

Phase II – Environmental Site Assessment

1984 Baseline Road
Ottawa, Ontario

Prepared for: Chick-fil-A Canada ULC

Report: PE7169-3

Date: September 26, 2025

TABLE OF CONTENTS

EXECUTIVE SUMMARY.....	iii
1.0 INTRODUCTION.....	1
1.1 Site Description	1
1.2 Property Ownership.....	1
1.3 Current and Proposed Future Uses.....	2
1.4 Applicable Site Condition Standard	2
2.0 BACKGROUND INFORMATION.....	3
2.1 Physical Setting	3
2.2 Past Investigations	3
3.0 SCOPE OF INVESTIGATION	6
3.1 Overview of Site Investigation	6
3.2 Media Investigated	6
3.3 Phase I Conceptual Site Model	7
3.4 Deviations from Sampling and Analysis Plan	8
3.5 Impediments	8
4.0 INVESTIGATION METHOD	9
4.1 Subsurface Investigation	9
4.2 Soil Sampling.....	9
4.3 Field Screening Measurements.....	10
4.4 Groundwater Monitoring Well Installation	10
4.5 Field Measurement of Water Quality Parameters.....	10
4.6 Groundwater Sampling	11
4.7 Analytical Testing	11
4.8 Residue Management.....	11
4.9 Elevation Surveying.....	12
4.10 Quality Assurance and Quality Control Measures	12
5.0 REVIEW AND EVALUATION	12
5.1 Geology	12
5.2 Groundwater Elevations, Flow Direction, and Hydraulic Gradient	12
5.3 Fine-Coarse Soil Texture.....	13
5.4 Soil: Field Screening.....	13
5.5 Soil Quality	13
5.6 Groundwater Quality.....	15
5.7 Quality Assurance and Quality Control Results	16
5.8 Phase II Conceptual Site Model	16
6.0 CONCLUSIONS	22
7.0 STATEMENT OF LIMITATIONS	24

List of Figures

Figure 1 – Key Plan

Drawing PE7169-2 – Site Plan

Drawing PE7169-3 – Surrounding Land Use Plan

Drawing PE7169-4 – Test Hole Location Plan

Drawing PE7169-5 – Analytical Testing Plan – Soil

Drawing PE7169-6 – Analytical Testing Plan – Groundwater

List of Appendices

Appendix 1 Sampling and Analysis Plan

Soil Profile and Test Data Sheets

Symbols and Terms

Analytical Test Results Tables

Laboratory Certificates of Analysis

EXECUTIVE SUMMARY

Assessment

A Phase II ESA was carried out for the property addressed 1984 Baseline Road, in the City of Ottawa, Ontario. The purpose of the Phase II ESA was to address potentially contaminating activities (PCAs) that were identified during the Phase I ESA and considered to result in areas of potential environmental concern (APECs) on the Phase II Property.

A preliminary groundwater sampling program was carried on July 28, 2025, from six out of seven monitoring wells previously installed by others. It should be noted that these monitoring wells were labelled MW100 through MW700 for the purposes of identification; no information regarding the installation of these wells was made available. Five of these wells (MW100, MW200, MW300, MW400, and MW500) were located within the Phase II Property, while the remaining two wells (MW600 and MW700) were situated just outside the property boundary to the east. Groundwater sampling from MW100 was not completed during the July sampling program.

Following the preliminary groundwater sampling, a subsurface investigation was carried out on August 1, 2025, in conjunction with geotechnical investigation and involved the advancement of four boreholes on the Phase II Property. The program consisted of drilling four boreholes (BH1-25 to BH4-25) to a maximum depth of 6.71 m below ground surface (bgs). A dynamic Cone Penetration Test was completed in BH4-25 for geotechnical purposes, and practical refusal was encountered at 9.88 mbgs. All four boreholes were instrumented with monitoring wells.

The soil stratigraphy generally consists of topsoil or asphalt overlying fill material, underlain by native silty sand or silty clay. The fill material primarily comprises brown silty sand with gravel or crushed stone, with occasional layers of silty clay. Native brown silty sand and/or silty clay was encountered beneath the fill material in all boreholes. Bedrock was not encountered during the current investigation. No visual or olfactory evidence of contamination was observed in the collected soil samples, and the vapour readings obtained are not considered indicative of volatile contamination. Groundwater was measured within the overburden at depths of 3.72 to 4.18 m below the existing ground surface.

Soil

A total of 9 soil samples (and one duplicate sample) were submitted for analysis of metals (including As, Sb, Se), mercury, Cr(VI), PAHs, BTEX, PHCs, PCBs, EC, and/or SAR. Four samples were also submitted for pH.

Based on the analytical results, all soil sample parameters analysed comply with the MECP Table 3 Commercial Standards.

Groundwater

10 groundwater samples (and one duplicate sample), including from existing monitoring wells (MW200 to MW700) and monitoring wells installed in BH1-25, BH2-25, BH3-25 and BH4-25, were submitted for laboratory analysis of BTEX, PHCs (F1-F4), VOCs and/or PCB parameters. While MW600 and MW700 were situated outside of the Phase II Property, the results are presented for informational purposes.

Based on the analytical results, all groundwater sample parameters analysed comply with the MECP Table 3 Commercial Standards.

Recommendations

Soil Management

Any excess soil generated on site must be handled in accordance with Ontario Regulation 406/19: On-Site and Excess Soil Management. Additional sampling, reporting, and tracking may be required depending on specific project details prior to soil being managed off-site. Further information regarding O. Reg 406/19 can be provided upon request.

Monitoring Wells

Any monitoring wells present on the Phase II Property that are not going to be used in the future, or will be destroyed during site redevelopment, should be abandoned according to O.Reg. 903 (Ontario Water Resources Act). In the mean time, the monitoring wells installed by Paterson will be registered with the MECP under Ontario Regulation 903 (Ontario Water Resources Act).

1.0 INTRODUCTION

At the request of Chick-fil-A Canada ULC, Paterson Group (Paterson) carried out a Phase II Environmental Site Assessment for the property addressed 1984 Baseline Road, in the City of Ottawa, Ontario. The purpose of this Phase II-ESA was to address areas of potential environmental concern identified in Phase I ESA conducted by Paterson Group, dated September 26, 2025.

1.1 Site Description

Address:	1984 Baseline Road, Ottawa, Ontario
Legal Description:	Part of Lot 35, Concession 2 (Rideau Front) and Part of Road Allowance between Concessions 1 and 2 (Rideau Front), City of Ottawa.
Property Identification Number:	04691-0235 (LT).
Location:	The Phase II Property is located on the southeast corner of the intersection between Baseline Road and Woodroffe Avenue, in the City of Ottawa, Ontario. Refer to Figure 1 - Key Plan in the Figures section following the text.
Latitude and Longitude:	45° 21' 5.0" N, 75° 45' 43.0" W

Site Description:

Configuration:	Irregular
Site Area:	0.24 ha (approximate)

1.2 Property Ownership

The Phase II Property is currently owned by Leikin Group. Paterson was engaged to complete the Phase II-ESA by Mr. Roland Garro with Chick-fil-A Canada ULC. Mr. Roland Garro can be reached by mail at 5200 Buffington Road, Atlanta, GA, USA, 30349.

1.3 Current and Proposed Future Uses

The Phase II Property is currently occupied by a single storey commercial retail building and associated parking and landscaped areas (Commercial Use). It is our understanding that the Phase II Property will be redeveloped with a new commercial retail building and will remain Commercial Use.

1.4 Applicable Site Condition Standard

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

- Coarse-grained soil conditions
- Full depth generic site conditions
- Non-potable groundwater conditions
- Commercial land use

Section 35 of O.Reg. 153/04 applies to the Phase II Property as the Phase II Property and neighbouring properties are all serviced by municipal water. No potable water wells are considered to be present within the Phase I ESA Study Area.

Section 41 of O.Reg. 153/04 does not apply to the Phase II Property, as the property is not within 30 m of an environmentally sensitive area.

Section 43.1 of O.Reg. 153/04 does not apply to the Phase II Property as the Phase II Property is not a Shallow Soil property.

Coarse-grained soil standards were chosen as a conservative approach based on the observed site conditions. Grain size analysis was not completed. The current and intended future use of the Phase II Property is commercial; therefore, the Commercial Standards have been selected for the purpose of this Phase II ESA.

2.0 BACKGROUND INFORMATION

2.1 Physical Setting

The Phase II Property is located on the southeast corner of the intersection between Baseline Road and Woodroffe Avenue, in the City of Ottawa, Ontario. The Phase II Property is located in a commercial setting. The Phase II Property is currently occupied by a commercial building situated in the central-western portion. The remainder of the site consists of landscaped areas and at-grade parking. The site topography is generally flat. The regional topography in the general area of the Phase II Property slopes down to the west and northwest. Site drainage consists of a combination of sheet flow to the catch basins in parking areas and surficial infiltration in grassed/vegetated areas. The Phase II Property is situated in a municipally serviced area.

2.2 Past Investigations

The following reports were reviewed prior to conducting this assessment:

- ❑ 'Designated Substance Survey, 1984 Baseline Road, Ottawa, Ontario,' prepared for Chick-fil-A Canada ULC., by Paterson Group Inc., and dated August 13, 2025.

A designated substance survey was completed by Paterson Group in conjunction with the current assessment. A total of 28 bulk samples of potentially asbestos-containing materials were submitted for laboratory analysis, along with two paint samples for lead content testing. The results did not identify any asbestos-containing materials (ACMs) or lead-based paints present within the building.

- ❑ 'Phase I - Environmental Site Assessment, 1984 Baseline Road, Ottawa, Ontario,' prepared by Paterson Group Inc. (Paterson), dated September 2025.

The Phase I ESA was completed in general accordance with the Ontario Regulation (O.Reg.) 153/04, as amended. Based on the available historical information, the Phase I Property was initially developed with a public roadway on the eastern portion of the subject site prior to 1945, with the remainder of the property consisting of agricultural use land. The Phase I Property was developed with the existing commercial building in approximately 2002. The building has operated as retail store since that time to the present day. Two PCAs related to on-site activities were identified including the potential presence of fill material of

unknown quality (APEC 1) and the use of de-icing agents for road and pedestrian safety (APEC 2).

Based on the available historical information, adjacent and surrounding properties within the Phase I Study Area have been developed primarily for commercial purposes. Off-site PCAs, including former retail fuel outlets and automotive service garages, and a former dry cleaner and PCB waste storage site, were identified and are considered to represent APECs on the Phase I Property.

Following the historical research, a site visit was conducted. No previously unidentified PCAs were observed during the review of the current use of the Phase I Property and surrounding properties.

Based on the September 2025 Phase I ESA conducted by Paterson for the Phase II property, on-site and off-site potentially contaminating activities (PCAs) were considered to result in nine (9) areas of potential environmental concern (APECs) on the Phase I and Phase II Property, as presented in the table below.

Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern with respect to Phase I-ESA 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 Fill Material of Unknown Quality	Throughout the Phase I Property	<i>"Item 30: Importation of Fill Material of Unknown Quality"</i>	On-site	BTEX PHCs Metals As, Se, Sb Mercury Cr(VI) PAHs	Soil
APEC 2 ¹ Application of Road Salt	Throughout parking areas on the Phase I Property	<i>"Item NA: Application of road salt for the safety of vehicular or pedestrian traffic under conditions of snow or ice"</i>	On-site	EC SAR	Soil
APEC 3 Former Retail Fuel Outlet (with 1 UST)	Eastern portion of the Phase I Property	<i>"Item 28: Gasoline and Associated Products Storage in Fixed Tanks"</i>	Off-site	BTEX PHCs VOCs	Soil Groundwater

Table 1 - Areas of Potential Environmental Concern

Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern with respect to Phase I-ESA 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 4 Former Retail Fuel Outlet (with 2 USTs)	Northern portion of the Phase I Property	<i>"Item 28: Gasoline and Associated Products Storage in Fixed Tanks"</i>	Off-site	BTEX PHCs VOCs	Soil Groundwater
APEC 5 Former Automotive Service Garage	Northern portion of the Phase I Property	<i>"Item 52: Storage, Maintenance, Fuelling and Repair of Equipment, Vehicles, and Material used to maintain Transportation Systems"</i>	Off-site	BTEX PHCs VOCs	Soil Groundwater
APEC 6 Former Retail Fuel Outlet (with 1 UST)	Northern portion of the Phase I Property	<i>"Item 28: Gasoline and Associated Products Storage in Fixed Tanks"</i>	Off-site	BTEX PHCs VOCs	Soil Groundwater
APEC 7 Former Automotive Service Garage	Northern portion of the Phase I Property	<i>"Item 52: Storage, Maintenance, Fuelling and Repair of Equipment, Vehicles, and Material used to maintain Transportation Systems"</i>	Off-site	BTEX PHCs VOCs	Soil Groundwater
APEC 8 Former Dry Cleaners	Throughout the Phase I Property	<i>"Item 37: Operation of Dry-Cleaning Equipment (where chemicals are used)"</i>	Off-site	BTEX PHCs VOCs	Soil Groundwater
APEC 9 Former PCB Waste Storage Site	Eastern portion of the Phase I Property	<i>"Item NA: Storage of PCB Waste"</i>	Off-site	PCBs	Soil Groundwater

¹ – In accordance with Section 49.1 of O. Reg 153/04 standards are deemed to be met if an applicable site condition standard is exceeded at a property solely because the qualified person has determined that a substance has been applied to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both. The exception outlined in Section 49.1 is being relied up with respect to the Phase I Property.

3.0 SCOPE OF INVESTIGATION

3.1 Overview of Site Investigation

The Phase II ESA, carried out in conjunction with a Geotechnical Investigation, included a preliminary groundwater sampling program for existing monitoring wells, carried out on July 28th, 2025, followed by a drilling program carried out on August 1, 2025. The program consisted of drilling four boreholes (BH1-25 to BH4-25) to a maximum depth of 6.71 m below ground surface (bgs). Dynamic Cone Penetration Test was completed in BH4-25 for geotechnical investigation, and practical refusal was encountered at 9.88 mbgs. All four boreholes were instrumented with groundwater monitoring wells. These boreholes were placed to address APECs identified during the Phase I ESA.

3.2 Media Investigated

During the subsurface investigation, soil samples and groundwater samples were obtained and submitted for laboratory analysis. The rationale for sampling and analyzing these media is based on the Contaminants of Potential Concern identified during the Phase I ESA.

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

- Benzene, Toluene, Ethylbenzene, Xylenes (BTEX);
- Petroleum Hydrocarbons, Fractions F₁ to F₄ (PHCs);
- Metals (including arsenic (As), antimony (Sb), selenium (Se));
- Mercury (Hg);
- Chromium VI (Cr VI);
- Polycyclic Aromatic Hydrocarbons (PAHs);
- Volatile Organic Compounds (VOCs);
- Polychlorinated Biphenyls (PCBs).

In accordance with Section 49.1 of O.Reg.153/04, as amended, electrical conductivity (EC) and sodium adsorption ratio (SAR) are not considered to be CPCs. However, EC and SAR were analyzed for future excess soil management purposes.

3.3 Phase I Conceptual Site Model

Geological and Hydrogeological Setting

The Geological Survey of Canada website on the Urban Geology of the National Capital Area was consulted as part of this assessment. Based on the information from NRCAN, bedrock in the area of the site consists of shale of the Rockcliffe Formation. Based on the maps, the surficial geology consists of alluvial sediments of sand and silt with an overburden thickness ranging from 10 to 15 m.

The topographic maps indicate that the elevation of the Phase I Property is approximately 80 m above sea level. The regional topography in the general area of the Phase I Property slopes down to the west and northwest.

Existing Buildings and Structures

The Phase I Property is occupied by a single storey slab-on-grade commercial building with associated asphalt parking, and landscaped areas, constructed in approximately 2002. The building is separated into a commercial retail area (southern portion) and a warehouse area (northern portion). The exterior of the building is finished with stucco panelling and a modified bituminous roof.

The Site Building is currently occupied by The Beer Store, operating as a retail store.

Subsurface Structures and Utilities

The Phase I Property is municipally serviced. Based on private and public underground utility locates obtained for the Phase I Property, underground utilities identified on the Phase I Property include electrical, natural gas, water, sewer, telecommunication lines primarily entering from the north and west of the Phase I Property. Storm sewers are present in the southern portion of the Phase I Property, in the parking area, as well as catch basins and manholes observed in this area. A pad mounted transformer is present to the west of the subject building, which was installed concurrently with site development in approximately 2002. No other subsurface structures were identified at the time of the site inspection.

Water Bodies and Areas of Natural and Scientific Interest

No areas of natural and scientific interest (ANSI) were identified on or within 250 m of the Phase I Property. No water bodies are present on the Phase I Property. The nearest body of water is Pinecrest Creek, approximately 95 m north of the Phase I Property.

Drinking Water Wells

There were no domestic wells identified within the Phase I Study Area. Based on the setting and presence of municipal services in the area, no drinking water wells are expected to be in use in the Phase I Study Area.

Neighbouring Land Use

Land use within the Phase I Study Area is primarily commercial, with some properties used for industrial and agricultural or other purposes. Current land use and PCAs identified in the Phase I Study Area are presented on Drawing PE7169-3 – Surrounding Land Use Plan.

Potentially Contaminating Activities and Areas of Potential Environmental Concern

As per Table 1 in Section 2.2 of this report, PCAs identified on the Phase II property include fill material of unknown quality and use of de-icing salt for safety purposes. Seven off-site PCAs considered to result in APECs on the Phase I Property are included in Table 1.

All APECs are outlined on Drawing PE7169-2 – Site Plan.

Assessment of Uncertainty and/or Absence of Information

The information available for review as part of the preparation of this Phase I-ESA is considered to be sufficient to conclude that there are on-site PCAs and off-site PCAs that have resulted in APECs on the Phase I Property. Additional off-site PCAs identified within the Phase I Study Area are not considered to represent APECs on the Phase I Property based on their separation distance and/or down/cross-gradient orientation with respect to the Phase I Property.

3.4 Deviations from Sampling and Analysis Plan

The Sampling and Analysis Plan for this project is included in Appendix 1 of this report. No deviations from the sampling and analysis plan were made during the completion of the Phase II ESA.

3.5 Impediments

The borehole locations were constrained by the presence of underground services at the Phase II Property. No other physical impediments or denial of access were encountered during the Phase II ESA.

4.0 INVESTIGATION METHOD

4.1 Subsurface Investigation

A preliminary groundwater sampling program was carried on July 28, 2025, from six out of seven monitoring wells previously installed by others. It should be noted that these monitoring wells were labelled MW100 through MW700 for the purposes of identification; no information regarding the installation of these wells was made available. Five of these wells (MW100, MW200, MW300, MW400, and MW500) were located within the Phase II Property, while the remaining two wells (MW600 and MW700) were situated just outside the property boundary to the east. Groundwater sampling from MW100 was not completed during the July sampling program.

Following the preliminary groundwater sampling, a subsurface investigation was carried out on August 1, 2025, in conjunction with geotechnical investigation and involved the advancement of four boreholes on the Phase II Property. The program consisted of drilling four boreholes (BH1-25 to BH4-25) to a maximum depth of 6.71 m below ground surface (bgs). A dynamic Cone Penetration Test was completed in BH4-25 for geotechnical purposes, and practical refusal was encountered at 9.88 mbgs. All four boreholes were instrumented with monitoring wells.

The boreholes were drilled with a low clearance drill rig operated by George Downing Estate Drilling of Hawkesbury, Ontario, under full-time supervision of Paterson personnel. The borehole locations are indicated on the attached Drawing PE7169-4- Test Hole Location Plan.

4.2 Soil Sampling

A total of 36 soil samples were obtained from the boreholes by means of grab sampling from auger flights/auger samples and split spoon sampling. Split spoon samples were taken at approximate 0.76 m intervals. The depths at which split spoon and auger flight samples were obtained from the test holes are shown as “**SS**” and “**AU**” respectively on the Soil Profile and Test Data Sheets provided in Appendix 2.

The soil stratigraphy generally consists of topsoil or asphalt overlying fill material, which is underlain by native silty clay. The fill material primarily comprises brown silty sand with gravel or crushed stone, with occasional layers of silty clay,

extending to depths of approximately 0.69 to 3.35 m below ground surface (mbgs). Bedrock surface was not confirmed during this investigation.

Borehole locations are shown on Drawing PE7169-4 – Test Hole Location Plan.

4.3 Field Screening Measurements

Soil samples recovered at the time of sampling 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. Allowing the samples to stabilize to room temperature ensures consistency of readings between samples.

To measure the soil vapours, the analyser probe is inserted into the nominal headspace above the soil sample. A photo ionization detector (PID) was used to measure the vapour concentrations.

The sample is agitated/manipulated gently as the measurement is taken. The peak reading registered within the first 15 seconds is recorded as the vapour measurement.

The measured vapour readings ranged from 0.3 to 1.1 ppm. These vapour readings are not considered to be indicative of potentially volatile contamination. Vapour readings are noted on the Soil Profile and Test Data Sheets in Appendix 1.

4.4 Groundwater Monitoring Well Installation

Four groundwater monitoring wells (BH1-25, BH2-25, BH3-25 and BH4-25) were installed on the Phase II Property as part of the subsurface investigation.

The monitoring wells consisted of 50 mm Schedule 40 threaded PVC risers and screens. The monitoring well construction details are listed in Table 1: Test Hole Summary Details and in the Soil Profile and Test Data Sheets, appended to this report.

4.5 Field Measurement of Water Quality Parameters

Water quality parameters were measured in the field using a multi-parameter analyzer. Parameters measured in the field included 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, the field parameters were relatively stable, or the well was dry. Stabilized field parameter values are summarized in Table 2: Stabilized Water Quality Parameters, appended to this report.

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. Groundwater samples were obtained from each monitoring well, using dedicated sampling equipment.

Standing water was purged from each well prior to sampling. Samples were stored in coolers to reduce analyte volatilization during transportation.

Details of our standard operating procedure for groundwater sampling are provided in the Sampling and Analysis Plan in Appendix 1.

4.7 Analytical Testing

Based on the guidelines outlined in the Sampling and Analysis Plan appended to this report, the soil and groundwater samples were submitted for analysis of the parameters listed in Table 3: Soil Testing Summary and Table 4: Groundwater Testing Summary, appended to this report.

The submitted soil samples were selected for analysis based on vapour screening and field observations to assess APECs and associated CPCs identified in the Phase I ESA.

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). Paracel is accredited and certified by SCC/CALA for specific tests registered with the association.

4.8 Residue Management

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

4.9 Elevation Surveying

The ground surface elevations at each test hole location were surveyed by Paterson personnel with a high-precisions GPS unit.

4.10 Quality Assurance and Quality Control Measures

A summary of quality assurance and quality control (QA/QC) measures, including sampling containers, preservation, labelling, handling, and custody, equipment cleaning procedures, and field quality control measurements is provided in the Sampling and Analysis Plan in Appendix 1.

5.0 REVIEW AND EVALUATION

5.1 Geology

The soil stratigraphy generally consists of topsoil or asphalt overlying fill material, underlain by native silty sand or silty clay. The fill material primarily comprises brown silty sand with gravel or crushed stone, with occasional layers of silty clay, extending to depths of approximately 0.69 to 3.35 m below ground surface (mbgs).

Native brown silty sand and/or silty clay was encountered beneath the fill material in all boreholes. Bedrock was not encountered during the current investigation.

No visual or olfactory evidence of contamination was observed in the collected soil samples.

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

5.2 Groundwater Elevations, Flow Direction, and Hydraulic Gradient

Groundwater levels were measured during the groundwater sampling events on July 28, 2025, and August 8, 2025, using an electronic water level meter. Groundwater levels were recorded from seven monitoring wells (MW100 to MW700) already present on or adjacent to the Phase II Property (installed by others) and four monitoring wells installed as part of the current investigation (BH1-25 to BH4-25). Groundwater levels are summarized in Table 5: Groundwater Levels, appended to this report.

Based on the groundwater elevations measured during the most recent sampling event, the groundwater at the Phase II ESA Property was encountered in the overburden between 3.72 to 4.18 m below the existing ground surface.

Based on the groundwater elevations measured during the most recent sampling event, groundwater contour mapping was completed. Groundwater contours are shown on Drawing PE7169-4 – Test Hole Location Plan. Based on the contour mapping, groundwater flow at the Phase II Property is in a north direction. It should be noted that groundwater levels are expected to fluctuate throughout the year with seasonal variations.

A horizontal hydraulic gradient of approximately 0.01 m/m was calculated.

5.3 Fine-Coarse Soil Texture

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

5.4 Soil: Field Screening

Field screening of the soil samples collected during drilling resulted in vapour readings ranging from 0.3 to 1.1 ppm. No visual or olfactory indications of contaminants, or visual indications of deleterious fill material were identified in the soil samples. The 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 9 soil samples (and one duplicate sample) were submitted for analysis of metals (including As, Sb, Se), mercury, Cr(VI), PAHs, BTEX, PHCs, PCBs, EC and/or SAR. Four samples were also submitted for pH analysis. The results of the analytical testing completed on the Phase II Property are presented in Table 6: Soil Analytical Results, appended to this report. The laboratory Certificates of Analysis are also provided in the Appendix.

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

Five soil samples were submitted for analysis of metals parameters (including As, Sb, Se), mercury, and Cr(VI). All metals (including As, Sb, Se), mercury, and Cr(VI) parameters analyzed meet the MECP Table 3 Commercial Standards. The analytical results for metals (including As, Sb, Se), mercury, and Cr(VI) are shown on Drawing PE7169-5– Analytical Testing Plan – Soil.

PCBs

Two soil samples were submitted for analysis of total PCBs. All PCB parameters analyzed meet the MECP Table 3 Commercial Standards. The analytical results for PCBs tested in soil are shown on Drawing PE7169-5– Analytical Testing Plan – Soil.

BTEX

Nine soil samples were submitted for analysis of BTEX parameters. All BTEX parameters analyzed meet the MECP Table 3 Commercial Standards. The analytical results for BTEX tested in soil are shown on Drawing PE7169-5– Analytical Testing Plan – Soil.

PHCs

Nine soil samples were submitted for analysis of PHC parameters. All PHC parameters analyzed meet the MECP Table 3 Commercial Standards. The analytical results for PHCs tested in soil are shown on Drawing PE7169-5– Analytical Testing Plan – Soil.

PAHs

Four soil samples were submitted for analysis of PAH parameters. All PAH parameters analyzed meet the MECP Table 3 Commercial Standards. The analytical results for PAHs tested in soil are shown on Drawing PE7169-5– Analytical Testing Plan – Soil.

EC/SAR

All EC/SAR parameters analyzed meet the MECP Table 3 Commercial Standards with the exception of soil samples BH1-25-SS2A and BH1-25-SS7. These exceedances are considered to be the result of the seasonal application of salt or similar substance to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both. 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.

pH

Four soil samples, two surface and two subsurface, were analyzed for pH, yielding results between 7.52 and 7.91. These values fall within the acceptable pH range for both surface soil (5.0–9.0) and subsurface soil (5.0–11.0).

Maximum Soil Parameter Concentrations

The maximum concentrations of the parameters identified in the soil samples analyzed on the Phase II Property are presented in Table 6A: Maximum Concentrations - Soil, appended to this report.

5.6 Groundwater Quality

10 groundwater samples (and one duplicate sample), including from existing monitoring wells (MW200 to MW700) and monitoring wells installed in BH1-25, BH2-25, BH3-25 and BH4-25, were submitted for laboratory analysis of BTEX, PHCs (F1-F4), VOCs and/or PCB parameters. While MW600 and MW700 were situated outside of the Phase II Property, the results are presented for informational purposes.

The results of all the analytical testing completed on the Phase II Property are presented in Table 7: Groundwater Analytical Results, appended to this report. The laboratory Certificates of Analysis are also provided in the Appendix.

VOCs (including BTEX)

10 groundwater samples were submitted for analysis of VOC parameters, including BTEX. All VOC and BTEX parameters comply with the MECP Table 3 Non-Potable Groundwater Standards. The analytical results for VOCs and BTEX in groundwater are shown on Drawing PE7169-6 – Analytical Testing Plan – Groundwater.

PHCs (F1-F4)

10 groundwater samples were submitted for analysis of PHC parameters. All PHC parameters comply with the MECP Table 3 Non-Potable Groundwater Standards. The analytical results for PHCs tested in groundwater are shown on Drawing PE7169-6 – Analytical Testing Plan – Groundwater.

PCBs

Two groundwater samples were submitted for analysis of total PCBs. All PCB parameters comply with the MECP Table 3 Non-Potable Groundwater Standards. The analytical results for PCBs tested in groundwater are shown on Drawing PE7169-6 – Analytical Testing Plan – Groundwater.

Maximum Groundwater Parameter Concentrations

The maximum concentrations of the parameters identified in the groundwater samples analyzed on the Phase II Property are presented in Table 7A: Maximum Concentrations - Groundwater, appended to this report.

5.7 Quality Assurance and Quality Control Results

All samples submitted as part of the July and August 2025 sampling events were handled in accordance with the Analytical Protocol with respect to preservation method, storage requirement, and container type. As per Subsection 47(3) of O.Reg. 153/04, as amended, under the Environmental Protection Act, a Certificate of Analysis has been received for each sample submitted for analysis and all Certificates of Analysis are appended to this report.

A duplicate soil sample of BH2-25-SS8 (DUP 1) was submitted for analysis of PHCs, BTEX, and VOCs. A duplicate groundwater sample of BH4-25-GW (DUP-1) was submitted for analysis of PHCs, BTEX, and VOCs. The duplicates were collected with the intent of calculating the relative percent difference (RPD) between duplicate sample values, as a way of assessing the quality of the analytical test results.

All of the analyzed concentrations in both original and their duplicate sample, were not detected above the laboratory method detection limit; as such these results are not tabulated for RPD (Relative Percent Different) calculations.

The quality of the field data collected during the Phase II ESA is considered to be sufficient to meet the overall objectives of the assessment.

5.8 Phase II Conceptual Site Model

The following section has been prepared in accordance with the requirements of O.Reg. 153/04, as amended by the Environmental Protection Act. Conclusions and recommendations are discussed in a subsequent section.

Site Description

Potentially Contaminating Activity and Areas of Potential Environmental Concern

Based on the results of the Phase I ESA completed for the Phase II property, nine (9) PCAs were considered to result in APECs on the Phase II Property. The identified APECs on the Phase II Property are presented in the table below.

Areas of Potential Environmental Concern					
Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern with respect to Phase I-ESA 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 Fill Material of Unknown Quality	Throughout the Phase I Property	<i>“Item 30: Importation of Fill Material of Unknown Quality”</i>	On-site	BTEX PHCs Metals As, Se, Sb Mercury Cr(VI) PAHs	Soil
APEC 2 ¹ Application of Road Salt	Throughout parking areas on the Phase I Property	<i>“Item NA: Application of road salt for the safety of vehicular or pedestrian traffic under conditions of snow or ice”</i>	On-site	EC SAR	Soil
APEC 3 Former Retail Fuel Outlet (with 1 UST)	Eastern portion of the Phase I Property	<i>“Item 28: Gasoline and Associated Products Storage in Fixed Tanks”</i>	Off-site	BTEX PHCs VOCs	Soil Groundwater
APEC 4 Former Retail Fuel Outlet (with 2 USTs)	Northern portion of the Phase I Property	<i>“Item 28: Gasoline and Associated Products Storage in Fixed Tanks”</i>	Off-site	BTEX PHCs VOCs	Soil Groundwater
APEC 5 Former Automotive Service Garage	Northern portion of the Phase I Property	<i>“Item 52: Storage, Maintenance, Fuelling and Repair of Equipment, Vehicles, and Material used to maintain Transportation Systems”</i>	Off-site	BTEX PHCs VOCs	Soil Groundwater
APEC 6 Former Retail Fuel Outlet (with 1 UST)	Northern portion of the Phase I Property	<i>“Item 28: Gasoline and Associated Products Storage in Fixed Tanks”</i>	Off-site	BTEX PHCs VOCs	Soil Groundwater
APEC 7 Former Automotive Service Garage	Northern portion of the Phase I Property	<i>“Item 52: Storage, Maintenance, Fuelling and Repair of Equipment, Vehicles, and Material used to maintain Transportation Systems”</i>	Off-site	BTEX PHCs VOCs	Soil Groundwater

Areas of Potential Environmental Concern					
Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern with respect to Phase I-ESA 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 8 Former Dry Cleaners	Throughout the Phase I Property	<i>"Item 37: Operation of Dry-Cleaning Equipment (where chemicals are used)"</i>	Off-site	BTEX PHCs VOCs	Soil Groundwater
APEC 9 Former PCB Waste Storage Site	Eastern portion of the Phase I Property	<i>"Item NA: Storage of PCB Waste"</i>	Off-site	PCBs	Soil Groundwater
¹ – In accordance with Section 49.1 of O. Reg. 153/04 standards are deemed to be met if an applicable site condition standard is exceeded at a property solely because the qualified person has determined that a substance has been applied to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both. The exception outlined in Section 49.1 is being relied up with respect to the Phase I Property.					

The remaining off-site PCAs identified are not considered to result in APECs on the Phase II Property, due to their separation distances and/or cross/down-gradient orientations with respect to the Phase II Property.

According to Section 49.1 of O.Reg. 153/04, if an applicable site condition standard is exceeded at a property solely because of the following reason, the applicable site condition standard is deemed not to be exceeded for the purpose of Part XV.1 of the Act: "The qualified person has determined, based on a phase one environmental site assessment or a phase two environmental site assessment, that a substance has been applied to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both."

In accordance with Section 49.1 of O.Reg. 153/04, any EC and SAR concentrations on the Phase II Property that exceed the MECP Table 3 Standards for a commercial land use are deemed not to be exceeded for the purpose of Part XV.1 of the Act. This exemption is being relied on for APEC 2.

All APECs are outlined on Drawing PE7169-2 – Site Plan, while all PCAs identified within the Phase I Study Area are presented on Drawing PE7169-3 – Surrounding Land Use Plan in the figures section of this report, following the text.

Contaminants of Potential Concern

The following CPCs are identified with respect to the Phase II Property:

Soil

- Benzene, Toluene, Ethylbenzene, Xylenes (BTEX);
- Volatile Organic Compounds (VOCs);
- Petroleum Hydrocarbons, Fractions F₁ to F₄ (PHCs);
- Polycyclic Aromatic Hydrocarbons (PAHs);
- Metals;
- As, Sb, Se;
- Mercury;
- Hexavalent Chromium (Cr(VI));
- Polychlorinated Biphenyls (PCBs);

Groundwater

- Benzene, Toluene, Ethylbenzene, Xylenes (BTEX);
- Volatile Organic Compounds (VOCs);
- Petroleum Hydrocarbons, Fractions F₁ to F₄ (PHCs);
- Polychlorinated Biphenyls (PCBs);

In accordance with Section 49.1 of O.Reg. 153/04, as amended, electrical conductivity (EC) and sodium adsorption ratio (SAR) are not considered to be CPCs.

Subsurface Structures and Utilities

Underground service locates were completed prior to the subsurface investigation. Underground utilities on the Phase II Property include electrical, natural gas, water, sewer, telecommunication lines primarily entering from the north and west of the Phase II Property. Storm sewers are present in the southern portion of the Phase II Property, in the parking area, as well as catch basins and manholes observed in this area. A pad mounted transformer is present to the west of the subject building, which was installed concurrently with site development in approximately 2002. No private wells or septic systems are present on the Phase II Property or within 250 m of the Phase II property. No other utilities or subsurface structures are present on the Phase II Property.

Physical Setting

Site Stratigraphy

The stratigraphy of the Phase II Property generally consists of:

- ❑ **Topsoil** was identified at ground surface in BH4-25 and extended to a maximum depth of 0.25 mbgs.
- ❑ **Asphalt** was identified at ground surface in BH1-25, BH2-25 and BH3-25 and extended to a maximum depth of 0.20 mbgs.
- ❑ **Fill material** consisting of brown silty sand with gravel/crushed stone, or brown silty clay with some crushed stone; extending to a maximum depth of approximately 3.35 mbgs in BH3-25. No visual or olfactory indications of contaminants, or visual indications of deleterious fill material were identified in the soil samples.
- ❑ **Native silty sand** with trace clay was identified beneath the fill material at BH2-25 and BH4-25. The silty sand extended to depths of approximately 2.21 m below grade.
- ❑ **Native silty clay** was identified beneath the fill layer or native silty sand layer. The silty clay extended to depths ranging from 1.22 to 3.35 m below grade.

Bedrock surface was not confirmed in the current investigation.

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

Hydrogeological Characteristics

The groundwater at the Phase II ESA Property was measured between 3.72 to 4.18 m below the existing ground surface.

Based on the groundwater elevations measured during the August 8, 2025, sampling event, groundwater contour mapping was completed. Groundwater contours are shown on Drawing PE7169-4 – Test Hole Location Plan. Based on the contour mapping, groundwater flow at the Phase II Property is in a north direction. It should be noted that groundwater levels are expected to fluctuate throughout the year with seasonal variations.

A horizontal hydraulic gradient of approximately 0.01 m/m was calculated.

Approximate Depth to Bedrock

Bedrock surface was not confirmed during this subsurface investigation to the maximum depth investigated (9.88 m bgs). Based on geological mapping and well records, bedrock is expected to be encountered between 10 to 15 m below the existing ground surface.

Approximate Depth to Water Table

The depth to the water table at the Phase II Property was measured to be between 3.72 to 4.18 m below the existing grade.

Sections 41 and 43.1 of the Regulation

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

Section 43.1 of the Regulation does not apply to the Phase II Property in that the property is not a Shallow Soil property.

Fill Placement

Fill material generally consisting of brown silty sand with gravel/crushed stone, or brown silty clay with some crushed stone was identified in each borehole on the Phase II Property, ranging from 0.05 to 3.35 m below ground surface.

Existing Buildings and Structures

The Phase II Property is occupied by a single storey slab-on-grade commercial building with associated asphalt parking, and landscaped areas, constructed in approximately 2002. The building is separated into a commercial retail area (southern portion) and a warehouse area (northern portion). The exterior of the building is finished with stucco panelling and a modified bituminous roof.

The Site Building is currently occupied by The Beer Store, operating as a retail store.

Proposed Buildings and Other Structures

The Phase II Property is proposed to be redeveloped with a commercial restaurant building.

Environmental Condition

Based on the findings of the Phase II ESA, no impacted soil or groundwater were identified on the Phase II Property.

6.0 CONCLUSIONS

Assessment

A Phase II ESA was carried out for the property addressed 1984 Baseline Road, in the City of Ottawa, Ontario. The purpose of the Phase II ESA was to address potentially contaminating activities (PCAs) that were identified during the Phase I ESA and considered to result in areas of potential environmental concern (APECs) on the Phase II Property.

A preliminary groundwater sampling program was carried on July 28, 2025, from six out of seven monitoring wells previously installed by others. It should be noted that these monitoring wells were labelled MW100 through MW700 for the purposes of identification; no information regarding the installation of these wells was made available. Five of these wells (MW100, MW200, MW300, MW400, and MW500) were located within the Phase II Property, while the remaining two wells (MW600 and MW700) were situated just outside the property boundary to the east. Groundwater sampling from MW100 was not completed during the July sampling program.

Following the preliminary groundwater sampling, a subsurface investigation was carried out on August 1, 2025, in conjunction with geotechnical investigation and involved the advancement of four boreholes on the Phase II Property. The program consisted of drilling four boreholes (BH1-25 to BH4-25) to a maximum depth of 6.71 m below ground surface (bgs). A dynamic Cone Penetration Test was completed in BH4-25 for geotechnical purposes, and practical refusal was encountered at 9.88 mbgs. All four boreholes were instrumented with monitoring wells.

The soil stratigraphy generally consists of topsoil or asphalt overlying fill material, underlain by native silty sand or silty clay. The fill material primarily comprises brown silty sand with gravel or crushed stone, with occasional layers of silty clay. Native brown silty sand and/or silty clay was encountered beneath the fill material in all boreholes. Bedrock was not encountered during the current investigation. No visual or olfactory evidence of contamination was observed in the collected soil samples, and the vapour readings obtained are not considered indicative of volatile contamination. Groundwater was measured within the overburden at depths of 3.72 to 4.18 m below the existing ground surface.

Soil

A total of 9 soil samples (and one duplicate sample) were submitted for analysis of metals (including As, Sb, Se), mercury, Cr(VI), PAHs, BTEX, PHCs, PCBs, EC, and/or SAR. Four samples were also submitted for pH.

Based on the analytical results, all soil sample parameters analysed comply with the MECP Table 3 Commercial Standards.

Groundwater

10 groundwater samples (and one duplicate sample), including from existing monitoring wells (MW200 to MW700) and monitoring wells installed in BH1-25, BH2-25, BH3-25 and BH4-25, were submitted for laboratory analysis of BTEX, PHCs (F1-F4), VOCs and/or PCB parameters. While MW600 and MW700 were situated outside of the Phase II Property, the results are presented for informational purposes.

Based on the analytical results, all groundwater sample parameters analysed comply with the MECP Table 3 Commercial Standards.

Recommendations

Soil Management

Any excess soil generated on site must be handled in accordance with Ontario Regulation 406/19: On-Site and Excess Soil Management. Additional sampling, reporting, and tracking may be required depending on specific project details prior to soil being managed off-site. Further information regarding O. Reg 406/19 can be provided upon request.

Monitoring Wells

Any monitoring wells present on the Phase II Property that are not going to be used in the future, or will be destroyed during site redevelopment, should be abandoned according to O.Reg. 903 (Ontario Water Resources Act). In the mean time, the monitoring wells installed by Paterson will be registered with the MECP under Ontario Regulation 903 (Ontario Water Resources Act).

7.0 STATEMENT OF LIMITATIONS

This Phase II - Environmental Site Assessment report has been prepared under the supervision of a Qualified Person, in general accordance with O. Reg 153/04. 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 Chick-fil-A ULC. Notification from Chick-fil-A ULC and Paterson Group will be required to release this report to any other party.

Paterson Group Inc.



Kuldeep Panchal, M. Eng.



Jesse Andrechek, P.Eng., Q.P.ESA



Report Distribution:

- Chick-fil-A ULC
- Paterson Group

FIGURES

FIGURE 1 – KEY PLAN

DRAWING PE7169-2 – SITE PLAN

DRAWING PE7169-3 – SURROUNDING LAND USE PLAN

DRAWING PE7169-4 – TEST HOLE LOCATION PLAN

DRAWING PE7169-5 – ANALYTICAL TESTING PLAN – SOIL

**DRAWING PE7169-6 – ANALYTICAL TESTING PLAN -
GROUNDWATER**

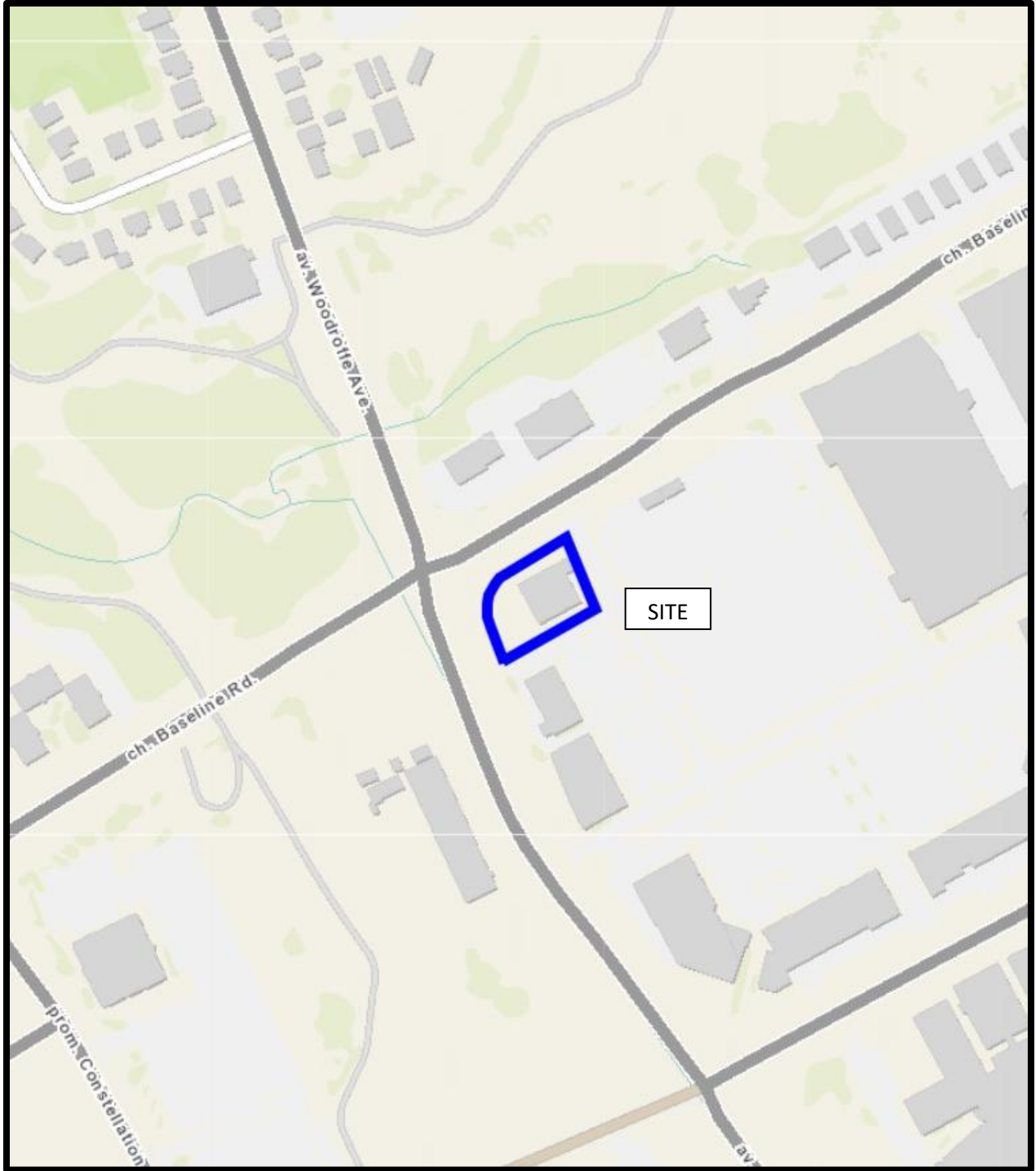
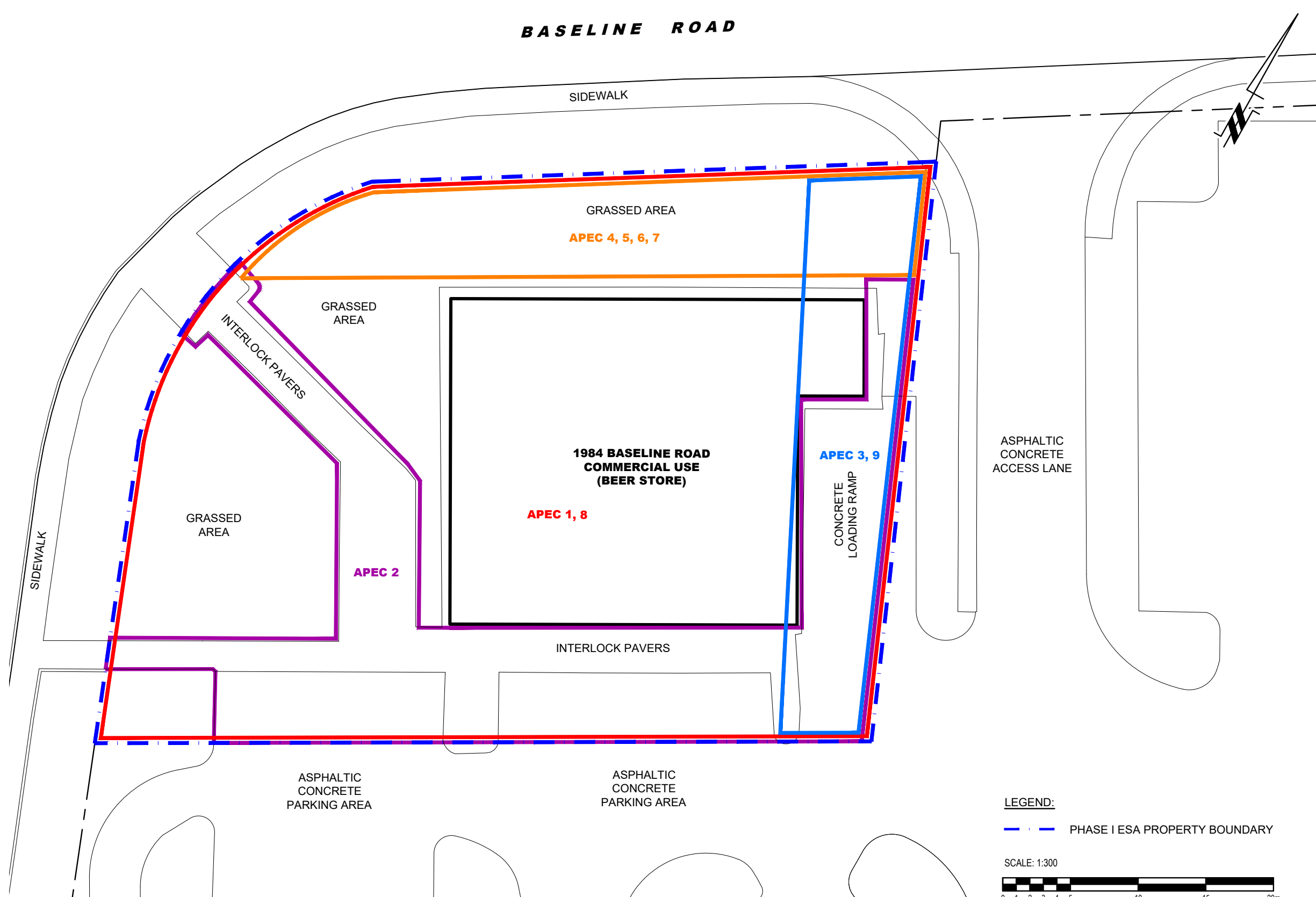


FIGURE 1
KEY PLAN

BASELINE ROAD

WOODROFFE AVENUE



AREAS OF POTENTIAL ENVIRONMENTAL CONCERN :

ID #	PCA ID	DESCRIPTION
1	30	FILL MATERIAL OF UNKNOWN QUALITY
2	N/A	APPLICATION OF ROAD SALT
3	28	FORMER RETAIL FUEL OUTLET WITH ONE UNDERGROUND STORAGE TANK
4	28	FORMER RETAIL FUEL OUTLET WITH TWO UNDERGROUND STORAGE TANKS
5	52	FORMER AUTOMOTIVE SERVICE GARAGE
6	28	FORMER RETAIL FUEL OUTLET WITH ONE UNDERGROUND STORAGE TANK
7	52	FORMER AUTOMOTIVE SERVICE GARAGE
8	37	FORMER DRY CLEANERS
9	N/A	FORMER PCB WASTE STORAGE SITE

LEGEND:

--- PHASE I ESA PROPERTY BOUNDARY

SCALE: 1:300



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

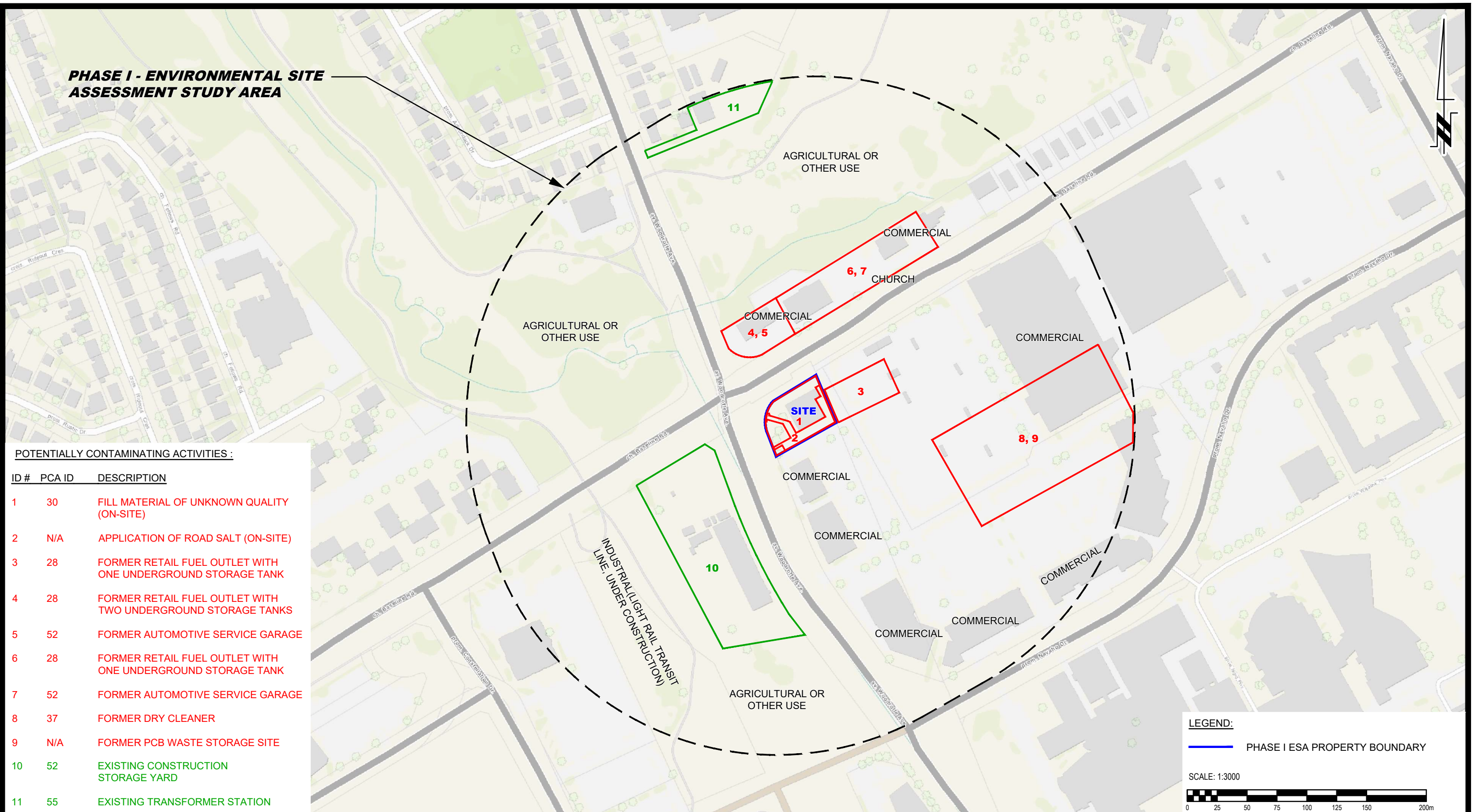
NO.	REVISIONS	DATE	INITIAL

CHICK-FIL-A CANADA ULC
PHASE I - ENVIRONMENTAL SITE ASSESSMENT
 1984 BASELINE ROAD
 OTTAWA, ONTARIO
SITE PLAN

Scale:	1:300	Date:	09/2025
Drawn by:	NFRV	Report No.:	PE7169-2
Checked by:	KMP	Dwg. No.:	PE7169-2
Approved by:	JA	Revision No.:	

p:\autocad\drawings\environmental\pe7169-2\pe7169-2_site_plan.dwg

PHASE I - ENVIRONMENTAL SITE ASSESSMENT STUDY AREA



POTENTIALLY CONTAMINATING ACTIVITIES :

ID #	PCA ID	DESCRIPTION
1	30	FILL MATERIAL OF UNKNOWN QUALITY (ON-SITE)
2	N/A	APPLICATION OF ROAD SALT (ON-SITE)
3	28	FORMER RETAIL FUEL OUTLET WITH ONE UNDERGROUND STORAGE TANK
4	28	FORMER RETAIL FUEL OUTLET WITH TWO UNDERGROUND STORAGE TANKS
5	52	FORMER AUTOMOTIVE SERVICE GARAGE
6	28	FORMER RETAIL FUEL OUTLET WITH ONE UNDERGROUND STORAGE TANK
7	52	FORMER AUTOMOTIVE SERVICE GARAGE
8	37	FORMER DRY CLEANER
9	N/A	FORMER PCB WASTE STORAGE SITE
10	52	EXISTING CONSTRUCTION STORAGE YARD
11	55	EXISTING TRANSFORMER STATION

LEGEND:

— PHASE I ESA PROPERTY BOUNDARY

SCALE: 1:3000

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

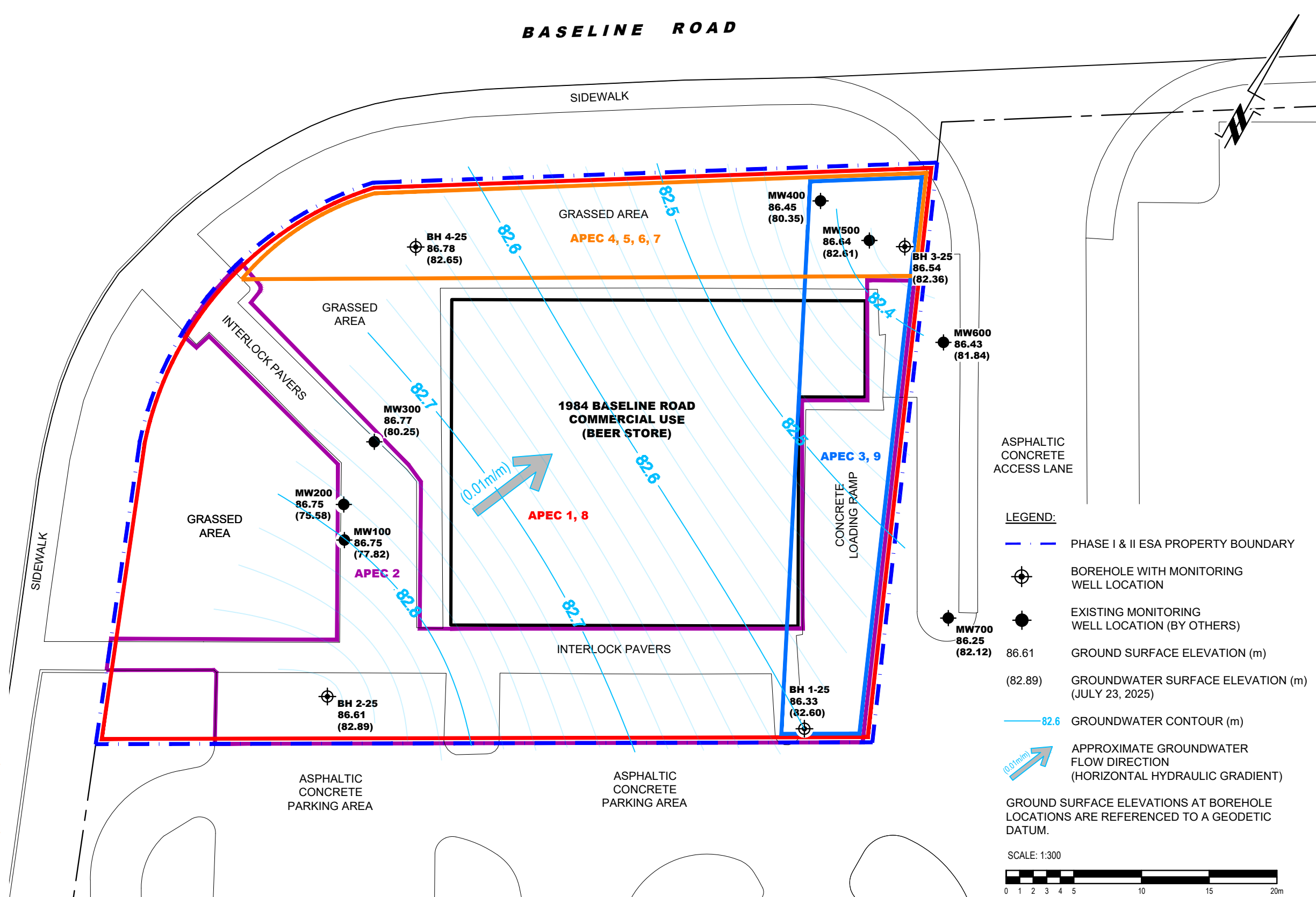
NO.	REVISIONS	DATE	INITIAL

CHICK-FIL-A CANADA ULC
PHASE I - ENVIRONMENTAL SITE ASSESSMENT
 1984 BASELINE ROAD
 OTTAWA, ONTARIO
SURROUNDING LAND USE PLAN

Scale:	1:3000	Date:	09/2025
Drawn by:	YA	Report No.:	PE7169-2
Checked by:	KMP	Dwg. No.:	PE7169-3
Approved by:	JA	Revision No.:	

BASELINE ROAD

WOODROFFE AVENUE



AREAS OF POTENTIAL ENVIRONMENTAL CONCERN :

ID #	PCA ID	DESCRIPTION
1	30	FILL MATERIAL OF UNKNOWN QUALITY
2	N/A	APPLICATION OF ROAD SALT
3	28	FORMER RETAIL FUEL OUTLET WITH ONE UNDERGROUND STORAGE TANK
4	28	FORMER RETAIL FUEL OUTLET WITH TWO UNDERGROUND STORAGE TANKS
5	52	FORMER AUTOMOTIVE SERVICE GARAGE
6	28	FORMER RETAIL FUEL OUTLET WITH ONE UNDERGROUND STORAGE TANK
7	52	FORMER AUTOMOTIVE SERVICE GARAGE
8	37	FORMER DRY CLEANERS
9	N/A	FORMER PCB WASTE STORAGE SITE

- LEGEND:**
- PHASE I & II ESA PROPERTY BOUNDARY
 - ⊕ BOREHOLE WITH MONITORING WELL LOCATION
 - EXISTING MONITORING WELL LOCATION (BY OTHERS)
 - 86.61 GROUND SURFACE ELEVATION (m)
 - (82.89) GROUNDWATER SURFACE ELEVATION (m) (JULY 23, 2025)
 - 82.6 GROUNDWATER CONTOUR (m)
 - ➔ APPROXIMATE GROUNDWATER FLOW DIRECTION (HORIZONTAL HYDRAULIC GRADIENT)

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

SCALE: 1:300

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

NO.	REVISIONS	DATE	INITIAL

CHICK-FIL-A CANADA ULC
PHASE II - ENVIRONMENTAL SITE ASSESSMENT
 1984 BASELINE ROAD
 OTTAWA, ONTARIO
TEST HOLE LOCATION PLAN

Scale:	1:300	Date:	09/2025
Drawn by:	YA	Report No.:	PE7169-3
Checked by:	KMP	Dwg. No.:	PE7169-4
Approved by:	JA	Revision No.:	

p:\autocad\drawings\environmental\pe7169\pe7169-phase ii (september 2025).dwg

BASELINE ROAD

WOODROFFE AVENUE

BH4-25-SS2 0.76-1.37m 01-AUG-2025
 BTEX, PHCs, VOCs, PAHs, Metals (including As, Sb and Se)
 Hg and Cr(VI) comply with MECP Table 3 Standards

BH4-25-SS8 5.33-5.94m 01-AUG-2025
 BTEX, PHCs and VOCs comply with MECP Table 3 Standards

BH3-25-AU1 0.20-0.76m 01-AUG-2025
 BTEX, PHCs, VOCs, PAHs, Metals (including As, Sb and Se)
 Hg and Cr(VI) comply with MECP Table 3 Standards.

BH3-25-SS8 5.33-5.94m 01-AUG-2025
 BTEX, PHCs, VOCs and PCBs comply with MECP Table 3 Standards

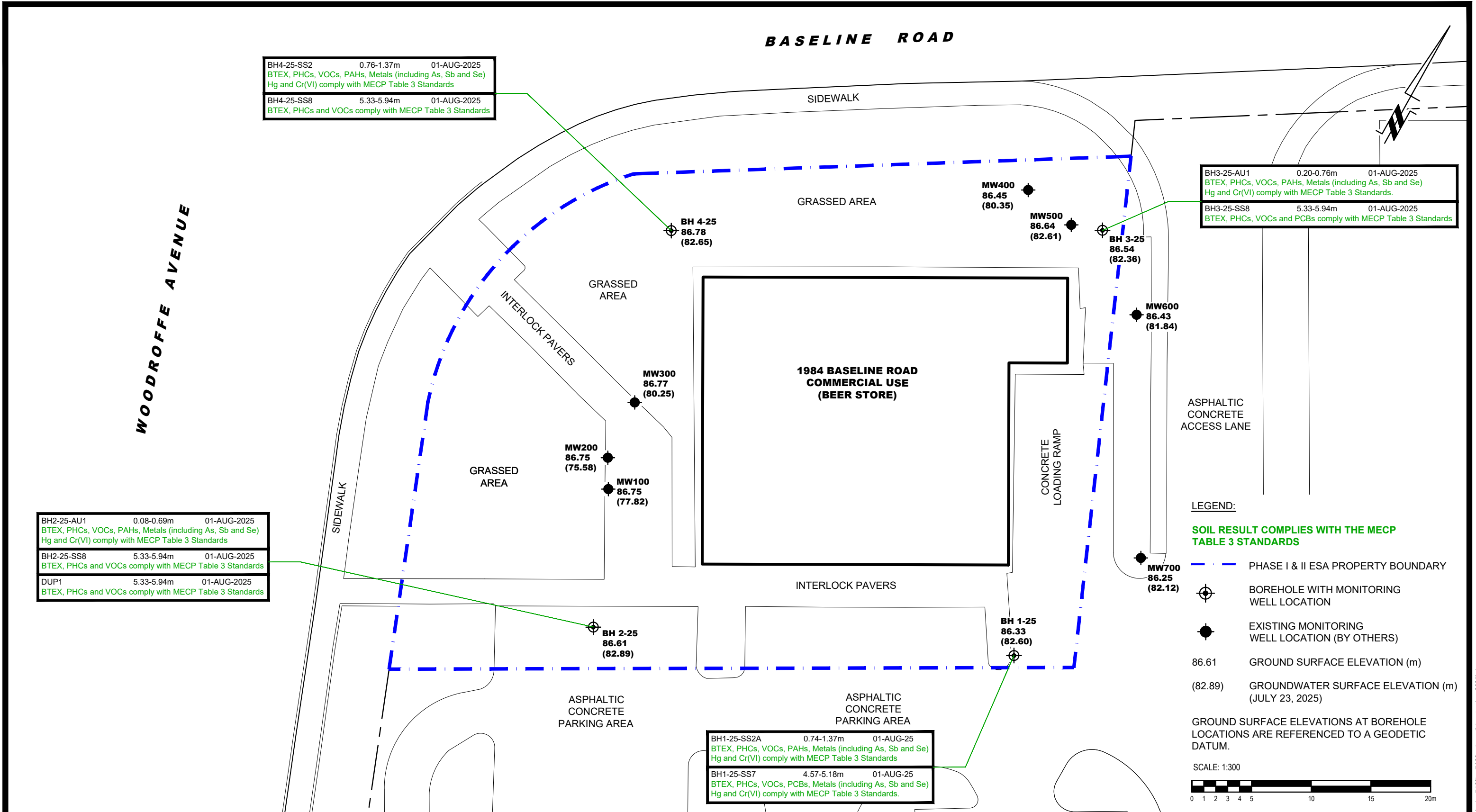
BH2-25-AU1 0.08-0.69m 01-AUG-2025
 BTEX, PHCs, VOCs, PAHs, Metals (including As, Sb and Se)
 Hg and Cr(VI) comply with MECP Table 3 Standards

BH2-25-SS8 5.33-5.94m 01-AUG-2025
 BTEX, PHCs and VOCs comply with MECP Table 3 Standards

DUP1 5.33-5.94m 01-AUG-2025
 BTEX, PHCs and VOCs comply with MECP Table 3 Standards

BH1-25-SS2A 0.74-1.37m 01-AUG-25
 BTEX, PHCs, VOCs, PAHs, Metals (including As, Sb and Se)
 Hg and Cr(VI) comply with MECP Table 3 Standards

BH1-25-SS7 4.57-5.18m 01-AUG-25
 BTEX, PHCs, VOCs, PCBs, Metals (including As, Sb and Se)
 Hg and Cr(VI) comply with MECP Table 3 Standards.



LEGEND:

SOIL RESULT COMPLIES WITH THE MECP TABLE 3 STANDARDS

- - - PHASE I & II ESA PROPERTY BOUNDARY
- BOREHOLE WITH MONITORING WELL LOCATION
- EXISTING MONITORING WELL LOCATION (BY OTHERS)
- 86.61 GROUND SURFACE ELEVATION (m)
- (82.89) GROUNDWATER SURFACE ELEVATION (m) (JULY 23, 2025)

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

SCALE: 1:300

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

NO.	REVISIONS	DATE	INITIAL

CHICK-FIL-A CANADA ULC

PHASE II - ENVIRONMENTAL SITE ASSESSMENT

1984 BASELINE ROAD

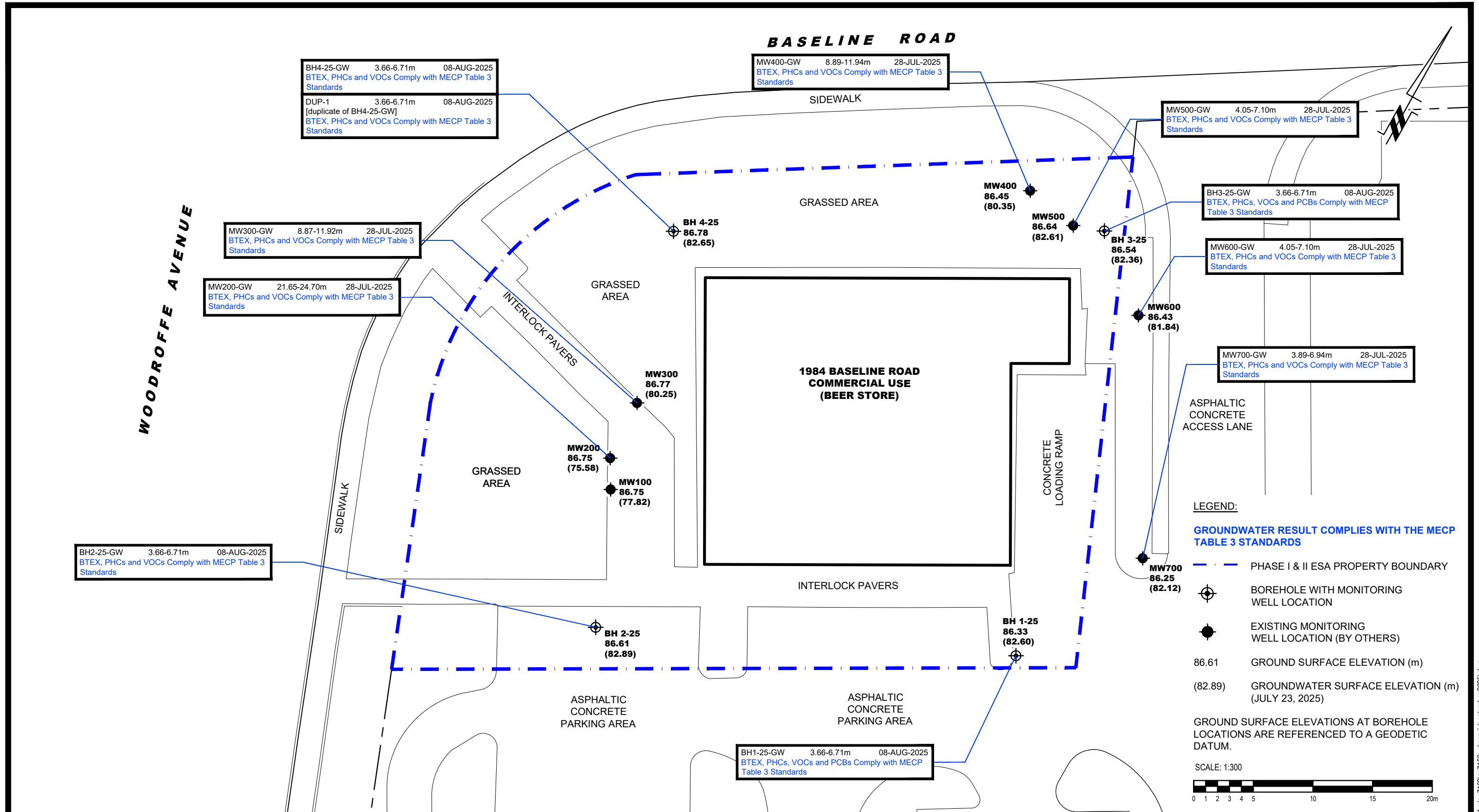
OTTAWA, ONTARIO

Title: **ANALYTICAL TESTING PLAN - SOIL**

BTEX, PHCs, VOCs, PAHs, METALS (As, Sb and Se), Hg and Cr(VI)

Scale:	1:300	Date:	09/2025
Drawn by:	YA	Report No.:	PE7169-3
Checked by:	KMP	Dwg. No.:	PE7169-5
Approved by:	JA	Revision No.:	

p:\autocad\drawings\environmental\per71x\per7169\per7169-phase ii (september 2025).dwg



LEGEND:

GROUNDWATER RESULT COMPLIES WITH THE MECP TABLE 3 STANDARDS

--- PHASE I & II ESA PROPERTY BOUNDARY

⊕ BOREHOLE WITH MONITORING WELL LOCATION

● EXISTING MONITORING WELL LOCATION (BY OTHERS)

86.61 GROUND SURFACE ELEVATION (m)

(82.89) GROUNDWATER SURFACE ELEVATION (m) (JULY 23, 2025)

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

SCALE: 1:300

0 1 2 3 4 5 10 15 20m

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

NO.	REVISIONS	DATE	INITIAL

CHICK-FIL-A CANADA ULC

PHASE II - ENVIRONMENTAL SITE ASSESSMENT

1984 BASELINE ROAD

OTTAWA, ONTARIO

Title: **ANALYTICAL TESTING PLAN - GROUNDWATER**
BTEX, PHCs, VOCs and PCBs

Scale:	1:300	Date:	09/2025
Drawn by:	YA	Report No.:	PE7169-3
Checked by:	KMP	Dwg. No.:	PE7169-6
Approved by:	JA	Revision No.:	

p:\autocad\drawings\environmental\per1\1x\per169\per169-phase ii (september 2025).dwg

APPENDIX 1

SAMPLING AND ANALYSIS PLAN

SOIL PROFILE AND TEST DATA SHEETS

SYMBOLS AND TERMS

ANALYTICAL TEST RESULTS TABLES

LABORATORY CERTIFICATES OF ANALYSIS

Sampling and Analysis Plan

1984 Baseline Road

Ottawa, Ontario

Prepared for: Chick-fil-A Canada ULC

Report: PE7169-SAP

Date: July 25, 2025

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 Group Inc. (Paterson) was commissioned by Chick-fil-A Canada ULC to conduct a Phase II – Environmental Site Assessment (Phase II ESA) at 1984 Baseline Road, in the City of Ottawa, Ontario.

Based on the findings of the Phase I ESA, the following subsurface investigation program was developed. It should be noted that the Phase II ESA was carried out in conjunction with a geotechnical investigation.

Borehole	Location & Rationale	Proposed Depth & Rationale
BH1-25	Placed on the south-eastern portion of the Phase II Property to assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former retail fuel outlet with 1 UST (APEC 3), former dry cleaners (APEC 8), former PCB waste storage site (APEC 9), and to assess excess soil quality for off-site reuse.	6.5m below ground surface; to assess overburden soils, and to intercept the groundwater table for the purpose of installing a monitoring well.
BH2-25	Placed on the south-western portion of the Phase II Property to assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former dry cleaners (APEC 8), and to assess excess soil quality for off-site reuse.	6.5m below ground surface; to assess overburden soils, and to intercept the groundwater table for the purpose of installing a monitoring well.
BH3-25	Placed on the north-eastern portion of the Phase II Property to assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former retail fuel outlet with 1 UST (APEC 3), former retail fuel outlet with 2 USTs (APEC 4), former automotive service garage (APEC 5), former retail fuel outlet with 1 UST (APEC 6), former automotive service garage (APEC 7), former dry cleaners (APEC 8), former PCB waste storage site (APEC 9), and to assess excess soil quality for off-site reuse.	6.5m below ground surface; to assess overburden soils, and to intercept the groundwater table for the purpose of installing a monitoring well.
BH4-25	Placed on the north-western portion of the Phase II Property to assess fill material of unknown quality (APEC 1), former retail fuel outlet with 2 USTs (APEC 4), former automotive service garage (APEC 5), former retail fuel outlet with 1 UST (APEC 6), former automotive service garage (APEC 7), former dry cleaners (APEC 8), and to assess excess soil quality for off-site reuse.	6.5m below ground surface; to assess overburden soils, and to intercept the groundwater table for the purpose of installing a monitoring well.

Borehole locations are shown on Drawing PE7169-4 – Test Hole Location Plan, appended to the main report.

At each borehole, split-spoon samples of the overburden soils will be obtained at 0.76 m (2'6") intervals until practical refusal to augering. 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 four boreholes (BH1- 25 to BH4-25) for the collection of groundwater samples.

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 MECP 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 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 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" threaded sections of Schedule 40 PVC slotted well screen (5' x 1 1/4" if installing in cored hole in bedrock)
- 5' x 2" threaded sections of Schedule 40 PVC riser pipe (5' x 1 1/4" 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 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 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

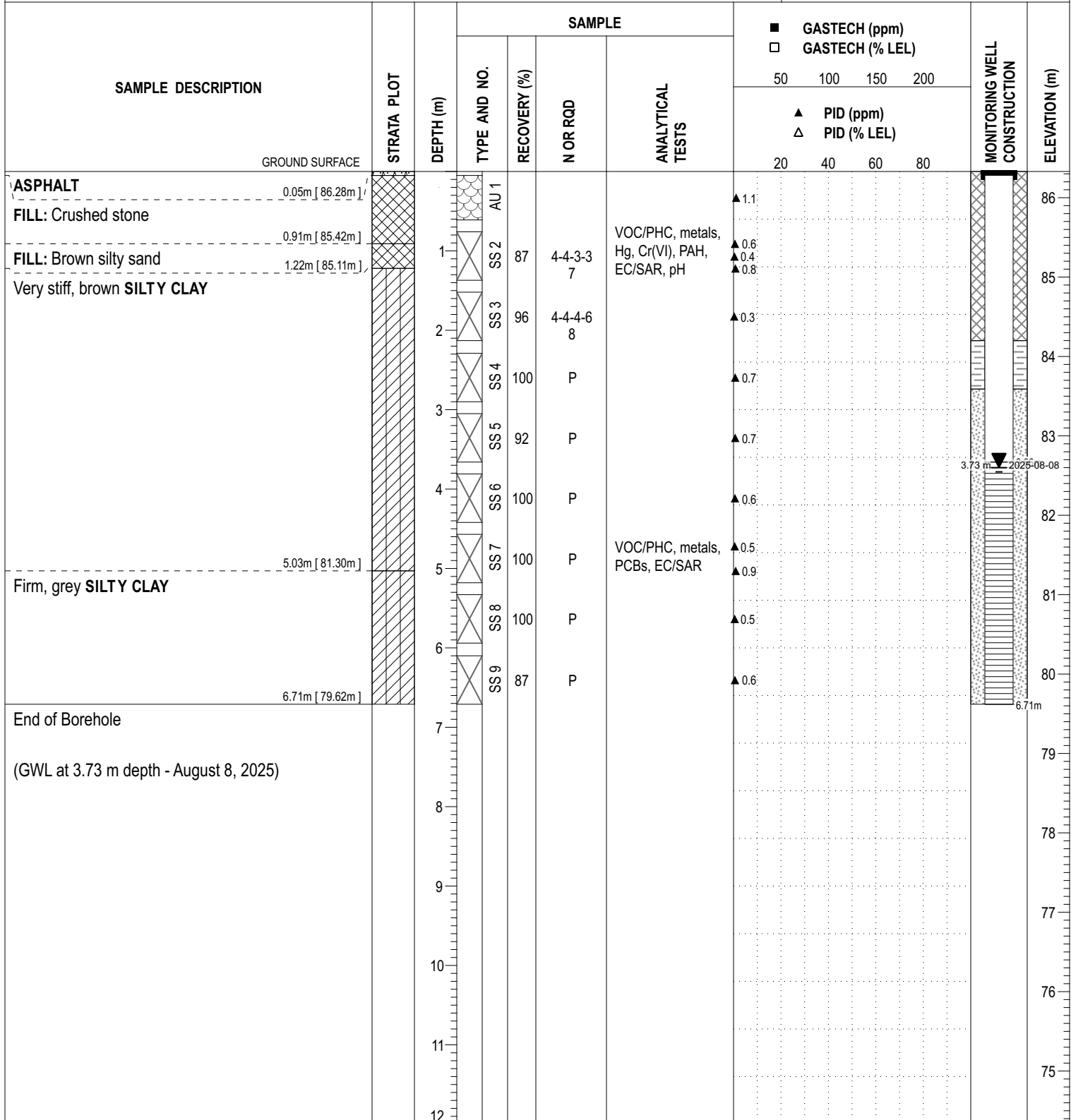
Site-specific impediments to the Sampling and Analysis plan are discussed in the body of the Phase II-ESA report.

COORD. SYS.: MTM ZONE 9 **EASTING:** 362640.32 **NORTHING:** 5023747.20 **ELEVATION:** 86.33

PROJECT: Proposed Commercial Development **FILE NO.:** PE7169

ADVANCED BY: CME-55 Low Clearance Drill

REMARKS: **DATE:** August 1, 2025 **HOLE NO.:** BH 1-25



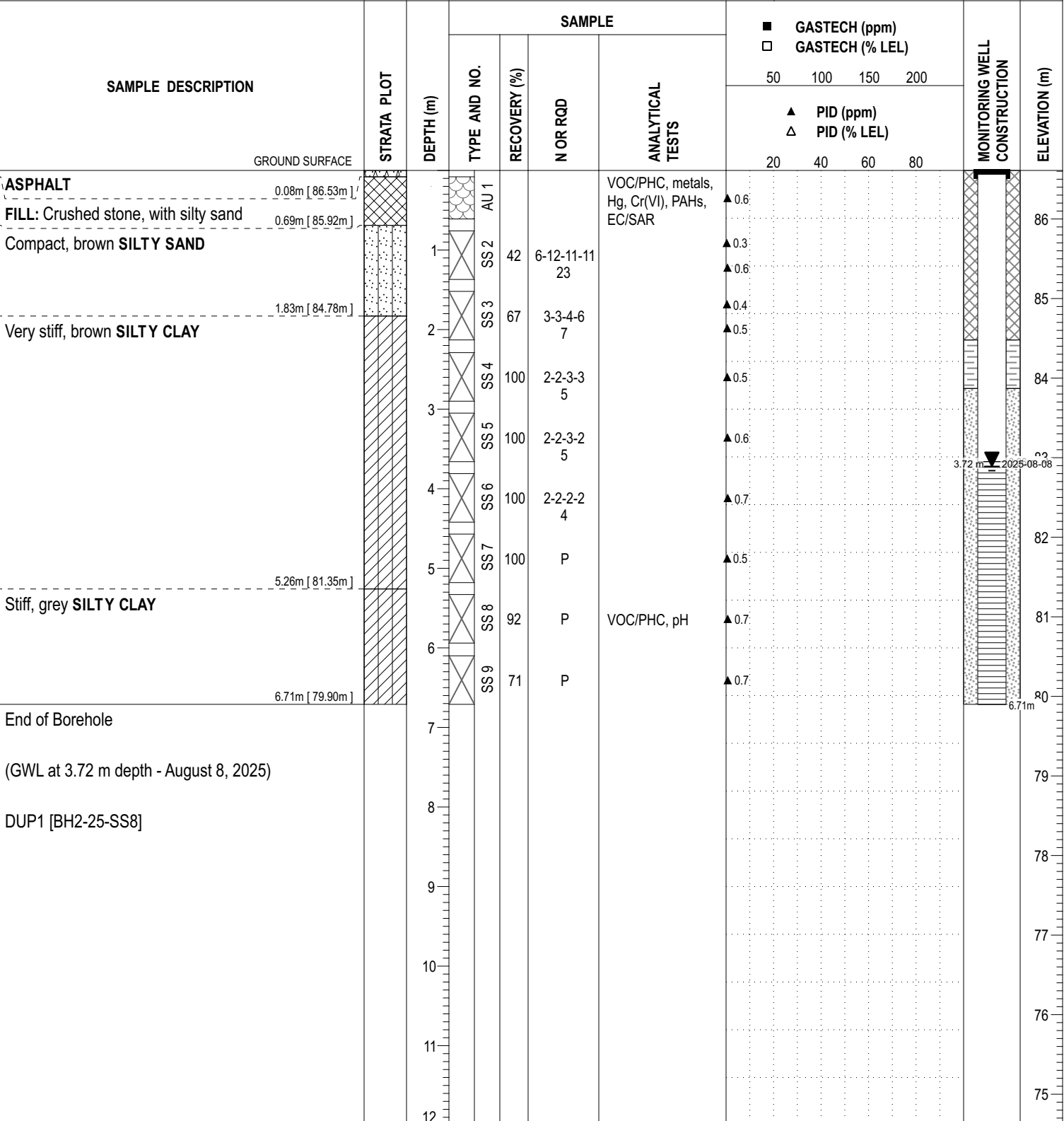
DISCLAIMER: THE DATA PRESENTED IN THIS SHEET IS THE PROPERTY OF PATERSON GROUP AND THE CLIENT FOR WHOM IT WAS PRODUCED. THIS SHEET SHOULD BE READ IN CONJUNCTION WITH ITS CORRESPONDING REPORT. PATERSON GROUP IS NOT RESPONSIBLE FOR THE UNAUTHORIZED USE OF THIS DATA.

COORD. SYS.: MTM ZONE 9 EASTING: 362608.38 NORTHING: 5023732.15 ELEVATION: 86.61

PROJECT: Proposed Commercial Development FILE NO. : PE7169

ADVANCED BY: CME-55 Low Clearance Drill HOLE NO. : BH 2-25

REMARKS: DATE: August 1, 2025



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.

COORD. SYS.: MTM ZONE 9 **EASTING:** 362629.46 **NORTHING:** 5023781.93 **ELEVATION:** 86.54

PROJECT: Proposed Commercial Development **FILE NO. :** PE7169

ADVANCED BY: CME-55 Low Clearance Drill

REMARKS: **DATE:** August 1, 2025 **HOLE NO. :** BH 3-25

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE				GASTECH (ppm)				MONITORING WELL CONSTRUCTION	ELEVATION (m)
			TYPE AND NO.	RECOVERY (%)	N OR RQD	ANALYTICAL TESTS	GASTECH (% LEL)		PID (ppm)			
							50	100	150	200		
GROUND SURFACE												
ASPHALT 0.20m [86.34m]			AU 1			VOC/PHC, metals, Hg, Cr(VI), PAHs, EC/SAR						
FILL: Brown silty sand, with gravel and crushed stone 1.07m [85.47m]		1	SS 2	8	6-8-5-5 13							86
FILL: Brown silty clay, trace crushed stone and topsoil		2	SS 3	42	2-2-3-3 5							85
		3	SS 4	83	1-2-3-2 5							84
Very stiff, brown SILTY CLAY 3.35m [83.19m]		4	SS 5	67	1-1-3-3 4							83
		5	SS 6	92	2-2-2-2 4							82
Stiff, grey SILTY CLAY 5.26m [81.28m]		6	SS 7	100	P							81
		7	SS 8	71	P	VOC/PHC, PCBs, pH						80
End of Borehole (GWL at 4.18 m depth - August 8, 2025) 6.71m [79.83m]		8	SS 9	79	P							79
		9										78
		10										77
		11										76
		12										75

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.

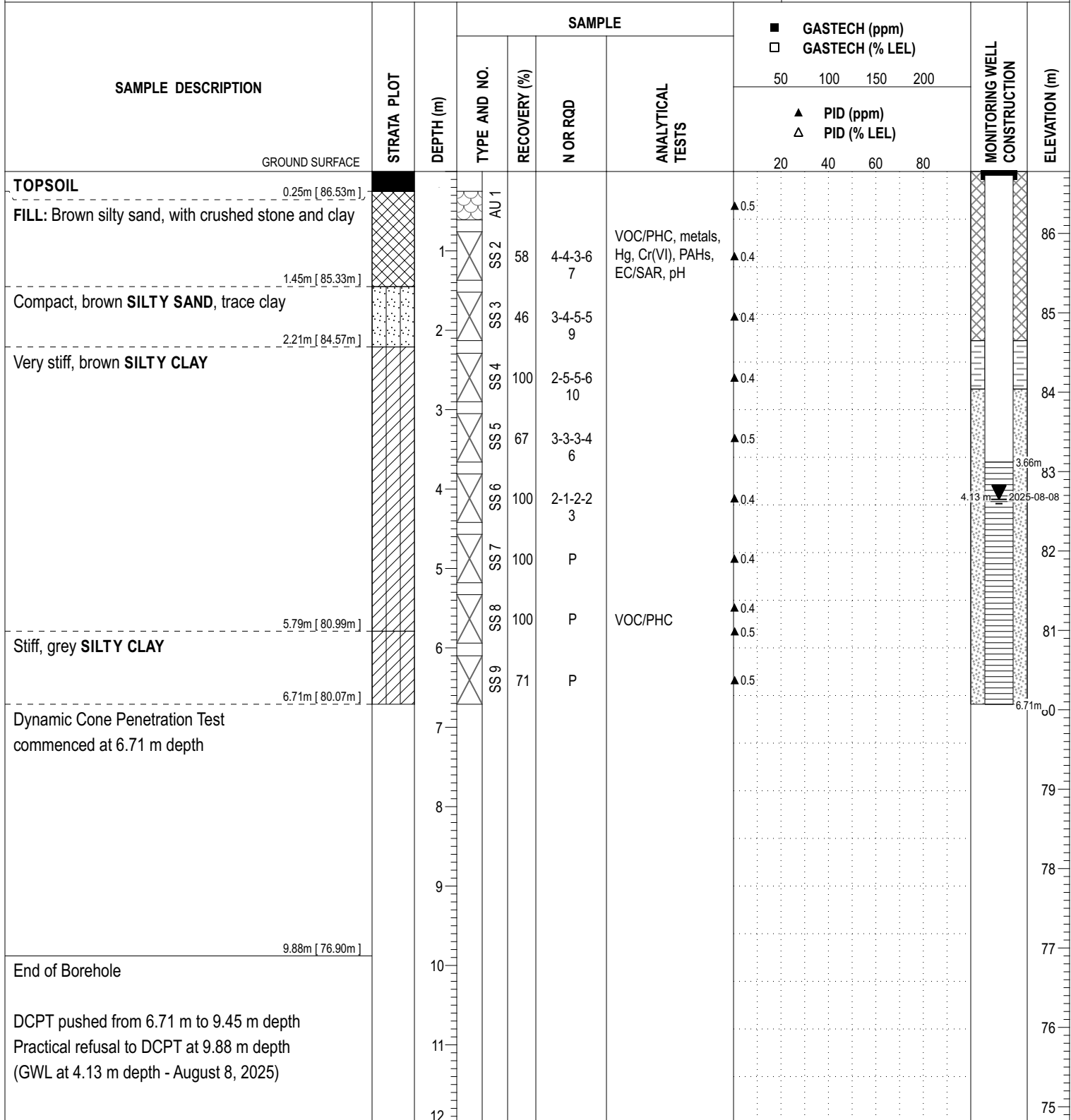
P:/AutoCAD Drawings/Test Hole Data Files/PE7169/data/sqlite 2025-08-18, 09:36 Paterson_Template_AA

COORD. SYS.: MTM ZONE 9 **EASTING:** 362597.92 **NORTHING:** 5023764.34 **ELEVATION:** 86.78

PROJECT: Proposed Commercial Development **FILE NO. :** PE7169

ADVANCED BY: CME-55 Low Clearance Drill

REMARKS: **DATE:** August 1, 2025 **HOLE NO. :** BH 4-25



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.

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 strength of cohesionless soils is the relative density, 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.

Relative Density	'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 vane tests, penetrometer tests, unconfined compression tests, or occasionally by Standard Penetration Tests.

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 is the ratio between the undisturbed undrained shear strength and the remoulded undrained shear strength of the soil.

Terminology used for describing soil strata based upon texture, or the proportion of individual particle sizes present is provided on the Textural Soil Classification Chart at the end of this information package.

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 NXL size core. However, it can be used on smaller core sizes, such as BX, 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
PS	-	Piston sample
AU	-	Auger sample or bulk sample
WS	-	Wash sample
RC	-	Rock core sample (Core bit size AXT, BXL, etc.). Rock core samples are obtained with the use of standard diamond drilling bits.

SYMBOLS AND TERMS (continued)

GRAIN SIZE DISTRIBUTION

MC%	-	Natural moisture 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 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 = $(D_{30})^2 / (D_{10} \times D_{60})$
Cu	-	Uniformity coefficient = D_{60} / D_{10}

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

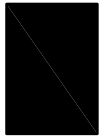
p'_o	-	Present effective overburden pressure at sample depth
p'_c	-	Preconsolidation pressure of (maximum past pressure on) sample
Ccr	-	Recompression index (in effect at pressures below p'_c)
Cc	-	Compression index (in effect at pressures above p'_c)
OC Ratio		Overconsolidation ratio = p'_c / p'_o
Void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

PERMEABILITY TEST

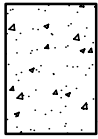
k	-	Coefficient of permeability or hydraulic conductivity is a measure of the ability of water to flow through the sample. The value of k is measured at a specified unit weight for (remoulded) cohesionless soil samples, because its value will vary with the unit weight or density of the sample during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

SYMBOLS AND TERMS (continued)

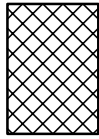
STRATA PLOT



Topsoil



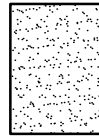
Asphalt



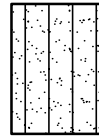
Fill



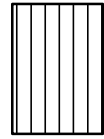
Peat



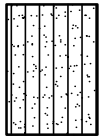
Sand



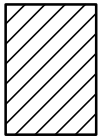
Silty Sand



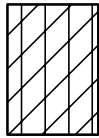
Silt



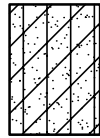
Sandy Silt



Clay



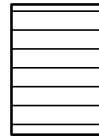
Silty Clay



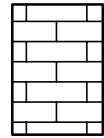
Clayey Silty Sand



Glacial Till



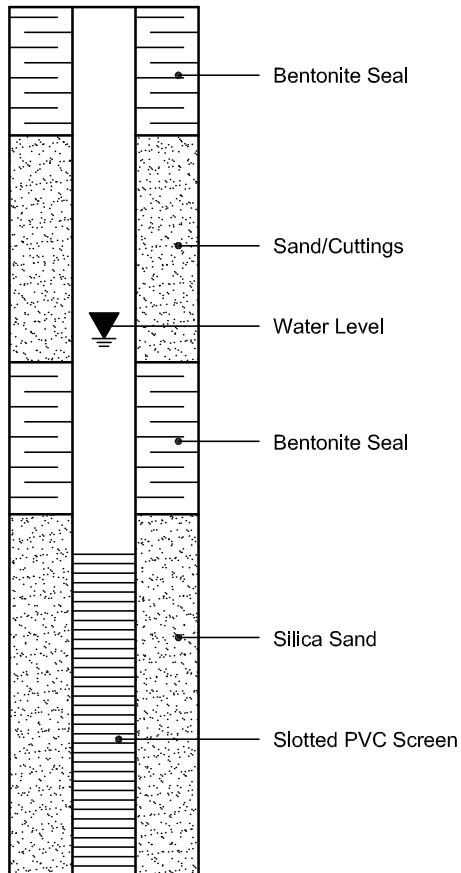
Shale



Bedrock

MONITORING WELL AND PIEZOMETER CONSTRUCTION

MONITORING WELL CONSTRUCTION



PIEZOMETER CONSTRUCTION

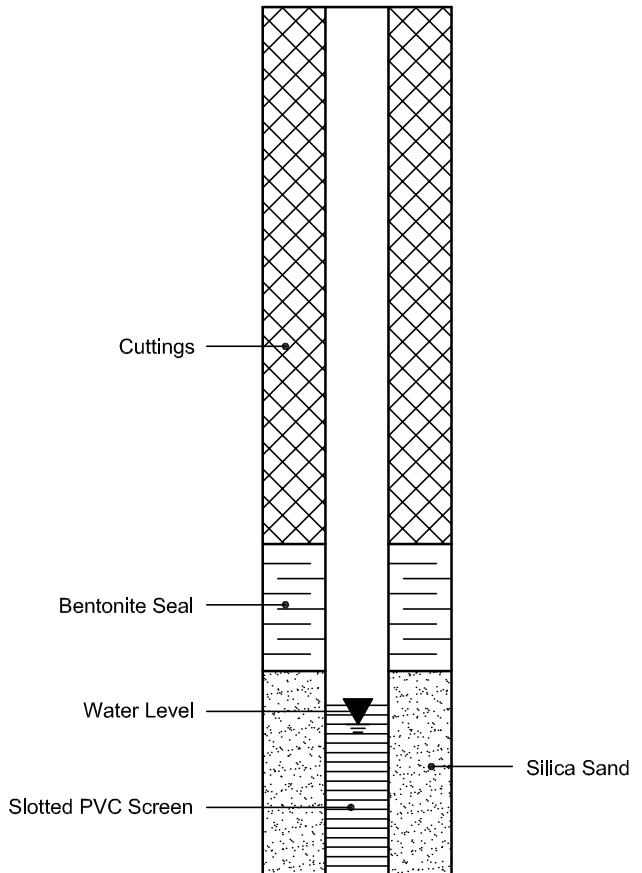


Table 1: Test Hole Summary Details

Test Hole ID	Date of Construction	Well Diameter (mm)	Ground Surface Elevation (masl)	Test Hole Depth (m)	Test Hole Bottom Elevation (masl)	Well Screen Length (m)	Well Screen Interval (mbgs)	Well Screen Interval (masl)	Geologic Media Intercepted by Well Screen
BH1-25	1-Aug-2025	50	86.33	6.71	79.62	3.05	3.66 - 6.71	82.67 - 79.62	Overburden - Silty Clay
BH2-25	1-Aug-2025	50	86.61	6.71	79.9	3.05	3.66 - 6.71	82.95 - 79.9	Overburden - Silty Clay
BH3-25	1-Aug-2025	50	86.54	6.71	79.83	3.05	3.66 - 6.71	82.88 - 79.83	Overburden - Silty Clay
BH4-25	1-Aug-2025	50	86.78	6.71	80.07	3.05	3.66 - 6.71	83.12 - 80.07	Overburden - Silty Clay
MW100	Unknown	50	86.75	19.90	66.85	3.05	16.85 - 19.9	69.9 - 66.85	Unknown
MW200	Unknown	50	86.75	24.70	62.05	3.05	21.65 - 24.7	65.1 - 62.05	Unknown
MW300	Unknown	50	86.77	11.92	74.85	3.05	8.87 - 11.92	77.9 - 74.85	Unknown
MW400	Unknown	50	86.45	11.94	74.51	3.05	8.89 - 11.94	77.56 - 74.51	Unknown
MW500	Unknown	50	86.64	7.10	79.54	3.05	4.05 - 7.1	82.59 - 79.54	Unknown
MW600	Unknown	50	86.43	7.10	79.33	3.05	4.05 - 7.1	82.38 - 79.33	Unknown
MW700	Unknown	50	86.25	6.94	79.31	3.05	3.89 - 6.94	82.36 - 79.31	Unknown

**Table 2: Stabilized Water
Quality Parameters**

Test Hole ID	Conductivity (μ S)	pH	Date of Measurement
MW200	2660	7.2	23-Jul-2025
MW300	1142	7.1	23-Jul-2025
MW400	1157	7.0	23-Jul-2025
MW500	1642	7.2	23-Jul-2025
MW600	6150	7.1	23-Jul-2025
MW700	1250	7.1	23-Jul-2025
BH1-25	3090	7.0	8-Aug-2025
BH2-25	1672	7.0	8-Aug-2025
BH3-25	3430	7.1	8-Aug-2025
BH4-25	2030	7.0	8-Aug-2025

Table 3: Soil Testing Summary

Sample ID and Laboratory ID	Sample Depth (mbgs)	Sampling Date	Rationale	PID Vapour Reading (ppm)	Parameter Groups Analyzed										
					PHCs	BTEX	VOCs	PAHs	PCBs	Metals	Hg	Cr ^{VI}	EC	SAR	pH
BH1-25-SS2A 2532227-01	0.74 - 1.37	1-Aug-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former retail fuel outlet with 1 UST (APEC 3), former dry cleaners (APEC 8), and to assess excess soil quality for off-site reuse	0.6	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
BH1-25-SS7 2532227-02	4.57 - 5.18	1-Aug-2025	To assess application of road salt (APEC 2), former retail fuel outlet with 1 UST (APEC 3), former dry cleaners (APEC 8), former PCB waste storage site (APEC 9), and to assess excess soil quality for off-site reuse	0.9	✓	✓	✓		✓	✓			✓	✓	
BH2-25-AU1 2532227-03	0.08 - 0.69	1-Aug-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former dry cleaners (APEC 8), and to assess excess soil quality for off-site reuse	0.6	✓	✓	✓	✓		✓	✓	✓	✓	✓	
BH2-25-SS8 2532227-04	5.33 - 5.94	1-Aug-2025	To assess former dry cleaners (APEC 8)	0.7	✓	✓	✓								✓
BH3-25-AU1 2532227-05	0.20 - 0.76	1-Aug-2025	To assess fill material of unknown quality (APEC 1), application of road salt (APEC 2), former retail fuel outlet with 1 UST (APEC 3), former retail fuel outlet with 2 USTs (APEC 4), former automotive service garage (APEC 5), former retail fuel outlet with 1 UST (APEC 6), former automotive service garage (APEC 7), former dry cleaners (APEC 8), and to assess excess soil quality for off-site reuse	0.4	✓	✓	✓	✓		✓	✓	✓	✓	✓	
BH3-25-SS8 2532227-06	5.33 - 5.94	1-Aug-2025	To assess former retail fuel outlet with 1 UST (APEC 3), former retail fuel outlet with 2 USTs (APEC 4), former automotive service garage (APEC 5), former retail fuel outlet with 1 UST (APEC 6), former automotive service garage (APEC 7), former dry cleaners (APEC 8), and former PCB waste storage site (APEC 9)	0.5	✓	✓	✓		✓						✓
BH4-25-SS2 2532227-07	0.76 - 1.37	1-Aug-2025	To assess fill material of unknown quality (APEC 1), former retail fuel outlet with 2 USTs (APEC 4), former automotive service garage (APEC 5), former retail fuel outlet with 1 UST (APEC 6), former automotive service garage (APEC 7), former dry cleaners (APEC 8), and to assess excess soil quality for off-site reuse	0.4	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓
BH4-25-SS8 2532227-08	5.33 - 5.94	1-Aug-2025	To assess former retail fuel outlet with 2 USTs (APEC 4), former automotive service garage (APEC 5), former retail fuel outlet with 1 UST (APEC 6), former automotive service garage (APEC 7), and former dry cleaners (APEC 8)	0.5	✓	✓	✓								
DUP1 2532227-09	5.33 - 5.94	1-Aug-2025	Duplicate sample for QA/QC purposes	0.7	✓	✓	✓								

Table 4: Groundwater Testing Summary

Sample ID and Laboratory ID	Sample Depth (mbgs)	Sampling Date	Rationale	Parameter Groups Analyzed			
				PHCs	BTEX	VOCs	PCBs
MW200-GW 2531178-01	21.65 - 24.7	28-Jul-2025	To assess former dry cleaners (APEC 8)	✓	✓	✓	
MW300-GW 2531178-02	8.87 - 11.92	28-Jul-2025	Assessment of APECs and/or preliminary delineation purposes	✓	✓	✓	
MW400-GW 2531178-03	8.89 - 11.94	28-Jul-2025	To assess former retail fuel outlet with 1 UST (APEC 3), former retail fuel outlet with 2 USTs (APEC 4), former automotive service garage (APEC 5), former retail fuel outlet with 1 UST (APEC 6), former automotive service garage (APEC 7), and former dry cleaners (APEC 8)	✓	✓	✓	
MW500-GW 2531178-04	4.05 - 7.1	28-Jul-2025	To assess former retail fuel outlet with 1 UST (APEC 3), former retail fuel outlet with 2 USTs (APEC 4), former automotive service garage (APEC 5), former retail fuel outlet with 1 UST (APEC 6), former automotive service garage (APEC 7), and former dry cleaners (APEC 8)	✓	✓	✓	
MW600-GW 2531178-05	4.05 - 7.1	28-Jul-2025	To assess former retail fuel outlet with 1 UST (APEC 3)	✓	✓	✓	
MW700-GW 2531178-06	3.89 - 6.94	28-Jul-2025	To assess former retail fuel outlet with 1 UST (APEC 3)	✓	✓	✓	
BH1-25-GW 2532396-01	3.66 - 6.71	8-Aug-2025	To assess former retail fuel outlet with 2 USTs (APEC 3), former dry cleaners (APEC 8), and former PCB waste storage site (APEC 9)	✓	✓	✓	✓
BH2-25-GW 2532396-02	3.66 - 6.71	8-Aug-2025	To assess former dry cleaners (APEC 8)	✓	✓	✓	
BH3-25-GW 2532396-03	3.66 - 6.71	8-Aug-2025	To assess former retail fuel outlet with 1 UST (APEC 3), former retail fuel outlet with 2 USTs (APEC 4), former automotive service garage (APEC 5), former retail fuel outlet with 1 UST (APEC 6), former automotive service garage (APEC 7), former dry cleaners (APEC 8), and former PCB waste storage site (APEC 9)	✓	✓	✓	✓
BH4-25-GW 2532396-04	3.66 - 6.71	8-Aug-2025	To assess former retail fuel outlet with 2 USTs (APEC 4), former automotive service garage (APEC 5), former retail fuel outlet with 1 UST (APEC 6), former automotive service garage (APEC 7), and former dry cleaners (APEC 8)	✓	✓	✓	
DUP-1 2532396-05	3.66 - 6.71	8-Aug-2025	Duplicate sample for QA/QC purposes	✓	✓	✓	

Table 5: Groundwater Levels

Test Hole ID	Ground Surface Elevation (masl)	Water Level Depth (mbgs)	Water Level Elevation (masl)	Date of Measurement
MW100	86.75	8.93	77.82	23-Jul-2025
MW200	86.75	11.17	75.58	23-Jul-2025
MW300	86.77	6.52	80.25	23-Jul-2025
MW400	86.45	6.10	80.35	23-Jul-2025
MW500	86.64	4.03	82.61	23-Jul-2025
MW600	86.43	4.59	81.84	23-Jul-2025
MW700	86.25	4.13	82.12	23-Jul-2025
BH1-25	86.33	3.73	82.60	8-Aug-2025
BH2-25	86.61	3.72	82.89	8-Aug-2025
BH3-25	86.54	4.18	82.36	8-Aug-2025
BH4-25	86.78	4.13	82.65	8-Aug-2025

Table 6: Soil Analytical Test Results

Parameter	Units	MDL	Regulation	BH1-25-SS2A 2532227-01	BH1-25-SS7 2532227-02	BH2-25-AU1 2532227-03	BH2-25-SS8 2532227-04	BH3-25-AU1 2532227-05	BH3-25-SS8 2532227-06
Sample Depth (m)			Reg 153/04 - Table 3 Industrial, coarse	0.74 - 1.37	4.57 - 5.18	0.08 - 0.69	5.33 - 5.94	0.20 - 0.76	5.33 - 5.94
Sample Date				1-Aug-2025	1-Aug-2025	1-Aug-2025	1-Aug-2025	1-Aug-2025	1-Aug-2025
Physical Characteristics									
% Solids	% by Wt.	0.1		87.4	68.8	95.8	67.5	88.8	68.6
General Inorganics									
SAR	N/A	0.01	12	39.3	12.7	2.82	-	0.97	-
Conductivity	uS/cm	5	1400	3860	6460	1320	-	393	-
pH	N/A	0.05	5-9 (surf); 5-11 (subsurf)	7.9	-	-	7.88	-	7.91
Metals									
Antimony	ug/g dry	1.0	40	ND (1.0)	ND (1.0)	ND (1.0)	-	ND (1.0)	-
Arsenic	ug/g dry	1.0	18	1.8	2.5	2.8	-	2.6	-
Barium	ug/g dry	1.0	670	49.8	194	116	-	116	-
Beryllium	ug/g dry	0.5	8.0	ND (0.5)	0.5	ND (0.5)	-	0.5	-
Boron	ug/g dry	5.0	120	6.1	ND (5.0)	18.4	-	ND (5.0)	-
Cadmium	ug/g dry	0.5	1.9	ND (0.5)	ND (0.5)	ND (0.5)	-	ND (0.5)	-
Chromium (VI)	ug/g dry	0.2	8.0	0.4	N/A	ND (0.2)	-	ND (0.2)	-
Chromium	ug/g dry	5.0	160	23.2	46	27.1	-	30.3	-
Cobalt	ug/g dry	1.0	80	6.3	11.8	6.5	-	7.9	-
Copper	ug/g dry	5.0	230	10.9	24.2	13.4	-	16.1	-
Lead	ug/g dry	1.0	120	20.4	4.4	5.5	-	6.7	-
Mercury	ug/g dry	0.1	3.9	ND (0.1)	N/A	ND (0.1)	-	ND (0.1)	-
Molybdenum	ug/g dry	1.0	40	ND (1.0)	ND (1.0)	ND (1.0)	-	ND (1.0)	-
Nickel	ug/g dry	5.0	270	12.6	25.2	13.3	-	16.9	-
Selenium	ug/g dry	1.0	5.5	ND (1.0)	ND (1.0)	ND (1.0)	-	ND (1.0)	-
Silver	ug/g dry	0.3	40	ND (0.3)	ND (0.3)	ND (0.3)	-	ND (0.3)	-
Thallium	ug/g dry	1.0	3.3	ND (1.0)	ND (1.0)	ND (1.0)	-	ND (1.0)	-
Uranium	ug/g dry	1.0	33	ND (1.0)	ND (1.0)	ND (1.0)	-	ND (1.0)	-
Vanadium	ug/g dry	10.0	86	28.8	64.5	21.5	-	41.9	-
Zinc	ug/g dry	20.0	340	40.8	68.5	ND (20.0)	-	48.9	-
VOCs									
Acetone	ug/g dry	0.50	16	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)
Benzene	ug/g dry	0.02	0.32	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)
Bromodichloromethane	ug/g dry	0.05	18	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Bromoform	ug/g dry	0.05	0.61	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Bromomethane	ug/g dry	0.05	0.05	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Carbon Tetrachloride	ug/g dry	0.05	0.21	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Chlorobenzene	ug/g dry	0.05	2.4	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Chloroform	ug/g dry	0.05	0.47	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Dibromochloromethane	ug/g dry	0.05	13	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Dichlorodifluoromethane	ug/g dry	0.05	16	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
1,2-Dichlorobenzene	ug/g dry	0.05	6.8	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
1,3-Dichlorobenzene	ug/g dry	0.05	9.6	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
1,4-Dichlorobenzene	ug/g dry	0.05	0.2	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
1,1-Dichloroethane	ug/g dry	0.05	17	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
1,2-Dichloroethane	ug/g dry	0.05	0.05	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
1,1-Dichloroethylene	ug/g dry	0.05	0.064	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
cis-1,2-Dichloroethylene	ug/g dry	0.05	55	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
trans-1,2-Dichloroethylene	ug/g dry	0.05	1.3	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
1,2-Dichloropropane	ug/g dry	0.05	0.16	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
cis-1,3-Dichloropropylene	ug/g dry	0.05	0.18	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
trans-1,3-Dichloropropylene	ug/g dry	0.05	0.18	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
1,3-Dichloropropene, total	ug/g dry	0.05	0.18	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Ethylbenzene	ug/g dry	0.05	9.5	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Ethylene dibromide (dibromoethane, 1,2)	ug/g dry	0.05	0.05	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Hexane	ug/g dry	0.05	46	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Methyl Ethyl Ketone (2-Butanone)	ug/g dry	0.50	70	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)
Methyl Isobutyl Ketone	ug/g dry	0.50	31	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)
Methyl tert-butyl ether	ug/g dry	0.05	11	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Methylene Chloride	ug/g dry	0.05	1.6	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Styrene	ug/g dry	0.05	34	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
1,1,1,2-Tetrachloroethane	ug/g dry	0.05	0.087	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
1,1,2,2-Tetrachloroethane	ug/g dry	0.05	0.05	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Tetrachloroethylene	ug/g dry	0.05	4.5	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Toluene	ug/g dry	0.05	68	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
1,1,1-Trichloroethane	ug/g dry	0.05	6.1	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
1,1,2-Trichloroethane	ug/g dry	0.05	0.05	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Trichloroethylene	ug/g dry	0.05	0.91	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Trichlorofluoromethane	ug/g dry	0.05	4.0	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Vinyl Chloride	ug/g dry	0.02	0.032	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)
m/p-Xylene	ug/g dry	0.05	26	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
o-Xylene	ug/g dry	0.05	26	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Xylenes, total	ug/g dry	0.05	26	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
BTEX									
Benzene	ug/g dry	0.02	0.32	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)
Ethylbenzene	ug/g dry	0.05	9.5	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Toluene	ug/g dry	0.05	68	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
m/p-Xylene	ug/g dry	0.05	26	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
o-Xylene	ug/g dry	0.05	26	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Xylenes, total	ug/g dry	0.05	26	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
PHCs									
F1 PHCs (C6-C10)	ug/g dry	7	55	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)
F2 PHCs (C10-C16)	ug/g dry	4	230	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)
F3 PHCs (C16-C34)	ug/g dry	8	1700	32	ND (8)	16	ND (8)	14	ND (8)
F4 PHCs (C34-C50)	ug/g dry	6	3300	45	ND (6)	24	ND (6)	11	ND (6)
PAHs									
Acenaphthene	ug/g dry	0.02	96	ND (0.02)	-	ND (0.02)	-	ND (0.02)	-
Acenaphthylene	ug/g dry	0.02	0.15	ND (0.02)	-	ND (0.02)	-	ND (0.02)	-
Anthracene	ug/g dry	0.02	0.67	ND (0.02)	-	ND (0.02)	-	ND (0.02)	-
Benzo[a]anthracene	ug/g dry	0.02	0.96	ND (0.02)	-	ND (0.02)	-	ND (0.02)	-
Benzo[a]pyrene	ug/g dry	0.02	0.3	ND (0.02)	-	ND (0.02)	-	ND (0.02)	-
Benzo[b]fluoranthene	ug/g dry	0.02	0.96	ND (0.02)	-	ND (0.02)	-	ND (0.02)	-
Benzo[g,h,i]perylene	ug/g dry	0.02	9.6	ND (0.02)	-	ND (0.02)	-	ND (0.02)	-
Benzo[k]fluoranthene	ug/g dry	0.02	0.96	ND (0.02)	-	ND (0.02)	-	ND (0.02)	-
Chrysene	ug/g dry	0.02	9.6	ND (0.02)	-	ND (0.02)	-	ND (0.02)	-
Dibenzo[a,h]anthracene	ug/g dry	0.02	0.1	ND (0.02)	-	ND (0.02)	-	ND (0.02)	-
Fluoranthene	ug/g dry	0.02	9.6	ND (0.02)	-	ND (0.02)	-	ND (0.02)	-
Fluorene	ug/g dry	0.02	62	ND (0.02)	-	ND (0.02)	-	ND (0.02)	-
Indeno [1,2,3-cd] pyrene	ug/g dry	0.02	0.76	ND (0.02)	-	ND (0.02)	-	ND (0.02)	-
1-Methylnaphthalene	ug/g dry	0.02	76	ND (0.02)	-	ND (0.02)	-	ND (0.02)	-
2-Methylnaphthalene	ug/g dry	0.02	76	ND (0.02)	-	ND (0.02)	-	ND (0.02)	-
Methylnaphthalene (1&2)	ug/g dry	0.04	76	ND (0.04)	-	ND (0.04)	-	ND (0.04)	-
Naphthalene	ug/g dry	0.01	9.6	ND (0.01)	-	ND (0.01)	-	ND (0.01)	-
Phenanthrene	ug/g dry	0.02	12	ND (0.02)	-	ND (0.02)	-	ND (0.02)	-
Pyrene	ug/g dry	0.02	96	ND (0.02)	-	ND (0.02)	-	ND (0.02)	-
PCBs									
PCBs, total	ug/g dry	0.05	1.1	-	ND (0.05)	-	-	-	ND (0.05)

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

Table 6: Soil Analytical Test Results

Parameter	Units	MDL	Regulation	BH4-25-SS2 2532227-07	BH4-25-SS8 2532227-08	DUP1 2532227-09
Sample Depth (m)			Reg 153/04 - Table 3 Industrial, coarse	0.76 - 1.37	5.33 - 5.94	5.33 - 5.94
Sample Date				1-Aug-2025	1-Aug-2025	1-Aug-2025
Physical Characteristics						
% Solids	% by Wt.	0.1		87.5	72.8	71.1
General Inorganics						
SAR	N/A	0.01	12	0.26	-	-
Conductivity	uS/cm	5	1400	187	-	-
pH	N/A	0.05	5-9 (surf); 5-11 (subsurf)	7.52	-	-
Metals						
Antimony	ug/g dry	1.0	40	ND (1.0)	-	-
Arsenic	ug/g dry	1.0	18	1.9	-	-
Barium	ug/g dry	1.0	670	92.4	-	-
Beryllium	ug/g dry	0.5	8.0	ND (0.5)	-	-
Boron	ug/g dry	5.0	120	ND (5.0)	-	-
Cadmium	ug/g dry	0.5	1.9	ND (0.5)	-	-
Chromium (VI)	ug/g dry	0.2	8.0	0.3	-	-
Chromium	ug/g dry	5.0	160	27.4	-	-
Cobalt	ug/g dry	1.0	80	7.5	-	-
Copper	ug/g dry	5.0	230	12.9	-	-
Lead	ug/g dry	1.0	120	9.3	-	-
Mercury	ug/g dry	0.1	3.9	ND (0.1)	-	-
Molybdenum	ug/g dry	1.0	40	ND (1.0)	-	-
Nickel	ug/g dry	5.0	270	14.9	-	-
Selenium	ug/g dry	1.0	5.5	ND (1.0)	-	-
Silver	ug/g dry	0.3	40	ND (0.3)	-	-
Thallium	ug/g dry	1.0	3.3	ND (1.0)	-	-
Uranium	ug/g dry	1.0	33	ND (1.0)	-	-
Vanadium	ug/g dry	10.0	86	39.3	-	-
Zinc	ug/g dry	20.0	340	40.7	-	-
VOCS						
Acetone	ug/g dry	0.50	16	ND (0.50)	ND (0.50)	ND (0.50)
Benzene	ug/g dry	0.02	0.32	ND (0.02)	ND (0.02)	ND (0.02)
Bromodichloromethane	ug/g dry	0.05	18	ND (0.05)	ND (0.05)	ND (0.05)
Bromoform	ug/g dry	0.05	0.61	ND (0.05)	ND (0.05)	ND (0.05)
Bromomethane	ug/g dry	0.05	0.05	ND (0.05)	ND (0.05)	ND (0.05)
Carbon Tetrachloride	ug/g dry	0.05	0.21	ND (0.05)	ND (0.05)	ND (0.05)
Chlorobenzene	ug/g dry	0.05	2.4	ND (0.05)	ND (0.05)	ND (0.05)
Chloroform	ug/g dry	0.05	0.47	ND (0.05)	ND (0.05)	ND (0.05)
Dibromochloromethane	ug/g dry	0.05	13	ND (0.05)	ND (0.05)	ND (0.05)
Dichlorodifluoromethane	ug/g dry	0.05	16	ND (0.05)	ND (0.05)	ND (0.05)
1,2-Dichlorobenzene	ug/g dry	0.05	6.8	ND (0.05)	ND (0.05)	ND (0.05)
1,3-Dichlorobenzene	ug/g dry	0.05	9.6	ND (0.05)	ND (0.05)	ND (0.05)
1,4-Dichlorobenzene	ug/g dry	0.05	0.2	ND (0.05)	ND (0.05)	ND (0.05)
1,1-Dichloroethane	ug/g dry	0.05	17	ND (0.05)	ND (0.05)	ND (0.05)
1,2-Dichloroethane	ug/g dry	0.05	0.05	ND (0.05)	ND (0.05)	ND (0.05)
1,1-Dichloroethylene	ug/g dry	0.05	0.064	ND (0.05)	ND (0.05)	ND (0.05)
cis-1,2-Dichloroethylene	ug/g dry	0.05	55	ND (0.05)	ND (0.05)	ND (0.05)
trans-1,2-Dichloroethylene	ug/g dry	0.05	1.3	ND (0.05)	ND (0.05)	ND (0.05)
1,2-Dichloropropane	ug/g dry	0.05	0.16	ND (0.05)	ND (0.05)	ND (0.05)
cis-1,3-Dichloropropylene	ug/g dry	0.05	0.18	ND (0.05)	ND (0.05)	ND (0.05)
trans-1,3-Dichloropropylene	ug/g dry	0.05	0.18	ND (0.05)	ND (0.05)	ND (0.05)
1,3-Dichloropropene, total	ug/g dry	0.05	0.18	ND (0.05)	ND (0.05)	ND (0.05)
Ethylbenzene	ug/g dry	0.05	9.5	ND (0.05)	ND (0.05)	ND (0.05)
Ethylene dibromide (dibromoethane, 1,2)	ug/g dry	0.05	0.05	ND (0.05)	ND (0.05)	ND (0.05)
Hexane	ug/g dry	0.05	46	ND (0.05)	ND (0.05)	ND (0.05)
Methyl Ethyl Ketone (2-Butanone)	ug/g dry	0.50	70	ND (0.50)	ND (0.50)	ND (0.50)
Methyl Isobutyl Ketone	ug/g dry	0.50	31	ND (0.50)	ND (0.50)	ND (0.50)
Methyl tert-butyl ether	ug/g dry	0.05	11	ND (0.05)	ND (0.05)	ND (0.05)
Methylene Chloride	ug/g dry	0.05	1.6	ND (0.05)	ND (0.05)	ND (0.05)
Styrene	ug/g dry	0.05	34	ND (0.05)	ND (0.05)	ND (0.05)
1,1,1,2-Tetrachloroethane	ug/g dry	0.05	0.087	ND (0.05)	ND (0.05)	ND (0.05)
1,1,2,2-Tetrachloroethane	ug/g dry	0.05	0.05	ND (0.05)	ND (0.05)	ND (0.05)
Tetrachloroethylene	ug/g dry	0.05	4.5	ND (0.05)	ND (0.05)	ND (0.05)
Toluene	ug/g dry	0.05	68	ND (0.05)	ND (0.05)	ND (0.05)
1,1,1-Trichloroethane	ug/g dry	0.05	6.1	ND (0.05)	ND (0.05)	ND (0.05)
1,1,2-Trichloroethane	ug/g dry	0.05	0.05	ND (0.05)	ND (0.05)	ND (0.05)
Trichloroethylene	ug/g dry	0.05	0.91	ND (0.05)	ND (0.05)	ND (0.05)
Trichlorofluoromethane	ug/g dry	0.05	4.0	ND (0.05)	ND (0.05)	ND (0.05)
Vinyl Chloride	ug/g dry	0.02	0.032	ND (0.02)	ND (0.02)	ND (0.02)
m/p-Xylene	ug/g dry	0.05	26	ND (0.05)	ND (0.05)	ND (0.05)
o-Xylene	ug/g dry	0.05	26	ND (0.05)	ND (0.05)	ND (0.05)
Xylenes, total	ug/g dry	0.05	26	ND (0.05)	ND (0.05)	ND (0.05)
BTEX						
Benzene	ug/g dry	0.02	0.32	ND (0.02)	ND (0.02)	ND (0.02)
Ethylbenzene	ug/g dry	0.05	9.5	ND (0.05)	ND (0.05)	ND (0.05)
Toluene	ug/g dry	0.05	68	ND (0.05)	ND (0.05)	ND (0.05)
m/p-Xylene	ug/g dry	0.05	26	ND (0.05)	ND (0.05)	ND (0.05)
o-Xylene	ug/g dry	0.05	26	ND (0.05)	ND (0.05)	ND (0.05)
Xylenes, total	ug/g dry	0.05	26	ND (0.05)	ND (0.05)	ND (0.05)
PHCs						
F1 PHCs (C6-C10)	ug/g dry	7	55	ND (7)	ND (7)	ND (7)
F2 PHCs (C10-C16)	ug/g dry	4	230	ND (4)	ND (4)	ND (4)
F3 PHCs (C16-C34)	ug/g dry	8	1700	ND (8)	ND (8)	ND (8)
F4 PHCs (C34-C50)	ug/g dry	6	3300	ND (6)	ND (6)	ND (6)
PAHs						
Acenaphthene	ug/g dry	0.02	96	ND (0.02)	-	-
Acenaphthylene	ug/g dry	0.02	0.15	ND (0.02)	-	-
Anthracene	ug/g dry	0.02	0.67	ND (0.02)	-	-
Benzo[a]anthracene	ug/g dry	0.02	0.96	ND (0.02)	-	-
Benzo[a]pyrene	ug/g dry	0.02	0.3	ND (0.02)	-	-
Benzo[b]fluoranthene	ug/g dry	0.02	0.96	ND (0.02)	-	-
Benzo[g,h,i]perylene	ug/g dry	0.02	9.6	ND (0.02)	-	-
Benzo[k]fluoranthene	ug/g dry	0.02	0.96	ND (0.02)	-	-
Chrysene	ug/g dry	0.02	9.6	ND (0.02)	-	-
Dibenzo[a,h]anthracene	ug/g dry	0.02	0.1	ND (0.02)	-	-
Fluoranthene	ug/g dry	0.02	9.6	ND (0.02)	-	-
Fluorene	ug/g dry	0.02	62	ND (0.02)	-	-
Indeno [1,2,3-cd] pyrene	ug/g dry	0.02	0.76	ND (0.02)	-	-
1-Methylnaphthalene	ug/g dry	0.02	76	ND (0.02)	-	-
2-Methylnaphthalene	ug/g dry	0.02	76	ND (0.02)	-	-
Methylnaphthalene (1&2)	ug/g dry	0.04	76	ND (0.04)	-	-
Naphthalene	ug/g dry	0.01	9.6	ND (0.01)	-	-
Phenanthrene	ug/g dry	0.02	12	ND (0.02)	-	-
Pyrene	ug/g dry	0.02	96	ND (0.02)	-	-
PCBs						
PCBs, total	ug/g dry	0.05	1.1	-	-	-

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

Table 6A: Maximum Concentrations Soil

Parameter	Sample ID / Depth (m)	Units	Reg 153/04 - Table 3 Industrial, coarse Standards	Concentration
SAR	BH1-25-SS2A 2532227-01 - 0.74 - 1.37	N/A	12	39.3
Conductivity	BH1-25-SS7 2532227-02 - 4.57 - 5.18	uS/cm	1400	6460
pH	BH3-25-SS8 2532227-06 - 5.33 - 5.94	N/A	5-9 (surf); 5-11 (subsurf)	7.91
Arsenic	BH2-25-AU1 2532227-03 - 0.08 - 0.69	ug/g dry	18	2.8
Barium	BH1-25-SS7 2532227-02 - 4.57 - 5.18	ug/g dry	670	194
Boron	BH2-25-AU1 2532227-03 - 0.08 - 0.69	ug/g dry	120	18.4
Chromium (VI)	BH1-25-SS2A 2532227-01 - 0.74 - 1.37	ug/g dry	8.0	0.4
Chromium	BH1-25-SS7 2532227-02 - 4.57 - 5.18	ug/g dry	160	46
Cobalt	BH1-25-SS7 2532227-02 - 4.57 - 5.18	ug/g dry	80	11.8
Copper	BH1-25-SS7 2532227-02 - 4.57 - 5.18	ug/g dry	230	24.2
Lead	BH1-25-SS2A 2532227-01 - 0.74 - 1.37	ug/g dry	120	20.4
Nickel	BH1-25-SS7 2532227-02 - 4.57 - 5.18	ug/g dry	270	25.2
Vanadium	BH1-25-SS7 2532227-02 - 4.57 - 5.18	ug/g dry	86	64.5
Zinc	BH1-25-SS7 2532227-02 - 4.57 - 5.18	ug/g dry	340	68.5
F3 PHCs (C16-C34)	BH1-25-SS2A 2532227-01 - 0.74 - 1.37	ug/g dry	1700	32
F4 PHCs (C34-C50)	BH1-25-SS2A 2532227-01 - 0.74 - 1.37	ug/g dry	3300	45
All remaining parameters analysed were reported non-detect in all samples.				

Table 7: Groundwater Analytical Test Results

Parameter	Units	MDL	Regulation	MW200-GW 2531178-01	MW300-GW 2531178-02	MW400-GW 2531178-03	MW500-GW 2531178-04	MW600-GW 2531178-05	MW700-GW 2531178-06	BH1-25-GW 2532396-01	BH2-25-GW 2532396-02	BH3-25-GW 2532396-03	BH4-25-GW 2532396-04	DUP-1 2532396-05
Sample Depth (m)			Reg 153/04 - Table 3 Non-Potable Groundwater, coarse	21.65 - 24.7	8.87 - 11.92	8.89 - 11.94	4.05 - 7.1	4.05 - 7.1	3.89 - 6.94	3.66 - 6.71	3.66 - 6.71	3.66 - 6.71	3.66 - 6.71	3.66 - 6.71
Sample Date				28-Jul-2025	28-Jul-2025	28-Jul-2025	28-Jul-2025	28-Jul-2025	28-Jul-2025	8-Aug-2025	8-Aug-2025	8-Aug-2025	8-Aug-2025	8-Aug-2025
Volatiles														
Acetone	ug/L	5.0	130000	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
Benzene	ug/L	0.5	44	ND (0.5)	ND (0.5)	4.1	ND (0.5)	2.7	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Bromodichloromethane	ug/L	0.5	85000	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)
Bromoform	ug/L	0.5	380	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)
Bromomethane	ug/L	0.5	5.6	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)
Carbon Tetrachloride	ug/L	0.2	0.79	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)	ND (0.2)
Chlorobenzene	ug/L	0.5	630	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)
Chloroform	ug/L	0.5	2.4	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)
Dibromochloromethane	ug/L	0.5	82000	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)
Dichlorodifluoromethane	ug/L	1.0	4400	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,2-Dichlorobenzene	ug/L	0.5	4600	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)
1,3-Dichlorobenzene	ug/L	0.5	9600	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)
1,4-Dichlorobenzene	ug/L	0.5	8.0	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)
1,1-Dichloroethane	ug/L	0.5	320	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)
1,2-Dichloroethane	ug/L	0.5	1.6	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)
1,1-Dichloroethylene	ug/L	0.5	1.6	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)
cis-1,2-Dichloroethylene	ug/L	0.5	1.6	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)
trans-1,2-Dichloroethylene	ug/L	0.5	1.6	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)
1,2-Dichloropropane	ug/L	0.5	16	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)
cis-1,3-Dichloropropylene	ug/L	0.5	5.2	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
trans-1,3-Dichloropropylene	ug/L	0.5	5.2	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
1,3-Dichloropropene, total	ug/L	0.5	5.2	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Ethylbenzene	ug/L	0.5	2300	ND (0.5)	ND (0.5)	2.4	ND (0.5)	6.2	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Ethylene dibromide (dibromoethane, 1,2)	ug/L	0.2	0.25	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)	ND (0.2)
Hexane	ug/L	1.0	51	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Methyl Ethyl Ketone (2-Butanone)	ug/L	5.0	470000	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
Methyl Isobutyl Ketone	ug/L	5.0	140000	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
Methyl tert-butyl ether	ug/L	2.0	190	ND (2.0)	ND (2.0)	3.7	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Methylene Chloride	ug/L	5.0	610	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
Styrene	ug/L	0.5	1300	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)
1,1,1,2-Tetrachloroethane	ug/L	0.5	3.3	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)
1,1,2,2-Tetrachloroethane	ug/L	0.5	3.2	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Tetrachloroethylene	ug/L	0.5	1.6	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)
Toluene	ug/L	0.5	18000	ND (0.5)	ND (0.5)	1.6	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
1,1,1-Trichloroethane	ug/L	0.5	640	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)
1,1,2-Trichloroethane	ug/L	0.5	4.7	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)
Trichloroethylene	ug/L	0.5	1.6	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)
Trichlorofluoromethane	ug/L	1.0	2500	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Vinyl Chloride	ug/L	0.5	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)
m/p-Xylene	ug/L	0.5	4200	ND (0.5)	ND (0.5)	3.9	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
o-Xylene	ug/L	0.5	4200	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)
Xylenes, total	ug/L	0.5	4200	ND (0.5)	ND (0.5)	3.9	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
BTEX														
Benzene	ug/L	0.5	44	ND (0.5)	ND (0.5)	4.1	ND (0.5)	2.7	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Ethylbenzene	ug/L	0.5	2300	ND (0.5)	ND (0.5)	2.4	ND (0.5)	6.2	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Toluene	ug/L	0.5	18000	ND (0.5)	ND (0.5)	1.6	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
m/p-Xylene	ug/L	0.5	4200	ND (0.5)	ND (0.5)	3.9	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
o-Xylene	ug/L	0.5	4200	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)
Xylenes, total	ug/L	0.5	4200	ND (0.5)	ND (0.5)	3.9	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Hydrocarbons														
F1 PHCs (C6-C10)	ug/L	25	750	ND (25)	ND (25)	ND (25)	ND (25)	ND (25)	ND (25)	ND (25)	ND (25)	ND (25)	ND (25)	ND (25)
F2 PHCs (C10-C16)	ug/L	100	150	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)
F3 PHCs (C16-C34)	ug/L	100	500	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)
F4 PHCs (C34-C50)	ug/L	100	500	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)
PCBs														
PCBs, total	ug/L	0.05	7.8	-	-	-	-	-	-	ND (0.05)	-	ND (0.05)	-	-

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

Table 7A: Maximum Concentrations Groundwater

Parameter	Sample ID / Screen Interval (m)	Units	Reg 153/04 - Table 3 Non-Potable Groundwater, coarse Standards	Concentration
Benzene	MW400-GW 2531178-03 - 8.89 - 11.94	ug/L	44	4.1
Ethylbenzene	MW600-GW 2531178-05 - 4.05 - 7.1	ug/L	2300	6.2
Methyl tert-butyl ether	MW400-GW 2531178-03 - 8.89 - 11.94	ug/L	190	3.7
Toluene	MW400-GW 2531178-03 - 8.89 - 11.94	ug/L	18000	1.6
m/p-Xylene	MW400-GW 2531178-03 - 8.89 - 11.94	ug/L	4200	3.9
Xylenes, total	MW400-GW 2531178-03 - 8.89 - 11.94	ug/L	4200	3.9
All remaining parameters analysed were reported non-detect in all samples.				

Certificate of Analysis

Paterson Group Consulting Engineers (Ottawa)

9 Auriga Drive
Ottawa, ON K2E 7T9
Attn: Jesse Andrechek

Client PO: 63688
Project: PE7169

Custody:

Report Date: 31-Jul-2025
Order Date: 29-Jul-2025

Order #: 2531178

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

Parcel ID	Client ID
2531178-01	MW200-GW
2531178-02	MW300-GW
2531178-03	MW400-GW
2531178-04	MW500-GW
2531178-05	MW600-GW
2531178-06	MW700-GW

Approved By:



Mark Foto, M.Sc.

Laboratory Director

Certificate of Analysis

Report Date: 31-Jul-2025

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

Order Date: 29-Jul-2025

Client PO: 63688

Project Description: PE7169

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
PHC F1	CWS Tier 1 - P&T GC-FID	30-Jul-25	30-Jul-25
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	29-Jul-25	30-Jul-25
REG 153: VOCs by P&T GC/MS	EPA 624 - P&T GC-MS	30-Jul-25	30-Jul-25

Certificate of Analysis

Report Date: 31-Jul-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 29-Jul-2025

Client PO: 63688

Project Description: PE7169

Client ID:	MW200-GW	MW300-GW	MW400-GW	MW500-GW	-	-
Sample Date:	28-Jul-25 09:00	28-Jul-25 09:00	28-Jul-25 09:00	28-Jul-25 09:00	-	-
Sample ID:	2531178-01	2531178-02	2531178-03	2531178-04	-	-
Matrix:	Ground Water	Ground Water	Ground Water	Ground Water	-	-
MDL/Units						

Volatiles

Acetone	5.0 ug/L	<5.0	<5.0	<5.0	<5.0	-	-
Benzene	0.5 ug/L	<0.5	<0.5	4.1	<0.5	-	-
Bromodichloromethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Bromoform	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Bromomethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Carbon Tetrachloride	0.2 ug/L	<0.2	<0.2	<0.2	<0.2	-	-
Chlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Chloroform	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Dibromochloromethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Dichlorodifluoromethane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0	-	-
1,2-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,3-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,4-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,2-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
cis-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
trans-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,2-Dichloropropane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
cis-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
trans-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,3-Dichloropropene, total	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Ethylbenzene	0.5 ug/L	<0.5	<0.5	2.4	<0.5	-	-
Ethylene dibromide (dibromoethane,	0.2 ug/L	<0.2	<0.2	<0.2	<0.2	-	-
Hexane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0	-	-

Certificate of Analysis

Report Date: 31-Jul-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 29-Jul-2025

Client PO: 63688

Project Description: PE7169

Client ID:	MW200-GW	MW300-GW	MW400-GW	MW500-GW	-	-
Sample Date:	28-Jul-25 09:00	28-Jul-25 09:00	28-Jul-25 09:00	28-Jul-25 09:00	-	-
Sample ID:	2531178-01	2531178-02	2531178-03	2531178-04	-	-
Matrix:	Ground Water	Ground Water	Ground Water	Ground Water	-	-
MDL/Units						

Volatiles

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	3.7	<2.0	-	-
Methylene Chloride	5.0 ug/L	<5.0	<5.0	<5.0	<5.0	-	-
Styrene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1,2,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Tetrachloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Toluene	0.5 ug/L	<0.5	<0.5	1.6	<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	3.9	<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	3.9	<0.5	-	-
Toluene-d8	Surrogate	103%	104%	103%	105%	-	-
Dibromofluoromethane	Surrogate	94.0%	93.2%	95.8%	89.9%	-	-
4-Bromofluorobenzene	Surrogate	106%	105%	103%	104%	-	-

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	-	-

Certificate of Analysis

Report Date: 31-Jul-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 29-Jul-2025

Client PO: 63688

Project Description: PE7169

Client ID:	MW600-GW	MW700-GW				
Sample Date:	28-Jul-25 09:00	28-Jul-25 09:00				
Sample ID:	2531178-05	2531178-06				
Matrix:	Ground Water	Ground Water				
MDL/Units						

Volatiles

Acetone	5.0 ug/L	<5.0	<5.0	-	-	-	-
Benzene	0.5 ug/L	2.7	<0.5	-	-	-	-
Bromodichloromethane	0.5 ug/L	<0.5	<0.5	-	-	-	-
Bromoform	0.5 ug/L	<0.5	<0.5	-	-	-	-
Bromomethane	0.5 ug/L	<0.5	<0.5	-	-	-	-
Carbon Tetrachloride	0.2 ug/L	<0.2	<0.2	-	-	-	-
Chlorobenzene	0.5 ug/L	<0.5	<0.5	-	-	-	-
Chloroform	0.5 ug/L	<0.5	<0.5	-	-	-	-
Dibromochloromethane	0.5 ug/L	<0.5	<0.5	-	-	-	-
Dichlorodifluoromethane	1.0 ug/L	<1.0	<1.0	-	-	-	-
1,2-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	-	-	-	-
1,3-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	-	-	-	-
1,4-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	-	-	-	-
1,1-Dichloroethane	0.5 ug/L	<0.5	<0.5	-	-	-	-
1,2-Dichloroethane	0.5 ug/L	<0.5	<0.5	-	-	-	-
1,1-Dichloroethylene	0.5 ug/L	<0.5	<0.5	-	-	-	-
cis-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	-	-	-	-
trans-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	-	-	-	-
1,2-Dichloropropane	0.5 ug/L	<0.5	<0.5	-	-	-	-
cis-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	-	-	-	-
trans-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	-	-	-	-
1,3-Dichloropropene, total	0.5 ug/L	<0.5	<0.5	-	-	-	-
Ethylbenzene	0.5 ug/L	6.2	<0.5	-	-	-	-
Ethylene dibromide (dibromoethane,	0.2 ug/L	<0.2	<0.2	-	-	-	-
Hexane	1.0 ug/L	<1.0	<1.0	-	-	-	-

Certificate of Analysis

Report Date: 31-Jul-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 29-Jul-2025

Client PO: 63688

Project Description: PE7169

Client ID:	MW600-GW	MW700-GW				
Sample Date:	28-Jul-25 09:00	28-Jul-25 09:00				
Sample ID:	2531178-05	2531178-06				
Matrix:	Ground Water	Ground Water				
MDL/Units						

Volatiles

Methyl Ethyl Ketone (2-Butanone)	5.0 ug/L	<5.0	<5.0	-	-	-	-
Methyl Isobutyl Ketone	5.0 ug/L	<5.0	<5.0	-	-	-	-
Methyl tert-butyl ether	2.0 ug/L	<2.0	<2.0	-	-	-	-
Methylene Chloride	5.0 ug/L	<5.0	<5.0	-	-	-	-
Styrene	0.5 ug/L	<0.5	<0.5	-	-	-	-
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	-	-	-	-
1,1,2,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	-	-	-	-
Tetrachloroethylene	0.5 ug/L	<0.5	<0.5	-	-	-	-
Toluene	0.5 ug/L	<0.5	<0.5	-	-	-	-
1,1,1-Trichloroethane	0.5 ug/L	<0.5	<0.5	-	-	-	-
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	104%	105%	-	-	-	-
Toluene-d8	Surrogate	105%	104%	-	-	-	-
Dibromofluoromethane	Surrogate	90.3%	102%	-	-	-	-

Hydrocarbons

F1 PHCs (C6-C10)	25 ug/L	<25	<25	-	-	-	-
F2 PHCs (C10-C16)	100 ug/L	<100	<100	-	-	-	-
F3 PHCs (C16-C34)	100 ug/L	<100	<100	-	-	-	-
F4 PHCs (C34-C50)	100 ug/L	<100	<100	-	-	-	-

Certificate of Analysis

Report Date: 31-Jul-2025

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

Order Date: 29-Jul-2025

Client PO: 63688

Project Description: PE7169

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					
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					

Certificate of Analysis

Report Date: 31-Jul-2025

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

Order Date: 29-Jul-2025

Client PO: 63688

Project Description: PE7169

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
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					
<i>Surrogate: 4-Bromofluorobenzene</i>	85.7		%	107	50-140			
<i>Surrogate: Dibromofluoromethane</i>	92.0		%	115	50-140			
<i>Surrogate: Toluene-d8</i>	88.2		%	110	50-140			

Certificate of Analysis

Report Date: 31-Jul-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 29-Jul-2025

Client PO: 63688

Project Description: PE7169

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	
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	

Certificate of Analysis

Report Date: 31-Jul-2025

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

Order Date: 29-Jul-2025

Client PO: 63688

Project Description: PE7169

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
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	
o-Xylene	ND	0.5	ug/L	ND			NC	30	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>86.1</i>		<i>%</i>		<i>108</i>	<i>50-140</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>87.1</i>		<i>%</i>		<i>109</i>	<i>50-140</i>			
<i>Surrogate: Toluene-d8</i>	<i>82.7</i>		<i>%</i>		<i>103</i>	<i>50-140</i>			

Certificate of Analysis

Report Date: 31-Jul-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 29-Jul-2025

Client PO: 63688

Project Description: PE7169

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	1820	25	ug/L	ND	106	85-115			
F2 PHCs (C10-C16)	1420	100	ug/L	ND	88.8	60-140			
F3 PHCs (C16-C34)	3810	100	ug/L	ND	97.2	60-140			
F4 PHCs (C34-C50)	2300	100	ug/L	ND	92.6	60-140			
Volatiles									
Acetone	79.7	5.0	ug/L	ND	79.7	50-140			
Benzene	38.9	0.5	ug/L	ND	97.3	60-130			
Bromodichloromethane	44.4	0.5	ug/L	ND	111	60-130			
Bromoform	45.3	0.5	ug/L	ND	113	60-130			
Bromomethane	33.1	0.5	ug/L	ND	82.7	50-140			
Carbon Tetrachloride	49.7	0.2	ug/L	ND	124	60-130			
Chlorobenzene	42.0	0.5	ug/L	ND	105	60-130			
Chloroform	40.8	0.5	ug/L	ND	102	60-130			
Dibromochloromethane	49.6	0.5	ug/L	ND	124	60-130			
Dichlorodifluoromethane	44.0	1.0	ug/L	ND	110	50-140			
1,2-Dichlorobenzene	47.2	0.5	ug/L	ND	118	60-130			
1,3-Dichlorobenzene	49.0	0.5	ug/L	ND	122	60-130			
1,4-Dichlorobenzene	47.4	0.5	ug/L	ND	119	60-130			
1,1-Dichloroethane	37.2	0.5	ug/L	ND	93.1	60-130			
1,2-Dichloroethane	36.5	0.5	ug/L	ND	91.2	60-130			
1,1-Dichloroethylene	38.2	0.5	ug/L	ND	95.4	60-130			
cis-1,2-Dichloroethylene	40.8	0.5	ug/L	ND	102	60-130			
trans-1,2-Dichloroethylene	40.4	0.5	ug/L	ND	101	60-130			
1,2-Dichloropropane	41.0	0.5	ug/L	ND	102	60-130			
cis-1,3-Dichloropropylene	47.5	0.5	ug/L	ND	119	60-130			
trans-1,3-Dichloropropylene	46.1	0.5	ug/L	ND	115	60-130			
Ethylbenzene	35.8	0.5	ug/L	ND	89.6	60-130			
Ethylene dibromide (dibromoethane, 1,2-)	45.9	0.2	ug/L	ND	115	60-130			
Hexane	33.5	1.0	ug/L	ND	83.6	60-130			
Methyl Ethyl Ketone (2-Butanone)	86.7	5.0	ug/L	ND	86.7	50-140			

Certificate of Analysis

Report Date: 31-Jul-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 29-Jul-2025

Client PO: 63688

Project Description: PE7169

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Methyl Isobutyl Ketone	114	5.0	ug/L	ND	114	50-140			
Methyl tert-butyl ether	84.0	2.0	ug/L	ND	84.0	50-140			
Methylene Chloride	41.7	5.0	ug/L	ND	104	60-130			
Styrene	44.8	0.5	ug/L	ND	112	60-130			
1,1,1,2-Tetrachloroethane	50.5	0.5	ug/L	ND	126	60-130			
1,1,1,2,2-Tetrachloroethane	45.0	0.5	ug/L	ND	113	60-130			
Tetrachloroethylene	44.0	0.5	ug/L	ND	110	60-130			
Toluene	38.4	0.5	ug/L	ND	95.9	60-130			
1,1,1-Trichloroethane	45.8	0.5	ug/L	ND	115	60-130			
1,1,2-Trichloroethane	42.9	0.5	ug/L	ND	107	60-130			
Trichloroethylene	42.9	0.5	ug/L	ND	107	60-130			
Trichlorofluoromethane	37.6	1.0	ug/L	ND	94.1	60-130			
Vinyl chloride	30.4	0.5	ug/L	ND	76.0	50-140			
m,p-Xylenes	80.1	0.5	ug/L	ND	100	60-130			
o-Xylene	38.0	0.5	ug/L	ND	95.0	60-130			
Surrogate: 4-Bromofluorobenzene	81.4		%		102	50-140			
Surrogate: Dibromofluoromethane	97.5		%		122	50-140			
Surrogate: Toluene-d8	80.6		%		101	50-140			

Certificate of Analysis

Report Date: 31-Jul-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 29-Jul-2025

Client PO: 63688

Project Description: PE7169

Qualifier Notes:

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 liability 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.



Parcel ID: 2531178



Parcel Order Number
(Lab Use Only)
2531178

Chain Of Custody
(Lab Use Only)

Client Name: **Paterson Group**
 Contact Name: **Jesse Andrechek**
 Address: **9 Auriga Dr.**
 Telephone: **(613) 226-7381**

Project Ref: **PE7169**
 Quote #:
 PO #: **63688**
 E-mail: **jandrechek@patersongroup.ca**
cgreen@patersongroup.ca

Page 1 of 1
Turnaround Time
 1 day 3 day
 2 day Regular
 Date Required: _____

REG 153/04 REG 406/19
 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		PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)							
				Date	Time														
1 MW200-GW	GW		3	07/28/2025		X	X												
2 MW300-GW																			
3 MW400-GW																			
4 MW500-GW																			
5 MW600-GW																			
6 MW700-GW																			
7																			
8																			
9																			
10																			

Comments:

Method of Delivery:
Parcel Courier

Relinquished By (Sign): *Amun*
 Relinquished By (Print): **Christopher Green**
 Date/Time: **07/29/2025**

Received By Driver/Depot:
 Date/Time:
 Temperature: _____ °C

Received at Lab: **LTI**
 Date/Time: **29/07/25; 16:50**
 Temperature: **13.7**

Verified By: *[Signature]*
 Date/Time: **30 8/7**
 pH Verified: By: _____

Certificate of Analysis

Paterson Group Consulting Engineers (Ottawa)

9 Auriga Drive
Ottawa, ON K2E 7T9
Attn: Jesse Andrechek

Client PO: 63745
Project: PE7169
Custody:

Report Date: 11-Aug-2025
Order Date: 6-Aug-2025

Order #: 2532227

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

Parcel ID	Client ID
2532227-01	BH1-25-SS2A
2532227-02	BH1-25-SS7
2532227-03	BH2-25-AU1
2532227-04	BH2-25-SS8
2532227-05	BH3-25-AU1
2532227-06	BH3-25-SS8
2532227-07	BH4-25-SS2
2532227-08	BH4-25-SS8
2532227-09	DUP1

Approved By:

A. Tuzca

Adriana Tirca, B.Eng (Chem)

Supervisor

Certificate of Analysis

Report Date: 11-Aug-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 6-Aug-2025

Client PO: 63745

Project Description: PE7169

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Chromium, hexavalent - soil	MOE E3056 - Extraction, colourimetric	8-Aug-25	8-Aug-25
Conductivity	MOE E3138 - probe @25 °C, water ext	8-Aug-25	8-Aug-25
Mercury by CVAA	EPA 7471B - CVAA, digestion	8-Aug-25	8-Aug-25
PCBs, total	SW846 8082A - GC-ECD	8-Aug-25	8-Aug-25
pH, soil	MOE E3137 - probe @25 °C, CaCl2 ext	8-Aug-25	8-Aug-25
PHC F1	CWS Tier 1 - P&T GC-FID	7-Aug-25	8-Aug-25
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	8-Aug-25	8-Aug-25
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	8-Aug-25	8-Aug-25
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	8-Aug-25	8-Aug-25
REG 153: VOCs by P&T GC/MS	EPA 8260 - P&T GC-MS	7-Aug-25	8-Aug-25
SAR	Calculated	8-Aug-25	8-Aug-25
Solids, %	CWS Tier 1 - Gravimetric	7-Aug-25	8-Aug-25

Certificate of Analysis

Report Date: 11-Aug-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 6-Aug-2025

Client PO: 63745

Project Description: PE7169

Client ID:	BH1-25-SS2A	BH1-25-SS7	BH2-25-AU1	BH2-25-SS8	-	-
Sample Date:	01-Aug-25 09:00	01-Aug-25 09:00	01-Aug-25 09:00	01-Aug-25 09:00	-	-
Sample ID:	2532227-01	2532227-02	2532227-03	2532227-04	-	-
Matrix:	Soil	Soil	Soil	Soil	-	-
MDL/Units						

Physical Characteristics

% Solids	0.1 % by Wt.	87.4	68.8	95.8	67.5	-	-
----------	--------------	------	------	------	------	---	---

General Inorganics

SAR	0.01 N/A	39.3	12.7	2.82	-	-	-
Conductivity	5 uS/cm	3860	6460	1320	-	-	-
pH	0.05 pH Units	7.90	-	-	7.88	-	-

Metals

Antimony	1.0 ug/g	<1.0	<1.0	<1.0	-	-	-
Arsenic	1.0 ug/g	1.8	2.5	2.8	-	-	-
Barium	1.0 ug/g	49.8	194	116	-	-	-
Beryllium	0.5 ug/g	<0.5	0.5	<0.5	-	-	-
Boron	5.0 ug/g	6.1	<5.0	18.4	-	-	-
Cadmium	0.5 ug/g	<0.5	<0.5	<0.5	-	-	-
Chromium (VI)	0.2 ug/g	0.4	-	<0.2	-	-	-
Chromium	5.0 ug/g	23.2	46.0	27.1	-	-	-
Cobalt	1.0 ug/g	6.3	11.8	6.5	-	-	-
Copper	5.0 ug/g	10.9	24.2	13.4	-	-	-
Lead	1.0 ug/g	20.4	4.4	5.5	-	-	-
Mercury	0.1 ug/g	<0.1	-	<0.1	-	-	-
Molybdenum	1.0 ug/g	<1.0	<1.0	<1.0	-	-	-
Nickel	5.0 ug/g	12.6	25.2	13.3	-	-	-
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	28.8	64.5	21.5	-	-	-

Certificate of Analysis

Report Date: 11-Aug-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 6-Aug-2025

Client PO: 63745

Project Description: PE7169

Client ID:	BH1-25-SS2A	BH1-25-SS7	BH2-25-AU1	BH2-25-SS8	-	-
Sample Date:	01-Aug-25 09:00	01-Aug-25 09:00	01-Aug-25 09:00	01-Aug-25 09:00	-	-
Sample ID:	2532227-01	2532227-02	2532227-03	2532227-04	-	-
Matrix:	Soil	Soil	Soil	Soil	-	-
MDL/Units						

Metals

Zinc	20.0 ug/g	40.8	68.5	<20.0	-	-
------	-----------	------	------	-------	---	---

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	-	-
Ethylene dibromide (dibromoethane,	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-

Certificate of Analysis

Report Date: 11-Aug-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 6-Aug-2025

Client PO: 63745

Project Description: PE7169

Client ID:	BH1-25-SS2A	BH1-25-SS7	BH2-25-AU1	BH2-25-SS8	-	-
Sample Date:	01-Aug-25 09:00	01-Aug-25 09:00	01-Aug-25 09:00	01-Aug-25 09:00	-	-
Sample ID:	2532227-01	2532227-02	2532227-03	2532227-04	-	-
Matrix:	Soil	Soil	Soil	Soil	-	-
MDL/Units						

Volatiles

Ethylbenzene	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	-	-
Dibromofluoromethane	Surrogate	69.4%	77.5%	67.3%	76.5%	-	-
Toluene-d8	Surrogate	114%	124%	109%	125%	-	-
4-Bromofluorobenzene	Surrogate	95.5%	104%	88.9%	105%	-	-

Hydrocarbons

F1 PHCs (C6-C10)	7 ug/g	<7	<7	<7	<7	-	-
F2 PHCs (C10-C16)	4 ug/g	<4	<4	<4	<4	-	-

Certificate of Analysis

Report Date: 11-Aug-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 6-Aug-2025

Client PO: 63745

Project Description: PE7169

Client ID:	BH1-25-SS2A	BH1-25-SS7	BH2-25-AU1	BH2-25-SS8	-	-
Sample Date:	01-Aug-25 09:00	01-Aug-25 09:00	01-Aug-25 09:00	01-Aug-25 09:00	-	-
Sample ID:	2532227-01	2532227-02	2532227-03	2532227-04	-	-
Matrix:	Soil	Soil	Soil	Soil	-	-
MDL/Units						

Hydrocarbons

F3 PHCs (C16-C34)	8 ug/g	32	<8	16	<8	-	-
F4 PHCs (C34-C50)	6 ug/g	45	<6	24	<6	-	-

Semi-Volatiles

Acenaphthene	0.02 ug/g	<0.02	-	<0.02	-	-	-
Acenaphthylene	0.02 ug/g	<0.02	-	<0.02	-	-	-
Anthracene	0.02 ug/g	<0.02	-	<0.02	-	-	-
Benzo [a] anthracene	0.02 ug/g	<0.02	-	<0.02	-	-	-
Benzo [a] pyrene	0.02 ug/g	<0.02	-	<0.02	-	-	-
Benzo [b] fluoranthene	0.02 ug/g	<0.02	-	<0.02	-	-	-
Benzo [g,h,i] perylene	0.02 ug/g	<0.02	-	<0.02	-	-	-
Benzo [k] fluoranthene	0.02 ug/g	<0.02	-	<0.02	-	-	-
Chrysene	0.02 ug/g	<0.02	-	<0.02	-	-	-
Dibenzo [a,h] anthracene	0.02 ug/g	<0.02	-	<0.02	-	-	-
Fluoranthene	0.02 ug/g	<0.02	-	<0.02	-	-	-
Fluorene	0.02 ug/g	<0.02	-	<0.02	-	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g	<0.02	-	<0.02	-	-	-
1-Methylnaphthalene	0.02 ug/g	<0.02	-	<0.02	-	-	-
2-Methylnaphthalene	0.02 ug/g	<0.02	-	<0.02	-	-	-
Methylnaphthalene (1&2)	0.04 ug/g	<0.04	-	<0.04	-	-	-
Naphthalene	0.01 ug/g	<0.01	-	<0.01	-	-	-
Phenanthrene	0.02 ug/g	<0.02	-	<0.02	-	-	-
Pyrene	0.02 ug/g	<0.02	-	<0.02	-	-	-
2-Fluorobiphenyl	Surrogate	54.6%	-	73.9%	-	-	-
Terphenyl-d14	Surrogate	68.2%	-	74.7%	-	-	-

PCBs

Certificate of Analysis

Report Date: 11-Aug-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 6-Aug-2025

Client PO: 63745

Project Description: PE7169

Client ID:	BH1-25-SS2A	BH1-25-SS7	BH2-25-AU1	BH2-25-SS8	-	-
Sample Date:	01-Aug-25 09:00	01-Aug-25 09:00	01-Aug-25 09:00	01-Aug-25 09:00	-	-
Sample ID:	2532227-01	2532227-02	2532227-03	2532227-04	-	-
Matrix:	Soil	Soil	Soil	Soil	-	-
MDL/Units						

PCBs

PCBs, total	0.05 ug/g	-	<0.05	-	-	-	-
Decachlorobiphenyl	Surrogate	-	124%	-	-	-	-

Certificate of Analysis

Report Date: 11-Aug-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 6-Aug-2025

Client PO: 63745

Project Description: PE7169

Client ID:	BH3-25-AU1	BH3-25-SS8	BH4-25-SS2	BH4-25-SS8	-	-
Sample Date:	01-Aug-25 09:00	01-Aug-25 09:00	01-Aug-25 09:00	01-Aug-25 09:00	-	-
Sample ID:	2532227-05	2532227-06	2532227-07	2532227-08	-	-
Matrix:	Soil	Soil	Soil	Soil	-	-
MDL/Units						

Physical Characteristics

% Solids	0.1 % by Wt.	88.8	68.6	87.5	72.8	-	-
----------	--------------	------	------	------	------	---	---

General Inorganics

SAR	0.01 N/A	0.97	-	0.26	-	-	-
Conductivity	5 uS/cm	393	-	187	-	-	-
pH	0.05 pH Units	-	7.91	7.52	-	-	-

Metals

Antimony	1.0 ug/g	<1.0	-	<1.0	-	-	-
Arsenic	1.0 ug/g	2.6	-	1.9	-	-	-
Barium	1.0 ug/g	116	-	92.4	-	-	-
Beryllium	0.5 ug/g	0.5	-	<0.5	-	-	-
Boron	5.0 ug/g	<5.0	-	<5.0	-	-	-
Cadmium	0.5 ug/g	<0.5	-	<0.5	-	-	-
Chromium (VI)	0.2 ug/g	<0.2	-	0.3	-	-	-
Chromium	5.0 ug/g	30.3	-	27.4	-	-	-
Cobalt	1.0 ug/g	7.9	-	7.5	-	-	-
Copper	5.0 ug/g	16.1	-	12.9	-	-	-
Lead	1.0 ug/g	6.7	-	9.3	-	-	-
Mercury	0.1 ug/g	<0.1	-	<0.1	-	-	-
Molybdenum	1.0 ug/g	<1.0	-	<1.0	-	-	-
Nickel	5.0 ug/g	16.9	-	14.9	-	-	-
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	41.9	-	39.3	-	-	-

Certificate of Analysis

Report Date: 11-Aug-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 6-Aug-2025

Client PO: 63745

Project Description: PE7169

Client ID:	BH3-25-AU1	BH3-25-SS8	BH4-25-SS2	BH4-25-SS8	-	-
Sample Date:	01-Aug-25 09:00	01-Aug-25 09:00	01-Aug-25 09:00	01-Aug-25 09:00	-	-
Sample ID:	2532227-05	2532227-06	2532227-07	2532227-08	-	-
Matrix:	Soil	Soil	Soil	Soil	-	-
MDL/Units						

Metals

Zinc	20.0 ug/g	48.9	-	40.7	-	-
------	-----------	------	---	------	---	---

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	-	-
Ethylene dibromide (dibromoethane,	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-

Certificate of Analysis

Report Date: 11-Aug-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 6-Aug-2025

Client PO: 63745

Project Description: PE7169

Client ID:	BH3-25-AU1	BH3-25-SS8	BH4-25-SS2	BH4-25-SS8	-	-
Sample Date:	01-Aug-25 09:00	01-Aug-25 09:00	01-Aug-25 09:00	01-Aug-25 09:00	-	-
Sample ID:	2532227-05	2532227-06	2532227-07	2532227-08	-	-
Matrix:	Soil	Soil	Soil	Soil	-	-
MDL/Units						

Volatiles

Ethylbenzene	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	92.6%	105%	94.4%	103%	-	-
Toluene-d8	Surrogate	112%	127%	116%	121%	-	-
Dibromofluoromethane	Surrogate	67.1%	76.0%	70.1%	75.2%	-	-

Hydrocarbons

F1 PHCs (C6-C10)	7 ug/g	<7	<7	<7	<7	-	-
F2 PHCs (C10-C16)	4 ug/g	<4	<4	<4	<4	-	-

Certificate of Analysis

Report Date: 11-Aug-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 6-Aug-2025

Client PO: 63745

Project Description: PE7169

Client ID:	BH3-25-AU1	BH3-25-SS8	BH4-25-SS2	BH4-25-SS8	-	-
Sample Date:	01-Aug-25 09:00	01-Aug-25 09:00	01-Aug-25 09:00	01-Aug-25 09:00	-	-
Sample ID:	2532227-05	2532227-06	2532227-07	2532227-08	-	-
Matrix:	Soil	Soil	Soil	Soil	-	-
MDL/Units						

Hydrocarbons

F3 PHCs (C16-C34)	8 ug/g	14 [1]	<8	<8	<8	-	-
F4 PHCs (C34-C50)	6 ug/g	11 [1]	<6	<6	<6	-	-

Semi-Volatiles

Acenaphthene	0.02 ug/g	<0.02	-	<0.02	-	-	-
Acenaphthylene	0.02 ug/g	<0.02	-	<0.02	-	-	-
Anthracene	0.02 ug/g	<0.02	-	<0.02	-	-	-
Benzo [a] anthracene	0.02 ug/g	<0.02	-	<0.02	-	-	-
Benzo [a] pyrene	0.02 ug/g	<0.02	-	<0.02	-	-	-
Benzo [b] fluoranthene	0.02 ug/g	<0.02	-	<0.02	-	-	-
Benzo [g,h,i] perylene	0.02 ug/g	<0.02	-	<0.02	-	-	-
Benzo [k] fluoranthene	0.02 ug/g	<0.02	-	<0.02	-	-	-
Chrysene	0.02 ug/g	<0.02	-	<0.02	-	-	-
Dibenzo [a,h] anthracene	0.02 ug/g	<0.02	-	<0.02	-	-	-
Fluoranthene	0.02 ug/g	<0.02	-	<0.02	-	-	-
Fluorene	0.02 ug/g	<0.02	-	<0.02	-	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g	<0.02	-	<0.02	-	-	-
1-Methylnaphthalene	0.02 ug/g	<0.02	-	<0.02	-	-	-
2-Methylnaphthalene	0.02 ug/g	<0.02	-	<0.02	-	-	-
Methylnaphthalene (1&2)	0.04 ug/g	<0.04	-	<0.04	-	-	-
Naphthalene	0.01 ug/g	<0.01	-	<0.01	-	-	-
Phenanthrene	0.02 ug/g	<0.02	-	<0.02	-	-	-
Pyrene	0.02 ug/g	<0.02	-	<0.02	-	-	-
2-Fluorobiphenyl	Surrogate	67.8%	-	96.9%	-	-	-
Terphenyl-d14	Surrogate	78.4%	-	77.6%	-	-	-

PCBs

Certificate of Analysis

Report Date: 11-Aug-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 6-Aug-2025

Client PO: 63745

Project Description: PE7169

Client ID:	BH3-25-AU1	BH3-25-SS8	BH4-25-SS2	BH4-25-SS8	-	-
Sample Date:	01-Aug-25 09:00	01-Aug-25 09:00	01-Aug-25 09:00	01-Aug-25 09:00	-	-
Sample ID:	2532227-05	2532227-06	2532227-07	2532227-08	-	-
Matrix:	Soil	Soil	Soil	Soil	-	-
MDL/Units						

PCBs

PCBs, total	0.05 ug/g	-	<0.05	-	-	-	-
Decachlorobiphenyl	Surrogate	-	132%	-	-	-	-

Certificate of Analysis

Report Date: 11-Aug-2025

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

Order Date: 6-Aug-2025

Client PO: 63745

Project Description: PE7169

Client ID:	DUP1					
Sample Date:	01-Aug-25 09:00					
Sample ID:	2532227-09					
Matrix:	Soil					
MDL/Units						

Physical Characteristics

% Solids	0.1 % by Wt.	71.1	-	-	-	-
----------	--------------	------	---	---	---	---

Volatiles

Acetone	0.50 ug/g	<0.50	-	-	-	-
Benzene	0.02 ug/g	<0.02	-	-	-	-
Bromodichloromethane	0.05 ug/g	<0.05	-	-	-	-
Bromoform	0.05 ug/g	<0.05	-	-	-	-
Bromomethane	0.05 ug/g	<0.05	-	-	-	-
Carbon Tetrachloride	0.05 ug/g	<0.05	-	-	-	-
Chlorobenzene	0.05 ug/g	<0.05	-	-	-	-
Chloroform	0.05 ug/g	<0.05	-	-	-	-
Dibromochloromethane	0.05 ug/g	<0.05	-	-	-	-
Dichlorodifluoromethane	0.05 ug/g	<0.05	-	-	-	-
1,2-Dichlorobenzene	0.05 ug/g	<0.05	-	-	-	-
1,3-Dichlorobenzene	0.05 ug/g	<0.05	-	-	-	-
1,4-Dichlorobenzene	0.05 ug/g	<0.05	-	-	-	-
1,1-Dichloroethane	0.05 ug/g	<0.05	-	-	-	-
1,2-Dichloroethane	0.05 ug/g	<0.05	-	-	-	-
1,1-Dichloroethylene	0.05 ug/g	<0.05	-	-	-	-
cis-1,2-Dichloroethylene	0.05 ug/g	<0.05	-	-	-	-
trans-1,2-Dichloroethylene	0.05 ug/g	<0.05	-	-	-	-
1,2-Dichloropropane	0.05 ug/g	<0.05	-	-	-	-
cis-1,3-Dichloropropylene	0.05 ug/g	<0.05	-	-	-	-
trans-1,3-Dichloropropylene	0.05 ug/g	<0.05	-	-	-	-
1,3-Dichloropropene, total	0.05 ug/g	<0.05	-	-	-	-
Ethylene dibromide (dibromoethane,	0.05 ug/g	<0.05	-	-	-	-

Certificate of Analysis

Report Date: 11-Aug-2025

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

Order Date: 6-Aug-2025

Client PO: 63745

Project Description: PE7169

Client ID:	DUP1					
Sample Date:	01-Aug-25 09:00					
Sample ID:	2532227-09					
Matrix:	Soil					
MDL/Units						

Volatiles

Ethylbenzene	0.05 ug/g	<0.05	-	-	-	-
Hexane	0.05 ug/g	<0.05	-	-	-	-
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g	<0.50	-	-	-	-
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	-	-	-	-
1,1,1,2,2-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	-	-	-	-
Toluene-d8	Surrogate	122%	-	-	-	-
Dibromofluoromethane	Surrogate	76.2%	-	-	-	-
4-Bromofluorobenzene	Surrogate	104%	-	-	-	-

Hydrocarbons

F1 PHCs (C6-C10)	7 ug/g	<7	-	-	-	-
F2 PHCs (C10-C16)	4 ug/g	<4	-	-	-	-

Certificate of Analysis

Report Date: 11-Aug-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 6-Aug-2025

Client PO: 63745

Project Description: PE7169

Client ID:	DUP1					
Sample Date:	01-Aug-25 09:00				-	-
Sample ID:	2532227-09					
Matrix:	Soil					
MDL/Units						

Hydrocarbons

F3 PHCs (C16-C34)	8 ug/g	<8	-	-	-	-
F4 PHCs (C34-C50)	6 ug/g	<6	-	-	-	-

Certificate of Analysis

Report Date: 11-Aug-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 6-Aug-2025

Client PO: 63745

Project Description: PE7169

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	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	0.0549		%	110	60-140			
Semi-Volatiles								
Acenaphthene	ND	0.02	ug/g					

Certificate of Analysis

Report Date: 11-Aug-2025

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

Order Date: 6-Aug-2025

Client PO: 63745

Project Description: PE7169

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
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					
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>0.846</i>		%	<i>63.5</i>	<i>50-140</i>			
<i>Surrogate: Terphenyl-d14</i>	<i>1.06</i>		%	<i>79.5</i>	<i>50-140</i>			
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					

Certificate of Analysis

Report Date: 11-Aug-2025

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

Order Date: 6-Aug-2025

Client PO: 63745

Project Description: PE7169

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
1,3-Dichlorobenzene	ND	0.05	ug/g					
1,4-Dichlorobenzene	ND	0.05	ug/g					
1,1-Dichloroethane	ND	0.05	ug/g					
1,2-Dichloroethane	ND	0.05	ug/g					
1,1-Dichloroethylene	ND	0.05	ug/g					
cis-1,2-Dichloroethylene	ND	0.05	ug/g					
trans-1,2-Dichloroethylene	ND	0.05	ug/g					
1,2-Dichloropropane	ND	0.05	ug/g					
cis-1,3-Dichloropropylene	ND	0.05	ug/g					
trans-1,3-Dichloropropylene	ND	0.05	ug/g					
1,3-Dichloropropene, total	ND	0.05	ug/g					
Ethylbenzene	ND	0.05	ug/g					
Ethylene dibromide (dibromoethane, 1,2-)	ND	0.05	ug/g					
Hexane	ND	0.05	ug/g					
Methyl Ethyl Ketone (2-Butanone)	ND	0.50	ug/g					
Methyl Isobutyl Ketone	ND	0.50	ug/g					
Methyl tert-butyl ether	ND	0.05	ug/g					
Methylene Chloride	ND	0.05	ug/g					
Styrene	ND	0.05	ug/g					
1,1,1,2-Tetrachloroethane	ND	0.05	ug/g					
1,1,2,2-Tetrachloroethane	ND	0.05	ug/g					
Tetrachloroethylene	ND	0.05	ug/g					
Toluene	ND	0.05	ug/g					
1,1,1-Trichloroethane	ND	0.05	ug/g					
1,1,2-Trichloroethane	ND	0.05	ug/g					
Trichloroethylene	ND	0.05	ug/g					
Trichlorofluoromethane	ND	0.05	ug/g					
Vinyl chloride	ND	0.02	ug/g					
m,p-Xylenes	ND	0.05	ug/g					
o-Xylene	ND	0.05	ug/g					
Xylenes, total	ND	0.05	ug/g					
Surrogate: 4-Bromofluorobenzene	7.50		%	93.8	50-140			

Certificate of Analysis

Report Date: 11-Aug-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 6-Aug-2025

Client PO: 63745

Project Description: PE7169

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: Dibromofluoromethane	5.40		%	67.4	50-140			
Surrogate: Toluene-d8	8.32		%	104	50-140			

Certificate of Analysis

Report Date: 11-Aug-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 6-Aug-2025

Client PO: 63745

Project Description: PE7169

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
SAR	41.4	0.01	N/A	39.3			5.1	30	
Conductivity	3900	5	uS/cm	3860			0.9	5	
pH	7.78	0.05	pH Units	7.74			0.5	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	2.2	1.0	ug/g	1.8			21.3	30	
Barium	58.5	1.0	ug/g	49.8			16.1	30	
Beryllium	ND	0.5	ug/g	ND			NC	30	
Boron	7.2	5.0	ug/g	6.1			16.1	30	
Cadmium	ND	0.5	ug/g	ND			NC	30	
Chromium (VI)	ND	0.2	ug/g	ND			NC	35	
Chromium	26.4	5.0	ug/g	23.2			12.6	30	
Cobalt	7.0	1.0	ug/g	6.3			10.0	30	
Copper	12.1	5.0	ug/g	10.9			10.5	30	
Lead	25.0	1.0	ug/g	20.4			20.2	30	
Mercury	ND	0.1	ug/g	ND			NC	30	
Molybdenum	ND	1.0	ug/g	ND			NC	30	
Nickel	14.3	5.0	ug/g	12.6			12.9	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	31.9	10.0	ug/g	28.8			10.3	30	
Zinc	48.5	20.0	ug/g	40.8			17.3	30	

PCBs

Certificate of Analysis

Report Date: 11-Aug-2025

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

Order Date: 6-Aug-2025

Client PO: 63745

Project Description: PE7169

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
PCBs, total	ND	0.05	ug/g	ND			NC	40	
<i>Surrogate: Decachlorobiphenyl</i>	<i>0.0919</i>		%		<i>127</i>	<i>60-140</i>			
Physical Characteristics									
% Solids	75.3	0.1	% by Wt.	77.4			2.8	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	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>0.813</i>		%		<i>53.3</i>	<i>50-140</i>			
<i>Surrogate: Terphenyl-d14</i>	<i>1.01</i>		%		<i>66.3</i>	<i>50-140</i>			
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	

Certificate of Analysis

Report Date: 11-Aug-2025

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

Order Date: 6-Aug-2025

Client PO: 63745

Project Description: PE7169

Method Quality Control: Duplicate

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

Certificate of Analysis

Report Date: 11-Aug-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 6-Aug-2025

Client PO: 63745

Project Description: PE7169

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Trichlorofluoromethane	ND	0.05	ug/g	ND			NC	50	
Vinyl chloride	ND	0.02	ug/g	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g	ND			NC	50	
o-Xylene	ND	0.05	ug/g	ND			NC	50	
Surrogate: 4-Bromofluorobenzene	8.39		%		92.8	50-140			
Surrogate: Dibromofluoromethane	6.22		%		68.9	50-140			
Surrogate: Toluene-d8	10.2		%		113	50-140			

Certificate of Analysis

Report Date: 11-Aug-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 6-Aug-2025

Client PO: 63745

Project Description: PE7169

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	165	7	ug/g	ND	95.9	85-115			
F2 PHCs (C10-C16)	99	4	ug/g	ND	109	60-140			
F3 PHCs (C16-C34)	253	8	ug/g	ND	114	60-140			
F4 PHCs (C34-C50)	157	6	ug/g	ND	112	60-140			
Metals									
Antimony	21.4	1.0	ug/g	ND	42.8	70-130			
Arsenic	61.6	1.0	ug/g	ND	122	70-130			
Barium	84.2	1.0	ug/g	19.9	129	70-130			
Beryllium	60.7	0.5	ug/g	ND	121	70-130			
Boron	59.0	5.0	ug/g	ND	113	70-130			
Cadmium	58.8	0.5	ug/g	ND	118	70-130			
Chromium (VI)	4.1	0.2	ug/g	ND	66.0	48-112			
Chromium	77.2	5.0	ug/g	9.3	136	70-130			QM-07
Cobalt	65.1	1.0	ug/g	2.5	125	70-130			
Copper	65.3	5.0	ug/g	ND	122	70-130			
Lead	70.4	1.0	ug/g	8.2	124	70-130			
Mercury	1.36	0.1	ug/g	ND	90.7	70-130			
Molybdenum	62.6	1.0	ug/g	ND	125	70-130			
Nickel	67.6	5.0	ug/g	5.0	125	70-130			
Selenium	58.0	1.0	ug/g	ND	116	70-130			
Silver	48.4	0.3	ug/g	ND	96.8	70-130			
Thallium	54.5	1.0	ug/g	ND	109	70-130			
Uranium	66.6	1.0	ug/g	ND	133	70-130			QM-07
Vanadium	79.6	10.0	ug/g	11.5	136	70-130			QM-07
Zinc	75.8	20.0	ug/g	ND	119	70-130			
PCBs									
PCBs, total	0.523	0.05	ug/g	ND	90.0	60-140			
<i>Surrogate: Decachlorobiphenyl</i>	<i>0.0880</i>		%		<i>121</i>	<i>60-140</i>			
Semi-Volatiles									
Acenaphthene	0.159	0.02	ug/g	ND	83.2	50-140			

Certificate of Analysis

Report Date: 11-Aug-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 6-Aug-2025

Client PO: 63745

Project Description: PE7169

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Acenaphthylene	0.151	0.02	ug/g	ND	79.5	50-140			
Anthracene	0.143	0.02	ug/g	ND	75.0	50-140			
Benzo [a] anthracene	0.150	0.02	ug/g	ND	78.5	50-140			
Benzo [a] pyrene	0.218	0.02	ug/g	ND	115	50-140			
Benzo [b] fluoranthene	0.169	0.02	ug/g	ND	88.8	50-140			
Benzo [g,h,i] perylene	0.163	0.02	ug/g	ND	85.6	50-140			
Benzo [k] fluoranthene	0.158	0.02	ug/g	ND	83.1	50-140			
Chrysene	0.163	0.02	ug/g	ND	85.4	50-140			
Dibenzo [a,h] anthracene	0.156	0.02	ug/g	ND	82.0	50-140			
Fluoranthene	0.167	0.02	ug/g	ND	87.5	50-140			
Fluorene	0.150	0.02	ug/g	ND	78.9	50-140			
Indeno [1,2,3-cd] pyrene	0.174	0.02	ug/g	ND	91.2	50-140			
1-Methylnaphthalene	0.118	0.02	ug/g	ND	61.9	50-140			
2-Methylnaphthalene	0.117	0.02	ug/g	ND	61.5	50-140			
Naphthalene	0.117	0.01	ug/g	ND	61.3	50-140			
Phenanthrene	0.165	0.02	ug/g	ND	86.7	50-140			
Pyrene	0.169	0.02	ug/g	ND	88.5	50-140			
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>0.970</i>		%		<i>63.6</i>	<i>50-140</i>			
<i>Surrogate: Terphenyl-d14</i>	<i>1.17</i>		%		<i>76.8</i>	<i>50-140</i>			
Volatiles									
Acetone	8.27	0.50	ug/g	ND	82.7	50-140			
Benzene	3.82	0.02	ug/g	ND	95.5	60-130			
Bromodichloromethane	3.04	0.05	ug/g	ND	75.9	60-130			
Bromoform	3.73	0.05	ug/g	ND	93.2	60-130			
Bromomethane	4.01	0.05	ug/g	ND	100	50-140			
Carbon Tetrachloride	3.38	0.05	ug/g	ND	84.5	60-130			
Chlorobenzene	4.56	0.05	ug/g	ND	114	60-130			
Chloroform	3.52	0.05	ug/g	ND	88.1	60-130			
Dibromochloromethane	3.80	0.05	ug/g	ND	95.0	60-130			
Dichlorodifluoromethane	4.81	0.05	ug/g	ND	120	50-140			
1,2-Dichlorobenzene	4.31	0.05	ug/g	ND	108	60-130			

Certificate of Analysis

Report Date: 11-Aug-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 6-Aug-2025

Client PO: 63745

Project Description: PE7169

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
1,3-Dichlorobenzene	4.30	0.05	ug/g	ND	107	60-130			
1,4-Dichlorobenzene	4.19	0.05	ug/g	ND	105	60-130			
1,1-Dichloroethane	3.75	0.05	ug/g	ND	93.8	60-130			
1,2-Dichloroethane	3.77	0.05	ug/g	ND	94.4	60-130			
1,1-Dichloroethylene	3.92	0.05	ug/g	ND	97.9	60-130			
cis-1,2-Dichloroethylene	3.74	0.05	ug/g	ND	93.5	60-130			
trans-1,2-Dichloroethylene	3.67	0.05	ug/g	ND	91.6	60-130			
1,2-Dichloropropane	3.71	0.05	ug/g	ND	92.9	60-130			
cis-1,3-Dichloropropylene	3.03	0.05	ug/g	ND	75.9	60-130			
trans-1,3-Dichloropropylene	2.75	0.05	ug/g	ND	68.8	60-130			
Ethylbenzene	4.24	0.05	ug/g	ND	106	60-130			
Ethylene dibromide (dibromoethane, 1,2-)	3.32	0.05	ug/g	ND	82.9	60-130			
Hexane	3.71	0.05	ug/g	ND	92.8	60-130			
Methyl Ethyl Ketone (2-Butanone)	8.38	0.50	ug/g	ND	83.8	50-140			
Methyl Isobutyl Ketone	8.70	0.50	ug/g	ND	87.0	50-140			
Methyl tert-butyl ether	9.13	0.05	ug/g	ND	91.3	50-140			
Methylene Chloride	4.59	0.05	ug/g	ND	115	60-130			
Styrene	3.94	0.05	ug/g	ND	98.6	60-130			
1,1,1,2-Tetrachloroethane	3.35	0.05	ug/g	ND	83.8	60-130			
1,1,2,2-Tetrachloroethane	3.26	0.05	ug/g	ND	81.5	60-130			
Tetrachloroethylene	4.57	0.05	ug/g	ND	114	60-130			
Toluene	4.36	0.05	ug/g	ND	109	60-130			
1,1,1-Trichloroethane	3.32	0.05	ug/g	ND	83.1	60-130			
1,1,2-Trichloroethane	3.43	0.05	ug/g	ND	85.8	60-130			
Trichloroethylene	3.87	0.05	ug/g	ND	96.8	60-130			
Trichlorofluoromethane	3.85	0.05	ug/g	ND	96.3	50-140			
Vinyl chloride	3.40	0.02	ug/g	ND	85.0	50-140			
m,p-Xylenes	9.22	0.05	ug/g	ND	115	60-130			
o-Xylene	4.43	0.05	ug/g	ND	111	60-130			
Surrogate: 4-Bromofluorobenzene	7.30		%		91.3	50-140			
Surrogate: Dibromofluoromethane	6.11		%		76.4	50-140			

Certificate of Analysis

Report Date: 11-Aug-2025

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

Order Date: 6-Aug-2025

Client PO: 63745

Project Description: PE7169

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
<i>Surrogate: Toluene-d8</i>	8.45		%		106	50-140			

Certificate of Analysis

Report Date: 11-Aug-2025

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

Order Date: 6-Aug-2025

Client PO: 63745

Project Description: PE7169

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.

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

Certificate of Analysis

Report Date: 11-Aug-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 6-Aug-2025

Client PO: 63745

Project Description: PE7169

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 unless 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 liability 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.



91 Blvd.
G 4JB
xbs.com
xm

Parcel Order Number
(Lab Use Only)

2532227

Chain Of Custody
(Lab Use Only)

Client Name: Paterson Group	Project Ref: PE7169	Page 1 of 1
Contact Name: Jesse Andrechek	Quote #:	Turnaround Time <input type="checkbox"/> 1 day <input type="checkbox"/> 3 day <input type="checkbox"/> 2 day <input checked="" type="checkbox"/> Regular
Address: 9 Auriga Drive, Ottawa	PO #: 63745	
Telephone: 613-226-7381	E-mail: jandrechek@hotmail.com	
Date Required: _____		

<input checked="" type="checkbox"/> REG 153/04 <input type="checkbox"/> REG 406/19		Other Regulation <input type="checkbox"/> REG 558 <input type="checkbox"/> PWQO <input type="checkbox"/> CCME <input type="checkbox"/> MISA <input type="checkbox"/> SU - Sani <input type="checkbox"/> SU - Storm Mun: _____ <input type="checkbox"/> Other: _____		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)		Required Analysis									
<input type="checkbox"/> Table 1 <input type="checkbox"/> Agri/Other <input type="checkbox"/> Med/Fine <input type="checkbox"/> Table 2 <input type="checkbox"/> Res/Park <input checked="" type="checkbox"/> Coarse <input checked="" type="checkbox"/> Table 3 <input checked="" type="checkbox"/> Ind/Comm <input type="checkbox"/> Table _____ For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No				Sample Taken Date Time		PHCs F1-F4+BTEX	VOCS	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	EC / SAR	pH	PCBs
Sample ID/Location Name		Matrix	Air Volume	# of Containers	Field Filtered										
1	BH1-25-SS2A	S		2		1-AUG/25			X	X	X	X	X	X	
2	BH1-25-SS7								X	X			X		X
3	BH2-25-AU1								X	X	X		X		
4	BH2-25-SS8								X	X				X	
5	BH3-25-AU1								X	X	X		X		
6	BH3-25-SS8								X	X				X	X
7	BH4-25-SS2								X	X	X		X	X	
8	BH4-25-SS8								X	X					
9	DUP1	✓		✓					X	X					
10															

Comments:		Method of Delivery: Parcel Courier	
Relinquished By (Sign): <i>J. Andrechek</i>	Received at Depot:	Received at Lab: <i>JAN</i>	Verified By: <i>SP</i>
Relinquished By (Print): Jesse Andrechek	Date/Time:	Date/Time: <i>Aug 6/25 16:17</i>	Date/Time: <i>Aug 7, 2025 11:50 am</i>
Date/Time: <i>6-AUG/25</i>	Temperature: _____ °C	Temperature: <i>16.2</i>	pH Verified: <input type="checkbox"/> By: _____

Certificate of Analysis

Paterson Group Consulting Engineers (Ottawa)

9 Auriga Drive
Ottawa, ON K2E 7T9
Attn: Jesse Andrechek

Client PO: 63768
Project: PE7169
Custody:

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

Order #: 2532396

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

Parcel ID	Client ID
2532396-01	BH1-25-GW
2532396-02	BH2-25-GW
2532396-03	BH3-25-GW
2532396-04	BH4-25-GW
2532396-05	DUP-1

Approved By:



Adriana Tirca, B.Eng (Chem)

Supervisor

Certificate of Analysis

Report Date: 14-Aug-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 8-Aug-2025

Client PO: 63768

Project Description: PE7169

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
PCBs, total	EPA 608 - GC-ECD	12-Aug-25	13-Aug-25
PHC F1	CWS Tier 1 - P&T GC-FID	11-Aug-25	11-Aug-25
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	12-Aug-25	13-Aug-25
REG 153: VOCs by P&T GC/MS	EPA 624 - P&T GC-MS	11-Aug-25	11-Aug-25

Certificate of Analysis

Report Date: 14-Aug-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 8-Aug-2025

Client PO: 63768

Project Description: PE7169

Client ID:	BH1-25-GW	BH2-25-GW	BH3-25-GW	BH4-25-GW	-	-
Sample Date:	08-Aug-25 09:00	08-Aug-25 09:00	08-Aug-25 09:00	08-Aug-25 09:00	-	-
Sample ID:	2532396-01	2532396-02	2532396-03	2532396-04	-	-
Matrix:	Ground Water	Ground Water	Ground Water	Ground Water	-	-
MDL/Units						

Volatiles

Acetone	5.0 ug/L	<5.0	<5.0	<5.0	<5.0	-	-
Benzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Bromodichloromethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Bromoform	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Bromomethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Carbon Tetrachloride	0.2 ug/L	<0.2	<0.2	<0.2	<0.2	-	-
Chlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Chloroform	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Dibromochloromethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Dichlorodifluoromethane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0	-	-
1,2-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,3-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,4-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,2-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
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	-	-

Certificate of Analysis

Report Date: 14-Aug-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 8-Aug-2025

Client PO: 63768

Project Description: PE7169

Client ID:	BH1-25-GW	BH2-25-GW	BH3-25-GW	BH4-25-GW	-	-
Sample Date:	08-Aug-25 09:00	08-Aug-25 09:00	08-Aug-25 09:00	08-Aug-25 09:00	-	-
Sample ID:	2532396-01	2532396-02	2532396-03	2532396-04	-	-
Matrix:	Ground Water	Ground Water	Ground Water	Ground Water	-	-
MDL/Units						

Volatiles

Methyl Ethyl Ketone (2-Butanone)	5.0 ug/L	<5.0	<5.0	<5.0	<5.0	-	-
Methyl Isobutyl Ketone	5.0 ug/L	<5.0	<5.0	<5.0	<5.0	-	-
Methyl tert-butyl ether	2.0 ug/L	<2.0	<2.0	<2.0	<2.0	-	-
Methylene Chloride	5.0 ug/L	<5.0	<5.0	<5.0	<5.0	-	-
Styrene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1,2,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Tetrachloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Toluene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1,1-Trichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1,2-Trichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Trichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Trichlorofluoromethane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0	-	-
Vinyl chloride	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
m,p-Xylenes	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
o-Xylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Xylenes, total	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Toluene-d8	Surrogate	108%	106%	105%	105%	-	-
4-Bromofluorobenzene	Surrogate	89.6%	89.7%	89.8%	90.4%	-	-
Dibromofluoromethane	Surrogate	57.1%	58.1%	56.3%	57.3%	-	-

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	-	-

Certificate of Analysis

Report Date: 14-Aug-2025

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

Order Date: 8-Aug-2025

Client PO: 63768

Project Description: PE7169

Client ID:	BH1-25-GW	BH2-25-GW	BH3-25-GW	BH4-25-GW		
Sample Date:	08-Aug-25 09:00	08-Aug-25 09:00	08-Aug-25 09:00	08-Aug-25 09:00	-	-
Sample ID:	2532396-01	2532396-02	2532396-03	2532396-04		
Matrix:	Ground Water	Ground Water	Ground Water	Ground Water		
MDL/Units						

PCBs

PCBs, total	0.05 ug/L	<0.05	-	<0.05	-	-	-
Decachlorobiphenyl	Surrogate	97.0%	-	90.8%	-	-	-

Certificate of Analysis

Report Date: 14-Aug-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 8-Aug-2025

Client PO: 63768

Project Description: PE7169

Client ID:	DUP-1					
Sample Date:	08-Aug-25 09:00					
Sample ID:	2532396-05					
Matrix:	Ground Water					
MDL/Units						

Volatiles

Acetone	5.0 ug/L	<5.0	-	-	-	-
Benzene	0.5 ug/L	<0.5	-	-	-	-
Bromodichloromethane	0.5 ug/L	<0.5	-	-	-	-
Bromoform	0.5 ug/L	<0.5	-	-	-	-
Bromomethane	0.5 ug/L	<0.5	-	-	-	-
Carbon Tetrachloride	0.2 ug/L	<0.2	-	-	-	-
Chlorobenzene	0.5 ug/L	<0.5	-	-	-	-
Chloroform	0.5 ug/L	<0.5	-	-	-	-
Dibromochloromethane	0.5 ug/L	<0.5	-	-	-	-
Dichlorodifluoromethane	1.0 ug/L	<1.0	-	-	-	-
1,2-Dichlorobenzene	0.5 ug/L	<0.5	-	-	-	-
1,3-Dichlorobenzene	0.5 ug/L	<0.5	-	-	-	-
1,4-Dichlorobenzene	0.5 ug/L	<0.5	-	-	-	-
1,1-Dichloroethane	0.5 ug/L	<0.5	-	-	-	-
1,2-Dichloroethane	0.5 ug/L	<0.5	-	-	-	-
1,1-Dichloroethylene	0.5 ug/L	<0.5	-	-	-	-
cis-1,2-Dichloroethylene	0.5 ug/L	<0.5	-	-	-	-
trans-1,2-Dichloroethylene	0.5 ug/L	<0.5	-	-	-	-
1,2-Dichloropropane	0.5 ug/L	<0.5	-	-	-	-
cis-1,3-Dichloropropylene	0.5 ug/L	<0.5	-	-	-	-
trans-1,3-Dichloropropylene	0.5 ug/L	<0.5	-	-	-	-
1,3-Dichloropropene, total	0.5 ug/L	<0.5	-	-	-	-
Ethylbenzene	0.5 ug/L	<0.5	-	-	-	-
Ethylene dibromide (dibromoethane,	0.2 ug/L	<0.2	-	-	-	-
Hexane	1.0 ug/L	<1.0	-	-	-	-

Certificate of Analysis

Report Date: 14-Aug-2025

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

Order Date: 8-Aug-2025

Client PO: 63768

Project Description: PE7169

Client ID:	DUP-1					
Sample Date:	08-Aug-25 09:00					
Sample ID:	2532396-05					
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	-	-	-	-
Toluene-d8	Surrogate	104%	-	-	-	-
4-Bromofluorobenzene	Surrogate	90.0%	-	-	-	-
Dibromofluoromethane	Surrogate	58.4%	-	-	-	-

Hydrocarbons

F1 PHCs (C6-C10)	25 ug/L	<25	-	-	-	-
F2 PHCs (C10-C16)	100 ug/L	<100	-	-	-	-
F3 PHCs (C16-C34)	100 ug/L	<100	-	-	-	-
F4 PHCs (C34-C50)	100 ug/L	<100	-	-	-	-

Certificate of Analysis

Report Date: 14-Aug-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 8-Aug-2025

Client PO: 63768

Project Description: PE7169

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					
PCBs								
PCBs, total	ND	0.05	ug/L					
Surrogate: Decachlorobiphenyl	0.217		%	86.8	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					

Certificate of Analysis

Report Date: 14-Aug-2025

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

Order Date: 8-Aug-2025

Client PO: 63768

Project Description: PE7169

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
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					
<i>Surrogate: 4-Bromofluorobenzene</i>	71.2		%	89.0	50-140			
<i>Surrogate: Dibromofluoromethane</i>	44.3		%	55.3	50-140			
<i>Surrogate: Toluene-d8</i>	86.8		%	109	50-140			

Certificate of Analysis

Report Date: 14-Aug-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 8-Aug-2025

Client PO: 63768

Project Description: PE7169

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	
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	0.52	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	

Certificate of Analysis

Report Date: 14-Aug-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 8-Aug-2025

Client PO: 63768

Project Description: PE7169

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
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	
o-Xylene	ND	0.5	ug/L	ND			NC	30	
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>70.8</i>		<i>%</i>		<i>88.5</i>	<i>50-140</i>			
<i>Surrogate: Dibromofluoromethane</i>	<i>46.3</i>		<i>%</i>		<i>57.9</i>	<i>50-140</i>			
<i>Surrogate: Toluene-d8</i>	<i>84.4</i>		<i>%</i>		<i>106</i>	<i>50-140</i>			

Certificate of Analysis

Report Date: 14-Aug-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 8-Aug-2025

Client PO: 63768

Project Description: PE7169

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	2000	25	ug/L	ND	99.8	85-115			
F2 PHCs (C10-C16)	1510	100	ug/L	ND	94.5	60-140			
F3 PHCs (C16-C34)	3920	100	ug/L	ND	100	60-140			
F4 PHCs (C34-C50)	2580	100	ug/L	ND	104	60-140			
PCBs									
PCBs, total	0.703	0.05	ug/L	ND	70.3	65-135			
<i>Surrogate: Decachlorobiphenyl</i>	<i>0.221</i>		%		<i>88.5</i>	<i>60-140</i>			
Volatiles									
Acetone	90.7	5.0	ug/L	ND	90.7	50-140			
Benzene	36.9	0.5	ug/L	ND	92.3	60-130			
Bromodichloromethane	27.1	0.5	ug/L	ND	67.6	60-130			
Bromoform	37.6	0.5	ug/L	ND	93.9	60-130			
Bromomethane	31.3	0.5	ug/L	ND	78.2	50-140			
Carbon Tetrachloride	27.0	0.2	ug/L	ND	67.4	60-130			
Chlorobenzene	47.2	0.5	ug/L	ND	118	60-130			
Chloroform	32.2	0.5	ug/L	ND	80.6	60-130			
Dibromochloromethane	36.8	0.5	ug/L	ND	92.0	60-130			
Dichlorodifluoromethane	46.1	1.0	ug/L	ND	115	50-140			
1,2-Dichlorobenzene	43.8	0.5	ug/L	ND	110	60-130			
1,3-Dichlorobenzene	42.3	0.5	ug/L	ND	106	60-130			
1,4-Dichlorobenzene	42.8	0.5	ug/L	ND	107	60-130			
1,1-Dichloroethane	35.5	0.5	ug/L	ND	88.8	60-130			
1,2-Dichloroethane	36.7	0.5	ug/L	ND	91.6	60-130			
1,1-Dichloroethylene	37.3	0.5	ug/L	ND	93.3	60-130			
cis-1,2-Dichloroethylene	34.0	0.5	ug/L	ND	85.1	60-130			
trans-1,2-Dichloroethylene	34.8	0.5	ug/L	ND	87.1	60-130			
1,2-Dichloropropane	35.9	0.5	ug/L	ND	89.8	60-130			
cis-1,3-Dichloropropylene	24.1	0.5	ug/L	ND	60.3	60-130			
trans-1,3-Dichloropropylene	25.7	0.5	ug/L	ND	64.2	60-130			
Ethylbenzene	43.7	0.5	ug/L	ND	109	60-130			

Certificate of Analysis

Report Date: 14-Aug-2025

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

Order Date: 8-Aug-2025

Client PO: 63768

Project Description: PE7169

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Ethylene dibromide (dibromoethane, 1,2-)	29.0	0.2	ug/L	ND	72.5	60-130			
Hexane	36.8	1.0	ug/L	ND	92.0	60-130			
Methyl Ethyl Ketone (2-Butanone)	90.6	5.0	ug/L	ND	90.6	50-140			
Methyl Isobutyl Ketone	90.3	5.0	ug/L	ND	90.3	50-140			
Methyl tert-butyl ether	93.1	2.0	ug/L	ND	93.1	50-140			
Methylene Chloride	40.6	5.0	ug/L	ND	102	60-130			
Styrene	38.9	0.5	ug/L	ND	97.4	60-130			
1,1,1,2-Tetrachloroethane	30.9	0.5	ug/L	ND	77.2	60-130			
1,1,2,2-Tetrachloroethane	32.2	0.5	ug/L	ND	80.5	60-130			
Tetrachloroethylene	46.7	0.5	ug/L	ND	117	60-130			
Toluene	45.7	0.5	ug/L	ND	114	60-130			
1,1,1-Trichloroethane	28.5	0.5	ug/L	ND	71.3	60-130			
1,1,2-Trichloroethane	31.3	0.5	ug/L	ND	78.2	60-130			
Trichloroethylene	29.2	0.5	ug/L	ND	73.0	60-130			
Trichlorofluoromethane	36.0	1.0	ug/L	ND	90.1	60-130			
Vinyl chloride	23.0	0.5	ug/L	ND	57.4	50-140			
m,p-Xylenes	99.1	0.5	ug/L	ND	124	60-130			
o-Xylene	45.7	0.5	ug/L	ND	114	60-130			
Surrogate: 4-Bromofluorobenzene	69.6		%		87.0	50-140			
Surrogate: Dibromofluoromethane	53.6		%		67.0	50-140			
Surrogate: Toluene-d8	86.8		%		109	50-140			

Certificate of Analysis

Report Date: 14-Aug-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 8-Aug-2025

Client PO: 63768

Project Description: PE7169

Qualifier Notes:

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 liability 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.



Parcel ID: 2532396



1000
9 St. Laurent Blvd
Ontario K1G 4J8
749-9947
info@paracelabs.com
paracelabs.com

Parcel Order Number (Lab Use Only) 25323 96	Chain Of Custody (Lab Use Only)
--	------------------------------------

Client Name: Paterson Group	Project Ref: PE7169	Page <u> </u> of <u> </u>
Contact Name: Jesse Andrechek	Quote #:	Turnaround Time <input type="checkbox"/> 1 day <input type="checkbox"/> 3 day <input type="checkbox"/> 2 day <input checked="" type="checkbox"/> Regular
Address: 9 Auriga Dr.	PO #: 63768	
Telephone: (613) 226-7381	E-mail: jandrechek@patersongroup.ca cgreen@patersongroup.ca	Date Required: _____

<input checked="" type="checkbox"/> REG 153/04 <input type="checkbox"/> REG 406/19	Other Regulation	Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)	Required Analysis																	
<input type="checkbox"/> Table 1 <input type="checkbox"/> Res/Park <input type="checkbox"/> Med/Fine <input type="checkbox"/> Table 2 <input type="checkbox"/> Ind/Comm <input type="checkbox"/> Coarse <input type="checkbox"/> Table 3 <input type="checkbox"/> Agri/Other <input type="checkbox"/> Table _____ For RSC: <input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> REG 558 <input type="checkbox"/> PWQO <input type="checkbox"/> CCME <input type="checkbox"/> MISA <input type="checkbox"/> SU - Sani <input type="checkbox"/> SU - Storm Mun: _____ <input type="checkbox"/> Other: _____	Matrix	Air Volume	# of Containers	Sample Taken Date Time		PHCs F-1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	PCBs						
Sample ID/Location Name																				
1	BH1-25-GW	GW		4	08/08/2025		X	X						X						
2	BH2-25-GW			3			X	X												
3	BH3-25-GW			4			X	X						X						
4	BH4-25-GW			3			X	X												
5	DUP-1			3			X	X												
6																				
7																				
8																				
9																				
10																				

Comments:			Method of Delivery: Parcel courier		
Relinquished By (Sign):	Received By Driver/Depot:	Received at Lab: L TJ	Verified By: SO		
Relinquished By (Print): Christopher Green	Date/Time:	Date/Time: 08/08/25 16:00	Date/Time: Aug 8, 2025 4:26pm		
Date/Time: 08/08/2025	Temperature: _____ °C	Temperature: 14.9	pH Verified: <input type="checkbox"/>	By: _____	