p-Xylene	ug/g dry	3.1	N/A	0.11	N/A	ND (0.05)	ND (0.05)	N/A	ND (0.05)	0.4	0.06	0.21
o-Xylene	ug/g dry	3.1	N/A	0.07	N/A	ND (0.05)	ND (0.05)	N/A	ND (0.05)	0.24	ND (0.05)	0.11
Xylenes, total	ug/g dry	3.1	N/A	0.18	N/A	ND (0.05)	ND (0.05)	N/A	ND (0.05)	0.63	0.06	0.32
PHCs, F1 to F4												
F1 PHCs (C6-C10)	ug/g dry	55	N/A	ND (7)	N/A	ND (7)	ND (7)	N/A	ND (7)	8	ND (7)	7
F2 PHCs (C10-C16)	ug/g dry	98	N/A	ND (40)	N/A	ND (4)	ND (4)	N/A	ND (4)	95	9	111
F3 PHCs (C16-C34)	ug/g dry	300	N/A	285	N/A	80	40	N/A	20	107	164	284
F4 PHCs (C34-C50)	ug/g dry	2800	N/A	1630	N/A	632	306	N/A	30	326	123	958
F4G PHCs (gravimetric)	ug/g dry	2800	N/A	2470	N/A	1100	457	N/A	N/A	1270	420	2620
PAHs												
Acenaphthene	ug/g dry	7.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.02)	0.04	ND (0.40)
Acenaphthylene	ug/g dry	0.15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.02)	0.08	ND (0.40)
Anthracene	ug/g dry	0.67	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.03	0.13	ND (0.40)
Benzo[a]anthracene	ug/g dry	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.08	0.44	ND (0.40)
Benzo[a]pyrene	ug/g dry	0.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.07	0.51	ND (0.40)
Benzo[b]fluoranthene	ug/g dry	0.78	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.11	0.58	ND (0.40)
Benzo[g,h,i]perylene	ug/g dry	6.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.04	0.24	ND (0.40)
Benzo[k]fluoranthene	ug/g dry	0.78	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.03	0.2	ND (0.40)
Chrysene	ug/g dry	7.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.09	0.43	ND (0.40)
Dibenzo[a,h]anthracene	ug/g dry	0.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.02)	ND (0.02)	ND (0.40)
Fluoranthene	ug/g dry	0.69	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.13	0.97	ND (0.40)
Fluorene	ug/g dry	62	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.04	0.04	ND (0.40)
Indeno [1,2,3-cd] pyrene	ug/g dry	0.38	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.05	0.32	ND (0.40)
1-Methylnaphthalene	ug/g dry	0.99	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.79	0.03	ND (0.40)
2-Methylnaphthalene	ug/g dry	0.99	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.44	0.03	ND (0.40)
Methylnaphthalene (1&2)	ug/g dry	0.99	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.23	0.06	ND (0.80)
Naphthalene	ug/g dry	0.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.76	0.03	ND (0.20)
Phenanthrene	ug/g dry	6.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.31	0.48	ND (0.40)
Pyrene	ug/g dry	78	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.11	0.61	ND (0.40)
PCBs												
PCBs, total	ug/g dry	0.35	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

2.00 Result exceeds Reg 153/04 - Table 7 Residential, coarse Standards
ND (0.2) MDL exceeds Reg 153/04 - Table 7 Residential, coarse Standards
ND (0.2) No concentrations identified above the MDL
N/A Parameter not analysed
NV No value given for indicated parameter

Parameter	Units	Regulation	BH4-25-AU2 2514307-04	BH4-25-SS3+SS4 2514307-05	DUP1-25 (DUP of BH3-25-AU1) 2514307-06	BH5-25-AU1 2514468-01	BH5-25-AU2 2514468-02	BH6-25-AU1 2514468-03	TP1-25-G1 2515146-01	TP2-25-G1 2515146-02	TP3-25-G3 2515146-03	TP4-25-G2 2515146-04
Sample Depth (m)		Reg 153/04 - Table 7 Residential,	0.30-0.61	1.52-2.54	0.0-0.61	0.0-0.30	0.30-0.61	0.18-0.56	0.2-0.3	0.1-0.2	0.7-0.8	0.8-0.9
Sample Date		coarse	1-Apr-2025	1-Apr-2025	1-Apr-2025	2-Apr-2025	2-Apr-2025	2-Apr-2025	4-Apr-2025	4-Apr-2025	4-Apr-2025	4-Apr-2025
Physical Characteristics												
% Solids	% by Wt.		95	94	86.7	89.7	93.3	87.6	92.5	90.5	86.6	85
General Inorganics												
SAR	N/A	5.0	0.45	0.11	0.24	0.54	0.46	0.16	0.36	0.1	0.35	0.16
Conductivity	uS/cm	700	642	1630	376	272	240	189	209	150	260	382
pH	N/A	5-9 (surf); 5-11 (subsurf)	N/A	7.88	N/A	N/A	N/A	N/A	N/A	N/A	7.51	N/A
Metals, Hg, CrVI, B-HWS												
Antimony	ug/g dry	7.5	ND (1.0)	ND (1.0)	ND (1.0)	23.5	4.2	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Arsenic	ug/g dry	18	3.4	3.1	3.5	3	1.7	1.7	2.3	2	1.6	2.8
Barium	ug/g dry	390	139	197	138	398	721	403	46.5	35.3	167	75.7
Beryllium	ug/g dry	4.0	ND (0.5)	0.6	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	0.5	ND (0.5)
Boron, available	ug/g dry	1.5	N/A	N/A	N/A	2.4	1.6	0.8	ND (0.5)	ND (0.5)	N/A	N/A
Boron	ug/g dry	120	22.2	22.1	11.1	33.2	18	13.4	5.5	ND (5.0)	13	6.9
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)
Chromium (VI)	ug/g dry	8.0	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)
Chromium	ug/g dry	160	20.5	25.8	16.3	17.3	13	11.4	10.8	9.1	12.7	16
Cobalt	ug/g dry	22	7.7	10.8	6.9	16.3	4.8	2.9	5.3	3.8	3.1	4.7
Copper	ug/g dry	140	18.3	21.3	22.2	21	9.7	7.1	14	10.4	7.5	29
Lead	ug/g dry	120	46.7	41.8	20.3	214	37	9.7	5.1	7.7	5.7	17.7
Mercury	ug/g dry	0.27	0.1	0.5	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)
Molybdenum	ug/g dry	6.9	1.1	1.8	1.4	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	18	23.1	14.6	17	10	7.5	10.4	7.6	9.4	12.1
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)
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)
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)
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)	1.1
Vanadium	ug/g dry	86	17.2	18.5	23	16.6	11.6	10.9	22.6	17.1	12.4	22.2
Zinc	ug/g dry	340	47.5	50.2	46.3	317	63.8	ND (20.0)	20.3	28.2	ND (20.0)	41
VOCs												
Acetone	ug/g dry	16	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	N/A	ND (0.50)
Benzene	ug/g dry	0.21	ND (0.02)	ND (0.02)	0.08	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A	ND (0.02)
Bromodichloromethane	ug/g dry	13	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)
Bromoform	ug/g dry	0.27	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)
Bromomethane	ug/g dry	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)	N/A	ND (0.05)
Carbon Tetrachloride	ug/g dry	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)	N/A	ND (0.05)
Chlorobenzene	ug/g dry	2.4	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)
Chloroform	ug/g dry	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)	N/A	ND (0.05)
Dibromochloromethane	ug/g dry	9.4	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)
Dichlorodifluoromethane	ug/g dry	16	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)
1,2-Dichlorobenzene	ug/g dry	3.4	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)
1,3-Dichlorobenzene	ug/g dry	4.8	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)
1,4-Dichlorobenzene	ug/g dry	0.083	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)
1,1-Dichloroethane	ug/g dry	3.5	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)
1,2-Dichloroethane	ug/g dry	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)	N/A	ND (0.05)
1,1-Dichloroethylene	ug/g dry	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)	N/A	ND (0.05)
cis-1,2-Dichloroethylene	ug/g dry	3.4	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)
trans-1,2-Dichloroethylene	ug/g dry	0.084	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)
1,2-Dichloropropane	ug/g dry	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)	N/A	ND (0.05)
cis-1,3-Dichloropropylene	ug/g dry	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)	N/A	ND (0.05)
trans-1,3-Dichloropropylene	ug/g dry	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)	N/A	ND (0.05)
1,3-Dichloropropene, total	ug/g dry	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)	N/A	ND (0.05)
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)	N/A	ND (0.05)
Ethylene dibromide (dibromoethane, 1,	ug/g dry	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)	N/A	ND (0.05)
Hexane	ug/g dry	2.8	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)
Methyl Ethyl Ketone (2-Butanone)	ug/g dry	16	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	N/A	ND (0.50)
Methyl Isobutyl Ketone	ug/g dry	1.7	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	N/A	ND (0.50)
Methyl tert-butyl ether	ug/g dry	0.75	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)
Methylene Chloride	ug/g dry	0.1	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)
Styrene	ug/g dry	0.7	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)
1,1,1,2-Tetrachloroethane	ug/g dry	0.058	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)
1,1,2,2-Tetrachloroethane	ug/g dry	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)	N/A	ND (0.05)
Tetrachloroethylene	ug/g dry	0.28	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)
Toluene	ug/g dry	2.3	ND (0.05)	ND (0.05)	0.16	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)
1,1,1-Trichloroethane	ug/g dry	0.38	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)
1,1,2-Trichloroethane	ug/g dry	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)	N/A	ND (0.05)
Trichloroethylene	ug/g dry	0.061	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)
Trichlorofluoromethane	ug/g dry	4.0	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)
Vinyl Chloride	ug/g dry	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)	N/A	ND (0.02)
m/p-Xylene	ug/g dry	3.1	0.12	0.17	0.21	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)
o-Xylene	ug/g dry	3.1	ND (0.05)	0.06	0.12	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)
Xylenes, total	ug/g dry	3.1	0.12	0.23	0.33	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	ND (0.05)
BTEX												
Benzene	ug/g dry	0.21	ND (0.02)	ND (0.02)	0.08	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)
Toluene	ug/g dry	2.3	ND (0.05)	ND (0.05)	0.16	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	0.12	0.17	0.21	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)	0.06	0.12	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	0.12	0.23	0.33	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
PHCs, F1 to F4												
F1 PHCs (C6-C10)	ug/g dry	55	9	15	9	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)
F2 PHCs (C10-C16)	ug/g dry	98	33	17	118	20	ND (4)	ND (4)	ND (4)	60	ND (4)	5
F3 PHCs (C16-C34)	ug/g dry	300	70	44	337	166	41	31	ND (8)	175	ND (8)	57
F4 PHCs (C34-C50)	ug/g dry	2800	60	35	1010	85	19	19	ND (6)	205	ND (6)	75
F4G PHCs (gravimetric)	ug/g dry	2800	N/A	N/A	2880	N/A	N/A	N/A	N/A	276	N/A	N/A
PAHs												
Acenaphthene	ug/g dry	7.9	0.11	ND (0.02)	ND (0.40)	0.7	0.11	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)
Acenaphthylene	ug/g dry	0.15	ND (0.02)	ND (0.02)	ND (0.40)	0.08	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	0.03
Anthracene	ug/g dry	0.67	0.1	ND (0.02)	ND (0.40)	2.33	0.44	0.08	ND (0.02)	ND (0.02)	ND (0.02)	0.04
Benzo[a]anthracene	ug/g dry	0.5	0.17	0.02	ND (0.40)	5.07	1.14	0.3	ND (0.02)	ND (0.02)	ND (0.02)	0.14
Benzo[a]pyrene	ug/g dry	0.3	0.18	0.02	ND (0.40)	4.67	1.1	0.27	ND (0.02)	ND (0.02)	ND (0.02)	0.12
Benzo[b]fluoranthene	ug/g dry	0.78	0.22	0.03	ND (0.40)	6.32	1.35	0.35	ND (0.02)	ND (0.02)	ND (0.02)	0.14
Benzo[g,h,i]perylene	ug/g dry	6.6	0.09	ND (0.02)	ND (0.40)	2.46	0.57	0.15	ND (0.02)	0.03	ND (0.02)	0.06
Benzo[k]fluoranthene	ug/g dry	0.78	0.07	ND (0.02)	ND (0.40)	2.12	0.48	0.12	ND (0.02)	ND (0.02)	ND (0.02)	0.05
Chrysene	ug/g dry	7.0	0.19	0.03	ND (0.40)	5.43	1.14	0.3	ND (0.02)	0.04	ND (0.02)	0.13
Dibenzo[a,h]anthracene	ug/g dry	0.1	ND (0.02)	ND (0.02)	ND (0.40)	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	0.52	0.05	ND (0.40)	14	3.16	0.71	ND (0.02)	ND (0.02)	ND (0.02)	0.28
Fluorene	ug/g dry	62	0.07	ND (0.02)	ND (0.40)	0.93	0.15	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	0.12	ND (0.02)	ND (0.40)	3	0.72	0.17	ND (0.02)	ND (0.02)	ND (0.02)	0.08
1-Methylnaphthalene	ug/g dry	0.99	0.11	0.03	ND (0.40)	0.16	0.02	ND (0.02)	ND (0.02)	0.02	ND (0.02)	ND (0.02)
2-Methylnaphthalene	ug/g dry	0.99	0.03	0.02	ND (0.40)	0.23	0.03	ND (0.02)	ND (0.02)	0.04	ND (0.02)	ND (0.02)
Methylnaphthalene (1&2)	ug/g dry	0.99	0.14	0.05	ND (0.80)	0.39	0.05	ND (0.04)	ND (0.04)	0.07	ND (0.04)	ND (0.04)
Naphthalene	ug/g dry	0.6	0.08	0.02	ND (0.20)	0.54	0.06	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)
Phenanthrene	ug/g dry	6.2	0.44	0.03	ND (0.40)	8.43	1.69	0.32	ND (0.02)	ND (0.02)	ND (0.02)	0.17
Pyrene	ug/g dry	78	0.32	0.03	ND (0.40)	8.4	1.76	0.47	ND (0.02)	0.03	ND (0.02)	0.17
PCBs												
PCBs, total	ug/g dry	0.35	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

2.00 Result exceeds Reg 153/04 - Table 7 Residential, coarse Standards
ND (0.2) MDL exceeds Reg 153/04 - Table 7 Residential, coarse Standards
ND (0.2) No concentrations identified above the MDL
N/A Parameter not analysed
NV No value given for indicated parameter

Parameter	Units	Regulation	TP5-25-G4 2515146-05	TP6-25-G1 2515146-06	TP7-25-G1 2515146-07	TP8-25-G1 2515146-08	TP9-25-G3 2515146-09	TP11-25-G2 2515146-10	TP12-25-G2 2515146-11	TP13-25-G2 2515146-12	TP14-25-G1 2515146-13	DUP2-25 (DUP of TP3-25-G3) 2515146-14
Sample Depth (m)		Reg 153/04 - Table 7 Residential, coarse	2.1-2.2	0.7-0.8	0.2-0.3	0.2-0.3	0.7-0.8	0.3-0.4	0.3-0.4	0.6-0.7	0.3-0.4	0.7-0.8
Sample Date			4-Apr-2025	4-Apr-2025	4-Apr-2025	4-Apr-2025	4-Apr-2025	4-Apr-2025	4-Apr-2025	4-Apr-2025	4-Apr-2025	4-Apr-2025
Physical Characteristics												
% Solids	% by Wt.		85.3	86.5	86.6	76.8	86.1	87.2	88.1	77.3	86.2	85.7
General Inorganics												
SAR	N/A	5.0	0.05	0.2	0.79	0.31	0.21	0.35	0.11	0.18	2.04	0.33
Conductivity	uS/cm	700	2300	370	825	319	268	168	149	267	365	245
pH	N/A	5-9 (surf); 5-11 (subsurf)	N/A	N/A	N/A	N/A	7.62	N/A	N/A	N/A	N/A	7.38
Metals, Hg, CrVI, B-HWS												
Antimony	ug/g dry	7.5	ND (1.0)	ND (1.0)	2.3	2.3	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Arsenic	ug/g dry	18	3.5	3	7	10.5	1.6	1.2	1.3	4.6	2.7	1.4
Barium	ug/g dry	390	190	132	221	306	90.9	64.7	58.7	176	75.1	148
Beryllium	ug/g dry	4.0	0.6	ND (0.5)	0.6	0.8	0.5	ND (0.5)	ND (0.5)	0.7	0.5	ND (0.5)
Boron, available	ug/g dry	1.5	N/A	N/A	N/A	N/A	N/A	ND (0.5)	1.3	N/A	0.5	N/A
Boron	ug/g dry	120	19.9	7	18	16.9	11.9	13.1	14.4	11.2	16.3	11.4
Cadmium	ug/g dry	1.2	ND (0.5)	ND (0.5)	1.4	1.4	ND (0.5)	ND (0.5)	ND (0.5)	0.5	ND (0.5)	ND (0.5)
Chromium (VI)	ug/g dry	8.0	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)
Chromium	ug/g dry	160	19.8	20.1	24.8	31	11.1	8.9	9.5	19.4	17.2	11.8
Cobalt	ug/g dry	22	8.5	5.6	8.7	9.4	1.7	2.3	2.6	4.6	7.1	2.7
Copper	ug/g dry	140	32	30.2	51.1	74.4	10.5	ND (5.0)	5.5	51.3	19	7
Lead	ug/g dry	120	129	84.8	300	381	5	4.5	4.5	115	22.6	5.5
Mercury	ug/g dry	0.27	0.1	ND (0.1)	0.3	1	ND (0.1)	ND (0.1)	ND (0.1)	0.2	ND (0.1)	ND (0.1)
Molybdenum	ug/g dry	6.9	ND (1.0)	ND (1.0)	ND (1.0)	2.3	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Nickel	ug/g dry	100	19.8	12.3	19	24	5.9	7.1	7.8	14.8	15.6	8.4
Selenium	ug/g dry	2.4	ND (1.0)	ND (1.0)	1	1.6	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)	0.3	1.1	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)
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)
Vanadium	ug/g dry	86	21	27.4	28.7	31.4	12	ND (10.0)	ND (10.0)	22.4	19.7	11.5
Zinc	ug/g dry	340	110	145	358	395	ND (20.0)	ND (20.0)	ND (20.0)	139	65.2	ND (20.0)
VOCs												
Acetone	ug/g dry	16	ND (0.50)	ND (0.50)	N/A	N/A	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	N/A
Benzene	ug/g dry	0.21	ND (0.02)	ND (0.02)	N/A	N/A	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A
Bromodichloromethane	ug/g dry	13	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
Bromoform	ug/g dry	0.27	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
Bromomethane	ug/g dry	0.05	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
Carbon Tetrachloride	ug/g dry	0.05	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
Chlorobenzene	ug/g dry	2.4	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
Chloroform	ug/g dry	0.05	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
Dibromochloromethane	ug/g dry	9.4	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
Dichlorodifluoromethane	ug/g dry	16	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
1,2-Dichlorobenzene	ug/g dry	3.4	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
1,3-Dichlorobenzene	ug/g dry	4.8	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
1,4-Dichlorobenzene	ug/g dry	0.083	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
1,1-Dichloroethane	ug/g dry	3.5	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
1,2-Dichloroethane	ug/g dry	0.05	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
1,1-Dichloroethylene	ug/g dry	0.05	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
cis-1,2-Dichloroethylene	ug/g dry	3.4	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
trans-1,2-Dichloroethylene	ug/g dry	0.084	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
1,2-Dichloropropane	ug/g dry	0.05	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
cis-1,3-Dichloropropylene	ug/g dry	0.05	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
trans-1,3-Dichloropropylene	ug/g dry	0.05	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
1,3-Dichloropropene, total	ug/g dry	0.05	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
Ethylbenzene	ug/g dry	2.0	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
Ethylene dibromide (dibromoethane, 1,	ug/g dry	0.05	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
Hexane	ug/g dry	2.8	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
Methyl Ethyl Ketone (2-Butanone)	ug/g dry	16	ND (0.50)	ND (0.50)	N/A	N/A	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	N/A
Methyl Isobutyl Ketone	ug/g dry	1.7	ND (0.50)	ND (0.50)	N/A	N/A	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	N/A
Methyl tert-butyl ether	ug/g dry	0.75	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
Methylene Chloride	ug/g dry	0.1	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
Styrene	ug/g dry	0.7	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
1,1,1,2-Tetrachloroethane	ug/g dry	0.058	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
1,1,2,2-Tetrachloroethane	ug/g dry	0.05	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
Tetrachloroethylene	ug/g dry	0.28	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
Toluene	ug/g dry	2.3	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
1,1,1-Trichloroethane	ug/g dry	0.38	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
1,1,2-Trichloroethane	ug/g dry	0.05	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
Trichloroethylene	ug/g dry	0.061	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
Trichlorofluoromethane	ug/g dry	4.0	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
Vinyl Chloride	ug/g dry	0.02	ND (0.02)	ND (0.02)	N/A	N/A	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A
m/p-Xylene	ug/g dry	3.1	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
o-Xylene	ug/g dry	3.1	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
Xylenes, total	ug/g dry	3.1	ND (0.05)	ND (0.05)	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
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)
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)
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)
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)
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)
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)
PHCs, F1 to F4												
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)
F2 PHCs (C10-C16)	ug/g dry	98	9	5	6	6	ND (4)	ND (4)	ND (4)	ND (4)	12	ND (4)
F3 PHCs (C16-C34)	ug/g dry	300	64	40	194	51	ND (8)	11	9	36	73	16
F4 PHCs (C34-C50)	ug/g dry	2800	113	87	171	63	ND (6)	7	ND (6)	30	132	13
F4G PHCs (gravimetric)	ug/g dry	2800	N/A	N/A	300	N/A	N/A	N/A	N/A	N/A	255	N/A
PAHs												
Acenaphthene	ug/g dry	7.9	0.02	0.04	0.1	0.05	ND (0.02)	ND (0.02)	ND (0.02)	0.2	ND (0.02)	ND (0.02)
Acenaphthylene	ug/g dry	0.15	ND (0.02)	ND (0.02)	0.1	0.04	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)
Anthracene	ug/g dry	0.67	0.06	0.19	0.45	0.17	ND (0.02)	ND (0.02)	ND (0.02)	0.16	ND (0.02)	ND (0.02)
Benzo[a]anthracene	ug/g dry	0.5	0.21	0.45	2.58	0.67	ND (0.02)	ND (0.02)	ND (0.02)	0.32	0.04	0.02
Benzo[a]pyrene	ug/g dry	0.3	0.19	0.38	2.52	0.65	ND (0.02)	ND (0.02)	ND (0.02)	0.34	0.04	0.03
Benzo[b]fluoranthene	ug/g dry	0.78	0.24	0.49	3.2	0.87	ND (0.02)	ND (0.02)	ND (0.02)	0.44	0.06	0.03
Benzo[g,h,i]perylene	ug/g dry	6.6	0.12	0.22	1.34	0.32	ND (0.02)	ND (0.02)	ND (0.02)	0.2	0.03	ND (0.02)
Benzo[k]fluoranthene	ug/g dry	0.78	0.07	0.45	3.15	0.25	ND (0.02)	ND (0.02)	ND (0.02)	0.14	ND (0.02)	ND (0.02)
Chrysene	ug/g dry	7.0	0.21	0.44	2.78	0.76	ND (0.02)	ND (0.02)	ND (0.02)	0.37	0.04	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)	ND (0.02)	ND (0.02)	ND (0.02)
Fluoranthene	ug/g dry	0.69	0.52	1.2	7.76	1.61	ND (0.02)	ND (0.02)	ND (0.02)	1.06	0.09	0.03
Fluorene	ug/g dry	62	0.03	0.05	0.11	0.06	ND (0.02)	ND (0.02)	ND (0.02)	0.08	ND (0.02)	ND (0.02)
Indeno [1,2,3-cd] pyrene	ug/g dry	0.38	0.14	0.28	1.75	0.43	ND (0.02)	ND (0.02)	ND (0.02)	0.25	0.04	0.02
1-Methylnaphthalene	ug/g dry	0.99	0.03	ND (0.02)	0.13	0.31	ND (0.02)	ND (0.02)	ND (0.02)	0.02	0.02	ND (0.02)
2-Methylnaphthalene	ug/g dry	0.99	0.04	ND (0.02)	0.14	0.3	ND (0.02)	ND (0.02)	ND (0.02)	0.03	0.03	ND (0.02)
Methylnaphthalene (1&2)	ug/g dry	0.99	0.07	ND (0.04)	0.27	0.61	ND (0.04)	ND (0.04)	ND (0.04)	0.05	0.05	ND (0.04)
Naphthalene	ug/g dry	0.6	0.03	0.02	0.09	0.15	ND (0.01)	ND (0.01)	ND (0.01)	0.08	0.02	ND (0.01)
Phenanthrene	ug/g dry	6.2	0.34	0.76	2.17	0.94	ND (0.02)	ND (0.02)	ND (0.02)	0.76	0.05	ND (0.02)
Pyrene	ug/g dry	78	0.31	0.67	3.95	0.95	ND (0.02)	ND (0.02)	ND (0.02)	0.64	0.06	0.03
PCBs												
PCBs, total	ug/g dry	0.35	N/A	N/A	ND (0.10)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

2.00 Result exceeds Reg 153/04 - Table 7 Residential, coarse Standards
ND (0.2) MDL exceeds Reg 153/04 - Table 7 Residential, coarse Standards
ND (0.2) No concentrations identified above the MDL
N/A Parameter not analysed
NV No value given for indicated parameter

Parameter	Units	Regulation	BH1-GW1 1047141-01	MW208-GW2 1047141-02	BH5-GW1 1048119-01	BH1-20-GW1 2025338-01	BH2-20-GW1 2025338-02	BH5-20-GW1 2025338-03	Dup1 (DUP of BH5-20-GW1) 2025338-04	BH1-25-GW 2516087-01	BH2-25-GW 2516087-02	BH3-25-GW 2516087-03	BH4-25-GW 2516087-04	BH5-25-GW 2516087-05	BH6-25-GW 2516087-06	DUP-1 (DUP of BH2-25-GW) 2516087-07	BH1-25-GW 2518043-01	BH2-25-GW 2518043-02	BH3-25-GW 2518043-03	BH4-25-GW 2518043-04	DUP1 (DUP of BH1-25-GW) 2518043-05
Sample Depth (m)		Reg 153/04 - Table 7 Non-Potable Groundwater, coarse	6.42-9.47	Unknown	1.95 - 5.00	2.84 - 5.89	6.12 - 9.17	2.99 - 6.04	2.99 - 6.04	2.94 - 5.99	2.94 - 5.99	2.94 - 5.99	2.82 - 5.56	2.46 - 5.51	2.54 - 5.59	2.94 - 5.99	2.94 - 5.99	2.94 - 5.99	2.94 - 5.99	2.82 - 5.56	2.94 - 5.99
Sample Date			16-Nov-2010	16-Nov-2010	23-Nov-2010	16-Jun-2020	16-Jun-2020	16-Jun-2020	16-Jun-2020	11-Apr-2025	11-Apr-2025	11-Apr-2025	11-Apr-2025	11-Apr-2025	11-Apr-2025	11-Apr-2025	25-Apr-2025	25-Apr-2025	25-Apr-2025	25-Apr-2025	25-Apr-2025
Metals, Hg, CrVI																					
Mercury	ug/L	0.1	N/A	N/A	N/A	ND (0.1)	ND (0.1)	N/A	N/A	ND (0.1)	N/A	ND (0.1)	N/A	ND (0.1)	ND (0.1)	N/A	N/A	ND (0.1)	N/A	ND (0.1)	N/A
Antimony	ug/L	16000	N/A	N/A	N/A	ND (0.5)	ND (0.5)	N/A	N/A	0.5	N/A	0.5	N/A	0.7	1.2	N/A	N/A	0.6	N/A	0.6	N/A
Arsenic	ug/L	1500	N/A	N/A	N/A	ND (1)	ND (1)	N/A	N/A	ND (1)	N/A	ND (1)	N/A	ND (1)	ND (1)	N/A	N/A	ND (1)	N/A	ND (1)	N/A
Barium	ug/L	23000	N/A	N/A	N/A	51	69	N/A	N/A	145	N/A	172	N/A	35	22	N/A	N/A	52	N/A	39	N/A
Beryllium	ug/L	53	N/A	N/A	N/A	ND (0.5)	ND (0.5)	N/A	N/A	ND (0.5)	N/A	ND (0.5)	N/A	ND (0.5)	ND (0.5)	N/A	N/A	ND (0.5)	N/A	ND (0.5)	N/A
Boron	ug/L	36000	N/A	N/A	N/A	58	156	N/A	N/A	89	N/A	955	N/A	143	137	N/A	N/A	170	N/A	326	N/A
Cadmium	ug/L	2.1	N/A	N/A	N/A	ND (0.1)	ND (0.1)	N/A	N/A	ND (0.1)	N/A	ND (0.1)	N/A	ND (0.1)	ND (0.1)	N/A	N/A	ND (0.1)	N/A	ND (0.1)	N/A
Chromium	ug/L	640	N/A	N/A	N/A	ND (1)	ND (1)	N/A	N/A	ND (1)	N/A	ND (1)	N/A	ND (1)	ND (1)	N/A	N/A	ND (1)	N/A	ND (1)	N/A
Chromium (VI)	ug/L	110	N/A	N/A	N/A	ND (10)	ND (10)	N/A	N/A	ND (10)	N/A	ND (10)	N/A	ND (10)	ND (10)	N/A	N/A	ND (10)	N/A	ND (10)	N/A
Cobalt	ug/L	52	N/A	N/A	N/A	ND (0.5)	ND (0.5)	N/A	N/A	1.7	N/A	0.6	N/A	ND (0.5)	ND (0.5)	N/A	N/A	ND (0.5)	N/A	1.9	N/A
Copper	ug/L	69	N/A	N/A	N/A	1.3	2	N/A	N/A	9.4	N/A	3.2	N/A	1.1	1.4	N/A	N/A	3.3	N/A	3.1	N/A
Lead	ug/L	20	N/A	N/A	N/A	ND (0.1)	ND (0.1)	N/A	N/A	1.5	N/A	0.2	N/A	0.1	0.1	N/A	N/A	ND (0.1)	N/A	ND (0.1)	N/A
Molybdenum	ug/L	7300	N/A	N/A	N/A	16.3	30.1	N/A	N/A	2.2	N/A	2.1	N/A	0.9	1	N/A	N/A	2.8	N/A	1.6	N/A
Nickel	ug/L	390	N/A	N/A	N/A	ND (1)	2	N/A	N/A	4	N/A	3	N/A	2	1	N/A	N/A	5	N/A	12	N/A
Selenium	ug/L	50	N/A	N/A	N/A	ND (1)	ND (1)	N/A	N/A	ND (1)	N/A	1	N/A	ND (1)	ND (1)	N/A	N/A	ND (1)	N/A	1	N/A
Silver	ug/L	1.2	N/A	N/A	N/A	ND (0.1)	ND (0.1)	N/A	N/A	ND (0.1)	N/A	ND (0.1)	N/A	ND (0.1)	ND (0.1)	N/A	N/A	ND (0.1)	N/A	ND (0.1)	N/A
Sodium	ug/L	1800000	N/A	N/A	N/A	30000	44600	N/A	N/A	36200	N/A	83700	N/A	51900	39000	N/A	N/A	64400	N/A	40200	N/A
Thallium	ug/L	400	N/A	N/A	N/A	ND (0.1)	0.1	N/A	N/A	0.1	N/A	0.2	N/A	ND (0.1)	ND (0.1)	N/A	N/A	0.1	N/A	0.2	N/A
Uranium	ug/L	330	N/A	N/A	N/A	0.7	1.5	N/A	N/A	2.7	N/A	3.6	N/A	0.5	0.4	N/A	N/A	1.3	N/A	2	N/A
Vanadium	ug/L	200	N/A	N/A	N/A	0.5	ND (0.5)	N/A	N/A	ND (0.5)	N/A	ND (0.5)	N/A	ND (0.5)	ND (0.5)	N/A	N/A	ND (0.5)	N/A	ND (0.5)	N/A
Zinc	ug/L	890	N/A	N/A	N/A	ND (5)	7	N/A	N/A	9	N/A	11	N/A	ND (5)	ND (5)	N/A	N/A	ND (5)	N/A	ND (5)	N/A
VOCs																					
Acetone	ug/L	100000	N/A	N/A	N/A	ND (5.0)	ND (5.0)	ND (5.0)	N/A	16.2	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	N/A	ND (5.0)	N/A	ND (5.0)
Benzene	ug/L	0.5	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	0.7	N/A	2.7	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	3.4	N/A	ND (0.5)	N/A	3.4
Bromodichloromethane	ug/L	67000	ND (0.4)	ND (0.4)	ND (0.4)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	N/A	ND (0.5)
Bromoform	ug/L	5.0	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	N/A	ND (0.5)
Bromomethane	ug/L	0.89	ND (0.7)	ND (0.7)	ND (0.7)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	N/A	ND (0.5)
Carbon Tetrachloride	ug/L	0.2	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.2)	ND (0.2)	ND (0.2)	N/A	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	N/A	ND (0.2)	N/A	ND (0.2)
Chlorobenzene	ug/L	140	ND (0.4)	ND (0.4)	ND (0.4)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	94.2	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	177	N/A	ND (0.5)	N/A	118
Chloroform	ug/L	2.0	ND (0.5)	ND (0.5)	ND (0.5)	2.8	6.6	9.9	N/A	1.1	ND (0.5)	2.2	0.5	0.9	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	N/A	ND (0.5)
Dibromochloromethane	ug/L	65000	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	N/A	ND (0.5)
Dichlorodifluoromethane	ug/L	3500	N/A	N/A	N/A	ND (1.0)	ND (1.0)	ND (1.0)	N/A	35.7	ND (1.0)	2	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	23.7	N/A	2	N/A	21.5
1,2-Dichlorobenzene	ug/L	150	ND (0.4)	ND (0.4)	ND (0.4)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	5.3	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	9.3	N/A	ND (0.5)	N/A	6.7
1,3-Dichlorobenzene	ug/L	7600	ND (0.4)	ND (0.4)	ND (0.4)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	N/A	ND (0.5)
1,4-Dichlorobenzene	ug/L	0.5	ND (0.4)	ND (0.4)	ND (0.4)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	10.1	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	19.2	N/A	ND (0.5)	N/A	12.7
1,1-Dichloroethane	ug/L	11	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	N/A	ND (0.5)
1,2-Dichloroethane	ug/L	0.5	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	N/A	ND (0.5)
1,1-Dichloroethylene	ug/L	0.5	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	N/A	ND (0.5)
cis-1,2-Dichloroethylene	ug/L	1.6	ND (0.4)	ND (0.4)	ND (0.4)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	N/A	ND (0.5)
trans-1,2-Dichloroethylene	ug/L	1.6	ND (1.0)	ND (1.0)	ND (1.0)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	N/A	ND (0.5)
1,2-Dichloropropane	ug/L	0.58	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	N/A	ND (0.5)
cis-1,3-Dichloropropylene	ug/L	0.5	ND (0.4)	ND (0.4)	ND (0.4)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	N/A	ND (0.5)
trans-1,3-Dichloropropylene	ug/L	0.5	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	N/A	ND (0.5)
1,3-Dichloropropene, total	ug/L	0.5	ND (0.9)	ND (0.9)	ND (0.9)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	N/A	ND (0.5)
Ethylbenzene	ug/L	54	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	N/A	ND (0.5)
Ethylene dibromide (dibromoethane, 1,2-)	ug/L	0.2	ND (1.0)	ND (1.0)	ND (1.0)	ND (0.2)	ND (0.2)	ND (0.2)	N/A	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	N/A	ND (0.2)	N/A	ND (0.2)
Hexane	ug/L	5.0	N/A	N/A	N/A	ND (1.0)	ND (1.0)	ND (1.0)	N/A	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	N/A	ND (1.0)	N/A	ND (1.0)
Methyl Ethyl Ketone (2-Butanone)	ug/L	21000	N/A	N/A	N/A	ND (5.0)	ND (5.0)	ND (5.0)	N/A	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	N/A	ND (5.0)	N/A	ND (5.0)
Methyl Isobutyl Ketone	ug/L	5200	N/A	N/A	N/A	ND (5.0)	ND (5.0)	ND (5.0)	N/A	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	N/A	ND (5.0)	N/A	ND (5.0)
Methyl tert-butyl ether	ug/L	15	N/A	N/A	N/A	ND (2.0)	ND (2.0)	ND (2.0)	N/A	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	N/A	ND (2.0)	N/A	ND (2.0)
Methylene Chloride	ug/L	26	ND (4.0)	ND (4.0)	ND (4.0)	ND (5.0)	ND (5.0)	ND (5.0)	N/A	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	N/A	ND (5.0)	N/A	ND (5.0)
Styrene	ug/L	43	ND (0.4)	ND (0.4)	ND (0.4)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	N/A	ND (0.5)
1,1,1,2-Tetrachloroethane	ug/L	1.1	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	N/A	ND (0.5)
1,1,2,2-Tetrachloroethane	ug/L	0.5	ND (0.6)	ND (0.6)	ND (0.6)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	N/A	ND (0.5)
Tetrachloroethylene	ug/L	0.5	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	N/A	ND (0.5)
Toluene	ug/L	320	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	2.7	N/A	1.1	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	N/A	ND (0.5)
1,1,1-Trichloroethane	ug/L	23	ND (0.4)	ND (0.4)	ND (0.4)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	N/A	ND (0.5)
1,1,2-Trichloroethane	ug/L	0.5	ND (0.6)	ND (0.6)	ND (0.6)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	N/A	ND (0.5)
Trichloroethylene	ug/L	0.5	ND (0.4)	ND (0.4)	ND (0.4)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	N/A	ND (0.5)
Trichlorofluoromethane	ug/L	2000	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	N/A	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	N/A	ND (1.0)	N/A	ND (1.0)
Vinyl Chloride	ug/L	0.5	ND (0.4)	ND (0.4)	ND (0.4)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	N/A	ND (0.5)
m/p-Xylene	ug/L	72	ND (0.5)	ND (0.5)	ND (0.5)	1.4	0.7	0.5	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	N/A	ND (0.5)
o-Xylene	ug/L	72	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	N/A	ND (0.5)
Xylenes, total	ug/L	72	ND (1.0)	ND (1.0)	ND (1.0)	1.4	0.7	0.5	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	ND (0.5)	N/A	ND (0.5)
BTEX																					
Benzene	ug/L	0.5	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	0.7	0.6	2.7	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	N/A	N/A	N/A	N/A
Ethylbenzene	ug/L	54	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)	N/A	N/A	N/A	N/A	N/A
Toluene	ug/L	320	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	2.7	2.6	1.1	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	N/A	N/A	N/A	N/A
m/p-Xylene	ug/L	72	ND (0.5)	ND (0.5)	ND (0.5)	1.4	0.7	0.5	0.6	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	N/A	N/A	N/A	N/A
o-Xylene	ug/L	72	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)	N/A	N/A	N/A	N/A	N/A
Xylenes, total	ug/L	72	ND (1.0)	ND (1.0)	ND (1.0)	1.4	0.7	0.5	0.6	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	N/A	N/A	N/A	N/A	N/A
PHCs, F1 to F4																					
F1 PHCs (C6-C10)	ug/L	420	ND (200)	ND (200)	ND (200)	ND (25)	ND (25)	ND (25)	ND (25)	ND (25)	ND (25)	ND (25)	ND (25)	ND (25)	ND (25)	ND (25)	N/A	N/A	N/A	N/A	N/A
F2 PHCs (C10-C16)	ug/L	150	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	N/A	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	N/A	N/A	N/A	N/A	N/A
F3 PHCs (C16-C34)	ug/L	500	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	N/A	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	N/A	N/A	N/A	N/A	N/A
F4 PHCs (C34-C50)	ug/L	500	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	N/A	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	N/A	N/A	N/A	N/A	N/A
PAHs																					
Acenaphthene	ug/L	17	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.17	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	N/A	N/A	N/A	N/A
Acenaphthylene	ug/L	1.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	N/A	N/A	N/A	N/A
Anthracene	ug/L	1.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.02	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	0.01	ND (0.01)	N/A	N/A	N/A	N/A	N/A
Benzo[a]anthracene	ug/L	1.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.05	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	0.05	ND (0.01)	N/A	N/A	N/A	N/A	N/A
Benzo[a]pyrene	ug/L	0.81	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.05	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	0.05	ND (0.01)	N/A	N/A	N/A	N/A	N/A
Benzo[b]fluoranthene	ug/L	0.75	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	0.06	ND (0.05)	N/A	N/A	N/A	N/A	N/A
Benzo[g,h,i]perylene	ug/L	0.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	N/A	N/A	N/A	N/A
Benzo[k]fluoranthene	ug/L	0.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	N/A	N/A	N/A	N/A
Chrysene	ug/L	0.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	0.05	ND (0.05)	N/A	N/A	N/A	N/A	N/A
Dibenzo[a,h]anthracene	ug/L	0.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	N/A	N/A	N/A	N/A
Fluoranthene	ug/L	44	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.1	ND (0.01)	ND (0.01)	ND (0.01)	0.03	0.09	0.02	N/A	N/A	N/A	N/A	N/A
Fluorene	ug/L	290	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.1	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	N/A	N/A	N/A	N/A
Indeno [1,2,3-cd] pyrene	ug/L	0.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	N/A	N/A	N/A	N/A
1-Methylnaphthalene	ug/L	1500	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.25	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	N/A	N/A	N/A	N/A
2-Methylnaphthalene	ug/L	1500	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.1	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	N/A	N/A	N/A	N/A
Methylnaphthalene (1&2)	ug/L	1500	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.35	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	ND (0.10)	N/A	N/A	N/A	N/A	N/A
Naphthalene	ug/L	7.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.11	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	N/A	N/A	N/A	N/A
Phenanthrene	ug/L	380	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.07	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A	N/A	N/A	N/A	N/A
Pyrene	ug/L	5.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.1	ND (0.01)	ND (0.01)	ND (0.01)	0.03	0.08	0.02	N/A	N/A	N/A	N/A	N/A
PCBs																					
PCBs, total	ug/L	0.2	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

2.00 Result exceeds Reg 153/04 - Table 7 Non-Potable Groundwater, coarse Standards
ND (0.2) MDL exceeds Reg 153/04 - Table 7 Non-Potable Groundwater, coarse Standards
ND (0.2) No concentrations identified above the MDL
N/A Parameter not analysed
NV No value given for indicated parameter

Parameter	Sample ID / Depth (m)	Units	Reg 153/04 - Table 7 Residential, coarse Standards	Concentration
SAR	TP14-25-G1 2515146-13 - 0.3-0.4	N/A	5.0	2.04
Conductivity	TP5-25-G4 2515146-05 - 2.1-2.2	uS/cm	700	2300
pH	BH4-25-SS3+SS4 2514307-05 - 1.52-2.54	N/A	5-9 (surf); 5-11 (subsurf)	7.88
Antimony	BH5-25-AU1 2514468-01 - 0.0-0.30	ug/g dry	7.5	23.5
Arsenic	BH5A-G4 1046174-01 - 0.7-0.9	ug/g dry	18	110
Barium	BH5-25-AU2 2514468-02 - 0.30-0.61	ug/g dry	390	721
Beryllium	TP8-25-G1 2515146-08 - 0.2-0.3	ug/g dry	4.0	0.8
Boron, available	BH5-25-AU1 2514468-01 - 0.0-0.30	ug/g dry	1.5	2.4
Boron	BH5-25-AU1 2514468-01 - 0.0-0.30	ug/g dry	120	33.2
Cadmium	TP7-25-G1 2515146-07 - 0.2-0.3	ug/g dry	1.2	1.4
Chromium (VI)	BH5A-G4 1046174-01 - 0.7-0.9	ug/g dry	8.0	ND (0.4)
Chromium	TP8-25-G1 2515146-08 - 0.2-0.3	ug/g dry	160	31
Cobalt	BH5-25-AU1 2514468-01 - 0.0-0.30	ug/g dry	22	16.3
Copper	TP8-25-G1 2515146-08 - 0.2-0.3	ug/g dry	140	74.4
Lead	TP8-25-G1 2515146-08 - 0.2-0.3	ug/g dry	120	381
Mercury	TP8-25-G1 2515146-08 - 0.2-0.3	ug/g dry	0.27	1
Molybdenum	BH5A-G4 1046174-01 - 0.7-0.9	ug/g dry	6.9	9
Nickel	BH5A-G4 1046174-01 - 0.7-0.9	ug/g dry	100	30
Selenium	TP8-25-G1 2515146-08 - 0.2-0.3	ug/g dry	2.4	1.6
Silver	TP8-25-G1 2515146-08 - 0.2-0.3	ug/g dry	20	1.1
Thallium	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	1.0	ND (1.0)
Uranium	TP4-25-G2 2515146-04 - 0.8-0.9	ug/g dry	23	1.1
Vanadium	BH5A-G4 1046174-01 - 0.7-0.9	ug/g dry	86	42
Zinc	TP8-25-G1 2515146-08 - 0.2-0.3	ug/g dry	340	395
Acetone	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	16	ND (0.50)
Bromodichloromethane	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	13	ND (0.05)
Bromoform	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	0.27	ND (0.05)
Bromomethane	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	0.05	ND (0.05)
Carbon Tetrachloride	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	0.05	ND (0.05)
Chlorobenzene	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	2.4	ND (0.05)
Chloroform	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	0.05	ND (0.05)
Dibromochloromethane	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	9.4	ND (0.05)
Dichlorodifluoromethane	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	16	ND (0.05)
1,2-Dichlorobenzene	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	3.4	ND (0.05)
1,3-Dichlorobenzene	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	4.8	ND (0.05)
1,4-Dichlorobenzene	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	0.083	ND (0.05)
1,1-Dichloroethane	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	3.5	ND (0.05)
1,2-Dichloroethane	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	0.05	ND (0.05)
1,1-Dichloroethylene	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	0.05	ND (0.05)
cis-1,2-Dichloroethylene	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	3.4	ND (0.05)
trans-1,2-Dichloroethylene	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	0.084	ND (0.05)
1,2-Dichloropropane	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	0.05	ND (0.05)
cis-1,3-Dichloropropylene	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	0.05	ND (0.05)
trans-1,3-Dichloropropylene	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	0.05	ND (0.05)
1,3-Dichloropropene, total	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	0.05	ND (0.05)
Ethylene dibromide (dibromoethane, 1,2-)	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	0.05	ND (0.05)

Parameter	Sample ID / Depth (m)	Units	Reg 153/04 - Table 7 Residential, coarse Standards	Concentration
Hexane	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	2.8	ND (0.05)
Methyl Ethyl Ketone (2-Butanone)	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	16	ND (0.50)
Methyl Isobutyl Ketone	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	1.7	ND (0.50)
Methyl tert-butyl ether	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	0.75	ND (0.05)
Methylene Chloride	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	0.1	ND (0.05)
Styrene	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	0.7	ND (0.05)
1,1,1,2-Tetrachloroethane	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	0.058	ND (0.05)
1,1,2,2-Tetrachloroethane	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	0.05	ND (0.05)
Tetrachloroethylene	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	0.28	ND (0.05)
1,1,1-Trichloroethane	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	0.38	ND (0.05)
1,1,2-Trichloroethane	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	0.05	ND (0.05)
Trichloroethylene	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	0.061	ND (0.05)
Trichlorofluoromethane	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	4.0	ND (0.05)
Vinyl Chloride	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	0.02	ND (0.02)
Benzene	BH1-25-AU2 2514307-01 - 0.30-0.61	ug/g dry	0.21	0.12
Ethylbenzene	BH1-25-AU2 2514307-01 - 0.30-0.61	ug/g dry	2.0	0.08
Toluene	BH1-25-AU2 2514307-01 - 0.30-0.61	ug/g dry	2.3	0.26
m/p-Xylene	BH1-25-AU2 2514307-01 - 0.30-0.61	ug/g dry	3.1	0.4
o-Xylene	BH1-25-AU2 2514307-01 - 0.30-0.61	ug/g dry	3.1	0.24
Xylenes, total	BH1-25-AU2 2514307-01 - 0.30-0.61	ug/g dry	3.1	0.63
F1 PHCs (C6-C10)	BH4-25-SS3+SS4 2514307-05 - 1.52-2.54	ug/g dry	55	15
F2 PHCs (C10-C16)	DUP1-25 (DUP of BH3-25-AU1) 2514307-06 - 0.0-0.61	ug/g dry	98	118
F3 PHCs (C16-C34)	DUP1-25 (DUP of BH3-25-AU1) 2514307-06 - 0.0-0.61	ug/g dry	300	337
F4 PHCs (C34-C50)	BH1-AU1 2022205-01 - 0.08-0.60	ug/g dry	2800	1630
F4G PHCs (gravimetric)	DUP1-25 (DUP of BH3-25-AU1) 2514307-06 - 0.0-0.61	ug/g dry	2800	2880
Acenaphthene	BH5-25-AU1 2514468-01 - 0.0-0.30	ug/g dry	7.9	0.7
Acenaphthylene	TP7-25-G1 2515146-07 - 0.2-0.3	ug/g dry	0.15	ND (0.40)
Anthracene	BH5-25-AU1 2514468-01 - 0.0-0.30	ug/g dry	0.67	2.33
Benzo[a]anthracene	BH5-25-AU1 2514468-01 - 0.0-0.30	ug/g dry	0.5	5.07
Benzo[a]pyrene	BH5-25-AU1 2514468-01 - 0.0-0.30	ug/g dry	0.3	4.67
Benzo[b]fluoranthene	BH5-25-AU1 2514468-01 - 0.0-0.30	ug/g dry	0.78	6.32
Benzo[g,h,i]perylene	BH5-25-AU1 2514468-01 - 0.0-0.30	ug/g dry	6.6	2.46
Benzo[k]fluoranthene	TP7-25-G1 2515146-07 - 0.2-0.3	ug/g dry	0.78	3.15
Chrysene	BH5-25-AU1 2514468-01 - 0.0-0.30	ug/g dry	7.0	5.43
Dibenzo[a,h]anthracene	BH3-25-AU1 2514307-03 - 0.0-0.61	ug/g dry	0.1	ND (0.40)
Fluoranthene	BH5-25-AU1 2514468-01 - 0.0-0.30	ug/g dry	0.69	14
Fluorene	BH5-25-AU1 2514468-01 - 0.0-0.30	ug/g dry	62	0.93
Indeno [1,2,3-cd] pyrene	BH5-25-AU1 2514468-01 - 0.0-0.30	ug/g dry	0.38	3
1-Methylnaphthalene	BH1-25-AU2 2514307-01 - 0.30-0.61	ug/g dry	0.99	0.79
2-Methylnaphthalene	BH1-25-AU2 2514307-01 - 0.30-0.61	ug/g dry	0.99	1.44
Methylnaphthalene (1&2)	BH1-25-AU2 2514307-01 - 0.30-0.61	ug/g dry	0.99	2.23
Naphthalene	BH1-25-AU2 2514307-01 - 0.30-0.61	ug/g dry	0.6	0.76
Phenanthrene	BH5-25-AU1 2514468-01 - 0.0-0.30	ug/g dry	6.2	8.43
Pyrene	BH5-25-AU1 2514468-01 - 0.0-0.30	ug/g dry	78	8.4
PCBs, total	TP7-25-G1 2515146-07 - 0.2-0.3	ug/g dry	0.35	ND (0.10)
Note: ND (x) = parameter analysed was reported non-detect				

Parameter	Sample ID / Screen Interval (m)	Units	Reg 153/04 - Table 7 Non-Potable Groundwater, coarse Standards	Concentration
Mercury	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	0.1	ND (0.1)
Antimony	BH6-25-GW 2516087-06 - 2.54 - 5.59	ug/L	16000	1.2
Arsenic	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	1500	ND (1)
Barium	BH3-25-GW 2516087-03 - 2.94 - 5.99	ug/L	23000	172
Beryllium	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	53	ND (0.5)
Boron	BH3-25-GW 2516087-03 - 2.94 - 5.99	ug/L	36000	955
Cadmium	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	2.1	ND (0.1)
Chromium	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	640	ND (1)
Chromium (VI)	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	110	ND (10)
Cobalt	BH4-25-GW 2518043-04 - 2.82 - 5.56	ug/L	52	1.9
Copper	BH1-25-GW 2516087-01 - 2.94 - 5.99	ug/L	69	9.4
Lead	BH1-25-GW 2516087-01 - 2.94 - 5.99	ug/L	20	1.5
Molybdenum	BH2-20-GW1 2025338-02 - 6.12 - 9.17	ug/L	7300	30.1
Nickel	BH4-25-GW 2518043-04 - 2.82 - 5.56	ug/L	390	12
Selenium	BH3-25-GW 2516087-03 - 2.94 - 5.99	ug/L	50	ND (1)
Silver	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	1.2	ND (0.1)
Sodium	BH3-25-GW 2516087-03 - 2.94 - 5.99	ug/L	1800000	83700
Thallium	BH3-25-GW 2516087-03 - 2.94 - 5.99	ug/L	400	0.2
Uranium	BH3-25-GW 2516087-03 - 2.94 - 5.99	ug/L	330	3.6
Vanadium	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	200	0.5
Zinc	BH3-25-GW 2516087-03 - 2.94 - 5.99	ug/L	890	11
Acetone	BH1-25-GW 2516087-01 - 2.94 - 5.99	ug/L	100000	16.2
Benzene	BH1-25-GW 2518043-01 - 2.94 - 5.99	ug/L	0.5	3.4
Bromodichloromethane	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	67000	ND (0.5)
Bromoform	BH1-GW1 1047141-01 - 6.42-9.47	ug/L	5.0	ND (0.5)
Bromomethane	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	0.89	ND (0.5)
Carbon Tetrachloride	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	0.2	ND (0.2)
Chlorobenzene	BH1-25-GW 2518043-01 - 2.94 - 5.99	ug/L	140	177
Chloroform	BH5-20-GW1 2025338-03 - 2.99 - 6.04	ug/L	2.0	9.9
Dibromochloromethane	BH1-GW1 1047141-01 - 6.42-9.47	ug/L	65000	ND (0.5)
Dichlorodifluoromethane	BH1-25-GW 2516087-01 - 2.94 - 5.99	ug/L	3500	35.7
1,2-Dichlorobenzene	BH1-25-GW 2518043-01 - 2.94 - 5.99	ug/L	150	9.3
1,3-Dichlorobenzene	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	7600	ND (0.5)
1,4-Dichlorobenzene	BH1-25-GW 2518043-01 - 2.94 - 5.99	ug/L	0.5	19.2
1,1-Dichloroethane	BH1-GW1 1047141-01 - 6.42-9.47	ug/L	11	ND (0.5)
1,2-Dichloroethane	BH1-GW1 1047141-01 - 6.42-9.47	ug/L	0.5	ND (0.5)
1,1-Dichloroethylene	BH1-GW1 1047141-01 - 6.42-9.47	ug/L	0.5	ND (0.5)
cis-1,2-Dichloroethylene	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	1.6	ND (0.5)
trans-1,2-Dichloroethylene	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	1.6	ND (0.5)
1,2-Dichloropropane	BH1-GW1 1047141-01 - 6.42-9.47	ug/L	0.58	ND (0.5)
cis-1,3-Dichloropropylene	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	0.5	ND (0.5)
trans-1,3-Dichloropropylene	BH1-GW1 1047141-01 - 6.42-9.47	ug/L	0.5	ND (0.5)
1,3-Dichloropropene, total	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	0.5	ND (0.5)
Ethylbenzene	BH1-GW1 1047141-01 - 6.42-9.47	ug/L	54	ND (0.5)
Ethylene dibromide (dibromoe	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	0.2	ND (0.2)
Hexane	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	5.0	ND (1.0)
Methyl Ethyl Ketone (2-Butano	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	21000	ND (5.0)
Methyl Isobutyl Ketone	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	5200	ND (5.0)
Methyl tert-butyl ether	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	15	ND (2.0)
Methylene Chloride	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	26	ND (5.0)
Styrene	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	43	ND (0.5)
1,1,1,2-Tetrachloroethane	BH1-GW1 1047141-01 - 6.42-9.47	ug/L	1.1	ND (0.5)

Parameter	Sample ID / Screen Interval (m)	Units	Reg 153/04 - Table 7 Non-Potable Groundwater, coarse Standards	Concentration
1,1,2,2-Tetrachloroethane	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	0.5	ND (0.5)
Tetrachloroethylene	BH1-GW1 1047141-01 - 6.42-9.47	ug/L	0.5	ND (0.5)
Toluene	BH5-20-GW1 2025338-03 - 2.99 - 6.04	ug/L	320	2.7
1,1,1-Trichloroethane	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	23	ND (0.5)
1,1,2-Trichloroethane	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	0.5	ND (0.5)
Trichloroethylene	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	0.5	ND (0.5)
Trichlorofluoromethane	BH1-GW1 1047141-01 - 6.42-9.47	ug/L	2000	ND (1.0)
Vinyl Chloride	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	0.5	ND (0.5)
m/p-Xylene	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	72	1.4
o-Xylene	BH1-GW1 1047141-01 - 6.42-9.47	ug/L	72	ND (0.5)
Xylenes, total	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	72	1.4
F1 PHCs (C6-C10)	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	420	ND (25)
F2 PHCs (C10-C16)	BH1-GW1 1047141-01 - 6.42-9.47	ug/L	150	ND (100)
F3 PHCs (C16-C34)	BH1-GW1 1047141-01 - 6.42-9.47	ug/L	500	ND (100)
F4 PHCs (C34-C50)	BH1-GW1 1047141-01 - 6.42-9.47	ug/L	500	ND (100)
Acenaphthene	BH1-25-GW 2516087-01 - 2.94 - 5.99	ug/L	17	0.17
Acenaphthylene	BH1-25-GW 2516087-01 - 2.94 - 5.99	ug/L	1.0	ND (0.05)
Anthracene	BH1-25-GW 2516087-01 - 2.94 - 5.99	ug/L	1.0	0.02
Benzo[a]anthracene	BH1-25-GW 2516087-01 - 2.94 - 5.99	ug/L	1.8	0.05
Benzo[a]pyrene	BH1-25-GW 2516087-01 - 2.94 - 5.99	ug/L	0.81	0.05
Benzo[b]fluoranthene	BH6-25-GW 2516087-06 - 2.54 - 5.59	ug/L	0.75	0.06
Benzo[g,h,i]perylene	BH1-25-GW 2516087-01 - 2.94 - 5.99	ug/L	0.2	ND (0.05)
Benzo[k]fluoranthene	BH1-25-GW 2516087-01 - 2.94 - 5.99	ug/L	0.4	ND (0.05)
Chrysene	BH6-25-GW 2516087-06 - 2.54 - 5.59	ug/L	0.7	ND (0.05)
Dibenzo[a,h]anthracene	BH1-25-GW 2516087-01 - 2.94 - 5.99	ug/L	0.4	ND (0.05)
Fluoranthene	BH1-25-GW 2516087-01 - 2.94 - 5.99	ug/L	44	0.1
Fluorene	BH1-25-GW 2516087-01 - 2.94 - 5.99	ug/L	290	0.1
Indeno [1,2,3-cd] pyrene	BH1-25-GW 2516087-01 - 2.94 - 5.99	ug/L	0.2	ND (0.05)
1-Methylnaphthalene	BH1-25-GW 2516087-01 - 2.94 - 5.99	ug/L	1500	0.25
2-Methylnaphthalene	BH1-25-GW 2516087-01 - 2.94 - 5.99	ug/L	1500	0.1
Methylnaphthalene (1&2)	BH1-25-GW 2516087-01 - 2.94 - 5.99	ug/L	1500	0.35
Naphthalene	BH1-25-GW 2516087-01 - 2.94 - 5.99	ug/L	7.0	0.11
Phenanthrene	BH1-25-GW 2516087-01 - 2.94 - 5.99	ug/L	380	0.07
Pyrene	BH1-25-GW 2516087-01 - 2.94 - 5.99	ug/L	5.7	0.1
PCBs, total	BH1-20-GW1 2025338-01 - 2.84 - 5.89	ug/L	0.2	ND (0.05)
Note: ND (x) = parameter analysed was reported non-detect.				

Parameter	MDL	BH3-25-AU1 2514307-03	DUP1-25 (DUP of BH3-25-AU1) 2514307-06	RPD (%)	QA/QC Result
General Inorganics					
SAR	0.01	0.28	0.24	15.4%	Within the acceptable range
Conductivity	5	496	376	27.5%	Outside the acceptable range
Metals, Hg, Cr(VI)					
Antimony	1	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
Arsenic	1	3.4	3.5	2.9%	Within the acceptable range
Barium	1	332	138	82.6%	Outside the acceptable range
Beryllium	0.5	0.5	ND (0.5)	0.0%	Within the acceptable range
Boron	5	14.2	11.1	24.5%	Outside the acceptable range
Cadmium	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Chromium (VI)	0.2	ND (0.2)	ND (0.2)	0.0%	Within the acceptable range
Chromium	5	17.1	16.3	4.8%	Within the acceptable range
Cobalt	1	5.9	6.9	15.6%	Within the acceptable range
Copper	5	20.6	22.2	7.5%	Within the acceptable range
Lead	1	18.3	20.3	10.4%	Within the acceptable range
Mercury	0.1	ND (0.1)	ND (0.1)	0.0%	Within the acceptable range
Molybdenum	1	1.3	1.4	7.4%	Within the acceptable range
Nickel	5	13.1	14.6	10.8%	Within the acceptable range
Selenium	1	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	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
Uranium	1	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
Vanadium	10	21.1	23.0	8.6%	Within the acceptable range
Zinc	20	42.8	46.3	7.9%	Within the acceptable range
Hydrocarbons					
F1 PHCs (C6-C10)	7	7.0	9.0	25.0%	Outside the acceptable range
F2 PHCs (C10-C16)	4	111	118	6.1%	Within the acceptable range
F3 PHCs (C16-C34)	8	284	337	17.1%	Within the acceptable range
F4 PHCs (C34-C50)	6	958	1010	5.3%	Within the acceptable range
F4G PHCs (gravimetric)	50	2620	2880	9.5%	Within the acceptable range
PAHs					
Acenaphthene	0.02	ND (0.40)	ND (0.40)	0.0%	Within the acceptable range
Acenaphthylene	0.02	ND (0.40)	ND (0.40)	0.0%	Within the acceptable range
Anthracene	0.02	ND (0.40)	ND (0.40)	0.0%	Within the acceptable range
Benzo[a]anthracene	0.02	ND (0.40)	ND (0.40)	0.0%	Within the acceptable range
Benzo[a]pyrene	0.02	ND (0.40)	ND (0.40)	0.0%	Within the acceptable range
Benzo[b]fluoranthene	0.02	ND (0.40)	ND (0.40)	0.0%	Within the acceptable range
Benzo[g,h,i]perylene	0.02	ND (0.40)	ND (0.40)	0.0%	Within the acceptable range
Benzo[k]fluoranthene	0.02	ND (0.40)	ND (0.40)	0.0%	Within the acceptable range
Chrysene	0.02	ND (0.40)	ND (0.40)	0.0%	Within the acceptable range
Dibenzo[a,h]anthracene	0.02	ND (0.40)	ND (0.40)	0.0%	Within the acceptable range
Fluoranthene	0.02	ND (0.40)	ND (0.40)	0.0%	Within the acceptable range
Fluorene	0.02	ND (0.40)	ND (0.40)	0.0%	Within the acceptable range
Indeno [1,2,3-cd] pyrene	0.02	ND (0.40)	ND (0.40)	0.0%	Within the acceptable range
1-Methylnaphthalene	0.02	ND (0.40)	ND (0.40)	0.0%	Within the acceptable range
2-Methylnaphthalene	0.02	ND (0.40)	ND (0.40)	0.0%	Within the acceptable range
Methylnaphthalene (1&2)	0.04	ND (0.80)	ND (0.80)	0.0%	Within the acceptable range
Naphthalene	0.01	ND (0.20)	ND (0.20)	0.0%	Within the acceptable range
Phenanthrene	0.02	ND (0.40)	ND (0.40)	0.0%	Within the acceptable range
Pyrene	0.02	ND (0.40)	ND (0.40)	0.0%	Within the acceptable range

Parameter	MDL	BH3-25-AU1 2514307-03	DUP1-25 (DUP of BH3-25-AU1) 2514307-06	RPD (%)	QA/QC Result
Volatiles					
Acetone	0.5	ND (0.50)	ND (0.50)	0.0%	Within the acceptable range
Benzene	0.02	0.08	0.08	0.0%	Within the acceptable range
Bromodichloromethane	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Bromoform	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Bromomethane	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Carbon Tetrachloride	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Chlorobenzene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Chloroform	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Dibromochloromethane	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Dichlorodifluoromethane	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
1,2-Dichlorobenzene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
1,3-Dichlorobenzene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
1,4-Dichlorobenzene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
1,1-Dichloroethane	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
1,2-Dichloroethane	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
1,1-Dichloroethylene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
cis-1,2-Dichloroethylene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
trans-1,2-Dichloroethylene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
1,2-Dichloropropane	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
cis-1,3-Dichloropropylene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
trans-1,3-Dichloropropylene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
1,3-Dichloropropene, total	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Ethylbenzene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Ethylene dibromide	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Hexane	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Methyl Ethyl Ketone	0.5	ND (0.50)	ND (0.50)	0.0%	Within the acceptable range
Methyl Isobutyl Ketone	0.5	ND (0.50)	ND (0.50)	0.0%	Within the acceptable range
Methyl tert-butyl ether	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Methylene Chloride	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Styrene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
1,1,1,2-Tetrachloroethane	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
1,1,2,2-Tetrachloroethane	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Tetrachloroethylene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Toluene	0.05	0.16	0.16	0.0%	Within the acceptable range
1,1,1-Trichloroethane	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
1,1,2-Trichloroethane	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Trichloroethylene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Trichlorofluoromethane	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Vinyl Chloride	0.02	ND (0.02)	ND (0.02)	0.0%	Within the acceptable range
m/p-Xylene	0.05	0.21	0.21	0.0%	Within the acceptable range
o-Xylene	0.05	0.11	0.12	8.7%	Within the acceptable range
Xylenes, total	0.05	0.32	0.33	3.1%	Within the acceptable range

Parameter	MDL	TP3-25-G3 2515146-03	DUP2-25 (DUP of TP3-25-G3) 2515146-14	RPD (%)	QA/QC Result
General Inorganics					
SAR	0.01	0.35	0.33	5.9%	Within the acceptable range
Conductivity	5	260	245	5.9%	Within the acceptable range
pH	0.05	7.51	7.38	1.7%	Within the acceptable range
Metals, Hg, Cr(VI)					
Antimony	1	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
Arsenic	1	1.6	1.4	13.3%	Within the acceptable range
Barium	1	167	148	12.1%	Within the acceptable range
Beryllium	0.5	0.5	ND (0.5)	0.0%	Within the acceptable range
Boron	5	13	11.4	13.1%	Within the acceptable range
Cadmium	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Chromium (VI)	0.2	ND (0.2)	ND (0.2)	0.0%	Within the acceptable range
Chromium	5	12.7	11.8	7.3%	Within the acceptable range
Cobalt	1	3.1	2.7	13.8%	Within the acceptable range
Copper	5	7.5	7	6.9%	Within the acceptable range
Lead	1	5.7	5.5	3.6%	Within the acceptable range
Mercury	0.1	ND (0.1)	ND (0.1)	0.0%	Within the acceptable range
Molybdenum	1	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
Nickel	5	9.4	8.4	11.2%	Within the acceptable range
Selenium	1	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	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
Uranium	1	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
Vanadium	10	12.4	11.5	7.5%	Within the acceptable range
Zinc	20	ND (20.0)	ND (20.0)	0.0%	Within the acceptable range
PAHs					
Acenaphthene	0.02	ND (0.02)	ND (0.02)	0.0%	Within the acceptable range
Acenaphthylene	0.02	ND (0.02)	ND (0.02)	0.0%	Within the acceptable range
Anthracene	0.02	ND (0.02)	ND (0.02)	0.0%	Within the acceptable range
Benzo[a]anthracene	0.02	ND (0.02)	0.02	0.0%	Within the acceptable range
Benzo[a]pyrene	0.02	ND (0.02)	0.03	40.0%	Outside the acceptable range
Benzo[b]fluoranthene	0.02	ND (0.02)	0.03	40.0%	Outside the acceptable range
Benzo[g,h,i]perylene	0.02	ND (0.02)	ND (0.02)	0.0%	Within the acceptable range
Benzo[k]fluoranthene	0.02	ND (0.02)	ND (0.02)	0.0%	Within the acceptable range
Chrysene	0.02	ND (0.02)	0.02	0.0%	Within the acceptable range
Dibenzo[a,h]anthracene	0.02	ND (0.02)	ND (0.02)	0.0%	Within the acceptable range
Fluoranthene	0.02	ND (0.02)	0.03	40.0%	Outside the acceptable range
Fluorene	0.02	ND (0.02)	ND (0.02)	0.0%	Within the acceptable range
Indeno [1,2,3-cd] pyrene	0.02	ND (0.02)	0.02	0.0%	Within the acceptable range
1-Methylnaphthalene	0.02	ND (0.02)	ND (0.02)	0.0%	Within the acceptable range
2-Methylnaphthalene	0.02	ND (0.02)	ND (0.02)	0.0%	Within the acceptable range
Methylnaphthalene (1&2)	0.04	ND (0.04)	ND (0.04)	0.0%	Within the acceptable range
Naphthalene	0.01	ND (0.01)	ND (0.01)	0.0%	Within the acceptable range
Phenanthrene	0.02	ND (0.02)	ND (0.02)	0.0%	Within the acceptable range
Pyrene	0.02	ND (0.02)	0.03	40.0%	Outside the acceptable range

Parameter	MDL	TP3-25-G3 2515146-03	DUP2-25 (DUP of TP3-25-G3) 2515146-14	RPD (%)	QA/QC Result
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
Hydrocarbons					
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)	16	66.7%	Outside the acceptable range
F4 PHCs (C34-C50)	6	ND (6)	13	73.7%	Outside the acceptable range

Parameter	MDL	BH5-20-GW1 2025338-03	Dup1 (DUP of BH5-20-GW1) 2025338-04	RPD (%)	QA/QC Result
BTEX					
Benzene	0.5	0.7	0.6	15.4%	Within the acceptable range
Ethylbenzene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Toluene	0.5	2.7	2.6	3.8%	Within the acceptable range
m/p-Xylene	0.5	0.5	0.6	18.2%	Within the acceptable range
o-Xylene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Xylenes, total	0.5	0.5	0.6		Within the acceptable range
Hydrocarbons					
F1 PHCs (C6-C10)	25	ND (25)	ND (25)	0.0%	Within the acceptable range

Parameter	MDL	BH2-25-GW 2516087-02	DUP-1 (DUP of BH2-25-GW) 2516087-07	RPD (%)	QA/QC Result
VOCs					
Acetone	5.0	ND (5.0)	ND (5.0)	0.0%	Within the acceptable range
Benzene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Bromodichloromethane	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Bromoform	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Bromomethane	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Carbon Tetrachloride	0.2	ND (0.2)	ND (0.2)	0.0%	Within the acceptable range
Chlorobenzene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Chloroform	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Dibromochloromethane	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Dichlorodifluoromethane	1.0	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
1,2-Dichlorobenzene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
1,3-Dichlorobenzene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
1,4-Dichlorobenzene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
1,1-Dichloroethane	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
1,2-Dichloroethane	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
1,1-Dichloroethylene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
cis-1,2-Dichloroethylene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
trans-1,2-Dichloroethylene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
1,2-Dichloropropane	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
cis-1,3-Dichloropropylene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
trans-1,3-Dichloropropylene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
1,3-Dichloropropene, total	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Ethylbenzene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Ethylene dibromide (dibromoe	0.2	ND (0.2)	ND (0.2)	0.0%	Within the acceptable range
Hexane	1.0	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
Methyl Ethyl Ketone (2-Butanc	5.0	ND (5.0)	ND (5.0)	0.0%	Within the acceptable range
Methyl Isobutyl Ketone	5.0	ND (5.0)	ND (5.0)	0.0%	Within the acceptable range
Methyl tert-butyl ether	2.0	ND (2.0)	ND (2.0)	0.0%	Within the acceptable range
Methylene Chloride	5.0	ND (5.0)	ND (5.0)	0.0%	Within the acceptable range
Styrene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
1,1,1,2-Tetrachloroethane	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
1,1,2,2-Tetrachloroethane	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Tetrachloroethylene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Toluene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
1,1,1-Trichloroethane	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
1,1,2-Trichloroethane	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Trichloroethylene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Trichlorofluoromethane	1.0	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
Vinyl Chloride	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
m/p-Xylene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
o-Xylene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Xylenes, total	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range

Parameter	MDL	BH2-25-GW 2516087-02	DUP-1 (DUP of BH2-25-GW) 2516087-07	RPD (%)	QA/QC Result
Hydrocarbons					
F1 PHCs (C6-C10)	25	ND (25)	ND (25)	0.0%	Within the acceptable range
F2 PHCs (C10-C16)	100	ND (100)	ND (100)	0.0%	Within the acceptable range
F3 PHCs (C16-C34)	100	ND (100)	ND (100)	0.0%	Within the acceptable range
F4 PHCs (C34-C50)	100	ND (100)	ND (100)	0.0%	Within the acceptable range
PAHs					
Acenaphthene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Acenaphthylene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Anthracene	0.01	ND (0.01)	ND (0.01)	0.0%	Within the acceptable range
Benzo[a]anthracene	0.01	ND (0.01)	ND (0.01)	0.0%	Within the acceptable range
Benzo[a]pyrene	0.01	ND (0.01)	ND (0.01)	0.0%	Within the acceptable range
Benzo[b]fluoranthene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Benzo[g,h,i]perylene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Benzo[k]fluoranthene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Chrysene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Dibenzo[a,h]anthracene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Fluoranthene	0.01	ND (0.01)	0.02	66.7%	Outside the acceptable range
Fluorene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Indeno [1,2,3-cd] pyrene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
1-Methylnaphthalene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
2-Methylnaphthalene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Methylnaphthalene (1&2)	0.1	ND (0.10)	ND (0.10)	0.0%	Within the acceptable range
Naphthalene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Phenanthrene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Pyrene	0.01	ND (0.01)	0.02	66.7%	Outside the acceptable range

Test Hole ID	Ground Surface Elevation (masl)	Water Level Depth (mbgs)	Water Level Elevation (masl)	Date of Measurement
MW208	66.50	3.40	63.10	16-Nov-2010
MW210	66.50	1.80	64.70	16-Nov-2010
BH3	66.43	dry	-	16-Nov-2010
BH5	66.50	dry	-	16-Nov-2010
BH3	66.43	dry	-	23-Nov-2010
BH5	66.50	3.30	63.20	23-Nov-2010
BH1-20	66.56	3.32	63.24	16-Jun-2020
BH2-20	66.61	3.66	62.95	16-Jun-2020
BH5-20	66.50	2.67	63.83	16-Jun-2020
BH1-25	66.26	2.76	63.50	11-Apr-2025
BH2-25	66.29	2.97	63.32	11-Apr-2025
BH3-25	66.36	3.63	62.73	11-Apr-2025
BH4-25	66.63	3.35	63.28	11-Apr-2025
BH5-25	66.25	3.60	62.65	11-Apr-2025
BH6-25	66.13	2.47	63.66	11-Apr-2025
BH1-25	66.26	2.49	63.77	25-Apr-2025
BH2-25	66.29	3.26	63.03	25-Apr-2025
BH3-25	66.36	3.58	62.78	25-Apr-2025
BH4-25	66.63	3.44	63.19	25-Apr-2025

Test Hole ID	Temperature (˚C)	Conductivity (µS)	pH	Date of Measurement
BH1-25	7.7	1271	7.0	11-Apr-2025
BH2-25	5.5	910	7.3	11-Apr-2025
BH3-25	8.3	1424	7.1	11-Apr-2025
BH4-25	6.9	1276	7.0	11-Apr-2025
BH5-25	6.2	920	7.5	11-Apr-2025
BH6-25	6.2	722	7.3	11-Apr-2025
BH1-25	9.7	1296	7.0	25-Apr-2025
BH2-25	9.6	1257	6.9	25-Apr-2025
BH3-25	10.1	1219	7.0	25-Apr-2025
BH4-25	9.2	1254	7.0	25-Apr-2025

SOIL PROFILE AND TEST DATA

Phase II - Environmental Site Assessment

335 & 389 Roosevelt Ave., 344 Winston Ave., 378 & 389 Wilmont Ave., Ottawa, ON

COORD. SYS.: MTM ZONE 9 **EASTING:** 362959.59 **NORTHING:** 5028485.36 **ELEVATION:** 66.26

PROJECT:

ADVANCED BY: CME-55 Low Clearance Drill

REMARKS:

DATE: April 1, 2025

FILE NO. : PE2144

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)	MONITORING WELL CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
FILL: Compact, brown silty sand with crushed stone, trace clay			AU 1, AU 2			Metals/Hg/CrVI/ B-HWS/VOC/BTEX/ PHC/PAH/EC/SAR/ pH	▲1.7 ▲2.9		
0.64m [65.62m]									
BEDROCK: Poor quality interbedded limestone and dolomite bedrock		1	RC 1	100	RQD 47				
		2	RC 2	97	RQD 47				
- Good to excellent quality below 3.0 m depth		3						2.76 m 2025-04-11	
		4	RC 3	100	RQD 83			2.94m	
		5	RC 4	100	RQD 100				
5.99m [60.27m]		6						5.99m	
End of Borehole									
(GWL at 2.76 m depth - April 11, 2025)		7							
		8							

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SOIL PROFILE AND TEST DATA

Phase II - Environmental Site Assessment

335 & 389 Roosevelt Ave., 344 Winston Ave., 378 & 389 Wilmont Ave., Ottawa, ON

COORD. SYS.: MTM ZONE 9 **EASTING:** 362948.36 **NORTHING:** 5028436.56 **ELEVATION:** 66.29

PROJECT:

ADVANCED BY: CME-55 Low Clearance Drill

REMARKS:

DATE: April 1, 2025

FILE NO. : PE2144

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)	MONITORING WELL CONSTRUCTION	ELEVATION (m)
GROUND SURFACE							50 100 150 200 / 20 40 60 80		
FILL: Compact, brown silty sand and gravel, with crushed stone, some topsoil			AU 1			Metals/Hg/CrVI/ VOC/BTEX/PHC/ PAH/EC/SAR	▲ 0.7		
0.76m [65.53m]									
BEDROCK: Fair to excellent quality interbedded limestone and dolomite bedrock		1	RC 1	100	RQD 62				
		2	RC 2	100	RQD 66				
		3	RC 3	100	RQD 100			2.97 m — 2025-04-11	
		4							
		5	RC 4	100	RQD 100				
5.99m [60.30m]		6						5.99m	
End of Borehole									
(GWL at 2.97 m depth - April 11, 2025)		7							
		8							

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SOIL PROFILE AND TEST DATA

Phase II - Environmental Site Assessment

335 & 389 Roosevelt Ave., 344 Winston Ave., 378 & 389 Wilmont Ave., Ottawa, ON

COORD. SYS.: MTM ZONE 9 **EASTING:** 362970.93 **NORTHING:** 5028470.25 **ELEVATION:** 66.36

PROJECT:

ADVANCED BY: CME-55 Low Clearance Drill

REMARKS:

DATE: April 1, 2025

FILE NO. : PE2144

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							50 100 150 200 / 20 40 60 80		
FILL: Compact, brown silty sand and crushed stone, trace clay			AU 1			Metals/Hg/CrVI/B-HWS/VOC/BTEX/PHC/PAH/EC/SAR	▲2.6		
0.86m [65.50m]									
BEDROCK: Fair to excellent quality interbedded limestone and dolomite bedrock		1	RC 1	84	RQD 56				66
		2	RC 2	100	RQD 66				65
		3	RC 3	100	RQD 100				64
		4	RC 4	100	RQD 90			2.94m	63
		5						3.63 m ▽ 2025-04-11	62
5.99m [60.37m]		6						5.99m	61
End of Borehole									60
(GWL at 3.63 m depth - April 11, 2025)		7							59
		8							

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SOIL PROFILE AND TEST DATA

Phase II - Environmental Site Assessment

335 & 389 Roosevelt Ave., 344 Winston Ave., 378 & 389 Wilmont Ave., Ottawa, ON

COORD. SYS.: MTM ZONE 9 **EASTING:** 362955.80 **NORTHING:** 5028427.53 **ELEVATION:** 66.63

PROJECT:

ADVANCED BY: CME-55 Low Clearance Drill

REMARKS:

DATE: April 1, 2025

FILE NO. : PE2144

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)	MONITORING WELL CONSTRUCTION	ELEVATION (m)
GROUND SURFACE							50 100 150 200 / 20 40 60 80		
FILL: Compact to dense, brown silty sand and gravel, with crushed stone, rock fragments		1	AU 1			Metals/Hg/CrVI/ VOC/BTEX/PHC/ PAH/EC/SAR	▲3.6 ▲6.6		66
			AU 2						
			SS 2	57	16-19-21-15 40		▲1.6		65
		2	SS 3	33	7-32-10-5 42		▲2.5		
			SS 4	91	12-50-/-/ 50/0.1	Metals/Hg/CrVI/ VOC/PHC/PAH/pH	▲1.8		64
2.59m [64.04m]								2.82m	
BEDROCK: Fair to excellent quality interbedded limestone and dolomite bedrock		3	RC 1	100	RQD 55			3.35 m 2025-04-11	63
		4	RC 2	100	RQD 89				62
		5	RC 3	100	RQD 95				
5.56m [61.07m]								5.56m	61
End of Borehole		6							60
(GWL at 3.35 m depth - April 11, 2025)		7							59
		8							

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SOIL PROFILE AND TEST DATA

Phase II - Environmental Site Assessment

335 & 389 Roosevelt Ave., 344 Winston Ave., 378 & 389 Wilmont Ave., Ottawa, ON

COORD. SYS.: MTM ZONE 9 **EASTING:** 362891.67 **NORTHING:** 5028416.89 **ELEVATION:** 66.25

PROJECT:

ADVANCED BY: CME-55 Low Clearance Drill

REMARKS:

DATE: April 2, 2025

FILE NO. : PE2144

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)	MONITORING WELL CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
FILL: Compact to dense, brown silty sand and crushed stone, some topsoil			AU 1			Metals/Hg/CrVI/B-HWS/VOC/BTEX/PHC/PAH/EC/SAR	▲ 1.3		
0.30m [65.95m]			AU 2				▲ 1.4		
Compact, brown **SILTY SAND** with gravel									
0.66m [65.59m]									
BEDROCK: Fair to excellent quality interbedded limestone and dolomite bedrock		1	RC 1	100	RQD 50				65
		2	RC 2	100	RQD 85			2.46m	64
		3	RC 3	100	RQD 92			3.60 m 2025-04-11	63
		4							62
		5	RC 4	100	RQD 85			5.51m	61
		6							60
		7	RC 5	100	RQD 97				59
		8	RC 6						

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SOIL PROFILE AND TEST DATA

Phase II - Environmental Site Assessment

335 & 389 Roosevelt Ave., 344 Winston Ave., 378 & 389 Wilmont Ave., Ottawa, ON

COORD. SYS.: MTM ZONE 9 **EASTING:** 362891.67 **NORTHING:** 5028416.89 **ELEVATION:** 66.25

PROJECT:

ADVANCED BY: CME-55 Low Clearance Drill

REMARKS:

DATE: April 2, 2025

FILE NO. : PE2144

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) 50 100 150 200 / PID (ppm) / PID (% LEL) 20 40 60 80	MONITORING WELL CONSTRUCTION	ELEVATION (m)
		8	RC 6	100	RQD 95				58
		9							57
		10	RC 7	100	RQD 98				56
		11	RC 8	100	RQD 100				55
		12							54
		13	RC 9	100	RQD 100				53
		14							52
		15	RC 10	100	RQD 98				51
15.06m [51.19m] End of Borehole (GWL at 3.60 m depth - April 11, 2025)		16							

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SOIL PROFILE AND TEST DATA

Phase II - Environmental Site Assessment

335 & 389 Roosevelt Ave., 344 Winston Ave., 378 & 389 Wilmont Ave., Ottawa, ON

COORD. SYS.: MTM ZONE 9 **EASTING:** 362907.01 **NORTHING:** 5028402.46 **ELEVATION:** 66.13

PROJECT:

ADVANCED BY: CME-55 Low Clearance Drill

REMARKS:

DATE: April 2, 2025

FILE NO. : PE2144

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							50 100 150 200 / 20 40 60 80		
TOPSOIL 0.18m [65.95m]									
Compact, brown **SILTY SAND** with gravel			AU 1			Metals/Hg/CrVI/ B-HWS/VOC/BTEX/ PHC/PAH/EC/SAR	▲3.1		
0.56m [65.57m]									
BEDROCK: Fair to excellent quality interbedded limestone and dolomite bedrock		1	RC 1	100	RQD 56				65
		2	RC 2	97	RQD 85			2.47 m 2025-04-11 2.54m	64
- Vertical fracture from 3.1 to 3.51 m depth		3	RC 3	95	RQD 75				63
		4							62
		5	RC 4	100	RQD 87				61
5.59m [60.54m]								5.59m	
End of Borehole		6							60
(GWL at 2.47 m depth - April 11, 2025)		7							59
		8							

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SOIL PROFILE AND TEST DATA

Phase II - Environmental Site Assessment

335 & 389 Roosevelt Ave., 344 Winston Ave., 378 & 389 Wilmont Ave., Ottawa, ON

COORD. SYS.: MTM ZONE 9 **EASTING:** 362969.22 **NORTHING:** 5028491.31 **ELEVATION:** 66.42

PROJECT:

ADVANCED BY: Back Hoe

REMARKS:

DATE: April 4, 2025

FILE NO. : PE2144

HOLE NO. : TP 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									
FILL: Crushed stone 0.10m [66.32m]									
FILL: Brown sand and gravel 0.30m [66.12m]									
FILL: Brown sand with clay, trace topsoil, organics 0.45m [65.97m]									
FILL: Brown, silty sand some gravel, trace clay 0.85m [65.57m]			G 1, G 2, G 3			VOC/BTEX/PHC/ PAH/Metals/Hg/CrVI/ B-HWS/EC/SAR	0.5, 0.4, 0.6		
End of Test Pit Practical refusal at 0.85 m depth		1, 2, 3, 4							66, 65, 64, 63

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

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

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SOIL PROFILE AND TEST DATA

Phase II - Environmental Site Assessment

335 & 389 Roosevelt Ave., 344 Winston Ave., 378 & 389 Wilmont Ave., Ottawa, ON

COORD. SYS.: MTM ZONE 9 **EASTING:** 362957.73 **NORTHING:** 5028475.73 **ELEVATION:** 66.21

PROJECT:

ADVANCED BY: Back Hoe

REMARKS:

DATE: April 4, 2025

FILE NO. : PE2144

HOLE NO. : TP 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									
FILL: Crushed stone									
0.10m [66.11m]									
FILL: Brown silty sand some crushed stone			G 1			VOC/BTEX/PHC/ PAH/Metals/Hg/CrVI/ B-HWS/EC/SAR	▲ 0.8		66
0.60m [65.61m]			G 2				▲ 0.6		
Light brown **SILTY SAND** with gravel, some cobbles		1							65
0.74m [65.47m]									
End of Test Pit		2							64
Practical refusal at 0.74 m depth		3							63
		4							

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SOIL PROFILE AND TEST DATA

Phase II - Environmental Site Assessment

335 & 389 Roosevelt Ave., 344 Winston Ave., 378 & 389 Wilmont Ave., Ottawa, ON

COORD. SYS.: MTM ZONE 9 **EASTING:** 362960.01 **NORTHING:** 5028455.22 **ELEVATION:** 66.27

PROJECT:

ADVANCED BY: Back Hoe

REMARKS:

DATE: April 4, 2025

FILE NO. : PE2144

HOLE NO. : TP 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)	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
FILL: Crushed stone									
0.10m [66.17m]									
FILL: Brown sand with crushed stone									
0.25m [66.02m]									
FILL: Brown silty sand, with crushed stone									
0.65m [65.62m]									
Compact, light brown **SILTY SAND** with gravel, some cobbles			G 1			BTEX/PHC/Metals/ Hg/CrVI/EC/SAR/ PAH/pH	0.4		66
0.82m [65.45m]			G 2				0.5		
End of Test Pit			G 3				0.5		65
Practical refusal at 0.82 m depth		1							
		2							64
		3							63
		4							

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

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

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SOIL PROFILE AND TEST DATA

Phase II - Environmental Site Assessment

335 & 389 Roosevelt Ave., 344 Winston Ave., 378 & 389 Wilmont Ave., Ottawa, ON

COORD. SYS.: MTM ZONE 9 **EASTING:** 362964.39 **NORTHING:** 5028431.66 **ELEVATION:** 66.78

PROJECT:

ADVANCED BY: Back Hoe

REMARKS:

DATE: April 4, 2025

FILE NO. : PE2144

HOLE NO. : TP 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							50 100 150 200 / 20 40 60 80		
FILL: Crushed stone									
0.24m [66.54m]									
FILL: Brown sand some crushed stone			G 1				▲ 0.3		
			G 2			VOC/BTEX/PHC/ PAH/Metals/Hg/CrVI/ EC/SAR	▲ 0.3		
0.95m [65.83m]									
End of Test Pit		1							66
Practical refusal at 0.95 m depth									65
		2							64
		3							63
		4							

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SOIL PROFILE AND TEST DATA

Phase II - Environmental Site Assessment

335 & 389 Roosevelt Ave., 344 Winston Ave., 378 & 389 Wilmont Ave., Ottawa, ON

COORD. SYS.: MTM ZONE 9 **EASTING:** 362958.70 **NORTHING:** 5028422.84 **ELEVATION:** 66.68

PROJECT:

ADVANCED BY: Back Hoe

REMARKS:

DATE: April 4, 2025

FILE NO. : PE2144

HOLE NO. : TP 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									
FILL: Crushed stone			G 1				0.4		
0.10m [66.58m]									
FILL: Brown silty sand and crushed stone									
0.25m [66.43m]									
FILL: Crushed stone			G 2				0.5		66
0.50m [66.18m]									
FILL: Brown silty sand and crushed stone, trace clay		1	G 3				0.4		65
		2	G 4			Metals/Hg/CrVI/ VOC/BTEX/PHC/ PAH/EC/SAR	0.5		64
			G 5				0.4		
3.00m [63.68m]		3							63
End of Test Pit Test pit terminated at 3.0m depth due to water infiltration and side walls collapsing into test pit		4							

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SOIL PROFILE AND TEST DATA

Phase II - Environmental Site Assessment

335 & 389 Roosevelt Ave., 344 Winston Ave., 378 & 389 Wilmont Ave., Ottawa, ON

COORD. SYS.: MTM ZONE 9 **EASTING:** 362946.53 **NORTHING:** 5028427.77 **ELEVATION:** 66.36

PROJECT:

ADVANCED BY: Back Hoe

REMARKS:

DATE: April 4, 2025

FILE NO. : PE2144

HOLE NO. : TP 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)	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
FILL: Crushed stone 0.10m [66.26m]									
FILL: Brown sand, some crushed stone 0.55m [65.81m]			G 1			VOC/BTEX/PHC/ PAH/Metals/Hg/CrVI/ EC/SAR	▲ 0.4		66
FILL: Brown silty sand, some gravel 0.90m [65.46m]			G 2				▲ 0.4		
End of Test Pit Practical refusal at 0.9 m depth		1 2 3 4							65 64 63

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

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

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SOIL PROFILE AND TEST DATA

Phase II - Environmental Site Assessment

335 & 389 Roosevelt Ave., 344 Winston Ave., 378 & 389 Wilmont Ave., Ottawa, ON

COORD. SYS.: MTM ZONE 9 **EASTING:** 362931.86 **NORTHING:** 5028422.09 **ELEVATION:** 66.33

PROJECT:

ADVANCED BY: Back Hoe

REMARKS:

DATE: April 4, 2025

FILE NO. : PE2144

HOLE NO. : TP 7-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	ANALYTICAL TESTS	GASTECH (ppm) / GASTECH (% LEL) / PID (ppm) / PID (% LEL)	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE							50 100 150 200 / 20 40 60 80		
FILL: Crushed stone 0.10m [66.23m]									
FILL: Brown silty sand, some crushed stone 0.60m [65.73m]			G 1			BTEX/PHC/PAH/ Metals/Hg/CrVI/EC/ SAR/PCBs	▲0.5		66
Light brown **SILTY SAND** with gravel, some cobbles 0.90m [65.43m]			G 2				▲0.5		
End of Test Pit		1							65
Practical refusal at 0.9 m depth		2							64
		3							63
		4							

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SOIL PROFILE AND TEST DATA

Phase II - Environmental Site Assessment

335 & 389 Roosevelt Ave., 344 Winston Ave., 378 & 389 Wilmont Ave., Ottawa, ON

COORD. SYS.: MTM ZONE 9 **EASTING:** 362936.14 **NORTHING:** 5028459.77 **ELEVATION:** 66.18

PROJECT:

ADVANCED BY: Back Hoe

REMARKS:

DATE: April 4, 2025

FILE NO. : PE2144

HOLE NO. : TP 8-25

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									
FILL: Crushed stone 0.15m [66.03m]									
FILL: Brown silty sand, some crushed stone and organics 0.30m [65.88m]			G 1			BTEX/PHC/PAH/ Metals/Hg/CrVI/EC/ SAR	▲ 0.5		
Light brown **SILTY SAND**, with gravel, some cobbles 0.65m [65.53m]			G 2				▲ 0.6		
End of Test Pit Practical refusal at 0.65 m depth		1 2 3 4							66 65 64 63

GASTECH (ppm) ■ / GASTECH (% LEL) □ — 50 100 150 200

PID (ppm) ▲ / PID (% LEL) △ — 20 40 60 80

DISCLAIMER: THE DATA PRESENTED IN THIS SHEET IS THE PROPERTY OF PATERSON GROUP AND THE CLIENT FOR WHOM IT WAS PRODUCED. THIS SHEET SHOULD BE READ IN CONJUNCTION WITH ITS CORRESPONDING REPORT. PATERSON GROUP IS NOT RESPONSIBLE FOR THE UNAUTHORIZED USE OF THIS DATA.

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SOIL PROFILE AND TEST DATA

Phase II - Environmental Site Assessment

335 & 389 Roosevelt Ave., 344 Winston Ave., 378 & 389 Wilmont Ave., Ottawa, ON

COORD. SYS.: MTM ZONE 9 **EASTING:** 362944.77 **NORTHING:** 5028445.96 **ELEVATION:** 66.25

PROJECT:

ADVANCED BY: Back Hoe

REMARKS:

DATE: April 4, 2025

FILE NO. : PE2144

HOLE NO. : TP 9-25

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									
FILL: Crushed stone 0.15m [66.10m]									
FILL: Brown silty sand, some gravel, trace clay 0.45m [65.80m]									
TOPSOIL: trace gravel and clay 0.55m [65.70m]									
Light brown **SILTY** fine to medium **SAND**, some gravel and cobbles 0.85m [65.41m]			G 1 G 2 G 3			VOC/BTEX/PHC/ PAH/Metals/Hg/CrVI/ EC/SAR/pH	▲ 0.3 ▲ 0.4 ▲ 0.4		
End of Test Pit Practical refusal at 0.85 m depth		1 2 3 4							66 65 64 63

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

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

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SOIL PROFILE AND TEST DATA

Phase II - Environmental Site Assessment

335 & 389 Roosevelt Ave., 344 Winston Ave., 378 & 389 Wilmont Ave., Ottawa, ON

COORD. SYS.: MTM ZONE 9 **EASTING:** 362918.26 **NORTHING:** 5028443.88 **ELEVATION:** 66.18

PROJECT:

ADVANCED BY: Back Hoe

REMARKS:

DATE: April 4, 2025

FILE NO. : PE2144

HOLE NO. : TP10-25

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									
FILL: Crushed stone 0.10m [66.08m]									66
FILL: Brown silty sand, some crushed stone 0.30m [65.88m]			G 1				▲0.4		
Compact, light brown **SILTY** fine **SAND** with gravel 0.60m [65.58m]			G 2				▲0.4		
End of Test Pit									
Practical refusal at 0.6 m depth		1							65
		2							64
		3							63
		4							

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

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

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SOIL PROFILE AND TEST DATA

Phase II - Environmental Site Assessment

335 & 389 Roosevelt Ave., 344 Winston Ave., 378 & 389 Wilmont Ave., Ottawa, ON

COORD. SYS.: MTM ZONE 9 **EASTING:** 362906.53 **NORTHING:** 5028428.17 **ELEVATION:** 66.11

PROJECT:

ADVANCED BY: Back Hoe

REMARKS:

DATE: April 4, 2025

FILE NO. : PE2144

HOLE NO. : TP11-25

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									
FILL: Crushed stone (0.05m [66.06m])			G 1			VOC/BTEX/PHC/ PAH/Metals/Hg/CrVI/ B-HWS/EC/SAR	▲0.5		66
FILL: Brown silty sand, some crushed stone (0.15m [65.95m])									
Compact, light brown **SILTY** fine **SAND** with gravel (0.45m [65.66m])			G 2				▲0.4		
End of Test Pit									
Practical refusal at 0.45 m depth		1							65
		2							64
		3							63
		4							

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

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

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SOIL PROFILE AND TEST DATA

Phase II - Environmental Site Assessment

335 & 389 Roosevelt Ave., 344 Winston Ave., 378 & 389 Wilmont Ave., Ottawa, ON

COORD. SYS.: MTM ZONE 9 **EASTING:** 362875.60 **NORTHING:** 5028398.22 **ELEVATION:** 66.24

PROJECT:

ADVANCED BY: Back Hoe

REMARKS:

DATE: April 4, 2025

FILE NO. : PE2144

HOLE NO. : TP12-25

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		
FILL: Brown silty sand, some crushed stone			G 1				▲0.5		
0.15m [66.09m]									66
Compact, light brown **SILTY** fine **SAND** with gravel			G 2			VOC/BTEX/PHC/ PAH/Metals/Hg/CrVI/ B-HWS/EC/SAR	▲0.3		
0.45m [65.79m]									
End of Test Pit									
Practical refusal at 0.45 m depth		1							65
		2							64
		3							63
		4							

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SOIL PROFILE AND TEST DATA

Phase II - Environmental Site Assessment

335 & 389 Roosevelt Ave., 344 Winston Ave., 378 & 389 Wilmont Ave., Ottawa, ON

COORD. SYS.: MTM ZONE 9 **EASTING:** 362953.45 **NORTHING:** 5028436.33 **ELEVATION:** 66.42

PROJECT:

ADVANCED BY: Back Hoe

REMARKS:

DATE: April 4, 2025

FILE NO. : PE2144

HOLE NO. : TP13-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	ANALYTICAL TESTS	GASTECH (ppm) / GASTECH (% LEL) / PID (ppm) / PID (% LEL)	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE									
FILL: Crushed stone 0.10m [66.32m]			G 1				0.1		66
FILL: Brown silty sand some crushed stone, trace topsoil and clay - Some demolition debris 0.75m [65.67m]			G 2			VOC/BTEX/PHC/ PAH/Metals/Hg/CrVI/ EC/SAR	0.1		
Brown **SILTY SAND** with gravel, some cobbles 1.05m [65.37m]		1	G 3				0.3		65
End of Test Pit Practical refusal at 1.05 m depth		2							64
		3							63
		4							

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SOIL PROFILE AND TEST DATA

Phase II - Environmental Site Assessment

335 & 389 Roosevelt Ave., 344 Winston Ave., 378 & 389 Wilmont Ave., Ottawa, ON

COORD. SYS.: MTM ZONE 9 **EASTING:** 362976.95 **NORTHING:** 5028462.62 **ELEVATION:** 66.41

PROJECT:

ADVANCED BY: Back Hoe

REMARKS:

DATE: April 4, 2025

FILE NO. : PE2144

HOLE NO. : TP14-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N OR RQD	ANALYTICAL TESTS	GASTECH (ppm) / GASTECH (% LEL) / PID (ppm) / PID (% LEL)	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE							50 100 150 200 / 20 40 60 80		
FILL: Crushed stone									
0.20m [66.21m]									
FILL: Dark brown silty sand, some gravel, cobbles and crushed stone, trace clay									
- Some demolition debris									
0.45m [65.96m]									
Compact, light brown **SILTY** fine **SAND** with gravel, trace clay			G 1			VOC/BTEX/PHC/ PAH/Metals/Hg/CrVI/ B-HWS/EC/SAR	▲ 0.4		66
			G 2				▲ 0.6		
1.00m [65.41m]		1							
End of Test Pit									65
Practical refusal at 1.00 m depth		2							64
		3							63
		4							

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patersongroup Consulting Engineers

154 Colonnade Road South, Ottawa, Ontario K2E 7J5

SOIL PROFILE AND TEST DATA

Supplemental Phase II - Environmental Site Assessment
335 Roosevelt Avenue
Ottawa, Ontario

DATUM Geodetic

FILE NO. PE2144

REMARKS

HOLE NO. BH 1-20

BORINGS BY CME-55 Low Clearance Drill **DATE** May 25, 2020

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	66.56
Asphaltic concrete 0.08							
FILL: Brown silty sand with crushed stone 0.60		AU	1				
Dense, brown **SILTY SAND** with gravel 1.09		SS	2	50	50+	1	65.56
		RC	1	100	100		
						2	64.56
		RC	2	95	56		
BEDROCK: Good to excellent quality, grey limestone						3	63.56
		RC	3	100	100		
						4	62.56
		RC	4	83	83		
						5	61.56
5.89							
End of Borehole							
(GWL @ 3.32m - June 16, 2020)							

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

Supplemental Phase II - Environmental Site Assessment
335 Roosevelt Avenue
Ottawa, Ontario

DATUM Geodetic

FILE NO. PE2144

REMARKS

HOLE NO. BH 2-20

BORINGS BY CME-55 Low Clearance Drill **DATE** May 25, 2020

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	66.61
Asphaltic concrete 0.05		AU	1				
FILL: Brown silty sand with crushed stone 0.60		SS	2	67	50+	1	65.61
Dense, brown **SILTY SAND,** some gravel 0.99		RC	1	100	0		
		RC	2	100	24	2	64.61
		RC	32	100	98	3	63.61
GLACIAL TILL: Very poor to excellent quality, grey limestone		RC	4	100	80	4	62.61
		RC	5	100	92	5	61.61
		RC	6	100	100	6	60.61
9.17						7	59.61
End of Borehole						8	58.61
(GWL @ 3.66m - June 16, 2020)						9	57.61

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

Supplemental Phase II - Environmental Site Assessment
335 Roosevelt Avenue
Ottawa, Ontario

DATUM Geodetic

FILE NO. PE2144

REMARKS

HOLE NO. BH 3-20

BORINGS BY CME-55 Low Clearance Drill **DATE** May 25, 2020

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 0.08						0	66.76		
FILL: Grey clayey silt with asphalt fragments 0.56		AU	1						
Dense, brown **SILTY SAND** with gravel 1.19		SS	2	20	50+	1	65.76		
End of Borehole									
Practical refusal to augering at 1.19m depth									

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.

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154 Colonnade Road South, Ottawa, Ontario K2E 7J5

SOIL PROFILE AND TEST DATA

Supplemental Phase II - Environmental Site Assessment
335 Roosevelt Avenue
Ottawa, Ontario

DATUM Geodetic

FILE NO. PE2144

REMARKS

HOLE NO. BH 4-20

BORINGS BY CME-55 Low Clearance Drill **DATE** May 25, 2020

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						0	66.44		
Asphaltic concrete 0.08 **FILL:** Grey clayey silt, occasional asphalt fragments 0.74		AU	1						
End of Borehole Practical refusal to augering at 0.74m depth.									

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

Supplemental Phase II - Environmental Site Assessment
335 Roosevelt Avenue
Ottawa, Ontario

DATUM Geodetic

FILE NO. PE2144

REMARKS

HOLE NO. BH 5-20

BORINGS BY CME-55 Low Clearance Drill **DATE** June 12, 2020

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	66.50
FILL: Browns ilty sand with crushed stone, trace cobbles and brick		AU	1				
0.60							
Dense, brown **SILTY SAND**		SS	2	33	50+	1	65.50
0.94		RC	1	100	0		
		RC	2	100	57	2	64.50
BEDROCK: Very poor to good quality, grey limestone		RC	3	100	82	3	63.50
						4	62.50
		RC	4	97	39	5	61.50
6.04						6	60.50
End of Borehole							
(GWL @ 2.67m - June 16, 2020)							

Photo Ionization Detector

● Volatile Organic Rdg. (ppm)

○ **Lower Explosive Limit %**

20 40 60 80

Monitoring Well Construction

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

Supplemental Phase II - Environmental Site Assessment
335 Roosevelt Avenue
Ottawa, Ontario

DATUM Geodetic

FILE NO. PE2144

REMARKS

HOLE NO. BH 6-20

BORINGS BY CME-55 Low Clearance Drill **DATE** June 12, 2020

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE							
Asphaltic concrete 0.08						0	66.54
FILL: Brown silty sand with crushed stone 0.51		AU	1				
Dense, brown **SILTY SAND,** some gravel 1.17		SS	2	53	50+	1	65.54
End of Borehole							
Practical refusal to augering at 1.17m depth							

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

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154 Colonnade Road South, Ottawa, Ontario K2E 7J5

SOIL PROFILE AND TEST DATA

Supplemental Phase II - Environmental Site Assessment
335 Roosevelt Avenue
Ottawa, Ontario

DATUM Geodetic

FILE NO. PE2144

REMARKS

HOLE NO. BH 7-20

BORINGS BY CME-55 Low Clearance Drill **DATE** June 12, 2020

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						0	66.52		
Asphaltic concrete 0.05									
FILL: Brown silty sand with gravel and crushed stone		AU	1						
0.94		SS	2	50	50+				
End of Borehole									
Practical refusal to augering at 0.94m depth.									

Photo Ionization Detector: ○ Lower Explosive Limit % — 20 40 60 80

100 200 300 400 500

RKI Eagle Rdg. (ppm)

▲ Full Gas Resp. △ Methane Elim.

patersongroup

Consulting Engineers

28 Concourse Gate, Unit 1, Ottawa, ON K2E 7T7

SOIL PROFILE AND TEST DATA

Phase I - II Environmental Site Assessment
335 Roosevelt Avenue
Ottawa, Ontario

DATUM TBM - Mag nail in utility pole, along southeast property line. Geodetic elevation = 67.30m.

REMARKS

BORINGS BY CME 55 Power Auger **DATE** 9 Nov 10

FILE NO. PE2144

HOLE NO. BH 1

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	66.39
Asphaltic concrete 0.05		AU	1				
FILL: Dark brown silty sand, some gravel 0.46		SS	2		50+		
0.74		RC	1	94	22	1	65.39
Grey-brown **SILTY CLAY,** some sand		RC	2	100	51	2	64.39
BEDROCK: Grey limestone						3	63.39
- black shaley limestone from 1.5 to 2.5m depth		RC	3	100	78	4	62.39
		RC	4	100	84	5	61.39
		RC	5	100	35	6	60.39
		RC	6	100	96	7	59.39
		RC	7	100	100	8	58.39
9.47						9	57.39
End of Borehole							
(GWL @ 4.88m-Nov. 16/10)							

Pen. Resist. Blows/0.3m
● 50 mm Dia. Cone

○ Lower Explosive Limit %

20 40 60 80

Piezometer Construction

100 200 300 400 500

Gastech 1314 Rdg. (ppm)

▲ Full Gas Resp. △ Methane Elim.

patersongroup

Consulting Engineers

28 Concourse Gate, Unit 1, Ottawa, ON K2E 7T7

SOIL PROFILE AND TEST DATA

Phase I - II Environmental Site Assessment
335 Roosevelt Avenue
Ottawa, Ontario

DATUM TBM - Mag nail in utility pole, along southeast property line. Geodetic elevation = 67.30m.

REMARKS

BORINGS BY CME 55 Power Auger **DATE** 9 Nov 10

FILE NO. PE2144

HOLE NO. BH 2

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	66.37
Asphaltic concrete 0.05							
FILL: Dark brown silty sand, some gravel 0.46		AU	1				
Grey-brown **SILTY CLAY** 0.60		SS	2	0	50+		
		RC	1	84	58	1	65.37
		RC	2	600	57	2	64.37
BEDROCK: Grey limestone						3	63.37
- black shaley limestone from 1.6m to 2.5m depth		RC	3	98	83	4	62.37
		RC	4	100	92	5	61.37
		RC	5	98	98	6	60.37
		RC	6	100	93	7	59.37
		SS	7	100	100	8	58.37
9.42						9	57.37
End of Borehole							
(GWL @ 6.53m-Nov. 16/10)							

Pen. Resist. Blows/0.3m
● 50 mm Dia. Cone

○ Lower Explosive Limit %

20 40 60 80

Piezometer Construction

100 200 300 400 500

Gastech 1314 Rdg. (ppm)

▲ Full Gas Resp. △ Methane Elim.

patersongroup

Consulting Engineers

28 Concourse Gate, Unit 1, Ottawa, ON K2E 7T7

SOIL PROFILE AND TEST DATA

Phase I - II Environmental Site Assessment
335 Roosevelt Avenue
Ottawa, Ontario

DATUM TBM - Mag nail in utility pole, along southeast property line. Geodetic elevation = 67.30m.

REMARKS

BORINGS BY CME 55 Power Auger **DATE** 9 Nov 10

FILE NO. PE2144

HOLE NO. BH 3

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	66.43
Asphaltic concrete 0.05		AU	1				
FILL; Brown silty sand with gravel 0.60							
FILL: Light brown silty sand, some gravel, trace clay 0.97		SS	2	0	50+	1	65.43
		RC	1	88	63		
		RC	2	97	35	2	64.43
BEDROCK: Grey limestone						3	63.43
- black shaley limestone from 1.5m to 1.7m depth		RC	3	100	75	4	62.43
		RC	4	98	87	5	61.43
						6	60.43
		RC	5	98	85	7	59.43
		RC	6	100	89	8	58.43
		RC	7	96	96	9	57.43
9.40							
End of Borehole							
(BH dry - Nov. 23/10)							

Pen. Resist. Blows/0.3m
● 50 mm Dia. Cone

○ Lower Explosive Limit %

20 40 60 80

Monitoring Well Construction

100 200 300 400 500

Gastech 1314 Rdg. (ppm)

▲ Full Gas Resp. △ Methane Elim.

patersongroup

Consulting Engineers

28 Concourse Gate, Unit 1, Ottawa, ON K2E 7T7

SOIL PROFILE AND TEST DATA

Phase I - II Environmental Site Assessment
335 Roosevelt Avenue
Ottawa, Ontario

DATUM TBM - Mag nail in utility pole, along southeast property line. Geodetic elevation = 67.30m.

REMARKS

FILE NO. **PE2144**

HOLE NO. **BH 4**

BORINGS BY CME 55 Power Auger **DATE** 10 Nov 10

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	66.64
Asphaltic concrete 0.04		AU	1				
Crushed stone 0.15							
FILL: Brown silty sand, some gravel 0.91		SS	2	90	10	1	65.64
Grey-brown **SILT** 1.17							
BEDROCK: Shaley limestone		RC	1	92	36	2	64.64
3.00						3	63.64
		RC	2	100	55	4	62.64
		RC	3	100	60	5	61.64
BEDROCK: Grey limestone						6	60.64
		RC	4	100	93	7	59.64
		RC	5	100	92	8	58.64
		RC	6	100	100	9	57.64
9.37							
End of Borehole							
(GWL @ 3.84m-Nov. 16/10)							

Pen. Resist. Blows/0.3m
● 50 mm Dia. Cone

○ Lower Explosive Limit %

20 40 60 80

Piezometer Construction

100 200 300 400 500

Gastech 1314 Rdg. (ppm)

▲ Full Gas Resp. △ Methane Elim.

patersongroup

Consulting Engineers

28 Concourse Gate, Unit 1, Ottawa, ON K2E 7T7

SOIL PROFILE AND TEST DATA

Phase I - II Environmental Site Assessment
335 Roosevelt Avenue
Ottawa, Ontario

DATUM TBM - Mag nail in utility pole, along southeast property line. Geodetic elevation = 67.30m.

REMARKS

BORINGS BY CME 55 Power Auger **DATE** 10 Nov 10

FILE NO. PE2144

HOLE NO. BH 5

SOIL DESCRIPTION	STRATA PLOT	SAMPLE TYPE	SAMPLE NUMBER	SAMPLE % RECOVERY	SAMPLE N VALUE or RQD	DEPTH (m)	ELEV. (m)
GROUND SURFACE						0	66.50
FILL: Dark brown silty sand with gravel, trace metals, brick and asphalt		SS	1	50	8		
0.76							
FILL: Black silty sand		SS	2	78	50+	1	65.50
0.94							
Light brown **SILT**		RC	1	86	0		
0.99							
		RC	2	97	45	2	64.50
						3	63.50
		RC	3	98	85		
BEDROCK: Grey limestone						4	62.50
- shaley limestone from 1.9m to 2.0m depth		RC	4	100	77	5	61.50
						6	60.50
		RC	5	100	95		
						7	59.50
		RC	6	100	82	8	58.50
		RC	7	100	83	9	57.50
9.40							
End of Borehole							
(GWL @ 3.28m-Nov. 23/10)							

Pen. Resist. Blows/0.3m
● 50 mm Dia. Cone

○ Lower Explosive Limit %

20 40 60 80

Monitoring Well Construction

100 200 300 400 500

Gastech 1314 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 x 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

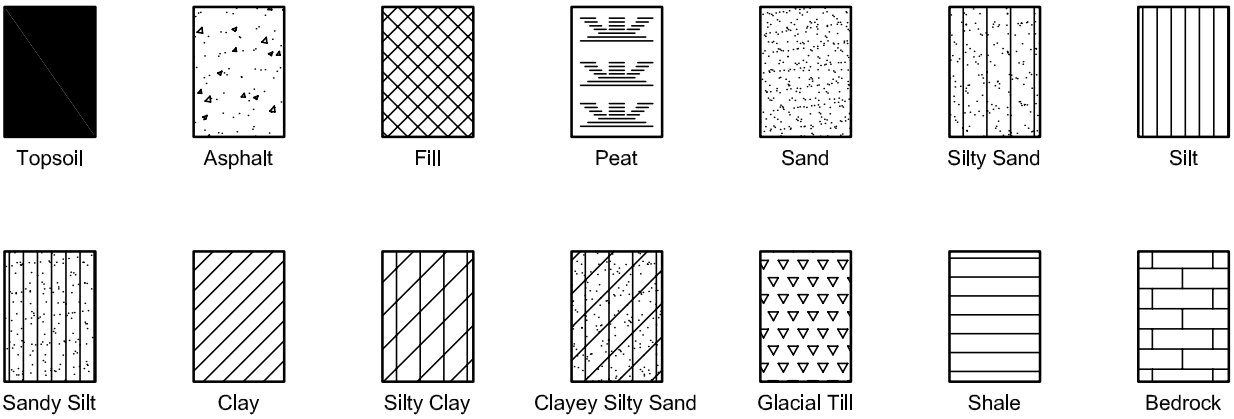
p'_o	-	Present effective overburden pressure at sample depth
p'_c	-	Preconsolidation pressure of (maximum past pressure on) sample
Ccr	-	Recompression index (in effect at pressures below p'_c)
Cc	-	Compression index (in effect at pressures above p'_c)
OC Ratio		Overconsolidaton ratio = p'_c / p'_o
Void 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.

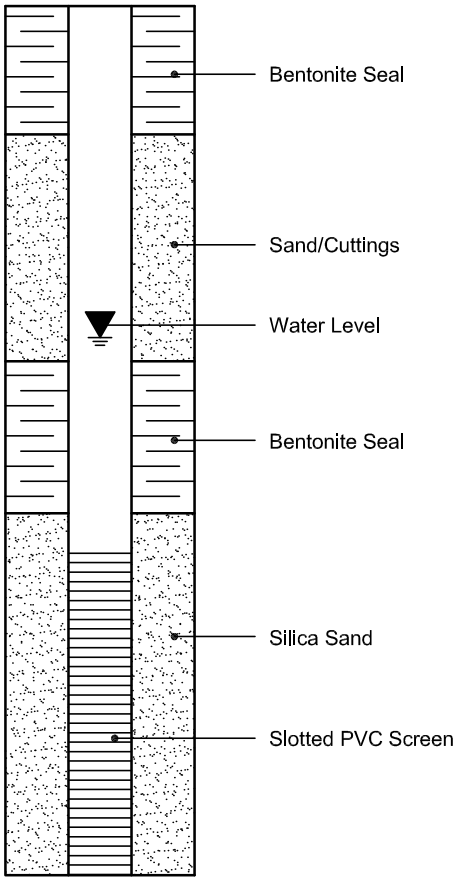
SYMBOLS AND TERMS (continued)

STRATA PLOT

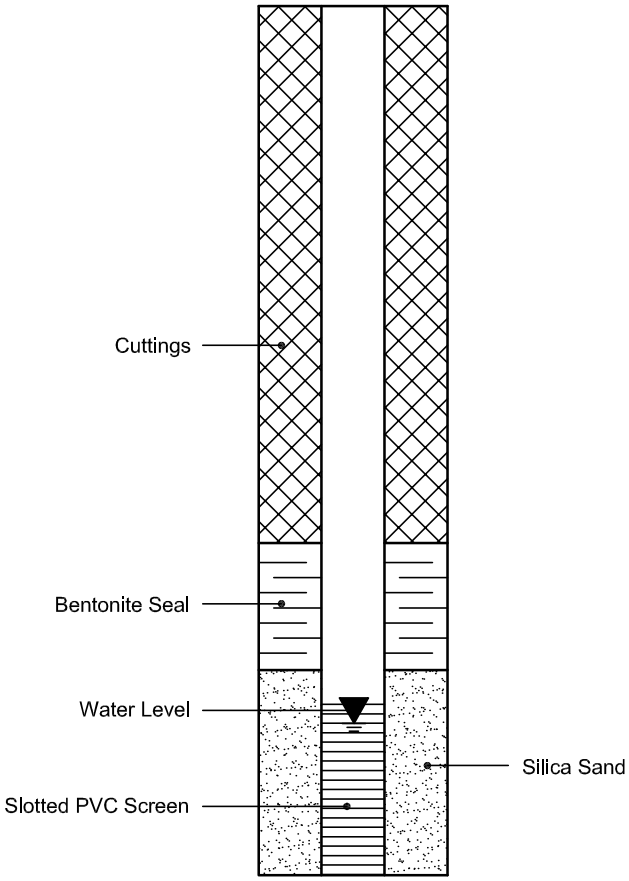


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Certificate of Analysis

Paterson Group Consulting Engineers

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

Client PO: 30156
Project: PE2144
Custody: 125515

Report Date: 1-Jun-2020
Order Date: 26-May-2020

Order #: 2022205

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

Paracel ID	Client ID
2022205-01	BH1-AU1
2022205-02	BH2-AU1
2022205-03	BH2-SS2
2022205-04	BH3-SS2

Approved By:



Dale Robertson, BSc
Laboratory Director

Any use of these results implies your agreement that our total liabilty in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.

Certificate of Analysis

Report Date: 01-Jun-2020

Client: Paterson Group Consulting Engineers

Order Date: 26-May-2020

Client PO: 30156

Project Description: PE2144

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	29-May-20	30-May-20
Chromium, hexavalent - soil	MOE E3056 - Extraction, colourimetric	28-May-20	30-May-20
Mercury by CVAA	EPA 7471B - CVAA, digestion	29-May-20	1-Jun-20
PCBs, total	SW846 8082A - GC-ECD	28-May-20	29-May-20
PHC F1	CWS Tier 1 - P&T GC-FID	29-May-20	30-May-20
PHC F4G (gravimetric)	CWS Tier 1 - Extraction Gravimetric	28-May-20	29-May-20
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	28-May-20	29-May-20
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	29-May-20	29-May-20
REG 153: VOCs by P&T GC/MS	EPA 8260 - P&T GC-MS	29-May-20	30-May-20
Solids, %	Gravimetric, calculation	28-May-20	28-May-20

Certificate of Analysis

Report Date: 01-Jun-2020

Client: **Paterson Group Consulting Engineers**

Order Date: 26-May-2020

Client PO: **30156**

Project Description: PE2144

	Client ID:	BH1-AU1	BH2-AU1	BH2-SS2	BH3-SS2
	Sample Date:	25-May-20 09:00	25-May-20 09:00	25-May-20 09:00	25-May-20 09:00
	Sample ID:	2022205-01	2022205-02	2022205-03	2022205-04
	MDL/Units	Soil	Soil	Soil	Soil
Physical Characteristics					
% Solids	0.1 % by Wt.	97.3	89.6	87.5	87.5
Metals					
Antimony	1.0 ug/g dry	<1.0	<1.0	-	<1.0
Arsenic	1.0 ug/g dry	2.4	2.7	-	3.4
Barium	1.0 ug/g dry	101	133	-	115
Beryllium	0.5 ug/g dry	<0.5	<0.5	-	0.5
Boron	5.0 ug/g dry	11.9	11.7	-	17.1
Cadmium	0.5 ug/g dry	<0.5	<0.5	-	<0.5
Chromium	5.0 ug/g dry	12.8	12.8	-	18.6
Chromium (VI)	0.2 ug/g dry	<0.2	<0.2	-	<0.2
Cobalt	1.0 ug/g dry	4.5	4.3	-	5.5
Copper	5.0 ug/g dry	13.1	14.1	-	16.2
Lead	1.0 ug/g dry	34.5	20.3	-	19.4
Mercury	0.1 ug/g dry	<0.1	<0.1	-	0.1
Molybdenum	1.0 ug/g dry	<1.0	<1.0	-	<1.0
Nickel	5.0 ug/g dry	11.1	10.8	-	17.8
Selenium	1.0 ug/g dry	<1.0	<1.0	-	<1.0
Silver	0.3 ug/g dry	<0.3	<0.3	-	<0.3
Thallium	1.0 ug/g dry	<1.0	<1.0	-	<1.0
Uranium	1.0 ug/g dry	<1.0	<1.0	-	<1.0
Vanadium	10.0 ug/g dry	24.7	17.6	-	19.1
Zinc	20.0 ug/g dry	36.7	36.8	-	48.9
Volatiles					
Acetone	0.50 ug/g dry	<0.50	-	-	-
Benzene	0.02 ug/g dry	<0.02	-	-	-
Bromodichloromethane	0.05 ug/g dry	<0.05	-	-	-
Bromoform	0.05 ug/g dry	<0.05	-	-	-
Bromomethane	0.05 ug/g dry	<0.05	-	-	-
Carbon Tetrachloride	0.05 ug/g dry	<0.05	-	-	-
Chlorobenzene	0.05 ug/g dry	<0.05	-	-	-
Chloroform	0.05 ug/g dry	<0.05	-	-	-
Dibromochloromethane	0.05 ug/g dry	<0.05	-	-	-
Dichlorodifluoromethane	0.05 ug/g dry	<0.05	-	-	-
1,2-Dichlorobenzene	0.05 ug/g dry	<0.05	-	-	-
1,3-Dichlorobenzene	0.05 ug/g dry	<0.05	-	-	-

Certificate of Analysis

Report Date: 01-Jun-2020

Client: Paterson Group Consulting Engineers

Order Date: 26-May-2020

Client PO: 30156

Project Description: PE2144

	Client ID:	BH1-AU1	BH2-AU1	BH2-SS2	BH3-SS2
	Sample Date:	25-May-20 09:00	25-May-20 09:00	25-May-20 09:00	25-May-20 09:00
	Sample ID:	2022205-01	2022205-02	2022205-03	2022205-04
	MDL/Units	Soil	Soil	Soil	Soil
1,4-Dichlorobenzene	0.05 ug/g dry	<0.05	-	-	-
1,1-Dichloroethane	0.05 ug/g dry	<0.05	-	-	-
1,2-Dichloroethane	0.05 ug/g dry	<0.05	-	-	-
1,1-Dichloroethylene	0.05 ug/g dry	<0.05	-	-	-
cis-1,2-Dichloroethylene	0.05 ug/g dry	<0.05	-	-	-
trans-1,2-Dichloroethylene	0.05 ug/g dry	<0.05	-	-	-
1,2-Dichloropropane	0.05 ug/g dry	<0.05	-	-	-
cis-1,3-Dichloropropylene	0.05 ug/g dry	<0.05	-	-	-
trans-1,3-Dichloropropylene	0.05 ug/g dry	<0.05	-	-	-
1,3-Dichloropropene, total	0.05 ug/g dry	<0.05	-	-	-
Ethylbenzene	0.05 ug/g dry	<0.05	-	-	-
Ethylene dibromide (dibromoethane, 1,2-)	0.05 ug/g dry	<0.05	-	-	-
Hexane	0.05 ug/g dry	<0.05	-	-	-
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g dry	<0.50	-	-	-
Methyl Isobutyl Ketone	0.50 ug/g dry	<0.50	-	-	-
Methyl tert-butyl ether	0.05 ug/g dry	<0.05	-	-	-
Methylene Chloride	0.05 ug/g dry	<0.05	-	-	-
Styrene	0.05 ug/g dry	<0.05	-	-	-
1,1,1,2-Tetrachloroethane	0.05 ug/g dry	<0.05	-	-	-
1,1,2,2-Tetrachloroethane	0.05 ug/g dry	<0.05	-	-	-
Tetrachloroethylene	0.05 ug/g dry	<0.05	-	-	-
Toluene	0.05 ug/g dry	0.09	-	-	-
1,1,1-Trichloroethane	0.05 ug/g dry	<0.05	-	-	-
1,1,2-Trichloroethane	0.05 ug/g dry	<0.05	-	-	-
Trichloroethylene	0.05 ug/g dry	<0.05	-	-	-
Trichlorofluoromethane	0.05 ug/g dry	<0.05	-	-	-
Vinyl chloride	0.02 ug/g dry	<0.02	-	-	-
m,p-Xylenes	0.05 ug/g dry	0.11	-	-	-
o-Xylene	0.05 ug/g dry	0.07	-	-	-
Xylenes, total	0.05 ug/g dry	0.18	-	-	-
4-Bromofluorobenzene	Surrogate	100%	-	-	-
Dibromofluoromethane	Surrogate	101%	-	-	-
Toluene-d8	Surrogate	108%	-	-	-
Benzene	0.02 ug/g dry	-	-	<0.02	<0.02
Ethylbenzene	0.05 ug/g dry	-	-	<0.05	<0.05
Toluene	0.05 ug/g dry	-	-	<0.05	<0.05

Certificate of Analysis

Report Date: 01-Jun-2020

Client: Paterson Group Consulting Engineers

Order Date: 26-May-2020

Client PO: 30156

Project Description: PE2144

	Client ID:	BH1-AU1	BH2-AU1	BH2-SS2	BH3-SS2
	Sample Date:	25-May-20 09:00	25-May-20 09:00	25-May-20 09:00	25-May-20 09:00
	Sample ID:	2022205-01	2022205-02	2022205-03	2022205-04
	MDL/Units	Soil	Soil	Soil	Soil
m,p-Xylenes	0.05 ug/g dry	-	-	<0.05	<0.05
o-Xylene	0.05 ug/g dry	-	-	<0.05	<0.05
Xylenes, total	0.05 ug/g dry	-	-	<0.05	<0.05
Toluene-d8	Surrogate	-	-	109%	109%
Hydrocarbons					
F1 PHCs (C6-C10)	7 ug/g dry	<7	-	<7	<7
F2 PHCs (C10-C16)	4 ug/g dry	<40 [1]	-	<4	<4
F3 PHCs (C16-C34)	8 ug/g dry	285	-	80	40
F4 PHCs (C34-C50)	6 ug/g dry	1630 [2]	-	632 [2]	306 [2]
F4G PHCs (gravimetric)	50 ug/g dry	2470	-	1100	457
PCBs					
PCBs, total	0.05 ug/g dry	<0.50 [3]	-	-	-
Decachlorobiphenyl	Surrogate	121%	-	-	-

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						
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	*0.0933*		*ug/g*		*93.3*	*60-140*			
Volatiles									
Acetone	ND	0.50	ug/g						
Benzene	ND	0.02	ug/g						
Bromodichloromethane	ND	0.05	ug/g						
Bromoform	ND	0.05	ug/g						
Bromomethane	ND	0.05	ug/g						
Carbon Tetrachloride	ND	0.05	ug/g						
Chlorobenzene	ND	0.05	ug/g						
Chloroform	ND	0.05	ug/g						
Dibromochloromethane	ND	0.05	ug/g						
Dichlorodifluoromethane	ND	0.05	ug/g						
1,2-Dichlorobenzene	ND	0.05	ug/g						
1,3-Dichlorobenzene	ND	0.05	ug/g						
1,4-Dichlorobenzene	ND	0.05	ug/g						
1,1-Dichloroethane	ND	0.05	ug/g						
1,2-Dichloroethane	ND	0.05	ug/g						
1,1-Dichloroethylene	ND	0.05	ug/g						
cis-1,2-Dichloroethylene	ND	0.05	ug/g						
trans-1,2-Dichloroethylene	ND	0.05	ug/g						
1,2-Dichloropropane	ND	0.05	ug/g						
cis-1,3-Dichloropropylene	ND	0.05	ug/g						
trans-1,3-Dichloropropylene	ND	0.05	ug/g						
1,3-Dichloropropene, total	ND	0.05	ug/g						
Ethylbenzene	ND	0.05	ug/g						
Ethylene dibromide (dibromoethane, 1,2	ND	0.05	ug/g						
Hexane	ND	0.05	ug/g						
Methyl Ethyl Ketone (2-Butanone)	ND	0.50	ug/g						
Methyl Isobutyl Ketone	ND	0.50	ug/g						
Methyl tert-butyl ether	ND	0.05	ug/g						

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Methylene Chloride	ND	0.05	ug/g						
Styrene	ND	0.05	ug/g						
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g						
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g						
Tetrachloroethylene	ND	0.05	ug/g						
Toluene	ND	0.05	ug/g						
1,1,1-Trichloroethane	ND	0.05	ug/g						
1,1,2-Trichloroethane	ND	0.05	ug/g						
Trichloroethylene	ND	0.05	ug/g						
Trichlorofluoromethane	ND	0.05	ug/g						
Vinyl chloride	ND	0.02	ug/g						
m,p-Xylenes	ND	0.05	ug/g						
o-Xylene	ND	0.05	ug/g						
Xylenes, total	ND	0.05	ug/g						
Surrogate: 4-Bromofluorobenzene	*8.51*		*ug/g*		*106*	*50-140*			
Surrogate: Dibromofluoromethane	*8.30*		*ug/g*		*104*	*50-140*			
Surrogate: Toluene-d8	*7.77*		*ug/g*		*97.1*	*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	*7.77*		*ug/g*		*97.1*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
F2 PHCs (C10-C16)	ND	40	ug/g dry	ND			NC	30	GEN09
F3 PHCs (C16-C34)	1160	80	ug/g dry	285			121.0	30	QR-04
F4 PHCs (C34-C50)	2040	60	ug/g dry	1630			22.5	30	
Metals									
Antimony	ND	1.0	ug/g dry	ND			NC	30	
Arsenic	5.2	1.0	ug/g dry	4.5			13.1	30	
Barium	181	1.0	ug/g dry	171			5.7	30	
Beryllium	ND	0.5	ug/g dry	ND			NC	30	
Boron	8.4	5.0	ug/g dry	8.9			6.2	30	
Cadmium	ND	0.5	ug/g dry	ND			NC	30	
Chromium (VI)	ND	0.2	ug/g dry	ND			NC	35	
Chromium	11.6	5.0	ug/g dry	10.1			13.1	30	
Cobalt	5.1	1.0	ug/g dry	4.6			9.2	30	
Copper	11.4	5.0	ug/g dry	10.1			11.9	30	
Lead	20.8	1.0	ug/g dry	18.6			10.8	30	
Mercury	ND	0.1	ug/g dry	ND			NC	30	
Molybdenum	3.0	1.0	ug/g dry	2.6			14.5	30	
Nickel	10.9	5.0	ug/g dry	9.8			9.9	30	
Selenium	ND	1.0	ug/g dry	ND			NC	30	
Silver	ND	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	11.4	10.0	ug/g dry	11.0			3.3	30	
Zinc	ND	20.0	ug/g dry	ND			NC	30	
PCBs									
PCBs, total	ND	0.05	ug/g dry	ND			NC	40	
Surrogate: Decachlorobiphenyl	*0.0872*		*ug/g dry*		*84.8*	*60-140*			
Physical Characteristics									
% Solids	91.3	0.1	% by Wt.	95.0			4.0	25	
Volatiles									
Acetone	ND	0.50	ug/g dry	ND			NC	50	
Benzene	ND	0.02	ug/g dry	ND			NC	50	
Bromodichloromethane	ND	0.05	ug/g dry	ND			NC	50	
Bromoform	ND	0.05	ug/g dry	ND			NC	50	
Bromomethane	ND	0.05	ug/g dry	ND			NC	50	
Carbon Tetrachloride	ND	0.05	ug/g dry	ND			NC	50	
Chlorobenzene	ND	0.05	ug/g dry	ND			NC	50	
Chloroform	ND	0.05	ug/g dry	ND			NC	50	
Dibromochloromethane	ND	0.05	ug/g dry	ND			NC	50	
Dichlorodifluoromethane	ND	0.05	ug/g dry	ND			NC	50	
1,2-Dichlorobenzene	ND	0.05	ug/g dry	ND			NC	50	
1,3-Dichlorobenzene	ND	0.05	ug/g dry	ND			NC	50	
1,4-Dichlorobenzene	ND	0.05	ug/g dry	ND			NC	50	
1,1-Dichloroethane	ND	0.05	ug/g dry	ND			NC	50	
1,2-Dichloroethane	ND	0.05	ug/g dry	ND			NC	50	
1,1-Dichloroethylene	ND	0.05	ug/g dry	ND			NC	50	
cis-1,2-Dichloroethylene	ND	0.05	ug/g dry	ND			NC	50	
trans-1,2-Dichloroethylene	ND	0.05	ug/g dry	ND			NC	50	
1,2-Dichloropropane	ND	0.05	ug/g dry	ND			NC	50	
cis-1,3-Dichloropropylene	ND	0.05	ug/g dry	ND			NC	50	
trans-1,3-Dichloropropylene	ND	0.05	ug/g dry	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g dry	ND			NC	50	
Ethylene dibromide (dibromoethane, 1,2-	ND	0.05	ug/g dry	ND			NC	50	
Hexane	ND	0.05	ug/g dry	ND			NC	50	
Methyl Ethyl Ketone (2-Butanone)	ND	0.50	ug/g dry	ND			NC	50	

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Methyl Isobutyl Ketone	ND	0.50	ug/g dry	ND			NC	50	
Methyl tert-butyl ether	ND	0.05	ug/g dry	ND			NC	50	
Methylene Chloride	ND	0.05	ug/g dry	ND			NC	50	
Styrene	ND	0.05	ug/g dry	ND			NC	50	
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g dry	ND			NC	50	
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g dry	ND			NC	50	
Tetrachloroethylene	ND	0.05	ug/g dry	ND			NC	50	
Toluene	ND	0.05	ug/g dry	ND			NC	50	
1,1,1-Trichloroethane	ND	0.05	ug/g dry	ND			NC	50	
1,1,2-Trichloroethane	ND	0.05	ug/g dry	ND			NC	50	
Trichloroethylene	ND	0.05	ug/g dry	ND			NC	50	
Trichlorofluoromethane	ND	0.05	ug/g dry	ND			NC	50	
Vinyl chloride	ND	0.02	ug/g dry	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND			NC	50	
o-Xylene	ND	0.05	ug/g dry	ND			NC	50	
Surrogate: 4-Bromofluorobenzene	*8.69*		*ug/g dry*		*101*	*50-140*			
Surrogate: Dibromofluoromethane	*8.77*		*ug/g dry*		*102*	*50-140*			
Surrogate: Toluene-d8	*9.35*		*ug/g dry*		*109*	*50-140*			
Benzene	ND	0.02	ug/g dry	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g dry	ND			NC	50	
Toluene	ND	0.05	ug/g dry	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND			NC	50	
o-Xylene	ND	0.05	ug/g dry	ND			NC	50	
Surrogate: Toluene-d8	*9.35*		*ug/g dry*		*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)	172	7	ug/g	ND	86.2	80-120			
F2 PHCs (C10-C16)	79	4	ug/g	ND	99.2	80-120			
F3 PHCs (C16-C34)	198	8	ug/g	ND	101	80-120			
F4 PHCs (C34-C50)	141	6	ug/g	ND	114	80-120			
F4G PHCs (gravimetric)	850	50	ug/g	ND	85.0	80-120			
Metals									
Antimony	44.9	1.0	ug/g	ND	89.4	70-130			
Arsenic	53.4	1.0	ug/g	1.8	103	70-130			
Barium	115	1.0	ug/g	68.4	92.4	70-130			
Beryllium	49.6	0.5	ug/g	ND	98.9	70-130			
Boron	46.1	5.0	ug/g	ND	85.0	70-130			
Cadmium	46.9	0.5	ug/g	ND	93.8	70-130			
Chromium (VI)	0.2	0.2	ug/g	ND	78.0	70-130			
Chromium	56.5	5.0	ug/g	ND	105	70-130			
Cobalt	51.3	1.0	ug/g	1.9	99.0	70-130			
Copper	52.1	5.0	ug/g	ND	96.1	70-130			
Lead	53.0	1.0	ug/g	7.5	91.0	70-130			
Mercury	1.68	0.1	ug/g	ND	112	70-130			
Molybdenum	50.1	1.0	ug/g	1.0	98.1	70-130			
Nickel	52.7	5.0	ug/g	ND	97.6	70-130			
Selenium	49.2	1.0	ug/g	ND	98.2	70-130			
Silver	43.9	0.3	ug/g	ND	87.8	70-130			
Thallium	46.6	1.0	ug/g	ND	93.1	70-130			
Uranium	50.2	1.0	ug/g	ND	99.9	70-130			
Vanadium	55.8	10.0	ug/g	ND	103	70-130			
Zinc	51.7	20.0	ug/g	ND	91.9	70-130			
PCBs									
PCBs, total	0.431	0.05	ug/g	ND	105	60-140			
Surrogate: Decachlorobiphenyl	*0.0839*		*ug/g*		*81.6*	*60-140*			
Volatiles									
Acetone	12.4	0.50	ug/g	ND	124	50-140			
Benzene	4.50	0.02	ug/g	ND	112	60-130			
Bromodichloromethane	4.27	0.05	ug/g	ND	107	60-130			
Bromoform	3.72	0.05	ug/g	ND	93.1	60-130			
Bromomethane	2.81	0.05	ug/g	ND	70.3	50-140			
Carbon Tetrachloride	3.75	0.05	ug/g	ND	93.7	60-130			
Chlorobenzene	3.95	0.05	ug/g	ND	98.7	60-130			
Chloroform	4.27	0.05	ug/g	ND	107	60-130			
Dibromochloromethane	3.38	0.05	ug/g	ND	84.6	60-130			
Dichlorodifluoromethane	2.56	0.05	ug/g	ND	64.0	50-140			
1,2-Dichlorobenzene	4.26	0.05	ug/g	ND	107	60-130			
1,3-Dichlorobenzene	4.21	0.05	ug/g	ND	105	60-130			
1,4-Dichlorobenzene	3.94	0.05	ug/g	ND	98.5	60-130			
1,1-Dichloroethane	4.02	0.05	ug/g	ND	101	60-130			
1,2-Dichloroethane	3.78	0.05	ug/g	ND	94.4	60-130			
1,1-Dichloroethylene	4.75	0.05	ug/g	ND	119	60-130			
cis-1,2-Dichloroethylene	4.65	0.05	ug/g	ND	116	60-130			
trans-1,2-Dichloroethylene	4.31	0.05	ug/g	ND	108	60-130			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
1,2-Dichloropropane	4.18	0.05	ug/g	ND	105	60-130			
cis-1,3-Dichloropropylene	3.65	0.05	ug/g	ND	91.3	60-130			
trans-1,3-Dichloropropylene	3.69	0.05	ug/g	ND	92.3	60-130			
Ethylbenzene	4.14	0.05	ug/g	ND	103	60-130			
Ethylene dibromide (dibromoethane, 1,2-	3.79	0.05	ug/g	ND	94.7	60-130			
Hexane	4.54	0.05	ug/g	ND	113	60-130			
Methyl Ethyl Ketone (2-Butanone)	11.2	0.50	ug/g	ND	112	50-140			
Methyl Isobutyl Ketone	11.4	0.50	ug/g	ND	114	50-140			
Methyl tert-butyl ether	11.3	0.05	ug/g	ND	113	50-140			
Methylene Chloride	4.22	0.05	ug/g	ND	106	60-130			
Styrene	3.84	0.05	ug/g	ND	96.0	60-130			
1,1,1,2-Tetrachloroethane	3.63	0.05	ug/g	ND	90.7	60-130			
1,1,2,2-Tetrachloroethane	3.86	0.05	ug/g	ND	96.4	60-130			
Tetrachloroethylene	4.23	0.05	ug/g	ND	106	60-130			
Toluene	3.46	0.05	ug/g	ND	86.6	60-130			
1,1,1-Trichloroethane	4.09	0.05	ug/g	ND	102	60-130			
1,1,2-Trichloroethane	3.85	0.05	ug/g	ND	96.2	60-130			
Trichloroethylene	4.02	0.05	ug/g	ND	101	60-130			
Trichlorofluoromethane	4.13	0.05	ug/g	ND	103	50-140			
Vinyl chloride	2.65	0.02	ug/g	ND	66.2	50-140			
m,p-Xylenes	7.86	0.05	ug/g	ND	98.3	60-130			
o-Xylene	3.99	0.05	ug/g	ND	99.8	60-130			
Surrogate: 4-Bromofluorobenzene	*8.34*		*ug/g*		*104*	*50-140*			
Surrogate: Dibromofluoromethane	*9.30*		*ug/g*		*116*	*50-140*			
Surrogate: Toluene-d8	*7.03*		*ug/g*		*87.9*	*50-140*			
Benzene	4.50	0.02	ug/g	ND	112	60-130			
Ethylbenzene	4.14	0.05	ug/g	ND	103	60-130			
Toluene	3.46	0.05	ug/g	ND	86.6	60-130			
m,p-Xylenes	7.86	0.05	ug/g	ND	98.3	60-130			
o-Xylene	3.99	0.05	ug/g	ND	99.8	60-130			
Surrogate: Toluene-d8	*7.03*		*ug/g*		*87.9*	*50-140*			

Qualifier Notes:

Sample Qualifiers :

1 : Elevated detection limits due to the nature of the sample matrix.

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

3 : The PCB chromatogram contained many peaks, however, the fingerprint pattern was not consistent with any Aroclor patterns. Results reported with an elevated detection limit.

QC Qualifiers :

GEN09 : Elevated detection limits due to the nature of the sample matrix.

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

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

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

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

CCME PHC additional information:

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

PARACE LABORATORIES LT

Paracel ID: 2022205

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2022205	Nº 125515

Client Name: Paterson Group
Contact Name: Mark D'Arcy
Address: 154 Colonnade Rd. S.
Telephone: 613-226-7381

Project Ref: PE2144
Quote #:
PO #: 30156
E-mail: mdarcy@patersongroup.ca

Page __ of __

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

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

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

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

Required Analysis

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken: Date	Sample Taken: Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	PHCs F1-F4	PCBs
1	BH1-AU1	S		2	May 25/20			X		X	X	X		X	X
2	BH2-AU1	S		1	↓					X	X	X			
3	BH2-SS2	S		2			X								
4	BH3-SS2	S		2			X			X	X	X			
5															
6															
7															
8															
9															
10															

Comments:

Method of Delivery: Paracel

Relinquished By (Sign):	Received By Driver/Depot:	Received at Lab:	Verified By:
Relinquished By (Print): Nick Sullivan	Date/Time:	Date/Time: 05-22-20 16:45	Date/Time: 05-26-20 16:57
Date/Time: May 26/20	Temperature: °C	Temperature: 18.7 °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: 27430
Project: PE2144
Custody: 125249

Report Date: 22-Jun-2020
Order Date: 16-Jun-2020

Order #: 2025184

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

Paracel ID	Client ID
2025184-01	BH5-AU1
2025184-02	BH5-SS2

Approved By:



Dale Robertson, BSc
Laboratory Director

Any use of these results implies your agreement that our total liabilty in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.

Certificate of Analysis

Report Date: 22-Jun-2020

Client: Paterson Group Consulting Engineers

Order Date: 16-Jun-2020

Client PO: 27430

Project Description: PE2144

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	18-Jun-20	19-Jun-20
Chromium, hexavalent - soil	MOE E3056 - Extraction, colourimetric	18-Jun-20	18-Jun-20
Mercury by CVAA	EPA 7471B - CVAA, digestion	22-Jun-20	22-Jun-20
PHC F1	CWS Tier 1 - P&T GC-FID	18-Jun-20	19-Jun-20
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	18-Jun-20	20-Jun-20
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	22-Jun-20	22-Jun-20

Certificate of Analysis

Report Date: 22-Jun-2020

Client: Paterson Group Consulting Engineers

Order Date: 16-Jun-2020

Client PO: 27430

Project Description: PE2144

	Client ID:	BH5-AU1	BH5-SS2	-	-
	Sample Date:	12-Jun-20 09:00	12-Jun-20 09:00	-	-
	Sample ID:	2025184-01	2025184-02	-	-
	MDL/Units	Soil	Soil	-	-
Metals					
Antimony	1.0 ug/g dry	<1.0	-	-	-
Arsenic	1.0 ug/g dry	6.5	-	-	-
Barium	1.0 ug/g dry	79.0	-	-	-
Beryllium	0.5 ug/g dry	<0.5	-	-	-
Boron	5.0 ug/g dry	7.0	-	-	-
Cadmium	0.5 ug/g dry	<0.5	-	-	-
Chromium	5.0 ug/g dry	20.3	-	-	-
Chromium (VI)	0.2 ug/g dry	<0.2	-	-	-
Cobalt	1.0 ug/g dry	7.4	-	-	-
Copper	5.0 ug/g dry	24.8	-	-	-
Lead	1.0 ug/g dry	25.7	-	-	-
Mercury	0.1 ug/g dry	<0.1	-	-	-
Molybdenum	1.0 ug/g dry	3.1	-	-	-
Nickel	5.0 ug/g dry	15.5	-	-	-
Selenium	1.0 ug/g dry	<1.0	-	-	-
Silver	0.3 ug/g dry	<0.3	-	-	-
Thallium	1.0 ug/g dry	<1.0	-	-	-
Uranium	1.0 ug/g dry	<1.0	-	-	-
Vanadium	10.0 ug/g dry	34.3	-	-	-
Zinc	20.0 ug/g dry	95.1	-	-	-
Volatiles					
Benzene	0.02 ug/g dry	-	<0.02	-	-
Ethylbenzene	0.05 ug/g dry	-	<0.05	-	-
Toluene	0.05 ug/g dry	-	<0.05	-	-
m,p-Xylenes	0.05 ug/g dry	-	<0.05	-	-
o-Xylene	0.05 ug/g dry	-	<0.05	-	-
Xylenes, total	0.05 ug/g dry	-	<0.05	-	-
Toluene-d8	Surrogate	-	105%	-	-
Hydrocarbons					
F1 PHCs (C6-C10)	7 ug/g dry	-	<7	-	-
F2 PHCs (C10-C16)	4 ug/g dry	-	<4	-	-
F3 PHCs (C16-C34)	8 ug/g dry	-	20	-	-
F4 PHCs (C34-C50)	6 ug/g dry	-	30	-	-

Certificate of Analysis

Report Date: 22-Jun-2020

Client: Paterson Group Consulting Engineers

Order Date: 16-Jun-2020

Client PO: 27430

Project Description: PE2144

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g						
F2 PHCs (C10-C16)	ND	4	ug/g						
F3 PHCs (C16-C34)	ND	8	ug/g						
F4 PHCs (C34-C50)	ND	6	ug/g						
Metals									
Antimony	ND	1.0	ug/g						
Arsenic	ND	1.0	ug/g						
Barium	ND	1.0	ug/g						
Beryllium	ND	0.5	ug/g						
Boron	ND	5.0	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium (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						
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	*7.01*		*ug/g*		*87.6*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g dry	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g dry	ND			NC	30	
F3 PHCs (C16-C34)	ND	8	ug/g dry	ND			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g dry	ND			NC	30	
Metals									
Antimony	1.3	1.0	ug/g dry	ND			NC	30	
Arsenic	4.3	1.0	ug/g dry	4.0			7.4	30	
Barium	84.5	1.0	ug/g dry	115			30.8	30	QR-05
Beryllium	0.7	0.5	ug/g dry	1.4			NC	30	
Boron	7.4	5.0	ug/g dry	5.5			29.7	30	
Cadmium	ND	0.5	ug/g dry	ND			NC	30	
Chromium (VI)	ND	0.2	ug/g dry	ND			NC	35	
Chromium	31.4	5.0	ug/g dry	35.7			12.9	30	
Cobalt	6.4	1.0	ug/g dry	8.0			21.6	30	
Copper	13.2	5.0	ug/g dry	31.6			NC	30	
Lead	11.1	1.0	ug/g dry	84.7			154.0	30	QR-05
Mercury	ND	0.1	ug/g dry	ND			NC	30	
Molybdenum	ND	1.0	ug/g dry	ND			NC	30	
Nickel	17.8	5.0	ug/g dry	21.7			20.2	30	
Selenium	ND	1.0	ug/g dry	1.3			NC	30	
Silver	ND	0.3	ug/g dry	ND			NC	30	
Thallium	ND	1.0	ug/g dry	ND			NC	30	
Uranium	ND	1.0	ug/g dry	ND			NC	30	
Vanadium	30.8	10.0	ug/g dry	44.3			NC	30	
Zinc	52.9	20.0	ug/g dry	81.3			NC	30	
Physical Characteristics									
% Solids	100	0.1	% by Wt.	100			0.0	25	
Volatiles									
Benzene	ND	0.02	ug/g dry	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g dry	ND			NC	50	
Toluene	ND	0.05	ug/g dry	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g dry	ND			NC	50	
o-Xylene	ND	0.05	ug/g dry	ND			NC	50	
Surrogate: Toluene-d8	*8.07*		*ug/g dry*		*101*	*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)	173	7	ug/g	ND	86.6	80-120			
F2 PHCs (C10-C16)	94	4	ug/g	ND	118	60-140			
F3 PHCs (C16-C34)	229	8	ug/g	ND	117	60-140			
F4 PHCs (C34-C50)	109	6	ug/g	ND	88.2	60-140			
Metals									
Antimony	48.2	1.0	ug/g	ND	96.1	70-130			
Arsenic	50.4	1.0	ug/g	1.6	97.5	70-130			
Barium	82.7	1.0	ug/g	46.1	73.2	70-130			
Beryllium	52.1	0.5	ug/g	0.6	103	70-130			
Boron	48.9	5.0	ug/g	ND	93.5	70-130			
Cadmium	49.2	0.5	ug/g	ND	98.1	70-130			
Chromium (VI)	0.1	0.2	ug/g	ND	50.5	70-130			QM-05
Chromium	64.6	5.0	ug/g	14.3	101	70-130			
Cobalt	49.5	1.0	ug/g	3.2	92.7	70-130			
Copper	53.6	5.0	ug/g	12.7	81.8	70-130			
Lead	48.9	1.0	ug/g	4.4	88.9	70-130			
Mercury	1.62	0.1	ug/g	ND	108	70-130			
Molybdenum	48.8	1.0	ug/g	ND	96.9	70-130			
Nickel	56.1	5.0	ug/g	8.7	94.8	70-130			
Selenium	49.0	1.0	ug/g	ND	96.9	70-130			
Silver	42.7	0.3	ug/g	ND	85.1	70-130			
Thallium	47.9	1.0	ug/g	ND	95.6	70-130			
Uranium	47.5	1.0	ug/g	ND	94.5	70-130			
Vanadium	64.0	10.0	ug/g	17.7	92.6	70-130			
Zinc	68.5	20.0	ug/g	32.5	71.9	70-130			
Volatiles									
Benzene	4.74	0.02	ug/g	ND	118	60-130			
Ethylbenzene	4.69	0.05	ug/g	ND	117	60-130			
Toluene	4.51	0.05	ug/g	ND	113	60-130			
m,p-Xylenes	9.64	0.05	ug/g	ND	121	60-130			
o-Xylene	4.33	0.05	ug/g	ND	108	60-130			
Surrogate: Toluene-d8	*7.75*		*ug/g*		*96.8*	*50-140*			

Qualifier Notes:

QC Qualifiers :

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

QR-05 : Duplicate RPDs higher than normally accepted. Remaining batch QA\QC was acceptable. May be sample effect.

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

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

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

CCME PHC additional information:

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

PARAC LABORATORIES

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Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
225184	Nº 125249

Page 1 of 1

Client Name: Paterson Group
Contact Name: Mark D'Arcy
Address: 154 Colonnade Rd. S.
Telephone:

Project Ref: PE2144
Quote #:
PO #: 27430
E-mail: mdarcy@patersongroup.ca

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

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

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

Required Analysis

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken: Date	Sample Taken: Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)
1	BH5-AU1	S		1	June 12/20	AM				X	X	X	
2	BH5-SS2	S		2	↓	↓	X						
3													
4													
5													
6													
7													
8													
9													
10													

Comments:

Method of Delivery: Paracel

Relinquished By (Sign):	Received By Driver/Depot:	Received at Lab: Dimeepan Dahmoli	Verified By:
Relinquished By (Print): Nick Sullivan	Date/Time: 12/06/20 1:15	Date/Time: JUN 16, 2020 02:52	Date/Time: 16 Jun 2020
Date/Time: June 12/20	Temperature: °C	Temperature: 11.0 °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: 62736
Project: PE2144
Custody:

Report Date: 8-Apr-2025
Order Date: 2-Apr-2025

Order #: 2514307

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

Paracel ID	Client ID
2514307-01	BH1-25-AU2
2514307-02	BH2-25-AU1
2514307-03	BH3-25-AU1
2514307-04	BH4-25-AU2
2514307-05	BH4-25-SS3+SS4
2514307-06	DUP1-25

Approved By:



Mark Foto, M.Sc.
Laboratory Director

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Boron, available	MOE (HWE), EPA 200.8 - ICP-MS	8-Apr-25	8-Apr-25
Chromium, hexavalent - soil	MOE E3056 - Extraction, colourimetric	4-Apr-25	4-Apr-25
Conductivity	MOE E3138 - probe @25 °C, water ext	4-Apr-25	4-Apr-25
Mercury by CVAA	EPA 7471B - CVAA, digestion	4-Apr-25	4-Apr-25
pH, soil	EPA 150.1 - pH probe @ 25 °C, CaCl buffered ext.	7-Apr-25	7-Apr-25
PHC F1	CWS Tier 1 - P&T GC-FID	4-Apr-25	7-Apr-25
PHC F4G (gravimetric)	CWS Tier 1 - Extraction Gravimetric	7-Apr-25	8-Apr-25
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	4-Apr-25	5-Apr-25
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	4-Apr-25	4-Apr-25
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	4-Apr-25	6-Apr-25
REG 153: VOCs by P&T GC/MS	EPA 8260 - P&T GC-MS	4-Apr-25	7-Apr-25
SAR	Calculated	4-Apr-25	4-Apr-25
Solids, %	CWS Tier 1 - Gravimetric	4-Apr-25	7-Apr-25

Certificate of Analysis

Report Date: 08-Apr-2025

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

Order Date: 2-Apr-2025

Client PO: **62736**

Project Description: PE2144

	Client ID:	BH1-25-AU2	BH2-25-AU1	BH3-25-AU1	BH4-25-AU2	-	-
	Sample Date:	01-Apr-25 09:00	01-Apr-25 09:00	01-Apr-25 09:00	01-Apr-25 09:00		
	Sample ID:	2514307-01	2514307-02	2514307-03	2514307-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Physical Characteristics							
% Solids	0.1 % by Wt.	88.2	80.9	84.7	95.0	-	-
General Inorganics							
SAR	0.01 N/A	0.14	0.38	0.28	0.45	-	-
Conductivity	5 uS/cm	344	224	496	642	-	-
pH	0.05 pH Units	7.57	-	-	-	-	-
Metals							
Antimony	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Arsenic	1.0 ug/g	5.6	4.2	3.4	3.4	-	-
Barium	1.0 ug/g	172	168	332	139	-	-
Beryllium	0.5 ug/g	0.6	0.6	0.5	<0.5	-	-
Boron, available	0.5 ug/g	0.7	-	0.8	-	-	-
Boron	5.0 ug/g	17.1	15.5	14.2	22.2	-	-
Cadmium	0.5 ug/g	<0.5	<0.5	<0.5	<0.5	-	-
Chromium (VI)	0.2 ug/g	<0.2	<0.2	<0.2	<0.2	-	-
Chromium	5.0 ug/g	19.0	19.8	17.1	20.5	-	-
Cobalt	1.0 ug/g	6.7	5.2	5.9	7.7	-	-
Copper	5.0 ug/g	41.2	30.9	20.6	18.3	-	-
Lead	1.0 ug/g	49.8	42.1	18.3	46.7	-	-
Mercury	0.1 ug/g	<0.1	<0.1	<0.1	0.1	-	-
Molybdenum	1.0 ug/g	1.6	2.3	1.3	1.1	-	-
Nickel	5.0 ug/g	16.7	13.8	13.1	18.0	-	-
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	-	-

	Client ID:	BH1-25-AU2	BH2-25-AU1	BH3-25-AU1	BH4-25-AU2	-	-
	Sample Date:	01-Apr-25 09:00	01-Apr-25 09:00	01-Apr-25 09:00	01-Apr-25 09:00		
	Sample ID:	2514307-01	2514307-02	2514307-03	2514307-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Metals							
Vanadium	10.0 ug/g	22.8	22.9	21.1	17.2	-	-
Zinc	20.0 ug/g	64.5	85.3	42.8	47.5	-	-
Volatiles							
Acetone	0.50 ug/g	<0.50	<0.50	<0.50	<0.50	-	-
Benzene	0.02 ug/g	0.12	<0.02	0.08	<0.02	-	-
Bromodichloromethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Bromoform	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Bromomethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Carbon Tetrachloride	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Chlorobenzene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Chloroform	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Dibromochloromethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Dichlorodifluoromethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,2-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,3-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,4-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,1-Dichloroethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,2-Dichloroethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,1-Dichloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
cis-1,2-Dichloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
trans-1,2-Dichloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,2-Dichloropropane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
cis-1,3-Dichloropropylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
trans-1,3-Dichloropropylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,3-Dichloropropene, total	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-

	Client ID:	BH1-25-AU2	BH2-25-AU1	BH3-25-AU1	BH4-25-AU2	-	-
	Sample Date:	01-Apr-25 09:00	01-Apr-25 09:00	01-Apr-25 09:00	01-Apr-25 09:00		
	Sample ID:	2514307-01	2514307-02	2514307-03	2514307-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Volatiles							
Ethylbenzene	0.05 ug/g	0.08	<0.05	<0.05	<0.05	-	-
Ethylene dibromide (dibromoethane,	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Hexane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g	<0.50	<0.50	<0.50	<0.50	-	-
Methyl Isobutyl Ketone	0.50 ug/g	<0.50	<0.50	<0.50	<0.50	-	-
Methyl tert-butyl ether	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Methylene Chloride	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Styrene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,1,1,2-Tetrachloroethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,1,2,2-Tetrachloroethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Tetrachloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Toluene	0.05 ug/g	0.26	<0.05	0.16	<0.05	-	-
1,1,1-Trichloroethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,1,2-Trichloroethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Trichloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Trichlorofluoromethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Vinyl chloride	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	-	-
m,p-Xylenes	0.05 ug/g	0.40	0.06	0.21	0.12	-	-
o-Xylene	0.05 ug/g	0.24	<0.05	0.11	<0.05	-	-
Xylenes, total	0.05 ug/g	0.63	0.06	0.32	0.12	-	-
Dibromofluoromethane	Surrogate	104%	109%	105%	98.7%	-	-
Toluene-d8	Surrogate	106%	110%	108%	101%	-	-
4-Bromofluorobenzene	Surrogate	85.9%	88.1%	86.4%	82.1%	-	-
Hydrocarbons							
F1 PHCs (C6-C10)	7 ug/g	8	<7	7	9	-	-

	Client ID:	BH1-25-AU2	BH2-25-AU1	BH3-25-AU1	BH4-25-AU2	-	-
	Sample Date:	01-Apr-25 09:00	01-Apr-25 09:00	01-Apr-25 09:00	01-Apr-25 09:00		
	Sample ID:	2514307-01	2514307-02	2514307-03	2514307-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Hydrocarbons							
F2 PHCs (C10-C16)	4 ug/g	95	9	111	33	-	-
F3 PHCs (C16-C34)	8 ug/g	107	164	284	70	-	-
F4 PHCs (C34-C50)	6 ug/g	326 [2]	123 [2]	958 [2]	60	-	-
F4G PHCs (gravimetric)	50 ug/g	1270	420	2620	-	-	-
Semi-Volatiles							
Acenaphthene	0.02 ug/g	<0.02	0.04	<0.40 [1]	0.11	-	-
Acenaphthylene	0.02 ug/g	<0.02	0.08	<0.40 [1]	<0.02	-	-
Anthracene	0.02 ug/g	0.03	0.13	<0.40 [1]	0.10	-	-
Benzo [a] anthracene	0.02 ug/g	0.08	0.44	<0.40 [1]	0.17	-	-
Benzo [a] pyrene	0.02 ug/g	0.07	0.51	<0.40 [1]	0.18	-	-
Benzo [b] fluoranthene	0.02 ug/g	0.11	0.58	<0.40 [1]	0.22	-	-
Benzo [g,h,i] perylene	0.02 ug/g	0.04	0.24	<0.40 [1]	0.09	-	-
Benzo [k] fluoranthene	0.02 ug/g	0.03	0.20	<0.40 [1]	0.07	-	-
Chrysene	0.02 ug/g	0.09	0.43	<0.40 [1]	0.19	-	-
Dibenzo [a,h] anthracene	0.02 ug/g	<0.02	<0.02	<0.40 [1]	<0.02	-	-
Fluoranthene	0.02 ug/g	0.13	0.97	<0.40 [1]	0.52	-	-
Fluorene	0.02 ug/g	0.04	0.04	<0.40 [1]	0.07	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g	0.05	0.32	<0.40 [1]	0.12	-	-
1-Methylnaphthalene	0.02 ug/g	0.79	0.03	<0.40 [1]	0.11	-	-
2-Methylnaphthalene	0.02 ug/g	1.44	0.03	<0.40 [1]	0.03	-	-
Methylnaphthalene (1&2)	0.04 ug/g	2.23	0.06	<0.80 [1]	0.14	-	-
Naphthalene	0.01 ug/g	0.76	0.03	<0.20 [1]	0.08	-	-
Phenanthrene	0.02 ug/g	0.31	0.48	<0.40 [1]	0.44	-	-
Pyrene	0.02 ug/g	0.11	0.61	<0.40 [1]	0.32	-	-
2-Fluorobiphenyl	Surrogate	81.7%	79.2%	97.6% [1]	79.5%	-	-

	Client ID:	BH1-25-AU2	BH2-25-AU1	BH3-25-AU1	BH4-25-AU2	-	-
	Sample Date:	01-Apr-25 09:00	01-Apr-25 09:00	01-Apr-25 09:00	01-Apr-25 09:00		
	Sample ID:	2514307-01	2514307-02	2514307-03	2514307-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Semi-Volatiles							
Terphenyl-d14	Surrogate	79.2%	81.0%	107% [1]	79.8%	-	-

	Client ID:	BH4-25-SS3+SS4	DUP1-25			-	-
	Sample Date:	01-Apr-25 09:00	01-Apr-25 09:00				
	Sample ID:	2514307-05	2514307-06				
	Matrix:	Soil	Soil				
	MDL/Units						
Physical Characteristics							
% Solids	0.1 % by Wt.	94.0	86.7	-	-	-	-
General Inorganics							
SAR	0.01 N/A	0.11	0.24	-	-	-	-
Conductivity	5 uS/cm	1630	376	-	-	-	-
pH	0.05 pH Units	7.88	-	-	-	-	-
Metals							
Antimony	1.0 ug/g	<1.0	<1.0	-	-	-	-
Arsenic	1.0 ug/g	3.1	3.5	-	-	-	-
Barium	1.0 ug/g	197	138	-	-	-	-
Beryllium	0.5 ug/g	0.6	<0.5	-	-	-	-
Boron	5.0 ug/g	22.1	11.1	-	-	-	-
Cadmium	0.5 ug/g	<0.5	<0.5	-	-	-	-
Chromium (VI)	0.2 ug/g	<0.2	<0.2	-	-	-	-
Chromium	5.0 ug/g	25.8	16.3	-	-	-	-
Cobalt	1.0 ug/g	10.8	6.9	-	-	-	-
Copper	5.0 ug/g	21.3	22.2	-	-	-	-
Lead	1.0 ug/g	41.8	20.3	-	-	-	-
Mercury	0.1 ug/g	0.5	<0.1	-	-	-	-
Molybdenum	1.0 ug/g	1.8	1.4	-	-	-	-
Nickel	5.0 ug/g	23.1	14.6	-	-	-	-
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	18.5	23.0	-	-	-	-

	Client ID:	BH4-25-SS3+SS4	DUP1-25			-	-
	Sample Date:	01-Apr-25 09:00	01-Apr-25 09:00				
	Sample ID:	2514307-05	2514307-06				
	Matrix:	Soil	Soil				
	MDL/Units						
Metals							
Zinc	20.0 ug/g	50.2	46.3	-	-	-	-
Volatiles							
Acetone	0.50 ug/g	<0.50	<0.50	-	-	-	-
Benzene	0.02 ug/g	<0.02	0.08	-	-	-	-
Bromodichloromethane	0.05 ug/g	<0.05	<0.05	-	-	-	-
Bromoform	0.05 ug/g	<0.05	<0.05	-	-	-	-
Bromomethane	0.05 ug/g	<0.05	<0.05	-	-	-	-
Carbon Tetrachloride	0.05 ug/g	<0.05	<0.05	-	-	-	-
Chlorobenzene	0.05 ug/g	<0.05	<0.05	-	-	-	-
Chloroform	0.05 ug/g	<0.05	<0.05	-	-	-	-
Dibromochloromethane	0.05 ug/g	<0.05	<0.05	-	-	-	-
Dichlorodifluoromethane	0.05 ug/g	<0.05	<0.05	-	-	-	-
1,2-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	-	-	-	-
1,3-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	-	-	-	-
1,4-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	-	-	-	-
1,1-Dichloroethane	0.05 ug/g	<0.05	<0.05	-	-	-	-
1,2-Dichloroethane	0.05 ug/g	<0.05	<0.05	-	-	-	-
1,1-Dichloroethylene	0.05 ug/g	<0.05	<0.05	-	-	-	-
cis-1,2-Dichloroethylene	0.05 ug/g	<0.05	<0.05	-	-	-	-
trans-1,2-Dichloroethylene	0.05 ug/g	<0.05	<0.05	-	-	-	-
1,2-Dichloropropane	0.05 ug/g	<0.05	<0.05	-	-	-	-
cis-1,3-Dichloropropylene	0.05 ug/g	<0.05	<0.05	-	-	-	-
trans-1,3-Dichloropropylene	0.05 ug/g	<0.05	<0.05	-	-	-	-
1,3-Dichloropropene, total	0.05 ug/g	<0.05	<0.05	-	-	-	-
Ethylene dibromide (dibromoethane,	0.05 ug/g	<0.05	<0.05	-	-	-	-

	Client ID:	BH4-25-SS3+SS4	DUP1-25			-	-
	Sample Date:	01-Apr-25 09:00	01-Apr-25 09:00				
	Sample ID:	2514307-05	2514307-06				
	Matrix:	Soil	Soil				
	MDL/Units						
Volatiles							
Ethylbenzene	0.05 ug/g	<0.05	<0.05	-	-	-	-
Hexane	0.05 ug/g	<0.05	<0.05	-	-	-	-
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g	<0.50	<0.50	-	-	-	-
Methyl Isobutyl Ketone	0.50 ug/g	<0.50	<0.50	-	-	-	-
Methyl tert-butyl ether	0.05 ug/g	<0.05	<0.05	-	-	-	-
Methylene Chloride	0.05 ug/g	<0.05	<0.05	-	-	-	-
Styrene	0.05 ug/g	<0.05	<0.05	-	-	-	-
1,1,1,2-Tetrachloroethane	0.05 ug/g	<0.05	<0.05	-	-	-	-
1,1,2,2-Tetrachloroethane	0.05 ug/g	<0.05	<0.05	-	-	-	-
Tetrachloroethylene	0.05 ug/g	<0.05	<0.05	-	-	-	-
Toluene	0.05 ug/g	<0.05	0.16	-	-	-	-
1,1,1-Trichloroethane	0.05 ug/g	<0.05	<0.05	-	-	-	-
1,1,2-Trichloroethane	0.05 ug/g	<0.05	<0.05	-	-	-	-
Trichloroethylene	0.05 ug/g	<0.05	<0.05	-	-	-	-
Trichlorofluoromethane	0.05 ug/g	<0.05	<0.05	-	-	-	-
Vinyl chloride	0.02 ug/g	<0.02	<0.02	-	-	-	-
m,p-Xylenes	0.05 ug/g	0.17	0.21	-	-	-	-
o-Xylene	0.05 ug/g	0.06	0.12	-	-	-	-
Xylenes, total	0.05 ug/g	0.23	0.33	-	-	-	-
Toluene-d8	Surrogate	102%	106%	-	-	-	-
Dibromofluoromethane	Surrogate	93.7%	107%	-	-	-	-
4-Bromofluorobenzene	Surrogate	80.4%	84.4%	-	-	-	-
Hydrocarbons							
F1 PHCs (C6-C10)	7 ug/g	15	9	-	-	-	-
F2 PHCs (C10-C16)	4 ug/g	17	118	-	-	-	-

	Client ID:	BH4-25-SS3+SS4	DUP1-25			-	-
	Sample Date:	01-Apr-25 09:00	01-Apr-25 09:00				
	Sample ID:	2514307-05	2514307-06				
	Matrix:	Soil	Soil				
	MDL/Units						
Hydrocarbons							
F3 PHCs (C16-C34)	8 ug/g	44	337	-	-	-	-
F4 PHCs (C34-C50)	6 ug/g	35	1010 [2]	-	-	-	-
F4G PHCs (gravimetric)	50 ug/g	-	2880	-	-	-	-
Semi-Volatiles							
Acenaphthene	0.02 ug/g	<0.02	<0.40 [1]	-	-	-	-
Acenaphthylene	0.02 ug/g	<0.02	<0.40 [1]	-	-	-	-
Anthracene	0.02 ug/g	<0.02	<0.40 [1]	-	-	-	-
Benzo [a] anthracene	0.02 ug/g	0.02	<0.40 [1]	-	-	-	-
Benzo [a] pyrene	0.02 ug/g	0.02	<0.40 [1]	-	-	-	-
Benzo [b] fluoranthene	0.02 ug/g	0.03	<0.40 [1]	-	-	-	-
Benzo [g,h,i] perylene	0.02 ug/g	<0.02	<0.40 [1]	-	-	-	-
Benzo [k] fluoranthene	0.02 ug/g	<0.02	<0.40 [1]	-	-	-	-
Chrysene	0.02 ug/g	0.03	<0.40 [1]	-	-	-	-
Dibenzo [a,h] anthracene	0.02 ug/g	<0.02	<0.40 [1]	-	-	-	-
Fluoranthene	0.02 ug/g	0.05	<0.40 [1]	-	-	-	-
Fluorene	0.02 ug/g	<0.02	<0.40 [1]	-	-	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g	<0.02	<0.40 [1]	-	-	-	-
1-Methylnaphthalene	0.02 ug/g	0.03	<0.40 [1]	-	-	-	-
2-Methylnaphthalene	0.02 ug/g	0.02	<0.40 [1]	-	-	-	-
Methylnaphthalene (1&2)	0.04 ug/g	0.05	<0.80 [1]	-	-	-	-
Naphthalene	0.01 ug/g	0.02	<0.20 [1]	-	-	-	-
Phenanthrene	0.02 ug/g	0.03	<0.40 [1]	-	-	-	-
Pyrene	0.02 ug/g	0.03	<0.40 [1]	-	-	-	-
2-Fluorobiphenyl	Surrogate	89.3%	77.1% [1]	-	-	-	-
Terphenyl-d14	Surrogate	88.6%	84.4% [1]	-	-	-	-

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, available	ND	0.5	ug/g					
Boron	ND	5.0	ug/g					
Cadmium	ND	0.5	ug/g					
Chromium (VI)	ND	0.2	ug/g					
Chromium	ND	5.0	ug/g					
Cobalt	ND	1.0	ug/g					
Copper	ND	5.0	ug/g					
Lead	ND	1.0	ug/g					
Mercury	ND	0.1	ug/g					
Molybdenum	ND	1.0	ug/g					
Nickel	ND	5.0	ug/g					
Selenium	ND	1.0	ug/g					
Silver	ND	0.3	ug/g					
Thallium	ND	1.0	ug/g					
Uranium	ND	1.0	ug/g					
Vanadium	ND	10.0	ug/g					
Zinc	ND	20.0	ug/g					
Semi-Volatiles								
Acenaphthene	ND	0.02	ug/g					
Acenaphthylene	ND	0.02	ug/g					

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Anthracene	ND	0.02	ug/g					
Benzo [a] anthracene	ND	0.02	ug/g					
Benzo [a] pyrene	ND	0.02	ug/g					
Benzo [b] fluoranthene	ND	0.02	ug/g					
Benzo [g,h,i] perylene	ND	0.02	ug/g					
Benzo [k] fluoranthene	ND	0.02	ug/g					
Chrysene	ND	0.02	ug/g					
Dibenzo [a,h] anthracene	ND	0.02	ug/g					
Fluoranthene	ND	0.02	ug/g					
Fluorene	ND	0.02	ug/g					
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g					
1-Methylnaphthalene	ND	0.02	ug/g					
2-Methylnaphthalene	ND	0.02	ug/g					
Methylnaphthalene (1&2)	ND	0.04	ug/g					
Naphthalene	ND	0.01	ug/g					
Phenanthrene	ND	0.02	ug/g					
Pyrene	ND	0.02	ug/g					
Surrogate: 2-Fluorobiphenyl	*1.27*		*%*	*95.6*	*50-140*			
Surrogate: Terphenyl-d14	*1.26*		*%*	*94.8*	*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					
1,2-Dichlorobenzene	ND	0.05	ug/g					
1,3-Dichlorobenzene	ND	0.05	ug/g					

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
1,4-Dichlorobenzene	ND	0.05	ug/g					
1,1-Dichloroethane	ND	0.05	ug/g					
1,2-Dichloroethane	ND	0.05	ug/g					
1,1-Dichloroethylene	ND	0.05	ug/g					
cis-1,2-Dichloroethylene	ND	0.05	ug/g					
trans-1,2-Dichloroethylene	ND	0.05	ug/g					
1,2-Dichloropropane	ND	0.05	ug/g					
cis-1,3-Dichloropropylene	ND	0.05	ug/g					
trans-1,3-Dichloropropylene	ND	0.05	ug/g					
1,3-Dichloropropene, total	ND	0.05	ug/g					
Ethylbenzene	ND	0.05	ug/g					
Ethylene dibromide (dibromoethane, 1,2-)	ND	0.05	ug/g					
Hexane	ND	0.05	ug/g					
Methyl Ethyl Ketone (2-Butanone)	ND	0.50	ug/g					
Methyl Isobutyl Ketone	ND	0.50	ug/g					
Methyl tert-butyl ether	ND	0.05	ug/g					
Methylene Chloride	ND	0.05	ug/g					
Styrene	ND	0.05	ug/g					
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g					
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g					
Tetrachloroethylene	ND	0.05	ug/g					
Toluene	ND	0.05	ug/g					
1,1,1-Trichloroethane	ND	0.05	ug/g					
1,1,2-Trichloroethane	ND	0.05	ug/g					
Trichloroethylene	ND	0.05	ug/g					
Trichlorofluoromethane	ND	0.05	ug/g					
Vinyl chloride	ND	0.02	ug/g					
m,p-Xylenes	ND	0.05	ug/g					
o-Xylene	ND	0.05	ug/g					
Xylenes, total	ND	0.05	ug/g					
Surrogate: 4-Bromofluorobenzene	*6.46*		*%*	*80.7*	*50-140*			
Surrogate: Dibromofluoromethane	*8.04*		*%*	*100*	*50-140*			

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: Toluene-d8	*7.64*		*%*	*95.5*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
SAR	0.27	0.01	N/A	0.25			7.7	30	
Conductivity	153	5	uS/cm	156			1.9	5	
pH	7.42	0.05	pH Units	7.37			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)	11	8	ug/g	12			6.3	30	
F4 PHCs (C34-C50)	ND	6	ug/g	ND			NC	30	
Metals									
Antimony	ND	1.0	ug/g	ND			NC	30	
Arsenic	4.8	1.0	ug/g	5.6			14.8	30	
Barium	147	1.0	ug/g	172			15.8	30	
Beryllium	0.5	0.5	ug/g	0.6			12.2	30	
Boron, available	ND	0.5	ug/g	ND			NC	35	
Boron	13.0	5.0	ug/g	17.1			27.2	30	
Cadmium	ND	0.5	ug/g	ND			NC	30	
Chromium (VI)	ND	0.2	ug/g	ND			NC	35	
Chromium	15.2	5.0	ug/g	19.0			22.3	30	
Cobalt	5.4	1.0	ug/g	6.7			21.7	30	
Copper	38.9	5.0	ug/g	41.2			6.0	30	
Lead	39.5	1.0	ug/g	49.8			23.1	30	
Mercury	ND	0.1	ug/g	ND			NC	30	
Molybdenum	1.3	1.0	ug/g	1.6			19.9	30	
Nickel	13.0	5.0	ug/g	16.7			24.7	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	17.5	10.0	ug/g	22.8			26.1	30	
Zinc	57.7	20.0	ug/g	64.5			11.1	30	

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Physical Characteristics									
% Solids	83.0	0.1	% by Wt.	84.0			1.2	25	
Semi-Volatiles									
Acenaphthene	ND	0.02	ug/g	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g	ND			NC	40	
Anthracene	0.029	0.02	ug/g	0.035			18.7	40	
Benzo [a] anthracene	0.080	0.02	ug/g	0.077			3.9	40	
Benzo [a] pyrene	0.076	0.02	ug/g	0.073			3.7	40	
Benzo [b] fluoranthene	0.110	0.02	ug/g	0.115			4.3	40	
Benzo [g,h,i] perylene	0.055	0.02	ug/g	0.043			25.4	40	
Benzo [k] fluoranthene	0.030	0.02	ug/g	0.026			14.2	40	
Chrysene	0.116	0.02	ug/g	0.091			24.7	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g	ND			NC	40	
Fluoranthene	0.124	0.02	ug/g	0.126			1.8	40	
Fluorene	0.037	0.02	ug/g	0.040			9.1	40	
Indeno [1,2,3-cd] pyrene	0.055	0.02	ug/g	0.046			19.5	40	
1-Methylnaphthalene	0.730	0.02	ug/g	0.792			8.2	40	
2-Methylnaphthalene	1.36	0.02	ug/g	1.44			5.9	40	
Naphthalene	0.716	0.01	ug/g	0.762			6.2	40	
Phenanthrene	0.281	0.02	ug/g	0.307			8.8	40	
Pyrene	0.106	0.02	ug/g	0.106			0.1	40	
Surrogate: 2-Fluorobiphenyl	*1.24*		*%*		*81.8*	*50-140*			
Surrogate: Terphenyl-d14	*1.20*		*%*		*79.4*	*50-140*			
Volatiles									
Acetone	ND	0.50	ug/g	ND			NC	50	
Benzene	ND	0.02	ug/g	ND			NC	50	
Bromodichloromethane	ND	0.05	ug/g	ND			NC	50	
Bromoform	ND	0.05	ug/g	ND			NC	50	
Bromomethane	ND	0.05	ug/g	ND			NC	50	
Carbon Tetrachloride	ND	0.05	ug/g	ND			NC	50	
Chlorobenzene	ND	0.05	ug/g	ND			NC	50	

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Chloroform	ND	0.05	ug/g	ND			NC	50	
Dibromochloromethane	ND	0.05	ug/g	ND			NC	50	
Dichlorodifluoromethane	ND	0.05	ug/g	ND			NC	50	
1,2-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,3-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,4-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,1-Dichloroethane	ND	0.05	ug/g	ND			NC	50	
1,2-Dichloroethane	ND	0.05	ug/g	ND			NC	50	
1,1-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
cis-1,2-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
trans-1,2-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
1,2-Dichloropropane	ND	0.05	ug/g	ND			NC	50	
cis-1,3-Dichloropropylene	ND	0.05	ug/g	ND			NC	50	
trans-1,3-Dichloropropylene	ND	0.05	ug/g	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g	ND			NC	50	
Ethylene dibromide (dibromoethane, 1,2-)	ND	0.05	ug/g	ND			NC	50	
Hexane	ND	0.05	ug/g	ND			NC	50	
Methyl Ethyl Ketone (2-Butanone)	ND	0.50	ug/g	ND			NC	50	
Methyl Isobutyl Ketone	ND	0.50	ug/g	ND			NC	50	
Methyl tert-butyl ether	ND	0.05	ug/g	ND			NC	50	
Methylene Chloride	ND	0.05	ug/g	ND			NC	50	
Styrene	ND	0.05	ug/g	ND			NC	50	
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g	ND			NC	50	
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g	ND			NC	50	
Tetrachloroethylene	ND	0.05	ug/g	ND			NC	50	
Toluene	ND	0.05	ug/g	ND			NC	50	
1,1,1-Trichloroethane	ND	0.05	ug/g	ND			NC	50	
1,1,2-Trichloroethane	ND	0.05	ug/g	ND			NC	50	
Trichloroethylene	ND	0.05	ug/g	ND			NC	50	
Trichlorofluoromethane	ND	0.05	ug/g	ND			NC	50	
Vinyl chloride	ND	0.02	ug/g	ND			NC	50	

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
m,p-Xylenes	ND	0.05	ug/g	ND			NC	50	
o-Xylene	ND	0.05	ug/g	ND			NC	50	
Surrogate: 4-Bromofluorobenzene	*7.78*		*%*		*84.2*	*50-140*			
Surrogate: Dibromofluoromethane	*10.0*		*%*		*108*	*50-140*			
Surrogate: Toluene-d8	*9.39*		*%*		*102*	*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)	187	7	ug/g	ND	109	85-115			
F2 PHCs (C10-C16)	114	4	ug/g	ND	123	60-140			
F3 PHCs (C16-C34)	304	8	ug/g	12	129	60-140			
F4 PHCs (C34-C50)	178	6	ug/g	ND	125	60-140			
F4G PHCs (gravimetric)	860	50	ug/g	ND	86.0	80-120			
Metals									
Arsenic	62.0	1.0	ug/g	ND	124	70-130			
Barium	55.5	1.0	ug/g	ND	111	70-130			
Beryllium	64.0	0.5	ug/g	ND	128	70-130			
Boron, available	4.18	0.5	ug/g	ND	83.7	60-140			
Boron	56.6	5.0	ug/g	ND	113	70-130			
Cadmium	49.5	0.5	ug/g	ND	99.0	70-130			
Chromium (VI)	5.1	0.2	ug/g	ND	102	66-118			
Chromium	52.4	5.0	ug/g	ND	105	70-130			
Cobalt	64.0	1.0	ug/g	ND	128	70-130			
Copper	62.8	5.0	ug/g	ND	126	70-130			
Lead	58.7	1.0	ug/g	ND	117	70-130			
Mercury	1.40	0.1	ug/g	ND	93.5	70-130			
Molybdenum	60.1	1.0	ug/g	ND	120	70-130			
Nickel	64.7	5.0	ug/g	ND	129	70-130			
Selenium	59.9	1.0	ug/g	ND	120	70-130			
Silver	55.9	0.3	ug/g	ND	112	70-130			
Thallium	62.2	1.0	ug/g	ND	124	70-130			
Uranium	64.7	1.0	ug/g	ND	129	70-130			
Vanadium	52.0	10.0	ug/g	ND	104	70-130			
Zinc	61.9	20.0	ug/g	ND	124	70-130			
Semi-Volatiles									
Acenaphthene	0.187	0.02	ug/g	ND	98.8	50-140			
Acenaphthylene	0.156	0.02	ug/g	ND	82.8	50-140			
Anthracene	0.203	0.02	ug/g	0.035	88.8	50-140			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Benzo [a] anthracene	0.270	0.02	ug/g	0.077	102	50-140			
Benzo [a] pyrene	0.242	0.02	ug/g	0.073	89.5	50-140			
Benzo [b] fluoranthene	0.302	0.02	ug/g	0.115	99.3	50-140			
Benzo [g,h,i] perylene	0.163	0.02	ug/g	0.043	63.9	50-140			
Benzo [k] fluoranthene	0.196	0.02	ug/g	0.026	89.7	50-140			
Chrysene	0.280	0.02	ug/g	0.091	100	50-140			
Dibenzo [a,h] anthracene	0.154	0.02	ug/g	ND	81.3	50-140			
Fluoranthene	0.362	0.02	ug/g	0.126	125	50-140			
Fluorene	0.225	0.02	ug/g	0.040	97.6	50-140			
Indeno [1,2,3-cd] pyrene	0.198	0.02	ug/g	0.046	80.7	50-140			
1-Methylnaphthalene	0.135	0.02	ug/g	ND	81.2	50-140			
2-Methylnaphthalene	0.193	0.02	ug/g	ND	116	50-140			
Naphthalene	0.132	0.01	ug/g	ND	78.9	50-140			
Phenanthrene	0.547	0.02	ug/g	0.307	127	50-140			
Pyrene	0.297	0.02	ug/g	0.106	101	50-140			
Surrogate: 2-Fluorobiphenyl	*1.42*		*%*		*93.9*	*50-140*			
Surrogate: Terphenyl-d14	*1.40*		*%*		*92.7*	*50-140*			
Volatiles									
Acetone	11.2	0.50	ug/g	ND	112	50-140			
Benzene	3.55	0.02	ug/g	ND	88.8	60-130			
Bromodichloromethane	3.48	0.05	ug/g	ND	87.1	60-130			
Bromoform	2.98	0.05	ug/g	ND	74.4	60-130			
Bromomethane	3.53	0.05	ug/g	ND	88.3	50-140			
Carbon Tetrachloride	3.15	0.05	ug/g	ND	78.7	60-130			
Chlorobenzene	3.11	0.05	ug/g	ND	77.7	60-130			
Chloroform	3.59	0.05	ug/g	ND	89.9	60-130			
Dibromochloromethane	2.71	0.05	ug/g	ND	67.7	60-130			
Dichlorodifluoromethane	4.46	0.05	ug/g	ND	111	50-140			
1,2-Dichlorobenzene	3.28	0.05	ug/g	ND	82.1	60-130			
1,3-Dichlorobenzene	3.20	0.05	ug/g	ND	79.9	60-130			
1,4-Dichlorobenzene	3.30	0.05	ug/g	ND	82.5	60-130			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
1,1-Dichloroethane	4.63	0.05	ug/g	ND	116	60-130			
1,2-Dichloroethane	3.84	0.05	ug/g	ND	96.1	60-130			
1,1-Dichloroethylene	4.02	0.05	ug/g	ND	100	60-130			
cis-1,2-Dichloroethylene	3.70	0.05	ug/g	ND	92.5	60-130			
trans-1,2-Dichloroethylene	4.11	0.05	ug/g	ND	103	60-130			
1,2-Dichloropropane	3.84	0.05	ug/g	ND	95.9	60-130			
cis-1,3-Dichloropropylene	3.61	0.05	ug/g	ND	90.3	60-130			
trans-1,3-Dichloropropylene	3.92	0.05	ug/g	ND	98.0	60-130			
Ethylbenzene	3.38	0.05	ug/g	ND	84.6	60-130			
Ethylene dibromide (dibromoethane, 1,2-)	2.70	0.05	ug/g	ND	67.5	60-130			
Hexane	4.65	0.05	ug/g	ND	116	60-130			
Methyl Ethyl Ketone (2-Butanone)	11.2	0.50	ug/g	ND	112	50-140			
Methyl Isobutyl Ketone	10.0	0.50	ug/g	ND	100	50-140			
Methyl tert-butyl ether	12.0	0.05	ug/g	ND	120	50-140			
Methylene Chloride	4.51	0.05	ug/g	ND	113	60-130			
Styrene	3.39	0.05	ug/g	ND	84.7	60-130			
1,1,1,2-Tetrachloroethane	2.70	0.05	ug/g	ND	67.6	60-130			
1,1,2,2-Tetrachloroethane	2.70	0.05	ug/g	ND	67.5	60-130			
Tetrachloroethylene	2.60	0.05	ug/g	ND	65.1	60-130			
Toluene	3.34	0.05	ug/g	ND	83.5	60-130			
1,1,1-Trichloroethane	3.51	0.05	ug/g	ND	87.8	60-130			
1,1,2-Trichloroethane	3.66	0.05	ug/g	ND	91.5	60-130			
Trichloroethylene	3.28	0.05	ug/g	ND	82.1	60-130			
Trichlorofluoromethane	4.28	0.05	ug/g	ND	107	50-140			
Vinyl chloride	3.77	0.02	ug/g	ND	94.3	50-140			
m,p-Xylenes	6.53	0.05	ug/g	ND	81.7	60-130			
o-Xylene	3.39	0.05	ug/g	ND	84.8	60-130			
Surrogate: 4-Bromofluorobenzene	*6.28*		*%*		*78.5*	*50-140*			
Surrogate: Dibromofluoromethane	*7.00*		*%*		*87.6*	*50-140*			
Surrogate: Toluene-d8	*7.36*		*%*		*92.0*	*50-140*			

Qualifier Notes:

Sample Qualifiers :

1: Elevated Reporting Limit due to matrix interference.

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

Applies to Samples: BH1-25-AU2, BH2-25-AU1, BH3-25-AU1, DUP1-25

Sample Data Revisions:

None

Certificate of Analysis

Report Date: 08-Apr-2025

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

Order Date: 2-Apr-2025

Client PO: 62736

Project Description: PE2144

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.

Any use of these results implies your agreement that our total liabilty in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.

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Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2514307	

Client Name: Paterson Group	Project Ref: PE2144	Page 1 of 1
Contact Name: Jesse Andrechek	Quote #:	Turnaround Time
Address: 9 Auriga Drive, Ottawa	PO #: 62736	☐ 1 day ☐ 3 day ☐ 2 day ☒ Regular
Telephone: 613-226-7381	E-mail: jandrechek@patersongroup.ca	Date Required:

☒ REG 153/04 ☐ REG 406/19

☐ Table 1 ☐ Agri/Other ☐ Med/Fine
☐ Table 2 ☒ Res/Park ☒ Coarse
☒ Table 3 ☐ Ind/Comm
☒ Table 7
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	EC/SAR	pH
1	BH1-25-AU2	S		2		1-APR/25		X	X	X	X	X	X	X	X
2	BH2-25-AU1	S		2				X	X	X	X	X	X	X	
3	BH3-25-AU1	S		2				X	X	X	X	X	X	X	
4	BH4-25-AU2	S		2				X	X	X	X	X	X	X	
5	BH4-25-SS3+SS4	S		2				X	X	X	X	X	X	X	X
6	DUP1-25	S		2				X	X	X	X	X	X	X	
7															
8															
9															
10															

Required Analysis

Comments:

Method of Delivery: Paracel Courier

Relinquished By (Sign):	Received at Depot:	Received at Lab:	Verified By: SP
Relinquished By (Print): Jesse Andrechek	Date/Time:	Date/Time: Apr 2. 16:20	Date/Time: Apr 3 2025 9:28am
Date/Time: 2-APR/25 (3PM	Temperature: °C	Temperature: 6.4	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: 62781
Project: PE2144
Custody:

Report Date: 10-Apr-2025
Order Date: 4-Apr-2025

Order #: 2514468

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

Paracel ID	Client ID
2514468-01	BH5-25-AU1
2514468-02	BH5-25-AU2
2514468-03	BH6-25-AU1

Approved By:



Dale Robertson, BSc
Senior Technical Advisor

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Boron, available	MOE (HWE), EPA 200.8 - ICP-MS	8-Apr-25	8-Apr-25
Chromium, hexavalent - soil	MOE E3056 - Extraction, colourimetric	7-Apr-25	8-Apr-25
Conductivity	MOE E3138 - probe @25 °C, water ext	8-Apr-25	8-Apr-25
Mercury by CVAA	EPA 7471B - CVAA, digestion	8-Apr-25	8-Apr-25
PHC F1	CWS Tier 1 - P&T GC-FID	8-Apr-25	8-Apr-25
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	7-Apr-25	8-Apr-25
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	8-Apr-25	8-Apr-25
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	7-Apr-25	10-Apr-25
REG 153: VOCs by P&T GC/MS	EPA 8260 - P&T GC-MS	8-Apr-25	8-Apr-25
SAR	Calculated	8-Apr-25	9-Apr-25
Solids, %	CWS Tier 1 - Gravimetric	7-Apr-25	8-Apr-25

Certificate of Analysis

Report Date: 10-Apr-2025

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

Order Date: 4-Apr-2025

Client PO: 62781

Project Description: PE2144

	Client ID:	BH5-25-AU1	BH5-25-AU2	BH6-25-AU1	-	-	-
	Sample Date:	02-Apr-25 09:00	02-Apr-25 09:00	02-Apr-25 09:00	-		
	Sample ID:	2514468-01	2514468-02	2514468-03	-		
	Matrix:	Soil	Soil	Soil	-		
	MDL/Units						
Physical Characteristics							
% Solids	0.1 % by Wt.	89.7	93.3	87.6	-	-	-
General Inorganics							
SAR	0.01 N/A	0.54	0.46	0.16	-	-	-
Conductivity	5 uS/cm	272	240	189	-	-	-
Metals							
Antimony	1.0 ug/g	23.5	4.2	<1.0	-	-	-
Arsenic	1.0 ug/g	3.0	1.7	1.7	-	-	-
Barium	1.0 ug/g	398	721	403	-	-	-
Beryllium	0.5 ug/g	<0.5	<0.5	<0.5	-	-	-
Boron	5.0 ug/g	33.2	18.0	13.4	-	-	-
Boron, available	0.5 ug/g	2.4	1.6	0.8	-	-	-
Cadmium	0.5 ug/g	<0.5	<0.5	<0.5	-	-	-
Chromium (VI)	0.2 ug/g	<0.2	<0.2	<0.2	-	-	-
Chromium	5.0 ug/g	17.3	13.0	11.4	-	-	-
Cobalt	1.0 ug/g	16.3	4.8	2.9	-	-	-
Copper	5.0 ug/g	21.0	9.7	7.1	-	-	-
Lead	1.0 ug/g	214	37.0	9.7	-	-	-
Mercury	0.1 ug/g	<0.1	<0.1	<0.1	-	-	-
Molybdenum	1.0 ug/g	<1.0	<1.0	<1.0	-	-	-
Nickel	5.0 ug/g	17.0	10.0	7.5	-	-	-
Selenium	1.0 ug/g	<1.0	<1.0	<1.0	-	-	-
Silver	0.3 ug/g	<0.3	<0.3	<0.3	-	-	-
Thallium	1.0 ug/g	<1.0	<1.0	<1.0	-	-	-
Uranium	1.0 ug/g	<1.0	<1.0	<1.0	-	-	-
Vanadium	10.0 ug/g	16.6	11.6	10.9	-	-	-

	Client ID:	BH5-25-AU1	BH5-25-AU2	BH6-25-AU1	-		
	Sample Date:	02-Apr-25 09:00	02-Apr-25 09:00	02-Apr-25 09:00	-	-	-
	Sample ID:	2514468-01	2514468-02	2514468-03	-		
	Matrix:	Soil	Soil	Soil	-		
	MDL/Units						
Metals							
Zinc	20.0 ug/g	317	63.8	<20.0	-	-	-
Volatiles							
Acetone	0.50 ug/g	<0.50	<0.50	<0.50	-	-	-
Benzene	0.02 ug/g	<0.02	<0.02	<0.02	-	-	-
Bromodichloromethane	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
Bromoform	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
Bromomethane	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
Carbon Tetrachloride	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
Chlorobenzene	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
Chloroform	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
Dibromochloromethane	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
Dichlorodifluoromethane	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
1,2-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
1,3-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
1,4-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
1,1-Dichloroethane	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
1,2-Dichloroethane	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
1,1-Dichloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
cis-1,2-Dichloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
trans-1,2-Dichloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
1,2-Dichloropropane	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
cis-1,3-Dichloropropylene	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
trans-1,3-Dichloropropylene	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
1,3-Dichloropropene, total	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
Ethylbenzene	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-

	Client ID:	BH5-25-AU1	BH5-25-AU2	BH6-25-AU1	-	-	-
	Sample Date:	02-Apr-25 09:00	02-Apr-25 09:00	02-Apr-25 09:00	-		
	Sample ID:	2514468-01	2514468-02	2514468-03	-		
	Matrix:	Soil	Soil	Soil	-		
	MDL/Units						
Volatiles							
Ethylene dibromide (dibromoethane,	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
Hexane	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g	<0.50	<0.50	<0.50	-	-	-
Methyl Isobutyl Ketone	0.50 ug/g	<0.50	<0.50	<0.50	-	-	-
Methyl tert-butyl ether	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
Methylene Chloride	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
Styrene	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
1,1,1,2-Tetrachloroethane	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
1,1,2,2-Tetrachloroethane	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
Tetrachloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
Toluene	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
1,1,1-Trichloroethane	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
1,1,2-Trichloroethane	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
Trichloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
Trichlorofluoromethane	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
Vinyl chloride	0.02 ug/g	<0.02	<0.02	<0.02	-	-	-
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	-	-	-
Xylenes, total	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
Toluene-d8	Surrogate	103%	101%	105%	-	-	-
Dibromofluoromethane	Surrogate	108%	107%	107%	-	-	-
4-Bromofluorobenzene	Surrogate	82.0%	79.8%	83.3%	-	-	-
Hydrocarbons							
F1 PHCs (C6-C10)	7 ug/g	<7	<7	<7	-	-	-
F2 PHCs (C10-C16)	4 ug/g	20	<4	<4	-	-	-

	Client ID:	BH5-25-AU1	BH5-25-AU2	BH6-25-AU1	-	-	-
	Sample Date:	02-Apr-25 09:00	02-Apr-25 09:00	02-Apr-25 09:00	-		
	Sample ID:	2514468-01	2514468-02	2514468-03	-		
	Matrix:	Soil	Soil	Soil	-		
	MDL/Units						
Hydrocarbons							
F3 PHCs (C16-C34)	8 ug/g	166 [1]	41	31	-	-	-
F4 PHCs (C34-C50)	6 ug/g	85	19	19	-	-	-
Semi-Volatiles							
Acenaphthene	0.02 ug/g	0.70	0.11	<0.02	-	-	-
Acenaphthylene	0.02 ug/g	0.08	<0.02	<0.02	-	-	-
Anthracene	0.02 ug/g	2.33	0.44	0.08	-	-	-
Benzo [a] anthracene	0.02 ug/g	5.07	1.14	0.30	-	-	-
Benzo [a] pyrene	0.02 ug/g	4.67	1.10	0.27	-	-	-
Benzo [b] fluoranthene	0.02 ug/g	6.32	1.35	0.35	-	-	-
Benzo [g,h,i] perylene	0.02 ug/g	2.46	0.57	0.15	-	-	-
Benzo [k] fluoranthene	0.02 ug/g	2.12	0.48	0.12	-	-	-
Chrysene	0.02 ug/g	5.43	1.14	0.30	-	-	-
Dibenzo [a,h] anthracene	0.02 ug/g	<0.02	<0.02	<0.02	-	-	-
Fluoranthene	0.02 ug/g	14.0	3.16	0.71	-	-	-
Fluorene	0.02 ug/g	0.93	0.15	0.02	-	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g	3.00	0.72	0.17	-	-	-
1-Methylnaphthalene	0.02 ug/g	0.16	0.02	<0.02	-	-	-
2-Methylnaphthalene	0.02 ug/g	0.23	0.03	<0.02	-	-	-
Methylnaphthalene (1&2)	0.04 ug/g	0.39	0.05	<0.04	-	-	-
Naphthalene	0.01 ug/g	0.54	0.06	<0.01	-	-	-
Phenanthrene	0.02 ug/g	8.43	1.69	0.32	-	-	-
Pyrene	0.02 ug/g	8.40	1.76	0.47	-	-	-
2-Fluorobiphenyl	Surrogate	96.4%	101%	92.2%	-	-	-
Terphenyl-d14	Surrogate	108%	101%	95.2%	-	-	-

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					
Metals								
Antimony	ND	1.0	ug/g					
Arsenic	ND	1.0	ug/g					
Barium	ND	1.0	ug/g					
Beryllium	ND	0.5	ug/g					
Boron, available	ND	0.5	ug/g					
Boron	ND	5.0	ug/g					
Cadmium	ND	0.5	ug/g					
Chromium (VI)	ND	0.2	ug/g					
Chromium	ND	5.0	ug/g					
Cobalt	ND	1.0	ug/g					
Copper	ND	5.0	ug/g					
Lead	ND	1.0	ug/g					
Mercury	ND	0.1	ug/g					
Molybdenum	ND	1.0	ug/g					
Nickel	ND	5.0	ug/g					
Selenium	ND	1.0	ug/g					
Silver	ND	0.3	ug/g					
Thallium	ND	1.0	ug/g					
Uranium	ND	1.0	ug/g					
Vanadium	ND	10.0	ug/g					
Zinc	ND	20.0	ug/g					
Semi-Volatiles								
Acenaphthene	ND	0.02	ug/g					
Acenaphthylene	ND	0.02	ug/g					
Anthracene	ND	0.02	ug/g					

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Benzo [a] anthracene	ND	0.02	ug/g					
Benzo [a] pyrene	ND	0.02	ug/g					
Benzo [b] fluoranthene	ND	0.02	ug/g					
Benzo [g,h,i] perylene	ND	0.02	ug/g					
Benzo [k] fluoranthene	ND	0.02	ug/g					
Chrysene	ND	0.02	ug/g					
Dibenzo [a,h] anthracene	ND	0.02	ug/g					
Fluoranthene	ND	0.02	ug/g					
Fluorene	ND	0.02	ug/g					
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g					
1-Methylnaphthalene	ND	0.02	ug/g					
2-Methylnaphthalene	ND	0.02	ug/g					
Methylnaphthalene (1&2)	ND	0.04	ug/g					
Naphthalene	ND	0.01	ug/g					
Phenanthrene	ND	0.02	ug/g					
Pyrene	ND	0.02	ug/g					
Surrogate: 2-Fluorobiphenyl	*1.12*		*%*	*83.8*	*50-140*			
Surrogate: Terphenyl-d14	*1.14*		*%*	*85.5*	*50-140*			
Volatiles								
Acetone	ND	0.50	ug/g					
Benzene	ND	0.02	ug/g					
Bromodichloromethane	ND	0.05	ug/g					
Bromoform	ND	0.05	ug/g					
Bromomethane	ND	0.05	ug/g					
Carbon Tetrachloride	ND	0.05	ug/g					
Chlorobenzene	ND	0.05	ug/g					
Chloroform	ND	0.05	ug/g					
Dibromochloromethane	ND	0.05	ug/g					
Dichlorodifluoromethane	ND	0.05	ug/g					
1,2-Dichlorobenzene	ND	0.05	ug/g					
1,3-Dichlorobenzene	ND	0.05	ug/g					
1,4-Dichlorobenzene	ND	0.05	ug/g					

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
1,1-Dichloroethane	ND	0.05	ug/g					
1,2-Dichloroethane	ND	0.05	ug/g					
1,1-Dichloroethylene	ND	0.05	ug/g					
cis-1,2-Dichloroethylene	ND	0.05	ug/g					
trans-1,2-Dichloroethylene	ND	0.05	ug/g					
1,2-Dichloropropane	ND	0.05	ug/g					
cis-1,3-Dichloropropylene	ND	0.05	ug/g					
trans-1,3-Dichloropropylene	ND	0.05	ug/g					
1,3-Dichloropropene, total	ND	0.05	ug/g					
Ethylbenzene	ND	0.05	ug/g					
Ethylene dibromide (dibromoethane, 1,2-)	ND	0.05	ug/g					
Hexane	ND	0.05	ug/g					
Methyl Ethyl Ketone (2-Butanone)	ND	0.50	ug/g					
Methyl Isobutyl Ketone	ND	0.50	ug/g					
Methyl tert-butyl ether	ND	0.05	ug/g					
Methylene Chloride	ND	0.05	ug/g					
Styrene	ND	0.05	ug/g					
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g					
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g					
Tetrachloroethylene	ND	0.05	ug/g					
Toluene	ND	0.05	ug/g					
1,1,1-Trichloroethane	ND	0.05	ug/g					
1,1,2-Trichloroethane	ND	0.05	ug/g					
Trichloroethylene	ND	0.05	ug/g					
Trichlorofluoromethane	ND	0.05	ug/g					
Vinyl chloride	ND	0.02	ug/g					
m,p-Xylenes	ND	0.05	ug/g					
o-Xylene	ND	0.05	ug/g					
Xylenes, total	ND	0.05	ug/g					
Surrogate: 4-Bromofluorobenzene	*6.76*		*%*	*84.5*	*50-140*			
Surrogate: Dibromofluoromethane	*8.08*		*%*	*101*	*50-140*			
Surrogate: Toluene-d8	*7.79*		*%*	*97.4*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
SAR	8.47	0.01	N/A	8.29			2.1	30	
Conductivity	1310	5	uS/cm	1300			0.5	5	
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g	ND			NC	40	
F2 PHCs (C10-C16)	18	4	ug/g	16			11.8	30	
F3 PHCs (C16-C34)	98	8	ug/g	70			33.3	30	QR-04
F4 PHCs (C34-C50)	33	6	ug/g	22			41.6	30	QR-04
Metals									
Antimony	ND	1.0	ug/g	ND			NC	30	
Arsenic	2.4	1.0	ug/g	2.9			18.0	30	
Barium	32.6	1.0	ug/g	40.6			22.0	30	
Beryllium	ND	0.5	ug/g	ND			NC	30	
Boron, available	ND	0.5	ug/g	ND			NC	35	
Boron	ND	5.0	ug/g	ND			NC	30	
Cadmium	ND	0.5	ug/g	ND			NC	30	
Chromium (VI)	0.2	0.2	ug/g	0.2			11.8	35	
Chromium	7.0	5.0	ug/g	8.5			19.2	30	
Cobalt	2.0	1.0	ug/g	2.4			20.2	30	
Copper	5.0	5.0	ug/g	6.4			24.8	30	
Lead	4.9	1.0	ug/g	6.0			19.9	30	
Mercury	ND	0.1	ug/g	ND			NC	30	
Molybdenum	1.2	1.0	ug/g	1.3			13.4	30	
Nickel	5.3	5.0	ug/g	7.3			NC	30	
Selenium	ND	1.0	ug/g	ND			NC	30	
Silver	ND	0.3	ug/g	ND			NC	30	
Thallium	ND	1.0	ug/g	ND			NC	30	
Uranium	ND	1.0	ug/g	ND			NC	30	
Vanadium	11.3	10.0	ug/g	14.0			21.6	30	
Zinc	24.5	20.0	ug/g	30.0			20.1	30	
Physical Characteristics									

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
% Solids	66.1	0.1	% by Wt.	66.1			0.1	25	
Semi-Volatiles									
Acenaphthene	ND	0.02	ug/g	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g	ND			NC	40	
Anthracene	ND	0.02	ug/g	ND			NC	40	
Benzo [a] anthracene	ND	0.02	ug/g	ND			NC	40	
Benzo [a] pyrene	ND	0.02	ug/g	ND			NC	40	
Benzo [b] fluoranthene	ND	0.02	ug/g	ND			NC	40	
Benzo [g,h,i] perylene	ND	0.02	ug/g	ND			NC	40	
Benzo [k] fluoranthene	ND	0.02	ug/g	ND			NC	40	
Chrysene	ND	0.02	ug/g	ND			NC	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g	ND			NC	40	
Fluoranthene	ND	0.02	ug/g	ND			NC	40	
Fluorene	ND	0.02	ug/g	ND			NC	40	
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g	ND			NC	40	
1-Methylnaphthalene	ND	0.02	ug/g	ND			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g	ND			NC	40	
Naphthalene	ND	0.01	ug/g	ND			NC	40	
Phenanthrene	ND	0.02	ug/g	ND			NC	40	
Pyrene	ND	0.02	ug/g	ND			NC	40	
Surrogate: 2-Fluorobiphenyl	*1.17*		*%*		*82.4*	*50-140*			
Surrogate: Terphenyl-d14	*1.20*		*%*		*84.4*	*50-140*			
Volatiles									
Acetone	ND	0.50	ug/g	ND			NC	50	
Benzene	ND	0.02	ug/g	ND			NC	50	
Bromodichloromethane	ND	0.05	ug/g	ND			NC	50	
Bromoform	ND	0.05	ug/g	ND			NC	50	
Bromomethane	ND	0.05	ug/g	ND			NC	50	
Carbon Tetrachloride	ND	0.05	ug/g	ND			NC	50	
Chlorobenzene	ND	0.05	ug/g	ND			NC	50	
Chloroform	ND	0.05	ug/g	ND			NC	50	

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Dibromochloromethane	ND	0.05	ug/g	ND			NC	50	
Dichlorodifluoromethane	ND	0.05	ug/g	ND			NC	50	
1,2-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,3-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,4-Dichlorobenzene	ND	0.05	ug/g	ND			NC	50	
1,1-Dichloroethane	ND	0.05	ug/g	ND			NC	50	
1,2-Dichloroethane	ND	0.05	ug/g	ND			NC	50	
1,1-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
cis-1,2-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
trans-1,2-Dichloroethylene	ND	0.05	ug/g	ND			NC	50	
1,2-Dichloropropane	ND	0.05	ug/g	ND			NC	50	
cis-1,3-Dichloropropylene	ND	0.05	ug/g	ND			NC	50	
trans-1,3-Dichloropropylene	ND	0.05	ug/g	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g	ND			NC	50	
Ethylene dibromide (dibromoethane, 1,2-)	ND	0.05	ug/g	ND			NC	50	
Hexane	ND	0.05	ug/g	ND			NC	50	
Methyl Ethyl Ketone (2-Butanone)	ND	0.50	ug/g	ND			NC	50	
Methyl Isobutyl Ketone	ND	0.50	ug/g	ND			NC	50	
Methyl tert-butyl ether	ND	0.05	ug/g	ND			NC	50	
Methylene Chloride	ND	0.05	ug/g	ND			NC	50	
Styrene	ND	0.05	ug/g	ND			NC	50	
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g	ND			NC	50	
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g	ND			NC	50	
Tetrachloroethylene	ND	0.05	ug/g	ND			NC	50	
Toluene	ND	0.05	ug/g	ND			NC	50	
1,1,1-Trichloroethane	ND	0.05	ug/g	ND			NC	50	
1,1,2-Trichloroethane	ND	0.05	ug/g	ND			NC	50	
Trichloroethylene	ND	0.05	ug/g	ND			NC	50	
Trichlorofluoromethane	ND	0.05	ug/g	ND			NC	50	
Vinyl chloride	ND	0.02	ug/g	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g	ND			NC	50	

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
o-Xylene	ND	0.05	ug/g	ND			NC	50	
Surrogate: 4-Bromofluorobenzene	*6.98*		*%*		*80.7*	*50-140*			
Surrogate: Dibromofluoromethane	*9.24*		*%*		*107*	*50-140*			
Surrogate: Toluene-d8	*8.84*		*%*		*102*	*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)	176	7	ug/g	ND	102	85-115			
F2 PHCs (C10-C16)	120	4	ug/g	16	113	60-140			
F3 PHCs (C16-C34)	357	8	ug/g	70	128	60-140			
F4 PHCs (C34-C50)	199	6	ug/g	22	125	60-140			
Metals									
Arsenic	56.1	1.0	ug/g	1.1	110	70-130			
Barium	68.4	1.0	ug/g	16.2	104	70-130			
Beryllium	58.7	0.5	ug/g	ND	117	70-130			
Boron, available	4.18	0.5	ug/g	ND	83.7	60-140			
Boron	52.9	5.0	ug/g	ND	103	70-130			
Cadmium	55.2	0.5	ug/g	ND	110	70-130			
Chromium (VI)	5.4	0.2	ug/g	0.2	94.5	48-112			
Chromium	65.5	5.0	ug/g	ND	124	70-130			
Cobalt	59.4	1.0	ug/g	1.0	117	70-130			
Copper	59.2	5.0	ug/g	ND	113	70-130			
Lead	56.0	1.0	ug/g	2.4	107	70-130			
Mercury	1.57	0.1	ug/g	ND	105	70-130			
Molybdenum	56.9	1.0	ug/g	ND	113	70-130			
Nickel	61.1	5.0	ug/g	ND	116	70-130			
Selenium	56.0	1.0	ug/g	ND	112	70-130			
Silver	35.8	0.3	ug/g	ND	71.6	70-130			
Thallium	54.2	1.0	ug/g	ND	108	70-130			
Uranium	59.9	1.0	ug/g	ND	119	70-130			
Vanadium	67.0	10.0	ug/g	ND	123	70-130			
Zinc	65.4	20.0	ug/g	ND	107	70-130			
Semi-Volatiles									
Acenaphthene	0.107	0.02	ug/g	ND	60.6	50-140			
Acenaphthylene	0.095	0.02	ug/g	ND	53.5	50-140			
Anthracene	0.107	0.02	ug/g	ND	60.2	50-140			
Benzo [a] anthracene	0.123	0.02	ug/g	ND	69.5	50-140			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Benzo [a] pyrene	0.097	0.02	ug/g	ND	54.9	50-140			
Benzo [b] fluoranthene	0.115	0.02	ug/g	ND	64.6	50-140			
Benzo [g,h,i] perylene	0.116	0.02	ug/g	ND	65.2	50-140			
Benzo [k] fluoranthene	0.115	0.02	ug/g	ND	65.1	50-140			
Chrysene	0.129	0.02	ug/g	ND	72.4	50-140			
Dibenzo [a,h] anthracene	0.121	0.02	ug/g	ND	68.1	50-140			
Fluoranthene	0.144	0.02	ug/g	ND	81.2	50-140			
Fluorene	0.113	0.02	ug/g	ND	63.9	50-140			
Indeno [1,2,3-cd] pyrene	0.123	0.02	ug/g	ND	69.1	50-140			
1-Methylnaphthalene	0.100	0.02	ug/g	ND	56.6	50-140			
2-Methylnaphthalene	0.146	0.02	ug/g	ND	82.2	50-140			
Naphthalene	0.098	0.01	ug/g	ND	55.1	50-140			
Phenanthrene	0.126	0.02	ug/g	ND	71.1	50-140			
Pyrene	0.115	0.02	ug/g	ND	65.1	50-140			
Surrogate: 2-Fluorobiphenyl	*1.06*		*%*		*74.8*	*50-140*			
Surrogate: Terphenyl-d14	*1.09*		*%*		*76.5*	*50-140*			
Volatiles									
Acetone	10.0	0.50	ug/g	ND	100	50-140			
Benzene	3.72	0.02	ug/g	ND	93.0	60-130			
Bromodichloromethane	2.95	0.05	ug/g	ND	73.7	60-130			
Bromoform	2.87	0.05	ug/g	ND	71.7	60-130			
Bromomethane	3.37	0.05	ug/g	ND	84.4	50-140			
Carbon Tetrachloride	2.71	0.05	ug/g	ND	67.9	60-130			
Chlorobenzene	3.09	0.05	ug/g	ND	77.1	60-130			
Chloroform	3.04	0.05	ug/g	ND	76.0	60-130			
Dibromochloromethane	4.23	0.05	ug/g	ND	106	60-130			
Dichlorodifluoromethane	4.89	0.05	ug/g	ND	122	50-140			
1,2-Dichlorobenzene	2.70	0.05	ug/g	ND	67.5	60-130			
1,3-Dichlorobenzene	2.66	0.05	ug/g	ND	66.5	60-130			
1,4-Dichlorobenzene	2.73	0.05	ug/g	ND	68.2	60-130			
1,1-Dichloroethane	4.03	0.05	ug/g	ND	101	60-130			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
1,2-Dichloroethane	3.32	0.05	ug/g	ND	83.1	60-130			
1,1-Dichloroethylene	3.67	0.05	ug/g	ND	91.6	60-130			
cis-1,2-Dichloroethylene	3.18	0.05	ug/g	ND	79.5	60-130			
trans-1,2-Dichloroethylene	3.59	0.05	ug/g	ND	89.7	60-130			
1,2-Dichloropropane	3.29	0.05	ug/g	ND	82.3	60-130			
cis-1,3-Dichloropropylene	3.08	0.05	ug/g	ND	77.0	60-130			
trans-1,3-Dichloropropylene	3.39	0.05	ug/g	ND	84.8	60-130			
Ethylbenzene	3.30	0.05	ug/g	ND	82.4	60-130			
Ethylene dibromide (dibromoethane, 1,2-)	2.64	0.05	ug/g	ND	65.9	60-130			
Hexane	4.08	0.05	ug/g	ND	102	60-130			
Methyl Ethyl Ketone (2-Butanone)	9.98	0.50	ug/g	ND	99.8	50-140			
Methyl Isobutyl Ketone	8.38	0.50	ug/g	ND	83.8	50-140			
Methyl tert-butyl ether	10.4	0.05	ug/g	ND	104	50-140			
Methylene Chloride	3.87	0.05	ug/g	ND	96.7	60-130			
Styrene	3.47	0.05	ug/g	ND	86.8	60-130			
1,1,1,2-Tetrachloroethane	2.44	0.05	ug/g	ND	61.0	60-130			
1,1,2,2-Tetrachloroethane	2.78	0.05	ug/g	ND	69.4	60-130			
Tetrachloroethylene	2.68	0.05	ug/g	ND	67.0	60-130			
Toluene	3.33	0.05	ug/g	ND	83.2	60-130			
1,1,1-Trichloroethane	3.03	0.05	ug/g	ND	75.8	60-130			
1,1,2-Trichloroethane	3.01	0.05	ug/g	ND	75.3	60-130			
Trichloroethylene	2.74	0.05	ug/g	ND	68.5	60-130			
Trichlorofluoromethane	3.93	0.05	ug/g	ND	98.4	50-140			
Vinyl chloride	4.55	0.02	ug/g	ND	114	50-140			
m,p-Xylenes	6.47	0.05	ug/g	ND	80.8	60-130			
o-Xylene	3.32	0.05	ug/g	ND	82.9	60-130			
Surrogate: 4-Bromofluorobenzene	*6.38*		*%*		*79.7*	*50-140*			
Surrogate: Dibromofluoromethane	*7.02*		*%*		*87.8*	*50-140*			
Surrogate: Toluene-d8	*8.53*		*%*		*107*	*50-140*			

Qualifier Notes:

Sample Qualifiers :

1: Some peak(s) in the GC-FID Chromatogram are not typical of petroleum hydrocarbon distillates. May be the result of high concentrations of non-mineral based compounds not completely removed by the method cleanup. Results may be biased high.
Applies to Samples: BH5-25-AU1

QC Qualifiers:

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

Sample Data Revisions:

None

Certificate of Analysis

Report Date: 10-Apr-2025

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

Order Date: 4-Apr-2025

Client PO: 62781

Project Description: PE2144

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.

Any use of these results implies your agreement that our total liabilty in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.

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Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2514469	

Client Name: Paterson Group	Project Ref: PE2144	Page 1 of 1
Contact Name: Jesse Andrechek	Quote #:	Turnaround Time
Address: 9 Auriga Drive, Ottawa	PO #: 62781	☐ 1 day ☐ 3 day ☐ 2 day ☒ Regular
Telephone: 613-226-7381	E-mail: jandrechek@patersongroup.ca	Date Required:

☒ REG 153/04 ☐ REG 406/19

☐ Table 1 ☐ Agri/Other ☐ Med/Fine
☐ Table 2 ☒ Res/Park ☒ Coarse
☐ Table 3 ☐ Ind/Comm
☒ Table 7
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
1	BH5-25-AU1	S		2		2-APR/25		X	X	X	X	X	X	X	X
2	~~BH5-25-AU2~~ BH5-25-AU2	S		2		↓		X	X	X	X	X	X	X	X
3	BH6-25-AU1	S		2		↓		X	X	X	X	X	X	X	X
4															
5															
6															
7															
8															
9															
10															

Comments:

Method of Delivery: PARACEL COURIER

Relinquished By (Sign):	Received at Depot:	Received at Lab: LTJ	Verified By: SP
Relinquished By (Print): Jesse Andrechek	Date/Time:	Date/Time: 04/04/25 - 16:00PM	Date/Time: Apr 4 2025 4:15pm
Date/Time: 4-APR-2025 3PM	Temperature: °C	Temperature: 14.1°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: 62799
Project: PE2144
Custody:

Report Date: 14-Apr-2025
Order Date: 8-Apr-2025

Order #: 2515146

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

Paracel ID	Client ID	Paracel ID	Client ID
2515146-01	TP1-25-G1		
2515146-02	TP2-25-G1		
2515146-03	TP3-25-G3		
2515146-04	TP4-25-G2		
2515146-05	TP5-25-G4		
2515146-06	TP6-25-G1		
2515146-07	TP7-25-G1		
2515146-08	TP8-25-G1		
2515146-09	TP9-25-G3		
2515146-10	TP11-25-G2		
2515146-11	TP12-25-G2		
2515146-12	TP13-25-G2		
2515146-13	TP14-25-G1		
2515146-14	DUP2-25		

Approved By:

Mark Foto

Mark Foto, M.Sc.
Laboratory Director

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Boron, available	MOE (HWE), EPA 200.8 - ICP-MS	9-Apr-25	9-Apr-25
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	9-Apr-25	9-Apr-25
Chromium, hexavalent - soil	MOE E3056 - Extraction, colourimetric	9-Apr-25	9-Apr-25
Conductivity	MOE E3138 - probe @25 °C, water ext	9-Apr-25	9-Apr-25
Mercury by CVAA	EPA 7471B - CVAA, digestion	9-Apr-25	9-Apr-25
PCBs, total	SW846 8082A - GC-ECD	9-Apr-25	10-Apr-25
pH, soil	EPA 150.1 - pH probe @ 25 °C, CaCl buffered ext.	10-Apr-25	10-Apr-25
PHC F1	CWS Tier 1 - P&T GC-FID	9-Apr-25	9-Apr-25
PHC F4G (gravimetric)	CWS Tier 1 - Extraction Gravimetric	11-Apr-25	11-Apr-25
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	8-Apr-25	10-Apr-25
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	9-Apr-25	9-Apr-25
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	9-Apr-25	11-Apr-25
REG 153: VOCs by P&T GC/MS	EPA 8260 - P&T GC-MS	9-Apr-25	9-Apr-25
SAR	Calculated	9-Apr-25	9-Apr-25
Solids, %	CWS Tier 1 - Gravimetric	9-Apr-25	11-Apr-25

Certificate of Analysis

Report Date: 14-Apr-2025

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

Order Date: 8-Apr-2025

Client PO: **62799**

Project Description: PE2144

	Client ID:	TP1-25-G1	TP2-25-G1	TP3-25-G3	TP4-25-G2	-	-
	Sample Date:	04-Apr-25 09:00	04-Apr-25 09:00	04-Apr-25 09:00	04-Apr-25 09:00		
	Sample ID:	2515146-01	2515146-02	2515146-03	2515146-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Physical Characteristics							
% Solids	0.1 % by Wt.	92.5	90.5	86.6	85.0	-	-
General Inorganics							
SAR	0.01 N/A	0.36	0.10	0.35	0.16	-	-
Conductivity	5 uS/cm	209	150	260	382	-	-
pH	0.05 pH Units	-	-	7.51	-	-	-
Metals							
Antimony	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Arsenic	1.0 ug/g	2.3	2.0	1.6	2.8	-	-
Barium	1.0 ug/g	46.5	35.3	167	75.7	-	-
Beryllium	0.5 ug/g	<0.5	<0.5	0.5	<0.5	-	-
Boron, available	0.5 ug/g	<0.5	<0.5	-	-	-	-
Boron	5.0 ug/g	5.5	<5.0	13.0	6.9	-	-
Cadmium	0.5 ug/g	<0.5	<0.5	<0.5	<0.5	-	-
Chromium (VI)	0.2 ug/g	<0.2	<0.2	<0.2	<0.2	-	-
Chromium	5.0 ug/g	10.8	9.1	12.7	16.0	-	-
Cobalt	1.0 ug/g	5.3	3.8	3.1	4.7	-	-
Copper	5.0 ug/g	14.0	10.4	7.5	29.0	-	-
Lead	1.0 ug/g	5.1	7.7	5.7	17.7	-	-
Mercury	0.1 ug/g	<0.1	<0.1	<0.1	<0.1	-	-
Molybdenum	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Nickel	5.0 ug/g	10.4	7.6	9.4	12.1	-	-
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	1.1	-	-

	Client ID:	TP1-25-G1	TP2-25-G1	TP3-25-G3	TP4-25-G2	-	-
	Sample Date:	04-Apr-25 09:00	04-Apr-25 09:00	04-Apr-25 09:00	04-Apr-25 09:00		
	Sample ID:	2515146-01	2515146-02	2515146-03	2515146-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Metals							
Vanadium	10.0 ug/g	22.6	17.1	12.4	22.2	-	-
Zinc	20.0 ug/g	20.3	28.2	<20.0	41.0	-	-
Volatiles							
Acetone	0.50 ug/g	<0.50	<0.50	-	<0.50	-	-
Benzene	0.02 ug/g	<0.02	<0.02	-	<0.02	-	-
Bromodichloromethane	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
Bromoform	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
Bromomethane	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
Carbon Tetrachloride	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
Chlorobenzene	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
Chloroform	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
Dibromochloromethane	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
Dichlorodifluoromethane	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
1,2-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
1,3-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
1,4-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
1,1-Dichloroethane	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
1,2-Dichloroethane	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
1,1-Dichloroethylene	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
cis-1,2-Dichloroethylene	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
trans-1,2-Dichloroethylene	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
1,2-Dichloropropane	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
cis-1,3-Dichloropropylene	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
trans-1,3-Dichloropropylene	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
1,3-Dichloropropene, total	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-

	Client ID:	TP1-25-G1	TP2-25-G1	TP3-25-G3	TP4-25-G2	-	-
	Sample Date:	04-Apr-25 09:00	04-Apr-25 09:00	04-Apr-25 09:00	04-Apr-25 09:00		
	Sample ID:	2515146-01	2515146-02	2515146-03	2515146-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Volatiles							
Ethylene dibromide (dibromoethane,	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
Ethylbenzene	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
Hexane	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g	<0.50	<0.50	-	<0.50	-	-
Methyl Isobutyl Ketone	0.50 ug/g	<0.50	<0.50	-	<0.50	-	-
Methyl tert-butyl ether	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
Methylene Chloride	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
Styrene	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
1,1,1,2-Tetrachloroethane	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
1,1,2,2-Tetrachloroethane	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
Tetrachloroethylene	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
Toluene	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
1,1,1-Trichloroethane	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
1,1,2-Trichloroethane	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
Trichloroethylene	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
Trichlorofluoromethane	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
Vinyl chloride	0.02 ug/g	<0.02	<0.02	-	<0.02	-	-
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	-	-
Xylenes, total	0.05 ug/g	<0.05	<0.05	-	<0.05	-	-
Dibromofluoromethane	Surrogate	97.8%	75.1%	-	80.7%	-	-
Toluene-d8	Surrogate	101%	111%	-	103%	-	-
4-Bromofluorobenzene	Surrogate	108%	103%	-	104%	-	-
Benzene	0.02 ug/g	-	-	<0.02	-	-	-
Ethylbenzene	0.05 ug/g	-	-	<0.05	-	-	-

	Client ID:	TP1-25-G1	TP2-25-G1	TP3-25-G3	TP4-25-G2	-	-
	Sample Date:	04-Apr-25 09:00	04-Apr-25 09:00	04-Apr-25 09:00	04-Apr-25 09:00		
	Sample ID:	2515146-01	2515146-02	2515146-03	2515146-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Volatiles							
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	-	-	-
Toluene-d8	Surrogate	-	-	104%	-	-	-
Hydrocarbons							
F1 PHCs (C6-C10)	7 ug/g	<7	<7	<7	<7	-	-
F2 PHCs (C10-C16)	4 ug/g	<4	60	<4	5	-	-
F3 PHCs (C16-C34)	8 ug/g	<8	175	<8	57	-	-
F4 PHCs (C34-C50)	6 ug/g	<6	205 [1]	<6	75	-	-
F4G PHCs (gravimetric)	50 ug/g	-	276	-	-	-	-
Semi-Volatiles							
Acenaphthene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	-	-
Acenaphthylene	0.02 ug/g	<0.02	<0.02	<0.02	0.03	-	-
Anthracene	0.02 ug/g	<0.02	<0.02	<0.02	0.04	-	-
Benzo [a] anthracene	0.02 ug/g	<0.02	<0.02	<0.02	0.14	-	-
Benzo [a] pyrene	0.02 ug/g	<0.02	<0.02	<0.02	0.12	-	-
Benzo [b] fluoranthene	0.02 ug/g	<0.02	<0.02	<0.02	0.14	-	-
Benzo [g,h,i] perylene	0.02 ug/g	<0.02	0.03	<0.02	0.06	-	-
Benzo [k] fluoranthene	0.02 ug/g	<0.02	<0.02	<0.02	0.05	-	-
Chrysene	0.02 ug/g	<0.02	0.04	<0.02	0.13	-	-
Dibenzo [a,h] anthracene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	-	-
Fluoranthene	0.02 ug/g	<0.02	<0.02	<0.02	0.28	-	-
Fluorene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g	<0.02	<0.02	<0.02	0.08	-	-

	Client ID:	TP1-25-G1	TP2-25-G1	TP3-25-G3	TP4-25-G2	-	-
	Sample Date:	04-Apr-25 09:00	04-Apr-25 09:00	04-Apr-25 09:00	04-Apr-25 09:00		
	Sample ID:	2515146-01	2515146-02	2515146-03	2515146-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Semi-Volatiles							
1-Methylnaphthalene	0.02 ug/g	<0.02	0.02	<0.02	<0.02	-	-
2-Methylnaphthalene	0.02 ug/g	<0.02	0.04	<0.02	<0.02	-	-
Methylnaphthalene (1&2)	0.04 ug/g	<0.04	0.07	<0.04	<0.04	-	-
Naphthalene	0.01 ug/g	<0.01	<0.01	<0.01	<0.01	-	-
Phenanthrene	0.02 ug/g	<0.02	<0.02	<0.02	0.17	-	-
Pyrene	0.02 ug/g	<0.02	0.03	<0.02	0.17	-	-
2-Fluorobiphenyl	Surrogate	92.4%	90.3%	80.0%	88.5%	-	-
Terphenyl-d14	Surrogate	103%	91.3%	84.3%	90.2%	-	-

	Client ID:	TP5-25-G4	TP6-25-G1	TP7-25-G1	TP8-25-G1	-	-
	Sample Date:	04-Apr-25 09:00	04-Apr-25 09:00	04-Apr-25 09:00	04-Apr-25 09:00		
	Sample ID:	2515146-05	2515146-06	2515146-07	2515146-08		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Physical Characteristics							
% Solids	0.1 % by Wt.	85.3	86.5	86.6	76.8	-	-
General Inorganics							
SAR	0.01 N/A	0.05	0.20	0.79	0.31	-	-
Conductivity	5 uS/cm	2300	370	825	319	-	-
Metals							
Antimony	1.0 ug/g	<1.0	<1.0	2.3	2.3	-	-
Arsenic	1.0 ug/g	3.5	3.0	7.0	10.5	-	-
Barium	1.0 ug/g	190	132	221	306	-	-
Beryllium	0.5 ug/g	0.6	<0.5	0.6	0.8	-	-
Boron	5.0 ug/g	19.9	7.0	18.0	16.9	-	-
Cadmium	0.5 ug/g	<0.5	<0.5	1.4	1.4	-	-
Chromium	5.0 ug/g	19.8	20.1	24.8	31.0	-	-
Chromium (VI)	0.2 ug/g	<0.2	<0.2	<0.2	<0.2	-	-
Cobalt	1.0 ug/g	8.5	5.6	8.7	9.4	-	-
Copper	5.0 ug/g	32.0	30.2	51.1	74.4	-	-
Lead	1.0 ug/g	129	84.8	300	381	-	-
Mercury	0.1 ug/g	0.1	<0.1	0.3	1.0	-	-
Molybdenum	1.0 ug/g	<1.0	<1.0	<1.0	2.3	-	-
Nickel	5.0 ug/g	19.8	12.3	19.0	24.0	-	-
Selenium	1.0 ug/g	<1.0	<1.0	1.0	1.6	-	-
Silver	0.3 ug/g	<0.3	<0.3	0.3	1.1	-	-
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	21.0	27.4	28.7	31.4	-	-
Zinc	20.0 ug/g	110	145	358	395	-	-

	Client ID:	TP5-25-G4	TP6-25-G1	TP7-25-G1	TP8-25-G1	-	-
	Sample Date:	04-Apr-25 09:00	04-Apr-25 09:00	04-Apr-25 09:00	04-Apr-25 09:00		
	Sample ID:	2515146-05	2515146-06	2515146-07	2515146-08		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Volatiles							
Acetone	0.50 ug/g	<0.50	<0.50	-	-	-	-
Benzene	0.02 ug/g	<0.02	<0.02	-	-	-	-
Bromodichloromethane	0.05 ug/g	<0.05	<0.05	-	-	-	-
Bromoform	0.05 ug/g	<0.05	<0.05	-	-	-	-
Bromomethane	0.05 ug/g	<0.05	<0.05	-	-	-	-
Carbon Tetrachloride	0.05 ug/g	<0.05	<0.05	-	-	-	-
Chlorobenzene	0.05 ug/g	<0.05	<0.05	-	-	-	-
Chloroform	0.05 ug/g	<0.05	<0.05	-	-	-	-
Dibromochloromethane	0.05 ug/g	<0.05	<0.05	-	-	-	-
Dichlorodifluoromethane	0.05 ug/g	<0.05	<0.05	-	-	-	-
1,2-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	-	-	-	-
1,3-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	-	-	-	-
1,4-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	-	-	-	-
1,1-Dichloroethane	0.05 ug/g	<0.05	<0.05	-	-	-	-
1,2-Dichloroethane	0.05 ug/g	<0.05	<0.05	-	-	-	-
1,1-Dichloroethylene	0.05 ug/g	<0.05	<0.05	-	-	-	-
cis-1,2-Dichloroethylene	0.05 ug/g	<0.05	<0.05	-	-	-	-
trans-1,2-Dichloroethylene	0.05 ug/g	<0.05	<0.05	-	-	-	-
1,2-Dichloropropane	0.05 ug/g	<0.05	<0.05	-	-	-	-
cis-1,3-Dichloropropylene	0.05 ug/g	<0.05	<0.05	-	-	-	-
trans-1,3-Dichloropropylene	0.05 ug/g	<0.05	<0.05	-	-	-	-
1,3-Dichloropropene, total	0.05 ug/g	<0.05	<0.05	-	-	-	-
Ethylbenzene	0.05 ug/g	<0.05	<0.05	-	-	-	-
Ethylene dibromide (dibromoethane,	0.05 ug/g	<0.05	<0.05	-	-	-	-
Hexane	0.05 ug/g	<0.05	<0.05	-	-	-	-

	Client ID:	TP5-25-G4	TP6-25-G1	TP7-25-G1	TP8-25-G1	-	-
	Sample Date:	04-Apr-25 09:00	04-Apr-25 09:00	04-Apr-25 09:00	04-Apr-25 09:00		
	Sample ID:	2515146-05	2515146-06	2515146-07	2515146-08		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Volatiles							
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g	<0.50	<0.50	-	-	-	-
Methyl Isobutyl Ketone	0.50 ug/g	<0.50	<0.50	-	-	-	-
Methyl tert-butyl ether	0.05 ug/g	<0.05	<0.05	-	-	-	-
Methylene Chloride	0.05 ug/g	<0.05	<0.05	-	-	-	-
Styrene	0.05 ug/g	<0.05	<0.05	-	-	-	-
1,1,1,2-Tetrachloroethane	0.05 ug/g	<0.05	<0.05	-	-	-	-
1,1,2,2-Tetrachloroethane	0.05 ug/g	<0.05	<0.05	-	-	-	-
Tetrachloroethylene	0.05 ug/g	<0.05	<0.05	-	-	-	-
Toluene	0.05 ug/g	<0.05	<0.05	-	-	-	-
1,1,1-Trichloroethane	0.05 ug/g	<0.05	<0.05	-	-	-	-
1,1,2-Trichloroethane	0.05 ug/g	<0.05	<0.05	-	-	-	-
Trichloroethylene	0.05 ug/g	<0.05	<0.05	-	-	-	-
Trichlorofluoromethane	0.05 ug/g	<0.05	<0.05	-	-	-	-
Vinyl chloride	0.02 ug/g	<0.02	<0.02	-	-	-	-
m,p-Xylenes	0.05 ug/g	<0.05	<0.05	-	-	-	-
o-Xylene	0.05 ug/g	<0.05	<0.05	-	-	-	-
Xylenes, total	0.05 ug/g	<0.05	<0.05	-	-	-	-
4-Bromofluorobenzene	Surrogate	104%	112%	-	-	-	-
Toluene-d8	Surrogate	107%	104%	-	-	-	-
Dibromofluoromethane	Surrogate	112%	97.7%	-	-	-	-
Benzene	0.02 ug/g	-	-	<0.02	<0.02	-	-
Ethylbenzene	0.05 ug/g	-	-	<0.05	<0.05	-	-
Toluene	0.05 ug/g	-	-	<0.05	<0.05	-	-
m,p-Xylenes	0.05 ug/g	-	-	<0.05	<0.05	-	-
o-Xylene	0.05 ug/g	-	-	<0.05	<0.05	-	-

	Client ID:	TP5-25-G4	TP6-25-G1	TP7-25-G1	TP8-25-G1	-	-
	Sample Date:	04-Apr-25 09:00	04-Apr-25 09:00	04-Apr-25 09:00	04-Apr-25 09:00		
	Sample ID:	2515146-05	2515146-06	2515146-07	2515146-08		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Volatiles							
Xylenes, total	0.05 ug/g	-	-	<0.05	<0.05	-	-
Toluene-d8	Surrogate	-	-	104%	108%	-	-
Hydrocarbons							
F1 PHCs (C6-C10)	7 ug/g	<7	<7	<7	<7	-	-
F2 PHCs (C10-C16)	4 ug/g	9	5	6	6	-	-
F3 PHCs (C16-C34)	8 ug/g	64	40	194	51	-	-
F4 PHCs (C34-C50)	6 ug/g	113	87	171 [1]	63	-	-
F4G PHCs (gravimetric)	50 ug/g	-	-	300	-	-	-
Semi-Volatiles							
Acenaphthene	0.02 ug/g	0.02	0.04	0.10	0.05	-	-
Acenaphthylene	0.02 ug/g	<0.02	<0.02	0.10	0.04	-	-
Anthracene	0.02 ug/g	0.06	0.19	0.45	0.17	-	-
Benzo [a] anthracene	0.02 ug/g	0.21	0.45	2.58	0.67	-	-
Benzo [a] pyrene	0.02 ug/g	0.19	0.38	2.52	0.65	-	-
Benzo [b] fluoranthene	0.02 ug/g	0.24	0.49	3.20	0.87	-	-
Benzo [g,h,i] perylene	0.02 ug/g	0.12	0.22	1.34	0.32	-	-
Benzo [k] fluoranthene	0.02 ug/g	0.07	0.45	3.15	0.25	-	-
Chrysene	0.02 ug/g	0.21	0.44	2.78	0.76	-	-
Dibenzo [a,h] anthracene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	-	-
Fluoranthene	0.02 ug/g	0.52	1.20	7.76	1.61	-	-
Fluorene	0.02 ug/g	0.03	0.05	0.11	0.06	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g	0.14	0.28	1.75	0.43	-	-
1-Methylnaphthalene	0.02 ug/g	0.03	<0.02	0.13	0.31	-	-
2-Methylnaphthalene	0.02 ug/g	0.04	<0.02	0.14	0.30	-	-
Methylnaphthalene (1&2)	0.04 ug/g	0.07	<0.04	0.27	0.61	-	-

	Client ID:	TP5-25-G4	TP6-25-G1	TP7-25-G1	TP8-25-G1	-	-
	Sample Date:	04-Apr-25 09:00	04-Apr-25 09:00	04-Apr-25 09:00	04-Apr-25 09:00		
	Sample ID:	2515146-05	2515146-06	2515146-07	2515146-08		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Semi-Volatiles							
Naphthalene	0.01 ug/g	0.03	0.02	0.09	0.15	-	-
Phenanthrene	0.02 ug/g	0.34	0.76	2.17	0.94	-	-
Pyrene	0.02 ug/g	0.31	0.67	3.95	0.95	-	-
2-Fluorobiphenyl	Surrogate	91.8%	84.2%	89.5%	88.6%	-	-
Terphenyl-d14	Surrogate	94.7%	84.7%	91.8%	89.6%	-	-
PCBs							
PCBs, total	0.05 ug/g	-	-	<0.10 [2]	-	-	-
Decachlorobiphenyl	Surrogate	-	-	122%	-	-	-

	Client ID:	TP9-25-G3	TP11-25-G2	TP12-25-G2	TP13-25-G2	-	-
	Sample Date:	04-Apr-25 09:00	04-Apr-25 09:00	04-Apr-25 09:00	04-Apr-25 09:00		
	Sample ID:	2515146-09	2515146-10	2515146-11	2515146-12		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Physical Characteristics							
% Solids	0.1 % by Wt.	86.1	87.2	88.1	77.3	-	-
General Inorganics							
SAR	0.01 N/A	0.21	0.35	0.11	0.18	-	-
Conductivity	5 uS/cm	268	168	149	267	-	-
pH	0.05 pH Units	7.62	-	-	-	-	-
Metals							
Antimony	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Arsenic	1.0 ug/g	1.6	1.2	1.3	4.6	-	-
Barium	1.0 ug/g	90.9	64.7	58.7	176	-	-
Beryllium	0.5 ug/g	0.5	<0.5	<0.5	0.7	-	-
Boron, available	0.5 ug/g	-	<0.5	1.3	-	-	-
Boron	5.0 ug/g	11.9	13.1	14.4	11.2	-	-
Cadmium	0.5 ug/g	<0.5	<0.5	<0.5	0.5	-	-
Chromium	5.0 ug/g	11.1	8.9	9.5	19.4	-	-
Chromium (VI)	0.2 ug/g	<0.2	<0.2	<0.2	<0.2	-	-
Cobalt	1.0 ug/g	1.7	2.3	2.6	4.6	-	-
Copper	5.0 ug/g	10.5	<5.0	5.5	51.3	-	-
Lead	1.0 ug/g	5.0	4.5	4.5	115	-	-
Mercury	0.1 ug/g	<0.1	<0.1	<0.1	0.2	-	-
Molybdenum	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Nickel	5.0 ug/g	5.9	7.1	7.8	14.8	-	-
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	-	-

	Client ID:	TP9-25-G3	TP11-25-G2	TP12-25-G2	TP13-25-G2	-	-
	Sample Date:	04-Apr-25 09:00	04-Apr-25 09:00	04-Apr-25 09:00	04-Apr-25 09:00		
	Sample ID:	2515146-09	2515146-10	2515146-11	2515146-12		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Metals							
Vanadium	10.0 ug/g	12.0	<10.0	<10.0	22.4	-	-
Zinc	20.0 ug/g	<20.0	<20.0	<20.0	139	-	-
Volatiles							
Acetone	0.50 ug/g	<0.50	<0.50	<0.50	<0.50	-	-
Benzene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	-	-
Bromodichloromethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Bromoform	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Bromomethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Carbon Tetrachloride	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Chlorobenzene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Chloroform	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Dibromochloromethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Dichlorodifluoromethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,2-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,3-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,4-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,1-Dichloroethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,2-Dichloroethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,1-Dichloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
cis-1,2-Dichloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
trans-1,2-Dichloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,2-Dichloropropane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
cis-1,3-Dichloropropylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
trans-1,3-Dichloropropylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,3-Dichloropropene, total	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-

	Client ID:	TP9-25-G3	TP11-25-G2	TP12-25-G2	TP13-25-G2	-	-
	Sample Date:	04-Apr-25 09:00	04-Apr-25 09:00	04-Apr-25 09:00	04-Apr-25 09:00		
	Sample ID:	2515146-09	2515146-10	2515146-11	2515146-12		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Volatiles							
Ethylbenzene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Ethylene dibromide (dibromoethane,	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Hexane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g	<0.50	<0.50	<0.50	<0.50	-	-
Methyl Isobutyl Ketone	0.50 ug/g	<0.50	<0.50	<0.50	<0.50	-	-
Methyl tert-butyl ether	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Methylene Chloride	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Styrene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,1,1,2-Tetrachloroethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,1,2,2-Tetrachloroethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Tetrachloroethylene	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	-	-
1,1,1-Trichloroethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
1,1,2-Trichloroethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Trichloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Trichlorofluoromethane	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Vinyl chloride	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	-	-
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	-	-
4-Bromofluorobenzene	Surrogate	105%	104%	104%	110%	-	-
Dibromofluoromethane	Surrogate	74.4%	75.2%	82.5%	93.9%	-	-
Toluene-d8	Surrogate	109%	105%	105%	117%	-	-
Hydrocarbons							
F1 PHCs (C6-C10)	7 ug/g	<7	<7	<7	<7	-	-

	Client ID:	TP9-25-G3	TP11-25-G2	TP12-25-G2	TP13-25-G2	-	-
	Sample Date:	04-Apr-25 09:00	04-Apr-25 09:00	04-Apr-25 09:00	04-Apr-25 09:00		
	Sample ID:	2515146-09	2515146-10	2515146-11	2515146-12		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Hydrocarbons							
F2 PHCs (C10-C16)	4 ug/g	<4	<4	<4	<4	-	-
F3 PHCs (C16-C34)	8 ug/g	<8	11	9	36	-	-
F4 PHCs (C34-C50)	6 ug/g	<6	7	<6	30	-	-
Semi-Volatiles							
Acenaphthene	0.02 ug/g	<0.02	<0.02	<0.02	0.20	-	-
Acenaphthylene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	-	-
Anthracene	0.02 ug/g	<0.02	<0.02	<0.02	0.16	-	-
Benzo [a] anthracene	0.02 ug/g	<0.02	<0.02	<0.02	0.32	-	-
Benzo [a] pyrene	0.02 ug/g	<0.02	<0.02	<0.02	0.34	-	-
Benzo [b] fluoranthene	0.02 ug/g	<0.02	<0.02	<0.02	0.44	-	-
Benzo [g,h,i] perylene	0.02 ug/g	<0.02	<0.02	<0.02	0.20	-	-
Benzo [k] fluoranthene	0.02 ug/g	<0.02	<0.02	<0.02	0.14	-	-
Chrysene	0.02 ug/g	<0.02	<0.02	<0.02	0.37	-	-
Dibenzo [a,h] anthracene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	-	-
Fluoranthene	0.02 ug/g	<0.02	<0.02	<0.02	1.06	-	-
Fluorene	0.02 ug/g	<0.02	<0.02	<0.02	0.08	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g	<0.02	<0.02	<0.02	0.25	-	-
1-Methylnaphthalene	0.02 ug/g	<0.02	<0.02	<0.02	0.02	-	-
2-Methylnaphthalene	0.02 ug/g	<0.02	<0.02	<0.02	0.03	-	-
Methylnaphthalene (1&2)	0.04 ug/g	<0.04	<0.04	<0.04	0.05	-	-
Naphthalene	0.01 ug/g	<0.01	<0.01	<0.01	0.08	-	-
Phenanthrene	0.02 ug/g	<0.02	<0.02	<0.02	0.76	-	-
Pyrene	0.02 ug/g	<0.02	<0.02	<0.02	0.64	-	-
2-Fluorobiphenyl	Surrogate	93.4%	82.4%	85.4%	94.3%	-	-
Terphenyl-d14	Surrogate	97.3%	84.3%	85.9%	95.5%	-	-

Certificate of Analysis

Report Date: 14-Apr-2025

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

Order Date: 8-Apr-2025

Client PO: 62799

Project Description: PE2144

	Client ID:	TP14-25-G1	DUP2-25			-	-
	Sample Date:	04-Apr-25 09:00	04-Apr-25 09:00				
	Sample ID:	2515146-13	2515146-14				
	Matrix:	Soil	Soil				
	MDL/Units						
Physical Characteristics							
% Solids	0.1 % by Wt.	86.2	85.7	-	-	-	-
General Inorganics							
SAR	0.01 N/A	2.04	0.33	-	-	-	-
Conductivity	5 uS/cm	365	245	-	-	-	-
pH	0.05 pH Units	-	7.38	-	-	-	-
Metals							
Antimony	1.0 ug/g	<1.0	<1.0	-	-	-	-
Arsenic	1.0 ug/g	2.7	1.4	-	-	-	-
Barium	1.0 ug/g	75.1	148	-	-	-	-
Beryllium	0.5 ug/g	0.5	<0.5	-	-	-	-
Boron, available	0.5 ug/g	0.5	-	-	-	-	-
Boron	5.0 ug/g	16.3	11.4	-	-	-	-
Cadmium	0.5 ug/g	<0.5	<0.5	-	-	-	-
Chromium	5.0 ug/g	17.2	11.8	-	-	-	-
Chromium (VI)	0.2 ug/g	<0.2	<0.2	-	-	-	-
Cobalt	1.0 ug/g	7.1	2.7	-	-	-	-
Copper	5.0 ug/g	19.0	7.0	-	-	-	-
Lead	1.0 ug/g	22.6	5.5	-	-	-	-
Mercury	0.1 ug/g	<0.1	<0.1	-	-	-	-
Molybdenum	1.0 ug/g	<1.0	<1.0	-	-	-	-
Nickel	5.0 ug/g	15.6	8.4	-	-	-	-
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	-	-	-	-

	Client ID:	TP14-25-G1	DUP2-25			-	-
	Sample Date:	04-Apr-25 09:00	04-Apr-25 09:00				
	Sample ID:	2515146-13	2515146-14				
	Matrix:	Soil	Soil				
	MDL/Units						
Metals							
Vanadium	10.0 ug/g	19.7	11.5	-	-	-	-
Zinc	20.0 ug/g	65.2	<20.0	-	-	-	-
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	-	-	-	-	-

	Client ID:	TP14-25-G1	DUP2-25			-	-
	Sample Date:	04-Apr-25 09:00	04-Apr-25 09:00				
	Sample ID:	2515146-13	2515146-14				
	Matrix:	Soil	Soil				
	MDL/Units						
Volatiles							
Ethylbenzene	0.05 ug/g	<0.05	-	-	-	-	-
Ethylene dibromide (dibromoethane,	0.05 ug/g	<0.05	-	-	-	-	-
Hexane	0.05 ug/g	<0.05	-	-	-	-	-
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	-	-	-	-	-
Dibromofluoromethane	Surrogate	114%	-	-	-	-	-
Toluene-d8	Surrogate	105%	-	-	-	-	-
4-Bromofluorobenzene	Surrogate	103%	-	-	-	-	-
Benzene	0.02 ug/g	-	<0.02	-	-	-	-
Ethylbenzene	0.05 ug/g	-	<0.05	-	-	-	-

	Client ID:	TP14-25-G1	DUP2-25			-	-
	Sample Date:	04-Apr-25 09:00	04-Apr-25 09:00				
	Sample ID:	2515146-13	2515146-14				
	Matrix:	Soil	Soil				
	MDL/Units						
Volatiles							
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	-	-	-	-
Toluene-d8	Surrogate	-	110%	-	-	-	-
Hydrocarbons							
F1 PHCs (C6-C10)	7 ug/g	<7	<7	-	-	-	-
F2 PHCs (C10-C16)	4 ug/g	12	<4	-	-	-	-
F3 PHCs (C16-C34)	8 ug/g	73	16	-	-	-	-
F4 PHCs (C34-C50)	6 ug/g	132 [1]	13	-	-	-	-
F4G PHCs (gravimetric)	50 ug/g	255	-	-	-	-	-
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	0.04	0.02	-	-	-	-
Benzo [a] pyrene	0.02 ug/g	0.04	0.03	-	-	-	-
Benzo [b] fluoranthene	0.02 ug/g	0.06	0.03	-	-	-	-
Benzo [g,h,i] perylene	0.02 ug/g	0.03	<0.02	-	-	-	-
Benzo [k] fluoranthene	0.02 ug/g	<0.02	<0.02	-	-	-	-
Chrysene	0.02 ug/g	0.04	0.02	-	-	-	-
Dibenzo [a,h] anthracene	0.02 ug/g	<0.02	<0.02	-	-	-	-
Fluoranthene	0.02 ug/g	0.09	0.03	-	-	-	-
Fluorene	0.02 ug/g	<0.02	<0.02	-	-	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g	0.04	0.02	-	-	-	-

	Client ID:	TP14-25-G1	DUP2-25			-	-
	Sample Date:	04-Apr-25 09:00	04-Apr-25 09:00				
	Sample ID:	2515146-13	2515146-14				
	Matrix:	Soil	Soil				
	MDL/Units						
Semi-Volatiles							
1-Methylnaphthalene	0.02 ug/g	0.02	<0.02	-	-	-	-
2-Methylnaphthalene	0.02 ug/g	0.03	<0.02	-	-	-	-
Methylnaphthalene (1&2)	0.04 ug/g	0.05	<0.04	-	-	-	-
Naphthalene	0.01 ug/g	0.02	<0.01	-	-	-	-
Phenanthrene	0.02 ug/g	0.05	<0.02	-	-	-	-
Pyrene	0.02 ug/g	0.06	0.03	-	-	-	-
2-Fluorobiphenyl	Surrogate	108%	86.7%	-	-	-	-
Terphenyl-d14	Surrogate	108%	88.0%	-	-	-	-

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, available	ND	0.5	ug/g					
Boron	ND	5.0	ug/g					
Cadmium	ND	0.5	ug/g					
Chromium (VI)	ND	0.2	ug/g					
Chromium	ND	5.0	ug/g					
Cobalt	ND	1.0	ug/g					
Copper	ND	5.0	ug/g					
Lead	ND	1.0	ug/g					
Mercury	ND	0.1	ug/g					
Molybdenum	ND	1.0	ug/g					
Nickel	ND	5.0	ug/g					
Selenium	ND	1.0	ug/g					
Silver	ND	0.3	ug/g					
Thallium	ND	1.0	ug/g					
Uranium	ND	1.0	ug/g					
Vanadium	ND	10.0	ug/g					
Zinc	ND	20.0	ug/g					
PCBs								
PCBs, total	ND	0.05	ug/g					
Surrogate: Decachlorobiphenyl	*0.0646*		*%*	*129*	*60-140*			

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Semi-Volatiles								
Acenaphthene	ND	0.02	ug/g					
Acenaphthylene	ND	0.02	ug/g					
Anthracene	ND	0.02	ug/g					
Benzo [a] anthracene	ND	0.02	ug/g					
Benzo [a] pyrene	ND	0.02	ug/g					
Benzo [b] fluoranthene	ND	0.02	ug/g					
Benzo [g,h,i] perylene	ND	0.02	ug/g					
Benzo [k] fluoranthene	ND	0.02	ug/g					
Chrysene	ND	0.02	ug/g					
Dibenzo [a,h] anthracene	ND	0.02	ug/g					
Fluoranthene	ND	0.02	ug/g					
Fluorene	ND	0.02	ug/g					
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g					
1-Methylnaphthalene	ND	0.02	ug/g					
2-Methylnaphthalene	ND	0.02	ug/g					
Methylnaphthalene (1&2)	ND	0.04	ug/g					
Naphthalene	ND	0.01	ug/g					
Phenanthrene	ND	0.02	ug/g					
Pyrene	ND	0.02	ug/g					
Surrogate: 2-Fluorobiphenyl	*0.835*		*%*	*62.6*	*50-140*			
Surrogate: Terphenyl-d14	*0.898*		*%*	*67.4*	*50-140*			
Volatiles								
Acetone	ND	0.50	ug/g					
Benzene	ND	0.02	ug/g					
Bromodichloromethane	ND	0.05	ug/g					
Bromoform	ND	0.05	ug/g					
Bromomethane	ND	0.05	ug/g					
Carbon Tetrachloride	ND	0.05	ug/g					
Chlorobenzene	ND	0.05	ug/g					
Chloroform	ND	0.05	ug/g					
Dibromochloromethane	ND	0.05	ug/g					

Method Quality Control: Blank

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

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: 4-Bromofluorobenzene	*7.79*		*%*	*97.4*	*50-140*			
Surrogate: Dibromofluoromethane	*5.95*		*%*	*74.3*	*50-140*			
Surrogate: Toluene-d8	*7.79*		*%*	*97.4*	*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	*7.79*		*%*	*97.4*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
SAR	0.22	0.01	N/A	0.22			0.3	30	
Conductivity	201	5	uS/cm	196			2.3	5	
pH	7.58	0.05	pH Units	7.61			0.4	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	2.1	1.0	ug/g	2.0			3.9	30	
Barium	45.1	1.0	ug/g	37.3			18.8	30	
Beryllium	ND	0.5	ug/g	ND			NC	30	
Boron, available	ND	0.5	ug/g	ND			NC	35	
Boron	6.9	5.0	ug/g	5.3			27.0	30	
Cadmium	ND	0.5	ug/g	ND			NC	30	
Chromium (VI)	ND	0.2	ug/g	ND			NC	35	
Chromium	15.1	5.0	ug/g	12.3			20.1	30	
Cobalt	5.3	1.0	ug/g	4.4			18.1	30	
Copper	11.4	5.0	ug/g	9.5			17.9	30	
Lead	3.0	1.0	ug/g	2.6			15.0	30	
Mercury	ND	0.1	ug/g	ND			NC	30	
Molybdenum	ND	1.0	ug/g	ND			NC	30	
Nickel	10.2	5.0	ug/g	8.6			16.7	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	28.4	10.0	ug/g	23.0			21.1	30	
Zinc	27.3	20.0	ug/g	22.7			18.3	30	

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
PCBs									
PCBs, total	ND	0.10	ug/g	ND			NC	40	
Surrogate: Decachlorobiphenyl	*0.0722*		*%*		*125*	*60-140*			
Physical Characteristics									
% Solids	77.0	0.1	% by Wt.	77.2			0.2	25	
Semi-Volatiles									
Acenaphthene	ND	0.02	ug/g	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g	ND			NC	40	
Anthracene	0.023	0.02	ug/g	ND			NC	40	
Benzo [a] anthracene	0.103	0.02	ug/g	ND			NC	40	
Benzo [a] pyrene	0.084	0.02	ug/g	ND			NC	40	
Benzo [b] fluoranthene	0.115	0.02	ug/g	ND			NC	40	
Benzo [g,h,i] perylene	0.044	0.02	ug/g	ND			NC	40	
Benzo [k] fluoranthene	0.044	0.02	ug/g	ND			NC	40	
Chrysene	0.106	0.02	ug/g	ND			NC	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g	ND			NC	40	
Fluoranthene	0.235	0.02	ug/g	ND			NC	40	
Fluorene	ND	0.02	ug/g	ND			NC	40	
Indeno [1,2,3-cd] pyrene	0.053	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	0.063	0.02	ug/g	ND			NC	40	
Pyrene	0.151	0.02	ug/g	ND			NC	40	
Surrogate: 2-Fluorobiphenyl	*1.12*		*%*		*73.5*	*50-140*			
Surrogate: Terphenyl-d14	*1.22*		*%*		*79.8*	*50-140*			
Volatiles									
Acetone	ND	0.50	ug/g	ND			NC	50	
Benzene	ND	0.02	ug/g	ND			NC	50	
Bromodichloromethane	ND	0.05	ug/g	ND			NC	50	
Bromoform	ND	0.05	ug/g	ND			NC	50	

Method Quality Control: Duplicate

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

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Trichloroethylene	ND	0.05	ug/g	ND			NC	50	
Trichlorofluoromethane	ND	0.05	ug/g	ND			NC	50	
Vinyl chloride	ND	0.02	ug/g	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g	ND			NC	50	
o-Xylene	ND	0.05	ug/g	ND			NC	50	
Surrogate: 4-Bromofluorobenzene	*12.4*		*%*		*111*	*50-140*			
Surrogate: Dibromofluoromethane	*9.32*		*%*		*83.4*	*50-140*			
Surrogate: Toluene-d8	*12.2*		*%*		*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	*12.2*		*%*		*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)	175	7	ug/g	ND	102	85-115			
F2 PHCs (C10-C16)	98	4	ug/g	ND	107	60-140			
F3 PHCs (C16-C34)	252	8	ug/g	ND	113	60-140			
F4 PHCs (C34-C50)	145	6	ug/g	ND	102	60-140			
F4G PHCs (gravimetric)	830	50	ug/g	ND	83.0	80-120			
Metals									
Arsenic	51.9	1.0	ug/g	ND	102	70-130			
Barium	63.1	1.0	ug/g	14.9	96.3	70-130			
Beryllium	54.3	0.5	ug/g	ND	108	70-130			
Boron, available	4.57	0.5	ug/g	ND	91.3	60-140			
Boron	53.0	5.0	ug/g	ND	102	70-130			
Cadmium	48.0	0.5	ug/g	ND	96.0	70-130			
Chromium (VI)	4.8	0.2	ug/g	ND	96.5	66-118			
Chromium	59.1	5.0	ug/g	ND	108	70-130			
Cobalt	54.1	1.0	ug/g	1.8	105	70-130			
Copper	54.9	5.0	ug/g	ND	102	70-130			
Lead	47.7	1.0	ug/g	1.0	93.3	70-130			
Mercury	1.56	0.1	ug/g	ND	104	70-130			
Molybdenum	48.6	1.0	ug/g	ND	96.9	70-130			
Nickel	55.3	5.0	ug/g	ND	104	70-130			
Selenium	49.9	1.0	ug/g	ND	99.2	70-130			
Silver	46.7	0.3	ug/g	ND	93.3	70-130			
Thallium	48.7	1.0	ug/g	ND	97.3	70-130			
Uranium	50.9	1.0	ug/g	ND	102	70-130			
Vanadium	63.9	10.0	ug/g	ND	109	70-130			
Zinc	57.9	20.0	ug/g	ND	97.7	70-130			
PCBs									
PCBs, total	0.611	0.05	ug/g	ND	111	60-140			
Surrogate: Decachlorobiphenyl	*0.0683*		*%*		*118*	*60-140*			
Semi-Volatiles									

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Acenaphthene	0.145	0.02	ug/g	ND	75.6	50-140			
Acenaphthylene	0.126	0.02	ug/g	ND	66.1	50-140			
Anthracene	0.141	0.02	ug/g	ND	73.6	50-140			
Benzo [a] anthracene	0.161	0.02	ug/g	ND	84.1	50-140			
Benzo [a] pyrene	0.119	0.02	ug/g	ND	62.2	50-140			
Benzo [b] fluoranthene	0.162	0.02	ug/g	ND	84.8	50-140			
Benzo [g,h,i] perylene	0.152	0.02	ug/g	ND	79.5	50-140			
Benzo [k] fluoranthene	0.150	0.02	ug/g	ND	78.6	50-140			
Chrysene	0.173	0.02	ug/g	ND	90.3	50-140			
Dibenzo [a,h] anthracene	0.156	0.02	ug/g	ND	81.8	50-140			
Fluoranthene	0.195	0.02	ug/g	ND	102	50-140			
Fluorene	0.152	0.02	ug/g	ND	79.3	50-140			
Indeno [1,2,3-cd] pyrene	0.155	0.02	ug/g	ND	81.0	50-140			
1-Methylnaphthalene	0.139	0.02	ug/g	ND	72.7	50-140			
2-Methylnaphthalene	0.197	0.02	ug/g	ND	103	50-140			
Naphthalene	0.134	0.01	ug/g	ND	70.1	50-140			
Phenanthrene	0.171	0.02	ug/g	ND	89.5	50-140			
Pyrene	0.159	0.02	ug/g	ND	83.0	50-140			
Surrogate: 2-Fluorobiphenyl	*1.20*		*%*		*78.6*	*50-140*			
Surrogate: Terphenyl-d14	*1.26*		*%*		*82.7*	*50-140*			
Volatiles									
Acetone	6.77	0.50	ug/g	ND	67.7	50-140			
Benzene	3.75	0.02	ug/g	ND	93.7	60-130			
Bromodichloromethane	3.30	0.05	ug/g	ND	82.4	60-130			
Bromoform	2.75	0.05	ug/g	ND	68.9	60-130			
Bromomethane	3.13	0.05	ug/g	ND	78.2	50-140			
Carbon Tetrachloride	3.16	0.05	ug/g	ND	79.1	60-130			
Chlorobenzene	3.41	0.05	ug/g	ND	85.3	60-130			
Chloroform	2.88	0.05	ug/g	ND	71.9	60-130			
Dibromochloromethane	2.95	0.05	ug/g	ND	73.9	60-130			
Dichlorodifluoromethane	3.40	0.05	ug/g	ND	84.9	50-140			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
1,2-Dichlorobenzene	3.44	0.05	ug/g	ND	85.9	60-130			
1,3-Dichlorobenzene	3.51	0.05	ug/g	ND	87.7	60-130			
1,4-Dichlorobenzene	3.48	0.05	ug/g	ND	87.0	60-130			
1,1-Dichloroethane	3.50	0.05	ug/g	ND	87.6	60-130			
1,2-Dichloroethane	2.97	0.05	ug/g	ND	74.1	60-130			
1,1-Dichloroethylene	3.61	0.05	ug/g	ND	90.2	60-130			
cis-1,2-Dichloroethylene	2.89	0.05	ug/g	ND	72.2	60-130			
trans-1,2-Dichloroethylene	3.76	0.05	ug/g	ND	93.9	60-130			
1,2-Dichloropropane	3.56	0.05	ug/g	ND	89.1	60-130			
cis-1,3-Dichloropropylene	2.83	0.05	ug/g	ND	70.8	60-130			
trans-1,3-Dichloropropylene	2.71	0.05	ug/g	ND	67.7	60-130			
Ethylbenzene	3.51	0.05	ug/g	ND	87.8	60-130			
Ethylene dibromide (dibromoethane, 1,2-)	3.06	0.05	ug/g	ND	76.4	60-130			
Hexane	3.55	0.05	ug/g	ND	88.7	60-130			
Methyl Ethyl Ketone (2-Butanone)	6.86	0.50	ug/g	ND	68.6	50-140			
Methyl Isobutyl Ketone	9.52	0.50	ug/g	ND	95.2	50-140			
Methyl tert-butyl ether	8.68	0.05	ug/g	ND	86.8	50-140			
Methylene Chloride	3.91	0.05	ug/g	ND	97.8	60-130			
Styrene	3.16	0.05	ug/g	ND	79.0	60-130			
1,1,1,2-Tetrachloroethane	3.06	0.05	ug/g	ND	76.4	60-130			
1,1,2,2-Tetrachloroethane	3.31	0.05	ug/g	ND	82.6	60-130			
Tetrachloroethylene	3.38	0.05	ug/g	ND	84.4	60-130			
Toluene	3.01	0.05	ug/g	ND	75.3	60-130			
1,1,1-Trichloroethane	2.91	0.05	ug/g	ND	72.7	60-130			
1,1,2-Trichloroethane	3.20	0.05	ug/g	ND	79.9	60-130			
Trichloroethylene	3.52	0.05	ug/g	ND	88.1	60-130			
Trichlorofluoromethane	3.90	0.05	ug/g	ND	97.4	50-140			
Vinyl chloride	4.31	0.02	ug/g	ND	108	50-140			
m,p-Xylenes	6.65	0.05	ug/g	ND	83.1	60-130			
o-Xylene	3.43	0.05	ug/g	ND	85.8	60-130			
Surrogate: 4-Bromofluorobenzene	*8.16*		*%*		*102*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: Dibromofluoromethane	*7.28*		*%*		*91.0*	*50-140*			
Surrogate: Toluene-d8	*7.86*		*%*		*98.2*	*50-140*			
Benzene	3.75	0.02	ug/g	ND	93.7	60-130			
Ethylbenzene	3.51	0.05	ug/g	ND	87.8	60-130			
Toluene	3.01	0.05	ug/g	ND	75.3	60-130			
m,p-Xylenes	6.65	0.05	ug/g	ND	83.1	60-130			
o-Xylene	3.43	0.05	ug/g	ND	85.8	60-130			
Surrogate: Toluene-d8	*7.86*		*%*		*98.2*	*50-140*			

Qualifier Notes:

Sample Qualifiers :

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

Applies to Samples: TP2-25-G1, TP7-25-G1, TP14-25-G1

2: The PCB chromatogram contained many peaks, however, the fingerprint pattern was not consistent with any Aroclor patterns. Results reported with an elevated reporting limit.

Applies to Samples: TP7-25-G1

Sample Data Revisions:

None

Certificate of Analysis

Report Date: 14-Apr-2025

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

Order Date: 8-Apr-2025

Client PO: 62799

Project Description: PE2144

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.

Any use of these results implies your agreement that our total liabilty in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.

PARACEL LABORATORIES LTD.

Paracel ID: 2515146

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2515140	

Client Name: Paterson Group	Project Ref: PE2144	Page 1 of 2
Contact Name: Jesse Andrechek	Quote #:	
Address: 9 Auriga Drive, Ottawa	PO #: 62799	Turnaround Time: ☐ 1 day ☐ 3 day ☐ 2 day ☒ Regular
Telephone: 613-226-7381	E-mail: jandrechek@patersongroup.ca cgreen@ " "	Date Required:

☒ REG 153/04 ☐ REG 406/19

☐ Table 1 ☐ Agri/Other ☐ Med/Fine
☐ Table 2 ☒ Res/Park ☒ Coarse
☐ Table 3 ☐ Ind/Comm
☒ Table 7
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	TP1-25-G1	S		2		04/04/2025		✓	✓	✓	✓	✓	✓	✓	✓		
2	TP2-25-G1	S		2				✓	✓	✓	✓	✓	✓	✓	✓		
3	TP3-25-G3	S		2				✓		✓	✓	✓	✓		✓	✓	
4	TP4-25-G2	S		2				✓	✓	✓	✓	✓	✓		✓		
5	TP5-25-G4	S		3				✓	✓	✓	✓	✓	✓		✓		
6	TP6-25-G1	S		2				✓	✓	✓	✓	✓	✓		✓		
7	TP7-25-G1	S		2				✓		✓	✓	✓	✓		✓		✓
8	TP8-25-G1	S		2				✓		✓	✓	✓	✓		✓		
9	TP9-25-G3	S		2				✓	✓	✓	✓	✓	✓		✓	✓	
10	TP11-25-G2	S		2				✓	✓	✓	✓	✓	✓	✓	✓		

Comments:

Method of Delivery: DropBox

Relinquished By (Sign):	Received at Depot:	Received at Lab:
Relinquished By (Print): Jesse Andrechek	Date/Time:	Date/Time: Apr 8 8:00
Date/Time: 7-APR-2025 3PM	Temperature: °C	Temperature: 8.7
		Verified By:
		Date/Time: Apr 8 10:10
		pH Verified: ☐ By: NA

PARACEL LABORATORIES LTD

Paracel ID: 2515146

Office
9 St. Laurent Blvd,
Ontario K1G 4J8
3-749-1947
paracellabs.com

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

Client Name: Paterson Group	Project Ref: PE2144	Page 2 of 2
Contact Name: Jesse Andrechek	Quote #:	**Turnaround Time**
Address: 9 Auriga Drive, Ottawa	PO #:	☐ 1 day ☐ 3 day
	E-mail: jandrechek@patersongroup.ca	☐ 2 day ☒ Regular
Telephone: 613-226-7381		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		
1	TP2-2S-G2	S		2		04/04/2023		✓	✓	✓	✓	✓	✓	✓	✓			
2	TP13-2S-G2	S		2				✓	✓	✓	✓	✓	✓		✓			
3	TP14-2S-G1	S		2				✓	✓	✓	✓	✓	✓	✓	✓			
4	DUP2-2S	S		2				✓		✓	✓	✓	✓		✓	✓		
5																		
6																		
7																		
8																		
9																		
10																		

Comments:

Method of Delivery: Dropped Off

Relinquished By (Sign):	Received at Depot:	Received at Lab:	Verified By:
Relinquished By (Print): Jesse Andrechek	Date/Time:	Date/Time: Apr 8 8:50	Date/Time: Apr 8 10:12
Date/Time:	Temperature: °C	Temperature: 8.7	pH Verified: ☐ By: NA

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Subcontracted Analysis

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

Paracel Report No.	**2518026**
Client Project(s):	**PE2144**
Client PO:	**62958**
Reference:	**SO Paterson Group Consulting Engineers**
CoC Number:	

Order Date:	25-Apr-25
Report Date:	29-May-25

Sample(s) from this project were subcontracted for the listed parameters. A copy of the subcontractor's report is attached

Paracel ID	Client ID	Analysis
2518026-01	TP8-25 (HA)	Methyl Mercury - soil

CERTIFICATE OF ANALYSIS

Work Order	:	**WT2509629**			
Client	:	**Paracel Laboratories Ltd**	Laboratory	:	ALS Environmental - Waterloo
Contact	:	Mark Foto	Account Manager	:	Costas Farassoglou
Address	:	2319 St. Laurent Blvd. Unit 300 Ottawa Ontario Canada K1G 4J8	Address	:	60 Northland Road, Unit 1 Waterloo ON Canada N2V 2B8
Telephone	:	613 731 9577	E-mail	:	costas.farassoglou@alsglobal.com
Project	:	2518026	Telephone	:	613 225 8279
PO	:	----	Date Samples Received	:	28-Apr-2025 15:30
C-O-C number	:	----	Date Analysis Commenced	:	22-May-2025
Sampler	:	CLIENT	Issue Date	:	28-May-2025 23:12
Site	:	----			
Quote number	:	Standing Offer 2025			
No. of samples received	:	1			
No. of samples analysed	:	1			

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results

Additional information pertinent to this report will be found in the following separate attachments: Quality Control Report, QC Interpretive report to assist with Quality Review and Sample Receipt Notification (SRN).

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Dan Gebert	Supervisor - Metals Mercury & Speciation	Metals, Burnaby, British Columbia
Janice Leung	Supervisor - Organics Instrumentation	Organics, Burnaby, British Columbia

General Comments

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Refer to the ALS Quality Control Interpretive report (QCI) for applicable references and methodology summaries. Reference methods may incorporate modifications to improve performance.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Please refer to Quality Control Interpretive report (QCI) for information regarding Holding Time compliance.

Key: CAS Number: Chemical Abstracts Services number is a unique identifier assigned to discrete substances.
LOR: Limit of Reporting (detection limit).

Unit	*Description*
%	percent
µg/kg	micrograms per kilogram

<: less than.
>: greater than.
Surrogate: An analyte that is similar in behavior to target analyte(s), but that does not occur naturally in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED on SRN or QCI Report, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical Results

Sub-Matrix: Soil/Solid (Matrix: Soil/Solid)					Client sample ID	TP8-25 (HA)	----	----	----	----
					Client sampling date / time	25-Apr-2025 09:00	----	----	----	----
Analyte	CAS Number	Method/Lab	LOR	Unit		WT2509629-001	----	----	----	----
						Result	----	----	----	----
Physical Tests										
Moisture	----	E144/VA	0.25	%		14.4	----	----	----	----
Speciated Metals										
Methylmercury (as MeHg)	22967-92-6	E538/VA	0.050	µg/kg		<0.050	----	----	----	----

Please refer to the General Comments section for an explanation of any qualifiers detected.

ALS Canada Ltd.

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right partner.

QUALITY CONTROL INTERPRETIVE REPORT

Work Order	: **WT2509629**	Page	: 1 of 5
Client	: **Paracel Laboratories Ltd**	Laboratory	: ALS Environmental - Waterloo
Contact	: Mark Foto	Account Manager	: Costas Farassoglou
Address	: 2319 St. Laurent Blvd. Unit 300 Ottawa ON Canada K1G 4J8	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 613 731 9577	Telephone	: 613 225 8279
Project	: 2518026	Date Samples Received	: 28-Apr-2025 15:30
PO	: ----	Issue Date	: 28-May-2025 23:12
C-O-C number	: ----		
Sampler	: CLIENT		
Site	: ----		
Quote number	: Standing Offer 2025		
No. of samples received	: 1		
No. of samples analysed	: 1		

This report is automatically generated by the ALS LIMS (Laboratory Information Management System) through evaluation of Quality Control (QC) results and other QA parameters associated with this submission, and is intended to facilitate rapid data validation by auditors or reviewers. The report highlights any exceptions and outliers to ALS Data Quality Objectives, provides holding time details and exceptions, summarizes QC sample frequencies, and lists applicable methodology references and summaries.

Key

Anonymous: Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number: Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO: Data Quality Objective.
LOR: Limit of Reporting (detection limit).
RPD: Relative Percent Difference.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Summary of Outliers

Outliers : Quality Control Samples

- No Method Blank value outliers occur.
- No Duplicate outliers occur.
- No Laboratory Control Sample (LCS) outliers occur
- No Test sample Surrogate recovery outliers exist.

Outliers: Reference Material (RM) Samples

- No Reference Material (RM) Sample outliers occur.

Outliers : Analysis Holding Time Compliance (Breaches)

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

- No Quality Control Sample Frequency Outliers occur.

Analysis Holding Time Compliance

This report summarizes extraction / preparation and analysis times and compares each with ALS recommended holding times, which are selected to meet known provincial and /or federal requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by organizations such as CCME, US EPA, APHA Standard Methods, ASTM, or Environment Canada (where available). Dates and holding times reported below represent the first dates of extraction or analysis. If subsequent tests or dilutions exceeded holding times, qualifiers are added (refer to COA).

If samples are identified below as having been analyzed or extracted outside of recommended holding times, measurement uncertainties may be increased, and this should be taken into consideration when interpreting results.

Where actual sampling date is not provided on the chain of custody, the date of receipt with time at 00:00 is used for calculation purposes.

Where only the sample date without time is provided on the chain of custody, the sampling date at 00:00 is used for calculation purposes.

Matrix: **Soil/Solid**

Evaluation: × = Holding time exceedance ; ✓ = Within Holding Time

Analyte Group : Analytical Method / Container / Client Sample ID(s)	*Method*	*Sampling Date*	*Extraction / Preparation*				*Analysis*			
			Preparation Date	*Holding Times* Rec	*Holding Times* Actual	*Eval*	*Analysis Date*	*Holding Times* Rec	*Holding Times* Actual	*Eval*
Physical Tests : Moisture Content by Gravimetry										
Non compliant container TP8-25 (HA)	E144	25-Apr-2025	----	----	----		26-May-2025	----	----	
Speciated Metals : Methylmercury in Soil by GCAFS										
Non compliant container TP8-25 (HA)	E538	25-Apr-2025	22-May-2025	28 days	27 days	✓	22-May-2025	28 days	27 days	✓

Legend & Qualifier Definitions

Rec. HT: ALS recommended hold time (see units).

Quality Control Parameter Frequency Compliance

The following report summarizes the frequency of laboratory QC samples analyzed within the analytical batches (QC lots) in which the submitted samples were processed. The actual frequency should be greater than or equal to the expected frequency.

Matrix: **Soil/Solid**

Evaluation: × = *QC frequency outside specification*; ✓ = *QC frequency within specification.*

Quality Control Sample Type			Count		Frequency (%)		
Analytical Methods	*Method*	*QC Lot #*	*QC*	*Regular*	*Actual*	*Expected*	*Evaluation*
Laboratory Duplicates (DUP)							
Moisture Content by Gravimetry	E144	2015595	1	10	10.0	5.0	✓
Methylmercury in Soil by GCAFS	E538	2009032	1	17	5.8	5.0	✓
Laboratory Control Samples (LCS)							
Moisture Content by Gravimetry	E144	2015595	1	10	10.0	5.0	✓
Methylmercury in Soil by GCAFS	E538	2009032	2	17	11.7	10.0	✓
Method Blanks (MB)							
Moisture Content by Gravimetry	E144	2015595	1	10	10.0	5.0	✓
Methylmercury in Soil by GCAFS	E538	2009032	1	17	5.8	5.0	✓

Methodology References and Summaries

The analytical methods used by ALS are developed using internationally recognized reference methods (where available), such as those published by US EPA, APHA Standard Methods, ASTM, ISO, Environment Canada, BC MOE, and Ontario MOE. Reference methods may incorporate modifications to improve performance (indicated by “mod”).

Analytical Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Moisture Content by Gravimetry	E144 ALS Environmental - Vancouver	Soil/Solid	CCME PHC in Soil - Tier 1	Moisture is measured gravimetrically by drying the sample at 105°C. Moisture content is calculated as the weight loss (due to water) divided by the wet weight of the sample, expressed as a percentage.
Methylmercury in Soil by GCAFS	E538 ALS Environmental - Vancouver	Soil/Solid	DeWild et al. (2004)/EPA 1630 (mod)	This method follows procedures published by DeWild, Olund, Olsen and Tate (2004) for the US Geological Survey (Techniques and Methods 5A-7). Samples are leached with an acidic copper sulphate solution to solubilize methylmercury for inorganic complexes. The methylmercury is then extracted into dichloromethane and then an aliquot is back extracted into ultra-pure water. The extract is analyzed by aqueous phase ethylation, purge and trap, desorption and GC separation. The separated species are then pyrolized to elemental Hg and quantified by cold vapour atomic fluorescence spectroscopy. Results are reported "as MeHg".

Preparation Methods	Method / Lab	Matrix	Method Reference	Method Descriptions
Methylmercury Soil Digestion	EP538 ALS Environmental - Vancouver	Soil/Solid	DeWild et al. (2004)	This method follows procedures published by DeWild, Olund, Olsen and Tate (2004) for the US Geological Survey (Techniques and Methods 5A-7). Samples are leached with an acidic copper sulphate solution to solubilize methylmercury for inorganic complexes. The methylmercury is then extracted into dichloromethane and then an aliquot is back extracted into ultra-pure water. The extract is analyzed by aqueous phase ethylation, purge and trap, desorption and GC separation. The separated species are then pyrolized to elemental Hg and quantified by cold vapour atomic flourescence spectroscopy. Results are reported "as MeHg".

QUALITY CONTROL REPORT

Work Order	: **WT2509629**	Page	: 1 of 3
Client	: Paracel Laboratories Ltd	Laboratory	: ALS Environmental - Waterloo
Contact	: Mark Foto	Account Manager	: Costas Farassoglou
Address	: 2319 St. Laurent Blvd. Unit 300 Ottawa ON Canada K1G 4J8	Address	: 60 Northland Road, Unit 1 Waterloo, Ontario Canada N2V 2B8
Telephone	: 613 731 9577	Telephone	: 613 225 8279
Project	: 2518026	Date Samples Received	: 28-Apr-2025 15:30
PO	: ----	Date Analysis Commenced	: 22-May-2025
C-O-C number	: ----	Issue Date	: 28-May-2025 23:12
Sampler	: CLIENT		
Site	: ----		
Quote number	: Standing Offer 2025		
No. of samples received	: 1		
No. of samples analysed	: 1		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. This document shall not be reproduced, except in full.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percent Difference (RPD) and Data Quality Objectives
- Reference Material (RM) Report; Recovery and Data Quality Objectives
- Method Blank (MB) Report; Recovery and Data Quality Objectives
- Laboratory Control Sample (LCS) Report; Recovery and Data Quality Objectives

Signatories

This document has been electronically signed by the authorized signatories below. Electronic signing is conducted in accordance with US FDA 21 CFR Part 11.

Signatories	*Position*	*Laboratory Department*
Dan Gebert	Supervisor - Metals Mercury & Speciation	Vancouver Metals, Burnaby, British Columbia
Janice Leung	Supervisor - Organics Instrumentation	Vancouver Organics, Burnaby, British Columbia

General Comments

The ALS Quality Control (QC) report is optionally provided to ALS clients upon request. ALS test methods include comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined Data Quality Objectives (DQOs) to provide confidence in the accuracy of associated test results. This report contains detailed results for all QC results applicable to this sample submission. Please refer to the ALS Quality Control Interpretation report (QCI) for applicable method references and methodology summaries.

Key :

Anonymous = Refers to samples which are not part of this work order, but which formed part of the QC process lot.
CAS Number = Chemical Abstracts Service number is a unique identifier assigned to discrete substances.
DQO = Data Quality Objective.
LOR = Limit of Reporting (detection limit).
RPD = Relative Percent Difference
# = Indicates a QC result that did not meet the ALS DQO.

Workorder Comments

Holding times are displayed as "---" if no guidance exists from CCME, Canadian provinces, or broadly recognized international references.

Laboratory Duplicate (DUP) Report

A Laboratory Duplicate (DUP) is a randomly selected intralaboratory replicate sample. Laboratory Duplicates provide information regarding method precision and sample heterogeneity. ALS DQOs for Laboratory Duplicates are expressed as test-specific limits for Relative Percent Difference (RPD), or as an absolute difference limit of 2 times the LOR for low concentration duplicates within ~ 4-10 times the LOR (cut-off is test-specific).

Sub-Matrix: **Soil/Solid**

					Laboratory Duplicate (DUP) Report						
Laboratory sample ID	*Client sample ID*	*Analyte*	*CAS Number*	*Method*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD(%) or Difference*	*Duplicate Limits*	*Qualifier*
Physical Tests (QC Lot: 2015595)											
VA25B1694-001	Anonymous	Moisture	----	E144	0.25	%	9.68	9.35	3.46%	20%	----
Speciated Metals (QC Lot: 2009032)											
WT2509629-001	TP8-25 (HA)	Methylmercury (as MeHg)	22967-92-6	E538	0.050	µg/kg	<0.050	<0.050	0	Diff <2x LOR	----

Method Blank (MB) Report

A Method Blank is an analyte-free matrix that undergoes sample processing identical to that carried out for test samples. Method Blank results are used to monitor and control for potential contamination from the laboratory environment and reagents. For most tests, the DQO for Method Blanks is for the result to be < LOR.

Sub-Matrix: **Soil/Solid**

Analyte	CAS Number	Method	LOR	Unit	Result	Qualifier
Physical Tests (QCLot: 2015595)						
Moisture	----	E144	0.25	%	<0.25	----
Speciated Metals (QCLot: 2009032)						
Methylmercury (as MeHg)	22967-92-6	E538	0.05	µg/kg	<0.050	----

Laboratory Control Sample (LCS) Report

A Laboratory Control Sample (LCS) is an analyte-free matrix that has been fortified (spiked) with test analytes at known concentration and processed in an identical manner to test samples. LCS results are expressed as percent recovery, and are used to monitor and control test method accuracy and precision, independent of test sample matrix.

Sub-Matrix: **Soil/Solid**

					Laboratory Control Sample (LCS) Report				
					Spike	Recovery (%)	Recovery Limits (%)		
Analyte	CAS Number	Method	LOR	Unit	Target Concentration	LCS	Low	High	Qualifier
Physical Tests (QCLot: 2015595)									
Moisture	----	E144	0.25	%	50 %	100	90.0	110	----
Speciated Metals (QCLot: 2009032)									
Methylmercury (as MeHg)	22967-92-6	E538	0.05	µg/kg	10 µg/kg	99.6	70.0	130	----

Reference Material (RM) Report

A Reference Material (RM) is a homogenous material with known and well-established analyte concentrations. RMs are processed in an identical manner to test samples, and are used to monitor and control the accuracy and precision of a test method for a typical sample matrix. RM results are expressed as percent recovery of the target analyte concentration. RM targets may be certified target concentrations provided by the RM supplier, or may be ALS long-term mean values (for empirical test methods).

Sub-Matrix:

					Reference Material (RM) Report				
					RM Target	Recovery (%)	Recovery Limits (%)		
Laboratory sample ID	Reference Material ID	Analyte	CAS Number	Method	Concentration	RM	Low	High	Qualifier
Speciated Metals (QCLot: 2009032)									
QC-2009032-003	RM	Methylmercury (as MeHg)	22967-92-6	E538	75 µg/kg	71.9	70.0	130	----

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Subcontract Order

WT2509629

SENDING LABORATORY:

Paracel Laboratories Ltd.
300-2319 St. Laurent Blvd.
Ottawa, ON K1G 4J8
Phone: 613-731-9577

Fax: 613-731-9064

RECEIVING LABORATORY:

ALS Laboratory Group (Ottawa)
7-190 Colonnade Rd
Ottawa, ON K2E7J5
Phone: (613) 225-8279

Fax: (613) 225-2801

INVOICE TO:

Paracel Laboratories Ltd.
300-2319 St. Laurent Blvd.
Ottawa, ON K1G 4J8
Phone: 613-731-9577

Fax: 613-731-9064

Date Requested: **28-Apr-25**
Project Number: **2518026**
Submitted By: **Sandra Demanins**

Required Regulation	Reg153
Turnaround Time	Standard

Sample ID	Matrix	Analyses Requested:	Sampled	Comments
TP8-25 (HA)	Soil	Methyl Mercury - soil	25-Apr-25 09:00	

Environmental Division
Waterloo
Work Order Reference
WT2509629

Telephone : +1 519 886 6910

4.5°
Apr 29 10:50 @900
Reg ICE PACK

Please email all results to mfoto@paracellabs.com, dbloom@paracellabs.com, drobertson@paracellabs.com

Sandra Demanins — Released By
Apr 28, 2025 12:15pm — Date / Time
Cosias F — Received By
28-APR-2025 15:30 — Date
18.3°C
→ ICE PACK

Temperature prior to Shipping: 3.7

PARACEL LABORATORIES LTD

Paracel ID: 2518026

aurent Blvd.
o K1G 4J8
047
acellabs.com
abs.com

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2518026	

Client Name: Paterson Group	Project Ref: PE2144	Page 1 of 1
Contact Name: Jesse Andrechek	Quote #:	Turnaround Time
Address: 9 Auriga Dr.	PO #: 62958	☐ 1 day ☐ 3 day
	E-mail: jandrechek@patersongroup.ca cgreen@patersongroup.ca	☐ 2 day ☒ Regular
Telephone: (613) 226-7381		Date Required:

☒ REG 153/04 ☐ REG 406/19

☐ Table 1 ☒ Res/Park ☐ Med/Fine
☐ Table 2 ☐ Ind/Comm ☒ Coarse
☐ Table 3 ☐ Agri/Other
☐ Table 7
For RSC: ☒ Yes ☐ No

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

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

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken: Date	Sample Taken: Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	Methyl Mercury			
1	TP8-25 (HA)	S		1	04/25/2025									X			
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	

Comments:

Method of Delivery: P. Courier

Relinquished By (Sign):	Received By Driver/Depot: KB 1609	Received at Lab: SD	Verified By: SD
Relinquished By (Print): Christopher Green	Date/Time: April 25	Date/Time: Apr 29, 2025 10:00am	Date/Time: Apr 28, 2025 10:30am
Date/Time: 04/25/2025	Temperature: 16.2 °C	Temperature: 3.8°C	pH Verified: ☐ By:

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Certificate of Analysis

Paterson Group Consulting Engineers
28 Concourse Gate, Unit 1
Nepean, ON K2E 7T7
Attn: Mark D'Arcy

Phone: (613) 226-7381
Fax: (613) 226-6344

Client PO: 10132
Project: PE2144
Custody: 79072

Report Date: 18-Nov-2010
Order Date: 11-Nov-2010
Order #: 1046174

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

Paracel ID	Client ID
1046174-01	BH5A-G4

Approved By: Mark Foto

Mark Foto, M.Sc. For Dale Robertson, BSc
Laboratory Director

Any use of these results implies your agreement that our total liabilty in connection with this work, however arising shall be limited to the amount paid by you for this work, and that our employees or agents shall not under circumstances be liable to you in connection with this work

Certificate of Analysis

Report Date: 18-Nov-2010

Client: **Paterson Group Consulting Engineers**

Order Date:11-Nov-2010

Client PO: 10132 Project Description: PE2144

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Boron, available	MOE (HWE), EPA 200.8 - ICP-MS	15-Nov-10	16-Nov-10
Chromium, hexavalent	MOE E3056 - Extraction, colourimetric	17-Nov-10	17-Nov-10
Mercury	EPA 7471A - CVAA, digestion	17-Nov-10	17-Nov-10
Metals	EPA 6020 - Digestion - ICP-MS	16-Nov-10	16-Nov-10
Solids, %	Gravimetric, calculation	15-Nov-10	15-Nov-10

Certificate of Analysis

Report Date: 18-Nov-2010

Client: **Paterson Group Consulting Engineers**

Order Date:11-Nov-2010

Client PO: 10132

Project Description: PE2144

	Client ID:	BH5A-G4	-	-	-
	Sample Date:	10-Nov-10	-	-	-
	Sample ID:	1046174-01	-	-	-
	MDL/Units	Soil	-	-	-
Physical Characteristics					
% Solids	0.1 % by Wt.	89.5	-	-	-
Metals					
Antimony	1 ug/g dry	3	-	-	-
Arsenic	1 ug/g dry	110	-	-	-
Barium	10 ug/g dry	402	-	-	-
Beryllium	0.5 ug/g dry	<0.5	-	-	-
Boron, available	0.5 ug/g dry	1.2	-	-	-
Cadmium	0.5 ug/g dry	1.1	-	-	-
Chromium	5 ug/g dry	30	-	-	-
Chromium (VI)	0.4 ug/g dry	<0.4	-	-	-
Cobalt	1 ug/g dry	10	-	-	-
Copper	5 ug/g dry	64	-	-	-
Lead	1 ug/g dry	94	-	-	-
Mercury	0.1 ug/g dry	0.2	-	-	-
Molybdenum	1 ug/g dry	9	-	-	-
Nickel	5 ug/g dry	30	-	-	-
Selenium	1 ug/g dry	<1	-	-	-
Silver	0.3 ug/g dry	0.4	-	-	-
Thallium	1 ug/g dry	<1	-	-	-
Vanadium	10 ug/g dry	42	-	-	-
Zinc	20 ug/g dry	124	-	-	-

Certificate of Analysis

Report Date: 18-Nov-2010

Client: **Paterson Group Consulting Engineers**

Order Date:11-Nov-2010

Client PO: 10132 Project Description: PE2144

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Metals									
Antimony	ND	1	ug/g						
Arsenic	ND	1	ug/g						
Barium	ND	10	ug/g						
Beryllium	ND	0.5	ug/g						
Boron, available	ND	0.5	ug/g						
Cadmium	ND	0.5	ug/g						
Chromium (VI)	ND	0.4	ug/g						
Chromium	ND	5	ug/g						
Cobalt	ND	1	ug/g						
Copper	ND	5	ug/g						
Lead	ND	1	ug/g						
Mercury	ND	0.1	ug/g						
Molybdenum	ND	1	ug/g						
Nickel	ND	5	ug/g						
Selenium	ND	1	ug/g						
Silver	ND	0.3	ug/g						
Thallium	ND	1	ug/g						
Vanadium	ND	10	ug/g						
Zinc	ND	20	ug/g						

Certificate of Analysis

Report Date: 18-Nov-2010

Client: **Paterson Group Consulting Engineers**

Order Date:11-Nov-2010

Client PO: 10132 Project Description: PE2144

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Metals									
Antimony	ND	1	ug/g dry	ND				26	
Arsenic	1.4	1	ug/g dry	1.5			10.9	35	
Barium	274	10	ug/g dry	280			2.0	34	
Beryllium	0.93	0.5	ug/g dry	0.98			6.0	25	
Boron, available	ND	0.5	ug/g dry	ND				35	
Cadmium	ND	0.5	ug/g dry	ND				33	
Chromium (VI)	ND	0.4	ug/g dry	ND				35	
Chromium	91.3	5	ug/g dry	96.9			6.0	32	
Cobalt	23.6	1	ug/g dry	25.1			6.1	32	
Copper	31.9	5	ug/g dry	33.5			4.9	32	
Lead	8.9	1	ug/g dry	9.5			6.2	44	
Mercury	ND	0.1	ug/g dry	ND				35	
Molybdenum	1.2	1	ug/g dry	1.7			40.8	29	QR-01
Nickel	50.9	5	ug/g dry	52.1			2.4	29	
Selenium	ND	1	ug/g dry	ND				28	
Silver	ND	0.3	ug/g dry	0.34			200.0	28	QR-01
Thallium	ND	1	ug/g dry	ND				27	
Vanadium	82.9	10	ug/g dry	89.3			7.4	27	
Zinc	75.5	20	ug/g dry	82.1			8.4	27	
Physical Characteristics									
% Solids	100	0.1	% by Wt.	67.8			38.4	25	

Certificate of Analysis

Report Date: 18-Nov-2010

Client: **Paterson Group Consulting Engineers**

Order Date:11-Nov-2010

Client PO: 10132 Project Description: PE2144

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Metals									
Antimony	59.2		ug/L	ND	118	80-120			
Arsenic	46.7		ug/L	ND	93.4	80-120			
Barium	50.7		ug/L	ND	101	80-120			
Beryllium	44.0		ug/L	ND	88.0	80-120			
Boron, available	3.97	0.5	ug/g	ND	79.4	70-122			
Cadmium	52.3		ug/L	ND	105	80-120			
Chromium (VI)	5.2	0.4	ug/g	ND	104	89-123			
Chromium	47.9		ug/L	ND	95.9	80-120			
Cobalt	46.2		ug/L	ND	92.3	80-120			
Copper	46.2		ug/L	ND	92.3	80-120			
Lead	50.6		ug/L	ND	101	80-120			
Mercury	1.76	0.1	ug/g	ND	117	72-128			
Molybdenum	53.4		ug/L	ND	107	80-120			
Nickel	45.3		ug/L	ND	90.5	80-120			
Selenium	48.7		ug/L	ND	97.4	80-120			
Silver	52.2		ug/L	ND	104	80-120			
Thallium	53.3		ug/L	ND	107	80-120			
Vanadium	47.3		ug/L	ND	94.5	80-120			
Zinc	41.7		ug/L	ND	83.5	80-120			

Sample and QC Qualifiers Notes

1- QR-01 : Duplicate RPD is high, however, the sample result is less than 10x the MDL.

Sample Data Revisions

None

Work Order Revisions/Comments:

None

Other Report Notes:

n/a: not applicable
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.

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Certificate of Analysis

Paterson Group Consulting Engineers
28 Concourse Gate, Unit 1
Nepean, ON K2E 7T7
Attn: Mark D'Arcy

Phone: (613) 226-7381
Fax: (613) 226-6344

Client PO: 10130
Project: PE2144
Custody: 76376

Report Date: 24-Nov-2010
Order Date: 17-Nov-2010
Order #: 1047141

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

Paracel ID	Client ID
1047141-01	BH1-GW1
1047141-02	MW208-GW2

Approved By:

Mark Foto, M.Sc. For Dale Robertson, BSc
Laboratory Director

Any use of these results implies your agreement that our total liabilty in connection with this work, however arising shall be limited to the amount paid by you for this work, and that our employees or agents shall not under circumstances be liable to you in connection with this work

Certificate of Analysis

Report Date: 24-Nov-2010

Client: **Paterson Group Consulting Engineers**

Order Date:17-Nov-2010

Client PO: 10130 Project Description: PE2144

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
CCME PHC F1	CWS Tier 1 - P&T GC-FID	19-Nov-10	23-Nov-10
CCME PHC F1 to F4 + VOC	[CALC]	23-Nov-10	23-Nov-10
CCME PHC F2 - F4	CWS Tier 1 - GC-FID, extraction	23-Nov-10	23-Nov-10
VOCs	EPA 624 - P&T GC-MS	19-Nov-10	23-Nov-10

Certificate of Analysis

Report Date: 24-Nov-2010

Client: **Paterson Group Consulting Engineers**

Order Date:17-Nov-2010

Client PO: 10130

Project Description: PE2144

	Client ID:	BH1-GW1	MW208-GW2	-	-
	Sample Date:	16-Nov-10	16-Nov-10	-	-
	Sample ID:	1047141-01	1047141-02	-	-
	MDL/Units	Water	Water	-	-
Volatiles					
Benzene	0.5 ug/L	<0.5 [1]	<0.5 [1]	-	-
Bromodichloromethane	0.4 ug/L	<0.4 [1]	<0.4 [1]	-	-
Bromoform	0.5 ug/L	<0.5 [1]	<0.5 [1]	-	-
Bromomethane	0.7 ug/L	<0.7 [1]	<0.7 [1]	-	-
Carbon Tetrachloride	0.5 ug/L	<0.5 [1]	<0.5 [1]	-	-
Chlorobenzene	0.4 ug/L	<0.4 [1]	<0.4 [1]	-	-
Chloroethane	1.0 ug/L	<1.0 [1]	<1.0 [1]	-	-
Chloroform	0.5 ug/L	<0.5 [1]	<0.5 [1]	-	-
Chloromethane	3.0 ug/L	<3.0 [1]	<3.0 [1]	-	-
Dibromochloromethane	0.5 ug/L	<0.5 [1]	<0.5 [1]	-	-
1,2-Dibromoethane	1.0 ug/L	<1.0 [1]	<1.0 [1]	-	-
1,2-Dichlorobenzene	0.4 ug/L	<0.4 [1]	<0.4 [1]	-	-
1,3-Dichlorobenzene	0.4 ug/L	<0.4 [1]	<0.4 [1]	-	-
1,4-Dichlorobenzene	0.4 ug/L	<0.4 [1]	<0.4 [1]	-	-
1,1-Dichloroethane	0.5 ug/L	<0.5 [1]	<0.5 [1]	-	-
1,2-Dichloroethane	0.5 ug/L	<0.5 [1]	<0.5 [1]	-	-
1,1-Dichloroethylene	0.5 ug/L	<0.5 [1]	<0.5 [1]	-	-
cis-1,2-Dichloroethylene	0.4 ug/L	<0.4 [1]	<0.4 [1]	-	-
trans-1,2-Dichloroethylene	1.0 ug/L	<1.0 [1]	<1.0 [1]	-	-
1,2-Dichloroethylene, total	1.4 ug/L	<1.4 [1]	<1.4 [1]	-	-
1,2-Dichloropropane	0.5 ug/L	<0.5 [1]	<0.5 [1]	-	-
cis-1,3-Dichloropropylene	0.4 ug/L	<0.4 [1]	<0.4 [1]	-	-
trans-1,3-Dichloropropylene	0.5 ug/L	<0.5 [1]	<0.5 [1]	-	-
1,3-Dichloropropene, total	0.9 ug/L	<0.9 [1]	<0.9 [1]	-	-
Ethylbenzene	0.5 ug/L	<0.5 [1]	<0.5 [1]	-	-
Methylene Chloride	4.0 ug/L	<4.0 [1]	<4.0 [1]	-	-
Styrene	0.4 ug/L	<0.4 [1]	<0.4 [1]	-	-
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5 [1]	<0.5 [1]	-	-
1,1,2,2-Tetrachloroethane	0.6 ug/L	<0.6 [1]	<0.6 [1]	-	-
Tetrachloroethylene	0.5 ug/L	<0.5 [1]	<0.5 [1]	-	-
Toluene	0.5 ug/L	<0.5 [1]	<0.5 [1]	-	-
1,1,1-Trichloroethane	0.4 ug/L	<0.4 [1]	<0.4 [1]	-	-
1,1,2-Trichloroethane	0.6 ug/L	<0.6 [1]	<0.6 [1]	-	-

Certificate of Analysis

Report Date: 24-Nov-2010

Client: **Paterson Group Consulting Engineers**

Order Date:17-Nov-2010

Client PO: 10130

Project Description: PE2144

	Client ID:	BH1-GW1	MW208-GW2	-	-
	Sample Date:	16-Nov-10	16-Nov-10	-	-
	Sample ID:	1047141-01	1047141-02	-	-
	MDL/Units	Water	Water	-	-
Trichloroethylene	0.4 ug/L	<0.4 [1]	<0.4 [1]	-	-
Trichlorofluoromethane	1.0 ug/L	<1.0 [1]	<1.0 [1]	-	-
1,3,5-Trimethylbenzene	0.5 ug/L	<0.5 [1]	<0.5 [1]	-	-
Vinyl chloride	0.4 ug/L	<0.4 [1]	<0.4 [1]	-	-
m,p-Xylenes	0.5 ug/L	<0.5 [1]	<0.5 [1]	-	-
o-Xylene	0.5 ug/L	<0.5 [1]	<0.5 [1]	-	-
Xylenes, total	1.0 ug/L	<1.0 [1]	<1.0 [1]	-	-
4-Bromofluorobenzene	Surrogate	107% [1]	108% [1]	-	-
Dibromofluoromethane	Surrogate	112% [1]	113% [1]	-	-
Toluene-d8	Surrogate	98.0% [1]	98.2% [1]	-	-
Hydrocarbons					
F1 PHCs (C6-C10)	200 ug/L	<200 [1]	<200 [1]	-	-
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	-	-
F1 + F2 PHCs	300 ug/L	<300	<300	-	-
F3 + F4 PHCs	200 ug/L	<200	<200	-	-

Certificate of Analysis

Report Date: 24-Nov-2010

Client: **Paterson Group Consulting Engineers**

Order Date:17-Nov-2010

Client PO: 10130 Project Description: PE2144

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	200	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									
Benzene	ND	0.5	ug/L						
Bromodichloromethane	ND	0.4	ug/L						
Bromoform	ND	0.5	ug/L						
Bromomethane	ND	0.7	ug/L						
Carbon Tetrachloride	ND	0.5	ug/L						
Chlorobenzene	ND	0.4	ug/L						
Chloroethane	ND	1.0	ug/L						
Chloroform	ND	0.5	ug/L						
Chloromethane	ND	3.0	ug/L						
Dibromochloromethane	ND	0.5	ug/L						
1,2-Dibromoethane	ND	1.0	ug/L						
1,2-Dichlorobenzene	ND	0.4	ug/L						
1,3-Dichlorobenzene	ND	0.4	ug/L						
1,4-Dichlorobenzene	ND	0.4	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	0.4	ug/L						
trans-1,2-Dichloroethylene	ND	1.0	ug/L						
1,2-Dichloroethylene, total	ND	1.4	ug/L						
1,2-Dichloropropane	ND	0.5	ug/L						
cis-1,3-Dichloropropylene	ND	0.4	ug/L						
trans-1,3-Dichloropropylene	ND	0.5	ug/L						
1,3-Dichloropropene, total	ND	0.9	ug/L						
Ethylbenzene	ND	0.5	ug/L						
Methylene Chloride	ND	4.0	ug/L						
Styrene	ND	0.4	ug/L						
1,1,1,2-Tetrachloroethane	ND	0.5	ug/L						
1,1,2,2-Tetrachloroethane	ND	0.6	ug/L						
Tetrachloroethylene	ND	0.5	ug/L						
Toluene	ND	0.5	ug/L						
1,1,1-Trichloroethane	ND	0.4	ug/L						
1,1,2-Trichloroethane	ND	0.6	ug/L						
Trichloroethylene	ND	0.4	ug/L						
Trichlorofluoromethane	ND	1.0	ug/L						
1,3,5-Trimethylbenzene	ND	0.5	ug/L						
Vinyl chloride	ND	0.4	ug/L						
m,p-Xylenes	ND	0.5	ug/L						
o-Xylene	ND	0.5	ug/L						
Xylenes, total	ND	1.0	ug/L						
Surrogate: 4-Bromofluorobenzene	*90.1*		*ug/L*		*113*	*83-134*			
Surrogate: Dibromofluoromethane	*73.2*		*ug/L*		*91.5*	*78-124*			
Surrogate: Toluene-d8	*81.6*		*ug/L*		*102*	*76-118*			

Certificate of Analysis

Report Date: 24-Nov-2010

Client: **Paterson Group Consulting Engineers**

Order Date:17-Nov-2010

Client PO: 10130 Project Description: PE2144

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	200	ug/L	ND				32	
Volatiles									
Benzene	ND	0.5	ug/L	ND				20	
Bromodichloromethane	ND	0.4	ug/L	ND				25	
Bromoform	ND	0.5	ug/L	ND				25	
Bromomethane	ND	0.7	ug/L	ND				25	
Carbon Tetrachloride	ND	0.5	ug/L	ND				25	
Chlorobenzene	ND	0.4	ug/L	ND				25	
Chloroethane	ND	1.0	ug/L	ND				25	
Chloroform	ND	0.5	ug/L	ND				19	
Chloromethane	ND	3.0	ug/L	ND				25	
Dibromochloromethane	ND	0.5	ug/L	ND				25	
1,2-Dibromoethane	ND	1.0	ug/L	ND				25	
1,2-Dichlorobenzene	ND	0.4	ug/L	ND				25	
1,3-Dichlorobenzene	ND	0.4	ug/L	ND				25	
1,4-Dichlorobenzene	ND	0.4	ug/L	ND				25	
1,1-Dichloroethane	ND	0.5	ug/L	ND				21	
1,2-Dichloroethane	ND	0.5	ug/L	ND				25	
1,1-Dichloroethylene	ND	0.5	ug/L	ND				21	
cis-1,2-Dichloroethylene	ND	0.4	ug/L	ND				20	
trans-1,2-Dichloroethylene	ND	1.0	ug/L	ND				25	
1,2-Dichloropropane	ND	0.5	ug/L	ND				25	
cis-1,3-Dichloropropylene	ND	0.4	ug/L	ND				25	
trans-1,3-Dichloropropylene	ND	0.5	ug/L	ND				25	
Ethylbenzene	ND	0.5	ug/L	ND				35	
Methylene Chloride	ND	4.0	ug/L	ND				25	
Styrene	ND	0.4	ug/L	ND				25	
1,1,1,2-Tetrachloroethane	ND	0.5	ug/L	ND				25	
1,1,2,2-Tetrachloroethane	ND	0.6	ug/L	ND				25	
Tetrachloroethylene	ND	0.5	ug/L	ND				31	
Toluene	ND	0.5	ug/L	ND				30	
1,1,1-Trichloroethane	ND	0.4	ug/L	ND				25	
1,1,2-Trichloroethane	ND	0.6	ug/L	ND				25	
Trichloroethylene	ND	0.4	ug/L	ND				30	
Trichlorofluoromethane	ND	1.0	ug/L	ND				25	
1,3,5-Trimethylbenzene	ND	0.5	ug/L	ND				20	
Vinyl chloride	ND	0.4	ug/L	ND				25	
m,p-Xylenes	ND	0.5	ug/L	ND				34	
o-Xylene	ND	0.5	ug/L	ND				32	
Surrogate: 4-Bromofluorobenzene	*88.0*		*ug/L*	*ND*	*110*	*83-134*			
Surrogate: Dibromofluoromethane	*73.0*		*ug/L*	*ND*	*91.3*	*78-124*			
Surrogate: Toluene-d8	*81.6*		*ug/L*	*ND*	*102*	*76-118*			

Certificate of Analysis

Report Date: 24-Nov-2010

Client: **Paterson Group Consulting Engineers**

Order Date:17-Nov-2010

Client PO: 10130 Project Description: PE2144

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	2130	200	ug/L	ND	106	68-117			
F2 PHCs (C10-C16)	1300	100	ug/L	ND	81.3	61-129			
F3 PHCs (C16-C34)	3260	100	ug/L	ND	81.5	61-129			
F4 PHCs (C34-C50)	1880	100	ug/L	ND	78.4	61-129			
Volatiles									
Benzene	39.9	0.5	ug/L	ND	99.6	55-141			
Bromodichloromethane	32.3	0.4	ug/L	ND	80.8	52-139			
Bromoform	46.6	0.5	ug/L	ND	116	52-170			
Bromomethane	18.9	0.7	ug/L	ND	47.3	32-138			
Carbon Tetrachloride	29.5	0.5	ug/L	ND	73.8	49-149			
Chlorobenzene	38.9	0.4	ug/L	ND	97.4	64-137			
Chloroethane	26.9	1.0	ug/L	ND	67.3	39-152			
Chloroform	32.4	0.5	ug/L	ND	81.1	58-138			
Chloromethane	40.7	3.0	ug/L	ND	102	24-163			
Dibromochloromethane	42.8	0.5	ug/L	ND	107	61-153			
1,2-Dibromoethane	50.7	1.0	ug/L	ND	127	61-145			
1,2-Dichlorobenzene	38.7	0.4	ug/L	ND	96.7	60-150			
1,3-Dichlorobenzene	46.0	0.4	ug/L	ND	115	62-149			
1,4-Dichlorobenzene	43.7	0.4	ug/L	ND	109	63-132			
1,1-Dichloroethane	35.7	0.5	ug/L	ND	89.3	51-156			
1,2-Dichloroethane	30.0	0.5	ug/L	ND	75.0	50-140			
1,1-Dichloroethylene	32.5	0.5	ug/L	ND	81.2	43-153			
cis-1,2-Dichloroethylene	41.8	0.4	ug/L	ND	104	58-145			
trans-1,2-Dichloroethylene	43.0	1.0	ug/L	ND	108	51-145			
1,2-Dichloropropane	37.1	0.5	ug/L	ND	92.8	56-136			
cis-1,3-Dichloropropylene	38.4	0.4	ug/L	ND	96.0	54-141			
trans-1,3-Dichloropropylene	43.8	0.5	ug/L	ND	110	61-140			
Ethylbenzene	44.5	0.5	ug/L	ND	111	61-139			
Methylene Chloride	32.2	4.0	ug/L	ND	80.6	58-149			
Styrene	49.0	0.4	ug/L	ND	123	63-143			
1,1,1,2-Tetrachloroethane	36.9	0.5	ug/L	ND	92.3	61-148			
1,1,2,2-Tetrachloroethane	36.8	0.6	ug/L	ND	92.1	50-157			
Tetrachloroethylene	45.2	0.5	ug/L	ND	113	51-145			
Toluene	38.4	0.5	ug/L	ND	96.1	54-136			
1,1,1-Trichloroethane	30.9	0.4	ug/L	ND	77.2	55-140			
1,1,2-Trichloroethane	44.2	0.6	ug/L	ND	110	63-144			
Trichloroethylene	37.2	0.4	ug/L	ND	93.1	52-135			
Trichlorofluoromethane	28.3	1.0	ug/L	ND	70.6	37-155			
1,3,5-Trimethylbenzene	33.2	0.5	ug/L	ND	83.0	61-151			
Vinyl chloride	27.1	0.4	ug/L	ND	67.8	31-159			
m,p-Xylenes	87.8	0.5	ug/L	ND	110	61-139			
o-Xylene	43.3	0.5	ug/L	ND	108	60-142			
Surrogate: 4-Bromofluorobenzene	*84.1*		*ug/L*		*105*	*83-134*			
Surrogate: Dibromofluoromethane	*77.4*		*ug/L*		*96.8*	*78-124*			
Surrogate: Toluene-d8	*70.8*		*ug/L*		*88.6*	*76-118*			

Sample and QC Qualifiers Notes

1- VOC09 : Please note that VOC results are based on an analysis taken from a previously sampled vial.

Sample Data Revisions

None

Work Order Revisions/Comments:

None

Other Report Notes:

n/a: not applicable

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.

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Chain of Custody

(lab use only)

Nº 76376

Reg. Drinking Water

Client Name: PATERSON GROUP	Project Ref: PE2144	Waterworks Name:	Page 1 of 1
Contact Name: Mark D'Arcy	Quote #	Waterworks Number:	Sample Taken by:
Address: 28 Concourse Gate, Unit 1	PO # 10130	Address:	Print Name: Beau Doherty
	E-mail Address: mdarcy@patersongroup.ca	After hours Contact:	Signature: B.D.
Telephone: 613-226-7381	~~Fax:~~ cc: bdoherty@patersongroup.ca	Public Health Unit:	TAT: [ ] 1-day [ ] 2-day [X] Reg.

Matrix Types: S–Soil/Sed. GW–Ground Water SW–Surface Water SS–Storm/Sanitary Sewer DW-Drinking Water RDW-Regulated Drinking Water P- Paint A-Air O-Other

Samples submitted under: (Indicate **ONLY** one)
☑ O. Reg 153 (511) Table 1 ☐ O. Reg 170/03 ☐ O. Reg 318/08 ☐ Private well
☐ CCME ____ ☐ O. Reg 243/07 ☐ O. Reg 319/08 ☐ Other: ____

Type of DW Sample: **R** = Raw; **T** = Treated; **D** = Distribution
Location Types: **S** = Surface Water; **G** = Ground Water

Paracel Order Number: 1047141

	Sample ID / Location Name	Matrix	Air Volume	Type of Sample	# of Containers	Sample Taken: Date	Sample Taken: Time	Free / Combined Chlorine Residual mg/L	Required Analyses: VOCs	Required Analyses: PHCs (F1-F4)
1	BH1-GW1	GW			3	Nov. 16/2010			✓	✓
2	MW208-GW2	GW			3	Nov. 16/2010			✓	✓
3										
4										
5										
6										
7										
8										
9										
10										

Comments:

Preservation Verification: pH ____ Temperature ____
Verified by: ____

Relinquished By (Print & Sign):	Received By Driver/Depot:	Received at Lab:	Verified By:
Beau Doherty, B.D.	Nov. 17/10		
Date/Time: Nov. 17/2010 - 9:00	Date/Time: 11:00	Date/Time: Nov. 17/10 3:07pm	Date/Time: Nov. 17/10 5:46pm

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Certificate of Analysis

Paterson Group Consulting Engineers
28 Concourse Gate, Unit 1
Nepean, ON K2E 7T7
Attn: Mark D'Arcy

Phone: (613) 226-7381
Fax: (613) 226-6344

Client PO: 10134
Project: PE2144
Custody: 79409

Report Date: 29-Nov-2010
Order Date: 25-Nov-2010
Order #: 1048119

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

Paracel ID	Client ID
1048119-01	BH5-GW1

Approved By: Mark Foto

Mark Foto, M.Sc. For Dale Robertson, BSc
Laboratory Director

Any use of these results implies your agreement that our total liabilty in connection with this work, however arising shall be limited to the amount paid by you for this work, and that our employees or agents shall not under circumstances be liable to you in connection with this work

Certificate of Analysis

Report Date: 29-Nov-2010

Client: **Paterson Group Consulting Engineers**

Order Date:25-Nov-2010

Client PO: 10134 Project Description: PE2144

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
CCME PHC F1	CWS Tier 1 - P&T GC-FID	26-Nov-10	27-Nov-10
CCME PHC F1 to F4 + VOC	[CALC]	26-Nov-10	27-Nov-10
CCME PHC F2 - F4	CWS Tier 1 - GC-FID, extraction	26-Nov-10	26-Nov-10
VOCs	EPA 624 - P&T GC-MS	26-Nov-10	27-Nov-10

Certificate of Analysis

Report Date: 29-Nov-2010

Client: **Paterson Group Consulting Engineers**

Order Date:25-Nov-2010

Client PO: 10134

Project Description: PE2144

	Client ID:	BH5-GW1	-	-	-
	Sample Date:	23-Nov-10	-	-	-
	Sample ID:	1048119-01	-	-	-
	MDL/Units	Water	-	-	-
Volatiles					
Benzene	0.5 ug/L	<0.5	-	-	-
Bromodichloromethane	0.4 ug/L	<0.4	-	-	-
Bromoform	0.5 ug/L	<0.5	-	-	-
Bromomethane	0.7 ug/L	<0.7	-	-	-
Carbon Tetrachloride	0.5 ug/L	<0.5	-	-	-
Chlorobenzene	0.4 ug/L	<0.4	-	-	-
Chloroethane	1.0 ug/L	<1.0	-	-	-
Chloroform	0.5 ug/L	<0.5	-	-	-
Chloromethane	3.0 ug/L	<3.0	-	-	-
Dibromochloromethane	0.5 ug/L	<0.5	-	-	-
1,2-Dibromoethane	1.0 ug/L	<1.0	-	-	-
1,2-Dichlorobenzene	0.4 ug/L	<0.4	-	-	-
1,3-Dichlorobenzene	0.4 ug/L	<0.4	-	-	-
1,4-Dichlorobenzene	0.4 ug/L	<0.4	-	-	-
1,1-Dichloroethane	0.5 ug/L	<0.5	-	-	-
1,2-Dichloroethane	0.5 ug/L	<0.5	-	-	-
1,1-Dichloroethylene	0.5 ug/L	<0.5	-	-	-
cis-1,2-Dichloroethylene	0.4 ug/L	<0.4	-	-	-
trans-1,2-Dichloroethylene	1.0 ug/L	<1.0	-	-	-
1,2-Dichloroethylene, total	1.4 ug/L	<1.4	-	-	-
1,2-Dichloropropane	0.5 ug/L	<0.5	-	-	-
cis-1,3-Dichloropropylene	0.4 ug/L	<0.4	-	-	-
trans-1,3-Dichloropropylene	0.5 ug/L	<0.5	-	-	-
1,3-Dichloropropene, total	0.9 ug/L	<0.9	-	-	-
Ethylbenzene	0.5 ug/L	<0.5	-	-	-
Methylene Chloride	4.0 ug/L	<4.0	-	-	-
Styrene	0.4 ug/L	<0.4	-	-	-
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5	-	-	-
1,1,2,2-Tetrachloroethane	0.6 ug/L	<0.6	-	-	-
Tetrachloroethylene	0.5 ug/L	<0.5	-	-	-
Toluene	0.5 ug/L	<0.5	-	-	-
1,1,1-Trichloroethane	0.4 ug/L	<0.4	-	-	-
1,1,2-Trichloroethane	0.6 ug/L	<0.6	-	-	-

Certificate of Analysis

Report Date: 29-Nov-2010

Client: **Paterson Group Consulting Engineers**

Order Date:25-Nov-2010

Client PO: 10134

Project Description: PE2144

	Client ID:	BH5-GW1	-	-	-
	Sample Date:	23-Nov-10	-	-	-
	Sample ID:	1048119-01	-	-	-
	MDL/Units	Water	-	-	-
Trichloroethylene	0.4 ug/L	<0.4	-	-	-
Trichlorofluoromethane	1.0 ug/L	<1.0	-	-	-
1,3,5-Trimethylbenzene	0.5 ug/L	<0.5	-	-	-
Vinyl chloride	0.4 ug/L	<0.4	-	-	-
m,p-Xylenes	0.5 ug/L	<0.5	-	-	-
o-Xylene	0.5 ug/L	<0.5	-	-	-
Xylenes, total	1.0 ug/L	<1.0	-	-	-
4-Bromofluorobenzene	Surrogate	94.7%	-	-	-
Dibromofluoromethane	Surrogate	120%	-	-	-
Toluene-d8	Surrogate	109%	-	-	-
Hydrocarbons					
F1 PHCs (C6-C10)	200 ug/L	<200	-	-	-
F2 PHCs (C10-C16)	100 ug/L	<100	-	-	-
F3 PHCs (C16-C34)	100 ug/L	<100	-	-	-
F4 PHCs (C34-C50)	100 ug/L	<100	-	-	-
F1 + F2 PHCs	300 ug/L	<300	-	-	-
F3 + F4 PHCs	200 ug/L	<200	-	-	-

Certificate of Analysis

Report Date: 29-Nov-2010

Client: **Paterson Group Consulting Engineers**

Order Date:25-Nov-2010

Client PO: 10134

Project Description: PE2144

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	200	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									
Benzene	ND	0.5	ug/L						
Bromodichloromethane	ND	0.4	ug/L						
Bromoform	ND	0.5	ug/L						
Bromomethane	ND	0.7	ug/L						
Carbon Tetrachloride	ND	0.5	ug/L						
Chlorobenzene	ND	0.4	ug/L						
Chloroethane	ND	1.0	ug/L						
Chloroform	ND	0.5	ug/L						
Chloromethane	ND	3.0	ug/L						
Dibromochloromethane	ND	0.5	ug/L						
1,2-Dibromoethane	ND	1.0	ug/L						
1,2-Dichlorobenzene	ND	0.4	ug/L						
1,3-Dichlorobenzene	ND	0.4	ug/L						
1,4-Dichlorobenzene	ND	0.4	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	0.4	ug/L						
trans-1,2-Dichloroethylene	ND	1.0	ug/L						
1,2-Dichloroethylene, total	ND	1.4	ug/L						
1,2-Dichloropropane	ND	0.5	ug/L						
cis-1,3-Dichloropropylene	ND	0.4	ug/L						
trans-1,3-Dichloropropylene	ND	0.5	ug/L						
1,3-Dichloropropene, total	ND	0.9	ug/L						
Ethylbenzene	ND	0.5	ug/L						
Methylene Chloride	ND	4.0	ug/L						
Styrene	ND	0.4	ug/L						
1,1,1,2-Tetrachloroethane	ND	0.5	ug/L						
1,1,2,2-Tetrachloroethane	ND	0.6	ug/L						
Tetrachloroethylene	ND	0.5	ug/L						
Toluene	ND	0.5	ug/L						
1,1,1-Trichloroethane	ND	0.4	ug/L						
1,1,2-Trichloroethane	ND	0.6	ug/L						
Trichloroethylene	ND	0.4	ug/L						
Trichlorofluoromethane	ND	1.0	ug/L						
1,3,5-Trimethylbenzene	ND	0.5	ug/L						
Vinyl chloride	ND	0.4	ug/L						
m,p-Xylenes	ND	0.5	ug/L						
o-Xylene	ND	0.5	ug/L						
Xylenes, total	ND	1.0	ug/L						
Surrogate: 4-Bromofluorobenzene	*70.0*		*ug/L*		*87.5*	*83-134*			
Surrogate: Dibromofluoromethane	*92.9*		*ug/L*		*116*	*78-124*			
Surrogate: Toluene-d8	*89.8*		*ug/L*		*112*	*76-118*			

Certificate of Analysis

Report Date: 29-Nov-2010

Client: **Paterson Group Consulting Engineers**

Order Date:25-Nov-2010

Client PO: 10134 Project Description: PE2144

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	200	ug/L	ND				32	
Volatiles									
Benzene	ND	0.5	ug/L	ND				20	
Bromodichloromethane	ND	0.4	ug/L	ND				25	
Bromoform	ND	0.5	ug/L	ND				25	
Bromomethane	ND	0.7	ug/L	ND				25	
Carbon Tetrachloride	ND	0.5	ug/L	ND				25	
Chlorobenzene	ND	0.4	ug/L	ND				25	
Chloroethane	ND	1.0	ug/L	ND				25	
Chloroform	ND	0.5	ug/L	ND				19	
Chloromethane	ND	3.0	ug/L	ND				25	
Dibromochloromethane	ND	0.5	ug/L	ND				25	
1,2-Dibromoethane	ND	1.0	ug/L	ND				25	
1,2-Dichlorobenzene	ND	0.4	ug/L	ND				25	
1,3-Dichlorobenzene	ND	0.4	ug/L	ND				25	
1,4-Dichlorobenzene	ND	0.4	ug/L	ND				25	
1,1-Dichloroethane	ND	0.5	ug/L	ND				21	
1,2-Dichloroethane	ND	0.5	ug/L	ND				25	
1,1-Dichloroethylene	ND	0.5	ug/L	ND				21	
cis-1,2-Dichloroethylene	ND	0.4	ug/L	ND				20	
trans-1,2-Dichloroethylene	ND	1.0	ug/L	ND				25	
1,2-Dichloropropane	ND	0.5	ug/L	ND				25	
cis-1,3-Dichloropropylene	ND	0.4	ug/L	ND				25	
trans-1,3-Dichloropropylene	ND	0.5	ug/L	ND				25	
Ethylbenzene	ND	0.5	ug/L	ND				35	
Methylene Chloride	ND	4.0	ug/L	ND				25	
Styrene	ND	0.4	ug/L	ND				25	
1,1,1,2-Tetrachloroethane	ND	0.5	ug/L	ND				25	
1,1,2,2-Tetrachloroethane	ND	0.6	ug/L	ND				25	
Tetrachloroethylene	ND	0.5	ug/L	ND				31	
Toluene	ND	0.5	ug/L	ND				30	
1,1,1-Trichloroethane	ND	0.4	ug/L	ND				25	
1,1,2-Trichloroethane	ND	0.6	ug/L	ND				25	
Trichloroethylene	ND	0.4	ug/L	ND				30	
Trichlorofluoromethane	ND	1.0	ug/L	ND				25	
1,3,5-Trimethylbenzene	ND	0.5	ug/L	ND				20	
Vinyl chloride	ND	0.4	ug/L	ND				25	
m,p-Xylenes	ND	0.5	ug/L	ND				34	
o-Xylene	ND	0.5	ug/L	ND				32	
Surrogate: 4-Bromofluorobenzene	*75.3*		*ug/L*	*ND*	*94.1*	*83-134*			
Surrogate: Dibromofluoromethane	*88.0*		*ug/L*	*ND*	*110*	*78-124*			
Surrogate: Toluene-d8	*87.2*		*ug/L*	*ND*	*109*	*76-118*			

Certificate of Analysis

Report Date: 29-Nov-2010

Client: **Paterson Group Consulting Engineers**

Order Date:25-Nov-2010

Client PO: 10134 Project Description: PE2144

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	1660	200	ug/L	ND	83.0	68-117			
F2 PHCs (C10-C16)	1220	100	ug/L	ND	76.5	61-129			
F3 PHCs (C16-C34)	2920	100	ug/L	ND	73.1	61-129			
F4 PHCs (C34-C50)	1560	100	ug/L	ND	65.0	61-129			
Volatiles									
Benzene	41.7	0.5	ug/L	ND	104	55-141			
Bromodichloromethane	28.3	0.4	ug/L	ND	70.7	52-139			
Bromoform	37.9	0.5	ug/L	ND	94.7	52-170			
Bromomethane	18.4	0.7	ug/L	ND	45.9	32-138			
Carbon Tetrachloride	24.3	0.5	ug/L	ND	60.8	49-149			
Chlorobenzene	39.0	0.4	ug/L	ND	97.6	64-137			
Chloroethane	28.5	1.0	ug/L	ND	71.2	39-152			
Chloroform	28.5	0.5	ug/L	ND	71.3	58-138			
Chloromethane	36.3	3.0	ug/L	ND	90.6	24-163			
Dibromochloromethane	34.3	0.5	ug/L	ND	85.8	61-153			
1,2-Dibromoethane	44.7	1.0	ug/L	ND	112	61-145			
1,2-Dichlorobenzene	38.4	0.4	ug/L	ND	95.9	60-150			
1,3-Dichlorobenzene	48.4	0.4	ug/L	ND	121	62-149			
1,4-Dichlorobenzene	46.2	0.4	ug/L	ND	116	63-132			
1,1-Dichloroethane	33.1	0.5	ug/L	ND	82.8	51-156			
1,2-Dichloroethane	24.2	0.5	ug/L	ND	60.6	50-140			
1,1-Dichloroethylene	32.8	0.5	ug/L	ND	81.9	43-153			
cis-1,2-Dichloroethylene	40.2	0.4	ug/L	ND	101	58-145			
trans-1,2-Dichloroethylene	40.6	1.0	ug/L	ND	101	51-145			
1,2-Dichloropropane	40.0	0.5	ug/L	ND	100	56-136			
cis-1,3-Dichloropropylene	37.8	0.4	ug/L	ND	94.4	54-141			
trans-1,3-Dichloropropylene	40.5	0.5	ug/L	ND	101	61-140			
Ethylbenzene	44.5	0.5	ug/L	ND	111	61-139			
Methylene Chloride	30.5	4.0	ug/L	ND	76.3	58-149			
Styrene	49.3	0.4	ug/L	ND	123	63-143			
1,1,1,2-Tetrachloroethane	33.2	0.5	ug/L	ND	82.9	61-148			
1,1,2,2-Tetrachloroethane	41.2	0.6	ug/L	ND	103	50-157			
Tetrachloroethylene	35.8	0.5	ug/L	ND	89.4	51-145			
Toluene	44.0	0.5	ug/L	ND	110	54-136			
1,1,1-Trichloroethane	25.1	0.4	ug/L	ND	62.6	55-140			
1,1,2-Trichloroethane	41.3	0.6	ug/L	ND	103	63-144			
Trichloroethylene	34.2	0.4	ug/L	ND	85.6	52-135			
Trichlorofluoromethane	22.3	1.0	ug/L	ND	55.7	37-155			
1,3,5-Trimethylbenzene	36.8	0.5	ug/L	ND	91.9	61-151			
Vinyl chloride	23.9	0.4	ug/L	ND	59.7	31-159			
m,p-Xylenes	92.9	0.5	ug/L	ND	116	61-139			
o-Xylene	43.0	0.5	ug/L	ND	108	60-142			
Surrogate: 4-Bromofluorobenzene	*77.9*		*ug/L*		*97.4*	*83-134*			
Surrogate: Dibromofluoromethane	*83.0*		*ug/L*		*104*	*78-124*			
Surrogate: Toluene-d8	*77.5*		*ug/L*		*96.8*	*76-118*			

Sample and QC Qualifiers Notes

None

Sample Data Revisions

None

Work Order Revisions/Comments:

None

Other Report Notes:

n/a: not applicable

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.

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Chain of Custody
(lab use only)

Nº 79409

Reg. Drinking Water

Client Name: PATERSON GROUP	Project Ref: PE2144	Waterworks Name:	Page 1 of 1
Contact Name: Mark D'Arcy	Quote #	Waterworks Number:	Sample Taken by:
Address: 28 Concourse Gate, Unit 1	PO # 10134	Address:	Print Name: Beau Doherty
	E-mail Address: mdarcy@patersongroup.ca	After hours Contact:	Signature: B. Dhd
Telephone: 613-226-7381	Fax: cc: bdoherty@patersongroup.ca	Public Health Unit:	TAT: [ ] 1-day [ ] 2-day [ ] Reg.

Matrix Types: S–Soil/Sed. **GW**–Ground Water **SW**–Surface Water **SS**–Storm/Sanitary Sewer **DW**–Drinking Water **RDW**–Regulated Drinking Water **P**- Paint **A**-Air **O**-Other

Samples submitted under: (Indicate **ONLY** one)
☑ O. Reg 153 (511) Table 1 ☐ O. Reg 170/03 ☐ O. Reg 318/08 ☐ Private well
☐ CCME ____ ☐ O. Reg 243/07 ☐ O. Reg 319/08 ☐ Other: ____

Type of **DW** Sample: **R** = Raw; **T** = Treated; **D** = Distribution
Location Types: **S** = Surface Water; **G** = Ground Water

Paracel Order Number: 104819

	Sample ID / Location Name	Matrix	Air Volume	Type of Sample	# of Containers	Sample Taken: Date	Sample Taken: Time	Free / Combined Chlorine Residual mg/L	Required Analyses: VOC S	PHCs (F1-F4)	HOLD
1	BH5-GW1	GW			3	Nov. 23/2010			✓	✓	✓
2											
3											
4											
5											
6											
7	hold PHCs F1-F4 + VOCs on a 2-day TAT as per										
8									Beau.		
9									DRoom	NOV 25/10	
10											

Comments: JK.

Preservation Verification: pH _____ Temperature ____
Verified by: _____

Relinquished By (Print & Sign): Beau Doherty, B. Dhd

Date/Time: Nov. 23/2010 - 2:30

Lab Use Only:

Received By Driver/Depot:	Received at Lab:	Verified By:
Date/Time: 3:15 Nov 23/10	Date/Time: NOV 25,10 9:—	Date/Time: NOV. 25,10 9:—

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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: 30065
Project: PE2144
Custody: 125756

Report Date: 22-Jun-2020
Order Date: 17-Jun-2020

Order #: 2025338

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

Paracel ID	Client ID
2025338-01	BH1-20-GW1
2025338-02	BH2-20-GW1
2025338-03	BH5-20-GW1
2025338-04	Dup1

Approved By:



Dale Robertson, BSc
Laboratory Director

Any use of these results implies your agreement that our total liabilty in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.

Certificate of Analysis

Report Date: 22-Jun-2020

Client: Paterson Group Consulting Engineers

Order Date: 17-Jun-2020

Client PO: 30065

Project Description: PE2144

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 624 - P&T GC-MS	19-Jun-20	19-Jun-20
Chromium, hexavalent - water	MOE E3056 - colourimetric	18-Jun-20	18-Jun-20
Mercury by CVAA	EPA 245.2 - Cold Vapour AA	18-Jun-20	18-Jun-20
Metals, ICP-MS	EPA 200.8 - ICP-MS	17-Jun-20	18-Jun-20
PCBs, total	EPA 608 - GC-ECD	18-Jun-20	18-Jun-20
PHC F1	CWS Tier 1 - P&T GC-FID	18-Jun-20	19-Jun-20
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	19-Jun-20	20-Jun-20
REG 153: VOCs by P&T GC/MS	EPA 624 - P&T GC-MS	18-Jun-20	19-Jun-20

Certificate of Analysis

Report Date: 22-Jun-2020

Client: Paterson Group Consulting Engineers

Order Date: 17-Jun-2020

Client PO: 30065

Project Description: PE2144

	Client ID:	BH1-20-GW1	BH2-20-GW1	BH5-20-GW1	Dup1
	Sample Date:	16-Jun-20 09:00	16-Jun-20 09:00	16-Jun-20 09:00	16-Jun-20 09:00
	Sample ID:	2025338-01	2025338-02	2025338-03	2025338-04
	MDL/Units	Water	Water	Water	Water
Metals					
Mercury	0.1 ug/L	<0.1	<0.1	-	-
Antimony	0.5 ug/L	<0.5	<0.5	-	-
Arsenic	1 ug/L	<1	<1	-	-
Barium	1 ug/L	51	69	-	-
Beryllium	0.5 ug/L	<0.5	<0.5	-	-
Boron	10 ug/L	58	156	-	-
Cadmium	0.1 ug/L	<0.1	<0.1	-	-
Chromium	1 ug/L	<1	<1	-	-
Chromium (VI)	10 ug/L	<10	<10	-	-
Cobalt	0.5 ug/L	<0.5	<0.5	-	-
Copper	0.5 ug/L	1.3	2.0	-	-
Lead	0.1 ug/L	<0.1	<0.1	-	-
Molybdenum	0.5 ug/L	16.3	30.1	-	-
Nickel	1 ug/L	<1	2	-	-
Selenium	1 ug/L	<1	<1	-	-
Silver	0.1 ug/L	<0.1	<0.1	-	-
Sodium	200 ug/L	30000	44600	-	-
Thallium	0.1 ug/L	<0.1	0.1	-	-
Uranium	0.1 ug/L	0.7	1.5	-	-
Vanadium	0.5 ug/L	0.5	<0.5	-	-
Zinc	5 ug/L	<5	7	-	-
Volatiles					
Acetone	5.0 ug/L	<5.0	<5.0	<5.0	-
Benzene	0.5 ug/L	<0.5	<0.5	0.7	-
Bromodichloromethane	0.5 ug/L	<0.5	<0.5	<0.5	-
Bromoform	0.5 ug/L	<0.5	<0.5	<0.5	-
Bromomethane	0.5 ug/L	<0.5	<0.5	<0.5	-
Carbon Tetrachloride	0.2 ug/L	<0.2	<0.2	<0.2	-
Chlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	-
Chloroform	0.5 ug/L	2.8	6.6	9.9	-
Dibromochloromethane	0.5 ug/L	<0.5	<0.5	<0.5	-
Dichlorodifluoromethane	1.0 ug/L	<1.0	<1.0	<1.0	-
1,2-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	-
1,3-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	-
1,4-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	-

Certificate of Analysis

Report Date: 22-Jun-2020

Client: Paterson Group Consulting Engineers

Order Date: 17-Jun-2020

Client PO: 30065

Project Description: PE2144

	Client ID:	BH1-20-GW1	BH2-20-GW1	BH5-20-GW1	Dup1
	Sample Date:	16-Jun-20 09:00	16-Jun-20 09:00	16-Jun-20 09:00	16-Jun-20 09:00
	Sample ID:	2025338-01	2025338-02	2025338-03	2025338-04
	MDL/Units	Water	Water	Water	Water
1,1-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	-
1,2-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	-
1,1-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	-
cis-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	-
trans-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	-
1,2-Dichloropropane	0.5 ug/L	<0.5	<0.5	<0.5	-
cis-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	<0.5	-
trans-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	<0.5	-
1,3-Dichloropropene, total	0.5 ug/L	<0.5	<0.5	<0.5	-
Ethylbenzene	0.5 ug/L	<0.5	<0.5	<0.5	-
Ethylene dibromide (dibromoethane, 1,2-)	0.2 ug/L	<0.2	<0.2	<0.2	-
Hexane	1.0 ug/L	<1.0	<1.0	<1.0	-
Methyl Ethyl Ketone (2-Butanone)	5.0 ug/L	<5.0	<5.0	<5.0	-
Methyl Isobutyl Ketone	5.0 ug/L	<5.0	<5.0	<5.0	-
Methyl tert-butyl ether	2.0 ug/L	<2.0	<2.0	<2.0	-
Methylene Chloride	5.0 ug/L	<5.0	<5.0	<5.0	-
Styrene	0.5 ug/L	<0.5	<0.5	<0.5	-
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	-
1,1,2,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	-
Tetrachloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	-
Toluene	0.5 ug/L	<0.5	<0.5	2.7	-
1,1,1-Trichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	-
1,1,2-Trichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	-
Trichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	-
Trichlorofluoromethane	1.0 ug/L	<1.0	<1.0	<1.0	-
Vinyl chloride	0.5 ug/L	<0.5	<0.5	<0.5	-
m,p-Xylenes	0.5 ug/L	1.4	0.7	0.5	-
o-Xylene	0.5 ug/L	<0.5	<0.5	<0.5	-
Xylenes, total	0.5 ug/L	1.4	0.7	0.5	-
4-Bromofluorobenzene	Surrogate	100%	101%	103%	-
Dibromofluoromethane	Surrogate	104%	102%	103%	-
Toluene-d8	Surrogate	101%	102%	102%	-
Benzene	0.5 ug/L	-	-	-	0.6
Ethylbenzene	0.5 ug/L	-	-	-	<0.5
Toluene	0.5 ug/L	-	-	-	2.6
m,p-Xylenes	0.5 ug/L	-	-	-	0.6

Certificate of Analysis

Report Date: 22-Jun-2020

Client: Paterson Group Consulting Engineers

Order Date: 17-Jun-2020

Client PO: 30065

Project Description: PE2144

	Client ID:	BH1-20-GW1	BH2-20-GW1	BH5-20-GW1	Dup1
	Sample Date:	16-Jun-20 09:00	16-Jun-20 09:00	16-Jun-20 09:00	16-Jun-20 09:00
	Sample ID:	2025338-01	2025338-02	2025338-03	2025338-04
	MDL/Units	Water	Water	Water	Water
o-Xylene	0.5 ug/L	-	-	-	<0.5
Xylenes, total	0.5 ug/L	-	-	-	0.6
Toluene-d8	Surrogate	-	-	-	101%
Hydrocarbons					
F1 PHCs (C6-C10)	25 ug/L	<25	<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	-
PCBs					
PCBs, total	0.05 ug/L	<0.05	-	-	-
Decachlorobiphenyl	Surrogate	64.0%	-	-	-

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	25	ug/L						
F2 PHCs (C10-C16)	ND	100	ug/L						
F3 PHCs (C16-C34)	ND	100	ug/L						
F4 PHCs (C34-C50)	ND	100	ug/L						
Metals									
Mercury	ND	0.1	ug/L						
Antimony	ND	0.5	ug/L						
Arsenic	ND	1	ug/L						
Barium	ND	1	ug/L						
Beryllium	ND	0.5	ug/L						
Boron	ND	10	ug/L						
Cadmium	ND	0.1	ug/L						
Chromium (VI)	ND	10	ug/L						
Chromium	ND	1	ug/L						
Cobalt	ND	0.5	ug/L						
Copper	ND	0.5	ug/L						
Lead	ND	0.1	ug/L						
Molybdenum	ND	0.5	ug/L						
Nickel	ND	1	ug/L						
Selenium	ND	1	ug/L						
Silver	ND	0.1	ug/L						
Sodium	ND	200	ug/L						
Thallium	ND	0.1	ug/L						
Uranium	ND	0.1	ug/L						
Vanadium	ND	0.5	ug/L						
Zinc	ND	5	ug/L						
PCBs									
PCBs, total	ND	0.05	ug/L						
Surrogate: Decachlorobiphenyl	*0.370*		*ug/L*		*74.0*	*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						
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						

Certificate of Analysis

Report Date: 22-Jun-2020

Client: Paterson Group Consulting Engineers

Order Date: 17-Jun-2020

Client PO: 30065

Project Description: PE2144

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
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	*82.2*		*ug/L*		*103*	*50-140*			
Surrogate: Dibromofluoromethane	*78.1*		*ug/L*		*97.6*	*50-140*			
Surrogate: Toluene-d8	*81.8*		*ug/L*		*102*	*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	*81.8*		*ug/L*		*102*	*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									
Mercury	ND	0.1	ug/L	ND			NC	20	
Antimony	0.59	0.5	ug/L	ND			NC	20	
Arsenic	ND	1	ug/L	ND			NC	20	
Barium	33.9	1	ug/L	33.4			1.3	20	
Beryllium	ND	0.5	ug/L	ND			NC	20	
Boron	ND	10	ug/L	ND			NC	20	
Cadmium	ND	0.1	ug/L	ND			NC	20	
Chromium (VI)	ND	10	ug/L	ND			NC	20	
Chromium	ND	1	ug/L	ND			NC	20	
Cobalt	ND	0.5	ug/L	ND			NC	20	
Copper	13.2	0.5	ug/L	13.2			0.4	20	
Lead	0.21	0.1	ug/L	0.24			14.3	20	
Molybdenum	1.81	0.5	ug/L	1.75			3.1	20	
Nickel	ND	1	ug/L	ND			NC	20	
Selenium	ND	1	ug/L	ND			NC	20	
Silver	ND	0.1	ug/L	ND			NC	20	
Sodium	3980	200	ug/L	4130			3.8	20	
Thallium	ND	0.1	ug/L	ND			NC	20	
Uranium	ND	0.1	ug/L	ND			NC	20	
Vanadium	0.62	0.5	ug/L	0.58			7.2	20	
Zinc	12	5	ug/L	12			4.5	20	
Volatiles									
Acetone	ND	5.0	ug/L	ND			NC	30	
Benzene	ND	0.5	ug/L	ND			NC	30	
Bromodichloromethane	ND	0.5	ug/L	ND			NC	30	
Bromoform	ND	0.5	ug/L	ND			NC	30	
Bromomethane	ND	0.5	ug/L	ND			NC	30	
Carbon Tetrachloride	ND	0.2	ug/L	ND			NC	30	
Chlorobenzene	ND	0.5	ug/L	ND			NC	30	
Chloroform	ND	0.5	ug/L	ND			NC	30	
Dibromochloromethane	ND	0.5	ug/L	ND			NC	30	
Dichlorodifluoromethane	ND	1.0	ug/L	ND			NC	30	
1,2-Dichlorobenzene	ND	0.5	ug/L	ND			NC	30	
1,3-Dichlorobenzene	ND	0.5	ug/L	ND			NC	30	
1,4-Dichlorobenzene	ND	0.5	ug/L	ND			NC	30	
1,1-Dichloroethane	ND	0.5	ug/L	ND			NC	30	
1,2-Dichloroethane	ND	0.5	ug/L	ND			NC	30	
1,1-Dichloroethylene	ND	0.5	ug/L	ND			NC	30	
cis-1,2-Dichloroethylene	ND	0.5	ug/L	ND			NC	30	
trans-1,2-Dichloroethylene	ND	0.5	ug/L	ND			NC	30	
1,2-Dichloropropane	ND	0.5	ug/L	ND			NC	30	
cis-1,3-Dichloropropylene	ND	0.5	ug/L	ND			NC	30	
trans-1,3-Dichloropropylene	ND	0.5	ug/L	ND			NC	30	
Ethylbenzene	ND	0.5	ug/L	ND			NC	30	
Ethylene dibromide (dibromoethane, 1,2	ND	0.2	ug/L	ND			NC	30	
Hexane	ND	1.0	ug/L	ND			NC	30	
Methyl Ethyl Ketone (2-Butanone)	ND	5.0	ug/L	ND			NC	30	
Methyl Isobutyl Ketone	ND	5.0	ug/L	ND			NC	30	
Methyl tert-butyl ether	ND	2.0	ug/L	ND			NC	30	
Methylene Chloride	ND	5.0	ug/L	ND			NC	30	
Styrene	ND	0.5	ug/L	ND			NC	30	
1,1,1,2-Tetrachloroethane	ND	0.5	ug/L	ND			NC	30	
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L	ND			NC	30	
Tetrachloroethylene	ND	0.5	ug/L	ND			NC	30	
Toluene	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
1,1,1-Trichloroethane	ND	0.5	ug/L	ND			NC	30	
1,1,2-Trichloroethane	ND	0.5	ug/L	ND			NC	30	
Trichloroethylene	ND	0.5	ug/L	ND			NC	30	
Trichlorofluoromethane	ND	1.0	ug/L	ND			NC	30	
Vinyl chloride	ND	0.5	ug/L	ND			NC	30	
m,p-Xylenes	ND	0.5	ug/L	ND			NC	30	
o-Xylene	ND	0.5	ug/L	ND			NC	30	
Surrogate: 4-Bromofluorobenzene	*76.5*		*ug/L*		*95.6*	*50-140*			
Surrogate: Dibromofluoromethane	*80.6*		*ug/L*		*101*	*50-140*			
Surrogate: Toluene-d8	*82.3*		*ug/L*		*103*	*50-140*			
Benzene	ND	0.5	ug/L	ND			NC	30	
Ethylbenzene	ND	0.5	ug/L	ND			NC	30	
Toluene	ND	0.5	ug/L	ND			NC	30	
m,p-Xylenes	ND	0.5	ug/L	ND			NC	30	
o-Xylene	ND	0.5	ug/L	ND			NC	30	
Surrogate: Toluene-d8	*82.3*		*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)	1780	25	ug/L	ND	89.0	68-117			
F2 PHCs (C10-C16)	1880	100	ug/L	ND	117	60-140			
F3 PHCs (C16-C34)	4340	100	ug/L	ND	111	60-140			
F4 PHCs (C34-C50)	2210	100	ug/L	ND	89.2	60-140			
Metals									
Mercury	3.33	0.1	ug/L	ND	111	70-130			
Antimony	50.6	0.5	ug/L	ND	101	80-120			
Arsenic	50.6	1	ug/L	ND	101	80-120			
Barium	87.0	1	ug/L	33.4	107	80-120			
Beryllium	53.3	0.5	ug/L	ND	107	80-120			
Boron	55	10	ug/L	ND	92.7	80-120			
Cadmium	53.6	0.1	ug/L	ND	107	80-120			
Chromium (VI)	166	10	ug/L	ND	83.0	70-130			
Chromium	52.4	1	ug/L	ND	104	80-120			
Cobalt	50.2	0.5	ug/L	ND	100	80-120			
Copper	62.2	0.5	ug/L	13.2	98.0	80-120			
Lead	49.3	0.1	ug/L	0.24	98.2	80-120			
Molybdenum	48.8	0.5	ug/L	1.75	94.0	80-120			
Nickel	49.4	1	ug/L	ND	97.7	80-120			
Selenium	50.3	1	ug/L	ND	100	80-120			
Silver	53.1	0.1	ug/L	ND	106	80-120			
Sodium	12700	200	ug/L	4130	85.2	80-120			
Thallium	52.3	0.1	ug/L	ND	105	80-120			
Uranium	48.0	0.1	ug/L	ND	95.8	80-120			
Vanadium	51.5	0.5	ug/L	0.58	102	80-120			
Zinc	62	5	ug/L	12	98.7	80-120			
PCBs									
PCBs, total	0.896	0.05	ug/L	ND	89.6	60-140			
Surrogate: Decachlorobiphenyl	*0.431*		*ug/L*		*86.2*	*60-140*			
Volatiles									
Acetone	95.9	5.0	ug/L	ND	95.9	50-140			
Benzene	42.8	0.5	ug/L	ND	107	60-130			
Bromodichloromethane	28.1	0.5	ug/L	ND	70.3	60-130			
Bromoform	34.1	0.5	ug/L	ND	85.2	60-130			
Bromomethane	36.5	0.5	ug/L	ND	91.2	50-140			
Carbon Tetrachloride	30.6	0.2	ug/L	ND	76.6	60-130			
Chlorobenzene	39.9	0.5	ug/L	ND	99.8	60-130			
Chloroform	35.2	0.5	ug/L	ND	88.0	60-130			
Dibromochloromethane	26.1	0.5	ug/L	ND	65.2	60-130			
Dichlorodifluoromethane	36.1	1.0	ug/L	ND	90.3	50-140			
1,2-Dichlorobenzene	34.0	0.5	ug/L	ND	85.0	60-130			
1,3-Dichlorobenzene	32.2	0.5	ug/L	ND	80.4	60-130			
1,4-Dichlorobenzene	33.3	0.5	ug/L	ND	83.3	60-130			
1,1-Dichloroethane	31.4	0.5	ug/L	ND	78.5	60-130			
1,2-Dichloroethane	45.7	0.5	ug/L	ND	114	60-130			
1,1-Dichloroethylene	32.5	0.5	ug/L	ND	81.2	60-130			
cis-1,2-Dichloroethylene	32.3	0.5	ug/L	ND	80.8	60-130			
trans-1,2-Dichloroethylene	32.7	0.5	ug/L	ND	81.8	60-130			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
1,2-Dichloropropane	37.5	0.5	ug/L	ND	93.7	60-130			
cis-1,3-Dichloropropylene	32.8	0.5	ug/L	ND	81.9	60-130			
trans-1,3-Dichloropropylene	29.8	0.5	ug/L	ND	74.5	60-130			
Ethylbenzene	42.4	0.5	ug/L	ND	106	60-130			
Ethylene dibromide (dibromoethane, 1,2	32.7	0.2	ug/L	ND	81.7	60-130			
Hexane	35.6	1.0	ug/L	ND	88.9	60-130			
Methyl Ethyl Ketone (2-Butanone)	103	5.0	ug/L	ND	103	50-140			
Methyl Isobutyl Ketone	102	5.0	ug/L	ND	102	50-140			
Methyl tert-butyl ether	86.2	2.0	ug/L	ND	86.2	50-140			
Methylene Chloride	29.4	5.0	ug/L	ND	73.4	60-130			
Styrene	32.0	0.5	ug/L	ND	79.9	60-130			
1,1,1,2-Tetrachloroethane	33.8	0.5	ug/L	ND	84.4	60-130			
1,1,2,2-Tetrachloroethane	30.5	0.5	ug/L	ND	76.2	60-130			
Tetrachloroethylene	34.0	0.5	ug/L	ND	85.1	60-130			
Toluene	39.2	0.5	ug/L	ND	98.0	60-130			
1,1,1-Trichloroethane	29.8	0.5	ug/L	ND	74.5	60-130			
1,1,2-Trichloroethane	37.0	0.5	ug/L	ND	92.6	60-130			
Trichloroethylene	36.3	0.5	ug/L	ND	90.8	60-130			
Trichlorofluoromethane	31.6	1.0	ug/L	ND	78.9	60-130			
Vinyl chloride	38.1	0.5	ug/L	ND	95.2	50-140			
m,p-Xylenes	79.1	0.5	ug/L	ND	98.9	60-130			
o-Xylene	39.9	0.5	ug/L	ND	99.8	60-130			
Surrogate: 4-Bromofluorobenzene	*72.7*		*ug/L*		*90.9*	*50-140*			
Surrogate: Dibromofluoromethane	*81.7*		*ug/L*		*102*	*50-140*			
Surrogate: Toluene-d8	*79.5*		*ug/L*		*99.3*	*50-140*			
Benzene	42.8	0.5	ug/L	ND	107	60-130			
Ethylbenzene	42.4	0.5	ug/L	ND	106	60-130			
Toluene	39.2	0.5	ug/L	ND	98.0	60-130			
m,p-Xylenes	79.1	0.5	ug/L	ND	98.9	60-130			
o-Xylene	39.9	0.5	ug/L	ND	99.8	60-130			
Surrogate: Toluene-d8	*79.5*		*ug/L*		*99.3*	*50-140*			

Qualifier Notes:

None

Sample Data Revisions

None

Work Order Revisions / Comments:

None

Other Report Notes:

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

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: 2025338

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2025338	Nº 125756

Client Name: PATERSON	Project Ref: PE2144	Page 1 of 1
Contact Name: MARK D'ARCY	Quote #:	Turnaround Time
Address: 154 Colonnade Road	PO #: 30065	☐ 1 day ☐ 3 day ☐ 2 day ☒ Regular
Telephone: 613-226-7381	E-mail: mdarcy@patersongroup.ca	Date Required:

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

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

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken Date	Sample Taken Time	PHCs F1-F4+BTEX	VOCs / F1	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	PCB	BTEX / F1	F2 - F4			
1	BH1-20-GW1	GW		7	June 16/20			X		X	X	X		X		X			
2	BH2-20-GW1	↓		6	↓			X		X	X	X				X			
3	BH5-20-GW1	↓		3	↓			X								X			
4	DUP1	GW		2	June 16/2020										X				
5																			
6																			
7																			
8																			
9																			
10																			

Comments:

Method of Delivery: PARCEL

Relinquished By (Sign):	Received By Driver/Depot: T. TOUSIGNANT	Received at Lab:	Verified By:
Relinquished By (Print): Joshua Rogers	Date/Time: 17/06/20 3:20	Date/Time: 06-17-20 17:48	Date/Time: 18 Jun 2020 9:52
Date/Time: June 17/2020	Temperature: °C	Temperature: 24.3 °C	pH Verified: ☐ / By:

Chain of Custody (Env.) xlsx

Revision 3.0

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Certificate of Analysis

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

Client PO: 62956
Project: PE2144
Custody:

Report Date: 1-May-2025
Order Date: 25-Apr-2025

Order #: 2518043

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

Paracel ID	Client ID
2518043-01	BH1-25-GW
2518043-02	BH2-25-GW
2518043-03	BH3-25-GW
2518043-04	BH4-25-GW
2518043-05	DUP1

Approved By:

Mark Foto

Mark Foto, M.Sc.
Laboratory Director

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Chromium, hexavalent - water	MOE E3056 - colourimetric	29-Apr-25	29-Apr-25
Mercury by CVAA	EPA 245.2 - Cold Vapour AA	29-Apr-25	29-Apr-25
Metals, ICP-MS	EPA 200.8 - ICP-MS	28-Apr-25	29-Apr-25
REG 153: VOCs by P&T GC/MS	EPA 624 - P&T GC-MS	1-May-25	1-May-25

Certificate of Analysis

Report Date: 01-May-2025

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

Order Date: 25-Apr-2025

Client PO: **62956**

Project Description: **PE2144**

	Client ID:	BH1-25-GW	BH2-25-GW	BH3-25-GW	BH4-25-GW	-	-
	Sample Date:	25-Apr-25 09:00	25-Apr-25 09:00	25-Apr-25 09:00	25-Apr-25 09:00		
	Sample ID:	2518043-01	2518043-02	2518043-03	2518043-04		
	Matrix:	Ground Water	Ground Water	Ground Water	Ground Water		
	MDL/Units						
Metals							
Mercury	0.1 ug/L	-	<0.1	-	<0.1	-	-
Antimony	0.5 ug/L	-	0.6	-	0.6	-	-
Arsenic	1 ug/L	-	<1	-	<1	-	-
Barium	1 ug/L	-	52	-	39	-	-
Beryllium	0.5 ug/L	-	<0.5	-	<0.5	-	-
Boron	10 ug/L	-	170	-	326	-	-
Cadmium	0.1 ug/L	-	<0.1	-	<0.1	-	-
Chromium (VI)	10 ug/L	-	<10	-	<10	-	-
Chromium	1 ug/L	-	<1	-	<1	-	-
Cobalt	0.5 ug/L	-	<0.5	-	1.9	-	-
Copper	0.5 ug/L	-	3.3	-	3.1	-	-
Lead	0.1 ug/L	-	<0.1	-	<0.1	-	-
Molybdenum	0.5 ug/L	-	2.8	-	1.6	-	-
Nickel	1 ug/L	-	5	-	12	-	-
Selenium	1 ug/L	-	<1	-	1	-	-
Silver	0.1 ug/L	-	<0.1	-	<0.1	-	-
Sodium	200 ug/L	-	64400	-	40200	-	-
Thallium	0.1 ug/L	-	0.1	-	0.2	-	-
Uranium	0.1 ug/L	-	1.3	-	2.0	-	-
Vanadium	0.5 ug/L	-	<0.5	-	<0.5	-	-
Zinc	5 ug/L	-	<5	-	<5	-	-
Volatiles							
Acetone	5.0 ug/L	<5.0	-	<5.0	-	-	-
Benzene	0.5 ug/L	3.4	-	<0.5	-	-	-
Bromodichloromethane	0.5 ug/L	<0.5	-	<0.5	-	-	-

	Client ID:	BH1-25-GW	BH2-25-GW	BH3-25-GW	BH4-25-GW	-	-
	Sample Date:	25-Apr-25 09:00	25-Apr-25 09:00	25-Apr-25 09:00	25-Apr-25 09:00		
	Sample ID:	2518043-01	2518043-02	2518043-03	2518043-04		
	Matrix:	Ground Water	Ground Water	Ground Water	Ground Water		
	MDL/Units						
Volatiles							
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	177	-	<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	23.7	-	2.0	-	-	-
1,2-Dichlorobenzene	0.5 ug/L	9.3	-	<0.5	-	-	-
1,3-Dichlorobenzene	0.5 ug/L	<0.5	-	<0.5	-	-	-
1,4-Dichlorobenzene	0.5 ug/L	19.2	-	<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	-	-	-
Ethylene dibromide (dibromoethane,	0.2 ug/L	<0.2	-	<0.2	-	-	-
Ethylbenzene	0.5 ug/L	<0.5	-	<0.5	-	-	-
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	-	-	-

	Client ID:	BH1-25-GW	BH2-25-GW	BH3-25-GW	BH4-25-GW	-	-
	Sample Date:	25-Apr-25 09:00	25-Apr-25 09:00	25-Apr-25 09:00	25-Apr-25 09:00		
	Sample ID:	2518043-01	2518043-02	2518043-03	2518043-04		
	Matrix:	Ground Water	Ground Water	Ground Water	Ground Water		
	MDL/Units						
Volatiles							
Methylene Chloride	5.0 ug/L	<5.0	-	<5.0	-	-	-
Styrene	0.5 ug/L	<0.5	-	<0.5	-	-	-
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5	-	<0.5	-	-	-
1,1,2,2-Tetrachloroethane	0.5 ug/L	<0.5	-	<0.5	-	-	-
Tetrachloroethylene	0.5 ug/L	<0.5	-	<0.5	-	-	-
Toluene	0.5 ug/L	<0.5	-	<0.5	-	-	-
1,1,1-Trichloroethane	0.5 ug/L	<0.5	-	<0.5	-	-	-
1,1,2-Trichloroethane	0.5 ug/L	<0.5	-	<0.5	-	-	-
Trichloroethylene	0.5 ug/L	<0.5	-	<0.5	-	-	-
Trichlorofluoromethane	1.0 ug/L	<1.0	-	<1.0	-	-	-
Vinyl chloride	0.5 ug/L	<0.5	-	<0.5	-	-	-
m,p-Xylenes	0.5 ug/L	<0.5	-	<0.5	-	-	-
o-Xylene	0.5 ug/L	<0.5	-	<0.5	-	-	-
Xylenes, total	0.5 ug/L	<0.5	-	<0.5	-	-	-
4-Bromofluorobenzene	Surrogate	94.0%	-	94.9%	-	-	-
Toluene-d8	Surrogate	106%	-	106%	-	-	-
Dibromofluoromethane	Surrogate	72.8%	-	71.1%	-	-	-

	Client ID:	DUP1				-	-
	Sample Date:	25-Apr-25 09:00					
	Sample ID:	2518043-05					
	Matrix:	Ground Water					
	MDL/Units						
Volatiles							
Acetone	5.0 ug/L	<5.0	-	-	-	-	-
Benzene	0.5 ug/L	3.4	-	-	-	-	-
Bromodichloromethane	0.5 ug/L	<0.5	-	-	-	-	-
Bromoform	0.5 ug/L	<0.5	-	-	-	-	-
Bromomethane	0.5 ug/L	<0.5	-	-	-	-	-
Carbon Tetrachloride	0.2 ug/L	<0.2	-	-	-	-	-
Chlorobenzene	0.5 ug/L	118	-	-	-	-	-
Chloroform	0.5 ug/L	<0.5	-	-	-	-	-
Dibromochloromethane	0.5 ug/L	<0.5	-	-	-	-	-
Dichlorodifluoromethane	1.0 ug/L	21.5	-	-	-	-	-
1,2-Dichlorobenzene	0.5 ug/L	6.7	-	-	-	-	-
1,3-Dichlorobenzene	0.5 ug/L	<0.5	-	-	-	-	-
1,4-Dichlorobenzene	0.5 ug/L	12.7	-	-	-	-	-
1,1-Dichloroethane	0.5 ug/L	<0.5	-	-	-	-	-
1,2-Dichloroethane	0.5 ug/L	<0.5	-	-	-	-	-
1,1-Dichloroethylene	0.5 ug/L	<0.5	-	-	-	-	-
cis-1,2-Dichloroethylene	0.5 ug/L	<0.5	-	-	-	-	-
trans-1,2-Dichloroethylene	0.5 ug/L	<0.5	-	-	-	-	-
1,2-Dichloropropane	0.5 ug/L	<0.5	-	-	-	-	-
cis-1,3-Dichloropropylene	0.5 ug/L	<0.5	-	-	-	-	-
trans-1,3-Dichloropropylene	0.5 ug/L	<0.5	-	-	-	-	-
1,3-Dichloropropene, total	0.5 ug/L	<0.5	-	-	-	-	-
Ethylene dibromide (dibromoethane,	0.2 ug/L	<0.2	-	-	-	-	-
Ethylbenzene	0.5 ug/L	<0.5	-	-	-	-	-
Hexane	1.0 ug/L	<1.0	-	-	-	-	-

	Client ID:	DUP1				-	-
	Sample Date:	25-Apr-25 09:00					
	Sample ID:	2518043-05					
	Matrix:	Ground Water					
	MDL/Units						
Volatiles							
Methyl Ethyl Ketone (2-Butanone)	5.0 ug/L	<5.0	-	-	-	-	-
Methyl Isobutyl Ketone	5.0 ug/L	<5.0	-	-	-	-	-
Methyl tert-butyl ether	2.0 ug/L	<2.0	-	-	-	-	-
Methylene Chloride	5.0 ug/L	<5.0	-	-	-	-	-
Styrene	0.5 ug/L	<0.5	-	-	-	-	-
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5	-	-	-	-	-
1,1,2,2-Tetrachloroethane	0.5 ug/L	<0.5	-	-	-	-	-
Tetrachloroethylene	0.5 ug/L	<0.5	-	-	-	-	-
Toluene	0.5 ug/L	<0.5	-	-	-	-	-
1,1,1-Trichloroethane	0.5 ug/L	<0.5	-	-	-	-	-
1,1,2-Trichloroethane	0.5 ug/L	<0.5	-	-	-	-	-
Trichloroethylene	0.5 ug/L	<0.5	-	-	-	-	-
Trichlorofluoromethane	1.0 ug/L	<1.0	-	-	-	-	-
Vinyl chloride	0.5 ug/L	<0.5	-	-	-	-	-
m,p-Xylenes	0.5 ug/L	<0.5	-	-	-	-	-
o-Xylene	0.5 ug/L	<0.5	-	-	-	-	-
Xylenes, total	0.5 ug/L	<0.5	-	-	-	-	-
Dibromofluoromethane	Surrogate	76.1%	-	-	-	-	-
Toluene-d8	Surrogate	104%	-	-	-	-	-
4-Bromofluorobenzene	Surrogate	95.0%	-	-	-	-	-

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Metals								
Mercury	ND	0.1	ug/L					
Antimony	ND	0.5	ug/L					
Arsenic	ND	1	ug/L					
Barium	ND	1	ug/L					
Beryllium	ND	0.5	ug/L					
Boron	ND	10	ug/L					
Cadmium	ND	0.1	ug/L					
Chromium (VI)	ND	10	ug/L					
Chromium	ND	1	ug/L					
Cobalt	ND	0.5	ug/L					
Copper	ND	0.5	ug/L					
Lead	ND	0.1	ug/L					
Molybdenum	ND	0.5	ug/L					
Nickel	ND	1	ug/L					
Selenium	ND	1	ug/L					
Silver	ND	0.1	ug/L					
Sodium	ND	200	ug/L					
Thallium	ND	0.1	ug/L					
Uranium	ND	0.1	ug/L					
Vanadium	ND	0.5	ug/L					
Zinc	ND	5	ug/L					
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					

Method Quality Control: Blank

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

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: 4-Bromofluorobenzene	*90.5*		*%*	*113*	*50-140*			
Surrogate: Dibromofluoromethane	*78.9*		*%*	*98.6*	*50-140*			
Surrogate: Toluene-d8	*91.8*		*%*	*115*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Metals									
Mercury	ND	0.1	ug/L	ND			NC	20	
Antimony	0.56	0.5	ug/L	ND			NC	20	
Arsenic	ND	1	ug/L	ND			NC	20	
Barium	107	1	ug/L	107			0.6	20	
Beryllium	ND	0.5	ug/L	ND			NC	20	
Boron	156	10	ug/L	152			2.8	20	
Cadmium	ND	0.1	ug/L	ND			NC	20	
Chromium (VI)	ND	10	ug/L	ND			NC	20	
Chromium	ND	1	ug/L	ND			NC	20	
Cobalt	ND	0.5	ug/L	ND			NC	20	
Copper	1.37	0.5	ug/L	1.33			3.0	20	
Lead	ND	0.1	ug/L	ND			NC	20	
Molybdenum	9.51	0.5	ug/L	9.73			2.3	20	
Nickel	2.3	1	ug/L	2.3			1.1	20	
Selenium	ND	1	ug/L	ND			NC	20	
Silver	ND	0.1	ug/L	ND			NC	20	
Sodium	208000	200	ug/L	209000			0.5	20	
Thallium	0.18	0.1	ug/L	0.18			0.6	20	
Uranium	2.4	0.1	ug/L	2.3			3.0	20	
Vanadium	0.75	0.5	ug/L	0.75			0.5	20	
Zinc	6	5	ug/L	6			2.4	20	
Volatiles									
Acetone	ND	5.0	ug/L	ND			NC	30	
Benzene	ND	0.5	ug/L	ND			NC	30	
Bromodichloromethane	ND	0.5	ug/L	ND			NC	30	
Bromoform	ND	0.5	ug/L	ND			NC	30	
Bromomethane	ND	0.5	ug/L	ND			NC	30	
Carbon Tetrachloride	ND	0.2	ug/L	ND			NC	30	
Chlorobenzene	ND	0.5	ug/L	ND			NC	30	
Chloroform	ND	0.5	ug/L	ND			NC	30	

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Dibromochloromethane	ND	0.5	ug/L	ND			NC	30	
Dichlorodifluoromethane	ND	1.0	ug/L	ND			NC	30	
1,2-Dichlorobenzene	ND	0.5	ug/L	ND			NC	30	
1,3-Dichlorobenzene	ND	0.5	ug/L	ND			NC	30	
1,4-Dichlorobenzene	ND	0.5	ug/L	ND			NC	30	
1,1-Dichloroethane	ND	0.5	ug/L	ND			NC	30	
1,2-Dichloroethane	ND	0.5	ug/L	ND			NC	30	
1,1-Dichloroethylene	ND	0.5	ug/L	ND			NC	30	
cis-1,2-Dichloroethylene	ND	0.5	ug/L	ND			NC	30	
trans-1,2-Dichloroethylene	ND	0.5	ug/L	ND			NC	30	
1,2-Dichloropropane	ND	0.5	ug/L	ND			NC	30	
cis-1,3-Dichloropropylene	ND	0.5	ug/L	ND			NC	30	
trans-1,3-Dichloropropylene	ND	0.5	ug/L	ND			NC	30	
Ethylbenzene	ND	0.5	ug/L	ND			NC	30	
Ethylene dibromide (dibromoethane, 1,2-)	ND	0.2	ug/L	ND			NC	30	
Hexane	ND	1.0	ug/L	ND			NC	30	
Methyl Ethyl Ketone (2-Butanone)	ND	5.0	ug/L	ND			NC	30	
Methyl Isobutyl Ketone	ND	5.0	ug/L	ND			NC	30	
Methyl tert-butyl ether	ND	2.0	ug/L	ND			NC	30	
Methylene Chloride	ND	5.0	ug/L	ND			NC	30	
Styrene	ND	0.5	ug/L	ND			NC	30	
1,1,1,2-Tetrachloroethane	ND	0.5	ug/L	ND			NC	30	
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L	ND			NC	30	
Tetrachloroethylene	ND	0.5	ug/L	ND			NC	30	
Toluene	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	*70.9*		*%*		*88.6*	*50-140*			
Surrogate: Dibromofluoromethane	*94.9*		*%*		*119*	*50-140*			
Surrogate: Toluene-d8	*81.5*		*%*		*102*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Metals									
Mercury	2.62	0.1	ug/L	ND	87.5	70-130			
Arsenic	51.2	1	ug/L	ND	101	80-120			
Barium	151	1	ug/L	107	88.3	80-120			
Beryllium	42.9	0.5	ug/L	ND	85.8	80-120			
Boron	176	10	ug/L	152	48.1	80-120			QM-07
Cadmium	43.7	0.1	ug/L	ND	87.3	80-120			
Chromium (VI)	198	10	ug/L	ND	99.0	75-115			
Chromium	56.7	1	ug/L	ND	113	80-120			
Cobalt	51.6	0.5	ug/L	ND	103	80-120			
Copper	47.3	0.5	ug/L	1.33	91.9	80-120			
Lead	38.8	0.1	ug/L	ND	77.5	80-120			QM-07
Molybdenum	55.0	0.5	ug/L	9.73	90.5	80-120			
Nickel	50.5	1	ug/L	2.3	96.3	80-120			
Selenium	45.2	1	ug/L	ND	89.7	80-120			
Silver	38.4	0.1	ug/L	ND	76.8	80-120			QM-07
Sodium	9210	200	ug/L	ND	92.1	80-120			
Thallium	42.4	0.1	ug/L	0.18	84.4	80-120			
Uranium	46.5	0.1	ug/L	2.3	88.3	80-120			
Vanadium	58.3	0.5	ug/L	0.75	115	80-120			
Zinc	47	5	ug/L	6	82.3	80-120			
Volatiles									
Acetone	69.8	5.0	ug/L	ND	69.8	50-140			
Benzene	48.8	0.5	ug/L	ND	122	60-130			
Bromodichloromethane	43.9	0.5	ug/L	ND	110	60-130			
Bromoform	36.9	0.5	ug/L	ND	92.3	60-130			
Bromomethane	33.2	0.5	ug/L	ND	83.0	50-140			
Carbon Tetrachloride	38.8	0.2	ug/L	ND	96.9	60-130			
Chlorobenzene	37.5	0.5	ug/L	ND	93.6	60-130			
Chloroform	41.3	0.5	ug/L	ND	103	60-130			
Dibromochloromethane	34.9	0.5	ug/L	ND	87.2	60-130			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Dichlorodifluoromethane	46.9	1.0	ug/L	ND	117	50-140			
1,2-Dichlorobenzene	37.3	0.5	ug/L	ND	93.3	60-130			
1,3-Dichlorobenzene	38.6	0.5	ug/L	ND	96.5	60-130			
1,4-Dichlorobenzene	36.5	0.5	ug/L	ND	91.2	60-130			
1,1-Dichloroethane	39.8	0.5	ug/L	ND	99.6	60-130			
1,2-Dichloroethane	47.0	0.5	ug/L	ND	118	60-130			
1,1-Dichloroethylene	30.0	0.5	ug/L	ND	74.9	60-130			
cis-1,2-Dichloroethylene	41.7	0.5	ug/L	ND	104	60-130			
trans-1,2-Dichloroethylene	33.0	0.5	ug/L	ND	82.4	60-130			
1,2-Dichloropropane	45.0	0.5	ug/L	ND	112	60-130			
cis-1,3-Dichloropropylene	37.1	0.5	ug/L	ND	92.7	60-130			
trans-1,3-Dichloropropylene	34.4	0.5	ug/L	ND	86.0	60-130			
Ethylbenzene	36.3	0.5	ug/L	ND	90.8	60-130			
Ethylene dibromide (dibromoethane, 1,2-)	33.0	0.2	ug/L	ND	82.6	60-130			
Hexane	45.9	1.0	ug/L	ND	115	60-130			
Methyl Ethyl Ketone (2-Butanone)	94.2	5.0	ug/L	ND	94.2	50-140			
Methyl Isobutyl Ketone	106	5.0	ug/L	ND	106	50-140			
Methyl tert-butyl ether	60.4	2.0	ug/L	ND	60.4	50-140			
Methylene Chloride	34.5	5.0	ug/L	ND	86.2	60-130			
Styrene	34.4	0.5	ug/L	ND	86.0	60-130			
1,1,1,2-Tetrachloroethane	36.2	0.5	ug/L	ND	90.4	60-130			
1,1,2,2-Tetrachloroethane	32.7	0.5	ug/L	ND	81.7	60-130			
Tetrachloroethylene	41.2	0.5	ug/L	ND	103	60-130			
Toluene	35.3	0.5	ug/L	ND	88.2	60-130			
1,1,1-Trichloroethane	44.7	0.5	ug/L	ND	112	60-130			
1,1,2-Trichloroethane	44.4	0.5	ug/L	ND	111	60-130			
Trichloroethylene	47.9	0.5	ug/L	ND	120	60-130			
Trichlorofluoromethane	36.1	1.0	ug/L	ND	90.3	60-130			
Vinyl chloride	45.2	0.5	ug/L	ND	113	50-140			
m,p-Xylenes	72.4	0.5	ug/L	ND	90.4	60-130			
o-Xylene	36.1	0.5	ug/L	ND	90.2	60-130			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: 4-Bromofluorobenzene	*65.1*		*%*		*81.4*	*50-140*			
Surrogate: Dibromofluoromethane	*86.1*		*%*		*108*	*50-140*			
Surrogate: Toluene-d8	*72.2*		*%*		*90.2*	*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

Any use of these results implies your agreement that our total liabilty in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.

PARACEL LABORATORIES LTD.

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Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2518043	

Client Name: Paterson Group	Project Ref: PE2144	Page 1 of 1
Contact Name: Jesse Andrechek	Quote #:	Turnaround Time
Address: 9 Auriga Dr.	PO #: 62956	☐ 1 day ☐ 3 day
	E-mail: jandrechek@patersongroup.ca cgreen@patersongroup.ca	☐ 2 day ■ Regular
Telephone: (613) 226-7381		Date Required:

■ REG 153/04 ☐ REG 406/19

☐ Table 1 ■ Res/Park ☐ Med/Fine
☐ Table 2 ☐ Ind/Comm ■ Coarse
☐ Table 3 ☐ Agri/Other
☐ Table 7
For RSC: ■ Yes ☐ No

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

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

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken Date	Sample Taken Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)					
1	BH1-25-GW	GW		2	04/25/2025			✓										
2	BH2-25-GW	GW		3						✓	✓	✓						
3	BH3-25-GW	GW		2				✓										
4	BH4-25-GW	GW		3						✓	✓	✓						
5	DUP1	GW		2				✓										
6																		
7																		
8																		
9																		
10																		

Comments:

Method of Delivery: P. Courier

Relinquished By (Sign):	Received By Driver/Depot: CB 1601	Received at Lab: SO	Verified By: SO
Relinquished By (Print): Christopher Green	Date/Time: April 25	Date/Time: Apr 25, 2025 10:10am	Date/Time: Apr 28, 2025 11:22 am
Date/Time: 04/25/2025	Temperature: 1.2 °C	Temperature: 3.8°C	pH Verified: ☑ By: LTJ

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Certificate of Analysis

Paterson Group Consulting Engineers (Ottawa)
9 Auriga Drive
Ottawa, ON K2E 7T9
Attn: Mark D'Arcy

Client PO: 62855
Project: PE2144
Custody:

Report Date: 17-Apr-2025
Order Date: 14-Apr-2025

Order #: 2516087

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

Paracel ID	Client ID
2516087-01	BH1-25-GW
2516087-02	BH2-25-GW
2516087-03	BH3-25-GW
2516087-04	BH4-25-GW
2516087-05	BH5-25-GW
2516087-06	BH6-25-GW
2516087-07	DUP-1

Approved By:

Mark Foto

Mark Foto, M.Sc.
Laboratory Director

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Chromium, hexavalent - water	MOE E3056 - colourimetric	15-Apr-25	15-Apr-25
Mercury by CVAA	EPA 245.2 - Cold Vapour AA	15-Apr-25	15-Apr-25
Metals, ICP-MS	EPA 200.8 - ICP-MS	15-Apr-25	16-Apr-25
PHC F1	CWS Tier 1 - P&T GC-FID	15-Apr-25	15-Apr-25
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	15-Apr-25	15-Apr-25
REG 153: PAHs by GC-MS	EPA 625 - GC-MS, extraction	16-Apr-25	17-Apr-25
REG 153: VOCs by P&T GC/MS	EPA 624 - P&T GC-MS	15-Apr-25	15-Apr-25

	Client ID:	BH1-25-GW	BH2-25-GW	BH3-25-GW	BH4-25-GW	-	-
	Sample Date:	11-Apr-25 09:00	11-Apr-25 09:00	11-Apr-25 09:00	11-Apr-25 09:00		
	Sample ID:	2516087-01	2516087-02	2516087-03	2516087-04		
	Matrix:	Ground Water	Ground Water	Ground Water	Ground Water		
	MDL/Units						
Metals							
Mercury	0.1 ug/L	<0.1	-	<0.1	-	-	-
Antimony	0.5 ug/L	0.5	-	0.5	-	-	-
Arsenic	1 ug/L	<1	-	<1	-	-	-
Barium	1 ug/L	145	-	172	-	-	-
Beryllium	0.5 ug/L	<0.5	-	<0.5	-	-	-
Boron	10 ug/L	89	-	955	-	-	-
Cadmium	0.1 ug/L	<0.1	-	<0.1	-	-	-
Chromium (VI)	10 ug/L	<10	-	<10	-	-	-
Chromium	1 ug/L	<1	-	<1	-	-	-
Cobalt	0.5 ug/L	1.7	-	0.6	-	-	-
Copper	0.5 ug/L	9.4	-	3.2	-	-	-
Lead	0.1 ug/L	1.5	-	0.2	-	-	-
Molybdenum	0.5 ug/L	2.2	-	2.1	-	-	-
Nickel	1 ug/L	4	-	3	-	-	-
Selenium	1 ug/L	<1	-	1	-	-	-
Silver	0.1 ug/L	<0.1	-	<0.1	-	-	-
Sodium	200 ug/L	36200	-	83700	-	-	-
Thallium	0.1 ug/L	0.1	-	0.2	-	-	-
Uranium	0.1 ug/L	2.7	-	3.6	-	-	-
Vanadium	0.5 ug/L	<0.5	-	<0.5	-	-	-
Zinc	5 ug/L	9	-	11	-	-	-
Volatiles							
Acetone	5.0 ug/L	16.2	<5.0	<5.0	<5.0	-	-
Benzene	0.5 ug/L	2.7	<0.5	<0.5	<0.5	-	-
Bromodichloromethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-

Certificate of Analysis

Report Date: 17-Apr-2025

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

Order Date: 14-Apr-2025

Client PO: 62855

Project Description: PE2144

	Client ID:	BH1-25-GW	BH2-25-GW	BH3-25-GW	BH4-25-GW	-	-
	Sample Date:	11-Apr-25 09:00	11-Apr-25 09:00	11-Apr-25 09:00	11-Apr-25 09:00		
	Sample ID:	2516087-01	2516087-02	2516087-03	2516087-04		
	Matrix:	Ground Water	Ground Water	Ground Water	Ground Water		
	MDL/Units						
Volatiles							
Bromoform	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Bromomethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Carbon Tetrachloride	0.2 ug/L	<0.2	<0.2	<0.2	<0.2	-	-
Chlorobenzene	0.5 ug/L	94.2	<0.5	<0.5	<0.5	-	-
Chloroform	0.5 ug/L	1.1	<0.5	2.2	0.5	-	-
Dibromochloromethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Dichlorodifluoromethane	1.0 ug/L	35.7	<1.0	2.0	<1.0	-	-
1,2-Dichlorobenzene	0.5 ug/L	5.3	<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	10.1	<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	-	-

Certificate of Analysis

Report Date: 17-Apr-2025

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

Order Date: 14-Apr-2025

Client PO: **62855**

Project Description: **PE2144**

	Client ID:	BH1-25-GW	BH2-25-GW	BH3-25-GW	BH4-25-GW	-	-
	Sample Date:	11-Apr-25 09:00	11-Apr-25 09:00	11-Apr-25 09:00	11-Apr-25 09:00		
	Sample ID:	2516087-01	2516087-02	2516087-03	2516087-04		
	Matrix:	Ground Water	Ground Water	Ground Water	Ground Water		
	MDL/Units						
Volatiles							
Methylene Chloride	5.0 ug/L	<5.0	<5.0	<5.0	<5.0	-	-
Styrene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1,2,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Tetrachloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Toluene	0.5 ug/L	1.1	<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	-	-
Toluene-d8	Surrogate	98.7%	107%	108%	107%	-	-
4-Bromofluorobenzene	Surrogate	96.0%	95.7%	95.8%	94.5%	-	-
Dibromofluoromethane	Surrogate	104%	108%	105%	106%	-	-
Hydrocarbons							
F1 PHCs (C6-C10)	25 ug/L	<25	<25	<25	<25	-	-
F2 PHCs (C10-C16)	100 ug/L	<100	<100	<100	<100	-	-
F3 PHCs (C16-C34)	100 ug/L	<100	<100	<100	<100	-	-
F4 PHCs (C34-C50)	100 ug/L	<100	<100	<100	<100	-	-
Semi-Volatiles							
Acenaphthene	0.05 ug/L	0.17	<0.05	<0.05	<0.05	-	-
Acenaphthylene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05	-	-

	Client ID:	BH1-25-GW	BH2-25-GW	BH3-25-GW	BH4-25-GW	-	-
	Sample Date:	11-Apr-25 09:00	11-Apr-25 09:00	11-Apr-25 09:00	11-Apr-25 09:00		
	Sample ID:	2516087-01	2516087-02	2516087-03	2516087-04		
	Matrix:	Ground Water	Ground Water	Ground Water	Ground Water		
	MDL/Units						
Semi-Volatiles							
Anthracene	0.01 ug/L	0.02	<0.01	<0.01	<0.01	-	-
Benzo [a] anthracene	0.01 ug/L	0.05	<0.01	<0.01	<0.01	-	-
Benzo [a] pyrene	0.01 ug/L	0.05	<0.01	<0.01	<0.01	-	-
Benzo [b] fluoranthene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05	-	-
Benzo [g,h,i] perylene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05	-	-
Benzo [k] fluoranthene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05	-	-
Chrysene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05	-	-
Dibenzo [a,h] anthracene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05	-	-
Fluoranthene	0.01 ug/L	0.10	<0.01	<0.01	<0.01	-	-
Fluorene	0.05 ug/L	0.10	<0.05	<0.05	<0.05	-	-
Indeno [1,2,3-cd] pyrene	0.05 ug/L	<0.05	<0.05	<0.05	<0.05	-	-
1-Methylnaphthalene	0.05 ug/L	0.25	<0.05	<0.05	<0.05	-	-
2-Methylnaphthalene	0.05 ug/L	0.10	<0.05	<0.05	<0.05	-	-
Methylnaphthalene (1&2)	0.10 ug/L	0.35	<0.10	<0.10	<0.10	-	-
Naphthalene	0.05 ug/L	0.11	<0.05	<0.05	<0.05	-	-
Phenanthrene	0.05 ug/L	0.07	<0.05	<0.05	<0.05	-	-
Pyrene	0.01 ug/L	0.10	<0.01	<0.01	<0.01	-	-
2-Fluorobiphenyl	Surrogate	65.8%	75.2%	76.0%	79.7%	-	-
Terphenyl-d14	Surrogate	71.9%	84.8%	87.7%	83.2%	-	-

	Client ID:	BH5-25-GW	BH6-25-GW	DUP-1		-	-
	Sample Date:	11-Apr-25 09:00	11-Apr-25 09:00	11-Apr-25 09:00			
	Sample ID:	2516087-05	2516087-06	2516087-07			
	Matrix:	Ground Water	Ground Water	Ground Water			
	MDL/Units						
Metals							
Mercury	0.1 ug/L	<0.1	<0.1	-	-	-	-
Antimony	0.5 ug/L	0.7	1.2	-	-	-	-
Arsenic	1 ug/L	<1	<1	-	-	-	-
Barium	1 ug/L	35	22	-	-	-	-
Beryllium	0.5 ug/L	<0.5	<0.5	-	-	-	-
Boron	10 ug/L	143	137	-	-	-	-
Cadmium	0.1 ug/L	<0.1	<0.1	-	-	-	-
Chromium (VI)	10 ug/L	<10	<10	-	-	-	-
Chromium	1 ug/L	<1	<1	-	-	-	-
Cobalt	0.5 ug/L	<0.5	<0.5	-	-	-	-
Copper	0.5 ug/L	1.1	1.4	-	-	-	-
Lead	0.1 ug/L	0.1	0.1	-	-	-	-
Molybdenum	0.5 ug/L	0.9	1.0	-	-	-	-
Nickel	1 ug/L	2	1	-	-	-	-
Selenium	1 ug/L	<1	<1	-	-	-	-
Silver	0.1 ug/L	<0.1	<0.1	-	-	-	-
Sodium	200 ug/L	51900	39000	-	-	-	-
Thallium	0.1 ug/L	<0.1	<0.1	-	-	-	-
Uranium	0.1 ug/L	0.5	0.4	-	-	-	-
Vanadium	0.5 ug/L	<0.5	<0.5	-	-	-	-
Zinc	5 ug/L	<5	<5	-	-	-	-
Volatiles							
Acetone	5.0 ug/L	<5.0	<5.0	<5.0	-	-	-
Benzene	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
Bromodichloromethane	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-

	Client ID:	BH5-25-GW	BH6-25-GW	DUP-1		-	-
	Sample Date:	11-Apr-25 09:00	11-Apr-25 09:00	11-Apr-25 09:00			
	Sample ID:	2516087-05	2516087-06	2516087-07			
	Matrix:	Ground Water	Ground Water	Ground Water			
	MDL/Units						
Volatiles							
Bromoform	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
Bromomethane	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
Carbon Tetrachloride	0.2 ug/L	<0.2	<0.2	<0.2	-	-	-
Chlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
Chloroform	0.5 ug/L	0.9	<0.5	<0.5	-	-	-
Dibromochloromethane	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
Dichlorodifluoromethane	1.0 ug/L	<1.0	<1.0	<1.0	-	-	-
1,2-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
1,3-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
1,4-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
1,1-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
1,2-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
1,1-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
cis-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
trans-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
1,2-Dichloropropane	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
cis-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
trans-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
1,3-Dichloropropene, total	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
Ethylbenzene	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
Ethylene dibromide (dibromoethane,	0.2 ug/L	<0.2	<0.2	<0.2	-	-	-
Hexane	1.0 ug/L	<1.0	<1.0	<1.0	-	-	-
Methyl Ethyl Ketone (2-Butanone)	5.0 ug/L	<5.0	<5.0	<5.0	-	-	-
Methyl Isobutyl Ketone	5.0 ug/L	<5.0	<5.0	<5.0	-	-	-
Methyl tert-butyl ether	2.0 ug/L	<2.0	<2.0	<2.0	-	-	-

Certificate of Analysis

Report Date: 17-Apr-2025

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

Order Date: 14-Apr-2025

Client PO: **62855**

Project Description: PE2144

	Client ID:	BH5-25-GW	BH6-25-GW	DUP-1		-	-
	Sample Date:	11-Apr-25 09:00	11-Apr-25 09:00	11-Apr-25 09:00			
	Sample ID:	2516087-05	2516087-06	2516087-07			
	Matrix:	Ground Water	Ground Water	Ground Water			
	MDL/Units						
Volatiles							
Methylene Chloride	5.0 ug/L	<5.0	<5.0	<5.0	-	-	-
Styrene	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
1,1,2,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
Tetrachloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
Toluene	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
1,1,1-Trichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
1,1,2-Trichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
Trichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
Trichlorofluoromethane	1.0 ug/L	<1.0	<1.0	<1.0	-	-	-
Vinyl chloride	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
m,p-Xylenes	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
o-Xylene	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
Xylenes, total	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
Toluene-d8	Surrogate	107%	108%	106%	-	-	-
Dibromofluoromethane	Surrogate	103%	105%	106%	-	-	-
4-Bromofluorobenzene	Surrogate	95.9%	95.4%	93.6%	-	-	-
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	-	-	-
Semi-Volatiles							
Acenaphthene	0.05 ug/L	<0.05	<0.05	<0.05	-	-	-
Acenaphthylene	0.05 ug/L	<0.05	<0.05	<0.05	-	-	-

	Client ID:	BH5-25-GW	BH6-25-GW	DUP-1		-	-
	Sample Date:	11-Apr-25 09:00	11-Apr-25 09:00	11-Apr-25 09:00			
	Sample ID:	2516087-05	2516087-06	2516087-07			
	Matrix:	Ground Water	Ground Water	Ground Water			
	MDL/Units						
Semi-Volatiles							
Anthracene	0.01 ug/L	<0.01	0.01	<0.01	-	-	-
Benzo [a] anthracene	0.01 ug/L	<0.01	0.05	<0.01	-	-	-
Benzo [a] pyrene	0.01 ug/L	<0.01	0.05	<0.01	-	-	-
Benzo [b] fluoranthene	0.05 ug/L	<0.05	0.06	<0.05	-	-	-
Benzo [g,h,i] perylene	0.05 ug/L	<0.05	<0.05	<0.05	-	-	-
Benzo [k] fluoranthene	0.05 ug/L	<0.05	<0.05	<0.05	-	-	-
Chrysene	0.05 ug/L	<0.05	0.05	<0.05	-	-	-
Dibenzo [a,h] anthracene	0.05 ug/L	<0.05	<0.05	<0.05	-	-	-
Fluoranthene	0.01 ug/L	0.03	0.09	0.02	-	-	-
Fluorene	0.05 ug/L	<0.05	<0.05	<0.05	-	-	-
Indeno [1,2,3-cd] pyrene	0.05 ug/L	<0.05	<0.05	<0.05	-	-	-
1-Methylnaphthalene	0.05 ug/L	<0.05	<0.05	<0.05	-	-	-
2-Methylnaphthalene	0.05 ug/L	<0.05	<0.05	<0.05	-	-	-
Methylnaphthalene (1&2)	0.10 ug/L	<0.10	<0.10	<0.10	-	-	-
Naphthalene	0.05 ug/L	<0.05	<0.05	<0.05	-	-	-
Phenanthrene	0.05 ug/L	<0.05	<0.05	<0.05	-	-	-
Pyrene	0.01 ug/L	0.03	0.08	0.02	-	-	-
2-Fluorobiphenyl	Surrogate	68.2%	74.1%	68.6%	-	-	-
Terphenyl-d14	Surrogate	81.3%	86.0%	84.4%	-	-	-

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								
Mercury	ND	0.1	ug/L					
Antimony	ND	0.5	ug/L					
Arsenic	ND	1	ug/L					
Barium	ND	1	ug/L					
Beryllium	ND	0.5	ug/L					
Boron	ND	10	ug/L					
Cadmium	ND	0.1	ug/L					
Chromium (VI)	ND	10	ug/L					
Chromium	ND	1	ug/L					
Cobalt	ND	0.5	ug/L					
Copper	ND	0.5	ug/L					
Lead	ND	0.1	ug/L					
Molybdenum	ND	0.5	ug/L					
Nickel	ND	1	ug/L					
Selenium	ND	1	ug/L					
Silver	ND	0.1	ug/L					
Sodium	ND	200	ug/L					
Thallium	ND	0.1	ug/L					
Uranium	ND	0.1	ug/L					
Vanadium	ND	0.5	ug/L					
Zinc	ND	5	ug/L					
Semi-Volatiles								
Acenaphthene	ND	0.05	ug/L					
Acenaphthylene	ND	0.05	ug/L					
Anthracene	ND	0.01	ug/L					
Benzo [a] anthracene	ND	0.01	ug/L					
Benzo [a] pyrene	ND	0.01	ug/L					

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Benzo [b] fluoranthene	ND	0.05	ug/L					
Benzo [g,h,i] perylene	ND	0.05	ug/L					
Benzo [k] fluoranthene	ND	0.05	ug/L					
Chrysene	ND	0.05	ug/L					
Dibenzo [a,h] anthracene	ND	0.05	ug/L					
Fluoranthene	ND	0.01	ug/L					
Fluorene	ND	0.05	ug/L					
Indeno [1,2,3-cd] pyrene	ND	0.05	ug/L					
1-Methylnaphthalene	ND	0.05	ug/L					
2-Methylnaphthalene	ND	0.05	ug/L					
Methylnaphthalene (1&2)	ND	0.10	ug/L					
Naphthalene	ND	0.05	ug/L					
Phenanthrene	ND	0.05	ug/L					
Pyrene	ND	0.01	ug/L					
Surrogate: 2-Fluorobiphenyl	*13.5*		*%*	*67.3*	*50-140*			
Surrogate: Terphenyl-d14	*18.0*		*%*	*90.2*	*50-140*			
Volatiles								
Acetone	ND	5.0	ug/L					
Benzene	ND	0.5	ug/L					
Bromodichloromethane	ND	0.5	ug/L					
Bromoform	ND	0.5	ug/L					
Bromomethane	ND	0.5	ug/L					
Carbon Tetrachloride	ND	0.2	ug/L					
Chlorobenzene	ND	0.5	ug/L					
Chloroform	ND	0.5	ug/L					
Dibromochloromethane	ND	0.5	ug/L					
Dichlorodifluoromethane	ND	1.0	ug/L					
1,2-Dichlorobenzene	ND	0.5	ug/L					
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					

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
1,1-Dichloroethylene	ND	0.5	ug/L					
cis-1,2-Dichloroethylene	ND	0.5	ug/L					
trans-1,2-Dichloroethylene	ND	0.5	ug/L					
1,2-Dichloropropane	ND	0.5	ug/L					
cis-1,3-Dichloropropylene	ND	0.5	ug/L					
trans-1,3-Dichloropropylene	ND	0.5	ug/L					
1,3-Dichloropropene, total	ND	0.5	ug/L					
Ethylbenzene	ND	0.5	ug/L					
Ethylene dibromide (dibromoethane, 1,2-)	ND	0.2	ug/L					
Hexane	ND	1.0	ug/L					
Methyl Ethyl Ketone (2-Butanone)	ND	5.0	ug/L					
Methyl Isobutyl Ketone	ND	5.0	ug/L					
Methyl tert-butyl ether	ND	2.0	ug/L					
Methylene Chloride	ND	5.0	ug/L					
Styrene	ND	0.5	ug/L					
1,1,1,2-Tetrachloroethane	ND	0.5	ug/L					
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L					
Tetrachloroethylene	ND	0.5	ug/L					
Toluene	ND	0.5	ug/L					
1,1,1-Trichloroethane	ND	0.5	ug/L					
1,1,2-Trichloroethane	ND	0.5	ug/L					
Trichloroethylene	ND	0.5	ug/L					
Trichlorofluoromethane	ND	1.0	ug/L					
Vinyl chloride	ND	0.5	ug/L					
m,p-Xylenes	ND	0.5	ug/L					
o-Xylene	ND	0.5	ug/L					
Xylenes, total	ND	0.5	ug/L					
Surrogate: 4-Bromofluorobenzene	*77.4*		*%*	*96.8*	*50-140*			
Surrogate: Dibromofluoromethane	*85.3*		*%*	*107*	*50-140*			
Surrogate: Toluene-d8	*85.8*		*%*	*107*	*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	
F2 PHCs (C10-C16)	943	100	ug/L	1060			11.3	30	
F3 PHCs (C16-C34)	873	100	ug/L	988			12.3	30	
F4 PHCs (C34-C50)	ND	100	ug/L	ND			NC	30	
Metals									
Mercury	ND	0.1	ug/L	ND			NC	20	
Antimony	ND	0.5	ug/L	ND			NC	20	
Arsenic	ND	1	ug/L	ND			NC	20	
Barium	ND	1	ug/L	ND			NC	20	
Beryllium	ND	0.5	ug/L	ND			NC	20	
Boron	ND	10	ug/L	ND			NC	20	
Cadmium	ND	0.1	ug/L	ND			NC	20	
Chromium (VI)	ND	10	ug/L	ND			NC	20	
Chromium	ND	1	ug/L	ND			NC	20	
Cobalt	ND	0.5	ug/L	ND			NC	20	
Copper	ND	0.5	ug/L	ND			NC	20	
Lead	ND	0.1	ug/L	ND			NC	20	
Molybdenum	ND	0.5	ug/L	ND			NC	20	
Nickel	ND	1	ug/L	ND			NC	20	
Selenium	ND	1	ug/L	ND			NC	20	
Silver	ND	0.1	ug/L	ND			NC	20	
Sodium	ND	200	ug/L	ND			NC	20	
Thallium	ND	0.1	ug/L	ND			NC	20	
Uranium	ND	0.1	ug/L	ND			NC	20	
Vanadium	ND	0.5	ug/L	ND			NC	20	
Zinc	ND	5	ug/L	ND			NC	20	
Volatiles									
Acetone	ND	5.0	ug/L	ND			NC	30	
Benzene	ND	0.5	ug/L	ND			NC	30	
Bromodichloromethane	ND	0.5	ug/L	ND			NC	30	

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
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	2.15	0.5	ug/L	2.18			1.4	30	
Dibromochloromethane	ND	0.5	ug/L	ND			NC	30	
Dichlorodifluoromethane	2.00	1.0	ug/L	1.98			1.0	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	

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
1,1,2-Trichloroethane	ND	0.5	ug/L	ND			NC	30	
Trichloroethylene	ND	0.5	ug/L	ND			NC	30	
Trichlorofluoromethane	ND	1.0	ug/L	ND			NC	30	
Vinyl chloride	ND	0.5	ug/L	ND			NC	30	
m,p-Xylenes	ND	0.5	ug/L	ND			NC	30	
o-Xylene	ND	0.5	ug/L	ND			NC	30	
Surrogate: 4-Bromofluorobenzene	*75.5*		*%*		*94.4*	*50-140*			
Surrogate: Dibromofluoromethane	*83.8*		*%*		*105*	*50-140*			
Surrogate: Toluene-d8	*87.5*		*%*		*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)	1720	25	ug/L	ND	100	85-115			
F2 PHCs (C10-C16)	1780	100	ug/L	ND	111	60-140			
F3 PHCs (C16-C34)	4430	100	ug/L	ND	113	60-140			
F4 PHCs (C34-C50)	2570	100	ug/L	ND	104	60-140			
Metals									
Mercury	2.84	0.1	ug/L	ND	94.5	70-130			
Arsenic	48.8	1	ug/L	ND	97.5	80-120			
Barium	50.9	1	ug/L	ND	102	80-120			
Beryllium	50.6	0.5	ug/L	ND	101	80-120			
Boron	45	10	ug/L	ND	88.9	80-120			
Cadmium	49.6	0.1	ug/L	ND	99.2	80-120			
Chromium (VI)	200	10	ug/L	ND	100	75-115			
Chromium	52.9	1	ug/L	ND	106	80-120			
Cobalt	50.1	0.5	ug/L	ND	100	80-120			
Copper	49.6	0.5	ug/L	ND	99.2	80-120			
Lead	36.9	0.1	ug/L	ND	73.8	80-120			QM-07
Molybdenum	38.7	0.5	ug/L	ND	77.2	80-120			QM-07
Nickel	51.6	1	ug/L	ND	103	80-120			
Selenium	48.6	1	ug/L	ND	97.0	80-120			
Silver	45.7	0.1	ug/L	ND	91.4	80-120			
Sodium	9370	200	ug/L	ND	92.3	80-120			
Thallium	45.7	0.1	ug/L	ND	91.4	80-120			
Uranium	39.0	0.1	ug/L	ND	78.0	80-120			QM-07
Vanadium	52.1	0.5	ug/L	ND	104	80-120			
Zinc	53	5	ug/L	ND	105	80-120			
Semi-Volatiles									
Acenaphthene	3.83	0.05	ug/L	ND	76.7	50-140			
Acenaphthylene	4.01	0.05	ug/L	ND	80.2	50-140			
Anthracene	3.98	0.01	ug/L	ND	79.6	50-140			
Benzo [a] anthracene	4.05	0.01	ug/L	ND	81.0	50-140			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Benzo [a] pyrene	3.91	0.01	ug/L	ND	78.2	50-140			
Benzo [b] fluoranthene	4.25	0.05	ug/L	ND	84.9	50-140			
Benzo [g,h,i] perylene	4.09	0.05	ug/L	ND	81.8	50-140			
Benzo [k] fluoranthene	4.13	0.05	ug/L	ND	82.6	50-140			
Chrysene	4.22	0.05	ug/L	ND	84.4	50-140			
Dibenzo [a,h] anthracene	4.32	0.05	ug/L	ND	86.5	50-140			
Fluoranthene	4.19	0.01	ug/L	ND	83.7	50-140			
Fluorene	3.99	0.05	ug/L	ND	79.8	50-140			
Indeno [1,2,3-cd] pyrene	4.25	0.05	ug/L	ND	85.1	50-140			
1-Methylnaphthalene	3.79	0.05	ug/L	ND	75.8	50-140			
2-Methylnaphthalene	3.99	0.05	ug/L	ND	79.8	50-140			
Naphthalene	3.74	0.05	ug/L	ND	74.9	50-140			
Phenanthrene	4.11	0.05	ug/L	ND	82.1	50-140			
Pyrene	4.00	0.01	ug/L	ND	80.0	50-140			
Surrogate: 2-Fluorobiphenyl	*14.1*		*%*		*70.4*	*50-140*			
Surrogate: Terphenyl-d14	*17.1*		*%*		*85.7*	*50-140*			
Volatiles									
Acetone	90.7	5.0	ug/L	ND	90.7	50-140			
Benzene	35.6	0.5	ug/L	ND	89.0	60-130			
Bromodichloromethane	34.7	0.5	ug/L	ND	86.6	60-130			
Bromoform	32.1	0.5	ug/L	ND	80.2	60-130			
Bromomethane	44.4	0.5	ug/L	ND	111	50-140			
Carbon Tetrachloride	33.0	0.2	ug/L	ND	82.5	60-130			
Chlorobenzene	34.6	0.5	ug/L	ND	86.5	60-130			
Chloroform	34.4	0.5	ug/L	ND	86.0	60-130			
Dibromochloromethane	32.6	0.5	ug/L	ND	81.6	60-130			
Dichlorodifluoromethane	41.2	1.0	ug/L	ND	103	50-140			
1,2-Dichlorobenzene	32.8	0.5	ug/L	ND	82.0	60-130			
1,3-Dichlorobenzene	32.1	0.5	ug/L	ND	80.4	60-130			
1,4-Dichlorobenzene	31.8	0.5	ug/L	ND	79.5	60-130			
1,1-Dichloroethane	34.3	0.5	ug/L	ND	85.8	60-130			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
1,2-Dichloroethane	35.8	0.5	ug/L	ND	89.4	60-130			
1,1-Dichloroethylene	35.3	0.5	ug/L	ND	88.2	60-130			
cis-1,2-Dichloroethylene	33.9	0.5	ug/L	ND	84.7	60-130			
trans-1,2-Dichloroethylene	41.2	0.5	ug/L	ND	103	60-130			
1,2-Dichloropropane	34.5	0.5	ug/L	ND	86.2	60-130			
cis-1,3-Dichloropropylene	34.3	0.5	ug/L	ND	85.8	60-130			
trans-1,3-Dichloropropylene	32.8	0.5	ug/L	ND	82.0	60-130			
Ethylbenzene	32.9	0.5	ug/L	ND	82.3	60-130			
Ethylene dibromide (dibromoethane, 1,2-)	34.9	0.2	ug/L	ND	87.2	60-130			
Hexane	37.0	1.0	ug/L	ND	92.4	60-130			
Methyl Ethyl Ketone (2-Butanone)	84.3	5.0	ug/L	ND	84.3	50-140			
Methyl Isobutyl Ketone	93.3	5.0	ug/L	ND	93.3	50-140			
Methyl tert-butyl ether	85.8	2.0	ug/L	ND	85.8	50-140			
Methylene Chloride	39.7	5.0	ug/L	ND	99.3	60-130			
Styrene	32.3	0.5	ug/L	ND	80.8	60-130			
1,1,1,2-Tetrachloroethane	32.8	0.5	ug/L	ND	82.0	60-130			
1,1,2,2-Tetrachloroethane	29.5	0.5	ug/L	ND	73.7	60-130			
Tetrachloroethylene	31.8	0.5	ug/L	ND	79.6	60-130			
Toluene	33.9	0.5	ug/L	ND	84.8	60-130			
1,1,1-Trichloroethane	33.8	0.5	ug/L	ND	84.5	60-130			
1,1,2-Trichloroethane	37.6	0.5	ug/L	ND	94.0	60-130			
Trichloroethylene	38.5	0.5	ug/L	ND	96.2	60-130			
Trichlorofluoromethane	41.2	1.0	ug/L	ND	103	60-130			
Vinyl chloride	45.0	0.5	ug/L	ND	112	50-140			
m,p-Xylenes	67.4	0.5	ug/L	ND	84.3	60-130			
o-Xylene	34.3	0.5	ug/L	ND	85.7	60-130			
Surrogate: 4-Bromofluorobenzene	*62.5*		*%*		*78.1*	*50-140*			
Surrogate: Dibromofluoromethane	*84.1*		*%*		*105*	*50-140*			
Surrogate: Toluene-d8	*80.0*		*%*		*100*	*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.

Any use of these results implies your agreement that our total liabilty in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.

PARACE LABORATORIES LT

Paracel ID: 2516087

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Ontario K1G 4J8
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www.paracelllabs.com

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2516087	

Client Name: Paterson Group	Project Ref: PE2144	Page 1 of 1
Contact Name: Mark D'Arcy	Quote #: [redacted]	Turnaround Time
Address: 9 Auriga Dr.	PO #: 62855	☐ 1 day ☐ 3 day
	E-mail: mdarcy@patersongroup.ca, jandrechek@patersongroup.ca, cgreen@patersongroup.ca	☐ 2 day ■ Regular
Telephone: (613) 226-7381		Date Required:

☐ REG 153/04 ■ REG 406/19

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

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

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

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken: Date	Sample Taken: Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)					
1	BH1-25-GW	GW		7	04/11/2025		✓	✓	✓	✓	✓	✓						
2	BH2-25-GW	GW		4			✓	✓	✓									
3	BH3-25-GW	GW		7			✓	✓	✓	✓	✓	✓						
4	BH4-25-GW	GW		4			✓	✓	✓									
5	BH5-25-GW	GW		7			✓	✓	✓	✓	✓	✓						
6	BH6-25-GW	GW		7			✓	✓	✓	✓	✓	✓						
7	DUP-1	GW		4			✓	✓	✓									
8																		
9																		
10																		

Comments:

Method of Delivery: Paracel Courier

Relinquished By (Sign):	Received By Driver/Depot:	Received at Lab: SD	Verified By: SD
Relinquished By (Print): Christopher Green	Date/Time:	Date/Time: Apr.14, 2025 4:05pm	Date/Time: Apr.14, 2025 4:46pm
Date/Time: 04/14/2025	Temperature: °C	Temperature: 9.9	pH Verified: ☑ By: LTJ