



Soil Engineers Ltd.

CONSULTING ENGINEERS

GEOTECHNICAL • ENVIRONMENTAL • HYDROGEOLOGICAL • BUILDING SCIENCE

90 WEST BEAVER CREEK ROAD, SUITE 100, RICHMOND HILL, ONTARIO L4B 1E7 · TEL: (416) 754-8515 · FAX: (905) 881-8335

BARRIE
TEL: (705) 721-7863
FAX: (705) 721-7864

MISSISSAUGA
TEL: (905) 542-7605
FAX: (905) 542-2769

OSHAWA
TEL: (905) 440-2040
FAX: (905) 725-1315

NEWMARKET
TEL: (905) 853-0647
FAX: (905) 881-8335

MUSKOKA
TEL: (705) 684-4242
FAX: (705) 684-8522

HAMILTON
TEL: (905) 777-7956
FAX: (905) 542-2769

A REPORT TO

U & N ENTERPRISE LTD.

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT

PROPOSED OFFICE BUILDING

3650 EGLINTON AVENUE WEST

CITY OF MISSISSAUGA

Reference No. 2211-E177

May 26, 2023

DISTRIBUTION

3 Copies - U & N Enterprise Ltd.



LIMITATIONS OF LIABILITY

This report was prepared by Soil Engineers Ltd. for the account of U & N Enterprise Ltd. and for review by their designated agents, financial institutions and government agencies. Use of the report is subject to the conditions and limitation of the contractual agreement. The material in it reflects the judgement of Madan K. Suwal, PhD, EPt., Ram Sah, M.A.Sc., P.Eng. and Arshad Shaikh, M.Sc., P.Eng., QP_{ESA}, in light of the information available at the time of preparation. Any use which a Third Party makes of this report, and/or any reliance on decisions to be made based on it, is the responsibility of such Third Parties. Soil Engineers Ltd. accepts no responsibility for damages, if any, suffered by any Third Party as a result of decisions made or actions based on this report.

One must understand that the mandate of Soil Engineers Ltd. is to obtain readily available past and present information pertinent to the subject site and to analyze representative soil samples for a Phase Two Environmental Site Assessment only. No other warranty or representation, expressed or implied, as to the accuracy of the information is included or intended by this assessment. Site conditions, environmental or otherwise, are not static and this report documents site conditions observed at the time of the last sampling.

It should be noted that the information supplied in this report is not sufficient to obtain approval for disposal of excess soil or materials generated during construction.

**TABLE OF CONTENTS**

1.0	EXECUTIVE SUMMARY	1
2.0	INTRODUCTION	2
2.1	Site Description	2
2.2	Property Ownership	3
2.3	Current and Proposed Future Uses	3
2.4	Applicable Site Condition Standards	3
3.0	BACKGROUND	5
ii	HYPERLINK \l "_Toc135309724" 3.1	Physical Setting
3.2	Past Investigations	6
4.0	SCOPE OF THE INVESTIGATION	7
4.1	Overview of Site Investigation	7
4.2	Media Investigated	8
4.3	Phase One Conceptual Site Model	8
4.4	Deviations from Sampling and Analysis Plan	8
4.5	Impediments	8
□	HYPERLINK \l "_TOC135309732" 5.0	INVESTIGATION METHOD
5.1	General	9
5.2	Drilling and Excavating	9
5.3	Soil: Sampling	10
5.4	Field Screening Measurements	11
5.5	Groundwater: Monitoring Well Installation	12
5.6	Groundwater: Field Measurement of Water Quality Parameters	12
5.7	Groundwater: Sampling	12
5.8	Sediment: Sampling	12
5.9	Analytical Testing	12
5.10	Residue Management Procedures	12
5.11	Elevation Surveying	13
5.12	Quality Assurance/Quality Control (QA/QC) Measures	13
6.0	REVIEW AND EVALUATION	15
??	HYPERLINK \l "_Toc135309746" 6.1	Geology
6.2	Groundwater: Elevations and Flow Direction	16
6.3	Groundwater: Hydraulic Gradients	16
6.4	Fine-Medium Soil Texture	16
6.5	Soil: Field Screening	16
6.6	Soil Quality	17
6.7	Groundwater Quality	18
6.8	Sediment Quality	19
6.9	Quality Assurance and Quality Control (QA/QC) Results	19
6.9.1	Field Quality Assurance and Quality Control (QA/QC) Samples	19
6.9.2	Sample Handling in Accordance with the Analytical Protocol	20
⌘	HYPERLINK \l "_Toc135309757" 6.9.3	Certification of Results



6.9.4	Data Validation.....	21
6.9.5	Data Quality Objectives.....	21
6.10	Phase Two Conceptual Site Model	21
6.10.1	Description and Assessment.....	22
6.10.1.1	Areas where Potentially Contaminating Activity Has Occurred	22
6.10.1.2	Areas of Potential Environmental Concern	23
6.10.1.3	Subsurface Structures and Utilities.....	23
6.10.2	Physical Setting	23
6.10.2.1	Stratigraphy.....	23
6.10.2.2	Hydrogeological Characteristics	24
6.10.2.3	Approximate Depth to Bedrock	24
6.10.2.4	Approximate Depth to Water Table.....	24
6.10.2.5	Section 35 and Section 41 or 43.1 of the Regulation.....	25
6.10.2.6	Areas On, In or Under the Phase Two Property Where Excess Soil Is Finally Placed.....	25
6.10.2.7	Proposed Building and Other	
6.10.3	Contamination In or Under the Phase Two Property.....	26
6.10.3.1	Area Where Contaminants are Present	26
6.10.3.2	Distribution of Contaminants.....	27
6.10.3.3	Contaminant Medium	27
6.10.3.4	Reasons for Discharge	27
6.10.3.5	Migration of Contaminants	27
6.10.4	Potential Exposure Pathways and Receptors.....	27
7.0	CONCLUSIONS.....	28
8.0	REFERENCES.....	31



TABLES

Soil Data.....	Table I
Maximum Concentration (Soil).....	Table II

FIGURES

Site Location Plan.....	Drawing No. 1
Sampling Location Plan	Drawing No. 2
Cross-Section Key Plan.....	Drawing No. 3
Geological Cross-Sections.....	Drawing No. 4

APPENDICES

Sampling and Analysis Plan.....	Appendix 'A'
Borehole Logs.....	Appendix 'B'
Certificate of Analysis (Soil Samples).....	Appendix 'C'



1.0 **EXECUTIVE SUMMARY**

Soil Engineers Ltd. (SEL) was retained by U & N Enterprise Ltd. to carry out a Phase Two Environmental Site Assessment (Phase Two ESA), as defined by Ontario Regulation (O. Reg.) 153/04, as amended under Environmental Protection Act (EPA). The Phase Two ESA was conducted for a property located at 3650 Eglinton Avenue West, in the City of Mississauga, Ontario (hereinafter referred to as “the subject site”).

The purpose of the Phase Two ESA was to assess the soil quality at the subject site, as related to the Areas of Potential Environmental Concern (APECs) identified in SEL Phase One Environmental Site Assessment (Phase One ESA).

The Phase Two ESA field work was conducted at selected locations on the subject site. Soil samples were collected and submitted for chemical analyses. The analytical results of the soil samples were reviewed in accordance with the Ministry of the Environment, Conservation and Parks (MECP) Table 2, Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Industrial/ Commercial/ Community Property Use for coarse grain soil (Table 2 Standards), as published in the “Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act” (EPA), dated April 15, 2011.

A review of the analytical test results of soil samples indicates the tested parameters at the test locations meet the Table 2 Standards. Consequently, there are no contaminants identified at the subject site at a concentration above the applicable site condition standards (Table 2 Standards) during the Phase Two ESA.

Based on the findings of the Phase Two ESA, it is our opinion that the property is suitable for the proposed office building. No further environmental investigation is recommended at this time.



2.0 **INTRODUCTION**

Soil Engineers Ltd. (SEL) was retained by U & N Enterprise Ltd. to carry out a Phase Two Environmental Site Assessment (Phase Two ESA), as defined by Ontario Regulation (O. Reg.) 153/04, as amended by O. Regs. 366/05, 66/08, 511/09, 245/10, 179/11, 269/11 and 333/13, herein referred to as O. Reg. 153/04, as amended under Environmental Protection Act (EPA). The Phase Two ESA was conducted for a property located at 3650 Eglinton Avenue West, in the City of Mississauga, Ontario (hereinafter referred to as “subject site”).

The purpose of the Phase Two ESA was to assess the soil quality at the subject site, as related to the potential environmental concerns identified in SEL Phase One Environmental Site Assessment (Phase One ESA) for the subject site.

2.1 **Site Description**

The subject site, rectangular in shape, encompassing an approximate area of 0.4505 hectares (ha) (1.113 acres (ac)). The Phase Two Property is located at 3650 Eglinton Avenue West, in the City of Mississauga. The subject site is comprised of two (2) Property Identification Numbers (PINs), 13404-0615 (LT) and 13404-0618 (LT). The legal descriptions of the subject site from the parcel registers are “PT LOT 2, REGISTRAR'S COMPILED PLAN 1542 TORONTO, PART 2, 43R25632; MISSISSAUGA” and “PT LOT 1, RCP 1542, DES PART 3, 43R25632; MISSISSAUGA”.

At the time of the assessment, the subject site is comprised of a building being used for commercial purpose, parking and vacant areas. The neighbouring properties consist mainly of commercial properties south, east, and southwest, residential properties to the west and wooded areas to the north/northwest of the subject site.

The ground surface at the subject site is relatively flat.



2.2 **Property Ownership**

This Phase Two ESA was commissioned to address any potential environmental concerns associated with the proposed office building, as authorized by Mr. Gurpreet Paul, U & N Enterprise Ltd. Our client can be contacted at:

U & N Enterprise Ltd.
5371 Churchill Meadows Boulevard
Mississauga, ON
L5M 7Y1

Attention: Mr. Gurpreet Paul, Director

2.3 **Current and Proposed Future Uses**

The subject site is currently being used for commercial purpose. An office building is being proposed for the subject site. It is anticipated that the new development will be provided with municipal services meeting urban standards.

2.4 **Applicable Site Condition Standards**

SEL has selected the applicable regulatory standard from O. Reg. 153/04, as amended, under the Environmental Protection Act (EPA), to assess the analytical data from the submitted soil samples. The following information was used to select the appropriate standard:

- The subject site is not considered to be environmentally sensitive based on the definition set forth in Ontario Regulation 153/04 as amended, as the property is not within/adjacent/part of an area of natural significance and the analytical testing indicated the pH of the tested surface soil sample is between 5 and 9 and subsurface soil sample is between 5 and 11.
- The property is not a shallow soil property, as the bedrock was not encountered within 2.0 metres (m) below ground surface (mbgs) during the investigation.



- No watercourse or water bodies are located at or within 30 metres (m) from the subject site.
- Based on the information obtained from the Phase One ESA, there are records of water wells at the subject site and within the Phase One Study Area.
- Full depth generic site condition standards is to be used in this assessment.
- The intended property use of the subject site is commercial.
- No grain size analysis was performed during this Phase Two ESA, therefore, the, coarse textured soil standards has been applied.

Based on the above information, the Ministry of the Environment, Conservation and Parks (MECP) Table 2, Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Industrial/ Commercial/ Community Property Use for coarse grain soil (Table 2 Standards), as published in the “Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act” (EPA), dated April 15, 2011 has been selected for evaluating the environmental conditions at the subject site.



3.0 **BACKGROUND**

3.1 **Physical Setting**

Based on the information obtained from the SEL Phase One ESA, the general physical setting of the subject site is summarized below:

The subject site is located within commercial and residential area within the City of Mississauga. The neighbouring properties consist mainly of commercial properties south, east, and southwest, residential properties to the west and wooded areas to the north/northwest of the subject site.

According to the Surface Geology Map of the subject site area, the subject site is underlain by Halton Till with material documented as predominantly silt to silty clay matrix, high in matrix carbonate content and clast poor. The Bedrock Geology Map shows the subject site is on Queenston Formation. The rock description was documented as shale, limestone, dolostone, siltstone. According to the Bedrock Topography Series, depth to bedrock in general vicinity of the subject site is approximately 18 meters below ground surface (mbgs).

The subject site is adjacent to a roadway (i.e. Eglinton Avenue West) to the north/northwest. The overall grade of the subject site generally descends to the easterly direction. A watershed map obtained from the Land Information Ontario (LIO), December 2022, shows that the subject site is located within the Sixteen Mile Creek – Credit River Watershed.

Based on the review of the Ontario Ministry of the Natural Resources and Forestry (OMNRF) and the LIO for listings of various classes of natural areas within the vicinity of the subject site, there is no Area of Natural Significance located at the subject site or within 30 m from the subject site boundaries. It shows that wooded areas are located to the north/northwest of the subject site.



3.2 **Past Investigations**

The following previous investigation report was reviewed as part of this Phase Two ESA:

- Phase One Environmental Site Assessment (Phase One ESA), Proposed Office Building, 3650 Eglinton Avenue West, City of Mississauga, SEL Reference No. 2211-E177, dated January 19, 2023.

The SEL Phase One ESA identified Potentially Contaminating Activities (PCAs) at the subject site and in the Phase One Study Area that may contribute to Areas of Potential Environmental Concerns (APECs) at the subject site, based on records review, interviews and site reconnaissance. Additionally, during the Phase Two ESA investigation, fill material was encountered at two (2) of the boreholes advanced in the eastern and southeastern portions of the subject site. Based on this information, the APEC 2 for corresponding PCA (#30) is extended to the majority of the subject site.

The findings of the SEL Phase One ESA and this Phase Two ESA revealed the following APECs:

- APEC 1: Potential soil impact due to possible use of pesticides during historical agricultural activities including orchard at the southwest portion of the subject site.
- APEC 2: Potential soil impact due to presence of earth fill material of unknown quality at majority of the subject site.
- APEC 3: Potential soil impact due to presence of above ground oil storage tank (AST) at basement of the building at the subject site.

The locations of the PCAs and APECs are shown on Drawing Nos. 1 and 2, respectively.



4.0 **SCOPE OF THE INVESTIGATION**

4.1 **Overview of Site Investigation**

The purpose of this investigation (Phase Two ESA) is to assess the soil quality at the subject site, as related to the potential environmental concern raised in the findings of the Phase One ESA. This Phase Two ESA was conducted in general conformance with the CSA Standard Z769-00 (R2018) and O. Reg. 153/04, as amended.

The scope of work for this investigation includes:

- Locate the underground and overhead utilities.
- Advance eight (8) boreholes (designated as BH1 to BH8) to a maximum depth of 4.6 meters below ground surface (mbgs).
- Collect representative soil samples from the sampling locations.
- Undertake field examination of the retrieved soil samples for visual and olfactory evidence of potential contamination.
- Undertake soil vapour measurements for the retrieved soil samples using a combustible gas detector (RKI Eagle) in methane elimination mode.
- Carry out an analytical testing program on selected soil samples including quality assurance and quality control (QA/QC) samples for one or more of the following parameters: Petroleum Hydrocarbons (PHCs), Benzene, Toluene, Ethylbenzene, Xylenes (BTEX), Volatile Organic Compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs), Metals, Arsenic (As), Antimony (Sb), Selenium (Se), Mercury (Hg), Chromium Hexavalent (Cr (VI)), Cyanides (CN⁻), Boron Hot Water Soluble (B-HWS), Electrical Conductivity (EC), Sodium Adsorption Ratio (SAR) and pH parameters.
- Review analytical testing results of submitted soil samples using applicable Site Condition Standards.
- Prepare a Phase Two ESA report presenting the findings of the investigation.



The rationale for the selection of sampling locations is presented in the Sampling and Analysis Plan in Appendix 'A'.

4.2 **Media Investigated**

Based on the findings of the Phase One ESA, only soil medium was investigated during the Phase Two ESA in accordance with the Sampling and Analysis Plan provided in Appendix 'A'. Groundwater and sediment was not identified as potentially contaminated media in the Phase One ESA. Consequently, no groundwater and sediment investigation was conducted as a part of this Phase Two ESA.

Boreholes were advanced using direct push with Shelby Tubes and split spoon, and soil samples were retrieved continuously. Soil samples were logged in the field and headspace vapour screening was conducted for all retrieved soil samples using a combustible gas detector (RKI Eagle) in methane elimination mode, calibrated with hexane and having a minimum detection level of 2 parts per million by volume (ppmv).

4.3 **Phase One Conceptual Site Model**

A plan, illustrating the features of the subject site and surrounding areas within 250 m from the subject site boundaries including the locations of PCAs, is presented in Drawing No. 1 and APECs are presented on Drawing No. 2.

4.4 **Deviations from Sampling and Analysis Plan**

No deviations from the sampling and analysis plan were encountered.

4.5 **Impediments**

No impediments were encountered during the investigation for the Phase Two ESA.



5.0 **INVESTIGATION METHOD**

5.1 **General**

The Phase Two ESA was carried out in accordance with the Sampling and Analysis Plan provided in Appendix 'A' and in accordance with the SEL Standard Operating Procedures (SOPs).

The investigation of the Phase Two ESA consisted of advancing eight (8) boreholes, field screening measurements, and collection of soil samples from the soil sampling locations for chemical analyses. The soil samples were assessed for the potential contamination with respect to the APECs identified in the SEL Phase One ESA.

The sampling and decontamination procedures were conducted in accordance with the "Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario", May 1996, revised December 1996, as amended by O. Reg. 511/09.

Laboratory analytical methods, protocols and procedures were carried out in accordance with the "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, in accordance with O. Reg. 511/09 and O. Reg. 269/11.

5.2 **Drilling and Excavating**

Prior to the field work, the underground and overhead utilities were located and marked out by the representatives of the major utility companies as per Ontario One Call Program and a private locator (All Clear Locates Inc.).

The field work for the Phase Two ESA was conducted on May 5, 2023. Eight (8) boreholes (designated as BH1 to BH8) were drilled up to a maximum depth of 4.6 mbgs by Kodiak Drilling, MECP approved licensed drillers. The locations of the boreholes are shown in



Drawing No. 2.

Boreholes were advanced with Pionjar equipped with split spoon sampler and direct push method (GeoProbe 6620) with Shelby Tubes, supplied by a specialist drilling contractor named Kodiak Drilling. Soil samples retrieved from boreholes were recovered continuously for soil vapour measurement, soil classification and visual and olfactory observations for potential contamination.

Drilling and sampling equipment such as drill rigs, drill pipes, drilling rods, split-spoons and spade were decontaminated prior to initial use, between borehole locations and at the completion of drilling activities. The drilling equipment was manually scrubbed with a brush using a phosphate-free solution, and power washed to remove any adhered soils, foreign material and potential contaminants. In addition, all sampling equipment were decontaminated prior to each usage.

The field work was monitored by SEL environmental personnel who recorded the findings and observations.

5.3 **Soil: Sampling**

Soil samples from the boreholes were retrieved at regular intervals, using split spoon or shelly tubes. Prior to recovering a sample, the sampling equipment was brushed clean using a solution of phosphate-free detergent and distilled water, and each discrete sample was handled by the sampler with new disposable gloves in order to avoid any risk of cross-contamination between the samples. Each soil sample was split with part of the sample sealed in a laboratory-prepared sampling media and stored in a cooler with ice, and the remainder of the sample sealed in a double sealable bag for vapour measurement and soil classification. A small amount of the soil sample was retrieved by a disposable 'T' shaped Terracore sampler and the soil samples from the Terracore sampler were stored in methanol vials for PHC Fraction F1 and VOCs analyses.



The subsoil conditions at the borehole locations indicated that beneath the layer of concrete or topsoil followed by earth fill material, the subject site is generally underlain by sandy silt till or silty clay till at various depths and borehole locations. No bedrock was encountered during the Phase Two ESA. Detailed descriptions of the encountered subsurface conditions are presented on the Borehole Logs provided in Appendix 'B'.

Generally the representative 'worst case' soil samples from each borehole to determine the maximum concentrations were selected and sent to the laboratory for chemical analyses, based on the soil vapour measurements and visual and olfactory observations. However, in absence of any evidence of elevated vapor or contamination/unusual observation, the soil samples were selected according to the contaminant of concerns (COCs) behavior (i.e. near the potential source for metals and PAHs, at the zone of water bearing for PHCs, and below the water table for VOCs).

5.4 **Field Screening Measurements**

The headspace vapour concentrations were measured using a portable RKI Eagle gas detector, TYPE 101 (Serial Number: E091011) set to include combustible gases with the exception of methane (methane elimination mode), and having a minimum detection level of 2 ppmv. Prior to taking the measurements, the instrument was calibrated to hexane standards for both ppm and lower explosive limit (LEL) according to the instruction manual for the instrument. Our field personnel are trained by the supplier for the proper calibration procedure. The instrument is calibrated or tuned up by the supplier (Pine Environmental Services Inc.), seasonally.

The results of the soil vapour measurement are presented in the Borehole Logs attached in Appendix 'B'.

It is to be noted that that the soil vapour measurements alongside with the visual and olfactory observations and contaminant of concerns (COCs) behavior were used to select the representative 'worst case' soil samples from each sampling location for chemical analyses.



5.5 **Groundwater: Monitoring Well Installation**

Groundwater was not assessed as part of this investigation.

5.6 **Groundwater: Field Measurement of Water Quality Parameters**

Groundwater was not assessed as part of this investigation.

5.7 **Groundwater: Sampling**

Groundwater was not assessed as part of this investigation.

5.8 **Sediment: Sampling**

Sediment was not assessed as part of this investigation.

5.9 **Analytical Testing**

The soil samples were analysed by Bureau Veritas Laboratories (BV Labs) in Mississauga, Ontario. BV Labs are accredited by the Canadian Association for Laboratory Accreditation (CALA) in accordance with ISO/IEC 17025:2005, as amended – “General Requirements for the Competence of Testing and Calibration Laboratories” for all the parameters analysed during this investigation.

5.10 **Residue Management Procedures**

There was no significant volume of excess soil generated during the field investigation. Consequently, there was no residue management procedure required as part of this Phase Two ESA.



5.11 **Elevation Surveying**

The ground elevations of the borehole locations were surveyed using a hand-held (Trimble Geoexplorer 7000 series) Global Navigation Satellite System measurement equipment. The equipment is capable of having vertical and horizontal accuracy of $0.1 \pm \text{m}$.

The elevations at the borehole locations are presented in Borehole Logs in Appendix 'B'.

5.12 **Quality Assurance/Quality Control (QA/QC) Measures**

The Soil Sampling and Analysis Plan provided in Appendix 'A' was prepared and executed based on the findings of the Phase One ESA.

The Phase Two ESA was carried out in accordance with the Sampling and Analysis Plan and in accordance with the SEL Standard Operating Procedures.

The sampling and decontamination procedures were conducted in accordance with the "Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario", May 1996, revised December 1996, as amended by O. Reg. 511/09.

Laboratory analytical methods, protocols and procedures were carried out in accordance with the "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, in accordance with O. Reg. 511/09 and O. Reg. 269/11.

Field observations were made and documented in a field book in accordance with generally accepted practices and with the procedures developed and utilized by SEL.

SEL field sampling QA/QC protocols, applied to the investigation, are as follows:

- The collection of at least one field duplicate sample per ten (10) samples for every



sampling medium (where three or more such samples are collected).

- Where volatile organic chemical analysis is required, the collection of discrete samples directly into laboratory-prepared sample vials and immediate placement into a cooler with ice to maintain the temperature at less than 10 °C for transport to the laboratory.
- If trace organics in the collected samples are anticipated (organic chemicals with a concentration of less than 1 µg/g), precautions are made to avoid any possible cross-contamination (eliminating bare hand or latex glove contacts with the soil); soil sampling equipment used for the collection of trace organics are cleaned using a phosphate-free detergent and water, followed by a distilled water rinse and a methanol rinse between sampling locations.

The results of the QA/QC samples (i.e. field duplicate samples) are discussed in Section 6.9 of this report.



6.0 **REVIEW AND EVALUATION**

6.1 **Geology**

Detailed descriptions of the encountered subsoil conditions are presented on the Borehole Logs provided in Appendix 'B'. The subsoil conditions at the borehole locations indicate indicated that beneath the layer of concrete or topsoil followed by earth fill material, the subject site is generally underlain by sandy silt till or silty clay till at various depths and locations. No bedrock was encountered during the Phase Two ESA. The location of cross sections for soil stratigraphy at the subject site is presented on Drawing No. 3. Geological Cross Sections, A-A' and B-B' are presented on Drawing No. 4.

The descriptions of the strata, encountered at the borehole locations, are briefly discussed below.

Concrete

A layer of concrete, approximately 0.08 m in thickness, was encountered at borehole location BH1.

Topsoil

A layer of topsoil, approximately 0.20 m in thickness, was encountered at all borehole
A layer of topsoil, approximately 0.20 m in thickness, was encountered at all borehole locations except at BH1 location.

Earth Fill

Earth fill material encountered underneath topsoil to the depth of 1.5 to 2.7 mbgs at BH2 to BH8 borehole locations.

**Silty Clay Till**

Deposit of silty clay till were encountered at borehole locations BH1, BH7 and BH8 from 0.1 mbgs, 1.5 mbgs and 1.5 mbgs to the termination depths of 1.5 mbgs, 3.8 mbgs and 3.8 mbgs, respectively.

Sandy Silt Till

Sandy silt till deposits were encountered at borehole locations BH2 to BH6 ranging from 1.5 to 2.7 mbgs to the termination depth of 3.8 to 4.6 mbgs.

Hydrogeology

On completion of the drilling activities, no groundwater was detected in any of the boreholes carried out at the subject site.

6.2 Groundwater: Elevations and Flow Direction

Groundwater was not assessed as part of this investigation.

6.3 Groundwater: Hydraulic Gradients

Groundwater was not assessed as part of this investigation.

6.4 Fine-Medium Soil Texture

No grain size analysis was performed as part of this investigation.

6.5 Soil: Field Screening

Headspace vapour screening was conducted for all retrieved soil samples using a combustible



gas detector (RKI Eagle) in methane elimination mode, calibrated with hexane and having a minimum detection level of 2 ppmv.

Non detectable to 80 ppm soil vapour readings were recorded for the collected soil samples.

6.6 Soil Quality

A representative “worst case” soil sample from each sampling location was selected based on the soil vapour measurements and visual and olfactory observations. The selected soil samples were submitted to the laboratory for chemical analyses of PHCs, BTEX, VOCs, PAHs, OCs, Metals, As, Sb, Se, Cr (VI), Hg, B-HWS, CN⁻, EC, SAR and pH parameters.

The soil test results were reviewed using the MECP Table 2, Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Industrial/ Commercial/ Community Property Use for coarse grain soil (Table 2 Standards), as published in the “Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act” (EPA), dated April 15, 2011.

Soil quality data containing results of the chemical analyses for the tested soil samples are presented in Table I. Maximum concentrations of the tested parameters in soil are presented in Table II.

A copy of the Certificate of Analysis for the soil samples is presented in Appendix ‘C’. The findings of the soil sampling results are summarized below.

Metals As, Sb, Se, Hg, Cr (VI), B-HWS, CN⁻ and pH

Eleven (11) original soil samples and one (1) field duplicate sample were submitted for analyses of Metals, As, Sb, Se, Hg, Cr (VI), B-HWS, CN⁻, EC, SAR and/or pH parameters. The test results indicate that the tested parameters in the soil samples at tested locations met the Table 2 Standards.

**Organochlorine Pesticides (OCs)**

Seven (7) original soil samples and one (1) field duplicate soil sample were submitted for analyses of OCs. The test results indicated that the tested parameters in the soil samples at tested locations met the Table 2 Standards.

Volatile Organic Compounds (VOCs)

Six (6) original soil samples were submitted for analyses of VOCs. The test results indicated that the tested parameters in the soils at the tested locations met the Table 2 Standards.

Petroleum Hydrocarbons (PHCs) and/or Benzene, Toluene, Ethylbenzene, Xylene (BTEX)

Eight (8) original soil samples and two (2) field duplicate samples were submitted for analyses of PHCs and/or BTEX. The test results indicated that the tested parameters in the soil samples at tested locations met the Table 2 Standards.

Polycyclic Aromatic Hydrocarbons (PAHs)

Six (6) original soil samples and one (1) field duplicate sample were submitted for analyses of PAHs. The test results indicate that the tested parameters in the soils at tested locations met the Table 2 Standards.

6.7 Groundwater Quality

Groundwater was not assessed as part of this investigation.



6.8 Sediment Quality

Sediment was not assessed as part of this investigation.

6.9 Quality Assurance and Quality Control (QA/QC) Results

The Phase Two ESA was carried out in accordance with the Sampling and Analysis Plan and in accordance with the SEL SOPs.

The sampling and decontamination procedures were conducted in accordance with the “Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario”, May 1996, revised December 1996, as amended by O. Reg. 511/09.

Laboratory analytical methods, protocols and procedures were carried out in accordance with the “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, in accordance with O. Reg. 511/09 and O. Reg. 269/11 (herein referred to as Analytical Protocol).

6.9.1 **Field Quality Assurance and Quality Control (QA/QC) Samples**

As part of the QA/QC program for the Phase Two ESA, QC samples in the form of field duplicate samples were analysed. Field duplicate samples were collected in the field for the analyses of Metals, OCs, PHCs, BTEX and PAHs in soil.

Field Duplicate

Five (5) field duplicate soil samples were collected and submitted for chemical analysis. Details of the duplicate sampling and analyses are presented in the table below:



Duplicate Sample ID	Original Sample ID	Media	Test Conducted
DUPS1	BH4/3	Soil	Metals
DUPS2	BH6/2	Soil	PAHs
DUPS3	BH5/2	Soil	PHCs and BTEX
DUPS4	BH7/3A	Soil	OCs
DUPS5	BH8/2	Soil	PHCs and BTEX

The results of the analyses of the field duplicate samples are similar to the results for the original samples or within acceptable limits of relative percentage differences (RPDs). However, the relative percent differences (RPDs) could not be calculated between the original and duplicate samples in the situation where the original and/or duplicate samples were below the reported laboratory detection limits.

The Certificates of Analysis for the QA/QC samples are included in Appendices ‘C’.

6.9.2 Sample Handling in Accordance with the Analytical Protocol

The samples analyzed as part of the Phase Two ESA were handled in accordance with the Analytical Protocol as per O. Reg. 153/04 with respect to holding time, preservation method, storage requirement and sample container type.

6.9.3 Certification of Results

Based on the review of the QA/QC sample results for the soil samples in this investigation, the Chain of Custody forms and the laboratory Certificate of Analysis, it is certified that:

- All Certificates of Analysis or Analytical Reports received pursuant to Section 47(2) of O. Reg. 153/04, as amended, comply with Section 47(3) of O. Reg. 153/04, as amended.
- A Certificate of Analysis or Analytical Report was received for each sample submitted for analysis.
- Copies of all Certificates of Analysis are included in Appendix ‘C’.



6.9.4 Data Validation

The Analytical Protocol establishes acceptance limits for use when assessing the reliability of data reported by analytical laboratories, including maximum holding times for the storage of samples/sample extracts between collection and analysis, analytical methods, field and/or laboratory quality assurance samples, recovery ranges for spiked samples and surrogates, Reporting Detection Limits (RDLs), mandatory maximum method detection limits and precision required when analyzing laboratory replicate and spiked samples.

The review of the data in the Certificate of Analysis indicates:

- All samples/sample extracts were analyzed within their applicable holding times using approved analytical methods.
- No tested parameters were detected in any laboratory blank samples.
- The RDLs were met for all tested parameters.
- The results of the laboratory duplicate samples are similar to the results for the original samples and relative percent differences for the detectable tested parameters are within the acceptable range.

6.9.5 Data Quality Objectives

In conclusion, the overall quality of field data did not affect decision making and the overall objectives of the investigation were met.

6.10 Phase Two Conceptual Site Model

The Phase Two Conceptual Site Model was prepared based on the findings of the Phase One Environmental Site Assessment (Phase One ESA) and this Phase Two Environmental Site Assessment (Phase Two ESA).



6.10.1 Description and Assessment

The subject site, rectangular in shape, encompassing an approximate area of 0.4505 hectares (ha) (1.113 acres (ac)). The Phase Two Property is located at 3650 Eglinton Avenue West, in the City of Mississauga. The subject site is comprised of two (2) Property Identification Numbers (PINs), 13404-0615 (LT) and 13404-0618 (LT). The legal description of the subject site from the parcel registers are “PT LOT 2, REGISTRAR'S COMPILED PLAN 1542 TORONTO, PART 2, 43R25632; MISSISSAUGA” and “PT LOT 1, RCP 1542, DES PART 3, 43R25632; MISSISSAUGA”.

6.10.1.1 Areas where Potentially Contaminating Activity Has Occurred

Potentially Contaminating Activities (PCAs) were identified at the subject site and the Phase One Study Area, based on the records review, the interview and the site reconnaissance. The locations of PCAs along with the corresponding list in Table 2 Schedule D of O. Reg. 153/04 are summarized below:

On-Site PCAs

- Possible use of pesticides during historical agricultural activities including orchard farming at majority of the subject site. #40 – Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications.
- Presence of earth fill material at majority of the subject site. #30 – Importation of Fill Materials of Unknown Quality
- One (1) heating oil AST is located at the basement of the building at the subject site. #28 – Gasoline and Associated Products Storage in Fixed Tanks

The on-site PCAs were considered to have contributed to the Areas of Potential Environmental Concerns (APECs) at the subject site.



The locations of the PCAs are shown on Drawing No. 1.

6.10.1.2 Areas of Potential Environmental Concern

The following Areas of Potential Environmental Concern (APECs) were identified at the subject site.

APEC 1: Potential soil impact due to possible use of pesticides during historical agricultural activities including orchard at the southwest portion of the subject site.

APEC 2: Potential soil impact due to presence of earth fill material of unknown quality at majority of the subject site.

APEC 3: Potential soil impact due to presence of above ground oil storage tank (AST) at basement of the building at the subject site.

The locations of the APECs are shown on Drawing No. 2.

6.10.1.3 Subsurface Structures and Utilities

At the time of the assessment, the subject site comprised of a building, parking and vacant areas. Since no contaminants were identified at the subject site at a concentration above the applicable Site Condition Standard, no subsurface structures or utilities with the potential to affect contaminants distribution or transport are identified at the subject site.

6.10.2 **Physical Setting**

6.10.2.1 Stratigraphy

According to the Surface Geology Map of the subject site area, the subject site is underlain by Halton Till with material documented as predominantly silt to silty clay matrix, high in matrix carbonate content and clast poor. The Bedrock Geology Map shows the subject site is on



Queenston Formation. The rock description was documented as shale, limestone, dolostone, siltstone

The field investigation for the Phase Two ESA consisted of advancing eight (8) boreholes (designated BH1 to BH8) to a maximum depth of 4.6 mbgs. The subsoil conditions at the borehole locations indicated that beneath the layer of concrete or topsoil followed by fill materials, the subject site is generally underlain by sandy silt till, silty clay till at various depths and locations. No bedrock was encountered during the Phase Two ESA.

The Sampling Location Plan is shown in Drawing No. 2. The locations of cross-sections for soil stratigraphy at the subject site are presented in Drawing No. 3. Geological Cross-sections A-A' and B-B' are presented in Drawing No. 4.

6.10.2.2 Hydrogeological Characteristics

The subject site is located in a larger hydrogeological region known as the Southern Ontario Lowlands. A Watershed Map provided by the Land Information Ontario (LIO), shows the subject site is located within the Sixteen Mile Creek – Credit River Watershed.

The ground surface is relatively flat, and the grade of the subject site generally descends towards the easterly direction.

6.10.2.3 Approximate Depth to Bedrock

Bedrock was not encountered at the subject site during the field investigation within the maximum drilling depth of 4.6 mbgs. According to the Bedrock Topography Series, depth to bedrock in general vicinity of the subject site is approximately 18 mbgs.

6.10.2.4 Approximate Depth to Water Table

Groundwater was not investigated as part of the Phase Two ESA.



6.10.2.5 Section 35 and Section 41 or 43.1 of the Regulation

Based on the records review, water wells are documented at the subject site and for properties within 250 m from the subject site boundaries. Therefore, Section 35 of the Regulation (Non-Potable Site Condition Standards) does not apply to the subject site.

The subject site is not within/adjacent/part of an area of natural significance and the analytical testing indicated that pH of the tested surface soil samples was between 5 and 9 and subsurface soil samples are between 5 and 11. Section 41 of the regulation (Site Condition Standards, Environmental Sensitive Areas) does not apply to the subject site.

The property is not a shallow soil property, as the bedrock was not encountered within 2.0 mbgs during the investigation. In addition, there is no water body at the subject site or within 30 m from the subject site boundaries. Therefore, Section 43.1 of the O. Reg. 153/04 (Site Condition Standards, Shallow Soil Property or Water Body) does not apply to the subject site.

6.10.2.6 Areas On, In or Under the Phase Two Property Where Excess Soil Is Finally Placed

The findings of our Phase One ESA and during the Phase Two ESA revealed the presence of earth fill material at the subject site. This fill materials were investigated during the Phase Two ESA. No soil was brought at the subject site during the Phase Two ESA.

6.10.2.7 Proposed Building and Other Structures

An office building is being proposed for the subject site. The locations of proposed structures were not known at the time of preparation of this Phase Two Conceptual Site Model.



6.10.3 Contamination In or Under the Phase Two Property

Based on the findings of the Phase One ESA, contaminants of potential concern (COPC) in soil with respect to the identified APECs at the subject site were assessed during the Phase Two ESA.

Based on the information obtained from the Phase One ESA and Phase Two ESA, the Ministry of the Environment, Conservation and Parks (MECP) Table 2, Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Industrial/ Commercial/ Community Property Use for coarse grain soil (Table 2 Standards), as published in the “Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act” (EPA), dated April 15, 2011, was selected for evaluating the environmental condition at the subject site.

6.10.3.1 Area Where Contaminants are Present

Soil samples were collected during the Phase Two ESA and submitted for chemical analyses of the following parameters:

APEC 1: Soil samples were submitted for chemical analyses of OCs, Metals, Hg, Cr (VI), As, Se, Sb, B-HWS, CN^- and pH parameters.

APEC 2: Soil samples were submitted for chemical analyses of PHCs, BTEX, VOCs, PAHs, Metals, As, Sb, Se, Hg, Cr(VI), B-HWS, CN^- , EC, SAR and pH parameters.

APEC 3: Soil samples were submitted for chemical analyses of PHCs, BTEX, Metals parameters.

A review of the analytical test results of soil samples indicated that the tested samples for the tested parameters at tested locations met the Table 2 Standards.

Consequently, there are no contaminants identified at the test locations at a concentration



above the applicable site condition standards (Table 2 Standards) during the Phase Two ESA.

6.10.3.2 Distribution of Contaminants

No contaminants are identified at the subject site at a concentration above applicable site condition standards.

6.10.3.3 Contaminant Medium

No contaminants are identified at the subject site at a concentration above applicable site condition standards.

6.10.3.4 Reasons for Discharge

No contaminants are identified at the subject site at a concentration above applicable site condition standards.

6.10.3.5 Migration of Contaminants

No contaminants are identified at the subject site at a concentration above applicable site condition standards.

6.10.4 Potential Exposure Pathways and Receptors

Since no contaminants are identified at the subject site at a concentration above the applicable site condition standard (Table 2 Standards), no potential exposure pathways and receptors are identified.



7.0 CONCLUSIONS

The purpose of the Phase Two Environmental Site Assessment (Phase Two ESA) was to assess the soil quality at the subject site, as related to the following Areas of Potential Environmental Concerns (APECs) identified in SEL Phase One Environmental Site Assessment (Phase One ESA):

APEC 1: Potential soil impact due to possible use of pesticides during historical agricultural activities including orchard at the southwest portion of the subject site.

APEC 2: Potential soil impact due to presence of earth fill material of unknown quality at majority of the subject site.

APEC 3: Potential soil impact due to presence of above ground oil storage tank (AST) at basement of the building at the subject site.

The findings of the field investigation and analytical results of the Phase Two ESA summarized below:

- The field investigation for this Phase Two ESA consisted of advancing eight (8) boreholes (designated as BH1 to BH8) to a maximum depth 4.6 mbgs.
- The subsoil conditions at the borehole locations indicated that beneath the layer of concrete or topsoil followed by earth fill material, the subject site is generally underlain by sandy silt till or silty clay till at various depths and locations.
- The soil samples were examined for visual and olfactory evidence of potential contamination. No evidence of potential contamination was documented in any of the retrieved soil samples.
- Headspace vapour screening was conducted for all retrieved soil samples using a combustible gas detector (RKI Eagle) in methane elimination mode, calibrated with hexane and having a minimum detection level of 2 parts per million by volume (ppmv). Non detectable to 80 ppm soil vapour readings were recorded for the collected soil samples.



- Based on the soil vapour measurements and visual and/or olfactory observations, representative “worst case” soil samples were selected from each sampling location for chemical analyses of Petroleum Hydrocarbons (PHCs), Benzene, Toluene, Ethylbenzene, Xylene (BTEX), Volatile Organic Compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs), Organochlorine Pesticides (OCs), Metals, Arsenic (As), Antimony (Sb), Selenium (Se), Mercury (Hg), Chromium Hexavalent (Cr (VI)), Cyanides (CN⁻), Boron Hot Water Soluble (B-HWS), Electrical Conductivity (EC), Sodium Adsorption Ratio (SAR) and pH parameters.
- As part of the quality assurance/quality control (QA/QC) program for the investigation, QC samples in the form of field duplicate samples were analysed. Field duplicate samples were collected in the field for the analyses of PHCs, BTEX, PAHs, OCs and Metals in soil.
- The analytical test results were reviewed using the Table 2, Full Depth Generic Site Condition Standards in a Potable Ground Water Condition for Industrial/ Commercial/ Community Property Use for coarse grain soil (Table 2 Standards), as published in the “Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act” (EPA), dated April 15, 2011.
- The results of the analysis of the duplicate samples are in general similar to the results for the original samples or within acceptable limits of relative percentage differences (RPDs). However, the relative percentage differences (RPDs) could not be calculated between the original and duplicate samples in the situation where the original and/or duplicate samples were below the reported laboratory detection limit.
- The overall QA/QC results are considered reliable.
- A review of the analytical test results of soil samples indicated that the tested parameters at the test locations met the Table 2 Standards. Consequently, there are no contaminants identified at the subject site at a concentration above the applicable site condition standards (Table 2 Standards) during the Phase Two ESA



Based on the findings of the Phase Two ESA, it is our opinion that the property is suitable for the proposed office building. No further environmental investigation is recommended at this time.

SOIL ENGINEERS LTD.

Madan K. Suwal, PhD, EPt.

Arshad Shaikh, M.Sc., P.Eng., QP_{ESA}

MKS/RS/AS: mks



Ram Sah, M.A.Sc., P.Eng.



8.0 **REFERENCES**

MECP. “Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario”, May 1996, revised December 1996, as amended by O. Reg. 511/09.

MECP. “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, in accordance with O. Reg. 511/09 and O. Reg. 269/11.

MECP. “Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act” (EPA), April 15, 2011.



Soil Engineers Ltd.

CONSULTING ENGINEERS

GEOTECHNICAL • ENVIRONMENTAL • HYDROGEOLOGICAL • BUILDING SCIENCE

90 WEST BEAVER CREEK ROAD, SUITE 100, RICHMOND HILL, ONTARIO L4B 1E7 • TEL: (416) 754-8515 • FAX: (905) 881-8335

BARRIE
TEL: (705) 721-7863
FAX: (705) 721-7864

MISSISSAUGA
TEL: (905) 542-7605
FAX: (905) 542-2769

OSHAWA
TEL: (905) 440-2040
FAX: (905) 725-1315

NEWMARKET
TEL: (905) 853-0647
FAX: (905) 881-8335

MUSKOKA
TEL: (705) 684-4242
FAX: (705) 684-8522

HAMILTON
TEL: (905) 777-7956
FAX: (905) 542-2769

TABLES

Reference No. 2211-E177



Project No. 2212-E177

Page 1 of 5

Sample ID	RDL*	BH1/1	BH2/2	BH2/4B	BH3/1B	BH4/3	DUPSI	BH5/1A	BH6/2	BH7/2	BH7/3A	BH8/1B	BH8/3A	Ontario Regulation 153/04 Table 2 ICC Standard**
Sample Date		5-May-2023	5-May-2023	5-May-2023	5-May-2023	5-May-2023	5-May-2023	5-May-2023	5-May-2023	5-May-2023	5-May-2023	5-May-2023	5-May-2023	
Laboratory ID		VSU064	VSU066	VSU065	VSU070	VSU076	VSU081	VSU077	VSU084	VTC701	VSU085	VTC703	VSU086	
Bore Hole/TP No.		BH1	BH2	BH2	BH3	BH4	BH4	BH5	BH6	BH7	BH7	BH8	BH8	
Depth (mbgs)		0.1 - 0.8	0.8 - 1.5	2.7 - 3.0	0.2 - 0.8	1.5 - 2.3	1.5 - 2.3	0.0 - 0.2	0.8 - 1.5	0.8 - 1.5	1.5 - 1.9	0.2 - 0.8	1.5 - 1.9	
Antimony	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.25	<0.20	<0.20	<0.20	<0.20	<0.20	40
Arsenic	1	4.1	4.1	4.7	4.1	3.4	4.4	6	4.4	4.3	4.3	3.5	4.4	18
Barium	0.5	50	60	67	68	75	69	52	52	64	62	67	61	670
Beryllium	0.2	0.47	0.54	0.56	0.68	0.55	0.58	0.65	0.57	0.52	0.56	0.6	0.59	8
Boron (Hot Water Soluble)	0.05	-	0.11	0.15	-	0.14	-	0.46	0.21	0.18	0.13	0.058	0.062	2
Cadmium	0.1	0.11	0.12	<0.10	0.2	0.1	<0.10	0.15	0.1	<0.10	<0.10	0.14	<0.10	1.9
Chromium	1	16	17	17	23	18	19	20	17	17	18	19	19	160
Chromium VI	0.18	-	<0.18	<0.18	<0.18	<0.18	-	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	8
Cobalt	0.1	11	10	15	9.4	10	12	9.9	9.8	11	12	10	12	80
Copper	0.5	26	24	28	24	24	25	24	29	26	28	22	27	230
Lead	1	8.1	8.9	10	17	8.8	10	20	10	8.3	9.6	9.2	8.8	120
Mercury	0.05	<0.050	<0.050	<0.050	0.052	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	3.9
Molybdenum	0.5	0.51	<0.50	0.59	1.3	<0.50	<0.50	0.62	<0.50	<0.50	<0.50	<0.50	<0.50	40
Nickel	0.5	22	20	26	20	21	25	21	21	22	24	23	24	270
Selenium	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	5.5
Silver	0.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	40
Thallium	0.05	0.13	0.14	0.16	0.13	0.13	0.14	0.11	0.12	0.13	0.13	0.13	0.15	3.3
Vanadium	5	24	24	24	27	24	25	27	25	24	26	26	26	86
Zinc	5	48	52	58	78	50	55	77	49	52	54	50	55	340
pH (pH Units)	-	7.76	7.65	7.87	-	7.77	-	7.36	7.7	7.74	-	7.71	-	-
Conductivity (ns/cm)	0.002	-	0.3	-	-	-	-	-	-	0.15	-	0.14	-	1.4
Sodium Adsorption Ratio	-	-	0.64	-	-	-	-	-	-	0.58	-	0.28	-	12
Cyanide, Free	0.01	-	<0.01	<0.01	-	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.051
Boron (Total)	5	5.7	6	7.8	6.6	7.6	7.8	7.6	6.2	5.7	7.4	6.2	7.4	120
Uranium	0.05	0.47	-	0.58	0.78	0.81	0.64	0.59	0.76	0.48	0.56	0.53	0.66	33

Analysis by BV Labs, all results in ppm (µg/g) unless otherwise stated

* Analytical Reportable Detection Limits (RDLs) are shown except as indicated in brackets.

** Standards shown are for Full Depth Generic Site Condition Standards in a Potable Ground Water Condition Industrial/Community Property Use for coarse grain soil



* Analytical Reportable Detection Limits (RDLs) are shown except as indicated in brackets.



SOIL CHEMICAL ANALYSIS - Volatile Organic Compound (VOCs) Parameters

Project No. 2212-E177

Page 3 of 5

Sample ID	RDL*	BH2/1B	BH3/3	BH4/1A	BH5/3	BH7/1B	BH8/2	Ontario Regulation 153/04 Table 2 ICC Standard**
Sample Date		5-May-2023	5-May-2023	5-May-2023	5-May-2023	5-May-2023	5-May-2023	
Laboratory ID		VS0068	VS0072	VS0074	VS0079	VTC700	VTC702	
Bore Hole No.		BH2	BH3	BH4	BH5	BH7	BH8	
Depth (mbs)		0.2 - 0.8	1.5 - 2.3	0.0 - 0.2	1.5 - 2.3	0.2 - 0.8	0.8 - 1.5	
Acetone	0.49	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49	16
Benzene	0.006	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	<0.0060	0.32
Bromodichloromethane	0.04	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	1.5
Bromoforn	0.04	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	0.61
Bromomethane	0.04	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	0.05
Carbon Tetrachloride	0.04	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	0.21
Chlorobenzene	0.04	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	2.4
Chloroform	0.04	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	0.47
Dibromochloromethane	0.04	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	2.3
1,2-Dichlorobenzene	0.04	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	1.2
1,3-Dichlorobenzene	0.04	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	9.6
1,4-Dichlorobenzene	0.04	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	0.2
1,1-Dichloroethane	0.04	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	0.47
1,2-Dichloroethane	0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	0.05
1,1-Dichloroethylene	0.04	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	0.064
Cis-1,2-Dichloroethylene	0.04	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	1.9
Trans-1,2-Dichloroethylene	0.04	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	1.3
1,2-Dichloropropane	0.04	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	0.16
Cis-1,3-Dichloropropylene	0.03	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	NV
Trans-1,3-Dichloropropylene	0.04	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	NV
Ethylbenzene	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	1.1
Ethylene Dibromide	0.04	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	0.05
Methyl Ethyl Ketone	0.4	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	70
Methylene Chloride	0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	1.6
Methyl Isobutyl Ketone	0.4	<0.40	<0.40	<0.40	<0.40	<0.40	<0.40	31
Methyl-t-Butyl Ether	0.04	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	1.6
Styrene	0.04	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	34
1,1,1,2-Tetrachloromethane	0.04	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	0.087
1,1,2,2-Tetrachloroethane	0.04	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	0.05
Toluene	0.02	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	6.4
Tetrachloroethylene	0.04	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	1.9
1,1,1,1-tetrachloroethane	0.04	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	6.1
1,1,2,2-Tetrachloroethane	0.04	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	0.05
Trichloroethylene	0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.55
Vinyl Chloride	0.019	<0.019	<0.019	<0.019	<0.019	<0.019	<0.019	0.032
m-Xylene & p-Xylene	0.02	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	NV
o-Xylene	0.02	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	NV
Total Xylenes	0.02	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	26
Dichlorodifluoromethane	0.04	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	16
Hexane(n)	0.04	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	46
Trichlorofluoromethane	0.04	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	4
1,3-Dichloropropene (cis + trans)	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.059

Analysis by BV Labs, all results in ppm (µg/g) unless otherwise stated

* Analytical Reportable Detection Limits (RDLs) are shown except as indicated in brackets.

** Standards shown are for Full Depth Generic Site Condition Standards in a Potable Ground Water Condition Industrial/Commercial/Community Property Use for coarse grain soil



Soil Engineers Ltd.

Sample ID	BH1/1	BH2/1B	BH3/3	BH4/1A	BH5/2	DUPS3	BH6/1B	BH7/1B	BH8/2	DUPS5
Sample Date	5-May-2023	5-May-2023	5-May-2023	5-May-2023	5-May-2023	5-May-2023	5-May-2023	5-May-2023	5-May-2023	5-May-2023
Laboratory ID	VSU064	VSU068	VSU072	VSU074	VSU078	VSU083	VSU080	VTC700	VTC702	VTC704
Bore Hole No.	BH1	BH2	BH3	BH4	BH5	BH5	BH6	BH7	BH8	BH8
Depth (mbsg)	0.1 - 0.8	0.2 - 0.8	1.5 - 2.3	0.0 - 0.2	0.8 - 1.5	0.8 - 1.5	0.2 - 0.8	0.2 - 0.8	0.8 - 1.5	0.8 - 1.5
Benzene	0.02	<0.020	-	-	<0.020	<0.020	<0.020	-	-	<0.020
Toluene	0.02	<0.020	-	-	<0.020	<0.020	<0.020	-	-	<0.020
Ethylbenzene	0.02	<0.020	-	-	<0.020	<0.020	<0.020	-	-	<0.020
m/p xylenes	0.04	<0.040	-	-	<0.040	<0.040	<0.040	-	-	<0.040
o xylene	0.02	<0.020	-	-	<0.020	<0.020	<0.020	-	-	<0.020
Total Xylenes	0.04	<0.040	-	-	<0.040	<0.040	<0.040	-	-	<0.040
F1 (C6-C10)	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
F1 (C6-C10) - BTEX	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
F2 (C10-C16)	10	<10	<10	<10	<10	<10	<10	<10	<10	<10
F3 (C16-C34)	50	<50	<50	<50	<50	<50	<50	<50	<50	<50
F4 (C34-C50)	50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Reached Baseline at C50	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

Analysis by BV Labs, all results in ppm (µg/L) unless otherwise stated

* Analytical Reportable Detection Limits (RDLs) are shown except as indicated in brackets.

** Standards shown are for Full Depth Generic Site Condition Standards in a Potable Ground Water Condition Industrial/Commercial/Community Property Use for coarse grain soil

Analysis by BV Labs, all results in ppm (µg/g) unless otherwise stated

* Analytical Reportable Detection Limits (RDLs) are shown except as indicated in brackets.

*** Standards shown are for Full Depth Generic Site Condition Standards in a Potable Ground Water Condition Industrial/Commercial/Community Property Use for coarse grain soil



Soil Engineers Ltd.

SOIL CHEMICAL ANALYSIS - Polycyclic Aromatic Hydrocarbons (PAHs) Parameters

Table 1

Project No. 2212-E177

Page 5 of 5

Sample ID	Sample Date	Laboratory ID	Bore Hole No.	Depth (mbsg)	RDL*	BH2/3	BH3/2	BH4/1B	BH6/2	DUPS2	BH7/2	BH8/1B	Ontario Regulation 153/04 Table 2 ICC Standard**
						5-May-2023	5-May-2023	5-May-2023	5-May-2023	5-May-2023	5-May-2023	5-May-2023	
						VSY067	VSY071	VSY075	VSY089	VSY082	VTC701	VTC703	
						BH2	BH3	BH4	BH6	BH6	BH7	BH8	
						1.5 - 2.3	0.8 - 1.5	0.2 - 0.8	0.8 - 1.5	0.8 - 1.5	0.8 - 1.5	0.2 - 0.8	
Acenaphthene					0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	21
Acenaphthylene					0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.15
Anthracene					0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.67
Benzo(a)anthracene					0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.96
Benzo(a)pyrene					0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.3
Benzo(b,j)fluoranthene					0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.96
Benzo(ghi)perylene					0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	9.6
Benzo(k)fluoranthene					0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.96
Chrysene					0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	9.6
Dibenzo(a,h)anthracene					0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.1
Fluoranthene					0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	9.6
Fluorene					0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	62
Indeno(1,2,3-cd)pyrene					0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	0.76
1-Methylnaphthalene					0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	30
2-Methylnaphthalene					0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	30
Naphthalene					0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	9.6
Phenanthrene					0.005	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	12
Pyrene					0.005	<0.0050	0.0064	<0.0050	<0.0050	0.0054	<0.0050	<0.0050	96
Methylnaphthalene, 2-(1-)					0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	<0.0071	30

Analysis by BV Labs, all results in ppm (µg/g) unless otherwise stated

* Analytical Reportable Detection Limits (RDLs) are shown except as indicated in brackets.

** Standards shown are for Full Depth Generic Site Condition Standards in a Potable Ground Water Condition Industrial/Commercial/Community Property Use for coarse grain soil

Project No. 2212-E177

Table II – Maximum Concentration (Soil)
Summary of Metals and Inorganics

Parameter	Unit	Maximum Concentration	Sample ID	Sampling Depth (m)
Antimony	ug/g	0.25	BH5/1A	0.0 - 0.2
Arsenic	ug/g	6	BH5/1A	0.0 - 0.2
Barium	ug/g	75	BH4/3	1.5 - 2.3
Beryllium	ug/g	0.68	BH3/1B	0.2 - 0.8
Boron (Hot Water Soluble)	ug/g	0.46	BH5/1A	0.0 - 0.2
Cadmium	ug/g	0.2	BH3/1B	0.2 - 0.8
Chromium	ug/g	23	BH3/1B	0.2 - 0.8
Chromium VI	ug/g	<0.18	-	-
Cobalt	ug/g	15	BH2/4B	2.7 - 3.0
Copper	ug/g	29	BH6/2	0.8 - 1.5
Lead	ug/g	20	BH5/1A	0.0 - 0.2
Mercury	ug/g	0.052	BH3/1B	0.2 - 0.8
Molybdenum	ug/g	1.3	BH3/1B	0.2 - 0.8
Nickel	ug/g	26	BH2/4B	2.7 - 3.0
Selenium	ug/g	<0.5	-	-
Silver	ug/g	<0.2	-	-
Thallium	ug/g	0.16	BH2/4B	2.7 - 3.0
Vanadium	ug/g	27	BH3/1B	0.2 - 0.8
Zinc	ug/g	78	BH3/1B	0.2 - 0.8
pH (pH Units)	-	7.87	BH2/4B	2.7 - 3.0
Conductivity (ms/cm)	mS/cm	0.3	BH2/2	0.8 - 1.5
Sodium Adsorption Ratio	-	0.64	BH2/2	0.8 - 1.5
Cyanide, Free	ug/g	<0.01	-	-
Boron (Total)	ug/g	7.8	BH2/4B	2.7 - 3.0
Uranium	ug/g	0.81	BH4/3	1.5 - 2.3

Project No. 2212-E177

Table II – Maximum Concentration (Soil)
Summary of VOCs

Parameter	Unit	Maximum Concentration	Sample ID	Sampling Depth (m)
Acetone	ug/g	<0.49	-	-
Benzene	ug/g	<0.006	-	-
Bromodichloromethane	ug/g	<0.04	-	-
Bromoform	ug/g	<0.04	-	-
Bromomethane	ug/g	<0.04	-	-
Carbon Tetrachloride	ug/g	<0.04	-	-
Chlorobenzene	ug/g	<0.04	-	-
Chloroform	ug/g	<0.04	-	-
Dibromochloromethane	ug/g	<0.04	-	-
1,2-Dichlorobenzene	ug/g	<0.04	-	-
1,3-Dichlorobenzene	ug/g	<0.04	-	-
1,4-Dichlorobenzene	ug/g	<0.04	-	-
1,1,1-Dichloroethane	ug/g	<0.04	-	-
1,2-Dichloroethane	ug/g	<0.049	-	-
1,1-Dichloroethylene	ug/g	<0.04	-	-
Cis-1,2-Dichloroethylene	ug/g	<0.04	-	-
Trans-1,2-Dichloroethylene	ug/g	<0.04	-	-
1,2-Dichloropropane	ug/g	<0.04	-	-
Cis-1,3-Dichloropropylene	ug/g	<0.03	-	-
Trans-1,3-Dichloropropylene	ug/g	<0.04	-	-
Ethylbenzene	ug/g	<0.01	-	-
Ethylene Dibromide	ug/g	<0.04	-	-
Methyl Ethyl Ketone	ug/g	<0.4	-	-
Methylene Chloride	ug/g	<0.049	-	-
Methyl Isobutyl Ketone	ug/g	<0.4	-	-
Methyl-t-Butyl Ether	ug/g	<0.04	-	-
Styrene	ug/g	<0.04	-	-
1,1,1,2-Tetrachloroethane	ug/g	<0.04	-	-

Project No. 2212-E177

Table II – Maximum Concentration (Soil)
Summary of VOCs (continued)

Parameter	Unit	Maximum Concentration	Sample ID	Sampling Depth (m)
1,1,2,2-Tetrachloroethane	ug/g	<0.04	-	-
Toluene	ug/g	<0.02	-	-
Tetrachloroethylene	ug/g	<0.04	-	-
1,1,1-Trichloroethane	ug/g	<0.04	-	-
1,1,2-Trichloroethane	ug/g	<0.04	-	-
Trichloroethylene	ug/g	<0.01	-	-
Vinyl Chloride	ug/g	<0.019	-	-
m-Xylene & p-Xylene	ug/g	<0.02	-	-
o-Xylene	ug/g	<0.02	-	-
Total Xylenes	ug/g	<0.02	-	-
Dichlorodifluoromethane	ug/g	<0.04	-	-
Hexane(n)	ug/g	<0.04	-	-
Trichlorofluoromethane	ug/g	<0.04	-	-
1,3-Dichloropropene (cis + trans)	ug/g	<0.05	-	-

Project No. 2212-E177

Table II – Maximum Concentration (Soil)
Summary of CCME F1-F4

Parameter	Unit	Maximum Concentration	Sample ID	Sampling Depth (m)
Benzene	ug/g	<0.02	-	-
Toluene	ug/g	<0.02	-	-
Ethylbenzene	ug/g	<0.02	-	-
m/p xylenes	ug/g	<0.04	-	-
o xylene	ug/g	<0.02	-	-
Total Xylenes	ug/g	<0.04	-	-
F1 (C6-C10)	ug/g	<10	-	-
F1 (C6-C10) - BTEX	ug/g	<10	-	-
F2 (C10-C16)	ug/g	<10	-	-
F3 (C16-C34)	ug/g	<50	-	-
F4 (C34-C50)	ug/g	<50	-	-

Project No. 2212-E177

Table II – Maximum Concentration (Soil)
Summary of PAHs

Parameter	Unit	Maximum Concentration	Sample ID	Sampling Depth (m)
Acenaphthene	ug/g	<0.005	-	-
Acenaphthylene	ug/g	<0.005	-	-
Anthracene	ug/g	<0.005	-	-
Benzo(a)anthracene	ug/g	<0.005	-	-
Benzo(a)pyrene	ug/g	<0.005	-	-
Benzo(b/j)fluoranthene	ug/g	<0.005	-	-
Benzo(ghi)perylene	ug/g	<0.005	-	-
Benzo(k)fluoranthene	ug/g	<0.005	-	-
Chrysene	ug/g	<0.005	-	-
Dibenzo(a,h)anthracene	ug/g	<0.005	-	-
Fluoranthene	ug/g	<0.005	-	-
Fluorene	ug/g	<0.005	-	-
Indeno(1,2,3-cd)pyrene	ug/g	<0.005	-	-
1-Methylnaphthalene	ug/g	<0.005	-	-
2-Methylnaphthalene	ug/g	<0.005	-	-
Naphthalene	ug/g	<0.005	-	-
Phenanthrene	ug/g	<0.005	-	-
Pyrene	ug/g	0.0064	BH3/2	0.8 - 1.5
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	-	-



Soil Engineers Ltd.

CONSULTING ENGINEERS

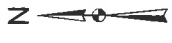
GEOTECHNICAL • ENVIRONMENTAL • HYDROGEOLOGICAL • BUILDING SCIENCE

90 WEST BEAVER CREEK ROAD, SUITE 100, RICHMOND HILL, ONTARIO L4B 1E7 • TEL: (416) 754-8515 • FAX: (905) 881-8335

BARRIE	MISSISSAUGA	OSHAWA	NEWMARKET	MUSKOKA	HAMILTON
TEL: (705) 721-7863	TEL: (905) 542-7605	TEL: (905) 440-2040	TEL: (905) 853-0647	TEL: (705) 684-4242	TEL: (905) 777-7956
FAX: (705) 721-7864	FAX: (905) 542-2769	FAX: (905) 725-1315	FAX: (905) 881-8335	FAX: (705) 684-8522	FAX: (905) 542-2769

FIGURES

Reference No. 2211-E177



- Subject Site
- Phase One Study Area
- Waterbody
- Major Road
- Local Road

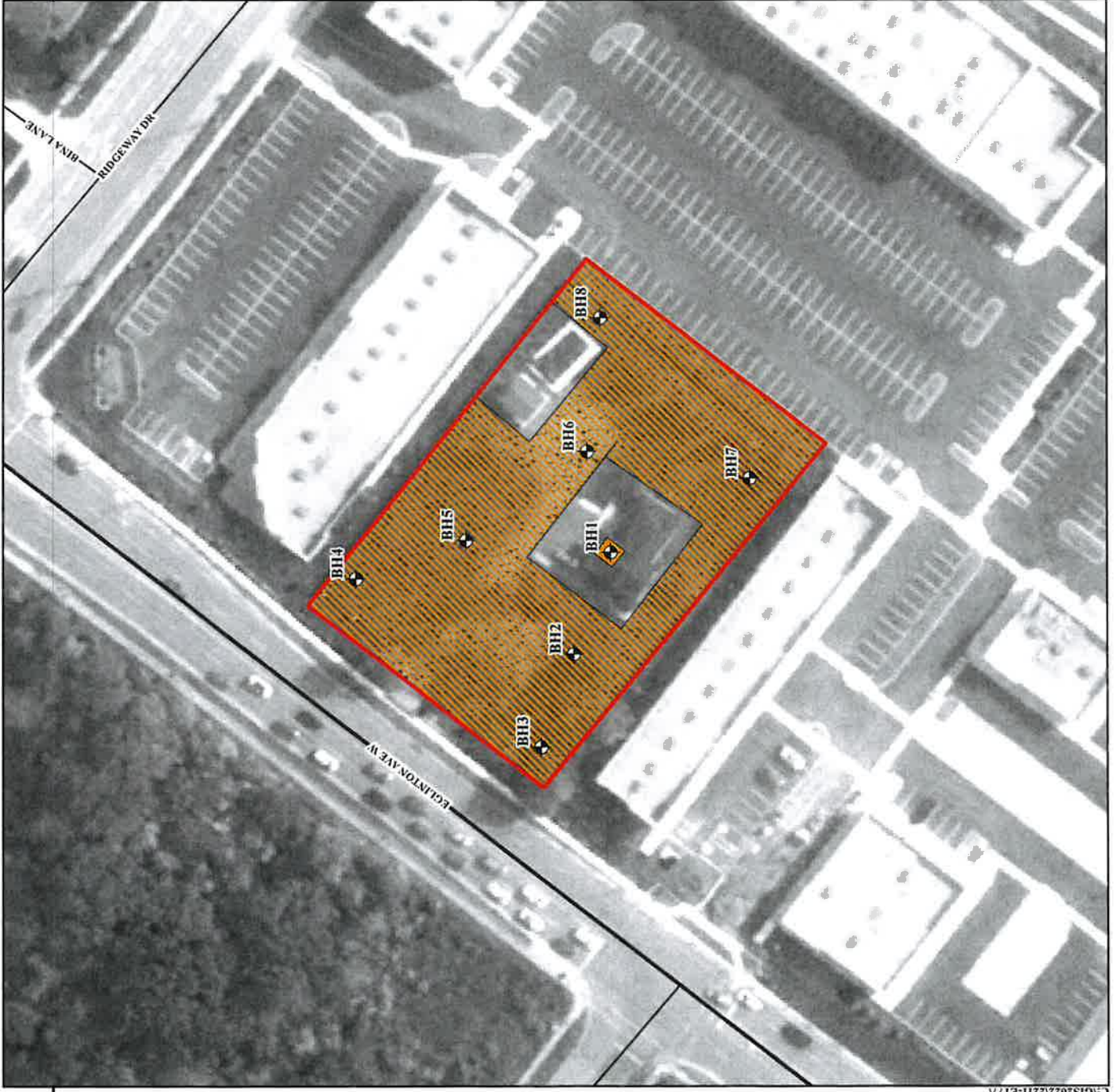
Potentially Contaminating Activities (PCAs)

- Gasoline and Associated Products Storage in Fixed Tanks
- Importation of Fill Material of Unknown Quality
- Pesticides (including Herbicides, Fungicides, and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage, and Large-Scale Applications



Soil Engineers Ltd.

Title: Site Location Plan
Project: Proposed Office Building 3650 Eglinton Avenue West City of Mississauga
Reference No. 2211-E177
Date: May 15, 2023
Scale: 0 15 30 60 90 120 150 Metres
Drawing No. 1



4821500

4821500

C:\GIS\2022\2211-E177



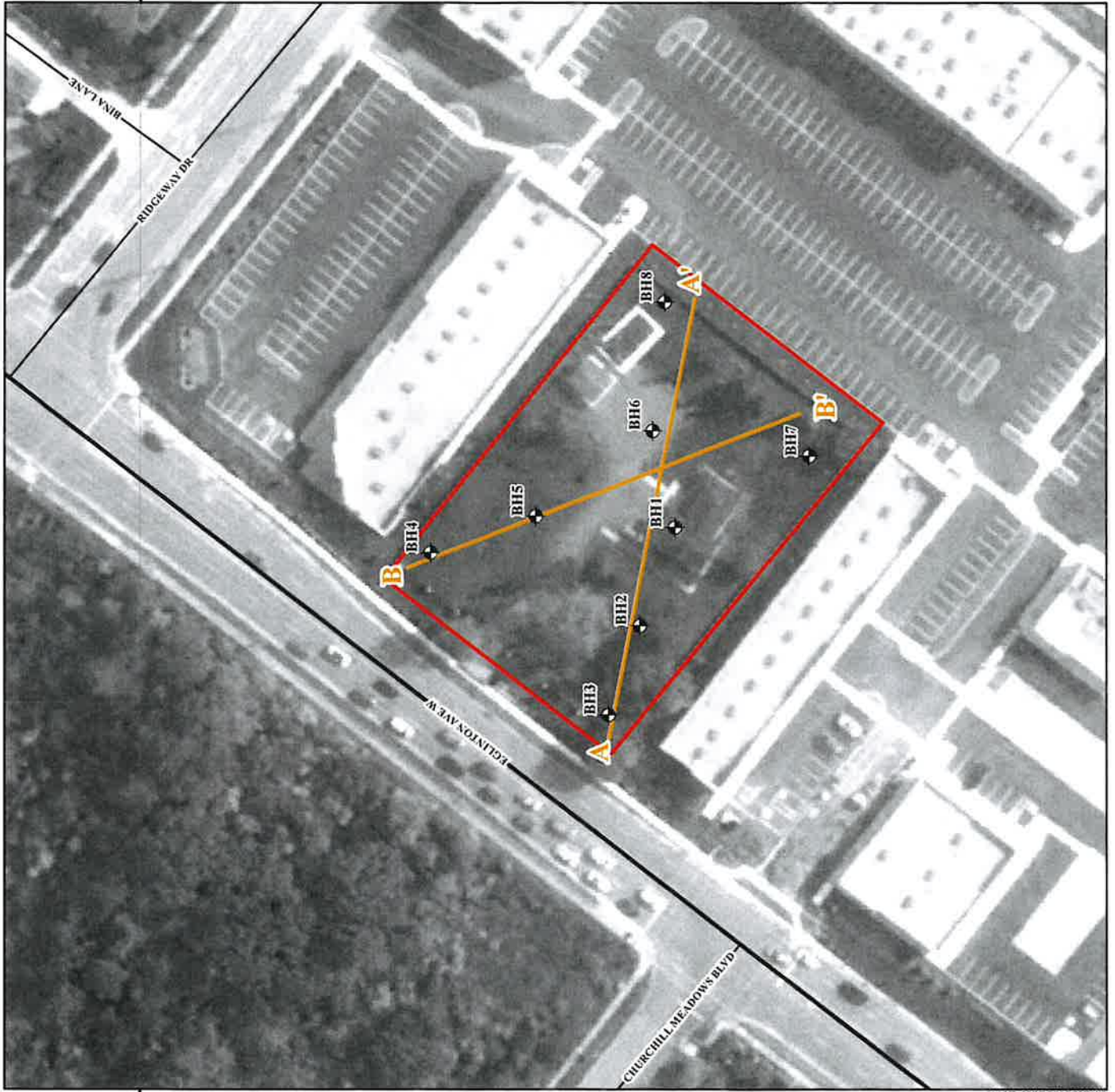
- Subject Site
- Borehole
- Major Road
- Local Road

Areas of Potential Environmental Concern (APEC)

- APEC 1
- APEC 2
- APEC 3



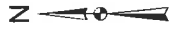
Title: Sampling Location Plan
Project: Proposed Office Building 3650 Eglinton Avenue West City of Mississauga
Reference No. 2211-E177
Date: May 15, 2023
Scale: 0 5 10 20 30 40 50 Metres
Drawing No. 2



4821500

4821500

C:\GIS\2022\2211-E177

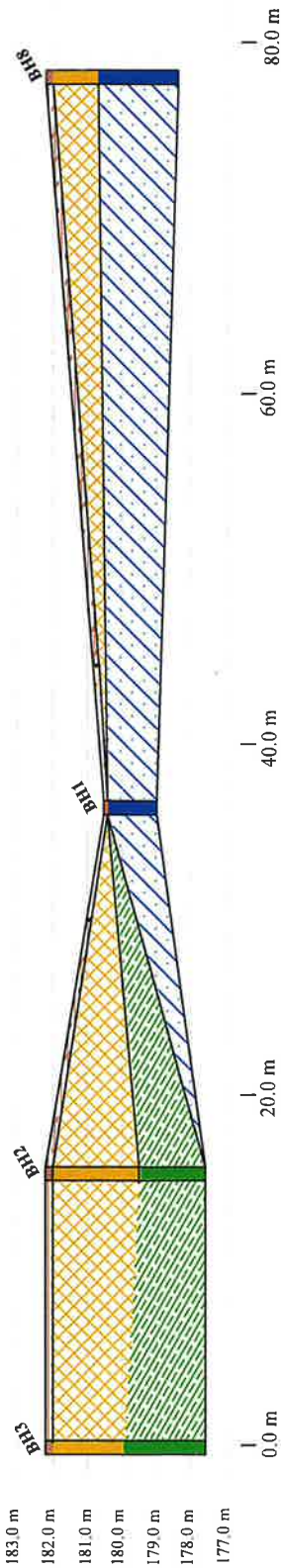


- Subject Site
- Borehole
- Major Road
- Local Road
- Cross-Section Direction



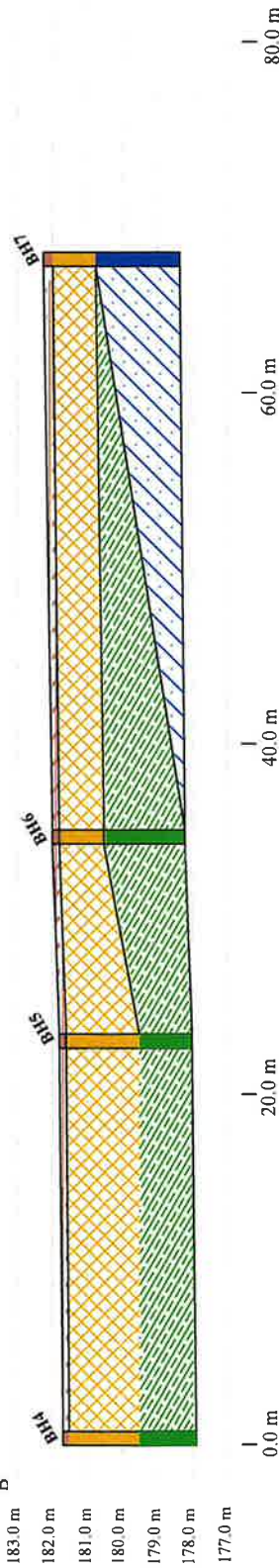
Title: Cross-Section Key Plan
Project: Proposed Office Building 3650 Eglinton Avenue West City of Mississauga
Reference No. 2211-E177
Date: May 15, 2023
Scale: 0 5 10 20 30 40 50 Metres
Drawing No. 3

East
A'



SECTION A-A'

South
B'



SECTION B-B'

West
A

Elevation (masl)
183.0 m
182.0 m
181.0 m
180.0 m
179.0 m
178.0 m
177.0 m

North
B

Elevation (masl)
183.0 m
182.0 m
181.0 m
180.0 m
179.0 m
178.0 m
177.0 m



Soil Engineers Ltd.
CONSULTING SOIL, FOUNDATION & ENVIRONMENTAL ENGINEERS

Title:

Geological Cross-Sections A-A' and B-B'

Project:

Proposed Office Building
3650 Eglinton Avenue West
City of Mississauga

Reference No:

2211-E177

Date:

May 5, 2023

Scale: V

1:200

Scale: H

1:200

Drawing No.

4

Concrete



Silty Clay, Till



Topsoil



Sandy Silt, Till



Earth Fill





Soil Engineers Ltd.

CONSULTING ENGINEERS

GEOTECHNICAL • ENVIRONMENTAL • HYDROGEOLOGICAL • BUILDING SCIENCE

90 WEST BEAVER CREEK ROAD, SUITE 100, RICHMOND HILL, ONTARIO L4B 1E7 · TEL: (416) 754-8515 · FAX: (905) 881-8335

BARRIE
TEL: (705) 721-7863
FAX: (705) 721-7864

MISSISSAUGA
TEL: (905) 542-7605
FAX: (905) 542-2769

OSHAWA
TEL: (905) 440-2040
FAX: (905) 725-1315

NEWMARKET
TEL: (905) 853-0647
FAX: (905) 881-8335

MUSKOKA
TEL: (705) 684-4242
FAX: (705) 684-8522

HAMILTON
TEL: (905) 777-7956
FAX: (905) 542-2769

APPENDIX 'A'

SAMPLING AND ANALYSIS PLAN

Reference No. 2211-E177



This Sampling and Analysis Plan is prepared for the Phase Two Environmental Site Assessment (Phase Two ESA), as defined by Ontario Regulation (O. Reg.) 153/04, as amended. The Phase Two ESA was conducted for a property located at 3650 Eglinton Avenue West, in the City of Mississauga, Ontario (hereinafter referred to as the 'subject site'). The Sampling and Analysis Plan is based on the findings of SEL Phase One Environmental Site Assessment (Phase One ESA).

1) **OBJECTIVE**

The objective of the Phase Two ESA is to assess the soil quality at the subject site, as related to the following Areas of Potential Environmental Concerns (APECs) identified at the subject site:

APEC 1: Potential soil impact due to possible use of pesticides during historical agricultural activities including orchard at the southwest portion of the subject site.

APEC 2: Potential soil impact due to presence of earth fill material of unknown quality at majority of the subject site.

APEC 3: Potential soil impact due to presence of above ground oil storage tank (AST) at basement of the building at the subject site.

2) **SCOPE OF WORK**

The scope of work for the Phase Two ESA includes:

- Locate the underground and overhead utilities.
- Advance eight (8) boreholes (designated as BH1 to BH8) to a maximum depth of 4.6 meters below ground surface (mbgs).
- Collect representative soil samples from the sampling locations.
- Undertake field examination of the retrieved soil samples for visual and olfactory evidence of potential contamination.
- Undertake soil vapour measurements for the retrieved soil samples using a



combustible gas detector (RKI Eagle) in methane elimination mode.

- Carry out an analytical testing program on selected soil samples including quality assurance and quality control (QA/QC) samples for one or more of the following parameters: Petroleum Hydrocarbons (PHCs), Benzene, Toluene, Ethylbenzene, Xylenes (BTEX), Volatile Organic Compounds (VOCs), Polycyclic Aromatic Hydrocarbons (PAHs), Metals, Arsenic (As), Antimony (Sb), Selenium (Se), Mercury (Hg), Chromium Hexavalent (Cr (VI)), Cyanides (CN⁻), Boron Hot Water Soluble (B-HWS), Electrical Conductivity (EC), Sodium Adsorption Ratio (SAR) and pH parameters.
- Review analytical testing results of submitted soil samples using applicable Site Condition Standards.
- Prepare a Phase Two ESA report presenting the findings of the investigation.

3) **RATIONALE FOR BOREHOLE LOCATIONS**

The rationale for the selection of the borehole locations is presented in the table below:

Areas of Potential Environmental Concerns (APECs)	Borehole / Monitoring Well ID.
APEC 1: Potential soil impact due to possible use of pesticides during historical agricultural activities including orchard at the southwest portion of the subject site.	BH2, BH3, BH4, BH5, BH6, BH7, BH8
APEC 2: Potential soil impact due to presence of earth fill material of unknown quality at majority of the subject site.	BH2, BH3, BH4, BH5, BH6, BH7, BH8
APEC 3: Potential soil impact due to presence of above ground oil storage tank (AST) at basement of the building at the subject site.	BH1

Location of proposed sampling locations for the Phase Two ESA is shown in Drawing No. 2.

4) **SOIL SAMPLES (INCLUDING QA/QC SAMPLES) ANALYTICAL SCHEDULE**

A summary of soil samples (including QA/QC samples) to be submitted is presented in the table below:



	OCs	M &/or I	BTEX and PHCs	VOCs	PAHs
Soil Samples (Boreholes) (QA/QC Samples)					
BH1	-	1	1	-	-
BH2	1	2	1	1	1
BH3	2	1	1	1	1
BH4	-	1	1	1	1
BH5	1	1	1	1	-
BH6	-	1	1	-	1
BH7	1	2	1	1	-
BH8	2	2	1	1	1
DUPS1	-	1	-	-	-
DUPS2	-	-	-	-	1
DUPS3	-	-	1	-	-
DUPS4	1	-	-	-	-
DUPS5	-	-	1	-	-

It should be noted that based on the analytical results of the submitted soil samples, if further activities of Phase Two ESA such as re-sampling and testing is required, additional samples from the area of interest will be submitted for analysis of contaminants of concern.

5) **SOIL SAMPLING PROCEDURES**

Soil Engineers Ltd.'s (SEL) Standard Operation Procedures (SOPs) will be followed throughout the field investigation (sampling, decontamination of equipment, observation and documentation) including the field QA/QC program. SEL SOPs are presented in Section 7 of this sampling and analysis plan.

6) **DATA QUALITY OBJECTIVES**

Sampling and decontamination procedures including QA/QC program should be carried out in accordance with:

- SEL SOPs, as presented in Section 7.
- The "Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario", May 1996, revised December 1996, as amended by O. Reg. 511/09.



Laboratory analytical methods, protocols and procedures should be carried out in accordance with the “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, in accordance with O. Reg. 511/09 and O. Reg. 269/11.

7) **STANDARD OPERATING PROCEDURES (SOPs)**

7.1) **Borehole Drilling**

The purpose of borehole drilling is to provide access to subsurface soils at specified locations and depths. Soil borings also allow for installation of groundwater monitoring wells.

7.1.1) **Underground Utilities**

Prior to drilling, the public utility service (One Call) and private utility services are contacted. The underground utility services are located and marked out in the field.

7.1.2) **Drilling Methods**

Direct Push Drilling (i.e. Geoprobe, Powerprobe, Pionjar, etc.)

The direct push drilling machine is a hydraulically powered hammer/ram sampling device. The unit is designed so that the weight of the vehicle provides the majority of downward force. The hydraulics, with the aid of a percussion hammer, push lengths of specially modified 54 mm (2.125 inch) outside diameter (OD), hardened steel rod into the ground. The rod is advanced to target sampling depth is reached. The steel rod has been specially modified for specific types of sample collection.



Flight-Auger Drilling

The flight-auger drilling machine is a hydraulically powered feed and retract system that provides 28,275 pounds (12,826 kg) of retract force and 18,650 pounds (8,460 kg) of down pressure. The 183 cm (72 inch) stroke, hydraulic vertical drive system has no chains or cables which can stretch. It is equipped with solid or hollow-stem augers. It is extended to pre-determined sampling intervals using conventional drilling methods, at which time a decontaminated 51 mm split-spoon sampler is extended ahead of the lead auger to collect a soil sample. The split-spoon sampler is then brought to surface and opened, exposing the soil core sample.

Hand Dug Test Pit

The hand-dug test pits were hand-dug using shovel. Prior to digging and sampling at each test pit location, the shovel was brushed clean using a solution of phosphate-free detergent and distilled water.

7.1.3) Occupational Health and Safety

Prior to drilling, the site is inspected to ensure that no potentially hazardous material is present near/around the drilling area. Safety procedures are reviewed and a safety check of the equipment is conducted including locating the emergency stop button on the drill rig, checking personal protective equipment (hard hats, safety shoes, eye/ear protection), locating the first aid kit and confirming the location of the nearest hospital, and verifying the standard procedure in case of injury.

7.1.4) Drilling Spoils

Excess soil generated during sampling and drilling procedure is stored at the site in metal barrels. If the analytical results indicate the soil is contaminated, a licensed disposal company is notified to collect the barrels of soil for proper disposal.



7.1.5) Borehole Abandonment

After drilling, logging and/or sampling, boreholes will be backfilled by the method described below:

- Bentonite is thoroughly mixed into the grout within the specified percentage range. The tremie grout is usually placed into the hole; however, for selected boreholes (e.g., shallow borings well above the water table) at certain sites, the grout may be allowed to free fall, taking care to ensure the grout does not bridge and form gaps or voids in the grout column.
- The volume of the borehole is calculated and compared to the grout volume used during grouting to aid in verifying that bridging did not occur.
- When using a tremie to place grout in the borehole, the bottom of the tremie is submerged into the grout column and withdrawn slowly as the hole fills with grout. If allowing the grout to free fall (and not using a tremie), the grout is poured slowly into the boring. The rise of the grout column is visually monitored or sounded with a weighted tape.
- If the method used to drill the boring utilized a drive casing, the casing is slowly extracted during grouting such that the bottom of the casing does not come above the top of the grout column.
- During the grouting process, no contaminating material (oil, grease, or fuels from gloves, pumps, hoses, et. al) is permitted to enter the grout mix and personnel wear personal protective equipment as specified in the Project Health and Safety Plan.
- Following grouting, barriers are placed over grouted boreholes as the grout is likely to settle in time, creating a physical hazard. Grouted boreholes typically require at least a second visit to ‘top off’ the hole.
- The surface hole condition should match the pre-drilling condition (asphalt, concrete, or smoothed flush with native surface), unless otherwise specified in the project work plans.



7.1.6) Subsurface Obstruction

Where refusal to drilling occurs due to rock, foundation or underground services, the borehole is relocated within 2.0 m downstream from the original borehole location.

7.2) Soil Sampling

7.2.1) Introduction

Soil sampling is conducted in accordance with the “Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario, May 1996” as revised December 1996 (MOE Guidance Manual) and as amended by O. Reg. 366/05, 66/08, 511/09, 245/10, 179/11, 269/11 and 333/13. The sampling procedures are described herein.

Drilling Rig Decontamination

Geoprobe

One-time use Shelby tube (thin-walled) samples are recovered from the boreholes in clear disposable PVC liners to prevent cross-contamination.

CME 55

Drilling equipment such as drill rigs, augers, drill pipes, drilling rods and split-spoons are decontaminated prior to initial use, between borehole locations and at the completion of drilling activities. The drilling equipment is manually scrubbed with a brush using a phosphate-free solution and thoroughly steam cleaned and/or power washed to remove any foreign material and potential contaminants.



In addition, the spilt-spoon sampler and any sub-sampling equipment is decontaminated prior to each usage. Various solutions are used for sampling equipment decontamination as described below:

- Phosphate-free soap solution (i.e., Alconox), tap water and distilled water are used for suspected petroleum hydrocarbon soil sampling.
- A reagent-grade methanol solution and distilled water are used for suspected VOCs soil sampling. The restate waste is collected.
- Reagent-grade 10% nitric acid solution and distilled water are used for suspected metals soil sampling. The restate waste will be collected.

7.2.2) Sample Logging and Field Screening

Samples are typically collected at 1.5 m intervals in the overburden. Tactile examination of the samples is made to classify the soil, and a log is recorded for each borehole detailing the physical characteristics of the soil including colour, soil type, structure, and any observed staining or odour. The organic vapour readings, the moisture content of the samples as determined in the laboratory, the groundwater and cave-in levels measured at the time of investigation, and the groundwater monitoring well construction details are given on the borehole logs.

7.2.3) Field Screening and Calibration Procedures

The soil samples are classified based on physical characteristics including colour, soil type, moisture, and visible observation of staining and/or odour. In addition, the organic vapour reading for each soil sample is determined using a gas detector. Based on the overall soil physical characteristics, representative soil samples are selected for chemical analysis.

The organic vapour readings are measured using a portable RKI Eagle gas detector, TYPE 101 (Serial Number: E091011) set to include all gases, and having a minimum detection of 2 ppm. Prior to measurement, the detector is calibrated using a Hexane 40% LEL gas. The allowable range of calibration is 38% to 42%.



7.2.4) Soil Sampling

The soil from the disposable sampler liner is handled using new disposable gloves in order to avoid the risk of cross-contamination between the samples. Sufficient amounts of the soil samples are placed into clean glass jars with Teflon lined lids for analyses for moisture content, medium to heavy PHCs, and Metals and Inorganics.

Small amounts of the soil samples are collected using a disposable 'T'-shaped Terracore sampler and stored in methanol or sodium bisulfate vials for light PHCs (CCME F1) and VOCs analysis, respectively; the remainder of the samples is placed into a sealable bag for vapour measurement and soil classification. The samples are stored in an insulated container with ice after sampling and during shipment to the laboratory.

The minimum requirements for the number, type and frequency of field quality control are given below:

- i. Field Duplicates: At least 1 field duplicate sample is collected and submitted for laboratory analysis for every 10 soil samples that are collected to ensure the soil sampling technique is accurate.



Soil Engineers Ltd.

CONSULTING ENGINEERS

GEOTECHNICAL • ENVIRONMENTAL • HYDROGEOLOGICAL • BUILDING SCIENCE

90 WEST BEAVER CREEK ROAD, SUITE 100, RICHMOND HILL, ONTARIO L4B 1E7 • TEL: (416) 754-8515 • FAX: (905) 881-8335

BARRIE
TEL: (705) 721-7863
FAX: (705) 721-7864

MISSISSAUGA
TEL: (905) 542-7605
FAX: (905) 542-2769

OSHAWA
TEL: (905) 440-2040
FAX: (905) 725-1315

NEWMARKET
TEL: (905) 853-0647
FAX: (905) 881-8335

MUSKOKA
TEL: (705) 684-4242
FAX: (705) 684-8522

HAMILTON
TEL: (905) 777-7956
FAX: (905) 542-2769

APPENDIX 'B'

BOREHOLE LOGS

Reference No. 2211-E177

JOB NO.: 2211-E177

LOG OF BOREHOLE NO.: 1

FIGURE NO.: 1

PROJECT DESCRIPTION: Proposed Office Building**METHOD OF BORING:** Pionjar**PROJECT LOCATION:** 3650 Eglinton Avenue West
City of Mississauga**DRILLING DATE:** May 5, 2023

El. (masl) Depth (mbgs)	SOIL DESCRIPTION	SAMPLES			Depth Scale (mbgs)	Combustible Headspace Reading (ppm)	REMARKS	WATER LEVEL
		Number	Type	Combustible Headspace Reading (ppm)				
180.5	Ground Surface							
0.0	7.6cm CONCRETE				0			
0.1	Brown SILTY CLAY, TILL trace of gravel	1	DO	50			BH1/1: PHCs, BTEX, Metals	
		2	DO	25	1			
		3	DO	25				
179.0	END OF BOREHOLE							
1.5								
					2			
					3			
					4			
					5			
					6			
					7			
					8			

**Soil Engineers Ltd.**

JOB NO.: 2211-E177

LOG OF BOREHOLE NO.: 2

FIGURE NO.: 2

PROJECT DESCRIPTION: Proposed Office Building**METHOD OF BORING:** Geoprobe**PROJECT LOCATION:** 3650 Eglinton Avenue West
City of Mississauga**DRILLING DATE:** May 5, 2023

El. (masl) Depth (mbgs)	SOIL DESCRIPTION	SAMPLES			Depth Scale (mbgs)	Combustible Headspace Reading (ppm)	REMARKS	WATER LEVEL
		Number	Type	Combustible Headspace Reading (ppm)				
182.2	Ground Surface							
0.0	20cm TOPSOIL	1A	TO	15	0	●	BH2/1B: PHCs, VOCs BH2/2: Metals, As, Sb, Se, EC, SAR, Cyanide, Cr(VI), Hg, B-HWS, pH BH2/3: PAHs BH2/4B: OCs, Metals, As, Sb, Se, Cr(VI), BHW-S, Cyanide, pH	
0.2	Brown EARTH FILL silty clay trace of gravel	1B	TO	15		●		
		2	TO	5	1	●		
		3	TO	5	2	●		
		4A	TO	10		●		
179.5	Grey SANDY SILT, TILL trace of gravel	4B	TO	10	3	●		
2.7		5	TO	0		●		
		6	TO	0	4	●		
177.6	END OF BOREHOLE				5			
4.6					6			
					7			
					8			

**Soil Engineers Ltd.**

JOB NO.: 2211-E177

LOG OF BOREHOLE NO.: 3

FIGURE NO.: 3

PROJECT DESCRIPTION: Proposed Office Building**METHOD OF BORING:** Geoprobe**PROJECT LOCATION:** 3650 Eglinton Avenue West
City of Mississauga**DRILLING DATE:** May 5, 2023

El. (masl) Depth (mbgs)	SOIL DESCRIPTION	SAMPLES			Depth Scale (mbgs)	Combustible Headspace Reading (ppm) ● 20 60 100 140 180	REMARKS	WATER LEVEL
		Number	Type	Combustible Headspace Reading (ppm)				
182.2 0.0	Ground Surface 20cm TOPSOIL	1A	TO	35	0	●	BH3/1A: OCs	
0.2	Brown EARTH FILL silty clay trace of gravel	1B	TO	10		●	BH3/1B: Metals, As, Sb, Se, Cr(VI), Hg, Cyanide, B-HWS, EC, SAR	
		2	TO	30	1	●	BH3/2: PAHs	
		3	TO	50	2	●	BH3/3: PHCs, VOCs	
179.9 2.3	Grey SANDY SILT, TILL	4A	TO	30		●	BH3/4A: OCs	
		4B	TO	30	3	●		
		5	TO	45		●		
177.6 4.6		6	TO	35	4	●		
	END OF BOREHOLE				5			
					6			
					7			
					8			

**Soil Engineers Ltd.**

JOB NO.: 2211-E177

LOG OF BOREHOLE NO.: 5

FIGURE NO.: 5

PROJECT DESCRIPTION: Proposed Office Building**METHOD OF BORING:** Geoprobe**PROJECT LOCATION:** 3650 Eglinton Avenue West
City of Mississauga**DRILLING DATE:** May 5, 2023

El. (masl) Depth (mbgs)	SOIL DESCRIPTION	SAMPLES			Depth Scale (mbgs)	● Combustible Headspace Reading (ppm) 2060100140180	REMARKS	WATER LEVEL
		Number	Type	Combustible Headspace Reading (ppm)				
181.8 0.0	Ground Surface							
0.2	Brown EARTH FILL silty clay trace of gravel	1A	TO	45	0	●	BH5/1A: OCs, Metals, As, Sb, Se, Cr(VI), B-HWS, pH, Cyanide	
		1B	TO	45		●		
		2	TO	55	1	●	BH5/2: PHCs, BTEX, DUPS3	
		3	TO	70	2	●	BH5/3: VOCs	
179.5 2.3	Brown SANDY SILT, TILL trace of gravel	4A	TO	60		●		
		4B	TO	60	3	●		
		5	TO	30		●		
178.0 3.8	END OF BOREHOLE				4			
					5			
					6			
					7			
					8			

**Soil Engineers Ltd.**

JOB NO.: 2211-E177

LOG OF BOREHOLE NO.: 6

FIGURE NO.: 6

PROJECT DESCRIPTION: Proposed Office Building**METHOD OF BORING:** Geoprobe**PROJECT LOCATION:** 3650 Eglinton Avenue West
City of Mississauga**DRILLING DATE:** May 5, 2023

El. (masl) Depth (mbgs)	SOIL DESCRIPTION	SAMPLES			Depth Scale (mbgs)	Combustible Headspace Reading (ppm)	REMARKS	WATER LEVEL
		Number	Type	Combustible Headspace Reading (ppm)				
182.0	Ground Surface							
0.0	20cm TOPSOIL	1A	TO	40	0	●	BH6/1B: PHCs, BTEX BH6/2: Metals, As, Sb, Se, Cyanide, Cr(VI), pH, Hg, B-HWS, PAHs, DUPS2	
0.2	Brown EARTH FILL clayey silt trace of gravel	1B	TO	40		●		
		2	TO	50	1	●		
180.5		3	TO	45	2	●		
1.5	Brown SANDY SILT, TILL trace of gravel	4	TO	35		●		
		5	TO	45	3	●		
178.2	END OF BOREHOLE				4			
3.8					5			
					6			
					7			
					8			

**Soil Engineers Ltd.**

JOB NO.: 2211-E177

LOG OF BOREHOLE NO.: 7

FIGURE NO.: 7

PROJECT DESCRIPTION: Proposed Office Building**METHOD OF BORING:** Geoprobe**PROJECT LOCATION:** 3650 Eglinton Avenue West
City of Mississauga**DRILLING DATE:** May 5, 2023

El. (masl) Depth (mbgs)	SOIL DESCRIPTION	SAMPLES			Depth Scale (mbgs)	Combustible Headspace Reading (ppm) ● 20 60 100 140 180	REMARKS	WATER LEVEL
		Number	Type	Combustible Headspace Reading (ppm)				
182.3	Ground Surface							
0.0	20cm TOPSOIL	1A	TO	35	0	●	BH7/1B: PHCs, VOCs BH7/2: Metals, As, Sb, Se, Cr(VI), Hg, Cyanide, B-HWS, EC, SAR, pH, PAHs BH7/3A: Metals, Cyanide, Cr(VI), Hg, B-HWS, OCs, DUPS4	
0.2	Brown EARTH FILL clayey silt trace of sand	1B	TO	35		●		
		2	TO	30	1	●		
180.7		3A	TO	40		●		
1.5	Brown SILTY CLAY, TILL trace of gravel	3B	TO	40	2	●		
		4	TO	25		●		
		5	TO	0	3	●		
178.4					4			
3.8	END OF BOREHOLE							
					5			
					6			
					7			
					8			

**Soil Engineers Ltd.**

JOB NO.: 2211-E177

LOG OF BOREHOLE NO.: 8

FIGURE NO.: 8

PROJECT DESCRIPTION: Proposed Office Building**METHOD OF BORING:** Geoprobe**PROJECT LOCATION:** 3650 Eglinton Avenue West
City of Mississauga**DRILLING DATE:** May 5, 2023

El. (masl) Depth (mbgs)	SOIL DESCRIPTION	SAMPLES			Depth Scale (mbgs)	Combustible Headspace Reading (ppm)	REMARKS	WATER LEVEL
		Number	Type	Combustible Headspace Reading (ppm)				
182.2 0.0	Ground Surface							
	20cm TOPSOIL	1A	TO	60	0		BH8/1A: OCs BH8/1B: Metals, As, Sb, Se, Cr(VI), Hg, Cyanide, B-HWS, EC, SAR, pH, PAHs	
0.2	Brown EARTH FILL sandy silt trace of gravel	1B	TO	60				
		2	TO	60	1			
180.7 1.5	Brown SILTY CLAY, TILL trace of gravel	3A	TO	65				
		3B	TO	65	2		BH8/2: PHCs, VOCs, DUPS5	
		4	TO	50				
		5	TO	25	3			
178.4 3.8	END OF BOREHOLE				4		BH8/3A: Metals, As, Sb, Se, Cyanide, Hg, B-HWS, OCs	
					5			
					6			
					7			
					8			

**Soil Engineers Ltd.**



Soil Engineers Ltd.

CONSULTING ENGINEERS

GEOTECHNICAL • ENVIRONMENTAL • HYDROGEOLOGICAL • BUILDING SCIENCE

90 WEST BEAVER CREEK ROAD, SUITE 100, RICHMOND HILL, ONTARIO L4B 1E7 · TEL: (416) 754-8515 · FAX: (905) 881-8335

BARRIE
TEL: (705) 721-7863
FAX: (705) 721-7864

MISSISSAUGA
TEL: (905) 542-7605
FAX: (905) 542-2769

OSHAWA
TEL: (905) 440-2040
FAX: (905) 725-1315

NEWMARKET
TEL: (905) 853-0647
FAX: (905) 881-8335

MUSKOKA
TEL: (705) 684-4242
FAX: (705) 684-8522

HAMILTON
TEL: (905) 777-7956
FAX: (905) 542-2769

APPENDIX 'C'

CERTIFICATE OF ANALYSIS (SOIL SAMPLES)

Reference No. 2211-E177



Your Project #: 2211-E177
 Site Location: MISSISSAUGA
 Your C.O.C. #: n/a

Attention: Madan K. Suwal

Soil Engineers Ltd
 90 West Beaver Creek Road
 Unit 100
 Richmond Hill, ON
 CANADA L4B 1E7

Report Date: 2023/05/18
 Report #: R7634977
 Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C3C8932

Received: 2023/05/05, 17:42

Sample Matrix: Soil
 # Samples Received: 26

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Methylnaphthalene Sum	4	N/A	2023/05/10	CAM SOP-00301	EPA 8270D m
Methylnaphthalene Sum	1	N/A	2023/05/15	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	4	2023/05/10	2023/05/10	CAM SOP-00408	R153 Ana. Prot. 2011
Hot Water Extractable Boron	3	2023/05/10	2023/05/11	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum	1	N/A	2023/05/10		EPA 8260C m
1,3-Dichloropropene Sum	2	N/A	2023/05/11		EPA 8260C m
1,3-Dichloropropene Sum	1	N/A	2023/05/12		EPA 8260C m
Free (WAD) Cyanide	6	2023/05/10	2023/05/10	CAM SOP-00457	OMOE E3015 m
Free (WAD) Cyanide	1	2023/05/15	2023/05/15	CAM SOP-00457	OMOE E3015 m
Conductivity	1	2023/05/10	2023/05/10	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1)	7	2023/05/10	2023/05/10	CAM SOP-00436	EPA 3060A/7199 m
Hexavalent Chromium in Soil by IC (1)	1	2023/05/12	2023/05/13	CAM SOP-00436	EPA 3060A/7199 m
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	4	N/A	2023/05/11	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	7	2023/05/10	2023/05/10	CAM SOP-00316	CCME CWS m
Acid Extractable Metals by ICPMS	2	2023/05/10	2023/05/10	CAM SOP-00447	EPA 6020B m
Acid Extractable Metals by ICPMS	8	2023/05/10	2023/05/11	CAM SOP-00447	EPA 6020B m
Moisture	1	N/A	2023/05/10	CAM SOP-00445	Carter 2nd ed 51.2 m
Moisture	24	N/A	2023/05/09	CAM SOP-00445	Carter 2nd ed 51.2 m
OC Pesticides (Selected) & PCB (4)	8	2023/05/10	2023/05/11	CAM SOP-00307	EPA 8081B/ 8082A
OC Pesticides Summed Parameters	5	N/A	2023/05/10	CAM SOP-00307	EPA 8081B/ 8082A
OC Pesticides Summed Parameters	3	N/A	2023/05/09	CAM SOP-00307	EPA 8081B/ 8082A
PAH Compounds in Soil by GC/MS (SIM)	1	2023/05/12	2023/05/12	CAM SOP-00318	EPA 8270E
PAH Compounds in Soil by GC/MS (SIM)	2	2023/05/09	2023/05/10	CAM SOP-00318	EPA 8270E
PAH Compounds in Soil by GC/MS (SIM)	2	2023/05/09	2023/05/09	CAM SOP-00318	EPA 8270E
pH CaCl2 EXTRACT	2	2023/05/10	2023/05/10	CAM SOP-00413	EPA 9045 D m
pH CaCl2 EXTRACT	1	2023/05/15	2023/05/15	CAM SOP-00413	EPA 9045 D m
pH CaCl2 EXTRACT	3	2023/05/18	2023/05/18	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	1	N/A	2023/05/11	CAM SOP-00102	EPA 6010C
Volatile Organic Compounds and F1 PHCs	2	N/A	2023/05/10	CAM SOP-00230	EPA 8260C m
Volatile Organic Compounds and F1 PHCs	1	N/A	2023/05/09	CAM SOP-00230	EPA 8260C m



Your Project #: 2211-E177
Site Location: MISSISSAUGA
Your C.O.C. #: n/a

Attention: Madan K. Suwal

Soil Engineers Ltd
90 West Beaver Creek Road
Unit 100
Richmond Hill, ON
CANADA L4B 1E7

Report Date: 2023/05/18
Report #: R7634977
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C3C8932

Received: 2023/05/05, 17:42

Sample Matrix: Soil
Samples Received: 26

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Volatile Organic Compounds in Soil	1	N/A	2023/05/12	CAM SOP-00228	EPA 8260D

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

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

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

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

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

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

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

(4) Chlordane (Total) = Alpha Chlordane + Gamma Chlordane



Your Project #: 2211-E177
Site Location: MISSISSAUGA
Your C.O.C. #: n/a

Attention: Madan K. Suwal

Soil Engineers Ltd
90 West Beaver Creek Road
Unit 100
Richmond Hill, ON
CANADA L4B 1E7

Report Date: 2023/05/18
Report #: R7634977
Version: 3 - Revision

CERTIFICATE OF ANALYSIS – REVISED REPORT

BUREAU VERITAS JOB #: C3C8932

Received: 2023/05/05, 17:42

Encryption Key

Antonella Brasil
Senior Project Manager
18 May 2023 18:20:46

Please direct all questions regarding this Certificate of Analysis to:
Antonella Brasil, Senior Project Manager
Email: Antonella.Brasil@bureauveritas.com
Phone# (905)817-5817

=====

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

O.REG 153 ICPMS METALS (SOIL)

Bureau Veritas ID		VSY064	VSY081			
Sampling Date		2023/05/05	2023/05/05			
COC Number		n/a	n/a			
	UNITS	BH1/1	DUPS1	RDL	MDL	QC Batch
Metals						
Acid Extractable Antimony (Sb)	ug/g	<0.20	<0.20	0.20	0.10	8655988
Acid Extractable Arsenic (As)	ug/g	4.1	4.4	1.0	0.10	8655988
Acid Extractable Barium (Ba)	ug/g	50	69	0.50	0.30	8655988
Acid Extractable Beryllium (Be)	ug/g	0.47	0.58	0.20	0.020	8655988
Acid Extractable Boron (B)	ug/g	5.7	7.8	5.0	1.0	8655988
Acid Extractable Cadmium (Cd)	ug/g	0.11	<0.10	0.10	0.030	8655988
Acid Extractable Chromium (Cr)	ug/g	16	19	1.0	0.20	8655988
Acid Extractable Cobalt (Co)	ug/g	11	12	0.10	0.020	8655988
Acid Extractable Copper (Cu)	ug/g	26	25	0.50	0.20	8655988
Acid Extractable Lead (Pb)	ug/g	8.1	10	1.0	0.10	8655988
Acid Extractable Molybdenum (Mo)	ug/g	0.51	<0.50	0.50	0.10	8655988
Acid Extractable Nickel (Ni)	ug/g	22	25	0.50	0.20	8655988
Acid Extractable Selenium (Se)	ug/g	<0.50	<0.50	0.50	0.10	8655988
Acid Extractable Silver (Ag)	ug/g	<0.20	<0.20	0.20	0.040	8655988
Acid Extractable Thallium (Tl)	ug/g	0.13	0.14	0.050	0.010	8655988
Acid Extractable Uranium (U)	ug/g	0.47	0.64	0.050	0.030	8655988
Acid Extractable Vanadium (V)	ug/g	24	25	5.0	0.50	8655988
Acid Extractable Zinc (Zn)	ug/g	48	55	5.0	0.50	8655988
Acid Extractable Mercury (Hg)	ug/g	<0.050	<0.050	0.050	0.030	8655988
RDL = Reportable Detection Limit						
QC Batch = Quality Control Batch						



Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		VS065				VS065			
Sampling Date		2023/05/05				2023/05/05			
COC Number		n/a				n/a			
	UNITS	BH2/4B	RDL	MDL	QC Batch	BH2/4B Lab-Dup	RDL	MDL	QC Batch
Inorganics									
Moisture	%	9.5	1.0	0.50	8653519				
Available (CaCl ₂) pH	pH	7.87			8656186	7.89			8656186
WAD Cyanide (Free)	ug/g	<0.01	0.01	0.005	8655766				
Chromium (VI)	ug/g	<0.18	0.18	0.050	8656019				
Metals									
Hot Water Ext. Boron (B)	ug/g	0.15	0.050	0.030	8656081	0.15	0.050	0.030	8656081
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	0.10	8655988				
Acid Extractable Arsenic (As)	ug/g	4.7	1.0	0.10	8655988				
Acid Extractable Barium (Ba)	ug/g	67	0.50	0.30	8655988				
Acid Extractable Beryllium (Be)	ug/g	0.56	0.20	0.020	8655988				
Acid Extractable Boron (B)	ug/g	7.8	5.0	1.0	8655988				
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.10	0.030	8655988				
Acid Extractable Chromium (Cr)	ug/g	17	1.0	0.20	8655988				
Acid Extractable Cobalt (Co)	ug/g	15	0.10	0.020	8655988				
Acid Extractable Copper (Cu)	ug/g	28	0.50	0.20	8655988				
Acid Extractable Lead (Pb)	ug/g	10	1.0	0.10	8655988				
Acid Extractable Molybdenum (Mo)	ug/g	0.59	0.50	0.10	8655988				
Acid Extractable Nickel (Ni)	ug/g	26	0.50	0.20	8655988				
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	0.10	8655988				
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	0.040	8655988				
Acid Extractable Thallium (Tl)	ug/g	0.16	0.050	0.010	8655988				
Acid Extractable Uranium (U)	ug/g	0.58	0.050	0.030	8655988				
Acid Extractable Vanadium (V)	ug/g	24	5.0	0.50	8655988				
Acid Extractable Zinc (Zn)	ug/g	58	5.0	0.50	8655988				
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	0.030	8655988				
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate									



Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		VSU066				VSU070			
Sampling Date		2023/05/05				2023/05/05			
COC Number		n/a				n/a			
	UNITS	BH2/2	RDL	MDL	QC Batch	BH3/1B	RDL	MDL	QC Batch
Calculated Parameters									
Sodium Adsorption Ratio	N/A	0.64			8651563				
Inorganics									
Conductivity	mS/cm	0.30	0.002	0.0005	8655821				
Available (CaCl ₂) pH	pH	7.65			8664577				
WAD Cyanide (Free)	ug/g	<0.01	0.01	0.005	8664305				
Chromium (VI)	ug/g	<0.18	0.18	0.050	8661354	<0.18	0.18	0.050	8656019
Metals									
Hot Water Ext. Boron (B)	ug/g	0.11	0.050	0.030	8656133				
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	0.10	8655988	<0.20	0.20	0.10	8655988
Acid Extractable Arsenic (As)	ug/g	4.1	1.0	0.10	8655988	4.1	1.0	0.10	8655988
Acid Extractable Barium (Ba)	ug/g	60	0.50	0.30	8655988	68	0.50	0.30	8655988
Acid Extractable Beryllium (Be)	ug/g	0.54	0.20	0.020	8655988	0.68	0.20	0.020	8655988
Acid Extractable Boron (B)	ug/g	6.0	5.0	1.0	8655988	6.6	5.0	1.0	8655988
Acid Extractable Cadmium (Cd)	ug/g	0.12	0.10	0.030	8655988	0.20	0.10	0.030	8655988
Acid Extractable Chromium (Cr)	ug/g	17	1.0	0.20	8655988	23	1.0	0.20	8655988
Acid Extractable Cobalt (Co)	ug/g	10	0.10	0.020	8655988	9.4	0.10	0.020	8655988
Acid Extractable Copper (Cu)	ug/g	24	0.50	0.20	8655988	24	0.50	0.20	8655988
Acid Extractable Lead (Pb)	ug/g	8.9	1.0	0.10	8655988	17	1.0	0.10	8655988
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	0.10	8655988	1.3	0.50	0.10	8655988
Acid Extractable Nickel (Ni)	ug/g	20	0.50	0.20	8655988	20	0.50	0.20	8655988
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	0.10	8655988	<0.50	0.50	0.10	8655988
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	0.040	8655988	<0.20	0.20	0.040	8655988
Acid Extractable Thallium (Tl)	ug/g	0.14	0.050	0.010	8655988	0.13	0.050	0.010	8655988
Acid Extractable Uranium (U)	ug/g	0.52	0.050	0.030	8655988	0.78	0.050	0.030	8655988
Acid Extractable Vanadium (V)	ug/g	24	5.0	0.50	8655988	27	5.0	0.50	8655988
Acid Extractable Zinc (Zn)	ug/g	52	5.0	0.50	8655988	78	5.0	0.50	8655988
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	0.030	8655988	0.052	0.050	0.030	8655988
RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch									



Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		VS076		VS077	VS084		VS085			
Sampling Date		2023/05/05		2023/05/05	2023/05/05		2023/05/05			
COC Number		n/a		n/a	n/a		n/a			
	UNITS	BH4/3	QC Batch	BH5/1A	BH6/2	QC Batch	BH7/3A	RDL	MDL	QC Batch
Inorganics										
Available (CaCl ₂) pH	pH	7.77	8656186							
WAD Cyanide (Free)	ug/g	<0.01	8655766	<0.01	<0.01	8655766	<0.01	0.01	0.005	8655766
Chromium (VI)	ug/g	<0.18	8656019	<0.18	<0.18	8656019	<0.18	0.18	0.050	8656019
Metals										
Hot Water Ext. Boron (B)	ug/g	0.14	8656081	0.46	0.21	8656081	0.13	0.050	0.030	8656133
Acid Extractable Antimony (Sb)	ug/g	<0.20	8655808	0.25	<0.20	8655988	<0.20	0.20	0.10	8655988
Acid Extractable Arsenic (As)	ug/g	3.4	8655808	6.0	4.4	8655988	4.3	1.0	0.10	8655988
Acid Extractable Barium (Ba)	ug/g	75	8655808	52	52	8655988	62	0.50	0.30	8655988
Acid Extractable Beryllium (Be)	ug/g	0.55	8655808	0.65	0.57	8655988	0.56	0.20	0.020	8655988
Acid Extractable Boron (B)	ug/g	7.6	8655808	7.6	6.2	8655988	7.4	5.0	1.0	8655988
Acid Extractable Cadmium (Cd)	ug/g	0.10	8655808	0.15	0.10	8655988	<0.10	0.10	0.030	8655988
Acid Extractable Chromium (Cr)	ug/g	18	8655808	20	17	8655988	18	1.0	0.20	8655988
Acid Extractable Cobalt (Co)	ug/g	10	8655808	9.9	9.8	8655988	12	0.10	0.020	8655988
Acid Extractable Copper (Cu)	ug/g	24	8655808	24	29	8655988	28	0.50	0.20	8655988
Acid Extractable Lead (Pb)	ug/g	8.8	8655808	20	10	8655988	9.6	1.0	0.10	8655988
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	8655808	0.62	<0.50	8655988	<0.50	0.50	0.10	8655988
Acid Extractable Nickel (Ni)	ug/g	21	8655808	21	21	8655988	24	0.50	0.20	8655988
Acid Extractable Selenium (Se)	ug/g	<0.50	8655808	<0.50	<0.50	8655988	<0.50	0.50	0.10	8655988
Acid Extractable Silver (Ag)	ug/g	<0.20	8655808	<0.20	<0.20	8655988	<0.20	0.20	0.040	8655988
Acid Extractable Thallium (Tl)	ug/g	0.13	8655808	0.11	0.12	8655988	0.13	0.050	0.010	8655988
Acid Extractable Uranium (U)	ug/g	0.81	8655808	0.59	0.76	8655988	0.56	0.050	0.030	8655988
Acid Extractable Vanadium (V)	ug/g	24	8655808	27	25	8655988	26	5.0	0.50	8655988
Acid Extractable Zinc (Zn)	ug/g	50	8655808	77	49	8655988	54	5.0	0.50	8655988
Acid Extractable Mercury (Hg)	ug/g	<0.050	8655808	<0.050	<0.050	8655988	<0.050	0.050	0.030	8655988
RDL = Reportable Detection Limit										
QC Batch = Quality Control Batch										



Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		VSY086			
Sampling Date		2023/05/05			
COC Number		n/a			
	UNITS	BH8/3A	RDL	MDL	QC Batch
Inorganics					
WAD Cyanide (Free)	ug/g	<0.01	0.01	0.005	8655766
Chromium (VI)	ug/g	<0.18	0.18	0.050	8656019
Metals					
Hot Water Ext. Boron (B)	ug/g	0.062	0.050	0.030	8656133
Acid Extractable Antimony (Sb)	ug/g	<0.20	0.20	0.10	8655808
Acid Extractable Arsenic (As)	ug/g	4.4	1.0	0.10	8655808
Acid Extractable Barium (Ba)	ug/g	61	0.50	0.30	8655808
Acid Extractable Beryllium (Be)	ug/g	0.59	0.20	0.020	8655808
Acid Extractable Boron (B)	ug/g	7.4	5.0	1.0	8655808
Acid Extractable Cadmium (Cd)	ug/g	<0.10	0.10	0.030	8655808
Acid Extractable Chromium (Cr)	ug/g	19	1.0	0.20	8655808
Acid Extractable Cobalt (Co)	ug/g	12	0.10	0.020	8655808
Acid Extractable Copper (Cu)	ug/g	27	0.50	0.20	8655808
Acid Extractable Lead (Pb)	ug/g	8.8	1.0	0.10	8655808
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	0.50	0.10	8655808
Acid Extractable Nickel (Ni)	ug/g	24	0.50	0.20	8655808
Acid Extractable Selenium (Se)	ug/g	<0.50	0.50	0.10	8655808
Acid Extractable Silver (Ag)	ug/g	<0.20	0.20	0.040	8655808
Acid Extractable Thallium (Tl)	ug/g	0.15	0.050	0.010	8655808
Acid Extractable Uranium (U)	ug/g	0.66	0.050	0.030	8655808
Acid Extractable Vanadium (V)	ug/g	26	5.0	0.50	8655808
Acid Extractable Zinc (Zn)	ug/g	55	5.0	0.50	8655808
Acid Extractable Mercury (Hg)	ug/g	<0.050	0.050	0.030	8655808
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					



Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

O.REG 153 OC PESTICIDES (SOIL)

Bureau Veritas ID		VSY065				VSY069			
Sampling Date		2023/05/05				2023/05/05			
COC Number		n/a				n/a			
	UNITS	BH2/4B	RDL	MDL	QC Batch	BH3/1A	RDL	MDL	QC Batch
Inorganics									
Moisture	%					16	1.0	0.50	8655210
Calculated Parameters									
Chlordane (Total)	ug/g	<0.0020	0.0020	N/A	8651464	<0.0020	0.0020	N/A	8651464
o,p-DDD + p,p-DDD	ug/g	<0.0020	0.0020	N/A	8651464	<0.0020	0.0020	N/A	8651464
o,p-DDE + p,p-DDE	ug/g	<0.0020	0.0020	N/A	8651464	0.0054	0.0020	N/A	8651464
o,p-DDT + p,p-DDT	ug/g	<0.0020	0.0020	N/A	8651464	0.0022	0.0020	N/A	8651464
Total Endosulfan	ug/g	<0.0020	0.0020	N/A	8651464	<0.0020	0.0020	N/A	8651464
Pesticides & Herbicides									
Aldrin	ug/g	<0.0020	0.0020	0.00040	8657324	<0.0020	0.0020	0.00040	8657324
a-Chlordane	ug/g	<0.0020	0.0020	0.00040	8657324	<0.0020	0.0020	0.00040	8657324
g-Chlordane	ug/g	<0.0020	0.0020	0.00040	8657324	<0.0020	0.0020	0.00040	8657324
o,p-DDD	ug/g	<0.0020	0.0020	0.00040	8657324	<0.0020	0.0020	0.00040	8657324
p,p-DDD	ug/g	<0.0020	0.0020	0.00040	8657324	<0.0020	0.0020	0.00040	8657324
o,p-DDE	ug/g	<0.0020	0.0020	0.00040	8657324	<0.0020	0.0020	0.00040	8657324
p,p-DDE	ug/g	<0.0020	0.0020	0.00040	8657324	0.0054	0.0020	0.00040	8657324
o,p-DDT	ug/g	<0.0020	0.0020	0.00040	8657324	<0.0020	0.0020	0.00040	8657324
p,p-DDT	ug/g	<0.0020	0.0020	0.00040	8657324	0.0022	0.0020	0.00040	8657324
Dieldrin	ug/g	<0.0020	0.0020	0.00040	8657324	<0.0020	0.0020	0.00040	8657324
Lindane	ug/g	<0.0020	0.0020	0.00040	8657324	<0.0020	0.0020	0.00040	8657324
Endosulfan I (alpha)	ug/g	<0.0020	0.0020	0.00040	8657324	<0.0020	0.0020	0.00040	8657324
Endosulfan II (beta)	ug/g	<0.0020	0.0020	0.00040	8657324	<0.0020	0.0020	0.00040	8657324
Endrin	ug/g	<0.0020	0.0020	0.00040	8657324	<0.0020	0.0020	0.00040	8657324
Heptachlor	ug/g	<0.0020	0.0020	0.00040	8657324	<0.0020	0.0020	0.00040	8657324
Heptachlor epoxide	ug/g	<0.0020	0.0020	0.00040	8657324	<0.0020	0.0020	0.00040	8657324
Hexachlorobenzene	ug/g	<0.0020	0.0020	0.00040	8657324	<0.0020	0.0020	0.00040	8657324
Hexachlorobutadiene	ug/g	<0.0020	0.0020	N/A	8657324	<0.0020	0.0020	N/A	8657324
Hexachloroethane	ug/g	<0.0020	0.0020	N/A	8657324	<0.0020	0.0020	N/A	8657324
Methoxychlor	ug/g	<0.0050	0.0050	0.0016	8657324	<0.0050	0.0050	0.0016	8657324
Surrogate Recovery (%)									
2,4,5,6-Tetrachloro-m-xylene	%	89			8657324	82			8657324
Decachlorobiphenyl	%	116			8657324	115			8657324
RDL = Reportable Detection Limit QC Batch = Quality Control Batch N/A = Not Applicable									



Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

O.REG 153 OC PESTICIDES (SOIL)

Bureau Veritas ID		VS073			VS077			VS085			
Sampling Date		2023/05/05			2023/05/05			2023/05/05			
COC Number		n/a			n/a			n/a			
	UNITS	BH3/4A	RDL	MDL	BH5/1A	RDL	MDL	BH7/3A	RDL	MDL	QC Batch
Calculated Parameters											
Chlordane (Total)	ug/g	<0.0020	0.0020	N/A	<0.010	0.010	N/A	<0.0020	0.0020	N/A	8651464
o,p-DDD + p,p-DDD	ug/g	<0.0020	0.0020	N/A	<0.010	0.010	N/A	<0.0020	0.0020	N/A	8651464
o,p-DDE + p,p-DDE	ug/g	<0.0020	0.0020	N/A	<0.010	0.010	N/A	<0.0020	0.0020	N/A	8651464
o,p-DDT + p,p-DDT	ug/g	<0.0020	0.0020	N/A	<0.010	0.010	N/A	<0.0020	0.0020	N/A	8651464
Total Endosulfan	ug/g	<0.0020	0.0020	N/A	<0.010	0.010	N/A	<0.0020	0.0020	N/A	8651464
Pesticides & Herbicides											
Aldrin	ug/g	<0.0020	0.0020	0.00040	<0.010	0.010	0.0020	<0.0020	0.0020	0.00040	8657324
a-Chlordane	ug/g	<0.0020	0.0020	0.00040	<0.010	0.010	0.0020	<0.0020	0.0020	0.00040	8657324
g-Chlordane	ug/g	<0.0020	0.0020	0.00040	<0.010	0.010	0.0020	<0.0020	0.0020	0.00040	8657324
o,p-DDD	ug/g	<0.0020	0.0020	0.00040	<0.010	0.010	0.0020	<0.0020	0.0020	0.00040	8657324
p,p-DDD	ug/g	<0.0020	0.0020	0.00040	<0.010	0.010	0.0020	<0.0020	0.0020	0.00040	8657324
o,p-DDE	ug/g	<0.0020	0.0020	0.00040	<0.010	0.010	0.0020	<0.0020	0.0020	0.00040	8657324
p,p-DDE	ug/g	<0.0020	0.0020	0.00040	<0.010	0.010	0.0020	<0.0020	0.0020	0.00040	8657324
o,p-DDT	ug/g	<0.0020	0.0020	0.00040	<0.010	0.010	0.0020	<0.0020	0.0020	0.00040	8657324
p,p-DDT	ug/g	<0.0020	0.0020	0.00040	<0.010	0.010	0.0020	<0.0020	0.0020	0.00040	8657324
Dieldrin	ug/g	<0.0020	0.0020	0.00040	<0.010	0.010	0.0020	<0.0020	0.0020	0.00040	8657324
Lindane	ug/g	<0.0020	0.0020	0.00040	<0.010	0.010	0.0020	<0.0020	0.0020	0.00040	8657324
Endosulfan I (alpha)	ug/g	<0.0020	0.0020	0.00040	<0.010	0.010	0.0020	<0.0020	0.0020	0.00040	8657324
Endosulfan II (beta)	ug/g	<0.0020	0.0020	0.00040	<0.010	0.010	0.0020	<0.0020	0.0020	0.00040	8657324
Endrin	ug/g	<0.0020	0.0020	0.00040	<0.010	0.010	0.0020	<0.0020	0.0020	0.00040	8657324
Heptachlor	ug/g	<0.0020	0.0020	0.00040	<0.010	0.010	0.0020	<0.0020	0.0020	0.00040	8657324
Heptachlor epoxide	ug/g	<0.0020	0.0020	0.00040	<0.010	0.010	0.0020	<0.0020	0.0020	0.00040	8657324
Hexachlorobenzene	ug/g	<0.0020	0.0020	0.00040	<0.010	0.010	0.0020	<0.0020	0.0020	0.00040	8657324
Hexachlorobutadiene	ug/g	<0.0020	0.0020	N/A	<0.010	0.010	N/A	<0.0020	0.0020	N/A	8657324
Hexachloroethane	ug/g	<0.0020	0.0020	N/A	<0.010	0.010	N/A	<0.0020	0.0020	N/A	8657324
Methoxychlor	ug/g	<0.0050	0.0050	0.0016	<0.025	0.025	0.0080	<0.0050	0.0050	0.0016	8657324
Surrogate Recovery (%)											
2,4,5,6-Tetrachloro-m-xylene	%	80			96			85			8657324
Decachlorobiphenyl	%	109			120			118			8657324
RDL = Reportable Detection Limit QC Batch = Quality Control Batch N/A = Not Applicable											



Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

O.REG 153 OC PESTICIDES (SOIL)

Bureau Veritas ID		VS086	VS087	VS088			
Sampling Date		2023/05/05	2023/05/05	2023/05/05			
COC Number		n/a	n/a	n/a			
	UNITS	BH8/3A	BH8/1A	DUPS4	RDL	MDL	QC Batch
Calculated Parameters							
Chlordane (Total)	ug/g	<0.0020	<0.0020	<0.0020	0.0020	N/A	8651464
o,p-DDD + p,p-DDD	ug/g	<0.0020	<0.0020	<0.0020	0.0020	N/A	8651464
o,p-DDE + p,p-DDE	ug/g	<0.0020	<0.0020	<0.0020	0.0020	N/A	8651464
o,p-DDT + p,p-DDT	ug/g	<0.0020	<0.0020	<0.0020	0.0020	N/A	8651464
Total Endosulfan	ug/g	<0.0020	<0.0020	<0.0020	0.0020	N/A	8651464
Pesticides & Herbicides							
Aldrin	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	8657324
a-Chlordane	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	8657324
g-Chlordane	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	8657324
o,p-DDD	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	8657324
p,p-DDD	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	8657324
o,p-DDE	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	8657324
p,p-DDE	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	8657324
o,p-DDT	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	8657324
p,p-DDT	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	8657324
Dieldrin	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	8657324
Lindane	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	8657324
Endosulfan I (alpha)	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	8657324
Endosulfan II (beta)	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	8657324
Endrin	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	8657324
Heptachlor	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	8657324
Heptachlor epoxide	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	8657324
Hexachlorobenzene	ug/g	<0.0020	<0.0020	<0.0020	0.0020	0.00040	8657324
Hexachlorobutadiene	ug/g	<0.0020	<0.0020	<0.0020	0.0020	N/A	8657324
Hexachloroethane	ug/g	<0.0020	<0.0020	<0.0020	0.0020	N/A	8657324
Methoxychlor	ug/g	<0.0050	<0.0050	<0.0050	0.0050	0.0016	8657324
Surrogate Recovery (%)							
2,4,5,6-Tetrachloro-m-xylene	%	87	86	89			8657324
Decachlorobiphenyl	%	114	128	109			8657324
RDL = Reportable Detection Limit							
QC Batch = Quality Control Batch							
N/A = Not Applicable							



Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

O.REG 153 PAHS (SOIL)

Bureau Veritas ID		VSY067	VSY071				VSY075			
Sampling Date		2023/05/05	2023/05/05				2023/05/05			
COC Number		n/a	n/a				n/a			
	UNITS	BH2/3	BH3/2	RDL	MDL	QC Batch	BH4/1B	RDL	MDL	QC Batch
Inorganics										
Moisture	%	11	18	1.0	0.50	8653413				
Calculated Parameters										
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	<0.0071	0.0071	N/A	8651351	<0.0071	0.0071	N/A	8651351
Polyaromatic Hydrocarbons										
Acenaphthene	ug/g	<0.0050	<0.0050	0.0050	0.0020	8653279	<0.0050	0.0050	0.0020	8653279
Acenaphthylene	ug/g	<0.0050	<0.0050	0.0050	0.0010	8653279	<0.0050	0.0050	0.0010	8653279
Anthracene	ug/g	<0.0050	<0.0050	0.0050	0.0010	8653279	<0.0050	0.0050	0.0010	8653279
Benzo(a)anthracene	ug/g	<0.0050	<0.0050	0.0050	0.0020	8653279	<0.0050	0.0050	0.0020	8653279
Benzo(a)pyrene	ug/g	<0.0050	<0.0050	0.0050	0.0010	8653279	<0.0050	0.0050	0.0010	8653279
Benzo(b,j)fluoranthene	ug/g	<0.0050	<0.0050	0.0050	0.0020	8653279	<0.0050	0.0050	0.0020	8653279
Benzo(g,h,i)perylene	ug/g	<0.0050	<0.0050	0.0050	0.0040	8653279	<0.0050	0.0050	0.0040	8653279
Benzo(k)fluoranthene	ug/g	<0.0050	<0.0050	0.0050	0.0020	8653279	<0.0050	0.0050	0.0020	8653279
Chrysene	ug/g	<0.0050	<0.0050	0.0050	0.0020	8653279	<0.0050	0.0050	0.0020	8653279
Dibenzo(a,h)anthracene	ug/g	<0.0050	<0.0050	0.0050	0.0040	8653279	<0.0050	0.0050	0.0040	8653279
Fluoranthene	ug/g	<0.0050	<0.0050	0.0050	0.0010	8653279	<0.0050	0.0050	0.0010	8653279
Fluorene	ug/g	<0.0050	<0.0050	0.0050	0.0010	8653279	<0.0050	0.0050	0.0010	8653279
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	<0.0050	0.0050	0.0040	8653279	<0.0050	0.0050	0.0040	8653279
1-Methylnaphthalene	ug/g	<0.0050	<0.0050	0.0050	0.0010	8653279	<0.0050	0.0050	0.0010	8653279
2-Methylnaphthalene	ug/g	<0.0050	<0.0050	0.0050	0.0010	8653279	<0.0050	0.0050	0.0010	8653279
Naphthalene	ug/g	<0.0050	<0.0050	0.0050	0.0010	8653279	<0.0050	0.0050	0.0010	8653279
Phenanthrene	ug/g	<0.0050	<0.0050	0.0050	0.0010	8653279	<0.0050	0.0050	0.0010	8653279
Pyrene	ug/g	<0.0050	0.0064	0.0050	0.0010	8653279	<0.0050	0.0050	0.0010	8653279
Surrogate Recovery (%)										
D10-Anthracene	%	92	88			8653279	89			8653279
D14-Terphenyl (FS)	%	86	83			8653279	84			8653279
D8-Acenaphthylene	%	82	79			8653279	80			8653279
RDL = Reportable Detection Limit QC Batch = Quality Control Batch N/A = Not Applicable										



Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

O.REG 153 PAHS (SOIL)

Bureau Veritas ID		VS082				VS082			
Sampling Date		2023/05/05				2023/05/05			
COC Number		n/a				n/a			
	UNITS	DUPS2	RDL	MDL	QC Batch	DUPS2 Lab-Dup	RDL	MDL	QC Batch
Inorganics									
Moisture	%	21	1.0	0.50	8653413				
Calculated Parameters									
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	0.0071	N/A	8651351				
Polyaromatic Hydrocarbons									
Acenaphthene	ug/g	<0.0050	0.0050	0.0020	8653279	<0.0050	0.0050	0.0020	8653279
Acenaphthylene	ug/g	<0.0050	0.0050	0.0010	8653279	<0.0050	0.0050	0.0010	8653279
Anthracene	ug/g	<0.0050	0.0050	0.0010	8653279	<0.0050	0.0050	0.0010	8653279
Benzo(a)anthracene	ug/g	<0.0050	0.0050	0.0020	8653279	<0.0050	0.0050	0.0020	8653279
Benzo(a)pyrene	ug/g	<0.0050	0.0050	0.0010	8653279	<0.0050	0.0050	0.0010	8653279
Benzo(b,j)fluoranthene	ug/g	<0.0050	0.0050	0.0020	8653279	<0.0050	0.0050	0.0020	8653279
Benzo(g,h,i)perylene	ug/g	<0.0050	0.0050	0.0040	8653279	<0.0050	0.0050	0.0040	8653279
Benzo(k)fluoranthene	ug/g	<0.0050	0.0050	0.0020	8653279	<0.0050	0.0050	0.0020	8653279
Chrysene	ug/g	<0.0050	0.0050	0.0020	8653279	<0.0050	0.0050	0.0020	8653279
Dibenzo(a,h)anthracene	ug/g	<0.0050	0.0050	0.0040	8653279	<0.0050	0.0050	0.0040	8653279
Fluoranthene	ug/g	<0.0050	0.0050	0.0010	8653279	<0.0050	0.0050	0.0010	8653279
Fluorene	ug/g	<0.0050	0.0050	0.0010	8653279	<0.0050	0.0050	0.0010	8653279
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	0.0050	0.0040	8653279	<0.0050	0.0050	0.0040	8653279
1-Methylnaphthalene	ug/g	<0.0050	0.0050	0.0010	8653279	<0.0050	0.0050	0.0010	8653279
2-Methylnaphthalene	ug/g	<0.0050	0.0050	0.0010	8653279	<0.0050	0.0050	0.0010	8653279
Naphthalene	ug/g	<0.0050	0.0050	0.0010	8653279	<0.0050	0.0050	0.0010	8653279
Phenanthrene	ug/g	<0.0050	0.0050	0.0010	8653279	<0.0050	0.0050	0.0010	8653279
Pyrene	ug/g	0.0054	0.0050	0.0010	8653279	<0.0050	0.0050	0.0010	8653279
Surrogate Recovery (%)									
D10-Anthracene	%	91			8653279	93			8653279
D14-Terphenyl (FS)	%	83			8653279	83			8653279
D8-Acenaphthylene	%	70			8653279	73			8653279
RDL = Reportable Detection Limit QC Batch = Quality Control Batch Lab-Dup = Laboratory Initiated Duplicate N/A = Not Applicable									



Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

O.REG 153 PAHS (SOIL)

Bureau Veritas ID		VSY089			
Sampling Date		2023/05/05			
COC Number		n/a			
	UNITS	BH6/2	RDL	MDL	QC Batch
Calculated Parameters					
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	0.0071	N/A	8653738
Polyaromatic Hydrocarbons					
Acenaphthene	ug/g	<0.0050	0.0050	0.0020	8660935
Acenaphthylene	ug/g	<0.0050	0.0050	0.0010	8660935
Anthracene	ug/g	<0.0050	0.0050	0.0010	8660935
Benzo(a)anthracene	ug/g	<0.0050	0.0050	0.0020	8660935
Benzo(a)pyrene	ug/g	<0.0050	0.0050	0.0010	8660935
Benzo(b/j)fluoranthene	ug/g	<0.0050	0.0050	0.0020	8660935
Benzo(g,h,i)perylene	ug/g	<0.0050	0.0050	0.0040	8660935
Benzo(k)fluoranthene	ug/g	<0.0050	0.0050	0.0020	8660935
Chrysene	ug/g	<0.0050	0.0050	0.0020	8660935
Dibenzo(a,h)anthracene	ug/g	<0.0050	0.0050	0.0040	8660935
Fluoranthene	ug/g	<0.0050	0.0050	0.0010	8660935
Fluorene	ug/g	<0.0050	0.0050	0.0010	8660935
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	0.0050	0.0040	8660935
1-Methylnaphthalene	ug/g	<0.0050	0.0050	0.0010	8660935
2-Methylnaphthalene	ug/g	<0.0050	0.0050	0.0010	8660935
Naphthalene	ug/g	<0.0050	0.0050	0.0010	8660935
Phenanthrene	ug/g	<0.0050	0.0050	0.0010	8660935
Pyrene	ug/g	<0.0050	0.0050	0.0010	8660935
Surrogate Recovery (%)					
D10-Anthracene	%	105			8660935
D14-Terphenyl (FS)	%	93			8660935
D8-Acenaphthylene	%	80			8660935
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					
N/A = Not Applicable					



Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

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

Bureau Veritas ID		VSY064	VSY078				VSY078			
Sampling Date		2023/05/05	2023/05/05				2023/05/05			
COC Number		n/a	n/a				n/a			
	UNITS	BH1/1	BH5/2	RDL	MDL	QC Batch	BH5/2 Lab-Dup	RDL	MDL	QC Batch
BTEX & F1 Hydrocarbons										
Benzene	ug/g	<0.020	<0.020	0.020	0.020	8658147	<0.020	0.020	0.020	8658147
Toluene	ug/g	<0.020	<0.020	0.020	0.020	8658147	<0.020	0.020	0.020	8658147
Ethylbenzene	ug/g	<0.020	<0.020	0.020	0.020	8658147	<0.020	0.020	0.020	8658147
o-Xylene	ug/g	<0.020	<0.020	0.020	0.020	8658147	<0.020	0.020	0.020	8658147
p+m-Xylene	ug/g	<0.040	<0.040	0.040	0.040	8658147	<0.040	0.040	0.040	8658147
Total Xylenes	ug/g	<0.040	<0.040	0.040	0.040	8658147	<0.040	0.040	0.040	8658147
F1 (C6-C10)	ug/g	<10	<10	10	5.0	8658147	<10	10	5.0	8658147
F1 (C6-C10) - BTEX	ug/g	<10	<10	10	5.0	8658147	<10	10	5.0	8658147
F2-F4 Hydrocarbons										
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	10	5.0	8655771				
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	50	5.0	8655771				
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	50	10	8655771				
Reached Baseline at C50	ug/g	Yes	Yes			8655771				
Surrogate Recovery (%)										
1,4-Difluorobenzene	%	107	106			8658147	105			8658147
4-Bromofluorobenzene	%	93	92			8658147	84			8658147
D10-o-Xylene	%	108	111			8658147	113			8658147
D4-1,2-Dichloroethane	%	107	113			8658147	108			8658147
o-Terphenyl	%	91	93			8655771				
RDL = Reportable Detection Limit										
QC Batch = Quality Control Batch										
Lab-Dup = Laboratory Initiated Duplicate										



Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

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

Bureau Veritas ID		VS080	VS083			
Sampling Date		2023/05/05	2023/05/05			
COC Number		n/a	n/a			
	UNITS	BH6/1B	DUP53	RDL	MDL	QC Batch
BTEX & F1 Hydrocarbons						
Benzene	ug/g	<0.020	<0.020	0.020	0.020	8658147
Toluene	ug/g	<0.020	<0.020	0.020	0.020	8658147
Ethylbenzene	ug/g	<0.020	<0.020	0.020	0.020	8658147
o-Xylene	ug/g	<0.020	<0.020	0.020	0.020	8658147
p+m-Xylene	ug/g	<0.040	<0.040	0.040	0.040	8658147
Total Xylenes	ug/g	<0.040	<0.040	0.040	0.040	8658147
F1 (C6-C10)	ug/g	<10	<10	10	5.0	8658147
F1 (C6-C10) - BTEX	ug/g	<10	<10	10	5.0	8658147
F2-F4 Hydrocarbons						
F2 (C10-C16 Hydrocarbons)	ug/g	<10	<10	10	5.0	8655771
F3 (C16-C34 Hydrocarbons)	ug/g	<50	<50	50	5.0	8655771
F4 (C34-C50 Hydrocarbons)	ug/g	<50	<50	50	10	8655771
Reached Baseline at C50	ug/g	Yes	Yes			8655771
Surrogate Recovery (%)						
1,4-Difluorobenzene	%	109	106			8658147
4-Bromofluorobenzene	%	97	86			8658147
D10-o-Xylene	%	108	108			8658147
D4-1,2-Dichloroethane	%	105	105			8658147
o-Terphenyl	%	90	93			8655771
RDL = Reportable Detection Limit						
QC Batch = Quality Control Batch						



Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

O.REG 153 VOCs BY HS & F1-F4 (SOIL)

Bureau Veritas ID		VS068				VS072			
Sampling Date		2023/05/05				2023/05/05			
COC Number		n/a				n/a			
	UNITS	BH2/1B	RDL	MDL	QC Batch	BH3/3	RDL	MDL	QC Batch
Inorganics									
Moisture	%	19	1.0	0.50	8653413				
Calculated Parameters									
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	0.050	0.010	8651352	<0.050	0.050	0.010	8651352
Volatile Organics									
Acetone (2-Propanone)	ug/g	<0.49	0.49	0.49	8652481	<0.49	0.49	0.49	8652660
Benzene	ug/g	<0.0060	0.0060	0.0060	8652481	<0.0060	0.0060	0.0060	8652660
Bromodichloromethane	ug/g	<0.040	0.040	0.040	8652481	<0.040	0.040	0.040	8652660
Bromoform	ug/g	<0.040	0.040	0.040	8652481	<0.040	0.040	0.040	8652660
Bromomethane	ug/g	<0.040	0.040	0.040	8652481	<0.040	0.040	0.040	8652660
Carbon Tetrachloride	ug/g	<0.040	0.040	0.040	8652481	<0.040	0.040	0.040	8652660
Chlorobenzene	ug/g	<0.040	0.040	0.040	8652481	<0.040	0.040	0.040	8652660
Chloroform	ug/g	<0.040	0.040	0.040	8652481	<0.040	0.040	0.040	8652660
Dibromochloromethane	ug/g	<0.040	0.040	0.040	8652481	<0.040	0.040	0.040	8652660
1,2-Dichlorobenzene	ug/g	<0.040	0.040	0.040	8652481	<0.040	0.040	0.040	8652660
1,3-Dichlorobenzene	ug/g	<0.040	0.040	0.040	8652481	<0.040	0.040	0.040	8652660
1,4-Dichlorobenzene	ug/g	<0.040	0.040	0.040	8652481	<0.040	0.040	0.040	8652660
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	0.040	0.040	8652481	<0.040	0.040	0.040	8652660
1,1-Dichloroethane	ug/g	<0.040	0.040	0.040	8652481	<0.040	0.040	0.040	8652660
1,2-Dichloroethane	ug/g	<0.049	0.049	0.049	8652481	<0.049	0.049	0.049	8652660
1,1-Dichloroethylene	ug/g	<0.040	0.040	0.040	8652481	<0.040	0.040	0.040	8652660
cis-1,2-Dichloroethylene	ug/g	<0.040	0.040	0.040	8652481	<0.040	0.040	0.040	8652660
trans-1,2-Dichloroethylene	ug/g	<0.040	0.040	0.040	8652481	<0.040	0.040	0.040	8652660
1,2-Dichloropropane	ug/g	<0.040	0.040	0.040	8652481	<0.040	0.040	0.040	8652660
cis-1,3-Dichloropropene	ug/g	<0.030	0.030	0.030	8652481	<0.030	0.030	0.030	8652660
trans-1,3-Dichloropropene	ug/g	<0.040	0.040	0.040	8652481	<0.040	0.040	0.040	8652660
Ethylbenzene	ug/g	<0.010	0.010	0.010	8652481	<0.010	0.010	0.010	8652660
Ethylene Dibromide	ug/g	<0.040	0.040	0.040	8652481	<0.040	0.040	0.040	8652660
Hexane	ug/g	<0.040	0.040	0.040	8652481	<0.040	0.040	0.040	8652660
Methylene Chloride(Dichloromethane)	ug/g	<0.049	0.049	0.049	8652481	<0.049	0.049	0.049	8652660
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	0.40	0.40	8652481	<0.40	0.40	0.40	8652660
Methyl Isobutyl Ketone	ug/g	<0.40	0.40	0.40	8652481	<0.40	0.40	0.40	8652660
Methyl t-butyl ether (MTBE)	ug/g	<0.040	0.040	0.040	8652481	<0.040	0.040	0.040	8652660
Styrene	ug/g	<0.040	0.040	0.040	8652481	<0.040	0.040	0.040	8652660
1,1,1,2-Tetrachloroethane	ug/g	<0.040	0.040	0.040	8652481	<0.040	0.040	0.040	8652660
RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch									

BUREAU
VERITAS

Bureau Veritas Job #: C3C8932

Report Date: 2023/05/18

Soil Engineers Ltd

Client Project #: 2211-E177

Site Location: MISSISSAUGA

Sampler Initials: ASH

O.REG 153 VOCs BY HS & F1-F4 (SOIL)

Bureau Veritas ID		VS068				VS072			
Sampling Date		2023/05/05				2023/05/05			
COC Number		n/a				n/a			
	UNITS	BH2/1B	RDL	MDL	QC Batch	BH3/3	RDL	MDL	QC Batch
1,1,2,2-Tetrachloroethane	ug/g	<0.040	0.040	0.040	8652481	<0.040	0.040	0.040	8652660
Tetrachloroethylene	ug/g	<0.040	0.040	0.040	8652481	<0.040	0.040	0.040	8652660
Toluene	ug/g	<0.020	0.020	0.020	8652481	<0.020	0.020	0.020	8652660
1,1,1-Trichloroethane	ug/g	<0.040	0.040	0.040	8652481	<0.040	0.040	0.040	8652660
1,1,2-Trichloroethane	ug/g	<0.040	0.040	0.040	8652481	<0.040	0.040	0.040	8652660
Trichloroethylene	ug/g	<0.010	0.010	0.010	8652481	<0.010	0.010	0.010	8652660
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	0.040	0.040	8652481	<0.040	0.040	0.040	8652660
Vinyl Chloride	ug/g	<0.019	0.019	0.019	8652481	<0.019	0.019	0.019	8652660
p+m-Xylene	ug/g	<0.020	0.020	0.020	8652481	<0.020	0.020	0.020	8652660
o-Xylene	ug/g	<0.020	0.020	0.020	8652481	<0.020	0.020	0.020	8652660
Total Xylenes	ug/g	<0.020	0.020	0.020	8652481	<0.020	0.020	0.020	8652660
F1 (C6-C10)	ug/g	<10	10	2.0	8652481	<10	10	2.0	8652660
F1 (C6-C10) - BTEX	ug/g	<10	10	2.0	8652481	<10	10	2.0	8652660
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	5.0	8655771	<10	10	5.0	8655771
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	5.0	8655771	<50	50	5.0	8655771
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	10	8655771	<50	50	10	8655771
Reached Baseline at C50	ug/g	Yes			8655771	Yes			8655771
Surrogate Recovery (%)									
o-Terphenyl	%	91			8655771	92			8655771
4-Bromofluorobenzene	%	96			8652481	97			8652660
D10-o-Xylene	%	96			8652481	100			8652660
D4-1,2-Dichloroethane	%	102			8652481	98			8652660
D8-Toluene	%	100			8652481	95			8652660
RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch									



Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

O.REG 153 VOCs BY HS & F1-F4 (SOIL)

Bureau Veritas ID		VS072				VS074			
Sampling Date		2023/05/05				2023/05/05			
COC Number		n/a				n/a			
	UNITS	BH3/3 Lab-Dup	RDL	MDL	QC Batch	BH4/1A	RDL	MDL	QC Batch
Calculated Parameters									
1,3-Dichloropropene (cis+trans)	ug/g					<0.050	0.050	0.010	8651352
Volatile Organics									
Acetone (2-Propanone)	ug/g	<0.49	0.49	0.49	8652660	<0.49	0.49	0.49	8652660
Benzene	ug/g	<0.0060	0.0060	0.0060	8652660	<0.0060	0.0060	0.0060	8652660
Bromodichloromethane	ug/g	<0.040	0.040	0.040	8652660	<0.040	0.040	0.040	8652660
Bromoform	ug/g	<0.040	0.040	0.040	8652660	<0.040	0.040	0.040	8652660
Bromomethane	ug/g	<0.040	0.040	0.040	8652660	<0.040	0.040	0.040	8652660
Carbon Tetrachloride	ug/g	<0.040	0.040	0.040	8652660	<0.040	0.040	0.040	8652660
Chlorobenzene	ug/g	<0.040	0.040	0.040	8652660	<0.040	0.040	0.040	8652660
Chloroform	ug/g	<0.040	0.040	0.040	8652660	<0.040	0.040	0.040	8652660
Dibromochloromethane	ug/g	<0.040	0.040	0.040	8652660	<0.040	0.040	0.040	8652660
1,2-Dichlorobenzene	ug/g	<0.040	0.040	0.040	8652660	<0.040	0.040	0.040	8652660
1,3-Dichlorobenzene	ug/g	<0.040	0.040	0.040	8652660	<0.040	0.040	0.040	8652660
1,4-Dichlorobenzene	ug/g	<0.040	0.040	0.040	8652660	<0.040	0.040	0.040	8652660
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	0.040	0.040	8652660	<0.040	0.040	0.040	8652660
1,1-Dichloroethane	ug/g	<0.040	0.040	0.040	8652660	<0.040	0.040	0.040	8652660
1,2-Dichloroethane	ug/g	<0.049	0.049	0.049	8652660	<0.049	0.049	0.049	8652660
1,1-Dichloroethylene	ug/g	<0.040	0.040	0.040	8652660	<0.040	0.040	0.040	8652660
cis-1,2-Dichloroethylene	ug/g	<0.040	0.040	0.040	8652660	<0.040	0.040	0.040	8652660
trans-1,2-Dichloroethylene	ug/g	<0.040	0.040	0.040	8652660	<0.040	0.040	0.040	8652660
1,2-Dichloropropane	ug/g	<0.040	0.040	0.040	8652660	<0.040	0.040	0.040	8652660
cis-1,3-Dichloropropene	ug/g	<0.030	0.030	0.030	8652660	<0.030	0.030	0.030	8652660
trans-1,3-Dichloropropene	ug/g	<0.040	0.040	0.040	8652660	<0.040	0.040	0.040	8652660
Ethylbenzene	ug/g	<0.010	0.010	0.010	8652660	<0.010	0.010	0.010	8652660
Ethylene Dibromide	ug/g	<0.040	0.040	0.040	8652660	<0.040	0.040	0.040	8652660
Hexane	ug/g	<0.040	0.040	0.040	8652660	<0.040	0.040	0.040	8652660
Methylene Chloride(Dichloromethane)	ug/g	<0.049	0.049	0.049	8652660	<0.049	0.049	0.049	8652660
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	0.40	0.40	8652660	<0.40	0.40	0.40	8652660
Methyl Isobutyl Ketone	ug/g	<0.40	0.40	0.40	8652660	<0.40	0.40	0.40	8652660
Methyl t-butyl ether (MTBE)	ug/g	<0.040	0.040	0.040	8652660	<0.040	0.040	0.040	8652660
Styrene	ug/g	<0.040	0.040	0.040	8652660	<0.040	0.040	0.040	8652660
1,1,1,2-Tetrachloroethane	ug/g	<0.040	0.040	0.040	8652660	<0.040	0.040	0.040	8652660
1,1,2,2-Tetrachloroethane	ug/g	<0.040	0.040	0.040	8652660	<0.040	0.040	0.040	8652660
RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch									
Lab-Dup = Laboratory Initiated Duplicate									

BUREAU
VERITAS

Bureau Veritas Job #: C3C8932

Report Date: 2023/05/18

Soil Engineers Ltd

Client Project #: 2211-E177

Site Location: MISSISSAUGA

Sampler Initials: ASH

O.REG 153 VOCs BY HS & F1-F4 (SOIL)

Bureau Veritas ID		VS072				VS074			
Sampling Date		2023/05/05				2023/05/05			
COC Number		n/a				n/a			
	UNITS	BH3/3 Lab-Dup	RDL	MDL	QC Batch	BH4/1A	RDL	MDL	QC Batch
Tetrachloroethylene	ug/g	<0.040	0.040	0.040	8652660	<0.040	0.040	0.040	8652660
Toluene	ug/g	<0.020	0.020	0.020	8652660	<0.020	0.020	0.020	8652660
1,1,1-Trichloroethane	ug/g	<0.040	0.040	0.040	8652660	<0.040	0.040	0.040	8652660
1,1,2-Trichloroethane	ug/g	<0.040	0.040	0.040	8652660	<0.040	0.040	0.040	8652660
Trichloroethylene	ug/g	<0.010	0.010	0.010	8652660	<0.010	0.010	0.010	8652660
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	0.040	0.040	8652660	<0.040	0.040	0.040	8652660
Vinyl Chloride	ug/g	<0.019	0.019	0.019	8652660	<0.019	0.019	0.019	8652660
p+m-Xylene	ug/g	<0.020	0.020	0.020	8652660	<0.020	0.020	0.020	8652660
o-Xylene	ug/g	<0.020	0.020	0.020	8652660	<0.020	0.020	0.020	8652660
Total Xylenes	ug/g	<0.020	0.020	0.020	8652660	<0.020	0.020	0.020	8652660
F1 (C6-C10)	ug/g	<10	10	2.0	8652660	<10	10	2.0	8652660
F1 (C6-C10) - BTEX	ug/g	<10	10	2.0	8652660	<10	10	2.0	8652660
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/g					<10	10	5.0	8655771
F3 (C16-C34 Hydrocarbons)	ug/g					<50	50	5.0	8655771
F4 (C34-C50 Hydrocarbons)	ug/g					<50	50	10	8655771
Reached Baseline at C50	ug/g					Yes			8655771
Surrogate Recovery (%)									
o-Terphenyl	%					92			8655771
4-Bromofluorobenzene	%	96			8652660	95			8652660
D10-o-Xylene	%	100			8652660	102			8652660
D4-1,2-Dichloroethane	%	92			8652660	83			8652660
D8-Toluene	%	98			8652660	101			8652660
RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch									
Lab-Dup = Laboratory Initiated Duplicate									

BUREAU
VERITAS

Bureau Veritas Job #: C3C8932

Report Date: 2023/05/18

Soil Engineers Ltd

Client Project #: 2211-E177

Site Location: MISSISSAUGA

Sampler Initials: ASH

O.REG 153 VOCS BY HS (SOIL)

Bureau Veritas ID		VS079			
Sampling Date		2023/05/05			
COC Number		n/a			
	UNITS	BH5/3	RDL	MDL	QC Batch
Calculated Parameters					
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	0.050	0.010	8651352
Volatile Organics					
Acetone (2-Propanone)	ug/g	<0.49	0.49	0.49	8656969
Benzene	ug/g	<0.0060	0.0060	0.0060	8656969
Bromodichloromethane	ug/g	<0.040	0.040	0.040	8656969
Bromoform	ug/g	<0.040	0.040	0.040	8656969
Bromomethane	ug/g	<0.040	0.040	0.040	8656969
Carbon Tetrachloride	ug/g	<0.040	0.040	0.040	8656969
Chlorobenzene	ug/g	<0.040	0.040	0.040	8656969
Chloroform	ug/g	<0.040	0.040	0.040	8656969
Dibromochloromethane	ug/g	<0.040	0.040	0.040	8656969
1,2-Dichlorobenzene	ug/g	<0.040	0.040	0.040	8656969
1,3-Dichlorobenzene	ug/g	<0.040	0.040	0.040	8656969
1,4-Dichlorobenzene	ug/g	<0.040	0.040	0.040	8656969
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	0.040	0.050	8656969
1,1-Dichloroethane	ug/g	<0.040	0.040	0.040	8656969
1,2-Dichloroethane	ug/g	<0.049	0.049	0.040	8656969
1,1-Dichloroethylene	ug/g	<0.040	0.040	0.040	8656969
cis-1,2-Dichloroethylene	ug/g	<0.040	0.040	0.040	8656969
trans-1,2-Dichloroethylene	ug/g	<0.040	0.040	0.040	8656969
1,2-Dichloropropane	ug/g	<0.040	0.040	0.040	8656969
cis-1,3-Dichloropropene	ug/g	<0.030	0.030	0.030	8656969
trans-1,3-Dichloropropene	ug/g	<0.040	0.040	0.040	8656969
Ethylbenzene	ug/g	<0.010	0.010	0.010	8656969
Ethylene Dibromide	ug/g	<0.040	0.040	0.040	8656969
Hexane	ug/g	<0.040	0.040	0.040	8656969
Methylene Chloride(Dichloromethane)	ug/g	<0.049	0.049	0.049	8656969
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	0.40	0.40	8656969
Methyl Isobutyl Ketone	ug/g	<0.40	0.40	0.40	8656969
Methyl t-butyl ether (MTBE)	ug/g	<0.040	0.040	0.040	8656969
Styrene	ug/g	<0.040	0.040	0.040	8656969
1,1,1,2-Tetrachloroethane	ug/g	<0.040	0.040	0.040	8656969
1,1,2,2-Tetrachloroethane	ug/g	<0.040	0.040	0.040	8656969
Tetrachloroethylene	ug/g	<0.040	0.040	0.040	8656969
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					



Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

O.REG 153 VOCs BY HS (SOIL)

Bureau Veritas ID		VSY079			
Sampling Date		2023/05/05			
COC Number		n/a			
	UNITS	BH5/3	RDL	MDL	QC Batch
Toluene	ug/g	<0.020	0.020	0.020	8656969
1,1,1-Trichloroethane	ug/g	<0.040	0.040	0.040	8656969
1,1,2-Trichloroethane	ug/g	<0.040	0.040	0.040	8656969
Trichloroethylene	ug/g	<0.010	0.010	0.010	8656969
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	0.040	0.040	8656969
Vinyl Chloride	ug/g	<0.019	0.019	0.019	8656969
p+m-Xylene	ug/g	<0.020	0.020	0.020	8656969
o-Xylene	ug/g	<0.020	0.020	0.020	8656969
Total Xylenes	ug/g	<0.020	0.020	0.020	8656969
Surrogate Recovery (%)					
4-Bromofluorobenzene	%	100			8656969
D10-o-Xylene	%	117			8656969
D4-1,2-Dichloroethane	%	96			8656969
D8-Toluene	%	99			8656969
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					

BUREAU
VERITAS

Bureau Veritas Job #: C3C8932

Report Date: 2023/05/18

Soil Engineers Ltd

Client Project #: 2211-E177

Site Location: MISSISSAUGA

Sampler Initials: ASH

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		VSU064		VSU066		VSU070	VSU070	VSU072			
Sampling Date		2023/05/05		2023/05/05		2023/05/05	2023/05/05	2023/05/05			
COC Number		n/a		n/a		n/a	n/a	n/a			
	UNITS	BH1/1	QC Batch	BH2/2	QC Batch	BH3/1B	BH3/1B Lab-Dup	BH3/3	RDL	MDL	QC Batch

Inorganics

Moisture	%	13	8653413	24	8653519	25	25	11	1.0	0.50	8653413
Available (CaCl ₂) pH	pH	7.76	8672177								

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas ID		VSU073		VSU074	VSU075	VSU076		VSU077			
Sampling Date		2023/05/05		2023/05/05	2023/05/05	2023/05/05		2023/05/05			
COC Number		n/a		n/a	n/a	n/a		n/a			
	UNITS	BH3/4A	QC Batch	BH4/1A	BH4/1B	BH4/3	QC Batch	BH5/1A	RDL	MDL	QC Batch

Inorganics

Moisture	%	11	8655210	9.5	18	14	8653413	15	1.0	0.50	8655210
Available (CaCl ₂) pH	pH							7.36			8672177

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Bureau Veritas ID		VSU077			VSU078		VSU079		VSU080			
Sampling Date		2023/05/05			2023/05/05		2023/05/05		2023/05/05			
COC Number		n/a			n/a		n/a		n/a			
	UNITS	BH5/1A Lab-Dup	MDL	QC Batch	BH5/2	QC Batch	BH5/3	QC Batch	BH6/1B	RDL	MDL	QC Batch

Inorganics

Moisture	%				25	8653413	17	8655210	23	1.0	0.50	8653413
Available (CaCl ₂) pH	pH	7.54		8672177								

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Lab-Dup = Laboratory Initiated Duplicate

Bureau Veritas ID		VSU083		VSU084		VSU085		VSU086				
Sampling Date		2023/05/05		2023/05/05		2023/05/05		2023/05/05				
COC Number		n/a		n/a		n/a		n/a				
	UNITS	DUPS3	QC Batch	BH6/2	QC Batch	BH7/3A	QC Batch	BH8/3A	RDL	MDL	QC Batch	

Inorganics

Moisture	%	23	8653413	17	8653413	11	8653519	12	1.0	0.50	8653413	
Available (CaCl ₂) pH	pH			7.70	8672177							

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch



BUREAU
VERITAS

Bureau Veritas Job #: C3C8932

Report Date: 2023/05/18

Soil Engineers Ltd

Client Project #: 2211-E177

Site Location: MISSISSAUGA

Sampler Initials: ASH

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		VS087	VS088		VS089			
Sampling Date		2023/05/05	2023/05/05		2023/05/05			
COC Number		n/a	n/a		n/a			
	UNITS	BH8/1A	DUPS4	QC Batch	BH6/2	RDL	MDL	QC Batch
Inorganics								
Moisture	%	20	11	8655210	21	1.0	0.50	8656521
RDL = Reportable Detection Limit								
QC Batch = Quality Control Batch								



Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

TEST SUMMARY

Bureau Veritas ID: VSY064
Sample ID: BH1/1
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8658147	N/A	2023/05/11	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8655771	2023/05/10	2023/05/10	Emir Danisman
Acid Extractable Metals by ICPMS	ICP/MS	8655988	2023/05/10	2023/05/11	Daniel Teclu
Moisture	BAL	8653413	N/A	2023/05/09	Rajkumar Patel
pH CaCl2 EXTRACT	AT	8672177	2023/05/18	2023/05/18	Surinder Rai

Bureau Veritas ID: VSY065
Sample ID: BH2/4B
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8656081	2023/05/10	2023/05/10	Medhat Nasr
Free (WAD) Cyanide	TECH	8655766	2023/05/10	2023/05/10	Chloe Pollock
Hexavalent Chromium in Soil by IC	IC/SPEC	8656019	2023/05/10	2023/05/10	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	8655988	2023/05/10	2023/05/11	Daniel Teclu
Moisture	BAL	8653519	N/A	2023/05/09	Rajkumar Patel
OC Pesticides (Selected) & PCB	GC/ECD	8657324	2023/05/10	2023/05/11	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	8651464	N/A	2023/05/09	Automated Statchk
pH CaCl2 EXTRACT	AT	8656186	2023/05/10	2023/05/10	Taslina Aktar

Bureau Veritas ID: VSY065 Dup
Sample ID: BH2/4B
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8656081	2023/05/10	2023/05/10	Medhat Nasr
pH CaCl2 EXTRACT	AT	8656186	2023/05/10	2023/05/10	Taslina Aktar

Bureau Veritas ID: VSY066
Sample ID: BH2/2
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8656133	2023/05/10	2023/05/11	Medhat Nasr
Free (WAD) Cyanide	TECH	8664305	2023/05/15	2023/05/15	Kruti Jitesh Patel
Conductivity	AT	8655821	2023/05/10	2023/05/10	Leily Karimi
Hexavalent Chromium in Soil by IC	IC/SPEC	8661354	2023/05/12	2023/05/13	Sousan Besharatlou
Acid Extractable Metals by ICPMS	ICP/MS	8655988	2023/05/10	2023/05/11	Daniel Teclu
Moisture	BAL	8653519	N/A	2023/05/09	Rajkumar Patel
pH CaCl2 EXTRACT	AT	8664577	2023/05/15	2023/05/15	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	8651563	N/A	2023/05/11	Automated Statchk



Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

TEST SUMMARY

Bureau Veritas ID: VSY067
Sample ID: BH2/3
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8651351	N/A	2023/05/10	Automated Statchk
Moisture	BAL	8653413	N/A	2023/05/09	Rajkumar Patel
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8653279	2023/05/09	2023/05/09	Mitesh Raj

Bureau Veritas ID: VSY068
Sample ID: BH2/1B
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8651352	N/A	2023/05/10	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8655771	2023/05/10	2023/05/10	Emir Danisman
Moisture	BAL	8653413	N/A	2023/05/09	Rajkumar Patel
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8652481	N/A	2023/05/09	Denis Reid

Bureau Veritas ID: VSY069
Sample ID: BH3/1A
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	8655210	N/A	2023/05/09	Shivani Desai
OC Pesticides (Selected) & PCB	GC/ECD	8657324	2023/05/10	2023/05/11	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	8651464	N/A	2023/05/10	Automated Statchk

Bureau Veritas ID: VSY070
Sample ID: BH3/1B
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hexavalent Chromium in Soil by IC	IC/SPEC	8656019	2023/05/10	2023/05/10	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	8655988	2023/05/10	2023/05/11	Daniel Teclu
Moisture	BAL	8653413	N/A	2023/05/09	Rajkumar Patel

Bureau Veritas ID: VSY070 Dup
Sample ID: BH3/1B
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	8653413	N/A	2023/05/09	Rajkumar Patel

Bureau Veritas ID: VSY071
Sample ID: BH3/2
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8651351	N/A	2023/05/10	Automated Statchk



Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

TEST SUMMARY

Bureau Veritas ID: VSY071
Sample ID: BH3/2
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	8653413	N/A	2023/05/09	Rajkumar Patel
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8653279	2023/05/09	2023/05/10	Mitesh Raj

Bureau Veritas ID: VSY072
Sample ID: BH3/3
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8651352	N/A	2023/05/11	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8655771	2023/05/10	2023/05/10	Emir Danisman
Moisture	BAL	8653413	N/A	2023/05/09	Rajkumar Patel
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8652660	N/A	2023/05/10	Blair Gannon

Bureau Veritas ID: VSY072 Dup
Sample ID: BH3/3
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8652660	N/A	2023/05/10	Blair Gannon

Bureau Veritas ID: VSY073
Sample ID: BH3/4A
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	8655210	N/A	2023/05/09	Shivani Desai
OC Pesticides (Selected) & PCB	GC/ECD	8657324	2023/05/10	2023/05/11	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	8651464	N/A	2023/05/10	Automated Statchk

Bureau Veritas ID: VSY074
Sample ID: BH4/1A
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8651352	N/A	2023/05/11	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8655771	2023/05/10	2023/05/10	Emir Danisman
Moisture	BAL	8653413	N/A	2023/05/09	Rajkumar Patel
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8652660	N/A	2023/05/10	Blair Gannon

Bureau Veritas ID: VSY075
Sample ID: BH4/1B
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8651351	N/A	2023/05/10	Automated Statchk



Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

TEST SUMMARY

Bureau Veritas ID: VSY075
Sample ID: BH4/1B
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	8653413	N/A	2023/05/09	Rajkumar Patel
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8653279	2023/05/09	2023/05/10	Mitesh Raj

Bureau Veritas ID: VSY076
Sample ID: BH4/3
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8656081	2023/05/10	2023/05/10	Medhat Nasr
Free (WAD) Cyanide	TECH	8655766	2023/05/10	2023/05/10	Chloe Pollock
Hexavalent Chromium in Soil by IC	IC/SPEC	8656019	2023/05/10	2023/05/10	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	8655808	2023/05/10	2023/05/10	Daniel Teclu
Moisture	BAL	8653413	N/A	2023/05/09	Rajkumar Patel
pH CaCl2 EXTRACT	AT	8656186	2023/05/10	2023/05/10	Taslima Aktar

Bureau Veritas ID: VSY077
Sample ID: BH5/1A
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8656081	2023/05/10	2023/05/10	Medhat Nasr
Free (WAD) Cyanide	TECH	8655766	2023/05/10	2023/05/10	Chloe Pollock
Hexavalent Chromium in Soil by IC	IC/SPEC	8656019	2023/05/10	2023/05/10	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	8655988	2023/05/10	2023/05/11	Daniel Teclu
Moisture	BAL	8655210	N/A	2023/05/09	Shivani Desai
OC Pesticides (Selected) & PCB	GC/ECD	8657324	2023/05/10	2023/05/11	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	8651464	N/A	2023/05/10	Automated Statchk
pH CaCl2 EXTRACT	AT	8672177	2023/05/18	2023/05/18	Surinder Rai

Bureau Veritas ID: VSY077 Dup
Sample ID: BH5/1A
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH CaCl2 EXTRACT	AT	8672177	2023/05/18	2023/05/18	Surinder Rai

Bureau Veritas ID: VSY078
Sample ID: BH5/2
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8658147	N/A	2023/05/11	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8655771	2023/05/10	2023/05/10	Emir Danisman
Moisture	BAL	8653413	N/A	2023/05/09	Rajkumar Patel



Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

TEST SUMMARY

Bureau Veritas ID: VSY078 Dup
Sample ID: BH5/2
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8658147	N/A	2023/05/11	Ravinder Gaidhu

Bureau Veritas ID: VSY079
Sample ID: BH5/3
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8651352	N/A	2023/05/12	Automated Statchk
Moisture	BAL	8655210	N/A	2023/05/09	Shivani Desai
Volatile Organic Compounds in Soil	GC/MS	8656969	N/A	2023/05/12	Skylar Canning

Bureau Veritas ID: VSY080
Sample ID: BH6/1B
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8658147	N/A	2023/05/11	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8655771	2023/05/10	2023/05/10	Emir Danisman
Moisture	BAL	8653413	N/A	2023/05/09	Rajkumar Patel

Bureau Veritas ID: VSY081
Sample ID: DUPS1
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Acid Extractable Metals by ICPMS	ICP/MS	8655988	2023/05/10	2023/05/11	Daniel Teclu

Bureau Veritas ID: VSY082
Sample ID: DUPS2
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8651351	N/A	2023/05/10	Automated Statchk
Moisture	BAL	8653413	N/A	2023/05/09	Rajkumar Patel
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8653279	2023/05/09	2023/05/09	Mitesh Raj

Bureau Veritas ID: VSY082 Dup
Sample ID: DUPS2
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8653279	2023/05/09	2023/05/09	Mitesh Raj



Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

TEST SUMMARY

Bureau Veritas ID: VSY083
Sample ID: DUP53
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8658147	N/A	2023/05/11	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8655771	2023/05/10	2023/05/10	Emir Danisman
Moisture	BAL	8653413	N/A	2023/05/09	Rajkumar Patel

Bureau Veritas ID: VSY084
Sample ID: BH6/2
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8656081	2023/05/10	2023/05/10	Medhat Nasr
Free (WAD) Cyanide	TECH	8655766	2023/05/10	2023/05/10	Chloe Pollock
Hexavalent Chromium in Soil by IC	IC/SPEC	8656019	2023/05/10	2023/05/10	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	8655988	2023/05/10	2023/05/11	Daniel Teclu
Moisture	BAL	8653413	N/A	2023/05/09	Rajkumar Patel
pH CaCl2 EXTRACT	AT	8672177	2023/05/18	2023/05/18	Surinder Rai

Bureau Veritas ID: VSY085
Sample ID: BH7/3A
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8656133	2023/05/10	2023/05/11	Medhat Nasr
Free (WAD) Cyanide	TECH	8655766	2023/05/10	2023/05/10	Chloe Pollock
Hexavalent Chromium in Soil by IC	IC/SPEC	8656019	2023/05/10	2023/05/10	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	8655988	2023/05/10	2023/05/11	Daniel Teclu
Moisture	BAL	8653519	N/A	2023/05/09	Rajkumar Patel
OC Pesticides (Selected) & PCB	GC/ECD	8657324	2023/05/10	2023/05/11	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	8651464	N/A	2023/05/09	Automated Statchk

Bureau Veritas ID: VSY086
Sample ID: BH8/3A
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hot Water Extractable Boron	ICP	8656133	2023/05/10	2023/05/11	Medhat Nasr
Free (WAD) Cyanide	TECH	8655766	2023/05/10	2023/05/10	Chloe Pollock
Hexavalent Chromium in Soil by IC	IC/SPEC	8656019	2023/05/10	2023/05/10	Violeta Porcila
Acid Extractable Metals by ICPMS	ICP/MS	8655808	2023/05/10	2023/05/10	Daniel Teclu
Moisture	BAL	8653413	N/A	2023/05/09	Rajkumar Patel
OC Pesticides (Selected) & PCB	GC/ECD	8657324	2023/05/10	2023/05/11	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	8651464	N/A	2023/05/09	Automated Statchk



Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

TEST SUMMARY

Bureau Veritas ID: VSY087
Sample ID: BH8/1A
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	8655210	N/A	2023/05/09	Shivani Desai
OC Pesticides (Selected) & PCB	GC/ECD	8657324	2023/05/10	2023/05/11	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	8651464	N/A	2023/05/10	Automated Statchk

Bureau Veritas ID: VSY088
Sample ID: DUPS4
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Moisture	BAL	8655210	N/A	2023/05/09	Shivani Desai
OC Pesticides (Selected) & PCB	GC/ECD	8657324	2023/05/10	2023/05/11	Mahmudul Khan
OC Pesticides Summed Parameters	CALC	8651464	N/A	2023/05/10	Automated Statchk

Bureau Veritas ID: VSY089
Sample ID: BH6/2
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/05

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8653738	N/A	2023/05/15	Automated Statchk
Moisture	BAL	8656521	N/A	2023/05/10	Rajkumar Patel
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8660935	2023/05/12	2023/05/12	Jonghan Yoon



Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

GENERAL COMMENTS

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

Package 1	3.7°C
-----------	-------

Cooler custody seal was present and intact.

Revised Report (2023/05/18): pH included for samples BH1/1, BH5/1A and BH6/2 as per client request.

Sample VSY077 [BH5/1A] : OC Pesticide Analysis: Due to the sample matrix, sample required dilution. Detection limits were adjusted accordingly.

O.REG 153 OC PESTICIDES (SOIL)

OC Pesticides (Selected) & PCB: The recovery was above the upper control limit. This may represent a high bias in some results for flagged analytes. For results that were not detected (ND), this potential bias has no impact.

Results relate only to the items tested.



Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

QUALITY ASSURANCE REPORT

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8652481	4-Bromofluorobenzene	2023/05/09	102	60 - 140	100	60 - 140	98	%		
8652481	D10-o-Xylene	2023/05/09	96	60 - 130	100	60 - 130	91	%		
8652481	D4-1,2-Dichloroethane	2023/05/09	99	60 - 140	100	60 - 140	100	%		
8652481	D8-Toluene	2023/05/09	100	60 - 140	100	60 - 140	100	%		
8652660	4-Bromofluorobenzene	2023/05/10	101	60 - 140	101	60 - 140	96	%		
8652660	D10-o-Xylene	2023/05/10	103	60 - 130	110	60 - 130	98	%		
8652660	D4-1,2-Dichloroethane	2023/05/10	99	60 - 140	96	60 - 140	100	%		
8652660	D8-Toluene	2023/05/10	101	60 - 140	104	60 - 140	100	%		
8653279	D10-Anthracene	2023/05/09	87	50 - 130	91	50 - 130	97	%		
8653279	D14-Terphenyl (FS)	2023/05/09	82	50 - 130	83	50 - 130	83	%		
8653279	D8-Acenaphthylene	2023/05/09	74	50 - 130	70	50 - 130	85	%		
8655771	o-Terphenyl	2023/05/10	92	60 - 130	94	60 - 130	94	%		
8656969	4-Bromofluorobenzene	2023/05/11	82	60 - 140	86	60 - 140	84	%		
8656969	D10-o-Xylene	2023/05/11	116	60 - 130	87	60 - 130	86	%		
8656969	D4-1,2-Dichloroethane	2023/05/11	112	60 - 140	116	60 - 140	121	%		
8656969	D8-Toluene	2023/05/11	116	60 - 140	113	60 - 140	100	%		
8657324	2,4,5,6-Tetrachloro-m-xylene	2023/05/11	99	50 - 130	80	50 - 130	93	%		
8657324	Decachlorobiphenyl	2023/05/11	135 (2)	50 - 130	95	50 - 130	121	%		
8658147	1,4-Difluorobenzene	2023/05/11	101	60 - 140	105	60 - 140	106	%		
8658147	4-Bromofluorobenzene	2023/05/11	107	60 - 140	105	60 - 140	89	%		
8658147	D10-o-Xylene	2023/05/11	109	60 - 140	102	60 - 140	96	%		
8658147	D4-1,2-Dichloroethane	2023/05/11	105	60 - 140	104	60 - 140	106	%		
8660935	D10-Anthracene	2023/05/12	107	50 - 130	108	50 - 130	113	%		
8660935	D14-Terphenyl (FS)	2023/05/12	103	50 - 130	96	50 - 130	104	%		
8660935	D8-Acenaphthylene	2023/05/12	88	50 - 130	89	50 - 130	85	%		
8652481	1,1,2-Tetrachloroethane	2023/05/09	101	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
8652481	1,1,1-Trichloroethane	2023/05/09	100	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
8652481	1,1,2,2-Tetrachloroethane	2023/05/09	97	60 - 140	94	60 - 130	<0.040	ug/g	NC	50
8652481	1,1,2-Trichloroethane	2023/05/09	100	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
8652481	1,1-Dichloroethane	2023/05/09	93	60 - 140	92	60 - 130	<0.040	ug/g	NC	50
8652481	1,1-Dichloroethylene	2023/05/09	98	60 - 140	97	60 - 130	<0.040	ug/g	NC	50



**BUREAU
VERITAS**
Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8652481	1,2-Dichlorobenzene	2023/05/09	97	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
8652481	1,2-Dichloroethane	2023/05/09	93	60 - 140	93	60 - 130	<0.049	ug/g	NC	50
8652481	1,2-Dichloropropane	2023/05/09	95	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
8652481	1,3-Dichlorobenzene	2023/05/09	97	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
8652481	1,4-Dichlorobenzene	2023/05/09	110	60 - 140	110	60 - 130	<0.040	ug/g	NC	50
8652481	Acetone (2-Propanone)	2023/05/09	107	60 - 140	84	60 - 140	<0.49	ug/g	NC	50
8652481	Benzene	2023/05/09	91	60 - 140	90	60 - 130	<0.0060	ug/g	NC	50
8652481	Bromodichloromethane	2023/05/09	100	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
8652481	Bromoform	2023/05/09	101	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
8652481	Bromomethane	2023/05/09	99	60 - 140	92	60 - 140	<0.040	ug/g	NC	50
8652481	Carbon Tetrachloride	2023/05/09	100	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
8652481	Chlorobenzene	2023/05/09	96	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
8652481	Chloroform	2023/05/09	98	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
8652481	cis-1,2-Dichloroethylene	2023/05/09	97	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
8652481	cis-1,3-Dichloropropene	2023/05/09	93	60 - 140	89	60 - 130	<0.030	ug/g	NC	50
8652481	Dibromochloromethane	2023/05/09	98	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
8652481	Dichlorodifluoromethane (FREON 12)	2023/05/09	106	60 - 140	107	60 - 140	<0.040	ug/g	NC	50
8652481	Ethylbenzene	2023/05/09	88	60 - 140	88	60 - 130	<0.010	ug/g	NC	50
8652481	Ethylene Dibromide	2023/05/09	96	60 - 140	94	60 - 130	<0.040	ug/g	NC	50
8652481	F1 (C6-C10) - BTEX	2023/05/09					<10	ug/g	NC	30
8652481	F1 (C6-C10)	2023/05/09	85	60 - 140	81	80 - 120	<10	ug/g	NC	30
8652481	Hexane	2023/05/09	95	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
8652481	Methyl Ethyl Ketone (2-Butanone)	2023/05/09	104	60 - 140	88	60 - 140	<0.40	ug/g	NC	50
8652481	Methyl Isobutyl Ketone	2023/05/09	102	60 - 140	97	60 - 130	<0.40	ug/g	NC	50
8652481	Methyl t-butyl ether (MTBE)	2023/05/09	92	60 - 140	91	60 - 130	<0.040	ug/g	NC	50
8652481	Methylene Chloride(Dichloromethane)	2023/05/09	106	60 - 140	104	60 - 130	<0.049	ug/g	NC	50
8652481	o-Xylene	2023/05/09	93	60 - 140	93	60 - 130	<0.020	ug/g	NC	50
8652481	p+m-Xylene	2023/05/09	92	60 - 140	92	60 - 130	<0.020	ug/g	NC	50
8652481	Styrene	2023/05/09	104	60 - 140	102	60 - 130	<0.040	ug/g	NC	50
8652481	Tetrachloroethylene	2023/05/09	93	60 - 140	92	60 - 130	<0.040	ug/g	NC	50
8652481	Toluene	2023/05/09	90	60 - 140	90	60 - 130	<0.020	ug/g	NC	50

Page 34 of 43

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

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



**BUREAU
VERITAS**
Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8652481	Total Xylenes	2023/05/09					<0.020	ug/g	NC	50
8652481	trans-1,2-Dichloroethylene	2023/05/09	98	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
8652481	trans-1,3-Dichloropropene	2023/05/09	100	60 - 140	93	60 - 130	<0.040	ug/g	NC	50
8652481	Trichloroethylene	2023/05/09	101	60 - 140	100	60 - 130	<0.010	ug/g	NC	50
8652481	Trichlorofluoromethane (FREON 11)	2023/05/09	99	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
8652481	Vinyl Chloride	2023/05/09	98	60 - 140	99	60 - 130	<0.019	ug/g	NC	50
8652660	1,1,1,2-Tetrachloroethane	2023/05/10	94	60 - 140	102	60 - 130	<0.040	ug/g	NC	50
8652660	1,1,1-Trichloroethane	2023/05/10	98	60 - 140	108	60 - 130	<0.040	ug/g	NC	50
8652660	1,1,2,2-Tetrachloroethane	2023/05/10	86	60 - 140	90	60 - 130	<0.040	ug/g	NC	50
8652660	1,1,2-Trichloroethane	2023/05/10	90	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
8652660	1,1-Dichloroethane	2023/05/10	91	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
8652660	1,1-Dichloroethylene	2023/05/10	96	60 - 140	106	60 - 130	<0.040	ug/g	NC	50
8652660	1,2-Dichlorobenzene	2023/05/10	92	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
8652660	1,2-Dichloroethane	2023/05/10	90	60 - 140	93	60 - 130	<0.049	ug/g	NC	50
8652660	1,2-Dichloropropane	2023/05/10	90	60 - 140	96	60 - 130	<0.040	ug/g	NC	50
8652660	1,3-Dichlorobenzene	2023/05/10	93	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
8652660	1,4-Dichlorobenzene	2023/05/10	106	60 - 140	116	60 - 130	<0.040	ug/g	NC	50
8652660	Acetone (2-Propanone)	2023/05/10	97	60 - 140	101	60 - 140	<0.49	ug/g	NC	50
8652660	Benzene	2023/05/10	88	60 - 140	95	60 - 130	<0.0060	ug/g	NC	50
8652660	Bromodichloromethane	2023/05/10	95	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
8652660	Bromoform	2023/05/10	91	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
8652660	Bromomethane	2023/05/10	98	60 - 140	106	60 - 140	<0.040	ug/g	NC	50
8652660	Carbon Tetrachloride	2023/05/10	97	60 - 140	106	60 - 130	<0.040	ug/g	NC	50
8652660	Chlorobenzene	2023/05/10	92	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
8652660	Chloroform	2023/05/10	94	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
8652660	cis-1,2-Dichloroethylene	2023/05/10	98	60 - 140	104	60 - 130	<0.040	ug/g	NC	50
8652660	cis-1,3-Dichloropropene	2023/05/10	93	60 - 140	98	60 - 130	<0.030	ug/g	NC	50
8652660	Dibromochloromethane	2023/05/10	91	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
8652660	Dichlorodifluoromethane (FREON 12)	2023/05/10	99	60 - 140	113	60 - 140	<0.040	ug/g	NC	50
8652660	Ethylbenzene	2023/05/10	85	60 - 140	95	60 - 130	<0.010	ug/g	NC	50
8652660	Ethylene Dibromide	2023/05/10	88	60 - 140	93	60 - 130	<0.040	ug/g	NC	50

Page 35 of 43

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

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



BUREAU
VERITAS

Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8652660	F1 (C6-C10) - BTEX	2023/05/10					<10	ug/g	NC	30
8652660	F1 (C6-C10)	2023/05/10	96	60 - 140	87	80 - 120	<10	ug/g	NC	30
8652660	Hexane	2023/05/10	96	60 - 140	108	60 - 130	<0.040	ug/g	NC	50
8652660	Methyl Ethyl Ketone (2-Butanone)	2023/05/10	92	60 - 140	93	60 - 140	<0.40	ug/g	NC	50
8652660	Methyl Isobutyl Ketone	2023/05/10	89	60 - 140	91	60 - 130	<0.40	ug/g	NC	50
8652660	Methyl t-butyl ether (MTBE)	2023/05/10	87	60 - 140	92	60 - 130	<0.040	ug/g	NC	50
8652660	Methylene Chloride(Dichloromethane)	2023/05/10	92	60 - 140	97	60 - 130	<0.049	ug/g	NC	50
8652660	o-Xylene	2023/05/10	89	60 - 140	99	60 - 130	<0.020	ug/g	NC	50
8652660	p+m-Xylene	2023/05/10	88	60 - 140	98	60 - 130	<0.020	ug/g	NC	50
8652660	Styrene	2023/05/10	99	60 - 140	109	60 - 130	<0.040	ug/g	NC	50
8652660	Tetrachloroethylene	2023/05/10	90	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
8652660	Toluene	2023/05/10	87	60 - 140	97	60 - 130	<0.020	ug/g	NC	50
8652660	Total Xylenes	2023/05/10					<0.020	ug/g	NC	50
8652660	trans-1,2-Dichloroethylene	2023/05/10	95	60 - 140	102	60 - 130	<0.040	ug/g	NC	50
8652660	trans-1,3-Dichloropropene	2023/05/10	97	60 - 140	103	60 - 130	<0.040	ug/g	NC	50
8652660	Trichloroethylene	2023/05/10	100	60 - 140	108	60 - 130	<0.010	ug/g	NC	50
8652660	Trichlorofluoromethane (FREON 11)	2023/05/10	100	60 - 140	111	60 - 130	<0.040	ug/g	NC	50
8652660	Vinyl Chloride	2023/05/10	98	60 - 140	109	60 - 130	<0.019	ug/g	NC	50
8653279	1-Methylnaphthalene	2023/05/09	90	50 - 130	95	50 - 130	<0.0050	ug/g	NC	40
8653279	2-Methylnaphthalene	2023/05/09	76	50 - 130	81	50 - 130	<0.0050	ug/g	NC	40
8653279	Acenaphthene	2023/05/09	93	50 - 130	111	50 - 130	<0.0050	ug/g	NC	40
8653279	Acenaphthylene	2023/05/09	84	50 - 130	84	50 - 130	<0.0050	ug/g	NC	40
8653279	Anthracene	2023/05/09	93	50 - 130	98	50 - 130	<0.0050	ug/g	NC	40
8653279	Benzo(a)anthracene	2023/05/09	93	50 - 130	94	50 - 130	<0.0050	ug/g	NC	40
8653279	Benzo(a)pyrene	2023/05/09	91	50 - 130	98	50 - 130	<0.0050	ug/g	NC	40
8653279	Benzo(b,j)fluoranthene	2023/05/09	97	50 - 130	106	50 - 130	<0.0050	ug/g	NC	40
8653279	Benzo(g,h,i)perylene	2023/05/09	106	50 - 130	114	50 - 130	<0.0050	ug/g	NC	40
8653279	Benzo(k)fluoranthene	2023/05/09	96	50 - 130	102	50 - 130	<0.0050	ug/g	NC	40
8653279	Chrysene	2023/05/09	100	50 - 130	102	50 - 130	<0.0050	ug/g	NC	40
8653279	Dibenzo(a,h)anthracene	2023/05/09	108	50 - 130	110	50 - 130	<0.0050	ug/g	NC	40
8653279	Fluoranthene	2023/05/09	92	50 - 130	95	50 - 130	<0.0050	ug/g	NC	40

Page 36 of 43



Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8653279	Fluorene	2023/05/09	91	50 - 130	91	50 - 130	<0.0050	ug/g	NC	40
8653279	Indeno(1,2,3-cd)pyrene	2023/05/09	105	50 - 130	112	50 - 130	<0.0050	ug/g	NC	40
8653279	Naphthalene	2023/05/09	77	50 - 130	84	50 - 130	<0.0050	ug/g	NC	40
8653279	Phenanthrene	2023/05/09	91	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40
8653279	Pyrene	2023/05/09	95	50 - 130	99	50 - 130	<0.0050	ug/g	8.2	40
8653413	Moisture	2023/05/09							0.81	20
8653519	Moisture	2023/05/09							1.1	20
8655210	Moisture	2023/05/09							4.1	20
8655766	WAD Cyanide (Free)	2023/05/10	103	75 - 125	106	80 - 120	<0.01	ug/g	NC	35
8655771	F2 (C10-C16 Hydrocarbons)	2023/05/10	100	60 - 130	101	80 - 120	<10	ug/g	NC	30
8655771	F3 (C16-C34 Hydrocarbons)	2023/05/10	101	60 - 130	100	80 - 120	<50	ug/g	21	30
8655771	F4 (C34-C50 Hydrocarbons)	2023/05/10	104	60 - 130	101	80 - 120	<50	ug/g	NC	30
8655808	Acid Extractable Antimony (Sb)	2023/05/10	97	75 - 125	102	80 - 120	<0.20	ug/g	NC	30
8655808	Acid Extractable Arsenic (As)	2023/05/10	98	75 - 125	101	80 - 120	<1.0	ug/g	5.7	30
8655808	Acid Extractable Barium (Ba)	2023/05/10	98	75 - 125	100	80 - 120	<0.50	ug/g	4.0	30
8655808	Acid Extractable Beryllium (Be)	2023/05/10	99	75 - 125	102	80 - 120	<0.20	ug/g	NC	30
8655808	Acid Extractable Boron (B)	2023/05/10	95	75 - 125	99	80 - 120	<5.0	ug/g	NC	30
8655808	Acid Extractable Cadmium (Cd)	2023/05/10	98	75 - 125	98	80 - 120	<0.10	ug/g	NC	30
8655808	Acid Extractable Chromium (Cr)	2023/05/10	102	75 - 125	102	80 - 120	<1.0	ug/g	4.1	30
8655808	Acid Extractable Cobalt (Co)	2023/05/10	98	75 - 125	103	80 - 120	<0.10	ug/g	9.3	30
8655808	Acid Extractable Copper (Cu)	2023/05/10	97	75 - 125	104	80 - 120	<0.50	ug/g	4.6	30
8655808	Acid Extractable Lead (Pb)	2023/05/10	97	75 - 125	103	80 - 120	<1.0	ug/g	9.0	30
8655808	Acid Extractable Mercury (Hg)	2023/05/10	94	75 - 125	100	80 - 120	<0.050	ug/g		
8655808	Acid Extractable Molybdenum (Mo)	2023/05/10	101	75 - 125	98	80 - 120	<0.50	ug/g	NC	30
8655808	Acid Extractable Nickel (Ni)	2023/05/10	95	75 - 125	101	80 - 120	<0.50	ug/g	9.6	30
8655808	Acid Extractable Selenium (Se)	2023/05/10	98	75 - 125	101	80 - 120	<0.50	ug/g	NC	30
8655808	Acid Extractable Silver (Ag)	2023/05/10	99	75 - 125	101	80 - 120	<0.20	ug/g	NC	30
8655808	Acid Extractable Thallium (Tl)	2023/05/10	99	75 - 125	103	80 - 120	<0.050	ug/g	NC	30
8655808	Acid Extractable Uranium (U)	2023/05/10	99	75 - 125	103	80 - 120	<0.050	ug/g	0.30	30
8655808	Acid Extractable Vanadium (V)	2023/05/10	100	75 - 125	103	80 - 120	<5.0	ug/g	4.1	30
8655808	Acid Extractable Zinc (Zn)	2023/05/10	93	75 - 125	104	80 - 120	<5.0	ug/g	14	30

Page 37 of 43

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

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



Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8655821	Conductivity	2023/05/10			102	90 - 110	<0.002	mS/cm	0.90	10
8655988	Acid Extractable Antimony (Sb)	2023/05/11	86	75 - 125	98	80 - 120	<0.20	ug/g	NC	30
8655988	Acid Extractable Arsenic (As)	2023/05/11	96	75 - 125	98	80 - 120	<1.0	ug/g	9.7	30
8655988	Acid Extractable Barium (Ba)	2023/05/11	NC	75 - 125	100	80 - 120	<0.50	ug/g	1.7	30
8655988	Acid Extractable Beryllium (Be)	2023/05/11	98	75 - 125	96	80 - 120	<0.20	ug/g	0.41	30
8655988	Acid Extractable Boron (B)	2023/05/11	87	75 - 125	96	80 - 120	<5.0	ug/g	2.5	30
8655988	Acid Extractable Cadmium (Cd)	2023/05/11	96	75 - 125	97	80 - 120	<0.10	ug/g	NC	30
8655988	Acid Extractable Chromium (Cr)	2023/05/11	NC	75 - 125	96	80 - 120	<1.0	ug/g	2.8	30
8655988	Acid Extractable Cobalt (Co)	2023/05/11	100	75 - 125	99	80 - 120	<0.10	ug/g	2.1	30
8655988	Acid Extractable Copper (Cu)	2023/05/11	NC	75 - 125	100	80 - 120	<0.50	ug/g	0.41	30
8655988	Acid Extractable Lead (Pb)	2023/05/11	95	75 - 125	98	80 - 120	<1.0	ug/g	7.6	30
8655988	Acid Extractable Mercury (Hg)	2023/05/11	102	75 - 125	97	80 - 120	<0.050	ug/g	NC	30
8655988	Acid Extractable Molybdenum (Mo)	2023/05/11	99	75 - 125	98	80 - 120	<0.50	ug/g	13	30
8655988	Acid Extractable Nickel (Ni)	2023/05/11	NC	75 - 125	95	80 - 120	<0.50	ug/g	0.41	30
8655988	Acid Extractable Selenium (Se)	2023/05/11	94	75 - 125	95	80 - 120	<0.50	ug/g	NC	30
8655988	Acid Extractable Silver (Ag)	2023/05/11	102	75 - 125	98	80 - 120	<0.20	ug/g	NC	30
8655988	Acid Extractable Thallium (Tl)	2023/05/11	94	75 - 125	99	80 - 120	<0.050	ug/g	4.9	30
8655988	Acid Extractable Uranium (U)	2023/05/11	98	75 - 125	97	80 - 120	<0.050	ug/g	5.3	30
8655988	Acid Extractable Vanadium (V)	2023/05/11	NC	75 - 125	96	80 - 120	<5.0	ug/g	1.5	30
8655988	Acid Extractable Zinc (Zn)	2023/05/11	NC	75 - 125	101	80 - 120	<5.0	ug/g	2.8	30
8656019	Chromium (VI)	2023/05/10	60 (1)	70 - 130	91	80 - 120	<0.18	ug/g	NC	35
8656081	Hot Water Ext. Boron (B)	2023/05/10	108	75 - 125	105	75 - 125	<0.050	ug/g	0.50	40
8656133	Hot Water Ext. Boron (B)	2023/05/11	102	75 - 125	112	75 - 125	<0.050	ug/g	4.7	40
8656186	Available (CaCl2) pH	2023/05/10			101	97 - 103			0.27	N/A
8656521	Moisture	2023/05/10							18	20
8656969	1,1,1,2-Tetrachloroethane	2023/05/12	104	60 - 140	99	60 - 130	<0.040	ug/g	NC	50
8656969	1,1,1-Trichloroethane	2023/05/12	97	60 - 140	91	60 - 130	<0.040	ug/g	NC	50
8656969	1,1,2,2-Tetrachloroethane	2023/05/12	113	60 - 140	118	60 - 130	<0.040	ug/g	NC	50
8656969	1,1,2-Trichloroethane	2023/05/12	128	60 - 140	126	60 - 130	<0.040	ug/g	NC	50
8656969	1,1-Dichloroethane	2023/05/12	109	60 - 140	102	60 - 130	<0.040	ug/g	NC	50
8656969	1,1-Dichloroethylene	2023/05/12	111	60 - 140	98	60 - 130	<0.040	ug/g	NC	50



Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8656969	1,2-Dichlorobenzene	2023/05/12	99	60 - 140	93	60 - 130	<0.040	ug/g	NC	50
8656969	1,2-Dichloroethane	2023/05/12	103	60 - 140	105	60 - 130	<0.049	ug/g	NC	50
8656969	1,2-Dichloropropane	2023/05/12	109	60 - 140	106	60 - 130	<0.040	ug/g	NC	50
8656969	1,3-Dichlorobenzene	2023/05/12	99	60 - 140	89	60 - 130	<0.040	ug/g	NC	50
8656969	1,4-Dichlorobenzene	2023/05/12	114	60 - 140	103	60 - 130	<0.040	ug/g	NC	50
8656969	Acetone (2-Propanone)	2023/05/12	114	60 - 140	125	60 - 140	<0.49	ug/g	NC	50
8656969	Benzene	2023/05/11	98	60 - 140	92	60 - 130	<0.0060	ug/g		
8656969	Bromodichloromethane	2023/05/12	100	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
8656969	Bromoform	2023/05/12	88	60 - 140	93	60 - 130	<0.040	ug/g	NC	50
8656969	Bromomethane	2023/05/12	101	60 - 140	98	60 - 140	<0.040	ug/g	NC	50
8656969	Carbon Tetrachloride	2023/05/12	99	60 - 140	92	60 - 130	<0.040	ug/g	NC	50
8656969	Chlorobenzene	2023/05/12	99	60 - 140	92	60 - 130	<0.040	ug/g	NC	50
8656969	Chloroform	2023/05/12	105	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
8656969	cis-1,2-Dichloroethylene	2023/05/12	100	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
8656969	cis-1,3-Dichloropropene	2023/05/12	83	60 - 140	89	60 - 130	<0.030	ug/g	NC	50
8656969	Dibromochloromethane	2023/05/12	100	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
8656969	Dichlorodifluoromethane (FREON 12)	2023/05/12	98	60 - 140	99	60 - 140	<0.040	ug/g	NC	50
8656969	Ethylbenzene	2023/05/11	NC	60 - 140	83	60 - 130	<0.010	ug/g		
8656969	Ethylene Dibromide	2023/05/12	100	60 - 140	102	60 - 130	<0.040	ug/g	NC	50
8656969	Hexane	2023/05/12	115	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
8656969	Methyl Ethyl Ketone (2-Butanone)	2023/05/12	102	60 - 140	113	60 - 140	<0.40	ug/g	NC	50
8656969	Methyl Isobutyl Ketone	2023/05/12	101	60 - 140	113	60 - 130	<0.40	ug/g	NC	50
8656969	Methyl t-butyl ether (MTBE)	2023/05/12	84	60 - 140	83	60 - 130	<0.040	ug/g	NC	50
8656969	Methylene Chloride(Dichloromethane)	2023/05/12	101	60 - 140	100	60 - 130	<0.049	ug/g	NC	50
8656969	o-Xylene	2023/05/11	95	60 - 140	85	60 - 130	<0.020	ug/g		
8656969	p+m-Xylene	2023/05/11	NC	60 - 140	85	60 - 130	<0.020	ug/g		
8656969	Styrene	2023/05/12	107	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
8656969	Tetrachloroethylene	2023/05/12	83	60 - 140	74	60 - 130	<0.040	ug/g	NC	50
8656969	Toluene	2023/05/11	104	60 - 140	94	60 - 130	<0.020	ug/g		
8656969	Total Xylenes	2023/05/11					<0.020	ug/g		
8656969	trans-1,2-Dichloroethylene	2023/05/12	101	60 - 140	94	60 - 130	<0.040	ug/g	NC	50



Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8656969	trans-1,3-Dichloropropene	2023/05/12	92	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
8656969	Trichloroethylene	2023/05/12	92	60 - 140	86	60 - 130	<0.010	ug/g	NC	50
8656969	Trichlorofluoromethane (FREON 11)	2023/05/12	104	60 - 140	95	60 - 130	<0.040	ug/g	NC	50
8656969	Vinyl Chloride	2023/05/12	113	60 - 140	104	60 - 130	<0.019	ug/g	NC	50
8657324	a-Chlordane	2023/05/11	129	50 - 130	94	50 - 130	<0.0020	ug/g	16	40
8657324	Aldrin	2023/05/11	116	50 - 130	79	50 - 130	<0.0020	ug/g	14	40
8657324	Dieldrin	2023/05/11	127	50 - 130	111	50 - 130	<0.0020	ug/g	200 (2)	40
8657324	Endosulfan I (alpha)	2023/05/11	132 (2)	50 - 130	117	50 - 130	<0.0020	ug/g	12	40
8657324	Endosulfan II (beta)	2023/05/11	121	50 - 130	100	50 - 130	<0.0020	ug/g	19	40
8657324	Endrin	2023/05/11	123	50 - 130	111	50 - 130	<0.0020	ug/g	17	40
8657324	g-Chlordane	2023/05/11	122	50 - 130	103	50 - 130	<0.0020	ug/g	16	40
8657324	Heptachlor epoxide	2023/05/11	116	50 - 130	115	50 - 130	<0.0020	ug/g	7.4	40
8657324	Heptachlor	2023/05/11	119	50 - 130	87	50 - 130	<0.0020	ug/g	13	40
8657324	Hexachlorobenzene	2023/05/11	110	50 - 130	88	50 - 130	<0.0020	ug/g	4.9	40
8657324	Hexachlorobutadiene	2023/05/11	93	50 - 130	95	50 - 130	<0.0020	ug/g	5.1	40
8657324	Hexachloroethane	2023/05/11	57	50 - 130	63	50 - 130	<0.0020	ug/g	9.6	40
8657324	Lindane	2023/05/11	106	50 - 130	99	50 - 130	<0.0020	ug/g	9.7	40
8657324	Methoxychlor	2023/05/11	121	50 - 130	106	50 - 130	<0.0050	ug/g	20	40
8657324	o,p-DDD	2023/05/11	143 (2)	50 - 130	110	50 - 130	<0.0020	ug/g	200 (2)	40
8657324	o,p-DDE	2023/05/11	141 (2)	50 - 130	106	50 - 130	<0.0020	ug/g	13	40
8657324	o,p-DDT	2023/05/11	128	50 - 130	88	50 - 130	<0.0020	ug/g	19	40
8657324	p,p-DDD	2023/05/11	127	50 - 130	112	50 - 130	<0.0020	ug/g	21	40
8657324	p,p-DDE	2023/05/11	136 (2)	50 - 130	96	50 - 130	<0.0020	ug/g	15	40
8657324	p,p-DDT	2023/05/11	130 (2)	50 - 130	93	50 - 130	<0.0020	ug/g	24	40
8658147	Benzene	2023/05/11	98	50 - 140	90	50 - 140	<0.020	ug/g	NC	50
8658147	Ethylbenzene	2023/05/11	106	50 - 140	101	50 - 140	<0.020	ug/g	NC	50
8658147	F1 (C6-C10) - BTEX	2023/05/11					<10	ug/g	NC	30
8658147	F1 (C6-C10)	2023/05/11	102	60 - 140	93	80 - 120	<10	ug/g	NC	30
8658147	o-Xylene	2023/05/11	106	50 - 140	96	50 - 140	<0.020	ug/g	NC	50
8658147	p+m-Xylene	2023/05/11	103	50 - 140	95	50 - 140	<0.040	ug/g	NC	50
8658147	Toluene	2023/05/11	98	50 - 140	89	50 - 140	<0.020	ug/g	NC	50

Page 40 of 43



**BUREAU
VERITAS**

Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8658147	Total Xylenes	2023/05/11					<0.040	ug/g	NC	50
8660935	1-Methylnaphthalene	2023/05/12	114	50 - 130	111	50 - 130	<0.0050	ug/g	NC	40
8660935	2-Methylnaphthalene	2023/05/12	100	50 - 130	99	50 - 130	<0.0050	ug/g	NC	40
8660935	Acenaphthene	2023/05/12	87	50 - 130	89	50 - 130	<0.0050	ug/g	NC	40
8660935	Acenaphthylene	2023/05/12	85	50 - 130	88	50 - 130	<0.0050	ug/g	NC	40
8660935	Anthracene	2023/05/12	95	50 - 130	97	50 - 130	<0.0050	ug/g	NC	40
8660935	Benzo(a)anthracene	2023/05/12	89	50 - 130	86	50 - 130	<0.0050	ug/g	NC	40
8660935	Benzo(a)pyrene	2023/05/12	84	50 - 130	88	50 - 130	<0.0050	ug/g	NC	40
8660935	Benzo(b,j)fluoranthene	2023/05/12	85	50 - 130	92	50 - 130	<0.0050	ug/g	67 (2)	40
8660935	Benzo(g,h,i)perylene	2023/05/12	86	50 - 130	86	50 - 130	<0.0050	ug/g	NC	40
8660935	Benzo(k)fluoranthene	2023/05/12	85	50 - 130	80	50 - 130	<0.0050	ug/g	37	40
8660935	Chrysene	2023/05/12	88	50 - 130	90	50 - 130	<0.0050	ug/g	NC	40
8660935	Dibenzo(a,h)anthracene	2023/05/12	80	50 - 130	77	50 - 130	<0.0050	ug/g	NC	40
8660935	Fluoranthene	2023/05/12	94	50 - 130	90	50 - 130	<0.0050	ug/g	61 (2)	40
8660935	Fluorene	2023/05/12	86	50 - 130	88	50 - 130	<0.0050	ug/g	NC	40
8660935	Indeno(1,2,3-cd)pyrene	2023/05/12	86	50 - 130	88	50 - 130	<0.0050	ug/g	NC	40
8660935	Naphthalene	2023/05/12	80	50 - 130	88	50 - 130	<0.0050	ug/g	NC	40
8660935	Phenanthrene	2023/05/12	87	50 - 130	88	50 - 130	<0.0050	ug/g	11	40
8660935	Pyrene	2023/05/12	98	50 - 130	91	50 - 130	<0.0050	ug/g	62 (2)	40
8661354	Chromium (VI)	2023/05/13	35 (3)	70 - 130	91	80 - 120	<0.18	ug/g	NC (4)	35
8664305	WAD Cyanide (Free)	2023/05/15	93	75 - 125	107	80 - 120	<0.01	ug/g	NC	35
8664577	Available (CaCl2) pH	2023/05/15			100	97 - 103			0.030	N/A



Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8672177	Available (CaCl ₂) pH	2023/05/18			97	97 - 103			2.4	N/A

N/A = Not Applicable

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

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

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

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

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

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

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference $\leq 2 \times \text{RDL}$).

(1) The matrix spike recovery was below the lower control limit. This may be due to the sample matrix. The sample was re-analyzed with the same results

(2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

(3) The matrix spike recovery was below the lower control limit. This may be due in part to the reducing environment of the sample. The sample was re-analyzed with the same results

(4) Detection limits were adjusted for high moisture content



Bureau Veritas Job #: C3C8932
Report Date: 2023/05/18

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

VALIDATION SIGNATURE PAGE

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

Anastassia Hamanov, Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by {0}, {1} responsible for {2} {3} laboratory operations.



Your Project #: 2211-E177
Site Location: MISSISSAUGA
Your C.O.C. #: N/A

Attention: Madan K. Suwal

Soil Engineers Ltd
90 West Beaver Creek Road
Unit 100
Richmond Hill, ON
CANADA L4B 1E7

Report Date: 2023/05/15
Report #: R7629851
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3C9682

Received: 2023/05/08, 13:18

Sample Matrix: Soil
Samples Received: 5

Analyses	Quantity	Date	Date	Laboratory Method	Analytical Method
		Extracted	Analyzed		
Methylnaphthalene Sum	2	N/A	2023/05/12	CAM SOP-00301	EPA 8270D m
Hot Water Extractable Boron	2	2023/05/11	2023/05/11	CAM SOP-00408	R153 Ana. Prot. 2011
1,3-Dichloropropene Sum	2	N/A	2023/05/11		EPA 8260C m
Free (WAD) Cyanide	2	2023/05/11	2023/05/11	CAM SOP-00457	OMOE E3015 m
Conductivity	2	2023/05/11	2023/05/11	CAM SOP-00414	OMOE E3530 v1 m
Hexavalent Chromium in Soil by IC (1)	2	2023/05/11	2023/05/15	CAM SOP-00436	EPA 3060A/7199 m
Petroleum Hydro. CCME F1 & BTEX in Soil (2)	1	N/A	2023/05/11	CAM SOP-00315	CCME PHC-CWS m
Petroleum Hydrocarbons F2-F4 in Soil (3)	3	2023/05/11	2023/05/11	CAM SOP-00316	CCME CWS m
Acid Extractable Metals by ICPMS	2	2023/05/10	2023/05/11	CAM SOP-00447	EPA 6020B m
Moisture	5	N/A	2023/05/10	CAM SOP-00445	Carter 2nd ed 51.2 m
PAH Compounds in Soil by GC/MS (SIM)	2	2023/05/10	2023/05/11	CAM SOP-00318	EPA 8270E
pH CaCl2 EXTRACT	2	2023/05/11	2023/05/11	CAM SOP-00413	EPA 9045 D m
Sodium Adsorption Ratio (SAR)	2	N/A	2023/05/12	CAM SOP-00102	EPA 6010C
Volatile Organic Compounds and F1 PHCs	2	N/A	2023/05/10	CAM SOP-00230	EPA 8260C m

Remarks:

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

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

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

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope



Your Project #: 2211-E177
Site Location: MISSISSAUGA
Your C.O.C. #: N/A

Attention: Madan K. Suwal

Soil Engineers Ltd
90 West Beaver Creek Road
Unit 100
Richmond Hill, ON
CANADA L4B 1E7

Report Date: 2023/05/15
Report #: R7629851
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C3C9682

Received: 2023/05/08, 13:18

dilution methods.

Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.

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

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

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

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

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

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

Encryption Key



AUTHORIZED REPORT
RAPPORT AUTORISÉ

Bureau Veritas

15 May 2023 16:22:33

Please direct all questions regarding this Certificate of Analysis to:

Antonella Brasil, Senior Project Manager

Email: Antonella.Brasil@bureauveritas.com

Phone# (905)817-5817

=====

This report has been generated and distributed using a secure automated process.

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.



Bureau Veritas Job #: C3C9682
Report Date: 2023/05/15

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

O.REG 153 METALS & INORGANICS PKG (SOIL)

Bureau Veritas ID		VTC701		VTC703				VTC703			
Sampling Date		2023/05/05		2023/05/05				2023/05/05			
COC Number		N/A		N/A				N/A			
	UNITS	BH7/2	QC Batch	BH8/1B	RDL	MDL	QC Batch	BH8/1B Lab-Dup	RDL	MDL	QC Batch

Calculated Parameters

Sodium Adsorption Ratio	N/A	0.58	8652944	0.28 (1)			8652944				
-------------------------	-----	------	---------	----------	--	--	---------	--	--	--	--

Inorganics

Conductivity	mS/cm	0.15	8658433	0.14	0.002	0.0005	8658433				
Available (CaCl2) pH	pH	7.74	8658993	7.71			8658892				
WAD Cyanide (Free)	ug/g	<0.01	8658293	<0.01	0.01	0.005	8658301	<0.01	0.01	0.005	8658301
Chromium (VI)	ug/g	<0.18	8658681	<0.18	0.18	0.050	8658681				

Metals

Hot Water Ext. Boron (B)	ug/g	0.18	8658381	0.058	0.050	0.030	8658381				
Acid Extractable Antimony (Sb)	ug/g	<0.20	8657252	<0.20	0.20	0.10	8657252				
Acid Extractable Arsenic (As)	ug/g	4.3	8657252	3.5	1.0	0.10	8657252				
Acid Extractable Barium (Ba)	ug/g	64	8657252	67	0.50	0.30	8657252				
Acid Extractable Beryllium (Be)	ug/g	0.52	8657252	0.60	0.20	0.020	8657252				
Acid Extractable Boron (B)	ug/g	5.7	8657252	6.2	5.0	1.0	8657252				
Acid Extractable Cadmium (Cd)	ug/g	<0.10	8657252	0.14	0.10	0.030	8657252				
Acid Extractable Chromium (Cr)	ug/g	17	8657252	19	1.0	0.20	8657252				
Acid Extractable Cobalt (Co)	ug/g	11	8657252	10	0.10	0.020	8657252				
Acid Extractable Copper (Cu)	ug/g	26	8657252	22	0.50	0.20	8657252				
Acid Extractable Lead (Pb)	ug/g	8.3	8657252	9.2	1.0	0.10	8657252				
Acid Extractable Molybdenum (Mo)	ug/g	<0.50	8657252	<0.50	0.50	0.10	8657252				
Acid Extractable Nickel (Ni)	ug/g	22	8657252	23	0.50	0.20	8657252				
Acid Extractable Selenium (Se)	ug/g	<0.50	8657252	<0.50	0.50	0.10	8657252				
Acid Extractable Silver (Ag)	ug/g	<0.20	8657252	<0.20	0.20	0.040	8657252				
Acid Extractable Thallium (Tl)	ug/g	0.13	8657252	0.13	0.050	0.010	8657252				
Acid Extractable Uranium (U)	ug/g	0.48	8657252	0.53	0.050	0.030	8657252				
Acid Extractable Vanadium (V)	ug/g	24	8657252	26	5.0	0.50	8657252				
Acid Extractable Zinc (Zn)	ug/g	52	8657252	50	5.0	0.50	8657252				
Acid Extractable Mercury (Hg)	ug/g	<0.050	8657252	<0.050	0.050	0.030	8657252				

RDL = Reportable Detection Limit

QC Batch = Quality Control Batch

Lab-Dup = Laboratory Initiated Duplicate

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

BUREAU
VERITAS

Bureau Veritas Job #: C3C9682

Report Date: 2023/05/15

Soil Engineers Ltd

Client Project #: 2211-E177

Site Location: MISSISSAUGA

Sampler Initials: ASH

O.REG 153 PAHS (SOIL)

Bureau Veritas ID		VTC701	VTC703			
Sampling Date		2023/05/05	2023/05/05			
COC Number		N/A	N/A			
	UNITS	BH7/2	BH8/1B	RDL	MDL	QC Batch

Calculated Parameters						
Methylnaphthalene, 2-(1-)	ug/g	<0.0071	<0.0071	0.0071	N/A	8652743
Polyaromatic Hydrocarbons						
Acenaphthene	ug/g	<0.0050	<0.0050	0.0050	0.0020	8655772
Acenaphthylene	ug/g	<0.0050	<0.0050	0.0050	0.0010	8655772
Anthracene	ug/g	<0.0050	<0.0050	0.0050	0.0010	8655772
Benzo(a)anthracene	ug/g	<0.0050	<0.0050	0.0050	0.0020	8655772
Benzo(a)pyrene	ug/g	<0.0050	<0.0050	0.0050	0.0010	8655772
Benzo(b,j)fluoranthene	ug/g	<0.0050	<0.0050	0.0050	0.0020	8655772
Benzo(g,h,i)perylene	ug/g	<0.0050	<0.0050	0.0050	0.0040	8655772
Benzo(k)fluoranthene	ug/g	<0.0050	<0.0050	0.0050	0.0020	8655772
Chrysene	ug/g	<0.0050	<0.0050	0.0050	0.0020	8655772
Dibenzo(a,h)anthracene	ug/g	<0.0050	<0.0050	0.0050	0.0040	8655772
Fluoranthene	ug/g	<0.0050	<0.0050	0.0050	0.0010	8655772
Fluorene	ug/g	<0.0050	<0.0050	0.0050	0.0010	8655772
Indeno(1,2,3-cd)pyrene	ug/g	<0.0050	<0.0050	0.0050	0.0040	8655772
1-Methylnaphthalene	ug/g	<0.0050	<0.0050	0.0050	0.0010	8655772
2-Methylnaphthalene	ug/g	<0.0050	<0.0050	0.0050	0.0010	8655772
Naphthalene	ug/g	<0.0050	<0.0050	0.0050	0.0010	8655772
Phenanthrene	ug/g	<0.0050	<0.0050	0.0050	0.0010	8655772
Pyrene	ug/g	<0.0050	<0.0050	0.0050	0.0010	8655772
Surrogate Recovery (%)						
D10-Anthracene	%	98	95			8655772
D14-Terphenyl (FS)	%	103	101			8655772
D8-Acenaphthylene	%	89	87			8655772
RDL = Reportable Detection Limit						
QC Batch = Quality Control Batch						
N/A = Not Applicable						

BUREAU
VERITAS

Bureau Veritas Job #: C3C9682

Report Date: 2023/05/15

Soil Engineers Ltd

Client Project #: 2211-E177

Site Location: MISSISSAUGA

Sampler Initials: ASH

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

Bureau Veritas ID		VTC704			
Sampling Date		2023/05/05			
COC Number		N/A			
	UNITS	DUSP5	RDL	MDL	QC Batch
BTEX & F1 Hydrocarbons					
Benzene	ug/g	<0.020	0.020	0.020	8659075
Toluene	ug/g	<0.020	0.020	0.020	8659075
Ethylbenzene	ug/g	<0.020	0.020	0.020	8659075
o-Xylene	ug/g	<0.020	0.020	0.020	8659075
p+m-Xylene	ug/g	<0.040	0.040	0.040	8659075
Total Xylenes	ug/g	<0.040	0.040	0.040	8659075
F1 (C6-C10)	ug/g	<10	10	5.0	8659075
F1 (C6-C10) - BTEX	ug/g	<10	10	5.0	8659075
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	5.0	8658261
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	5.0	8658261
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	10	8658261
Reached Baseline at C50	ug/g	Yes			8658261
Surrogate Recovery (%)					
1,4-Difluorobenzene	%	106			8659075
4-Bromofluorobenzene	%	90			8659075
D10-o-Xylene	%	100			8659075
D4-1,2-Dichloroethane	%	111			8659075
o-Terphenyl	%	90			8658261
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					



Bureau Veritas Job #: C3C9682
Report Date: 2023/05/15

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

O.REG 153 VOCs BY HS & F1-F4 (SOIL)

Bureau Veritas ID		VTC700				VTC700			
Sampling Date		2023/05/05				2023/05/05			
COC Number		N/A				N/A			
	UNITS	BH7/1B	RDL	MDL	QC Batch	BH7/1B Lab-Dup	RDL	MDL	QC Batch
Calculated Parameters									
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	0.050	0.010	8653589				
Volatile Organics									
Acetone (2-Propanone)	ug/g	<0.49	0.49	0.49	8655371	<0.49	0.49	0.49	8655371
Benzene	ug/g	<0.0060	0.0060	0.0060	8655371	<0.0060	0.0060	0.0060	8655371
Bromodichloromethane	ug/g	<0.040	0.040	0.040	8655371	<0.040	0.040	0.040	8655371
Bromoform	ug/g	<0.040	0.040	0.040	8655371	<0.040	0.040	0.040	8655371
Bromomethane	ug/g	<0.040	0.040	0.040	8655371	<0.040	0.040	0.040	8655371
Carbon Tetrachloride	ug/g	<0.040	0.040	0.040	8655371	<0.040	0.040	0.040	8655371
Chlorobenzene	ug/g	<0.040	0.040	0.040	8655371	<0.040	0.040	0.040	8655371
Chloroform	ug/g	<0.040	0.040	0.040	8655371	<0.040	0.040	0.040	8655371
Dibromochloromethane	ug/g	<0.040	0.040	0.040	8655371	<0.040	0.040	0.040	8655371
1,2-Dichlorobenzene	ug/g	<0.040	0.040	0.040	8655371	<0.040	0.040	0.040	8655371
1,3-Dichlorobenzene	ug/g	<0.040	0.040	0.040	8655371	<0.040	0.040	0.040	8655371
1,4-Dichlorobenzene	ug/g	<0.040	0.040	0.040	8655371	<0.040	0.040	0.040	8655371
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	0.040	0.040	8655371	<0.040	0.040	0.040	8655371
1,1-Dichloroethane	ug/g	<0.040	0.040	0.040	8655371	<0.040	0.040	0.040	8655371
1,2-Dichloroethane	ug/g	<0.049	0.049	0.049	8655371	<0.049	0.049	0.049	8655371
1,1-Dichloroethylene	ug/g	<0.040	0.040	0.040	8655371	<0.040	0.040	0.040	8655371
cis-1,2-Dichloroethylene	ug/g	<0.040	0.040	0.040	8655371	<0.040	0.040	0.040	8655371
trans-1,2-Dichloroethylene	ug/g	<0.040	0.040	0.040	8655371	<0.040	0.040	0.040	8655371
1,2-Dichloropropane	ug/g	<0.040	0.040	0.040	8655371	<0.040	0.040	0.040	8655371
cis-1,3-Dichloropropene	ug/g	<0.030	0.030	0.030	8655371	<0.030	0.030	0.030	8655371
trans-1,3-Dichloropropene	ug/g	<0.040	0.040	0.040	8655371	<0.040	0.040	0.040	8655371
Ethylbenzene	ug/g	<0.010	0.010	0.010	8655371	<0.010	0.010	0.010	8655371
Ethylene Dibromide	ug/g	<0.040	0.040	0.040	8655371	<0.040	0.040	0.040	8655371
Hexane	ug/g	<0.040	0.040	0.040	8655371	<0.040	0.040	0.040	8655371
Methylene Chloride(Dichloromethane)	ug/g	<0.049	0.049	0.049	8655371	<0.049	0.049	0.049	8655371
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	0.40	0.40	8655371	<0.40	0.40	0.40	8655371
Methyl Isobutyl Ketone	ug/g	<0.40	0.40	0.40	8655371	<0.40	0.40	0.40	8655371
Methyl t-butyl ether (MTBE)	ug/g	<0.040	0.040	0.040	8655371	<0.040	0.040	0.040	8655371
Styrene	ug/g	<0.040	0.040	0.040	8655371	<0.040	0.040	0.040	8655371
1,1,1,2-Tetrachloroethane	ug/g	<0.040	0.040	0.040	8655371	<0.040	0.040	0.040	8655371
1,1,2,2-Tetrachloroethane	ug/g	<0.040	0.040	0.040	8655371	<0.040	0.040	0.040	8655371
Tetrachloroethylene	ug/g	<0.040	0.040	0.040	8655371	<0.040	0.040	0.040	8655371
RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch									
Lab-Dup = Laboratory Initiated Duplicate									



Bureau Veritas Job #: C3C9682
Report Date: 2023/05/15

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

O.REG 153 VOCs BY HS & F1-F4 (SOIL)

Bureau Veritas ID		VTC700				VTC700			
Sampling Date		2023/05/05				2023/05/05			
COC Number		N/A				N/A			
	UNITS	BH7/1B	RDL	MDL	QC Batch	BH7/1B Lab-Dup	RDL	MDL	QC Batch
Toluene	ug/g	<0.020	0.020	0.020	8655371	<0.020	0.020	0.020	8655371
1,1,1-Trichloroethane	ug/g	<0.040	0.040	0.040	8655371	<0.040	0.040	0.040	8655371
1,1,2-Trichloroethane	ug/g	<0.040	0.040	0.040	8655371	<0.040	0.040	0.040	8655371
Trichloroethylene	ug/g	<0.010	0.010	0.010	8655371	<0.010	0.010	0.010	8655371
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	0.040	0.040	8655371	<0.040	0.040	0.040	8655371
Vinyl Chloride	ug/g	<0.019	0.019	0.019	8655371	<0.019	0.019	0.019	8655371
p+m-Xylene	ug/g	<0.020	0.020	0.020	8655371	<0.020	0.020	0.020	8655371
o-Xylene	ug/g	<0.020	0.020	0.020	8655371	<0.020	0.020	0.020	8655371
Total Xylenes	ug/g	<0.020	0.020	0.020	8655371	<0.020	0.020	0.020	8655371
F1 (C6-C10)	ug/g	<10	10	2.0	8655371	<10	10	2.0	8655371
F1 (C6-C10) - BTEX	ug/g	<10	10	2.0	8655371	<10	10	2.0	8655371
F2-F4 Hydrocarbons									
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	5.0	8658261				
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	5.0	8658261				
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	10	8658261				
Reached Baseline at C50	ug/g	Yes			8658261				
Surrogate Recovery (%)									
o-Terphenyl	%	88			8658261				
4-Bromofluorobenzene	%	96			8655371	97			8655371
D10-o-Xylene	%	106			8655371	105			8655371
D4-1,2-Dichloroethane	%	91			8655371	89			8655371
D8-Toluene	%	98			8655371	99			8655371
RDL = Reportable Detection Limit									
QC Batch = Quality Control Batch									
Lab-Dup = Laboratory Initiated Duplicate									



Bureau Veritas Job #: C3C9682
Report Date: 2023/05/15

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Bureau Veritas ID		VTC702			
Sampling Date		2023/05/05			
COC Number		N/A			
	UNITS	BH8/2	RDL	MDL	QC Batch
Calculated Parameters					
1,3-Dichloropropene (cis+trans)	ug/g	<0.050	0.050	0.010	8653589
Volatile Organics					
Acetone (2-Propanone)	ug/g	<0.49	0.49	0.49	8655371
Benzene	ug/g	<0.0060	0.0060	0.0060	8655371
Bromodichloromethane	ug/g	<0.040	0.040	0.040	8655371
Bromoform	ug/g	<0.040	0.040	0.040	8655371
Bromomethane	ug/g	<0.040	0.040	0.040	8655371
Carbon Tetrachloride	ug/g	<0.040	0.040	0.040	8655371
Chlorobenzene	ug/g	<0.040	0.040	0.040	8655371
Chloroform	ug/g	<0.040	0.040	0.040	8655371
Dibromochloromethane	ug/g	<0.040	0.040	0.040	8655371
1,2-Dichlorobenzene	ug/g	<0.040	0.040	0.040	8655371
1,3-Dichlorobenzene	ug/g	<0.040	0.040	0.040	8655371
1,4-Dichlorobenzene	ug/g	<0.040	0.040	0.040	8655371
Dichlorodifluoromethane (FREON 12)	ug/g	<0.040	0.040	0.040	8655371
1,1-Dichloroethane	ug/g	<0.040	0.040	0.040	8655371
1,2-Dichloroethane	ug/g	<0.049	0.049	0.049	8655371
1,1-Dichloroethylene	ug/g	<0.040	0.040	0.040	8655371
cis-1,2-Dichloroethylene	ug/g	<0.040	0.040	0.040	8655371
trans-1,2-Dichloroethylene	ug/g	<0.040	0.040	0.040	8655371
1,2-Dichloropropane	ug/g	<0.040	0.040	0.040	8655371
cis-1,3-Dichloropropene	ug/g	<0.030	0.030	0.030	8655371
trans-1,3-Dichloropropene	ug/g	<0.040	0.040	0.040	8655371
Ethylbenzene	ug/g	<0.010	0.010	0.010	8655371
Ethylene Dibromide	ug/g	<0.040	0.040	0.040	8655371
Hexane	ug/g	<0.040	0.040	0.040	8655371
Methylene Chloride(Dichloromethane)	ug/g	<0.049	0.049	0.049	8655371
Methyl Ethyl Ketone (2-Butanone)	ug/g	<0.40	0.40	0.40	8655371
Methyl Isobutyl Ketone	ug/g	<0.40	0.40	0.40	8655371
Methyl t-butyl ether (MTBE)	ug/g	<0.040	0.040	0.040	8655371
Styrene	ug/g	<0.040	0.040	0.040	8655371
1,1,1,2-Tetrachloroethane	ug/g	<0.040	0.040	0.040	8655371
1,1,2,2-Tetrachloroethane	ug/g	<0.040	0.040	0.040	8655371
Tetrachloroethylene	ug/g	<0.040	0.040	0.040	8655371
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					



BUREAU
VERITAS

Bureau Veritas Job #: C3C9682

Report Date: 2023/05/15

Soil Engineers Ltd

Client Project #: 2211-E177

Site Location: MISSISSAUGA

Sampler Initials: ASH

O.REG 153 VOCS BY HS & F1-F4 (SOIL)

Bureau Veritas ID		VTC702			
Sampling Date		2023/05/05			
COC Number		N/A			
	UNITS	BH8/2	RDL	MDL	QC Batch
Toluene	ug/g	<0.020	0.020	0.020	8655371
1,1,1-Trichloroethane	ug/g	<0.040	0.040	0.040	8655371
1,1,2-Trichloroethane	ug/g	<0.040	0.040	0.040	8655371
Trichloroethylene	ug/g	<0.010	0.010	0.010	8655371
Trichlorofluoromethane (FREON 11)	ug/g	<0.040	0.040	0.040	8655371
Vinyl Chloride	ug/g	<0.019	0.019	0.019	8655371
p+m-Xylene	ug/g	<0.020	0.020	0.020	8655371
o-Xylene	ug/g	<0.020	0.020	0.020	8655371
Total Xylenes	ug/g	<0.020	0.020	0.020	8655371
F1 (C6-C10)	ug/g	<10	10	2.0	8655371
F1 (C6-C10) - BTEX	ug/g	<10	10	2.0	8655371
F2-F4 Hydrocarbons					
F2 (C10-C16 Hydrocarbons)	ug/g	<10	10	5.0	8658261
F3 (C16-C34 Hydrocarbons)	ug/g	<50	50	5.0	8658261
F4 (C34-C50 Hydrocarbons)	ug/g	<50	50	10	8658261
Reached Baseline at C50	ug/g	Yes			8658261
Surrogate Recovery (%)					
o-Terphenyl	%	89			8658261
4-Bromofluorobenzene	%	93			8655371
D10-o-Xylene	%	103			8655371
D4-1,2-Dichloroethane	%	89			8655371
D8-Toluene	%	98			8655371
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					

BUREAU
VERITAS

Bureau Veritas Job #: C3C9682

Report Date: 2023/05/15

Soil Engineers Ltd

Client Project #: 2211-E177

Site Location: MISSISSAUGA

Sampler Initials: ASH

RESULTS OF ANALYSES OF SOIL

Bureau Veritas ID		VTC700		VTC701		VTC702		VTC703			
Sampling Date		2023/05/05		2023/05/05		2023/05/05		2023/05/05			
COC Number		N/A		N/A		N/A		N/A			
	UNITS	BH7/1B	QC Batch	BH7/2	QC Batch	BH8/2	QC Batch	BH8/1B	RDL	MDL	QC Batch

Inorganics											
Moisture	%	13	8656055	11	8656521	14	8656055	14	1.0	0.50	8656521
RDL = Reportable Detection Limit											
QC Batch = Quality Control Batch											

Bureau Veritas ID		VTC704			
Sampling Date		2023/05/05			
COC Number		N/A			
	UNITS	DUSP5	RDL	MDL	QC Batch

Inorganics					
Moisture	%	14	1.0	0.50	8656055
RDL = Reportable Detection Limit					
QC Batch = Quality Control Batch					



BUREAU
VERITAS

Bureau Veritas Job #: C3C9682
Report Date: 2023/05/15

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

TEST SUMMARY

Bureau Veritas ID: VTC700
Sample ID: BH7/1B
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8653589	N/A	2023/05/11	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8658261	2023/05/11	2023/05/11	Suleeqa Nurr
Moisture	BAL	8656055	N/A	2023/05/10	Rajkumar Patel
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8655371	N/A	2023/05/10	Blair Gannon

Bureau Veritas ID: VTC700 Dup
Sample ID: BH7/1B
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8655371	N/A	2023/05/10	Blair Gannon

Bureau Veritas ID: VTC701
Sample ID: BH7/2
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8652743	N/A	2023/05/12	Automated Statchk
Hot Water Extractable Boron	ICP	8658381	2023/05/11	2023/05/11	Medhat Nasr
Free (WAD) Cyanide	TECH	8658293	2023/05/11	2023/05/11	Prgya Panchal
Conductivity	AT	8658433	2023/05/11	2023/05/11	Leily Karimi
Hexavalent Chromium in Soil by IC	IC/SPEC	8658681	2023/05/11	2023/05/15	Surleen Kaur Romana
Acid Extractable Metals by ICPMS	ICP/MS	8657252	2023/05/10	2023/05/11	Daniel Teclu
Moisture	BAL	8656521	N/A	2023/05/10	Rajkumar Patel
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8655772	2023/05/10	2023/05/11	Mitesh Raj
pH CaCl2 EXTRACT	AT	8658993	2023/05/11	2023/05/11	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	8652944	N/A	2023/05/12	Automated Statchk

Bureau Veritas ID: VTC702
Sample ID: BH8/2
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
1,3-Dichloropropene Sum	CALC	8653589	N/A	2023/05/11	Automated Statchk
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8658261	2023/05/11	2023/05/11	Suleeqa Nurr
Moisture	BAL	8656055	N/A	2023/05/10	Rajkumar Patel
Volatile Organic Compounds and F1 PHCs	GC/MSFD	8655371	N/A	2023/05/10	Blair Gannon

Bureau Veritas ID: VTC703
Sample ID: BH8/1B
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Methylnaphthalene Sum	CALC	8652743	N/A	2023/05/12	Automated Statchk
Hot Water Extractable Boron	ICP	8658381	2023/05/11	2023/05/11	Medhat Nasr



Bureau Veritas Job #: C3C9682
Report Date: 2023/05/15

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

TEST SUMMARY

Bureau Veritas ID: VTC703
Sample ID: BH8/1B
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	8658301	2023/05/11	2023/05/11	Prgya Panchal
Conductivity	AT	8658433	2023/05/11	2023/05/11	Leily Karimi
Hexavalent Chromium in Soil by IC	IC/SPEC	8658681	2023/05/11	2023/05/15	Surleen Kaur Romana
Acid Extractable Metals by ICPMS	ICP/MS	8657252	2023/05/10	2023/05/11	Daniel Teclu
Moisture	BAL	8656521	N/A	2023/05/10	Rajkumar Patel
PAH Compounds in Soil by GC/MS (SIM)	GC/MS	8655772	2023/05/10	2023/05/11	Mitesh Raj
pH CaCl ₂ EXTRACT	AT	8658892	2023/05/11	2023/05/11	Surinder Rai
Sodium Adsorption Ratio (SAR)	CALC/MET	8652944	N/A	2023/05/12	Automated Statchk

Bureau Veritas ID: VTC703 Dup
Sample ID: BH8/1B
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Free (WAD) Cyanide	TECH	8658301	2023/05/11	2023/05/11	Prgya Panchal

Bureau Veritas ID: VTC704
Sample ID: DUSP5
Matrix: Soil

Collected: 2023/05/05
Shipped:
Received: 2023/05/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Petroleum Hydro. CCME F1 & BTEX in Soil	HSGC/MSFD	8659075	N/A	2023/05/11	Ravinder Gaidhu
Petroleum Hydrocarbons F2-F4 in Soil	GC/FID	8658261	2023/05/11	2023/05/11	Suleeqa Nurr
Moisture	BAL	8656055	N/A	2023/05/10	Rajkumar Patel



Bureau Veritas Job #: C3C9682
Report Date: 2023/05/15

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

GENERAL COMMENTS

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

Package 1	0.3°C
-----------	-------

Cooler custody seal was present and intact.

Results relate only to the items tested.



**BUREAU
VERITAS**
Bureau Veritas Job #: C3C9682
Report Date: 2023/05/15

QUALITY ASSURANCE REPORT

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8655371	4-Bromofluorobenzene	2023/05/10	100	60 - 140	102	60 - 140	95	%		
8655371	D10-o-Xylene	2023/05/10	112	60 - 130	112	60 - 130	99	%		
8655371	D4-1,2-Dichloroethane	2023/05/10	89	60 - 140	91	60 - 140	94	%		
8655371	D8-Toluene	2023/05/10	107	60 - 140	105	60 - 140	97	%		
8655772	D10-Anthracene	2023/05/10	94	50 - 130	97	50 - 130	100	%		
8655772	D14-Terphenyl (FS)	2023/05/10	99	50 - 130	102	50 - 130	104	%		
8655772	D8-Acenaphthylene	2023/05/10	82	50 - 130	92	50 - 130	92	%		
8658261	o-Terphenyl	2023/05/11	86	60 - 130	86	60 - 130	97	%		
8659075	1,4-Difluorobenzene	2023/05/11	101	60 - 140	101	60 - 140	108	%		
8659075	4-Bromofluorobenzene	2023/05/11	103	60 - 140	103	60 - 140	79	%		
8659075	D10-o-Xylene	2023/05/11	100	60 - 140	92	60 - 140	99	%		
8659075	D4-1,2-Dichloroethane	2023/05/11	104	60 - 140	105	60 - 140	109	%		
8655371	1,1,1,2-Tetrachloroethane	2023/05/10	96	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
8655371	1,1,1-Trichloroethane	2023/05/10	106	60 - 140	102	60 - 130	<0.040	ug/g	NC	50
8655371	1,1,2,2-Tetrachloroethane	2023/05/10	78	60 - 140	82	60 - 130	<0.040	ug/g	NC	50
8655371	1,1,2-Trichloroethane	2023/05/10	86	60 - 140	87	60 - 130	<0.040	ug/g	NC	50
8655371	1,1-Dichloroethane	2023/05/10	92	60 - 140	91	60 - 130	<0.040	ug/g	NC	50
8655371	1,1-Dichloroethylene	2023/05/10	103	60 - 140	101	60 - 130	<0.040	ug/g	NC	50
8655371	1,2-Dichlorobenzene	2023/05/10	97	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
8655371	1,2-Dichloroethane	2023/05/10	83	60 - 140	84	60 - 130	<0.049	ug/g	NC	50
8655371	1,2-Dichloropropane	2023/05/10	87	60 - 140	88	60 - 130	<0.040	ug/g	NC	50
8655371	1,3-Dichlorobenzene	2023/05/10	101	60 - 140	100	60 - 130	<0.040	ug/g	NC	50
8655371	1,4-Dichlorobenzene	2023/05/10	115	60 - 140	113	60 - 130	<0.040	ug/g	NC	50
8655371	Acetone (2-Propanone)	2023/05/10	85	60 - 140	88	60 - 140	<0.49	ug/g	NC	50
8655371	Benzene	2023/05/10	89	60 - 140	89	60 - 130	<0.0060	ug/g	NC	50
8655371	Bromodichloromethane	2023/05/10	93	60 - 140	93	60 - 130	<0.040	ug/g	NC	50
8655371	Bromoform	2023/05/10	85	60 - 140	90	60 - 130	<0.040	ug/g	NC	50
8655371	Bromomethane	2023/05/10	96	60 - 140	95	60 - 140	<0.040	ug/g	NC	50
8655371	Carbon Tetrachloride	2023/05/10	106	60 - 140	102	60 - 130	<0.040	ug/g	NC	50
8655371	Chlorobenzene	2023/05/10	95	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
8655371	Chloroform	2023/05/10	94	60 - 140	93	60 - 130	<0.040	ug/g	NC	50



**BUREAU
VERITAS**

Bureau Veritas Job #: C3C9682
Report Date: 2023/05/15

QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8655371	cis-1,2-Dichloroethylene	2023/05/10	98	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
8655371	cis-1,3-Dichloropropene	2023/05/10	84	60 - 140	82	60 - 130	<0.030	ug/g	NC	50
8655371	Dibromochloromethane	2023/05/10	90	60 - 140	93	60 - 130	<0.040	ug/g	NC	50
8655371	Dichlorodifluoromethane (FREON 12)	2023/05/10	108	60 - 140	106	60 - 140	<0.040	ug/g	NC	50
8655371	Ethylbenzene	2023/05/10	93	60 - 140	93	60 - 130	<0.010	ug/g	NC	50
8655371	Ethylene Dibromide	2023/05/10	84	60 - 140	87	60 - 130	<0.040	ug/g	NC	50
8655371	F1 (C6-C10) - BTEX	2023/05/10					<10	ug/g	NC	30
8655371	F1 (C6-C10)	2023/05/10	113	60 - 140	89	80 - 120	<10	ug/g	NC	30
8655371	Hexane	2023/05/10	107	60 - 140	104	60 - 130	<0.040	ug/g	NC	50
8655371	Methyl Ethyl ketone (2-Butanone)	2023/05/10	77	60 - 140	81	60 - 140	<0.40	ug/g	NC	50
8655371	Methyl Isobutyl Ketone	2023/05/10	76	60 - 140	79	60 - 130	<0.40	ug/g	NC	50
8655371	Methyl t-butyl ether (MTBE)	2023/05/10	80	60 - 140	83	60 - 130	<0.040	ug/g	NC	50
8655371	Methylene Chloride(Dichloromethane)	2023/05/10	89	60 - 140	90	60 - 130	<0.049	ug/g	NC	50
8655371	o-Xylene	2023/05/10	95	60 - 140	97	60 - 130	<0.020	ug/g	NC	50
8655371	p+m-Xylene	2023/05/10	96	60 - 140	97	60 - 130	<0.020	ug/g	NC	50
8655371	Styrene	2023/05/10	101	60 - 140	106	60 - 130	<0.040	ug/g	NC	50
8655371	Tetrachloroethylene	2023/05/10	104	60 - 140	98	60 - 130	<0.040	ug/g	NC	50
8655371	Toluene	2023/05/10	95	60 - 140	92	60 - 130	<0.020	ug/g	NC	50
8655371	Total Xylenes	2023/05/10					<0.020	ug/g	NC	50
8655371	trans-1,2-Dichloroethylene	2023/05/10	99	60 - 140	97	60 - 130	<0.040	ug/g	NC	50
8655371	trans-1,3-Dichloropropene	2023/05/10	86	60 - 140	85	60 - 130	<0.040	ug/g	NC	50
8655371	Trichloroethylene	2023/05/10	107	60 - 140	105	60 - 130	<0.010	ug/g	NC	50
8655371	Trichlorofluoromethane (FREON 11)	2023/05/10	110	60 - 140	106	60 - 130	<0.040	ug/g	NC	50
8655371	Vinyl Chloride	2023/05/10	104	60 - 140	102	60 - 130	<0.019	ug/g	NC	50
8655772	1-Methylnaphthalene	2023/05/10	92	50 - 130	105	50 - 130	<0.0050	ug/g	NC	40
8655772	2-Methylnaphthalene	2023/05/10	83	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40
8655772	Acenaphthene	2023/05/10	91	50 - 130	95	50 - 130	<0.0050	ug/g	NC	40
8655772	Acenaphthylene	2023/05/10	87	50 - 130	94	50 - 130	<0.0050	ug/g	NC	40
8655772	Anthracene	2023/05/10	94	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40
8655772	Benzo(a)anthracene	2023/05/10	98	50 - 130	98	50 - 130	<0.0050	ug/g	NC	40
8655772	Benzo(a)pyrene	2023/05/10	92	50 - 130	94	50 - 130	<0.0050	ug/g	NC	40

Page 15 of 18

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

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



Bureau Veritas Job #: C3C9682
Report Date: 2023/05/15

QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8655772	Benzo(b,j)fluoranthene	2023/05/10	95	50 - 130	96	50 - 130	<0.0050	ug/g	NC	40
8655772	Benzo(g,h,i)perylene	2023/05/10	100	50 - 130	103	50 - 130	<0.0050	ug/g	NC	40
8655772	Benzo(k)fluoranthene	2023/05/10	92	50 - 130	92	50 - 130	<0.0050	ug/g	NC	40
8655772	Chrysene	2023/05/10	96	50 - 130	98	50 - 130	<0.0050	ug/g	NC	40
8655772	Dibenzo(a,h)anthracene	2023/05/10	93	50 - 130	95	50 - 130	<0.0050	ug/g	NC	40
8655772	Fluoranthene	2023/05/10	100	50 - 130	102	50 - 130	<0.0050	ug/g	NC	40
8655772	Fluorene	2023/05/10	92	50 - 130	95	50 - 130	<0.0050	ug/g	NC	40
8655772	Indeno(1,2,3-cd)pyrene	2023/05/10	95	50 - 130	98	50 - 130	<0.0050	ug/g	NC	40
8655772	Naphthalene	2023/05/10	72	50 - 130	91	50 - 130	<0.0050	ug/g	NC	40
8655772	Phenanthrene	2023/05/10	95	50 - 130	97	50 - 130	<0.0050	ug/g	NC	40
8655772	Pyrene	2023/05/10	99	50 - 130	100	50 - 130	<0.0050	ug/g	NC	40
8656055	Moisture	2023/05/10							0	20
8656521	Moisture	2023/05/10							18	20
8657252	Acid Extractable Antimony (Sb)	2023/05/11	105	75 - 125	104	80 - 120	<0.20	ug/g	13	30
8657252	Acid Extractable Arsenic (As)	2023/05/11	103	75 - 125	98	80 - 120	<1.0	ug/g	7.6	30
8657252	Acid Extractable Barium (Ba)	2023/05/11	NC	75 - 125	103	80 - 120	<0.50	ug/g	5.1	30
8657252	Acid Extractable Beryllium (Be)	2023/05/11	107	75 - 125	100	80 - 120	<0.20	ug/g	3.9	30
8657252	Acid Extractable Boron (B)	2023/05/11	100	75 - 125	97	80 - 120	<5.0	ug/g	NC	30
8657252	Acid Extractable Cadmium (Cd)	2023/05/11	103	75 - 125	99	80 - 120	<0.10	ug/g	9.4	30
8657252	Acid Extractable Chromium (Cr)	2023/05/11	106	75 - 125	100	80 - 120	<1.0	ug/g	7.9	30
8657252	Acid Extractable Cobalt (Co)	2023/05/11	104	75 - 125	100	80 - 120	<0.10	ug/g	7.1	30
8657252	Acid Extractable Copper (Cu)	2023/05/11	104	75 - 125	104	80 - 120	<0.50	ug/g	2.7	30
8657252	Acid Extractable Lead (Pb)	2023/05/11	105	75 - 125	102	80 - 120	<1.0	ug/g	3.1	30
8657252	Acid Extractable Mercury (Hg)	2023/05/11	108	75 - 125	105	80 - 120	<0.050	ug/g	NC	30
8657252	Acid Extractable Molybdenum (Mo)	2023/05/11	109	75 - 125	102	80 - 120	<0.50	ug/g	14	30
8657252	Acid Extractable Nickel (Ni)	2023/05/11	104	75 - 125	99	80 - 120	<0.50	ug/g	12	30
8657252	Acid Extractable Selenium (Se)	2023/05/11	102	75 - 125	99	80 - 120	<0.50	ug/g	NC	30
8657252	Acid Extractable Silver (Ag)	2023/05/11	104	75 - 125	102	80 - 120	<0.20	ug/g	NC	30
8657252	Acid Extractable Thallium (Tl)	2023/05/11	105	75 - 125	103	80 - 120	<0.050	ug/g	8.3	30
8657252	Acid Extractable Uranium (U)	2023/05/11	106	75 - 125	101	80 - 120	<0.050	ug/g	4.6	30
8657252	Acid Extractable Vanadium (V)	2023/05/11	NC	75 - 125	99	80 - 120	<5.0	ug/g	1.9	30



QUALITY ASSURANCE REPORT(CONT'D)

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

QC Batch	Parameter	Date	Matrix Spike		SPIKED BLANK		Method Blank		RPD	
			% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits
8657252	Acid Extractable Zinc (Zn)	2023/05/11	NC	75 - 125	98	80 - 120	<5.0	ug/g	5.1	30
8658261	F2 (C10-C16 Hydrocarbons)	2023/05/11	97	60 - 130	96	80 - 120	<10	ug/g	NC	30
8658261	F3 (C16-C34 Hydrocarbons)	2023/05/11	98	60 - 130	97	80 - 120	<50	ug/g	NC	30
8658261	F4 (C34-C50 Hydrocarbons)	2023/05/11	99	60 - 130	98	80 - 120	<50	ug/g	NC	30
8658293	WAD Cyanide (Free)	2023/05/11	100	75 - 125	106	80 - 120	<0.01	ug/g	NC	35
8658301	WAD Cyanide (Free)	2023/05/11	105	75 - 125	104	80 - 120	<0.01	ug/g	NC	35
8658381	Hot Water Ext. Boron (B)	2023/05/11	96	75 - 125	106	75 - 125	<0.050	ug/g	16	40
8658433	Conductivity	2023/05/11			103	90 - 110	<0.002	mS/cm	0.34	10
8658681	Chromium (VI)	2023/05/15	47 (1)	70 - 130	92	80 - 120	<0.18	ug/g	NC	35
8658892	Available (CaCl2) pH	2023/05/11			100	97 - 103			0.58	N/A
8658993	Available (CaCl2) pH	2023/05/11			100	97 - 103			0.74	N/A
8659075	Benzene	2023/05/11	88	50 - 140	81	50 - 140	<0.020	ug/g	NC	50
8659075	Ethylbenzene	2023/05/11	98	50 - 140	92	50 - 140	<0.020	ug/g	NC	50
8659075	F1 (C6-C10) - BTEX	2023/05/11					<10	ug/g	NC	30
8659075	F1 (C6-C10)	2023/05/11	85	60 - 140	85	80 - 120	<10	ug/g	NC	30
8659075	o-Xylene	2023/05/11	97	50 - 140	88	50 - 140	<0.020	ug/g	NC	50
8659075	p+m-Xylene	2023/05/11	93	50 - 140	85	50 - 140	<0.040	ug/g	NC	50
8659075	Toluene	2023/05/11	88	50 - 140	81	50 - 140	<0.020	ug/g	NC	50
8659075	Total Xylenes	2023/05/11					<0.040	ug/g	NC	50

N/A = Not Applicable

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

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

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

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

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

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

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

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



Bureau Veritas Job #: C3C9682
Report Date: 2023/05/15

Soil Engineers Ltd
Client Project #: 2211-E177
Site Location: MISSISSAUGA
Sampler Initials: ASH

VALIDATION SIGNATURE PAGE

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

Anastassia Hamanov, Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by {0}, {1} responsible for {2} {3} laboratory operations.