PATERSON GROUP

Phase II – Environmental Site Assessment

1146 Snow Street

Ottawa, Ontario

Prepared for 1146 Snow Street Inc.

Report: PE6763-2
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EXECUTIVE SUMMARY

Assessment

Paterson Group was retained by 1146 Snow Street Inc. to conduct a Phase II – Environmental Site Assessment (Phase II ESA) for 1146 Snow Street, in the City of Ottawa, Ontario. The purpose of the Phase II ESA was to address potentially contaminating activities (PCAs) that were identified during the Phase I ESA and were considered to result in areas of potential environmental concern (APECs) on the subject site (Phase II Property).

A previous Phase II ESA was completed in 2022 by others on the Phase II Property for due diligence purposes, which involved drilling four (4) boreholes (MW1, BH2, BH3, and MW4), two of which were instrumented with groundwater monitoring wells (MW1 and MW4). No soil or groundwater impacts were identified at that time, however, it was recommended by Paterson that additional sampling be completed to support the filing a Record of Site Condition, based on the proposed change in land use from commercial to residential.

The initial subsurface investigation for this assessment was conducted on October 1, 2024 and consisted of drilling three (3) boreholes (BH1-24 to BH3-24) across the Phase II Property. The boreholes were advanced to measured depths ranging from 4.62 to 8.99m below the existing ground surface. Two (2) boreholes were extended into bedrock by means of rock coring (BH1-24 and BH2-24). Upon completion, two (2) boreholes were instrumented with groundwater monitoring wells (BH1-24 and BH3-24) in order to access the groundwater table.

Based on the identification of metals impacted fill material in BH2-24, an additional test pit program was conducted on November 8, 2024, which consisted of seven (7) test pits (TP1-24 to TP7-24) across the Phase II Property, completed for delineation purposes.

In general, the subsurface soil profile encountered at the borehole and test pit locations consisted of asphalt or topsoil over a brown silty sand and crushed stone fill material, underlain by silty sand with trace to some cobbles and sandy glacial till. Bedrock surface was encountered in two boreholes during the field drilling program at depths of 4.50m and 5.66m below the existing ground surface.

During the current field sampling program, the groundwater was measured at depths ranging from 3.85 to 4.19m below the existing ground surface (bgs).

A total of 16 soil samples (and two duplicate samples) from the current investigation were submitted for laboratory analysis of BTEX, PHCs (F_1-F_4), VOCs, metals, Hg^+, CrVI, PAHs, EC and/or SAR parameters. Previous Phase II ESA results consisting of 8 soil samples

submitted for laboratory analysis of BTEX, PHCs (F_1-F_4), metals, Hg^+, cyanide, CrVI, PAHs, EC and/or SAR parameters were also included in this analysis.

Based on the analytical test results, all analytical soil results comply with the MECP Table 3 Residential standards with the exception of metals impacted fill material in BH2-24 and TP6-24.

Two (2) groundwater samples (from MW1 and BH3-24) were submitted for laboratory analysis of BTEX, PHCs (F_1-F_4), and/or VOCs. Previous Phase II ESA results consisting of 2 groundwater samples (from MW1 and MW4) submitted for laboratory analysis of BTEX, PHCs (F_1-F_4), metals, Hg^+, and CrVI parameters were also included in this analysis. Based on the analytical test results, all groundwater parameter concentrations are in compliance with the MECP Table 3 Residential standards.

Recommendations

Soil

Based on the analytical results, the fill material present at BH2-24 and TP6-24 contains elevated metals parameters which exceed site standards. Given the low-mobility of these contaminants, along with groundwater analytical results and delineation sampling to date, this contamination is considered to be confined to the fill material within this localized area.

It is our understanding that the Phase II Property will be developed for residential use in the near future. If a generic Record of Site Condition is to be filed for the Phase II Property, impacted soil will need to be remediated in order to meet the generic site condition standards. It is recommended that Paterson personnel be present on-site during remediation activities to direct the excavation and segregation of impacted soil, as well as to conduct confirmatory sampling as required. This contaminated soil will require disposal at a licensed waste disposal facility. A leachate analysis of impacted soil for landfill characterization was conducted as per Ontario Regulation 347/558 from TP6-24-G2, the results of which are included in Appendix 1 of this report.

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

Monitoring Wells

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

1.0 INTRODUCTION

At the request of 1146 Snow Street Inc., Paterson Group (Paterson) conducted a Phase II – Environmental Site Assessment (Phase II ESA) for the property addressed 1146 Snow Street, in the City of Ottawa, Ontario (the Phase II Property).

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

1.1 Site Description

Address:	1146 Snow Street, Ottawa, Ontario.
Legal Description:	Lots 50, 51, 52, 53 & 54, Registered Plan 323, City of Ottawa, Ontario.
Location:	The Phase I Property is located south of Snow Street, approximately 60m east of Cummings Avenue, in the City of Ottawa, Ontario. Refer to Figure 1 - Key Plan for the site location.
Latitude and Longitude:	45° 25' 51.5" N, 75° 38' 00" W

Site Description:

Configuration:	Irregular
Site Area:	0.15 ha (approximately)
Zoning:	R3-VV - Residential Third Density Zone
Current Use:	The Phase I Property is currently undeveloped, unused land.
Services:	The Phase I Property is located in a municipally serviced area, and will receive full municipal services upon development.

1.2 Property Ownership

The Phase II Property is currently owned by 1146 Snow Street Inc. Paterson was retained to complete this Phase II ESA by Mr. Jonathon Blakely of M. David Blakely Architect Inc on behalf of 1146 Snow Street Inc, who can be contacted at 2200 Prince of Wales Drive, Suite 101, or by telephone at (613) 226-8811.

1.3 Applicable Site Condition Standard

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

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

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

2.0 BACKGROUND INFORMATION

2.1 Physical Setting

The Phase II Property is currently vacant of any buildings (demolished in approximately March 2020). The Phase II Property is considered to be commercial use based on its most recent use.

The site topography is relatively flat, while the regional topography slopes down to the southeast towards Green's Creek. The Phase II Property is generally considered to be at grade with respect to the surrounding properties with the exception of a retaining wall along the south portion of the property, where there is approximately a 1m change in elevation.

Water drainage on the Phase II Property occurs primarily via infiltration and surface run-off.

2.2 Previous Investigations

- ❒ "Phase 2 Environmental Site Assessment, Property located at 1146 Snow Street, Ottawa, Ontario," prepared for Moscatel Boutique by St. Lawrence Testing & Inspection Co. Ltd., dated October 24, 2022.

Phase II ESA sampling was subsequently conducted on the Phase II Property. The subsurface investigation consisted of 4 boreholes (MW1, BH2, BH3, and MW4) on the Phase II Property, of which 2 (MW1 and MW4) were instrumented with groundwater monitoring wells. The subsurface profile in the borehole locations reportedly consisted of brown moist silty sand in all borehole locations. The monitoring wells were installed in overburden, at depths of 4.38m and 5.71m for MW1 and MW4 respectively, both with a 3.05m screen.

A total of 8 soil samples were submitted for laboratory analysis of metals, mercury, Cr(VI), B-HWS, cyanide, EC/SAR, and pH, with 4 samples also submitted for BTEX/PHCs. Based on the analytical results, all parameter concentrations were in compliance with the MECP Table 3 Residential standards.

Groundwater samples obtained from MW1 and MW4 were submitted for laboratory analysis of metals, mercury, Cr(VI), and BTEX/PHCs. Based on the analytical results, all parameter concentrations were in compliance with the MECP Table 3 Residential standards. No further environmental work was recommended.

3.0 SCOPE OF INVESTIGATION

3.1 Overview of Site Investigation

The subsurface investigation for this assessment was conducted on October 1, 2024, and November 8, 2024, and consisted of drilling three boreholes (BH1-24 to BH3-24) and excavating seven test pits (TP1-24 to TP7-24) across the Phase II Property.

The boreholes were advanced to depths ranging from approximately 4.62 m to 8.99 m below the existing ground surface. Test pits were excavated to depths ranging from 2.0 to 2.4m below the existing ground surface. Two boreholes (BH1-24 and BH2-24) were advanced into bedrock by means of rock coring and terminated within the bedrock unit. Bedrock surface was encountered at depths

ranging from approximately 4.50 m to 5.66 m below ground surface at these locations.

Upon completion, two boreholes (BH1-24 and BH3-24) were instrumented with groundwater monitoring wells in order to access the groundwater table. During the current field sampling program, the groundwater was measured at depths ranging from approximately 3.85 to 4.19m below the existing ground surface (including existing monitoring wells MW1 and MW4).

3.2 Media Investigated

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

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

Soil

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

Groundwater

- ❒ Benzene, Toluene, Ethylbenzene, Xylenes (BTEX);
- ❒ Volatile Organic Compounds (VOCs);
- ❒ Petroleum Hydrocarbons (PHCs F_1-F_4);
- ❒ Metals
- ❒ As, Se, Sb;
- ❒ Mercury (Hg);
- ❒ Cr(VI);

3.3 Phase I ESA Conceptual Site Model

Geological and Hydrogeological Setting

Based on the available mapping information, the bedrock beneath the Phase II Property consists of shale of the Billings Formation. The surficial geology reportedly consists of fine-textured glaciomarine deposits (silt and clay, minor sand and gravel) with an overburden thickness of 3 to 5m.

Groundwater is anticipated to be encountered within the overburden and flow in a southeasterly direction towards Green's Creek.

Water Bodies and Areas of Natural and Scientific Interest

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

The nearest named water body with respect to the Phase I Property is the Rideau River, located approximately 2.7 km to the southwest of the Phase I Property at its closest point.

Drinking Water Wells

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

Existing Buildings and Structures

No buildings or structures currently exist on the Phase II Property.

Current and Future Property Use

The current land use of the property is considered to be commercial use, based on the most recent use as a heating and plumbing contractor's yard. Based on the most recent drawings provided to Paterson, the site is being considered for redevelopment with a four-storey residential apartment building. Since the property is proposed to be redeveloped for a more sensitive land use (commercial to residential use), a record of site condition (RSC) will need to be filed with the MECP.

Neighbouring Land Use

The surrounding land uses within the Phase I Study Area consist primarily of residential, with some agricultural or other use land and parkland, and industrial use land further south. Current land use is depicted on Drawing PE6763-2 – Surrounding Land Use Plan, in the Figures section of this report.

Potentially Contaminating Activities and Areas of Potential Environmental Concern

As per Section 7.1 of the Phase I ESA report, four (4) potentially contaminating activities (PCAs) resulting in areas of potential environmental concern (APECs) were identified with respect to the Phase II Property. These APECs include:

- ❑ APEC 1 (PCA 1 on Drawing PE6763-1, Item NA "Former Storage of Construction Materials")

Based on a review of aerial photographs, the Phase II Property was used for commercial purposes since approximately the 1960s, which included the storage of construction materials including potential surficial staining and spills from vehicle parking and storage. The former storage of construction materials is considered to represent an APEC potentially impacting soil and groundwater.

APEC 1 is considered to extend across the northern to central portion of the Phase II Property.

- ❑ APEC 2 (PCA 2 on Drawing PE6763-1, Item 30 "Importation of Fill Material of Unknown Quality")

Based on a review of aerial photographs, as well as past subsurface investigations, fill material of unknown quality was imported to the Phase II Property during previous development and/or as grading material for use as a commercial yard. The presence of the fill material is considered to represent an APEC potentially impacting soil on the Phase II Property.

APEC 2 is considered to extend across the entire Phase II Property.

- ❑ APEC 3 (PCA 3 on Drawing PE6289-1, No Item Number "Application of Road Salt")

This APEC is related to the potential application of salt or similar substance to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both. The potential use of road salt is considered to represent an APEC potentially impacting soil on the Phase II Property.

APEC 3 is situated in the northern portion of the Phase I Property.

- ❑ APEC 4 (PCA 4 on Drawing PE6289-1, No Item Number "Former Fencing Contractor Yard")

This APEC is related to the former fencing installation contractor activity adjacent to the south of the Phase II Property, with former waste generation records including waste oils and lubricants. This former activity is considered to represent an APEC potentially impacting soil and groundwater on the Phase II Property.

APEC 4 is situated in the southern portion of the Phase II Property.

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

Contaminants of Potential Concern

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

<u>Soil</u>

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

Groundwater

- ❒ Benzene, Toluene, Ethylbenzene, Xylenes (BTEX);
- ❒ Volatile Organic Compounds (VOCs);
- ❒ Petroleum Hydrocarbons (PHCs F_1-F_4);
- ❒ Metals
- ❒ As, Se, Sb;
- ❒ Mercury (Hg);
- ❒ Cr(VI);

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

Assessment of Uncertainty and/or Absence of Information

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

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

3.4 Deviations from the Sampling and Analysis Plan

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

3.5 Physical Impediments

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

4.0 INVESTIGATION METHOD

4.1 Subsurface Investigation

The subsurface investigation for this assessment was conducted on October 1, 2024, and November 8, 2024, and consisted of drilling three boreholes (BH1-24 to BH3-24) and excavating seven test pits (TP1-24 to TP7-24) across the Phase II Property.

The boreholes were advanced to depths ranging from approximately 4.62 m to 8.99 m below the existing ground surface. Test pits were excavated to depths ranging from 2.0 to 2.4m below the existing ground surface. Two (2) boreholes (BH1-24 and BH2A-24) were advanced into bedrock by means of rock coring and terminated within the bedrock unit. Bedrock surface was encountered at depths ranging from approximately 4.50 m to 5.66 m below ground surface at these locations.

Upon completion, two boreholes (BH1-24 and BH3-24) were instrumented with groundwater monitoring wells in order to access the groundwater table. During the field sampling program, the groundwater was measured at depths ranging from approximately 3.85 to 4.19m below the existing ground surface (including existing monitoring wells MW1 and MW4).

Under the full-time supervision of Paterson personnel, the boreholes were drilled using a track-mounted drill rig provided by George Downing Estate Drilling of Hawkesbury, Ontario. The locations of the boreholes are illustrated on Drawing PE6763-3 – Test Hole Location Plan, appended to this report.

4.2 Soil Sampling

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

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

A total of 22 soil samples and 5 rock core samples were obtained from the boreholes by means of auger and split spoon sampling and diamond bit rock coring. An additional 36 soil samples were obtained from grab samples from the excavator bucket during the test pit program. The depths at which auger, split spoon, rock core, and grab samples were obtained from the boreholes are shown as "**AU**", "**SS**", "**RC**", and "**G**" respectively, on the Soil Profile and Test Data Sheets, appended to this report.

4.3 Field Screening Measurements

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

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

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

4.4 Groundwater Monitoring Well Installation

Two groundwater monitoring wells were installed on the Phase II Property as part of this assessment. These monitoring wells were constructed using 35mm (BH1-24) or 50mm (BH3-24) diameter Schedule 40 threaded PVC risers and screens. A sand pack consisting of silica sand was placed around the screen with a bentonite seal placed above to minimize cross-contamination. A summary of the monitoring well construction details are listed below in Table 1 as well as on the Soil Profile and Test Data Sheets provided in Appendix 1.

Table 1
Monitoring Well Construction Details

Well ID	Ground Surface Elevation (m ASL)	Total Depth (m BGS)	Screened Interval (m BGS)	Sand Pack (m BGS)	Bentonite Seal (m BGS)
MW1	75.19	4.38	1.33 - 4.38	unknown	unknown
MW4	75.19	5.71	2.66 - 5.71	unknown	unknown
BH1-24	74.78	8.99	5.85 - 8.90	5.85 - 8.99	0 - 5.85
BH3-24	74.45	4.75	1.66 - 4.71	1.22 - 4.75	0 - 1.66

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

4.5 Field Measurement of Water Quality Parameters

Groundwater monitoring and sampling was conducted on-site on October 8th, 2024. At this time, water quality parameters were measured in the field using a multi-parameter analyzer. Parameters measured in the field included temperature, pH and electrical conductivity.

Field parameters were measured after each well volume purged. Wells were purged prior to sampling until at least three well volumes had been removed or the field parameters were relatively stable. Stabilized field parameter values are summarized below in Table 2 as well as on the Soil Profile and Test Data Sheets provided in Appendix 1.

Table 2
Measurement of Stabilized Water Quality Parameters

Test Hole ID	Temperature (˚C)	Conductivity (µS)	pH	Date of Measurement
BH1-24	12.8	507	8.61	October 8, 2024
BH3-24	12.3	604	7.17	October 8, 2024
MW1	14.4	632	7.19	October 8, 2024

4.6 Groundwater Sampling

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

Standing water was purged from each monitoring well prior to the recovery of the groundwater samples using dedicated sampling equipment. The samples were then stored in coolers to reduce possible analyte volatilization during their

transportation. Further details of our standard operating procedure for groundwater sampling are provided in the Sampling and Analysis Plan, appended to this report.

4.7 Analytical Testing

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

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

4.8 Residue Management

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

4.9 Elevation Surveying

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

4.10 Quality Assurance and Quality Control Measures

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

5.0 REVIEW AND EVALUATION

5.1 Geology

In general, the subsurface soil profile encountered at the borehole and test pit locations consists of asphalt or topsoil over a brown silty sand and crushed stone fill material, underlain by silty sand with trace to some cobbles and sandy glacial till. Bedrock surface was encountered in two boreholes during the field drilling program at depths of 5.66m and 4.50m below the existing ground surface.

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

5.2 Groundwater Elevations, Flow Direction, and Hydraulic Gradient

Groundwater levels were measured using an electronic water level meter on October 8, 2024. The groundwater levels are summarized below in Table 3.

Table 3
Groundwater Level Measurements

Test Hole ID	Ground Surface Elevation (masl)	Water Level Depth (m)	Water Level Elevation (masl)	Date of Measurement
BH1-24	74.78	4.18	70.60	8-Oct-2024
BH3-24	74.45	4.13	70.32	8-Oct-2024
MW1	75.19	3.85	71.34	8-Oct-2024
MW4	75.62	4.19	71.43	8-Oct-2024

The groundwater at the Phase II Property was encountered within the bedrock at depths ranging from approximately 3.85 to 4.19m below the existing ground surface.

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

Using the groundwater elevations recorded during the sampling event, groundwater contour mapping was completed as part of this assessment. According to the mapped contour data, illustrated on Drawing PE6763-3 – Test Hole Location Plan in the appendix, the groundwater flow on the subject site was calculated to be in a southern direction. A horizontal hydraulic gradient of approximately 0.05 m/m was also calculated as part of this assessment. It should be noted that groundwater levels are expected to fluctuate throughout the year with seasonal variations.

5.3 Fine/Coarse Soil Texture

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

5.4 Field Screening

Field screening of the soil samples collected during the drilling program resulted in organic vapour readings ranging from 0.1 ppm to 1.0 ppm, indicating that there is a negligible potential for the presence of volatile substances. Field screening results of each individual soil sample are provided on the Soil Profile and Test Data Sheets appended to this report.

5.5 Soil Quality

A total of 16 soil samples and one duplicate sample were submitted for laboratory analysis of BTEX, PHCs (F_1-F_4), VOCs, metals, Hg^+, CrVI, PAHs, EC, and/or SAR parameters during this investigation. Eight (8) soil samples from the previous investigation that were submitted for laboratory analysis of BTEX, PHCs (F_1-F_4), VOCs, metals, cyanide, Hg^+, CrVI, PAHs, EC, and/or SAR parameters were also included in the analysis of results. The results of the analytical testing are presented in the Laboratory Certificates of Analysis included in Appendix 1.

BTEX and PHCs

Twenty soil samples were submitted for analysis of BTEX and PHC parameters. All BTEX and PHC parameter concentrations in the soil samples analyzed are in compliance with the selected MECP Table 3 Coarse-Grained Residential Soil Standards.

VOCs

One soil sample was submitted for analysis of VOC parameters. No VOC parameters were detected in the analyzed soil sample. All VOC parameter concentrations in the soil sample analyzed are in compliance with the selected MECP Table 3 Coarse-Grained Residential Soil Standards.

PAHs

Three soil samples were submitted for analysis of PAH parameters. No PAH parameters were detected in the analyzed soil samples. All PAH parameter concentrations in the soil sample analyzed are in compliance with the selected MECP Table 3 Coarse-Grained Residential Soil Standards.

Metals

Twenty-four soil samples were submitted for analysis of metals parameters (including As, Se, Sb). Metals concentrations, including arsenic, copper, lead, molybdenum and/or zinc were identified above the MECP Table 3 Coarse-Grained Residential Soil Standards in samples BH2-24-AU1 and TP6-24-G2. The remaining metals concentrations in the soil samples analyzed are in compliance with the selected MECP Table 3 Coarse-Grained Residential Soil Standards.

Cr(VI) and Hg

Twenty-four soil samples were submitted for analysis of Cr(VI) and Hg parameters. All Cr(VI) and Hg parameter concentrations in the soil samples analyzed are in compliance with the selected MECP Table 3 Coarse-Grained Residential Soil Standards.

EC and SAR

Twenty-three soil samples were submitted for analysis of EC and SAR parameters. All EC and SAR parameter concentrations in the soil samples analyzed are in compliance with the selected MECP Table 3 Coarse-Grained Residential Soil Standards.

Summary of Soil Results

Based on the analytical results, soil on the Phase II Property is considered to meet the MECP Table 3 Residential standards with the exception of metals concentrations identified within the upper fill material at BH2-24 and TP6-24.

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

5.6 Groundwater Quality

A total of 2 groundwater samples and one duplicate sample were submitted for laboratory analysis of BTEX, PHCs (F_1-F_4), and/or VOC parameters as part of this investigation. Two (2) groundwater samples from the previous investigation that were submitted for laboratory analysis of BTEX, PHCs (F_1-F_4), metals, Hg, and Cr(VI) parameters were also included in the analysis of results. The results of the analytical testing are presented in the laboratory Certificates of Analysis included in Appendix 1.

BTEX and PHCs

Three (3) groundwater samples were submitted for laboratory analysis of BTEX and PHC parameters. Although some low-level BTEX parameters were identified in MW1 and MW4 in 2022, the results are in compliance with the MECP Table 3 Non-Potable Groundwater Standards. No BTEX or PHC concentrations were detected above the laboratory method detection limits in the groundwater sample obtained from BH3-24.

VOCs

Two (2) groundwater samples were submitted for laboratory analysis of VOC parameters. No VOC parameter concentrations were detected above the laboratory method detection limits in the samples analyzed (MW1 and BH3-24). The results are in compliance with the MECP Table 3 Non-Potable Groundwater Standards.

Metals, including CrVI and Hg

Although metals, Hg, and Cr(VI) are not considered to be contaminants of concern within the groundwater, two groundwater samples from the previous investigation by others were submitted for laboratory analysis of metals parameters (including As, Se, Sb, CrVI and Hg). The results are in compliance with the MECP Table 3 Non-Potable Groundwater Standards.

Summary of Groundwater Results

Based on the analytical results, groundwater on the Phase II Property is considered to meet the MECP Table 3 Coarse-Grained Residential Soil Standards.

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

5.7 Quality Assurance and Quality Control Results

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

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

As per the Sampling and Analysis Plan, two duplicate soil samples were obtained from soil samples BH2-24-SS3 for BTEX, PHCs, metals, Hg, and CrVI, and TP6-24-G2 for metals analysis; and groundwater sample BH3-24-GW1 for VOCs and PHCs analysis. A trip blank was also submitted for VOC analysis. The relative percent difference (RPD) calculations for the original and duplicate samples are presented in the laboratory Certificates of Analysis included in Appendix 1.

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

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

5.8 Phase II Conceptual Site Model

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

Site Description

Potentially Contaminating Activity and Areas of Potential Environmental Concern

As described in Section 7.1 of the Phase I ESA report, as well as Section 2.2 of this report, the following PCAs, as defined by Table 2 of O. Reg. 153/04, are considered to result in APECs on the Phase II Property:

Table 4
Areas of Potential Environmental Concern

Area of potential environmental concern	Location of area of potential environmental concern on phase one property	Potentially contaminating activity	Location of PCA (on-site or off-site)	Contaminants of potential concern	Media potentially impacted (Groundwater, soil and/or sediment)
APEC 1 (Former Storage of Construction Materials)	Across Northern Portion of Phase I Property	PCA N/A: Former storage of construction materials, including potential surficial staining and spills from vehicle parking and storage	On-site	BTEX PHCs Metals As, Sb, Se CrVI Hg	Soil and Groundwater
APEC 2 (Importation of Fill Material of Unknown Quality)	Across Entire Phase I Property	No PCA ID: PHCs Fraction F3 and F4G identified in upper fill material	On-site	BTEX PHCs PAHs Metals As, Se, Sb CrVI Hg	Soil
APEC 3 (Application of Road Salt)	Northern portion of Phase I Property	No PCA ID: Potential surficial staining and spills from vehicle parking and storage	On-site	EC SAR	Soil
APEC 4 (Former Fencing Contractor Yard)	Southern portion of Phase I Property	No PCA ID: Potential surficial staining and spills from vehicle parking and storage	On-site	BTEX VOCs PHCs	Soil and Groundwater

Contaminants of Potential Concern (CPCs)

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

Soil

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

Groundwater

- ❒ Benzene, Toluene, Ethylbenzene, Xylenes (BTEX);
- ❒ Volatile Organic Compounds (VOCs);
- ❒ Petroleum Hydrocarbons (PHCs F_1-F_4);
- ❒ Metals
- ❒ As, Se, Sb;
- ❒ Mercury (Hg);
- ❒ Cr(VI);

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

Subsurface Structures and Utilities

Underground service locates were completed prior to the subsurface investigation. No below ground structures or utilities are known to be present on the Phase II Property.

Physical Setting

Site Stratigraphy

The stratigraphy of the Phase II Property generally consists of:

- ❒ Asphalt or topsoil (intermittent);
- ❒ Fill material consisting of silty sand and crushed stone with trace brick and organics, extending to a maximum encountered depth of 1.45m below the existing ground surface;

- Silty sand to sandy silt with trace cobbles; encountered below the fill material, and extending to a maximum encountered depth of 4.50m below the existing ground surface, and becoming grey at approximately 4.0 to 5.3m below the existing ground surface;
- Shale Bedrock; extending below encountered bedrock surface depths ranging from 4.50 to 5.66m below the existing ground surface.

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

Hydrogeological Characteristics

The groundwater at the Phase II Property was encountered within the silty sand to sandy silt or glacial till at measured depths ranging from 3.85 to 5.11m below the existing ground surface.

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

Approximate Depth to Bedrock

Bedrock was encountered in two boreholes (BH1-24 and BH2A-24) during the field drilling program at depths of 4.50 and 5.66m below ground surface, respectively.

Approximate Depth to Water Table

The depth to the water table is approximately 3.85 to 5.11m below the existing ground surface.

Sections 41 and 43.1 of Ontario Regulation 153/04

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

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

Existing Buildings and Structures

No buildings or structures currently exist on the Phase II Property.

Environmental Condition

Areas Where Contaminants are Present

Based on the findings of this assessment, soil (fill material) from samples BH2-24-AU1 and TP6-24-G2, to the east of the former commercial building and within the former construction storage area (within APECs 1, 2, and 3), is contaminated with metals parameters.

Based on the analytical test results, the groundwater beneath the Phase II Property is not considered to be contaminated.

Types of Contaminants

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

Soil:

- Metals (Including As, Se, Sb)
  - Arsenic
  - Copper
  - Lead
  - Molybdenum
  - Zinc

Contaminated Media

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

No groundwater impacts were identified above the MECP Table 3 Standards.

What Is Known About Areas Where Contaminants Are Present

Fill material present to the east of the former commercial building and within former material storage area (within APECs 1, 2, and 3) is impacted with metals above the MECP Table 3 Residential standards. The origin of these contaminants is unknown but may be the result of the importation of fill material of unknown quality, and/or from the historic storage of construction materials on-site.

These impacts are considered to be confined to the fill material (extending from ground surface to approximately 0.91 to 1.05m bgs based on the test hole data).

Distribution and Migration of Contaminants

The distribution of metals impacts above the MECP Table 3 Residential standards are considered to be limited to the fill material in the immediate area of BH2-24 and TP6-24. Metals impacted soil is horizontally delineated by samples TP2-24-G2, TP3-24-G2, S3 (from BH2), BH3-24-SS2, and S1 (from MW1). Metals impacts were vertically delineated by sample BH2-24-SS3 (1.52 to 2.13m), within the native silty sand.

Based on the low mobility of these contaminants, as well as groundwater results, these contaminants are not suspected to have migrated into the water table.

Discharge of Contaminants

It is unknown where metals concentrations identified at BH2-24 and TP6-24 originated but they may be the result of the importation of fill material of unknown quality, and/or from the historic storage of construction materials on-site.

Climatic and Meteorological Conditions

In general, climatic and meteorological conditions have the potential to affect contaminant distribution. Two (2) ways by which climatic and meteorological conditions may affect contaminant distribution include the downward leaching of contaminants via the infiltration of precipitation, and the migration of contaminants via groundwater levels and/or flow, which may fluctuate seasonally.

Based on the clean groundwater results obtained during this investigation, no downward migration of contaminants is suspected to have occurred.

Potential for Vapour Intrusion

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

6.0 CONCLUSIONS

Assessment

Paterson Group was retained by 1146 Snow Street Inc. to conduct a Phase II – Environmental Site Assessment (Phase II ESA) for 1146 Snow Street, in the City of Ottawa, Ontario. The purpose of the Phase II ESA was to address potentially contaminating activities (PCAs) that were identified during the Phase I ESA and were considered to result in areas of potential environmental concern (APECs) on the subject site (Phase II Property).

A previous Phase II ESA was completed in 2022 by others on the Phase II Property for due diligence purposes, which involved drilling four (4) boreholes (MW1, BH2, BH3, and MW4), two of which were instrumented with groundwater monitoring wells (MW1 and MW4). No soil or groundwater impacts were identified at that time, however, it was recommended by Paterson that additional sampling be completed to support the filing a Record of Site Condition, based on the proposed change in land use from commercial to residential.

The initial subsurface investigation for this assessment was conducted on October 1, 2024 and consisted of drilling three (3) boreholes (BH1-24 to BH3-24) across the Phase II Property. The boreholes were advanced to measured depths ranging from 4.62 to 8.99m below the existing ground surface. Two (2) boreholes were extended into bedrock by means of rock coring (BH1-24 and BH2-24). Upon completion, two (2) boreholes were instrumented with groundwater monitoring wells (BH1-24 and BH3-24) in order to access the groundwater table.

Based on the identification of metals impacted fill material in BH2-24, an additional test pit program was conducted on November 8, 2024, which consisted of seven (7) test pits (TP1-24 to TP7-24) across the Phase II Property, completed for delineation purposes.

In general, the subsurface soil profile encountered at the borehole and test pit locations consisted of asphalt or topsoil over a brown silty sand and crushed stone fill material, underlain by silty sand with trace to some cobbles and sandy glacial till. Bedrock surface was encountered in two boreholes during the field drilling program at depths of 4.50m and 5.66m below the existing ground surface.

During the current field sampling program, the groundwater was measured at depths ranging from 3.85 to 4.19m below the existing ground surface (bgs).

A total of 16 soil samples (and two duplicate samples) from the current investigation were submitted for laboratory analysis of BTEX, PHCs (F_1-F_4), VOCs, metals, Hg^+, CrVI, PAHs, EC and/or SAR parameters. Previous Phase II ESA results consisting of 8 soil samples submitted for laboratory analysis of BTEX, PHCs (F_1-F_4), metals, Hg^+, cyanide, CrVI, PAHs, EC and/or SAR parameters were also included in this analysis.

Based on the analytical test results, all analytical soil results comply with the MECP Table 3 Residential standards with the exception of metals impacted fill material in BH2-24 and TP6-24.

Two (2) groundwater samples (from MW1 and BH3-24) were submitted for laboratory analysis of BTEX, PHCs (F_1-F_4), and/or VOCs. Previous Phase II ESA results consisting of 2 groundwater samples (from MW1 and MW4) submitted for laboratory analysis of BTEX, PHCs (F_1-F_4), metals, Hg^+, and CrVI parameters were also included in this analysis. Based on the analytical test results, all groundwater parameter concentrations are in compliance with the MECP Table 3 Residential standards.

Recommendations

Soil

Based on the analytical results, the fill material present at BH2-24 and TP6-24 contains elevated metals parameters which exceed site standards. Given the low-mobility of these contaminants, along with groundwater analytical results and delineation sampling to date, this contamination is considered to be confined to the fill material within this localized area.

It is our understanding that the Phase II Property will be developed for residential use in the near future. If a generic Record of Site Condition is to be filed for the Phase II Property, impacted soil will need to be remediated in order to meet the generic site condition standards. It is recommended that Paterson personnel be present on-site during remediation activities to direct the excavation and segregation of impacted soil, as well as to conduct confirmatory sampling as required. This contaminated soil will require disposal at a licensed waste disposal facility. A leachate analysis of impacted soil for landfill characterization was conducted as per Ontario Regulation 347/558 from TP6-24-G2, the results of which are included in Appendix 1 of this report.

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

Monitoring Wells

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

7.0 STATEMENT OF LIMITATIONS

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

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

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

This report was prepared for the sole use of 1146 Snow Street Inc. Permission and notification from the above noted party and Paterson Group will be required prior to the release of this report to any other party.

Paterson Group Inc.

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

Adrian Menyhart, P.Eng., QP$_{ESA}$

Report Distribution:

- 1146 Snow Street Inc.
- Paterson Group Inc.

FIGURES

FIGURE 1 – KEY PLAN

DRAWING PE6763-1 – SITE PLAN

DRAWING PE6763-2 – SURROUNDING LAND USE PLAN

DRAWING PE6763-3 – TEST HOLE LOCATION PLAN

DRAWING PE6763-4 – ANALYTICAL TESTING PLAN – SOIL (METALS (As, Sb, Se))

DRAWING PE6763-4A – CROSS SECTION A-A' – SOIL (METALS (As, Sb, Se))

DRAWING PE6763-4B – CROSS SECTION B-B' – SOIL (METALS (As, Sb, Se))

DRAWING PE6763-5 – ANALYTICAL TESTING PLAN – SOIL (Hg, CrVI, B-HWS, VOCs, BTEX, PHCs, PAHs, EC, SAR, CN-, pH)

DRAWING PE6763-5A – CROSS SECTION A-A' – SOIL (Hg, CrVI, B-HWS, VOCs, BTEX, PHCs, PAHs, EC, SAR, CN-, pH)

DRAWING PE6763-5B – CROSS SECTION B-B' – SOIL (Hg, CrVI, B-HWS, VOCs, BTEX, PHCs, PAHs, EC, SAR, CN-, pH)

DRAWING PE6763-6 – ANALYTICAL TESTING PLAN – GROUNDWATER

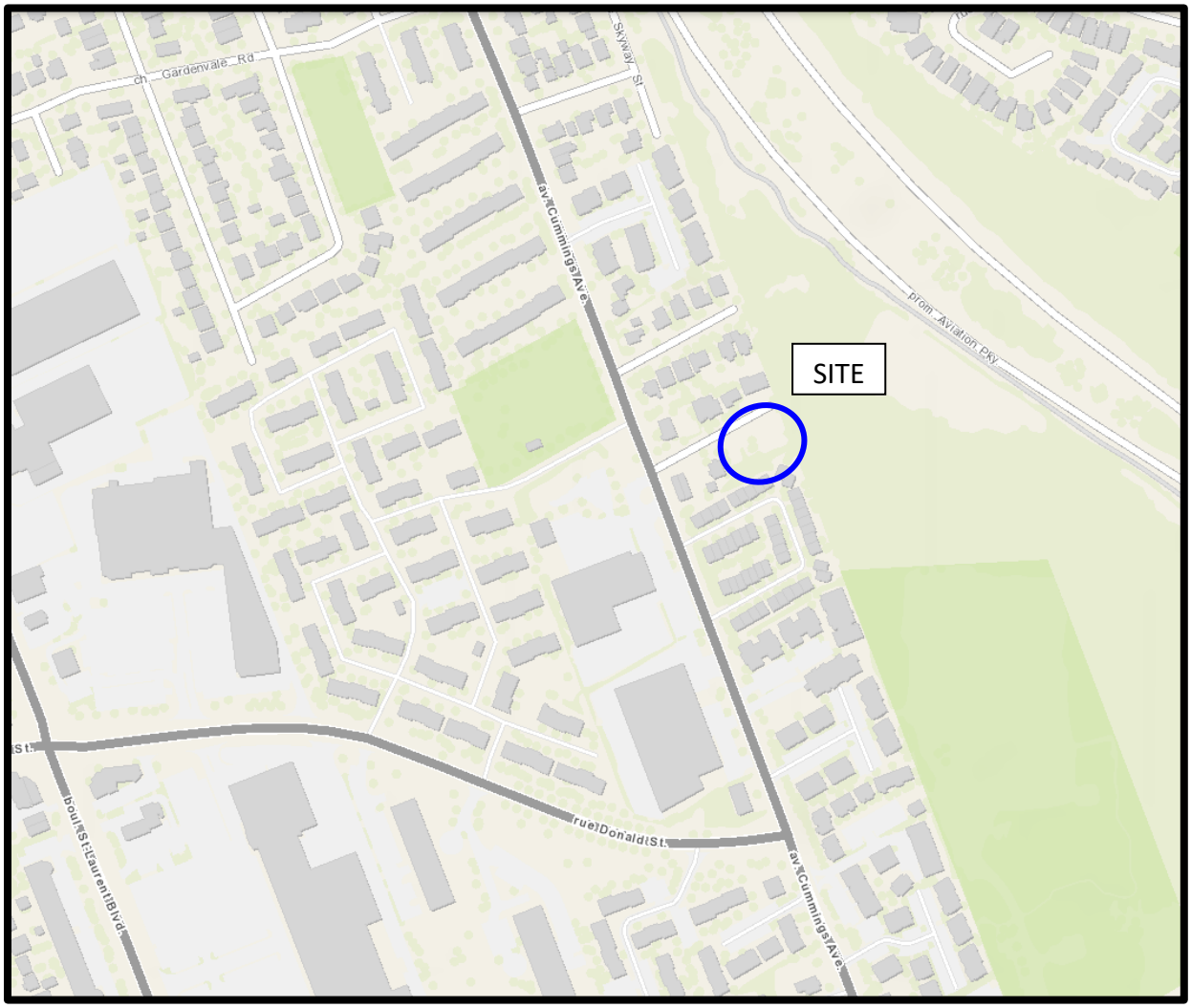
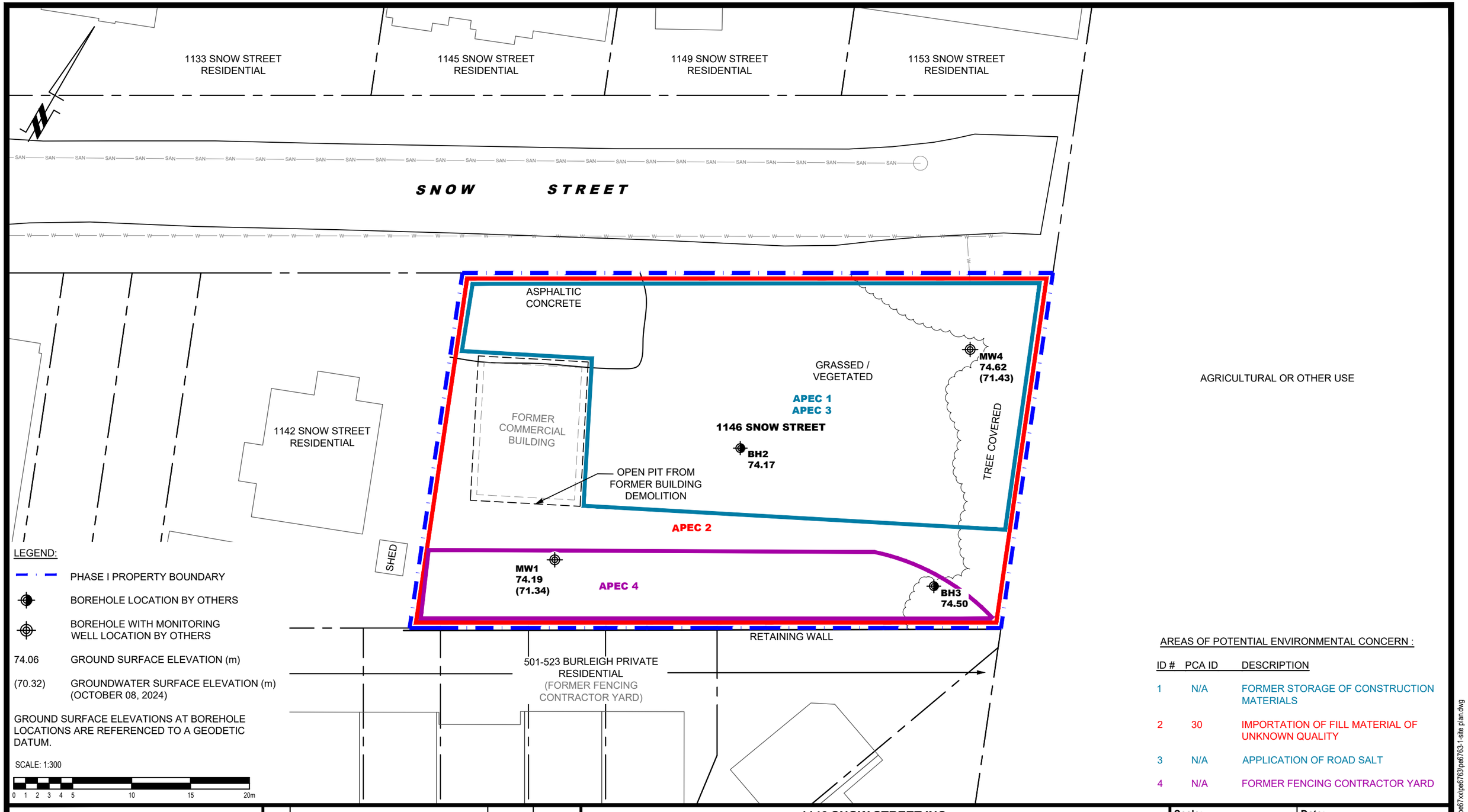


Figure 1

KEY PLAN



LEGEND:

- PHASE I PROPERTY BOUNDARY
- BOREHOLE LOCATION BY OTHERS
- BOREHOLE WITH MONITORING WELL LOCATION BY OTHERS
- 74.06 GROUND SURFACE ELEVATION (m)
- (70.32) GROUNDWATER SURFACE ELEVATION (m) (OCTOBER 08, 2024)

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

SCALE: 1:300

0 1 2 3 4 5 10 15 20m

AREAS OF POTENTIAL ENVIRONMENTAL CONCERN :

ID #	PCA ID	DESCRIPTION
1	N/A	FORMER STORAGE OF CONSTRUCTION MATERIALS
2	30	IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
3	N/A	APPLICATION OF ROAD SALT
4	N/A	FORMER FENCING CONTRACTOR YARD

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NO.	REVISIONS	DATE	INITIAL

1146 SNOW STREET INC.

PHASE I - ENVIRONMENTAL SITE ASSESSMENT
1146 SNOW STREET

OTTAWA, ONTARIO

Title:

SITE PLAN

Scale: 1:300	Date: 11/2024
Drawn by: YA	Report No.: PE6763-1
Checked by: JA	Dwg. No.: PE6763-1
Approved by: AM	Revision No.:

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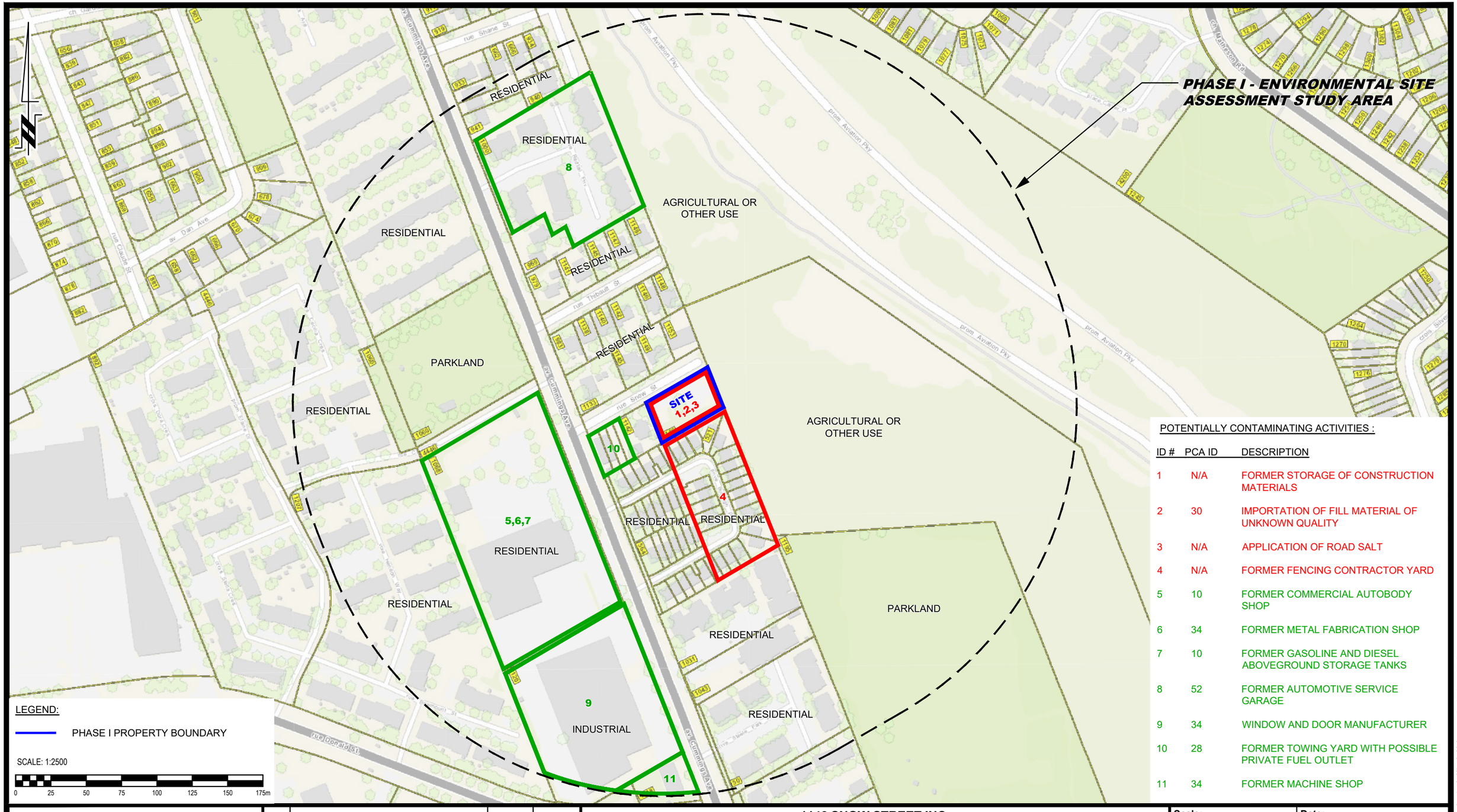

LEGEND:

PHASE I PROPERTY BOUNDARY

SCALE: 1:2500

0 25 50 75 100 125 150 175m

POTENTIALLY CONTAMINATING ACTIVITIES :

ID #	PCA ID	DESCRIPTION
1	N/A	FORMER STORAGE OF CONSTRUCTION MATERIALS
2	30	IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
3	N/A	APPLICATION OF ROAD SALT
4	N/A	FORMER FENCING CONTRACTOR YARD
5	10	FORMER COMMERCIAL AUTOBODY SHOP
6	34	FORMER METAL FABRICATION SHOP
7	10	FORMER GASOLINE AND DIESEL ABOVEGROUND STORAGE TANKS
8	52	FORMER AUTOMOTIVE SERVICE GARAGE
9	34	WINDOW AND DOOR MANUFACTURER
10	28	FORMER TOWING YARD WITH POSSIBLE PRIVATE FUEL OUTLET
11	34	FORMER MACHINE SHOP

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1146 SNOW STREET INC.

PHASE I - ENVIRONMENTAL SITE ASSESSMENT
1146 SNOW STREET

OTTAWA, ONTARIO

Title:

SURROUNDING LAND USE PLAN

Scale: 1:2500	Date: 11/2024
Drawn by: YA	Report No.: PE6763-1
Checked by: JA	Dwg. No.: PE6763-2
Approved by: AM	Revision No.:

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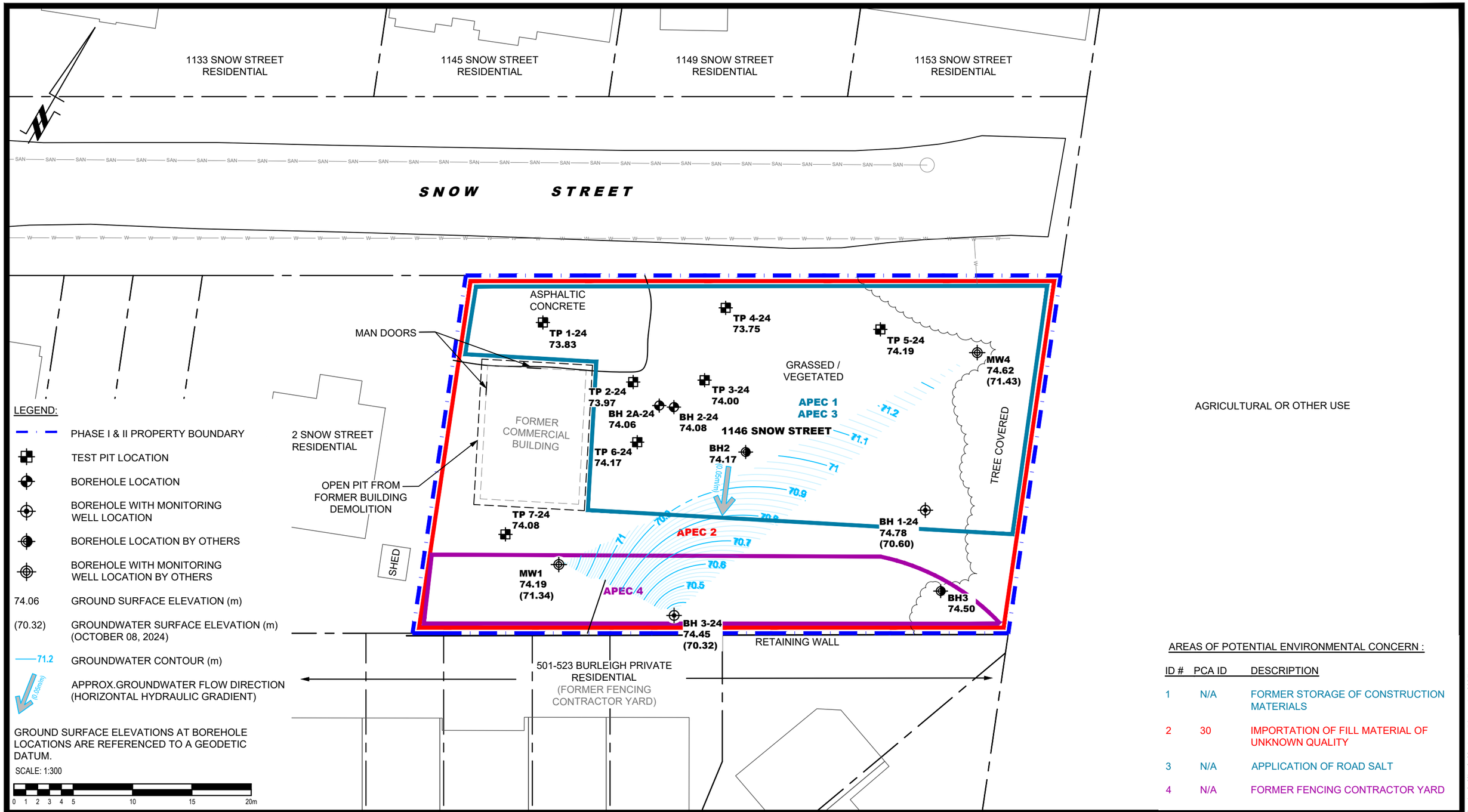

LEGEND:

- PHASE I & II PROPERTY BOUNDARY
- TEST PIT LOCATION
- BOREHOLE LOCATION
- BOREHOLE WITH MONITORING WELL LOCATION
- BOREHOLE LOCATION BY OTHERS
- BOREHOLE WITH MONITORING WELL LOCATION BY OTHERS
- 74.06 GROUND SURFACE ELEVATION (m)
- (70.32) GROUNDWATER SURFACE ELEVATION (m) (OCTOBER 08, 2024)
- 71.2 GROUNDWATER CONTOUR (m)
- APPROX.GROUNDWATER FLOW DIRECTION (HORIZONTAL HYDRAULIC GRADIENT) (0.05m/m)

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

SCALE: 1:300

0 1 2 3 4 5 10 15 20m

AREAS OF POTENTIAL ENVIRONMENTAL CONCERN :

ID #	PCA ID	DESCRIPTION
1	N/A	FORMER STORAGE OF CONSTRUCTION MATERIALS
2	30	IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
3	N/A	APPLICATION OF ROAD SALT
4	N/A	FORMER FENCING CONTRACTOR YARD

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NO.	REVISIONS	DATE	INITIAL

1146 SNOW STREET INC.

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
1146 SNOW STREET

OTTAWA, ONTARIO

Title: TEST HOLE LOCATION PLAN

Scale: 1:300	Date: 11/2024
Drawn by: YA	Report No.: PE6763-2
Checked by: JA	Dwg. No.: PE6763-3
Approved by: AM	Revision No.:

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BH2-24-AU1	0.00-0.61m	01-OCT-2024
Parameter	Result(µg/g)	Standard(µg/g)
Arsenic	20.3	18
Copper	239	140
Molybdenum	36.3	6.9
Zinc	461	340

BH2-24-SS3 1.52-2.13m 01-OCT-2024
Metals comply with MECP Table 3 Standards

BH2-24-SS6A 3.81-3.96m 01-OCT-2024
Metals comply with MECP Table 3 Standards

TP2-24-G2 0.4-0.5m 08-NOV-2024
Metals comply with MECP Table 3 standards

TP1-24-G2 0.5-0.6m 08-NOV-2024
Metals comply with MECP Table 3 standards

TP6-24-G2	0.4-0.5m	08-NOV-2024
Parameter	Result (µg/g)	Standard(µg/g)
Copper	262	140
Lead	247	120
Molybdenum	39.6	6.9
Zinc	573	340

TP7-24-G2 0.4-0.5m 08-NOV-2024
Metals comply with MECP Table 3 standards

TP4-24-G2 0.4-0.5m 08-NOV-2024
Metals comply with MECP Table 3 standards

TP3-24-G2 0.4-0.5m 08-NOV-2024
Metals comply with MECP Table 3 standards

TP5-24-G2 0.4-0.5m 08-NOV-2024
Metals comply with MECP Table 3 standards

S7 0.00-0.61m 05-OCT-2022
Metals comply with MECP Table 3 Standards

S8 0.76-1.37m 05-OCT-2022
Metals comply with MECP Table 3 Standards

1145 SNOW STREET RESIDENTIAL

1149 SNOW STREET RESIDENTIAL

1153 SNOW STREET RESIDENTIAL

SNOW STREET

A

A'

B

B'

ASPHALTIC CONCRETE

MAN DOORS

TP 1-24 73.83

TP 4-24 73.75

TP 5-24 74.19

MW4 74.62 (71.43)

GRASSED / VEGETATED

TP 2-24 73.97

TP 3-24 74.00

BH 2A-24 74.06

BH 2-24 74.08

1146 SNOW STREET

TP 6-24 74.17

BH2 74.17

TREE COVERED

AGRICULTURAL OR OTHER USE

2 SNOW STREET RESIDENTIAL

FORMER COMMERCIAL BUILDING

OPEN PIT FROM FORMER BUILDING DEMOLITION

TP 7-24 74.08

SHED

MW1 74.19 (71.34)

BH 1-24 74.78 (70.60)

BH3 74.50

BH 3-24 74.45 (70.32)

RETAINING WALL

501-523 BURLEIGH PRIVATE RESIDENTIAL (FORMER FENCING CONTRACTOR YARD)

S3 0.00-0.61m 05-OCT-2022
Metals comply with MECP Table 3 Standards

S4 0.76-1.37m 05-OCT-2022
Metals comply with MECP Table 3 Standards

BH1-24-SS2 0.76-1.37m 01-OCT-2024
Metals comply with MECP Table 3 Standards

BH1-24-SS4 2.29-2.90m 01-OCT-2024
Metals comply with MECP Table 3 Standards

BH1-24-SS6 3.81-4.42m 01-OCT-2024
Metals comply with MECP Table 3 Standards

S1 0.00-0.61m 05-OCT-2022
Metals comply with MECP Table 3 Standards

S2 0.76-1.37m 05-OCT-2022
Metals comply with MECP Table 3 Standards

BH3-24-SS2 0.76-1.37m 01-OCT-2024
Metals comply with MECP Table 3 Standards

BH3-24-SS3 1.52-2.13m 01-OCT-2024
Metals comply with MECP Table 3 Standards

BH3-24-SS6A 3.81-4.01m 01-OCT-2024
Metals comply with MECP Table 3 Standards

S5 0.00-0.61m 05-OCT-2022
Metals comply with MECP Table 3 Standards

S6 0.76-1.37m 05-OCT-2022
Metals comply with MECP Table 3 Standards

LEGEND:

SOIL RESULT COMPLIES WITH THE MECP TABLE 3 STANDARDS

SOIL RESULT EXCEEDS THE MECP TABLE 3 STANDARDS

- PHASE I & II PROPERTY BOUNDARY
- BOREHOLE LOCATION
- BOREHOLE WITH MONITORING WELL LOCATION
- BOREHOLE LOCATION BY OTHERS
- BOREHOLE WITH MONITORING WELL LOCATION BY OTHERS
- 74.06 GROUND SURFACE ELEVATION (m)
- (70.32) GROUNDWATER SURFACE ELEVATION (m) (OCTOBER 08, 2024)
- DELINEATION OF SOIL WITH CONCENTRATIONS OF METALS EXCEEDING THE MECP TABLE 3 STANDARDS

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

SCALE: 1:300

0 1 2 3 4 5 10 15 20m

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NO.	REVISIONS	DATE	INITIAL

1146 SNOW STREET INC.

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
1146 SNOW STREET

OTTAWA, ONTARIO

Title: **ANALYTICAL TESTING PLANS - SOIL METALS (As, Sb, Se)**

Scale: 1:300	Date: 11/2024
Drawn by: YA	Report No.: PE6763-2
Checked by: JA	Dwg. No.: PE6763-4
Approved by: AM	Revision No.:

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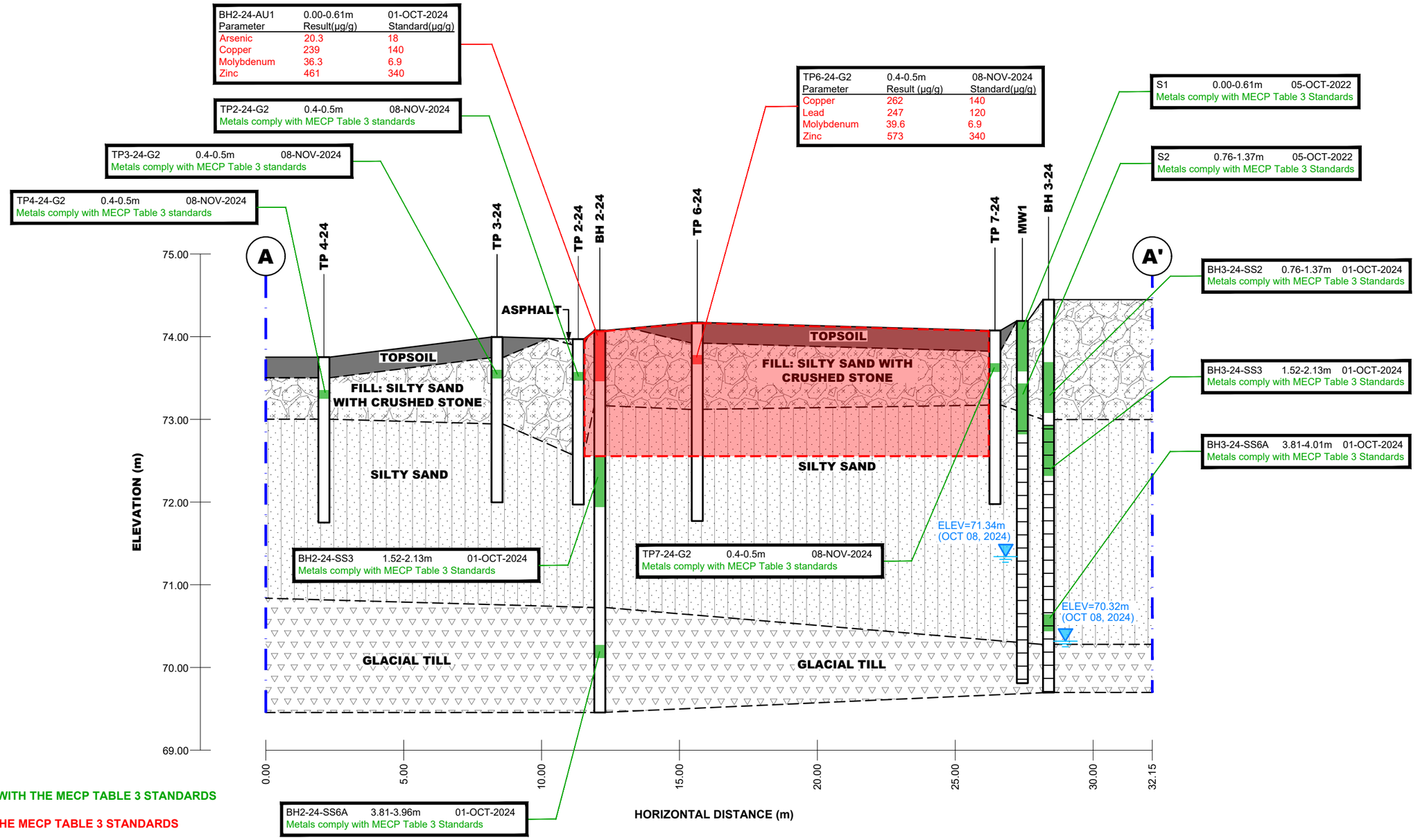

LEGEND:

SOIL RESULT COMPLIES WITH THE MECP TABLE 3 STANDARDS

SOIL RESULT EXCEEDS THE MECP TABLE 3 STANDARDS

PHASE I & II PROPERTY BOUNDARY

DELINEATION OF SOIL WITH CONCENTRATIONS OF METALS EXCEEDING THE MECP TABLE 3 STANDARDS

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NO.	REVISIONS	DATE	INITIAL

1146 SNOW STREET INC.

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
1146 SNOW STREET

OTTAWA, ONTARIO

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

Scale: AS SHOWN	Date: 11/2024
Drawn by: ZS	Report No.: PE6763-2
Checked by: JA	Dwg. No.: PE6763-4A
Approved by: AM	Revision No.:

11x17

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TP6-24-G2	0.4-0.5m	08-NOV-2024
Parameter	Result (µg/g)	Standard(µg/g)
Copper	262	140
Lead	247	120
Molybdenum	39.6	6.9
Zinc	573	340

TP2-24-G2 0.4-0.5m 08-NOV-2024
Metals comply with MECP Table 3 standards

TP1-24-G2 0.5-0.6m 08-NOV-2024
Metals comply with MECP Table 3 standards

BH2-24-AU1	0.00-0.61m	01-OCT-2024
Parameter	Result(µg/g)	Standard(µg/g)
Arsenic	20.3	18
Copper	239	140
Molybdenum	36.3	6.9
Zinc	461	340

BH2-24-SS3 1.52-2.13m 01-OCT-2024
Metals comply with MECP Table 3 Standards

TP3-24-G2 0.4-0.5m 08-NOV-2024
Metals comply with MECP Table 3 standards

BH2-24-SS6A 3.81-3.96m 01-OCT-2024
Metals comply with MECP Table 3 Standards

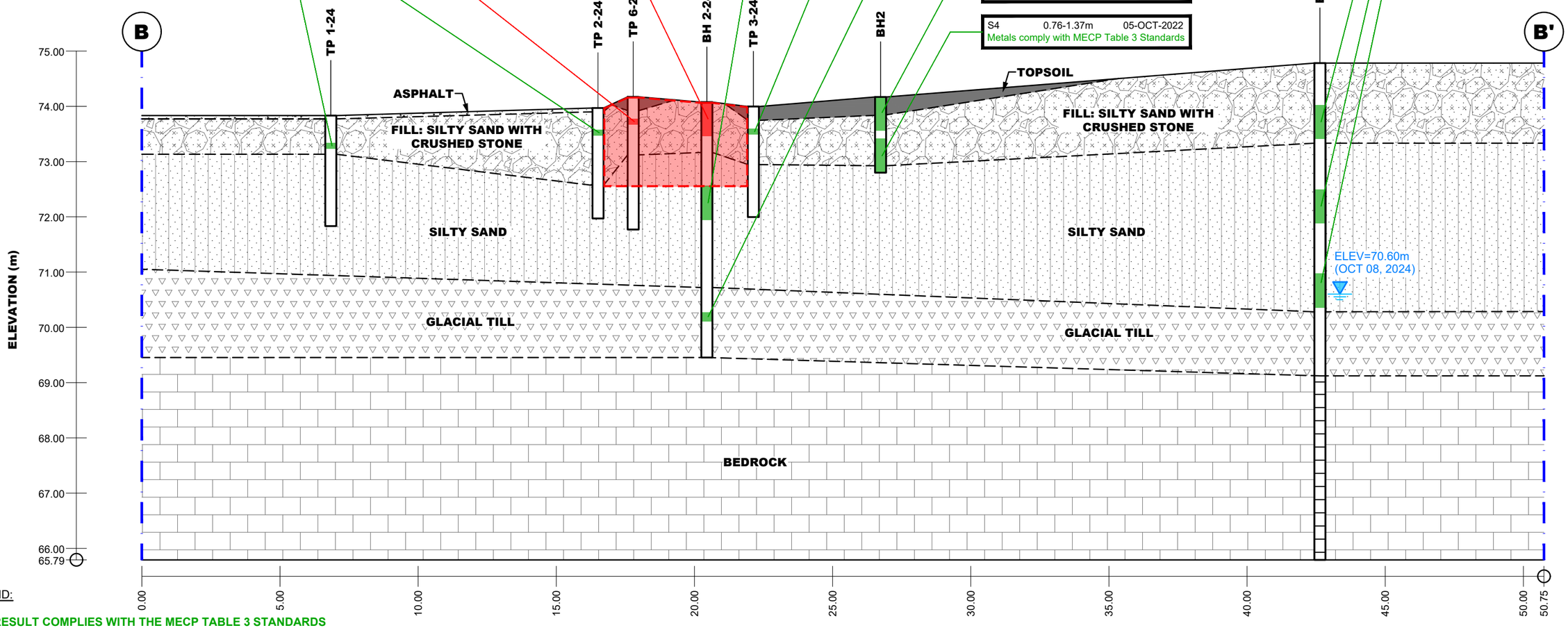
S3 0.00-0.61m 05-OCT-2022
Metals comply with MECP Table 3 Standards

S4 0.76-1.37m 05-OCT-2022
Metals comply with MECP Table 3 Standards

BH1-24-SS2 0.76-1.37m 01-OCT-2024
Metals comply with MECP Table 3 Standards

BH1-24-SS4 2.29-2.90m 01-OCT-2024
Metals comply with MECP Table 3 Standards

BH1-24-SS6 3.81-4.42m 01-OCT-2024
Metals comply with MECP Table 3 Standards



LEGEND:

SOIL RESULT COMPLIES WITH THE MECP TABLE 3 STANDARDS

SOIL RESULT EXCEEDS THE MECP TABLE 3 STANDARDS

PHASE I & II PROPERTY BOUNDARY

DELINEATION OF SOIL WITH CONCENTRATIONS OF METALS EXCEEDING THE MECP TABLE 3 STANDARDS

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

NO.	REVISIONS	DATE	INITIAL

1146 SNOW STREET INC.

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
1146 SNOW STREET

OTTAWA, ONTARIO

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

Scale: AS SHOWN	Date: 11/2024
Drawn by: ZS	Report No.: PE6763-2
Checked by: JA	Dwg. No.: PE6763-4B
Approved by: AM	Revision No.:

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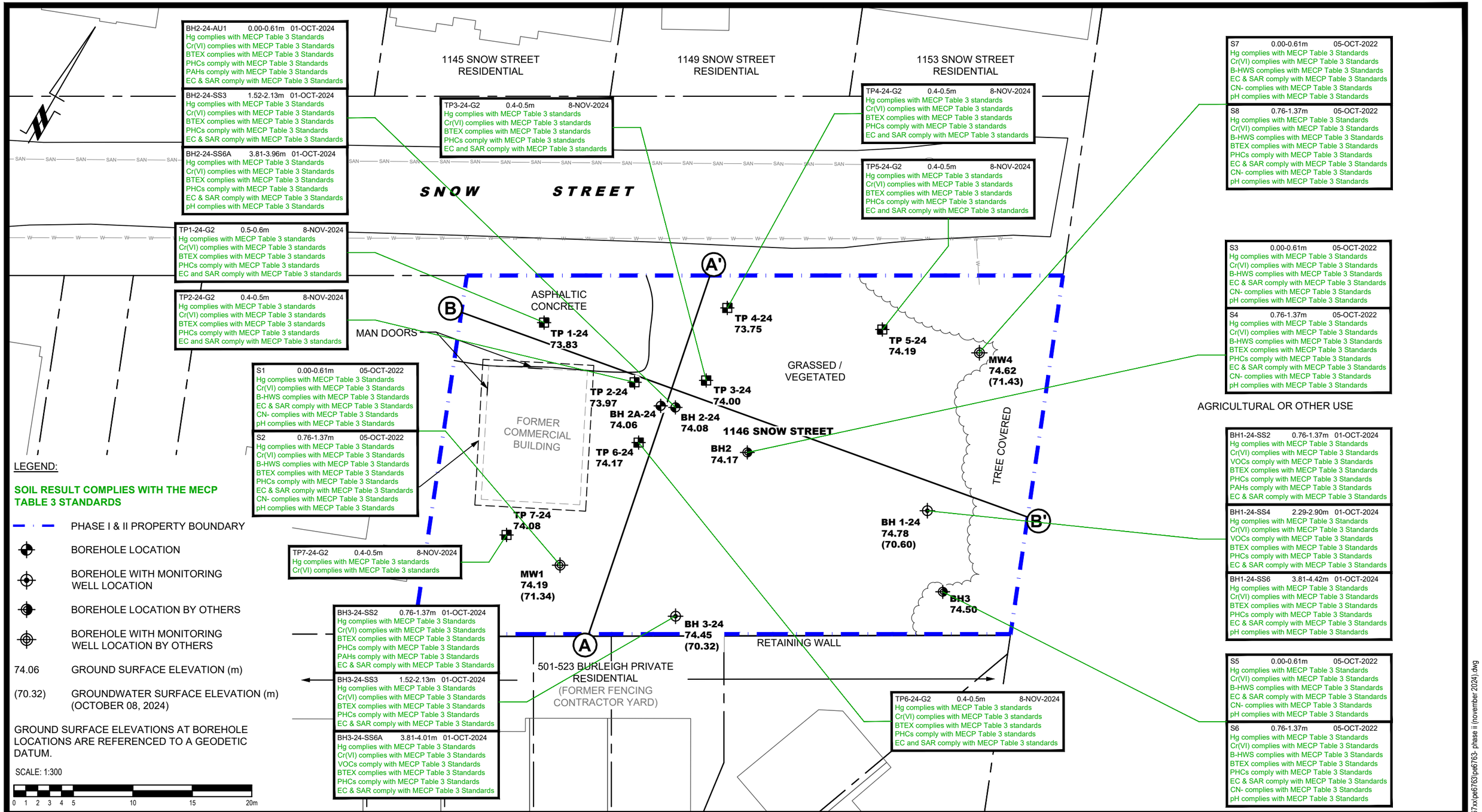

PATERSON GROUP
9 AURIGA DRIVE
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K2E 7T9
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NO.	REVISIONS	DATE	INITIAL

1146 SNOW STREET INC.

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
1146 SNOW STREET

OTTAWA, ONTARIO

Title:
ANALYTICAL TESTING PLANS - SOIL
Hg, Cr(VI), B-HWS, VOCs, BTEX, PHCs, PAHs, EC, SAR, CN-, pH

Scale: 1:300	**Date:** 11/2024
Drawn by: YA	**Report No.:** PE6763-2
Checked by: JA	**Dwg. No.:** PE6763-5
Approved by: AM	**Revision No.:**

11x17

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TP2-24-G2 0.4-0.5m 8-NOV-2024
Hg complies with MECP Table 3 standards
Cr(VI) complies with MECP Table 3 standards
BTEX complies with MECP Table 3 standards
PHCs comply with MECP Table 3 standards
EC and SAR comply with MECP Table 3 standards

TP3-24-G2 0.4-0.5m 8-NOV-2024
Hg complies with MECP Table 3 standards
Cr(VI) complies with MECP Table 3 standards
BTEX complies with MECP Table 3 standards
PHCs comply with MECP Table 3 standards
EC and SAR comply with MECP Table 3 standards

TP4-24-G2 0.4-0.5m 8-NOV-2024
Hg complies with MECP Table 3 standards
Cr(VI) complies with MECP Table 3 standards
BTEX complies with MECP Table 3 standards
PHCs comply with MECP Table 3 standards
EC and SAR comply with MECP Table 3 standards

BH2-24-AU1 0.00-0.61m 01-OCT-2024
Hg complies with MECP Table 3 Standards
Cr(VI) complies with MECP Table 3 Standards
BTEX complies with MECP Table 3 Standards
PHCs comply with MECP Table 3 Standards
PAHs comply with MECP Table 3 Standards
EC & SAR comply with MECP Table 3 Standards

BH2-24-SS3 1.52-2.13m 01-OCT-2024
Hg complies with MECP Table 3 Standards
Cr(VI) complies with MECP Table 3 Standards
BTEX complies with MECP Table 3 Standards
PHCs comply with MECP Table 3 Standards
EC & SAR comply with MECP Table 3 Standards

BH2-24-SS6A 3.81-3.96m 01-OCT-2024
Hg complies with MECP Table 3 Standards
Cr(VI) complies with MECP Table 3 Standards
BTEX complies with MECP Table 3 Standards
PHCs comply with MECP Table 3 Standards
EC & SAR comply with MECP Table 3 Standards
pH complies with MECP Table 3 Standards

TP7-24-G2 0.4-0.5m 8-NOV-2024
Hg complies with MECP Table 3 standards
Cr(VI) complies with MECP Table 3 standards

TP6-24-G2 0.4-0.5m 8-NOV-2024
Hg complies with MECP Table 3 standards
Cr(VI) complies with MECP Table 3 standards
BTEX complies with MECP Table 3 standards
PHCs comply with MECP Table 3 standards
EC and SAR comply with MECP Table 3 standards

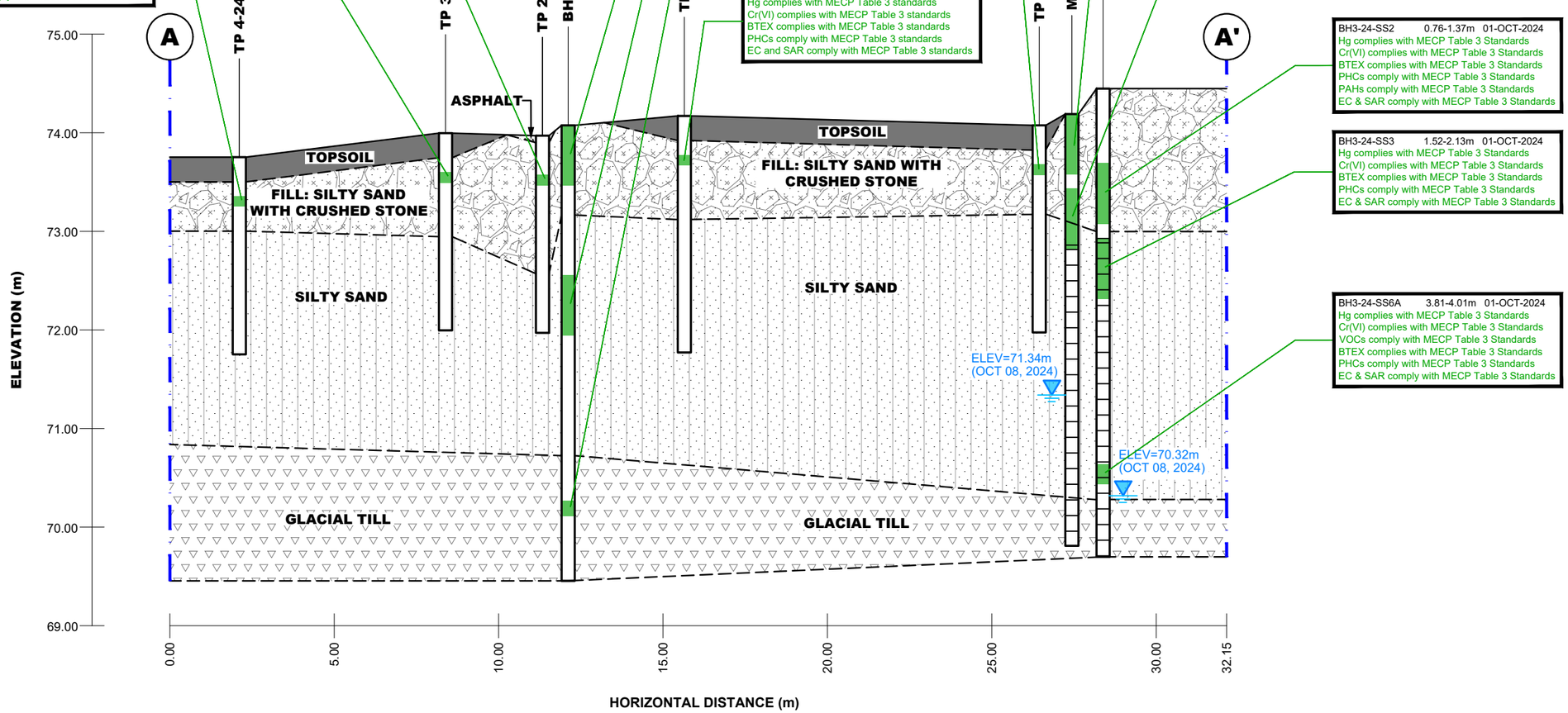
S1 0.00-0.61m 05-OCT-2022
Hg complies with MECP Table 3 Standards
Cr(VI) complies with MECP Table 3 Standards
B-HWS complies with MECP Table 3 Standards
EC & SAR comply with MECP Table 3 Standards
CN- complies with MECP Table 3 Standards
pH complies with MECP Table 3 Standards

S2 0.76-1.37m 05-OCT-2022
Hg complies with MECP Table 3 Standards
Cr(VI) complies with MECP Table 3 Standards
B-HWS complies with MECP Table 3 Standards
BTEX complies with MECP Table 3 Standards
PHCs comply with MECP Table 3 Standards
EC & SAR comply with MECP Table 3 Standards
CN- complies with MECP Table 3 Standards
pH complies with MECP Table 3 Standards

BH3-24-SS2 0.76-1.37m 01-OCT-2024
Hg complies with MECP Table 3 Standards
Cr(VI) complies with MECP Table 3 Standards
BTEX complies with MECP Table 3 Standards
PHCs comply with MECP Table 3 Standards
PAHs comply with MECP Table 3 Standards
EC & SAR comply with MECP Table 3 Standards

BH3-24-SS3 1.52-2.13m 01-OCT-2024
Hg complies with MECP Table 3 Standards
Cr(VI) complies with MECP Table 3 Standards
BTEX complies with MECP Table 3 Standards
PHCs comply with MECP Table 3 Standards
EC & SAR comply with MECP Table 3 Standards

BH3-24-SS6A 3.81-4.01m 01-OCT-2024
Hg complies with MECP Table 3 Standards
Cr(VI) complies with MECP Table 3 Standards
VOCs comply with MECP Table 3 Standards
BTEX complies with MECP Table 3 Standards
PHCs comply with MECP Table 3 Standards
EC & SAR comply with MECP Table 3 Standards



LEGEND:

SOIL RESULT COMPLIES WITH THE MECP TABLE 3 STANDARDS

PHASE I & II PROPERTY BOUNDARY

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

NO.	REVISIONS	DATE	INITIAL

1146 SNOW STREET INC.

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
1146 SNOW STREET

OTTAWA, ONTARIO

Title: CROSS-SECTION A-A' - SOIL
Hg, Cr(VI), B-HWS, VOCs, BTEX, PHCs, PAHs, EC, SAR, CN-, pH

Scale: AS SHOWN	Date: 11/2024
Drawn by: ZS	Report No.: PE6763-2
Checked by: JA	Dwg. No.: PE6763-5A
Approved by: AM	Revision No.:

11x17

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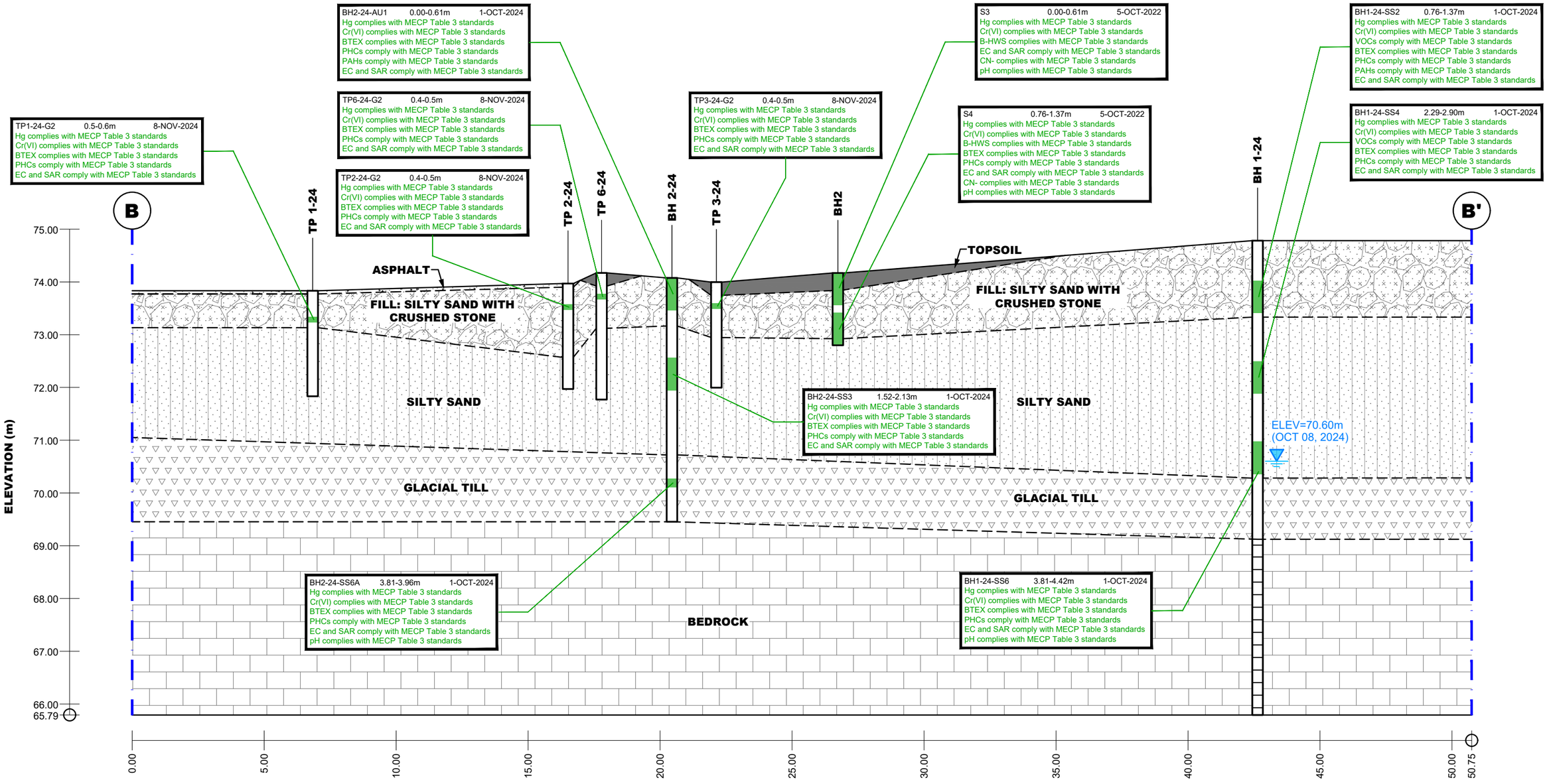

LEGEND:

SOIL RESULT COMPLIES WITH THE MECP TABLE 3 STANDARDS

PHASE I & II PROPERTY BOUNDARY

PATERSON GROUP
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NO.	REVISIONS	DATE	INITIAL

1146 SNOW STREET INC.

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
1146 SNOW STREET

OTTAWA, ONTARIO

Title:

CROSS-SECTION B-B' - SOIL
Hg, Cr(VI), B-HWS, VOCs, BTEX, PHCs, PAHs, EC, SAR, CN-, pH

Scale: AS SHOWN	Date: 11/2024
Drawn by: ZS	Report No.: PE6763-2
Checked by: JA	Dwg. No.: PE6763-5B
Approved by: AM	Revision No.:

11x17

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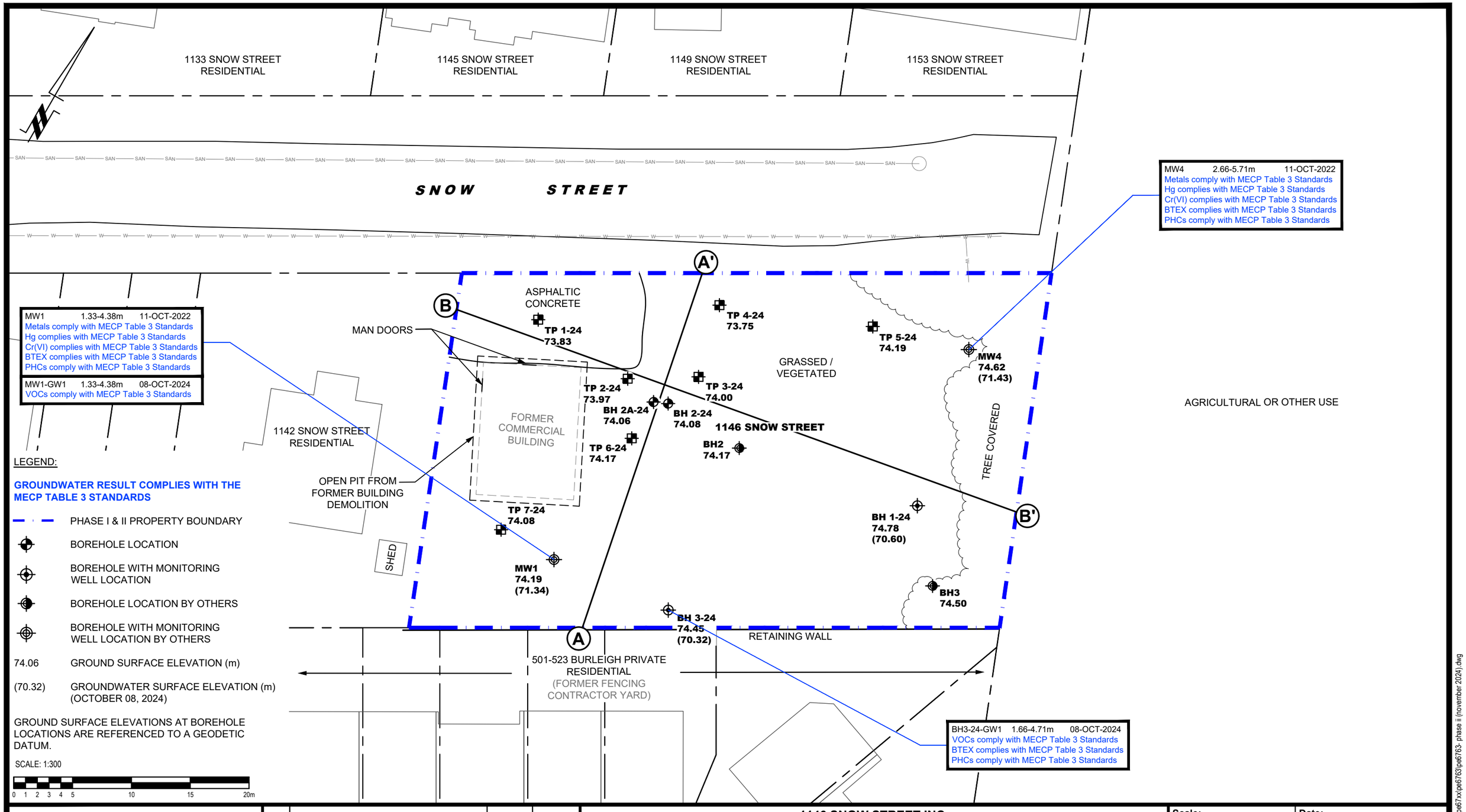

LEGEND:

GROUNDWATER RESULT COMPLIES WITH THE MECP TABLE 3 STANDARDS

- PHASE I & II PROPERTY BOUNDARY
- BOREHOLE LOCATION
- BOREHOLE WITH MONITORING WELL LOCATION
- BOREHOLE LOCATION BY OTHERS
- BOREHOLE WITH MONITORING WELL LOCATION BY OTHERS
- 74.06 GROUND SURFACE ELEVATION (m)
- (70.32) GROUNDWATER SURFACE ELEVATION (m) (OCTOBER 08, 2024)

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

SCALE: 1:300

0 1 2 3 4 5 10 15 20m

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

1146 SNOW STREET INC.

PHASE II - ENVIRONMENTAL SITE ASSESSMENT
1146 SNOW STREET

OTTAWA, ONTARIO

Title: **ANALYTICAL TESTING PLANS - GROUNDWATER METALS (As, Sb, Se) , Hg, Cr(VI), VOCs, BTEX, PHCs**

Scale: 1:300	Date: 11/2024
Drawn by: YA	Report No.: PE6763-2
Checked by: JA	Dwg. No.: PE6763-6
Approved by: AM	Revision No.:

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APPENDIX 1

SAMPLING AND ANALYSIS PLAN

SOIL PROFILE AND TEST DATA SHEETS

SYMBOLS AND TERMS

LABORATORY CERTIFICATES OF ANALYSIS

PATERSON GROUP

Sampling & Analysis Plan

1146 Snow Street,
Ottawa, Ontario

Prepared for 1146 Snow Street Inc.

Report: PE6763-SAP
September 26, 2024

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1.0 SAMPLING PROGRAM

Paterson Group Inc. (Paterson) was commissioned by 1146 Snow Street Inc. to conduct a Phase II – Environmental Site Assessment (Phase II ESA) for the property addressed 1146 Snow Street (Phase II Property), in the City of Ottawa, Ontario.

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

Borehole	Location & Rationale	Proposed Depth & Rationale
BH1-24	East-central portion of the RSC Property; to assess former on-site storage of construction materials (APEC 1), the importation of fill material of unknown quality (APEC 2), the application of road salt (APEC 3), and preliminary excess soil testing	3m into bedrock; for geotechnical analysis, to assess overburden soils, and to intercept the groundwater table for the purpose of installing a monitoring well.
BH2-24	Central portion of the RSC Property; to assess former on-site storage of construction materials (APEC 1), the importation of fill material of unknown quality (APEC 2), the application of road salt (APEC 3), and preliminary excess soil testing	3m into bedrock; for geotechnical analysis, and to assess overburden soils.
BH3-24	Southern portion of RSC Property; to assess application of road salt (APEC 3), adjacent former fencing contractor yard (APEC 4), and preliminary excess soil testing.	5-7 m; to assess overburden soils, and to intercept the groundwater table for the purpose of installing a monitoring well.

Borehole locations are shown on Drawing PE6763-3 – Test Hole Location Plan, appended to the main report.

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

Following the borehole drilling, groundwater monitoring wells will be installed in two of the boreholes as indicated to allow for the collection of groundwater samples.

2.0 ANALYTICAL TESTING PROGRAM

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

- ❒ At least one sample from each 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 soil at the Phase II Property is based on the following general considerations:

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

- ❒ Groundwater monitoring well screens should straddle the water table at sites where the contaminants of concern are suspected to be LNAPLs.

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

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

3.0 STANDARD OPERATING PROCEDURES

3.1 Environmental Drilling Procedure

Purpose

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

Equipment

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

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

Determining Borehole Locations

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

After drilling is completed, a plan with the borehole locations must be provided. Distances and orientations of boreholes with respect to site features (buildings, roadways, etc.) must be provided. Distances should be measured using a measuring tape or wheel rather than paced off. Ground surface elevations at each borehole should be surveyed relative to a geodetic benchmark, if one is available, or a temporary site benchmark which can be tied in at a later date if necessary.

Drilling Procedure

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

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

Spoon Washing Procedure

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

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

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

Screening Procedure

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

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

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

3.2 Monitoring Well Installation Procedure

Equipment

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

Procedure

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

3.3 Monitoring Well Sampling Procedure

Equipment

- ❒ Water level 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

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.

Sampling & Analysis Plan

1146 Snow Street,
Ottawa, Ontario

Prepared for 1146 Snow Street Inc.

Report: PE6763-SAP.02
November 1, 2024

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PAGE

1.0 SAMPLING PROGRAM

Paterson Group Inc. (Paterson) was commissioned by 1146 Snow Street Inc. to conduct a Supplemental Phase II – Environmental Site Assessment (Phase II ESA) for the property addressed 1146 Snow Street (Phase II Property), in the City of Ottawa, Ontario.

Based on the findings of the previous Phase II ESA, the following supplemental subsurface investigation program was developed to assess APECs and delineate soil exceedances.

Test Hole	Location & Rationale	Proposed Depth & Rationale
TP1-24	Assess soil quality in the northwestern portion of the Phase II Property.	Collect samples to below fill material, submit fill sample for horizontal delineation and if contamination is encountered
TP2-24	Assess soil quality in the northwestern portion of the Phase II Property.	Collect samples to below fill material, submit fill sample for horizontal delineation and if contamination is encountered
TP3-24	Assess soil quality in the north-central portion of the Phase II Property.	Collect samples to below fill material, submit fill sample for horizontal delineation and if contamination is encountered
TP4-24	Assess soil quality in the n north-central portion of the Phase II Property.	Collect samples to below fill material, submit fill sample for horizontal delineation and if contamination is encountered
TP5-24	Assess soil quality in the northeastern portion of the Phase II Property.	Collect samples to below fill material, submit fill sample for horizontal delineation and if contamination is encountered
TP6-24	Assess soil quality in the east-central portion of the Phase II Property.	Collect samples to below fill material, submit fill sample for horizontal delineation and if contamination is encountered
TP7-24	Assess soil quality in the southeastern portion of the Phase II Property.	Collect samples to below fill material, submit fill sample for horizontal delineation and if contamination is encountered

Test hole locations are shown on Drawing PE6763-3 – Test Hole Location Plan, appended to the main report.

Grab samples will be obtained from each stratigraphic unit encountered in the test pits. All soil samples will be retained, and samples will be selected for submission following a preliminary screening analysis.

2.0 ANALYTICAL TESTING PROGRAM

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

- ❒ At least one sample from each test hole should be submitted, in order to delineate the horizontal extent of contamination across the site.

- ❒ At least one sample from each stratigraphic unit should be submitted, in order to delineate the vertical extent of contamination at the site.

- ❒ In test holes where there is visual or olfactory evidence of contamination, or where organic vapour meter or photoionization detector readings indicate the presence of contamination, the 'worst-case' sample from each test hole should be submitted for comparison with MECP site condition standards.

- ❒ In test holes with evidence of contamination as described above, a sample should be submitted from the stratigraphic unit below the 'worst-case' sample to determine whether the contaminant(s) have migrated downward.

- ❒ Parameters analyzed should be consistent with the Contaminants of Potential Concern identified in the Phase I ESA.

3.0 STANDARD OPERATING PROCEDURES

3.1 Test Pit Excavation Procedure

Purpose

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

Equipment

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

- ❒ Glass soil sample jars
- ❒ two buckets
- ❒ latex or nitrile gloves (depending on suspected contaminant)
- ❒ RKI Eagle organic vapour meter or MiniRae photoionization detector (depending on contamination suspected)

Determining Test Hole Locations

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

After drilling is completed a plan with the test pit/excavation locations must be provided. Distances and orientations of test pits/excavations with respect to site features (buildings, roadways, etc.) must be provided. Distances should be measured using a measuring tape or wheel rather than paced off. round surface elevations at each borehole should be surveyed relative to a geodetic benchmark, if one is available, or a temporary site benchmark which can be tied in at a later date if necessary.

Test Pitting Procedure

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

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

- ❒ Sample soils in every stratigraphy level or in 1m intervals, whichever is less.
- ❒ Make sure samples are well sealed in plastic bags with no holes prior to screening and are kept cool but unfrozen.
- ❒ If sampling for VOCs, BTEX, or PHCs F1, a soil core from each soil sample which may be analysed must be taken and placed in the laboratory-provided methanol vial.
- ❒ Note all and any odours or discolouration of samples.
- ❒ If obvious contamination is encountered, continue sampling until vertical extent of contamination is delineated.
- ❒ If at all possible, soil samples should be submitted to a preliminary screening procedure on site, either using a RKI Eagle, PID, etc. depending on type of suspected contamination.

Sampling Procedure

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

Soil Screening Procedure

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

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

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

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

Physical impediments to the Sampling and Analysis plan may include:

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

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

SOIL PROFILE AND TEST DATA

Phase II Environmental Site Assessment

1146 Snow Street, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 372640.75 **NORTHING:** 5032705.81 **ELEVATION:** 74.78

PROJECT: Proposed Residential Building

BORINGS BY: CME-55 Low Clearance Drill

REMARKS:

DATE: October 01, 2024

FILE NO. : PE6763

HOLE NO. : BH 1-24

SAMPLE DESCRIPTION	DEPTH (m)	SAMPLE TYPE AND NO.	RECOVERY (%)	N, Nc OR RQD	ELEVATION (m)
GROUND SURFACE	0				74
FILL: Compact, brown silty fine sand, some gravel, trace brick and roots		AU 1			
1.45m [73.33m]	1	SS 2	42	4-7-7-7 14	
Compact, brown **SILTY** fine **SAND**	2	SS 3	58	5-8-11-11 19	73
		SS 4	58	5-10-11-10 21	
3.73m [71.05m]	3	SS 5	67	6-13-13-16 26	72
Dense, brown **SILTY** fine **SAND** to **SANDY SILT**		SS 6	83	10-17-14-9 31	
- Silt content increasing	4				71
4.50m [70.28m]					
GLACIAL TILL: Loose, brown silty fine sand, trace to some gravel	5	SS 7	83	3-3-5-13 8	70
5.26m [69.52m]					
GLACIAL TILL: Dense, dark grey silty fine sand, trace to some gravel		SS 8	99	14-50-/-/ 50/0.03	
5.66m [69.12m]	6	RC 1	94	RQD 87	69
BEDROCK: Fair to good quality black shale					
	7	RC 2	97	RQD 78	68
	8	RC 3	88	RQD 86	67
8.99m [65.79m]					66
End of Borehole	9				
(GWL at 4.18 m - October 8, 2024)	10				65

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

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

MONITORING WELL CONSTRUCTION: 4.2 m ▼ 2024-10-08

SOIL PROFILE AND TEST DATA

Phase II Environmental Site Assessment

1146 Snow Street, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 372618.10 **NORTHING:** 5032702.82 **ELEVATION:** 74.08

PROJECT: Proposed Residential Building

BORINGS BY: CME-55 Low Clearance Drill

REMARKS:

DATE: October 01, 2024

FILE NO. : PE6763

HOLE NO. : BH 2-24

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N, Nc OR RQD	SAMPLE ANALYTICAL TESTS	GASTECH (ppm) / GASTECH (% LEL) 50 100 150 200 / PID (ppm) / PID (% LEL) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE		0							74
FILL: Loose, brown silty fine sand, some gravel			AU 1						
0.91m [73.17m]		1	SS 2	50	3-2-5-6 7				73
Loose to compact, brown **SILTY** fine **SAND**			SS 3	67	4-7-6-7 13				
- Compact by 1.53 m depth		2							72
- Loose by 2.29 m depth			SS 4	58	2-4-5-6 9				
3.35m [70.73m]		3	SS 5	83	5-10-21-14 31				71
GLACIAL TILL: Dense, brown silty fine sand, some gravel									
3.73m [70.34m]		4	SS 6	75	6-13-12-14 25				70
GLACIAL TILL: Compact, grey medium sand, some gravel									
3.96m [70.12m]			SS 7	100	50-/-/-/ 50/0.05				
GLACIAL TILL: Compact, grey sandy silt, trace gravel and black shale		5							69
4.62m [69.45m]									
End of Borehole		6							68
Practical refusal to augering at 4.62 m depth		7							67
		8							66
		9							65
		10							

SOIL PROFILE AND TEST DATA

Phase II Environmental Site Assessment

1146 Snow Street, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 372616.92 **NORTHING:** 5032702.26 **ELEVATION:** 74.06

PROJECT: Proposed Residential Building

BORINGS BY: CME-55 Low Clearance Drill

REMARKS:

DATE: October 01, 2024

FILE NO. : PE6763

HOLE NO. : BH 2A-24

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N, Nc OR RQD	SAMPLE ANALYTICAL TESTS	GASTECH (ppm) / GASTECH (% LEL) / PID (ppm) / PID (% LEL)	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE		0					50 100 150 200 / 20 40 60 80		74
FILL: Loose, brown silty fine sand, some gravel									
0.91m [73.15m]		1							73
Loose to compact, brown **SILTY** fine **SAND**		2							72
3.35m [70.71m]		3							71
GLACIAL TILL: Dense, brown silty fine sand, some gravel									
3.73m [70.33m]		4							70
GLACIAL TILL: Compact, grey medium sand, some gravel									
3.96m [70.10m]									
GLACIAL TILL: Compact, grey sandy silt, trace gravel and black shale		5	RC 1	97	RQD 90				69
4.50m [69.56m]		6							68
BEDROCK: Good to excellent quality black shale		7	RC 2	100	RQD 100				67
7.65m [66.41m]									
End of Borehole		8							66
		9							65
		10							

SOIL PROFILE AND TEST DATA

Phase II Environmental Site Assessment

1146 Snow Street, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 372626.82 **NORTHING:** 5032687.56 **ELEVATION:** 74.45

PROJECT: Proposed Residential Building

BORINGS BY: CME-55 Low Clearance Drill

REMARKS:

DATE: October 01, 2024

FILE NO. : PE6763

HOLE NO. : BH 3-24

SAMPLE DESCRIPTION	DEPTH (m)	SAMPLE TYPE AND NO.	RECOVERY (%)	N, Nc OR RQD	ANALYTICAL TESTS	ELEVATION (m)
GROUND SURFACE	0					74.45
FILL: Loose, brown sandy silt, trace gravel, clay and organics (0.30m [74.15m])		AU 1				
FILL: Loose, brown silty fine sand, trace gravel (1.45m [73.00m])	1	SS 2	67	3-3-2-4 5		73
Compact, grey **SILTY** fine **SAND** to **SANDY SILT** (2.21m [72.24m])	2	SS 3	75	5-6-7-9 13		72
Compact, brown **SILTY** fine **SAND**, trace gravel - Trace organics at 3.05 m depth (4.01m [70.44m])	3	SS 4	83	4-6-7-9 13		71
		SS 5	75	5-7-7-7 14		
Compact, brown **SANDY SILT** (4.17m [70.28m])	4	SS 6	67	5-13-13-11 26		70
GLACIAL TILL: Compact, grey silty sand, some gravel (4.65m [69.80m])		SS 7	99	7-50-/-/ 50/0.03		
GLACIAL TILL: Compact, grey sandy silt (4.75m [69.70m])	5					69
End of Borehole Practical refusal to auger at 4.75 m depth (GWL at 4.13 m - October 8, 2024)	6					68
	7					67
	8					66
	9					65
	10					

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

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

MONITORING WELL CONSTRUCTION: 4.1 m — 2024-10-08

SOIL PROFILE AND TEST DATA

Phase II Environmental Site Assessment

1146 Snow Street, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 372604.93 **NORTHING:** 5032703.44 **ELEVATION:** 73.83

PROJECT: Proposed Residential Building

BORINGS BY: Backhoe

REMARKS:

DATE: November 08, 2024

FILE NO. : PE6763

HOLE NO. : TP 1-24

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N, Nc OR RQD	SAMPLE ANALYTICAL TESTS	GASTECH (ppm) / GASTECH (% LEL) / PID (ppm) / PID (% LEL)	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE		0							73.83
ASPHALT 0.06m [73.77m]			G 1						
FILL: Crushed stone 0.40m [73.43m]			G 2						
FILL: Brown silty sand, trace cobbles and rooots 0.70m [73.13m]		1	G 3						73
Brown **SILTY SAND**, trace cobbles 1.10m [72.73m]			G 4						
SILTY SAND, with cobbles 2.00m [71.83m]		2	G 5						72
End of Test Pit									
		3							71
		4							70
		5							69

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

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

SOIL PROFILE AND TEST DATA

Phase II Environmental Site Assessment

1146 Snow Street, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 372614.02 **NORTHING:** 5032702.88 **ELEVATION:** 73.97

PROJECT: Proposed Residential Building

BORINGS BY: Backhoe

REMARKS:

DATE: November 08, 2024

FILE NO. : PE6763

HOLE NO. : TP 2-24

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N, Nc OR RQD	SAMPLE ANALYTICAL TESTS	GASTECH (ppm) / GASTECH (% LEL) 50 100 150 200 / PID (ppm) / PID (% LEL) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE		0							73.97
ASPHALT 0.07m [73.90m]			G 1						
FILL: Cruhsed stone 0.25m [73.72m]									
FILL: Brown silty sand, with cobbles, boulders and brick			G 2						
		1	G 3						73
1.40m [72.57m]									
SILTY SAND, trace cobbles			G 4						
2.00m [71.97m]		2	G 5						72
End of Test Pit									
		3							71
		4							70
		5							69

SOIL PROFILE AND TEST DATA

Phase II Environmental Site Assessment

1146 Snow Street, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 372619.16 **NORTHING:** 5032706.02 **ELEVATION:** 74.00

PROJECT: Proposed Residential Building

BORINGS BY: Backhoe

REMARKS:

DATE: November 08, 2024

FILE NO. : PE6763

HOLE NO. : TP 3-24

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N, Nc OR RQD	SAMPLE ANALYTICAL TESTS	GASTECH (ppm) / GASTECH (% LEL) / PID (ppm) / PID (% LEL)	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE		0					50 100 150 200 / 20 40 60 80		74
TOPSOIL 0.25m [73.75m]									
FILL: Dark brown silty sand, with cobbles, trace roots			G 2						
1.05m [72.95m]		1	G 3						73
Brown **SILTY SAND**, trace cobbles			G 4						
2.00m [72.00m]		2	G 5						72
End of Test Pit									
		3							71
		4							70
		5							69

SOIL PROFILE AND TEST DATA

Phase II Environmental Site Assessment

1146 Snow Street, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 372617.66 **NORTHING:** 5032712.19 **ELEVATION:** 73.75

PROJECT: Proposed Residential Building

BORINGS BY: Backhoe

REMARKS:

DATE: November 08, 2024

FILE NO. : PE6763

HOLE NO. : TP 4-24

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE: TYPE AND NO.	SAMPLE: RECOVERY (%)	SAMPLE: N, Nc OR RQD	SAMPLE: ANALYTICAL TESTS	GASTECH (ppm) / GASTECH (% LEL) 50 100 150 200 / PID (ppm) / PID (% LEL) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE		0							73
TOPSOIL 0.25m [73.50m]			G 1						
FILL: Dark brown silty sand, with cobbles, trace roots 0.75m [73.00m]			G 2						
Loose, brown **SILTY SAND**		1	G 3						72
			G 4						
2.00m [71.75m]		2	G 5						71
End of Test Pit		3							70
		4							69
		5							

SOIL PROFILE AND TEST DATA

Phase II Environmental Site Assessment

1146 Snow Street, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 372629.86 **NORTHING:** 5032717.12 **ELEVATION:** 74.19

PROJECT: Proposed Residential Building

BORINGS BY: Backhoe

REMARKS:

DATE: November 08, 2024

FILE NO. : PE6763

HOLE NO. : TP 5-24

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N, Nc OR RQD	SAMPLE ANALYTICAL TESTS	GASTECH (ppm) / GASTECH (% LEL) 50 100 150 200 / PID (ppm) / PID (% LEL) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE		0							74
TOPSOIL 0.20m [73.99m]			G 1						
FILL: Silty sand to gravel, with cobbles			G 2						
		1	G 3						73
1.30m [72.89m]									
Compact to dense **SILTY SAND**			G 4						
2.00m [72.19m]		2	G 5						72
End of Test Pit		3							71
		4							70
		5							

SOIL PROFILE AND TEST DATA

Phase II Environmental Site Assessment

1146 Snow Street, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 372616.85 **NORTHING:** 5032698.66 **ELEVATION:** 74.17

PROJECT: Proposed Residential Building

BORINGS BY: Backhoe

REMARKS:

DATE: November 08, 2024

FILE NO. : PE6763

HOLE NO. : TP 6-24

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE: TYPE AND NO.	SAMPLE: RECOVERY (%)	SAMPLE: N, Nc OR RQD	SAMPLE: ANALYTICAL TESTS	GASTECH (ppm) / GASTECH (% LEL) 50 100 150 200 / PID (ppm) / PID (% LEL) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE		0							74
TOPSOIL 0.25m [73.92m]			G 1						
FILL: Brown silty sand, with gravel, cobbles, asphalt and bricks			G 2						
1.05m [73.12m]		1	G 3						73
SILTY SAND, trace cobbles			G 4						
2.40m [71.77m]		2	G 5						72
End of Test Pit			G 6						
		3							71
		4							70
		5							

SOIL PROFILE AND TEST DATA

Phase II Environmental Site Assessment

1146 Snow Street, Ottawa, Ontario

COORD. SYS.: MTM ZONE 9 **EASTING:** 372611.10 **NORTHING:** 5032686.38 **ELEVATION:** 74.08

PROJECT: Proposed Residential Building

BORINGS BY: Backhoe

REMARKS:

DATE: November 08, 2024

FILE NO. : PE6763

HOLE NO. : TP 7-24

SAMPLE DESCRIPTION	STRATA PLOT	DEPTH (m)	SAMPLE TYPE AND NO.	SAMPLE RECOVERY (%)	SAMPLE N, Nc OR RQD	SAMPLE ANALYTICAL TESTS	GASTECH (ppm) / GASTECH (% LEL) 50 100 150 200 / PID (ppm) / PID (% LEL) 20 40 60 80	PIEZOMETER CONSTRUCTION	ELEVATION (m)
GROUND SURFACE		0							74
TOPSOIL 0.25m [73.83m]			G 1						
FILL: Silty sand, with cobbles 0.90m [73.17m]			G 2						
Brown **SILTY SAND**, trace cobbles		1	G 3						73
			G 4						
2.10m [71.98m]		2	G 5						72
End of Test Pit									
		3							71
		4							70
		5							

SYMBOLS AND TERMS

SOIL DESCRIPTION

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

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

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

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

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

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

SYMBOLS AND TERMS (continued)

SOIL DESCRIPTION (continued)

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

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

ROCK DESCRIPTION

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

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

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

SAMPLE TYPES

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

SYMBOLS AND TERMS (continued)

PLASTICITY LIMITS AND GRAIN SIZE DISTRIBUTION

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

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

CONSOLIDATION TEST

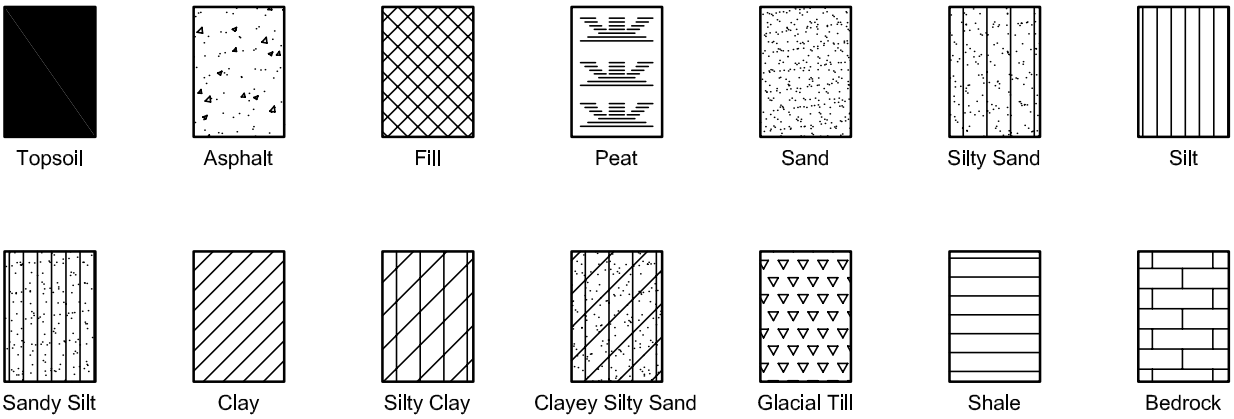
p'_o	-	Present effective overburden pressure at sample depth
p'_c	-	Preconsolidation pressure of (maximum past pressure on) sample
Ccr	-	Recompression index (in effect at pressures below p'_c)
Cc	-	Compression index (in effect at pressures above p'_c)
OC Ratio		Overconsolidaton ratio = p'_c / p'_o
Void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

PERMEABILITY TEST

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

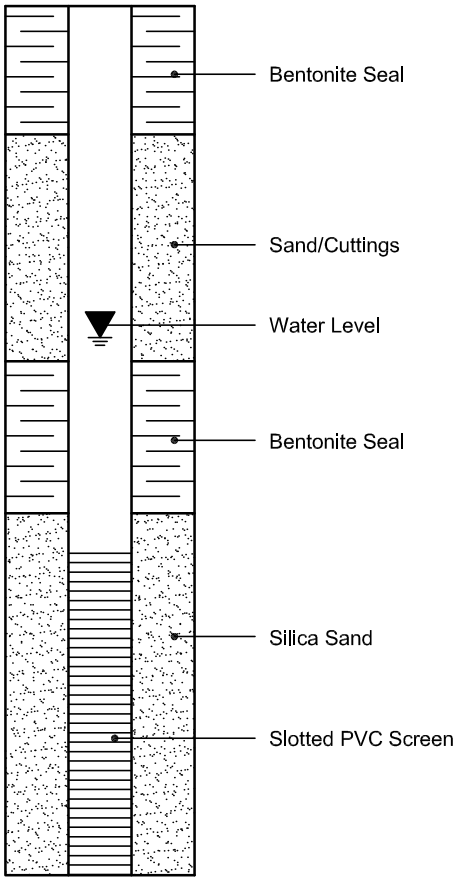
SYMBOLS AND TERMS (continued)

STRATA PLOT

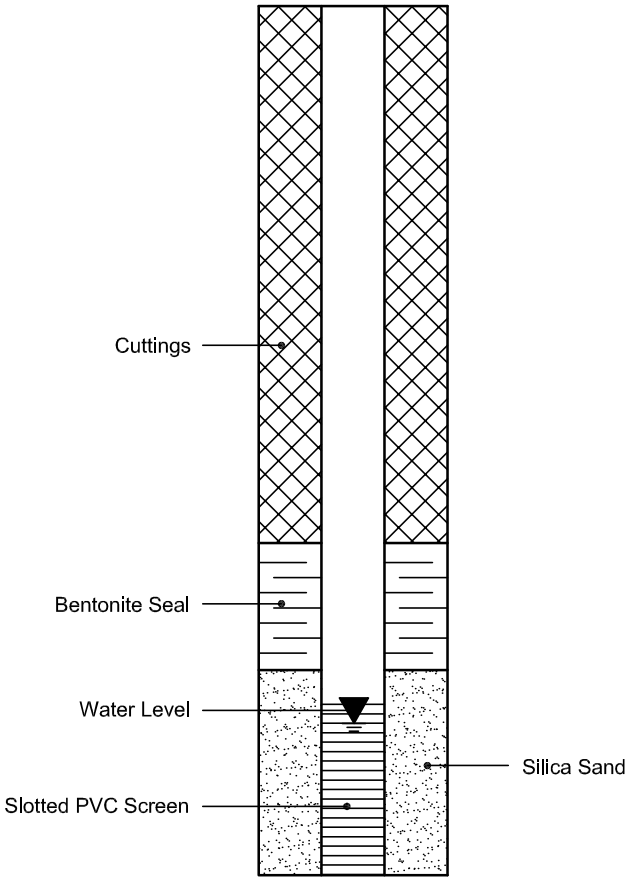


MONITORING WELL AND PIEZOMETER CONSTRUCTION

MONITORING WELL CONSTRUCTION



PIEZOMETER CONSTRUCTION



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
MW1	5-Oct-2022	50	75.19	4.38	70.81	3.05	1.33 - 4.38	73.86 - 70.81	silty sand, some gravel
BH2	5-Oct-2022	-	74.17	1.37	72.8	-	-	-	-
BH3	5-Oct-2022	-	74.50	1.37	73.13	-	-	-	-
MW4	5-Oct-2022	50	75.62	5.71	69.91	3.05	2.66 - 5.71	72.96 - 69.91	silty sand, some gravel
BH1-24	1-Oct-2024	35	74.78	8.90	65.88	3.05	5.85 - 8.9	68.93 - 65.88	shale bedrock
BH2-24	1-Oct-2024	-	74.08	4.62	69.46	-	-	-	-
BH3-24	1-Oct-2024	50	74.45	4.71	69.74	3.05	1.66 - 4.71	72.79 - 69.74	silty sand, some gravel
TP1-24	8-Nov-2024	-	73.83	2.00	71.83	-	-	-	-
TP2-24	8-Nov-2024	-	73.97	2.00	71.97	-	-	-	-
TP3-24	8-Nov-2024	-	74.00	2.00	72	-	-	-	-
TP4-24	8-Nov-2024	-	73.75	2.00	71.75	-	-	-	-
TP5-24	8-Nov-2024	-	74.19	2.00	72.19	-	-	-	-
TP6-24	8-Nov-2024	-	74.17	2.40	71.77	-	-	-	-
TP7-24	8-Nov-2024	-	74.08	2.10	71.98	-	-	-	-

Sample ID and Laboratory ID	Sample Depth (mbgs)	Sampling Date	Rationale	PID Vapour Reading (ppm)	Parameter Groups Analyzed									
					PHCs	BTEX	VOCs	PAHs	Metals	Hg, Cr^{VI}	B-HWS	CN-	EC, SAR	pH
S1 TZO206	0.00-0.61	5-Oct-2024	Assess fill material of unknown quality (APEC 2), and application of road salt (APEC 3)	-					✓	✓	✓	✓	✓	✓
S2 TZO207	0.76-1.37	5-Oct-2024	Assess application of road salt (APEC 3), and former fencing contractor yard adjacent south (APEC 4)	-	✓	✓			✓	✓	✓	✓	✓	✓
S3 TZO208	0.00-0.61	5-Oct-2024	Assess former on-site storage of construction materials (APEC 1), fill material of unknown quality (APEC 2), and application of road salt (APEC 3)	-					✓	✓	✓	✓	✓	✓
S4 TZO209	0.76-1.37	5-Oct-2024	Assess former on-site storage of construction materials (APEC 1), and application of road salt (APEC 3)	-	✓	✓			✓	✓	✓	✓	✓	✓
S5 TZO210	0.00-0.61	5-Oct-2024	Assess fill material of unknown quality (APEC 2), application of road salt (APEC 3), and former fencing contractor yard adjacent south (APEC 4)	-					✓	✓	✓	✓	✓	✓
S6 TZO211	0.76-1.37	5-Oct-2024	Assess application of road salt (APEC 3), and former fencing contractor yard adjacent south (APEC 4)	-	✓	✓			✓	✓	✓	✓	✓	✓
S7 TZO212	0.00-0.61	5-Oct-2024	Assess former on-site storage of construction materials (APEC 1), fill material of unknown quality (APEC 2), and application of road salt (APEC 3)	-					✓	✓	✓	✓	✓	✓
S8 TZO213	0.76-1.37	5-Oct-2024	Assess former on-site storage of construction materials (APEC 1), and application of road salt (APEC 3)	-	✓	✓			✓	✓	✓	✓	✓	✓
BH1-24-SS2 2440373-01	0.76-1.37	1-Oct-2024	Assess former on-site storage of construction materials (APEC 1), fill material of unknown quality (APEC 2), application of road salt (APEC 3), and preliminary excess soil testing	0.2	✓	✓		✓	✓	✓			✓	
BH1-24-SS4 2440373-02	2.29-2.90	1-Oct-2024	Assess former on-site storage of construction materials (APEC 1), application of road salt (APEC 3), and preliminary excess soil testing	0.3	✓	✓			✓	✓			✓	
BH1-24-SS6 2440373-03	3.81-4.42	1-Oct-2024	Assess former on-site storage of construction materials (APEC 1), application of road salt (APEC 3), and preliminary excess soil testing (in upper water table)	0.6	✓	✓			✓	✓			✓	✓
BH2-24-AU1 2440373-04	0.00-0.61	1-Oct-2024	Assess former on-site storage of construction materials (APEC 1), fill material of unknown quality (APEC 2), application of road salt (APEC 3), and preliminary excess soil testing	0.6	✓	✓		✓	✓	✓			✓	
BH2-24-SS3 2440373-05	1.52-2.13	1-Oct-2024	Assess former on-site storage of construction materials (APEC 1), application of road salt (APEC 3), and preliminary excess soil testing (in upper water table)	0.2	✓	✓			✓	✓			✓	
BH2-24-SS6A 2440373-06	3.81-3.96	1-Oct-2024	Assess former on-site storage of construction materials (APEC 1), fill material of unknown quality (APEC 2), application of road salt (APEC 3), and preliminary excess soil testing in upper water table	0.5	✓	✓			✓	✓			✓	✓
BH3-24-SS2 2440373-07	0.76-1.37	1-Oct-2024	Assess fill material of unknown quality (APEC 2), application of road salt (APEC 3), adjacent former fencing contractor yard (APEC 4), and preliminary excess soil testing	0.4	✓	✓		✓	✓	✓			✓	
BH3-24-SS3 2440373-08	1.52-2.13	1-Oct-2024	Assess application of road salt (APEC 3), adjacent former fencing contractor yard (APEC 4), and preliminary excess soil testing	0.4	✓	✓			✓	✓			✓	
BH3-24-SS6A 2440373-09	3.81-4.01	1-Oct-2024	Assess adjacent former fencing contractor yard (APEC 4) in upper water table, and preliminary excess soil testing	0.5	✓	✓	✓		✓	✓			✓	
DUP1 (Dup of BH2-24-SS3) 2440373-10	1.52-2.13	1-Oct-2024	Laboratory QA/QC	0.2	✓	✓			✓	✓				
TP1-24-G2 2446099-01	0.5-06	8-Nov-2024	Horizontal delineation of metals exceedance, and to further assess: former on-site storage of construction materials (APEC 1), fill material of unknown quality (APEC 2) application of road salt (APEC 3), and preliminary excess soil testing	0.3	✓	✓			✓	✓			✓	
TP2-24-G2 2446099-02	0.4-0.5	8-Nov-2024	Horizontal delineation of metals exceedance, and to further assess: former on-site storage of construction materials (APEC 1), fill material of unknown quality (APEC 2) application of road salt (APEC 3), and preliminary excess soil testing	0.1	✓	✓			✓	✓			✓	
TP3-24-G2 2446099-03	0.4-0.5	8-Nov-2024	Horizontal delineation of metals exceedance, and to further assess: former on-site storage of construction materials (APEC 1), fill material of unknown quality (APEC 2) application of road salt (APEC 3), and preliminary excess soil testing	0.1	✓	✓			✓	✓			✓	
TP4-24-G2 2446099-04	0.4-0.5	8-Nov-2024	Horizontal delineation of metals exceedance, and to further assess: former on-site storage of construction materials (APEC 1), fill material of unknown quality (APEC 2) application of road salt (APEC 3), and preliminary excess soil testing	0.2	✓	✓			✓	✓			✓	
TP5-24-G2 2446099-05	0.4-0.5	8-Nov-2024	Horizontal delineation of metals exceedance, and to further assess: former on-site storage of construction materials (APEC 1), fill material of unknown quality (APEC 2) application of road salt (APEC 3), and preliminary excess soil testing	0.1	✓	✓			✓	✓			✓	
TP6-24-G2 2446099-06	0.4-0.5	8-Nov-2024	Horizontal delineation of metals exceedance, and to further assess: former on-site storage of construction materials (APEC 1), fill material of unknown quality (APEC 2) application of road salt (APEC 3), and preliminary excess soil testing	0.2	✓	✓			✓	✓			✓	
TP7-24-G2 2446099-07	0.4-0.5	8-Nov-2024	Horizontal delineation of metals exceedance	0.1					✓	✓				
DUP1 (Dup of TP6-24-G2) 2502141-01	0.4-0.5	8-Nov-2024	Laboratory QA/QC	0.2					✓					

Sample ID and Laboratory ID	Sample Depth (mbgs)	Sampling Date	Rationale	Parameter Groups Analyzed					
				PHCs	BTEX	VOCs	Metals	Hg	Cr^{VI}
MW1 TZO123	1.33 - 4.38	11-Oct-2022	Assess adjacent former fencing contractor yard (APEC 4)	✓	✓		✓	✓	✓
MW4 TZO124	2.66 - 5.71	11-Oct-2022	Assess former on-site storage of construction materials (APEC 1)	✓	✓		✓	✓	✓
MW1-GW1 2441407-01	1.33 - 4.38	8-Oct-2024	Assess adjacent former fencing contractor yard (APEC 4)			✓			
BH3-24-GW1 2441407-02	1.66 - 4.71	8-Oct-2024	Assess adjacent former fencing contractor yard (APEC 4)	✓	✓	✓			
DUP (Dup of BH3-24-GW1) 2441407-03	1.66 - 4.71	8-Oct-2024	Laboratory QA/QC	✓	✓	✓			

Parameter	Units	Regulation	S1 TZO206	S2 TZO207	S3 TZO208	S4 TZO209	S5 TZO210	S6 TZO211	S7 TZO212	S8 TZO213	BH1-24-SS2 2440373-01	BH1-24-SS4 2440373-02
Sample Depth (m)		Reg 153/04-Table 3 Residential, coarse	0.00-0.61	0.76-1.37	0.00-0.61	0.76-1.37	0.00-0.61	0.76-1.37	0.00-0.61	0.76-1.37	0.76-1.37	2.29-2.90
Sample Date			5-Oct-2024	5-Oct-2024	5-Oct-2024	5-Oct-2024	5-Oct-2024	5-Oct-2024	5-Oct-2024	5-Oct-2024	1-Oct-2024	1-Oct-2024
Physical Characteristics												
% Solids	% by Wt.		87.0	82.0	90.7	92.3	90.4	88.0	91.2	83.0	90.5	95
General Inorganics												
SAR	N/A	5.0	0.24	0.35	0.14	0.35	0.31	0.49	0.24	0.39	0.17	0.17
Conductivity	uS/cm	700	120	72	280	81	83	28	170	68	89	35
Cyanide, free	ug/g dry	0.051	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	N/A	N/A
pH	uS/cm	5-9 (surf); 5-11 (subsurf)	7.13	7.02	7.83	7.28	7.16	6.87	7.51	7.24	N/A	N/A
Metals												
Antimony	ug/g dry	7.5	0.21	0.21	0.39	ND (0.20)	ND (0.20)	ND (0.20)	0.25	ND (0.20)	ND (1.0)	ND (1.0)
Arsenic	ug/g dry	18	9.8	9.8	3.5	1.1	2.3	ND (1.0)	3.1	2.3	3.1	1.4
Barium	ug/g dry	390	64	64	62	40	41	31	62	71	60.7	14.4
Beryllium	ug/g dry	4.0	0.44	0.44	0.39	0.34	0.35	0.28	0.45	0.52	0.5	ND (0.5)
Boron	ug/g dry	120	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)
Boron, available	ug/g dry	1.5	0.13	ND (0.05)	0.27	0.11	0.075	ND (0.05)	0.18	0.09	N/A	N/A
Cadmium	ug/g dry	1.2	0.16	0.16	0.34	0.1	0.12	ND (0.10)	0.14	ND (0.10)	ND (0.5)	ND (0.5)
Chromium (VI)	ug/g dry	8.0	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	ND (0.18)	0.2	ND (0.2)
Chromium	ug/g dry	160	20	13	21	16	17	13	20	22	19.7	9.5
Cobalt	ug/g dry	22	6.2	4.6	6.5	5.6	7.3	6.2	8.4	8.8	7.3	3.7
Copper	ug/g dry	140	11	9.7	32	9.4	15	12	22	23	22	9.2
Lead	ug/g dry	120	13	3.6	35	7.1	10	4.6	16	8	6.7	2.3
Mercury	ug/g dry	0.27	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.1)	ND (0.1)
Molybdenum	ug/g dry	6.9	0.83	ND (0.5)	1.3	ND (0.5)	0.67	0.5	1.1	1	ND (1.0)	ND (1.0)
Nickel	ug/g dry	100	15	10	15	11	14	11	18	21	16.1	6.2
Selenium	ug/g dry	2.4	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (0.50)	ND (1.0)	ND (1.0)
Silver	ug/g dry	20	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.20)	ND (0.3)	ND (0.3)
Thallium	ug/g dry	1.0	0.14	0.075	0.12	0.096	0.13	0.11	0.14	0.21	ND (1.0)	ND (1.0)
Uranium	ug/g dry	23	0.56	0.65	0.8	0.59	0.68	0.58	0.72	0.78	ND (1.0)	ND (1.0)
Vanadium	ug/g dry	86	31	23	28	27	27	24	30	33	28.1	18.8
Zinc	ug/g dry	340	60	17	95	24	33	19	40	30	26.1	ND (20.0)
Volatiles												
Acetone	ug/g dry	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzene	ug/g dry	0.21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bromodichloromethane	ug/g dry	13	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bromoform	ug/g dry	0.27	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bromomethane	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Carbon Tetrachloride	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chlorobenzene	ug/g dry	2.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chloroform	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dibromochloromethane	ug/g dry	9.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dichlorodifluoromethane	ug/g dry	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-Dichlorobenzene	ug/g dry	3.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,3-Dichlorobenzene	ug/g dry	4.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,4-Dichlorobenzene	ug/g dry	0.083	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1-Dichloroethane	ug/g dry	3.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-Dichloroethane	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1-Dichloroethylene	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
cis-1,2-Dichloroethylene	ug/g dry	3.4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
trans-1,2-Dichloroethylene	ug/g dry	0.084	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2-Dichloropropane	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
cis-1,3-Dichloropropylene	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
trans-1,3-Dichloropropylene	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,3-Dichloropropene, total	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ethylbenzene	ug/g dry	2.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ethylene dibromide (dibromoethane, 1,	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hexane	ug/g dry	2.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Methyl Ethyl Ketone (2-Butanone)	ug/g dry	16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Methyl Isobutyl Ketone	ug/g dry	1.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Methyl tert-butyl ether	ug/g dry	0.75	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Methylene Chloride	ug/g dry	0.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Styrene	ug/g dry	0.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1,1,2-Tetrachloroethane	ug/g dry	0.058	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1,2,2-Tetrachloroethane	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tetrachloroethylene	ug/g dry	0.28	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Toluene	ug/g dry	2.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1,1-Trichloroethane	ug/g dry	0.38	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1,2-Trichloroethane	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Trichloroethylene	ug/g dry	0.061	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Trichlorofluoromethane	ug/g dry	4.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vinyl Chloride	ug/g dry	0.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
m/p-Xylene	ug/g dry	3.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
o-Xylene	ug/g dry	3.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Xylenes, total	ug/g dry	3.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
BTEX												
Benzene	ug/g dry	0.21	N/A	ND (0.02)	N/A	ND (0.02)	N/A	ND (0.02)	N/A	ND (0.02)	ND (0.02)	ND (0.02)
Ethylbenzene	ug/g dry	2.0	N/A	ND (0.02)	N/A	ND (0.02)	N/A	ND (0.02)	N/A	ND (0.02)	ND (0.05)	ND (0.05)
Toluene	ug/g dry	2.3	N/A	ND (0.02)	N/A	ND (0.02)	N/A	ND (0.02)	N/A	ND (0.02)	ND (0.05)	ND (0.05)
m/p-Xylene	ug/g dry	3.1	N/A	ND (0.04)	N/A	ND (0.04)	N/A	ND (0.04)	N/A	ND (0.04)	ND (0.05)	ND (0.05)
o-Xylene	ug/g dry	3.1	N/A	ND (0.02)	N/A	ND (0.02)	N/A	ND (0.02)	N/A	ND (0.02)	ND (0.05)	ND (0.05)
Xylenes, total	ug/g dry	3.1	N/A	ND (0.04)	N/A	ND (0.04)	N/A	ND (0.04)	N/A	ND (0.04)	ND (0.05)	ND (0.05)
Hydrocarbons												
F1 PHCs (C6-C10)	ug/g dry	55	N/A	ND (10)	N/A	ND (10)	N/A	ND (10)	N/A	ND (10)	ND (7)	ND (7)
F2 PHCs (C10-C16)	ug/g dry	98	N/A	ND (10)	N/A	ND (10)	N/A	ND (10)	N/A	ND (10)	ND (4)	ND (4)
F3 PHCs (C16-C34)	ug/g dry	300	N/A	ND (50)	N/A	ND (50)	N/A	ND (50)	N/A	ND (50)	34	ND (8)
F4 PHCs (C34-C50)	ug/g dry	2800	N/A	ND (50)	N/A	ND (50)	N/A	ND (50)	N/A	ND (50)	8	ND (6)
Semi-Volatiles												
Acenaphthene	ug/g dry	7.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.02)	N/A
Acenaphthylene	ug/g dry	0.15	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.02)	N/A
Anthracene	ug/g dry	0.67	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.02)	N/A
Benzo[a]anthracene	ug/g dry	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.02)	N/A
Benzo[a]pyrene	ug/g dry	0.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.02)	N/A
Benzo[b]fluoranthene	ug/g dry	0.78	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.02)	N/A
Benzo[g,h,i]perylene	ug/g dry	6.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.02)	N/A
Benzo[k]fluoranthene	ug/g dry	0.78	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.02)	N/A
Chrysene	ug/g dry	7.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.02)	N/A
Dibenzo[a,h]anthracene	ug/g dry	0.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.02)	N/A
Fluoranthene	ug/g dry	0.69	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.02)	N/A
Fluorene	ug/g dry	62	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.02)	N/A
Indeno [1,2,3-cd] pyrene	ug/g dry	0.38	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.02)	N/A
1-Methylnaphthalene	ug/g dry	0.99	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.02)	N/A
2-Methylnaphthalene	ug/g dry	0.99	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.02)	N/A
Methylnaphthalene (1&2)	ug/g dry	0.99	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.04)	N/A
Naphthalene	ug/g dry	0.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.01)	N/A
Phenanthrene	ug/g dry	6.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.02)	N/A
Pyrene	ug/g dry	78	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.02)	N/A

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

Parameter	Units	Regulation	BH1-24-SS6 2440373-03	BH2-24-AU1 2440373-04	BH2-24-SS3 2440373-05	BH2-24-SS6A 2440373-06	BH3-24-SS2 2440373-07	BH3-24-SS3 2440373-08	BH3-24-SS6A 2440373-09	DUP1 (Dup of BH2-24-SS3) 2440373-10	TP1-24-G2 2446099-01	TP2-24-G2 2446099-02
Sample Depth (m)		Reg 153/04-Table 3 Residential, coarse	3.81-4.42	0.00-0.61	1.52-2.13	3.81-3.96	0.76-1.37	1.52-2.13	3.81-4.01	1.52-2.13	0.5-06	0.4-0.5
Sample Date			1-Oct-2024	1-Oct-2024	1-Oct-2024	1-Oct-2024	1-Oct-2024	1-Oct-2024	1-Oct-2024	1-Oct-2024	8-Nov-2024	8-Nov-2024
Physical Characteristics												
% Solids	% by Wt.		84.2	90.3	94.5	87.5	95.8	89.3	83.6	94.6	85.9	91.3
General Inorganics												
SAR	N/A	5.0	0.11	0.1	0.22	0.24	0.16	0.2	0.14	N/A	0.11	0.09
Conductivity	uS/cm	700	73	122	35	103	66	40	95	N/A	121	344
Cyanide, free	ug/g dry	0.051	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
pH	uS/cm	5-9 (surf); 5-11 (subsurf)	7.75	N/A	N/A	7.73	N/A	N/A	N/A	N/A	N/A	N/A
Metals												
Antimony	ug/g dry	7.5	ND (1.0)	2.8	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Arsenic	ug/g dry	18	1.4	20.3	ND (1.0)	2	1.7	1.1	1.8	ND (1.0)	15.7	8.3
Barium	ug/g dry	390	28.2	100	16.6	23.2	24.3	20.5	18.1	13.1	78.4	79.9
Beryllium	ug/g dry	4.0	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)
Boron	ug/g dry	120	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)
Boron, available	ug/g dry	1.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cadmium	ug/g dry	1.2	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Chromium (VI)	ug/g dry	8.0	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)	0.2	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)
Chromium	ug/g dry	160	11.6	40.5	6.7	9.6	9.8	7.4	8.8	5.1	23	26
Cobalt	ug/g dry	22	4.1	15.7	2.2	3.9	4	3	4.2	1.7	6.2	7.3
Copper	ug/g dry	140	10.7	239	ND (5.0)	10.8	12.4	8.4	9.9	ND (5.0)	10.4	20
Lead	ug/g dry	120	2.4	76.9	1.7	3.7	3.8	1.7	2.5	1.2	10	24
Mercury	ug/g dry	0.27	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)	ND (0.1)
Molybdenum	ug/g dry	6.9	ND (1.0)	36.3	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	1.6	ND (1.0)	1	ND (1.0)
Nickel	ug/g dry	100	7.1	15.2	ND (5.0)	7.4	8.7	5.6	9.9	ND (5.0)	12.4	15.3
Selenium	ug/g dry	2.4	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Silver	ug/g dry	20	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)
Thallium	ug/g dry	1.0	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Uranium	ug/g dry	23	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Vanadium	ug/g dry	86	19.6	27.8	ND (10.0)	14.8	14.7	11.9	16.8	ND (10.0)	31.3	38.2
Zinc	ug/g dry	340	ND (20.0)	461	ND (20.0)	ND (20.0)	ND (20.0)	ND (20.0)	ND (20.0)	ND (20.0)	61.7	66.9
Volatiles												
Acetone	ug/g dry	16	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.50)	N/A	N/A	N/A
Benzene	ug/g dry	0.21	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.02)	N/A	N/A	N/A
Bromodichloromethane	ug/g dry	13	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
Bromoform	ug/g dry	0.27	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
Bromomethane	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
Carbon Tetrachloride	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
Chlorobenzene	ug/g dry	2.4	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
Chloroform	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
Dibromochloromethane	ug/g dry	9.4	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
Dichlorodifluoromethane	ug/g dry	16	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
1,2-Dichlorobenzene	ug/g dry	3.4	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
1,3-Dichlorobenzene	ug/g dry	4.8	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
1,4-Dichlorobenzene	ug/g dry	0.083	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
1,1-Dichloroethane	ug/g dry	3.5	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
1,2-Dichloroethane	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
1,1-Dichloroethylene	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
cis-1,2-Dichloroethylene	ug/g dry	3.4	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
trans-1,2-Dichloroethylene	ug/g dry	0.084	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
1,2-Dichloropropane	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
cis-1,3-Dichloropropylene	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
trans-1,3-Dichloropropylene	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
1,3-Dichloropropene, total	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
Ethylbenzene	ug/g dry	2.0	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
Ethylene dibromide (dibromoethane, 1,	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
Hexane	ug/g dry	2.8	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
Methyl Ethyl Ketone (2-Butanone)	ug/g dry	16	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.50)	N/A	N/A	N/A
Methyl Isobutyl Ketone	ug/g dry	1.7	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.50)	N/A	N/A	N/A
Methyl tert-butyl ether	ug/g dry	0.75	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
Methylene Chloride	ug/g dry	0.1	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
Styrene	ug/g dry	0.7	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
1,1,1,2-Tetrachloroethane	ug/g dry	0.058	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
1,1,2,2-Tetrachloroethane	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
Tetrachloroethylene	ug/g dry	0.28	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
Toluene	ug/g dry	2.3	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
1,1,1-Trichloroethane	ug/g dry	0.38	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
1,1,2-Trichloroethane	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
Trichloroethylene	ug/g dry	0.061	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
Trichlorofluoromethane	ug/g dry	4.0	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
Vinyl Chloride	ug/g dry	0.02	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.02)	N/A	N/A	N/A
m/p-Xylene	ug/g dry	3.1	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
o-Xylene	ug/g dry	3.1	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
Xylenes, total	ug/g dry	3.1	N/A	N/A	N/A	N/A	N/A	N/A	ND (0.05)	N/A	N/A	N/A
BTEX												
Benzene	ug/g dry	0.21	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)
Ethylbenzene	ug/g dry	2.0	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Toluene	ug/g dry	2.3	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
m/p-Xylene	ug/g dry	3.1	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
o-Xylene	ug/g dry	3.1	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Xylenes, total	ug/g dry	3.1	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)
Hydrocarbons												
F1 PHCs (C6-C10)	ug/g dry	55	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)	ND (7)
F2 PHCs (C10-C16)	ug/g dry	98	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)	ND (4)
F3 PHCs (C16-C34)	ug/g dry	300	ND (8)	17	ND (8)	21	22	38	ND (8)	ND (8)	ND (8)	13
F4 PHCs (C34-C50)	ug/g dry	2800	ND (6)	ND (6)	ND (6)	ND (6)	7	ND (6)	ND (6)	ND (6)	ND (6)	ND (6)
Semi-Volatiles												
Acenaphthene	ug/g dry	7.9	N/A	ND (0.02)	N/A	N/A	ND (0.02)	N/A	N/A	N/A	N/A	N/A
Acenaphthylene	ug/g dry	0.15	N/A	ND (0.02)	N/A	N/A	ND (0.02)	N/A	N/A	N/A	N/A	N/A
Anthracene	ug/g dry	0.67	N/A	ND (0.02)	N/A	N/A	ND (0.02)	N/A	N/A	N/A	N/A	N/A
Benzo[a]anthracene	ug/g dry	0.5	N/A	ND (0.02)	N/A	N/A	ND (0.02)	N/A	N/A	N/A	N/A	N/A
Benzo[a]pyrene	ug/g dry	0.3	N/A	ND (0.02)	N/A	N/A	ND (0.02)	N/A	N/A	N/A	N/A	N/A
Benzo[b]fluoranthene	ug/g dry	0.78	N/A	ND (0.02)	N/A	N/A	ND (0.02)	N/A	N/A	N/A	N/A	N/A
Benzo[g,h,i]perylene	ug/g dry	6.6	N/A	ND (0.02)	N/A	N/A	ND (0.02)	N/A	N/A	N/A	N/A	N/A
Benzo[k]fluoranthene	ug/g dry	0.78	N/A	ND (0.02)	N/A	N/A	ND (0.02)	N/A	N/A	N/A	N/A	N/A
Chrysene	ug/g dry	7.0	N/A	ND (0.02)	N/A	N/A	ND (0.02)	N/A	N/A	N/A	N/A	N/A
Dibenzo[a,h]anthracene	ug/g dry	0.1	N/A	ND (0.02)	N/A	N/A	ND (0.02)	N/A	N/A	N/A	N/A	N/A
Fluoranthene	ug/g dry	0.69	N/A	ND (0.02)	N/A	N/A	ND (0.02)	N/A	N/A	N/A	N/A	N/A
Fluorene	ug/g dry	62	N/A	ND (0.02)	N/A	N/A	ND (0.02)	N/A	N/A	N/A	N/A	N/A
Indeno [1,2,3-cd] pyrene	ug/g dry	0.38	N/A	ND (0.02)	N/A	N/A	ND (0.02)	N/A	N/A	N/A	N/A	N/A
1-Methylnaphthalene	ug/g dry	0.99	N/A	ND (0.02)	N/A	N/A	ND (0.02)	N/A	N/A	N/A	N/A	N/A
2-Methylnaphthalene	ug/g dry	0.99	N/A	ND (0.02)	N/A	N/A	ND (0.02)	N/A	N/A	N/A	N/A	N/A
Methylnaphthalene (1&2)	ug/g dry	0.99	N/A	ND (0.04)	N/A	N/A	ND (0.04)	N/A	N/A	N/A	N/A	N/A
Naphthalene	ug/g dry	0.6	N/A	ND (0.01)	N/A	N/A	ND (0.01)	N/A	N/A	N/A	N/A	N/A
Phenanthrene	ug/g dry	6.2	N/A	ND (0.02)	N/A	N/A	ND (0.02)	N/A	N/A	N/A	N/A	N/A
Pyrene	ug/g dry	78	N/A	ND (0.02)	N/A	N/A	ND (0.02)	N/A	N/A	N/A	N/A	N/A

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

Parameter	Units	Regulation	TP3-24-G2 2446099-03	TP4-24-G2 2446099-04	TP5-24-G2 2446099-05	TP6-24-G2 2446099-06	TP7-24-G2 2446099-07
Sample Depth (m)		Reg 153/04-Table 3 Residential, coarse	0.4-0.5	0.4-0.5	0.4-0.5	0.4-0.5	0.4-0.5
Sample Date			8-Nov-2024	8-Nov-2024	8-Nov-2024	8-Nov-2024	8-Nov-2024
Physical Characteristics							
% Solids	% by Wt.		89.7	92.3	87.5	90.8	86.1
General Inorganics							
SAR	N/A	5.0	0.15	0.13	0.13	0.11	N/A
Conductivity	uS/cm	700	37	47	63	262	N/A
Cyanide, free	ug/g dry	0.051	N/A	N/A	N/A	N/A	N/A
pH	uS/cm	5-9 (surf); 5-11 (subsurf)	N/A	N/A	N/A	N/A	N/A
Metals							
Antimony	ug/g dry	7.5	ND (1.0)	ND (1.0)	ND (1.0)	4.5	ND (1.0)
Arsenic	ug/g dry	18	2.9	4.5	7.5	14.7	11.1
Barium	ug/g dry	390	104	63	78.3	222	100
Beryllium	ug/g dry	4.0	0.5	ND (0.5)	0.6	ND (0.5)	0.5
Boron	ug/g dry	120	ND (5.0)	ND (5.0)	5.4	ND (5.0)	ND (5.0)
Boron, available	ug/g dry	1.5	N/A	N/A	N/A	N/A	N/A
Cadmium	ug/g dry	1.2	ND (0.5)	ND (0.5)	ND (0.5)	0.6	ND (0.5)
Chromium (VI)	ug/g dry	8.0	0.7	ND (0.2)	0.2	ND (0.2)	ND (0.2)
Chromium	ug/g dry	160	34.4	18.6	28.3	15.2	27.1
Cobalt	ug/g dry	22	9	7	10	15	7.7
Copper	ug/g dry	140	12.3	27.3	19.5	262	16.9
Lead	ug/g dry	120	10.5	30.7	15.2	247	18.2
Mercury	ug/g dry	0.27	ND (0.1)	ND (0.1)	ND (0.1)	0.2	ND (0.1)
Molybdenum	ug/g dry	6.9	1.1	ND (1.0)	1.4	39.6	1.4
Nickel	ug/g dry	100	17.3	12.9	22.2	10.4	17.7
Selenium	ug/g dry	2.4	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Silver	ug/g dry	20	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)	ND (0.3)
Thallium	ug/g dry	1.0	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Uranium	ug/g dry	23	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)	1.5
Vanadium	ug/g dry	86	55.9	34.4	43.1	11.7	42.6
Zinc	ug/g dry	340	90.1	46.7	50.6	573	77.3
Volatiles							
Acetone	ug/g dry	16	N/A	N/A	N/A	N/A	N/A
Benzene	ug/g dry	0.21	N/A	N/A	N/A	N/A	N/A
Bromodichloromethane	ug/g dry	13	N/A	N/A	N/A	N/A	N/A
Bromoform	ug/g dry	0.27	N/A	N/A	N/A	N/A	N/A
Bromomethane	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A
Carbon Tetrachloride	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A
Chlorobenzene	ug/g dry	2.4	N/A	N/A	N/A	N/A	N/A
Chloroform	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A
Dibromochloromethane	ug/g dry	9.4	N/A	N/A	N/A	N/A	N/A
Dichlorodifluoromethane	ug/g dry	16	N/A	N/A	N/A	N/A	N/A
1,2-Dichlorobenzene	ug/g dry	3.4	N/A	N/A	N/A	N/A	N/A
1,3-Dichlorobenzene	ug/g dry	4.8	N/A	N/A	N/A	N/A	N/A
1,4-Dichlorobenzene	ug/g dry	0.083	N/A	N/A	N/A	N/A	N/A
1,1-Dichloroethane	ug/g dry	3.5	N/A	N/A	N/A	N/A	N/A
1,2-Dichloroethane	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A
1,1-Dichloroethylene	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A
cis-1,2-Dichloroethylene	ug/g dry	3.4	N/A	N/A	N/A	N/A	N/A
trans-1,2-Dichloroethylene	ug/g dry	0.084	N/A	N/A	N/A	N/A	N/A
1,2-Dichloropropane	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A
cis-1,3-Dichloropropylene	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A
trans-1,3-Dichloropropylene	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A
1,3-Dichloropropene, total	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A
Ethylbenzene	ug/g dry	2.0	N/A	N/A	N/A	N/A	N/A
Ethylene dibromide (dibromoethane, 1,	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A
Hexane	ug/g dry	2.8	N/A	N/A	N/A	N/A	N/A
Methyl Ethyl Ketone (2-Butanone)	ug/g dry	16	N/A	N/A	N/A	N/A	N/A
Methyl Isobutyl Ketone	ug/g dry	1.7	N/A	N/A	N/A	N/A	N/A
Methyl tert-butyl ether	ug/g dry	0.75	N/A	N/A	N/A	N/A	N/A
Methylene Chloride	ug/g dry	0.1	N/A	N/A	N/A	N/A	N/A
Styrene	ug/g dry	0.7	N/A	N/A	N/A	N/A	N/A
1,1,1,2-Tetrachloroethane	ug/g dry	0.058	N/A	N/A	N/A	N/A	N/A
1,1,2,2-Tetrachloroethane	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A
Tetrachloroethylene	ug/g dry	0.28	N/A	N/A	N/A	N/A	N/A
Toluene	ug/g dry	2.3	N/A	N/A	N/A	N/A	N/A
1,1,1-Trichloroethane	ug/g dry	0.38	N/A	N/A	N/A	N/A	N/A
1,1,2-Trichloroethane	ug/g dry	0.05	N/A	N/A	N/A	N/A	N/A
Trichloroethylene	ug/g dry	0.061	N/A	N/A	N/A	N/A	N/A
Trichlorofluoromethane	ug/g dry	4.0	N/A	N/A	N/A	N/A	N/A
Vinyl Chloride	ug/g dry	0.02	N/A	N/A	N/A	N/A	N/A
m/p-Xylene	ug/g dry	3.1	N/A	N/A	N/A	N/A	N/A
o-Xylene	ug/g dry	3.1	N/A	N/A	N/A	N/A	N/A
Xylenes, total	ug/g dry	3.1	N/A	N/A	N/A	N/A	N/A
BTEX							
Benzene	ug/g dry	0.21	ND (0.02)	ND (0.02)	ND (0.02)	ND (0.02)	N/A
Ethylbenzene	ug/g dry	2.0	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
Toluene	ug/g dry	2.3	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
m/p-Xylene	ug/g dry	3.1	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
o-Xylene	ug/g dry	3.1	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
Xylenes, total	ug/g dry	3.1	ND (0.05)	ND (0.05)	ND (0.05)	ND (0.05)	N/A
Hydrocarbons							
F1 PHCs (C6-C10)	ug/g dry	55	ND (7)	ND (7)	ND (7)	ND (7)	N/A
F2 PHCs (C10-C16)	ug/g dry	98	ND (4)	ND (4)	ND (4)	ND (4)	N/A
F3 PHCs (C16-C34)	ug/g dry	300	ND (8)	ND (8)	ND (8)	ND (8)	N/A
F4 PHCs (C34-C50)	ug/g dry	2800	ND (6)	ND (6)	ND (6)	ND (6)	N/A
Semi-Volatiles							
Acenaphthene	ug/g dry	7.9	N/A	N/A	N/A	N/A	N/A
Acenaphthylene	ug/g dry	0.15	N/A	N/A	N/A	N/A	N/A
Anthracene	ug/g dry	0.67	N/A	N/A	N/A	N/A	N/A
Benzo[a]anthracene	ug/g dry	0.5	N/A	N/A	N/A	N/A	N/A
Benzo[a]pyrene	ug/g dry	0.3	N/A	N/A	N/A	N/A	N/A
Benzo[b]fluoranthene	ug/g dry	0.78	N/A	N/A	N/A	N/A	N/A
Benzo[g,h,i]perylene	ug/g dry	6.6	N/A	N/A	N/A	N/A	N/A
Benzo[k]fluoranthene	ug/g dry	0.78	N/A	N/A	N/A	N/A	N/A
Chrysene	ug/g dry	7.0	N/A	N/A	N/A	N/A	N/A
Dibenzo[a,h]anthracene	ug/g dry	0.1	N/A	N/A	N/A	N/A	N/A
Fluoranthene	ug/g dry	0.69	N/A	N/A	N/A	N/A	N/A
Fluorene	ug/g dry	62	N/A	N/A	N/A	N/A	N/A
Indeno [1,2,3-cd] pyrene	ug/g dry	0.38	N/A	N/A	N/A	N/A	N/A
1-Methylnaphthalene	ug/g dry	0.99	N/A	N/A	N/A	N/A	N/A
2-Methylnaphthalene	ug/g dry	0.99	N/A	N/A	N/A	N/A	N/A
Methylnaphthalene (1&2)	ug/g dry	0.99	N/A	N/A	N/A	N/A	N/A
Naphthalene	ug/g dry	0.6	N/A	N/A	N/A	N/A	N/A
Phenanthrene	ug/g dry	6.2	N/A	N/A	N/A	N/A	N/A
Pyrene	ug/g dry	78	N/A	N/A	N/A	N/A	N/A

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

Parameter	Units	Regulation	MW1 TZO123	MW4 TZO124	MW1-GW1 2441407-01	BH3-24-GW1 2441407-02	DUP (Dup of BH3-24-GW1) 2441407-03	Trip Blank 2441407-04
Sample Depth (m)		Reg 153/04-Table 3 Non-Potable	1.33 - 4.38	2.66 - 5.71	1.33 - 4.38	1.66 - 4.71	1.66 - 4.71	N/A
Sample Date		Groundwater, coarse	11-Oct-2022	11-Oct-2022	8-Oct-2024	8-Oct-2024	8-Oct-2024	8-Oct-2024
Metals								
Mercury	ug/L	0.29	ND (0.10)	ND (0.10)	N/A	N/A	N/A	N/A
Antimony	ug/L	20000	ND (0.50)	5.1	N/A	N/A	N/A	N/A
Arsenic	ug/L	1900	ND (1.0)	91.2	N/A	N/A	N/A	N/A
Barium	ug/L	29000	350	200	N/A	N/A	N/A	N/A
Beryllium	ug/L	67	ND (0.40)	ND (0.40)	N/A	N/A	N/A	N/A
Boron	ug/L	45000	69	66	N/A	N/A	N/A	N/A
Cadmium	ug/L	2.7	ND (0.09)	ND (0.09)	N/A	N/A	N/A	N/A
Chromium	ug/L	810	ND (5.0)	ND (5.0)	N/A	N/A	N/A	N/A
Chromium (VI)	ug/L	140	ND (0.50)	ND (0.50)	N/A	N/A	N/A	N/A
Cobalt	ug/L	66	1.1	ND (0.50)	N/A	N/A	N/A	N/A
Copper	ug/L	87	ND (0.90)	ND (0.90)	N/A	N/A	N/A	N/A
Lead	ug/L	25	ND (0.50)	ND (0.50)	N/A	N/A	N/A	N/A
Molybdenum	ug/L	9200	21	52	N/A	N/A	N/A	N/A
Nickel	ug/L	490	2.7	3.8	N/A	N/A	N/A	N/A
Selenium	ug/L	63	4.4	ND (2.0)	N/A	N/A	N/A	N/A
Silver	ug/L	1.5	ND (0.09)	ND (0.09)	N/A	N/A	N/A	N/A
Sodium	ug/L	2300000	27000	13000	N/A	N/A	N/A	N/A
Thallium	ug/L	510	ND (0.05)	0.06	N/A	N/A	N/A	N/A
Uranium	ug/L	420	13	9.2	N/A	N/A	N/A	N/A
Vanadium	ug/L	250	0.53	0.96	N/A	N/A	N/A	N/A
Zinc	ug/L	1100	ND (5.0)	ND (5.0)	N/A	N/A	N/A	N/A
Volatiles								
Acetone	ug/L	130000	N/A	N/A	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
Benzene	ug/L	44	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Bromodichloromethane	ug/L	85000	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Bromoform	ug/L	380	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Bromomethane	ug/L	5.6	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Carbon Tetrachloride	ug/L	0.79	N/A	N/A	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)
Chlorobenzene	ug/L	630	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Chloroform	ug/L	2.4	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Dibromochloromethane	ug/L	82000	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Dichlorodifluoromethane	ug/L	4400	N/A	N/A	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
1,2-Dichlorobenzene	ug/L	4600	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
1,3-Dichlorobenzene	ug/L	9600	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
1,4-Dichlorobenzene	ug/L	8.0	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
1,1-Dichloroethane	ug/L	320	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
1,2-Dichloroethane	ug/L	1.6	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
1,1-Dichloroethylene	ug/L	1.6	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
cis-1,2-Dichloroethylene	ug/L	1.6	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
trans-1,2-Dichloroethylene	ug/L	1.6	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
1,2-Dichloropropane	ug/L	16	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
cis-1,3-Dichloropropylene	ug/L	5.2	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
trans-1,3-Dichloropropylene	ug/L	5.2	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
1,3-Dichloropropene, total	ug/L	5.2	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Ethylbenzene	ug/L	2300	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Ethylene dibromide (dibromoethane, 1	ug/L	0.25	N/A	N/A	ND (0.2)	ND (0.2)	ND (0.2)	ND (0.2)
Hexane	ug/L	51	N/A	N/A	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Methyl Ethyl Ketone (2-Butanone)	ug/L	470000	N/A	N/A	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
Methyl Isobutyl Ketone	ug/L	140000	N/A	N/A	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
Methyl tert-butyl ether	ug/L	190	N/A	N/A	ND (2.0)	ND (2.0)	ND (2.0)	ND (2.0)
Methylene Chloride	ug/L	610	N/A	N/A	ND (5.0)	ND (5.0)	ND (5.0)	ND (5.0)
Styrene	ug/L	1300	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
1,1,1,2-Tetrachloroethane	ug/L	3.3	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
1,1,2,2-Tetrachloroethane	ug/L	3.2	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Tetrachloroethylene	ug/L	1.6	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Toluene	ug/L	18000	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
1,1,1-Trichloroethane	ug/L	640	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
1,1,2-Trichloroethane	ug/L	4.7	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Trichloroethylene	ug/L	1.6	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Trichlorofluoromethane	ug/L	2500	N/A	N/A	ND (1.0)	ND (1.0)	ND (1.0)	ND (1.0)
Vinyl Chloride	ug/L	0.5	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
m/p-Xylene	ug/L	4200	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
o-Xylene	ug/L	4200	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Xylenes, total	ug/L	4200	N/A	N/A	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
BTEX								
Benzene	ug/L	44	0.33	0.73	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Ethylbenzene	ug/L	2300	ND (0.20)	ND (0.20)	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Toluene	ug/L	18000	1.2	1.3	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
m/p-Xylene	ug/L	4200	0.83	0.6	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
o-Xylene	ug/L	4200	0.46	0.26	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Xylenes, total	ug/L	4200	1.3	0.86	ND (0.5)	ND (0.5)	ND (0.5)	ND (0.5)
Hydrocarbons								
F1 PHCs (C6-C10)	ug/L	750	ND (25)	ND (25)	N/A	ND (25)	ND (25)	N/A
F2 PHCs (C10-C16)	ug/L	150	ND (100)	ND (100)	N/A	ND (100)	ND (100)	N/A
F3 PHCs (C16-C34)	ug/L	500	ND (200)	ND (200)	N/A	ND (100)	ND (100)	N/A
F4 PHCs (C34-C50)	ug/L	500	ND (200)	ND (200)	N/A	ND (100)	ND (100)	N/A

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

Parameter	Sample ID / Depth (m)	Units	Reg 153/04-Table 3 Residential, coarse Standards	Concentration
SAR	S6 TZO211 - 0.76-1.37	N/A	5.0	0.49
Conductivity	TP2-24-G2 2446099-02 - 0.4-0.5	uS/cm	700	344
Cyanide, free	S1 TZO206 - 0.00-0.61	ug/g dry	0.051	ND (0.01)
Antimony	TP6-24-G2 2446099-06 - 0.4-0.5	ug/g dry	7.5	4.5
Arsenic	BH2-24-AU1 2440373-04 - 0.00-0.61	ug/g dry	18	20.3
Barium	TP6-24-G2 2446099-06 - 0.4-0.5	ug/g dry	390	222
Beryllium	TP5-24-G2 2446099-05 - 0.4-0.5	ug/g dry	4.0	0.6
Boron	TP5-24-G2 2446099-05 - 0.4-0.5	ug/g dry	120	5.4
Boron, available	S3 TZO208 - 0.00-0.61	ug/g dry	1.5	0.27
Cadmium	TP6-24-G2 2446099-06 - 0.4-0.5	ug/g dry	1.2	0.6
Chromium (VI)	TP3-24-G2 2446099-03 - 0.4-0.5	ug/g dry	8.0	0.7
Chromium	BH2-24-AU1 2440373-04 - 0.00-0.61	ug/g dry	160	40.5
Cobalt	DUP1 (Dup of TP6-24-G2) 2502141-01 - 0.4-0.5	ug/g dry	22	16.6
Copper	TP6-24-G2 2446099-06 - 0.4-0.5	ug/g dry	140	262
Lead	TP6-24-G2 2446099-06 - 0.4-0.5	ug/g dry	120	247
Mercury	TP6-24-G2 2446099-06 - 0.4-0.5	ug/g dry	0.27	0.2
Molybdenum	TP6-24-G2 2446099-06 - 0.4-0.5	ug/g dry	6.9	39.6
Nickel	TP5-24-G2 2446099-05 - 0.4-0.5	ug/g dry	100	22.2
Selenium	BH1-24-SS2 2440373-01 - 0.76-1.37	ug/g dry	2.4	ND (1.0)
Silver	BH1-24-SS2 2440373-01 - 0.76-1.37	ug/g dry	20	ND (0.3)
Thallium	BH1-24-SS2 2440373-01 - 0.76-1.37	ug/g dry	1.0	ND (1.0)
Uranium	TP7-24-G2 2446099-07 - 0.4-0.5	ug/g dry	23	1.5
Zinc	DUP1 (Dup of TP6-24-G2) 2502141-01 - 0.4-0.5	ug/g dry	340	605
Acetone	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	16	ND (0.50)
Benzene	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	0.21	ND (0.02)
Bromodichloromethane	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	13	ND (0.05)
Bromoform	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	0.27	ND (0.05)
Bromomethane	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	0.05	ND (0.05)
Carbon Tetrachloride	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	0.05	ND (0.05)
Chlorobenzene	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	2.4	ND (0.05)
Chloroform	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	0.05	ND (0.05)
Dibromochloromethane	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	9.4	ND (0.05)
Dichlorodifluoromethane	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	16	ND (0.05)
1,2-Dichlorobenzene	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	3.4	ND (0.05)
1,3-Dichlorobenzene	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	4.8	ND (0.05)
1,4-Dichlorobenzene	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	0.083	ND (0.05)
1,1-Dichloroethane	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	3.5	ND (0.05)
1,2-Dichloroethane	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	0.05	ND (0.05)
1,1-Dichloroethylene	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	0.05	ND (0.05)
cis-1,2-Dichloroethylene	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	3.4	ND (0.05)
trans-1,2-Dichloroethylene	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	0.084	ND (0.05)
1,2-Dichloropropane	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	0.05	ND (0.05)
cis-1,3-Dichloropropylene	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	0.05	ND (0.05)
trans-1,3-Dichloropropylene	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	0.05	ND (0.05)

Parameter	Sample ID / Depth (m)	Units	Reg 153/04-Table 3 Residential, coarse Standards	Concentration
1,3-Dichloropropene, total	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	0.05	ND (0.05)
Ethylbenzene	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	2.0	ND (0.05)
Ethylene dibromide (dibromoethane, 1,2-)	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	0.05	ND (0.05)
Hexane	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	2.8	ND (0.05)
Methyl Ethyl Ketone (2-Butanone)	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	16	ND (0.50)
Methyl Isobutyl Ketone	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	1.7	ND (0.50)
Methyl tert-butyl ether	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	0.75	ND (0.05)
Methylene Chloride	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	0.1	ND (0.05)
Styrene	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	0.7	ND (0.05)
1,1,1,2-Tetrachloroethane	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	0.058	ND (0.05)
1,1,2,2-Tetrachloroethane	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	0.05	ND (0.05)
Tetrachloroethylene	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	0.28	ND (0.05)
Toluene	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	2.3	ND (0.05)
1,1,1-Trichloroethane	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	0.38	ND (0.05)
1,1,2-Trichloroethane	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	0.05	ND (0.05)
Trichloroethylene	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	0.061	ND (0.05)
Trichlorofluoromethane	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	4.0	ND (0.05)
Vinyl Chloride	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	0.02	ND (0.02)
m/p-Xylene	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	3.1	ND (0.05)
Xylenes, total	BH3-24-SS6A 2440373-09 - 3.81-4.01	ug/g dry	3.1	ND (0.05)
Benzene	S2 TZO207 - 0.76-1.37	ug/g dry	0.21	ND (0.02)
Ethylbenzene	BH1-24-SS2 2440373-01 - 0.76-1.37	ug/g dry	2.0	ND (0.05)
Toluene	BH1-24-SS2 2440373-01 - 0.76-1.37	ug/g dry	2.3	ND (0.05)
m/p-Xylene	BH1-24-SS2 2440373-01 - 0.76-1.37	ug/g dry	3.1	ND (0.05)
Xylenes, total	BH1-24-SS2 2440373-01 - 0.76-1.37	ug/g dry	3.1	ND (0.05)
F1 PHCs (C6-C10)	S2 TZO207 - 0.76-1.37	ug/g dry	55	ND (10)
F2 PHCs (C10-C16)	S2 TZO207 - 0.76-1.37	ug/g dry	98	ND (10)
F4 PHCs (C34-C50)	S2 TZO207 - 0.76-1.37	ug/g dry	2800	ND (50)
Acenaphthene	BH1-24-SS2 2440373-01 - 0.76-1.37	ug/g dry	7.9	ND (0.02)
Acenaphthylene	BH1-24-SS2 2440373-01 - 0.76-1.37	ug/g dry	0.15	ND (0.02)
Anthracene	BH1-24-SS2 2440373-01 - 0.76-1.37	ug/g dry	0.67	ND (0.02)
Benzo[a]anthracene	BH1-24-SS2 2440373-01 - 0.76-1.37	ug/g dry	0.5	ND (0.02)
Benzo[a]pyrene	BH1-24-SS2 2440373-01 - 0.76-1.37	ug/g dry	0.3	ND (0.02)
Benzo[b]fluoranthene	BH1-24-SS2 2440373-01 - 0.76-1.37	ug/g dry	0.78	ND (0.02)
Benzo[g,h,i]perylene	BH1-24-SS2 2440373-01 - 0.76-1.37	ug/g dry	6.6	ND (0.02)
Benzo[k]fluoranthene	BH1-24-SS2 2440373-01 - 0.76-1.37	ug/g dry	0.78	ND (0.02)
Chrysene	BH1-24-SS2 2440373-01 - 0.76-1.37	ug/g dry	7.0	ND (0.02)
Dibenzo[a,h]anthracene	BH1-24-SS2 2440373-01 - 0.76-1.37	ug/g dry	0.1	ND (0.02)
Fluoranthene	BH1-24-SS2 2440373-01 - 0.76-1.37	ug/g dry	0.69	ND (0.02)
Fluorene	BH1-24-SS2 2440373-01 - 0.76-1.37	ug/g dry	62	ND (0.02)
Indeno [1,2,3-cd] pyrene	BH1-24-SS2 2440373-01 - 0.76-1.37	ug/g dry	0.38	ND (0.02)
1-Methylnaphthalene	BH1-24-SS2 2440373-01 - 0.76-1.37	ug/g dry	0.99	ND (0.02)

Parameter	Sample ID / Depth (m)	Units	Reg 153/04-Table 3 Residential, coarse Standards	Concentration
2-Methylnaphthalene	BH1-24-SS2 2440373-01 - 0.76-1.37	ug/g dry	0.99	ND (0.02)
Methylnaphthalene (1&2)	BH1-24-SS2 2440373-01 - 0.76-1.37	ug/g dry	0.99	ND (0.04)
Naphthalene	BH1-24-SS2 2440373-01 - 0.76-1.37	ug/g dry	0.6	ND (0.01)
Note: ND (x) = parameter analysed was reported non-detect				

Parameter	Sample ID / Screen Interval (m)	Units	Reg 153/04-Table 3 Non-Potable Groundwater, coarse Standards	Concentration
Mercury	MW1 TZO123 - 1.33 - 4.38	ug/L	0.29	ND (0.10)
Antimony	MW4 TZO124 - 2.66 - 5.71	ug/L	20000	5.1
Arsenic	MW4 TZO124 - 2.66 - 5.71	ug/L	1900	91.2
Barium	MW1 TZO123 - 1.33 - 4.38	ug/L	29000	350
Beryllium	MW1 TZO123 - 1.33 - 4.38	ug/L	67	ND (0.40)
Boron	MW1 TZO123 - 1.33 - 4.38	ug/L	45000	69
Cadmium	MW1 TZO123 - 1.33 - 4.38	ug/L	2.7	ND (0.09)
Chromium	MW1 TZO123 - 1.33 - 4.38	ug/L	810	ND (5.0)
Chromium (VI)	MW1 TZO123 - 1.33 - 4.38	ug/L	140	ND (0.50)
Cobalt	MW1 TZO123 - 1.33 - 4.38	ug/L	66	1.1
Copper	MW1 TZO123 - 1.33 - 4.38	ug/L	87	ND (0.90)
Lead	MW1 TZO123 - 1.33 - 4.38	ug/L	25	ND (0.50)
Molybdenum	MW4 TZO124 - 2.66 - 5.71	ug/L	9200	52
Nickel	MW4 TZO124 - 2.66 - 5.71	ug/L	490	3.8
Selenium	MW1 TZO123 - 1.33 - 4.38	ug/L	63	4.4
Silver	MW1 TZO123 - 1.33 - 4.38	ug/L	1.5	ND (0.09)
Sodium	MW1 TZO123 - 1.33 - 4.38	ug/L	2300000	27000
Thallium	MW4 TZO124 - 2.66 - 5.71	ug/L	510	0.06
Uranium	MW1 TZO123 - 1.33 - 4.38	ug/L	420	13
Vanadium	MW4 TZO124 - 2.66 - 5.71	ug/L	250	0.96
Zinc	MW1 TZO123 - 1.33 - 4.38	ug/L	1100	ND (5.0)
Acetone	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	130000	ND (5.0)
Benzene	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	44	ND (0.5)
Bromodichloromethane	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	85000	ND (0.5)
Bromoform	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	380	ND (0.5)
Bromomethane	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	5.6	ND (0.5)
Carbon Tetrachloride	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	0.79	ND (0.2)
Chlorobenzene	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	630	ND (0.5)
Chloroform	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	2.4	ND (0.5)
Dibromochloromethane	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	82000	ND (0.5)
Dichlorodifluoromethane	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	4400	ND (1.0)
1,2-Dichlorobenzene	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	4600	ND (0.5)
1,3-Dichlorobenzene	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	9600	ND (0.5)
1,4-Dichlorobenzene	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	8.0	ND (0.5)
1,1-Dichloroethane	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	320	ND (0.5)
1,2-Dichloroethane	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	1.6	ND (0.5)
1,1-Dichloroethylene	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	1.6	ND (0.5)
cis-1,2-Dichloroethylene	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	1.6	ND (0.5)
trans-1,2-Dichloroethylene	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	1.6	ND (0.5)
1,2-Dichloropropane	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	16	ND (0.5)
cis-1,3-Dichloropropylene	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	5.2	ND (0.5)
trans-1,3-Dichloropropylene	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	5.2	ND (0.5)
1,3-Dichloropropene, total	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	5.2	ND (0.5)
Ethylbenzene	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	2300	ND (0.5)
Ethylene dibromide (dibromoethane, 1,2-)	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	0.25	ND (0.2)

Parameter	Sample ID / Screen Interval (m)	Units	Reg 153/04-Table 3 Non-Potable Groundwater, coarse Standards	Concentration
Hexane	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	51	ND (1.0)
Methyl Ethyl Ketone (2-Butanone)	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	470000	ND (5.0)
Methyl Isobutyl Ketone	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	140000	ND (5.0)
Methyl tert-butyl ether	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	190	ND (2.0)
Methylene Chloride	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	610	ND (5.0)
Styrene	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	1300	ND (0.5)
1,1,1,2-Tetrachloroethane	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	3.3	ND (0.5)
1,1,2,2-Tetrachloroethane	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	3.2	ND (0.5)
Tetrachloroethylene	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	1.6	ND (0.5)
Toluene	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	18000	ND (0.5)
1,1,1-Trichloroethane	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	640	ND (0.5)
1,1,2-Trichloroethane	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	4.7	ND (0.5)
Trichloroethylene	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	1.6	ND (0.5)
Trichlorofluoromethane	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	2500	ND (1.0)
Vinyl Chloride	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	0.5	ND (0.5)
m/p-Xylene	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	4200	ND (0.5)
o-Xylene	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	4200	ND (0.5)
Xylenes, total	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	4200	ND (0.5)
Benzene	MW4 TZO124 - 2.66 - 5.71	ug/L	44	0.73
Ethylbenzene	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	2300	ND (0.5)
Toluene	MW4 TZO124 - 2.66 - 5.71	ug/L	18000	1.3
m/p-Xylene	MW1 TZO123 - 1.33 - 4.38	ug/L	4200	0.83
o-Xylene	MW1-GW1 2441407-01 - 1.33 - 4.38	ug/L	4200	ND (0.5)
Xylenes, total	MW1 TZO123 - 1.33 - 4.38	ug/L	4200	1.3
F1 PHCs (C6-C10)	MW1 TZO123 - 1.33 - 4.38	ug/L	750	ND (25)
F2 PHCs (C10-C16)	MW1 TZO123 - 1.33 - 4.38	ug/L	150	ND (100)
F3 PHCs (C16-C34)	MW1 TZO123 - 1.33 - 4.38	ug/L	500	ND (200)
F4 PHCs (C34-C50)	MW1 TZO123 - 1.33 - 4.38	ug/L	500	ND (200)
Note: ND (x) = parameter analysed was reported non-detect.				

Parameter	MDL	BH2-24-SS3 2440373-05	DUP1 (Dup of BH2-24-SS3) 2440373-10	RPD (%)	QA/QC Result
Metals					
Antimony	1.0	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
Arsenic	1.0	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
Barium	1.0	16.6	13.1	23.6%	Outside the acceptable range
Beryllium	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Boron	5.0	ND (5.0)	ND (5.0)	0.0%	Within the acceptable range
Cadmium	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Chromium (VI)	0.2	ND (0.2)	ND (0.2)	0.0%	Within the acceptable range
Chromium	5.0	6.7	5.1	27.1%	Outside the acceptable range
Cobalt	1.0	2.2	1.7	25.6%	Outside the acceptable range
Copper	5.0	ND (5.0)	ND (5.0)	0.0%	Within the acceptable range
Lead	1.0	1.7	1.2	34.5%	Outside the acceptable range
Mercury	0.1	ND (0.1)	ND (0.1)	0.0%	Within the acceptable range
Molybdenum	1.0	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
Nickel	5.0	ND (5.0)	ND (5.0)	0.0%	Within the acceptable range
Selenium	1.0	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
Silver	0.3	ND (0.3)	ND (0.3)	0.0%	Within the acceptable range
Thallium	1.0	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
Uranium	1.0	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
Vanadium	10.0	ND (10.0)	ND (10.0)	0.0%	Within the acceptable range
Zinc	20.0	ND (20.0)	ND (20.0)	0.0%	Within the acceptable range
BTEX					
Benzene	0.02	ND (0.02)	ND (0.02)	0.0%	Within the acceptable range
Ethylbenzene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Toluene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
m/p-Xylene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
o-Xylene	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Xylenes, total	0.05	ND (0.05)	ND (0.05)	0.0%	Within the acceptable range
Hydrocarbons					
F1 PHCs (C6-C10)	7	ND (7)	ND (7)	0.0%	Within the acceptable range
F2 PHCs (C10-C16)	4	ND (4)	ND (4)	0.0%	Within the acceptable range
F3 PHCs (C16-C34)	8	ND (8)	ND (8)	0.0%	Within the acceptable range
F4 PHCs (C34-C50)	6	ND (6)	ND (6)	0.0%	Within the acceptable range

Parameter	MDL	TP6-24-G2 2446099-06	DUP1 (Dup of TP6-24-G2) 2502141-01	RPD (%)	QA/QC Result
Metals					
Antimony	1.0	4.5	4.2	6.9%	Within the acceptable range
Arsenic	1.0	14.7	16.2	9.7%	Within the acceptable range
Barium	1.0	222	184	18.7%	Within the acceptable range
Beryllium	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Boron	5.0	ND (5.0)	ND (5.0)	0.0%	Within the acceptable range
Cadmium	0.5	0.6	0.6	0.0%	Within the acceptable range
Chromium	5.0	15.2	18.5	19.6%	Within the acceptable range
Cobalt	1.0	15	16.6	10.1%	Within the acceptable range
Copper	5.0	262	247	5.9%	Within the acceptable range
Lead	1.0	247	213	14.8%	Within the acceptable range
Molybdenum	1.0	39.6	39.6	0.0%	Within the acceptable range
Nickel	5.0	10.4	12.9	21.5%	Outside the acceptable range
Selenium	1.0	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
Silver	0.3	ND (0.3)	ND (0.3)	0.0%	Within the acceptable range
Thallium	1.0	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
Uranium	1.0	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
Vanadium	10.0	11.7	13.9	17.2%	Within the acceptable range
Zinc	20.0	573	605	5.4%	Within the acceptable range

Parameter	MDL	BH3-24-GW1 2441407-02	DUP (Dup of BH3-24-GW1) 2441407-03	RPD (%)	QA/QC Result
Volatiles					
Acetone	5	ND (5.0)	ND (5.0)	0.0%	Within the acceptable range
Benzene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Bromodichloromethane	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Bromoform	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Bromomethane	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Carbon Tetrachloride	0.2	ND (0.2)	ND (0.2)	0.0%	Within the acceptable range
Chlorobenzene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Chloroform	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Dibromochloromethane	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Dichlorodifluoromethane	1	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
1,2-Dichlorobenzene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
1,3-Dichlorobenzene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
1,4-Dichlorobenzene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
1,1-Dichloroethane	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
1,2-Dichloroethane	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
1,1-Dichloroethylene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
cis-1,2-Dichloroethylene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
trans-1,2-Dichloroethylene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
1,2-Dichloropropane	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
cis-1,3-Dichloropropylene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
trans-1,3-Dichloropropylene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
1,3-Dichloropropene, total	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Ethylbenzene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Ethylene dibromide (dibromoe	0.2	ND (0.2)	ND (0.2)	0.0%	Within the acceptable range
Hexane	1	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
Methyl Ethyl Ketone (2-Butano	5	ND (5.0)	ND (5.0)	0.0%	Within the acceptable range
Methyl Isobutyl Ketone	5	ND (5.0)	ND (5.0)	0.0%	Within the acceptable range
Methyl tert-butyl ether	2	ND (2.0)	ND (2.0)	0.0%	Within the acceptable range
Methylene Chloride	5	ND (5.0)	ND (5.0)	0.0%	Within the acceptable range
Styrene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
1,1,1,2-Tetrachloroethane	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
1,1,2,2-Tetrachloroethane	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Tetrachloroethylene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Toluene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
1,1,1-Trichloroethane	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
1,1,2-Trichloroethane	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Trichloroethylene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Trichlorofluoromethane	1	ND (1.0)	ND (1.0)	0.0%	Within the acceptable range
Vinyl Chloride	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
m/p-Xylene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
o-Xylene	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Xylenes, total	0.5	ND (0.5)	ND (0.5)	0.0%	Within the acceptable range
Hydrocarbons					
F1 PHCs (C6-C10)	25	ND (25)	ND (25)	0.0%	Within the acceptable range
F2 PHCs (C10-C16)	100	ND (100)	ND (100)	0.0%	Within the acceptable range
F3 PHCs (C16-C34)	100	ND (100)	ND (100)	0.0%	Within the acceptable range
F4 PHCs (C34-C50)	100	ND (100)	ND (100)	0.0%	Within the acceptable range

Test Hole ID	Ground Surface Elevation (masl)	Water Level Depth (m)	Water Level Elevation (masl)	Date of Measurement
MW1	75.19	3.91	71.28	11-Oct-2022
MW4	75.62	5.11	70.51	11-Oct-2022
BH1-24	74.78	4.18	70.60	8-Oct-2024
BH3-24	74.45	4.13	70.32	8-Oct-2024
MW1	75.19	3.85	71.34	8-Oct-2024
MW4	75.62	4.19	71.43	8-Oct-2024

Test Hole ID	Temperature (˚C)	Conductivity (µS)	pH	Date of Measurement
BH1-24	12.8	507	8.61	8-Oct-2024
BH3-24	12.3	604	7.17	8-Oct-2024
MW1	14.4	632	7.19	8-Oct-2024

Your Project #: MOSCATEL BOUTIQUE
Site Location: 1146 SNOW STREET, OTTAWA
Your C.O.C. #: na

Attention: Gib McIntee

St Lawrence Testing & Inspection Co Ltd

814 Second St W
PO Box 997
Cornwall, ON
CANADA K6H 5V1

Report Date: 2022/10/20
Report #: R7350122
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C2T7449
Received: 2022/10/13, 09:27

Sample Matrix: Soil
Samples Received: 8

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Hot Water Extractable Boron	8	2022/10/17	2022/10/18	CAM SOP-00408	R153 Ana. Prot. 2011
Free (WAD) Cyanide	8	2022/10/17	2022/10/18	CAM SOP-00457	OMOE E3015 m
Conductivity	8	2022/10/18	2022/10/18	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1)	8	2022/10/17	2022/10/18	CAM SOP-00436	EPA 3060/7199 m
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	4	N/A	2022/10/17	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	3	2022/10/19	2022/10/19	CAM SOP-00316	CCME CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	1	2022/10/19	2022/10/20	CAM SOP-00316	CCME CWS m
Acid Extractable Metals by ICPMS	8	2022/10/17	2022/10/18	CAM SOP-00447	EPA 6020B m
Moisture	8	N/A	2022/10/15	CAM SOP-00445	Carter 2nd ed 51.2 m
pH CaCl2 EXTRACT	8	2022/10/17	2022/10/17	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	8	N/A	2022/10/19	CAM SOP-00102	EPA 6010C

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Your Project #: MOSCATEL BOUTIQUE
Site Location: 1146 SNOW STREET, OTTAWA
Your C.O.C. #: na

Attention: Gib McIntee

St Lawrence Testing & Inspection Co Ltd

814 Second St W
PO Box 997
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CANADA K6H 5V1

Report Date: 2022/10/20
Report #: R7350122
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C2T7449
Received: 2022/10/13, 09:27

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.

* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.

(1) Soils are reported on a dry weight basis unless otherwise specified.

(2) No lab extraction date is given for F1BTEX & VOC samples that are field preserved with methanol. Extraction date is the date sampled unless otherwise stated.

(3) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

Encryption Key

Grace (Hongmei) Zhao
Project Manager
20 Oct 2022 17:02:09

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Jolanta Goralczyk, Project Manager
Email: Jolanta.Goralczyk@bureauveritas.com
Phone# (905)817-5751

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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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Bureau Veritas Job #: C2T7449
Report Date: 2022/10/20

St Lawrence Testing & Inspection Co Ltd
Client Project #: MOSCATEL BOUTIQUE
Site Location: 1146 SNOW STREET, OTTAWA
Sampler Initials: GM

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		TZO206			TZO207			TZO208		
Sampling Date		2022/10/05 09:30			2022/10/05 09:40			2022/10/05 09:50		
COC Number		na			na			na		
	UNITS	**S1**	**RDL**	**QC Batch**	**S2**	**RDL**	**QC Batch**	**S3**	**RDL**	**QC Batch**
Calculated Parameters										
Sodium Adsorption Ratio	N/A	0.24 (1)		8281511	0.35 (1)		8281511	0.14 (1)		8281511
Inorganics										
Conductivity	mS/cm	0.12	0.002	8289022	0.072	0.002	8289022	0.28	0.002	8289022
Moisture	%	13	1.0	8285985				9.3	1.0	8285985
Available (CaCl2) pH	pH	7.13		8287355	7.02		8287355	7.83		8287355
WAD Cyanide (Free)	ug/g	ND	0.01	8286552	ND	0.01	8286552	ND	0.01	8286552
Chromium (VI)	ug/g	ND	0.18	8287371	ND	0.18	8287371	ND	0.18	8287371
Metals										
Hot Water Ext. Boron (B)	ug/g	0.13	0.050	8287280	ND	0.050	8287280	0.27	0.050	8287280
Acid Extractable Antimony (Sb)	ug/g	0.21	0.20	8287377	ND	0.20	8287377	0.39	0.20	8287377
Acid Extractable Arsenic (As)	ug/g	9.8	1.0	8287377	ND	1.0	8287377	3.5	1.0	8287377
Acid Extractable Barium (Ba)	ug/g	64	0.50	8287377	33	0.50	8287377	62	0.50	8287377
Acid Extractable Beryllium (Be)	ug/g	0.44	0.20	8287377	0.31	0.20	8287377	0.39	0.20	8287377
Acid Extractable Boron (B)	ug/g	ND	5.0	8287377	ND	5.0	8287377	ND	5.0	8287377
Acid Extractable Cadmium (Cd)	ug/g	0.16	0.10	8287377	ND	0.10	8287377	0.34	0.10	8287377
Acid Extractable Chromium (Cr)	ug/g	20	1.0	8287377	13	1.0	8287377	21	1.0	8287377
Acid Extractable Cobalt (Co)	ug/g	6.2	0.10	8287377	4.6	0.10	8287377	6.5	0.10	8287377
Acid Extractable Copper (Cu)	ug/g	11	0.50	8287377	9.7	0.50	8287377	32	0.50	8287377
Acid Extractable Lead (Pb)	ug/g	13	1.0	8287377	3.6	1.0	8287377	35	1.0	8287377
Acid Extractable Molybdenum (Mo)	ug/g	0.83	0.50	8287377	ND	0.50	8287377	1.3	0.50	8287377
Acid Extractable Nickel (Ni)	ug/g	15	0.50	8287377	10	0.50	8287377	15	0.50	8287377
Acid Extractable Selenium (Se)	ug/g	ND	0.50	8287377	ND	0.50	8287377	ND	0.50	8287377
Acid Extractable Silver (Ag)	ug/g	ND	0.20	8287377	ND	0.20	8287377	ND	0.20	8287377
Acid Extractable Thallium (Tl)	ug/g	0.14	0.050	8287377	0.075	0.050	8287377	0.12	0.050	8287377
Acid Extractable Uranium (U)	ug/g	0.56	0.050	8287377	0.65	0.050	8287377	0.80	0.050	8287377
Acid Extractable Vanadium (V)	ug/g	31	5.0	8287377	23	5.0	8287377	28	5.0	8287377
Acid Extractable Zinc (Zn)	ug/g	60	5.0	8287377	17	5.0	8287377	95	5.0	8287377
Acid Extractable Mercury (Hg)	ug/g	ND	0.050	8287377	ND	0.050	8287377	ND	0.050	8287377

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

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O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		TZO209			TZO210			TZO211		
Sampling Date		2022/10/05 10:00			2022/10/05 10:15			2022/10/05 10:25		
COC Number		na			na			na		
	UNITS	S4	RDL	QC Batch	S5	RDL	QC Batch	S6	RDL	QC Batch
Calculated Parameters										
Sodium Adsorption Ratio	N/A	0.35 (1)		8281511	0.31 (1)		8281511	0.49 (1)		8281511
Inorganics										
Conductivity	mS/cm	0.081	0.002	8289022	0.083	0.002	8289022	0.028	0.002	8289022
Moisture	%				9.6	1.0	8285985			
Available (CaCl2) pH	pH	7.28		8287355	7.16		8287355	6.87		8287355
WAD Cyanide (Free)	ug/g	ND	0.01	8286552	ND	0.01	8286552	ND	0.01	8286552
Chromium (VI)	ug/g	ND	0.18	8287371	ND	0.18	8287371	ND	0.18	8287371
Metals										
Hot Water Ext. Boron (B)	ug/g	0.11	0.050	8287280	0.075	0.050	8287280	ND	0.050	8287280
Acid Extractable Antimony (Sb)	ug/g	ND	0.20	8287377	ND	0.20	8287377	ND	0.20	8287377
Acid Extractable Arsenic (As)	ug/g	1.1	1.0	8287377	2.3	1.0	8287377	ND	1.0	8287377
Acid Extractable Barium (Ba)	ug/g	40	0.50	8287377	41	0.50	8287377	31	0.50	8287377
Acid Extractable Beryllium (Be)	ug/g	0.34	0.20	8287377	0.35	0.20	8287377	0.28	0.20	8287377
Acid Extractable Boron (B)	ug/g	ND	5.0	8287377	ND	5.0	8287377	ND	5.0	8287377
Acid Extractable Cadmium (Cd)	ug/g	0.10	0.10	8287377	0.12	0.10	8287377	ND	0.10	8287377
Acid Extractable Chromium (Cr)	ug/g	16	1.0	8287377	17	1.0	8287377	13	1.0	8287377
Acid Extractable Cobalt (Co)	ug/g	5.6	0.10	8287377	7.3	0.10	8287377	6.2	0.10	8287377
Acid Extractable Copper (Cu)	ug/g	9.4	0.50	8287377	15	0.50	8287377	12	0.50	8287377
Acid Extractable Lead (Pb)	ug/g	7.1	1.0	8287377	10	1.0	8287377	4.6	1.0	8287377
Acid Extractable Molybdenum (Mo)	ug/g	ND	0.50	8287377	0.67	0.50	8287377	0.50	0.50	8287377
Acid Extractable Nickel (Ni)	ug/g	11	0.50	8287377	14	0.50	8287377	11	0.50	8287377
Acid Extractable Selenium (Se)	ug/g	ND	0.50	8287377	ND	0.50	8287377	ND	0.50	8287377
Acid Extractable Silver (Ag)	ug/g	ND	0.20	8287377	ND	0.20	8287377	ND	0.20	8287377
Acid Extractable Thallium (Tl)	ug/g	0.096	0.050	8287377	0.13	0.050	8287377	0.11	0.050	8287377
Acid Extractable Uranium (U)	ug/g	0.59	0.050	8287377	0.68	0.050	8287377	0.58	0.050	8287377
Acid Extractable Vanadium (V)	ug/g	27	5.0	8287377	27	5.0	8287377	24	5.0	8287377
Acid Extractable Zinc (Zn)	ug/g	24	5.0	8287377	33	5.0	8287377	19	5.0	8287377
Acid Extractable Mercury (Hg)	ug/g	ND	0.050	8287377	ND	0.050	8287377	ND	0.050	8287377

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.
(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

St Lawrence Testing & Inspection Co Ltd
Client Project #: MOSCATEL BOUTIQUE
Site Location: 1146 SNOW STREET, OTTAWA
Sampler Initials: GM

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		TZO212			TZO213		
Sampling Date		2022/10/05 10:40			2022/10/05 10:45		
COC Number		na			na		
	UNITS	**S7**	**RDL**	**QC Batch**	**S8**	**RDL**	**QC Batch**
Calculated Parameters							
Sodium Adsorption Ratio	N/A	0.24 (1)		8281511	0.39 (1)		8281511
Inorganics							
Conductivity	mS/cm	0.17	0.002	8289022	0.068	0.002	8289022
Moisture	%	8.8	1.0	8285985			
Available (CaCl2) pH	pH	7.51		8287355	7.24		8287355
WAD Cyanide (Free)	ug/g	ND	0.01	8286552	ND	0.01	8286552
Chromium (VI)	ug/g	ND	0.18	8287371	0.19	0.18	8287371
Metals							
Hot Water Ext. Boron (B)	ug/g	0.18	0.050	8287280	0.090	0.050	8287280
Acid Extractable Antimony (Sb)	ug/g	0.25	0.20	8287377	ND	0.20	8287377
Acid Extractable Arsenic (As)	ug/g	3.1	1.0	8287377	2.3	1.0	8287377
Acid Extractable Barium (Ba)	ug/g	62	0.50	8287377	71	0.50	8287377
Acid Extractable Beryllium (Be)	ug/g	0.45	0.20	8287377	0.52	0.20	8287377
Acid Extractable Boron (B)	ug/g	ND	5.0	8287377	ND	5.0	8287377
Acid Extractable Cadmium (Cd)	ug/g	0.14	0.10	8287377	ND	0.10	8287377
Acid Extractable Chromium (Cr)	ug/g	20	1.0	8287377	22	1.0	8287377
Acid Extractable Cobalt (Co)	ug/g	8.4	0.10	8287377	8.8	0.10	8287377
Acid Extractable Copper (Cu)	ug/g	22	0.50	8287377	23	0.50	8287377
Acid Extractable Lead (Pb)	ug/g	16	1.0	8287377	8.0	1.0	8287377
Acid Extractable Molybdenum (Mo)	ug/g	1.1	0.50	8287377	1.0	0.50	8287377
Acid Extractable Nickel (Ni)	ug/g	18	0.50	8287377	21	0.50	8287377
Acid Extractable Selenium (Se)	ug/g	ND	0.50	8287377	ND	0.50	8287377
Acid Extractable Silver (Ag)	ug/g	ND	0.20	8287377	ND	0.20	8287377
Acid Extractable Thallium (Tl)	ug/g	0.14	0.050	8287377	0.21	0.050	8287377
Acid Extractable Uranium (U)	ug/g	0.72	0.050	8287377	0.78	0.050	8287377
Acid Extractable Vanadium (V)	ug/g	30	5.0	8287377	33	5.0	8287377
Acid Extractable Zinc (Zn)	ug/g	40	5.0	8287377	30	5.0	8287377
Acid Extractable Mercury (Hg)	ug/g	ND	0.050	8287377	ND	0.050	8287377

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

(1) Sodium was not detected. To report SAR the sodium detection limit was used in the calculation. This value represents a maximum ratio.

Bureau Veritas Job #: C2T7449
Report Date: 2022/10/20

St Lawrence Testing & Inspection Co Ltd
Client Project #: MOSCATEL BOUTIQUE
Site Location: 1146 SNOW STREET, OTTAWA
Sampler Initials: GM

O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

Bureau Veritas ID		TZO207	TZO209			TZO209			TZO211		
Sampling Date		2022/10/05 09:40	2022/10/05 10:00			2022/10/05 10:00			2022/10/05 10:25		
COC Number		na	na			na			na		
	UNITS	**S2**	**S4**	**RDL**	**QC Batch**	**S4 Lab-Dup**	**RDL**	**QC Batch**	**S6**	**RDL**	**QC Batch**
Inorganics											
Moisture	%	18	7.7	1.0	8285692				12	1.0	8285692
BTEX & F1 Hydrocarbons											
Benzene	ug/g	ND	ND	0.020	8286265				ND	0.020	8286265
Toluene	ug/g	ND	ND	0.020	8286265				ND	0.020	8286265
Ethylbenzene	ug/g	ND	ND	0.020	8286265				ND	0.020	8286265
o-Xylene	ug/g	ND	ND	0.020	8286265				ND	0.020	8286265
p+m-Xylene	ug/g	ND	ND	0.040	8286265				ND	0.040	8286265
Total Xylenes	ug/g	ND	ND	0.040	8286265				ND	0.040	8286265
F1 (C6-C10)	ug/g	ND	ND	10	8286265				ND	10	8286265
F1 (C6-C10) - BTEX	ug/g	ND	ND	10	8286265				ND	10	8286265
F2-F4 Hydrocarbons											
F2 (C10-C16 Hydrocarbons)	ug/g	ND	ND	10	8292567	ND	10	8292567	ND	10	8292567
F3 (C16-C34 Hydrocarbons)	ug/g	ND	ND	50	8292567	ND	50	8292567	ND	50	8292567
F4 (C34-C50 Hydrocarbons)	ug/g	ND	ND	50	8292567	ND	50	8292567	ND	50	8292567
Reached Baseline at C50	ug/g	Yes	Yes		8292567	Yes		8292567	Yes		8292567
Surrogate Recovery (%)											
1,4-Difluorobenzene	%	105	101		8286265				104		8286265
4-Bromofluorobenzene	%	71	91		8286265				83		8286265
D10-o-Xylene	%	110	118		8286265				109		8286265
D4-1,2-Dichloroethane	%	101	105		8286265				101		8286265
o-Terphenyl	%	95	98		8292567	97		8292567	97		8292567

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

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O.REG 153 PHCS, BTEX/F1-F4 (SOIL)

Bureau Veritas ID		TZO213		
Sampling Date		2022/10/05 10:45		
COC Number		na		
	UNITS	**S8**	**RDL**	**QC Batch**
Inorganics				
Moisture	%	17	1.0	8285692
BTEX & F1 Hydrocarbons				
Benzene	ug/g	ND	0.020	8286265
Toluene	ug/g	ND	0.020	8286265
Ethylbenzene	ug/g	ND	0.020	8286265
o-Xylene	ug/g	ND	0.020	8286265
p+m-Xylene	ug/g	ND	0.040	8286265
Total Xylenes	ug/g	ND	0.040	8286265
F1 (C6-C10)	ug/g	ND	10	8286265
F1 (C6-C10) - BTEX	ug/g	ND	10	8286265
F2-F4 Hydrocarbons				
F2 (C10-C16 Hydrocarbons)	ug/g	ND	10	8293482
F3 (C16-C34 Hydrocarbons)	ug/g	ND	50	8293482
F4 (C34-C50 Hydrocarbons)	ug/g	ND	50	8293482
Reached Baseline at C50	ug/g	Yes		8293482
Surrogate Recovery (%)				
1,4-Difluorobenzene	%	106		8286265
4-Bromofluorobenzene	%	72		8286265
D10-o-Xylene	%	115		8286265
D4-1,2-Dichloroethane	%	97		8286265
o-Terphenyl	%	90		8293482

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

Bureau Veritas Job #: C2T7449
Report Date: 2022/10/20

St Lawrence Testing & Inspection Co Ltd
Client Project #: MOSCATEL BOUTIQUE
Site Location: 1146 SNOW STREET, OTTAWA
Sampler Initials: GM

TEST SUMMARY

Bureau Veritas ID: TZO206
Sample ID: S1
Matrix: Soil

Collected: 2022/10/05
Shipped:
Received: 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8287280	2022/10/17	2022/10/18	Jolly John
Free (WAD) Cyanide	TECH	8286552	2022/10/17	2022/10/18	Kruti Jitesh Patel
Conductivity	AT	8289022	2022/10/18	2022/10/18	Surinder Rai
Hexavalent Chromium in Soil by IC	IC/SPEC	8287371	2022/10/17	2022/10/18	Sousan Besharatlou
Acid Extractable Metals by ICPMS	ICP/MS	8287377	2022/10/17	2022/10/18	Daniel Teclu
Moisture	BAL	8285985	N/A	2022/10/15	Min Yang
pH CaCl2 EXTRACT	AT	8287355	2022/10/17	2022/10/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8281511	N/A	2022/10/19	Automated Statchk

Bureau Veritas ID: TZO207
Sample ID: S2
Matrix: Soil

Collected: 2022/10/05
Shipped:
Received: 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8287280	2022/10/17	2022/10/18	Jolly John
Free (WAD) Cyanide	TECH	8286552	2022/10/17	2022/10/18	Kruti Jitesh Patel
Conductivity	AT	8289022	2022/10/18	2022/10/18	Surinder Rai
Hexavalent Chromium in Soil by IC	IC/SPEC	8287371	2022/10/17	2022/10/18	Sousan Besharatlou
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8286265	N/A	2022/10/17	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8292567	2022/10/19	2022/10/19	Jeevaraj Jeevaratrnam
Acid Extractable Metals by ICPMS	ICP/MS	8287377	2022/10/17	2022/10/18	Daniel Teclu
Moisture	BAL	8285692	N/A	2022/10/15	Min Yang
pH CaCl2 EXTRACT	AT	8287355	2022/10/17	2022/10/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8281511	N/A	2022/10/19	Automated Statchk

Bureau Veritas ID: TZO208
Sample ID: S3
Matrix: Soil

Collected: 2022/10/05
Shipped:
Received: 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8287280	2022/10/17	2022/10/18	Jolly John
Free (WAD) Cyanide	TECH	8286552	2022/10/17	2022/10/18	Kruti Jitesh Patel
Conductivity	AT	8289022	2022/10/18	2022/10/18	Surinder Rai
Hexavalent Chromium in Soil by IC	IC/SPEC	8287371	2022/10/17	2022/10/18	Sousan Besharatlou
Acid Extractable Metals by ICPMS	ICP/MS	8287377	2022/10/17	2022/10/18	Daniel Teclu
Moisture	BAL	8285985	N/A	2022/10/15	Min Yang
pH CaCl2 EXTRACT	AT	8287355	2022/10/17	2022/10/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8281511	N/A	2022/10/19	Automated Statchk

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Bureau Veritas Job #: C2T7449
Report Date: 2022/10/20

St Lawrence Testing & Inspection Co Ltd
Client Project #: MOSCATEL BOUTIQUE
Site Location: 1146 SNOW STREET, OTTAWA
Sampler Initials: GM

TEST SUMMARY

Bureau Veritas ID: TZO209
Sample ID: S4
Matrix: Soil

Collected: 2022/10/05
Shipped:
Received: 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8287280	2022/10/17	2022/10/18	Jolly John
Free (WAD) Cyanide	TECH	8286552	2022/10/17	2022/10/18	Kruti Jitesh Patel
Conductivity	AT	8289022	2022/10/18	2022/10/18	Surinder Rai
Hexavalent Chromium in Soil by IC	IC/SPEC	8287371	2022/10/17	2022/10/18	Sousan Besharatlou
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8286265	N/A	2022/10/17	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8292567	2022/10/19	2022/10/19	Jeevaraj Jeevaratrnam
Acid Extractable Metals by ICPMS	ICP/MS	8287377	2022/10/17	2022/10/18	Daniel Teclu
Moisture	BAL	8285692	N/A	2022/10/15	Min Yang
pH CaCl2 EXTRACT	AT	8287355	2022/10/17	2022/10/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8281511	N/A	2022/10/19	Automated Statchk

Bureau Veritas ID: TZO209 Dup
Sample ID: S4
Matrix: Soil

Collected: 2022/10/05
Shipped:
Received: 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8292567	2022/10/19	2022/10/19	Jeevaraj Jeevaratrnam

Bureau Veritas ID: TZO210
Sample ID: S5
Matrix: Soil

Collected: 2022/10/05
Shipped:
Received: 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8287280	2022/10/17	2022/10/18	Jolly John
Free (WAD) Cyanide	TECH	8286552	2022/10/17	2022/10/18	Kruti Jitesh Patel
Conductivity	AT	8289022	2022/10/18	2022/10/18	Surinder Rai
Hexavalent Chromium in Soil by IC	IC/SPEC	8287371	2022/10/17	2022/10/18	Sousan Besharatlou
Acid Extractable Metals by ICPMS	ICP/MS	8287377	2022/10/17	2022/10/18	Daniel Teclu
Moisture	BAL	8285985	N/A	2022/10/15	Min Yang
pH CaCl2 EXTRACT	AT	8287355	2022/10/17	2022/10/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8281511	N/A	2022/10/19	Automated Statchk

Bureau Veritas ID: TZO211
Sample ID: S6
Matrix: Soil

Collected: 2022/10/05
Shipped:
Received: 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8287280	2022/10/17	2022/10/18	Jolly John
Free (WAD) Cyanide	TECH	8286552	2022/10/17	2022/10/18	Kruti Jitesh Patel
Conductivity	AT	8289022	2022/10/18	2022/10/18	Surinder Rai
Hexavalent Chromium in Soil by IC	IC/SPEC	8287371	2022/10/17	2022/10/18	Sousan Besharatlou
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8286265	N/A	2022/10/17	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8292567	2022/10/19	2022/10/19	Jeevaraj Jeevaratrnam
Acid Extractable Metals by ICPMS	ICP/MS	8287377	2022/10/17	2022/10/18	Daniel Teclu

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Bureau Veritas Job #: C2T7449
Report Date: 2022/10/20

St Lawrence Testing & Inspection Co Ltd
Client Project #: MOSCATEL BOUTIQUE
Site Location: 1146 SNOW STREET, OTTAWA
Sampler Initials: GM

TEST SUMMARY

Bureau Veritas ID: TZO211
Sample ID: S6
Matrix: Soil

Collected: 2022/10/05
Shipped:
Received: 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	8285692	N/A	2022/10/15	Min Yang
pH CaCl2 EXTRACT	AT	8287355	2022/10/17	2022/10/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8281511	N/A	2022/10/19	Automated Statchk

Bureau Veritas ID: TZO212
Sample ID: S7
Matrix: Soil

Collected: 2022/10/05
Shipped:
Received: 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8287280	2022/10/17	2022/10/18	Jolly John
Free (WAD) Cyanide	TECH	8286552	2022/10/17	2022/10/18	Kruti Jitesh Patel
Conductivity	AT	8289022	2022/10/18	2022/10/18	Surinder Rai
Hexavalent Chromium in Soil by IC	IC/SPEC	8287371	2022/10/17	2022/10/18	Sousan Besharatlou
Acid Extractable Metals by ICPMS	ICP/MS	8287377	2022/10/17	2022/10/18	Daniel Teclu
Moisture	BAL	8285985	N/A	2022/10/15	Min Yang
pH CaCl2 EXTRACT	AT	8287355	2022/10/17	2022/10/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8281511	N/A	2022/10/19	Automated Statchk

Bureau Veritas ID: TZO213
Sample ID: S8
Matrix: Soil

Collected: 2022/10/05
Shipped:
Received: 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8287280	2022/10/17	2022/10/18	Jolly John
Free (WAD) Cyanide	TECH	8286552	2022/10/17	2022/10/18	Kruti Jitesh Patel
Conductivity	AT	8289022	2022/10/18	2022/10/18	Surinder Rai
Hexavalent Chromium in Soil by IC	IC/SPEC	8287371	2022/10/17	2022/10/18	Sousan Besharatlou
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8286265	N/A	2022/10/17	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8293482	2022/10/19	2022/10/20	Suleeqa Nurr
Acid Extractable Metals by ICPMS	ICP/MS	8287377	2022/10/17	2022/10/18	Daniel Teclu
Moisture	BAL	8285692	N/A	2022/10/15	Min Yang
pH CaCl2 EXTRACT	AT	8287355	2022/10/17	2022/10/17	Taslima Aktar
Sodium Adsorption Ratio (SAR)	CALC/MET	8281511	N/A	2022/10/19	Automated Statchk

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.7°C

Sample TZO207 [S2] : F1 BTEX analysis : Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency

Sample TZO211 [S6] : F1 BTEX analysis : Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency

Sample TZO213 [S8] : F1 BTEX analysis : Soil weight exceeds the protocol specification of approximately 5g in the field preserved vial. Additional methanol was added to the vial to ensure extraction efficiency

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
8285692	MUC	RPD	Moisture	2022/10/15	NC		%	20
8285985	MUC	RPD	Moisture	2022/10/15	14		%	20
8286265	RGA	Matrix Spike	1,4-Difluorobenzene	2022/10/17		98	%	60 - 140
			4-Bromofluorobenzene	2022/10/17		110	%	60 - 140
			D10-o-Xylene	2022/10/17		115	%	60 - 140
			D4-1,2-Dichloroethane	2022/10/17		93	%	60 - 140
			Benzene	2022/10/17		97	%	50 - 140
			Toluene	2022/10/17		99	%	50 - 140
			Ethylbenzene	2022/10/17		111	%	50 - 140
			o-Xylene	2022/10/17		109	%	50 - 140
			p+m-Xylene	2022/10/17		113	%	50 - 140
			F1 (C6-C10)	2022/10/17		98	%	60 - 140
8286265	RGA	Spiked Blank	1,4-Difluorobenzene	2022/10/17		99	%	60 - 140
			4-Bromofluorobenzene	2022/10/17		107	%	60 - 140
			D10-o-Xylene	2022/10/17		103	%	60 - 140
			D4-1,2-Dichloroethane	2022/10/17		92	%	60 - 140
			Benzene	2022/10/17		86	%	50 - 140
			Toluene	2022/10/17		88	%	50 - 140
			Ethylbenzene	2022/10/17		99	%	50 - 140
			o-Xylene	2022/10/17		98	%	50 - 140
			p+m-Xylene	2022/10/17		101	%	50 - 140
			F1 (C6-C10)	2022/10/17		95	%	80 - 120
8286265	RGA	Method Blank	1,4-Difluorobenzene	2022/10/17		102	%	60 - 140
			4-Bromofluorobenzene	2022/10/17		91	%	60 - 140
			D10-o-Xylene	2022/10/17		104	%	60 - 140
			D4-1,2-Dichloroethane	2022/10/17		100	%	60 - 140
			Benzene	2022/10/17	ND, RDL=0.020		ug/g	
			Toluene	2022/10/17	ND, RDL=0.020		ug/g	
			Ethylbenzene	2022/10/17	ND, RDL=0.020		ug/g	
			o-Xylene	2022/10/17	ND, RDL=0.020		ug/g	
			p+m-Xylene	2022/10/17	ND, RDL=0.040		ug/g	
			Total Xylenes	2022/10/17	ND, RDL=0.040		ug/g	
			F1 (C6-C10)	2022/10/17	ND, RDL=10		ug/g	
			F1 (C6-C10) - BTEX	2022/10/17	ND, RDL=10		ug/g	
8286265	RGA	RPD	Benzene	2022/10/17	NC		%	50
			Toluene	2022/10/17	NC		%	50
			Ethylbenzene	2022/10/17	NC		%	50
			o-Xylene	2022/10/17	NC		%	50
			p+m-Xylene	2022/10/17	NC		%	50
			Total Xylenes	2022/10/17	NC		%	50
			F1 (C6-C10)	2022/10/17	NC		%	30
			F1 (C6-C10) - BTEX	2022/10/17	NC		%	30
8286552	KJP	Matrix Spike	WAD Cyanide (Free)	2022/10/18		112	%	75 - 125

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
8286552	KJP	Spiked Blank	WAD Cyanide (Free)	2022/10/18		112	%	80 - 120
8286552	KJP	Method Blank	WAD Cyanide (Free)	2022/10/18	ND, RDL=0.01		ug/g	
8286552	KJP	RPD	WAD Cyanide (Free)	2022/10/18	NC		%	35
8287280	JOH	Matrix Spike	Hot Water Ext. Boron (B)	2022/10/18		106	%	75 - 125
8287280	JOH	Spiked Blank	Hot Water Ext. Boron (B)	2022/10/18		99	%	75 - 125
8287280	JOH	Method Blank	Hot Water Ext. Boron (B)	2022/10/18	ND, RDL=0.050		ug/g	
8287280	JOH	RPD	Hot Water Ext. Boron (B)	2022/10/18	6.0		%	40
8287355	TAK	Spiked Blank	Available (CaCl2) pH	2022/10/17		100	%	97 - 103
8287355	TAK	RPD	Available (CaCl2) pH	2022/10/17	0.46		%	N/A
8287371	SBS	Matrix Spike	Chromium (VI)	2022/10/18		39 (1)	%	70 - 130
8287371	SBS	Spiked Blank	Chromium (VI)	2022/10/18		94	%	80 - 120
8287371	SBS	Method Blank	Chromium (VI)	2022/10/18	ND, RDL=0.18		ug/g	
8287371	SBS	RPD	Chromium (VI)	2022/10/18	NC		%	35
8287377	DT1	Matrix Spike	Acid Extractable Antimony (Sb)	2022/10/18		104	%	75 - 125
			Acid Extractable Arsenic (As)	2022/10/18		99	%	75 - 125
			Acid Extractable Barium (Ba)	2022/10/18		NC	%	75 - 125
			Acid Extractable Beryllium (Be)	2022/10/18		96	%	75 - 125
			Acid Extractable Boron (B)	2022/10/18		91	%	75 - 125
			Acid Extractable Cadmium (Cd)	2022/10/18		98	%	75 - 125
			Acid Extractable Chromium (Cr)	2022/10/18		100	%	75 - 125
			Acid Extractable Cobalt (Co)	2022/10/18		97	%	75 - 125
			Acid Extractable Copper (Cu)	2022/10/18		107	%	75 - 125
			Acid Extractable Lead (Pb)	2022/10/18		NC	%	75 - 125
			Acid Extractable Molybdenum (Mo)	2022/10/18		97	%	75 - 125
			Acid Extractable Nickel (Ni)	2022/10/18		98	%	75 - 125
			Acid Extractable Selenium (Se)	2022/10/18		94	%	75 - 125
			Acid Extractable Silver (Ag)	2022/10/18		100	%	75 - 125
			Acid Extractable Thallium (Tl)	2022/10/18		96	%	75 - 125
			Acid Extractable Uranium (U)	2022/10/18		97	%	75 - 125
			Acid Extractable Vanadium (V)	2022/10/18		95	%	75 - 125
			Acid Extractable Zinc (Zn)	2022/10/18		NC	%	75 - 125
			Acid Extractable Mercury (Hg)	2022/10/18		83	%	75 - 125
8287377	DT1	Spiked Blank	Acid Extractable Antimony (Sb)	2022/10/17		99	%	80 - 120
			Acid Extractable Arsenic (As)	2022/10/17		100	%	80 - 120
			Acid Extractable Barium (Ba)	2022/10/17		93	%	80 - 120
			Acid Extractable Beryllium (Be)	2022/10/17		97	%	80 - 120
			Acid Extractable Boron (B)	2022/10/17		95	%	80 - 120
			Acid Extractable Cadmium (Cd)	2022/10/17		98	%	80 - 120
			Acid Extractable Chromium (Cr)	2022/10/17		101	%	80 - 120
			Acid Extractable Cobalt (Co)	2022/10/17		101	%	80 - 120
			Acid Extractable Copper (Cu)	2022/10/17		98	%	80 - 120
			Acid Extractable Lead (Pb)	2022/10/17		102	%	80 - 120
			Acid Extractable Molybdenum (Mo)	2022/10/17		99	%	80 - 120
			Acid Extractable Nickel (Ni)	2022/10/17		100	%	80 - 120
			Acid Extractable Selenium (Se)	2022/10/17		101	%	80 - 120
			Acid Extractable Silver (Ag)	2022/10/17		101	%	80 - 120
			Acid Extractable Thallium (Tl)	2022/10/17		103	%	80 - 120
			Acid Extractable Uranium (U)	2022/10/17		104	%	80 - 120

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Vanadium (V)	2022/10/17		97	%	80 - 120
			Acid Extractable Zinc (Zn)	2022/10/17		100	%	80 - 120
			Acid Extractable Mercury (Hg)	2022/10/17		91	%	80 - 120
8287377	DT1	Method Blank	Acid Extractable Antimony (Sb)	2022/10/17	ND, RDL=0.20		ug/g	
			Acid Extractable Arsenic (As)	2022/10/17	ND, RDL=1.0		ug/g	
			Acid Extractable Barium (Ba)	2022/10/17	ND, RDL=0.50		ug/g	
			Acid Extractable Beryllium (Be)	2022/10/17	ND, RDL=0.20		ug/g	
			Acid Extractable Boron (B)	2022/10/17	ND, RDL=5.0		ug/g	
			Acid Extractable Cadmium (Cd)	2022/10/17	ND, RDL=0.10		ug/g	
			Acid Extractable Chromium (Cr)	2022/10/17	ND, RDL=1.0		ug/g	
			Acid Extractable Cobalt (Co)	2022/10/17	ND, RDL=0.10		ug/g	
			Acid Extractable Copper (Cu)	2022/10/17	ND, RDL=0.50		ug/g	
			Acid Extractable Lead (Pb)	2022/10/17	ND, RDL=1.0		ug/g	
			Acid Extractable Molybdenum (Mo)	2022/10/17	ND, RDL=0.50		ug/g	
			Acid Extractable Nickel (Ni)	2022/10/17	ND, RDL=0.50		ug/g	
			Acid Extractable Selenium (Se)	2022/10/17	ND, RDL=0.50		ug/g	
			Acid Extractable Silver (Ag)	2022/10/17	ND, RDL=0.20		ug/g	
			Acid Extractable Thallium (Tl)	2022/10/17	ND, RDL=0.050		ug/g	
			Acid Extractable Uranium (U)	2022/10/17	ND, RDL=0.050		ug/g	
			Acid Extractable Vanadium (V)	2022/10/17	ND, RDL=5.0		ug/g	
			Acid Extractable Zinc (Zn)	2022/10/17	ND, RDL=5.0		ug/g	
			Acid Extractable Mercury (Hg)	2022/10/17	ND, RDL=0.050		ug/g	
8287377	DT1	RPD	Acid Extractable Antimony (Sb)	2022/10/18	24		%	30
			Acid Extractable Arsenic (As)	2022/10/18	1.4		%	30
			Acid Extractable Barium (Ba)	2022/10/18	0.87		%	30
			Acid Extractable Beryllium (Be)	2022/10/18	9.0		%	30
			Acid Extractable Boron (B)	2022/10/18	NC		%	30
			Acid Extractable Cadmium (Cd)	2022/10/18	21		%	30
			Acid Extractable Chromium (Cr)	2022/10/18	6.9		%	30
			Acid Extractable Cobalt (Co)	2022/10/18	4.0		%	30
			Acid Extractable Copper (Cu)	2022/10/18	6.9		%	30
			Acid Extractable Lead (Pb)	2022/10/18	3.1		%	30
			Acid Extractable Molybdenum (Mo)	2022/10/18	NC		%	30

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Acid Extractable Nickel (Ni)	2022/10/18	4.9		%	30
			Acid Extractable Selenium (Se)	2022/10/18	NC		%	30
			Acid Extractable Silver (Ag)	2022/10/18	NC		%	30
			Acid Extractable Thallium (Tl)	2022/10/18	18		%	30
			Acid Extractable Uranium (U)	2022/10/18	6.8		%	30
			Acid Extractable Vanadium (V)	2022/10/18	1.3		%	30
			Acid Extractable Zinc (Zn)	2022/10/18	2.8		%	30
			Acid Extractable Mercury (Hg)	2022/10/18	NC		%	30
8289022	SAU	Spiked Blank	Conductivity	2022/10/18		100	%	90 - 110
8289022	SAU	Method Blank	Conductivity	2022/10/18	ND, RDL=0.002		mS/cm	
8289022	SAU	RPD	Conductivity	2022/10/18	0.67		%	10
8292567	JJE	Matrix Spike [TZO209-03]	o-Terphenyl	2022/10/19		94	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2022/10/19		101	%	60 - 130
			F3 (C16-C34 Hydrocarbons)	2022/10/19		102	%	60 - 130
			F4 (C34-C50 Hydrocarbons)	2022/10/19		106	%	60 - 130
8292567	JJE	Spiked Blank	o-Terphenyl	2022/10/19		93	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2022/10/19		99	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2022/10/19		99	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2022/10/19		103	%	80 - 120
8292567	JJE	Method Blank	o-Terphenyl	2022/10/19		96	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2022/10/19	ND, RDL=10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2022/10/19	ND, RDL=50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2022/10/19	ND, RDL=50		ug/g	
8292567	JJE	RPD [TZO209-03]	F2 (C10-C16 Hydrocarbons)	2022/10/19	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2022/10/19	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2022/10/19	NC		%	30
8293482	SN1	Matrix Spike	o-Terphenyl	2022/10/20		87	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2022/10/20		96	%	60 - 130
			F3 (C16-C34 Hydrocarbons)	2022/10/20		94	%	60 - 130
			F4 (C34-C50 Hydrocarbons)	2022/10/20		97	%	60 - 130
8293482	SN1	Spiked Blank	o-Terphenyl	2022/10/20		89	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2022/10/20		98	%	80 - 120
			F3 (C16-C34 Hydrocarbons)	2022/10/20		98	%	80 - 120
			F4 (C34-C50 Hydrocarbons)	2022/10/20		100	%	80 - 120
8293482	SN1	Method Blank	o-Terphenyl	2022/10/20		98	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2022/10/20	ND, RDL=10		ug/g	
			F3 (C16-C34 Hydrocarbons)	2022/10/20	ND, RDL=50		ug/g	
			F4 (C34-C50 Hydrocarbons)	2022/10/20	ND, RDL=50		ug/g	
8293482	SN1	RPD	F2 (C10-C16 Hydrocarbons)	2022/10/20	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2022/10/20	NC		%	30

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			F4 (C34-C50 Hydrocarbons)	2022/10/20	NC		%	30

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) The matrix spike recovery was below the lower control limit. This may be due in part to the reducing environment of the sample. The matrix spike was reanalyzed to confirm result.

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VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Ewa Pranjic, M.Sc., C.Chem, Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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Your Project #: MOCATEL BOUTIQUE
Site Location: 1146 SNOW ST. OTTAWA
Your C.O.C. #: na

Attention: Gib McIntee

St Lawrence Testing & Inspection Co Ltd

814 Second St W
PO Box 997
Cornwall, ON
CANADA K6H 5V1

Report Date: 2022/10/21
Report #: R7352311
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C2T7435
Received: 2022/10/13, 09:27

Sample Matrix: Water
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Chromium (VI) in Water	2	N/A	2022/10/14	CAM SOP-00436	EPA 7199 m
Petroleum Hydro. CCME F1 & BTEX in Water	2	N/A	2022/10/17	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Water (1)	2	2022/10/20	2022/10/20	CAM SOP-00316	CCME PHC-CWS m
Mercury	2	2022/10/18	2022/10/18	CAM SOP-00453	EPA 7470A m
Dissolved Metals by ICPMS	2	N/A	2022/10/18	CAM SOP-00447	EPA 6020B m

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, MELCC, EPA, APHA.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

Reference Method suffix "m" indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) All CCME PHC results met required criteria unless otherwise stated in the report. The CWS PHC methods employed by Bureau Veritas conform to all prescribed elements of the reference method and performance based elements have been validated. All modifications have been validated and proven equivalent following "Alberta Environment's Interpretation of the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Validation of Performance-Based Alternative Methods September 2003". Documentation is available upon request. Modifications from Reference Method for the Canada-wide Standard for Petroleum Hydrocarbons in Soil-Tier 1 Method: F2/F3/F4 data reported using validated cold solvent extraction instead of Soxhlet extraction.

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Your Project #: MOCATEL BOUTIQUE
Site Location: 1146 SNOW ST. OTTAWA
Your C.O.C. #: na

Attention: Gib McIntee

St Lawrence Testing & Inspection Co Ltd

814 Second St W
PO Box 997
Cornwall, ON
CANADA K6H 5V1

Report Date: 2022/10/21
Report #: R7352311
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C2T7435
Received: 2022/10/13, 09:27

Encryption Key

Jolanta Goralczyk
Project Manager
21 Oct 2022 17:56:19

Please direct all questions regarding this Certificate of Analysis to your Project Manager.
Jolanta Goralczyk, Project Manager
Email: Jolanta.Goralczyk@bureauveritas.com
Phone# (905)817-5751

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For Service Group specific validation please refer to the Validation Signature Page.

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Bureau Veritas Job #: C2T7435
Report Date: 2022/10/21

St Lawrence Testing & Inspection Co Ltd
Client Project #: MOCATEL BOUTIQUE
Site Location: 1146 SNOW ST. OTTAWA
Sampler Initials: SR

O.REG 153 METALS PACKAGE (WATER)

Bureau Veritas ID		TZO123	TZO124		
Sampling Date		2022/10/11 11:30	2022/10/11 11:00		
COC Number		na	na		
	UNITS	**MW 1**	**MW 4**	**RDL**	**QC Batch**
Metals					
Chromium (VI)	ug/L	ND	ND	0.50	8283666
Mercury (Hg)	ug/L	ND	ND	0.10	8289299
Dissolved Antimony (Sb)	ug/L	ND	5.1	0.50	8284017
Dissolved Arsenic (As)	ug/L	ND	1.2	1.0	8284017
Dissolved Barium (Ba)	ug/L	350	200	2.0	8284017
Dissolved Beryllium (Be)	ug/L	ND	ND	0.40	8284017
Dissolved Boron (B)	ug/L	69	66	10	8284017
Dissolved Cadmium (Cd)	ug/L	ND	ND	0.090	8284017
Dissolved Chromium (Cr)	ug/L	ND	ND	5.0	8284017
Dissolved Cobalt (Co)	ug/L	1.1	ND	0.50	8284017
Dissolved Copper (Cu)	ug/L	ND	ND	0.90	8284017
Dissolved Lead (Pb)	ug/L	ND	ND	0.50	8284017
Dissolved Molybdenum (Mo)	ug/L	21	52	0.50	8284017
Dissolved Nickel (Ni)	ug/L	2.7	3.8	1.0	8284017
Dissolved Selenium (Se)	ug/L	4.4	ND	2.0	8284017
Dissolved Silver (Ag)	ug/L	ND	ND	0.090	8284017
Dissolved Sodium (Na)	ug/L	27000	13000	100	8284017
Dissolved Thallium (Tl)	ug/L	ND	0.060	0.050	8284017
Dissolved Uranium (U)	ug/L	13	9.2	0.10	8284017
Dissolved Vanadium (V)	ug/L	0.53	0.96	0.50	8284017
Dissolved Zinc (Zn)	ug/L	ND	ND	5.0	8284017

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

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O.REG 153 PHCS, BTEX/F1-F4 (WATER)

Bureau Veritas ID		TZO123	TZO124		
Sampling Date		2022/10/11 11:30	2022/10/11 11:00		
COC Number		na	na		
	UNITS	**MW 1**	**MW 4**	**RDL**	**QC Batch**
BTEX & F1 Hydrocarbons					
Benzene	ug/L	0.33	0.73	0.20	8286407
Toluene	ug/L	1.2	1.3	0.20	8286407
Ethylbenzene	ug/L	ND	ND	0.20	8286407
o-Xylene	ug/L	0.46	0.26	0.20	8286407
p+m-Xylene	ug/L	0.83	0.60	0.40	8286407
Total Xylenes	ug/L	1.3	0.86	0.40	8286407
F1 (C6-C10)	ug/L	ND	ND	25	8286407
F1 (C6-C10) - BTEX	ug/L	ND	ND	25	8286407
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/L	ND	ND	100	8294552
F3 (C16-C34 Hydrocarbons)	ug/L	ND	ND	200	8294552
F4 (C34-C50 Hydrocarbons)	ug/L	ND	ND	200	8294552
Reached Baseline at C50	ug/L	Yes	Yes		8294552
Surrogate Recovery (%)					
1,4-Difluorobenzene	%	100	99		8286407
4-Bromofluorobenzene	%	99	99		8286407
D10-o-Xylene	%	88	88		8286407
D4-1,2-Dichloroethane	%	106	107		8286407
o-Terphenyl	%	96	96		8294552

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

Bureau Veritas Job #: C2T7435
Report Date: 2022/10/21

St Lawrence Testing & Inspection Co Ltd
Client Project #: MOCATEL BOUTIQUE
Site Location: 1146 SNOW ST. OTTAWA
Sampler Initials: SR

TEST SUMMARY

Bureau Veritas ID: TZO123
Sample ID: MW 1
Matrix: Water

Collected: 2022/10/11
Shipped:
Received: 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chromium (VI) in Water	IC	8283666	N/A	2022/10/14	Theodora Luck
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	8286407	N/A	2022/10/17	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8294552	2022/10/20	2022/10/20	Dennis Ngondu
Mercury	CV/AA	8289299	2022/10/18	2022/10/18	Japneet Gill
Dissolved Metals by ICPMS	ICP/MS	8284017	N/A	2022/10/18	Arefa Dabhad

Bureau Veritas ID: TZO124
Sample ID: MW 4
Matrix: Water

Collected: 2022/10/11
Shipped:
Received: 2022/10/13

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chromium (VI) in Water	IC	8283666	N/A	2022/10/14	Theodora Luck
Petroleum Hydro. CCME F1 & BTEX in Water	HSGC/MSFD	8286407	N/A	2022/10/17	Lincoln Ramdahin
Petroleum Hydrocarbons F2-F4 in Water	GC/FID	8294552	2022/10/20	2022/10/20	Dennis Ngondu
Mercury	CV/AA	8289299	2022/10/18	2022/10/18	Japneet Gill
Dissolved Metals by ICPMS	ICP/MS	8284017	N/A	2022/10/18	Arefa Dabhad

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Bureau Veritas Job #: C2T7435
Report Date: 2022/10/21

St Lawrence Testing & Inspection Co Ltd
Client Project #: MOCATEL BOUTIQUE
Site Location: 1146 SNOW ST. OTTAWA
Sampler Initials: SR

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.7°C

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
8283666	TL2	Matrix Spike	Chromium (VI)	2022/10/14		103	%	80 - 120
8283666	TL2	Spiked Blank	Chromium (VI)	2022/10/14		104	%	80 - 120
8283666	TL2	Method Blank	Chromium (VI)	2022/10/14	ND, RDL=0.50		ug/L	
8283666	TL2	RPD	Chromium (VI)	2022/10/14	NC		%	20
8284017	ADA	Matrix Spike	Dissolved Antimony (Sb)	2022/10/18		104	%	80 - 120
			Dissolved Arsenic (As)	2022/10/18		96	%	80 - 120
			Dissolved Barium (Ba)	2022/10/18		99	%	80 - 120
			Dissolved Beryllium (Be)	2022/10/18		102	%	80 - 120
			Dissolved Boron (B)	2022/10/18		NC	%	80 - 120
			Dissolved Cadmium (Cd)	2022/10/18		101	%	80 - 120
			Dissolved Chromium (Cr)	2022/10/18		93	%	80 - 120
			Dissolved Cobalt (Co)	2022/10/18		97	%	80 - 120
			Dissolved Copper (Cu)	2022/10/18		101	%	80 - 120
			Dissolved Lead (Pb)	2022/10/18		96	%	80 - 120
			Dissolved Molybdenum (Mo)	2022/10/18		105	%	80 - 120
			Dissolved Nickel (Ni)	2022/10/18		94	%	80 - 120
			Dissolved Selenium (Se)	2022/10/18		97	%	80 - 120
			Dissolved Silver (Ag)	2022/10/18		93	%	80 - 120
			Dissolved Sodium (Na)	2022/10/18		99	%	80 - 120
			Dissolved Thallium (Tl)	2022/10/18		99	%	80 - 120
			Dissolved Uranium (U)	2022/10/18		98	%	80 - 120
			Dissolved Vanadium (V)	2022/10/18		95	%	80 - 120
			Dissolved Zinc (Zn)	2022/10/18		93	%	80 - 120
8284017	ADA	Spiked Blank	Dissolved Antimony (Sb)	2022/10/18		103	%	80 - 120
			Dissolved Arsenic (As)	2022/10/18		100	%	80 - 120
			Dissolved Barium (Ba)	2022/10/18		98	%	80 - 120
			Dissolved Beryllium (Be)	2022/10/18		101	%	80 - 120
			Dissolved Boron (B)	2022/10/18		98	%	80 - 120
			Dissolved Cadmium (Cd)	2022/10/18		101	%	80 - 120
			Dissolved Chromium (Cr)	2022/10/18		96	%	80 - 120
			Dissolved Cobalt (Co)	2022/10/18		98	%	80 - 120
			Dissolved Copper (Cu)	2022/10/18		101	%	80 - 120
			Dissolved Lead (Pb)	2022/10/18		100	%	80 - 120
			Dissolved Molybdenum (Mo)	2022/10/18		103	%	80 - 120
			Dissolved Nickel (Ni)	2022/10/18		98	%	80 - 120
			Dissolved Selenium (Se)	2022/10/18		98	%	80 - 120
			Dissolved Silver (Ag)	2022/10/18		99	%	80 - 120
			Dissolved Sodium (Na)	2022/10/18		103	%	80 - 120
			Dissolved Thallium (Tl)	2022/10/18		101	%	80 - 120
			Dissolved Uranium (U)	2022/10/18		101	%	80 - 120
			Dissolved Vanadium (V)	2022/10/18		96	%	80 - 120
			Dissolved Zinc (Zn)	2022/10/18		98	%	80 - 120
8284017	ADA	Method Blank	Dissolved Antimony (Sb)	2022/10/18	ND, RDL=0.50		ug/L	
			Dissolved Arsenic (As)	2022/10/18	ND, RDL=1.0		ug/L	
			Dissolved Barium (Ba)	2022/10/18	ND, RDL=2.0		ug/L	
			Dissolved Beryllium (Be)	2022/10/18	ND, RDL=0.40		ug/L	

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Dissolved Boron (B)	2022/10/18	ND, RDL=10		ug/L	
			Dissolved Cadmium (Cd)	2022/10/18	ND, RDL=0.090		ug/L	
			Dissolved Chromium (Cr)	2022/10/18	ND, RDL=5.0		ug/L	
			Dissolved Cobalt (Co)	2022/10/18	ND, RDL=0.50		ug/L	
			Dissolved Copper (Cu)	2022/10/18	ND, RDL=0.90		ug/L	
			Dissolved Lead (Pb)	2022/10/18	ND, RDL=0.50		ug/L	
			Dissolved Molybdenum (Mo)	2022/10/18	ND, RDL=0.50		ug/L	
			Dissolved Nickel (Ni)	2022/10/18	ND, RDL=1.0		ug/L	
			Dissolved Selenium (Se)	2022/10/18	ND, RDL=2.0		ug/L	
			Dissolved Silver (Ag)	2022/10/18	ND, RDL=0.090		ug/L	
			Dissolved Sodium (Na)	2022/10/18	ND, RDL=100		ug/L	
			Dissolved Thallium (Tl)	2022/10/18	ND, RDL=0.050		ug/L	
			Dissolved Uranium (U)	2022/10/18	ND, RDL=0.10		ug/L	
			Dissolved Vanadium (V)	2022/10/18	ND, RDL=0.50		ug/L	
			Dissolved Zinc (Zn)	2022/10/18	ND, RDL=5.0		ug/L	
8284017	ADA	RPD	Dissolved Antimony (Sb)	2022/10/18	NC		%	20
			Dissolved Arsenic (As)	2022/10/18	5.9		%	20
			Dissolved Barium (Ba)	2022/10/18	0.42		%	20
			Dissolved Beryllium (Be)	2022/10/18	NC		%	20
			Dissolved Boron (B)	2022/10/18	2.3		%	20
			Dissolved Cadmium (Cd)	2022/10/18	NC		%	20
			Dissolved Chromium (Cr)	2022/10/18	NC		%	20
			Dissolved Cobalt (Co)	2022/10/18	NC		%	20
			Dissolved Copper (Cu)	2022/10/18	5.3		%	20
			Dissolved Lead (Pb)	2022/10/18	NC		%	20
			Dissolved Molybdenum (Mo)	2022/10/18	0.51		%	20
			Dissolved Nickel (Ni)	2022/10/18	8.3		%	20
			Dissolved Selenium (Se)	2022/10/18	NC		%	20
			Dissolved Silver (Ag)	2022/10/18	NC		%	20
			Dissolved Thallium (Tl)	2022/10/18	NC		%	20
			Dissolved Uranium (U)	2022/10/18	12		%	20
			Dissolved Vanadium (V)	2022/10/18	0.86		%	20
			Dissolved Zinc (Zn)	2022/10/18	3.1		%	20
8286407	LRA	Matrix Spike	1,4-Difluorobenzene	2022/10/17		97	%	70 - 130
			4-Bromofluorobenzene	2022/10/17		98	%	70 - 130
			D10-o-Xylene	2022/10/17		113	%	70 - 130
			D4-1,2-Dichloroethane	2022/10/17		110	%	70 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
			Benzene	2022/10/17		95	%	50 - 140
			Toluene	2022/10/17		91	%	50 - 140
			Ethylbenzene	2022/10/17		96	%	50 - 140
			o-Xylene	2022/10/17		94	%	50 - 140
			p+m-Xylene	2022/10/17		95	%	50 - 140
			F1 (C6-C10)	2022/10/17		101	%	60 - 140
8286407	LRA	Spiked Blank	1,4-Difluorobenzene	2022/10/17		94	%	70 - 130
			4-Bromofluorobenzene	2022/10/17		100	%	70 - 130
			D10-o-Xylene	2022/10/17		112	%	70 - 130
			D4-1,2-Dichloroethane	2022/10/17		103	%	70 - 130
			Benzene	2022/10/17		91	%	50 - 140
			Toluene	2022/10/17		90	%	50 - 140
			Ethylbenzene	2022/10/17		98	%	50 - 140
			o-Xylene	2022/10/17		95	%	50 - 140
			p+m-Xylene	2022/10/17		96	%	50 - 140
			F1 (C6-C10)	2022/10/17		98	%	60 - 140
8286407	LRA	Method Blank	1,4-Difluorobenzene	2022/10/17		94	%	70 - 130
			4-Bromofluorobenzene	2022/10/17		97	%	70 - 130
			D10-o-Xylene	2022/10/17		94	%	70 - 130
			D4-1,2-Dichloroethane	2022/10/17		100	%	70 - 130
			Benzene	2022/10/17	ND, RDL=0.20		ug/L	
			Toluene	2022/10/17	ND, RDL=0.20		ug/L	
			Ethylbenzene	2022/10/17	ND, RDL=0.20		ug/L	
			o-Xylene	2022/10/17	ND, RDL=0.20		ug/L	
			p+m-Xylene	2022/10/17	ND, RDL=0.40		ug/L	
			Total Xylenes	2022/10/17	ND, RDL=0.40		ug/L	
			F1 (C6-C10)	2022/10/17	ND, RDL=25		ug/L	
			F1 (C6-C10) - BTEX	2022/10/17	ND, RDL=25		ug/L	
8286407	LRA	RPD	Benzene	2022/10/17	NC		%	30
			Toluene	2022/10/17	NC		%	30
			Ethylbenzene	2022/10/17	NC		%	30
			o-Xylene	2022/10/17	NC		%	30
			p+m-Xylene	2022/10/17	NC		%	30
			Total Xylenes	2022/10/17	NC		%	30
			F1 (C6-C10)	2022/10/17	NC		%	30
			F1 (C6-C10) - BTEX	2022/10/17	NC		%	30
8289299	JGC	Matrix Spike	Mercury (Hg)	2022/10/18		101	%	75 - 125
8289299	JGC	Spiked Blank	Mercury (Hg)	2022/10/18		102	%	80 - 120
8289299	JGC	Method Blank	Mercury (Hg)	2022/10/18	ND, RDL=0.10		ug/L	
8289299	JGC	RPD	Mercury (Hg)	2022/10/18	NC		%	20
8294552	DN0	Matrix Spike	o-Terphenyl	2022/10/20		101	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2022/10/20		111	%	60 - 130
			F3 (C16-C34 Hydrocarbons)	2022/10/20		112	%	60 - 130

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QUALITY ASSURANCE REPORT(CONT'D)

QA/QC Batch	Init	QC Type	Parameter	Date Analyzed	Value	Recovery	UNITS	QC Limits
8294552	DN0	Spiked Blank	F4 (C34-C50 Hydrocarbons)	2022/10/20		112	%	60 - 130
			o-Terphenyl	2022/10/20		100	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2022/10/20		108	%	60 - 130
			F3 (C16-C34 Hydrocarbons)	2022/10/20		110	%	60 - 130
			F4 (C34-C50 Hydrocarbons)	2022/10/20		108	%	60 - 130
8294552	DN0	Method Blank	o-Terphenyl	2022/10/20		63	%	60 - 130
			F2 (C10-C16 Hydrocarbons)	2022/10/20	ND, RDL=100		ug/L	
			F3 (C16-C34 Hydrocarbons)	2022/10/20	ND, RDL=200		ug/L	
			F4 (C34-C50 Hydrocarbons)	2022/10/20	ND, RDL=200		ug/L	
8294552	DN0	RPD	F2 (C10-C16 Hydrocarbons)	2022/10/20	NC		%	30
			F3 (C16-C34 Hydrocarbons)	2022/10/20	NC		%	30
			F4 (C34-C50 Hydrocarbons)	2022/10/20	NC		%	30

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

Surrogate: A pure or isotopically labeled compound whose behavior mirrors the analytes of interest. Used to evaluate extraction efficiency.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

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Bureau Veritas Job #: C2T7435
Report Date: 2022/10/21

St Lawrence Testing & Inspection Co Ltd
Client Project #: MOCATEL BOUTIQUE
Site Location: 1146 SNOW ST. OTTAWA
Sampler Initials: SR

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Anastassia Hamanov, Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation please refer to the Validation Signature Page.

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Certificate of Analysis

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

Client PO: 61452
Project: PE6763
Custody:

Report Date: 8-Oct-2024
Order Date: 2-Oct-2024

Order #: 2440373

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

Paracel ID	Client ID
2440373-01	BH1-24-SS2
2440373-02	BH1-24-SS4
2440373-03	BH1-24-SS6
2440373-04	BH2-24-AU1
2440373-05	BH2-24-SS3
2440373-06	BH2-24-SS6A
2440373-07	BH3-24-SS2
2440373-08	BH3-24-SS3
2440373-09	BH3-24-SS6A
2440373-10	DUP1

Approved By:

Mark Foto, M.Sc.

Lab Supervisor

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	3-Oct-24	3-Oct-24
Chromium, hexavalent - soil	MOE E3056 - Extraction, colourimetric	4-Oct-24	8-Oct-24
Conductivity	MOE E3138 - probe @25 °C, water ext	4-Oct-24	4-Oct-24
Mercury by CVAA	EPA 7471B - CVAA, digestion	4-Oct-24	4-Oct-24
pH, soil	EPA 150.1 - pH probe @ 25 °C, CaCl buffered ext.	3-Oct-24	3-Oct-24
PHC F1	CWS Tier 1 - P&T GC-FID	3-Oct-24	3-Oct-24
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	3-Oct-24	5-Oct-24
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	4-Oct-24	4-Oct-24
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	3-Oct-24	3-Oct-24
REG 153: VOCs by P&T GC/MS	EPA 8260 - P&T GC-MS	3-Oct-24	4-Oct-24
SAR	Calculated	4-Oct-24	4-Oct-24
Solids, %	CWS Tier 1 - Gravimetric	3-Oct-24	4-Oct-24

Certificate of Analysis

Report Date: 08-Oct-2024

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

Order Date: 2-Oct-2024

Client PO: **61452**

Project Description: **PE6763**

	Client ID:	BH1-24-SS2	BH1-24-SS4	BH1-24-SS6	BH2-24-AU1	-	-
	Sample Date:	01-Oct-24 09:00	01-Oct-24 09:00	01-Oct-24 09:00	01-Oct-24 09:00		
	Sample ID:	2440373-01	2440373-02	2440373-03	2440373-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Physical Characteristics							
% Solids	0.1 % by Wt.	90.5	95.0	84.2	90.3	-	-
General Inorganics							
SAR	0.01 N/A	0.17	0.17	0.11	0.10	-	-
Conductivity	5 uS/cm	89	35	73	122	-	-
pH	0.05 pH Units	-	-	7.75	-	-	-
Metals							
Antimony	1.0 ug/g	<1.0	<1.0	<1.0	2.8	-	-
Arsenic	1.0 ug/g	3.1	1.4	1.4	20.3	-	-
Barium	1.0 ug/g	60.7	14.4	28.2	100	-	-
Beryllium	0.5 ug/g	0.5	<0.5	<0.5	<0.5	-	-
Boron	5.0 ug/g	<5.0	<5.0	<5.0	<5.0	-	-
Cadmium	0.5 ug/g	<0.5	<0.5	<0.5	<0.5	-	-
Chromium	5.0 ug/g	19.7	9.5	11.6	40.5	-	-
Chromium (VI)	0.2 ug/g	0.2	<0.2	<0.2	<0.2	-	-
Cobalt	1.0 ug/g	7.3	3.7	4.1	15.7	-	-
Copper	5.0 ug/g	22.0	9.2	10.7	239	-	-
Lead	1.0 ug/g	6.7	2.3	2.4	76.9	-	-
Mercury	0.1 ug/g	<0.1	<0.1	<0.1	<0.1	-	-
Molybdenum	1.0 ug/g	<1.0	<1.0	<1.0	36.3	-	-
Nickel	5.0 ug/g	16.1	6.2	7.1	15.2	-	-
Selenium	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Silver	0.3 ug/g	<0.3	<0.3	<0.3	<0.3	-	-
Thallium	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Uranium	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Vanadium	10.0 ug/g	28.1	18.8	19.6	27.8	-	-

Certificate of Analysis

Report Date: 08-Oct-2024

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

Order Date: 2-Oct-2024

Client PO: **61452**

Project Description: **PE6763**

	Client ID:	BH1-24-SS2	BH1-24-SS4	BH1-24-SS6	BH2-24-AU1	-	-
	Sample Date:	01-Oct-24 09:00	01-Oct-24 09:00	01-Oct-24 09:00	01-Oct-24 09:00		
	Sample ID:	2440373-01	2440373-02	2440373-03	2440373-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Metals							
Zinc	20.0 ug/g	26.1	<20.0	<20.0	461	-	-
Volatiles							
Benzene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	-	-
Ethylbenzene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Toluene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
m,p-Xylenes	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
o-Xylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Xylenes, total	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Toluene-d8	Surrogate	117%	113%	121%	116%	-	-
Hydrocarbons							
F1 PHCs (C6-C10)	7 ug/g	<7	<7	<7	<7	-	-
F2 PHCs (C10-C16)	4 ug/g	<4	<4	<4	<4	-	-
F3 PHCs (C16-C34)	8 ug/g	34	<8	<8	17	-	-
F4 PHCs (C34-C50)	6 ug/g	8	<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	-	-

	Client ID:	BH1-24-SS2	BH1-24-SS4	BH1-24-SS6	BH2-24-AU1	-	-
	Sample Date:	01-Oct-24 09:00	01-Oct-24 09:00	01-Oct-24 09:00	01-Oct-24 09:00		
	Sample ID:	2440373-01	2440373-02	2440373-03	2440373-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Semi-Volatiles							
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	66.4%	-	-	68.4%	-	-
Terphenyl-d14	Surrogate	81.8%	-	-	78.7%	-	-

	Client ID:	BH2-24-SS3	BH2-24-SS6A	BH3-24-SS2	BH3-24-SS3	-	-
	Sample Date:	01-Oct-24 09:00	01-Oct-24 09:00	01-Oct-24 09:00	01-Oct-24 09:00		
	Sample ID:	2440373-05	2440373-06	2440373-07	2440373-08		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Physical Characteristics							
% Solids	0.1 % by Wt.	94.5	87.5	95.8	89.3	-	-
General Inorganics							
SAR	0.01 N/A	0.22	0.24	0.16	0.20	-	-
Conductivity	5 uS/cm	35	103	66	40	-	-
pH	0.05 pH Units	-	7.73	-	-	-	-
Metals							
Antimony	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Arsenic	1.0 ug/g	<1.0	2.0	1.7	1.1	-	-
Barium	1.0 ug/g	16.6	23.2	24.3	20.5	-	-
Beryllium	0.5 ug/g	<0.5	<0.5	<0.5	<0.5	-	-
Boron	5.0 ug/g	<5.0	<5.0	<5.0	<5.0	-	-
Cadmium	0.5 ug/g	<0.5	<0.5	<0.5	<0.5	-	-
Chromium (VI)	0.2 ug/g	<0.2	<0.2	<0.2	0.2	-	-
Chromium	5.0 ug/g	6.7	9.6	9.8	7.4	-	-
Cobalt	1.0 ug/g	2.2	3.9	4.0	3.0	-	-
Copper	5.0 ug/g	<5.0	10.8	12.4	8.4	-	-
Lead	1.0 ug/g	1.7	3.7	3.8	1.7	-	-
Mercury	0.1 ug/g	<0.1	<0.1	<0.1	<0.1	-	-
Molybdenum	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Nickel	5.0 ug/g	<5.0	7.4	8.7	5.6	-	-
Selenium	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Silver	0.3 ug/g	<0.3	<0.3	<0.3	<0.3	-	-
Thallium	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Uranium	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Vanadium	10.0 ug/g	<10.0	14.8	14.7	11.9	-	-

Certificate of Analysis

Report Date: 08-Oct-2024

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

Order Date: 2-Oct-2024

Client PO: **61452**

Project Description: **PE6763**

	Client ID:	BH2-24-SS3	BH2-24-SS6A	BH3-24-SS2	BH3-24-SS3	-	-
	Sample Date:	01-Oct-24 09:00	01-Oct-24 09:00	01-Oct-24 09:00	01-Oct-24 09:00		
	Sample ID:	2440373-05	2440373-06	2440373-07	2440373-08		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Metals							
Zinc	20.0 ug/g	<20.0	<20.0	<20.0	<20.0	-	-
Volatiles							
Benzene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	-	-
Ethylbenzene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Toluene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
m,p-Xylenes	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
o-Xylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Xylenes, total	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Toluene-d8	Surrogate	113%	119%	113%	116%	-	-
Hydrocarbons							
F1 PHCs (C6-C10)	7 ug/g	<7	<7	<7	<7	-	-
F2 PHCs (C10-C16)	4 ug/g	<4	<4	<4	<4	-	-
F3 PHCs (C16-C34)	8 ug/g	<8	21	22	38	-	-
F4 PHCs (C34-C50)	6 ug/g	<6	<6	7	<6	-	-
Semi-Volatiles							
Acenaphthene	0.02 ug/g	-	-	<0.02	-	-	-
Acenaphthylene	0.02 ug/g	-	-	<0.02	-	-	-
Anthracene	0.02 ug/g	-	-	<0.02	-	-	-
Benzo [a] anthracene	0.02 ug/g	-	-	<0.02	-	-	-
Benzo [a] pyrene	0.02 ug/g	-	-	<0.02	-	-	-
Benzo [b] fluoranthene	0.02 ug/g	-	-	<0.02	-	-	-
Benzo [g,h,i] perylene	0.02 ug/g	-	-	<0.02	-	-	-
Benzo [k] fluoranthene	0.02 ug/g	-	-	<0.02	-	-	-
Chrysene	0.02 ug/g	-	-	<0.02	-	-	-
Dibenzo [a,h] anthracene	0.02 ug/g	-	-	<0.02	-	-	-

	Client ID:	BH2-24-SS3	BH2-24-SS6A	BH3-24-SS2	BH3-24-SS3	-	-
	Sample Date:	01-Oct-24 09:00	01-Oct-24 09:00	01-Oct-24 09:00	01-Oct-24 09:00		
	Sample ID:	2440373-05	2440373-06	2440373-07	2440373-08		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Semi-Volatiles							
Fluoranthene	0.02 ug/g	-	-	<0.02	-	-	-
Fluorene	0.02 ug/g	-	-	<0.02	-	-	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g	-	-	<0.02	-	-	-
1-Methylnaphthalene	0.02 ug/g	-	-	<0.02	-	-	-
2-Methylnaphthalene	0.02 ug/g	-	-	<0.02	-	-	-
Methylnaphthalene (1&2)	0.04 ug/g	-	-	<0.04	-	-	-
Naphthalene	0.01 ug/g	-	-	<0.01	-	-	-
Phenanthrene	0.02 ug/g	-	-	<0.02	-	-	-
Pyrene	0.02 ug/g	-	-	<0.02	-	-	-
2-Fluorobiphenyl	Surrogate	-	-	67.6%	-	-	-
Terphenyl-d14	Surrogate	-	-	84.4%	-	-	-

	Client ID:	BH3-24-SS6A	DUP1			-	-
	Sample Date:	01-Oct-24 09:00	01-Oct-24 09:00				
	Sample ID:	2440373-09	2440373-10				
	Matrix:	Soil	Soil				
	MDL/Units						
Physical Characteristics							
% Solids	0.1 % by Wt.	83.6	94.6	-	-	-	-
General Inorganics							
SAR	0.01 N/A	0.14	-	-	-	-	-
Conductivity	5 uS/cm	95	-	-	-	-	-
Metals							
Antimony	1.0 ug/g	<1.0	<1.0	-	-	-	-
Arsenic	1.0 ug/g	1.8	<1.0	-	-	-	-
Barium	1.0 ug/g	18.1	13.1	-	-	-	-
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	<0.2	-	-	-	-
Chromium	5.0 ug/g	8.8	5.1	-	-	-	-
Cobalt	1.0 ug/g	4.2	1.7	-	-	-	-
Copper	5.0 ug/g	9.9	<5.0	-	-	-	-
Lead	1.0 ug/g	2.5	1.2	-	-	-	-
Mercury	0.1 ug/g	<0.1	<0.1	-	-	-	-
Molybdenum	1.0 ug/g	1.6	<1.0	-	-	-	-
Nickel	5.0 ug/g	9.9	<5.0	-	-	-	-
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	16.8	<10.0	-	-	-	-
Zinc	20.0 ug/g	<20.0	<20.0	-	-	-	-

	Client ID:	BH3-24-SS6A	DUP1			-	-
	Sample Date:	01-Oct-24 09:00	01-Oct-24 09:00				
	Sample ID:	2440373-09	2440373-10				
	Matrix:	Soil	Soil				
	MDL/Units						
Volatiles							
Acetone	0.50 ug/g	<0.50	-	-	-	-	-
Benzene	0.02 ug/g	<0.02	-	-	-	-	-
Bromodichloromethane	0.05 ug/g	<0.05	-	-	-	-	-
Bromoform	0.05 ug/g	<0.05	-	-	-	-	-
Bromomethane	0.05 ug/g	<0.05	-	-	-	-	-
Carbon Tetrachloride	0.05 ug/g	<0.05	-	-	-	-	-
Chlorobenzene	0.05 ug/g	<0.05	-	-	-	-	-
Chloroform	0.05 ug/g	<0.05	-	-	-	-	-
Dibromochloromethane	0.05 ug/g	<0.05	-	-	-	-	-
Dichlorodifluoromethane	0.05 ug/g	<0.05	-	-	-	-	-
1,2-Dichlorobenzene	0.05 ug/g	<0.05	-	-	-	-	-
1,3-Dichlorobenzene	0.05 ug/g	<0.05	-	-	-	-	-
1,4-Dichlorobenzene	0.05 ug/g	<0.05	-	-	-	-	-
1,1-Dichloroethane	0.05 ug/g	<0.05	-	-	-	-	-
1,2-Dichloroethane	0.05 ug/g	<0.05	-	-	-	-	-
1,1-Dichloroethylene	0.05 ug/g	<0.05	-	-	-	-	-
cis-1,2-Dichloroethylene	0.05 ug/g	<0.05	-	-	-	-	-
trans-1,2-Dichloroethylene	0.05 ug/g	<0.05	-	-	-	-	-
1,2-Dichloropropane	0.05 ug/g	<0.05	-	-	-	-	-
cis-1,3-Dichloropropylene	0.05 ug/g	<0.05	-	-	-	-	-
trans-1,3-Dichloropropylene	0.05 ug/g	<0.05	-	-	-	-	-
1,3-Dichloropropene, total	0.05 ug/g	<0.05	-	-	-	-	-
Ethylene dibromide (dibromoethane,	0.05 ug/g	<0.05	-	-	-	-	-
Ethylbenzene	0.05 ug/g	<0.05	-	-	-	-	-
Hexane	0.05 ug/g	<0.05	-	-	-	-	-

	Client ID:	BH3-24-SS6A	DUP1			-	-
	Sample Date:	01-Oct-24 09:00	01-Oct-24 09:00				
	Sample ID:	2440373-09	2440373-10				
	Matrix:	Soil	Soil				
	MDL/Units						
Volatiles							
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g	<0.50	-	-	-	-	-
Methyl Isobutyl Ketone	0.50 ug/g	<0.50	-	-	-	-	-
Methyl tert-butyl ether	0.05 ug/g	<0.05	-	-	-	-	-
Methylene Chloride	0.05 ug/g	<0.05	-	-	-	-	-
Styrene	0.05 ug/g	<0.05	-	-	-	-	-
1,1,1,2-Tetrachloroethane	0.05 ug/g	<0.05	-	-	-	-	-
1,1,2,2-Tetrachloroethane	0.05 ug/g	<0.05	-	-	-	-	-
Tetrachloroethylene	0.05 ug/g	<0.05	-	-	-	-	-
Toluene	0.05 ug/g	<0.05	-	-	-	-	-
1,1,1-Trichloroethane	0.05 ug/g	<0.05	-	-	-	-	-
1,1,2-Trichloroethane	0.05 ug/g	<0.05	-	-	-	-	-
Trichloroethylene	0.05 ug/g	<0.05	-	-	-	-	-
Trichlorofluoromethane	0.05 ug/g	<0.05	-	-	-	-	-
Vinyl chloride	0.02 ug/g	<0.02	-	-	-	-	-
m,p-Xylenes	0.05 ug/g	<0.05	-	-	-	-	-
o-Xylene	0.05 ug/g	<0.05	-	-	-	-	-
Xylenes, total	0.05 ug/g	<0.05	-	-	-	-	-
Toluene-d8	Surrogate	121%	-	-	-	-	-
Dibromofluoromethane	Surrogate	104%	-	-	-	-	-
4-Bromofluorobenzene	Surrogate	116%	-	-	-	-	-
Benzene	0.02 ug/g	-	<0.02	-	-	-	-
Ethylbenzene	0.05 ug/g	-	<0.05	-	-	-	-
Toluene	0.05 ug/g	-	<0.05	-	-	-	-
m,p-Xylenes	0.05 ug/g	-	<0.05	-	-	-	-
o-Xylene	0.05 ug/g	-	<0.05	-	-	-	-

	Client ID:	BH3-24-SS6A	DUP1			-	-
	Sample Date:	01-Oct-24 09:00	01-Oct-24 09:00				
	Sample ID:	2440373-09	2440373-10				
	Matrix:	Soil	Soil				
	MDL/Units						
Volatiles							
Xylenes, total	0.05 ug/g	-	<0.05	-	-	-	-
Toluene-d8	Surrogate	-	113%	-	-	-	-
Hydrocarbons							
F1 PHCs (C6-C10)	7 ug/g	<7	<7	-	-	-	-
F2 PHCs (C10-C16)	4 ug/g	<4	<4	-	-	-	-
F3 PHCs (C16-C34)	8 ug/g	<8	<8	-	-	-	-
F4 PHCs (C34-C50)	6 ug/g	<6	<6	-	-	-	-

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					
Semi-Volatiles								
Acenaphthene	ND	0.02	ug/g					
Acenaphthylene	ND	0.02	ug/g					
Anthracene	ND	0.02	ug/g					
Benzo [a] anthracene	ND	0.02	ug/g					

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Benzo [a] pyrene	ND	0.02	ug/g					
Benzo [b] fluoranthene	ND	0.02	ug/g					
Benzo [g,h,i] perylene	ND	0.02	ug/g					
Benzo [k] fluoranthene	ND	0.02	ug/g					
Chrysene	ND	0.02	ug/g					
Dibenzo [a,h] anthracene	ND	0.02	ug/g					
Fluoranthene	ND	0.02	ug/g					
Fluorene	ND	0.02	ug/g					
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g					
1-Methylnaphthalene	ND	0.02	ug/g					
2-Methylnaphthalene	ND	0.02	ug/g					
Methylnaphthalene (1&2)	ND	0.04	ug/g					
Naphthalene	ND	0.01	ug/g					
Phenanthrene	ND	0.02	ug/g					
Pyrene	ND	0.02	ug/g					
Surrogate: 2-Fluorobiphenyl	*0.911*		*%*	*68.3*	*50-140*			
Surrogate: Terphenyl-d14	*1.23*		*%*	*92.0*	*50-140*			
Volatiles								
Acetone	ND	0.50	ug/g					
Benzene	ND	0.02	ug/g					
Bromodichloromethane	ND	0.05	ug/g					
Bromoform	ND	0.05	ug/g					
Bromomethane	ND	0.05	ug/g					
Carbon Tetrachloride	ND	0.05	ug/g					
Chlorobenzene	ND	0.05	ug/g					
Chloroform	ND	0.05	ug/g					
Dibromochloromethane	ND	0.05	ug/g					
Dichlorodifluoromethane	ND	0.05	ug/g					
1,2-Dichlorobenzene	ND	0.05	ug/g					
1,3-Dichlorobenzene	ND	0.05	ug/g					
1,4-Dichlorobenzene	ND	0.05	ug/g					
1,1-Dichloroethane	ND	0.05	ug/g					

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
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	*8.41*		*%*	*105*	*50-140*			
Surrogate: Dibromofluoromethane	*6.38*		*%*	*79.8*	*50-140*			
Surrogate: Toluene-d8	*9.05*		*%*	*113*	*50-140*			
Benzene	ND	0.02	ug/g					

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Ethylbenzene	ND	0.05	ug/g					
Toluene	ND	0.05	ug/g					
m,p-Xylenes	ND	0.05	ug/g					
o-Xylene	ND	0.05	ug/g					
Xylenes, total	ND	0.05	ug/g					
Surrogate: Toluene-d8	*9.05*		*%*	*113*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
SAR	1.95	0.01	N/A	1.89			3.1	30	
Conductivity	219	5	uS/cm	224			2.5	5	
pH	7.72	0.05	pH Units	7.75			0.4	2.3	
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g	ND			NC	30	
F3 PHCs (C16-C34)	ND	8	ug/g	ND			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g	ND			NC	30	
Metals									
Antimony	ND	1.0	ug/g	ND			NC	30	
Arsenic	4.2	1.0	ug/g	5.4			23.7	30	
Barium	292	1.0	ug/g	363			21.6	30	
Beryllium	1.1	0.5	ug/g	1.3			13.8	30	
Boron	9.4	5.0	ug/g	11.2			17.5	30	
Cadmium	ND	0.5	ug/g	ND			NC	30	
Chromium (VI)	ND	0.2	ug/g	ND			NC	35	
Chromium	43.3	5.0	ug/g	52.7			19.6	30	
Cobalt	16.7	1.0	ug/g	20.3			19.3	30	
Copper	28.3	5.0	ug/g	33.2			15.7	30	
Lead	32.9	1.0	ug/g	39.7			18.7	30	
Mercury	0.137	0.1	ug/g	0.155			12.3	30	
Molybdenum	ND	1.0	ug/g	ND			NC	30	
Nickel	24.5	5.0	ug/g	29.9			19.9	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	1.1	1.0	ug/g	1.3			15.8	30	
Vanadium	68.2	10.0	ug/g	82.5			18.9	30	
Zinc	104	20.0	ug/g	127			20.0	30	
Physical Characteristics									

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
% Solids	95.0	0.1	% by Wt.	95.0			0.1	25	
Semi-Volatiles									
Acenaphthene	ND	0.02	ug/g	ND			NC	40	
Acenaphthylene	ND	0.02	ug/g	ND			NC	40	
Anthracene	ND	0.02	ug/g	ND			NC	40	
Benzo [a] anthracene	0.029	0.02	ug/g	0.032			8.5	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	0.030	0.02	ug/g	0.034			14.1	40	
Dibenzo [a,h] anthracene	ND	0.02	ug/g	ND			NC	40	
Fluoranthene	0.093	0.02	ug/g	0.109			15.3	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	0.077	0.02	ug/g	0.092			17.1	40	
Pyrene	0.072	0.02	ug/g	0.086			17.9	40	
Surrogate: 2-Fluorobiphenyl	*0.997*		*%*		*68.3*	*50-140*			
Surrogate: Terphenyl-d14	*1.41*		*%*		*96.9*	*50-140*			
Volatiles									
Acetone	ND	0.50	ug/g	ND			NC	50	
Benzene	ND	0.02	ug/g	ND			NC	50	
Bromodichloromethane	ND	0.05	ug/g	ND			NC	50	
Bromoform	ND	0.05	ug/g	ND			NC	50	
Bromomethane	ND	0.05	ug/g	ND			NC	50	
Carbon Tetrachloride	ND	0.05	ug/g	ND			NC	50	
Chlorobenzene	ND	0.05	ug/g	ND			NC	50	
Chloroform	ND	0.05	ug/g	ND			NC	50	

Method Quality Control: Duplicate

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

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
o-Xylene	ND	0.05	ug/g	ND			NC	50	
Surrogate: 4-Bromofluorobenzene	*8.93*		*%*		*107*	*50-140*			
Surrogate: Dibromofluoromethane	*7.85*		*%*		*94.1*	*50-140*			
Surrogate: Toluene-d8	*9.33*		*%*		*112*	*50-140*			
Benzene	ND	0.02	ug/g	ND			NC	50	
Ethylbenzene	ND	0.05	ug/g	ND			NC	50	
Toluene	ND	0.05	ug/g	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g	ND			NC	50	
o-Xylene	ND	0.05	ug/g	ND			NC	50	
Surrogate: Toluene-d8	*9.33*		*%*		*112*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	193	7	ug/g	ND	112	85-115			
F2 PHCs (C10-C16)	104	4	ug/g	ND	108	60-140			
F3 PHCs (C16-C34)	275	8	ug/g	ND	117	60-140			
F4 PHCs (C34-C50)	125	6	ug/g	ND	84.2	60-140			
Metals									
Arsenic	54.4	1.0	ug/g	2.2	105	70-130			
Barium	73.2	1.0	ug/g	24.3	97.8	70-130			
Beryllium	45.7	0.5	ug/g	0.5	90.5	70-130			
Boron	46.1	5.0	ug/g	ND	83.3	70-130			
Cadmium	42.7	0.5	ug/g	ND	85.1	70-130			
Chromium (VI)	5.2	0.2	ug/g	ND	100	70-130			
Chromium	70.3	5.0	ug/g	21.1	98.5	70-130			
Cobalt	56.7	1.0	ug/g	8.1	97.1	70-130			
Copper	58.5	5.0	ug/g	13.3	90.4	70-130			
Lead	68.1	1.0	ug/g	15.9	105	70-130			
Mercury	1.55	0.1	ug/g	0.155	93.2	70-130			
Molybdenum	48.1	1.0	ug/g	ND	95.4	70-130			
Nickel	57.0	5.0	ug/g	12.0	90.0	70-130			
Selenium	46.3	1.0	ug/g	ND	91.9	70-130			
Silver	43.4	0.3	ug/g	ND	86.6	70-130			
Thallium	51.7	1.0	ug/g	ND	103	70-130			
Uranium	55.5	1.0	ug/g	ND	110	70-130			
Vanadium	81.7	10.0	ug/g	33.0	97.4	70-130			
Zinc	87.1	20.0	ug/g	50.7	72.8	70-130			
Semi-Volatiles									
Acenaphthene	0.153	0.02	ug/g	ND	83.7	50-140			
Acenaphthylene	0.159	0.02	ug/g	ND	87.3	50-140			
Anthracene	0.188	0.02	ug/g	ND	103	50-140			
Benzo [a] anthracene	0.152	0.02	ug/g	0.032	66.3	50-140			
Benzo [a] pyrene	0.124	0.02	ug/g	ND	68.2	50-140			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Benzo [b] fluoranthene	0.130	0.02	ug/g	ND	71.5	50-140			
Benzo [g,h,i] perylene	0.119	0.02	ug/g	ND	65.3	50-140			
Benzo [k] fluoranthene	0.127	0.02	ug/g	ND	69.9	50-140			
Chrysene	0.179	0.02	ug/g	0.034	79.4	50-140			
Dibenzo [a,h] anthracene	0.104	0.02	ug/g	ND	57.3	50-140			
Fluoranthene	0.244	0.02	ug/g	0.109	74.3	50-140			
Fluorene	0.157	0.02	ug/g	ND	86.1	50-140			
Indeno [1,2,3-cd] pyrene	0.115	0.02	ug/g	ND	63.1	50-140			
1-Methylnaphthalene	0.130	0.02	ug/g	ND	71.5	50-140			
2-Methylnaphthalene	0.133	0.02	ug/g	ND	72.9	50-140			
Naphthalene	0.150	0.01	ug/g	ND	82.3	50-140			
Phenanthrene	0.221	0.02	ug/g	0.092	70.7	50-140			
Pyrene	0.239	0.02	ug/g	0.086	83.8	50-140			
Surrogate: 2-Fluorobiphenyl	*0.923*		*%*		*63.3*	*50-140*			
Surrogate: Terphenyl-d14	*1.28*		*%*		*87.6*	*50-140*			
Volatiles									
Acetone	6.91	0.50	ug/g	ND	69.1	50-140			
Benzene	2.70	0.02	ug/g	ND	67.4	60-130			
Bromodichloromethane	3.12	0.05	ug/g	ND	78.0	60-130			
Bromoform	2.69	0.05	ug/g	ND	67.2	60-130			
Bromomethane	3.61	0.05	ug/g	ND	90.2	50-140			
Carbon Tetrachloride	2.85	0.05	ug/g	ND	71.3	60-130			
Chlorobenzene	3.60	0.05	ug/g	ND	90.0	60-130			
Chloroform	2.75	0.05	ug/g	ND	68.7	60-130			
Dibromochloromethane	2.83	0.05	ug/g	ND	70.8	60-130			
Dichlorodifluoromethane	4.25	0.05	ug/g	ND	106	50-140			
1,2-Dichlorobenzene	3.15	0.05	ug/g	ND	78.8	60-130			
1,3-Dichlorobenzene	3.19	0.05	ug/g	ND	79.7	60-130			
1,4-Dichlorobenzene	3.11	0.05	ug/g	ND	77.7	60-130			
1,1-Dichloroethane	2.83	0.05	ug/g	ND	70.9	60-130			
1,2-Dichloroethane	3.30	0.05	ug/g	ND	82.4	60-130			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
1,1-Dichloroethylene	3.31	0.05	ug/g	ND	82.8	60-130			
cis-1,2-Dichloroethylene	2.94	0.05	ug/g	ND	73.6	60-130			
trans-1,2-Dichloroethylene	3.02	0.05	ug/g	ND	75.6	60-130			
1,2-Dichloropropane	3.11	0.05	ug/g	ND	77.7	60-130			
cis-1,3-Dichloropropylene	3.50	0.05	ug/g	ND	87.5	60-130			
trans-1,3-Dichloropropylene	3.78	0.05	ug/g	ND	94.5	60-130			
Ethylbenzene	3.44	0.05	ug/g	ND	86.0	60-130			
Ethylene dibromide (dibromoethane, 1,2-)	2.81	0.05	ug/g	ND	70.2	60-130			
Hexane	3.24	0.05	ug/g	ND	81.0	60-130			
Methyl Ethyl Ketone (2-Butanone)	8.93	0.50	ug/g	ND	89.3	50-140			
Methyl Isobutyl Ketone	5.65	0.50	ug/g	ND	56.5	50-140			
Methyl tert-butyl ether	6.36	0.05	ug/g	ND	63.6	50-140			
Methylene Chloride	3.36	0.05	ug/g	ND	83.9	60-130			
Styrene	3.51	0.05	ug/g	ND	87.8	60-130			
1,1,1,2-Tetrachloroethane	2.61	0.05	ug/g	ND	65.4	60-130			
1,1,2,2-Tetrachloroethane	3.25	0.05	ug/g	ND	81.2	60-130			
Tetrachloroethylene	3.78	0.05	ug/g	ND	94.4	60-130			
Toluene	3.39	0.05	ug/g	ND	84.8	60-130			
1,1,1-Trichloroethane	2.77	0.05	ug/g	ND	69.2	60-130			
1,1,2-Trichloroethane	3.25	0.05	ug/g	ND	81.1	60-130			
Trichloroethylene	2.95	0.05	ug/g	ND	73.9	60-130			
Trichlorofluoromethane	3.88	0.05	ug/g	ND	97.0	50-140			
Vinyl chloride	3.23	0.02	ug/g	ND	80.8	50-140			
m,p-Xylenes	7.52	0.05	ug/g	ND	94.0	60-130			
o-Xylene	3.75	0.05	ug/g	ND	93.8	60-130			
Surrogate: 4-Bromofluorobenzene	*8.30*		*%*		*104*	*50-140*			
Surrogate: Dibromofluoromethane	*6.42*		*%*		*80.2*	*50-140*			
Surrogate: Toluene-d8	*8.68*		*%*		*108*	*50-140*			
Benzene	2.70	0.02	ug/g	ND	67.4	60-130			
Ethylbenzene	3.44	0.05	ug/g	ND	86.0	60-130			
Toluene	3.39	0.05	ug/g	ND	84.8	60-130			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
m,p-Xylenes	7.52	0.05	ug/g	ND	94.0	60-130			
o-Xylene	3.75	0.05	ug/g	ND	93.8	60-130			
Surrogate: Toluene-d8	*8.68*		*%*		*108*	*50-140*			

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

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

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

CCME PHC additional information:

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

- F1 range corrected for BTEX.

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

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

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

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

PARACEL LABORATORIES LTD.

Paracel ID: 2440373

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2440373	

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

Project Ref: PE6763
Quote #:
PO #: 61452
E-mail: jandrechek@patersongroup.ca

Page 1 of 1

Turnaround Time

☐ 1 day ☐ 3 day
☐ 2 day ☒ Regular

Date Required:

☒ REG 153/04 ☐ REG 406/19

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

Other Regulation

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

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

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Field Filtered	Sample Taken: Date	Sample Taken: Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	EC/SAR	pH		
1	BH1-24-SS2	S		2		1-Oct/24		X		X	X	X	X		X			
2	BH1-24-SS4	"		"		"		X			X	X	X		X			
3	BH1-24-SS6							X			X	X	X		X	X		
4	BH2-24-AU1							X		X	X	X	X		X			
5	BH2-24-SS3							X			X	X	X		X			
6	BH2-24-SS6A							X			X	X	X		X	X		
7	BH3-24-SS2							X		X	X	X	X		X			
8	BH3-24-SS3							X			X	X	X		X			
9	BH3-24-SS6A							X	X		X	X	X		X			
10	DUP1	↓		↓		↓		X			X	X	X					

Comments:

Method of Delivery: Paracel Courier

Relinquished By (Sign):	Received at Depot:	Received at Lab: SD	Verified By: SD
Relinquished By (Print): Jesse Andrechek	Date/Time:	Date/Time: Oct 2, 2024 3:55pm	Date/Time: Oct 2, 2024 4:49pm
Date/Time: 2-Oct/24 3PM	Temperature: °C	Temperature: 17.6	pH Verified: ☐ By:

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Certificate of Analysis

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

Client PO: 61523
Project: PE6763
Custody:

Report Date: 16-Oct-2024
Order Date: 10-Oct-2024

Order #: 2441407

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

Paracel ID	Client ID
2441407-01	MW1-GW1
2441407-02	BH3-24-GW1
2441407-03	DUP
2441407-04	Trip Blank

Approved By:

Mark Foto, M.Sc.
Lab Supervisor

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
PHC F1	CWS Tier 1 - P&T GC-FID	11-Oct-24	12-Oct-24
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	15-Oct-24	16-Oct-24
REG 153: VOCs by P&T GC/MS	EPA 624 - P&T GC-MS	11-Oct-24	12-Oct-24

	Client ID:	MW1-GW1	BH3-24-GW1	DUP	Trip Blank	-	-
	Sample Date:	08-Oct-24 09:00	08-Oct-24 09:00	08-Oct-24 09:00	05-Oct-24 09:00		
	Sample ID:	2441407-01	2441407-02	2441407-03	2441407-04		
	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	-	-
Ethylbenzene	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	-	-
Hexane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0	-	-

Certificate of Analysis

Report Date: 16-Oct-2024

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

Order Date: 10-Oct-2024

Client PO: **61523**

Project Description: PE6763

	Client ID:	MW1-GW1	BH3-24-GW1	DUP	Trip Blank	-	-
	Sample Date:	08-Oct-24 09:00	08-Oct-24 09:00	08-Oct-24 09:00	05-Oct-24 09:00		
	Sample ID:	2441407-01	2441407-02	2441407-03	2441407-04		
	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	115%	116%	115%	117%	-	-
4-Bromofluorobenzene	Surrogate	95.6%	96.4%	100%	97.4%	-	-
Dibromofluoromethane	Surrogate	131%	131%	125%	131%	-	-
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	-	-	-

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					

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					
Surrogate: 4-Bromofluorobenzene	*73.9*		*%*	*92.4*	*50-140*			
Surrogate: Dibromofluoromethane	*96.2*		*%*	*120*	*50-140*			
Surrogate: Toluene-d8	*90.6*		*%*	*113*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	ND	25	ug/L	ND			NC	30	
Volatiles									
Acetone	17.2	5.0	ug/L	22.9			28.6	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	1.00			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	

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	
Surrogate: 4-Bromofluorobenzene	*80.6*		*%*		*101*	*50-140*			
Surrogate: Dibromofluoromethane	*98.0*		*%*		*123*	*50-140*			
Surrogate: Toluene-d8	*87.9*		*%*		*110*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	1810	25	ug/L	ND	105	85-115			
F2 PHCs (C10-C16)	1940	100	ug/L	ND	121	60-140			
F3 PHCs (C16-C34)	4640	100	ug/L	ND	118	60-140			
F4 PHCs (C34-C50)	2410	100	ug/L	ND	97.0	60-140			
Volatiles									
Acetone	109	5.0	ug/L	ND	109	50-140			
Benzene	43.5	0.5	ug/L	ND	109	60-130			
Bromodichloromethane	47.1	0.5	ug/L	ND	118	60-130			
Bromoform	36.8	0.5	ug/L	ND	92.0	60-130			
Bromomethane	46.1	0.5	ug/L	ND	115	50-140			
Carbon Tetrachloride	45.8	0.2	ug/L	ND	115	60-130			
Chlorobenzene	47.8	0.5	ug/L	ND	119	60-130			
Chloroform	43.6	0.5	ug/L	ND	109	60-130			
Dibromochloromethane	42.4	0.5	ug/L	ND	106	60-130			
Dichlorodifluoromethane	46.6	1.0	ug/L	ND	117	50-140			
1,2-Dichlorobenzene	44.0	0.5	ug/L	ND	110	60-130			
1,3-Dichlorobenzene	41.2	0.5	ug/L	ND	103	60-130			
1,4-Dichlorobenzene	45.8	0.5	ug/L	ND	114	60-130			
1,1-Dichloroethane	31.6	0.5	ug/L	ND	79.1	60-130			
1,2-Dichloroethane	44.7	0.5	ug/L	ND	112	60-130			
1,1-Dichloroethylene	44.7	0.5	ug/L	ND	112	60-130			
cis-1,2-Dichloroethylene	44.6	0.5	ug/L	ND	112	60-130			
trans-1,2-Dichloroethylene	42.6	0.5	ug/L	ND	106	60-130			
1,2-Dichloropropane	44.1	0.5	ug/L	ND	110	60-130			
cis-1,3-Dichloropropylene	34.9	0.5	ug/L	ND	87.3	60-130			
trans-1,3-Dichloropropylene	38.4	0.5	ug/L	ND	96.0	60-130			
Ethylbenzene	36.9	0.5	ug/L	ND	92.2	60-130			
Ethylene dibromide (dibromoethane, 1,2-)	44.6	0.2	ug/L	ND	112	60-130			
Hexane	40.1	1.0	ug/L	ND	100	60-130			
Methyl Ethyl Ketone (2-Butanone)	84.1	5.0	ug/L	ND	84.1	50-140			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Methyl Isobutyl Ketone	95.0	5.0	ug/L	ND	95.0	50-140			
Methyl tert-butyl ether	84.2	2.0	ug/L	ND	84.2	50-140			
Methylene Chloride	42.9	5.0	ug/L	ND	107	60-130			
Styrene	37.5	0.5	ug/L	ND	93.8	60-130			
1,1,1,2-Tetrachloroethane	50.0	0.5	ug/L	ND	125	60-130			
1,1,2,2-Tetrachloroethane	42.6	0.5	ug/L	ND	107	60-130			
Tetrachloroethylene	45.0	0.5	ug/L	ND	112	60-130			
Toluene	43.6	0.5	ug/L	ND	109	60-130			
1,1,1-Trichloroethane	41.5	0.5	ug/L	ND	104	60-130			
1,1,2-Trichloroethane	43.0	0.5	ug/L	ND	107	60-130			
Trichloroethylene	46.4	0.5	ug/L	ND	116	60-130			
Trichlorofluoromethane	41.8	1.0	ug/L	ND	104	60-130			
Vinyl chloride	30.4	0.5	ug/L	ND	76.1	50-140			
m,p-Xylenes	81.8	0.5	ug/L	ND	102	60-130			
o-Xylene	42.4	0.5	ug/L	ND	106	60-130			
Surrogate: 4-Bromofluorobenzene	*68.0*		*%*		*85.0*	*50-140*			
Surrogate: Dibromofluoromethane	*103*		*%*		*129*	*50-140*			
Surrogate: Toluene-d8	*86.6*		*%*		*108*	*50-140*			

Certificate of Analysis

Report Date: 16-Oct-2024

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

Order Date: 10-Oct-2024

Client PO: 61523

Project Description: PE6763

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.

PARACEL LABORATORIES LTD.

Paracel ID: 2441407

Paracel Order Number (Lab Use Only)

Chain Of Custody (Lab Use Only)

Client Name: Paterson Group	Project Ref: PE6763
Contact Name: Jesse Andrechuk	Quote #:
Address: 9 Auriga	PO #: 61523
Telephone: 613-226-7381	E-mail: jandrechek@patersongroup.ca

Page 1 of 1

Turnaround Time

☐ 1 day ☐ 3 day ☐ 2 day ☒ Regular

Date Required:

☒ REG 153/04 ☐ REG 406/19

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

Other Regulation

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

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

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Field Filtered	Sample Taken: Date	Sample Taken: Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)
1	MW1-GW1	GW		2		10-OCT/24			X					
2	BH3-24-GW1	↓		3		↓	↓	X	X					
3	DUP			3				X	X					
4	Trip Blank	↓		1		5 OCT 24	↓		X					
5														
6														
7														
8														
9														
10														

Comments:

Method of Delivery: Paracel Courier

Relinquished By (Sign):	Received at Depot:	Received at Lab: SS	Verified By: Jillian
Relinquished By (Print): Jesse Andrechuk	Date/Time:	Date/Time: 10 Oct 24 1411	Date/Time: 10 Oct 24 15:19
Date/Time: 10-OCT/2024	Temperature: °C	Temperature: 15.2	pH Verified: ☐ By:

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Certificate of Analysis

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

Client PO: 61725
Project: PE6763
Custody:

Report Date: 15-Nov-2024
Order Date: 11-Nov-2024

Order #: 2446099

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

Paracel ID	Client ID
2446099-01	TP1-24-G2
2446099-02	TP2-24-G2
2446099-03	TP3-24-G2
2446099-04	TP4-24-G2
2446099-05	TP5-24-G2
2446099-06	TP6-24-G2
2446099-07	TP7-24-G2

Approved By:

Dale Robertson, BSc
Laboratory Director

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
BTEX by P&T GC-MS	EPA 8260 - P&T GC-MS	12-Nov-24	12-Nov-24
Chromium, hexavalent - soil	MOE E3056 - Extraction, colourimetric	12-Nov-24	13-Nov-24
Conductivity	MOE E3138 - probe @25 °C, water ext	13-Nov-24	13-Nov-24
Mercury by CVAA	EPA 7471B - CVAA, digestion	14-Nov-24	14-Nov-24
PHC F1	CWS Tier 1 - P&T GC-FID	12-Nov-24	12-Nov-24
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	12-Nov-24	12-Nov-24
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	13-Nov-24	13-Nov-24
SAR	Calculated	13-Nov-24	13-Nov-24
Solids, %	CWS Tier 1 - Gravimetric	11-Nov-24	13-Nov-24

PARACEL LABORATORIES LTD.

Order #: 2446099

Certificate of Analysis

Report Date: 15-Nov-2024

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

Order Date: 11-Nov-2024

Client PO: 61725

Project Description: PE6763

	Client ID:	TP1-24-G2	TP2-24-G2	TP3-24-G2	TP4-24-G2	-	-
	Sample Date:	08-Nov-24 09:00	08-Nov-24 09:00	08-Nov-24 09:00	08-Nov-24 09:00		
	Sample ID:	2446099-01	2446099-02	2446099-03	2446099-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Physical Characteristics							
% Solids	0.1 % by Wt.	85.9	91.3	89.7	92.3	-	-
General Inorganics							
SAR	0.01 N/A	0.11	0.09	0.15	0.13	-	-
Conductivity	5 uS/cm	121	344	37	47	-	-
Metals							
Antimony	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Arsenic	1.0 ug/g	15.7	8.3	2.9	4.5	-	-
Barium	1.0 ug/g	78.4	79.9	104	63.0	-	-
Beryllium	0.5 ug/g	<0.5	<0.5	0.5	<0.5	-	-
Boron	5.0 ug/g	<5.0	<5.0	<5.0	<5.0	-	-
Cadmium	0.5 ug/g	<0.5	<0.5	<0.5	<0.5	-	-
Chromium (VI)	0.2 ug/g	<0.2	<0.2	0.7	<0.2	-	-
Chromium	5.0 ug/g	23.0	26.0	34.4	18.6	-	-
Cobalt	1.0 ug/g	6.2	7.3	9.0	7.0	-	-
Copper	5.0 ug/g	10.4	20.0	12.3	27.3	-	-
Lead	1.0 ug/g	10.0	24.0	10.5	30.7	-	-
Mercury	0.1 ug/g	<0.1	<0.1	<0.1	<0.1	-	-
Molybdenum	1.0 ug/g	1.0	<1.0	1.1	<1.0	-	-
Nickel	5.0 ug/g	12.4	15.3	17.3	12.9	-	-
Selenium	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Silver	0.3 ug/g	<0.3	<0.3	<0.3	<0.3	-	-
Thallium	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Uranium	1.0 ug/g	<1.0	<1.0	<1.0	<1.0	-	-
Vanadium	10.0 ug/g	31.3	38.2	55.9	34.4	-	-
Zinc	20.0 ug/g	61.7	66.9	90.1	46.7	-	-

	Client ID:	TP1-24-G2	TP2-24-G2	TP3-24-G2	TP4-24-G2	-	-
	Sample Date:	08-Nov-24 09:00	08-Nov-24 09:00	08-Nov-24 09:00	08-Nov-24 09:00		
	Sample ID:	2446099-01	2446099-02	2446099-03	2446099-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Volatiles							
Benzene	0.02 ug/g	<0.02	<0.02	<0.02	<0.02	-	-
Ethylbenzene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Toluene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
m,p-Xylenes	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
o-Xylene	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Xylenes, total	0.05 ug/g	<0.05	<0.05	<0.05	<0.05	-	-
Toluene-d8	Surrogate	112%	109%	110%	108%	-	-
Hydrocarbons							
F1 PHCs (C6-C10)	7 ug/g	<7	<7	<7	<7	-	-
F2 PHCs (C10-C16)	4 ug/g	<4	<4	<4	<4	-	-
F3 PHCs (C16-C34)	8 ug/g	<8	13	<8	<8	-	-
F4 PHCs (C34-C50)	6 ug/g	<6	<6	<6	<6	-	-

	Client ID:	TP5-24-G2	TP6-24-G2	TP7-24-G2		-	-
	Sample Date:	08-Nov-24 09:00	08-Nov-24 09:00	08-Nov-24 09:00			
	Sample ID:	2446099-05	2446099-06	2446099-07			
	Matrix:	Soil	Soil	Soil			
	MDL/Units						
Physical Characteristics							
% Solids	0.1 % by Wt.	87.5	90.8	86.1	-	-	-
General Inorganics							
SAR	0.01 N/A	0.13	0.11	-	-	-	-
Conductivity	5 uS/cm	63	262	-	-	-	-
Metals							
Antimony	1.0 ug/g	<1.0	4.5	<1.0	-	-	-
Arsenic	1.0 ug/g	7.5	14.7	11.1	-	-	-
Barium	1.0 ug/g	78.3	222	100	-	-	-
Beryllium	0.5 ug/g	0.6	<0.5	0.5	-	-	-
Boron	5.0 ug/g	5.4	<5.0	<5.0	-	-	-
Cadmium	0.5 ug/g	<0.5	0.6	<0.5	-	-	-
Chromium	5.0 ug/g	28.3	15.2	27.1	-	-	-
Chromium (VI)	0.2 ug/g	0.2	<0.2	<0.2	-	-	-
Cobalt	1.0 ug/g	10.0	15.0	7.7	-	-	-
Copper	5.0 ug/g	19.5	262	16.9	-	-	-
Lead	1.0 ug/g	15.2	247	18.2	-	-	-
Mercury	0.1 ug/g	<0.1	0.2	<0.1	-	-	-
Molybdenum	1.0 ug/g	1.4	39.6	1.4	-	-	-
Nickel	5.0 ug/g	22.2	10.4	17.7	-	-	-
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	1.5	-	-	-
Vanadium	10.0 ug/g	43.1	11.7	42.6	-	-	-
Zinc	20.0 ug/g	50.6	573	77.3	-	-	-

	Client ID:	TP5-24-G2	TP6-24-G2	TP7-24-G2		-	-
	Sample Date:	08-Nov-24 09:00	08-Nov-24 09:00	08-Nov-24 09:00			
	Sample ID:	2446099-05	2446099-06	2446099-07			
	Matrix:	Soil	Soil	Soil			
	MDL/Units						
Volatiles							
Benzene	0.02 ug/g	<0.02	<0.02	-	-	-	-
Ethylbenzene	0.05 ug/g	<0.05	<0.05	-	-	-	-
Toluene	0.05 ug/g	<0.05	<0.05	-	-	-	-
m,p-Xylenes	0.05 ug/g	<0.05	<0.05	-	-	-	-
o-Xylene	0.05 ug/g	<0.05	<0.05	-	-	-	-
Xylenes, total	0.05 ug/g	<0.05	<0.05	-	-	-	-
Toluene-d8	Surrogate	112%	109%	-	-	-	-
Hydrocarbons							
F1 PHCs (C6-C10)	7 ug/g	<7	<7	-	-	-	-
F2 PHCs (C10-C16)	4 ug/g	<4	<4	-	-	-	-
F3 PHCs (C16-C34)	8 ug/g	<8	<8	-	-	-	-
F4 PHCs (C34-C50)	6 ug/g	<6	<6	-	-	-	-

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					
Volatiles								
Benzene	ND	0.02	ug/g					
Ethylbenzene	ND	0.05	ug/g					
Toluene	ND	0.05	ug/g					
m,p-Xylenes	ND	0.05	ug/g					

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
o-Xylene	ND	0.05	ug/g					
Xylenes, total	ND	0.05	ug/g					
Surrogate: Toluene-d8	*8.64*		*%*	*108*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
SAR	0.11	0.01	N/A	0.11			0.0	30	
Conductivity	117	5	uS/cm	121			3.4	5	
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									
Arsenic	14.0	1.0	ug/g	18.7			28.6	30	
Barium	275	1.0	ug/g	338			20.4	30	
Beryllium	0.6	0.5	ug/g	0.8			27.7	30	
Boron	7.2	5.0	ug/g	11.6			NC	30	
Cadmium	1.0	0.5	ug/g	1.2			18.1	30	
Chromium (VI)	ND	0.2	ug/g	ND			NC	35	
Cobalt	7.4	1.0	ug/g	9.7			26.9	30	
Copper	120	5.0	ug/g	148			20.8	30	
Lead	228	1.0	ug/g	271			17.3	30	
Mercury	0.106	0.1	ug/g	ND			NC	30	
Molybdenum	7.4	1.0	ug/g	10.9			NC	30	
Nickel	31.1	5.0	ug/g	42.4			NC	30	
Selenium	1.2	1.0	ug/g	1.8			NC	30	
Silver	0.4	0.3	ug/g	0.5			NC	30	
Thallium	ND	1.0	ug/g	ND			NC	30	
Uranium	1.4	1.0	ug/g	1.7			20.6	30	
Vanadium	17.1	10.0	ug/g	24.9			NC	30	
Zinc	167	20.0	ug/g	212			23.7	30	
Physical Characteristics									
% Solids	93.0	0.1	% by Wt.	93.0			0.0	25	
Volatiles									
Benzene	ND	0.02	ug/g	ND			NC	50	

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Ethylbenzene	ND	0.05	ug/g	ND			NC	50	
Toluene	ND	0.05	ug/g	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g	ND			NC	50	
o-Xylene	ND	0.05	ug/g	ND			NC	50	
Surrogate: Toluene-d8	*10.7*		*%*		*113*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F1 PHCs (C6-C10)	175	7	ug/g	ND	102	85-115			
F2 PHCs (C10-C16)	99	4	ug/g	ND	106	60-140			
F3 PHCs (C16-C34)	243	8	ug/g	ND	107	60-140			
F4 PHCs (C34-C50)	139	6	ug/g	ND	96.3	60-140			
Metals									
Antimony	39.1	1.0	ug/g	2.9	72.4	70-130			
Arsenic	66.3	1.0	ug/g	7.5	118	70-130			
Barium	202	1.0	ug/g	135	134	70-130			QM-07
Beryllium	59.4	0.5	ug/g	ND	118	70-130			
Boron	62.0	5.0	ug/g	ND	115	70-130			
Cadmium	60.7	0.5	ug/g	0.5	120	70-130			
Chromium (VI)	0.1	0.2	ug/g	ND	74.5	48-112			
Chromium	110	5.0	ug/g	58.6	104	70-130			
Cobalt	64.1	1.0	ug/g	3.9	120	70-130			
Copper	114	5.0	ug/g	59.1	109	70-130			
Lead	163	1.0	ug/g	108	108	70-130			
Mercury	1.45	0.1	ug/g	ND	96.7	70-130			
Molybdenum	65.2	1.0	ug/g	4.3	122	70-130			
Nickel	72.9	5.0	ug/g	16.9	112	70-130			
Selenium	53.6	1.0	ug/g	ND	106	70-130			
Silver	52.7	0.3	ug/g	ND	105	70-130			
Thallium	58.5	1.0	ug/g	ND	117	70-130			
Uranium	61.4	1.0	ug/g	ND	121	70-130			
Vanadium	72.2	10.0	ug/g	10.0	124	70-130			
Zinc	130	20.0	ug/g	84.8	90.3	70-130			
Volatiles									
Benzene	3.08	0.02	ug/g	ND	76.9	60-130			
Ethylbenzene	4.04	0.05	ug/g	ND	101	60-130			
Toluene	3.90	0.05	ug/g	ND	97.4	60-130			
m,p-Xylenes	8.60	0.05	ug/g	ND	108	60-130			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
o-Xylene	4.28	0.05	ug/g	ND	107	60-130			
Surrogate: Toluene-d8	*8.74*		*%*		*109*	*50-140*			

Qualifier Notes:

QC Qualifiers:

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

Sample Data Revisions:

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

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

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

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

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

CCME PHC additional information:

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

- F1 range corrected for BTEX.

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

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

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

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

PARACEL LABORATORIES LTD.

Paracel ID: 2446099

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Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2446099	

Client Name: Paterson	Project Ref: PE6763	Page 1 of 1
Contact Name: Jesse Andrechek	Quote #:	Turnaround Time
Address: 9 Auriga Drive	PO #: 61725	☐ 1 day ☐ 3 day
	E-mail: jandrechek@patersongroup.ca kpanchal@patersongroup.ca	☐ 2 day ☒ Regular
Telephone: 613-226-7381		Date Required:

☒ REG 153/04 ☐ REG 406/19

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

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

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

Required Analysis: PHCs F1-F4+BTEX, VOCs, PAHs, Metals by ICP, Hg, CrVI, B (HWS), EC/SAR

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken Date	Sample Taken Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	EC/SAR
1	TP1-24-G2	S		2	Nov 8, 2024		✓			✓	✓	✓		✓
2	TP2-24-G2	↓		↓	↓		↓			↓	↓	↓		↓
3	TP3-24-G2													
4	TP4-24-G2													
5	TP5-24-G2													
6	TP6-24-G2			↓			↓			↓	↓	↓		↓
7	TP7-24-G2			1						✓	✓	✓		
8	TP2-24-G4 (on hold)			↓										
9	TP6-24-G4 (on hold)	↓		↓	↓									
10														

Comments:

Method of Delivery: Paracel Courier

Relinquished By (Sign): Kpanchal	Received By Driver/Depot:	Received at Lab: SS	Verified By: SO
Relinquished By (Print): Kuldeep Panchal	Date/Time:	Date/Time: 11 Nov 24 1620	Date/Time: Nov 11, 2024 4:36pm
Date/Time: 11/11/2024	Temperature: °C	Temperature: 14.9	pH Verified: ☐ By:

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Certificate of Analysis

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

Client PO: 62108
Project: PE6763
Custody:

Report Date: 13-Jan-2025
Order Date: 8-Jan-2025

Order #: 2502141

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

Paracel ID	Client ID
2502141-01	DUP1

Approved By:

Mark Foto, M.Sc.
Laboratory Director

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	9-Jan-25	9-Jan-25
Solids, %	CWS Tier 1 - Gravimetric	10-Jan-25	13-Jan-25

	Client ID:	DUP1	-	-	-		
	Sample Date:	08-Nov-24 09:00	-	-	-	-	-
	Sample ID:	2502141-01	-	-	-		
	Matrix:	Soil	-	-	-		
	MDL/Units						
Physical Characteristics							
% Solids	0.1 % by Wt.	92.4	-	-	-	-	-
Metals							
Antimony	1.0 ug/g	4.2	-	-	-	-	-
Arsenic	1.0 ug/g	16.2	-	-	-	-	-
Barium	1.0 ug/g	184	-	-	-	-	-
Beryllium	0.5 ug/g	<0.5	-	-	-	-	-
Boron	5.0 ug/g	<5.0	-	-	-	-	-
Cadmium	0.5 ug/g	0.6	-	-	-	-	-
Chromium	5.0 ug/g	18.5	-	-	-	-	-
Cobalt	1.0 ug/g	16.6	-	-	-	-	-
Copper	5.0 ug/g	247	-	-	-	-	-
Lead	1.0 ug/g	213	-	-	-	-	-
Molybdenum	1.0 ug/g	39.6	-	-	-	-	-
Nickel	5.0 ug/g	12.9	-	-	-	-	-
Selenium	1.0 ug/g	<1.0	-	-	-	-	-
Silver	0.3 ug/g	<0.3	-	-	-	-	-
Thallium	1.0 ug/g	<1.0	-	-	-	-	-
Uranium	1.0 ug/g	<1.0	-	-	-	-	-
Vanadium	10.0 ug/g	13.9	-	-	-	-	-
Zinc	20.0 ug/g	605	-	-	-	-	-

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Metals								
Antimony	ND	1.0	ug/g					
Arsenic	ND	1.0	ug/g					
Barium	ND	1.0	ug/g					
Beryllium	ND	0.5	ug/g					
Boron	ND	5.0	ug/g					
Cadmium	ND	0.5	ug/g					
Chromium	ND	5.0	ug/g					
Cobalt	ND	1.0	ug/g					
Copper	ND	5.0	ug/g					
Lead	ND	1.0	ug/g					
Molybdenum	ND	1.0	ug/g					
Nickel	ND	5.0	ug/g					
Selenium	ND	1.0	ug/g					
Silver	ND	0.3	ug/g					
Thallium	ND	1.0	ug/g					
Uranium	ND	1.0	ug/g					
Vanadium	ND	10.0	ug/g					
Zinc	ND	20.0	ug/g					

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Metals									
Antimony	ND	1.0	ug/g	ND			NC	30	
Arsenic	6.8	1.0	ug/g	6.9			1.6	30	
Barium	54.6	1.0	ug/g	55.5			1.7	30	
Beryllium	0.7	0.5	ug/g	0.7			13.5	30	
Boron	14.3	5.0	ug/g	17.4			19.3	30	
Cadmium	ND	0.5	ug/g	ND			NC	30	
Chromium	23.3	5.0	ug/g	23.1			0.7	30	
Cobalt	11.1	1.0	ug/g	10.6			4.8	30	
Copper	21.8	5.0	ug/g	20.8			4.9	30	
Lead	10.5	1.0	ug/g	9.9			5.8	30	
Molybdenum	2.2	1.0	ug/g	2.2			3.1	30	
Nickel	26.6	5.0	ug/g	25.4			4.7	30	
Selenium	ND	1.0	ug/g	ND			NC	30	
Silver	ND	0.3	ug/g	ND			NC	30	
Thallium	ND	1.0	ug/g	ND			NC	30	
Uranium	1.2	1.0	ug/g	1.1			2.0	30	
Vanadium	33.0	10.0	ug/g	34.1			3.4	30	
Zinc	55.4	20.0	ug/g	52.4			5.5	30	
Physical Characteristics									
% Solids	86.1	0.1	% by Wt.	86.0			0.1	25	

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Metals									
Arsenic	53.0	1.0	ug/g	2.7	101	70-130			
Barium	74.4	1.0	ug/g	22.2	104	70-130			
Beryllium	51.5	0.5	ug/g	ND	102	70-130			
Boron	52.8	5.0	ug/g	6.9	91.6	70-130			
Cadmium	50.4	0.5	ug/g	ND	101	70-130			
Chromium	61.0	5.0	ug/g	9.2	103	70-130			
Cobalt	56.7	1.0	ug/g	4.2	105	70-130			
Copper	58.4	5.0	ug/g	8.3	100	70-130			
Lead	51.2	1.0	ug/g	4.0	94.4	70-130			
Molybdenum	50.8	1.0	ug/g	ND	99.8	70-130			
Nickel	62.2	5.0	ug/g	10.2	104	70-130			
Selenium	47.1	1.0	ug/g	ND	93.8	70-130			
Silver	46.6	0.3	ug/g	ND	93.2	70-130			
Thallium	47.6	1.0	ug/g	ND	95.0	70-130			
Uranium	47.9	1.0	ug/g	ND	95.0	70-130			
Vanadium	64.1	10.0	ug/g	13.6	101	70-130			
Zinc	68.4	20.0	ug/g	21.0	94.8	70-130			

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

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

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

PARACEL LABORATORIES LTD. | T R R

Paracel ID: 2502141

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2502141	

Client Name: Paterson Group	Project Ref: PE6763
Contact Name: Jesse Andrechek	Quote #:
Address: 9 Auriga Drive, Ottawa	PO #: 62108
Telephone: 613-226-7381	E-mail: jandrechek@patersongroup.ca

Page 1 of 1

Turnaround Time

☐ 1 day ☐ 3 day
☐ 2 day ☒ Regular

Date Required:

☒ REG 153/04 ☐ REG 406/19

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

Other Regulation

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

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

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Field Filtered	Sample Taken: Date	Sample Taken: Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	EC / SAR	pH		
1	DUP1	S		1		8-Nov/24	—				✓							
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Required Analysis

Comments:

Method of Delivery: Drop Box

Relinquished By (Sign):	Received at Depot:	Received at Lab:
Relinquished By (Print): Jesse Andrechek	Date/Time:	Date/Time: Jan 8 8:00
Date/Time: 7-JAN/2025	Temperature: °C	Temperature: 5.1

Verified By:
Date/Time: Jan 8 8:18
pH Verified: ☐ By: NA

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Ottawa, ON, K1G 4J8
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www.paracellabs.com

Certificate of Analysis

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

Client PO: 61725
Project: PE6763
Custody:

Report Date: 15-Nov-2024
Order Date: 11-Nov-2024

Order #: 2446098

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

Paracel ID	Client ID
2446098-01	TCLP-8 Nov 2024

Approved By:

Mark Foto, M.Sc.
Lab Supervisor

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Flashpoint	ASTM D93 - Pensky-Martens Closed Cup	12-Nov-24	12-Nov-24
Metals, ICP-MS	TCLP EPA 6020 - Digestion - ICP-MS	13-Nov-24	13-Nov-24
pH, soil	EPA 150.1 - pH probe @ 25 °C, CaCl buffered ext.	13-Nov-24	13-Nov-24
REG 558 - Benzene	TCLP ZHE EPA 624 - P&T GC-MS	13-Nov-24	14-Nov-24
REG 558 - Cyanide	TCLP MOE E3015- Auto Colour	15-Nov-24	15-Nov-24
REG 558 - Fluoride	TCLP EPA 340.2 - ISE	13-Nov-24	13-Nov-24
REG 558 - Mercury by CVAA	TCLP EPA 7470A, CVAA	14-Nov-24	14-Nov-24
REG 558 - NO3/NO2	TCLP EPA 300.1 - IC	13-Nov-24	13-Nov-24
REG 558 - PAHs	TCLP EPA 625 - GC-MS	14-Nov-24	15-Nov-24
Solids, %	CWS Tier 1 - Gravimetric	11-Nov-24	13-Nov-24

	Client ID:	TCLP-8 Nov 2024	-	-	-	-	-
	Sample Date:	08-Nov-24 09:00	-	-	-	-	-
	Sample ID:	2446098-01	-	-	-		
	Matrix:	Soil	-	-	-		
	MDL/Units						
Physical Characteristics							
% Solids	0.1 % by Wt.	90.9	-	-	-	-	-
Flashpoint	°C	>70	-	-	-	-	-
EPA 1311 - TCLP Leachate Inorganics							
Fluoride	0.05 mg/L	<0.05	-	-	-	-	-
Nitrate as N	1 mg/L	<1	-	-	-	-	-
Nitrite as N	1 mg/L	<1	-	-	-	-	-
Nitrate + Nitrite as N	2 mg/L	<2	-	-	-	-	-
Cyanide, free	0.02 mg/L	<0.02	-	-	-	-	-
EPA 1311 - TCLP Leachate Metals							
Arsenic	0.05 mg/L	<0.05	-	-	-	-	-
Barium	0.05 mg/L	0.59	-	-	-	-	-
Boron	0.10 mg/L	<0.10	-	-	-	-	-
Cadmium	0.01 mg/L	<0.01	-	-	-	-	-
Chromium	0.05 mg/L	<0.05	-	-	-	-	-
Lead	0.05 mg/L	<0.05	-	-	-	-	-
Mercury	0.005 mg/L	<0.005	-	-	-	-	-
Selenium	0.05 mg/L	<0.05	-	-	-	-	-
Silver	0.05 mg/L	<0.05	-	-	-	-	-
Uranium	0.05 mg/L	<0.05	-	-	-	-	-
EPA 1311 - TCLP Leachate Volatiles							
Benzene	0.005 mg/L	<0.005	-	-	-	-	-
Toluene-d8	Surrogate	105%	-	-	-	-	-
EPA 1311 - TCLP Leachate Organics							
Benzo [a] pyrene	0.0001 mg/L	<0.0001	-	-	-	-	-
Terphenyl-d14	Surrogate	56.0%	-	-	-	-	-
General Inorganics							

	Client ID:	TCLP-8 Nov 2024	-	-	-		
	Sample Date:	08-Nov-24 09:00	-	-	-	-	-
	Sample ID:	2446098-01	-	-	-		
	Matrix:	Soil	-	-	-		
	MDL/Units						
General Inorganics							
pH	0.05 pH Units	7.15	-	-	-	-	-

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
EPA 1311 - TCLP Leachate Inorganics								
Fluoride	ND	0.05	mg/L					
Nitrate as N	ND	1	mg/L					
Nitrite as N	ND	1	mg/L					
Nitrate + Nitrite as N	ND	2	mg/L					
Cyanide, free	ND	0.02	mg/L					
EPA 1311 - TCLP Leachate Metals								
Arsenic	ND	0.05	mg/L					
Barium	ND	0.05	mg/L					
Boron	ND	0.10	mg/L					
Cadmium	ND	0.01	mg/L					
Chromium	ND	0.05	mg/L					
Lead	ND	0.05	mg/L					
Mercury	ND	0.005	mg/L					
Selenium	ND	0.05	mg/L					
Silver	ND	0.05	mg/L					
Uranium	ND	0.05	mg/L					
EPA 1311 - TCLP Leachate Organics								
Benzo [a] pyrene	ND	0.0001	mg/L					
Surrogate: Terphenyl-d14	*0.086*		*%*	*43.1*	*37-156*			
EPA 1311 - TCLP Leachate Volatiles								
Benzene	ND	0.005	mg/L					
Surrogate: Toluene-d8	*0.0831*		*%*	*104*	*76-118*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
EPA 1311 - TCLP Leachate Inorganics									
Fluoride	ND	0.05	mg/L	ND			NC	20	
Nitrate as N	ND	1	mg/L	ND			NC	20	
Nitrite as N	ND	1	mg/L	ND			NC	20	
Cyanide, free	ND	0.02	mg/L	ND			NC	20	
EPA 1311 - TCLP Leachate Metals									
Arsenic	ND	0.05	mg/L	ND			NC	29	
Barium	0.583	0.05	mg/L	0.590			1.1	34	
Boron	ND	0.10	mg/L	ND			NC	33	
Cadmium	ND	0.01	mg/L	ND			NC	33	
Chromium	ND	0.05	mg/L	ND			NC	32	
Lead	ND	0.05	mg/L	ND			NC	32	
Mercury	ND	0.005	mg/L	ND			NC	30	
Selenium	ND	0.05	mg/L	ND			NC	28	
Silver	ND	0.05	mg/L	ND			NC	28	
Uranium	ND	0.05	mg/L	ND			NC	27	
EPA 1311 - TCLP Leachate Volatiles									
Benzene	ND	0.005	mg/L	ND			NC	25	
Surrogate: Toluene-d8	*0.0836*		*%*		*104*	*76-118*			
General Inorganics									
pH	6.39	0.05	pH Units	6.44			0.8	2.3	
Physical Characteristics									
% Solids	93.0	0.1	% by Wt.	93.0			0.0	25	

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
EPA 1311 - TCLP Leachate Inorganics									
Fluoride	0.56	0.05	mg/L	ND	112	70-130			
Nitrate as N	10	1	mg/L	ND	104	81-112			
Nitrite as N	10	1	mg/L	ND	102	76-107			
Cyanide, free	0.029	0.02	mg/L	ND	57.4	52-148			
EPA 1311 - TCLP Leachate Metals									
Arsenic	54.8	0.05	mg/L	0.255	109	83-119			
Barium	109	0.05	mg/L	59.0	99.8	80-120			
Boron	53.9	0.10	mg/L	2.48	103	71-128			
Cadmium	49.0	0.01	mg/L	0.161	97.6	78-119			
Chromium	60.9	0.05	mg/L	1.21	119	80-124			
Lead	46.3	0.05	mg/L	0.316	92.0	77-126			
Mercury	0.0315	0.005	mg/L	ND	105	70-130			
Selenium	45.3	0.05	mg/L	0.241	90.1	75-125			
Silver	47.6	0.05	mg/L	ND	95.2	70-128			
Uranium	52.0	0.05	mg/L	ND	104	70-131			
EPA 1311 - TCLP Leachate Organics									
Benzo [a] pyrene	0.0610	0.0001	mg/L	ND	122	39-123			
Surrogate: Terphenyl-d14	*0.26*		*%*		*128*	*37-156*			
EPA 1311 - TCLP Leachate Volatiles									
Benzene	0.031	0.005	mg/L	ND	77.8	55-141			
Surrogate: Toluene-d8	*0.0883*		*%*		*110*	*76-118*			

Certificate of Analysis

Report Date: 15-Nov-2024

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

Order Date: 11-Nov-2024

Client PO: 61725

Project Description: PE6763

Qualifier Notes:

Sample Qualifiers :

Sample Data Revisions:

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

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

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

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

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

PARACEL LABORATORIES LTD. | TRU RES REL

Paracel ID: 2446098

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2446098	

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

Project Ref: PE6763
Quote #:
PO #: 61725
E-mail: jandrechek@petersongroup.ca
kpanchal@petersongroup.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)

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken Date	Sample Taken Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	Required Analysis: Metals + inorganics in leachate	PAHs in leachate	Flashpoint	pH	Benzene in leachate
1	TCLP - 8 Nov 2024	S		1	Nov 8, 2024									✓	✓	✓	✓	✓
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Comments:

Method of Delivery: Paracel Courier

Relinquished By (Sign):	Received By Driver/Depot:	Received at Lab: SS	Verified By: SS
Relinquished By (Print): Kuldeep Panchal	Date/Time:	Date/Time: 11 Nov 24 1620	Date/Time: Nov 11, 2024 4:30 pm
Date/Time: 11/11/2024	Temperature: °C	Temperature: 14.9	pH Verified: ☐ By: