

## **Phase II – Environmental Site Assessment**

1146 Snow Street  
Ottawa, Ontario

Prepared for 1146 Snow Street Inc.

Report: PE6763-2  
January 28, 2025



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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<sub>1</sub>-F<sub>4</sub>), VOCs, metals, Hg<sup>+</sup>, 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<sub>1</sub>-F<sub>4</sub>), metals, Hg<sup>+</sup>, 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<sub>1</sub>-F<sub>4</sub>), 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<sub>1</sub>-F<sub>4</sub>), metals, Hg<sup>+</sup>, 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<sub>1</sub>-F<sub>4</sub>);
- ☐ Metals
- ☐ As, Se, Sb;
- ☐ Mercury (Hg);
- ☐ Cr(VI);
- ☐ PAHs.

#### Groundwater

- ☐ Benzene, Toluene, Ethylbenzene, Xylenes (BTEX);
- ☐ Volatile Organic Compounds (VOCs);
- ☐ Petroleum Hydrocarbons (PHCs F<sub>1</sub>-F<sub>4</sub>);
- ☐ 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:

#### Soil

- ☐ Benzene, Toluene, Ethylbenzene, Xylenes (BTEX);
- ☐ Volatile Organic Compounds (VOCs);
- ☐ Petroleum Hydrocarbons (PHCs F<sub>1</sub>-F<sub>4</sub>);
- ☐ Metals
- ☐ As, Se, Sb;
- ☐ Mercury (Hg);
- ☐ Cr(VI);
- ☐ PAHs.

### Groundwater

- ☐ Benzene, Toluene, Ethylbenzene, Xylenes (BTEX);
- ☐ Volatile Organic Compounds (VOCs);
- ☐ Petroleum Hydrocarbons (PHCs F<sub>1</sub>-F<sub>4</sub>);
- ☐ 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.

| <b>Table 1<br/>Monitoring Well Construction Details</b> |                                         |                            |                                  |                          |                               |
|---------------------------------------------------------|-----------------------------------------|----------------------------|----------------------------------|--------------------------|-------------------------------|
| <b>Well ID</b>                                          | <b>Ground Surface Elevation (m ASL)</b> | <b>Total Depth (m BGS)</b> | <b>Screened Interval (m BGS)</b> | <b>Sand Pack (m BGS)</b> | <b>Bentonite Seal (m BGS)</b> |
| 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.

| <b>Table 2<br/>Measurement of Stabilized Water Quality Parameters</b> |                         |                          |           |                            |
|-----------------------------------------------------------------------|-------------------------|--------------------------|-----------|----------------------------|
| <b>Test Hole ID</b>                                                   | <b>Temperature (°C)</b> | <b>Conductivity (µS)</b> | <b>pH</b> | <b>Date of Measurement</b> |
| 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.

| <b>Table 3<br/>Groundwater Level Measurements</b> |                                        |                              |                                     |                            |
|---------------------------------------------------|----------------------------------------|------------------------------|-------------------------------------|----------------------------|
| <b>Test Hole ID</b>                               | <b>Ground Surface Elevation (masl)</b> | <b>Water Level Depth (m)</b> | <b>Water Level Elevation (masl)</b> | <b>Date of Measurement</b> |
| 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<sub>1</sub>-F<sub>4</sub>), VOCs, metals, Hg<sup>+</sup>, 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<sub>1</sub>-F<sub>4</sub>), VOCs, metals, cyanide, Hg<sup>+</sup>, 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<sub>1</sub>-F<sub>4</sub>), 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<sub>1</sub>-F<sub>4</sub>), 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:

| <b>Table 4<br/>Areas of Potential Environmental Concern</b>        |                                                                                  |                                                                                                                                       |                                              |                                                            |                                                                       |
|--------------------------------------------------------------------|----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|------------------------------------------------------------|-----------------------------------------------------------------------|
| <b>Area of potential environmental concern</b>                     | <b>Location of area of potential environmental concern on phase one property</b> | <b>Potentially contaminating activity</b>                                                                                             | <b>Location of PCA (on-site or off-site)</b> | <b>Contaminants of potential concern</b>                   | <b>Media potentially impacted (Groundwater, soil and/or sediment)</b> |
| <b>APEC 1</b><br>(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<br>PHCs<br>Metals<br>As, Sb, Se<br>CrVI<br>Hg         | Soil and Groundwater                                                  |
| <b>APEC 2</b><br>(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<br>PHCs<br>PAHs<br>Metals<br>As, Se, Sb<br>CrVI<br>Hg | Soil                                                                  |
| <b>APEC 3</b><br>(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<br>SAR                                                  | Soil                                                                  |
| <b>APEC 4</b><br>(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<br>VOCs<br>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<sub>1</sub>-F<sub>4</sub>);
- ☐ Metals
- ☐ As, Se, Sb;
- ☐ Mercury (Hg);
- ☐ Cr(VI);
- ☐ PAHs.

### Groundwater

- ☐ Benzene, Toluene, Ethylbenzene, Xylenes (BTEX);
- ☐ Volatile Organic Compounds (VOCs);
- ☐ Petroleum Hydrocarbons (PHCs F<sub>1</sub>-F<sub>4</sub>);
- ☐ 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<sub>1</sub>-F<sub>4</sub>), VOCs, metals, Hg<sup>+</sup>, 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<sub>1</sub>-F<sub>4</sub>), metals, Hg<sup>+</sup>, 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<sub>1</sub>-F<sub>4</sub>), 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<sub>1</sub>-F<sub>4</sub>), metals, Hg<sup>+</sup>, 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<sub>ESA</sub>



Adrian Menyhart, P.Eng., QP<sub>ESA</sub>



### **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**

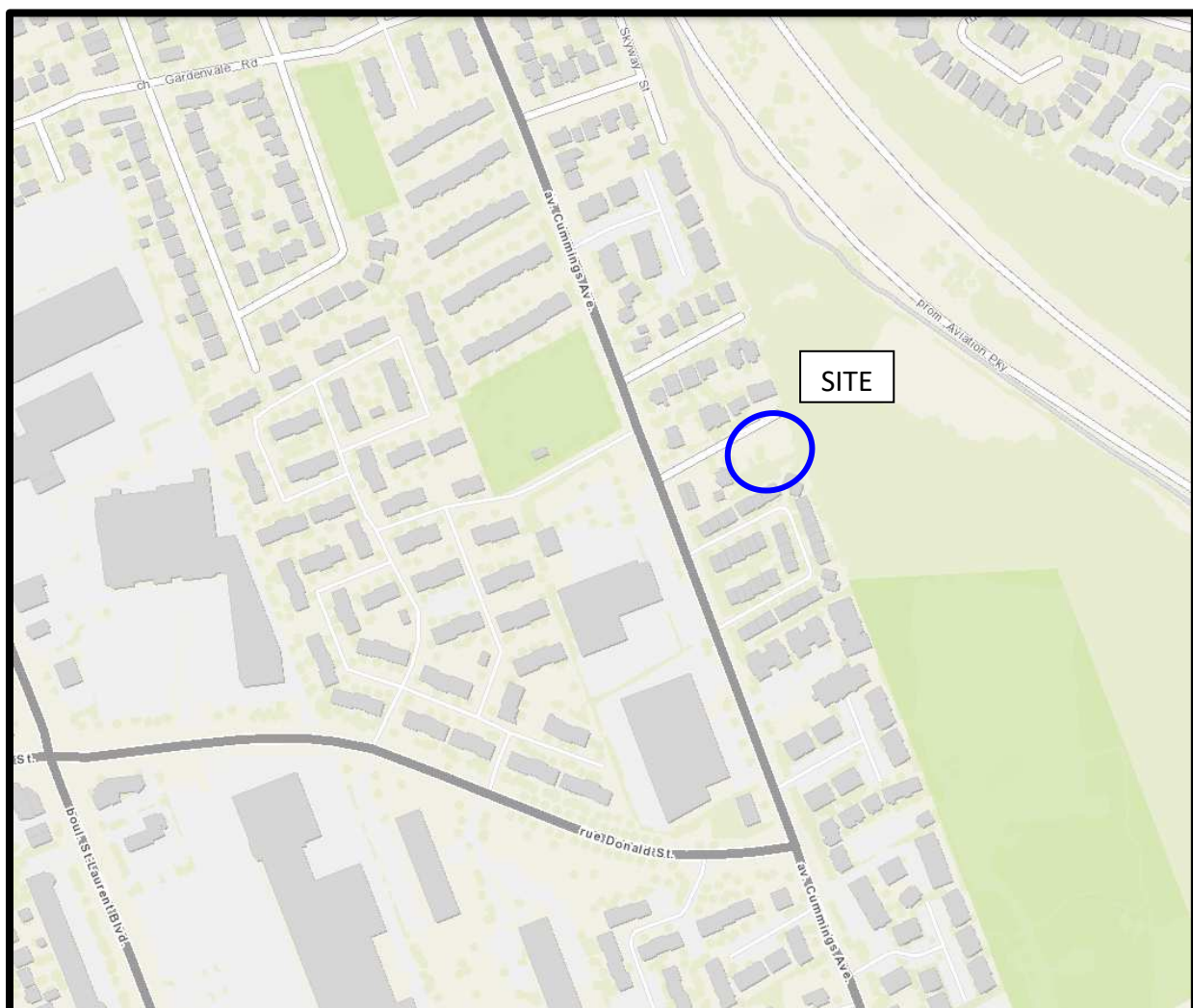
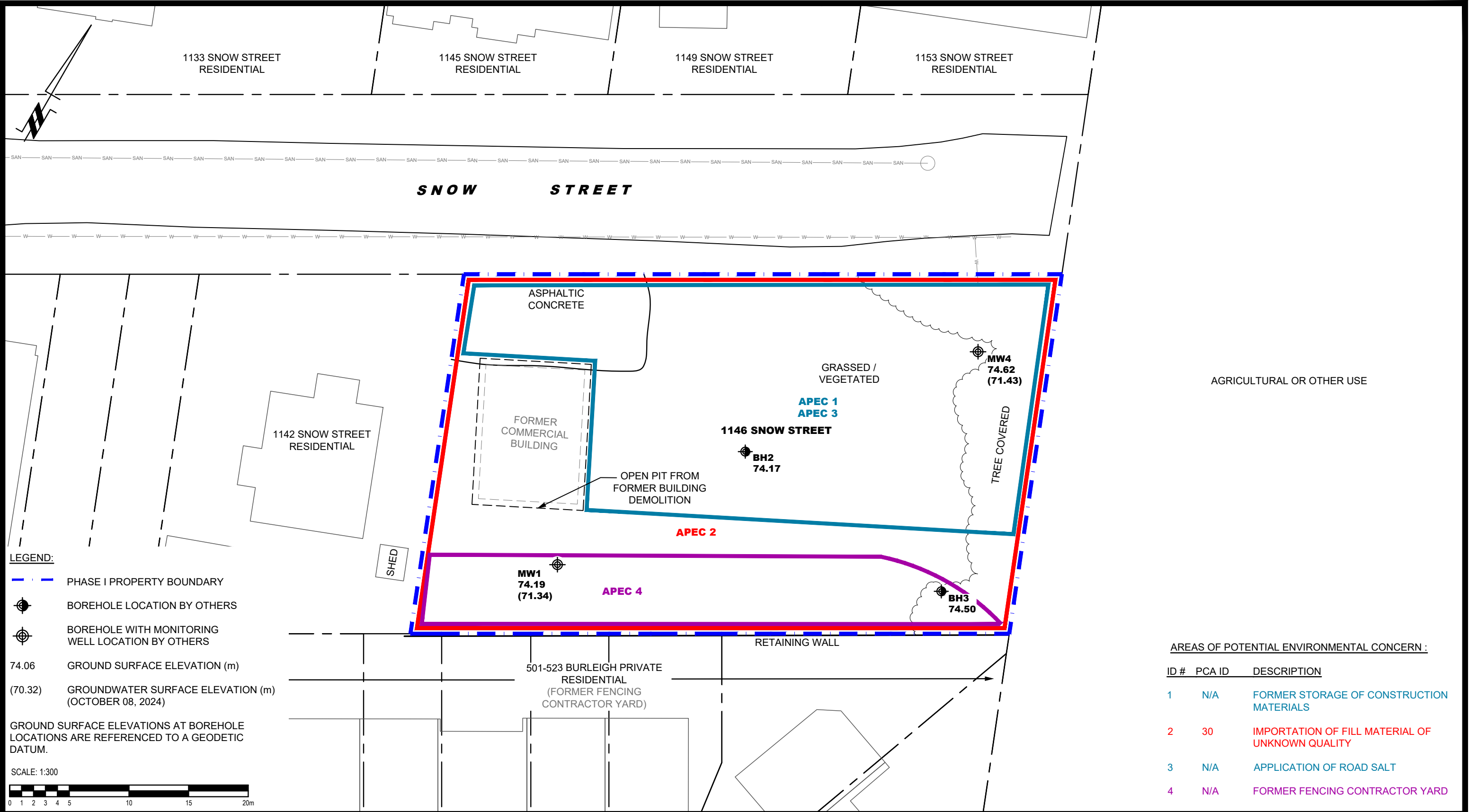


Figure 1  
KEY PLAN



LEGEND:

PHASE I PROPERTY BOUNDARY

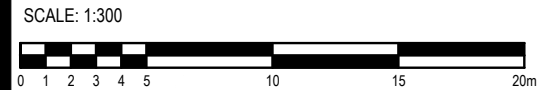
BOREHOLE LOCATION BY OTHERS

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.



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

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| NO. | REVISIONS | DATE | INITIAL |
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PHASE I - ENVIRONMENTAL SITE ASSESSMENT  
1146 SNOW STREET

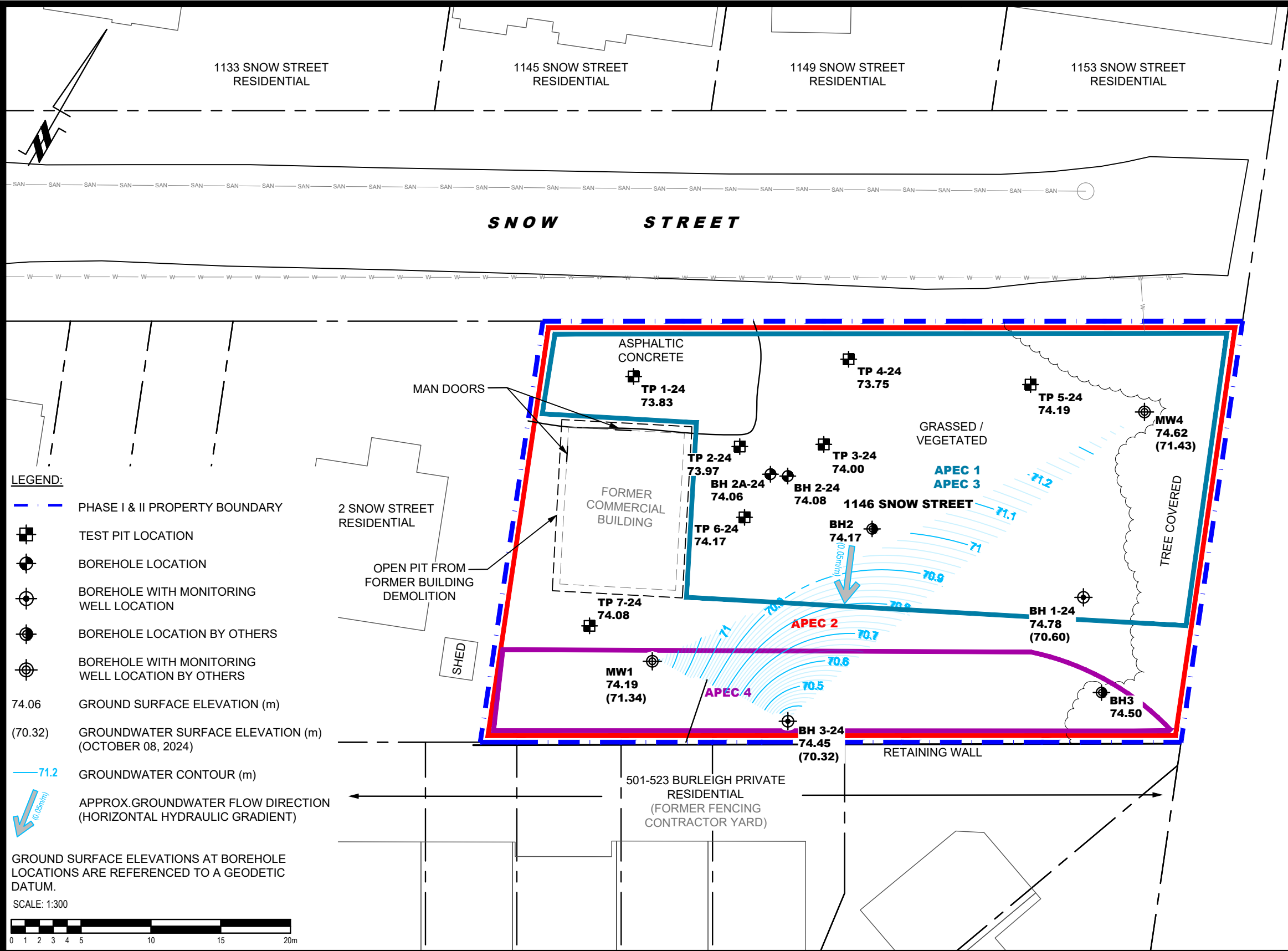
OTTAWA,  
Title:

ONTARIO

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.: |          |





AGRICULTURAL OR OTHER USE

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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1146 SNOW STREET INC.  
PHASE II - ENVIRONMENTAL SITE ASSESSMENT  
1146 SNOW STREET

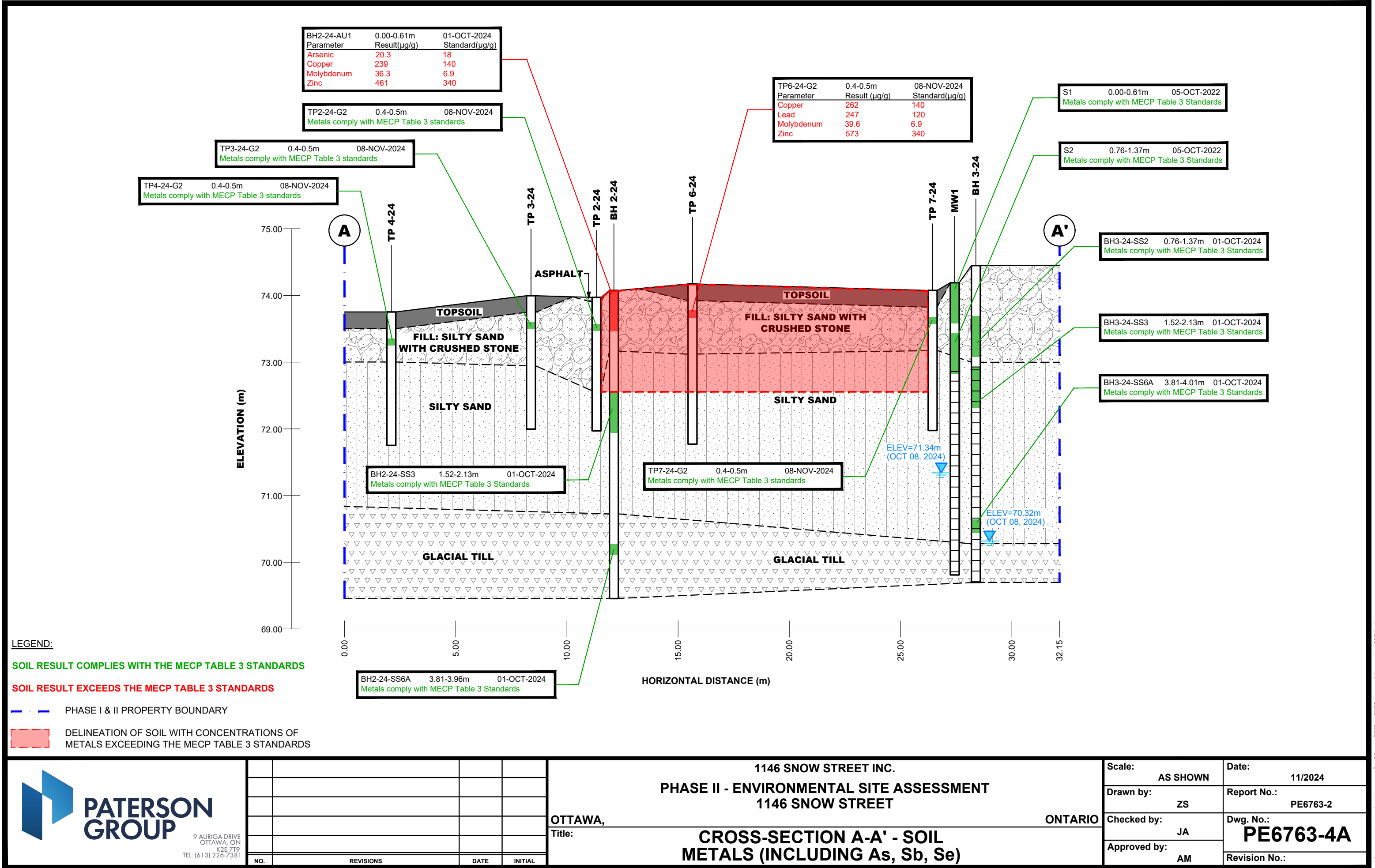
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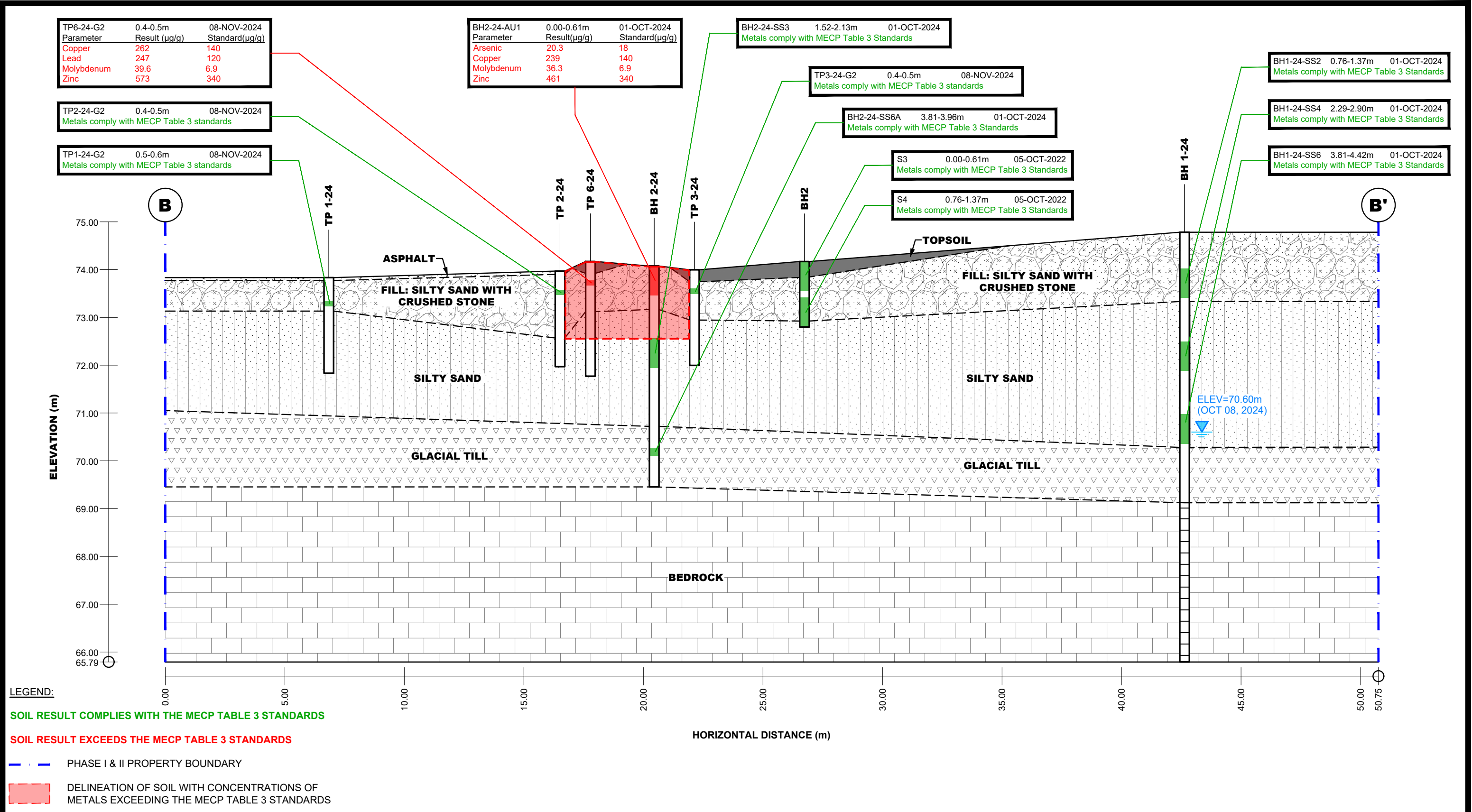
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TEST HOLE LOCATION PLAN

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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PHASE II - ENVIRONMENTAL SITE ASSESSMENT  
1146 SNOW STREET

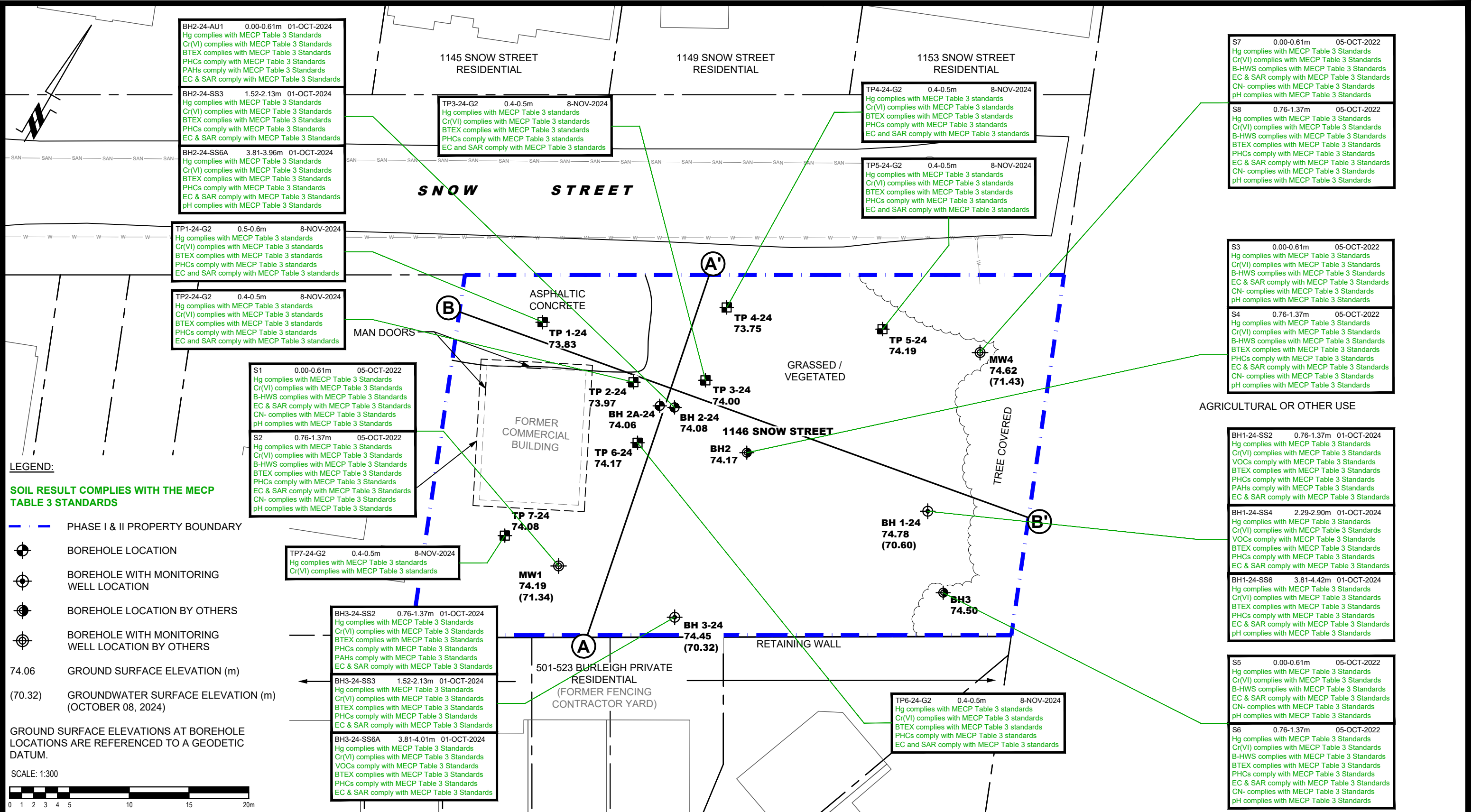
OTTAWA,  
Title:

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

Scale: AS SHOWN  
Drawn by: ZS  
Checked by: JA  
Approved by: AM

Date: 11/2024  
Report No.: PE6763-2  
Dwg. No.: **PE6763-4B**  
Revision No.:



**LEGEND:**

**SOIL 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

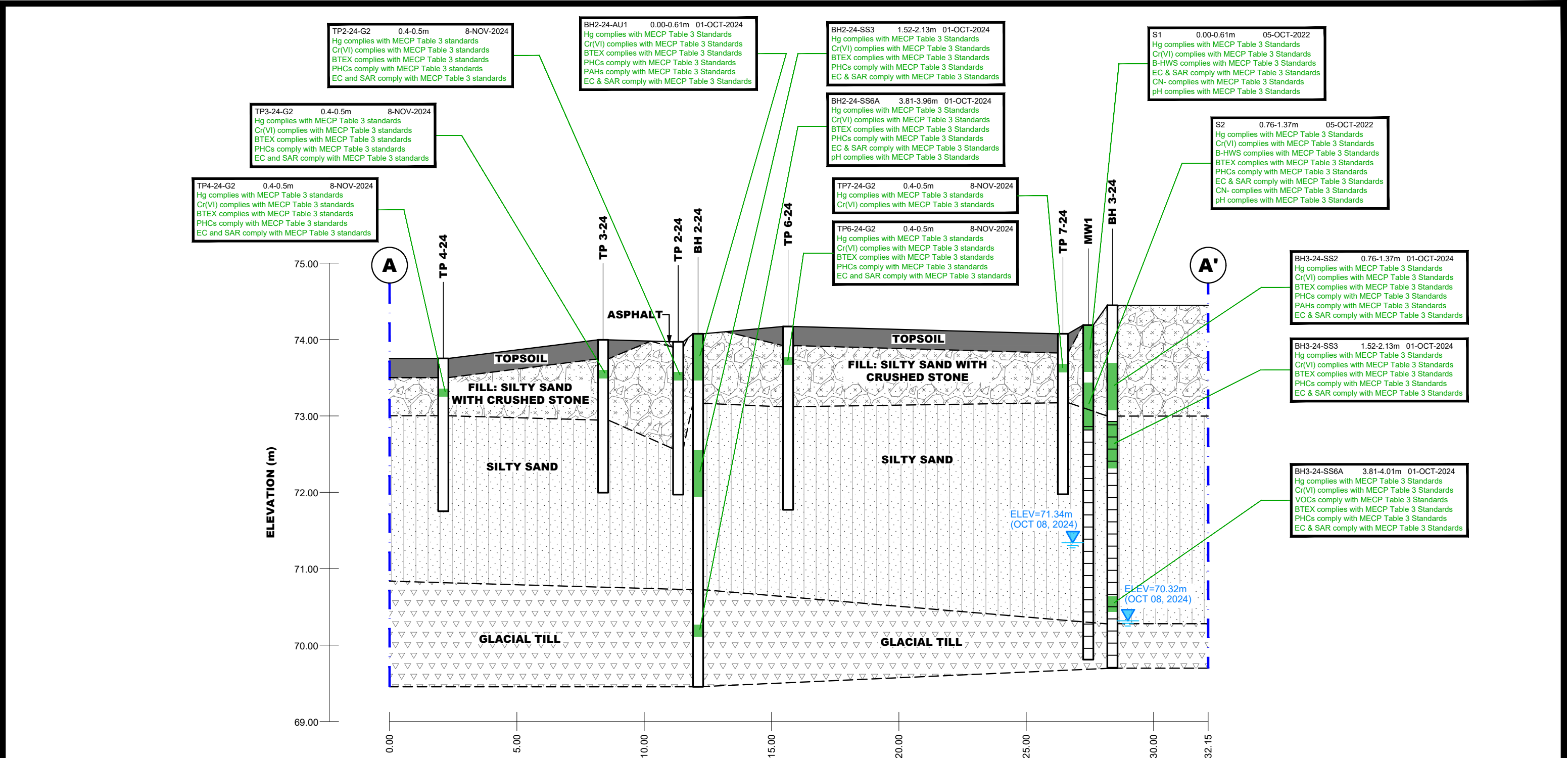
74.06 GROUND SURFACE ELEVATION (m)

(70.32) GROUNDWATER SURFACE ELEVATION (m) (OCTOBER 08, 2024)

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

SCALE: 1:300

|                                                                              |           |      |         |                                                                                                |  |  |  |                    |                         |
|------------------------------------------------------------------------------|-----------|------|---------|------------------------------------------------------------------------------------------------|--|--|--|--------------------|-------------------------|
| <div>9 AURIGA DRIVE<br/>OTTAWA, ON<br/>K2E 7T9<br/>TEL: (613) 226-7381</div> |           |      |         | 1146 SNOW STREET INC.<br>PHASE II - ENVIRONMENTAL SITE ASSESSMENT<br>1146 SNOW STREET          |  |  |  | Scale:<br>1:300    | Date:<br>11/2024        |
|                                                                              |           |      |         | OTTAWA,<br>Title:                                                                              |  |  |  | Drawn by:<br>YA    | Report No.:<br>PE6763-2 |
|                                                                              |           |      |         | ANALYTICAL TESTING PLANS - SOIL<br>Hg, Cr(VI), B-HWS, VOCs, BTEX, PHCs, PAHs, EC, SAR, CN-, pH |  |  |  | Checked by:<br>JA  | Dwg. No.:<br>PE6763-5   |
|                                                                              |           |      |         |                                                                                                |  |  |  | Approved by:<br>AM | Revision No.:           |
| NO.                                                                          | REVISIONS | DATE | INITIAL |                                                                                                |  |  |  |                    |                         |



LEGEND:

SOIL RESULT COMPLIES WITH THE MECP TABLE 3 STANDARDS

— — — PHASE I & II PROPERTY BOUNDARY



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

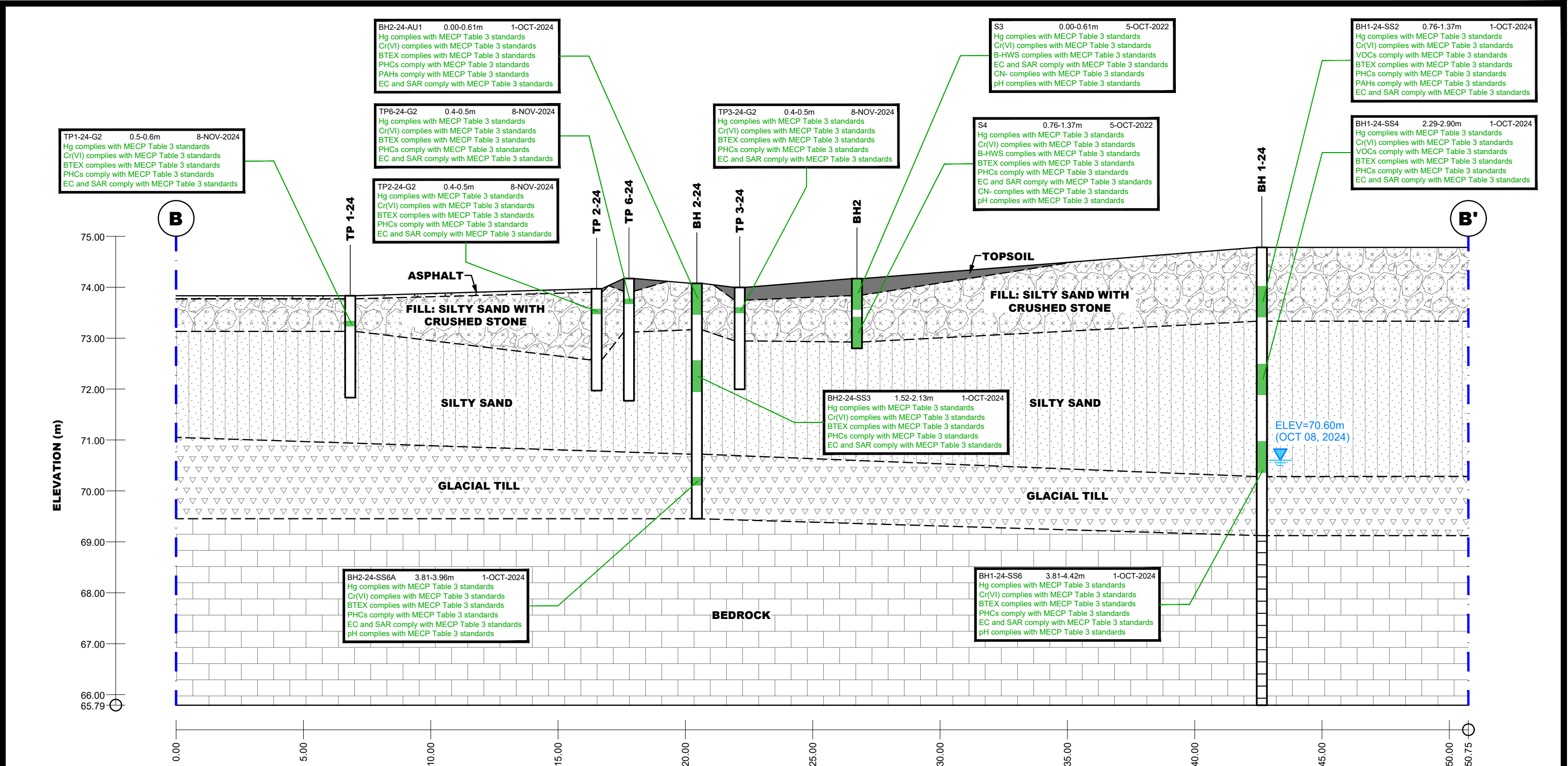
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1146 SNOW STREET INC.  
PHASE II - ENVIRONMENTAL SITE ASSESSMENT  
1146 SNOW STREET

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

ONTARIO

|              |          |               |           |
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| 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.: |           |



LEGEND:

SOIL RESULT COMPLIES WITH THE MECP TABLE 3 STANDARDS

PHASE I & II PROPERTY BOUNDARY



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1146 SNOW STREET INC.

PHASE II - ENVIRONMENTAL SITE ASSESSMENT

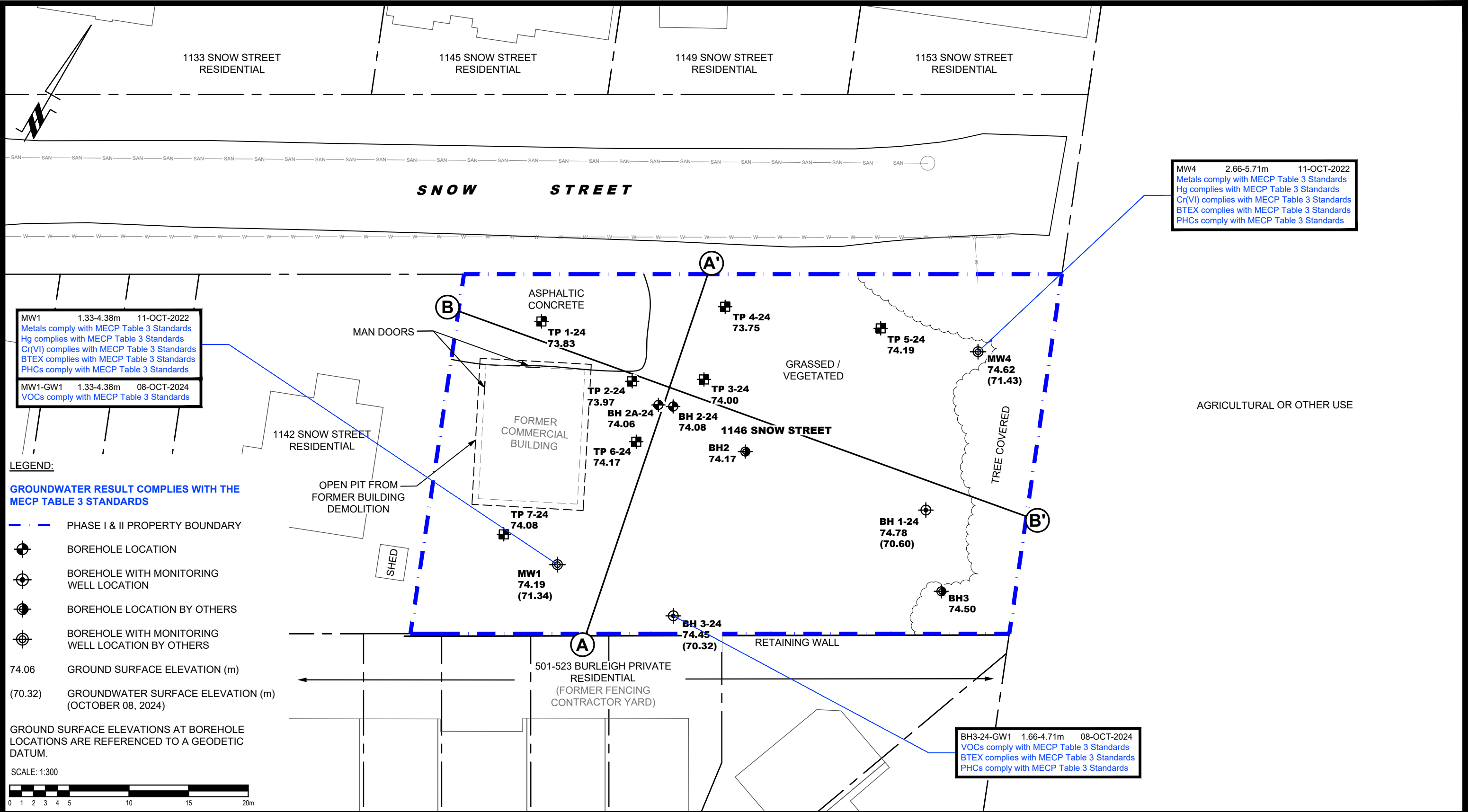
1146 SNOW STREET

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.:        |





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OTTAWA,  
Title:

1146 SNOW STREET INC.  
PHASE II - ENVIRONMENTAL SITE ASSESSMENT  
1146 SNOW STREET  
ONTARIO

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

|              |       |               |          |
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| 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.: |          |

# **APPENDIX 1**

**SAMPLING AND ANALYSIS PLAN**

**SOIL PROFILE AND TEST DATA SHEETS**

**SYMBOLS AND TERMS**

**LABORATORY CERTIFICATES OF ANALYSIS**

# **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)
- ☐ RKL 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<sub>1</sub>, a soil core from each soil sample, which may be analyzed, must be taken and placed in the laboratory-provided methanol vial.
- ☐ Note all and any odours or discolouration of samples.
- ☐ Split spoon samplers must be washed between samples.
- ☐ If obvious contamination is encountered, continue sampling until vertical extent of contamination is delineated.
- ☐ As a general rule, environmental boreholes should be deep enough to intercept the groundwater table (unless this is impossible/impractical - call project manager to discuss).
- ☐ If at all possible, soil samples should be submitted to a preliminary screening procedure on site, either using a RKI Eagle, PID, etc. depending on type of suspected contamination.

## **Spoon Washing Procedure**

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

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

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

### **Screening Procedure**

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

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

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

## 3.2 Monitoring Well Installation Procedure

### Equipment

- ☐ 5' x 2" threaded sections of Schedule 40 PVC slotted well screen (5' x 1 1/4" if installing in cored hole in bedrock)
- ☐ 5' x 2" threaded sections of Schedule 40 PVC riser pipe (5' x 1 1/4" if installing in cored hole in bedrock)
- ☐ Threaded end-cap
- ☐ Slip-cap or J-plug
- ☐ Asphalt cold patch or concrete
- ☐ Silica Sand
- ☐ Bentonite chips (Holeplug)
- ☐ Steel flushmount casing

### Procedure

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

### 3.3 Monitoring Well Sampling Procedure

#### Equipment

- ☐ Water level metre or interface probe on hydrocarbon/LNAPL sites
- ☐ Spray bottles containing water and methanol to clean water level tape or interface probe
- ☐ Peristaltic pump
- ☐ Polyethylene tubing for peristaltic pump
- ☐ Flexible tubing for peristaltic pump
- ☐ Latex or nitrile gloves (depending on suspected contaminant)
- ☐ Allen keys and/or 9/16" socket wrench to remove well caps
- ☐ Graduated bucket with volume measurements
- ☐ pH/Temperature/Conductivity combo pen
- ☐ Laboratory-supplied sample bottles

#### Sampling Procedure

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

## 4.0 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

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

- ☐ All non-dedicated sampling equipment (split spoons) will be decontaminated according to the SOPs listed above.
- ☐ All groundwater sampling equipment is dedicated (polyethylene and flexible peristaltic tubing is replaced for each well).
- ☐ Where groundwater samples are to be analyzed for VOCs, one laboratory-provided trip blank will be submitted for analysis with every laboratory submission.
- ☐ Approximately one (1) field duplicate will be submitted for every ten (10) samples submitted for laboratory analysis. A minimum of one (1) field duplicate per project will be submitted. Field duplicates will be submitted for soil and groundwater samples
- ☐ Where combo pens are used to measure field chemistry, they will be calibrated on an approximately monthly basis, according to frequency of use.

## 5.0 DATA QUALITY OBJECTIVES

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

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

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

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

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

may be calculated using a concentration equal to one half the laboratory detection limit.

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

These considerations are discussed in the body of the report.

## **6.0 PHYSICAL IMPEDIMENTS**

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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## 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)
- ☐ RKL 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.

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## 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.

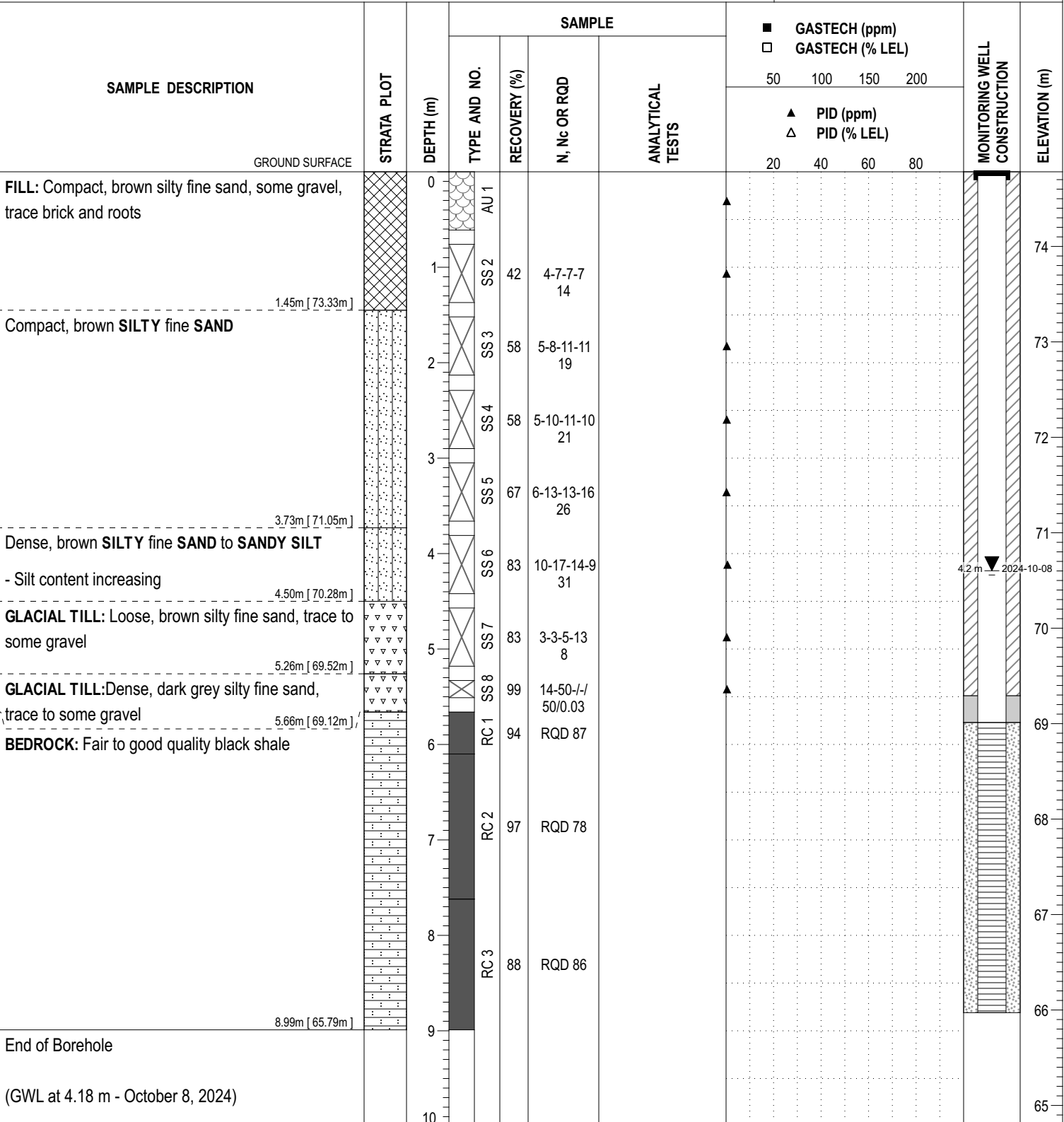
**COORD. SYS.:** MTM ZONE 9      **EASTING:** 372640.75      **NORTHING:** 5032705.81      **ELEVATION:** 74.78

**PROJECT:** Proposed Residential Building

**FILE NO. :** PE6763

**BORINGS BY:** CME-55 Low Clearance Drill

**REMARKS:**
**DATE:** October 01, 2024

**HOLE NO. :** BH 1-24


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

**PROJECT:** Proposed Residential Building

**FILE NO. :** PE6763

**BORINGS BY:** CME-55 Low Clearance Drill

**DATE:** October 01, 2024

**HOLE NO. :** BH 2-24

**REMARKS:**

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

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

**PROJECT:** Proposed Residential Building

**FILE NO. :** PE6763

**BORINGS BY:** CME-55 Low Clearance Drill

**REMARKS:**
**DATE:** October 01, 2024

**HOLE NO. :** BH 2A-24

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

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

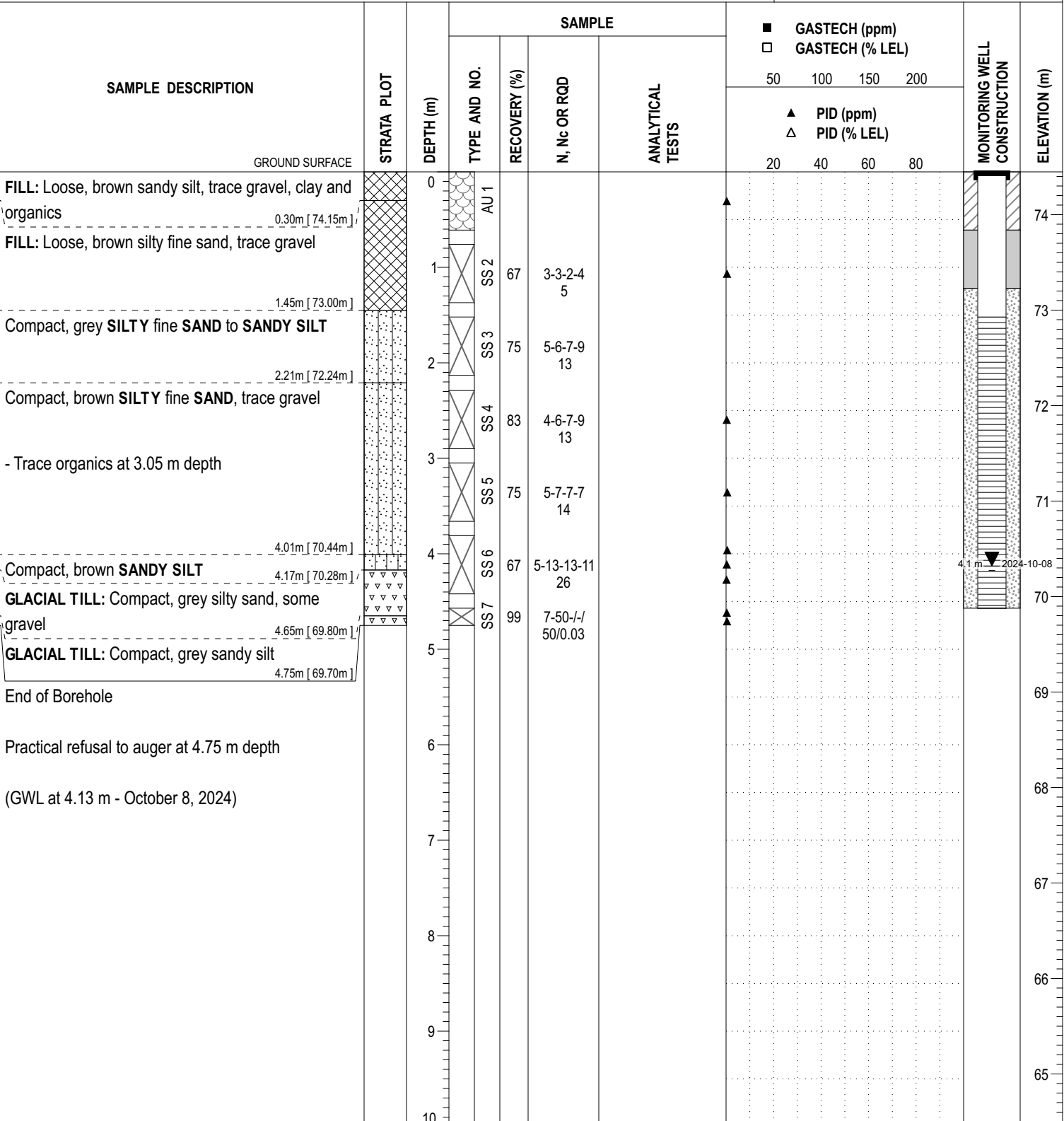
**PROJECT:** Proposed Residential Building

**FILE NO. :** PE6763

**BORINGS BY:** CME-55 Low Clearance Drill

**DATE:** October 01, 2024

**HOLE NO. :** BH 3-24

**REMARKS:**


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

**PROJECT:** Proposed Residential Building

**FILE NO. :** PE6763

**BORINGS BY:** Backhoe

**REMARKS:**
**DATE:** November 08, 2024

**HOLE NO. :** TP 1-24

| SAMPLE DESCRIPTION                              | STRATA PLOT | DEPTH (m)        | SAMPLE       |              |              |                     | <div> <div> <div>■</div> <div> GASTECH (ppm)<br/> GASTECH (% LEL) </div> </div> <div> <div>▲</div> <div> PID (ppm)<br/> PID (% LEL) </div> </div> </div> |     |     |     | PIEZOMETER<br>CONSTRUCTION | ELEVATION (m) |
|-------------------------------------------------|-------------|------------------|--------------|--------------|--------------|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|----------------------------|---------------|
|                                                 |             |                  | TYPE AND NO. | RECOVERY (%) | N, Nc OR RQD | ANALYTICAL<br>TESTS | 50                                                                                                                                                       | 100 | 150 | 200 |                            |               |
|                                                 |             |                  |              |              |              |                     | 20                                                                                                                                                       | 40  | 60  | 80  |                            |               |
| GROUND SURFACE                                  |             | 0                |              |              |              |                     |                                                                                                                                                          |     |     |     |                            |               |
| ASPHALT                                         |             | 0.06m [ 73.77m ] | G 1          |              |              |                     |                                                                                                                                                          |     |     |     |                            |               |
| FILL: Crushed stone                             |             | 0.40m [ 73.43m ] | G 2          |              |              |                     |                                                                                                                                                          |     |     |     |                            |               |
| FILL: Brown silty sand, trace cobbles and roots |             | 0.70m [ 73.13m ] | G 3          |              |              |                     |                                                                                                                                                          |     |     |     |                            | 73            |
| Brown SILTY SAND, trace cobbles                 |             | 1.10m [ 72.73m ] | G 4          |              |              |                     |                                                                                                                                                          |     |     |     |                            |               |
| SILTY SAND, with cobbles                        |             | 2.00m [ 71.83m ] | G 5          |              |              |                     |                                                                                                                                                          |     |     |     |                            | 72            |
| End of Test Pit                                 |             |                  |              |              |              |                     |                                                                                                                                                          |     |     |     |                            | 71            |
|                                                 |             | 3                |              |              |              |                     |                                                                                                                                                          |     |     |     |                            | 70            |
|                                                 |             | 4                |              |              |              |                     |                                                                                                                                                          |     |     |     |                            | 69            |
|                                                 |             | 5                |              |              |              |                     |                                                                                                                                                          |     |     |     |                            |               |

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

**PROJECT:** Proposed Residential Building

**FILE NO. :** PE6763

**BORINGS BY:** Backhoe

**REMARKS:**
**DATE:** November 08, 2024

**HOLE NO. :** TP 2-24

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

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

**PROJECT:** Proposed Residential Building      **FILE NO. :** PE6763

**BORINGS BY:** Backhoe      **HOLE NO. :** TP 3-24

**REMARKS:**      **DATE:** November 08, 2024

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

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## Phase II Environmental Site Assessment

1146 Snow Street, Ottawa, Ontario

**ELEVATION: 73.75**

**FILE NO. : PE6763**

HOLE NO.: TP 4-24

**DATE:** November 08, 2024

\\p\AutoCAD Drawings\Test Hole Data Files\PE67xx\PE6763\data.sqlite 2024-11-18, 16:19 Paterson\_Template CE

PAGE: 1 / 1

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

PROJECT: Proposed Residential Building      FILE NO. : **PE6763**

BORINGS BY: Backhoe      HOLE NO. : **TP 5-24**

REMARKS:      DATE: November 08, 2024

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

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

**PROJECT:** Proposed Residential Building

**FILE NO. :** PE6763

**BORINGS BY:** Backhoe

**REMARKS:**
**DATE:** November 08, 2024

**HOLE NO. :** TP 6-24

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

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

**PROJECT:** Proposed Residential Building      **FILE NO. :** PE6763

**BORINGS BY:** Backhoe      **HOLE NO. :** TP 7-24

**REMARKS:**      **DATE:** November 08, 2024

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

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# 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<br>These grain size descriptions are not used below 0.075 mm grain size |
| D10 | - | Grain size at which 10% of the soil is finer (effective grain size)                                                                             |
| D60 | - | Grain size at which 60% of the soil is finer                                                                                                    |
| Cc  | - | Concavity coefficient = $(D_{30})^2 / (D_{10} \times D_{60})$                                                                                   |
| Cu  | - | Uniformity coefficient = $D_{60} / D_{10}$                                                                                                      |

Cc and Cu are used to assess the grading of sands and gravels:

Well-graded gravels have:  $1 < Cc < 3$  and  $Cu > 4$

Well-graded sands have:  $1 < Cc < 3$  and  $Cu > 6$

Sands and gravels not meeting the above requirements are poorly-graded or uniformly-graded.

Cc and Cu are not applicable for the description of soils with more than 10% silt and clay  
(more than 10% finer than 0.075 mm or the #200 sieve)

### CONSOLIDATION TEST

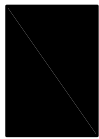
|            |   |                                                                |
|------------|---|----------------------------------------------------------------|
| $p'_o$     | - | Present effective overburden pressure at sample depth          |
| $p'_c$     | - | Preconsolidation pressure of (maximum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

### PERMEABILITY TEST

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

## SYMBOLS AND TERMS (continued)

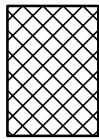
### STRATA PLOT



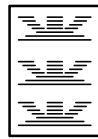
Topsoil



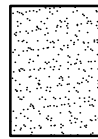
Asphalt



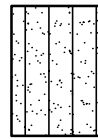
Fill



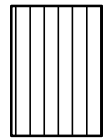
Peat



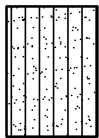
Sand



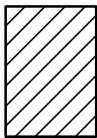
Silty Sand



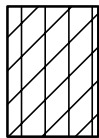
Silt



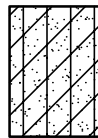
Sandy Silt



Clay



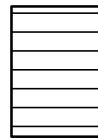
Silty Clay



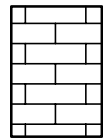
Clayey Silty Sand



Glacial Till



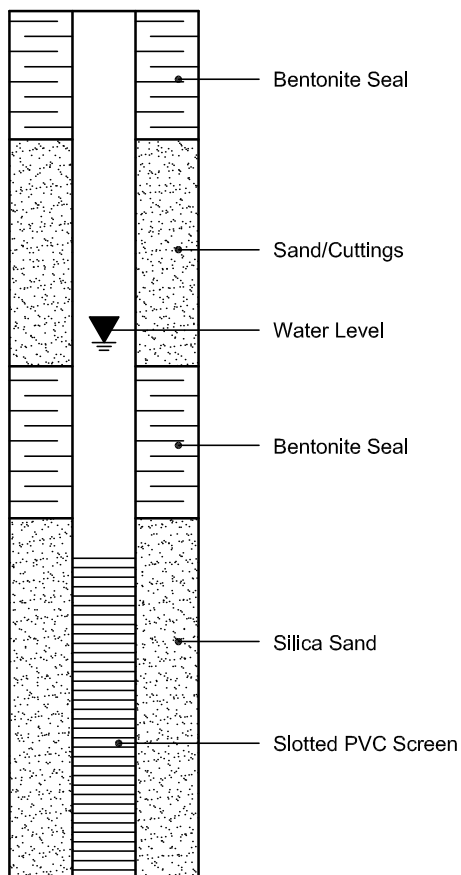
Shale



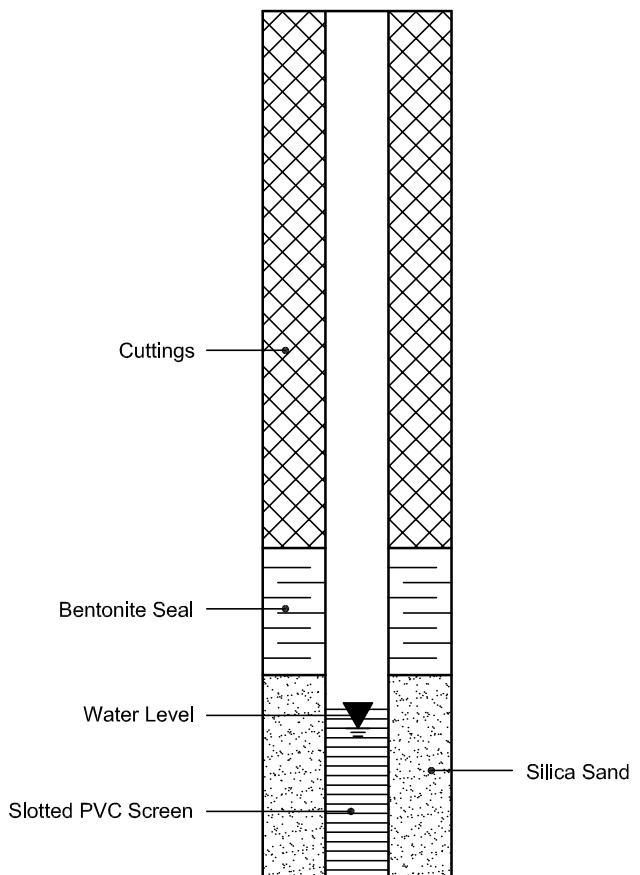
Bedrock

### MONITORING WELL AND PIEZOMETER CONSTRUCTION

#### MONITORING WELL CONSTRUCTION



#### PIEZOMETER CONSTRUCTION



| 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 <sup>VI</sup> | B-HWS | CN- | EC, SAR | pH |
| S1<br>TZO206                           | 0.00-0.61           | 5-Oct-2024    | Assess fill material of unknown quality (APEC 2), and application of road salt (APEC 3)                                                                                                                                                         | -                        |                           |      |      |      | ✓      | ✓                    | ✓     | ✓   | ✓       | ✓  |
| S2<br>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<br>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<br>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<br>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<br>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<br>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<br>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<br>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<br>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<br>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<br>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<br>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<br>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<br>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<br>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<br>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)<br>2440373-10 | 1.52-2.13           | 1-Oct-2024    | Laboratory QA/QC                                                                                                                                                                                                                                | 0.2                      | ✓                         | ✓    |      |      | ✓      | ✓                    |       |     |         |    |
| TP1-24-G2<br>2446099-01                | 0.5-0.6             | 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<br>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<br>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<br>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<br>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<br>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<br>2446099-07                | 0.4-0.5             | 8-Nov-2024    | Horizontal delineation of metals exceedance                                                                                                                                                                                                     | 0.1                      |                           |      |      |      | ✓      | ✓                    |       |     |         |    |
| DUP1 (Dup of TP6-24-G2)<br>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 <sup>VI</sup> |
| MW1<br>TZO123                         | 1.33 - 4.38         | 11-Oct-2022   | Assess adjacent former fencing contractor yard (APEC 4)          | ✓                         | ✓    |      | ✓      | ✓  | ✓                |
| MW4<br>TZO124                         | 2.66 - 5.71         | 11-Oct-2022   | Assess former on-site storage of construction materials (APEC 1) | ✓                         | ✓    |      | ✓      | ✓  | ✓                |
| MW1-GW1<br>2441407-01                 | 1.33 - 4.38         | 8-Oct-2024    | Assess adjacent former fencing contractor yard (APEC 4)          |                           |      | ✓    |        |    |                  |
| BH3-24-GW1<br>2441407-02              | 1.66 - 4.71         | 8-Oct-2024    | Assess adjacent former fencing contractor yard (APEC 4)          | ✓                         | ✓    | ✓    |        |    |                  |
| DUP (Dup of BH3-24-GW1)<br>2441407-03 | 1.66 - 4.71         | 8-Oct-2024    | Laboratory QA/QC                                                 | ✓                         | ✓    | ✓    |        |    |                  |

| Parameter                               | Units    | Regulation                             | S1<br>T20206 | S2<br>T20207 | S3<br>T20208 | S4<br>T20209 | S5<br>T20210 | S6<br>T20211 | S7<br>T20212 | S8<br>T20213 | BH1-24-552<br>2440373-01 | BH1-24-554<br>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               |
| <b>Physical Characteristics</b>         |          |                                        |              |              |              |              |              |              |              |              |                          |                          |
| % Solids                                | % by Wt. |                                        | 87.0         | 82.0         | 90.7         | 92.3         | 90.4         | 88.0         | 91.2         | 83.0         | 90.5                     | 95                       |
| <b>General Inorganics</b>               |          |                                        |              |              |              |              |              |              |              |              |                          |                          |
| SAK                                     | 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           | 68           | 170          | 68           | 89           | 35                       | 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                      |
| <b>Metals</b>                           |          |                                        |              |              |              |              |              |              |              |              |                          |                          |
| 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)                |
| <b>Volatiles</b>                        |          |                                        |              |              |              |              |              |              |              |              |                          |                          |
| 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, 1,2) | 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 | 2.6                                    | 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                      |
| <b>BTEX</b>                             |          |                                        |              |              |              |              |              |              |              |              |                          |                          |
| 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)                |
| <b>Hydrocarbons</b>                     |          |                                        |              |              |              |              |              |              |              |              |                          |                          |
| 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 (16)                  |
| <b>Semi-Volatiles</b>                   |          |                                        |              |              |              |              |              |              |              |              |                          |                          |
| 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[ghi]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-S56<br>2440373-03 | BH2-24-AU1<br>2440373-04 | BH2-24-S53<br>2440373-05 | BH2-24-S56A<br>2440373-06 | BH3-24-S52<br>2440373-07 | BH3-24-S53<br>2440373-08 | BH3-24-S56A<br>2440373-09 | DUP1 (Dup of BH2-<br>24-S53)<br>2440373-10 | TP1-24-G2<br>2446099-01 | TP2-24-G2<br>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                                  | 0.5-0.96                | 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              |
| <b>Physical Characteristics</b>         |          |                                        |                          |                          |                          |                           |                          |                          |                           |                                            |                         |                         |
| % Solids                                | % by Wt. |                                        | 84.2                     | 90.3                     | 94.5                     | 87.5                      | 95.8                     | 89.3                     | 83.6                      | 94.6                                       | 85.9                    | 91.3                    |
| <b>General Inorganics</b>               |          |                                        |                          |                          |                          |                           |                          |                          |                           |                                            |                         |                         |
| SAK                                     | 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                     |
| <b>Metals</b>                           |          |                                        |                          |                          |                          |                           |                          |                          |                           |                                            |                         |                         |
| 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                    |
| <b>Volatiles</b>                        |          |                                        |                          |                          |                          |                           |                          |                          |                           |                                            |                         |                         |
| 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, 1,2) | 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 | 2.6                                    | 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                     |
| <b>BTEX</b>                             |          |                                        |                          |                          |                          |                           |                          |                          |                           |                                            |                         |                         |
| 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)               |
| <b>Hydrocarbons</b>                     |          |                                        |                          |                          |                          |                           |                          |                          |                           |                                            |                         |                         |
| 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)                                     | 13                      | 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)                  |
| <b>Semi-Volatiles</b>                   |          |                                        |                          |                          |                          |                           |                          |                          |                           |                                            |                         |                         |
| 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[k]fluoranthene                    | 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[e]pyrene                          | 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                     |
| Dibenz[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

| Parameter                               | Units    | Regulation                             | TP3-24-G2<br>2446099-03 | TP4-24-G2<br>2446099-04 | TP5-24-G2<br>2446099-05 | TP6-24-G2<br>2446099-06 | TP7-24-G2<br>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              |
| <b>Physical Characteristics</b>         |          |                                        |                         |                         |                         |                         |                         |
| % Solids                                | % by Wt. |                                        | 89.7                    | 92.3                    | 87.5                    | 90.8                    | 86.1                    |
| <b>General Inorganics</b>               |          |                                        |                         |                         |                         |                         |                         |
| SAH                                     | 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                     |
| <b>Metals</b>                           |          |                                        |                         |                         |                         |                         |                         |
| 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                    |
| <b>Volatiles</b>                        |          |                                        |                         |                         |                         |                         |                         |
| 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                     |
| Bromoforn                               | 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, 1,2) | 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                     |
| <b>BTEX</b>                             |          |                                        |                         |                         |                         |                         |                         |
| 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                     |
| <b>Hydrocarbons</b>                     |          |                                        |                         |                         |                         |                         |                         |
| 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                     |
| <b>Semi-Volatiles</b>                   |          |                                        |                         |                         |                         |                         |                         |
| 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[h,h]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<br>TZO123 | MW4<br>TZO124 | MW1-GW1<br>2441407-01 | BH3-24-GW1<br>2441407-02 | DUP (Dup of BH3-<br>24-GW1)<br>2441407-03 | Trip Blank<br>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               |
| <b>Metals</b>                           |       |                                |               |               |                       |                          |                                           |                          |
| 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                      |
| <b>Volatiles</b>                        |       |                                |               |               |                       |                          |                                           |                          |
| 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, 1,2) | 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)                 |
| <b>BTEX</b>                             |       |                                |               |               |                       |                          |                                           |                          |
| 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)                 |
| <b>Hydrocarbons</b>                     |       |                                |               |               |                       |                          |                                           |                          |
| 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<br>Residential, coarse<br>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<br>Residential, coarse<br>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<br>(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-<br>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<br>Residential, coarse<br>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<br>Non-Potable<br>Groundwater, coarse<br>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<br>(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<br>Non-Potable<br>Groundwater, coarse<br>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<br>2440373-05 | DUP1 (Dup of BH2-<br>24-SS3)<br>2440373-10 | RPD (%) | QA/QC Result                 |
|---------------------|------|--------------------------|--------------------------------------------|---------|------------------------------|
| <b>Metals</b>       |      |                          |                                            |         |                              |
| 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  |
| <b>BTEX</b>         |      |                          |                                            |         |                              |
| 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  |
| <b>Hydrocarbons</b> |      |                          |                                            |         |                              |
| 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<br>2446099-06 | DUP1 (Dup of TP6-<br>24-G2)<br>2502141-01 | RPD (%) | QA/QC Result                 |
|---------------|------|-------------------------|-------------------------------------------|---------|------------------------------|
| <b>Metals</b> |      |                         |                                           |         |                              |
| 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<br>2441407-02 | DUP (Dup of BH3-<br>24-GW1)<br>2441407-03 | RPD (%) | QA/QC Result                |
|--------------------------------|-----|--------------------------|-------------------------------------------|---------|-----------------------------|
| <b>Volatiles</b>               |     |                          |                                           |         |                             |
| 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-Butanol | 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 |
| <b>Hydrocarbons</b>            |     |                          |                                           |         |                             |
| 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       | Date       | Laboratory Method | Analytical Method    |
|---------------------------------------------|----------|------------|------------|-------------------|----------------------|
|                                             |          | Extracted  | Analyzed   |                   |                      |
| 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.



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**

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

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 F18TEX & 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

=====

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.

Total Cover Pages : 2

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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

Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.



**BUREAU  
VERITAS**

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<br>09:30 |       |          | 2022/10/05<br>09:40 |       |          | 2022/10/05<br>09:50 |       |          |
| COC Number                                                                                                                                |       | na                  |       |          | na                  |       |          | na                  |       |          |
|                                                                                                                                           | UNITS | S1                  | RDL   | QC Batch | S2                  | RDL   | QC Batch | S3                  | RDL   | QC Batch |
| <b>Calculated Parameters</b>                                                                                                              |       |                     |       |          |                     |       |          |                     |       |          |
| Sodium Adsorption Ratio                                                                                                                   | N/A   | 0.24 (1)            |       | 8281511  | 0.35 (1)            |       | 8281511  | 0.14 (1)            |       | 8281511  |
| <b>Inorganics</b>                                                                                                                         |       |                     |       |          |                     |       |          |                     |       |          |
| 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 (CaCl <sub>2</sub> ) 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  |
| <b>Metals</b>                                                                                                                             |       |                     |       |          |                     |       |          |                     |       |          |
| 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. |       |                     |       |          |                     |       |          |                     |       |          |



BUREAU  
VERITAS

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                                                                                                                         |       | TZO209              |       |          | TZO210              |       |          | TZO211              |       |          |
| Sampling Date                                                                                                                             |       | 2022/10/05<br>10:00 |       |          | 2022/10/05<br>10:15 |       |          | 2022/10/05<br>10:25 |       |          |
| COC Number                                                                                                                                |       | na                  |       |          | na                  |       |          | na                  |       |          |
|                                                                                                                                           | UNITS | S4                  | RDL   | QC Batch | S5                  | RDL   | QC Batch | S6                  | RDL   | QC Batch |
| <b>Calculated Parameters</b>                                                                                                              |       |                     |       |          |                     |       |          |                     |       |          |
| Sodium Adsorption Ratio                                                                                                                   | N/A   | 0.35 (1)            |       | 8281511  | 0.31 (1)            |       | 8281511  | 0.49 (1)            |       | 8281511  |
| <b>Inorganics</b>                                                                                                                         |       |                     |       |          |                     |       |          |                     |       |          |
| 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 (CaCl <sub>2</sub> ) 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  |
| <b>Metals</b>                                                                                                                             |       |                     |       |          |                     |       |          |                     |       |          |
| 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. |       |                     |       |          |                     |       |          |                     |       |          |



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                                                                                                                         |       | TZ0212              |       |          | TZ0213              |       |          |
| Sampling Date                                                                                                                             |       | 2022/10/05<br>10:40 |       |          | 2022/10/05<br>10:45 |       |          |
| COC Number                                                                                                                                |       | na                  |       |          | na                  |       |          |
|                                                                                                                                           | UNITS | S7                  | RDL   | QC Batch | S8                  | RDL   | QC Batch |
| <b>Calculated Parameters</b>                                                                                                              |       |                     |       |          |                     |       |          |
| Sodium Adsorption Ratio                                                                                                                   | N/A   | 0.24 (1)            |       | 8281511  | 0.39 (1)            |       | 8281511  |
| <b>Inorganics</b>                                                                                                                         |       |                     |       |          |                     |       |          |
| Conductivity                                                                                                                              | mS/cm | 0.17                | 0.002 | 8289022  | 0.068               | 0.002 | 8289022  |
| Moisture                                                                                                                                  | %     | 8.8                 | 1.0   | 8285985  |                     |       |          |
| Available (CaCl <sub>2</sub> ) 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  |
| <b>Metals</b>                                                                                                                             |       |                     |       |          |                     |       |          |
| 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**

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<br>09:40 | 2022/10/05<br>10:00 |            |                 | 2022/10/05<br>10:00   |            |                 | 2022/10/05<br>10:25 |            |                 |
| COC Number                                                                                |              | na                  | na                  |            |                 | na                    |            |                 | na                  |            |                 |
|                                                                                           | <b>UNITS</b> | <b>S2</b>           | <b>S4</b>           | <b>RDL</b> | <b>QC Batch</b> | <b>S4<br/>Lab-Dup</b> | <b>RDL</b> | <b>QC Batch</b> | <b>S6</b>           | <b>RDL</b> | <b>QC Batch</b> |
| <b>Inorganics</b>                                                                         |              |                     |                     |            |                 |                       |            |                 |                     |            |                 |
| Moisture                                                                                  | %            | 18                  | 7.7                 | 1.0        | 8285692         |                       |            |                 | 12                  | 1.0        | 8285692         |
| <b>BTEX &amp; F1 Hydrocarbons</b>                                                         |              |                     |                     |            |                 |                       |            |                 |                     |            |                 |
| 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         |
| <b>F2-F4 Hydrocarbons</b>                                                                 |              |                     |                     |            |                 |                       |            |                 |                     |            |                 |
| 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         |
| <b>Surrogate Recovery (%)</b>                                                             |              |                     |                     |            |                 |                       |            |                 |                     |            |                 |
| 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. |              |                     |                     |            |                 |                       |            |                 |                     |            |                 |



**BUREAU  
VERITAS**

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                                                                                                                                                 |              | TZO213              |            |                 |
| Sampling Date                                                                                                                                                     |              | 2022/10/05<br>10:45 |            |                 |
| COC Number                                                                                                                                                        |              | na                  |            |                 |
|                                                                                                                                                                   | <b>UNITS</b> | <b>S8</b>           | <b>RDL</b> | <b>QC Batch</b> |
| <b>Inorganics</b>                                                                                                                                                 |              |                     |            |                 |
| Moisture                                                                                                                                                          | %            | 17                  | 1.0        | 8285692         |
| <b>BTEX &amp; F1 Hydrocarbons</b>                                                                                                                                 |              |                     |            |                 |
| 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         |
| <b>F2-F4 Hydrocarbons</b>                                                                                                                                         |              |                     |            |                 |
| 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         |
| <b>Surrogate Recovery (%)</b>                                                                                                                                     |              |                     |            |                 |
| 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<br>QC Batch = Quality Control Batch<br>ND = Not Detected at a concentration equal or greater than the indicated Detection Limit. |              |                     |            |                 |



**BUREAU  
VERITAS**

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 CaCl <sub>2</sub> 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 Jeevaratnam |
| 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 CaCl <sub>2</sub> 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 CaCl <sub>2</sub> 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**

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 (VAD) 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 Jeevaratnam |
| 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 Jeevaratnam |

**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 (VAD) 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 (VAD) 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 Jeevaratnam |
| Acid Extractable Metals by ICPMS        | ICP/MS          | 8287377 | 2022/10/17 | 2022/10/18    | Daniel Teclu         |



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: 2022/10/13  
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: 2022/10/13  
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: 2022/10/13  
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  |



BUREAU  
VERITAS

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

### 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.**

BUREAU  
VERITAS

Bureau Veritas Job #: C2T7449

Report Date: 2022/10/20

St Lawrence Testing &amp; Inspection Co Ltd

Client Project #: MOSCATEL BOUTIQUE

Site Location: 1146 SNOW STREET, OTTAWA

Sampler Initials: GM

## QUALITY ASSURANCE REPORT

| QA/QC<br>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,<br>RDL=0.020 |          | ug/g  |           |
|                |      |              | Toluene               | 2022/10/17    | ND,<br>RDL=0.020 |          | ug/g  |           |
|                |      |              | Ethylbenzene          | 2022/10/17    | ND,<br>RDL=0.020 |          | ug/g  |           |
|                |      |              | o-Xylene              | 2022/10/17    | ND,<br>RDL=0.020 |          | ug/g  |           |
|                |      |              | p+m-Xylene            | 2022/10/17    | ND,<br>RDL=0.040 |          | ug/g  |           |
|                |      |              | Total Xylenes         | 2022/10/17    | ND,<br>RDL=0.040 |          | ug/g  |           |
|                |      |              | F1 (C6-C10)           | 2022/10/17    | ND,<br>RDL=10    |          | ug/g  |           |
|                |      |              | F1 (C6-C10) - BTEX    | 2022/10/17    | ND,<br>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  |



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

### 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,<br>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,<br>RDL=0.050 |          | ug/g  |           |
| 8287280     | JOH  | RPD          | Hot Water Ext. Boron (B)          | 2022/10/18    | 6.0              |          | %     | 40        |
| 8287355     | TAK  | Spiked Blank | Available (CaCl <sub>2</sub> ) pH | 2022/10/17    |                  | 100      | %     | 97 - 103  |
| 8287355     | TAK  | RPD          | Available (CaCl <sub>2</sub> ) 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,<br>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  |



BUREAU  
VERITAS

Bureau Veritas Job #: C2T7449

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St Lawrence Testing & Inspection Co Ltd

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Site Location: 1146 SNOW STREET, OTTAWA

Sampler Initials: GM

### QUALITY ASSURANCE REPORT(CONT'D)

| QA/QC<br>Batch | Init | QC Type      | Parameter                        | Date Analyzed | Value            | Recovery | UNITS | QC Limits |
|----------------|------|--------------|----------------------------------|---------------|------------------|----------|-------|-----------|
| 8287377        | DT1  | Method Blank | 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  |
|                |      |              | Acid Extractable Antimony (Sb)   | 2022/10/17    | ND,<br>RDL=0.20  |          | ug/g  |           |
|                |      |              | Acid Extractable Arsenic (As)    | 2022/10/17    | ND,<br>RDL=1.0   |          | ug/g  |           |
|                |      |              | Acid Extractable Barium (Ba)     | 2022/10/17    | ND,<br>RDL=0.50  |          | ug/g  |           |
|                |      |              | Acid Extractable Beryllium (Be)  | 2022/10/17    | ND,<br>RDL=0.20  |          | ug/g  |           |
|                |      |              | Acid Extractable Boron (B)       | 2022/10/17    | ND,<br>RDL=5.0   |          | ug/g  |           |
|                |      |              | Acid Extractable Cadmium (Cd)    | 2022/10/17    | ND,<br>RDL=0.10  |          | ug/g  |           |
|                |      |              | Acid Extractable Chromium (Cr)   | 2022/10/17    | ND,<br>RDL=1.0   |          | ug/g  |           |
|                |      |              | Acid Extractable Cobalt (Co)     | 2022/10/17    | ND,<br>RDL=0.10  |          | ug/g  |           |
|                |      |              | Acid Extractable Copper (Cu)     | 2022/10/17    | ND,<br>RDL=0.50  |          | ug/g  |           |
|                |      |              | Acid Extractable Lead (Pb)       | 2022/10/17    | ND,<br>RDL=1.0   |          | ug/g  |           |
|                |      |              | Acid Extractable Molybdenum (Mo) | 2022/10/17    | ND,<br>RDL=0.50  |          | ug/g  |           |
|                |      |              | Acid Extractable Nickel (Ni)     | 2022/10/17    | ND,<br>RDL=0.50  |          | ug/g  |           |
|                |      |              | Acid Extractable Selenium (Se)   | 2022/10/17    | ND,<br>RDL=0.50  |          | ug/g  |           |
|                |      |              | Acid Extractable Silver (Ag)     | 2022/10/17    | ND,<br>RDL=0.20  |          | ug/g  |           |
|                |      |              | Acid Extractable Thallium (Tl)   | 2022/10/17    | ND,<br>RDL=0.050 |          | ug/g  |           |
|                |      |              | Acid Extractable Uranium (U)     | 2022/10/17    | ND,<br>RDL=0.050 |          | ug/g  |           |
|                |      |              | Acid Extractable Vanadium (V)    | 2022/10/17    | ND,<br>RDL=5.0   |          | ug/g  |           |
|                |      |              | Acid Extractable Zinc (Zn)       | 2022/10/17    | ND,<br>RDL=5.0   |          | ug/g  |           |
|                |      |              | Acid Extractable Mercury (Hg)    | 2022/10/17    | ND,<br>RDL=0.050 |          | ug/g  |           |
|                |      |              | 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        |



BUREAU  
VERITAS

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St Lawrence Testing & Inspection Co Ltd

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Sampler Initials: GM

### QUALITY ASSURANCE REPORT(CONT'D)

| QA/QC<br>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,<br>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,<br>RDL=10    |          | ug/g  |           |
|                |      |                          | F3 (C16-C34 Hydrocarbons)      | 2022/10/19    | ND,<br>RDL=50    |          | ug/g  |           |
|                |      |                          | F4 (C34-C50 Hydrocarbons)      | 2022/10/19    | ND,<br>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,<br>RDL=10    |          | ug/g  |           |
|                |      |                          | F3 (C16-C34 Hydrocarbons)      | 2022/10/20    | ND,<br>RDL=50    |          | ug/g  |           |
|                |      |                          | F4 (C34-C50 Hydrocarbons)      | 2022/10/20    | ND,<br>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        |



BUREAU  
VERITAS

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

### QUALITY ASSURANCE REPORT(CONT'D)

| QA/QC<br>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 $\leq 2 \times$ 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.                                                                                                                 |      |         |                           |               |       |          |       |           |



BUREAU  
VERITAS

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

### VALIDATION SIGNATURE PAGE

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

Ewa Pranjić, 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.



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                                  | Date     |                | Laboratory Method        | Analytical Method |
|-------------------------------------------|----------|----------------|--------------------------|-------------------|
|                                           | Quantity | Date Extracted |                          |                   |
| 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.

This Certificate shall not be reproduced except in full, without the written approval of the laboratory.

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.



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

=====

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.

Total Cover Pages : 2

Page 2 of 11

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

Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.



**BUREAU  
VERITAS**

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<br>11:30 | 2022/10/11<br>11:00 |            |                 |
| COC Number        |              | na                  | na                  |            |                 |
|                   | <b>UNITS</b> | <b>MW 1</b>         | <b>MW 4</b>         | <b>RDL</b> | <b>QC Batch</b> |

| <b>Metals</b>             |      |       |       |       |         |
|---------------------------|------|-------|-------|-------|---------|
| 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.



**BUREAU  
VERITAS**

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 PHCS, BTEX/F1-F4 (WATER)

|                                                                                           |              |                     |                     |            |                 |
|-------------------------------------------------------------------------------------------|--------------|---------------------|---------------------|------------|-----------------|
| Bureau Veritas ID                                                                         |              | TZO123              | TZO124              |            |                 |
| Sampling Date                                                                             |              | 2022/10/11<br>11:30 | 2022/10/11<br>11:00 |            |                 |
| COC Number                                                                                |              | na                  | na                  |            |                 |
|                                                                                           | <b>UNITS</b> | <b>MW 1</b>         | <b>MW 4</b>         | <b>RDL</b> | <b>QC Batch</b> |
| <b>BTEX &amp; F1 Hydrocarbons</b>                                                         |              |                     |                     |            |                 |
| 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         |
| <b>F2-F4 Hydrocarbons</b>                                                                 |              |                     |                     |            |                 |
| 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         |
| <b>Surrogate Recovery (%)</b>                                                             |              |                     |                     |            |                 |
| 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 Ngondou   |
| 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 Ngondou   |
| 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**

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.

BUREAU  
VERITAS

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

## QUALITY ASSURANCE REPORT

| QA/QC<br>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,<br>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,<br>RDL=0.50 |          | ug/L  |           |
|                |      |              | Dissolved Arsenic (As)    | 2022/10/18    | ND,<br>RDL=1.0  |          | ug/L  |           |
|                |      |              | Dissolved Barium (Ba)     | 2022/10/18    | ND,<br>RDL=2.0  |          | ug/L  |           |
|                |      |              | Dissolved Beryllium (Be)  | 2022/10/18    | ND,<br>RDL=0.40 |          | ug/L  |           |



BUREAU  
VERITAS

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

### QUALITY ASSURANCE REPORT(CONT'D)

| QA/QC<br>Batch | Init | QC Type      | Parameter                 | Date Analyzed | Value            | Recovery | UNITS | QC Limits |
|----------------|------|--------------|---------------------------|---------------|------------------|----------|-------|-----------|
| 8284017        | ADA  | RPD          | Dissolved Boron (B)       | 2022/10/18    | ND,<br>RDL=10    |          | ug/L  |           |
|                |      |              | Dissolved Cadmium (Cd)    | 2022/10/18    | ND,<br>RDL=0.090 |          | ug/L  |           |
|                |      |              | Dissolved Chromium (Cr)   | 2022/10/18    | ND,<br>RDL=5.0   |          | ug/L  |           |
|                |      |              | Dissolved Cobalt (Co)     | 2022/10/18    | ND,<br>RDL=0.50  |          | ug/L  |           |
|                |      |              | Dissolved Copper (Cu)     | 2022/10/18    | ND,<br>RDL=0.90  |          | ug/L  |           |
|                |      |              | Dissolved Lead (Pb)       | 2022/10/18    | ND,<br>RDL=0.50  |          | ug/L  |           |
|                |      |              | Dissolved Molybdenum (Mo) | 2022/10/18    | ND,<br>RDL=0.50  |          | ug/L  |           |
|                |      |              | Dissolved Nickel (Ni)     | 2022/10/18    | ND,<br>RDL=1.0   |          | ug/L  |           |
|                |      |              | Dissolved Selenium (Se)   | 2022/10/18    | ND,<br>RDL=2.0   |          | ug/L  |           |
|                |      |              | Dissolved Silver (Ag)     | 2022/10/18    | ND,<br>RDL=0.090 |          | ug/L  |           |
|                |      |              | Dissolved Sodium (Na)     | 2022/10/18    | ND,<br>RDL=100   |          | ug/L  |           |
|                |      |              | Dissolved Thallium (Tl)   | 2022/10/18    | ND,<br>RDL=0.050 |          | ug/L  |           |
|                |      |              | Dissolved Uranium (U)     | 2022/10/18    | ND,<br>RDL=0.10  |          | ug/L  |           |
|                |      |              | Dissolved Vanadium (V)    | 2022/10/18    | ND,<br>RDL=0.50  |          | ug/L  |           |
|                |      |              | Dissolved Zinc (Zn)       | 2022/10/18    | ND,<br>RDL=5.0   |          | ug/L  |           |
|                |      |              | 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  |



**BUREAU  
VERITAS**

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

### QUALITY ASSURANCE REPORT(CONT'D)

| QA/QC<br>Batch | Init | QC Type      | Parameter                 | Date Analyzed | Value           | Recovery | UNITS | QC Limits |
|----------------|------|--------------|---------------------------|---------------|-----------------|----------|-------|-----------|
| 8286407        | LRA  | Spiked Blank | 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  |
|                |      |              | 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  |
| 8286407        | LRA  | Method Blank | p+m-Xylene                | 2022/10/17    |                 | 96       | %     | 50 - 140  |
|                |      |              | F1 (C6-C10)               | 2022/10/17    |                 | 98       | %     | 60 - 140  |
|                |      |              | 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,<br>RDL=0.20 |          | ug/L  |           |
|                |      |              | Toluene                   | 2022/10/17    | ND,<br>RDL=0.20 |          | ug/L  |           |
|                |      |              | Ethylbenzene              | 2022/10/17    | ND,<br>RDL=0.20 |          | ug/L  |           |
|                |      |              | o-Xylene                  | 2022/10/17    | ND,<br>RDL=0.20 |          | ug/L  |           |
|                |      |              | p+m-Xylene                | 2022/10/17    | ND,<br>RDL=0.40 |          | ug/L  |           |
|                |      |              | Total Xylenes             | 2022/10/17    | ND,<br>RDL=0.40 |          | ug/L  |           |
|                |      |              | F1 (C6-C10)               | 2022/10/17    | ND,<br>RDL=25   |          | ug/L  |           |
|                |      |              | F1 (C6-C10) - BTEX        | 2022/10/17    | ND,<br>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,<br>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  |



**BUREAU  
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Sampler Initials: SR

### QUALITY ASSURANCE REPORT(CONT'D)

| QA/QC<br>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  |
| 8294552        | DN0  | Method Blank | F4 (C34-C50 Hydrocarbons) | 2022/10/20    |                | 108      | %     | 60 - 130  |
|                |      |              | o-Terphenyl               | 2022/10/20    |                | 63       | %     | 60 - 130  |
|                |      |              | F2 (C10-C16 Hydrocarbons) | 2022/10/20    | ND,<br>RDL=100 |          | ug/L  |           |
|                |      |              | F3 (C16-C34 Hydrocarbons) | 2022/10/20    | ND,<br>RDL=200 |          | ug/L  |           |
| 8294552        | DN0  | RPD          | F4 (C34-C50 Hydrocarbons) | 2022/10/20    | ND,<br>RDL=200 |          | ug/L  |           |
|                |      |              | 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  $\leq 2 \times$  RDL).



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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

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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.

## 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

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

## 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 | - | - |

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    |                 |                 |                 |                 |   |   |

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% | - | - |

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    |                 |                 |                 |                 |   |   |

#### 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 | - | - | - |

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    |                 |                 |                 |                 |   |   |

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% | - | - |

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:   | 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 | - | - | - | - |

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:   | 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 | - | - | - | - |

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:   | 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 | - | - | - |

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:   | 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 | - | - | - |

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

## Method Quality Control: Blank

| Analyte                   | Result | Reporting Limit | Units | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---------------------------|--------|-----------------|-------|------|------------|-----|-----------|-------|
| <b>General Inorganics</b> |        |                 |       |      |            |     |           |       |
| Conductivity              | ND     | 5               | uS/cm |      |            |     |           |       |
| <b>Hydrocarbons</b>       |        |                 |       |      |            |     |           |       |
| 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  |      |            |     |           |       |
| <b>Metals</b>             |        |                 |       |      |            |     |           |       |
| 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  |      |            |     |           |       |
| <b>Semi-Volatiles</b>     |        |                 |       |      |            |     |           |       |
| 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  |      |            |     |           |       |

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## 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     |     |           |       |
| <b>Volatiles</b>            |        |                 |       |      |            |     |           |       |
| 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  |      |            |     |           |       |

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**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  |      |            |     |           |       |

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### 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     |     |           |       |

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Project Description: PE6763

## Method Quality Control: Duplicate

| Analyte                   | Result | Reporting Limit | Units    | Source Result | %REC | %REC Limit | RPD  | RPD Limit | Notes |
|---------------------------|--------|-----------------|----------|---------------|------|------------|------|-----------|-------|
| <b>General Inorganics</b> |        |                 |          |               |      |            |      |           |       |
| 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       |       |
| <b>Hydrocarbons</b>       |        |                 |          |               |      |            |      |           |       |
| 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        |       |
| <b>Metals</b>             |        |                 |          |               |      |            |      |           |       |
| 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

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## 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        |       |
| <b>Semi-Volatiles</b>       |        |                 |          |               |      |            |      |           |       |
| 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     |      |           |       |
| <b>Volatiles</b>            |        |                 |          |               |      |            |      |           |       |
| 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        |       |

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| 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        |       |

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| 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     |     |           |       |

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

## Method Quality Control: Spike

| Analyte               | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|-----------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| <b>Hydrocarbons</b>   |        |                 |       |               |      |            |     |           |       |
| 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     |     |           |       |
| <b>Metals</b>         |        |                 |       |               |      |            |     |           |       |
| 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     |     |           |       |
| <b>Semi-Volatiles</b> |        |                 |       |               |      |            |     |           |       |
| 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     |     |           |       |

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

## 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     |     |           |       |
| <b>Volatiles</b>            |        |                 |       |               |      |            |     |           |       |
| 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     |     |           |       |

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

## 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     |     |           |       |

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

**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     |     |           |       |

## Certificate of Analysis

Client: Paterson Group Consulting Engineers (Ottawa)

Client PO: 61452

Report Date: 08-Oct-2024

Order Date: 2-Oct-2024

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

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

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

*CCME PHC additional information:*

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

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



|                                      |                                            |                                                                                                                                                                |
|--------------------------------------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Client Name: <u>Paterson</u>         | Project Ref: <u>PE6763</u>                 | Page <u>1</u> of <u>1</u>                                                                                                                                      |
| Contact Name: <u>Jesse Andrechek</u> | Quote #:                                   | Turnaround Time<br><input type="checkbox"/> 1 day <input type="checkbox"/> 3 day<br><input type="checkbox"/> 2 day <input checked="" type="checkbox"/> Regular |
| Address: <u>9 Auriga Dr.</u>         | PO #: <u>61452</u>                         |                                                                                                                                                                |
| Telephone: <u>613-226-7381</u>       | E-mail: <u>jandrechek@patersongroup.ca</u> |                                                                                                                                                                |
| Date Required:                       |                                            |                                                                                                                                                                |

|                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                |                                                                                                                                                                              |            |                   |                |                           |   |                 |      |      |               |    |      |         |              |   |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-------------------|----------------|---------------------------|---|-----------------|------|------|---------------|----|------|---------|--------------|---|--|
| <input checked="" type="checkbox"/> REG 153/04 <input type="checkbox"/> REG 406/19                                                                                                                                                                                                                                                                                                                                                          | Other Regulation                                                                                                                                                                                                                                               | Matrix Type: <b>S</b> (Soil/Sed.) <b>GW</b> (Ground Water)<br><b>SW</b> (Surface Water) <b>SS</b> (Storm/Sanitary Sewer)<br><b>P</b> (Paint) <b>A</b> (Air) <b>O</b> (Other) |            | Required Analysis |                |                           |   |                 |      |      |               |    |      |         |              |   |  |
| <input type="checkbox"/> Table 1 <input type="checkbox"/> Agri/Other <input type="checkbox"/> Med/Fine<br><input type="checkbox"/> Table 2 <input checked="" type="checkbox"/> Res/Park <input checked="" type="checkbox"/> Coarse<br><input checked="" type="checkbox"/> Table 3 <input type="checkbox"/> Ind/Comm<br><input type="checkbox"/> Table _____<br>For RSC: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> REG 558 <input type="checkbox"/> PWQO<br><input type="checkbox"/> CCME <input type="checkbox"/> MISA<br><input type="checkbox"/> SU - Sani <input type="checkbox"/> SU - Storm<br>Mun: _____<br><input type="checkbox"/> Other: _____ | Matrix                                                                                                                                                                       | Air Volume | # of Containers   | Field Filtered | Sample Taken<br>Date Time |   | PHCs F1-F4+BTEX | VOCs | PAHs | Metals by ICP | Hg | CrVI | B (HWS) | EC/SAR<br>pH |   |  |
| Sample ID/Location Name                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                |                                                                                                                                                                              |            |                   |                |                           |   |                 |      |      |               |    |      |         |              |   |  |
| 1 BH1-24-SS2                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                | S                                                                                                                                                                            |            | 2                 |                | 1-OCT/24                  | / | X               |      | X    | X             | X  | X    |         | X            |   |  |
| 2 BH1-24-SS4                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                |                                                                                                                                                                              |            | 1                 |                |                           |   | 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 DUPI                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                | ↓                                                                                                                                                                            |            | ↓                 |                | ↓                         |   | X               | X    |      | X             | X  | X    |         | X            |   |  |

|                                                 |                       |                                      |                                            |  |  |
|-------------------------------------------------|-----------------------|--------------------------------------|--------------------------------------------|--|--|
| Comments:                                       |                       |                                      | Method of Delivery: <u>Paracel Courier</u> |  |  |
| Relinquished By (Sign): <u>[Signature]</u>      | Received at Depot:    | Received at Lab: <u>SD</u>           | Verified By: <u>SD</u>                     |  |  |
| Relinquished By (Print): <u>Jesse Andrechek</u> | Date/Time:            | Date/Time: <u>Oct 2, 2024 3:55pm</u> | Date/Time: <u>Oct 2, 2024 4:49pm</u>       |  |  |
| Date/Time: <u>2-OCT/24 3PM</u>                  | Temperature: _____ °C | Temperature: <u>17.6</u>             | pH Verified: <input type="checkbox"/> By:  |  |  |

## Certificate of Analysis

**Paterson Group Consulting Engineers (Ottawa)**

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

Client PO: 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

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

### 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     |

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**

|                                    |          |      |      |      |      |   |   |
|------------------------------------|----------|------|------|------|------|---|---|
| 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 | - | - | - |

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

## Method Quality Control: Blank

| Analyte                                  | Result | Reporting Limit | Units | %REC | %REC Limit | RPD | RPD Limit | Notes |
|------------------------------------------|--------|-----------------|-------|------|------------|-----|-----------|-------|
| <b>Hydrocarbons</b>                      |        |                 |       |      |            |     |           |       |
| 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  |      |            |     |           |       |
| <b>Volatiles</b>                         |        |                 |       |      |            |     |           |       |
| 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  |      |            |     |           |       |

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Report Date: 16-Oct-2024

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 10-Oct-2024

Client PO: 61523

Project Description: PE6763

**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     |     |           |       |

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Report Date: 16-Oct-2024

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 10-Oct-2024

Client PO: 61523

Project Description: PE6763

## Method Quality Control: Duplicate

| Analyte                                  | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD  | RPD Limit | Notes |
|------------------------------------------|--------|-----------------|-------|---------------|------|------------|------|-----------|-------|
| <b>Hydrocarbons</b>                      |        |                 |       |               |      |            |      |           |       |
| F1 PHCs (C6-C10)                         | ND     | 25              | ug/L  | ND            |      |            | NC   | 30        |       |
| <b>Volatiles</b>                         |        |                 |       |               |      |            |      |           |       |
| 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        |       |

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Report Date: 16-Oct-2024

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 10-Oct-2024

Client PO: 61523

Project Description: PE6763

**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     |     |           |       |

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

## Method Quality Control: Spike

| Analyte                                  | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|------------------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| <b>Hydrocarbons</b>                      |        |                 |       |               |      |            |     |           |       |
| 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     |     |           |       |
| <b>Volatiles</b>                         |        |                 |       |               |      |            |     |           |       |
| 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     |     |           |       |

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

### 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

Client: Paterson Group Consulting Engineers (Ottawa)

Client PO: 61523

Report Date: 16-Oct-2024

Order Date: 10-Oct-2024

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.

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



Client Name: Paterson Group  
Contact Name: Jesse Andrechuk  
Address: 9 Auriga  
Telephone: 613-226-7381

Project Ref: PE6763  
Quote #:  
PO #: 61523  
E-mail: jandrechuk@patersongroup.ca

Page 1 of 1

Turnaround Time

☐ 1 day ☐ 3 day  
☐ 2 day ☒ Regular

Date Required: \_\_\_\_\_

☒ REG 153/04 ☐ REG 406/19 Other Regulation  
☐ Table 1 ☐ Agri/Other ☐ Med/Fine ☐ REG 558 ☐ PWQO  
☐ Table 2 ☒ Res/Park ☒ Coarse ☐ CCME ☐ MISA  
☒ Table 3 ☐ Ind/Comm ☐ SU - Sani ☐ SU - Storm  
☐ Table \_\_\_\_\_  
For RSC: ☒ Yes ☐ No ☐ Other: \_\_\_\_\_

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

Required Analysis

| Sample ID/Location Name |            | Matrix | Air Volume | # of Containers | Field Filtered | Sample Taken |      | PHCs F1-F4+BTEX | VOCs | PAHs | Metals by ICP | Hg | CrVI | B (HWS) |  |  |  |  |  |
|-------------------------|------------|--------|------------|-----------------|----------------|--------------|------|-----------------|------|------|---------------|----|------|---------|--|--|--|--|--|
|                         |            |        |            |                 |                | Date         | Time |                 |      |      |               |    |      |         |  |  |  |  |  |
| 1                       | MW1 - GW1  | GW     |            | 2               |                | 9-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:

Relinquished By (Sign): [Signature]  
Relinquished By (Print): Jesse Andrechuk  
Date/Time: 10-OCT/2024

Received at Depot:

Date/Time:

Temperature: \_\_\_\_\_ °C

Received at Lab:

Date/Time:

Temperature: 15.2

Verified By:

Date/Time:

pH Verified: ☐

By:

Paracel Courier

Jillian

10 Oct 24 15:19

## 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

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

**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     |

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 | - | - |

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    |                 |                 |                 |                 |   |   |

#### 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 | - | - |

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:   | 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 | - | - | - |

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:   | 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 | - | - | - | - |

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

## Method Quality Control: Blank

| Analyte                   | Result | Reporting Limit | Units | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---------------------------|--------|-----------------|-------|------|------------|-----|-----------|-------|
| <b>General Inorganics</b> |        |                 |       |      |            |     |           |       |
| Conductivity              | ND     | 5               | uS/cm |      |            |     |           |       |
| <b>Hydrocarbons</b>       |        |                 |       |      |            |     |           |       |
| 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  |      |            |     |           |       |
| <b>Metals</b>             |        |                 |       |      |            |     |           |       |
| 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  |      |            |     |           |       |
| <b>Volatiles</b>          |        |                 |       |      |            |     |           |       |
| 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  |      |            |     |           |       |

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

### 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     |     |           |       |

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

## Method Quality Control: Duplicate

| Analyte                         | Result | Reporting Limit | Units    | Source Result | %REC | %REC Limit | RPD  | RPD Limit | Notes |
|---------------------------------|--------|-----------------|----------|---------------|------|------------|------|-----------|-------|
| <b>General Inorganics</b>       |        |                 |          |               |      |            |      |           |       |
| SAR                             | 0.11   | 0.01            | N/A      | 0.11          |      |            | 0.0  | 30        |       |
| Conductivity                    | 117    | 5               | uS/cm    | 121           |      |            | 3.4  | 5         |       |
| <b>Hydrocarbons</b>             |        |                 |          |               |      |            |      |           |       |
| 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        |       |
| <b>Metals</b>                   |        |                 |          |               |      |            |      |           |       |
| 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        |       |
| <b>Physical Characteristics</b> |        |                 |          |               |      |            |      |           |       |
| % Solids                        | 93.0   | 0.1             | % by Wt. | 93.0          |      |            | 0.0  | 25        |       |
| <b>Volatiles</b>                |        |                 |          |               |      |            |      |           |       |
| Benzene                         | ND     | 0.02            | ug/g     | ND            |      |            | NC   | 50        |       |

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

### 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     |     |           |       |

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

## 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     |     |           | QM-07 |
| Arsenic           | 66.3   | 1.0             | ug/g  | 7.5           | 118  | 70-130     |     |           |       |
| Barium            | 202    | 1.0             | ug/g  | 135           | 134  | 70-130     |     |           |       |
| 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     |     |           |       |

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

### 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     |     |           |       |

## Certificate of Analysis

Client: Paterson Group Consulting Engineers (Ottawa)

Client PO: 61725

Report Date: 15-Nov-2024

Order Date: 11-Nov-2024

Project Description: PE6763

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 unless otherwise noted.

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

*CCME PHC additional information:*

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

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



|                                      |                                                                                |                                                                                                                                                                |
|--------------------------------------|--------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Client Name: <u>Peterson</u>         | Project Ref: <u>PE6763</u>                                                     | Page <u>1</u> of <u>1</u>                                                                                                                                      |
| Contact Name: <u>Jesse Andrechek</u> | Quote #:                                                                       | Turnaround Time<br><input type="checkbox"/> 1 day <input type="checkbox"/> 3 day<br><input type="checkbox"/> 2 day <input checked="" type="checkbox"/> Regular |
| Address: <u>9 Aurora Drive</u>       | PO #: <u>61725</u>                                                             |                                                                                                                                                                |
| Telephone: <u>613-226-7381</u>       | E-mail: <u>jandrechek@petersongroup.ca</u><br><u>kpunchul@petersongroup.ca</u> |                                                                                                                                                                |
| Date Required: _____                 |                                                                                |                                                                                                                                                                |

| <input checked="" type="checkbox"/> REG 153/04 <input type="checkbox"/> REG 406/19<br><input type="checkbox"/> Table 1 <input checked="" type="checkbox"/> Res/Park <input type="checkbox"/> Med/Fine<br><input type="checkbox"/> Table 2 <input type="checkbox"/> Ind/Comm <input checked="" type="checkbox"/> Coarse<br><input checked="" type="checkbox"/> Table 3 <input type="checkbox"/> Agri/Other<br><input type="checkbox"/> Table _____<br>For RSC: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No |                     | Other Regulation<br><input type="checkbox"/> REG 558 <input type="checkbox"/> PWQO<br><input type="checkbox"/> CCME <input type="checkbox"/> MISA<br><input type="checkbox"/> SU - Sani <input type="checkbox"/> SU - Storm<br>Mun: _____<br><input type="checkbox"/> Other: _____ |            | Matrix Type: <b>S</b> (Soil/Sed.) <b>GW</b> (Ground Water)<br><b>SW</b> (Surface Water) <b>SS</b> (Storm/Sanitary Sewer)<br><b>P</b> (Paint) <b>A</b> (Air) <b>O</b> (Other) |              | Required Analysis<br>PHCs F1-F4+BTEX<br>VOCs<br>PAHs<br>Metals by ICP<br>Hg<br>CrVI<br>B (HWS)<br><b>EC/SAR</b> |      |      |      |               |    |      |         |        |  |  |  |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----------------------------------------------------------------------------------------------------------------|------|------|------|---------------|----|------|---------|--------|--|--|--|--|--|
| Sample ID/Location Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                     | Matrix                                                                                                                                                                                                                                                                             | Air Volume | # of Containers                                                                                                                                                              | Sample Taken |                                                                                                                 | PHCs | VOCs | PAHs | Metals by ICP | Hg | CrVI | B (HWS) | EC/SAR |  |  |  |  |  |
| Date                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Time                |                                                                                                                                                                                                                                                                                    |            |                                                                                                                                                                              |              |                                                                                                                 |      |      |      |               |    |      |         |        |  |  |  |  |  |
| 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           | ↓                                                                                                                                                                                                                                                                                  |            | 2                                                                                                                                                                            |              |                                                                                                                 |      |      |      | ✓             | ✓  | ✓    |         |        |  |  |  |  |  |
| 8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | TP2-24-G4 (on hold) | ↓                                                                                                                                                                                                                                                                                  |            | ↓                                                                                                                                                                            |              |                                                                                                                 |      |      |      |               |    |      |         |        |  |  |  |  |  |
| 9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | TP6-24-G4 (on hold) | ↓                                                                                                                                                                                                                                                                                  |            | ↓                                                                                                                                                                            |              |                                                                                                                 |      |      |      |               |    |      |         |        |  |  |  |  |  |
| 10                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                     |                                                                                                                                                                                                                                                                                    |            |                                                                                                                                                                              |              |                                                                                                                 |      |      |      |               |    |      |         |        |  |  |  |  |  |

|                                                 |                           |                                           |                                                 |
|-------------------------------------------------|---------------------------|-------------------------------------------|-------------------------------------------------|
| Comments:                                       |                           | Method of Delivery: <u>Parcel Courier</u> |                                                 |
| Relinquished By (Sign): <u>[Signature]</u>      | Received By Driver/Depot: | Received at Lab: <u>SS</u>                | Verified By: <u>So</u>                          |
| Relinquished By (Print): <u>Kuldeep Punchul</u> | Date/Time:                | Date/Time: <u>11 Nov 24 1620</u>          | Date/Time: <u>Nov 11, 2024 4:36pm</u>           |
| Date/Time: <u>11/11/2024</u>                    | Temperature: _____ °C     | Temperature: <u>14.9</u>                  | pH Verified: <input type="checkbox"/> By: _____ |

## Certificate of Analysis

**Paterson Group Consulting Engineers (Ottawa)**

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

Client PO: 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      |

*Mark Foto*

Mark Foto, M.Sc.  
Laboratory Director

Certificate of Analysis

Report Date: 13-Jan-2025

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

Order Date: 8-Jan-2025

**Client PO:** 62108

**Project Description:** PE6763

### 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     |

Certificate of Analysis

Report Date: 13-Jan-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 8-Jan-2025

Client PO: 62108

Project Description: PE6763

|              |                 |   |   |   |   |
|--------------|-----------------|---|---|---|---|
| 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  | - | - | - | - |

Certificate of Analysis

Report Date: 13-Jan-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 8-Jan-2025

Client PO: 62108

Project Description: PE6763

## Method Quality Control: Blank

| Analyte       | Result | Reporting Limit | Units | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---------------|--------|-----------------|-------|------|------------|-----|-----------|-------|
| <b>Metals</b> |        |                 |       |      |            |     |           |       |
| 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  |      |            |     |           |       |

Certificate of Analysis

Report Date: 13-Jan-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 8-Jan-2025

Client PO: 62108

Project Description: PE6763

### Method Quality Control: Duplicate

| Analyte                         | Result | Reporting Limit | Units    | Source Result | %REC | %REC Limit | RPD  | RPD Limit | Notes |
|---------------------------------|--------|-----------------|----------|---------------|------|------------|------|-----------|-------|
| <b>Metals</b>                   |        |                 |          |               |      |            |      |           |       |
| 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        |       |
| <b>Physical Characteristics</b> |        |                 |          |               |      |            |      |           |       |
| % Solids                        | 86.1   | 0.1             | % by Wt. | 86.0          |      |            | 0.1  | 25        |       |

Certificate of Analysis

Report Date: 13-Jan-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 8-Jan-2025

Client PO: 62108

Project Description: PE6763

## Method Quality Control: Spike

| Analyte       | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|---------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| <b>Metals</b> |        |                 |       |               |      |            |     |           |       |
| 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     |     |           |       |

Certificate of Analysis

Report Date: 13-Jan-2025

Client: Paterson Group Consulting Engineers (Ottawa)

Order Date: 8-Jan-2025

Client PO: 62108

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

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

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

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

Paracel ID: 2502141



Paracel Order Number  
(Lab Use Only)

2502141

Chain Of Custody  
(Lab Use Only)

|                                 |                                     |                                                                                                                                                                                         |
|---------------------------------|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Client Name: Paterson Group     | Project Ref: P6763                  | Page 1 of 1                                                                                                                                                                             |
| Contact Name: Jesse Andrechek   | Quote #:                            | <b>Turnaround Time</b><br><input type="checkbox"/> 1 day <input type="checkbox"/> 3 day<br><input type="checkbox"/> 2 day <input checked="" type="checkbox"/> Regular<br>Date Required: |
| Address: 9 Auriga Drive, Ottawa | PO #: 62108                         |                                                                                                                                                                                         |
| Telephone: 613-226-7381         | E-mail: jandrechek@patersongroup.ca |                                                                                                                                                                                         |

| <input checked="" type="checkbox"/> REG 153/04 <input type="checkbox"/> REG 406/19<br><input type="checkbox"/> Table 1 <input type="checkbox"/> Agri/Other <input type="checkbox"/> Med/Fine<br><input type="checkbox"/> Table 2 <input checked="" type="checkbox"/> Res/Park <input checked="" type="checkbox"/> Coarse<br><input checked="" type="checkbox"/> Table 3 <input type="checkbox"/> Ind/Comm<br><input type="checkbox"/> Table _____<br>For RSC: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | <b>Other Regulation</b><br><input type="checkbox"/> REG 558 <input type="checkbox"/> PWQO<br><input type="checkbox"/> CCME <input type="checkbox"/> MISA<br><input type="checkbox"/> SU - Sani <input type="checkbox"/> SU - Storm<br>Mun: _____<br><input type="checkbox"/> Other: _____ | <b>Matrix Type:</b> S (Soil/Sed.) GW (Ground Water)<br>SW (Surface Water) SS (Storm/Sanitary Sewer)<br>P (Paint) A (Air) O (Other) | <b>Required Analysis</b><br>PHCs F1-F4+BTEX<br>VOCs<br>PAHs<br>Metals by ICP<br>Hg<br>CrVI<br>B (HWS)<br>EC / SAR<br>pH |                |                           |                 |      |      |               |    |      |         |          |    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|----------------|---------------------------|-----------------|------|------|---------------|----|------|---------|----------|----|
| Sample ID/Location Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Matrix                                                                                                                                                                                                                                                                                    | Air Volume                                                                                                                         | # of Containers                                                                                                         | Field Filtered | Sample Taken<br>Date 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                           |                                                                                                                                    |                                                                                                                         |                |                           |                 |      |      |               |    |      |         |          |    |

|                                             |                    |                       |                                              |
|---------------------------------------------|--------------------|-----------------------|----------------------------------------------|
| Comments:                                   |                    | Method of Delivery:   |                                              |
| Relinquished By (Sign): <i>J. Andrechek</i> | Received at Depot: | Received at Lab:      | Verified By: <i>J. Andrechek</i>             |
| Relinquished By (Print): Jesse Andrechek    | Date/Time:         | Date/Time: Jan 8 8:00 | Date/Time: Jan 8 8:18                        |
| Date/Time: 7-JAN-2025                       | Temperature: °C    | Temperature: 5.1      | pH Verified: <input type="checkbox"/> By: NA |

## 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

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

## 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     |

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:   | 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**

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:   | 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 | - | - | - | - |
|----|---------------|------|---|---|---|---|

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

## Method Quality Control: Blank

| Analyte                                    | Result | Reporting Limit | Units | %REC | %REC Limit | RPD | RPD Limit | Notes |
|--------------------------------------------|--------|-----------------|-------|------|------------|-----|-----------|-------|
| <b>EPA 1311 - TCLP Leachate Inorganics</b> |        |                 |       |      |            |     |           |       |
| 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  |      |            |     |           |       |
| <b>EPA 1311 - TCLP Leachate Metals</b>     |        |                 |       |      |            |     |           |       |
| 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  |      |            |     |           |       |
| <b>EPA 1311 - TCLP Leachate Organics</b>   |        |                 |       |      |            |     |           |       |
| Benzo [a] pyrene                           | ND     | 0.0001          | mg/L  |      |            |     |           |       |
| Surrogate: Terphenyl-d14                   | 0.086  |                 | %     | 43.1 | 37-156     |     |           |       |
| <b>EPA 1311 - TCLP Leachate Volatiles</b>  |        |                 |       |      |            |     |           |       |
| Benzene                                    | ND     | 0.005           | mg/L  |      |            |     |           |       |
| Surrogate: Toluene-d8                      | 0.0831 |                 | %     | 104  | 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

### Method Quality Control: Duplicate

| Analyte                                    | Result | Reporting Limit | Units    | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|--------------------------------------------|--------|-----------------|----------|---------------|------|------------|-----|-----------|-------|
| <b>EPA 1311 - TCLP Leachate Inorganics</b> |        |                 |          |               |      |            |     |           |       |
| 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        |       |
| <b>EPA 1311 - TCLP Leachate Metals</b>     |        |                 |          |               |      |            |     |           |       |
| 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        |       |
| <b>EPA 1311 - TCLP Leachate Volatiles</b>  |        |                 |          |               |      |            |     |           |       |
| Benzene                                    | ND     | 0.005           | mg/L     | ND            |      |            | NC  | 25        |       |
| Surrogate: Toluene-d8                      | 0.0836 |                 | %        |               | 104  | 76-118     |     |           |       |
| <b>General Inorganics</b>                  |        |                 |          |               |      |            |     |           |       |
| pH                                         | 6.39   | 0.05            | pH Units | 6.44          |      |            | 0.8 | 2.3       |       |
| <b>Physical Characteristics</b>            |        |                 |          |               |      |            |     |           |       |
| % Solids                                   | 93.0   | 0.1             | % by Wt. | 93.0          |      |            | 0.0 | 25        |       |

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

## Method Quality Control: Spike

| Analyte                                    | Result | Reporting Limit | Units | Source Result | %REC | %REC Limit | RPD | RPD Limit | Notes |
|--------------------------------------------|--------|-----------------|-------|---------------|------|------------|-----|-----------|-------|
| <b>EPA 1311 - TCLP Leachate Inorganics</b> |        |                 |       |               |      |            |     |           |       |
| 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     |     |           |       |
| <b>EPA 1311 - TCLP Leachate Metals</b>     |        |                 |       |               |      |            |     |           |       |
| 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     |     |           |       |
| <b>EPA 1311 - TCLP Leachate Organics</b>   |        |                 |       |               |      |            |     |           |       |
| Benzo [a] pyrene                           | 0.0610 | 0.0001          | mg/L  | ND            | 122  | 39-123     |     |           |       |
| Surrogate: Terphenyl-d14                   | 0.26   |                 | %     |               | 128  | 37-156     |     |           |       |
| <b>EPA 1311 - TCLP Leachate Volatiles</b>  |        |                 |       |               |      |            |     |           |       |
| Benzene                                    | 0.031  | 0.005           | mg/L  | ND            | 77.8 | 55-141     |     |           |       |
| Surrogate: Toluene-d8                      | 0.0883 |                 | %     |               | 110  | 76-118     |     |           |       |

Certificate of Analysis

Client: Paterson Group Consulting Engineers (Ottawa)

Client PO: 61725

Report Date: 15-Nov-2024

Order Date: 11-Nov-2024

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 unless otherwise noted.

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

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

