G2S Consulting Inc.
4361 Harvester Rd., Unit 12, Burlington, ON L7L 5M4
P 905.331.3735 F 905.642.5999
G2Sconsulting.com

Phase Two Environmental Site Assessment

70 Hope Avenue, Hamilton, Ontario

G2S24376B

Municipal Land Development Office
Planning & Economic Development
City of Hamilton
71 Main Street East
Hamilton, Ontario
L8P 4Y5

December 2024

Executive Summary

G2S Consulting Inc. (G2S) was retained by the City of Hamilton (the Client) to complete a Phase Two Environmental Site Assessment (ESA) for the property located at 70 Hope Street in Hamilton, Ontario, hereinafter referred to as the 'Site'. Authorization to proceed with this assignment was provided under PO CR01044, dated August 2, 2024.

The irregular shaped Site is located on the south side of Hope Avenue, approximately 30 m east of the intersection with Kenilworth Avenue North and covers an approximate plan area of 0.19 hectares (0.47 acres). The 'Study Area', which is defined as being the area including the Site and lands within approximately 250 m of the Site, consists of residential and commercial land use as part of the City of Hamilton Homeside neighbourhood urban development. An inlet of Lake Ontario is the nearest water body, located approximately 2.2 kilometres (km) north of the Site.

The Site is currently developed as an asphalt paved parking lot. The Site was first developed for residential property use pre-1914. The residential property use continued, with some instances of commercial use in the southern portion of the Site until the early 1960s, when residential buildings were demolished for development into the existing municipal parking lot.

G2S understands the Client requires the Phase Two ESA for due diligence purposes related to the potential redevelopment for residential purposes. The Site was most recently used for commercial purposes (as a parking lot) and is proposed to be used for residential purposes. Since there is a change in property use planned (commercial to residential), a Record of Site Condition (RSC) is required under O. Reg. 153/04, prior to re-development.

The purpose of this Phase Two ESA was to satisfy O. Reg. 153/04 (as amended) requirements, to investigate potential contamination within Areas of Potential Environmental Concern (APECs) identified during a Phase One ESA completed by G2S in October 2024, in preparation of filing an RSC for the Site. Refer to the appended Drawings 2 and 3 in Appendix A for a summary of the identified Potentially Contaminating Activities (PCAs) and APECs for the Site.

The field work for this investigation was completed in November 2024, and included the advancement of four boreholes on-Site, three of which were installed as groundwater monitoring wells. Refer to Drawing 4 for the Borehole and Monitoring Well Location Plan.

The findings of this assignment are summarized as follows:

1. In general, the subsurface conditions included a pavement structure comprising approximately 60 to 110 millimeters of asphalt, underlain by granular material approximately 150 – 280 mm in thickness. Fill materials were present on the north portion of the Site generally consisting of brown, red and grey silty clay with some sand, and extended to depths between approximately 0.4 and 1.2 m bgs. Native grey and brown silty clay with trace sand was encountered in the central portion of the Site from 0.4 to 1.3 m. A shale/till complex unit was encountered beneath the fill and/or silty clay in all boreholes, extending to depths between 1.8 and 2.4 m bgs. Red shale bedrock was encountered in each borehole extending to the borehole termination depths. Refer to the borehole logs in Appendix B.

2. Groundwater was found in the monitoring wells on November 15, 2024, between depths of 3.38 and 4.35 m bgs.

3. Soil samples were submitted for laboratory analysis of PHCs F1 to F4 including BTEX, VOCs, PAHs, and metals and ORPs. The concentrations of the tested parameters in the submitted samples were below the Ministry of Environment, Conservation, and Parks (MECP) Table 3 Site Condition Standards (SCS) for Residential/Parkland/Institutional (RPI) Property Use, with the exception of the following:

    - Sample BH104 S1A – PHC F3 (433 µg/g) exceeded the SCS of 300 µg/g, PHC F4 Gravimetric (G) (4540 µg/g) exceeded the SCS of 2800 µg/g.
    - Duplicate sample BH105 S1A – PHC F3 (316 µg/g) exceeded the SCS of 300 µg/g.
    - Sample BH101 S1B – Benzo[a]anthracene (0.70 µg/g) exceeded the SCS of 0.5 µg/g, benzo(a)pyrene (0.75 µg/g) exceeded the SCS of 0.3 µg/g, dibenzo[a,h]anthracene (0.11 µg/g) exceeded the SCS of 0.1 µg/g, fluoranthene (1.66 µg/g) exceeded the SCS of 0.69 µg/g and indeno(1,2,3-cd)pyrene (0.41 µg/g) exceeded the SCS of 0.38 µg/g.
    - Sample BH101 S1B – Boron (Hot Water Soluble (HWS)) (4.4 µg/g) exceeded the SCS of 1.5 µg/g and lead (237 µg/g) exceeded the SCS of 120 µg/g.
    - Sample BH102 S1C – Boron (HWS) (1.8 µg/g) exceeded the SCS of 1.5 µg/g.
    - Sample BH103 S1B – Sodium Adsorption Ratio (SAR) (12.4) exceeded the SCS of 5 and Electrical Conductivity (EC) (1.35 mS/cm) exceeded the SCS of 0.7 mS/cm.
    - Sample BH104 S1B – Boron (HWS) (2.2 µg/g) exceeded the SCS of 1.5 µg/g, SAR (6.64) exceeded the SCS of 5 and EC (1.02 mS/cm) exceeded the SCS of 0.7 mS/cm.
    - Duplicate sample BH105 S1B (duplicate of BH104 S1B) – Boron (HWS) (2.7 µg/g) exceeded the SCS of 1.5 µg/g, SAR (8.87 µg/g) exceeded the SCS of 5 µg/g and EC (1.46 mS/cm) exceeded the SCS of 0.7 mS/cm.

4. Groundwater samples from the monitoring wells were submitted for laboratory analysis of PHCs F1-F4 including BTEX, VOCs, PAHs, and metals and ORPs. The concentrations of the tested parameters in the submitted samples were below the MECP Table 3 SCS, with the exception of the following:

    - Sample BH103 (2.3 µg/L) and duplicate sample BH/MW105 (4.2 µg/L) exceeded the SCS of 1.6 µg/L for VOC parameter 1,1-dichloroethylene.

5. The elevated EC and SAR in soil are attributed to the historical use of de-icing salt on the surfaces of the Site and adjacent roadways. Under O. Reg. 153/04, as amended, where a SCS is exceeded solely because a substance has been applied to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow and ice, the applicable site condition standard is deemed not to be exceeded. Reference is made to O. Reg. 153/04, as amended, s. 49 (1).

Based on the results of the Phase Two ESA, the Site soil and groundwater does not meet the applicable MECP Table 3 RPI SCS. As such, supplemental Phase Two ESA work is required before an RSC can be filed.

G2S recommends the following supplemental work:

- Resample groundwater at BH/MW103 in order to confirm that the exceedance of 1,1-dichloroethylene exceedance is not anomalous.

- Complete a program of supplemental Phase Two ESA soil sampling and chemical testing for horizontal and vertical delineation of soil contamination.

In accordance with O. Reg. 903/90, as amended, the monitoring wells should be decommissioned if the wells are not in use or being maintained for future use.

The assignment is subject to the Statement of Limitations that is included in this report. It should be noted soil and groundwater conditions between and beyond the sampled locations may differ from those encountered during this assignment. G2S should be contacted if impacted soil or groundwater conditions become apparent during future development to further access and appropriately handle the materials, if any, and evaluate whether modifications to the conclusions documented in this report are necessary.

Table of Contents

Appendices

List of Drawings

1. Introduction

G2S Consulting Inc. (G2S) was retained by the City of Hamilton (the Client) to complete a Phase Two Environmental Site Assessment (ESA) for the property located at 70 Hope Avenue in Hamilton, Ontario, hereinafter referred to as the 'Site'. Authorization to proceed with this assignment was provided under PO CR01044, dated August 2, 2024.

G2S understands the Client requires the Phase Two ESA for due diligence purposes related to the potential redevelopment of the Site for residential purposes. The Site was most recently used for commercial purposes (as a parking lot) and is proposed to be used for residential purposes. Since there is a change in property use planned (commercial to residential), a Record of Site Condition (RSC) is required under O. Reg. 153/04, as amended, prior to re-development.

Drawing 1 in Appendix A illustrates the location of the Site involved in the study.

1.1 Site Description

The 'Study Area', which is defined as being the area including the Site and lands within approximately 250 m of the Site, consists primarily of residential and commercial land use.

The Site is currently developed as an asphalt paved parking lot. The Site was first developed for residential property use pre-1914. The residential property use continued, with some instances of commercial use in the southern portion of the Site until the early 1960s, when residential buildings were demolished for development into the existing municipal parking lot.

1.2 Property Ownership and Information

Table 1: General Site Details

Municipal Address	70 Hope Avenue, Hamilton, Ontario
General Site Location	South side of Hope Avenue, approximately 40 m east of Kenilworth Avenue North.
Approximate Plan Area	Approximate plan area of 0.19 hectares (0.46 acres) with frontage of approximately 20 m on Hope Avenue, frontage of approximately 8 m on Brittania Avenue and a depth of approximately 125 m.
Property Identification Number (PIN)	17260-0059 (LT)
Legal Description	LT 6, BLK 6, PL 395, LT 7, BLK 6, PL 395; LTS 14, 15 & 16, PL 564, S/T HL156481 & AB362102; HAMILTON
Current Site Owner and Contact Information	The Corporation of the City of Hamilton
Current Site Occupant	Vacant (parking lot)

1.3 Current and Proposed Future Land Uses

G2S understands the Client requires the Phase Two ESA for due diligence purposes related to the proposed redevelopment for residential purposes. Since there is a change in property use planned (commercial to residential), an RSC is required under O. Reg. 153/04, prior to re-development.

In accordance with the current regulatory requirements, the environmental site assessment work was carried out under the supervision of a Qualified Person as defined in O. Reg. 153/04.

1.4 Applicable Site Condition Standards

The assessment criteria applicable to a given site in Ontario are provided in the Ministry of Environment, Conservation, and Parks (MECP) document entitled "Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act," dated April 15, 2011.

Standards are provided in Tables 1 to 9 in the document. These standards are based on site sensitivity, groundwater use, property use, soil type and restoration depth.

For this investigation, G2S has selected the Full Depth Generic Table 3 Site Condition Standards (SCS) in a Potable Groundwater Condition and Residential/Parkland/Institutional (RPI) Property Use, with coarse textured soils. The selection of this category is based on the following factors:

- There is no intention to carry out stratified restoration at the Site.
- Conservatively, coarse textured grain size was chosen based on the presence of coarse textured fill.
- The use of the Site is commercial with a proposed change in land use to residential.
- The Site is not located within 30 metres of a water body.
- The Site is not considered a sensitive site based on:
    - The Site is not within an area of natural significance or includes or is adjacent to such an area or part of such an area.
    - The pH values are within the recommended range of 5 to 9 for surface soil (<1.5 m) and within 5 to 11 for subsurface soil (>1.5 m).
- The non-potable groundwater condition applies to the Site based on:
    - The Site, and/or properties, in whole or in part, within 250 metres of the boundaries of the Site, are located within the Regional Municipality of Hamilton, which obtains potable water from Lake Ontario.
- Based on the findings from the Phase Two ESA, the following can be confirmed with respect to Sections 41 and 43.1 of O.Reg. 153/04:
    - The Site is not a shallow soil property, as defined in Section 43.1 of O.Reg. 153/04.

- The Site is not an environmentally sensitive site as defined in Section 41 of O.Reg. 153/04.

2. Background Information

2.1 Physical Setting

No water bodies or areas of natural significance were located on-Site or within the Study Area. The nearest water body is Hamilton Harbour, which is located approximately 2.2 kilometres north of the Site.

The Site is located approximately 89 m above sea level. Based on our observations and review, the expected direction of groundwater flow is to the north, following surface topography towards Lake Ontario. Local variations in groundwater flow patterns, however, can be expected due to buried utility infrastructures and buildings.

G2S reviewed the Soil Associations of Southern Ontario map which indicated the Site and Study Area is dominantly sandy loam formed on sand and gravel from the Grey-Brown Podzolic group. Additionally, the Palaeozoic Geology of Southern Ontario, Map 2254, Ontario Division of Mines, was reviewed which indicated the Site is underlain by red shale of the Upper Ordovician Queenston Formation. The Bedrock Topography of Grimsby Area, Map P.2401, Ontario Geological Survey indicated that bedrock is located approximately 5 m below ground surface (bgs).

2.2 Past Investigations

G2S previously completed a Phase One ESA for the Site, entitled:

"Phase One Environmental Site Assessment, 70 Hope Avenue South, Hamilton, Ontario," dated October 15, 2024.

The Phase One ESA identified three on-Site and several off-Site PCAs which were assessed based on observations of the operations, their location relative to the Site with respect to the inferred groundwater flow direction, their tenure, expected chemical storage amounts, etc. Based on review and evaluation of the information gathered, the following APECs were identified on-Site:

APEC 1A: North portion of the Site - Potential for imported fill material within former building footprint.

APEC 1B: South portion of the Site – Potential for imported fill material within former building footprint.

APEC 2: South portion of the Site - Historic presence of a coal operation on the south portion of the Site.

APEC 3: Entire Site – Historical use of de-icing salt located on paved portions of the Site.

APEC 4: West portion of the Site – Historic presence of three dry cleaners and a diesel fuel injection service west of the Site.

APEC 5: Historic presence of a gasoline service station with USTs as well as automotive servicing (~25 m southwest).

Regarding APEC 3 (de-icing salt use), per Section 49.1 of O. Reg 153/04, assessment of this APEC is not required. Under the Regulations, where a substance has been applied to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow or ice or both, the applicable standard is deemed not to be exceeded. In this regard, further assessment of this APEC is not required.

Based on the Phase One ESA findings, a Phase Two ESA was recommended to investigate potential environmental impacts in soil and groundwater, resulting from the identified APECs.

3. Scope of the investigation

3.1 Overview of Site Investigation

The purpose of this Phase Two ESA was to satisfy O. Reg. 153/04 requirements, to investigate potential contamination within APECs identified during a Phase One ESA completed by G2S in October 2024 in preparation of filing an RSC for the Site. Refer to the appended Drawings 2 and 3 in Appendix A for a summary of the identified PCAs and APECs for the Site.

3.2 Scope of Work

The scope of work for this investigation included the following:

- Review of previous reports;
- The locating and marking of underground utilities by public and private utility locators;
- Attendance at the Site to complete boreholes and install groundwater monitoring wells;
- Soil and groundwater sampling;
- Laboratory analysis of soil and groundwater samples;
- Data compilation and evaluation of the information gathered, and
- Preparation of this report, discussing the information compiled and the corresponding conclusions and recommendations.

4. Investigation method

4.1 General

The locations of underground utilities were identified and marked by public locating companies as well as a private utility locating contractor.

4.2 Media Investigated

Based on the Phase One ESA, the media potentially impacted at the Site included soil and groundwater which were investigated as part of this Phase Two ESA. No sediment or surface water was present.

4.3 Phase One Conceptual Site Model

Based on the review, interpretation and evaluation of the data compiled, a Phase One Conceptual Site Model (CSM) of the Phase One ESA property was prepared and is included in the G2S Phase One ESA report completed in October 2024. The additional information acquired as part of this Phase Two ESA was used to prepare the Phase Two CSM, which will be finalized during the RSC.

4.4 Deviations from Sampling and Analysis Plan

No deviations from the sampling and analysis plan were encountered during this assignment.

4.5 Impediments

There were no impediments during completion of this Phase Two ESA.

4.6 Drilling

The drilling was conducted on November 7, 2024, and included the advancement of four boreholes on-Site (labelled as BH101 to BH104) by Profile Drilling Inc. (Profile), a licensed well contractor, under the supervision of G2S staff. Three of the boreholes (BH101, BH102, and BH103) were completed as groundwater monitoring wells (labelled BH/MW101, BH/MW102 and BH/MW103, respectively). A track mounted VTR Power Probe drill rig was used to advance the boreholes and to collect the soil samples.

Appropriate precautions were taken, and equipment and sampling tool decontamination was carried out during field work to minimize potential cross-contamination between samples and boreholes. Petroleum-based greases and/or solvents were not used during drilling activities. The boreholes were sampled to a maximum depth of approximately 2.7m bgs upon direct push sampler refusal on bedrock. Refusal on bedrock was encountered at 2.4 m bgs in BH104. Boreholes BH101 to BH103 were advanced into bedrock using continuous flight solid stem augers to facilitate monitoring well installation.

The borehole and monitoring well locations were established in the field by G2S as shown on Drawing 4 in Appendix A.

4.7 Soil Sampling

During field work, soil samples in the boreholes were collected with split spoon samplers using disposal polyvinyl chloride (PVC) tube liners advanced following direct push methods. G2S staff continually monitored the field activities to log the recovered soil cores/samples, to record the depth of soil sample collection and total depths of the boreholes. Field observations were recorded on borehole logs and are included in Appendix B.

The soil samples were field logged and placed in laboratory provided glass jars with Teflon™ lined lids and/or methanol vials (pre-filled and weighed with 10 mL purge & trap grade methanol). Sample cores for analysis of volatiles were collected using a 5-gram Eze-Core Soil Sampler. Disposable nitrile gloves (one per sample) were used during sample collection. The jars and vials were then sealed and stored in an insulated cooler with ice for transportation to the laboratory for additional examination. The remaining soil samples were placed in a sealed plastic bag for vapour screening for the presence of organic vapours. Particular attention was applied to visual and olfactory evidence of potential contamination such as odour and staining during field work.

The soil sampling and sample handling procedures were carried out according to the supporting documents of O. Reg. 153/04 and established standards.

4.8 Field Screening Measurements

Organic vapour readings were recorded using an RKI Eagle 2 gas detector, equipped with a Photo Ionization Detector (PID) sensor, calibrated to isobutylene (IBL) and a catalytic combustible gas sensor, calibrated to hexane (HEX). The PID sensor detects low level volatile organic compounds (VOCs) in parts per million (ppm) and the catalytic combustible gas sensor detects petroleum hydrocarbons (PHCs) in ppm or lower explosive limit (LEL). Accuracy of the gas monitor varies with the type of gas being measured.

The correlation between combustible vapour concentrations and PHCs in soil is highly dependent on the soil type, moisture content, and characteristics of the contaminant of concern. The results of the screening are used as a tool in establishing relative soil vapour concentrations, and aid in the selection of soil samples for chemical analysis among samples and borehole locations.

The organic vapour readings were measured by inserting the instrument's probe into the headspace of the plastic bag and manipulating the soil samples by hand. There are no regulatory criteria for soil vapours; however, organic vapour readings provide a general indication of the relative concentration of organic vapours encountered in the soil samples during drilling.

4.9 Groundwater Monitoring Well Installation

Groundwater monitoring wells were installed in boreholes BH101, BH102, and BH103, identified as BH/MW101, BH/MW102, and BH/MW103, respectively. The monitoring wells were installed in accordance with the Ontario Water Resources Act – R.R.O. 1990, Regulation 903, as amended to O. Reg. 128/03, and were installed by a licensed well contractor (Profile Drilling Inc.).

The monitoring wells were installed to a depths between 7.54 and 7.81 m bgs. The monitoring wells were constructed using 50-millimetre (mm) diameter, number 10 slot Schedule 40 PVC screen and PVC riser pipe, completed with a 1.5 m long screen, and sealed at the base with PVC end cap and an appropriate length of riser pipe extending to just below the flushmount casings. All pipe connections were threaded flush joints with no lubricants or adhesives used in the

construction of the monitoring wells. Details of the completion of the monitoring wells are provided on the borehole logs in Appendix B. The annular space around the well screen in the wells was backfilled with silica sand to an approximate height of 0.3 m above the top of the screen. The sand pack was extended above the screens to allow for compaction of the sand pack and expansion of the overlying well seal. A granular bentonite ('Hole Plug') seal was placed in the borehole annulus from the top of the sand pack to approximately 0.3 m below the ground surface. The monitoring wells were completed with flushmount protective steel casings cemented in place.

The Site owner is considered to be the owner of the monitoring wells installed by Profile ("well owner" Section 1.0, Regulation 903). When the monitoring wells are no longer required, it is the owner's responsibility to arrange for abandonment in accordance with Ontario Water Resources Act–R.R.O. 1990, Regulation 903, as amended to O. Reg. 128/03.

4.10 Elevation Surveying

The borehole/monitoring well locations were selected and established in the field by G2S and ground surface elevations were determined by G2S. The following temporary benchmark was used for vertical reference:

TBM: The manhole cover located on Hope Avenue, approximately 5 m north of the centre of the north Site entrance.
Assigned Elevation: 100.00 m (metric, assigned)

4.11 Groundwater Sampling

On November 15, 2024, G2S attended the Site to record the groundwater levels, develop and purge the groundwater in the monitoring wells. Collection of groundwater samples for chemical testing was completed on November 19, 2024.

An electronic water level meter was used to record the depth of groundwater in the monitoring wells. Dedicated bailers were installed in the monitoring wells for purging and dedicated low-density polyethylene (LDPE) tubing was installed in the monitoring wells for sample collection with a low flow peristaltic pump. Well development included the removal of a minimum of three casing volumes or until the wells were dry, in accordance with fixed volume and well evacuation purging procedures as outlines in ASTM D6452 99 (2012). The electric water level meter was rinsed with a mild detergent, distilled water, and methanol to prevent cross contamination between wells.

The groundwater samples were field logged and placed in clean, laboratory provided bottles and stored in an insulated cooler on ice. Samples were then taken to the G2S laboratory where the samples were temporarily preserved in a refrigerator to maintain a cool environment or were delivered directly to the laboratory for analysis. Particular attention was applied to visual and olfactory evidence of potential contamination such as odours and/or sheen during field work.

The groundwater sampling and sample handling procedures were carried out according to the supporting documents of O. Reg. 153/04 and established standards.

4.12 Analytical Testing

Selected soil and groundwater samples were submitted for chemical analysis under chain of custody protocols to Paracel Laboratories Ltd. (Paracel), a Canadian Association for Laboratory Accreditation Inc. (CALA) accredited laboratory.

The rationale for soil sample selection was based on visual and/or olfactory evidence of potential contamination and assessment of the APECs identified in the Phase One ESA. Soil samples from the boreholes were analyzed for potential contaminants of concern (COCs), including petroleum hydrocarbon fractions F1 to F4 (PHCs F1 to F4) including benzene, toluene, ethylbenzenes, and xylenes (BTEX), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and metals and other regulated parameters (ORPs). Grain size analysis was also completed on soil sample BH102 S2B to confirm the soil texture. The table below indicates the soil samples selected for laboratory analysis.

Table 3: Soil Samples Submitted for Laboratory Analysis

Sample ID	Depths (m bgs)	Date Sampled	Chemical Analysis						Rationale
			PHCs F1 to F4	BTEX	VOCs	PAHs	M/ORPs	TCLP M&I, VOCs, B(a)P, and Ignitability	
BH101 S1B	0.3 – 1.2	November 7, 2024	✓	✓	✓	✓	✓		Investigate APEC 1a and 4 to confirm soil quality
BH101 S2	1.2 – 2.4		✓	✓	✓				
BH102 S1B	0.3 – 0.4		✓	✓	✓				Investigate APEC 1b and 2 to confirm soil quality
BH102 S1C	0.4 – 1.2					✓	✓		
BH103 S1B	0.2 – 1.2					✓	✓		Investigate APEC 1b, 2 and 4 to confirm soil quality
BH103 S2A	1.2 –1.8		✓	✓	✓				
BH104 S1A	0.1 – 0.3		✓	✓	✓				Investigate APEC 1a to confirm soil quality
BH104 S1B	0.3 – 1.2					✓	✓		
BH105 S1A	Duplicate of BH104 S1A		✓	✓	✓				QA/QC
BH105 S1B	Duplicate of BH104 S1B					✓	✓		
TCLP GS1	Composite of drummed cuttings							✓	Waste Characterization

Notes: PHCs - Petroleum Hydrocarbons Fractions F1-F4; BTEX – Benzene, Toluene, Ethylbenzene, Xylenes
PAHs – Polycyclic Aromatic Hydrocarbons; VOCs – Volatile Organic Compounds
M/ORPs – Metals and Other Regulated Parameters; TCLP – Toxicity Characteristic Leaching Procedure
ORPs include boron-hot water soluble (HWS), free cyanide (CN-), chromium hexavalent (CrVI), mercury (Hg), pH, electrical conductivity (EC), and sodium adsorption ratio (SAR)

The rationale for groundwater sample selection was based on visual and/or olfactory evidence of potential contamination and the identified APECs. Groundwater samples from the monitoring wells were analyzed for potential COCs including PHCs F1 to F4, BTEX, VOCs, PAHs, and metals and ORPs. The table below provides details of the groundwater samples collected and the chemical analyses performed.

Table 4: Groundwater Samples Submitted for Laboratory Analysis

Sample ID	Monitoring Well ID	Date Sampled	Chemical Analysis					Rationale
			PHCs F1 to F4	BTEX	VOCs	PAHs	M/ORPs	
BH/MW101	BH/MW101	November 19, 2024	✓	✓	✓			Investigate APEC 4 to confirm groundwater quality
BH/MW102	BH/MW102		✓	✓		✓	✓*	Investigate APEC 2 to confirm groundwater quality
BH/MW103	BH/MW103		✓	✓	✓	✓	✓	Investigate APEC 2, 4 and 5 to confirm groundwater quality
BH/MW105	Duplicate of BH/MW103		✓	✓	✓	✓	✓	QA/QC

Notes: * Metals only (no ORPs)
ORPs include free cyanide (CN-), chromium hexavalent (CrVI), mercury (Hg), pH, and chloride (Cl-).

4.13 Residue Management Procedures

Soil cuttings generated during drilling were stored on-Site in sealed steel drums and purged groundwater from the monitoring wells was stored in 25 L pails, pending the results of chemical testing. Following completion of drilling, the drums of soil cuttings were removed from the site by a licenced waste hauler (Terra Nova Environmental Services Inc.) on November 8, 2024. The pails of groundwater can be removed off Site by a licenced waste disposal subcontractor once no longer required, or during redevelopment of the Site.

5. Review and Evaluation

5.1 Geology

Reference is made to the appended drawings in Appendix A and borehole logs in Appendix B for details of the field work including sampling locations, visual soil classification, inferred stratigraphy, groundwater observations, and monitoring well installation details.

The boundaries indicated on the borehole logs are intended to reflect transition zones for the purpose of environmental assessment and should not be interpreted as exact planes of geological change.

A description of the soil stratigraphy encountered on the Site, in order of depth, is summarized in the sections below. Cross-Sections A-A' and B-B' depicting profiles are included as Drawings 8A to D and 9A to C, respectively, in Appendix A.

Pavement Structure

A layer of asphalt was encountered in boreholes BH101 to BH104, approximately 60 to 110 mm in thickness overlying granular material approximately 150 – 280 mm in thickness.

Fill Materials

Fill materials were encountered beneath the pavement structure in BH101, BH102 and BH104, generally consisting of brown, red and grey silty clay with some sand, and extended to depths between approximately 0.4 and 1.2 m below ground surface (bgs).

Silty Clay

Native grey and brown silty clay with trace sand was encountered in BH102 from 0.4 to 1.3 m bgs.

Shale/Till Complex

A shale/till complex unit was encountered beneath the fill and/or silty clay in all boreholes, extending to depths between 1.8 and 2.4 m bgs.

Bedrock

Red shale bedrock was encountered below the native material in each borehole extending to the borehole termination depths.

5.2 Groundwater Elevation and Flow Direction

Groundwater levels were measured in the wells on November 15, 2024. The arbitrary elevation of the ground surface was determined in the field, and groundwater level measurements were taken by measuring to the surface of the groundwater from the ground surface and from the top of the well casing with the necessary corrections made to establish depths below grade if required.

The following table summarizes the monitoring well installation details and groundwater observations.

Table 5: Summary of Groundwater Levels

Monitoring Well I.D.	Ground Surface Elevation	Well Depth from Ground Surface (m)	Screened Interval Elevation (m) and Depth (m bgs)	Groundwater Elevation and Depth (m bgs)
				November 15, 2024
BH/MW101	100.12	7.81	92.31 – 93.81 (6.31 – 7.81)	95.77 (4.35)
BH/MW102	100.64	7.76	92.88 – 94.38 (6.26 – 7.76)	97.10 (3.54)
BH/MW103	100.58	7.54	93.04– 94.54 (6.04 – 7.54)	97.20 (3.38)

Note: Monitoring wells were surveyed for elevation relative to an arbitrary benchmark.

Based on the measured groundwater elevation data, local groundwater flow at the Site appears to be towards the north. The expected direction of groundwater flow in the Study Area is to the north, following surface topography towards Lake Ontario located approximately 2.2 kilometres north of the Site.

The groundwater levels were found at depths between 3.38 and 4.35 m bgs during the measurements on November 15, 2024. Groundwater levels are subject to seasonal fluctuations and variations in precipitation; however, the effects of seasonal variation at the Site are not anticipated to significantly affect the groundwater conditions of the Site from an environmental viewpoint. Due to the depth of groundwater, utilities are not expected to impact the flow of groundwater or affect the migration of contaminants.

5.3 Groundwater Hydraulic Gradient

Groundwater level contours for the monitoring wells on-Site are shown on Drawing 5, which also shows the monitoring well locations and measured water levels. Table 5 above provides a summary of the water levels between in November 2024.

Based on G2Ss' Site observations and short-term water level measurements, the groundwater table underlying the Site has a horizontal gradient of approximately 0.018 (1.8%) towards the north.

5.4 Soil Texture

The subsurface stratigraphy in the boreholes typically comprised fill materials over a deposit of red shale and till complex. For a preliminary assessment, material finer than 75 µm by washing analysis of a selected sample collected during the Phase Two ESA was completed by G2S and indicated 92.8 % by mass of particles were less than 75 µm in mean diameter, indicating medium/fine textured soils SCSs may be applicable to the Site, as defined in O. Reg. 153/04. However, based on the presence of fill, coarse textured soil SCSs were chosen as conservative.

5.5 Soil Field Screening

Measured soil vapour concentrations on the headspace of recovered soil samples were identified between 0 and 25 ppm for the catalytic gas sensor and 0 and 1 ppm for the photoionization detector at the time of sampling. Complete soil field screening measurements are presented on the borehole logs in Appendix B.

5.6 Analytical Findings – Soil

Tables summarizing the analytical results are included in Appendix C and the laboratory Certificates of Analysis for the soil samples submitted for analysis are included in Appendix D.

The laboratory method detection limits (MDLs) were below the MECP Table 3 RPI SCS for the parameters analyzed.

5.6.1 Petroleum Hydrocarbons Fractions F1 to F4 (PHC F1 to F4) including Benzene, Toluene, Ethylbenzene, and Xylene (BTEX)

PHCs F1 to F4 and BTEX were not detected or were detected at concentrations below the Table 3 RPI SCS in the submitted soil samples, with the exception of the following:

- Sample BH104 S1A – PHC F3 (433 µg/g) exceeded the SCS of 300 µg/g, PHC F4 Gravimetric (G) (4540 µg/g) exceeded the SCS of 2800 µg/g.
- Duplicate sample BH105 S1A – PHC F3 (316 µg/g) exceeded the SCS of 300 µg/g.

Refer to Table 1 in Appendix C.

5.6.2 Volatile Organic Compounds (VOCs)

Volatile organic compounds were not detected or were detected at concentrations below the Table 3 RPI SCS in the submitted soil samples. Refer to Table 2 in Appendix C.

5.6.3 Polycyclic Aromatic Hydrocarbons (PAHs)

Polycyclic aromatic hydrocarbons were not detected or were detected at concentrations below the Table 3 RPI SCS in the submitted soil samples, with the exception of the following:

- Sample BH101 S1B – Benzo[a]anthracene (0.70 µg/g) exceeded the SCS of 0.5 µg/g, benzo[a]pyrene (0.75 µg/g) exceeded the SCS of 0.3 µg/g, dibenzo[a,h]anthracene (0.11 µg/g) exceeded the SCS of 0.1 µg/g, fluoranthene (1.66 µg/g) exceeded the SCS of 0.69 µg/g and indeno(1,2,3-cd)pyrene (0.41 µg/g) exceeded the SCS of 0.38 µg/g.

Refer to Table 3 in Appendix C.

5.6.4 Metals and Other Regulated Parameters (ORPs)

Metals and ORPs were not detected or were detected as concentrations below the Table 3 RPI SCS in the submitted soil samples, with the exception of the following:

- Sample BH101 S1B – Boron (Hot Water Soluble (HWS)) (4.4 µg/g) exceeded the SCS of 1.5 µg/g and lead (237 µg/g) exceeded the SCS of 120 µg/g.

- Sample BH102 S1C – Boron (HWS) (1.8 µg/g) exceeded the SCS of 1.5 µg/g.

- Sample BH103 S1B – Sodium Adsorption Ration (SAR) (12.4) exceeded the SCS of 5 and Electrical Conductivity (EC) (1.35 mS/cm) exceeded the SCS of 0.7 mS/cm.

- Sample BH104 S1B – Boron (HWS) (2.2 µg/g) exceeded the SCS of 1.5 µg/g, SAR (6.64) exceeded the SCS of 5 and EC (1.02 mS/cm) exceeded the SCS of 0.7 mS/cm.

- Duplicate sample BH105 S1B (duplicate of BH104 S1B) – Boron (HWS) (2.7 µg/g) exceeded the SCS of 1.5 µg/g, SAR (8.87) exceeded the SCS of 5 and EC (1.46 mS/cm) exceeded the SCS of 0.7 mS/cm.

The elevated EC and SAR are attributed to the historical use of de-icing salt on the surfaces of the Site and adjacent roadways. Under O. Reg. 153/04, as amended, where a SCS is exceeded solely because a substance has been applied to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow and ice, the applicable SCS is deemed not to be exceeded. Reference is made to O. Reg. 153/04, as amended, s. 49 (1).

Refer to Table 4 in Appendix C.

5.6.5 Waste Characterization

The measured concentrations of the tested metals and inorganic parameters met the Schedule 4 leachate quality criteria, VOCs and B(a)P were not detected, and the material was not ignitable. Therefore, the material was classified as nonhazardous waste and could be disposed of at a landfill facility with an environmental compliance approval (ECA) to receive the waste type, pending approval of landfill authorities.

5.7 Analytical Findings – Groundwater

Tables summarizing the analytical results are included in Appendix C and the laboratory Certificates of Analysis for the groundwater samples submitted for analysis are included in Appendix D.

The laboratory MDLs were below the MECP Table 3 SCS for the parameters analyzed.

5.7.1 PHC F1 to F4 and BTEX

PHCs F1 to F4 and BTEX were not detected in the submitted groundwater samples and met the Table 3 SCS. Refer to Table 5 in Appendix C.

5.7.2 VOCs

VOCs were not detected or were detected in concentrations below the Table 3 SCS in the submitted groundwater samples, with the exception of the following:

- Sample BH103 (2.3 µg/L) and Duplicate sample BH/MW105 (4.2 µg/L) exceeded the SCS of 1.6 µg/L for 1,1-dichloroethylene.

Refer to Table 6 in Appendix C.

5.7.3 PAHs

Polycyclic aromatic hydrocarbons were not detected or were detected at concentrations below the Table 3 SCS in the submitted groundwater samples.

Refer to Table 7 in Appendix C.

5.7.4 Metals and ORPs

Metals and ORPs were not detected or were detected as concentrations below the Table 3 SCS in the submitted groundwater samples.

Refer to Table 8 in Appendix C.

5.7.5 LNAPLs and DNAPLs

No sheen or hydrocarbon odours were observed in the purged groundwater from the monitoring wells.

5.8 Quality Assurance/Quality Control (QA/QC) Results

Paracel Laboratories Ltd. (Paracel) is accredited by the Canadian Association for Laboratory Accreditation (CALA) in accordance with ISO/IEC 17025:2017 – "General Requirements for the Competence of Testing and Calibration Laboratories" for the analysis of all parameters for all samples in the scope of work for which SCS have been established under O. Reg. 153/04.

The chemical analyses conducted by Paracel were in accordance with the O. Reg. 153/04 Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act dated March 9, 2004, amended as of July 1, 2011.

Soil and groundwater samples were analysed by using standard reference methods and the testing methods were referenced in the Paracel Certificates of Analysis, as required by the MECP's protocol. Laboratory Quality Assurance/Quality Control (QA/QC) data is included with the Certificates of Analysis, which are appended. Method blank, spiked method blank, laboratory spiked, and duplicate soil samples were analysed by the laboratory with each batch of samples.

The results of chemical analysis of method blank sample indicated that the detected levels were within the acceptable range. The chemical test data for spiked method blank and laboratory spike samples indicated that the recovery ranges were within the statistically determined control limits.

A trip blank sample as well as blind field duplicates were obtained by G2S during the field work and submitted to Paracel as summarized in the following table:

Table 6: Trip Blank & Duplicate Sample Submissions

Sample I.D.	Date	Matrix	Rationale for Submission	Analysis
BH105 S1A	2024/11/07	Soil	Field duplicate of BH104 S1A	PHCs, BTEX, VOCs,
BH105 S1B	2024/11/07	Soil	Field duplicate of BH104 S1B	PAHs, M/ORPs

Table 6: Trip Blank & Duplicate Sample Submissions

Sample I.D.	Date	Matrix	Rationale for Submission	Analysis
BH/MW105	08/17/22	GW	Field duplicate of BH/MW103	PHCs, BTEX, PAHs, VOCs, metals and inorganics
Trip Blank	15/11/2024	DI	Laboratory Quality Assurance	VOCs

Note: GW – Groundwater DI – Deionized water

As a means of determining the reproducibility or variability related to analytical procedures of a homogenous sample, the relative percentage differences (RPD) between analyzed values for original and duplicate samples were calculated.

For sample reproducibility calculations, maximum RPD values were calculated using the following formula:

$$RPD = \frac{\text{Difference between duplicate results}}{\text{Average of duplicate results}} \times 100\%$$

The maximum RPD values for some PHC and metal parameters calculated were above the acceptable statistical variation of 40% in soil sample BH104 S1A and duplicate sample BH105 S1A as well as BH104 S1B and duplicate sample BH105S1B. A summary of the data is presented in the following table. It is noted these soil samples comprised heterogeneous fill.

Table 7: QA/QC Samples Submitted of Laboratory Analysis – Soil

Parameter	Sample ID	Analytical Result (µg/g)	RPD (%)
PHC F4	BH104 S1A	1340	43.2
	BH105 S1A	864	
PHC F4G	BH104 S1A	4540	56.1
	BH105 S1A	2550	
Lead	BH104 S1B	7.5	50.0
	BH105 S1B	12.5	

The maximum RPD for the groundwater sample BH/MW103 and duplicate groundwater sample BH/MW105 were within the acceptable statistical variation of 40%, except for on VOC parameter. The data is summarized in the following table:

Table 8: QA/QC Samples Submitted of Laboratory Analysis – Groundwater

Parameter	Sample ID	Analytical Result (µg/L)	RPD (%)
1,1-Dichloroethylene	BH/MW103	2.3	58.5
	BH/MW105	4.2	

The RPDs outlined by the MECP (as generally less than or equal to 40%), refer to laboratory duplicates from homogenous samples. Fill samples are heterogeneous and thus, subject to both laboratory and sampling variability. As such, RPD control limits are generally larger than those defined in the Environmental Protection Act (EPA) and/or the MECP guidelines which outline sample duplicates of homogeneous samples and do not specify specific criteria for field duplicates. MECP documentation does however allow for larger limits with respect to field duplicates as the MECP recognizes the increased variability in sampling and subsequent elevated uncertainty.

With respect to the RPD for 1,1-dichloroethylene in groundwater noted above, the result may be a result of variable sediment content within samples submitted to the laboratory.

The results of laboratory duplicate sampling performed by Paracel as part of their in-house QA/QC yielded acceptable data. The overall quality of the field data from the investigation with respect to the data quality objectives demonstrated that the overall objectives of the investigation and the assessment were met.

Trip Blank – VOCs were not detected in the trip blank.

With respect to subsection 47 (3) of the regulation, we confirm that:

A. All certificates of analysis or analytical reports received pursuant to clause 47 (2) (b) of the regulation comply with subsection 47(3)

B. A certificate of analysis or analytical report has been received for each sample submitted for analysis, and

C. All certificates of analysis or analytical reports received have been included in full in an appendix to the phase two environmental site assessment report.

5.9 Summary of Contamination

Tables summarizing the analytical results are included in Appendix C – Tables 1 to 4 for soil and Tables 5 to 8 for groundwater.

Based on review and evaluation of the data, the fill material and shallow subsurface soil on-Site has elevated levels of PAHs (benzo(a)pyrene, benzo(a)anthracene, dibenzo(a,h)anthracene, and fluoranthene) and metals (lead and boron HWS). The layer of contaminated material is present across the north and central portions of the Site, found to depths of up to approximately 1.3 m bgs. Refer to Drawings 6A to E, Drawings 8A to D, and Drawings 9A to C for plan views and cross-sections of the soil analytical data.

A groundwater impact was identified on the south portion of the Site in BH/MW103 in the form of VOC parameter 1,1-dichloroethylene. Refer to Drawings 7A to D, and Drawing 8C for plan views and a cross-section of the groundwater analytical data.

Quantification of the extent of soil and groundwater impacts at the Site requires vertical and horizontal delineation before an RSC can be prepared for the Site.

6. Conclusions and Recommendations

The purpose of this Phase Two ESA was to satisfy O. Reg. 153/04 (as amended) requirements, to investigate potential contamination within Areas of Potential Environmental Concern (APECs) identified during a Phase One ESA completed by G2S in October 2024, in preparation of filing an RSC for the Site. Refer to the appended Drawings 2 and 3 in Appendix A for a summary of the identified Potentially Contaminating Activities (PCAs) and Areas of Potential Environmental Concern (APECs) for the Site.

G2S understands the Client requires the Phase Two ESA for due diligence purposes related to the proposed redevelopment for residential purposes. The Site was most recently used for commercial purposes (as a parking lot) and is proposed to be used for residential purposes. Since there is a change in property use planned (commercial to residential), a Record of Site Condition (RSC) is required under O. Reg. 153/04, prior to re-development.

The field work for this investigation was completed in November 2024 and included the advancement of four boreholes on-Site, three of which were installed as groundwater monitoring wells. Refer to Drawing 4 for the Borehole and Monitoring Well Location Plan.

The findings of this assignment are summarized as follows:

1. In general, the subsurface conditions included a pavement structure comprising approximately 60 to 110 millimeters of asphalt, underlain by granular material approximately 150 – 280 mm in thickness. Fill materials were present on the north portion of the Site generally consisting of brown, red and grey silty clay with some sand, and extended to depths between approximately 0.4 and 1.2 m bgs. Native grey and brown silty clay with trace sand was encountered in the central portion of the Site from 0.4 to 1.3 m. A shale/till complex unit was encountered beneath the fill and/or silty clay in all boreholes, extending to depths between 1.8 and 2.4 m bgs. Red shale bedrock was encountered in each borehole extending to the borehole termination depths. Refer to the borehole logs in Appendix B.

2. Groundwater was found in the monitoring wells on November 15, 2024, between depths of 3.38 and 4.35 m bgs.

3. Soil samples were submitted for laboratory analysis of PHCs F1 to F4 including BTEX, VOCs, PAHs, and metals and ORPs. The concentrations of the tested parameters in the submitted samples were below the Ministry of Environment, Conservation, and Parks (MECP) Table 3 Site Condition Standards (SCS) for Residential/Parkland/Institutional (RPI) Property Use, with the exception of the following:

    - Sample BH104 S1A – PHC F3 (433 µg/g) exceeded the SCS of 300 µg/g, PHC F4 Gravimetric (G) (4540 µg/g) exceeded the SCS of 2800 µg/g.

    - Duplicate sample BH105 S1A – PHC F3 (316 µg/g) exceeded the SCS of 300 µg/g.

    - Sample BH101 S1B – Benzo[a]anthracene (0.70 µg/g) exceeded the SCS of 0.5 µg/g, benzo(a)pyrene (0.75 µg/g) exceeded the SCS of 0.3 µg/g, dibenzo[a,h]anthracene (0.11 µg/g) exceeded the SCS of 0.1 µg/g, fluoranthene (1.66 µg/g) exceeded the SCS of 0.69 µg/g and indeno(1,2,3-cd)pyrene (0.41 µg/g) exceeded the SCS of 0.38 µg/g.

- Sample BH101 S1B – Boron (Hot Water Soluble (HWS)) (4.4 µg/g) exceeded the SCS of 1.5 µg/g and lead (237 µg/g) exceeded the SCS of 120 µg/g.

- Sample BH102 S1C – Boron (HWS) (1.8 µg/g) exceeded the SCS of 1.5 µg/g.

- Sample BH103 S1B – Sodium Adsorption Ration (SAR) (12.4) exceeded the SCS of 5 and Electrical Conductivity (EC) (1.35 mS/cm) exceeded the SCS of 0.7 mS/cm.

- Sample BH104 S1B – Boron (HWS) (2.2 µg/g) exceeded the SCS of 1.5 µg/g, SAR (6.64) exceeded the SCS of 5 and EC (1.02 mS/cm) exceeded the SCS of 0.7 mS/cm.

- Duplicate sample BH105 S1B (duplicate of BH104 S1B) – Boron (HWS) (2.7 µg/g) exceeded the SCS of 1.5 µg/g, SAR (8.87 µg/g) exceeded the SCS of 5 µg/g and EC (1.46 mS/cm) exceeded the SCS of 0.7 mS/cm.

4. Groundwater samples from the monitoring wells were submitted for laboratory analysis of PHCs F1-F4 including BTEX, VOCs, PAHs, and metals and ORPs. The concentrations of the tested parameters in the submitted samples were below the MECP Table 3 SCS, with the exception of the following:

    - Sample BH103 (2.3 µg/L) and duplicate sample BH/MW105 (4.2 µg/L) exceeded the SCS of 1.6 µg/L for VOC parameter 1,1-dichloroethylene.

5. The elevated EC and SAR in soil are attributed to the historical use of de-icing salt on the surfaces of the Site and adjacent roadways. Under O. Reg. 153/04, as amended, where a SCS is exceeded solely because a substance has been applied to surfaces for the safety of vehicular or pedestrian traffic under conditions of snow and ice, the applicable site condition standard is deemed not to be exceeded. Reference is made to O. Reg. 153/04, as amended, s. 49 (1).

Based on the results of the Phase Two ESA, the Site soil and groundwater does not meet the applicable MECP Table 3 RPI SCS. As such, supplemental Phase Two ESA work is required before an RSC can be filed.

G2S recommends the following supplemental work:

- Resample groundwater at BH/MW103 in order to confirm that the exceedance of 1,1-dichloroethylene exceedance is not anomalous.

- Complete a program of supplemental Phase Two ESA soil sampling and chemical testing for horizontal and vertical delineation of soil contamination.

In accordance with O. Reg. 903/90, as amended, the monitoring wells should be decommissioned if the wells are not in use or being maintained for future use.

The assignment is subject to the Statement of Limitations that is included in this report. It should be noted soil and groundwater conditions between and beyond the sampled locations may differ from those encountered during this assignment. G2S should be contacted if impacted soil or groundwater conditions become apparent during future development to further access and appropriately handle the materials, if any, and evaluate whether modifications to the conclusions documented in this report are necessary.

7. Qualifications of the Assessors

This Phase Two ESA was conducted by Cait Worona, B.Sc. Ms. Worona is responsible for the successful completion of field work and reporting. Ms. Worona has completed numerous projects on behalf of private and public sector clients for industrial, commercial, and residential sites.

This Phase Two ESA was reviewed by Mr. David Smith, B.Sc. Mr. Smith has been trained to conduct Phase One and Two ESAs in accordance with the CSA and O. Reg. 153/04, as amended. Mr. Smith is a Senior Project Manager with over 24 years of professional experience specializing in environmental investigations and project management. Mr. Smith has completed numerous projects on behalf of private and public sector clients for industrial, commercial, and residential sites.

This Phase Two ESA was prepared under the supervision of, and the report was reviewed by Melissa King, a Professional Geoscientist registered with the Professional Geoscientists of Ontario. Ms. King is a Senior Geoscientist and Head of Environmental Services in G2S's Burlington branch office and is a Qualified Person (QP). She has over 25 years of interdisciplinary professional experience specializing in environmental and hydrogeologic investigations and project management. Her main areas of expertise include Phase One and Phase Two ESAs, site cleanup / remediation planning and supervision, site remediation, Risk Assessment, Records of Site Condition and hydrogeologic investigations. She has completed hundreds of projects for commercial, industrial, and residential clients for a wide variety of project types (industrial complexes, commercial developments, entertainment and institutional buildings, and residential development).

8. References and Supporting Documentation

a) "Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario" Ministry of the Environment of Ontario, December 1996.

b) "Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act", April 15, 2011.

c) The Ontario Water Resources Act – R.R.O. 1990, Regulation 903 – Amended to O. Reg. 128/03, August 2003.0.8

d) "Protocol for Analytical Methods Used in the Assessment of Properties Under Part XV.1 of the Environmental Protection Act", March 2004.

e) Ontario Regulation 153/04 (made under the Environmental Protection Act), May 2004, as amended.

f) "Z769-00, Phase II Environmental Site Assessment," Canadian Standard Association, March 2000.

g) Environmental Protection Act, R.S.O. 1990, Chapter E.19, as amended, September 2004.

h) Singer SN, Cheng CK, Scafe MG. (2003). *The Hydrogeology of Southern Ontario, Second Edition*, Report from the Ontario Ministry of the Environment.

i) "Phase One Environmental Site Assessment, 70 Hope Avenue, Hamilton, Ontario," dated October 2024, prepared by G2S Consulting Inc. for the City of Hamilton.

9. Limitations

This report has been prepared for the sole benefit of City of Hamilton (the Client) and is intended to provide limited information on the subsurface environmental conditions at the Site. The report may not be used by any other person or entity without the expressed written consent of the Client and G2S Consulting Inc. (G2S). Any use which a third party makes of this report, or any reliance on decisions made based on it, is the responsibility of such third parties. G2S accepts no responsibility for damages, if any suffered by any third party as a result of decisions made or actions based on this report.

The findings in this report are limited to the conditions at the Site at the time of this investigation as described herein. Conclusions presented in this report should not be construed as legal advice.

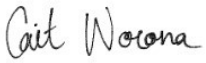
If Site conditions or applicable standards change or if any additional information becomes available at a future date, changes to the findings, conclusions and recommendations in this report may be necessary.

10. Closing Remarks

We trust this report is satisfactory for your purposes. Should you have any questions, please do not hesitate to contact this office.

Yours truly,

G2S Consulting Inc.



Cait Worona, B.Sc.
Environmental Scientist

Melissa King, P.Geo., QP_{ESA}
Head of Environmental Services
Senior Geoscientist

David Smith, B.Sc.
Senior Project Manager

Appendix A:
Drawings

LEGEND

APPROXIMATE SITE LIMITS

REFERENCE:
DRAWINGS REPRODUCED USING CITY OF HAMILTON GIS IMAGERY

TITLE:
SITE LOCATION PLAN

CLIENT:
CITY OF HAMILTON

LOCATION:
70 HOPE AVENUE
HAMILTON, ONTARIO

PROJECT NO.: G2S24376

DRAWING:	1
SCALE:	N.T.S.
DATE:	JANUARY 2025
DRAWN BY:	DB
FILE NAME:	G2S24376P2RSC.dwg

LEGEND

	APPROXIMATE PHASE ONE ESA, PHASE TWO ESA AND RSC SITE BOUNDARY
#28	ON-SITE POTENTIALLY CONTAMINATING ACTIVITY (AS DEFINED IN TABLE 2 OF O.REG.153/04, AS AMENDED)
#28	OFF-SITE PCA
	PCA CONTRIBUTING TO AN APEC

POTENTIALLY CONTAMINATING ACTIVITIES (PCAs) AS DEFINED IN TABLE 2 OF REG. 153/04

#10	COMMERCIAL AUTOBODY SHOPS
#18	ELECTRICITY GENERATION, TRANSFOMERS AND SUBSTATIONS
#28	GASOLINE AND ASSOCIATED PRODUCTS STORAGE IN FIXED TANKS
#30	IMPORTATION OF FILL MATERIAL OF UNKNOWN QUALITY
#34	METAL FABRICATION
OTHER 1	COAL STORAGE
OTHER 2	HISTORIC USE OF DE-ICING SALT

REFERENCE:
DRAWINGS REPRODUCED USING CITY OF HAMILTON GIS IMAGERY

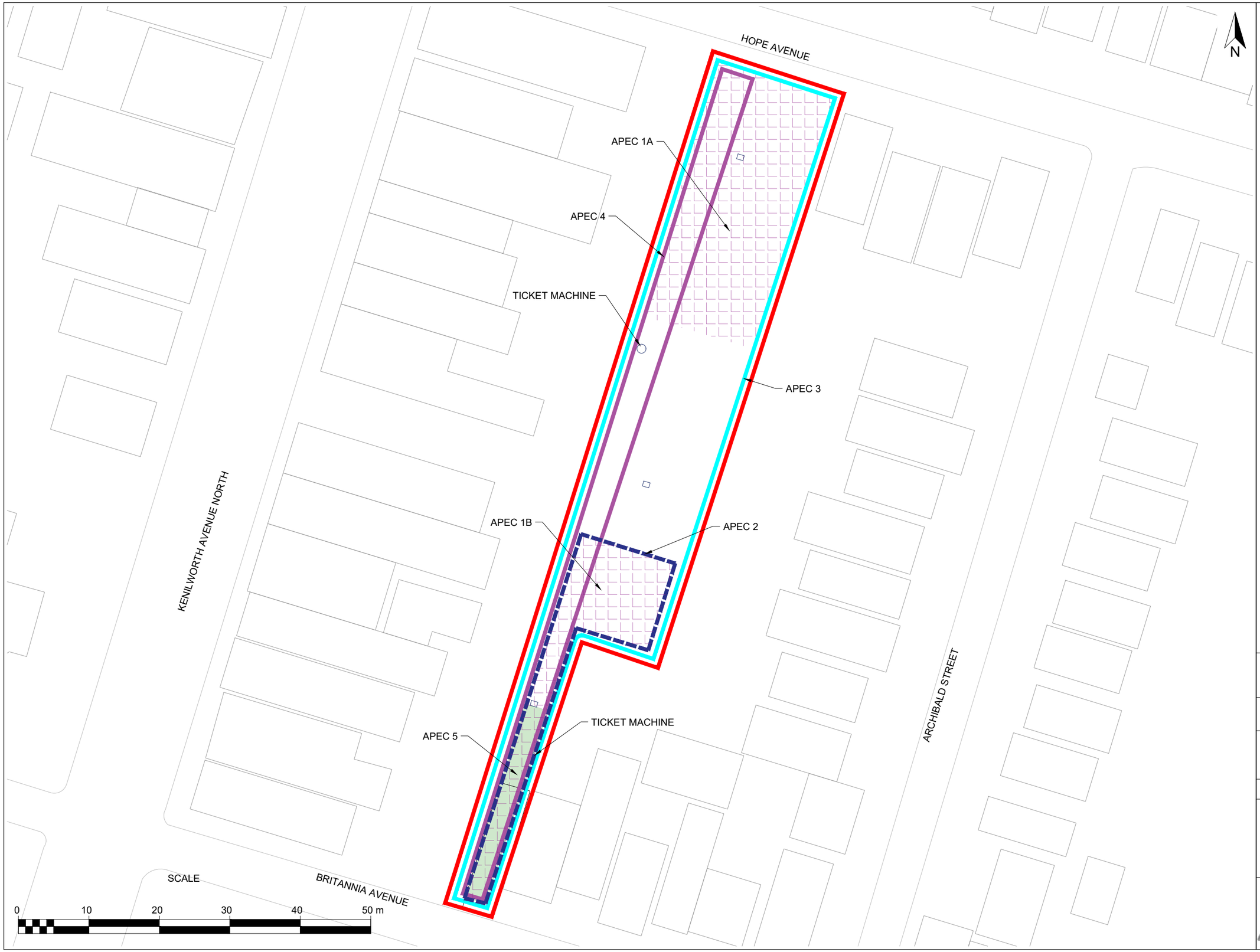
TITLE:
POTENTIALLY CONTAMINATING ACTIVITIES (PCAs)

CLIENT:
CITY OF HAMILTON

LOCATION:
70 HOPE AVENUE
HAMILTON, ONTARIO

PROJECT NO.: G2S24376

DRAWING:	2
SCALE:	AS SHOWN
DATE:	JANUARY 2025
DRAWN BY:	DB
FILE NAME:	G2S24376P2RSC.dwg



LEGEND

APPROXIMATE SITE LIMITS

AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

APEC 1A APEC 1B	SOUTH AND NORTH PORTIONS OF THE SITE - POTENTIAL FOR FILL MATERIAL WITHIN FORMER BUILDING FOOTPRINTS
APEC 2	SOUTH PORTION OF THE SITE - HISTORIC PRESENCE OF A COAL OPERATION
APEC 3	ENTIRE SITE - HISTORIC USE OF DE-ICING SALT ON PAVED PORTIONS OF THE SITE
APEC 4	WEST PORTION OF THE SITE - HISTORIC PRESENCE OF THREE DRY CLEANERS AND A DIESEL FUEL INJECTION SERVICE (ADJACENT TO THE WEST)
APEC 5	SOUTH PORTION OF THE SITE - HISTORIC PRESENCE OF A GASOLINE SERVICE STATION WITH UNDERGROUND STORAGE TANKS AND AUTOMOTIVE SERVICING

REFERENCE:
DRAWINGS REPRODUCED USING CITY OF HAMILTON GIS IMAGERY

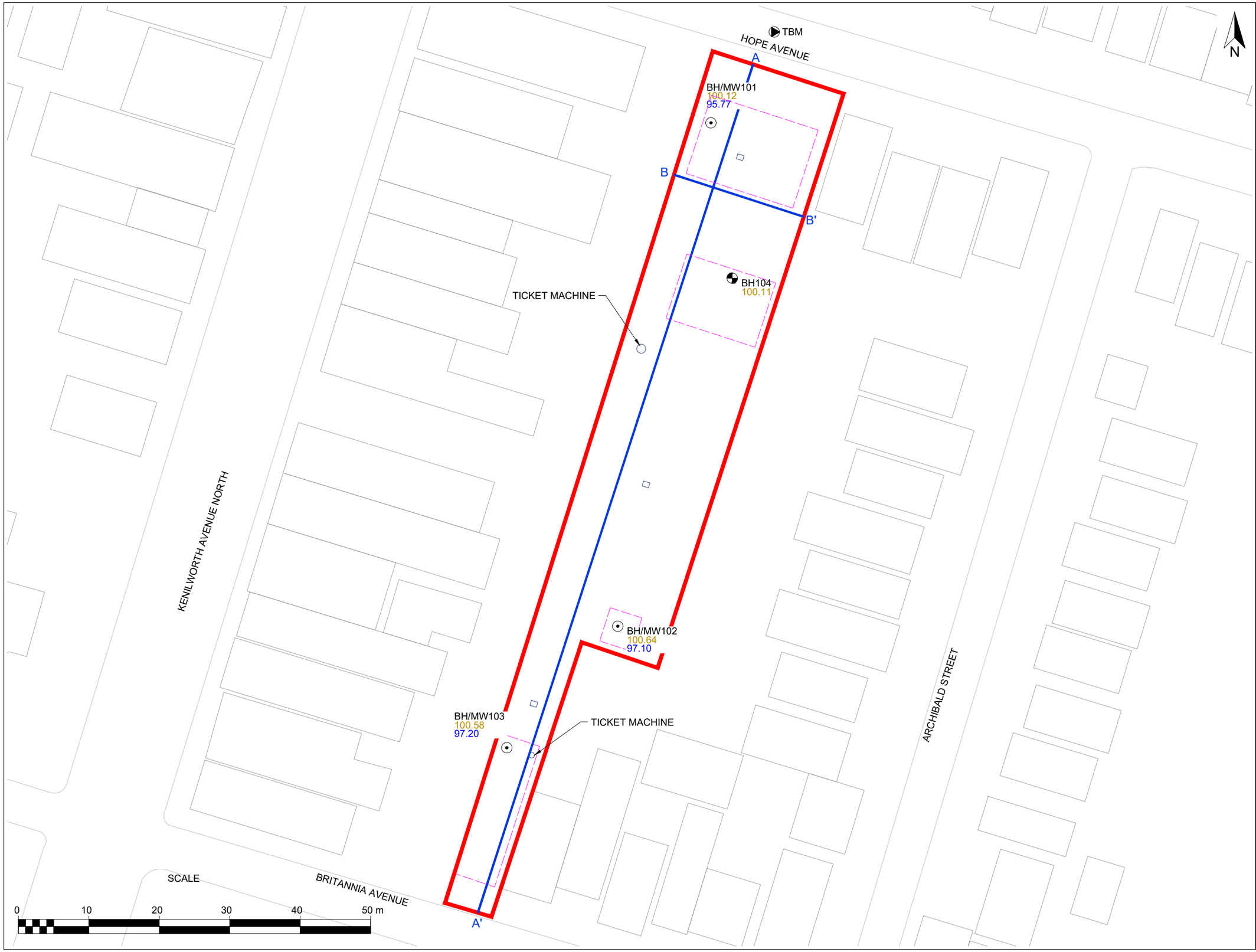
TITLE:
AREAS OF POTENTIAL ENVIRONMENTAL CONCERN (APECs)

CLIENT:
CITY OF HAMILTON

LOCATION:
70 HOPE AVENUE
HAMILTON, ONTARIO

PROJECT NO.: G2S24376

DRAWING:	3
SCALE:	AS SHOWN
DATE:	JANUARY 2025
DRAWN BY:	DB
FILE NAME:	G2S24376P2RSC.dwg



LEGEND

- APPROXIMATE SITE LIMITS
- APPROXIMATE LOCATION OF FORMER BUILDINGS
- BOREHOLE ADVANCED BY G2S (NOVEMBER 2024)
- BOREHOLE / MONITORING WELL ADVANCED BY G2S (NOVEMBER 2024)
- TEMPORARY BENCHMARK (TBM)
- 100.12 GROUND SURFACE ELEVATION (m)
- 95.77 MEASURED GROUNDWATER ELEVATION (m) (NOVEMBER 15, 2024)
- A A' CROSS SECTION LOCATION (SEE DRAWINGS 8 TO 9)

REFERENCE:
DRAWINGS REPRODUCED USING CITY OF HAMILTON GIS IMAGERY

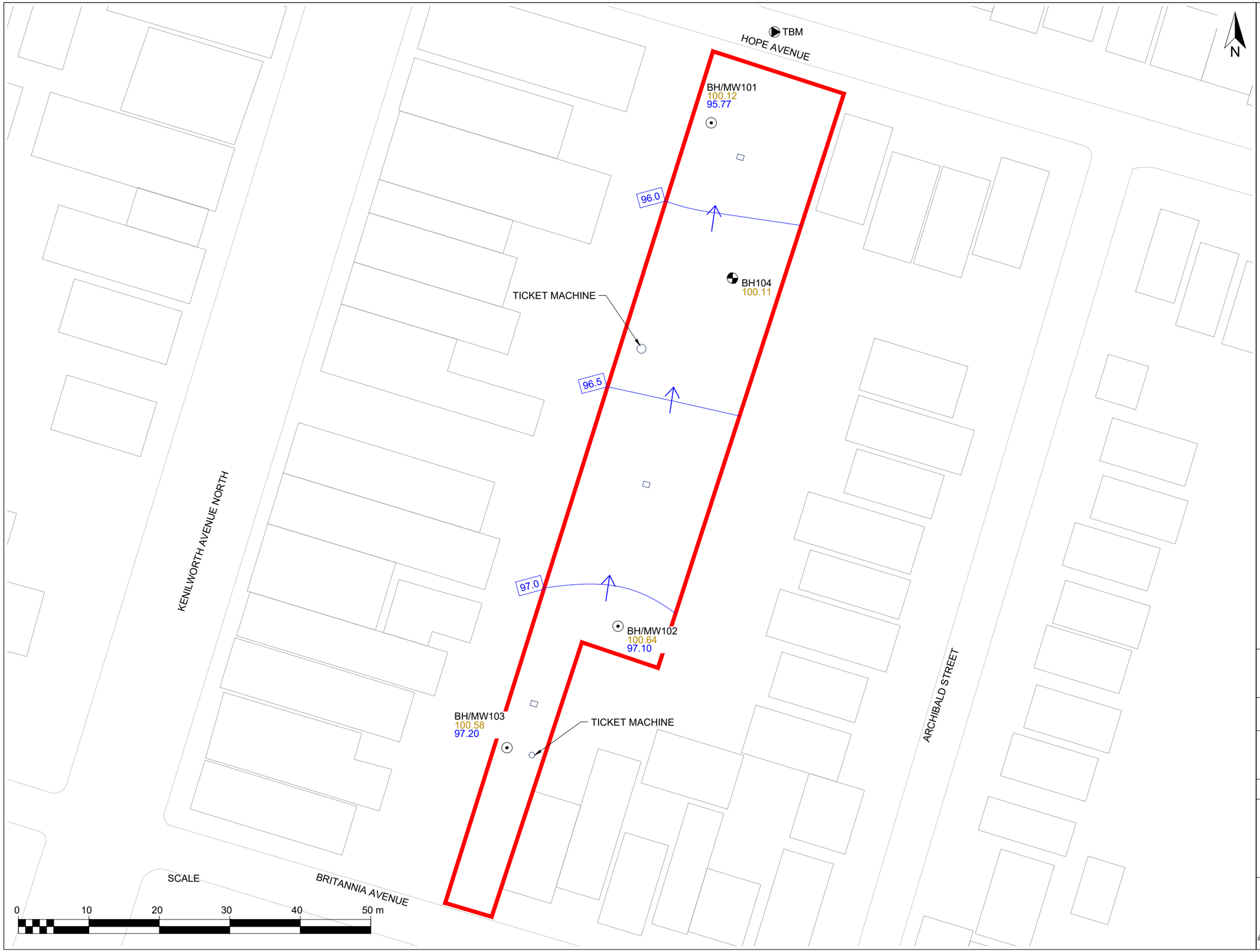
TITLE:
BOREHOLE AND MONITORING WELL LOCATION PLAN

CLIENT:
CITY OF HAMILTON

LOCATION:
70 HOPE AVENUE
HAMILTON, ONTARIO

PROJECT NO.: G2S24376

DRAWING:	4
SCALE:	AS SHOWN
DATE:	JANUARY 2025
DRAWN BY:	DB
FILE NAME:	G2S24376P2RSC.dwg



LEGEND

- APPROXIMATE SITE LIMITS
- BOREHOLE ADVANCED BY G2S (NOVEMBER 2024)
- BOREHOLE / MONITORING WELL ADVANCED BY G2S (NOVEMBER 2024)
- TEMPORARY BENCHMARK (TBM)
- 100.12 GROUND SURFACE ELEVATION (m)
- 95.77 MEASURED GROUNDWATER ELEVATION (m) (NOVEMBER 15, 2024)
- INFERRED GROUNDWATER FLOW DIRECTION

REFERENCE:
DRAWINGS REPRODUCED USING CITY OF HAMILTON GIS IMAGERY

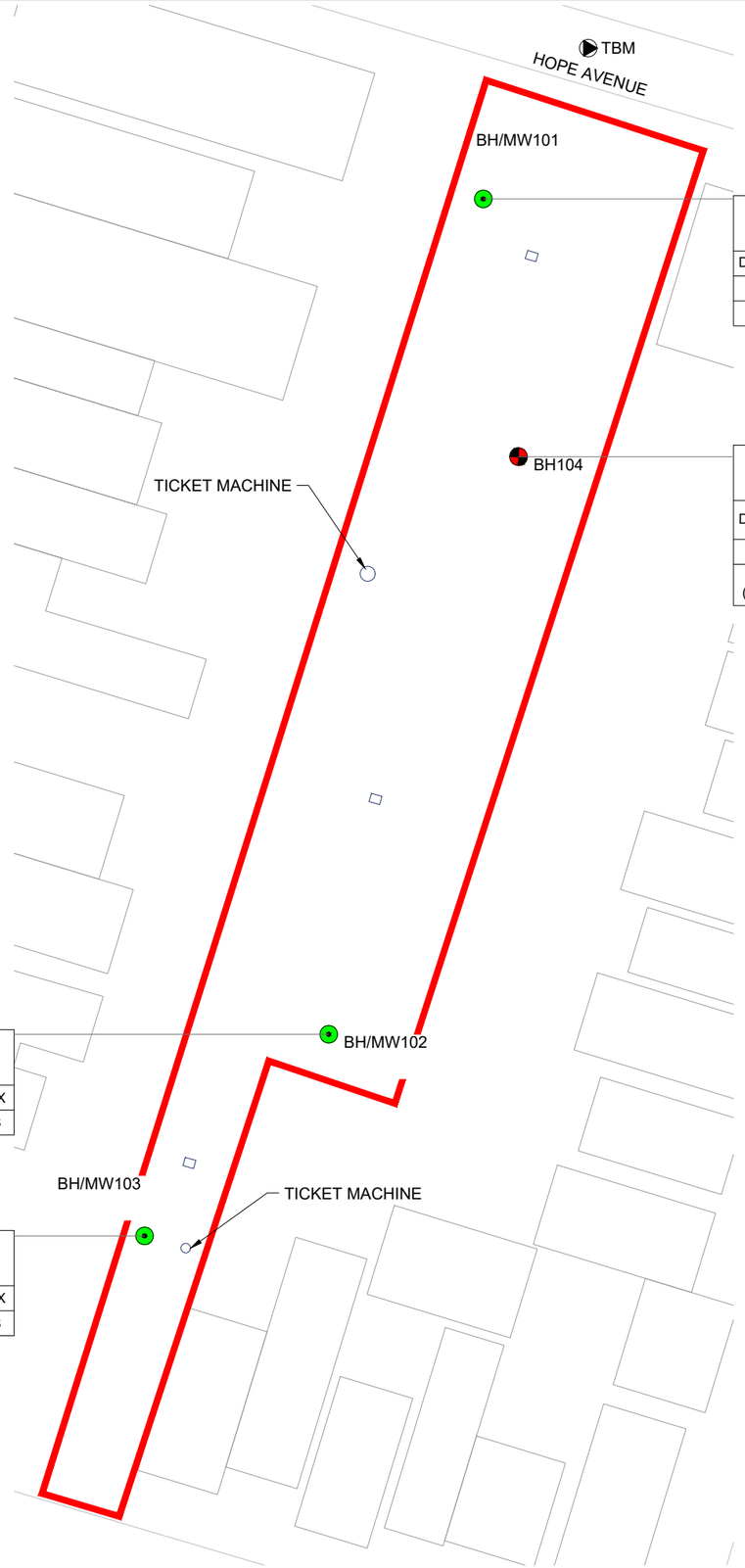
TITLE:
GROUNDWATER CONTOUR PLAN -
NOVEMBER 15, 2024

CLIENT:
CITY OF HAMILTON

LOCATION:
70 HOPE AVENUE
HAMILTON, ONTARIO

PROJECT NO.: G2S24376

DRAWING:	5
SCALE:	AS SHOWN
DATE:	JANUARY 2025
DRAWN BY:	DB
FILE NAME:	G2S24376P2RSC.dwg



BH101	DATE SAMPLED: 2024/11/07
DEPTH (mbgs)	PHCs & BTEX
0.3 - 1.2	MEETS SCS
1.2 - 2.4	MEETS SCS

BH104	DATE SAMPLED: 2024/11/07		
DEPTH (mbgs)	F3	F4G	ALL OTHER PHCs & BTEX
0.1 - 0.3	433	4540	MEETS SCS
0.1 - 0.3 (DUPLICATE)	316	2550	MEETS SCS

BH102	DATE SAMPLED: 2024/11/07
DEPTH (mbgs)	PHCs & BTEX
0.3 - 0.4	MEETS SCS

BH103	DATE SAMPLED: 2024/11/07
DEPTH (mbgs)	PHCs & BTEX
1.2 - 1.8	MEETS SCS

SCALE

0 10 20 30 40 50 m

N

LEGEND

- APPROXIMATE SITE LIMITS
- BOREHOLE ADVANCED BY G2S (NOVEMBER 2024)
- BOREHOLE / MONITORING WELL ADVANCED BY G2S (NOVEMBER 2024)
- TEMPORARY BENCHMARK (TBM)
- SAMPLE MEETS MECP TABLE 3 SCS
- SAMPLE DOES NOT MEET MECP TABLE 3 SCS
- SCS — SITE CONDITION STANDARDS
- PHCs — PETROLEUM HYDROCARBONS F1 TO F4G
- BTEX — BENZENE, TOLUENE, ETHYLBENZENE, XYLENES

PARAMETER		UNIT	TABLE 3 SCS
F3	PETROLEUM HYDROCARBON F3	µg/g	300
F4G	PETROLEUM HYDROCARBONS F4 (GRAVIMETRIC)	µg/g	2800

NOTE:

REFER TO ANALYTICAL RESULTS TABLE IN APPENDIX C FOR THE SCS & FULL RESULTS, INCLUDING PARAMETERS THAT MET THE SCS

REFERENCE:

DRAWINGS REPRODUCED USING CITY OF HAMILTON GIS IMAGERY

TITLE:

SOIL ANALYTICAL RESULTS -

PHCs F1 TO F4G & BTEX

CLIENT:

CITY OF HAMILTON

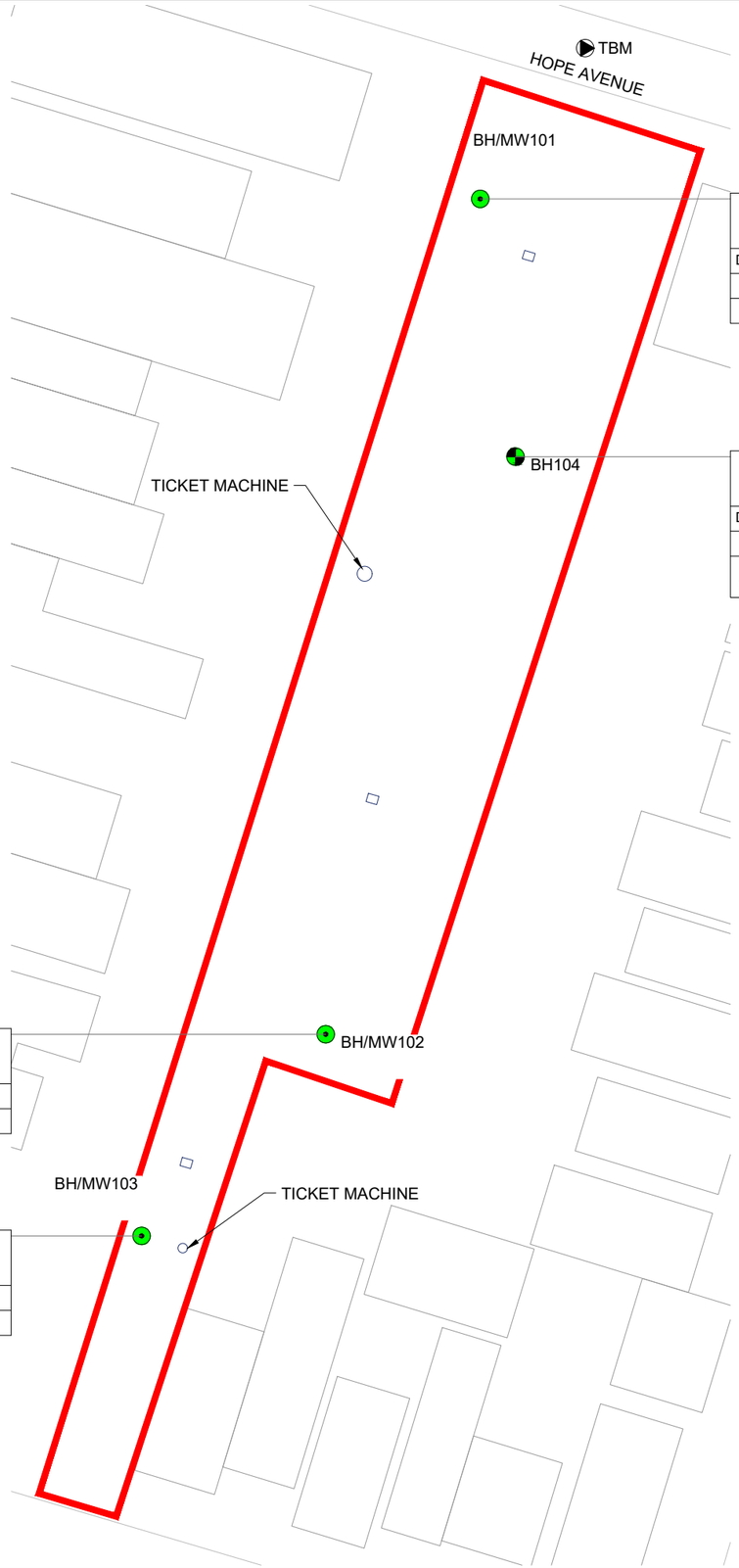
LOCATION:

70 HOPE AVENUE

HAMILTON, ONTARIO

PROJECT NO.: G2S24376

DRAWING:	6A
SCALE:	AS SHOWN
DATE:	JANUARY 2025
DRAWN BY:	DB
FILE NAME:	G2S24376P2RSC.dwg



SCALE

0 10 20 30 40 50 m

N

LEGEND

- APPROXIMATE SITE LIMITS
- BOREHOLE ADVANCED BY G2S (NOVEMBER 2024)
- BOREHOLE / MONITORING WELL ADVANCED BY G2S (NOVEMBER 2024)
- TEMPORARY BENCHMARK (TBM)
- SAMPLE MEETS MECP TABLE 3 SCS

SCS SITE CONDITION STANDARDS

VOCs VOLATILE ORGANIC COMPOUNDS

NOTE:

REFER TO ANALYTICAL RESULTS TABLE IN APPENDIX C FOR THE SCS & FULL RESULTS, INCLUDING PARAMETERS THAT MET THE SCS

REFERENCE:

DRAWINGS REPRODUCED USING CITY OF HAMILTON GIS IMAGERY

TITLE:

SOIL ANALYTICAL RESULTS -

VOCs

CLIENT:

CITY OF HAMILTON

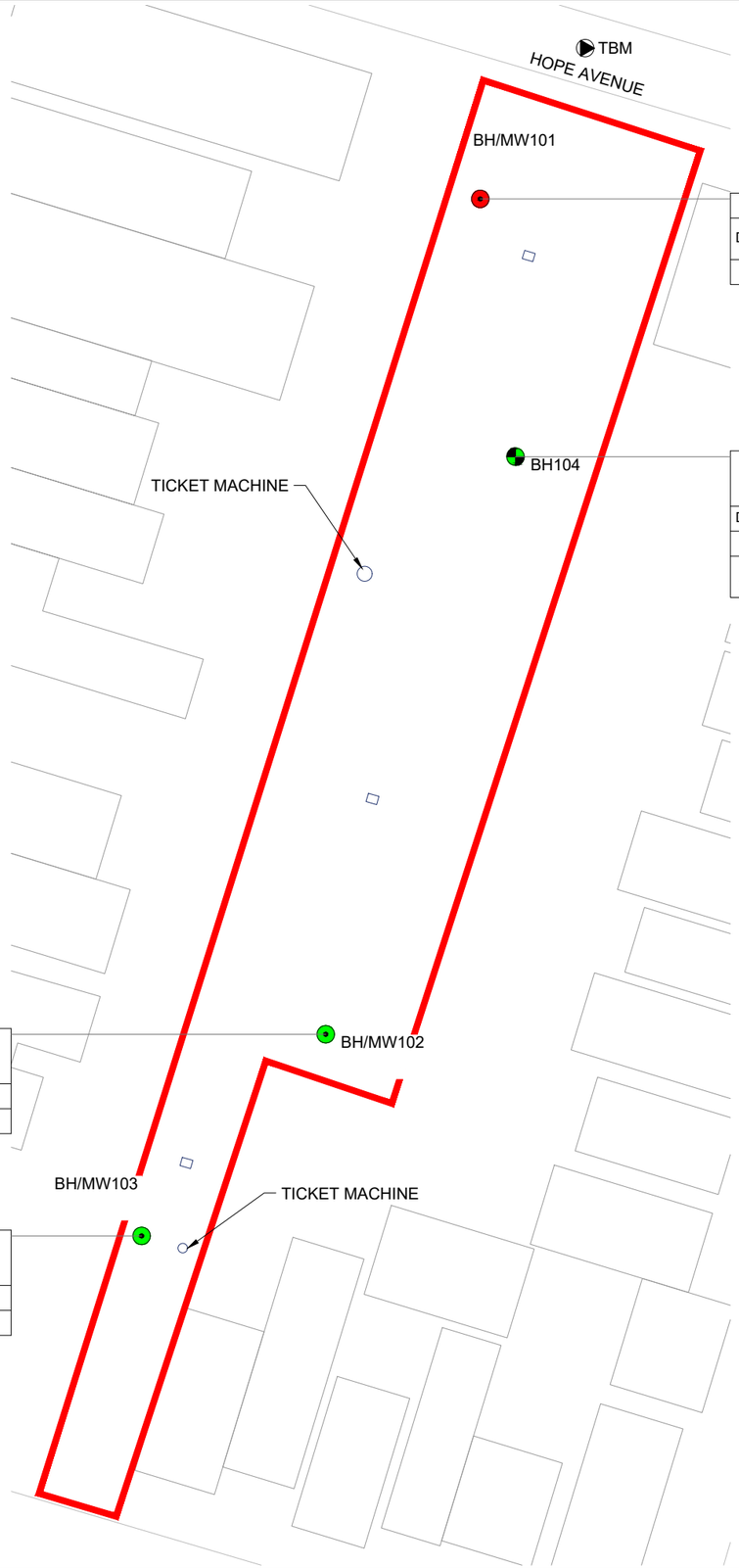
LOCATION:

70 HOPE AVENUE

HAMILTON, ONTARIO

PROJECT NO.: G2S24376

DRAWING:	6B
SCALE:	AS SHOWN
DATE:	JANUARY 2025
DRAWN BY:	DB
FILE NAME:	G2S24376P2RSC.dwg



BH101	DATE SAMPLED: 2024/11/07					
DEPTH (mbgs)	B(a)A	B(a)P	D(a,h)A	FLATH	I(1,2,3-cd)P	ALL OTHER PAHs
0.3 - 1.2	0.70	0.75	0.11	1.66	0.41	MEETS SCS

BH104	DATE SAMPLED: 2024/11/07
DEPTH (mbgs)	PAHs
0.3 - 1.2	MEETS SCS
0.3 - 1.2 (DUPLICATE)	MEETS SCS

BH102	DATE SAMPLED: 2024/11/07
DEPTH (mbgs)	PAHs
0.4 - 1.2	MEETS SCS

BH103	DATE SAMPLED: 2024/11/07
DEPTH (mbgs)	PAHs
0.2 - 1.2	MEETS SCS

SCALE

0 10 20 30 40 50 m

N

LEGEND

- APPROXIMATE SITE LIMITS
- BOREHOLE ADVANCED BY G2S (NOVEMBER 2024)
- BOREHOLE / MONITORING WELL ADVANCED BY G2S (NOVEMBER 2024)
- TEMPORARY BENCHMARK (TBM)
- SAMPLE MEETS MECP TABLE 3 SCS
- SAMPLE DOES NOT MEET MECP TABLE 3 SCS
- SCS — SITE CONDITION STANDARDS
- PAHs — POLYCYCLIC AROMATIC HYDROCARBONS

PARAMETER		UNIT	TABLE 3 SCS
B(a)A	BENZO(a)ANTHRACENE	µg/g	0.65
B(a)P	BENZO(a)PYRENE	µg/g	0.3
D(a,h)A	DIBENZO(a,h)ANTHRACENE	µg/g	0.1
FLATH	FLUORANTHENE	µg/g	0.69
I(1,2,3-cd)P	INDENO(1,2,3-cd)PYRENE	µg/g	0.38

NOTE:

REFER TO ANALYTICAL RESULTS TABLE IN APPENDIX C FOR THE SCS & FULL RESULTS, INCLUDING PARAMETERS THAT MET THE SCS

REFERENCE:

DRAWINGS REPRODUCED USING CITY OF HAMILTON GIS IMAGERY

TITLE:

SOIL ANALYTICAL RESULTS -

PAHs

CLIENT:

CITY OF HAMILTON

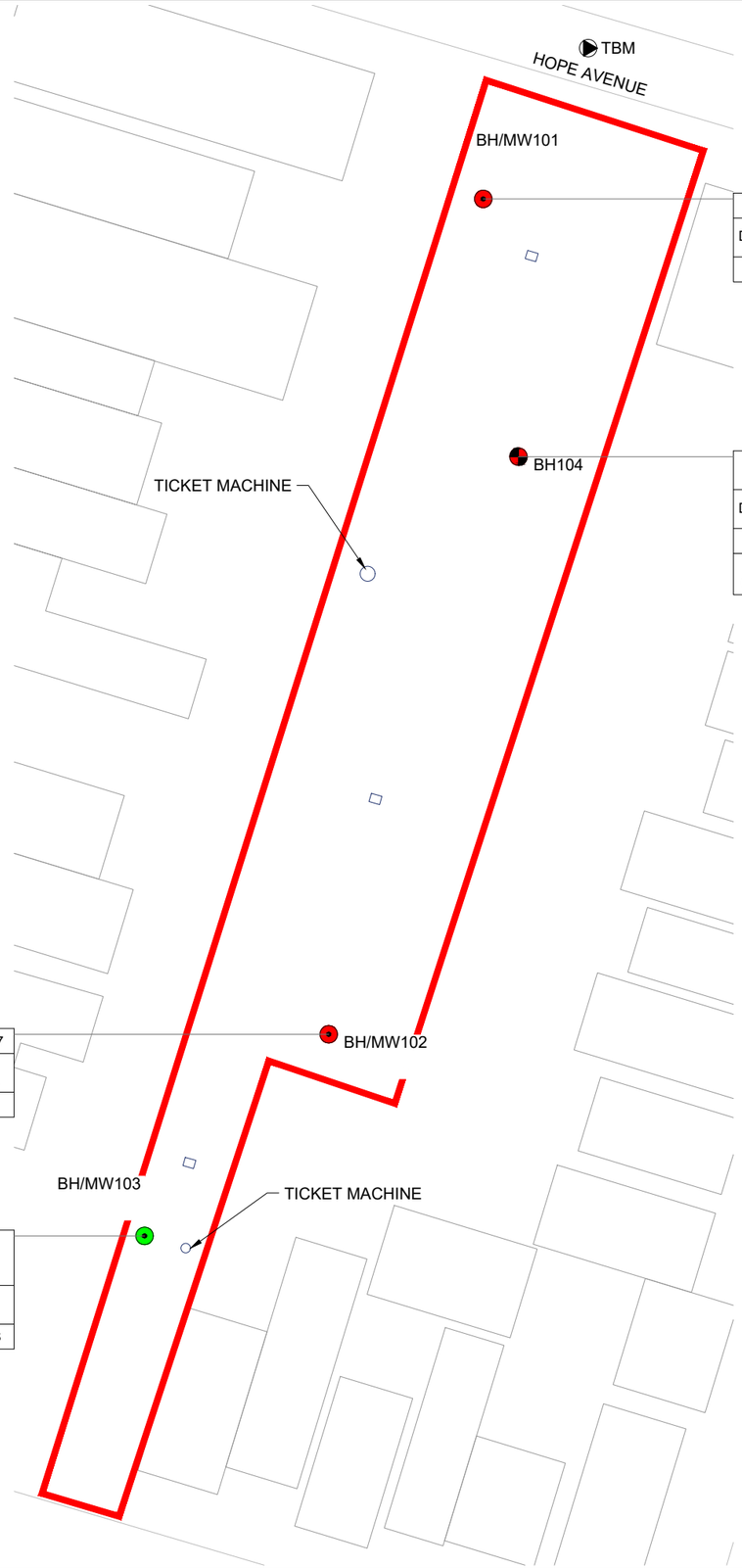
LOCATION:

70 HOPE AVENUE

HAMILTON, ONTARIO

PROJECT NO.: G2S24376

DRAWING:	6C
SCALE:	AS SHOWN
DATE:	JANUARY 2025
DRAWN BY:	DB
FILE NAME:	G2S24376P2RSC.dwg



N

LEGEND

- APPROXIMATE SITE LIMITS
- BOREHOLE ADVANCED BY G2S (NOVEMBER 2024)
- BOREHOLE / MONITORING WELL ADVANCED BY G2S (NOVEMBER 2024)
- TEMPORARY BENCHMARK (TBM)
- SAMPLE MEETS MECP TABLE 3 SCS
- SAMPLE DOES NOT MEET MECP TABLE 3 SCS

SCS — SITE CONDITION STANDARDS

*ORPs — OTHER REGULATED PARAMETERS

PARAMETER		UNIT	TABLE 3 SCS
B(HWS)	BORON (HOT WATER SOLUBLE)	µg/g	1.5
Pb	LEAD	mg/g	120

NOTE:

REFER TO ANALYTICAL RESULTS TABLE IN APPENDIX C FOR THE SCS & FULL RESULTS, INCLUDING PARAMETERS THAT MET THE SCS

*ORPs INCLUDES B(HWS), CN^-, CrVI, Hg & pH

REFERENCE:

DRAWINGS REPRODUCED USING CITY OF HAMILTON GIS IMAGERY

TITLE:

SOIL ANALYTICAL RESULTS -

METALS & ORPs

CLIENT:

CITY OF HAMILTON

LOCATION:

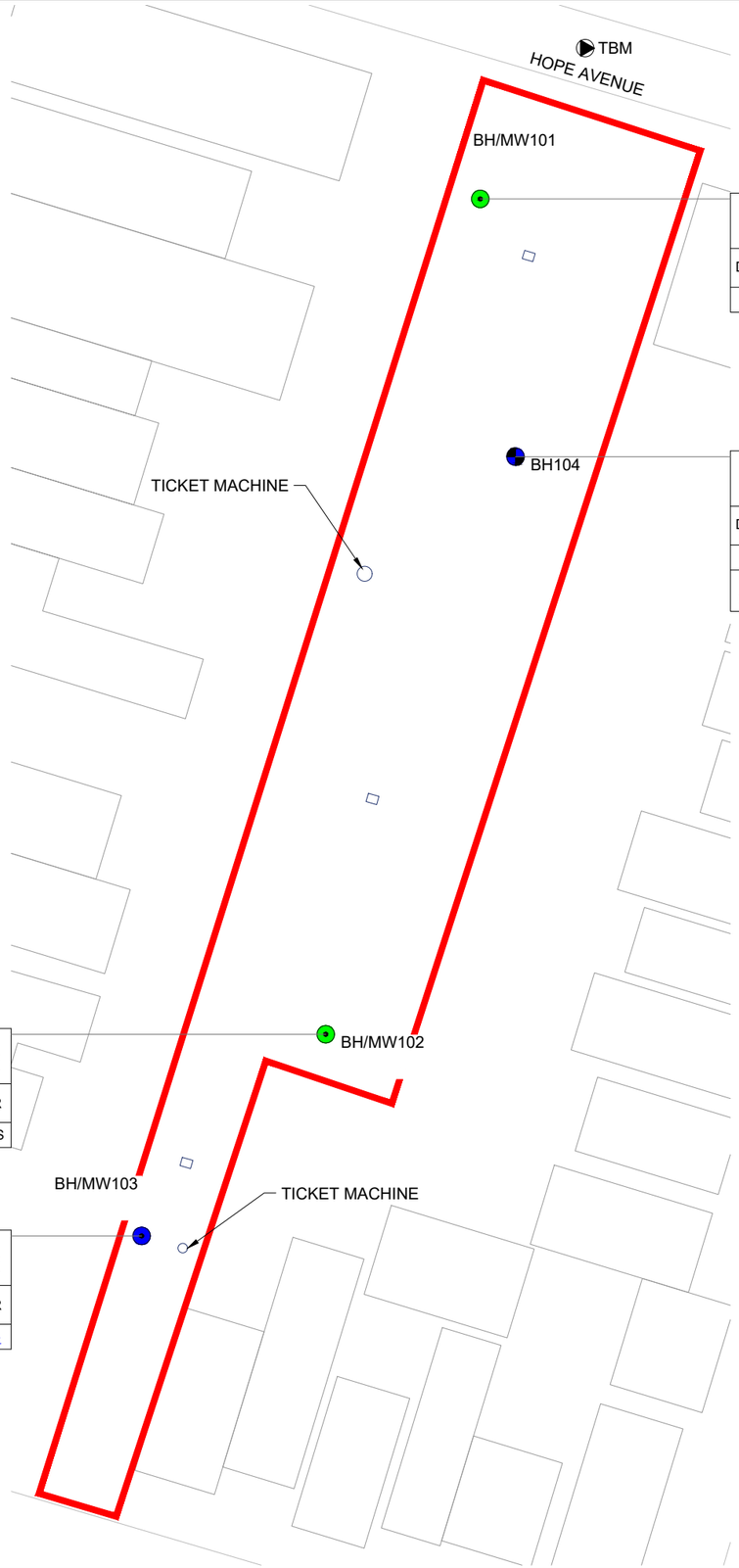
70 HOPE AVENUE

HAMILTON, ONTARIO

PROJECT NO.: G2S24376

DRAWING:	6D
SCALE:	AS SHOWN
DATE:	JANUARY 2025
DRAWN BY:	DB
FILE NAME:	G2S24376P2RSC.dwg

*NOTE:
UNDER ONTARIO REGULATION (O.REG.) 153/04, AS AMENDED, WHERE A SITE CONDITION STANDARD (SCS) IS EXCEEDED SOLELY BECAUSE A SUBSTANCE HAS BEEN APPLIED TO THE SURFACE FOR THE SAFETY OF VEHICULAR OR PEDESTRIAN TRAFFIC UNDER CONDITIONS OF SNOW OR ICE OR BOTH, THE APPLICABLE SCS IS DEEMED NOT THE BE EXCEEDED. REFERENCE IS MADE TO O.REG 153/04, AS AMENDED, s 49.1 FOR A FULL OUTLINE OF THE REGULATION REGARDING SOIL IMPACTED BY DE-ICING SALT.



SCALE

0 10 20 30 40 50 m

N

LEGEND

- APPROXIMATE SITE LIMITS
- BOREHOLE ADVANCED BY G2S (NOVEMBER 2024)
- BOREHOLE / MONITORING WELL ADVANCED BY G2S (NOVEMBER 2024)
- TEMPORARY BENCHMARK (TBM)
- SAMPLE MEETS MECP TABLE 3 SCS
- RESULTS EXCEMPT (SEE *NOTE)
- SCS — SITE CONDITION STANDARDS
- EC — ELECTRICAL CONDUCTIVITY
- SAR — SODIUM ADSORPTION RATIO

PARAMETER	UNIT	TABLE 3 SCS
EC	mS/cm	0.7
SAR	--	5

NOTE:
REFER TO ANALYTICAL RESULTS TABLE IN APPENDIX C FOR THE SCS & FULL RESULTS, INCLUDING PARAMETERS THAT MET THE SCS

REFERENCE:
DRAWINGS REPRODUCED USING CITY OF HAMILTON GIS IMAGERY

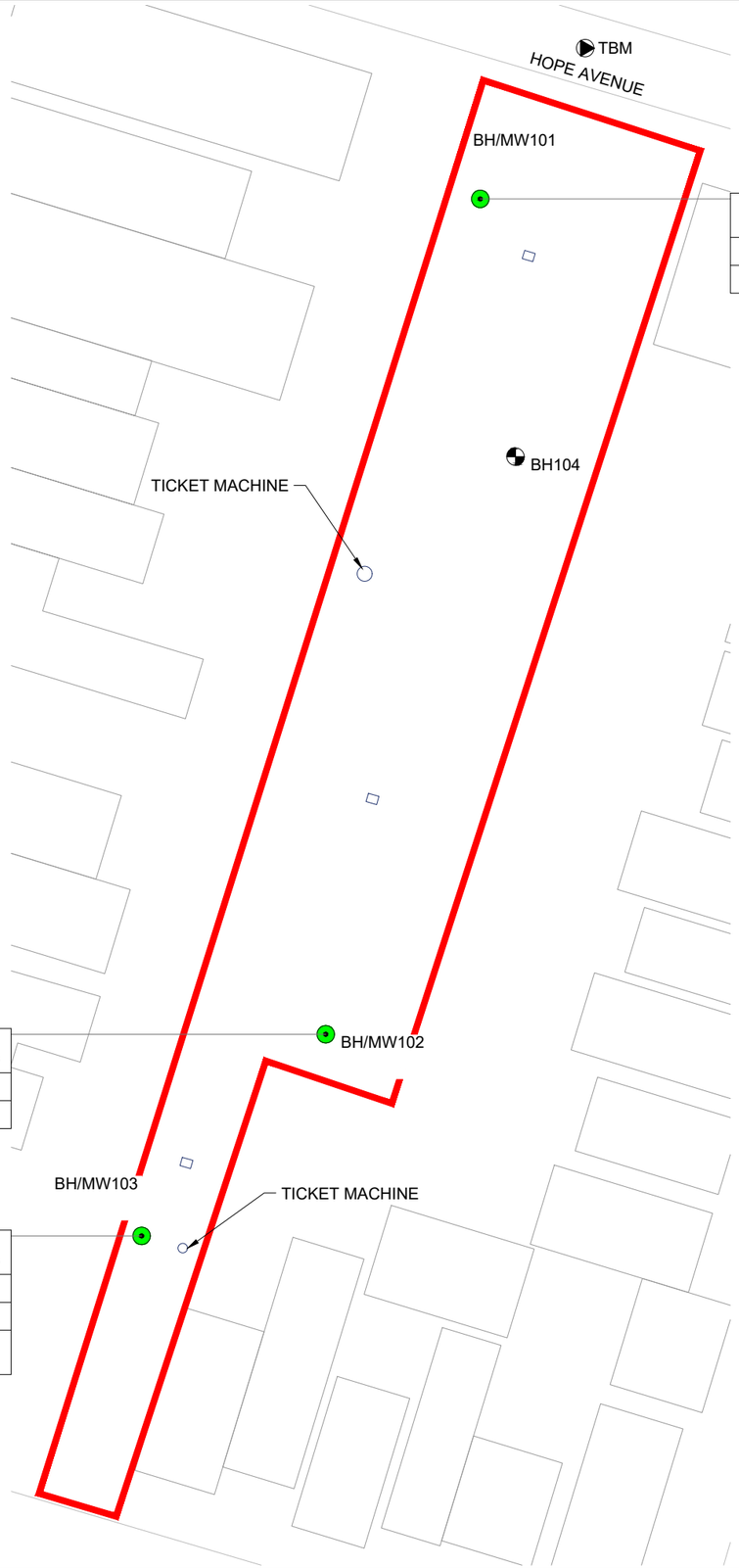
TITLE:
SOIL ANALYTICAL RESULTS -
EC & SAR

CLIENT:
CITY OF HAMILTON

LOCATION:
70 HOPE AVENUE
HAMILTON, ONTARIO

PROJECT NO.: G2S24376

DRAWING:	6E
SCALE:	AS SHOWN
DATE:	JANUARY 2025
DRAWN BY:	DB
FILE NAME:	G2S24376P2RSC.dwg



BH/MW101	Screen Depth 6.31 - 7.81 mbgs
DATE	PHCs & BTEX
2024/11/19	MEETS SCS

BH/MW102	Screen Depth 6.26 - 7.76 mbgs
DATE	PHCs & BTEX
2024/11/19	MEETS SCS

BH/MW103	Screen Depth 6.04 - 7.54 mbgs
DATE	PHCs & BTEX
2024/11/19	MEETS SCS
2024/11/19 (DUPLICATE)	MEETS SCS

SCALE

0 10 20 30 40 50 m

N

LEGEND

- APPROXIMATE SITE LIMITS
- BOREHOLE ADVANCED BY G2S (NOVEMBER 2024)
- BOREHOLE / MONITORING WELL ADVANCED BY G2S (NOVEMBER 2024)
- TEMPORARY BENCHMARK (TBM)
- SAMPLE MEETS MECP TABLE 3 SCS
- SCS — SITE CONDITION STANDARDS
- PHCs — PETROLEUM HYDROCARBONS F1 TO F4
- BTEX — BENZENE, TOLUENE, ETHYLBENZENE, XYLENES

NOTE:

REFER TO ANALYTICAL RESULTS TABLE IN APPENDIX C FOR THE SCS & FULL RESULTS, INCLUDING PARAMETERS THAT MET THE SCS

REFERENCE:

DRAWINGS REPRODUCED USING CITY OF HAMILTON GIS IMAGERY

TITLE:

GROUNDWATER ANALYTICAL RESULTS -

PHCs F1 TO F4 & BTEX

CLIENT:

CITY OF HAMILTON

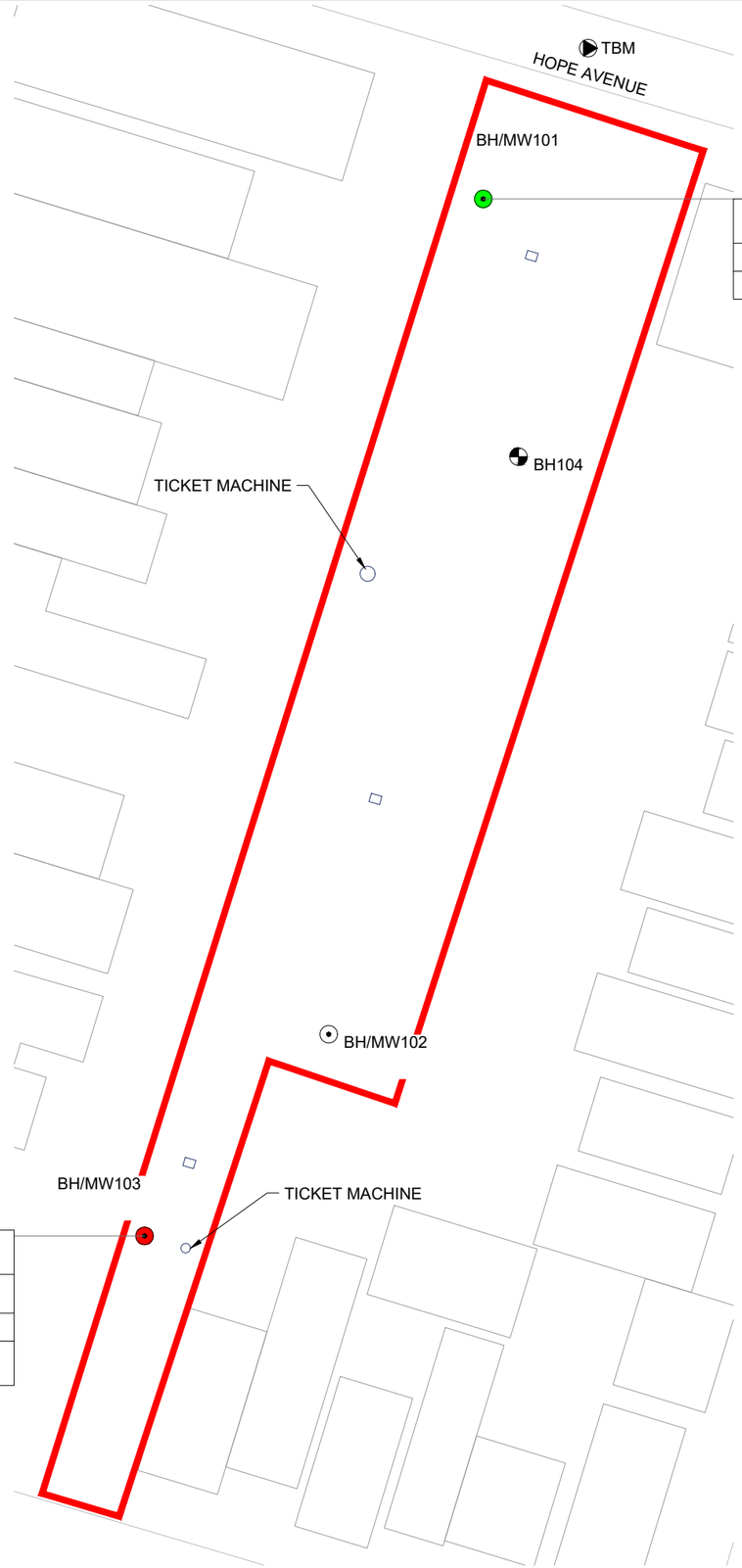
LOCATION:

70 HOPE AVENUE

HAMILTON, ONTARIO

PROJECT NO.: G2S24376

DRAWING:	7A
SCALE:	AS SHOWN
DATE:	JANUARY 2025
DRAWN BY:	DB
FILE NAME:	G2S24376P2RSC.dwg



BH/MW101	Screen Depth 6.31 - 7.81 mbgs
DATE	VOCs
2024/11/19	MEETS SCS

BH/MW103	Screen Depth 6.04 - 7.54 mbgs	
DATE	1,1-DCE	ALL OTHER VOCs
2024/11/19	2.3	MEETS SCS
2024/11/19 (DUPLICATE)	4.2	MEETS SCS

SCALE

0 10 20 30 40 50 m

N

LEGEND

- APPROXIMATE SITE LIMITS
- BOREHOLE ADVANCED BY G2S (NOVEMBER 2024)
- BOREHOLE / MONITORING WELL ADVANCED BY G2S (NOVEMBER 2024)
- TEMPORARY BENCHMARK (TBM)
- SAMPLE MEETS MECP TABLE 3 SCS
- SAMPLE DOES NOT MEET MECP TABLE 3 SCS

SCS SITE CONDITION STANDARDS

VOCs VOLATILE ORGANIC COMPOUNDS

PARAMETER		UNIT	TABLE 2 SCS
1,1-DCE	1,1-DICHLOROETHYLENE	µg/L	1.6

NOTE:

REFER TO ANALYTICAL RESULTS TABLE IN APPENDIX C FOR THE SCS & FULL RESULTS, INCLUDING PARAMETERS THAT MET THE SCS

REFERENCE:

DRAWINGS REPRODUCED USING CITY OF HAMILTON GIS IMAGERY

TITLE:

GROUNDWATER ANALYTICAL RESULTS - VOCs

CLIENT:

CITY OF HAMILTON

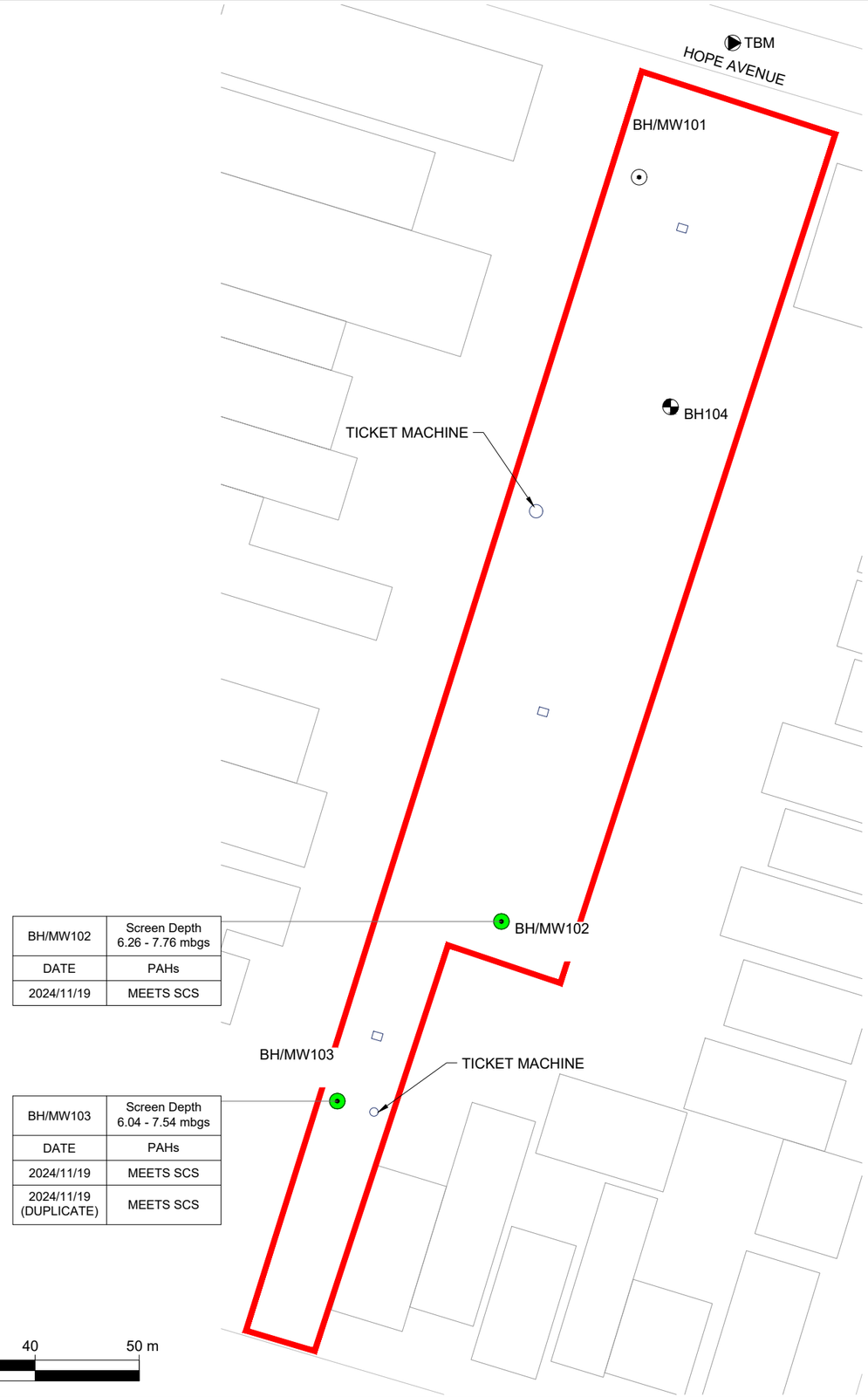
LOCATION:

70 HOPE AVENUE

HAMILTON, ONTARIO

PROJECT NO.: G2S24376

DRAWING:	7B
SCALE:	AS SHOWN
DATE:	JANUARY 2025
DRAWN BY:	DB
FILE NAME:	G2S24376P2RSC.dwg



BH/MW102	Screen Depth 6.26 - 7.76 mbgs
DATE	PAHs
2024/11/19	MEETS SCS

BH/MW103	Screen Depth 6.04 - 7.54 mbgs
DATE	PAHs
2024/11/19	MEETS SCS
2024/11/19 (DUPLICATE)	MEETS SCS

LEGEND

- APPROXIMATE SITE LIMITS
- BOREHOLE ADVANCED BY G2S (NOVEMBER 2024)
- BOREHOLE / MONITORING WELL ADVANCED BY G2S (NOVEMBER 2024)
- TEMPORARY BENCHMARK (TBM)
- SAMPLE MEETS MECP TABLE 3 SCS

SCS — SITE CONDITION STANDARDS

PAHs — POLYCYCLIC AROMATIC HYDROCARBONS

NOTE:

REFER TO ANALYTICAL RESULTS TABLE IN APPENDIX C FOR THE SCS & FULL RESULTS, INCLUDING PARAMETERS THAT MET THE SCS

REFERENCE:

DRAWINGS REPRODUCED USING CITY OF HAMILTON GIS IMAGERY

TITLE:

GROUNDWATER ANALYTICAL RESULTS - PAHs

CLIENT:

CITY OF HAMILTON

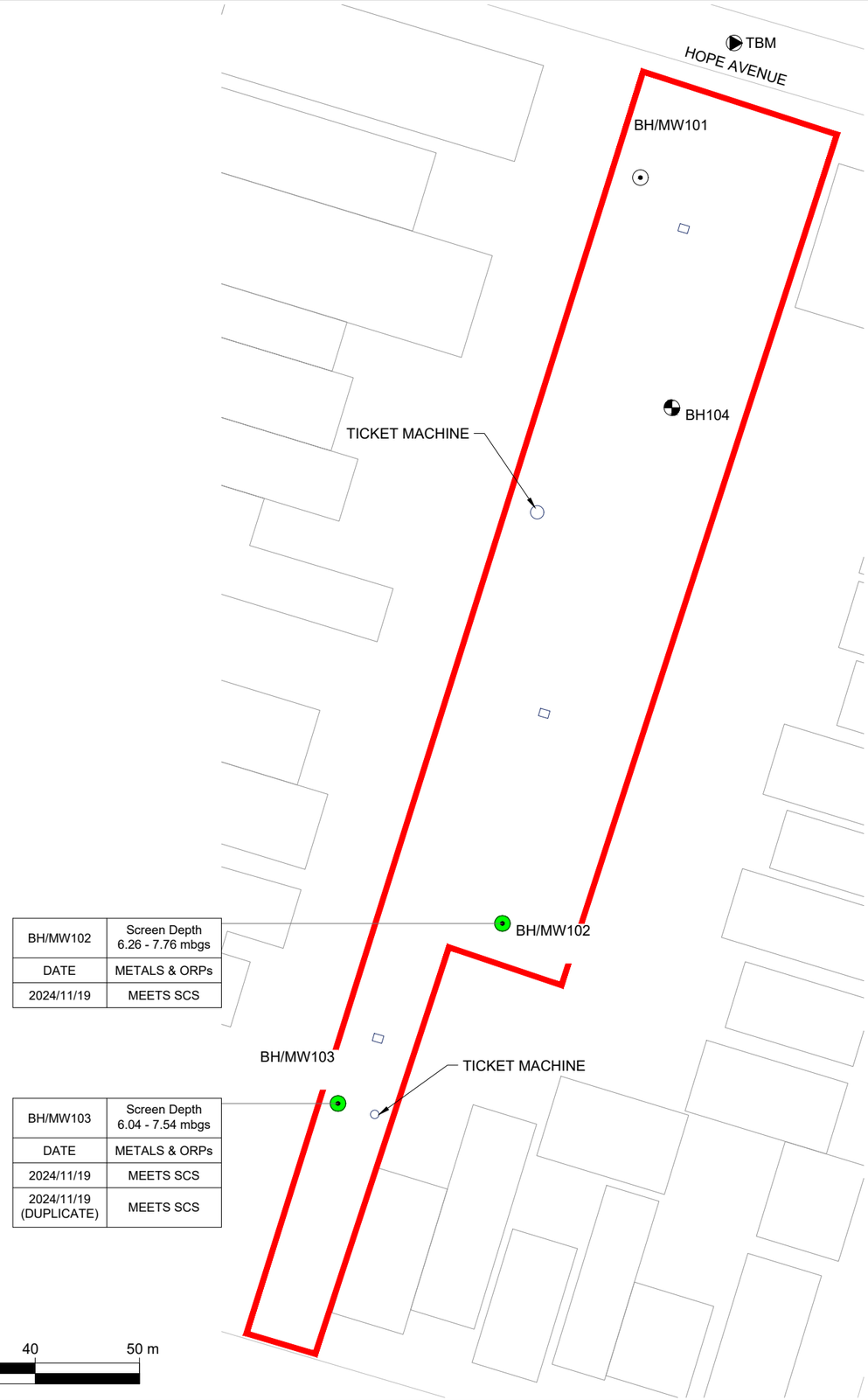
LOCATION:

70 HOPE AVENUE

HAMILTON, ONTARIO

PROJECT NO.: G2S24376

DRAWING:	7C
SCALE:	AS SHOWN
DATE:	JANUARY 2025
DRAWN BY:	DB
FILE NAME:	G2S24376P2RSC.dwg



BH/MW102	Screen Depth 6.26 - 7.76 mbgs
DATE	METALS & ORPs
2024/11/19	MEETS SCS

BH/MW103	Screen Depth 6.04 - 7.54 mbgs
DATE	METALS & ORPs
2024/11/19	MEETS SCS
2024/11/19 (DUPLICATE)	MEETS SCS

N

LEGEND

- APPROXIMATE SITE LIMITS
- BOREHOLE ADVANCED BY G2S (NOVEMBER 2024)
- BOREHOLE / MONITORING WELL ADVANCED BY G2S (NOVEMBER 2024)
- TEMPORARY BENCHMARK (TBM)
- SAMPLE MEETS MECP TABLE 3 SCS
- SCS — SITE CONDITION STANDARDS
- *ORPs — OTHER REGULATED PARAMETERS

NOTE:

REFER TO ANALYTICAL RESULTS TABLE IN APPENDIX C FOR THE SCS & FULL RESULTS, INCLUDING PARAMETERS THAT MET THE SCS

*ORPs INCLUDES B(HWS), CN^-, CrVI, Hg & pH

REFERENCE:

DRAWINGS REPRODUCED USING CITY OF HAMILTON GIS IMAGERY

TITLE:

GROUNDWATER ANALYTICAL RESULTS -

METALS & ORPs

CLIENT:

CITY OF HAMILTON

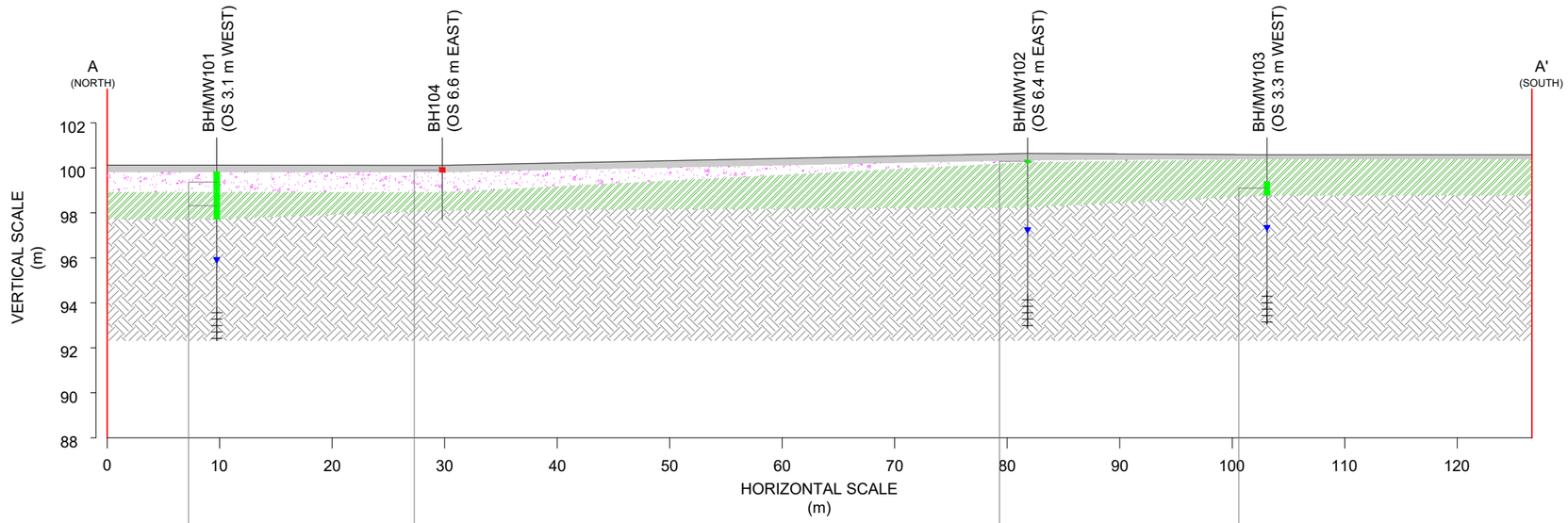
LOCATION:

70 HOPE AVENUE

HAMILTON, ONTARIO

PROJECT NO.: G2S24376

DRAWING:	7D
SCALE:	AS SHOWN
DATE:	JANUARY 2025
DRAWN BY:	DB
FILE NAME:	G2S24376P2RSC.dwg



BH101	DATE SAMPLED: 2024/11/07
DEPTH (mbgs)	PHCs & BTEX
0.3 - 1.2	MEETS SCS
1.2 - 2.4	MEETS SCS

BH104	DATE SAMPLED: 2024/11/07		
DEPTH (mbgs)	F3	F4G	ALL OTHER PHCs & BTEX
0.1 - 0.3	433	4540	MEETS SCS
0.1 - 0.3 (DUPLICATE)	316	2550	MEETS SCS

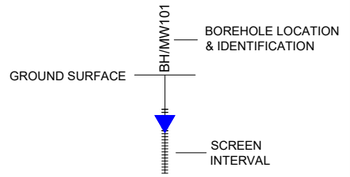
BH102	DATE SAMPLED: 2024/11/07
DEPTH (mbgs)	PHCs & BTEX
0.3 - 0.4	MEETS SCS

BH103	DATE SAMPLED: 2024/11/07
DEPTH (mbgs)	PHCs & BTEX
1.2 - 1.8	MEETS SCS

PARAMETER		UNIT	TABLE 3 SCS
F3	PETROLEUM HYDROCARBON F3	µg/g	300
F4G	PETROLEUM HYDROCARBONS F4 (GRAVIMETRIC)	µg/g	2800

LEGEND

- ASPHALT / GRANULAR
- FILL MATERIALS
- NATIVE (CLAYEY SILT / SHALE-TILL COMPLEX)
- BEDROCK
- GROUNDWATER LEVEL
- OS — OFFSET
- mbgs — METRES BELOW GROUND SURFACE
- SCS — SITE CONDITION STANDARDS
- SAMPLE MEETS MECP TABLE 3 SCS
- SAMPLE DOES NOT MEET MECP TABLE 3 SCS
- PHCs — PETROLEUM HYDROCARBONS F1 TO F4G
- BTEX — BENZENE, TOLUENE, ETHYLBENZENE, XYLENES



NOTE:

REFER TO ANALYTICAL RESULTS TABLE IN APPENDIX C FOR THE SCS & FULL RESULTS, INCLUDING PARAMETERS THAT MET THE SCS

REFERENCE:

DRAWINGS REPRODUCED USING CITY OF HAMILTON GIS IMAGERY

TITLE:

CROSS SECTION A-A' - SOIL ANALYTICAL RESULTS - PHCs F1 TO F4G & BTEX

CLIENT:

CITY OF HAMILTON

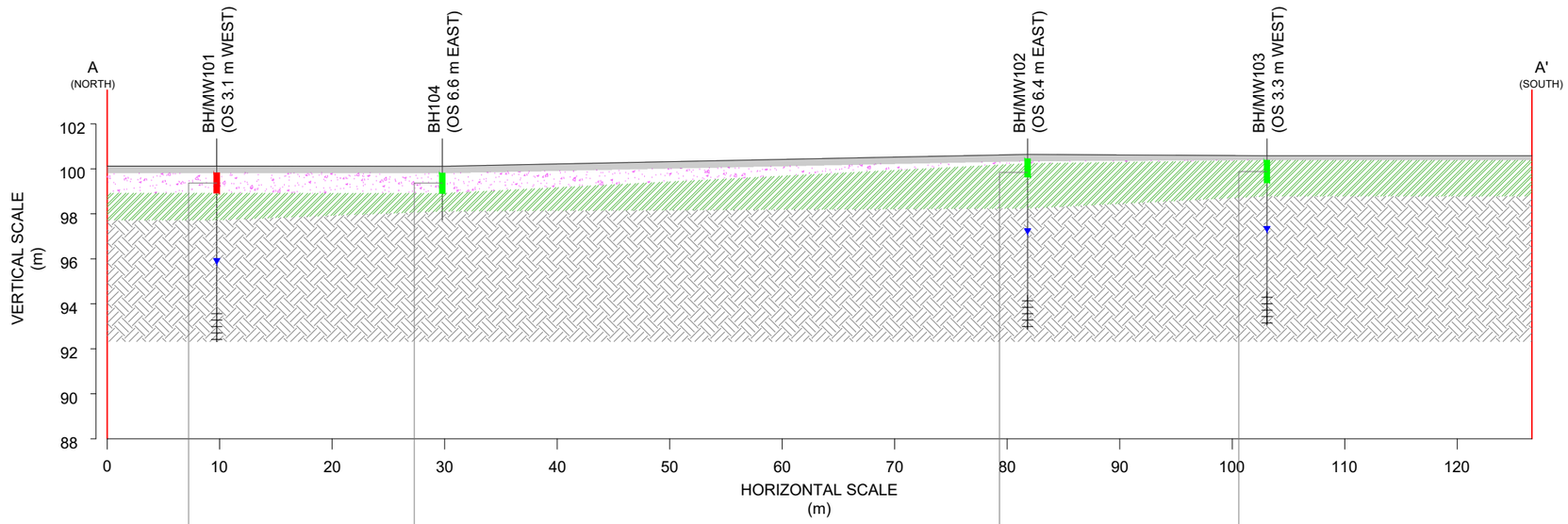
LOCATION:

70 HOPE AVENUE

HAMILTON, ONTARIO

PROJECT NO.: G2S24376

DRAWING:	8A
SCALE:	AS SHOWN
DATE:	JANUARY 2025
DRAWN BY:	DB
FILE NAME:	G2S24376P2RSC.dwg



BH101	DATE SAMPLED: 2024/11/07					
DEPTH (mbgs)	B(a)A	B(a)P	D(a,h)A	FLATH	I(1,2,3-cd)P	ALL OTHER PAHs
0.3 - 1.2	0.70	0.75	0.11	1.66	0.41	MEETS SCS

BH104	DATE SAMPLED: 2024/11/07
DEPTH (mbgs)	PAHs
0.3 - 1.2	MEETS SCS
0.3 - 1.2 (DUPLICATE)	MEETS SCS

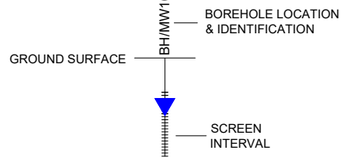
BH102	DATE SAMPLED: 2024/11/07
DEPTH (mbgs)	PAHs
0.4 - 1.2	MEETS SCS

BH103	DATE SAMPLED: 2024/11/07
DEPTH (mbgs)	PAHs
0.2 - 1.2	MEETS SCS

PARAMETER		UNIT	TABLE 3 SCS
B(a)A	BENZO(a)ANTHRACENE	µg/g	0.65
B(a)P	BENZO(a)PYRENE	µg/g	0.3
D(a,h)A	DIBENZO(a,h)ANTHRACENE	µg/g	0.1
FLATH	FLUORANTHENE	µg/g	0.69
I(1,2,3-cd)P	INDENO(1,2,3-cd)PYRENE	µg/g	0.38

LEGEND

- ASPHALT / GRANULAR
- FILL MATERIALS
- NATIVE (CLAYEY SILT / SHALE-TILL COMPLEX)
- BEDROCK
- GROUNDWATER LEVEL
- OS — OFFSET
- mbgs — METRES BELOW GROUND SURFACE
- SCS — SITE CONDITION STANDARDS
- SAMPLE MEETS MECP TABLE 3 SCS
- SAMPLE DOES NOT MEET MECP TABLE 3 SCS
- PAHs — POLYCYCLIC AROMATIC HYDROCARBONS



NOTE:

REFER TO ANALYTICAL RESULTS TABLE IN APPENDIX C FOR THE SCS & FULL RESULTS, INCLUDING PARAMETERS THAT MET THE SCS

REFERENCE:

DRAWINGS REPRODUCED USING CITY OF HAMILTON GIS IMAGERY

TITLE:

CROSS SECTION A-A' - SOIL ANALYTICAL RESULTS - PAHs

CLIENT:

CITY OF HAMILTON

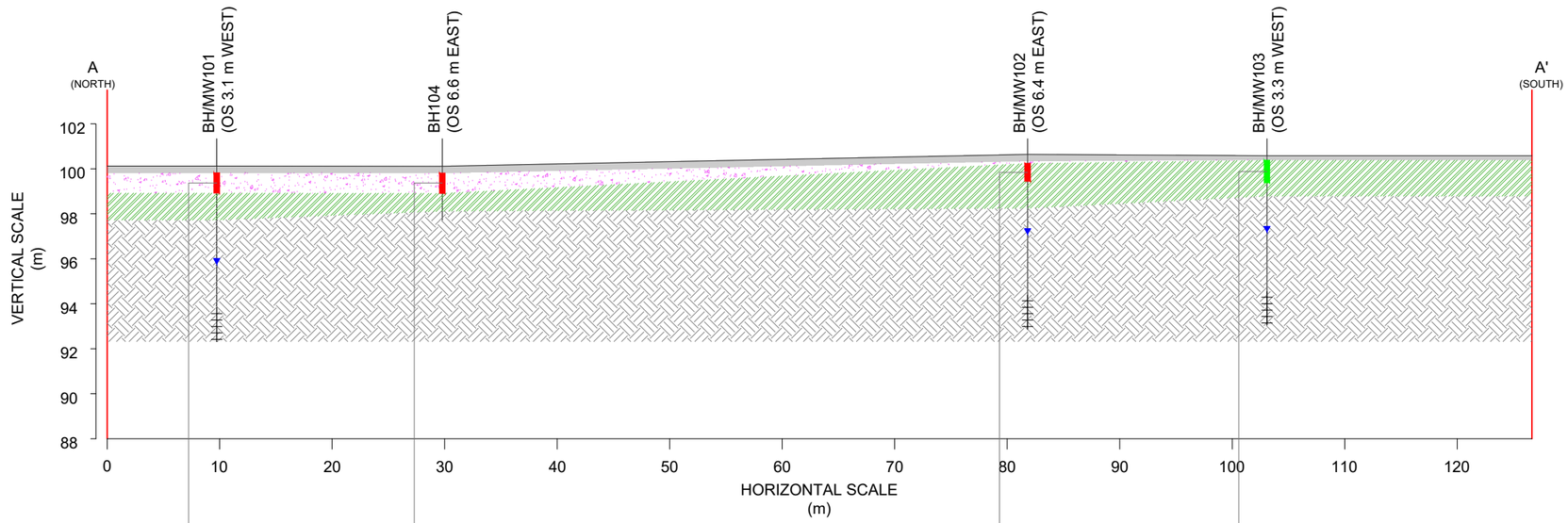
LOCATION:

70 HOPE AVENUE

HAMILTON, ONTARIO

PROJECT NO.: G2S24376

DRAWING:	8B
SCALE:	AS SHOWN
DATE:	JANUARY 2025
DRAWN BY:	DB
FILE NAME:	G2S24376P2RSC.dwg



BH101	DATE SAMPLED: 2024/11/07		
DEPTH (mbgs)	B(HWS)	Pb	ALL OTHER METALS & ORPs
0.3 - 1.2	4.4	237	MEETS SCS

BH104	DATE SAMPLED: 2024/11/07	
DEPTH (mbgs)	B(HWS)	ALL OTHER METALS & ORPs
0.3 - 1.2	2.2	MEETS SCS
0.3 - 1.2 (DUPLICATE)	2.7	MEETS SCS

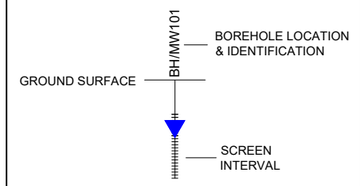
BH102	DATE SAMPLED: 2024/11/07	
DEPTH (mbgs)	B(HWS)	ALL OTHER METALS & ORPs
0.4 - 1.2	1.8	MEETS SCS

BH103	DATE SAMPLED: 2024/11/07
DEPTH (mbgs)	METALS & ORPs
0.2 - 1.2	MEETS SCS

PARAMETER		UNIT	TABLE 3 SCS
B(HWS)	BORON (HOT WATER SOLUBLE)	µg/g	1.5
Pb	LEAD	mg/g	120

LEGEND

- ASPHALT / GRANULAR
- FILL MATERIALS
- NATIVE (CLAYEY SILT / SHALE-TILL COMPLEX)
- BEDROCK
- GROUNDWATER LEVEL
- OS — OFFSET
- mbgs — METRES BELOW GROUND SURFACE
- SCS — SITE CONDITION STANDARDS
- SAMPLE MEETS MECP TABLE 3 SCS
- SAMPLE DOES NOT MEET MECP TABLE 3 SCS
- *ORPs — OTHER REGULATED PARAMETERS
- B(HWS) — BORON (HOT WATER SOLUBLE)



NOTE:

REFER TO ANALYTICAL RESULTS TABLE IN APPENDIX C FOR THE SCS & FULL RESULTS, INCLUDING PARAMETERS THAT MET THE SCS

*ORPs INCLUDES B(HWS), CN^-, CrVI, Hg & pH

REFERENCE:

DRAWINGS REPRODUCED USING CITY OF HAMILTON GIS IMAGERY

TITLE:

CROSS SECTION A-A' - SOIL ANALYTICAL RESULTS - METALS & ORPs

CLIENT:

CITY OF HAMILTON

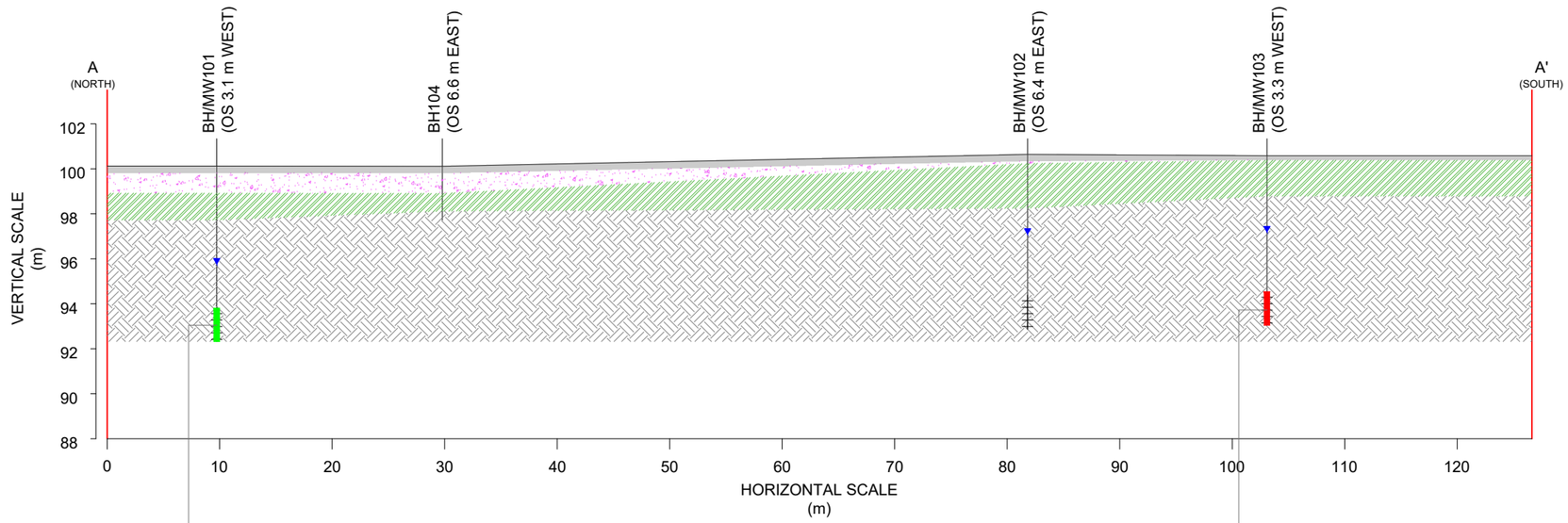
LOCATION:

70 HOPE AVENUE

HAMILTON, ONTARIO

PROJECT NO.: G2S24376

DRAWING:	8C
SCALE:	AS SHOWN
DATE:	JANUARY 2025
DRAWN BY:	DB
FILE NAME:	G2S24376P2RSC.dwg



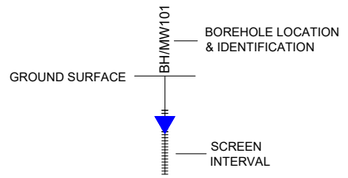
BH/MW101	Screen Depth 6.31 - 7.81 mbgs
DATE	VOCs
2024/11/19	MEETS SCS

BH/MW103	Screen Depth 6.04 - 7.54 mbgs	
DATE	1,1-DCE	ALL OTHER VOCs
2024/11/19	2.3	MEETS SCS
2024/11/19 (DUPLICATE)	4.2	MEETS SCS

PARAMETER		UNIT	TABLE 2 SCS
1,1-DCE	1,1-DICHLOROETHYLENE	µg/L	1.6

LEGEND

	ASPHALT / GRANULAR
	FILL MATERIALS
	NATIVE (CLAYEY SILT / SHALE-TILL COMPLEX)
	BEDROCK
	GROUNDWATER LEVEL
OS	OFFSET
mbgs	METRES BELOW GROUND SURFACE
SCS	SITE CONDITION STANDARDS
	SAMPLE MEETS MECP TABLE 3 SCS
	SAMPLE DOES NOT MEET MECP TABLE 3 SCS
VOCs	VOLATILE ORGANIC COMPOUNDS



NOTE:

REFER TO ANALYTICAL RESULTS TABLE IN APPENDIX C FOR THE SCS & FULL RESULTS, INCLUDING PARAMETERS THAT MET THE SCS

REFERENCE:

DRAWINGS REPRODUCED USING CITY OF HAMILTON GIS IMAGERY

TITLE:

CROSS SECTION A-A' - GROUNDWATER

ANALYTICAL RESULTS - VOCs

CLIENT:

CITY OF HAMILTON

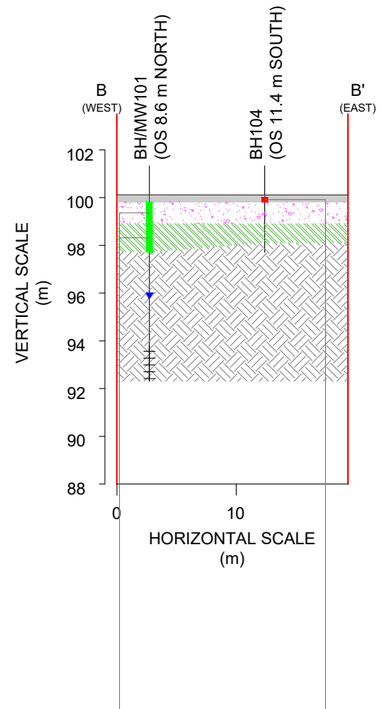
LOCATION:

70 HOPE AVENUE

HAMILTON, ONTARIO

PROJECT NO.: G2S24376

DRAWING:	8D
SCALE:	AS SHOWN
DATE:	JANUARY 2025
DRAWN BY:	DB
FILE NAME:	G2S24376P2RSC.dwg



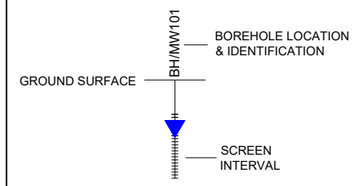
BH101	DATE SAMPLED: 2024/11/07
DEPTH (mbgs)	PHCs & BTEX
0.3 - 1.2	MEETS SCS
1.2 - 2.4	MEETS SCS

BH104	DATE SAMPLED: 2024/11/07		
DEPTH (mbgs)	F3	F4G	ALL OTHER PHCs & BTEX
0.1 - 0.3	433	4540	MEETS SCS
0.1 - 0.3 (DUPLICATE)	316	2550	MEETS SCS

PARAMETER		UNIT	TABLE 3 SCS
F3	PETROLEUM HYDROCARBON F3	µg/g	300
F4G	PETROLEUM HYDROCARBONS F4 (GRAVIMETRIC)	µg/g	2800

LEGEND

	ASPHALT / GRANULAR
	FILL MATERIALS
	NATIVE (CLAYEY SILT / SHALE-TILL COMPLEX)
	BEDROCK
	GROUNDWATER LEVEL
OS	OFFSET
mbgs	METRES BELOW GROUND SURFACE
SCS	SITE CONDITION STANDARDS
	SAMPLE MEETS MECP TABLE 3 SCS
	SAMPLE DOES NOT MEET MECP TABLE 3 SCS
PHCs	PETROLEUM HYDROCARBONS F1 TO F4G
BTEX	BENZENE, TOLUENE, ETHYLBENZENE, XYLENES



NOTE:

REFER TO ANALYTICAL RESULTS TABLE IN APPENDIX C FOR THE SCS & FULL RESULTS, INCLUDING PARAMETERS THAT MET THE SCS

REFERENCE:

DRAWINGS REPRODUCED USING CITY OF HAMILTON GIS IMAGERY

TITLE:

CROSS SECTION B-B' - SOIL ANALYTICAL RESULTS - PHCs F1 TO F4G & BTEX

CLIENT:

CITY OF HAMILTON

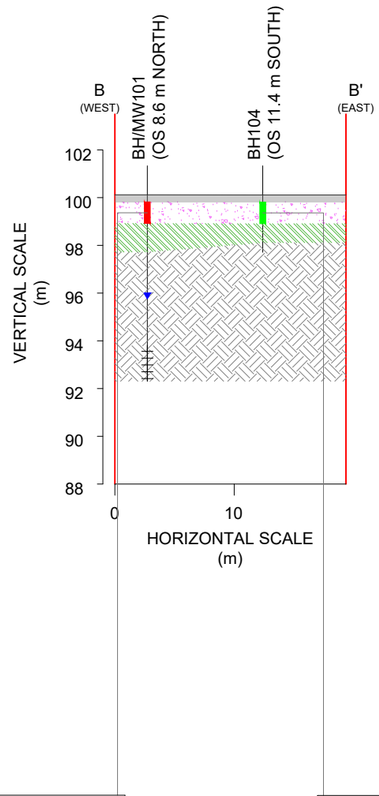
LOCATION:

70 HOPE AVENUE

HAMILTON, ONTARIO

PROJECT NO.: G2S24376

DRAWING:	9A
SCALE:	AS SHOWN
DATE:	JANUARY 2025
DRAWN BY:	DB
FILE NAME:	G2S24376P2RSC.dwg



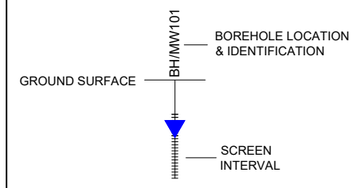
BH101	DATE SAMPLED: 2024/11/07					
DEPTH (mbgs)	B(a)A	B(a)P	D(a,h)A	FLATH	I(1,2,3-cd)P	ALL OTHER PAHs
0.3 - 1.2	0.70	0.75	0.11	1.66	0.41	MEETS SCS

BH104	DATE SAMPLED: 2024/11/07
DEPTH (mbgs)	PAHs
0.3 - 1.2	MEETS SCS
0.3 - 1.2 (DUPLICATE)	MEETS SCS

PARAMETER		UNIT	TABLE 3 SCS
B(a)A	BENZO(a)ANTHRACENE	µg/g	0.65
B(a)P	BENZO(a)PYRENE	µg/g	0.3
D(a,h)A	DIBENZO(a,h)ANTHRACENE	µg/g	0.1
FLATH	FLUORANTHENE	µg/g	0.69
I(1,2,3-cd)P	INDENO(1,2,3-cd)PYRENE	µg/g	0.38

LEGEND

	ASPHALT / GRANULAR
	FILL MATERIALS
	NATIVE (CLAYEY SILT / SHALE-TILL COMPLEX)
	BEDROCK
	GROUNDWATER LEVEL
OS	OFFSET
mbgs	METRES BELOW GROUND SURFACE
SCS	SITE CONDITION STANDARDS
	SAMPLE MEETS MECP TABLE 3 SCS
	SAMPLE DOES NOT MEET MECP TABLE 3 SCS
PAHs	POLYCYCLIC AROMATIC HYDROCARBONS



NOTE:

REFER TO ANALYTICAL RESULTS TABLE IN APPENDIX C FOR THE SCS & FULL RESULTS, INCLUDING PARAMETERS THAT MET THE SCS

REFERENCE:

DRAWINGS REPRODUCED USING CITY OF HAMILTON GIS IMAGERY

TITLE:

CROSS SECTION B-B' - SOIL ANALYTICAL RESULTS - PAHs

CLIENT:

CITY OF HAMILTON

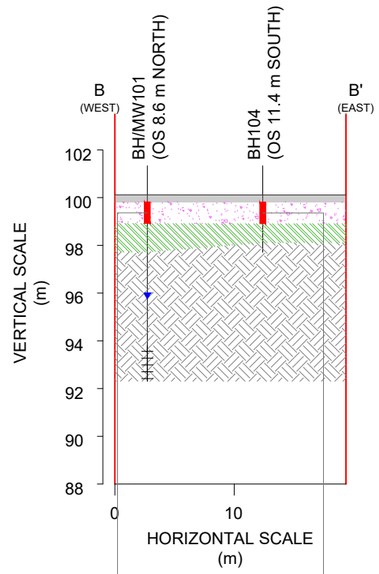
LOCATION:

70 HOPE AVENUE

HAMILTON, ONTARIO

PROJECT NO.: G2S24376

DRAWING:	9B
SCALE:	AS SHOWN
DATE:	JANUARY 2025
DRAWN BY:	DB
FILE NAME:	G2S24376P2RSC.dwg



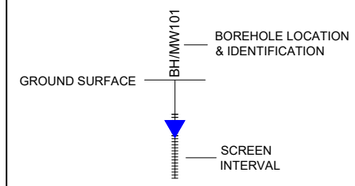
BH101	DATE SAMPLED: 2024/11/07		
DEPTH (mbgs)	B(HWS)	Pb	ALL OTHER METALS & ORPs
0.3 - 1.2	4.4	237	MEETS SCS

BH104	DATE SAMPLED: 2024/11/07	
DEPTH (mbgs)	B(HWS)	ALL OTHER METALS & ORPs
0.3 - 1.2	2.2	MEETS SCS
0.3 - 1.2 (DUPLICATE)	2.7	MEETS SCS

PARAMETER		UNIT	TABLE 3 SCS
B(HWS)	BORON (HOT WATER SOLUBLE)	µg/g	1.5
Pb	LEAD	mg/g	120

LEGEND

	ASPHALT / GRANULAR
	FILL MATERIALS
	NATIVE (CLAYEY SILT / SHALE-TILL COMPLEX)
	BEDROCK
	GROUNDWATER LEVEL
OS	OFFSET
mbgs	METRES BELOW GROUND SURFACE
SCS	SITE CONDITION STANDARDS
	SAMPLE MEETS MECP TABLE 3 SCS
	SAMPLE DOES NOT MEET MECP TABLE 3 SCS
*ORPs	OTHER REGULATED PARAMETERS
B(HWS)	BORON (HOT WATER SOLUBLE)



NOTE:

REFER TO ANALYTICAL RESULTS TABLE IN APPENDIX C FOR THE SCS & FULL RESULTS, INCLUDING PARAMETERS THAT MET THE SCS

*ORPs INCLUDES B(HWS), CN^-, CrVI, Hg & pH

REFERENCE:

DRAWINGS REPRODUCED USING CITY OF HAMILTON GIS IMAGERY

TITLE:

CROSS SECTION B-B' - SOIL ANALYTICAL RESULTS - METALS & ORPs

CLIENT:

CITY OF HAMILTON

LOCATION:

70 HOPE AVENUE

HAMILTON, ONTARIO

PROJECT NO.: G2S24376

DRAWING:	9C
SCALE:	AS SHOWN
DATE:	JANUARY 2025
DRAWN BY:	DB
FILE NAME:	G2S24376P2RSC.dwg

Appendix B:
Borehole Logs

BH/MW NUMBER 101

G2S Consulting Inc.

CLIENT City of Hamilton
PROJECT NAME Proposed Residential Development
PROJECT NUMBER G2S24376
PROJECT LOCATION 70 Hope Street, Hamilton, ON
DATE STARTED 24-11-7 **COMPLETED** 24-11-7
GROUND ELEVATION 100.12 m
DRILLING CONTRACTOR Profile Drilling Inc.
LOGGED BY DB **CHECKED BY** DS
DRILLING METHOD 9700 VTR Power Probe; Direct Push; CFSSA
NOTES

DEPTH (m)	MATERIAL DESCRIPTION	ELEVATION (m)	NUMBER	TYPE	SOIL GAS READINGS HEX/IBL (ppm)
0.1	ASPHALT: ~110 mm	100.01	S1A	DP	15/0
0.3	GRANULAR: ~160 mm	99.85			
1	FILL: Silty clay, red, grey, brown and dark brown, some sand, very moist		S1B		20/1
1.2		98.92			
2	SHALE / TILL COMPLEX: Red and grey, more weathered shale with depth		S2	DP	20/1
2.4		97.72			
2.7	WEATHERED SHALE BEDROCK: Red and grey	97.38	S3	DP	25/1
3	Straight auger to 7.8 m for monitoring well installation				
7.8		92.31			

Borehole terminated at 7.8 m.

WELL DIAGRAM:
- Flushmount protective casing set in concrete
- Bentonite seal
- Filter sand
- 6.31
- Slotted screen
- 7.81

Water Level Readings:

Date	Depth (m)	Elev. (m)
2024-11-15	4.35	95.77

BH/MW NUMBER 102

G2S Consulting Inc.

CLIENT City of Hamilton
PROJECT NAME Proposed Residential Development
PROJECT NUMBER G2S24376
PROJECT LOCATION 70 Hope Street, Hamilton, ON
DATE STARTED 24-11-7 **COMPLETED** 24-11-7
GROUND ELEVATION 100.64 m
DRILLING CONTRACTOR Profile Drilling Inc.
LOGGED BY DB **CHECKED BY** DS
DRILLING METHOD 9700 VTR Power Probe; Direct Push; CFSSA
NOTES

DEPTH (m)	MATERIAL DESCRIPTION	ELEVATION (m)	NUMBER	TYPE	SOIL GAS READINGS HEX/IBL (ppm)
0.1	ASPHALT: ~80 mm	100.56	S1A	DP	0/0
0.3	GRANULAR: ~170 mm	100.39	S1B		0/0
0.4	FILL: Silty clay, red, some sand, moist	100.24	S1C		0/0
1.3	SILTY CLAY: Grey and brown, trace to some sand, moist	99.32	S2A		0/0
2.4	SHALE / TILL COMPLEX: Red, some sand, moist	98.24	S2B	DP	0/0
2.7	WEATHERED SHALE BEDROCK: Red and grey	97.90	S3	DP	0/0
7.8	Straight auger to 7.8 m for monitoring well installation	92.88			

Borehole terminated at 7.8 m.

WELL DIAGRAM:
- Flushmount protective casing set in concrete
- Bentonite seal
- Filter sand
- 6.26
- Slotted screen
- 7.76

Water Level Readings:

Date	Depth (m)	Elev. (m)
2024-11-15	3.54	97.10

BH/MW NUMBER 103

G2S Consulting Inc.

CLIENT City of Hamilton
PROJECT NAME Proposed Residential Development
PROJECT NUMBER G2S24376
PROJECT LOCATION 70 Hope Street, Hamilton, ON
DATE STARTED 24-11-7 **COMPLETED** 24-11-7
GROUND ELEVATION 100.58 m
DRILLING CONTRACTOR Profile Drilling Inc.
LOGGED BY DB **CHECKED BY** DS
DRILLING METHOD 9700 VTR Power Probe; Direct Push; CFSSA
NOTES

DEPTH (m)	MATERIAL DESCRIPTION	ELEVATION (m)	NUMBER	TYPE	SOIL GAS READINGS HEX/IBL (ppm)
0.1	ASPHALT: ~90 mm	100.49	S1A	DP	0/0
0.2	GRANULAR: ~150 mm	100.34			
1	SHALE / TILL COMPLEX: Red, trace sand, more shale fragments with depth, moist		S1B		5/0
1.8		98.78	S2A	DP	10/1
2	WEATHERED SHALE BEDROCK: Red and grey		S2B		5/1
2.7		97.84	S3	DP	5/0
3	Straight auger to 7.5 m for monitoring well installation				
4					
5					
6					
7					
7.5		93.04			

WELL DIAGRAM: Flushmount protective casing set in concrete; Bentonite seal; Filter sand 6.04; Slotted screen; 7.54

Borehole terminated at 7.5 m.

Water Level Readings:

Date	Depth (m)	Elev. (m)
2024-11-15	3.38	97.20

BOREHOLE NUMBER 104

CLIENT City of Hamilton
PROJECT NAME Proposed Residential Development
PROJECT NUMBER G2S24376
PROJECT LOCATION 70 Hope Street, Hamilton, ON
DATE STARTED 24-11-7 **COMPLETED** 24-11-7
GROUND ELEVATION 100.11 m
DRILLING CONTRACTOR Profile Drilling Inc.
LOGGED BY DB **CHECKED BY** DS
DRILLING METHOD 9700 VTR Power Probe; Direct Push
NOTES

DEPTH (m)	MATERIAL DESCRIPTION	ELEVATION (m)	GRAPHIC LOG	NUMBER	TYPE	SOIL GAS READINGS HEX/IBL (ppm)	WELL DIAGRAM
	0.1 ASPHALT: ~60 mm	100.05		S1A	DP	25/0	
	0.3 GRANULAR: ~280 mm	99.77		S1B		0/1	
1	FILL: Silty clay, grey, brown, red and dark brown, some sand, very moist						
	1.2	98.91					
	SHALE / TILL COMPLEX: Red and grey, moist			S2A	DP	0/1	
2	2.0	98.10					
	WEATHERED SHALE BEDROCK: Red and grey			S2B		5/1	
	2.4	97.71					

Borehole terminated at 2.4 m.

Appendix C:
Analytical Results Tables

Table 1: Soil Quality Results
Petroleum Hydrocarbons (F1-F4) and BTEX

Parameter	Unit	*Table 3 RPI SCS - Coarse texture	Sample Identification					
			BH101 S1B	BH101 S2	BH102 S1B	BH103 S2A	BH104 S1A	BH105 S1A (Duplicate of BH104 S1A)
Date Sampled			**7-Nov-24**	**7-Nov-24**	**7-Nov-24**	**7-Nov-24**	**7-Nov-24**	**7-Nov-24**
Depth	**mbgs**		**0.3 - 1.2**	**1.2 - 2.4**	**0.3 - 0.4**	**1.2 - 1.8**	**0.1 - 0.3**	**0.1 - 0.3**
Benzene	µg/g	0.21	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Ethylbenzene	µg/g	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Toluene	µg/g	2.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes	µg/g	3.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Petroleum Hydrocarbons F1	µg/g	55	<7	<7	<7	<7	<7	<7
Petroleum Hydrocarbons F2	µg/g	98	<4	<4	<4	<4	8	6
Petroleum Hydrocarbons F3	µg/g	300	12	<8	<8	<8	**433**	**316**
Petroleum Hydrocarbons F4	µg/g	2800	<6	<6	<6	<6	1340	864
Petroleum Hydrocarbons F4G	µg/g	2800	-	-	-	-	**4540**	2550

*Ministry of the Environment, Conservation, and Parks Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, dated April 2011.

SCS - Site Condition Standards

RPI - Residential/Parkland/Institutional

Values shaded and in bold exceed Table 3 RPI SCS

Table 2: Soil Quality Results
Volatile Organic Compounds (VOCs)

Parameter	Unit	*Table 3 RPI SCS - Coarse texture	Sample Identification					
			BH101 S1B	BH101 S2	BH102 S1B	BH103 S2A	BH104 S1A	BH105 S1A (Duplicate of BH104 S1A)
Date Sampled			**7-Nov-24**	**7-Nov-24**	**7-Nov-24**	**7-Nov-24**	**7-Nov-24**	**7-Nov-24**
Depth	**mbgs**		**0.3 - 1.2**	**1.2 - 2.4**	**0.3 - 0.4**	**1.2 - 1.8**	**0.1 - 0.3**	**0.1 - 0.3**
Acetone	µg/g	16	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Benzene	µg/g	0.21	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromodichloromethane	µg/g	13	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromoform	µg/g	0.27	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Bromomethane	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chlorobenzene	µg/g	2.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chloroform	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	µg/g	9.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorodifluoromethane	µg/g	16	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,2-	µg/g	3.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,3-	µg/g	4.8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichlorobenzene, 1,4-	µg/g	0.083	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethane, 1,1-	µg/g	3.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethane, 1,2-	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethylene, 1,1-	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethylene, 1,2-cis-	µg/g	3.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloroethylene, 1,2-trans-	µg/g	0.084	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloropropane, 1,2-	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dichloropropene, 1,3-	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	µg/g	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Hexane (n)	µg/g	2.8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl Ethyl Ketone (MEK)	µg/g	16	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	µg/g	1.7	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Methyl tert-butyl ether (MTBE)	µg/g	0.75	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	µg/g	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	µg/g	0.7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethane, 1,1,1,2-	µg/g	0.058	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethane, 1,1,2,2-	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Tetrachloroethylene	µg/g	0.28	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Toluene	µg/g	2.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichloroethane, 1,1,1-	µg/g	0.38	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichloroethane, 1,1,2-	µg/g	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichloroethylene	µg/g	0.061	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	µg/g	4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	µg/g	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Xylene Mixture (Total)	µg/g	3.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

*Ministry of the Environment, Conservation, and Parks Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection
SCS - Site Condition Standards
RPI - Residential/Parkland/Institutional
Values shaded and in bold exceed Table 3 RPI SCS

Table 3: Soil Quality Results
Polycyclic Aromatic Hydrocarbons (PAHs)

Parameter	Unit	*Table 3 RPI SCS - Coarse texture	Sample Identification				
			BH101 S1B	BH102 S1C	BH103 S1B	BH104 S1B	BH105 S1B (Duplicate of BH104 S1B)
Date Sampled	-	-	**7-Nov-24**	**7-Nov-24**	**7-Nov-24**	**7-Nov-24**	**7-Nov-24**
Depth	mbgs	-	**0.3 - 1.2**	**0.4 - 1.2**	**0.2 - 1.2**	**0.3 - 1.2**	**0.3 - 1.2**
Acenaphthene	µg/g	7.9	0.05	<0.02	<0.02	<0.02	<0.02
Acenaphthylene	µg/g	0.15	0.10	0.04	<0.02	<0.02	<0.02
Anthracene	µg/g	0.67	0.17	<0.02	<0.02	<0.02	<0.02
Benzo[a]anthracene	µg/g	0.5	**0.70**	0.07	<0.02	<0.02	<0.02
Benzo[a]pyrene	µg/g	0.3	**0.75**	0.08	<0.02	<0.02	<0.02
Benzo[b]fluoranthene	µg/g	0.78	0.50	0.07	<0.02	<0.02	<0.02
Benzo[g,h,i]perylene	µg/g	6.6	0.39	0.06	<0.02	<0.02	<0.02
Benzo[k]fluoranthene	µg/g	0.78	0.25	0.03	<0.02	<0.02	<0.02
Chrysene	µg/g	7	0.68	0.08	<0.02	<0.02	<0.02
Dibenzo[a,h]anthracene	µg/g	0.1	**0.11**	<0.02	<0.02	<0.02	<0.02
Fluoranthene	µg/g	0.69	**1.66**	0.09	<0.02	<0.02	<0.02
Fluorene	µg/g	62	0.05	<0.02	<0.02	<0.02	<0.02
Indeno [1,2,3-cd] pyrene	µg/g	0.38	**0.41**	0.05	<0.02	<0.02	<0.02
Methylnaphthalene (1&2)	µg/g	0.99	0.04	<0.03	<0.03	<0.03	<0.03
Naphthalene	µg/g	0.6	0.02	<0.01	<0.01	<0.01	<0.01
Phenanthrene	µg/g	6.2	0.60	<0.02	<0.02	<0.02	<0.02
Pyrene	µg/g	78	1.05	0.07	<0.02	<0.02	<0.02

*Ministry of the Environment, Conservation, and Parks Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental

SCS - Site Condition Standards

RPI - Residential/Parkland/Institutional

Table 4: Soil Quality Results
Metals and Other Regulated Parameters (ORPs)

Parameter	Unit	*Table 3 RPI SCS - Coarse texture	Sample Identification				
			BH101 S1B	BH102 S1C	BH103 S1B	BH104 S1B	BH105 S1B (Duplicate of BH104 S1B)
Date Sampled			**7-Nov-24**	**7-Nov-24**	**7-Nov-24**	**7-Nov-24**	**7-Nov-24**
Depth	**mbgs**		**0.3 - 1.2**	**0.4 - 1.2**	**0.2 - 1.2**	**0.3 - 1.2**	**0.3 - 1.2**
Antimony	µg/g	7.5	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	µg/g	18	4.4	4.6	4.0	4.0	4.1
Barium	µg/g	390	137	48.1	65.4	143	99.9
Beryllium	µg/g	4	0.7	0.5	1.0	1.1	1.1
Boron (Hot Water Soluble)	µg/g	1.5	**4.4**	**1.8**	1.2	**2.2**	**2.7**
Boron (Total)	µg/g	120	15.8	9.8	26.4	12.1	11.6
Cadmium	µg/g	1.2	0.6	<0.5	<0.5	<0.5	<0.5
Chromium VI	µg/g	8	<0.2	<0.2	<0.2	<0.2	0.2
Chromium (Total)	µg/g	160	17.8	15.3	24.1	25.1	19.0
Cobalt	µg/g	22	8.5	7.7	15.0	10.1	6.9
Copper	µg/g	140	22.3	6.1	7.7	6.5	6.4
Cyanide (CN-)	µg/g	0.051	<0.03	<0.03	<0.03	<0.03	<0.03
Lead	µg/g	120	**237**	11.6	7.7	7.5	12.5
Mercury	µg/g	0.27	<0.1	<0.1	<0.1	<0.1	<0.1
Molybdenum	µg/g	6.9	<1.0	<1.0	<1.0	<1.0	<1.0
Nickel	µg/g	100	17.5	15.3	25.9	21.2	14.8
Selenium	µg/g	2.4	<1.0	<1.0	<1.0	<1.0	<1.0
Silver	µg/g	20	<0.3	<0.3	<0.3	<0.3	<0.3
Thallium	µg/g	1	<1.0	<1.0	<1.0	<1.0	<1.0
Uranium	µg/g	23	<1.0	<1.0	<1.0	<1.0	<1.0
Vanadium	µg/g	86	20.6	24.9	25.4	29.5	23.2
Zinc	µg/g	340	229	60.0	74.0	43.1	43.9
Sodium Adsorption Ratio	-	5	3.36	3.35	**12.4**	**6.64**	**8.87**
Electrical Conductivity	mS/cm	0.7	0.652	0.529	**1.35**	**1.02**	**1.46**
pH	-		7.41	7.52	7.36	7.15	7.08

*Ministry of the Environment, Conservation, and Parks Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act , dated April 2011.

**pH 5 to 9 for surface soils; pH 5 to 11 for subsurface soil

SCS - Site Condition Standards

RPI - Residential/Parkland/Institutional

ORPs include Cyanide (CN-), Mercury (Hg), Chromium VI (CrVI), Boron (hot water soluble), pH, EC and SAR

Values shaded and in bold exceed Table 3 RPI SCS

The elevated EC and SAR in soil are attributed to the historical use of de-icing salt on the surfaces of the Site and adjacent roadways. Under O.Reg. 153/04, as amended, where a SCS is exceeded solely because a substance has been applied for the safety of vehicular or pedestrian traffic under conditions of snow and ice, the applicable SCS is deemed to not be exceeded. Reference is made to O.Reg. 153/04, as amended, S. 49(1).

Table 5: Groundwater Quality Results
Petroleum Hydrocarbons (PHCs) F1-F4 and BTEX

Parameter	Unit	*Table 3 RPI/ICC SCS - Coarse texture	Sample Identification			
			BH/MW101	BH/MW102	BH/MW103	BH/MW105
Date Sampled	-	-	**19-Nov-24**	**19-Nov-24**	**19-Nov-24**	**19-Nov-24**
Screen Depth	m bgs	-	**6.31 – 7.81**	**6.26 – 7.76**	**6.04 – 7.54**	**6.04 – 7.54**
Benzene	µg/L	44	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	µg/L	2300	<0.5	<0.5	<0.5	<0.5
Toluene	µg/L	18000	<0.5	<0.5	<0.5	<0.5
Xylenes (total)	µg/L	4200	<0.5	<0.5	<0.5	<0.5
Petroleum Hydrocarbons F1 (C6-C10)	µg/L	750	<25	<25	<25	<25
Petroleum Hydrocarbons F2 (C10-C16)	µg/L	150	<100	<100	<100	<100
Petroleum Hydrocarbons F3 (C16-C34)	µg/L	500	<100	<100	<100	<100
Petroleum Hydrocarbons F4 (C34-C50)	µg/L	500	<100	<100	<100	<100

*MECP Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, dated April 2011.
RPI /ICC- Residential/Parkland/Institutional/Industrial/Commercial/Community
SCS - Site Condition Standard

Table 6: Groundwater Quality Results
Volatile Organic Compounds (VOCs)

Parameter	Unit	*Table 3 RPI/ICC SCS - Coarse texture	Sample Identification		
			BH/MW101	BH/MW103	BH/MW105
Date Sampled	**-**	**-**	**13-Nov-24**	**19-Nov-24**	**19-Nov-24**
Screen Depth			**6.31 – 7.81**	**6.04 – 7.54**	**6.04 – 7.54**
Acetone	µg/L	130000	<5.0	<5.0	<5.0
Benzene	µg/L	44	<5.0	<5.0	<5.0
Bromodichloromethane	µg/L	85000	<0.5	<0.5	<0.5
Bromoform	µg/L	380	<0.5	<0.5	<0.5
Bromomethane	µg/L	5.6	<0.5	<0.5	<0.5
Carbon Tetrachloride	µg/L	0.79	<0.2	<0.2	<0.2
Chlorobenzene	µg/L	630	<0.5	<0.5	<0.5
Chloroform	µg/L	2.4	<0.5	<0.5	<0.5
Dibromochloromethane	µg/L	82000	<0.5	<0.5	<0.5
Dichlorodifluoromethane	µg/L	4400	<1.0	<1.0	<1.0
Dichlorobenzene, 1,2-	µg/L	4600	<0.5	<0.5	<0.5
Dichlorobenzene, 1,3-	µg/L	9600	<0.5	<0.5	<0.5
Dichlorobenzene, 1,4-	µg/L	8	<0.5	<0.5	<0.5
Dichloroethane, 1,1-	µg/L	320	<0.5	3.2	4.3
Dichloroethane, 1,2-	µg/L	1.6	<0.5	<0.5	0.5
Dichloroethylene, 1,1-	µg/L	1.6	<0.5	**2.3**	**4.2**
Dichloroethylene, 1,2-cis-	µg/L	1.6	<0.5	<0.5	<0.5
Dichloroethylene, 1,2-trans-	µg/L	1.6	<0.5	<0.5	<0.5
Dichloropropane, 1,2-	µg/L	16	<0.5	<0.5	<0.5
Dichloropropene, 1,3-	µg/L	5.2	<0.5	<0.5	<0.5
Ethylbenzene	µg/L	2300	<0.5	<0.5	<0.5
Ethylene Dibromide	µg/L	0.25	<0.2	<0.2	<0.2
Hexane (n)	µg/L	51	<1.0	<1.0	<1.0
Methyl Ethyl Ketone (MEK)	µg/L	470000	<5.0	<5.0	<5.0
Methyl Isobutyl Ketone	µg/L	140000	<5.0	<5.0	<5.0
Methyl tert-butyl ether (MTBE)	µg/L	190	<2.0	<2.0	<2.0
Methylene Chloride	µg/L	610	<5.0	<5.0	<5.0
Styrene	µg/L	1300	<0.5	<0.5	<0.5
Tetrachloroethane, 1,1,1,2-	µg/L	3.3	<0.5	<0.5	<0.5
Tetrachloroethane, 1,1,2,2-	µg/L	3.2	<0.5	<0.5	<0.5
Tetrachloroethylene	µg/L	1.6	<0.5	<0.5	<0.5
Toluene	µg/L	18000	<0.5	<0.5	<0.5
Trichloroethane, 1,1,1-	µg/L	640	<0.5	<0.5	<0.5
Trichloroethane, 1,1,2-	µg/L	4.7	<0.5	<0.5	<0.5
Trichloroethylene	µg/L	1.6	<0.5	<0.5	<0.5
Trichlorofluoromethane	µg/L	2500	<1.0	<1.0	<1.0
Vinyl Chloride	µg/L	0.5	<0.5	<0.5	<0.5
Xylene Mixture	µg/L	4200	<0.05	<0.05	<0.05

*MECP Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, dated April 2011.

RPI /ICC- Residential/Parkland/Institutional/Industrial/Commercial/Community

Values shaded and in bold exceed Table 3 RPI SCS

SCS - Site Condition Standard

Table 7: Groundwater Quality Results
Polycyclic Aromatic Hydrocarbons (PAHs)

Parameter	Unit	*Table 3 RPI/ICC SCS - Coarse texture	Sample Identification		
			BH/MW102	BH/MW103	BH/MW105
Date Sampled	**-**	**-**	**19-Nov-24**	**19-Nov-24**	**19-Nov-24**
Screen Depth	**m bgs**	**-**	**6.26 – 7.76**	**6.04 – 7.54**	**6.04 – 7.54**
Acenaphthene	µg/L	600	<0.05	<0.05	<0.05
Acenaphthylene	µg/L	1.8	<0.05	<0.05	<0.05
Anthracene	µg/L	2.4	<0.01	<0.01	<0.01
Benzo(a)anthracene	µg/L	4.7	<0.01	<0.01	<0.01
Benzo(a)pyrene	µg/L	0.81	<0.01	<0.01	<0.01
Benzo(b)fluoranthene	µg/L	0.75	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/L	0.2	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/L	0.4	<0.05	<0.05	<0.05
Chrysene	µg/L	1	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/L	0.52	<0.05	<0.05	<0.05
Fluoranthene	µg/L	130	<0.01	<0.01	<0.01
Fluorene	µg/L	400	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/L	0.2	<0.05	<0.05	<0.05
1- Methylnaphthalene	µg/L	1800	<0.05	<0.05	<0.05
2- Methylnaphthalene	µg/L	1800	<0.05	<0.05	<0.05
Methylnaphthalene, 2-(1-)	µg/L	1800	<0.10	<0.10	<0.10
Naphthalene	µg/L	1400	<0.05	<0.05	<0.05
Phenanthrene	µg/L	580	<0.05	<0.05	<0.05
Pyrene	µg/L	68	<0.01	<0.01	<0.01

*MECP Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, dated April 2011.

SCS - Site Condition Standards

RPI /ICC- Residential/Parkland/Institutional/Industrial/Commercial/Community

Table 8: Groundwater Quality Results
Metals and Other Regulated Parameters (ORPs)

Parameter	Unit	*Table 3 RPI/ICC SCS - Coarse texture	Sample Identification		
			BH/MW102	BH/MW103	BH/MW105
Date Sampled	**-**	**-**	**19-Nov-24**	**19-Nov-24**	**19-Nov-24**
Screen Depth			**6.26 – 7.76**	**6.04 – 7.54**	**6.04 – 7.54**
Antimony	µg/L	20000	<0.5	<0.5	<0.5
Arsenic	µg/L	1900	1.5	3.1	3.0
Barium	µg/L	29000	14.0	15.5	14.8
Beryllium	µg/L	67	<0.5	<0.5	<0.5
Boron (Total)	µg/L	45000	5350	3800	3770
Cadmium	µg/L	2.7	<0.2	<0.2	<0.2
Chloride	µg/L	2300000	-	451000	436000
Chromium VI	µg/L	140	-	<10	<10
Chromium (Total)	µg/L	810	<1.0	<1.0	<1.0
Cobalt	µg/L	66	1.3	1.3	1.1
Copper	µg/L	87	<0.5	0.7	<0.5
Cyanide (CN-)	µg/L	66	-	<2	<2
Lead	µg/L	25	<0.2	<0.2	<0.2
Mercury	µg/L	0.29	-	<0.1	<0.1
Molybdenum	µg/L	9200	5.2	4.1	4.2
Nickel	µg/L	490	2.2	2.4	2.3
Selenium	µg/L	63	<1.0	<1.0	<1.0
Silver	µg/L	1.5	<0.2	<0.2	<0.2
Sodium	µg/L	2300000	510000	439000	458000
Thallium	µg/L	510	<0.5	<0.5	<0.5
Uranium	µg/L	420	2.2	1.9	1.8
Vanadium	µg/L	250	<0.5	<0.5	<0.5
Zinc	µg/L	1100	<5.0	<5.0	<5.0
pH	µg/L		-	7.2	7.2

*MECP Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act, dated April 2011.

SCS - Site Condition Standards

RPI - Residential/Parkland/Institutional/Industrial/Commercial/Community

ORPs include Arsenic (As), Antimony (Sb), Selenium (Se), Cyanide (CN-), Mercury (Hg), Chromium VI (CrVI, Sodium (Na), and Chloride (Cl).

Appendix D:
Certificates of Analysis

PARACEL LABORATORIES LTD.
TRUSTED. RESPONSIVE. RELIABLE.

351 Nash Road North, unit 9B
Hamilton, ON L8H 7P4
1-800-749-1947
www.paracellabs.com

Certificate of Analysis

G2S Environmental Consulting Inc. (Burlington)
4361 Harvester Road, Unit 12
Burlington, ON L7L 5M4
Attn: Dylan Brice

Client PO:
Project: G2S24376
Custody:

Report Date: 22-Nov-2024
Order Date: 11-Nov-2024

Revised Report

Order #: 2446078

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

Paracel ID	Client ID
2446078-01	BH101 S1B
2446078-02	BH101 S2
2446078-03	BH102 S1B
2446078-04	BH102 S1C
2446078-05	BH103 S1B
2446078-06	BH103 S2A
2446078-07	BH104 S1A
2446078-08	BH104 S1B
2446078-09	BH105 S1A
2446078-10	BH105 S1B

Approved By:

Milan Ralitsch, PhD
Senior Technical Manager

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Boron, available	MOE (HWE), EPA 200.8 - ICP-MS	13-Nov-24	13-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
Cyanide, free	MOE E3015 - Auto Colour, water extraction	12-Nov-24	12-Nov-24
Mercury by CVAA	EPA 7471B - CVAA, digestion	12-Nov-24	14-Nov-24
PHC F1	CWS Tier 1 - P&T GC-FID	12-Nov-24	14-Nov-24
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	12-Nov-24	14-Nov-24
REG 153: Metals by ICP/MS, soil	EPA 6020 - Digestion - ICP-MS	13-Nov-24	13-Nov-24
REG 153: PAHs by GC-MS	EPA 8270 - GC-MS, extraction	12-Nov-24	14-Nov-24
REG 153: pH, soil	EPA 150.1 - pH probe @ 25 °C, CaCl buffered ext.	12-Nov-24	13-Nov-24
REG 153: PHC F4(g)	CWS Tier 1 - Extraction Gravimetric	14-Nov-24	14-Nov-24
REG 153: VOCs by P&T GC-MS	EPA 8260 - P&T GC-MS	12-Nov-24	14-Nov-24
SAR	Calculated	13-Nov-24	13-Nov-24
Solids, %	CWS Tier 1 - Gravimetric	12-Nov-24	13-Nov-24

Summary of Criteria Exceedances

(If this page is blank then there are no exceedances)

Only those criteria that a sample exceeds will be highlighted in red

Regulatory Comparison:

Paracel Laboratories has provided regulatory guidelines on this report for informational purposes only and makes no representations or warranties that the data is accurate or reflects the current regulatory values. The user is advised to consult with the appropriate official regulations to evaluate compliance. Sample results that are highlighted have exceeded the selected regulatory limit. Calculated uncertainty estimations have not been applied for determining regulatory exceedances.

Sample	Analyte	MDL / Units	Result	Reg 153/04 -T3 Res/Park, coarse	-
BH101 S1B	Boron, available	0.5 ug/g	4.4	1.5 ug/g	-
BH101 S1B	Lead	1.0 ug/g	237	120 ug/g	-
BH101 S1B	Benzo [a] anthracene	0.02 ug/g	0.70	0.5 ug/g	-
BH101 S1B	Benzo [a] pyrene	0.02 ug/g	0.75	0.3 ug/g	-
BH101 S1B	Dibenzo [a,h] anthracene	0.02 ug/g	0.11	0.1 ug/g	-
BH101 S1B	Fluoranthene	0.02 ug/g	1.66	0.69 ug/g	-
BH101 S1B	Indeno [1,2,3-cd] pyrene	0.02 ug/g	0.41	0.38 ug/g	-
BH102 S1C	Boron, available	0.5 ug/g	1.8	1.5 ug/g	-
BH103 S1B	SAR	0.01 N/A	12.4	5 N/A	-
BH103 S1B	Conductivity	0.005 mS/cm	1.35	0.7 mS/cm	-
BH104 S1A	F3 PHCs (C16-C34)	8 ug/g	433	300 ug/g	-
BH104 S1A	F4G-sg PHCs (gravimetric)	50 ug/g	4540	2800 ug/g	-
BH104 S1B	SAR	0.01 N/A	6.64	5 N/A	-
BH104 S1B	Conductivity	0.005 mS/cm	1.02	0.7 mS/cm	-
BH104 S1B	Boron, available	0.5 ug/g	2.2	1.5 ug/g	-
BH105 S1A	F3 PHCs (C16-C34)	8 ug/g	316	300 ug/g	-
BH105 S1B	SAR	0.01 N/A	8.87	5 N/A	-
BH105 S1B	Conductivity	0.005 mS/cm	1.46	0.7 mS/cm	-
BH105 S1B	Boron, available	0.5 ug/g	2.7	1.5 ug/g	-

PARACEL LABORATORIES LTD.

Order #: 2446078

Certificate of Analysis

Report Date: 22-Nov-2024

Client: **G2S Environmental Consulting Inc. (Burlington)**

Order Date: 11-Nov-2024

Client PO:

Project Description: G2S24376

	Client ID:	BH101 S1B	BH101 S2	BH102 S1B	BH102 S1C	Criteria:	
	Sample Date:	07-Nov-24 00:00	07-Nov-24 00:00	07-Nov-24 00:00	07-Nov-24 00:00	Reg 153/04 -T3 Res/Park, coarse	-
	Sample ID:	2446078-01	2446078-02	2446078-03	2446078-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Physical Characteristics							
% Solids	0.1 % by Wt.	82.9	87.6	88.3	84.9	-	-
General Inorganics							
SAR	0.01 N/A	3.36	-	-	3.35	5 N/A	-
Conductivity	0.005 mS/cm	0.652	-	-	0.529	0.7 mS/cm	-
Cyanide, free	0.03 ug/g	<0.03	-	-	<0.03	0.051 ug/g	-
pH	0.05 pH Units	7.41	-	-	7.52	5.00 - 9.00 pH Units	-
Metals							
Antimony	1.0 ug/g	<1.0	-	-	<1.0	7.5 ug/g	-
Arsenic	1.0 ug/g	4.4	-	-	4.6	18 ug/g	-
Barium	1.0 ug/g	137	-	-	48.1	390 ug/g	-
Beryllium	0.5 ug/g	0.7	-	-	0.5	4 ug/g	-
Boron	5.0 ug/g	15.8	-	-	9.8	120 ug/g	-
Boron, available	0.5 ug/g	4.4	-	-	1.8	1.5 ug/g	-
Cadmium	0.5 ug/g	0.6	-	-	<0.5	1.2 ug/g	-
Chromium	5.0 ug/g	17.8	-	-	15.3	160 ug/g	-
Chromium (VI)	0.2 ug/g	<0.2	-	-	<0.2	8 ug/g	-
Cobalt	1.0 ug/g	8.5	-	-	7.7	22 ug/g	-
Copper	5.0 ug/g	22.3	-	-	6.1	140 ug/g	-
Lead	1.0 ug/g	237	-	-	11.6	120 ug/g	-
Mercury	0.1 ug/g	<0.1	-	-	<0.1	0.27 ug/g	-
Molybdenum	1.0 ug/g	<1.0	-	-	<1.0	6.9 ug/g	-
Nickel	5.0 ug/g	17.5	-	-	15.3	100 ug/g	-
Selenium	1.0 ug/g	<1.0	-	-	<1.0	2.4 ug/g	-
Silver	0.3 ug/g	<0.3	-	-	<0.3	20 ug/g	-
Thallium	1.0 ug/g	<1.0	-	-	<1.0	1 ug/g	-

	Client ID:	BH101 S1B	BH101 S2	BH102 S1B	BH102 S1C	Criteria:	
	Sample Date:	07-Nov-24 00:00	07-Nov-24 00:00	07-Nov-24 00:00	07-Nov-24 00:00	Reg 153/04 -T3 Res/Park, coarse	-
	Sample ID:	2446078-01	2446078-02	2446078-03	2446078-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Metals							
Uranium	1.0 ug/g	<1.0	-	-	<1.0	23 ug/g	-
Vanadium	10.0 ug/g	20.6	-	-	24.9	86 ug/g	-
Zinc	20.0 ug/g	229	-	-	60.0	340 ug/g	-
Volatiles							
Acetone	0.50 ug/g	<0.50	<0.50	<0.50	-	16 ug/g	-
Benzene	0.02 ug/g	<0.02	<0.02	<0.02	-	0.21 ug/g	-
Bromodichloromethane	0.05 ug/g	<0.05	<0.05	<0.05	-	13 ug/g	-
Bromoform	0.05 ug/g	<0.05	<0.05	<0.05	-	0.27 ug/g	-
Bromomethane	0.05 ug/g	<0.05	<0.05	<0.05	-	0.05 ug/g	-
Carbon Tetrachloride	0.05 ug/g	<0.05	<0.05	<0.05	-	0.05 ug/g	-
Chlorobenzene	0.05 ug/g	<0.05	<0.05	<0.05	-	2.4 ug/g	-
Chloroform	0.05 ug/g	<0.05	<0.05	<0.05	-	0.05 ug/g	-
Dibromochloromethane	0.05 ug/g	<0.05	<0.05	<0.05	-	9.4 ug/g	-
Dichlorodifluoromethane	0.05 ug/g	<0.05	<0.05	<0.05	-	16 ug/g	-
1,2-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	<0.05	-	3.4 ug/g	-
1,3-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	<0.05	-	4.8 ug/g	-
1,4-Dichlorobenzene	0.05 ug/g	<0.05	<0.05	<0.05	-	0.083 ug/g	-
1,1-Dichloroethane	0.05 ug/g	<0.05	<0.05	<0.05	-	3.5 ug/g	-
1,2-Dichloroethane	0.05 ug/g	<0.05	<0.05	<0.05	-	0.05 ug/g	-
1,1-Dichloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	-	0.05 ug/g	-
cis-1,2-Dichloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	-	3.4 ug/g	-
trans-1,2-Dichloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	-	0.084 ug/g	-
1,2-Dichloropropane	0.05 ug/g	<0.05	<0.05	<0.05	-	0.05 ug/g	-
cis-1,3-Dichloropropylene	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
trans-1,3-Dichloropropylene	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-

	Client ID:	BH101 S1B	BH101 S2	BH102 S1B	BH102 S1C	Criteria:	
	Sample Date:	07-Nov-24 00:00	07-Nov-24 00:00	07-Nov-24 00:00	07-Nov-24 00:00	Reg 153/04 -T3 Res/Park, coarse	-
	Sample ID:	2446078-01	2446078-02	2446078-03	2446078-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Volatiles							
1,3-Dichloropropene, total	0.05 ug/g	<0.05	<0.05	<0.05	-	0.05 ug/g	-
Ethylene dibromide (dibromoethane,	0.05 ug/g	<0.05	<0.05	<0.05	-	0.05 ug/g	-
Ethylbenzene	0.05 ug/g	<0.05	<0.05	<0.05	-	2 ug/g	-
Hexane	0.05 ug/g	<0.05	<0.05	<0.05	-	2.8 ug/g	-
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g	<0.50	<0.50	<0.50	-	16 ug/g	-
Methyl Isobutyl Ketone	0.50 ug/g	<0.50	<0.50	<0.50	-	1.7 ug/g	-
Methyl tert-butyl ether	0.05 ug/g	<0.05	<0.05	<0.05	-	0.75 ug/g	-
Methylene Chloride	0.05 ug/g	<0.05	<0.05	<0.05	-	0.1 ug/g	-
Styrene	0.05 ug/g	<0.05	<0.05	<0.05	-	0.7 ug/g	-
1,1,1,2-Tetrachloroethane	0.05 ug/g	<0.05	<0.05	<0.05	-	0.058 ug/g	-
1,1,2,2-Tetrachloroethane	0.05 ug/g	<0.05	<0.05	<0.05	-	0.05 ug/g	-
Tetrachloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	-	0.28 ug/g	-
Toluene	0.05 ug/g	<0.05	<0.05	<0.05	-	2.3 ug/g	-
1,1,1-Trichloroethane	0.05 ug/g	<0.05	<0.05	<0.05	-	0.38 ug/g	-
1,1,2-Trichloroethane	0.05 ug/g	<0.05	<0.05	<0.05	-	0.05 ug/g	-
Trichloroethylene	0.05 ug/g	<0.05	<0.05	<0.05	-	0.061 ug/g	-
Trichlorofluoromethane	0.05 ug/g	<0.05	<0.05	<0.05	-	4 ug/g	-
Vinyl chloride	0.02 ug/g	<0.02	<0.02	<0.02	-	0.02 ug/g	-
m,p-Xylenes	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
o-Xylene	0.05 ug/g	<0.05	<0.05	<0.05	-	-	-
Xylenes, total	0.05 ug/g	<0.05	<0.05	<0.05	-	3.1 ug/g	-
Dibromofluoromethane	Surrogate	115%	103%	107%	-	-	-
4-Bromofluorobenzene	Surrogate	102%	106%	105%	-	-	-
Toluene-d8	Surrogate	102%	103%	102%	-	-	-
Hydrocarbons							

Certificate of Analysis

Report Date: 22-Nov-2024

Client: **G2S Environmental Consulting Inc. (Burlington)**

Order Date: 11-Nov-2024

Client PO:

Project Description: G2S24376

	Client ID:	BH101 S1B	BH101 S2	BH102 S1B	BH102 S1C	Criteria:	
	Sample Date:	07-Nov-24 00:00	07-Nov-24 00:00	07-Nov-24 00:00	07-Nov-24 00:00	Reg 153/04 -T3 Res/Park, coarse	-
	Sample ID:	2446078-01	2446078-02	2446078-03	2446078-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Hydrocarbons							
F1 PHCs (C6-C10)	7 ug/g	<7	<7	<7	-	55 ug/g	-
F2 PHCs (C10-C16)	4 ug/g	<4	<4	<4	-	98 ug/g	-
F3 PHCs (C16-C34)	8 ug/g	12	<8	<8	-	300 ug/g	-
F4 PHCs (C34-C50)	6 ug/g	<6	<6	<6	-	2800 ug/g	-
Semi-Volatiles							
Acenaphthene	0.02 ug/g	0.05	-	-	<0.02	7.9 ug/g	-
Acenaphthylene	0.02 ug/g	0.10	-	-	0.04	0.15 ug/g	-
Anthracene	0.02 ug/g	0.17	-	-	<0.02	0.67 ug/g	-
Benzo [a] anthracene	0.02 ug/g	0.70	-	-	0.07	0.5 ug/g	-
Benzo [a] pyrene	0.02 ug/g	0.75	-	-	0.08	0.3 ug/g	-
Benzo [b] fluoranthene	0.02 ug/g	0.50	-	-	0.07	0.78 ug/g	-
Benzo [g,h,i] perylene	0.02 ug/g	0.39	-	-	0.06	6.6 ug/g	-
Benzo [k] fluoranthene	0.02 ug/g	0.25	-	-	0.03	0.78 ug/g	-
Chrysene	0.02 ug/g	0.68	-	-	0.08	7 ug/g	-
Dibenzo [a,h] anthracene	0.02 ug/g	0.11	-	-	<0.02	0.1 ug/g	-
Fluoranthene	0.02 ug/g	1.66	-	-	0.09	0.69 ug/g	-
Fluorene	0.02 ug/g	0.05	-	-	<0.02	62 ug/g	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g	0.41	-	-	0.05	0.38 ug/g	-
1-Methylnaphthalene	0.02 ug/g	0.02	-	-	<0.02	0.99 ug/g	-
2-Methylnaphthalene	0.02 ug/g	0.02	-	-	<0.02	0.99 ug/g	-
Methylnaphthalene (1&2)	0.03 ug/g	0.04	-	-	<0.03	0.99 ug/g	-
Naphthalene	0.01 ug/g	0.02	-	-	<0.01	0.6 ug/g	-
Phenanthrene	0.02 ug/g	0.60	-	-	<0.02	6.2 ug/g	-
Pyrene	0.02 ug/g	1.05	-	-	0.07	78 ug/g	-
2-Fluorobiphenyl	Surrogate	97.0%	-	-	103%	-	-

	Client ID:	BH101 S1B	BH101 S2	BH102 S1B	BH102 S1C	Criteria:	
	Sample Date:	07-Nov-24 00:00	07-Nov-24 00:00	07-Nov-24 00:00	07-Nov-24 00:00	Reg 153/04 -T3 Res/Park, coarse	-
	Sample ID:	2446078-01	2446078-02	2446078-03	2446078-04		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Semi-Volatiles							
Terphenyl-d14	Surrogate	108%	-	-	122%	-	-

	Client ID:	BH103 S1B	BH103 S2A	BH104 S1A	BH104 S1B	Criteria:	
	Sample Date:	07-Nov-24 00:00	07-Nov-24 00:00	07-Nov-24 00:00	07-Nov-24 00:00	Reg 153/04 -T3 Res/Park, coarse	-
	Sample ID:	2446078-05	2446078-06	2446078-07	2446078-08		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Physical Characteristics							
% Solids	0.1 % by Wt.	82.4	85.5	89.0	78.7	-	-
General Inorganics							
SAR	0.01 N/A	12.4	-	-	6.64	5 N/A	-
Conductivity	0.005 mS/cm	1.35	-	-	1.02	0.7 mS/cm	-
Cyanide, free	0.03 ug/g	<0.03	-	-	<0.03	0.051 ug/g	-
pH	0.05 pH Units	7.36	-	-	7.15	5.00 - 9.00 pH Units	-
Metals							
Antimony	1.0 ug/g	<1.0	-	-	<1.0	7.5 ug/g	-
Arsenic	1.0 ug/g	4.0	-	-	4.0	18 ug/g	-
Barium	1.0 ug/g	65.4	-	-	143	390 ug/g	-
Beryllium	0.5 ug/g	1.0	-	-	1.1	4 ug/g	-
Boron	5.0 ug/g	26.4	-	-	12.1	120 ug/g	-
Boron, available	0.5 ug/g	1.2	-	-	2.2	1.5 ug/g	-
Cadmium	0.5 ug/g	<0.5	-	-	<0.5	1.2 ug/g	-
Chromium	5.0 ug/g	24.1	-	-	25.1	160 ug/g	-
Chromium (VI)	0.2 ug/g	<0.2	-	-	<0.2	8 ug/g	-
Cobalt	1.0 ug/g	15.0	-	-	10.1	22 ug/g	-
Copper	5.0 ug/g	7.7	-	-	6.5	140 ug/g	-
Lead	1.0 ug/g	7.7	-	-	7.5	120 ug/g	-
Mercury	0.1 ug/g	<0.1	-	-	<0.1	0.27 ug/g	-
Molybdenum	1.0 ug/g	<1.0	-	-	<1.0	6.9 ug/g	-
Nickel	5.0 ug/g	25.9	-	-	21.2	100 ug/g	-
Selenium	1.0 ug/g	<1.0	-	-	<1.0	2.4 ug/g	-
Silver	0.3 ug/g	<0.3	-	-	<0.3	20 ug/g	-
Thallium	1.0 ug/g	<1.0	-	-	<1.0	1 ug/g	-

	Client ID:	BH103 S1B	BH103 S2A	BH104 S1A	BH104 S1B	Criteria:	
	Sample Date:	07-Nov-24 00:00	07-Nov-24 00:00	07-Nov-24 00:00	07-Nov-24 00:00	Reg 153/04 -T3 Res/Park, coarse	-
	Sample ID:	2446078-05	2446078-06	2446078-07	2446078-08		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Metals							
Uranium	1.0 ug/g	<1.0	-	-	<1.0	23 ug/g	-
Vanadium	10.0 ug/g	25.4	-	-	29.5	86 ug/g	-
Zinc	20.0 ug/g	74.0	-	-	43.1	340 ug/g	-
Volatiles							
Acetone	0.50 ug/g	-	<0.50	<0.50	-	16 ug/g	-
Benzene	0.02 ug/g	-	<0.02	<0.02	-	0.21 ug/g	-
Bromodichloromethane	0.05 ug/g	-	<0.05	<0.05	-	13 ug/g	-
Bromoform	0.05 ug/g	-	<0.05	<0.05	-	0.27 ug/g	-
Bromomethane	0.05 ug/g	-	<0.05	<0.05	-	0.05 ug/g	-
Carbon Tetrachloride	0.05 ug/g	-	<0.05	<0.05	-	0.05 ug/g	-
Chlorobenzene	0.05 ug/g	-	<0.05	<0.05	-	2.4 ug/g	-
Chloroform	0.05 ug/g	-	<0.05	<0.05	-	0.05 ug/g	-
Dibromochloromethane	0.05 ug/g	-	<0.05	<0.05	-	9.4 ug/g	-
Dichlorodifluoromethane	0.05 ug/g	-	<0.05	<0.05	-	16 ug/g	-
1,2-Dichlorobenzene	0.05 ug/g	-	<0.05	<0.05	-	3.4 ug/g	-
1,3-Dichlorobenzene	0.05 ug/g	-	<0.05	<0.05	-	4.8 ug/g	-
1,4-Dichlorobenzene	0.05 ug/g	-	<0.05	<0.05	-	0.083 ug/g	-
1,1-Dichloroethane	0.05 ug/g	-	<0.05	<0.05	-	3.5 ug/g	-
1,2-Dichloroethane	0.05 ug/g	-	<0.05	<0.05	-	0.05 ug/g	-
1,1-Dichloroethylene	0.05 ug/g	-	<0.05	<0.05	-	0.05 ug/g	-
cis-1,2-Dichloroethylene	0.05 ug/g	-	<0.05	<0.05	-	3.4 ug/g	-
trans-1,2-Dichloroethylene	0.05 ug/g	-	<0.05	<0.05	-	0.084 ug/g	-
1,2-Dichloropropane	0.05 ug/g	-	<0.05	<0.05	-	0.05 ug/g	-
cis-1,3-Dichloropropylene	0.05 ug/g	-	<0.05	<0.05	-	-	-
trans-1,3-Dichloropropylene	0.05 ug/g	-	<0.05	<0.05	-	-	-

	Client ID:	BH103 S1B	BH103 S2A	BH104 S1A	BH104 S1B	Criteria:	
	Sample Date:	07-Nov-24 00:00	07-Nov-24 00:00	07-Nov-24 00:00	07-Nov-24 00:00	Reg 153/04 -T3 Res/Park, coarse	-
	Sample ID:	2446078-05	2446078-06	2446078-07	2446078-08		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Volatiles							
1,3-Dichloropropene, total	0.05 ug/g	-	<0.05	<0.05	-	0.05 ug/g	-
Ethylbenzene	0.05 ug/g	-	<0.05	<0.05	-	2 ug/g	-
Ethylene dibromide (dibromoethane,	0.05 ug/g	-	<0.05	<0.05	-	0.05 ug/g	-
Hexane	0.05 ug/g	-	<0.05	<0.05	-	2.8 ug/g	-
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g	-	<0.50	<0.50	-	16 ug/g	-
Methyl Isobutyl Ketone	0.50 ug/g	-	<0.50	<0.50	-	1.7 ug/g	-
Methyl tert-butyl ether	0.05 ug/g	-	<0.05	<0.05	-	0.75 ug/g	-
Methylene Chloride	0.05 ug/g	-	<0.05	<0.05	-	0.1 ug/g	-
Styrene	0.05 ug/g	-	<0.05	<0.05	-	0.7 ug/g	-
1,1,1,2-Tetrachloroethane	0.05 ug/g	-	<0.05	<0.05	-	0.058 ug/g	-
1,1,2,2-Tetrachloroethane	0.05 ug/g	-	<0.05	<0.05	-	0.05 ug/g	-
Tetrachloroethylene	0.05 ug/g	-	<0.05	<0.05	-	0.28 ug/g	-
Toluene	0.05 ug/g	-	<0.05	<0.05	-	2.3 ug/g	-
1,1,1-Trichloroethane	0.05 ug/g	-	<0.05	<0.05	-	0.38 ug/g	-
1,1,2-Trichloroethane	0.05 ug/g	-	<0.05	<0.05	-	0.05 ug/g	-
Trichloroethylene	0.05 ug/g	-	<0.05	<0.05	-	0.061 ug/g	-
Trichlorofluoromethane	0.05 ug/g	-	<0.05	<0.05	-	4 ug/g	-
Vinyl chloride	0.02 ug/g	-	<0.02	<0.02	-	0.02 ug/g	-
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	-	3.1 ug/g	-
4-Bromofluorobenzene	Surrogate	-	105%	104%	-	-	-
Dibromofluoromethane	Surrogate	-	107%	106%	-	-	-
Toluene-d8	Surrogate	-	101%	102%	-	-	-
Hydrocarbons							

Certificate of Analysis

Report Date: 22-Nov-2024

Client: G2S Environmental Consulting Inc. (Burlington)

Order Date: 11-Nov-2024

Client PO:

Project Description: G2S24376

	Client ID:	BH103 S1B	BH103 S2A	BH104 S1A	BH104 S1B	Criteria:	
	Sample Date:	07-Nov-24 00:00	07-Nov-24 00:00	07-Nov-24 00:00	07-Nov-24 00:00	Reg 153/04 -T3 Res/Park, coarse	-
	Sample ID:	2446078-05	2446078-06	2446078-07	2446078-08		
	Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units						
Hydrocarbons							
F1 PHCs (C6-C10)	7 ug/g	-	<7	<7	-	55 ug/g	-
F2 PHCs (C10-C16)	4 ug/g	-	<4	8	-	98 ug/g	-
F3 PHCs (C16-C34)	8 ug/g	-	<8	433	-	300 ug/g	-
F4 PHCs (C34-C50)	6 ug/g	-	<6	1340 [1]	-	2800 ug/g	-
F4G-sg PHCs (gravimetric)	50 ug/g	-	-	4540	-	2800 ug/g	-
Semi-Volatiles							
Acenaphthene	0.02 ug/g	<0.02	-	-	<0.02	7.9 ug/g	-
Acenaphthylene	0.02 ug/g	<0.02	-	-	<0.02	0.15 ug/g	-
Anthracene	0.02 ug/g	<0.02	-	-	<0.02	0.67 ug/g	-
Benzo [a] anthracene	0.02 ug/g	<0.02	-	-	<0.02	0.5 ug/g	-
Benzo [a] pyrene	0.02 ug/g	<0.02	-	-	<0.02	0.3 ug/g	-
Benzo [b] fluoranthene	0.02 ug/g	<0.02	-	-	<0.02	0.78 ug/g	-
Benzo [g,h,i] perylene	0.02 ug/g	<0.02	-	-	<0.02	6.6 ug/g	-
Benzo [k] fluoranthene	0.02 ug/g	<0.02	-	-	<0.02	0.78 ug/g	-
Chrysene	0.02 ug/g	<0.02	-	-	<0.02	7 ug/g	-
Dibenzo [a,h] anthracene	0.02 ug/g	<0.02	-	-	<0.02	0.1 ug/g	-
Fluoranthene	0.02 ug/g	<0.02	-	-	<0.02	0.69 ug/g	-
Fluorene	0.02 ug/g	<0.02	-	-	<0.02	62 ug/g	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g	<0.02	-	-	<0.02	0.38 ug/g	-
1-Methylnaphthalene	0.02 ug/g	<0.02	-	-	<0.02	0.99 ug/g	-
2-Methylnaphthalene	0.02 ug/g	<0.02	-	-	<0.02	0.99 ug/g	-
Methylnaphthalene (1&2)	0.03 ug/g	<0.03	-	-	<0.03	0.99 ug/g	-
Naphthalene	0.01 ug/g	<0.01	-	-	<0.01	0.6 ug/g	-
Phenanthrene	0.02 ug/g	<0.02	-	-	<0.02	6.2 ug/g	-
Pyrene	0.02 ug/g	<0.02	-	-	<0.02	78 ug/g	-

		Client ID:	BH103 S1B	BH103 S2A	BH104 S1A	BH104 S1B	**Criteria:**	
		Sample Date:	07-Nov-24 00:00	07-Nov-24 00:00	07-Nov-24 00:00	07-Nov-24 00:00	**Reg 153/04 -T3 Res/Park, coarse**	-
		Sample ID:	2446078-05	2446078-06	2446078-07	2446078-08		
		Matrix:	Soil	Soil	Soil	Soil		
	MDL/Units							
Semi-Volatiles								
2-Fluorobiphenyl	Surrogate		105%	-	-	95.6%	-	-
Terphenyl-d14	Surrogate		127%	-	-	118%	-	-

Certificate of Analysis

Report Date: 22-Nov-2024

Client: G2S Environmental Consulting Inc. (Burlington)

Order Date: 11-Nov-2024

Client PO:

Project Description: G2S24376

	Client ID:	BH105 S1A	BH105 S1B			Criteria:	
	Sample Date:	07-Nov-24 00:00	07-Nov-24 00:00			Reg 153/04 -T3	-
	Sample ID:	2446078-09	2446078-10			Res/Park, coarse	
	Matrix:	Soil	Soil				
	MDL/Units						
Physical Characteristics							
% Solids	0.1 % by Wt.	86.9	79.2	-	-	-	-
General Inorganics							
SAR	0.01 N/A	-	8.87	-	-	5 N/A	-
Conductivity	0.005 mS/cm	-	1.46	-	-	0.7 mS/cm	-
Cyanide, free	0.03 ug/g	-	<0.03	-	-	0.051 ug/g	-
pH	0.05 pH Units	-	7.08	-	-	5.00 - 9.00 pH Units	-
Metals							
Antimony	1.0 ug/g	-	<1.0	-	-	7.5 ug/g	-
Arsenic	1.0 ug/g	-	4.1	-	-	18 ug/g	-
Barium	1.0 ug/g	-	99.9	-	-	390 ug/g	-
Beryllium	0.5 ug/g	-	1.1	-	-	4 ug/g	-
Boron, available	0.5 ug/g	-	2.7	-	-	1.5 ug/g	-
Boron	5.0 ug/g	-	11.6	-	-	120 ug/g	-
Cadmium	0.5 ug/g	-	<0.5	-	-	1.2 ug/g	-
Chromium (VI)	0.2 ug/g	-	0.2	-	-	8 ug/g	-
Chromium	5.0 ug/g	-	19.0	-	-	160 ug/g	-
Cobalt	1.0 ug/g	-	6.9	-	-	22 ug/g	-
Copper	5.0 ug/g	-	6.4	-	-	140 ug/g	-
Lead	1.0 ug/g	-	12.5	-	-	120 ug/g	-
Mercury	0.1 ug/g	-	<0.1	-	-	0.27 ug/g	-
Molybdenum	1.0 ug/g	-	<1.0	-	-	6.9 ug/g	-
Nickel	5.0 ug/g	-	14.8	-	-	100 ug/g	-
Selenium	1.0 ug/g	-	<1.0	-	-	2.4 ug/g	-
Silver	0.3 ug/g	-	<0.3	-	-	20 ug/g	-
Thallium	1.0 ug/g	-	<1.0	-	-	1 ug/g	-

	Client ID:	BH105 S1A	BH105 S1B			Criteria:	
	Sample Date:	07-Nov-24 00:00	07-Nov-24 00:00			Reg 153/04 -T3 Res/Park, coarse	-
	Sample ID:	2446078-09	2446078-10				
	Matrix:	Soil	Soil				
	MDL/Units						
Metals							
Uranium	1.0 ug/g	-	<1.0	-	-	23 ug/g	-
Vanadium	10.0 ug/g	-	23.2	-	-	86 ug/g	-
Zinc	20.0 ug/g	-	43.9	-	-	340 ug/g	-
Volatiles							
Acetone	0.50 ug/g	<0.50	-	-	-	16 ug/g	-
Benzene	0.02 ug/g	<0.02	-	-	-	0.21 ug/g	-
Bromodichloromethane	0.05 ug/g	<0.05	-	-	-	13 ug/g	-
Bromoform	0.05 ug/g	<0.05	-	-	-	0.27 ug/g	-
Bromomethane	0.05 ug/g	<0.05	-	-	-	0.05 ug/g	-
Carbon Tetrachloride	0.05 ug/g	<0.05	-	-	-	0.05 ug/g	-
Chlorobenzene	0.05 ug/g	<0.05	-	-	-	2.4 ug/g	-
Chloroform	0.05 ug/g	<0.05	-	-	-	0.05 ug/g	-
Dibromochloromethane	0.05 ug/g	<0.05	-	-	-	9.4 ug/g	-
Dichlorodifluoromethane	0.05 ug/g	<0.05	-	-	-	16 ug/g	-
1,2-Dichlorobenzene	0.05 ug/g	<0.05	-	-	-	3.4 ug/g	-
1,3-Dichlorobenzene	0.05 ug/g	<0.05	-	-	-	4.8 ug/g	-
1,4-Dichlorobenzene	0.05 ug/g	<0.05	-	-	-	0.083 ug/g	-
1,1-Dichloroethane	0.05 ug/g	<0.05	-	-	-	3.5 ug/g	-
1,2-Dichloroethane	0.05 ug/g	<0.05	-	-	-	0.05 ug/g	-
1,1-Dichloroethylene	0.05 ug/g	<0.05	-	-	-	0.05 ug/g	-
cis-1,2-Dichloroethylene	0.05 ug/g	<0.05	-	-	-	3.4 ug/g	-
trans-1,2-Dichloroethylene	0.05 ug/g	<0.05	-	-	-	0.084 ug/g	-
1,2-Dichloropropane	0.05 ug/g	<0.05	-	-	-	0.05 ug/g	-
cis-1,3-Dichloropropylene	0.05 ug/g	<0.05	-	-	-	-	-
trans-1,3-Dichloropropylene	0.05 ug/g	<0.05	-	-	-	-	-

	Client ID:	BH105 S1A	BH105 S1B			Criteria:	
	Sample Date:	07-Nov-24 00:00	07-Nov-24 00:00			Reg 153/04 -T3 Res/Park, coarse	-
	Sample ID:	2446078-09	2446078-10				
	Matrix:	Soil	Soil				
	MDL/Units						
Volatiles							
1,3-Dichloropropene, total	0.05 ug/g	<0.05	-	-	-	0.05 ug/g	-
Ethylbenzene	0.05 ug/g	<0.05	-	-	-	2 ug/g	-
Ethylene dibromide (dibromoethane,	0.05 ug/g	<0.05	-	-	-	0.05 ug/g	-
Hexane	0.05 ug/g	<0.05	-	-	-	2.8 ug/g	-
Methyl Ethyl Ketone (2-Butanone)	0.50 ug/g	<0.50	-	-	-	16 ug/g	-
Methyl Isobutyl Ketone	0.50 ug/g	<0.50	-	-	-	1.7 ug/g	-
Methyl tert-butyl ether	0.05 ug/g	<0.05	-	-	-	0.75 ug/g	-
Methylene Chloride	0.05 ug/g	<0.05	-	-	-	0.1 ug/g	-
Styrene	0.05 ug/g	<0.05	-	-	-	0.7 ug/g	-
1,1,1,2-Tetrachloroethane	0.05 ug/g	<0.05	-	-	-	0.058 ug/g	-
1,1,2,2-Tetrachloroethane	0.05 ug/g	<0.05	-	-	-	0.05 ug/g	-
Tetrachloroethylene	0.05 ug/g	<0.05	-	-	-	0.28 ug/g	-
Toluene	0.05 ug/g	<0.05	-	-	-	2.3 ug/g	-
1,1,1-Trichloroethane	0.05 ug/g	<0.05	-	-	-	0.38 ug/g	-
1,1,2-Trichloroethane	0.05 ug/g	<0.05	-	-	-	0.05 ug/g	-
Trichloroethylene	0.05 ug/g	<0.05	-	-	-	0.061 ug/g	-
Trichlorofluoromethane	0.05 ug/g	<0.05	-	-	-	4 ug/g	-
Vinyl chloride	0.02 ug/g	<0.02	-	-	-	0.02 ug/g	-
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	-	-	-	3.1 ug/g	-
Dibromofluoromethane	Surrogate	103%	-	-	-	-	-
Toluene-d8	Surrogate	103%	-	-	-	-	-
4-Bromofluorobenzene	Surrogate	104%	-	-	-	-	-
Hydrocarbons							

	Client ID:	BH105 S1A	BH105 S1B			Criteria:	
	Sample Date:	07-Nov-24 00:00	07-Nov-24 00:00			Reg 153/04 -T3 Res/Park, coarse	-
	Sample ID:	2446078-09	2446078-10				
	Matrix:	Soil	Soil				
	MDL/Units						
Hydrocarbons							
F1 PHCs (C6-C10)	7 ug/g	<7	-	-	-	55 ug/g	-
F2 PHCs (C10-C16)	4 ug/g	6	-	-	-	98 ug/g	-
F3 PHCs (C16-C34)	8 ug/g	316	-	-	-	300 ug/g	-
F4 PHCs (C34-C50)	6 ug/g	864 [1]	-	-	-	2800 ug/g	-
F4G-sg PHCs (gravimetric)	50 ug/g	2550	-	-	-	2800 ug/g	-
Semi-Volatiles							
Acenaphthene	0.02 ug/g	-	<0.02	-	-	7.9 ug/g	-
Acenaphthylene	0.02 ug/g	-	<0.02	-	-	0.15 ug/g	-
Anthracene	0.02 ug/g	-	<0.02	-	-	0.67 ug/g	-
Benzo [a] anthracene	0.02 ug/g	-	<0.02	-	-	0.5 ug/g	-
Benzo [a] pyrene	0.02 ug/g	-	<0.02	-	-	0.3 ug/g	-
Benzo [b] fluoranthene	0.02 ug/g	-	<0.02	-	-	0.78 ug/g	-
Benzo [g,h,i] perylene	0.02 ug/g	-	<0.02	-	-	6.6 ug/g	-
Benzo [k] fluoranthene	0.02 ug/g	-	<0.02	-	-	0.78 ug/g	-
Chrysene	0.02 ug/g	-	<0.02	-	-	7 ug/g	-
Dibenzo [a,h] anthracene	0.02 ug/g	-	<0.02	-	-	0.1 ug/g	-
Fluoranthene	0.02 ug/g	-	<0.02	-	-	0.69 ug/g	-
Fluorene	0.02 ug/g	-	<0.02	-	-	62 ug/g	-
Indeno [1,2,3-cd] pyrene	0.02 ug/g	-	<0.02	-	-	0.38 ug/g	-
1-Methylnaphthalene	0.02 ug/g	-	<0.02	-	-	0.99 ug/g	-
2-Methylnaphthalene	0.02 ug/g	-	<0.02	-	-	0.99 ug/g	-
Methylnaphthalene (1&2)	0.03 ug/g	-	<0.03	-	-	0.99 ug/g	-
Naphthalene	0.01 ug/g	-	<0.01	-	-	0.6 ug/g	-
Phenanthrene	0.02 ug/g	-	<0.02	-	-	6.2 ug/g	-
Pyrene	0.02 ug/g	-	<0.02	-	-	78 ug/g	-

		Client ID:	BH105 S1A	BH105 S1B			**Criteria:**	
		Sample Date:	07-Nov-24 00:00	07-Nov-24 00:00			**Reg 153/04 -T3 Res/Park, coarse**	-
		Sample ID:	2446078-09	2446078-10				
		Matrix:	Soil	Soil				
	MDL/Units							
Semi-Volatiles								
2-Fluorobiphenyl	Surrogate		-	95.4%	-	-	-	-
Terphenyl-d14	Surrogate		-	120%	-	-	-	-

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics								
SAR	ND	0.01	N/A					
Conductivity	ND	0.005	mS/cm					
Cyanide, free	ND	0.03	ug/g					
Hydrocarbons								
F1 PHCs (C6-C10)	ND	7	ug/g					
F2 PHCs (C10-C16)	ND	4	ug/g					
F3 PHCs (C16-C34)	ND	8	ug/g					
F4 PHCs (C34-C50)	ND	6	ug/g					
F4G-sg PHCs (gravimetric)	ND	50	ug/g					
Metals								
Antimony	ND	1.0	ug/g					
Arsenic	ND	1.0	ug/g					
Barium	ND	1.0	ug/g					
Beryllium	ND	0.5	ug/g					
Boron, available	ND	0.5	ug/g					
Boron	ND	5.0	ug/g					
Cadmium	ND	0.5	ug/g					
Chromium (VI)	ND	0.2	ug/g					
Chromium	ND	5.0	ug/g					
Cobalt	ND	1.0	ug/g					
Copper	ND	5.0	ug/g					
Lead	ND	1.0	ug/g					
Mercury	ND	0.1	ug/g					
Molybdenum	ND	1.0	ug/g					
Nickel	ND	5.0	ug/g					
Selenium	ND	1.0	ug/g					
Silver	ND	0.3	ug/g					
Thallium	ND	1.0	ug/g					
Uranium	ND	1.0	ug/g					
Vanadium	ND	10.0	ug/g					
Zinc	ND	20.0	ug/g					
Semi-Volatiles								

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Acenaphthene	ND	0.02	ug/g					
Acenaphthylene	ND	0.02	ug/g					
Anthracene	ND	0.02	ug/g					
Benzo [a] anthracene	ND	0.02	ug/g					
Benzo [a] pyrene	ND	0.02	ug/g					
Benzo [b] fluoranthene	ND	0.02	ug/g					
Benzo [g,h,i] perylene	ND	0.02	ug/g					
Benzo [k] fluoranthene	ND	0.02	ug/g					
Chrysene	ND	0.02	ug/g					
Dibenzo [a,h] anthracene	ND	0.02	ug/g					
Fluoranthene	ND	0.02	ug/g					
Fluorene	ND	0.02	ug/g					
Indeno [1,2,3-cd] pyrene	ND	0.02	ug/g					
1-Methylnaphthalene	ND	0.02	ug/g					
2-Methylnaphthalene	ND	0.02	ug/g					
Methylnaphthalene (1&2)	ND	0.03	ug/g					
Naphthalene	ND	0.01	ug/g					
Phenanthrene	ND	0.02	ug/g					
Pyrene	ND	0.02	ug/g					
Surrogate: 2-Fluorobiphenyl	*0.426*		*%*	*84.5*	*50-140*			
Surrogate: Terphenyl-d14	*0.530*		*%*	*105*	*50-140*			
Volatiles								
Acetone	ND	0.50	ug/g					
Benzene	ND	0.02	ug/g					
Bromodichloromethane	ND	0.05	ug/g					
Bromoform	ND	0.05	ug/g					
Bromomethane	ND	0.05	ug/g					
Carbon Tetrachloride	ND	0.05	ug/g					
Chlorobenzene	ND	0.05	ug/g					
Chloroform	ND	0.05	ug/g					
Dibromochloromethane	ND	0.05	ug/g					
Dichlorodifluoromethane	ND	0.05	ug/g					

Method Quality Control: Blank

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

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: 4-Bromofluorobenzene	*8.41*		*%*	*104*	*50-140*			
Surrogate: Dibromofluoromethane	*8.85*		*%*	*110*	*50-140*			
Surrogate: Toluene-d8	*8.23*		*%*	*102*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
SAR	0.17	0.01	N/A	0.19			11.1	30	
Conductivity	0.368	0.005	mS/cm	0.363			1.6	5	
Cyanide, free	ND	0.03	ug/g	ND			NC	35	
pH	7.07	0.05	pH Units	7.03			0.6	10	
Hydrocarbons									
F1 PHCs (C6-C10)	ND	7	ug/g	ND			NC	40	
F2 PHCs (C10-C16)	ND	4	ug/g	ND			NC	30	
F3 PHCs (C16-C34)	ND	8	ug/g	ND			NC	30	
F4 PHCs (C34-C50)	ND	6	ug/g	ND			NC	30	
F4G-sg PHCs (gravimetric)	48200	50	ug/g	52300			8.1	30	
Metals									
Antimony	ND	1.0	ug/g	ND			NC	30	
Arsenic	1.3	1.0	ug/g	1.5			8.4	30	
Barium	15.0	1.0	ug/g	15.5			3.2	30	
Beryllium	ND	0.5	ug/g	ND			NC	30	
Boron, available	3.65	0.5	ug/g	4.36			17.6	35	
Boron	ND	5.0	ug/g	ND			NC	30	
Cadmium	ND	0.5	ug/g	ND			NC	30	
Chromium (VI)	ND	0.2	ug/g	ND			NC	35	
Chromium	6.4	5.0	ug/g	6.3			2.4	30	
Cobalt	1.8	1.0	ug/g	1.8			1.6	30	
Copper	6.4	5.0	ug/g	6.5			1.9	30	
Lead	2.1	1.0	ug/g	2.1			1.0	30	
Mercury	ND	0.1	ug/g	ND			NC	30	
Molybdenum	ND	1.0	ug/g	ND			NC	30	
Nickel	ND	5.0	ug/g	ND			NC	30	
Selenium	ND	1.0	ug/g	ND			NC	30	
Silver	ND	0.3	ug/g	ND			NC	30	
Thallium	ND	1.0	ug/g	ND			NC	30	
Uranium	ND	1.0	ug/g	ND			NC	30	

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Vanadium	20.1	10.0	ug/g	20.0			0.3	30	
Zinc	ND	20.0	ug/g	ND			NC	30	
Physical Characteristics									
% Solids	98.9	0.1	% by Wt.	98.6			0.3	25	
Semi-Volatiles									
Acenaphthene	0.039	0.02	ug/g	0.047			16.8	40	
Acenaphthylene	0.091	0.02	ug/g	0.101			10.5	40	
Anthracene	0.132	0.02	ug/g	0.167			23.4	40	
Benzo [a] anthracene	0.742	0.02	ug/g	0.697			6.2	40	
Benzo [a] pyrene	0.803	0.02	ug/g	0.745			7.5	40	
Benzo [b] fluoranthene	0.640	0.02	ug/g	0.502			24.2	40	
Benzo [g,h,i] perylene	0.478	0.02	ug/g	0.388			20.8	40	
Benzo [k] fluoranthene	0.290	0.02	ug/g	0.252			14.2	40	
Chrysene	0.787	0.02	ug/g	0.677			15.0	40	
Dibenzo [a,h] anthracene	0.103	0.02	ug/g	0.108			4.4	40	
Fluoranthene	1.66	0.02	ug/g	1.66			0.4	40	
Fluorene	0.045	0.02	ug/g	0.055			20.4	40	
Indeno [1,2,3-cd] pyrene	0.482	0.02	ug/g	0.410			16.1	40	
1-Methylnaphthalene	ND	0.02	ug/g	0.020			NC	40	
2-Methylnaphthalene	ND	0.02	ug/g	0.022			NC	40	
Naphthalene	0.018	0.01	ug/g	0.019			3.9	40	
Phenanthrene	0.574	0.02	ug/g	0.603			4.9	40	
Pyrene	1.16	0.02	ug/g	1.05			10.0	40	
Surrogate: 2-Fluorobiphenyl	*0.499*		*%*		*82.0*	*50-140*			
Surrogate: Terphenyl-d14	*0.609*		*%*		*100*	*50-140*			
Volatiles									
Acetone	ND	0.50	ug/g	ND			NC	50	
Benzene	ND	0.02	ug/g	ND			NC	50	
Bromodichloromethane	ND	0.05	ug/g	ND			NC	50	
Bromoform	ND	0.05	ug/g	ND			NC	50	
Bromomethane	ND	0.05	ug/g	ND			NC	50	

Method Quality Control: Duplicate

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

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Trichlorofluoromethane	ND	0.05	ug/g	ND			NC	50	
Vinyl chloride	ND	0.02	ug/g	ND			NC	50	
m,p-Xylenes	ND	0.05	ug/g	ND			NC	50	
o-Xylene	ND	0.05	ug/g	ND			NC	50	
Surrogate: 4-Bromofluorobenzene	*10.5*		*%*		*102*	*50-140*			
Surrogate: Dibromofluoromethane	*11.1*		*%*		*108*	*50-140*			
Surrogate: Toluene-d8	*10.6*		*%*		*103*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
Cyanide, free	0.277	0.03	ug/g	ND	82.0	70-130			
Hydrocarbons									
F1 PHCs (C6-C10)	60	7	ug/g	ND	81.0	0-200			
F2 PHCs (C10-C16)	90	4	ug/g	ND	107	60-140			
F3 PHCs (C16-C34)	204	8	ug/g	ND	109	60-140			
F4 PHCs (C34-C50)	127	6	ug/g	ND	94.0	60-140			
F4G-sg PHCs (gravimetric)	1100	50	ug/g	ND	110	80-120			
Metals									
Antimony	45.2	1.0	ug/g	ND	90.3	70-130			
Arsenic	49.2	1.0	ug/g	ND	97.2	70-130			
Barium	54.9	1.0	ug/g	6.2	97.3	70-130			
Beryllium	51.8	0.5	ug/g	ND	103	70-130			
Boron, available	3.51	0.5	ug/g	ND	70.2	70-122			
Boron	51.1	5.0	ug/g	ND	99.8	70-130			
Cadmium	51.4	0.5	ug/g	ND	103	70-130			
Chromium (VI)	5.1	0.2	ug/g	ND	84.0	70-130			
Chromium	52.3	5.0	ug/g	ND	99.5	70-130			
Cobalt	49.3	1.0	ug/g	ND	97.3	70-130			
Copper	51.1	5.0	ug/g	ND	97.0	70-130			
Lead	50.8	1.0	ug/g	ND	99.9	70-130			
Mercury	1.43	0.1	ug/g	ND	95.2	70-130			
Molybdenum	49.4	1.0	ug/g	ND	98.5	70-130			
Nickel	49.7	5.0	ug/g	ND	96.9	70-130			
Selenium	46.8	1.0	ug/g	ND	93.4	70-130			
Silver	43.6	0.3	ug/g	ND	87.2	70-130			
Thallium	48.8	1.0	ug/g	ND	97.4	70-130			
Uranium	51.6	1.0	ug/g	ND	103	70-130			
Vanadium	57.7	10.0	ug/g	ND	99.3	70-130			
Zinc	53.5	20.0	ug/g	ND	98.2	70-130			
Semi-Volatiles									

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Acenaphthene	0.627	0.02	ug/g	ND	116	50-140			
Acenaphthylene	0.583	0.02	ug/g	ND	108	50-140			
Anthracene	0.567	0.02	ug/g	ND	105	50-140			
Benzo [a] anthracene	0.666	0.02	ug/g	ND	123	50-140			
Benzo [a] pyrene	0.626	0.02	ug/g	ND	116	50-140			
Benzo [b] fluoranthene	0.618	0.02	ug/g	ND	114	50-140			
Benzo [g,h,i] perylene	0.604	0.02	ug/g	ND	112	50-140			
Benzo [k] fluoranthene	0.577	0.02	ug/g	ND	107	50-140			
Chrysene	0.611	0.02	ug/g	ND	113	50-140			
Dibenzo [a,h] anthracene	0.550	0.02	ug/g	ND	102	50-140			
Fluoranthene	0.678	0.02	ug/g	ND	125	50-140			
Fluorene	0.755	0.02	ug/g	ND	139	50-140			
Indeno [1,2,3-cd] pyrene	0.655	0.02	ug/g	ND	121	50-140			
1-Methylnaphthalene	0.601	0.02	ug/g	ND	111	50-140			
2-Methylnaphthalene	0.623	0.02	ug/g	ND	115	50-140			
Naphthalene	0.586	0.01	ug/g	ND	108	50-140			
Phenanthrene	0.647	0.02	ug/g	ND	119	50-140			
Pyrene	0.620	0.02	ug/g	ND	114	50-140			
Surrogate: 2-Fluorobiphenyl	*0.528*		*%*		*105*	*50-140*			
Surrogate: Terphenyl-d14	*0.507*		*%*		*100*	*50-140*			
Volatiles									
Acetone	120	0.50	ug/g	ND	120	50-140			
Benzene	36.2	0.02	ug/g	ND	89.9	50-140			
Bromodichloromethane	38.8	0.05	ug/g	ND	96.8	50-140			
Bromoform	34.7	0.05	ug/g	ND	86.6	50-140			
Bromomethane	51.5	0.05	ug/g	ND	124	50-140			
Carbon Tetrachloride	39.3	0.05	ug/g	ND	97.4	50-140			
Chlorobenzene	35.9	0.05	ug/g	ND	89.9	50-140			
Chloroform	41.4	0.05	ug/g	ND	104	50-140			
Dibromochloromethane	37.5	0.05	ug/g	ND	93.9	50-140			
Dichlorodifluoromethane	54.1	0.05	ug/g	ND	134	50-140			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
1,2-Dichlorobenzene	35.4	0.05	ug/g	ND	88.3	50-140			
1,3-Dichlorobenzene	35.4	0.05	ug/g	ND	88.6	50-140			
1,4-Dichlorobenzene	35.1	0.05	ug/g	ND	87.0	50-140			
1,1-Dichloroethane	40.6	0.05	ug/g	ND	101	50-140			
1,2-Dichloroethane	40.3	0.05	ug/g	ND	100	50-140			
1,1-Dichloroethylene	34.3	0.05	ug/g	ND	85.4	50-140			
cis-1,2-Dichloroethylene	41.2	0.05	ug/g	ND	102	50-140			
trans-1,2-Dichloroethylene	36.5	0.05	ug/g	ND	90.6	50-140			
1,2-Dichloropropane	36.2	0.05	ug/g	ND	90.7	50-140			
cis-1,3-Dichloropropylene	34.7	0.05	ug/g	ND	86.5	50-140			
trans-1,3-Dichloropropylene	36.6	0.05	ug/g	ND	90.9	50-140			
Ethylbenzene	36.0	0.05	ug/g	ND	89.3	50-140			
Ethylene dibromide (dibromoethane, 1,2-)	36.6	0.05	ug/g	ND	90.8	50-140			
Hexane	31.4	0.05	ug/g	ND	78.6	50-140			
Methyl Ethyl Ketone (2-Butanone)	106	0.50	ug/g	ND	106	50-140			
Methyl Isobutyl Ketone	70.8	0.50	ug/g	ND	70.9	50-140			
Methyl tert-butyl ether	81.2	0.05	ug/g	ND	81.0	50-140			
Methylene Chloride	41.1	0.05	ug/g	ND	103	50-140			
Styrene	39.3	0.05	ug/g	ND	97.5	50-140			
1,1,1,2-Tetrachloroethane	33.4	0.05	ug/g	ND	82.8	50-140			
1,1,2,2-Tetrachloroethane	33.1	0.05	ug/g	ND	82.5	50-140			
Tetrachloroethylene	35.1	0.05	ug/g	ND	87.1	50-140			
Toluene	35.6	0.05	ug/g	ND	88.3	50-140			
1,1,1-Trichloroethane	40.2	0.05	ug/g	ND	100	50-140			
1,1,2-Trichloroethane	33.7	0.05	ug/g	ND	84.4	50-140			
Trichloroethylene	36.0	0.05	ug/g	ND	89.8	50-140			
Trichlorofluoromethane	37.3	0.05	ug/g	ND	94.0	50-140			
Vinyl chloride	49.6	0.02	ug/g	ND	123	50-140			
m,p-Xylenes	72.8	0.05	ug/g	ND	90.2	50-140			
o-Xylene	36.5	0.05	ug/g	ND	90.5	50-140			
Surrogate: 4-Bromofluorobenzene	*7.02*		*%*		*94.9*	*50-140*			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: Dibromofluoromethane	*7.98*		*%*		*108*	*50-140*			
Surrogate: Toluene-d8	*7.22*		*%*		*97.5*	*50-140*			

Qualifier Notes:

Sample Qualifiers :

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

Applies to Samples: BH104 S1A, BH105 S1A

Sample Data Revisions:

None

Certificate of Analysis

Report Date: 22-Nov-2024

Client: **G2S Environmental Consulting Inc. (Burlington)**

Order Date: 11-Nov-2024

Client PO:

Project Description: G2S24376

Work Order Revisions / Comments:

Revision-1: This report includes updated criteria comparison and sampling date.

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

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

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

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

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

CCME PHC additional information:

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

- F1 range corrected for BTEX.

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

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

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

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

PARACEL LABORATORIES LTD.

Paracel ID: 2446078

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2446078	

Client Name: G2S Consulting Inc.	Project Ref: G2S24376	Page 1 of 1	
Contact Name:	Quote #:	**Turnaround Time**	
Address: 4361 Harvester Rd, Suite 12, Burlington, ON L7L 5M4	PO #:	☐ 1 day	☐ 3 day
	E-mail: dylanb@g2sconsulting.com davids@g2sconsulting.com	☐ 2 day	☒ Regular
Telephone: 905-331-3735		Date Required:	

☒ REG 153/04 ☐ REG 406/19

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

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

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

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken Date	Sample Taken Time	PHC	BTEX	PCB	M&I	PAH	VOC						
1	BH101 S1B	S		4	2024/11/07	PM	✔			✔	✔	✔						
2	BH101 S2	S		3	2024/11/07	PM	✔					✔						
3	BH102 S1B	S		3	2024/11/07	AM	✔					✔						
4	BH102 S1C	S		3	2024/11/07	AM				✔	✔							
5	BH103 S1B	S		3	2024/11/07	AM				✔	✔							
6	BH103 S2A	S		3	2024/11/07	AM	✔					✔						
7	BH104 S1A	S		3	2024/11/07	PM	✔					✔						
8	BH104 S1B	S		3	2024/11/07	PM				✔	✔							
9	BH105 S1A	S		3	2024/11/07	PM	✔					✔						
10	BH105 S1B	S		3	2024/11/07	PM				✔	✔							

Comments:

Method of Delivery: Zoom

Relinquished By (Sign):	Received By Driver/Depot:	Received at Lab: KM	Verified By: AV
Relinquished By (Print): D.BRICE	Date/Time:	Date/Time: 11/11/24 1454	Date/Time: 11/11/24 15:28
Date/Time: 2024/11/11 @1400	Temperature: °C	Temperature: 12.8	pH Verified: ☐ By:

PARACEL LABORATORIES LTD.
TRUSTED. RESPONSIVE. RELIABLE.

351 Nash Road North, unit 9B
Hamilton, ON L8H 7P4
1-800-749-1947
www.paracellabs.com

Certificate of Analysis

G2S Environmental Consulting Inc. (Burlington)
4361 Harvester Road, Unit 12
Burlington, ON L7L 5M4
Attn: David Smith

Client PO: 70 Hope Ave, Hamilton
Project: G2S24376B
Custody: 146276

Report Date: 10-Dec-2024
Order Date: 19-Nov-2024

Revised Report

Order #: 2447185

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

Paracel ID	Client ID
2447185-01	BH/MW101
2447185-02	BH/MW102
2447185-03	BH/MW103
2447185-04	BH/MW105
2447185-05	Trip Blank

Approved By:

Alex Enfield, MSc
Lab Manager

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Anions	EPA 300.1 - IC	22-Nov-24	22-Nov-24
BTEX by P&T GC-MS	EPA 624 - P&T GC-MS	21-Nov-24	21-Nov-24
Chromium, hexavalent - water	MOE E3056 - colourimetric	20-Nov-24	20-Nov-24
Cyanide, free	MOE E3015 - Auto Colour	21-Nov-24	21-Nov-24
Mercury by CVAA	EPA 245.2 - Cold Vapour AA	20-Nov-24	21-Nov-24
pH	EPA 150.1 - pH probe @25 °C	22-Nov-24	22-Nov-24
PHC F1	CWS Tier 1 - P&T GC-FID	20-Nov-24	21-Nov-24
PHCs F2 to F4	CWS Tier 1 - GC-FID, extraction	20-Nov-24	22-Nov-24
REG 153: Metals by ICP/MS, water	EPA 200.8 - ICP-MS	21-Nov-24	21-Nov-24
REG 153: PAHs by GC-MS	EPA 625 - GC-MS, extraction	21-Nov-24	25-Nov-24
REG 153: VOCs by P&T GC-MS	EPA 624 - P&T GC-MS	21-Nov-24	21-Nov-24

Summary of Criteria Exceedances

(If this page is blank then there are no exceedances)

Only those criteria that a sample exceeds will be highlighted in red

Regulatory Comparison:

Paracel Laboratories has provided regulatory guidelines on this report for informational purposes only and makes no representations or warranties that the data is accurate or reflects the current regulatory values. The user is advised to consult with the appropriate official regulations to evaluate compliance. Sample results that are highlighted have exceeded the selected regulatory limit. Calculated uncertainty estimations have not been applied for determining regulatory exceedances.

Sample	Analyte	MDL / Units	Result	Reg 153/04 -T3 Non-Potable Groundwater, coarse	-
BH/MW103	1,1-Dichloroethylene	0.5 ug/L	2.3	1.6 ug/L	-
BH/MW105	1,1-Dichloroethylene	0.5 ug/L	4.2	1.6 ug/L	-

	Client ID:	BH/MW101	BH/MW102	BH/MW103	BH/MW105	Criteria:	
	Sample Date:	19-Nov-24 00:00	19-Nov-24 00:00	19-Nov-24 00:00	19-Nov-24 00:00	Reg 153/04 -T3 Non-Potable Groundwater, coarse	-
	Sample ID:	2447185-01	2447185-02	2447185-03	2447185-04		
	Matrix:	Ground Water	Ground Water	Ground Water	Ground Water		
	MDL/Units						
General Inorganics							
Cyanide, free	2 ug/L	-	-	<2	<2	66 ug/L	-
pH	0.1 pH Units	-	-	7.2	7.2	5.00 - 9.00 pH Units	-
Anions							
Chloride	1.0 mg/L	-	-	451	436	2300000 ug/L	-
Metals							
Mercury	0.1 ug/L	-	-	<0.1	<0.1	0.29 ug/L	-
Antimony	0.5 ug/L	-	<0.5	<0.5	<0.5	20000 ug/L	-
Arsenic	1.0 ug/L	-	1.5	3.1	3.0	1900 ug/L	-
Barium	1.0 ug/L	-	14.0	15.5	14.8	29000 ug/L	-
Beryllium	0.5 ug/L	-	<0.5	<0.5	<0.5	67 ug/L	-
Boron	10.0 ug/L	-	5350	3800	3770	45000 ug/L	-
Cadmium	0.2 ug/L	-	<0.2	<0.2	<0.2	2.7 ug/L	-
Chromium (VI)	10 ug/L	-	-	<10	<10	140 ug/L	-
Chromium	1.0 ug/L	-	<1.0	<1.0	<1.0	810 ug/L	-
Cobalt	0.5 ug/L	-	1.3	1.3	1.1	66 ug/L	-
Copper	0.5 ug/L	-	<0.5	0.7	<0.5	87 ug/L	-
Lead	0.2 ug/L	-	<0.2	<0.2	<0.2	25 ug/L	-
Molybdenum	0.5 ug/L	-	5.2	4.1	4.2	9200 ug/L	-
Nickel	1.0 ug/L	-	2.2	2.4	2.3	490 ug/L	-
Selenium	1.0 ug/L	-	<1.0	<1.0	<1.0	63 ug/L	-
Silver	0.2 ug/L	-	<0.2	<0.2	<0.2	1.5 ug/L	-
Sodium	200 ug/L	-	510000	439000	458000	2300000 ug/L	-
Thallium	0.5 ug/L	-	<0.5	<0.5	<0.5	510 ug/L	-
Uranium	0.2 ug/L	-	2.2	1.9	1.8	420 ug/L	-
Vanadium	0.5 ug/L	-	<0.5	<0.5	<0.5	250 ug/L	-

Certificate of Analysis

Report Date: 10-Dec-2024

Client: G2S Environmental Consulting Inc. (Burlington)

Order Date: 19-Nov-2024

Client PO: 70 Hope Ave, Hamilton

Project Description: G2S24376B

	Client ID:	BH/MW101	BH/MW102	BH/MW103	BH/MW105	Criteria:	
	Sample Date:	19-Nov-24 00:00	19-Nov-24 00:00	19-Nov-24 00:00	19-Nov-24 00:00	Reg 153/04 -T3 Non-Potable Groundwater, coarse	-
	Sample ID:	2447185-01	2447185-02	2447185-03	2447185-04		
	Matrix:	Ground Water	Ground Water	Ground Water	Ground Water		
	MDL/Units						
Metals							
Zinc	5.0 ug/L	-	<5.0	<5.0	<5.0	1100 ug/L	-
Volatiles							
Acetone	5.0 ug/L	<5.0	-	<5.0	<5.0	130000 ug/L	-
Benzene	0.5 ug/L	<0.5	-	<0.5	<0.5	44 ug/L	-
Bromodichloromethane	0.5 ug/L	<0.5	-	<0.5	<0.5	85000 ug/L	-
Bromoform	0.5 ug/L	<0.5	-	<0.5	<0.5	380 ug/L	-
Bromomethane	0.5 ug/L	<0.5	-	<0.5	<0.5	5.6 ug/L	-
Carbon Tetrachloride	0.2 ug/L	<0.2	-	<0.2	<0.2	0.79 ug/L	-
Chlorobenzene	0.5 ug/L	<0.5	-	<0.5	<0.5	630 ug/L	-
Chloroform	0.5 ug/L	<0.5	-	<0.5	<0.5	2.4 ug/L	-
Dibromochloromethane	0.5 ug/L	<0.5	-	<0.5	<0.5	82000 ug/L	-
Dichlorodifluoromethane	1.0 ug/L	<1.0	-	<1.0	<1.0	4400 ug/L	-
1,2-Dichlorobenzene	0.5 ug/L	<0.5	-	<0.5	<0.5	4600 ug/L	-
1,3-Dichlorobenzene	0.5 ug/L	<0.5	-	<0.5	<0.5	9600 ug/L	-
1,4-Dichlorobenzene	0.5 ug/L	<0.5	-	<0.5	<0.5	8 ug/L	-
1,1-Dichloroethane	0.5 ug/L	<0.5	-	3.2	4.3	320 ug/L	-
1,2-Dichloroethane	0.5 ug/L	<0.5	-	<0.5	0.5	1.6 ug/L	-
1,1-Dichloroethylene	0.5 ug/L	<0.5	-	2.3	4.2	1.6 ug/L	-
cis-1,2-Dichloroethylene	0.5 ug/L	<0.5	-	<0.5	<0.5	1.6 ug/L	-
trans-1,2-Dichloroethylene	0.5 ug/L	<0.5	-	<0.5	<0.5	1.6 ug/L	-
1,2-Dichloropropane	0.5 ug/L	<0.5	-	<0.5	<0.5	16 ug/L	-
cis-1,3-Dichloropropylene	0.5 ug/L	<0.5	-	<0.5	<0.5	-	-
trans-1,3-Dichloropropylene	0.5 ug/L	<0.5	-	<0.5	<0.5	-	-
1,3-Dichloropropene, total	0.5 ug/L	<0.5	-	<0.5	<0.5	5.2 ug/L	-
Ethylene dibromide (dibromoethane,	0.2 ug/L	<0.2	-	<0.2	<0.2	0.25 ug/L	-

	Client ID:	BH/MW101	BH/MW102	BH/MW103	BH/MW105	Criteria:	
	Sample Date:	19-Nov-24 00:00	19-Nov-24 00:00	19-Nov-24 00:00	19-Nov-24 00:00	Reg 153/04 -T3 Non-Potable Groundwater, coarse	-
	Sample ID:	2447185-01	2447185-02	2447185-03	2447185-04		
	Matrix:	Ground Water	Ground Water	Ground Water	Ground Water		
	MDL/Units						
Volatiles							
Ethylbenzene	0.5 ug/L	<0.5	-	<0.5	<0.5	2300 ug/L	-
Hexane	1.0 ug/L	<1.0	-	<1.0	<1.0	51 ug/L	-
Methyl Ethyl Ketone (2-Butanone)	5.0 ug/L	<5.0	-	<5.0	<5.0	470000 ug/L	-
Methyl Isobutyl Ketone	5.0 ug/L	<5.0	-	<5.0	<5.0	140000 ug/L	-
Methyl tert-butyl ether	2.0 ug/L	<2.0	-	<2.0	<2.0	190 ug/L	-
Methylene Chloride	5.0 ug/L	<5.0	-	<5.0	<5.0	610 ug/L	-
Styrene	0.5 ug/L	<0.5	-	<0.5	<0.5	1300 ug/L	-
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5	-	<0.5	<0.5	3.3 ug/L	-
1,1,2,2-Tetrachloroethane	0.5 ug/L	<0.5	-	<0.5	<0.5	3.2 ug/L	-
Tetrachloroethylene	0.5 ug/L	<0.5	-	<0.5	<0.5	1.6 ug/L	-
Toluene	0.5 ug/L	<0.5	-	<0.5	<0.5	18000 ug/L	-
1,1,1-Trichloroethane	0.5 ug/L	<0.5	-	<0.5	<0.5	640 ug/L	-
1,1,2-Trichloroethane	0.5 ug/L	<0.5	-	<0.5	<0.5	4.7 ug/L	-
Trichloroethylene	0.5 ug/L	<0.5	-	<0.5	<0.5	1.6 ug/L	-
Trichlorofluoromethane	1.0 ug/L	<1.0	-	<1.0	<1.0	2500 ug/L	-
Vinyl chloride	0.5 ug/L	<0.5	-	<0.5	<0.5	0.5 ug/L	-
m,p-Xylenes	0.5 ug/L	<0.5	-	<0.5	<0.5	-	-
o-Xylene	0.5 ug/L	<0.5	-	<0.5	<0.5	-	-
Xylenes, total	0.05 ug/L	<0.05	-	<0.05	<0.05	4200 ug/L	-
Dibromofluoromethane	Surrogate	91.4%	-	96.6%	95.5%	-	-
Toluene-d8	Surrogate	104%	-	104%	104%	-	-
4-Bromofluorobenzene	Surrogate	108%	-	106%	105%	-	-
Benzene	0.5 ug/L	-	<0.5	-	-	44 ug/L	-
Ethylbenzene	0.5 ug/L	-	<0.5	-	-	2300 ug/L	-
Toluene	0.5 ug/L	-	<0.5	-	-	18000 ug/L	-

	Client ID:	BH/MW101	BH/MW102	BH/MW103	BH/MW105	Criteria:	
	Sample Date:	19-Nov-24 00:00	19-Nov-24 00:00	19-Nov-24 00:00	19-Nov-24 00:00	Reg 153/04 -T3 Non-Potable Groundwater, coarse	-
	Sample ID:	2447185-01	2447185-02	2447185-03	2447185-04		
	Matrix:	Ground Water	Ground Water	Ground Water	Ground Water		
	MDL/Units						
Volatiles							
m,p-Xylenes	0.5 ug/L	-	<0.5	-	-	-	-
o-Xylene	0.5 ug/L	-	<0.5	-	-	-	-
Xylenes, total	0.5 ug/L	-	<0.5	-	-	4200 ug/L	-
Toluene-d8	Surrogate	-	104%	-	-	-	-
Hydrocarbons							
F1 PHCs (C6-C10)	25 ug/L	<25	<25	<25	<25	750 ug/L	-
F2 PHCs (C10-C16)	100 ug/L	<100	<100	<100	<100	150 ug/L	-
F3 PHCs (C16-C34)	100 ug/L	<100	<100	<100	<100	500 ug/L	-
F4 PHCs (C34-C50)	100 ug/L	<100	<100	<100	<100	500 ug/L	-
Semi-Volatiles							
Acenaphthene	0.05 ug/L	-	<0.05	<0.05	<0.05	600 ug/L	-
Acenaphthylene	0.05 ug/L	-	<0.05	<0.05	<0.05	1.8 ug/L	-
Anthracene	0.01 ug/L	-	<0.01	<0.01	<0.01	2.4 ug/L	-
Benzo [a] anthracene	0.01 ug/L	-	<0.01	<0.01	<0.01	4.7 ug/L	-
Benzo [a] pyrene	0.01 ug/L	-	<0.01	<0.01	<0.01	0.81 ug/L	-
Benzo [b] fluoranthene	0.05 ug/L	-	<0.05	<0.05	<0.05	0.75 ug/L	-
Benzo [g,h,i] perylene	0.05 ug/L	-	<0.05	<0.05	<0.05	0.2 ug/L	-
Benzo [k] fluoranthene	0.05 ug/L	-	<0.05	<0.05	<0.05	0.4 ug/L	-
Chrysene	0.05 ug/L	-	<0.05	<0.05	<0.05	1 ug/L	-
Dibenzo [a,h] anthracene	0.05 ug/L	-	<0.05	<0.05	<0.05	0.52 ug/L	-
Fluoranthene	0.01 ug/L	-	<0.01	<0.01	<0.01	130 ug/L	-
Fluorene	0.05 ug/L	-	<0.05	<0.05	<0.05	400 ug/L	-
Indeno [1,2,3-cd] pyrene	0.05 ug/L	-	<0.05	<0.05	<0.05	0.2 ug/L	-
1-Methylnaphthalene	0.05 ug/L	-	<0.05	<0.05	<0.05	1800 ug/L	-
2-Methylnaphthalene	0.05 ug/L	-	<0.05	<0.05	<0.05	1800 ug/L	-

	Client ID:	BH/MW101	BH/MW102	BH/MW103	BH/MW105	Criteria:	
	Sample Date:	19-Nov-24 00:00	19-Nov-24 00:00	19-Nov-24 00:00	19-Nov-24 00:00	Reg 153/04 -T3 Non-Potable Groundwater, coarse	-
	Sample ID:	2447185-01	2447185-02	2447185-03	2447185-04		
	Matrix:	Ground Water	Ground Water	Ground Water	Ground Water		
	MDL/Units						
Semi-Volatiles							
Methylnaphthalene (1&2)	0.10 ug/L	-	<0.10	<0.10	<0.10	1800 ug/L	-
Naphthalene	0.05 ug/L	-	<0.05	<0.05	<0.05	1400 ug/L	-
Phenanthrene	0.05 ug/L	-	<0.05	<0.05	<0.05	580 ug/L	-
Pyrene	0.01 ug/L	-	<0.01	<0.01	<0.01	68 ug/L	-
2-Fluorobiphenyl	Surrogate	-	101%	100%	85.5%	-	-
Terphenyl-d14	Surrogate	-	138%	116%	122%	-	-

	Client ID:	Trip Blank				Criteria:	
	Sample Date:	13-Nov-24 09:22				Reg 153/04 -T3 Non-Potable Groundwater, coarse	-
	Sample ID:	2447185-05					
	Matrix:	Water					
	MDL/Units						
Volatiles							
Acetone	5.0 ug/L	<5.0	-	-	-	130000 ug/L	-
Benzene	0.5 ug/L	<0.5	-	-	-	44 ug/L	-
Bromodichloromethane	0.5 ug/L	<0.5	-	-	-	85000 ug/L	-
Bromoform	0.5 ug/L	<0.5	-	-	-	380 ug/L	-
Bromomethane	0.5 ug/L	<0.5	-	-	-	5.6 ug/L	-
Carbon Tetrachloride	0.2 ug/L	<0.2	-	-	-	0.79 ug/L	-
Chlorobenzene	0.5 ug/L	<0.5	-	-	-	630 ug/L	-
Chloroform	0.5 ug/L	<0.5	-	-	-	2.4 ug/L	-
Dibromochloromethane	0.5 ug/L	<0.5	-	-	-	82000 ug/L	-
Dichlorodifluoromethane	1.0 ug/L	<1.0	-	-	-	4400 ug/L	-
1,2-Dichlorobenzene	0.5 ug/L	<0.5	-	-	-	4600 ug/L	-
1,3-Dichlorobenzene	0.5 ug/L	<0.5	-	-	-	9600 ug/L	-
1,4-Dichlorobenzene	0.5 ug/L	<0.5	-	-	-	8 ug/L	-
1,1-Dichloroethane	0.5 ug/L	<0.5	-	-	-	320 ug/L	-
1,2-Dichloroethane	0.5 ug/L	<0.5	-	-	-	1.6 ug/L	-
1,1-Dichloroethylene	0.5 ug/L	<0.5	-	-	-	1.6 ug/L	-
cis-1,2-Dichloroethylene	0.5 ug/L	<0.5	-	-	-	1.6 ug/L	-
trans-1,2-Dichloroethylene	0.5 ug/L	<0.5	-	-	-	1.6 ug/L	-
1,2-Dichloropropane	0.5 ug/L	<0.5	-	-	-	16 ug/L	-
cis-1,3-Dichloropropylene	0.5 ug/L	<0.5	-	-	-	-	-
trans-1,3-Dichloropropylene	0.5 ug/L	<0.5	-	-	-	-	-
1,3-Dichloropropene, total	0.5 ug/L	<0.5	-	-	-	5.2 ug/L	-
Ethylbenzene	0.5 ug/L	<0.5	-	-	-	2300 ug/L	-
Ethylene dibromide (dibromoethane,	0.2 ug/L	<0.2	-	-	-	0.25 ug/L	-
Hexane	1.0 ug/L	<1.0	-	-	-	51 ug/L	-

	Client ID:	Trip Blank				Criteria:	
	Sample Date:	13-Nov-24 09:22				Reg 153/04 -T3 Non-Potable Groundwater, coarse	-
	Sample ID:	2447185-05					
	Matrix:	Water					
	MDL/Units						
Volatiles							
Methyl Ethyl Ketone (2-Butanone)	5.0 ug/L	<5.0	-	-	-	470000 ug/L	-
Methyl Isobutyl Ketone	5.0 ug/L	<5.0	-	-	-	140000 ug/L	-
Methyl tert-butyl ether	2.0 ug/L	<2.0	-	-	-	190 ug/L	-
Methylene Chloride	5.0 ug/L	<5.0	-	-	-	610 ug/L	-
Styrene	0.5 ug/L	<0.5	-	-	-	1300 ug/L	-
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5	-	-	-	3.3 ug/L	-
1,1,2,2-Tetrachloroethane	0.5 ug/L	<0.5	-	-	-	3.2 ug/L	-
Tetrachloroethylene	0.5 ug/L	<0.5	-	-	-	1.6 ug/L	-
Toluene	0.5 ug/L	<0.5	-	-	-	18000 ug/L	-
1,1,1-Trichloroethane	0.5 ug/L	<0.5	-	-	-	640 ug/L	-
1,1,2-Trichloroethane	0.5 ug/L	<0.5	-	-	-	4.7 ug/L	-
Trichloroethylene	0.5 ug/L	<0.5	-	-	-	1.6 ug/L	-
Trichlorofluoromethane	1.0 ug/L	<1.0	-	-	-	2500 ug/L	-
Vinyl chloride	0.5 ug/L	<0.5	-	-	-	0.5 ug/L	-
m,p-Xylenes	0.5 ug/L	<0.5	-	-	-	-	-
o-Xylene	0.5 ug/L	<0.5	-	-	-	-	-
Xylenes, total	0.05 ug/L	<0.05	-	-	-	4200 ug/L	-
Dibromofluoromethane	Surrogate	89.7%	-	-	-	-	-
4-Bromofluorobenzene	Surrogate	109%	-	-	-	-	-
Toluene-d8	Surrogate	104%	-	-	-	-	-

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions								
Chloride	ND	1.0	mg/L					
General Inorganics								
Cyanide, free	ND	2	ug/L					
Hydrocarbons								
F1 PHCs (C6-C10)	ND	25	ug/L					
F2 PHCs (C10-C16)	ND	100	ug/L					
F3 PHCs (C16-C34)	ND	100	ug/L					
F4 PHCs (C34-C50)	ND	100	ug/L					
Metals								
Mercury	ND	0.1	ug/L					
Antimony	ND	0.5	ug/L					
Arsenic	ND	1.0	ug/L					
Barium	ND	1.0	ug/L					
Beryllium	ND	0.5	ug/L					
Boron	ND	10.0	ug/L					
Cadmium	ND	0.2	ug/L					
Chromium (VI)	ND	10	ug/L					
Chromium	ND	1.0	ug/L					
Cobalt	ND	0.5	ug/L					
Copper	ND	0.5	ug/L					
Lead	ND	0.2	ug/L					
Molybdenum	ND	0.5	ug/L					
Nickel	ND	1.0	ug/L					
Selenium	ND	1.0	ug/L					
Silver	ND	0.2	ug/L					
Sodium	ND	200	ug/L					
Thallium	ND	0.5	ug/L					
Uranium	ND	0.2	ug/L					
Vanadium	ND	0.5	ug/L					
Zinc	ND	5.0	ug/L					
Semi-Volatiles								
Acenaphthene	ND	0.05	ug/L					

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Acenaphthylene	ND	0.05	ug/L					
Anthracene	ND	0.01	ug/L					
Benzo [a] anthracene	ND	0.01	ug/L					
Benzo [a] pyrene	ND	0.01	ug/L					
Benzo [b] fluoranthene	ND	0.05	ug/L					
Benzo [g,h,i] perylene	ND	0.05	ug/L					
Benzo [k] fluoranthene	ND	0.05	ug/L					
Chrysene	ND	0.05	ug/L					
Dibenzo [a,h] anthracene	ND	0.05	ug/L					
Fluoranthene	ND	0.01	ug/L					
Fluorene	ND	0.05	ug/L					
Indeno [1,2,3-cd] pyrene	ND	0.05	ug/L					
1-Methylnaphthalene	ND	0.05	ug/L					
2-Methylnaphthalene	ND	0.05	ug/L					
Methylnaphthalene (1&2)	ND	0.10	ug/L					
Naphthalene	ND	0.05	ug/L					
Phenanthrene	ND	0.05	ug/L					
Pyrene	ND	0.01	ug/L					
Surrogate: 2-Fluorobiphenyl	*7.92*		*%*	*78.4*	*50-140*			
Surrogate: Terphenyl-d14	*10.8*		*%*	*107*	*50-140*			
Volatiles								
Acetone	ND	5.0	ug/L					
Benzene	ND	0.5	ug/L					
Bromodichloromethane	ND	0.5	ug/L					
Bromoform	ND	0.5	ug/L					
Bromomethane	ND	0.5	ug/L					
Carbon Tetrachloride	ND	0.2	ug/L					
Chlorobenzene	ND	0.5	ug/L					
Chloroform	ND	0.5	ug/L					
Dibromochloromethane	ND	0.5	ug/L					
Dichlorodifluoromethane	ND	1.0	ug/L					
1,2-Dichlorobenzene	ND	0.5	ug/L					

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
1,3-Dichlorobenzene	ND	0.5	ug/L					
1,4-Dichlorobenzene	ND	0.5	ug/L					
1,1-Dichloroethane	ND	0.5	ug/L					
1,2-Dichloroethane	ND	0.5	ug/L					
1,1-Dichloroethylene	ND	0.5	ug/L					
cis-1,2-Dichloroethylene	ND	0.5	ug/L					
trans-1,2-Dichloroethylene	ND	0.5	ug/L					
1,2-Dichloropropane	ND	0.5	ug/L					
cis-1,3-Dichloropropylene	ND	0.5	ug/L					
trans-1,3-Dichloropropylene	ND	0.5	ug/L					
1,3-Dichloropropene, total	ND	0.5	ug/L					
Ethylbenzene	ND	0.5	ug/L					
Ethylene dibromide (dibromoethane, 1,2-)	ND	0.2	ug/L					
Hexane	ND	1.0	ug/L					
Methyl Ethyl Ketone (2-Butanone)	ND	5.0	ug/L					
Methyl Isobutyl Ketone	ND	5.0	ug/L					
Methyl tert-butyl ether	ND	2.0	ug/L					
Methylene Chloride	ND	5.0	ug/L					
Styrene	ND	0.5	ug/L					
1,1,1,2-Tetrachloroethane	ND	0.5	ug/L					
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L					
Tetrachloroethylene	ND	0.5	ug/L					
Toluene	ND	0.5	ug/L					
1,1,1-Trichloroethane	ND	0.5	ug/L					
1,1,2-Trichloroethane	ND	0.5	ug/L					
Trichloroethylene	ND	0.5	ug/L					
Trichlorofluoromethane	ND	1.0	ug/L					
Vinyl chloride	ND	0.5	ug/L					
m,p-Xylenes	ND	0.5	ug/L					
o-Xylene	ND	0.5	ug/L					
Xylenes, total	ND	0.05	ug/L					
Surrogate: 4-Bromofluorobenzene	*86.8*		*%*	*108*	*50-140*			

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: Dibromofluoromethane	*73.6*		*%*	*91.7*	*50-140*			
Surrogate: Toluene-d8	*83.5*		*%*	*104*	*50-140*			
Benzene	ND	0.5	ug/L					
Ethylbenzene	ND	0.5	ug/L					
Toluene	ND	0.5	ug/L					
m,p-Xylenes	ND	0.5	ug/L					
o-Xylene	ND	0.5	ug/L					
Xylenes, total	ND	0.5	ug/L					
Surrogate: Toluene-d8	*83.5*		*%*	*104*	*50-140*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Chloride	232	1.0	mg/L	233			0.2	10	
General Inorganics									
Cyanide, free	ND	2	ug/L	ND			NC	20	
pH	6.9	0.1	pH Units	6.9			0.4	10	
Hydrocarbons									
F1 PHCs (C6-C10)	ND	25	ug/L	ND			NC	30	
Metals									
Mercury	ND	0.1	ug/L	ND			NC	20	
Antimony	ND	0.5	ug/L	ND			NC	20	
Arsenic	3.3	1.0	ug/L	3.2			1.5	20	
Barium	144	1.0	ug/L	145			0.6	20	
Beryllium	ND	0.5	ug/L	ND			NC	20	
Boron	ND	10.0	ug/L	ND			NC	20	
Cadmium	ND	0.2	ug/L	ND			NC	20	
Chromium (VI)	ND	10	ug/L	ND			NC	20	
Chromium	ND	1.0	ug/L	ND			NC	20	
Cobalt	ND	0.5	ug/L	ND			NC	20	
Copper	1.4	0.5	ug/L	1.4			0.2	20	
Lead	ND	0.2	ug/L	ND			NC	20	
Molybdenum	33.9	0.5	ug/L	34.1			0.8	20	
Nickel	11.7	1.0	ug/L	11.9			1.0	20	
Selenium	ND	1.0	ug/L	ND			NC	20	
Silver	ND	0.2	ug/L	ND			NC	20	
Sodium	1660000	200	ug/L	2020000			19.5	20	
Thallium	ND	0.5	ug/L	ND			NC	20	
Uranium	ND	0.2	ug/L	ND			NC	20	
Vanadium	24.3	0.5	ug/L	24.2			0.4	20	
Zinc	ND	5.0	ug/L	ND			NC	20	
Volatiles									
Acetone	ND	5.0	ug/L	ND			NC	30	

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Benzene	ND	0.5	ug/L	ND			NC	30	
Bromodichloromethane	ND	0.5	ug/L	ND			NC	30	
Bromoform	ND	0.5	ug/L	ND			NC	30	
Bromomethane	ND	0.5	ug/L	ND			NC	30	
Carbon Tetrachloride	ND	0.2	ug/L	ND			NC	30	
Chlorobenzene	ND	0.5	ug/L	ND			NC	30	
Chloroform	ND	0.5	ug/L	ND			NC	30	
Dibromochloromethane	ND	0.5	ug/L	ND			NC	30	
Dichlorodifluoromethane	ND	1.0	ug/L	ND			NC	30	
1,2-Dichlorobenzene	ND	0.5	ug/L	ND			NC	30	
1,3-Dichlorobenzene	ND	0.5	ug/L	ND			NC	30	
1,4-Dichlorobenzene	ND	0.5	ug/L	ND			NC	30	
1,1-Dichloroethane	ND	0.5	ug/L	ND			NC	30	
1,2-Dichloroethane	ND	0.5	ug/L	ND			NC	30	
1,1-Dichloroethylene	ND	0.5	ug/L	ND			NC	30	
cis-1,2-Dichloroethylene	ND	0.5	ug/L	ND			NC	30	
trans-1,2-Dichloroethylene	ND	0.5	ug/L	ND			NC	30	
1,2-Dichloropropane	ND	0.5	ug/L	ND			NC	30	
cis-1,3-Dichloropropylene	ND	0.5	ug/L	ND			NC	30	
trans-1,3-Dichloropropylene	ND	0.5	ug/L	ND			NC	30	
Ethylbenzene	ND	0.5	ug/L	ND			NC	30	
Ethylene dibromide (dibromoethane, 1,2-)	ND	0.2	ug/L	ND			NC	30	
Hexane	ND	1.0	ug/L	ND			NC	30	
Methyl Ethyl Ketone (2-Butanone)	ND	5.0	ug/L	ND			NC	30	
Methyl Isobutyl Ketone	ND	5.0	ug/L	ND			NC	30	
Methyl tert-butyl ether	ND	2.0	ug/L	ND			NC	30	
Methylene Chloride	ND	5.0	ug/L	ND			NC	30	
Styrene	ND	0.5	ug/L	ND			NC	30	
1,1,1,2-Tetrachloroethane	ND	0.5	ug/L	ND			NC	30	
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L	ND			NC	30	
Tetrachloroethylene	ND	0.5	ug/L	ND			NC	30	

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
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	*87.1*		*%*		*108*	*50-140*			
Surrogate: Dibromofluoromethane	*71.5*		*%*		*89.1*	*50-140*			
Surrogate: Toluene-d8	*83.0*		*%*		*103*	*50-140*			
Benzene	ND	0.5	ug/L	ND			NC	30	
Ethylbenzene	ND	0.5	ug/L	ND			NC	30	
Toluene	ND	0.5	ug/L	ND			NC	30	
m,p-Xylenes	ND	0.5	ug/L	ND			NC	30	
o-Xylene	ND	0.5	ug/L	ND			NC	30	
Surrogate: Toluene-d8	*83.0*		*%*		*103*	*50-140*			

Method Quality Control: LCS Dup

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Hydrocarbons									
F2 PHCs (C10-C16)	1240	100	ug/L	ND	75.2	60-140	25.8	200	
F3 PHCs (C16-C34)	3160	100	ug/L	ND	85.3	60-140	22.7	200	
F4 PHCs (C34-C50)	2610	100	ug/L	ND	97.5	60-140	22.5	200	
Semi-Volatiles									
Acenaphthene	9.53	0.05	ug/L	ND	95.3	50-140	4.21	200	
Acenaphthylene	9.32	0.05	ug/L	ND	93.2	50-140	3.79	200	
Anthracene	11.2	0.01	ug/L	ND	112	50-140	2.32	200	
Benzo [a] anthracene	11.5	0.01	ug/L	ND	115	50-140	3.24	200	
Benzo [a] pyrene	11.4	0.01	ug/L	ND	114	50-140	3.75	200	
Benzo [b] fluoranthene	13.9	0.05	ug/L	ND	139	50-140	0.762	200	
Benzo [g,h,i] perylene	13.0	0.05	ug/L	ND	130	50-140	1.27	200	
Benzo [k] fluoranthene	13.0	0.05	ug/L	ND	130	50-140	4.69	200	
Chrysene	11.2	0.05	ug/L	ND	112	50-140	0.976	200	
Dibenzo [a,h] anthracene	10.8	0.05	ug/L	ND	108	50-140	5.68	200	
Fluoranthene	11.4	0.01	ug/L	ND	114	50-140	1.13	200	
Fluorene	11.8	0.05	ug/L	ND	118	50-140	1.60	200	
Indeno [1,2,3-cd] pyrene	13.2	0.05	ug/L	ND	132	50-140	1.26	200	
1-Methylnaphthalene	7.58	0.05	ug/L	ND	75.8	50-140	7.95	200	
2-Methylnaphthalene	7.71	0.05	ug/L	ND	77.1	50-140	7.78	200	
Naphthalene	7.70	0.05	ug/L	ND	77.0	50-140	8.70	200	
Phenanthrene	11.6	0.05	ug/L	ND	116	50-140	0.293	200	
Pyrene	12.0	0.01	ug/L	ND	120	50-140	2.75	200	

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Chloride	244	1.0	mg/L	233	106	80-120			
General Inorganics									
Cyanide, free	27.4	2	ug/L	ND	122	70-130			
Hydrocarbons									
F1 PHCs (C6-C10)	575	25	ug/L	ND	81.3	0-200			
F2 PHCs (C10-C16)	1610	100	ug/L	ND	97.5	60-140			
F3 PHCs (C16-C34)	3970	100	ug/L	ND	107	60-140			
F4 PHCs (C34-C50)	3270	100	ug/L	ND	122	60-140			
Metals									
Mercury	2.88	0.1	ug/L	ND	96.1	70-130			
Antimony	48.8	0.5	ug/L	ND	96.7	70-130			
Arsenic	55.0	1.0	ug/L	3.2	104	70-130			
Barium	197	1.0	ug/L	145	103	70-130			
Beryllium	55.1	0.5	ug/L	ND	110	70-130			
Boron	66.3	10.0	ug/L	ND	115	70-130			
Cadmium	43.5	0.2	ug/L	ND	87.0	70-130			
Chromium (VI)	206	10	ug/L	ND	103	70-130			
Chromium	54.9	1.0	ug/L	ND	109	70-130			
Cobalt	50.3	0.5	ug/L	ND	100	70-130			
Copper	49.2	0.5	ug/L	1.4	95.5	70-130			
Lead	46.9	0.2	ug/L	ND	93.6	70-130			
Molybdenum	88.3	0.5	ug/L	34.1	108	70-130			
Nickel	61.6	1.0	ug/L	11.9	99.4	70-130			
Selenium	46.4	1.0	ug/L	ND	92.1	70-130			
Silver	43.3	0.2	ug/L	ND	86.6	70-130			
Sodium	9290	200	ug/L	ND	92.9	80-120			
Thallium	45.5	0.5	ug/L	ND	91.0	70-130			
Uranium	50.9	0.2	ug/L	ND	102	70-130			
Vanadium	74.5	0.5	ug/L	24.2	101	70-130			
Zinc	44.8	5.0	ug/L	ND	86.1	70-130			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Semi-Volatiles									
Acenaphthene	9.94	0.05	ug/L	ND	99.4	50-140			
Acenaphthylene	9.68	0.05	ug/L	ND	96.8	50-140			
Anthracene	11.4	0.01	ug/L	ND	114	50-140			
Benzo [a] anthracene	11.9	0.01	ug/L	ND	119	50-140			
Benzo [a] pyrene	11.9	0.01	ug/L	ND	119	50-140			
Benzo [b] fluoranthene	14.0	0.05	ug/L	ND	140	50-140			
Benzo [g,h,i] perylene	13.2	0.05	ug/L	ND	132	50-140			
Benzo [k] fluoranthene	13.6	0.05	ug/L	ND	136	50-140			
Chrysene	11.3	0.05	ug/L	ND	113	50-140			
Dibenzo [a,h] anthracene	11.4	0.05	ug/L	ND	114	50-140			
Fluoranthene	11.5	0.01	ug/L	ND	115	50-140			
Fluorene	12.0	0.05	ug/L	ND	120	50-140			
Indeno [1,2,3-cd] pyrene	13.4	0.05	ug/L	ND	134	50-140			
1-Methylnaphthalene	8.21	0.05	ug/L	ND	82.1	50-140			
2-Methylnaphthalene	8.33	0.05	ug/L	ND	83.3	50-140			
Naphthalene	8.40	0.05	ug/L	ND	84.0	50-140			
Phenanthrene	11.6	0.05	ug/L	ND	116	50-140			
Pyrene	12.4	0.01	ug/L	ND	124	50-140			
Surrogate: 2-Fluorobiphenyl	*9.30*		*%*		*92.0*	*50-140*			
Surrogate: Terphenyl-d14	*10.3*		*%*		*102*	*50-140*			
Volatiles									
Acetone	99.9	5.0	ug/L	ND	99.9	50-140			
Benzene	39.7	0.5	ug/L	ND	99.3	50-140			
Bromodichloromethane	38.7	0.5	ug/L	ND	96.9	50-140			
Bromoform	41.3	0.5	ug/L	ND	103	50-140			
Bromomethane	47.9	0.5	ug/L	ND	119	50-140			
Carbon Tetrachloride	39.5	0.2	ug/L	ND	98.8	50-140			
Chlorobenzene	38.0	0.5	ug/L	ND	95.0	50-140			
Chloroform	41.2	0.5	ug/L	ND	103	50-140			
Dibromochloromethane	41.3	0.5	ug/L	ND	103	50-140			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Dichlorodifluoromethane	55.4	1.0	ug/L	ND	136	50-140			
1,2-Dichlorobenzene	38.6	0.5	ug/L	ND	96.5	50-140			
1,3-Dichlorobenzene	37.9	0.5	ug/L	ND	94.9	50-140			
1,4-Dichlorobenzene	38.1	0.5	ug/L	ND	95.2	50-140			
1,1-Dichloroethane	34.1	0.5	ug/L	ND	85.3	50-140			
1,2-Dichloroethane	41.9	0.5	ug/L	ND	105	50-140			
1,1-Dichloroethylene	33.9	0.5	ug/L	ND	84.7	50-140			
cis-1,2-Dichloroethylene	38.8	0.5	ug/L	ND	97.1	50-140			
trans-1,2-Dichloroethylene	35.1	0.5	ug/L	ND	87.8	50-140			
1,2-Dichloropropane	39.0	0.5	ug/L	ND	97.5	50-140			
cis-1,3-Dichloropropylene	39.4	0.5	ug/L	ND	98.5	50-140			
trans-1,3-Dichloropropylene	40.6	0.5	ug/L	ND	102	50-140			
Ethylbenzene	36.2	0.5	ug/L	ND	90.6	50-140			
Ethylene dibromide (dibromoethane, 1,2-)	40.9	0.2	ug/L	ND	102	50-140			
Hexane	41.2	1.0	ug/L	ND	103	50-140			
Methyl Ethyl Ketone (2-Butanone)	108	5.0	ug/L	ND	108	50-140			
Methyl Isobutyl Ketone	131	5.0	ug/L	ND	131	50-140			
Methyl tert-butyl ether	92.1	2.0	ug/L	ND	91.8	50-140			
Methylene Chloride	39.8	5.0	ug/L	ND	99.4	50-140			
Styrene	38.7	0.5	ug/L	ND	96.7	50-140			
1,1,1,2-Tetrachloroethane	36.5	0.5	ug/L	ND	91.3	50-140			
1,1,2,2-Tetrachloroethane	42.7	0.5	ug/L	ND	107	50-140			
Tetrachloroethylene	38.6	0.5	ug/L	ND	96.4	50-140			
Toluene	38.8	0.5	ug/L	ND	96.9	50-140			
1,1,1-Trichloroethane	40.3	0.5	ug/L	ND	101	50-140			
1,1,2-Trichloroethane	39.2	0.5	ug/L	ND	98.1	50-140			
Trichloroethylene	38.6	0.5	ug/L	ND	96.4	50-140			
Trichlorofluoromethane	39.8	1.0	ug/L	ND	99.6	50-140			
Vinyl chloride	44.0	0.5	ug/L	ND	110	50-140			
m,p-Xylenes	74.0	0.5	ug/L	ND	92.5	50-140			
o-Xylene	35.9	0.5	ug/L	ND	89.8	50-140			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: 4-Bromofluorobenzene	*78.1*		*%*		*97.0*	*50-140*			
Surrogate: Dibromofluoromethane	*86.5*		*%*		*108*	*50-140*			
Surrogate: Toluene-d8	*80.0*		*%*		*99.2*	*50-140*			
Benzene	39.7	0.5	ug/L	ND	99.3	50-140			
Ethylbenzene	36.2	0.5	ug/L	ND	90.6	50-140			
Toluene	38.8	0.5	ug/L	ND	96.9	50-140			
m,p-Xylenes	74.0	0.5	ug/L	ND	92.5	50-140			
o-Xylene	35.9	0.5	ug/L	ND	89.8	50-140			
Surrogate: Toluene-d8	*80.0*		*%*		*99.2*	*50-140*			

Certificate of Analysis

Report Date: 10-Dec-2024

Client: G2S Environmental Consulting Inc. (Burlington)

Order Date: 19-Nov-2024

Client PO: 70 Hope Ave, Hamilton

Project Description: G2S24376B

Qualifier Notes:

Sample Data Revisions:

None

Work Order Revisions / Comments:

Revision-1: This report includes an updated sampling date as per COC, and an updated criteria comparison as per client.

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

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

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

CCME PHC additional information:

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

- F1 range corrected for BTEX.

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

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

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

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

PARACEL LABORATORIES LTD.

Paracel ID: 2447185

Paracel Order Number (Lab Use Only)	Chain of Custody (Lab Use Only)
2447185	№ 146276

Page 1 of 1

Client Name: G2S CONSULTING INC.	Project Ref: G2S243763	Turnaround Time
Contact Name: David Smith	Quote #: Standing offer	☐ 1 day ☐ 3 day
Address: 4361 HARVESTER ROAD, BURLINGTON, ON, L7L5M4	PO #: 70 Hope Ave, Hamilton	☐ 2 day ☒ Regular
Telephone: (905) 461-0961	E-mail: davids@g2sconsulting.com	Date Required:

☒ REG 153/04 ☐ REG 406/19

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

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

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

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken Date	Sample Taken Time	PHCs F1-F4+BTEX	VOCs	PAHs	Metals by ICP	Hg	CrVI	B (HWS)	METALS AND INORGANICS
1	BH/MW101	GW		3	Nov. 19/24		X	X						
2	BH/MW102	GW		5			X		X	X				
3	BH/MW103	GW		9			X	X	X					X
4	BH/MW105	GW		9			X	X	X					X
5	TRIP BLANK			1				X						
6														
7														
8														
9														
10														

Comments:

Method of Delivery: Walk In

Relinquished By (Sign):	Received at Depot:	Received at Lab: km	Verified By: km
Relinquished By (Print): Monita Bieri	Date/Time:	Date/Time: 11/19/24 1410.	Date/Time: 9/19/24 1453
Date/Time: Nov. 19/24	Temperature: °C	Temperature: 14.6 °C	pH Verified: ☐ By: km

PARACEL LABORATORIES LTD.
TRUSTED.
RESPONSIVE.
RELIABLE.

351 Nash Road North, unit 9B
Hamilton, ON L8H 7P4
1-800-749-1947
www.paracellabs.com

Certificate of Analysis

G2S Environmental Consulting Inc. (Burlington)
4361 Harvester Road, Unit 12
Burlington, ON L7L 5M4
Attn: Dylan Brice

Client PO:
Project: 24376
Custody:

Report Date: 14-Nov-2024
Order Date: 11-Nov-2024

Order #: 2446079

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

Paracel ID	Client ID
2446079-01	TCLP GS1

Approved By:

Milan Ralitsch, PhD
Senior Technical Manager

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Ignitability	based on EPA 1030	13-Nov-24	13-Nov-24
REG 558 - Cyanide	TCLP MOE E3015- Auto Colour	12-Nov-24	12-Nov-24
REG 558 - Fluoride	TCLP EPA 340.2 - ISE	13-Nov-24	14-Nov-24
REG 558 - Mercury by CVAA	TCLP EPA 7470A, CVAA	12-Nov-24	14-Nov-24
REG 558 - Metals, ICP-MS	TCLP EPA 6020 - Digestion - ICP-MS	13-Nov-24	14-Nov-24
REG 558 - NO3/NO2	TCLP EPA 300.1 - IC	14-Nov-24	14-Nov-24
REG 558 - PAHs	TCLP EPA 625 - GC-MS	13-Nov-24	14-Nov-24
REG 558 - VOCs	TCLP ZHE EPA 624 - P&T GC-MS	13-Nov-24	14-Nov-24
Solids, %	CWS Tier 1 - Gravimetric	12-Nov-24	13-Nov-24

Summary of Criteria Exceedances

(If this page is blank then there are no exceedances)

Only those criteria that a sample exceeds will be highlighted in red

Regulatory Comparison:

Paracel Laboratories has provided regulatory guidelines on this report for informational purposes only and makes no representations or warranties that the data is accurate or reflects the current regulatory values. The user is advised to consult with the appropriate official regulations to evaluate compliance. Sample results that are highlighted have exceeded the selected regulatory limit. Calculated uncertainty estimations have not been applied for determining regulatory exceedances.

Sample	Analyte	MDL / Units	Result	Reg 558 Schedule 4	-

	Client ID:	TCLP GS1	-	-	-	Criteria:	
	Sample Date:	07-Nov-24 00:00	-	-	-	Reg 558 Schedule 4	-
	Sample ID:	2446079-01	-	-	-		
	Matrix:	Soil	-	-	-		
	MDL/Units						
Physical Characteristics							
% Solids	0.1 % by Wt.	79.5	-	-	-	-	-
Ignitability	N/A	Negative	-	-	-	-	-
EPA 1311 - TCLP Leachate Inorganics							
Fluoride	0.05 mg/L	0.40	-	-	-	150 mg/L	-
Nitrate as N	1 mg/L	<1	-	-	-	1000 mg/L	-
Nitrite as N	1 mg/L	<1	-	-	-	1000 mg/L	-
Cyanide, free	0.02 mg/L	<0.02	-	-	-	20 mg/L	-
EPA 1311 - TCLP Leachate Metals							
Arsenic	0.05 mg/L	<0.05	-	-	-	2.5 mg/L	-
Barium	0.05 mg/L	0.86	-	-	-	100 mg/L	-
Boron	0.05 mg/L	0.14	-	-	-	500 mg/L	-
Cadmium	0.01 mg/L	<0.01	-	-	-	0.5 mg/L	-
Chromium	0.05 mg/L	<0.05	-	-	-	5 mg/L	-
Lead	0.05 mg/L	<0.05	-	-	-	5 mg/L	-
Mercury	0.005 mg/L	<0.005	-	-	-	0.1 mg/L	-
Selenium	0.05 mg/L	<0.05	-	-	-	1 mg/L	-
Silver	0.05 mg/L	<0.05	-	-	-	5 mg/L	-
Uranium	0.05 mg/L	<0.05	-	-	-	10 mg/L	-
EPA 1311 - TCLP Leachate Volatiles							
Benzene	0.005 mg/L	<0.005	-	-	-	0.5 mg/L	-
Carbon Tetrachloride	0.005 mg/L	<0.005	-	-	-	0.5 mg/L	-
Chlorobenzene	0.004 mg/L	<0.004	-	-	-	8 mg/L	-
Chloroform	0.006 mg/L	<0.006	-	-	-	10 mg/L	-
1,2-Dichlorobenzene	0.004 mg/L	<0.004	-	-	-	20 mg/L	-
1,4-Dichlorobenzene	0.004 mg/L	<0.004	-	-	-	0.5 mg/L	-

	Client ID:	TCLP GS1	-	-	-	Criteria:	
	Sample Date:	07-Nov-24 00:00	-	-	-	Reg 558 Schedule 4	-
	Sample ID:	2446079-01	-	-	-		
	Matrix:	Soil	-	-	-		
	MDL/Units						
EPA 1311 - TCLP Leachate Volatiles							
1,2-Dichloroethane	0.005 mg/L	<0.005	-	-	-	0.5 mg/L	-
1,1-Dichloroethylene	0.006 mg/L	<0.006	-	-	-	1.4 mg/L	-
Methyl Ethyl Ketone (2-Butanone)	0.30 mg/L	<0.30	-	-	-	200 mg/L	-
Methylene Chloride	0.04 mg/L	<0.04	-	-	-	5 mg/L	-
Tetrachloroethylene	0.005 mg/L	<0.005	-	-	-	3 mg/L	-
Trichloroethylene	0.004 mg/L	<0.004	-	-	-	5 mg/L	-
Vinyl chloride	0.005 mg/L	<0.005	-	-	-	0.2 mg/L	-
4-Bromofluorobenzene	Surrogate	104%	-	-	-	-	-
Dibromofluoromethane	Surrogate	70.9%	-	-	-	-	-
Toluene-d8	Surrogate	102%	-	-	-	-	-
EPA 1311 - TCLP Leachate Organics							
Benzo [a] pyrene	0.0001 mg/L	<0.0001	-	-	-	0.001 mg/L	-
Terphenyl-d14	Surrogate	102%	-	-	-	-	-

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
EPA 1311 - TCLP Leachate Inorganics								
Fluoride	ND	0.05	mg/L					
Nitrate as N	ND	1	mg/L					
Nitrite as N	ND	1	mg/L					
Cyanide, free	ND	0.02	mg/L					
EPA 1311 - TCLP Leachate Metals								
Arsenic	ND	0.05	mg/L					
Barium	ND	0.05	mg/L					
Boron	ND	0.05	mg/L					
Cadmium	ND	0.01	mg/L					
Chromium	ND	0.05	mg/L					
Lead	ND	0.05	mg/L					
Mercury	ND	0.005	mg/L					
Selenium	ND	0.05	mg/L					
Silver	ND	0.05	mg/L					
Uranium	ND	0.05	mg/L					
EPA 1311 - TCLP Leachate Organics								
Benzo [a] pyrene	ND	0.0001	mg/L					
Surrogate: Terphenyl-d14	*0.028*		*%*	*112*	*40-150*			

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
EPA 1311 - TCLP Leachate Inorganics									
Fluoride	0.28	0.05	mg/L	0.28			0.4	20	
Nitrate as N	ND	1	mg/L	ND			NC	20	
Nitrite as N	ND	1	mg/L	ND			NC	20	
Cyanide, free	ND	0.02	mg/L	ND			NC	20	
EPA 1311 - TCLP Leachate Metals									
Arsenic	ND	0.05	mg/L	ND			NC	29	
Barium	0.269	0.05	mg/L	0.248			8.2	34	
Boron	ND	0.05	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	
Physical Characteristics									
% Solids	98.9	0.1	% by Wt.	98.6			0.3	25	

Method Quality Control: LCS Dup

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
EPA 1311 - TCLP Leachate Organics									
Benzo [a] pyrene	0.0278	0.0001	mg/L	ND	111	40-150	4.06	200	

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
EPA 1311 - TCLP Leachate Inorganics									
Fluoride	0.78	0.05	mg/L	0.28	100	70-130			
Nitrate as N	1	1	mg/L	ND	103	80-120			
Nitrite as N	1	1	mg/L	ND	103	80-120			
Cyanide, free	0.050	0.02	mg/L	ND	101	60-136			
EPA 1311 - TCLP Leachate Metals									
Arsenic	0.471	0.05	mg/L	ND	94.3	83-119			
Barium	0.678	0.05	mg/L	0.248	86.0	83-116			
Boron	0.547	0.05	mg/L	ND	109	71-128			
Cadmium	0.426	0.01	mg/L	ND	85.1	78-119			
Chromium	0.506	0.05	mg/L	ND	101	80-124			
Lead	0.413	0.05	mg/L	ND	82.6	77-126			
Mercury	0.0311	0.005	mg/L	ND	104	70-130			
Selenium	0.409	0.05	mg/L	ND	81.7	81-125			
Silver	0.423	0.05	mg/L	ND	84.6	70-128			
Uranium	0.471	0.05	mg/L	ND	94.3	70-131			
EPA 1311 - TCLP Leachate Organics									
Benzo [a] pyrene	0.0289	0.0001	mg/L	ND	116	40-150			
Surrogate: Terphenyl-d14	*0.024*		*%*		*95.1*	*40-150*			
EPA 1311 - TCLP Leachate Volatiles									
Benzene	0.333	0.005	mg/L	ND	95.8	60-130			
Carbon Tetrachloride	0.344	0.005	mg/L	ND	98.9	60-130			
Chlorobenzene	0.324	0.004	mg/L	ND	94.3	60-130			
Chloroform	0.367	0.006	mg/L	ND	107	60-130			
1,2-Dichlorobenzene	0.323	0.004	mg/L	ND	93.4	60-130			
1,4-Dichlorobenzene	0.325	0.004	mg/L	ND	93.5	60-130			
1,2-Dichloroethane	0.317	0.005	mg/L	ND	91.8	60-130			
1,1-Dichloroethylene	0.367	0.006	mg/L	ND	106	60-130			
Methyl Ethyl Ketone (2-Butanone)	0.716	0.30	mg/L	ND	83.2	50-140			
Methylene Chloride	0.342	0.04	mg/L	ND	99.4	60-130			
Tetrachloroethylene	0.351	0.005	mg/L	ND	101	60-130			

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Trichloroethylene	0.349	0.004	mg/L	ND	101	60-130			
Vinyl chloride	0.389	0.005	mg/L	ND	113	50-140			
Surrogate: 4-Bromofluorobenzene	*0.751*		*%*		*108*	*50-140*			
Surrogate: Dibromofluoromethane	*0.799*		*%*		*116*	*50-140*			
Surrogate: Toluene-d8	*0.659*		*%*		*95.1*	*50-140*			

Certificate of Analysis

Report Date: 14-Nov-2024

Client: **G2S Environmental Consulting Inc. (Burlington)**

Order Date: 11-Nov-2024

Client PO:

Project Description: 24376

Qualifier Notes:

Sample Qualifiers :

Sample Data Revisions:

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

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

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

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

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

PARACEL LABORATORIES LTD.

Paracel ID: 2446079

Paracel Order Number (Lab Use Only)	Chain Of Custody (Lab Use Only)
2446079	

Client Name: G2S Consulting Inc.	Project Ref: 24376	Page 1 of 1
Contact Name:	Quote #:	Turnaround Time
Address: 4361 Harvester Rd, Suite 12, Burlington, ON L7L 5M4	PO #:	☐ 1 day ☐ 3 day ☐ 2 day ☒ Regular
Telephone: 905-331-3735	E-mail: dylanb@g2sconsulting.com davids@g2sconsulting.com	Date Required:

☐ REG 153/04 ☐ REG 406/19

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

Other Regulation

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

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

	Sample ID/Location Name	Matrix	Air Volume	# of Containers	Sample Taken Date	Sample Taken Time	TCLP M&I	TCLP VOC		TCLP BaP	TCLP IGNITEAB.							
1	TCLP GS1	S		2	2024/11/07	PM	✔	✔		✔	✔							
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		

Comments:

Method of Delivery: Loom

Relinquished By (Sign):	Received By Driver/Depot:	Received at Lab: km	Verified By: km
Relinquished By (Print): D.BRICE	Date/Time:	Date/Time: 11/11/24 1454	Date/Time: 11/11/24 1526
Date/Time: 2024/11/11 1400	Temperature: °C	Temperature: 12.8	pH Verified: ☐ By: NA