PROJECT NO.: SM 220717-E

SEPTEMBER 14, 2023

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
DORCHESTER ROAD & OLDFIELD ROAD - LOT 197
NIAGARA FALLS, ONTARIO

PREPARED FOR:

UPPER CANADA PLANNING & ENGINEERING LTD.

Soil-Mat

BY

SOIL-MAT ENGINEERS & CONSULTANTS LTD.
401 GRAYS ROAD
HAMILTON, ONTARIO
L8E 2Z3

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PROJECT NO.: SM 220717-E September 14, 2023

UPPER CANADA PLANNING & ENGINEERING LTD.
30 Hannover, Unit #3
St. Catharines, Ontario
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Attention: William Heikoop, B.U.R.Pl., MCIP, RPP
Planner

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT
DORCHESTER ROAD & OLDFIELD ROAD - LOT 197
NIAGARA FALLS, ONTARIO

1.0 EXECUTIVE SUMMARY

SOIL-MAT ENGINEERS & CONSULTANTS LTD. [SOIL-MAT ENGINEERS] were retained by UPPER CANADA PLANNING & ENGINEERING LTD. to undertake Phase Two ESA activities on the above captioned property. Of note, our Phase Two activities were completed in accordance with Ontario Regulation 153/04 [as amended] to support the eventual filing of a Record of Site Condition [RSC] for the property.

The Phase Two ESA fieldwork included the advancement of ten [10] boreholes and five [5] hand dug test pits on the Phase Two Property to facilitate the collection and submission of select soil and groundwater samples for laboratory analytical testing.

Based on SOIL-MAT ENGINEERS' field observations and the laboratory analytical test results received in its office, SOIL-MAT ENGINEERS is pleased to offer the following:

- The laboratory analytical test results for all of the submitted soil samples are all below the applicable Ontario Regulation 153/04 [as amended] Table 2 Site Condition Standards for the select tested contaminant of potential concern [COPC] groupings;
- The laboratory analytical test results for all of the submitted groundwater samples are all below the applicable Ontario Regulation 153/04 [as amended] Table 2 Site Condition Standards for the select tested COPC groupings, and;
- Based on the findings of our Phase Two ESA activities, it is the opinion of Soil-Mat Engineers that the Site is suitable for a residential development and that an RSC can be filed in support of a residential development.

The samples secured for analytical testing are believed to be representative of the conditions at the sample locations only. If any significant changes are noted, i.e., odours, staining etc., SOIL-MAT ENGINEERS should be contacted to reassess the environmental characteristics of the Site.

2.0 INTRODUCTION

SOIL-MAT ENGINEERS were retained by UPPER CANADA PLANNING & ENGINEERING LTD. to undertake a Phase Two ESA activities on the above captioned property. It is noted that the Phase Two activities were undertaken in accordance with Ontario Regulation 153/04 [as amended] to support the eventual filing of an RSC for the Phase Two Property.

A Phase One ESA was previously prepared by SOIL-MAT ENGINEERS, and was utilised in determining the rationale for these Phase Two ESA activities [refer to SOIL-MAT ENGINEERS' Report No.: SM 220717-E dated February 14, 2023].

Our fieldwork, laboratory testing and interpretation in connection with the assessment activities has been finalised and our comments and recommendations, based on our findings, are presented in the following paragraphs.

The subject property is herein referred to as the Phase Two Property and/or the *Site*.

2.0 (i) SITE DESCRIPTION

At the time of this Report, the Phase Two Property was comprised of an irregularly shaped parcel of land located on the southwest corner of Dorchester Road and Oldfield Road in the City of Niagara Falls, Ontario. The northern portion of the Phase Two Property was comprised of a gravel-covered, exterior storage area that was utilised for storing railway ties, railway tracks, railway signals and various small stockpiles of ballast stone and other miscellaneous gravel and fill materials. The southern portion of the Phase Two Property was comprised primarily of forested lands. In addition, a berm was observed along the limit of the Phase Two Property fronting Dorchester Road.

The Site was bounded to the north by Dorchester Road, to the east and south by woodlands, and to the west by grasslands and woodlands.

For descriptive purposes, Dorchester Road has been designated as having a west-east alignment.

The geographic coordinates of the Site, recorded using a hand held global positioning unit, are [NAD 83] 17T 655150E/ 4770150N.

2.0 (ii) PROPERTY OWNERSHIP

At the time of this report, the Site was owned by '1071046 Ontario Ltd.' However, as noted in the preamble of this Report, SOIL-MAT ENGINEERS were retained by UPPER CANADA PLANNING & ENGINEERING LTD. to undertake the Phase Two ESA activities on the Site. The contact information for the owner is provided below:

1. Contact Name: Mr. Mil Kovacevich
2. Mailing Address: 30 Hannover, Unit #3, St. Catharines, Ontario, L2W 1A3
3. Contact e-mail: mil.kovacevich@gmail.com
4. Contact Phone: 905-984-0194

2.0 (iii) CURRENT AND PROPOSED FUTURE USE

Current Use: Commercial Use
Proposed Use: Residential Use

Based on the current use and the proposed use of the Site, the proposed development is subject to a mandatory filing of a Record of Site Condition to support the change in land use to a more sensitive use.

2.0 (iv) APPLICABLE SITE CONDITION STANDARDS

The following criteria was utilised to determine the appropriate site classification and applicable soil and groundwater standards.

- Current land use: Commercial;
- Intended land use: Residential;
- Drinking Water Supply: Non-Potable Ground Water;
- On-site Soil Texture: Coarse Grained Soils;
- Depth to Bedrock: 20.1 to 21.0 metres;
- pH of soils on the Site: Within the Applicable Generic Site Condition Standards Range;
- Surface Water Body: Not observed on-Site or within 30 metres of the Site.

Based on the above, the applicable site condition standards [SCSs] are the Table 3 SCSs for a Residential/Parkland/Institutional Use [RPI] property use in a non-potable groundwater condition from the Ministry of the Environment document “Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environment Protection Act, (2011), hereinafter referred to as the ‘Table 3 RPI Standards’. However, to avoid a possible 30 day upper tier municipality non-potable water notification delay the Qualified Person [QP] opted to compare all of the available soil analytical test results to the Table 2 Standards for a residential / parkland / institutional [RPI] property use in a potable groundwater condition from the Ministry of the Environment document “Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act, (2011), hereinafter referred to as the ‘Table 2 RPI Standards’.

3.0 BACKGROUND INFORMATION

3.0 (i) PHYSICAL SETTING

The adjacent properties are comprised of a mixture of residential, commercial, industrial use and forested lands.

There are no water bodies in whole or in part on the Phase Two Property. In addition, no surface water bodies were observed within 30 metres of the Phase Two Property.

There are no areas of natural significance located in whole or in part on the Phase Two Property.

3.0 (ii) PAST INVESTIGATIONS

SOIL-MAT ENGINEERS had access to the following environmental reports, which were utilized as supporting documents during the completion of this Report.

1. Phase One Environmental Site Assessment, Dorchester Road & Oldfield Road – Lot 197, Niagara Falls, Ontario. SM 220717-E dated February 14, 2023: prepared for UPPER CANADA PLANNING & ENGINEERING LTD.

The February 14, 2023 Phase One ESA report revealed two [2] potentially contaminating activities on the Phase One Property, including the following:

- Our visual observations of the Phase One Property revealed a berm along the portion of the property fronting Dorchester Road. The origin and quality of the material in the berm was not known at the time of this Report. In addition, various small stockpiles of fill material were observed on the northern portion of the Phase One Property, and;
- Information contained in the aerial photographs, as well as our visual observations of the Phase One Study Area, revealed numerous piles of railway ties and railway tracks stored across the northern portion of the Phase One Property.

The neighbouring and nearby lands are comprised of a mixture of residential, commercial, industrial and forested lands. The current and historic operations on properties located in the Phase One Study Area revealed five [5] historical PCAs that are considered likely to cause an area of potential environmental concern [APEC] on the Phase One Property, including the following:

- Information contained in the Vernon City Directory Series, aerial photographs and the EcoLog ERIS database search, as well as our visual observations of the Phase One Study Area, revealed a construction equipment sales, service and assembly plant located approximately 90 metres west-southwest of the Phase One Property. This property is recognised as 7942 Dorchester Road and has been occupied by 'Palfinger Inc.' since circa 1989;
- Information contained in the Vernon City Directory Series, aerial photographs, a 1996 topographic map, and the EcoLog ERIS database search revealed the following historical operations on 8100 Dorchester Road, which is located approximately 250 metres southwest of the Phase One Property:
    - A plastics manufacturing company maintained operations on this property from

circa 1985 to circa 2000, including Chemacryl [circa 1985 to circa 1995] and CYRO Canada [circa 1995 to 2000];
  - Information contained in the Vernon City Directory Series revealed a metal fabrication facility operated on this property from circa 2010 to 2014 [R&D Weld Performance], and;
  - Information contained in the Vernon City Directory Series revealed a sandblasting and powder coating facility operated on this property from circa 2011 to 2014 [Laurcoat Inc.].
- Information available in the EcoLog ERIS database search and T.S.S.A. records revealed records of two [2] expired fuel storage tanks and a private fuel outlet formerly located at 875 Dorchester Road, which is located approximately 80 metres west-northwest of the phase One Property.

The specific PCA numbers, associated with the potential environmental concerns listed above, include the following:

Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity	Locations of PCA (on-site or off-site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC #1	The limit of the Phase One Property fronting Dorchester Road and the various small stockpiles of fill material observed on the property.	30. Importation of Fill Material of Unknown Quality [PCA A]	On-Site	Metals, As, Sb, Se, Hg, CN-, Cr(VI), B-HWS, EC, SAR, PHCs and BTEX	Soil
APEC #2	The northern portion of the Phase One Property.	49. Rail Yards, Tracks and Spurs [PCA B]	On-Site	Metals, As, Sb, Se, Hg, CN-, Cr(VI), B-HWS, EC, SAR, PHCs, PAHs and VOCs	Soil
APEC #3	The western limit of the Phase One Property.	Other. Construction Vehicle and Equipment Manufacturing and Bulk Storage [PCA C]	Off-Site	Metals, As, Sb, Se, Hg, CN-, Cr(VI), B-HWS, EC, SAR, Na, Cl-, PHCs, VOCs and PAHs	Soil and Groundwater
APEC #4	The western limit of the Phase One Property.	8. Chemical Manufacturing, Processing and Bulk Storage [PCA D]	Off-Site	Metals, As, Sb, Se, Hg, CN-, Cr(VI), B-HWS, EC, SAR, Na, Cl-, PHCs, VOCs and BNAs	Soil and Groundwater

Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity	Locations of PCA (on-site or off-site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC #5	The western limit of the Phase One Property.	34. Metal Fabrication [PCA E]	Off-Site	Metals, As, Sb, Se, Hg, CN-, Cr(VI), B-HWS, EC, SAR, Na, Cl-, PHCs and VOCs	Soil and Groundwater
APEC #6	The western limit of the Phase One Property.	Other. Metal Sandblasting Shop [PCA F]	Off-Site	Metals, As, Sb, Se, Hg, CN-, Cr(VI), B-HWS, EC, SAR, Na, Cl-, PHCs and VOCs	Soil and Groundwater
APEC #7	The northern limit of the Phase One Property.	28. Gasoline and Associated Products Storage in Fixed Tanks [PCA G]	Off-Site	PHCs and BTEX	Soil and Groundwater

Notes: As = Arsenic, Sb = Antimony, Se = Selenium, B-HWS = Boron (Hot Water Soluble), CN- = Cyanide, EC = Electrical Conductivity, Cr (VI) = Hexavalent Chromium, Hg = Mercury, SAR = Sodium Absorption Ratio, Na = Sodium, Cl- = Chloride, PHCs = Petroleum Hydrocarbons, BTEX = Benzene, Toluene, Ethylbenzene and Xylene Mixture, VOCs= Volatile Organic Compounds, BNAs = Acid, Base and Neutrals

The above noted report was supervised by a Qualified Person [QP] of SOIL-MAT ENGINEERS.

In addition to the above, SOIL-MAT ENGINEERS SOIL-MAT ENGINEERS contacted the City of Niagara Falls to request a copy of previous environmental reports for the Site that may be on file with the City. However, the results were not available during the completion of this Report.

In addition, a search of the MOE's *Brownfields Environmental Site Registry* did not reveal a previous Phase One ESA that may have been undertaken on the Site.

4.0 SCOPE OF THE INVESTIGATION

4.0 (i) OVERVIEW OF SITE INVESTIGATION

Based on the recommendations presented in our February 14, 2023 Phase One Report, ten [10] boreholes and five [5] hand dug test pits were advanced on Site to assess the impact to the soil, if any, as a result of the noted PCAs. In addition, a groundwater monitoring well was installed at four [4] borehole locations, upon completion of drilling activities, to facilitate the collection of groundwater samples for laboratory analytical testing.

Representative soil and groundwater samples were secured following standard industry sampling protocols and were submitted to AGAT laboratories for laboratory analytical testing for the specific Phase Two contaminants of potential concern [COPCs], in this case being petroleum hydrocarbons [PHCs], benzene, toluene, ethylbenzene and xylenes [BTEX], volatile organic compounds [VOCs], base, neutral and acids [BNAs], polycyclic aromatic hydrocarbons [PAHs], Metals, arsenic [As], antimony [Sb], selenium [Se], boron-hot water soluble [B-HWS], cyanide [CN-], electrical conductivity [EC], hexavalent chromium [Cr (VI)], mercury [Hg], sodium adsorption ratio [SAR], sodium [Na] and chloride [Cl-]. For reporting purposes, the COPCs listed above [with the exception of BNAs, PHCs, BTEX, PAHs, and VOCs] are hereinafter referred to as “Metals”.

4.0 (ii) MEDIA INVESTIGATED

The purpose of the Phase Two activities was to assess the soil and groundwater quality on the Phase Two Property, as related to the environmental concerns identified upon completion of our February 14, 2023 Phase One Report.

4.0 (iii) PHASE ONE CONCEPTUAL SITE MODEL

At the time of this Report, the Phase One Property was comprised of an irregularly shaped parcel of land located on the southwest corner of Dorchester Road and Oldfield Road in the City of Niagara Falls, Ontario.

SOIL-MAT ENGINEERS completed a Phase One ESA on the Site in February of 2023.

The information gathered during the completion of this Phase One ESA report revealed that the Site was first developed between 1981 and 1994 as commercial lands that were utilised as an exterior storage area for former railway ties, tracks and signals. The first readily available visual aid for the Site is a topographic map from 1907 which illustrates the Site as undeveloped land. Other visual aids, including aerial photographs from 1934, 1955, 1965, 1971, 1981, 1994, 2000, 2006, 2010, 2016 and 2020 and topographic maps from 1938, 1963, and 1996, and fire insurance plans from 1965 confirm the development timeline above.

The Phase One research revealed two [2] potentially contaminating activities [PCAs] on the Phase One Property, including the following:

- Our visual observations of the Phase One Property revealed a berm along the portion of the property fronting Dorchester Road. The origin and quality of the material in the berm was not known at the time of this Report. In addition, various small stockpiles of fill material were observed on the northern portion of the Phase One Property, and;
- Information contained in the aerial photographs, as well as our visual observations of the Phase One Study Area, revealed numerous piles of railway ties and railway tracks stored across the northern portion of the Phase One Property.

The neighbouring and nearby lands are comprised of a mixture of residential, commercial, industrial and forested lands. The current and historic operations on properties located in the Phase One Study Area revealed five [5] historical PCAs that are considered likely to cause an area of potential environmental concern [APEC] on the Phase One Property, including the following:

- Information contained in the Vernon City Directory Series, aerial photographs and the EcoLog ERIS database search, as well as our visual observations of the Phase One Study Area, revealed a construction equipment sales, service and assembly plant located approximately 90 metres west-southwest of the Phase One Property. This property is recognised as 7942 Dorchester Road and has been occupied by 'Palfinger Inc.' since circa 1989;
- Information contained in the Vernon City Directory Series, aerial photographs, a 1996 topographic map, and the EcoLog ERIS database search revealed the following historical operations on 8100 Dorchester Road, which is located approximately 250 metres southwest of the Phase One Property:
    - A plastics manufacturing company maintained operations on this property from circa 1985 to circa 2000, including Chemacryl [circa 1985 to circa 1995] and CYRO Canada. [circa 1995 to 2000];
    - Information contained in the Vernon City Directory Series revealed a metal fabrication facility operated on this property from circa 2010 to 2014 [R&D Weld Performance], and;
    - Information contained in the Vernon City Directory Series revealed a sandblasting and powder coating facility operated on this property from circa 2011 to 2014 [Laurcoat Inc.].
- Information available in the EcoLog ERIS database search and T.S.S.A. records revealed records of two [2] expired fuel storage tanks and a private fuel outlet formerly located at 7875 Dorchester Road, which is located approximately 80 metres west-northwest of the Phase One Property.

As a result of the Phase One ESA carried out by SOIL-MAT ENGINEERS, the following PCAs were identified on the Site:

Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity	Locations of PCA (on-site or off-site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC #1	The limit of the Phase One Property fronting Dorchester Road and the various small stockpiles of fill material observed on the property.	30. Importation of Fill Material of Unknown Quality [PCA A]	On-Site	Petroleum Hydrocarbons [PHCs], Metals, and Benzene, Toluene, Ethylbenzene and Xylenes [BTEX]	Soil
APEC #2	The northern portion of the Phase One Property.	49. Rail Yards, Tracks and Spurs [PCA B]	On-Site	Polycyclic Aromatic Hydrocarbons [PAHs], Volatile Organic Compounds [VOCs], and Metals	Soil
APEC #3	The western limit of the Phase One Property.	Other. Construction Vehicle and Equipment Manufacturing and Bulk Storage [PCA C]	Off-Site	Metals, PHCs and VOCs	Soil and Groundwater
APEC #4	The western limit of the Phase One Property.	8. Chemical Manufacturing, Processing and Bulk Storage [PCA D]	Off-Site	PHCs, VOCs and Metals	Soil and Groundwater
APEC #5	The western limit of the Phase One Property.	34. Metal Fabrication [PCA E]	Off-Site	Metals, PHCs and VOCs	Soil and Groundwater
APEC #6	The western limit of the Phase One Property.	Other. Metal Sandblasting Shop [PCA F]	Off-Site	Metals, PHCs and VOCs	Soil and Groundwater
APEC #7	The northern limit of the Phase One Property.	28. Gasoline and Associated Products Storage in Fixed Tanks [PCA G]	Off-Site	PHCs and BTEX	Soil and Groundwater

SOIL-MAT ENGINEER's Phase One CSM is included in Appendix 'A' of this Report for reference.

4.0 (iv) DEVIATIONS FROM SAMPLING AND ANALYSIS PLAN

Professional care was exercised during the retrieval of each sample, the placement of each sample in the appropriate sample jar, the labeling of the field samples and associated chain of custody and in the delivery of the samples to the testing laboratory.

As our standard operating procedures dictate unusual field observations, such as visual or olfactory evidence of a suspected impact, a deviation from SOIL-MAT ENGINEERS' field sampling and handling protocols or incident on the testing laboratories' side was documented either on our field borehole logs or in-house copy of the sample certificate of analysis. There were no deviations recorded during this Phase Two ESA.

4.0 (v) IMPEDIMENTS

There were no impediments to SOIL-MAT ENGINEERS' field work and assessment activities during the Phase Two ESA.

5.0 INVESTIGATION METHODS

5.0 (i) GENERAL

There were no deviations in SOIL-MAT ENGINEERS' planned Phase Two activities.

5.0 (ii) DRILLING AND EXCAVATING

All boreholes were advanced using solid stem auger equipment on July 26 to 27, 2023. The physical advancement of the boreholes and installation of the groundwater monitoring wells was performed by Davis Drilling Ltd. via a track mounted drill rig under the supervision of a representative of SOIL-MAT ENGINEERS.

Soil samples were generally collected in 0.76m intervals from the ground surface to the termination of each borehole. After each sampling event, the split-spoon sampler was thoroughly washed with non-phosphate detergent then rinsed with water before the collection of each subsequent sample to minimise the potential for cross-contamination between samples.

5.0 (iii) SOIL SAMPLING

Soil samples were examined in the field for visual and olfactory evidence of potential impacts such as unusual staining and/or odours, etc., and were split into two separate samples, including the following:

- One half of the sample was sealed in sampling jars for submission to AGAT for analytical testing, and;
- One half of the sample was sealed in a plastic sampling bag for further characterisation in SOIL-MAT ENGINEERS' in-house soils laboratory.

The soil samples that were picked up at our office by AGAT were sealed in pre-cleaned wide mouth, amber glass sample jars, no head space, as provided by the laboratory. The samples were stored and transported in a cooler and kept under ice packs to minimise potential volatilisation of select parameters. New disposable sampling gloves were used for the collection of each soil sample with care given not to make contact with the samples and gloves. Dedicated sample retrieval equipment, including a stainless steel split-spoon, was used to retrieve each sample and before depositing it directly it into the AGAT Laboratories sample jar.

The samples were picked up at our office by AGAT in coolers equipped with ice packs to help maintain a temperature range between the applicable 0^{o}C to 10^{o}C. As reported on the chain of custody for the soil samples, the samples were picked up at our office with an average temperature of 8.5 ^{o}C and arrived at AGAT's lab in Mississauga, Ontario with a final temperature of 7.9^{o}C.

5.0 (iv) FIELD SCREENING MEASUREMENTS

All of the Phase Two ESA soil samples were examined in the field for visual and olfactory evidence of potential PHC impact(s), such as unusual staining and/or odours, etc.

In addition, an RKI Eagle gas detector was utilised during the collection of the soil samples. All samples tested recorded a value of 0 ppm.

5.0 (v) GROUND WATER: MONITORING WELL INSTALLATION

A 50 millimetre groundwater monitoring well was installed at four [4] borehole locations upon the completion of drilling activities. The wells were installed to depths of approximately 6.1 metres, with a screened interval in the lower 3.05 metres. The groundwater monitoring wells were installed in accordance with *Ontario Regulation 903 [Water Wells]* under the Ontario Water Resources Act.

A water well record was submitted to the Ministry of the Environment, Conservation and Parks [MOE] upon completion of drilling activities. It is the responsibility of the Site owner to ensure the groundwater monitoring wells are maintained in an appropriate, safe and secure condition as per the Regulation and to arrange for the monitoring wells to be abandoned in accordance with the Regulation when they are no longer in use.

The monitoring installation details are summarized in the table below.

Monitoring Well	Bottom of Monitoring Well [m bgs]	Bottom of Monitoring Well Elevation* [m]	Screen Length [m]	Screen Interval [m bgs]	Filter Pack [m bgs]	Bentonite Plug [m bgs]	Ground Surface Elevation* [m]
MW1	6.1	93.60	3.05	3.05-6.1	2.75-6.1	0.15-2.75	99.70
MW2	6.1	93.62	3.05	3.05-6.1	2.75-6.1	0.15-2.75	99.72
MW3	6.1	93.96	3.05	3.05-6.1	2.75-6.1	0.15-2.75	100.06
MW4	6.1	94.05	3.05	3.05-6.1	2.75-6.1	0.15-2.75	100.15

* - Elevations referenced to a Temporary Benchmark with an assumed elevation of 100.00 metres.

5.0 (vi) GROUND WATER: FIELD MEASUREMENT OF WATER QUALITY PARAMETERS

An Oil / Water interface probe was utilized during the monitoring and collection of the groundwater samples. A light non-aqueous phase liquid [LNAPL] layer was not identified in any of the on-site groundwater monitoring wells.

The samples were delivered immediately to AGAT upon retrieval from the monitoring well and were subjected to AGAT's QA procedure which included a temperature reading upon their receipt.

The groundwater samples were delivered to the AGAT lab in Mississauga, Ontario, immediately after sampling, on ice to begin cooling the samples between the applicable 0°C to 10°C. As reported on the chain of custody for the groundwater samples, the samples were picked up at our office with an average temperature of 12.8 °C and arrived at AGAT's lab in Mississauga, Ontario with a final temperature of 8.2°C.

5.0 (vii) GROUND WATER: SAMPLING

Three [3] well volumes were purged from each groundwater monitoring well prior to the collection of the groundwater samples. The monitoring wells were then allowed to recharge back to recorded static groundwater levels prior to the physical sample collection.

The monitoring wells installed on the Site during this Phase Two ESA were equipped with dedicated sampling equipment, including a 25 millimetre water bailer for sample collection for the PHC and BTEX parameters.

A low flow bladder pump was utilised for the collection of groundwater samples for the remaining COPC groupings as the samples were subjected to laboratory analytical testing for VOCs.

Professional care was exercised during the retrieval of each sample, the placement of each sample in the appropriate sample jar, the labeling of the field samples and associated chain of custody and in the delivery of the samples to the testing laboratory.

As our standard operating procedures dictate unusual field observations, such as visual or olfactory evidence of a suspected impact, a deviation from SOIL-MAT ENGINEERS' field sampling and handling protocols or incident on the testing laboratories' side was documented either on our field borehole logs or in-house copy of the sample certificate of analysis.

There were no deviations recorded during the Phase Two ESAs.

5.0 (viii) SEDIMENT SAMPLING

Sediment sampling was not conducted as part of the Phase Two activities as the mediums investigated were limited to the soil and groundwater mediums.

5.0 (ix) ANALYTICAL TESTING

All laboratory analytical work was performed by AGAT Laboratories [AGAT] in Mississauga, Ontario.

AGAT is a member of the Canadian Association for Laboratory Accreditation [CALA] and meets the requirements of Section 47 of the Record of Site Condition Regulation.

5.0 (x) RESIDUAL MANAGEMENT PROCEDURES

Soil cuttings produced from the physical drilling activities were stored on-site in the vicinity of each borehole until the results of the laboratory analytical testing demonstrated that the subject soil material met the applicable SCSs.

Purged groundwater was stored on-site until the results of the laboratory analytical testing demonstrated that the groundwater met the applicable SCS at which time the groundwater was discarded across the surface soil in the vicinity of each groundwater sampling point.

5.0 (xi) ELEVATION SURVEYING

All boreholes and groundwater monitoring wells were surveyed by a staff member of SOIL-MAT ENGINEERS to facilitate site relative survey information. A temporary benchmark described as the top of an existing manhole located in the intersection of Dorchester Road and Oldfield Road was used as a temporary benchmark. The temporary benchmark was assigned an assumed elevation of 100.00 metres.

5.0 (xii) QUALITY ASSURANCE AND QUALITY CONTROL MEASURES

QA/QC was maintained during the field program through equipment decontamination and sampling procedures, as outlined in the "*MOE Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario*" (May, 1996).

Standard QA/QC protocols were followed for bottle preparation, sample collection and transportation, as outlined by MOE guidance documents, including the MOE's 2011 "*Protocol for Analytical Methods Used in the Assessment of Properties Under Part XV.1 of the Environmental Protection Act*".

In addition to these field-based measures, extensive QA/QC procedures were carried out by the analytical laboratories, including:

- Lab blanks;
- Spikes;
- Matrix blanks; and
- Instrument blanks and assessments of instrument tuning and performance.

Based on the evaluation of the sampling and analytical procedures used, the following data quality statements can be made:

- The data are adequate for the RSC objectives and approach utilized; and,
- Soil analytical data were of an acceptable quality for comparison to 2011 MOE SCS as defined by *O.Reg.153/04, as amended,* for current investigations.

6.0 REVIEW AND EVALUATION

6.0 (i) GEOLOGY

SOIL-MAT ENGINEERS' Phase Two ESA revealed the following Site stratigraphy:

- TOPSOIL: A surficial veneer of topsoil, approximately 150 to 200 millimetres in thickness, was encountered at Borehole Nos.: 'BH1' and 'BH2'. It is noted that the depth of topsoil may vary across the site and from the depths encountered at the borehole locations.
- GRAVEL: Borehole Nos.: 'BH3' through to 'BH10', inclusive, were advanced through a surficial granular fill deposit, which was found to consist of approximately 150 to 200 millimetres of compact granular material.
- SILTY CLAY/ CLAYEY SILT: Silty Clay/ Clayey Silt was encountered beneath the topsoil and gravel structures in all borehole locations and below the silty sand/ sandy silt layer in Borehole No.: 'BH4'. The cohesive soil was brown in colour, with the exception of Borehole No.: 'BH4' which was brown in colour and transitioned to grey beneath the silty sand/ sandy silt later at a depth of approximately 6 metres. The silty clay/ clayey silt was found to contain trace amounts of sand and gravel and was in a soft to very stiff state. The silty clay/ clayey silt was proven to termination at a depth of approximately 3.6 to 6.7 metres beneath the existing ground surface.
- SILTY SAND/ SANDY SILT: Silty Sand/ Sandy Silt was encountered beneath the silty clay/ clayey silt layer in Borehole Nos.: 'BH1' through to 'BH4' inclusive. The granular soil was brown in colour, was found to contain trace to some clay, and was very loose to compact in consistency. The silty sand/ sandy silt was proven to termination at a depth of approximately 5.9 to 6.7 metres beneath the existing ground surface.
- GROUNDWATER: The depth to the groundwater table is anticipated to be approximately 4.4 to 4.8 metres based on groundwater readings secured from the four [4] monitoring wells installed on the Site. Although seasonal fluctuations to this level should be expected. Based on the groundwater contours extrapolated from the recorded static groundwater levels on the Site the groundwater flow is expected to the west-northwest. The horizontal hydraulic gradient was estimated as 0.00036.

6.0 (ii) GROUND WATER: ELEVATIONS AND FLOW DIRECTIONS

All boreholes were recorded as 'dry' upon completion of drilling activities at depths of 3.6 to 6.7 metres below the existing ground structure. It is noted that insufficient time would have passed for the static groundwater level to stabilize in the open boreholes during drilling.

Groundwater monitoring wells were installed in Borehole Nos. 'BH1', 'BH2', 'BH3' and 'BH4' for future monitoring of the static groundwater level and environmental sampling of the on-site groundwater.

The monitoring installation details are summarized in table format on the following page:

TABLE A
SUMMARY OF GROUNDWATER LEVELS

Borehole No.	Surface Elevation* (m)	August 2, 2023		March 24, 2022	
		Depth [m bgs]	Elev.* [m]	Depth [m bgs]	Elev.* [m]
BH1	99.70	4.82	94.88	4.83	94.87
BH2	99.72	4.49	95.23	4.44	95.28
BH3	100.06	4.39	95.67	4.38	95.68
BH4	100.15	4.19	95.96	4.82	95.33

* - Elevations referenced to a Temporary Benchmark with an assumed elevation of 100.00 metres.

Based on the groundwater readings, and based on our experience in the area and observations recorded during drilling activities, the static groundwater level is estimated at a depth of approximately 4.4 to 4.8 metres below the existing ground surface, although seasonal fluctuations must be expected.

Based on the groundwater contours extrapolated from the recorded static groundwater levels on the Site the groundwater flow direction through the Site is to the west-northwest.

The monitoring well locations, groundwater contours, and inferred groundwater flow direction is illustrated on Drawing No.: 2 in Appendix 'B'.

6.0 (iii) GROUND WATER: HYDRAULIC GRADIENTS

The horizontal hydraulic gradient was calculated based on the groundwater levels recorded during the Phase Two activities. Based on these recordings, the distance between the monitoring wells and the depth of well installation the horizontal hydraulic gradient is estimated as 0.00036.

6.0 (iv) FINE-MEDIUM SOIL TEXTURE

SOIL-MAT ENGINEERS' borehole logs indicate that the surface and subsurface soil consists primarily of silty clay/ clayey silt as the predominant soil type. However, a hydrometer was not performed on these soils. As such the soil was classified as a coarse texture.

6.0 (v) SOIL: FIELD SCREENING

SOIL-MAT ENGINEERS did not observe any visual or olfactory evidence that suggested a new COPC grouping should be considered during the assessment activities.

6.0 (vi) SOIL QUALITY

In total, twenty-seven [27] soil samples, including four [4] duplicate samples, were secured from the Site to assess potential adverse impact(s) to the soil medium on the Site as a result of the PCAs identified in our February 14, 2023 Phase One Report.

The secured soil samples were submitted to AGAT for laboratory analytical testing as described in the summary table below:

SUMMARY OF TESTED SOIL SAMPLES

Sample ID	Depth [m bgs]	Laboratory Analysis	Soil Description	Associated APECs and PCAs
BH1 SS3	1.5 - 2.1	Metals, BTEX, PHCs, VOCs & BNAs	Silty Clay/ Clayey Silt	APECs: 3, 4, 5, & 6 PCAs: Other [Construction Vehicle and Equipment Manufacturing and Bulk Storage], 8, 34 & Other [Metal Sandblasting Shop]
BH1 SS7	4.6 – 5.2	Metals, BTEX, PHCs, VOCs & BNAs	Silty Sand/ Sandy Silt	APECs: 3, 4, 5, & 6 PCAs: Other [Construction Vehicle and Equipment Manufacturing and Bulk Storage], 8, 34 & Other [Metal Sandblasting Shop]
BH2 SS3	1.5 - 2.1	Metals, BTEX, PHCs, VOCs & BNAs	Silty Clay/ Clayey Silt	APECs: 3, 4, 5, & 6 PCAs: Other [Construction Vehicle and Equipment Manufacturing and Bulk Storage], 8, 34 & Other [Metal Sandblasting Shop]
BH2 SS9	6.1 – 6.7	Metals, BTEX, PHCs, VOCs & BNAs	Silty Sand/ Sandy Silt	APECs: 3, 4, 5, & 6 PCAs: Other [Construction Vehicle and Equipment Manufacturing and Bulk Storage], 8, 34 & Other [Metal Sandblasting Shop]
BH3 SS3	1.5 - 2.1	BTEX & PHCs	Silty Clay/ Clayey Silt	APECs: 2 & 7 PCAs: 49 & 28
BH3 SS8	5.3 – 6.9	BTEX & PHCs	Silty Sand/ Sandy Silt	APECs: 2 & 7 PCAs: 49 & 28
BH3 SS9	6.1 – 6.7	BTEX & PHCs	Silty Sand/ Sandy Silt	APECs: 2 & 7 PCAs: 49 & 28
BH4 SS2	0.8 – 1.4	BTEX & PHCs	Silty Clay/ Clayey Silt	APEC: 2 PCA: 49
BH4 SS8	5.3 – 6.9	BTEX & PHCs	Silty Sand/ Sandy Silt	APEC: 2 PCA: 49
BH5 SS2	0.8 – 1.4	Metals, BTEX, PHCs, VOCs & PAHs	Silty Clay/ Clayey Silt	APEC: 2 PCA: 49
BH6 SS2	0.8 – 1.4	Metals, BTEX, PHCs, VOCs & PAHs	Silty Clay/ Clayey Silt	APEC: 2 PCA: 49
BH6 SS4	2.3 – 2.9	Metals, BTEX, PHCs, VOCs & PAHs	Silty Clay/ Clayey Silt	APEC: 2 PCA: 49
BH7 SS2	0.8 – 1.4	Metals, BTEX, PHCs, VOCs & PAHs	Silty Clay/ Clayey Silt	APEC: 2 PCA: 49
BH8 SS2	0.8 – 1.4	Metals, BTEX, PHCs, VOCs & PAHs	Silty Clay/ Clayey Silt	APEC: 2 PCA: 49
BH8 SS3	1.5 - 2.1	Metals, BTEX, PHCs, VOCs & PAHs	Silty Clay/ Clayey Silt	APEC: 2 PCA: 49
BH9 SS1	0.15 – 0.6	Metals, BTEX, PHCs, VOCs & PAHs	Silty Clay/ Clayey Silt	APEC: 2 PCA: 49

Sample ID	Depth [m bgs]	Laboratory Analysis	Soil Description	Associated APECs and PCAs
BH10 SS2	0.8 – 1.4	Metals, BTEX, PHCs, VOCs & PAHs	Silty Clay/ Clayey Silt	APEC: 2 PCA: 49
BH10 SS3	1.5 - 2.1	Metals, BTEX, PHCs, VOCs & PAHs	Silty Clay/ Clayey Silt	A+9PEC: 2 PCA: 49
TP1	0.3	Metals, BTEX & PHCs	Silty Clay/ Clayey Silt	APEC: 1 PCA: 28
TP2	0.3	Metals, BTEX & PHCs	Silty Clay/ Clayey Silt	APEC: 1 PCA: 28
TP3	0.3	Metals, BTEX & PHCs	Silty Clay/ Clayey Silt	APEC: 1 PCA: 28
TP4	0.3	Metals, BTEX & PHCs	Silty Clay/ Clayey Silt	APEC: 1 PCA: 28
TP5	0.3	Metals, BTEX & PHCs	Silty Clay/ Clayey Silt	APEC: 1 PCA: 28
DUP1 [BH1 SS3]	1.5 - 2.1	BNAs	Silty Clay/ Clayey Silt	APECs: 3, 4, 5, & 6 PCAs: Other [Construction Vehicle and Equipment Manufacturing and Bulk Storage], 8, 34 & Other [Metal Sandblasting Shop]
DUP2 [BH3 SS3]	1.5 - 2.1	BTEX & PHCs	Silty Clay/ Clayey Silt	APECs: 2 & 7 PCAs: 49 & 28
DUP3 [TP1]	0.3	Metals, BTEX & PHCs	Silty Clay/ Clayey Silt	APEC: 1 PCA: 28
DUP4 [TP3]	0.3	Metals, BTEX & PHCs	Silty Clay/ Clayey Silt	APEC: 1 PCA: 28

The laboratory analytical test results, for the submitted soil samples, are summarised in table format below:

SUMMARY OF SOIL SAMPLE TEST RESULTS

Sample ID	Depth [m bgs]	Laboratory Analysis	Soil Description	Table 2 RPI Exceedances	Associated APECs and PCAs
BH1 SS3	1.5 - 2.1	Metals, BTEX, PHCs, VOCs & BNAs	Silty Clay/ Clayey Silt	No exceedances reported	APECs: 3, 4, 5, & 6 PCAs: Other [Construction Vehicle and Equipment Manufacturing and Bulk Storage], 8, 34 & Other [Metal Sandblasting Shop]
BH1 SS7	4.6 – 5.2	Metals, BTEX, PHCs, VOCs & BNAs	Silty Sand/ Sandy Silt	No exceedances reported	APECs: 3, 4, 5, & 6 PCAs: Other [Construction Vehicle and Equipment Manufacturing and Bulk Storage], 8, 34 & Other [Metal Sandblasting Shop]
BH2 SS3	1.5 - 2.1	Metals, BTEX, PHCs, VOCs & BNAs	Silty Clay/ Clayey Silt	No exceedances reported	APECs: 3, 4, 5, & 6 PCAs: Other [Construction Vehicle and Equipment Manufacturing and Bulk Storage], 8, 34 & Other [Metal Sandblasting Shop]

Sample ID	Depth [m bgs]	Laboratory Analysis	Soil Description	Table 2 RPI Exceedances	Associated APECs and PCAs
BH2 SS9	6.1 – 6.7	Metals, BTEX, PHCs, VOCs & BNAs	Silty Sand/ Sandy Silt	No exceedances reported	APECs: 3, 4, 5, & 6 PCAs: Other [Construction Vehicle and Equipment Manufacturing and Bulk Storage], 8, 34 & Other [Metal Sandblasting Shop]
BH3 SS3	1.5 - 2.1	BTEX & PHCs	Silty Clay/ Clayey Silt	No exceedances reported	APECs: 2 & 7 PCAs: 49 & 28
BH3 SS8	5.3 – 5.9	BTEX & PHCs	Silty Sand/ Sandy Silt	No exceedances reported	APECs: 2 & 7 PCAs: 49 & 28
BH3 SS9	6.1 – 6.7	BTEX & PHCs	Silty Sand/ Sandy Silt	No exceedances reported	APECs: 2 & 7 PCAs: 49 & 28
BH4 SS2	0.8 – 1.4	BTEX & PHCs	Silty Clay/ Clayey Silt	No exceedances reported	APEC: 2 PCA: 49
BH4 SS8	5.3 – 5.9	BTEX & PHCs	Silty Sand/ Sandy Silt	No exceedances reported	APEC: 2 PCA: 49
BH5 SS2	0.8 – 1.4	Metals, BTEX, PHCs, VOCs & PAHs	Silty Clay/ Clayey Silt	No exceedances reported	APEC: 2 PCA: 49
BH6 SS2	0.8 – 1.4	Metals, BTEX, PHCs, VOCs & PAHs	Silty Clay/ Clayey Silt	No exceedances reported	APEC: 2 PCA: 49
BH6 SS4	2.3 – 2.9	Metals, BTEX, PHCs, VOCs & PAHs	Silty Clay/ Clayey Silt	No exceedances reported	APEC: 2 PCA: 49
BH7 SS2	0.8 – 1.4	Metals, BTEX, PHCs, VOCs & PAHs	Silty Clay/ Clayey Silt	No exceedances reported	APEC: 2 PCA: 49
BH8 SS2	0.8 – 1.4	Metals, BTEX, PHCs, VOCs & PAHs	Silty Clay/ Clayey Silt	No exceedances reported	APEC: 2 PCA: 49
BH8 SS3	1.5 - 2.1	Metals, BTEX, PHCs, VOCs & PAHs	Silty Clay/ Clayey Silt	No exceedances reported	APEC: 2 PCA: 49
BH9 SS1	0.15 – 0.6	Metals, BTEX, PHCs, VOCs & PAHs	Silty Clay/ Clayey Silt	No exceedances reported	APEC: 2 PCA: 49
BH10 SS2	0.8 – 1.4	Metals, BTEX, PHCs, VOCs & PAHs	Silty Clay/ Clayey Silt	No exceedances reported	APEC: 2 PCA: 49
BH10 SS3	1.5 - 2.1	Metals, BTEX, PHCs, VOCs & PAHs	Silty Clay/ Clayey Silt	No exceedances reported	APEC: 2 PCA: 49

Sample ID	Depth [m bgs]	Laboratory Analysis	Soil Description	Table 2 RPI Exceedances	Associated APECs and PCAs
TP1	0.3	Metals, BTEX & PHCs	Silty Clay/ Clayey Silt	No exceedances reported	APEC: 1 PCA: 28
TP2	0.3	Metals, BTEX & PHCs	Silty Clay/ Clayey Silt	No exceedances reported	APEC: 1 PCA: 28
TP3	0.3	Metals, BTEX & PHCs	Silty Clay/ Clayey Silt	No exceedances reported	APEC: 1 PCA: 28
TP4	0.3	Metals, BTEX & PHCs	Silty Clay/ Clayey Silt	No exceedances reported	APEC: 1 PCA: 28
TP5	0.3	Metals, BTEX & PHCs	Silty Clay/ Clayey Silt	No exceedances reported	APEC: 1 PCA: 28
DUP1 [BH1 SS3]	1.5 - 2.1	BNAs	Silty Clay/ Clayey Silt	No exceedances reported	APECs: 3, 4, 5, & 6 PCAs: Other [Construction Vehicle and Equipment Manufacturing and Bulk Storage], 8, 34 & Other [Metal Sandblasting Shop]
DUP2 [BH3 SS3]	1.5 - 2.1	BTEX & PHCs	Silty Clay/ Clayey Silt	No exceedances reported	APECs: 2 & 7 PCAs: 49 & 28
DUP3 [TP1]	0.3	Metals, BTEX & PHCs	Silty Clay/ Clayey Silt	No exceedances reported	APEC: 1 PCA: 28
DUP4 [TP3]	0.3	Metals, BTEX & PHCs	Silty Clay/ Clayey Silt	No exceedances reported	APEC: 1 PCA: 28

Notes: Metals = Metals, Arsenic [As], Antimony [Sb], Selenium [Se], Boron-Hot water Soluble [B-HWS], Cyanide [CN-], Electrical Conductivity [EC], Hexavalent Chromium [Cr (VI)], Mercury [Hg] and Sodium Adsorption Ratio [SAR], PHCs = Petroleum Hydrocarbons, VOCs = Volatile Organic Compounds,
BTEX = Benzene, Toluene, Ethylbenzene, and Xylene Mixture, PAHs = Polycyclic Aromatic Hydrocarbons, BNAs = Base, Neutrals and Acid

In all cases, the laboratory analytical test results for the submitted soil samples meet the applicable Table 2 RPI site condition standards for the select tested COPC groupings.

The AGAT Certificate of Analysis is included in Appendix 'C' for reference.

The Phase Two Property boundaries, borehole locations and laboratory analytical test results are illustrated on Drawing Nos. 3, 3A – 3E, and 4A – 4D in Appendix 'B'. SOIL-MAT ENGINEERS' borehole logs are also included in Appendix 'B' for reference.

6.0 (vii) GROUND WATER QUALITY

In total, four [4] ground water samples, including one duplicate sample, were secured from the Site to assess potential adverse impact(s) on the Site as a result of the PCAs identified in our February 14, 2023 Phase One Report.

The secured groundwater samples were submitted to AGAT for laboratory analytical testing as described in the summary table on the following page:

Sample ID	Laboratory Analysis	Associated APECs and PCAs
MW1	PHCs & BTEX	APECs: 3, 4, 5, & 6 PCAs: Other [Construction Vehicle and Equipment Manufacturing and Bulk Storage], 8, 34 & Other [Metal Sandblasting Shop]
MW2	PHCs & BTEX	APECs: 3, 4, 5, & 6 PCAs: Other [Construction Vehicle and Equipment Manufacturing and Bulk Storage], 8, 34 & Other [Metal Sandblasting Shop]
MW3	Metals, PHCs, BTEX, VOCs, and BNAs	APECs: 2 & 7 PCAs: 49 & 28
MW4	Metals, PHCs, BTEX, VOCs, and BNAs	APEC: 2 PCA: 49
DUP [MW4]	Metals, PHCs, BTEX, VOCs, and BNAs	APEC: 2 PCA: 49
Notes: Metals = Metals, As, Sb, Se, BHWS, CN, EC, Cr(VI), Hg and SAR, PHCs = Petroleum Hydrocarbons, BTEX = Benzene, Toluene, Ethylbenzene, and Xylene Mixture, VOCs = Volatile Organic Compounds, BNAs = Base Neutrals and Acid		

The laboratory analytical test results for the submitted water samples are summarised below:

SUMMARY OF ANALYTICAL TESTING – WATER [TABLE 2 NPGW]

Sample ID	Laboratory Analysis	Table 2 NPGW Exceedances	Associated APECs and PCAs
MW1	PHCs & BTEX	No Exceedances Reported	APECs: 3, 4, 5, & 6 PCAs: Other [Construction Vehicle and Equipment Manufacturing and Bulk Storage], 8, 34 & Other [Metal Sandblasting Shop]
MW2	PHCs & BTEX	No Exceedances Reported	APECs: 3, 4, 5, & 6 PCAs: Other [Construction Vehicle and Equipment Manufacturing and Bulk Storage], 8, 34 & Other [Metal Sandblasting Shop]
MW3	Metals, PHCs, BTEX, VOCs, and BNAs	No Exceedances Reported	APECs: 2 & 7 PCAs: 49 & 28
MW4	Metals, PHCs, BTEX, VOCs, and BNAs	No Exceedances Reported	APEC: 2 PCA: 49
DUP [MW4]	Metals, PHCs, BTEX, VOCs, and BNAs	No Exceedances Reported	APEC: 2 PCA: 49
Notes: Metals = Metals, As, Sb, Se, BHWS, CN, Electrical Conductivity [EC], Cr (VI), Hg and SAR, PHCs = Petroleum Hydrocarbons, PAHs = Polycyclic Aromatic Hydrocarbons, BTEX = Benzene, Toluene, Ethylbenzene, Xylenes, VOC= Volatile Organic Compounds			

The laboratory analytical test results for the submitted groundwater samples are all below the applicable Table 2 PGW Standards for the select tested COPC groupings.

The AGAT certificate of analysis for the groundwater analytical data is contained in Appendix ‘D’ for reference.

6.0 (viii) SEDIMENT QUALITY

Sediment sampling was not conducted as part of the Phase Two ESA fieldwork as the mediums of concern were limited to soil and groundwater.

6.0 (ix) QUALITY ASSURANCE AND QUALITY CONTROL RESULTS

QA/QC was maintained during the field program through equipment decontamination and sampling procedures, as outlined in the "*MOE Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario*" (May, 1996).

Standard QA/QC protocols were followed for bottle preparation, sample collection and transportation, as outlined by MOE guidance documents, including the MOE's 2011 "*Protocol for Analytical Methods Used in the Assessment of Properties Under Part XV.1 of the Environmental Protection Act*".

In addition to these field-based measures, extensive QA/QC procedures were carried out by the analytical laboratories, including:

- Lab blanks;
- Spikes;
- Matrix blanks; and
- Instrument blanks and assessments of instrument tuning and performance.

Based on the evaluation of the sampling and analytical procedures used, the following data quality statements can be made:

- The data is adequate for the RSC objectives and approach utilized; and,
- Soil analytical data were of an acceptable quality for comparison to Table 3 SCS as defined by *O.Reg.153/04, as amended,* for current investigations;

No deviations from the QA/QC protocols were noted during the completion of the Phase Two ESA fieldwork.

6.0 (x) PHASE TWO CONCEPTUAL SITE MODEL

SOIL-MAT ENGINEERS' has not prepared a Phase Two CSM as part of this Phase Two ESA report. However, a Phase Two CSM will be prepared to support the eventual filing of an RSC.

7.0 CONCLUSIONS

A description of the staff members associated with the completion of the Phase Two ESA activities is contained in Appendix 'E' of this Report. The ESA activities were supervised by Mr. Steve Sears, B. Eng. Mgmt., P. Eng., QP_{ESA}, who is a Qualified Person for the undertaking of ESA activities.

The Phase Two ESA fieldwork included the advancement of ten [10] boreholes and five [5] hand dug test pits on the property to facilitate the collection and submission of select soil and groundwater samples for laboratory analytical testing.

Based on SOIL-MAT ENGINEERS' field observations and the laboratory analytical test results received in its office, SOIL-MAT ENGINEERS is pleased to ooffer the following:

- The laboratory analytical test results for all of the submitted soil samples are all below the applicable Ontario Regulation 153/04 [as amended] Table 2 Site Condition Standards for the select tested contaminant of potential concern groupings;
- The laboratory analytical test results for all of the submitted groundwater samples are all below the applicable Ontario Regulation 153/04 [as amended] Table 2 Site Condition Standards for the select tested contaminant of potential concern groupings, and;
- Based on the findings of our Phase Two ESA activities, it is the opinion of Soil-Mat Engineers that the Site is suitable for a residential development and that a RSC can be filed in support of a residential development.

The samples secured for analytical testing are believed to be representative of the conditions at the sample locations only. If any significant changes are noted, i.e., odours, staining etc., SOIL-MAT ENGINEERS should be contacted to reassess the environmental characteristics of the Site.

SOIL-MAT ENGINEERS & CONSULTANTS LTD. prepared this Report for the account of UPPER CANADA PLANNING & ENGINEERING LTD. The material in if reflects SOIL-MAT ENGINEERS' best judgement in light of the information available to it at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. SOIL-MAT ENGINEERS accepts no responsibility for damages, if any suffered by any third party as a result of decisions made or actions based on this report.

We trust this Report is satisfactory for your purposes. Please feel free to contact our Office if you have any questions, or we may be of further service to you.

Yours very truly,
SOIL-MAT ENGINEERS & CONSULTANTS LTD.

Lianne Crawford, Env. Tech. Dipl.
Environmental Technician

Keith Gleadall, B.A., EA Dipl.
Environmental Manager

Stephen R. Sears, B. Eng. Mgmt., P. Eng., QP$_{ESA}$
Review Engineer

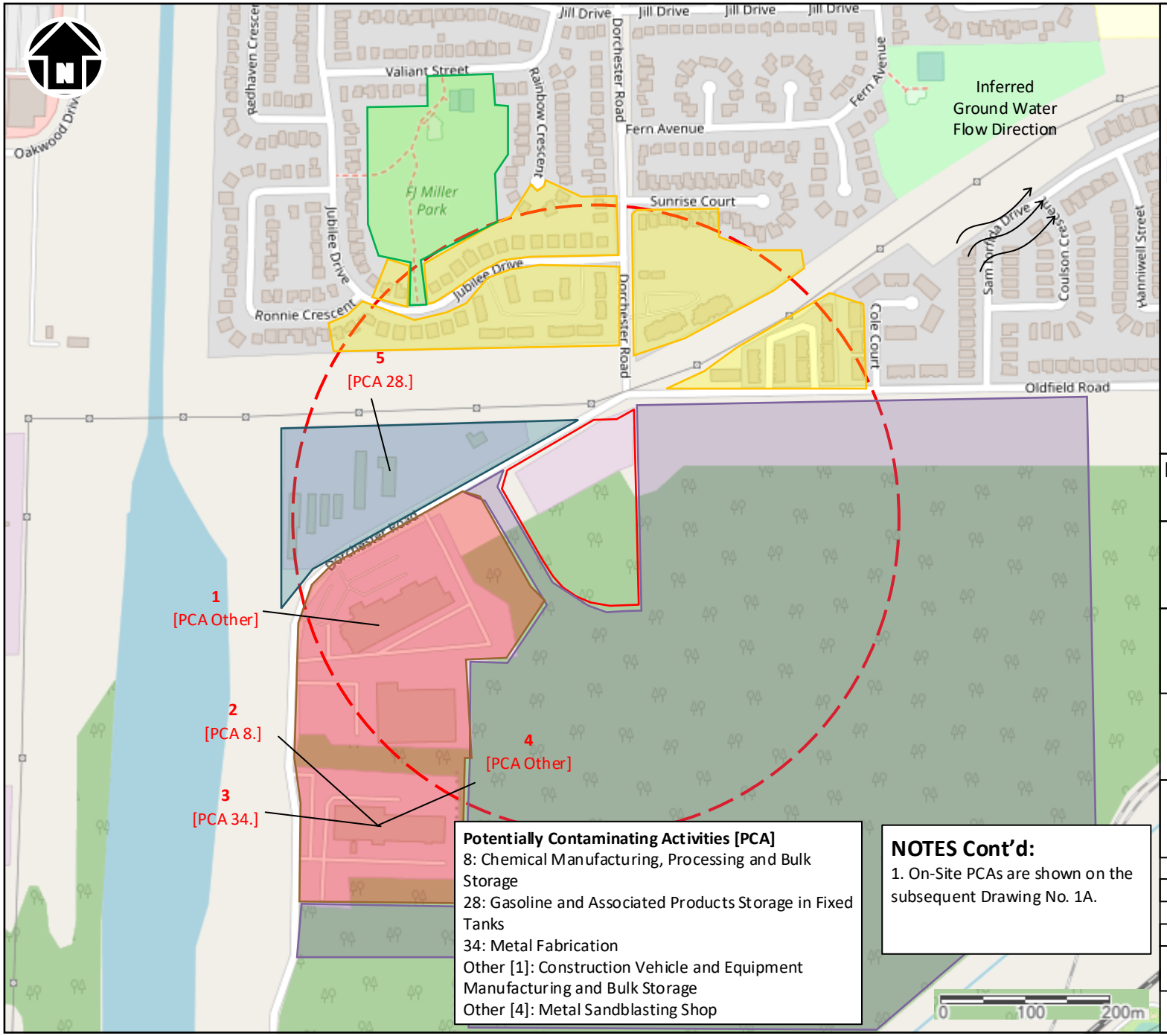
Distribution: UPPER CANADA PLANNING & ENGINEERING LTD. [1]

Enclosures:

Appendix 'A':	Phase One CSM
Appendix 'B'	Site Plan Drawings and Borehole Logs;
Appendix 'C'	AGAT Soil Analytical Data;
Appendix 'D'	AGAT Groundwater Analytical Data
Appendix 'E'	Qualifications of Assessors;
Appendix 'F'	Statement of Limitations

Appendix ‘A’

1. Phase One CSM



Potentially Contaminating Activities [PCA]
8: Chemical Manufacturing, Processing and Bulk Storage
28: Gasoline and Associated Products Storage in Fixed Tanks
34: Metal Fabrication
Other [1]: Construction Vehicle and Equipment Manufacturing and Bulk Storage
Other [4]: Metal Sandblasting Shop

NOTES Cont'd:
1. On-Site PCAs are shown on the subsequent Drawing No. 1A.

LEGEND

- = Site Boundary
- = Phase One ESA Study Area
- = Residential
- = Vacant
- = Industrial Lands
- = Residential Lands
- = Commercial Lands
- = Community Lands
- PCA # = Off-Site PCA causing an APEC on the RSC Property

NOTES:
1. Base map retrieved from Niagara Navigator.

Soil-Mat
Engineers & Consultants Ltd.

CLIENT
UPPER CANADA PLANNING & ENGINEERING LTD.

PROJECT TITLE
Phase One Environmental Site Assessment
Dorchester Road and Oldfield Road, Lot 197, Niagara Falls, Ontario

DRAWING TITLE
Phase One Conceptual Site Model

PROJECT No.	SM 220717-E
DATE	October 2022
CHECKED	KG
DRAWN	AL

FILE NAME
220717 Phase One CSM.vsd

DRAWING No. 1

Conceptual Site Model Notes

CSM Off-Site Property Number	Current Occupant	Potential Contaminating Activity	Contaminants of Potential Concern	Qualified Person Specific Comments
1	Palfinger	Yes	Metals, PHCs and VOCs	Information contained in the Vernon City Directory Series, aerial photographs and the EcoLog ERIS database search, as well as our visual observations of the Phase One Study Area, revealed a construction equipment sales, service and assembly plant located approximately 90 metres west-southwest of the Phase One Property. This property is recognised as 7942 Dorchester Road and has been occupied by 'Palfinger Inc.' since circa 1989. Given the location of the property to the Site with respect to the inferred groundwater flow direction [up-gradient] and the distance between the property and the Site, this property is considered a PCA likely to cause an APEC on the Site.
2	WRB Sales and Marketing	Yes	PHCs, VOCs and Metals	Information contained in the Vernon City Directory Series, aerial photographs, a 1996 topographic map, and the EcoLog ERIS database search report revealed a plastic chemical plant that maintained operations at 8100 Dorchester Road, which is located approximately 250 metres southwest of the Phase One Property, [Chemacryl Plastics Ltd, from circa 1985 to 1990 and CYRO Canada, from circa 1995 to 2000]. Given the location of the property to the Site with respect to the inferred groundwater flow direction [up-gradient] and the distance between the property and the Site, this property is considered a PCA likely to cause an APEC on the Site.
3	WRB Sales and Marketing	Yes	Metals, PHCs and VOCs	Information contained in the Vernon City Directory Series, aerial photographs, a 1996 topographic map, and the EcoLog ERIS database search report revealed a metal fabrication shop that maintained operations at 8100 Dorchester Road, which is located approximately 250 metres southwest of the Phase One Property, [R&D Weld Performance, from circa 2010 to 2014]. Given the location of the property to the Site with respect to the inferred groundwater flow direction [up-gradient] and the distance between the property and the Site, this property is considered a PCA likely to cause an APEC on the Site.

CSM Off-Site Property Number	Current Occupant	Potential Contaminating Activity	Contaminants of Potential Concern	Qualified Person Specific Comments
4	WRB Sales and Marketing	Yes	Metals, PHCs and VOCs	Information contained in the Vernon City Directory Series, aerial photographs, a 1996 topographic map, and the EcoLog ERIS database search report revealed a metal sandblasting shop that maintained operations at 8100 Dorchester Road, which is located approximately 240 metres southwest of the Phase One Property, [Laurcoat Inc., from circa 2014]. Given the location of the property to the Site with respect to the inferred groundwater flow direction [up-gradient] and the distance between the property and the Site, this property is considered a PCA likely to cause an APEC on the Site.
5	Quantum Niagara Gymnastics	Yes	PHCs and BTEX	Information extrapolated from the EcoLog ERIS database search and T.S.S.A. records search report revealed two [2] expired full-service liquid fuel tanks and an expired full-service/self-service private fuel outlet approximately 55 metres west from the Phase One Property. Given the location of the property to the Site with respect to the inferred groundwater flow direction [trans-gradient] and the distance between the property and the Site, this property is considered a PCA likely to cause an APEC on the Site.

SUPPORTING INFORMATION TO SATISFY TABLE 1, SCHEDULE D, PART VI OF THE RSC REGULATION

1. Based on the findings of the Phase One Environmental Site Assessment [ESA], two [2] potentially contaminating activities [PCAs] were identified on the Phase One Property and five [5] PCAs were identified in the Phase One Study Area that resulted in seven [7] areas of potential environmental concern [APECs] on the Phase One Property. The remaining properties identified in the Phase One Study Area were not considered significant environmental liabilities to the Phase One Property. The APECs are listed below in Table format. The Phase One Property is illustrated on the attached Drawing No.: 1. The APECs associated with the PCA on the Phase One Property is illustrated on the attached Drawing No.: 1B.

Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity	Locations of PCA (on-site or off-site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC #1	The limit of the Phase One Property fronting Dorchester Road and the various small stockpiles of fill material observed on the property.	30. Importation of Fill Material of Unknown Quality [PCA A]	On-Site	Petroleum Hydrocarbons [PHCs], Metals, and Benzene, Toluene, Ethylbenzene and Xylenes [BTEX]	Soil
APEC #2	The northern portion of the Phase One Property.	49. Rail Yards, Tracks and Spurs [PCA B]	On-Site	Polycyclic Aromatic Hydrocarbons [PAHs], Volatile Organic Compounds [VOCs], and Metals	Soil
APEC #3	The western limit of the Phase One Property.	Other. Construction Vehicle and Equipment Manufacturing and Bulk Storage [PCA C]	Off-Site	Metals, PHCs and VOCs	Soil and Groundwater
APEC #4	The western limit of the Phase One Property.	8. Chemical Manufacturing, Processing and Bulk Storage [PCA D]	Off-Site	PHCs, VOCs and Metals	Soil and Groundwater
APEC #5	The western limit of the Phase One Property.	34. Metal Fabrication [PCA E]	Off-Site	Metals, PHCs and VOCs	Soil and Groundwater
APEC #6	The western limit of the Phase One Property.	Other. Metal Sandblasting Shop [PCA F]	Off-Site	Metals, PHCs and VOCs	Soil and Groundwater

Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity	Locations of PCA (on-site or off-site)	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)
APEC #7	The northern limit of the Phase One Property.	28. Gasoline and Associated Products Storage in Fixed Tanks [PCA G]	Off-Site	PHCs and BTEX	Soil and Groundwater

Notes: APEC = area of potential environmental concern, PCA = potentially contaminating activity, COPCs = Contaminants of Potential Concern, PHCs = Petroleum Hydrocarbons, PAHs = polycyclic aromatic hydrocarbons, VOCs = volatile organic compounds, BTEX = Benzene, Toluene, Ethylbenzene, and Xylene Mixture

2. There are no water bodies in whole or in part on the Phase One Property or within the Phase One ESA Study Area [250 metre radius from the limits of the Phase One Property]. The local and regional groundwater flow direction is inferred to the northeast toward Lake Ontario.

3. There are no areas of natural significance located in whole or in part on the Phase One Property or in the Phase One Study Area.

4. There are no potable groundwater wells or groundwater monitoring wells located on the Phase One Property.

5. A review of the MOE's water well records revealed records of two [2] potable groundwater wells within the Phase One Study Area. No records of groundwater monitoring wells were found for lands located within the Phase One Study Area. One of the potable wells is reportedly located on the adjacent property to the east of the Site and reportedly terminate approximately 20.4 metres below the ground surface. The other potable groundwater well is reportedly located approximately 170 metres from the Site, and reportedly terminates approximately 25.9 metres below the ground surface.

6. The proposed development on the Phase One Property will be serviced with buried utilities, including storm and sanitary sewers, a municipal water supply, hydro and other soft services. The depth and location of these service trenches are not anticipated to affect, direct or alter the migration of any potential off-site contaminants.

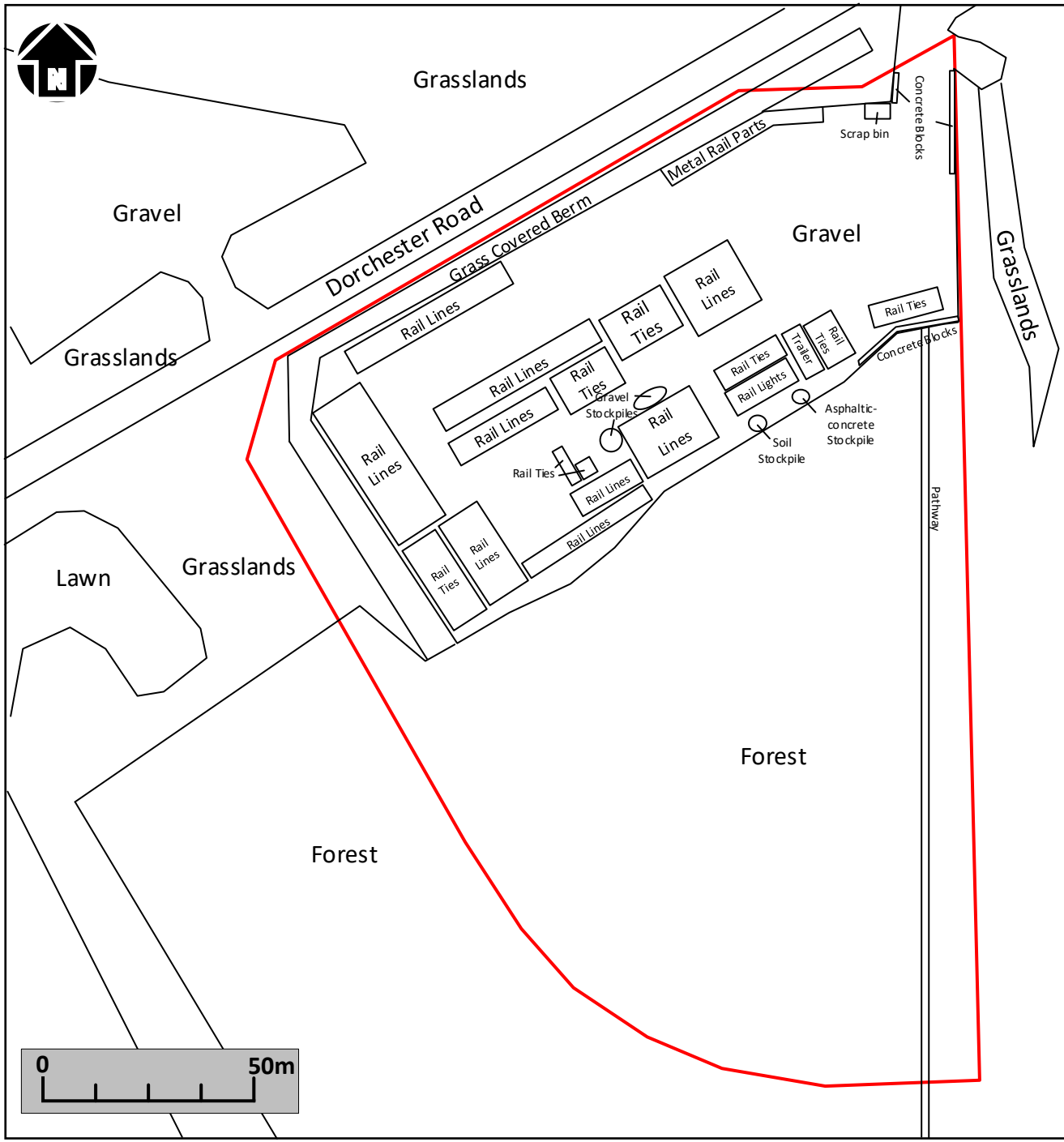
7. SOIL-MAT ENGINEERS & CONSULTANTS LTD. have been retained to undertake a geotechnical report on the Property however, was not complete at the time of this report. A review of the Ministry of Northern Development and Mine's "Quaternary Geology of the Niagara-Welland Area, Southern Ontario Sheet Map 2496" and the "Paleozoic Geology of the Niagara Area, Southern Ontario Sheet Map 2344", revealed the Site to be underlain by glaciolacustrine deeper water clay and silt, in turn, underlain by Guelph Formation brown or tan dolostone shale bedrock. The depth to the groundwater table is anticipated to be approximately 18.3 metres below the ground surface elevation based on information ferreted out from groundwater well records for water wells located within the Phase One Study Area.

8. The validity of the CSM may be affected if the future use of the Phase One Property diverts from the current understanding of the proposed development to include the installation of multi-level basements or deep groundwater wells that may artificially alter or redirect local groundwater toward the Phase One Property. In this scenario, given the distance of the limited potential contaminating activities with relation to the Site, these activities are not considered a significant liability to the Phase One Property, and as a result it is recommended that intrusive soil and/or groundwater sampling and monitoring would not be required in this scenario.

9. Based on the results of the Phase One ESA, it is the opinion of SOIL-MAT ENGINEERS & CONSULTANTS LTD. that a Phase Two ESA is required for the property.

Appendix 'B'

1. Drawing No.: 1: Site Plan;
2. Drawing No.: 1A: APECs;
3. Drawing No.: 2: Groundwater Contours and Inferred Groundwater Flow Direction;
4. Drawing No.: 3: Borehole, Monitoring Well and Test Pit Location Plan;
5. Drawing No.: 3A: Analytical Data Summary [Soil] Metals including Hydride Forming Metals;
6. Drawing No.: 3B: Analytical Data Summary [Soil] PHCs and BTEX;
7. Drawing No.: 3C: Analytical Data Summary [Soil] VOCs;
8. Drawing No.: 3D: Analytical Data Summary [Soil] PAHs;
9. Drawing No.: 3E: Analytical Data Summary [Soil] BNAs;
10. Drawing No.: 4A: Analytical Data Summary [Water] Metals;
11. Drawing No.: 4B: Analytical Data Summary [Water] PHCs and BTEX;
12. Drawing No.: 4C: Analytical Data Summary [Water] VOCs;
13. Drawing No.: 4D: Analytical Data Summary [Water] BNAs;
14. Borehole Logs



LEGEND

= Site Boundary

NOTES:

1. This map should be read in conjunction with Soil-Mat Engineers and Consultants Ltd. Report No.: SM 220717-E

Soil-Mat
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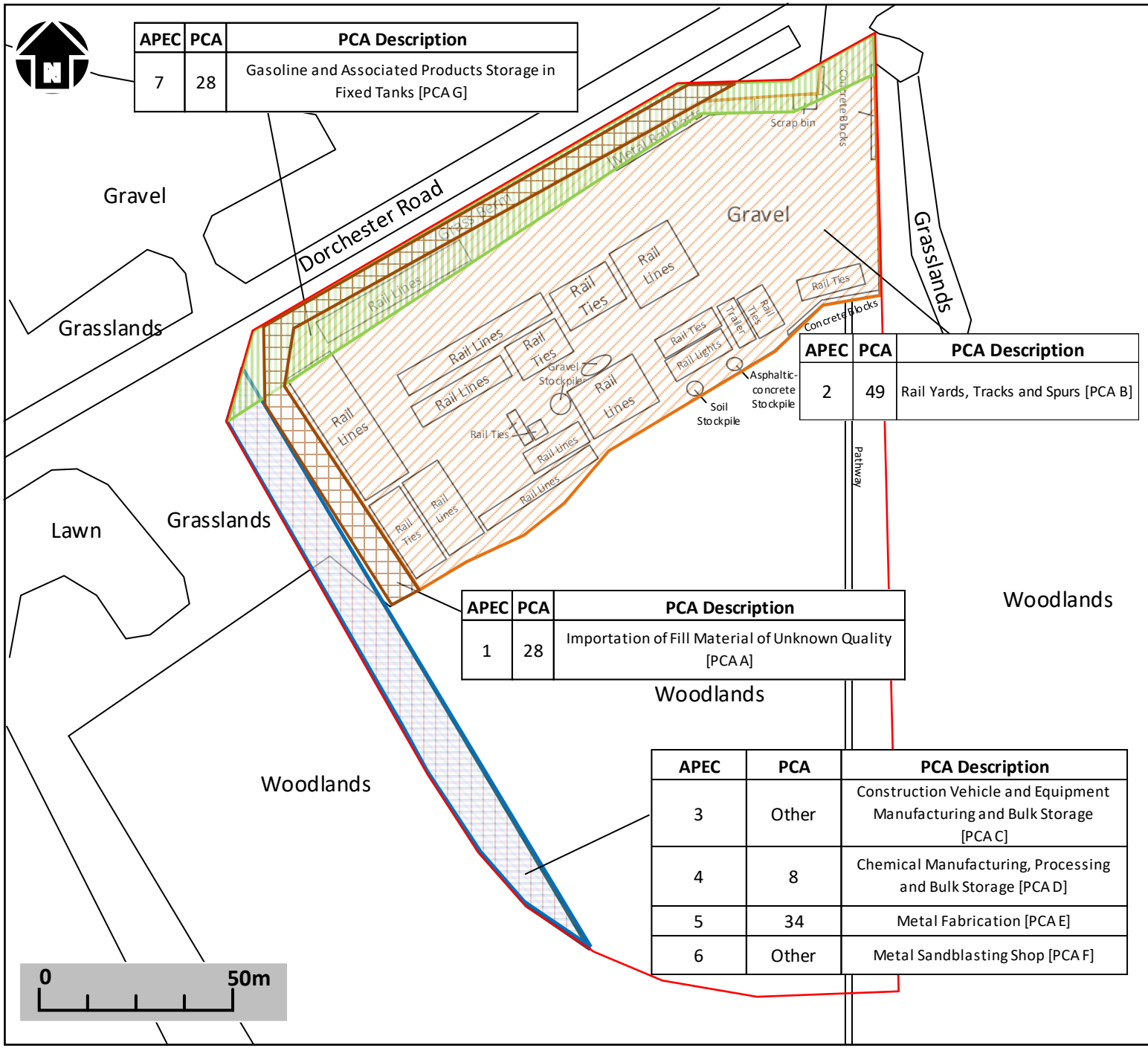
PROJECT TITLE
Phase Two Environmental Site Assessment
Dorchester Road and Oldfield Road - Lot 197, Niagara Falls, Ontario

DRAWING TITLE
Site Plan

PROJECT No.	SM 220717-E
DATE	August 2023
CHECKED	SS
DRAWN	LC
FILE NAME	220717 PhTwoDrawings.vsd

DRAWING No. 1A



APEC	PCA	PCA Description
7	28	Gasoline and Associated Products Storage in Fixed Tanks [PCA G]

APEC	PCA	PCA Description
2	49	Rail Yards, Tracks and Spurs [PCA B]

APEC	PCA	PCA Description
1	28	Importation of Fill Material of Unknown Quality [PCA A]

APEC	PCA	PCA Description
3	Other	Construction Vehicle and Equipment Manufacturing and Bulk Storage [PCA C]
4	8	Chemical Manufacturing, Processing and Bulk Storage [PCA D]
5	34	Metal Fabrication [PCA E]
6	Other	Metal Sandblasting Shop [PCA F]

LEGEND

- = Site Boundary
- = APEC #1
- = APEC #2
- = APEC #3
- = APEC #4
- = APEC #5
- = APEC #6
- = APEC #7

NOTES:

1. This map should be read in conjunction with Soil-Mat Engineers and Consultants Ltd. Report No.: SM 220717-E

Soil-Mat
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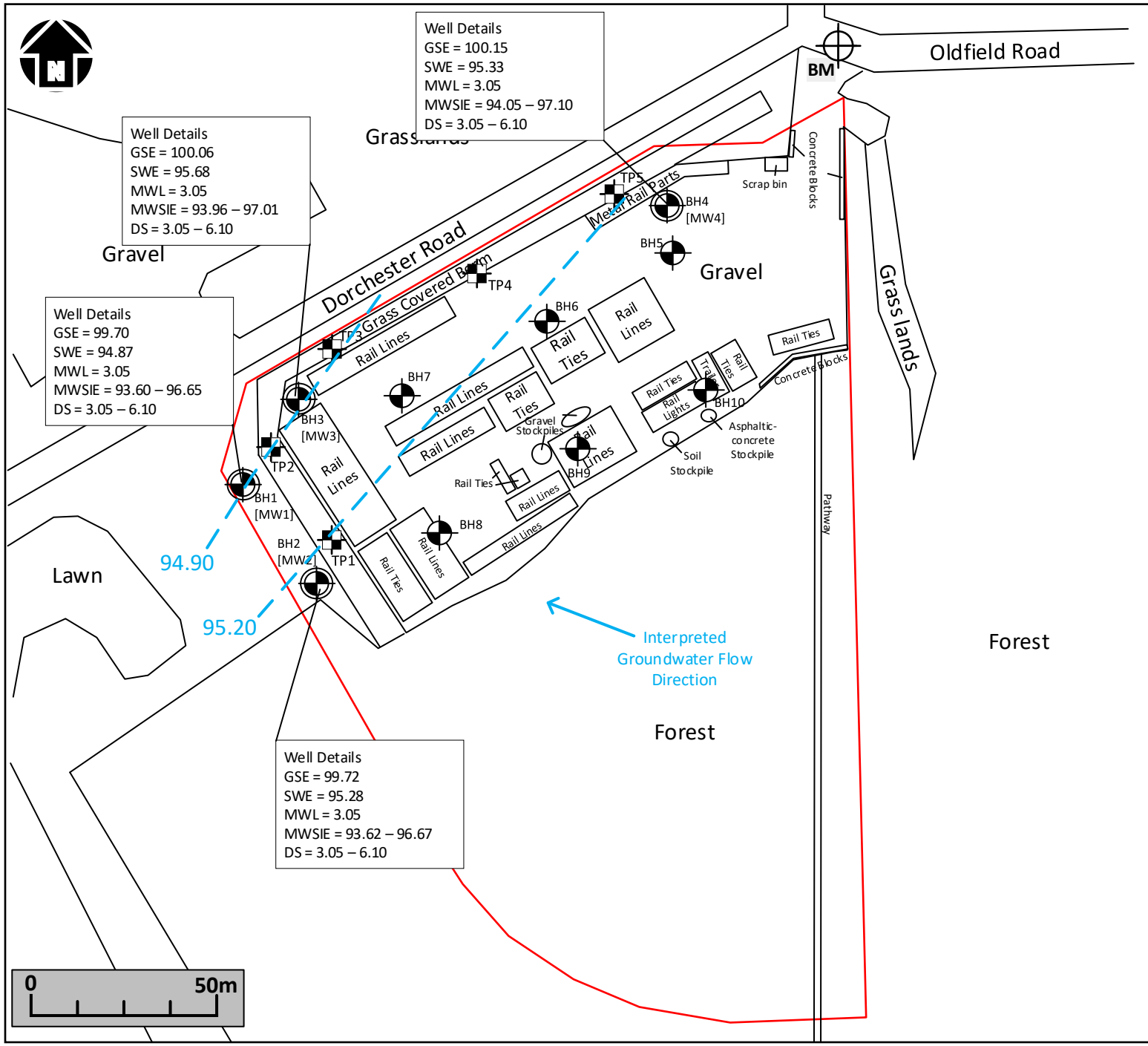
UPPER CANADA PLANNING & ENGINEERING LTD.

PROJECT TITLE
Phase One Environmental Site Assessment
Dorchester Road and Oldfield Road, Lot 197, Niagara Falls, Ontario

DRAWING TITLE
APECs

PROJECT No.	SM 220717-E
DATE	October 2022
CHECKED	PM
DRAWN	AL
FILE NAME	220717 Site Plan.vsd

DRAWING No. 1B



LEGEND

- = Site Boundary
- BH# = Borehole Location
- BH [MW#] = Borehole/Monitoring Well Location
- TP# = Test pit Location
- BM = Temporary Benchmark — Top of manhole with temporary elevation of 100.00 metres.
- = Interpreted Groundwater Elevation

GSE = Monitoring Well Ground Surface Elevation
SWE = Static Water Elevation [taken on Aug. 10, 2023]
MWL = Monitoring Well Length
MWSIE = Monitoring Well Screen Interval Elevation
DS = Depth of Screen

NOTES:

1. This map should be read in conjunction with Soil-Mat Engineers and Consultants Ltd. Report No.: SM 220717-E

Soil-Mat
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UPPER CANADA PLANNING & ENGINEERING LTD.

PROJECT TITLE

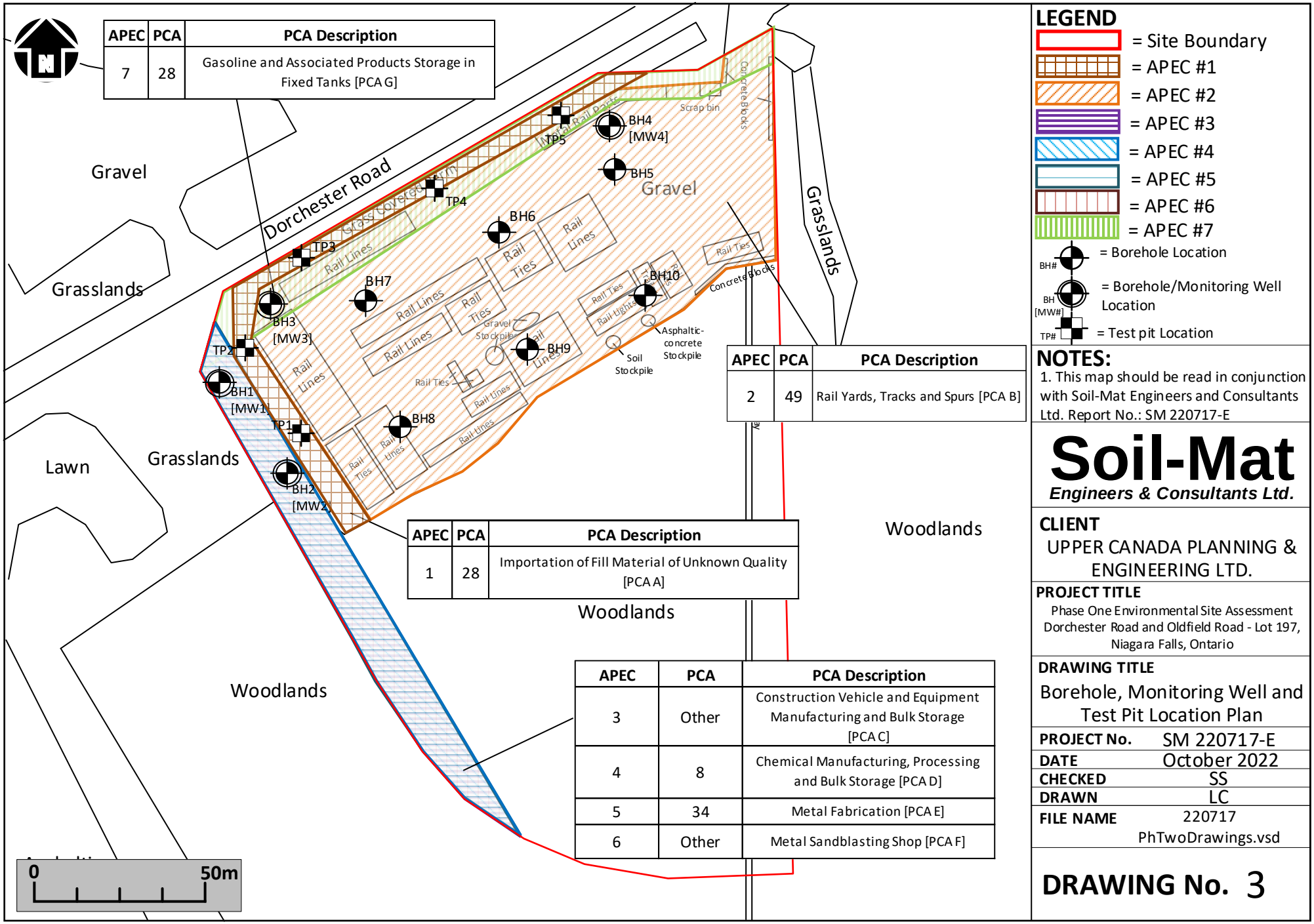
Phase Two Environmental Site Assessment
Dorchester Road and Oldfield Road - Lot 197, Niagara Falls, Ontario

DRAWING TITLE

Groundwater Contours and Inferred Groundwater Flow Direction

PROJECT No.	SM 220717-E
DATE	August 2023
CHECKED	SS
DRAWN	LC
FILE NAME	220717 PhTwoDrawings.vsd

DRAWING No. 2



APEC	PCA	PCA Description
7	28	Gasoline and Associated Products Storage in Fixed Tanks [PCA G]

APEC	PCA	PCA Description
2	49	Rail Yards, Tracks and Spurs [PCA B]

APEC	PCA	PCA Description
1	28	Importation of Fill Material of Unknown Quality [PCA A]

APEC	PCA	PCA Description
3	Other	Construction Vehicle and Equipment Manufacturing and Bulk Storage [PCA C]
4	8	Chemical Manufacturing, Processing and Bulk Storage [PCA D]
5	34	Metal Fabrication [PCA E]
6	Other	Metal Sandblasting Shop [PCA F]

LEGEND

- = Site Boundary
- = APEC #1
- = APEC #2
- = APEC #3
- = APEC #4
- = APEC #5
- = APEC #6
- = APEC #7
- BH# = Borehole Location
- BH [MW#] = Borehole/Monitoring Well Location
- TP# = Test pit Location

NOTES:

1. This map should be read in conjunction with Soil-Mat Engineers and Consultants Ltd. Report No.: SM 220717-E

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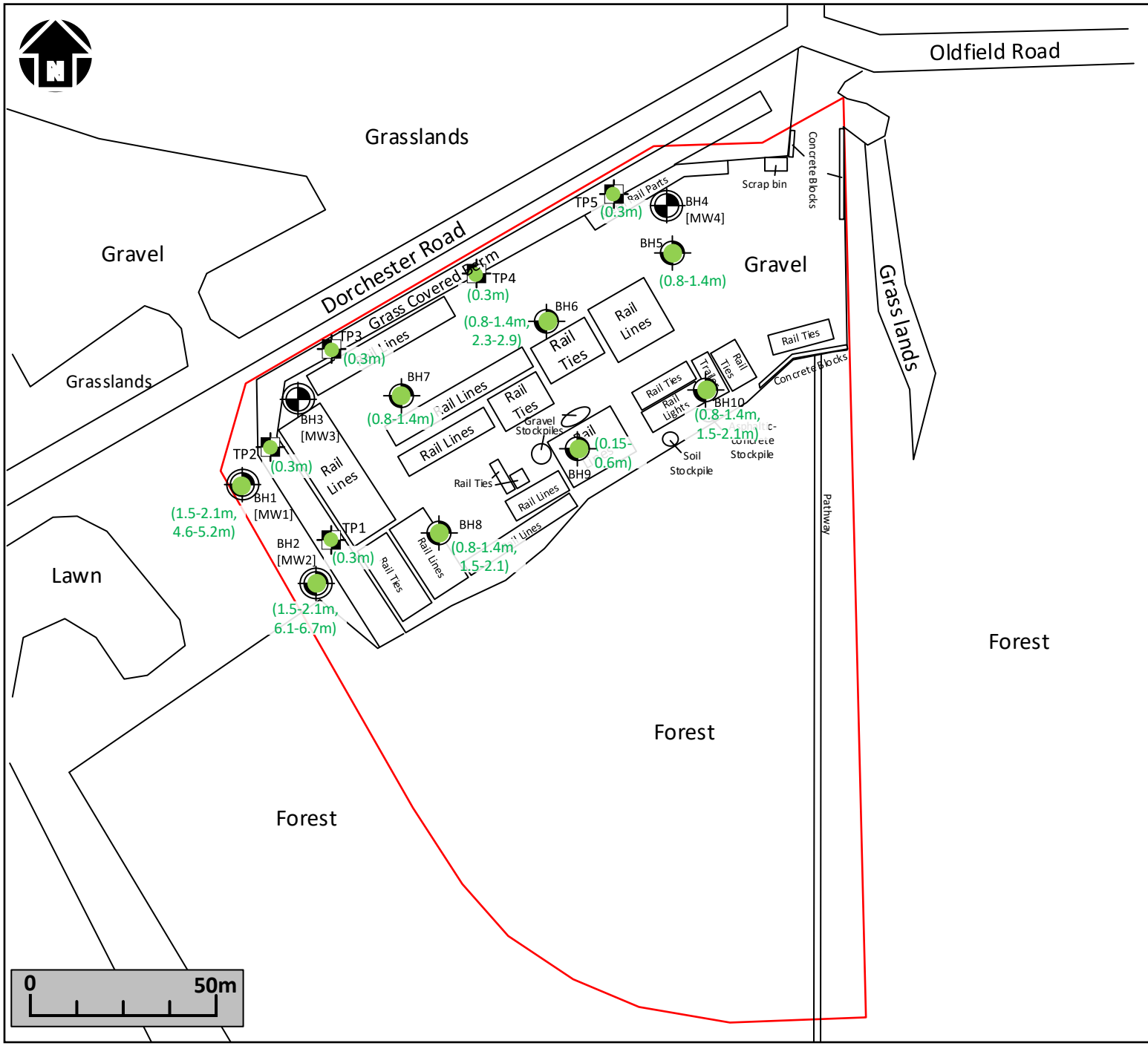
UPPER CANADA PLANNING & ENGINEERING LTD.

PROJECT TITLE
Phase One Environmental Site Assessment
Dorchester Road and Oldfield Road - Lot 197, Niagara Falls, Ontario

DRAWING TITLE
Borehole, Monitoring Well and Test Pit Location Plan

PROJECT No.	SM 220717-E
DATE	October 2022
CHECKED	SS
DRAWN	LC
FILE NAME	220717 PhTwoDrawings.vsd

DRAWING No. 3



LEGEND

= Site Boundary

= Borehole Location

= Borehole/Monitoring Well Location

= Test pit Location

Samples exceeding the Table 2 RPI SCSs

Samples meeting the Table 2 RPI SCSs

(#.## - #.## m) Sample Depth (metres below ground surface)

NOTES:

1. This map should be read in conjunction with Soil-Mat Engineers and Consultants Ltd. Report No.: SM 220717-E
2. The Metals grouping listed on the drawing includes: Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, EC and SAR

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PROJECT TITLE

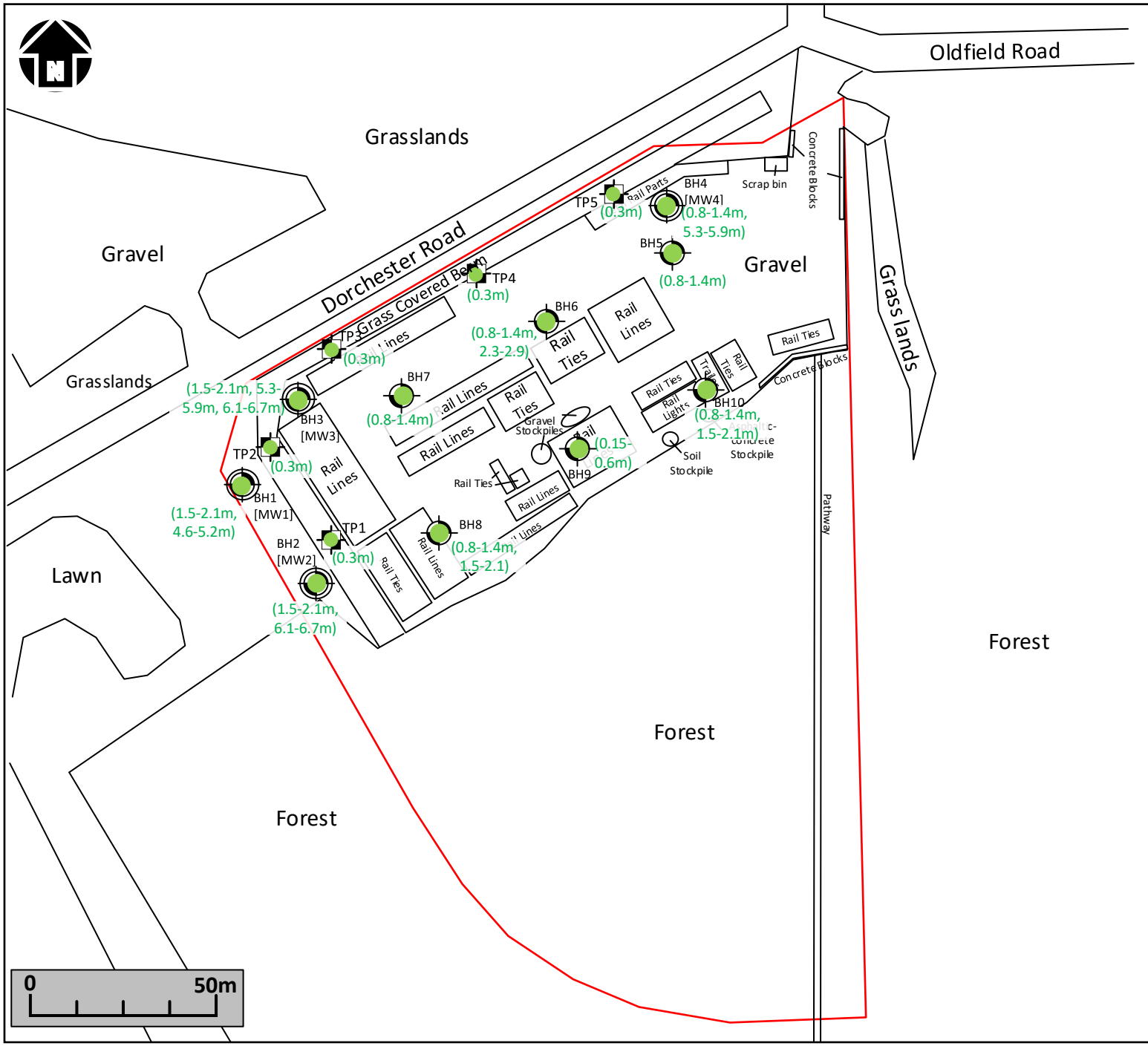
Phase Two Environmental Site Assessment
Dorchester Road and Oldfield Road - Lot 197, Niagara Falls, Ontario

DRAWING TITLE

Analytical Data Summary [Soil]
Metals Incl. Hydride Forming Metals

PROJECT No.	SM 220717-E
DATE	August 2023
CHECKED	SS
DRAWN	LC
FILE NAME	220717 PhTwoDrawings.vsd

DRAWING No. 3A



LEGEND

- = Site Boundary
- BH# = Borehole Location
- BH [MW#] = Borehole/Monitoring Well Location
- TP# = Test pit Location
- Samples exceeding the Table 2 RPI SCSs
- Samples meeting the Table 2 RPI SCSs
- (#.## - #.## m) Sample Depth (metres below ground surface)

NOTES:

1. This map should be read in conjunction with Soil-Mat Engineers and Consultants Ltd. Report No.: SM 220717-E
2. PHC = Petroleum Hydrocarbons
3. BTEX = Benzene, Toluene, Ethylbenzene & Xylenes

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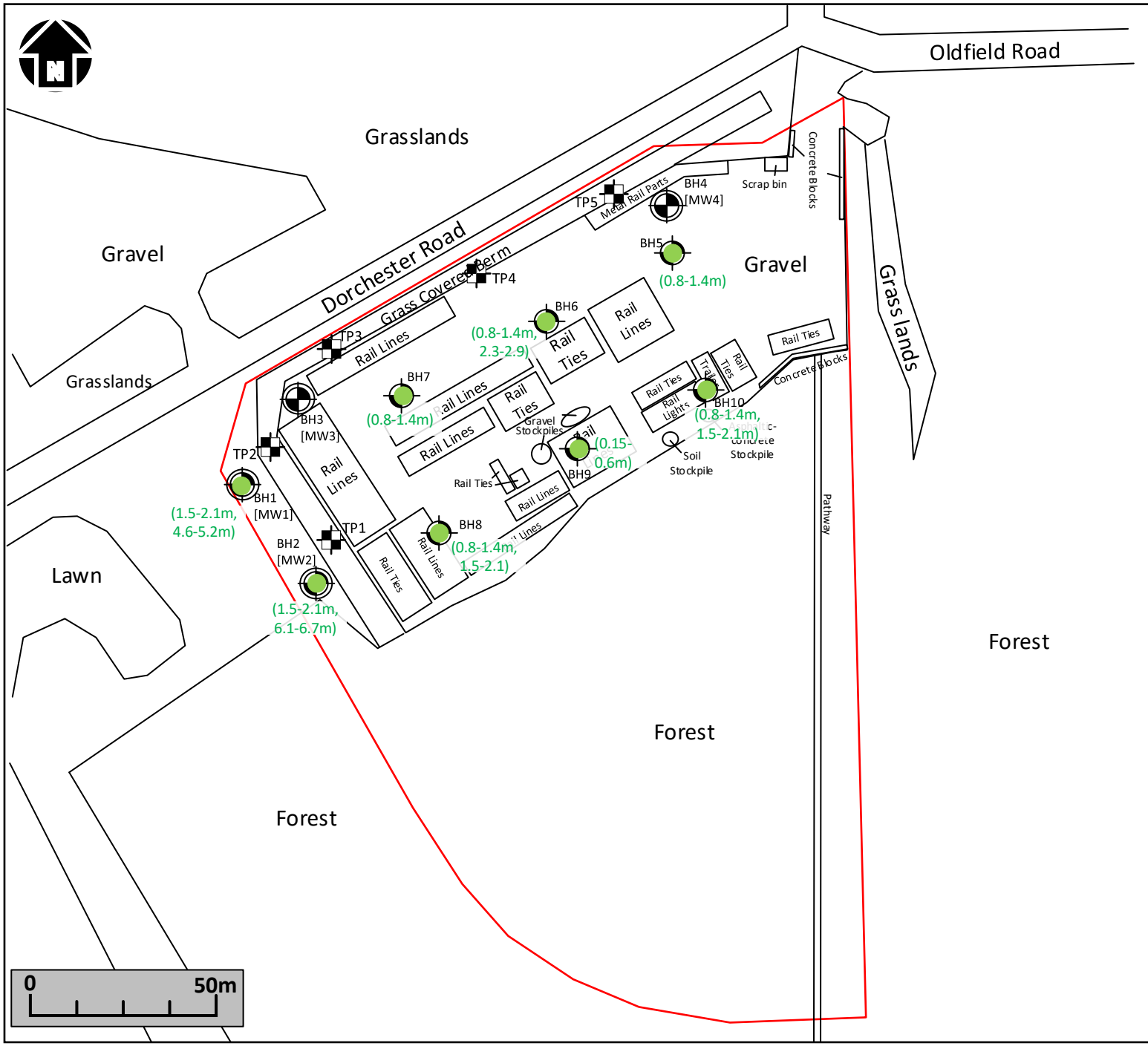
PROJECT TITLE
Phase Two Environmental Site Assessment
Dorchester Road and Oldfield Road - Lot 197, Niagara Falls, Ontario

DRAWING TITLE
Analytical Data Summary [Soil] - PHCs and BTEX

PROJECT No.	SM 220717-E
DATE	August 2023
CHECKED	SS
DRAWN	LC
FILE NAME	220717 PhTwoDrawings.vsd

DRAWING No. 3B



LEGEND

= Site Boundary

= Borehole Location

= Borehole/Monitoring Well Location

= Test pit Location

Samples exceeding the Table 2 RPI SCSs

Samples meeting the Table 2 RPI SCSs

(#.## - #.## m) Sample Depth (metres below ground surface)

NOTES:

1. This map should be read in conjunction with Soil-Mat Engineers and Consultants Ltd. Report No.: SM 220717-E

2. VOCs = Volatile Organic Compounds

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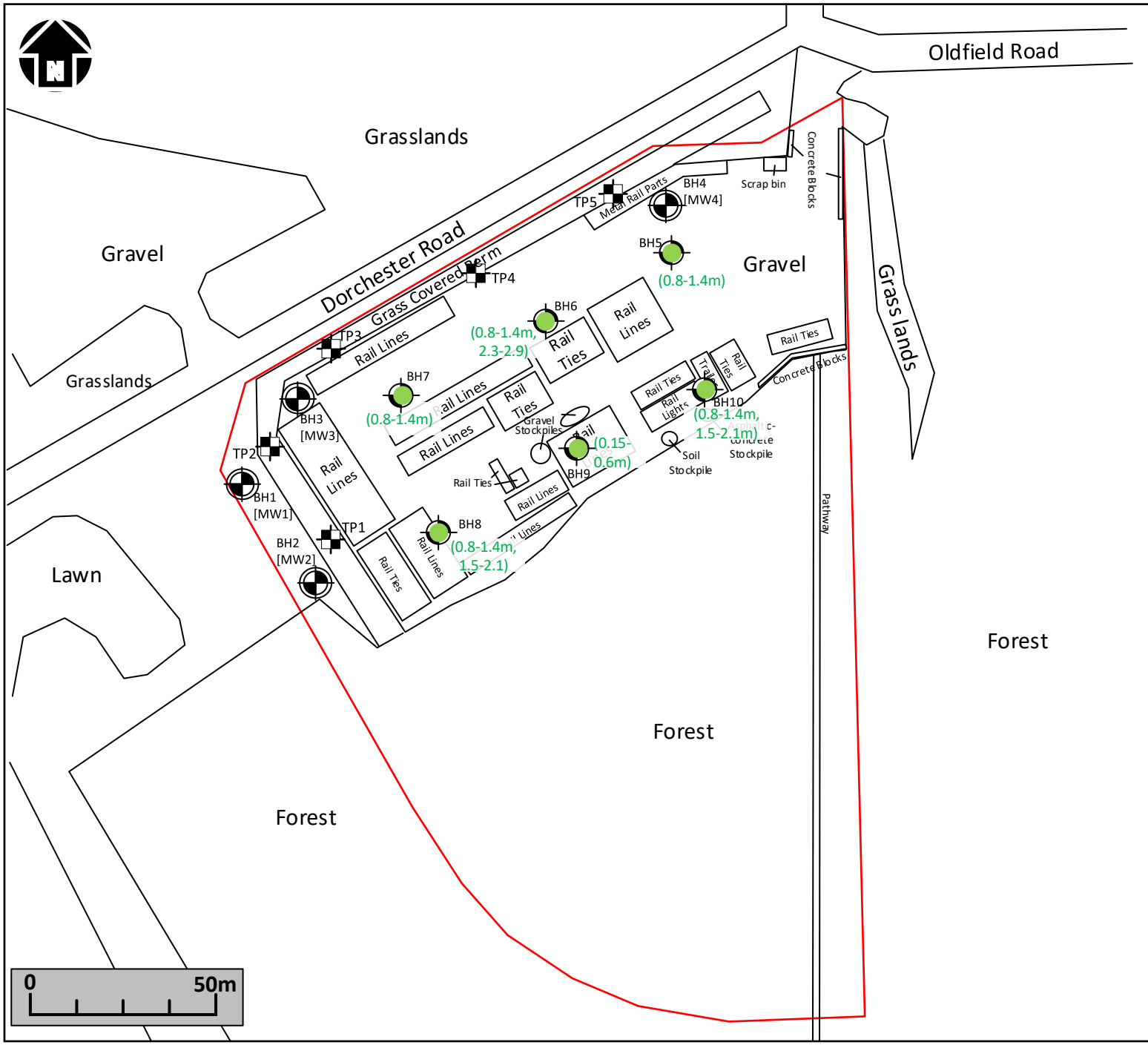
PROJECT TITLE
Phase Two Environmental Site Assessment
Dorchester Road and Oldfield Road - Lot 197, Niagara Falls, Ontario

DRAWING TITLE
Analytical Data Summary [Soil] - VOCs

PROJECT No.	SM 220717-E
DATE	August 2023
CHECKED	SS
DRAWN	LC
FILE NAME	220717 PhTwoDrawings.vsd

DRAWING No. 3C



LEGEND

= Site Boundary

BH# = Borehole Location

BH [MW#] = Borehole/Monitoring Well Location

TP# = Test pit Location

Samples exceeding the Table 2 RPI SCSs

Samples meeting the Table 2 RPI SCSs

(#.## - #.## m) Sample Depth (metres below ground surface)

NOTES:

1. This map should be read in conjunction with Soil-Mat Engineers and Consultants Ltd. Report No.: SM 220717-E

2. PAHs = Polycyclic Aromatic Hydrocarbons

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PROJECT TITLE

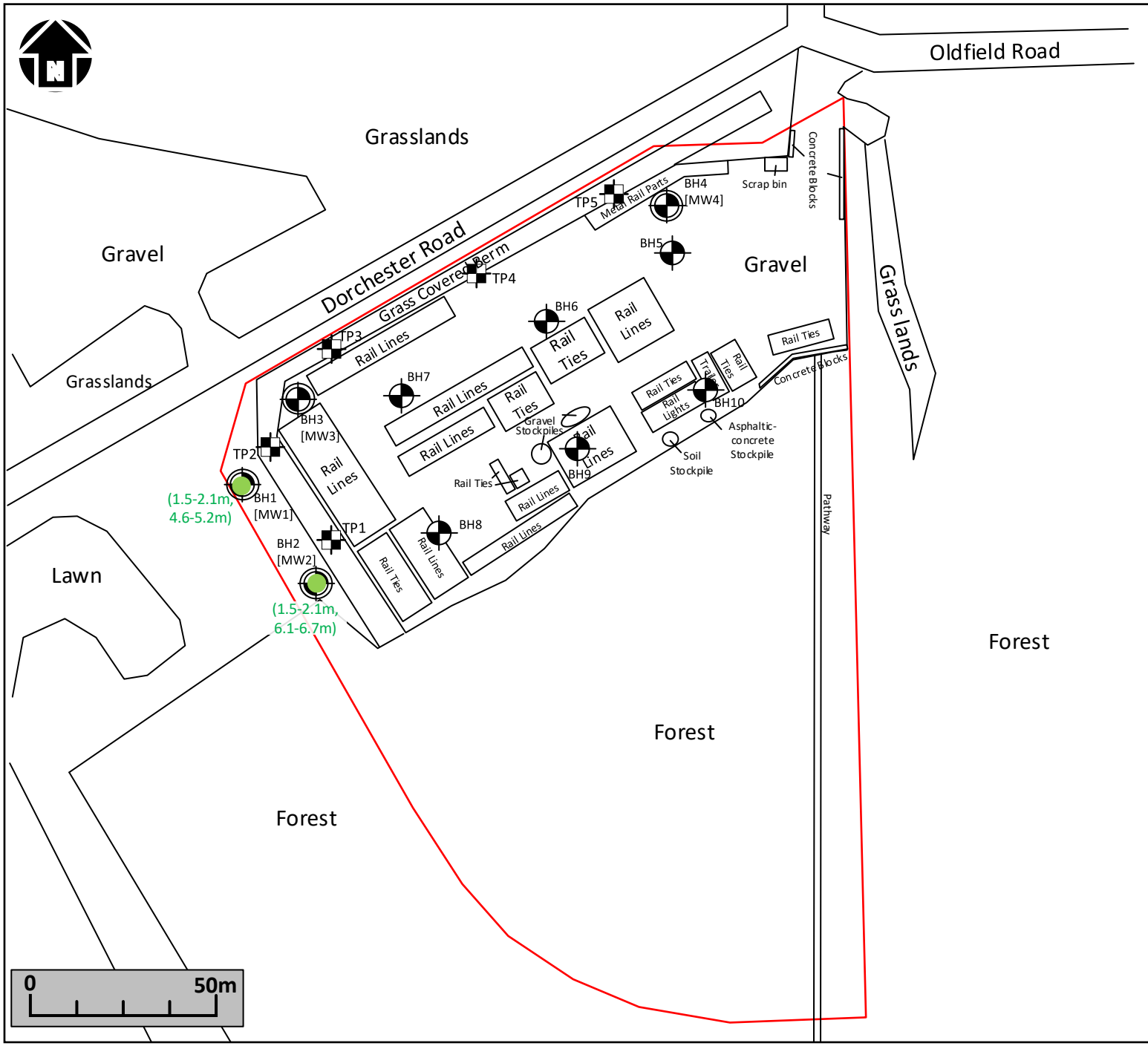
Phase Two Environmental Site Assessment
Dorchester Road and Oldfield Road - Lot 197, Niagara Falls, Ontario

DRAWING TITLE

Analytical Data Summary [Soil] - PAHs

PROJECT No.	SM 220717-E
DATE	August 2023
CHECKED	SS
DRAWN	LC
FILE NAME	220717 PhTwoDrawings.vsd

DRAWING No. 3D



LEGEND

- = Site Boundary
- BH# = Borehole Location
- BH [MW#] = Borehole/Monitoring Well Location
- TP# = Test pit Location
- Samples exceeding the Table 2 RPI SCSs
- Samples meeting the Table 2 RPI SCSs
- (#.## - #.## m) Sample Depth (metres below ground surface)

NOTES:

1. This map should be read in conjunction with Soil-Mat Engineers and Consultants Ltd. Report No.: SM 220717-E

2. BNAs = Base, Neutrals & Acid Extractables

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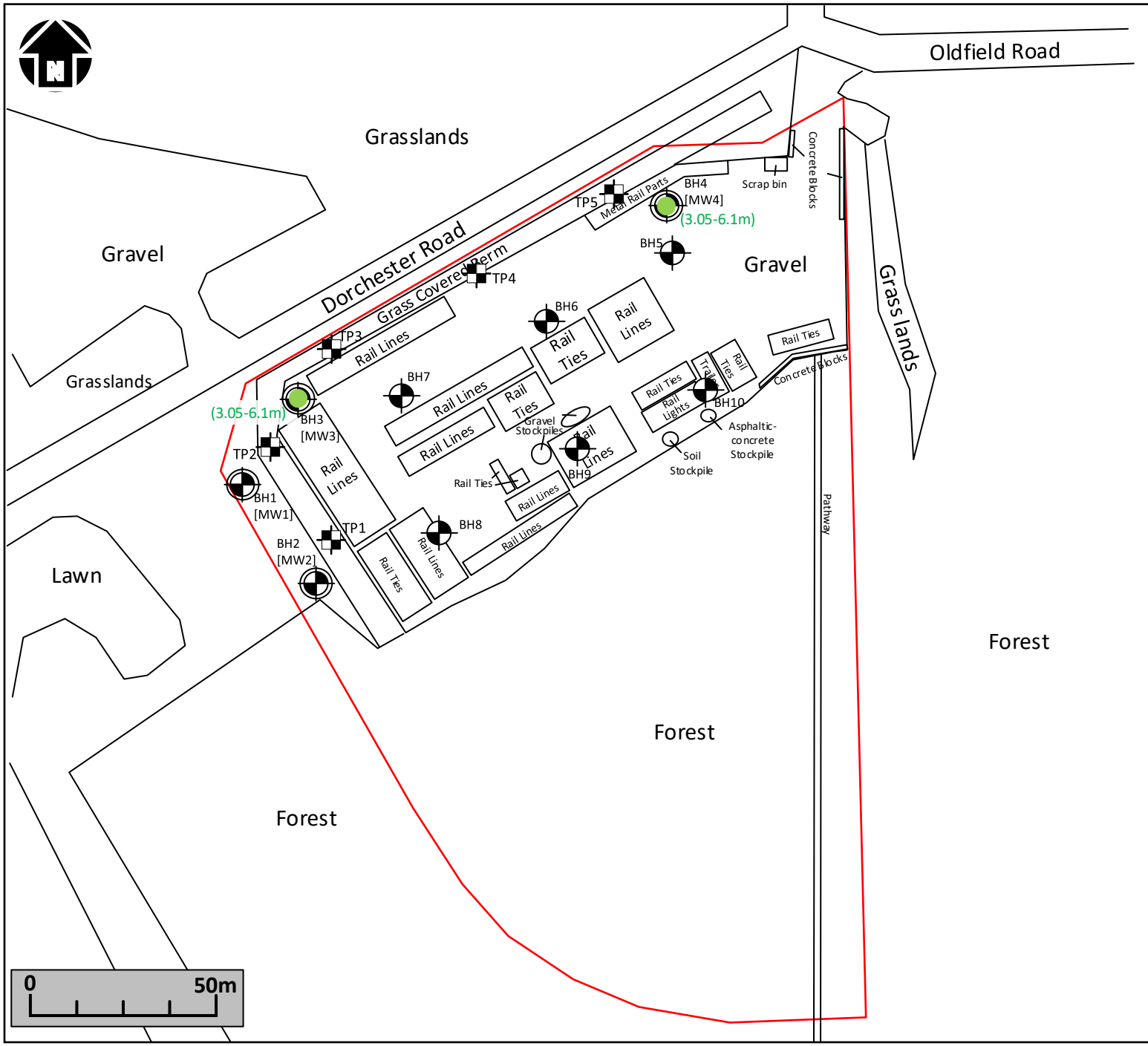
PROJECT TITLE
Phase Two Environmental Site Assessment
Dorchester Road and Oldfield Road - Lot 197, Niagara Falls, Ontario

DRAWING TITLE
Analytical Data Summary [Soil] - BNAs

PROJECT No.	SM 220717-E
DATE	August 2023
CHECKED	SS
DRAWN	LC
FILE NAME	220717 PhTwoDrawings.vsd

DRAWING No. 3E



LEGEND

= Site Boundary

BH# = Borehole Location

BH [MW#] = Borehole/Monitoring Well Location

TP# = Test pit Location

Samples exceeding the Table 2 RPI SCSs

Samples meeting the Table 2 RPI SCSs

(#.## - #.## m) Sample Depth (metres below ground surface)

NOTES:

1. This map should be read in conjunction with Soil-Mat Engineers and Consultants Ltd. Report No.: SM 220717-E.
2. The Metals grouping listed on the drawing includes: Metals, As, Sb, Se, B-HWS, Cr(VI), Hg, CN-, Na and Cl-.

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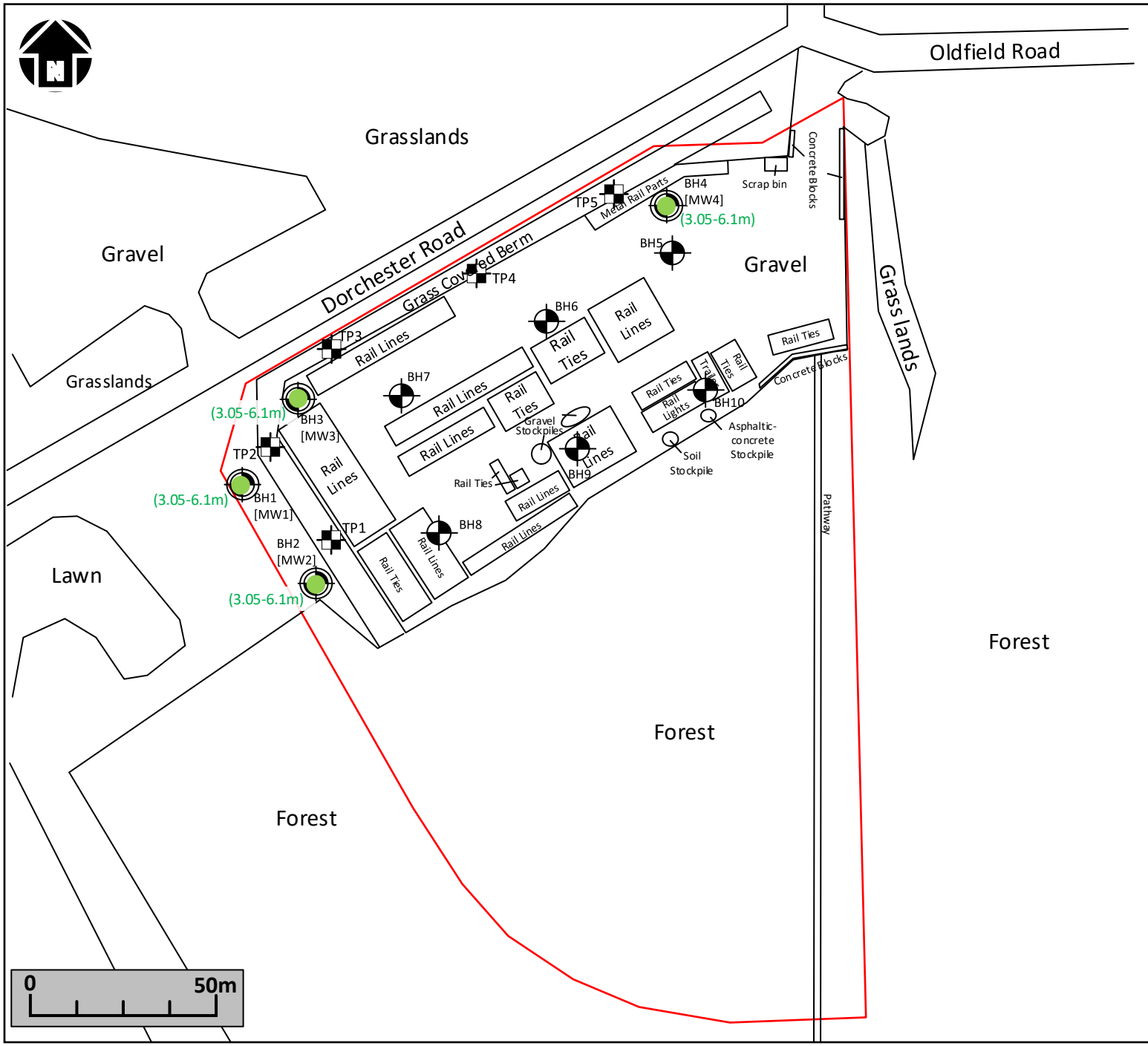
PROJECT TITLE
Phase Two Environmental Site Assessment
Dorchester Road and Oldfield Road - Lot 197, Niagara Falls, Ontario

DRAWING TITLE
Analytical Data Summary
[Groundwater]- Metals

PROJECT No.	SM 220717-E
DATE	August 2023
CHECKED	SS
DRAWN	LC
FILE NAME	220717 PhTwoDrawings.vsd

DRAWING No. 4A



LEGEND

- = Site Boundary
- BH# = Borehole Location
- BH [MW#] = Borehole/Monitoring Well Location
- TP# = Test pit Location
- Samples exceeding the Table 2 RPI SCSs
- Samples meeting the Table 2 RPI SCSs
- (#.## - #.## m) Sample Depth (metres below ground surface)

NOTES:

1. This map should be read in conjunction with Soil-Mat Engineers and Consultants Ltd. Report No.: SM 220717-E.

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UPPER CANADA PLANNING & ENGINEERING LTD.

PROJECT TITLE

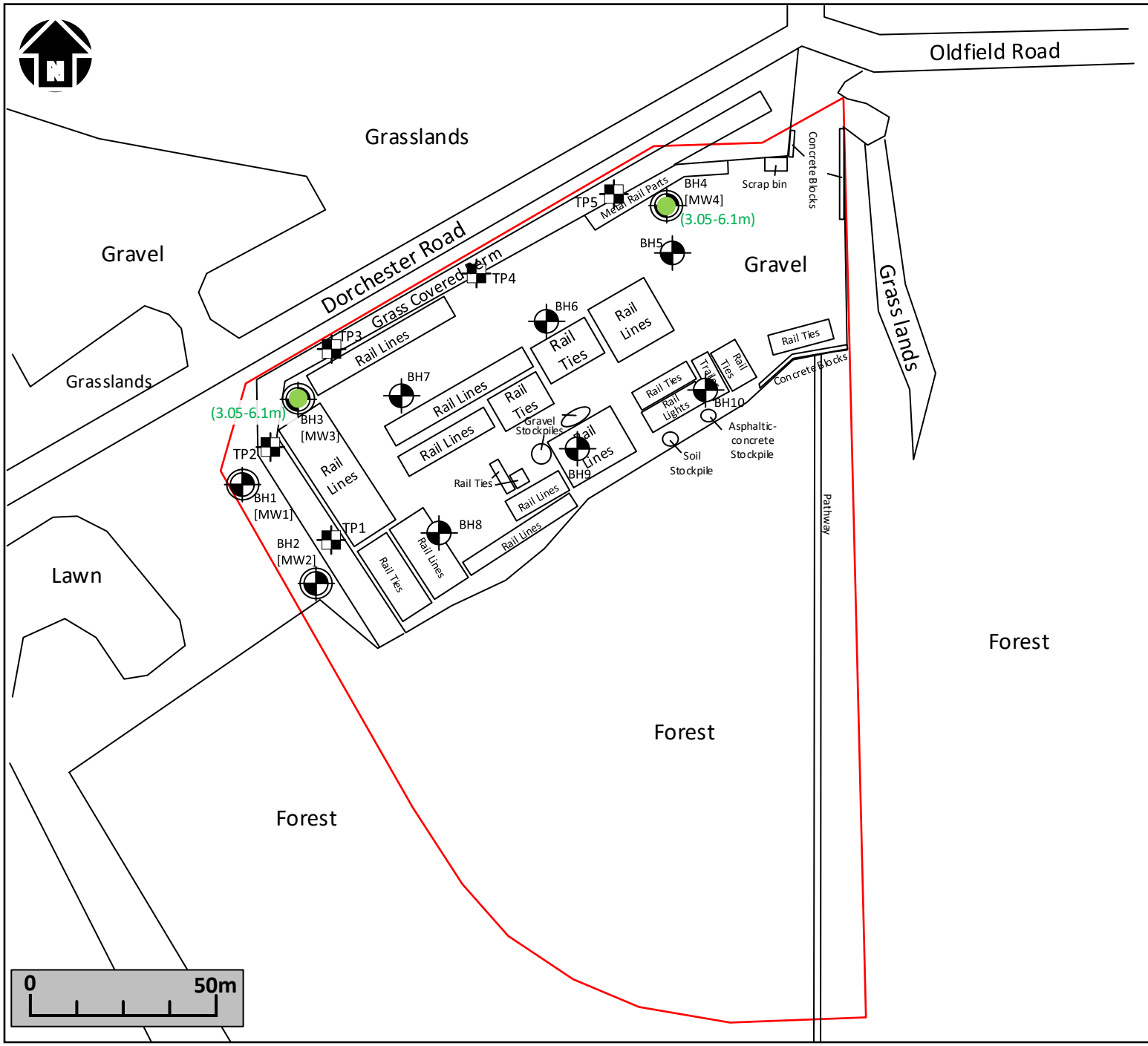
Phase Two Environmental Site Assessment
Dorchester Road and Oldfield Road - Lot 197, Niagara Falls, Ontario

DRAWING TITLE

Analytical Data Summary
[Groundwater]- PHCs and BTEX

PROJECT No.	SM 220717-E
DATE	August 2023
CHECKED	SS
DRAWN	LC
FILE NAME	220717 PhTwoDrawings.vsd

DRAWING No. 4B



LEGEND

- = Site Boundary
- BH# = Borehole Location
- BH [MW#] = Borehole/Monitoring Well Location
- TP# = Test pit Location
- Samples exceeding the Table 2 RPI SCSs
- Samples meeting the Table 2 RPI SCSs
- (#.## - #.## m) Sample Depth (metres below ground surface)

NOTES:

1. This map should be read in conjunction with Soil-Mat Engineers and Consultants Ltd. Report No.: SM 220717-E.

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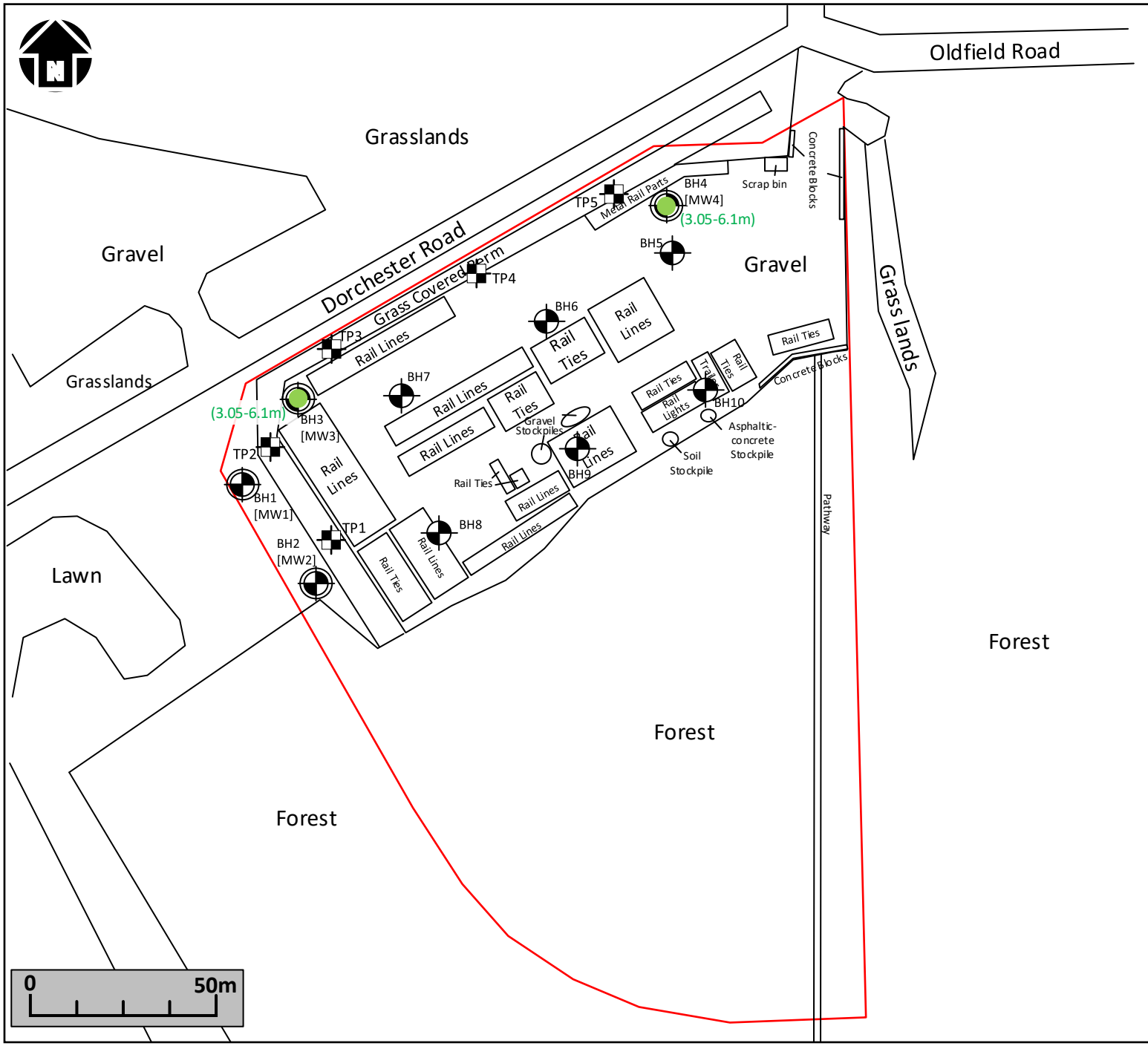
PROJECT TITLE
Phase Two Environmental Site Assessment
Dorchester Road and Oldfield Road - Lot 197, Niagara Falls, Ontario

DRAWING TITLE
Analytical Data Summary
[Groundwater] - VOCs

PROJECT No.	SM 220717-E
DATE	August 2023
CHECKED	SS
DRAWN	LC
FILE NAME	220717 PhTwoDrawings.vsd

DRAWING No. 4C



LEGEND

= Site Boundary

BH# = Borehole Location

BH [MW#] = Borehole/Monitoring Well Location

TP# = Test pit Location

Samples exceeding the Table 2 RPI SCSs

Samples meeting the Table 2 RPI SCSs

(#.## - #.## m) Sample Depth (metres below ground surface)

NOTES:

1. This map should be read in conjunction with Soil-Mat Engineers and Consultants Ltd. Report No.: SM 220717-E.

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UPPER CANADA PLANNING & ENGINEERING LTD.

PROJECT TITLE

Phase Two Environmental Site Assessment
Dorchester Road and Oldfield Road - Lot 197, Niagara Falls, Ontario

DRAWING TITLE

Analytical Data Summary
[Groundwater] - BNAs

PROJECT No.	SM 220717-E
DATE	August 2023
CHECKED	SS
DRAWN	LC
FILE NAME	220717 PhTwoDrawings.vsd

DRAWING No. 4D

Log of Borehole No. 1/MW1

Project No: SM 220717-E
Project: Phase Two ESA
Location: Dorchester Road, Niagara Falls
Client: Upper Canada Planning & Engineering Ltd.

Project Manager: Peter Markesic, B.Sc.
Borehole Location: See Drawing No.1
UTM Coordinates - N: 4769434
E: 653782

Depth (ft / m)	Elevation (m)	Description	Type	Number	Blow Counts	Blows/300mm	Recovery	PP (kgf/cm2)	U.Wt.(kN/m3)
0 / 0	99.70	Ground Surface							
0 / 0	99.55	**Topsoil** Approximately 150 millimetres of topsoil.							
3 / 1		**Silty Clay/Clayey Silt** Brown, trace sand and gravel, very stiff to soft.	SS	1	2,2,4,4	6			
			SS	2	5,6,8,10	14			
6 / 2			SS	3	4,6,9,8	15			
9 / 3			SS	4	2,3,3,5	6			
			SS	5	2,2,3,4	5			
13 / 4			SS	6	1,2,2,2	4			
15 / 5	95.10	**Silty Sand/Sandy Silt** Brown, trace to some clay, very loose to compact.	SS	7	1,1,7,10	8			
18 / 6			SS	8	6,7,7,8	14			
21 / 6			SS	9	0,0,0,2	0			
22 / 7	93.00	End of Borehole							

NOTES:

1. Borehole was advanced using solid stem auger equipment on July 26, 2023 to termination at a depth of 6.7 metres.

2. Borehole was recorded as open and 'dry' upon completion and backfilled as per Ontario Regulation 903.

3. Soil samples will be discarded after 3 months unless otherwise directed by our client.

4. A monitoring well was installed. The following free groundwater level readings have been measured:
August 2, 2023: 4.82 mbgs
August 10, 2023: 4.83 mbgs

Moisture Content w% (10 20 30 40)
Standard Penetration Test blows/300mm (20 40 60 80)

Drill Method: Solid Stem Augers
Drill Date: July 26, 2023
Hole Size: 150 Millimetres
Drilling Contractor: Davis Drilling Ltd.

Soil-Mat Engineers & Consultants Ltd.
401 Grays Road · Hamilton, Ontario · L8E 2Z3
T: 905.318.7440 · TF: 800.243.1922 · F: 905.318.7455
www.soil-mat.ca · E: info@soil-mat.ca

Datum: Temporary Benchmark
Field Logged by: NS
Checked by: PM
Sheet: 1 of 1

Log of Borehole No. 2/MW2

Project No: SM 220717-E
Project: Phase Two ESA
Location: Dorchester Road, Niagara Falls
Client: Upper Canada Planning & Engineering Ltd.

Project Manager: Peter Markesic, B.Sc.
Borehole Location: See Drawing No.1
UTM Coordinates - N: 4769418
E: 653804

Depth (ft)	Depth (m)	Elevation (m)	Description	Type	Number	Blow Counts	Blows/300mm	Recovery	PP (kgf/cm2)	U.Wt.(kN/m3)
		99.72	Ground Surface							
0	0	99.52	**Topsoil** Approximately 200 millimetres of topsoil.							
1			**Silty Clay/Clayey Silt** Brown, trace sand and gravel, very stiff to firm.	SS	1	2,2,4,4	6			
2										
3	1			SS	2	5,8,10,12	18			
4										
5			NOTES:							
6	2		1. Borehole was advanced using solid stem auger equipment on July 26, 2023 to termination at a depth of 6.7 metres.	SS	3	6,7,12,14	19			
7										
8			2. Borehole was recorded as open and 'dry' upon completion and backfilled as per Ontario Regulation 903.	SS	4	4,6,8,10	14			
9										
10	3		3. Soil samples will be discarded after 3 months unless otherwise directed by our client.	SS	5	4,5,6,6	11			
11										
12			4. A monitoring well was installed. The following free groundwater level readings have been measured: August 2, 2023: 4.49 mbgs August 10, 2023: 4.44 mbgs							
13	4			SS	6	2,3,4,4	7			
14										
15		94.90								
16	5		**Silty Sand/Sandy Silt** Brown, trace to some clay, very loose to compact.	SS	7	3,4,5,4	9			
17										
18				SS	8	4,6,6,7	12			
19										
20	6									
21				SS	9	0,0,0,2	0			
22		93.00								
23	7		End of Borehole							
24										
25										
26										

Moisture Content w% (10 20 30 40)
Standard Penetration Test blows/300mm (20 40 60 80)

Drill Method: Solid Stem Augers
Drill Date: July 26, 2023
Hole Size: 150 Millimetres
Drilling Contractor: Davis Drilling Ltd.

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Field Logged by: NS
Checked by: PM
Sheet: 1 of 1

Log of Borehole No. 3/MW3

Project No: SM 220717-E
Project Manager: Peter Markesic, B.Sc.
Project: Phase Two ESA
Borehole Location: See Drawing No.1
Location: Dorchester Road, Niagara Falls
UTM Coordinates - N: 4769473
Client: Upper Canada Planning & Engineering Ltd.
E: 653812

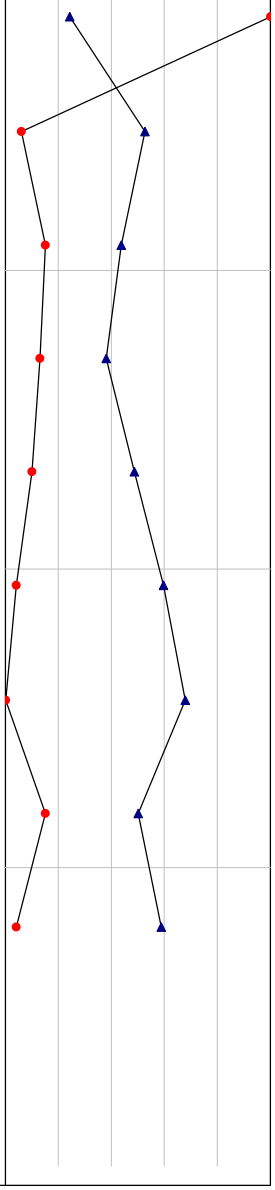
Depth (ft / m)	Elevation (m)	Description	Well Data	Sample Type	Sample Number	Blow Counts	Blows/300mm	Recovery	PP (kgf/cm2)	U.Wt.(kN/m3)
	100.06	Ground Surface								
0 / 0	99.86	**Granular Fill** Approximately 200 millimetres of compact granular fill.								
		Silty Clay/Clayey Silt Brown, trace sand and gravel, very stiff to firm.		SS	1	20,10,50/5"	100			
				SS	2	2,2,4,8	6			
1				SS	3	4,7,8,9	15			
2				SS	4	6,6,7,8	13			
3				SS	5	3,5,58	10			
4				SS	6	2,2,2,3	4			
	95.30			SS	7	0,0,0,2	0			
5		**Silty Sand/Sandy Silt** Brown, trace to some clay, very loose to compact.		SS	8	4,8,7,6	15			
6				SS	9	1,2,2,0	4			
	93.40	End of Borehole								
7										

NOTES:

1. Borehole was advanced using solid stem auger equipment on July 26, 2023 to termination at a depth of 6.7 metres.
2. Borehole was recorded as open and 'dry' upon completion and backfilled as per Ontario Regulation 903.
3. Soil samples will be discarded after 3 months unless otherwise directed by our client.
4. A monitoring well was installed. The following free groundwater level readings have been measured:
August 2, 2023: 4.39 mbgs
August 10, 2023: 4.38 mbgs

Moisture Content w% (10 20 30 40)

Standard Penetration Test blows/300mm (20 40 60 80)



Drill Method: Solid Stem Augers
Drill Date: July 26, 2023
Hole Size: 150 Millimetres
Drilling Contractor: Davis Drilling Ltd.

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Sheet: 1 of 1

Log of Borehole No. 4/MW

Project No: SM 220717-E
Project: Phase Two ESA
Location: Dorchester Road, Niagara Falls
Client: Upper Canada Planning & Engineering Ltd.

Project Manager: Peter Markesic, B.Sc.
Borehole Location: See Drawing No.1
UTM Coordinates - N: 4769521
E: 653896

Depth (ft / m)	Elevation (m)	Description	Type	Number	Blow Counts	Blows/300mm	Recovery	PP (kgf/cm2)	U.Wt.(kN/m3)
0 / 0	100.15	Ground Surface							
0 / 0	99.95	**Granular Fill** Approximately 200 millimetres of compact granular fill.	SS	1	50/4"	100			
		Silty Clay/Clayey Silt Brown, trace sand and gravel, reworked in the upper levels, stiff to soft.	SS	2	8,4,4,5	8			
		NOTES: 1. Borehole was advanced using solid stem auger equipment on July 26, 2023 to termination at a depth of 6.7 metres. 2. Borehole was recorded as open and 'dry' upon completion and backfilled as per Ontario Regulation 903. 3. Soil samples will be discarded after 3 months unless otherwise directed by our client. 4. A monitoring well was installed. The following free groundwater level readings have been measured: August 2, 2023: 4.19 mbgs August 10, 2023: 4.82 mbgs	SS	3	2,5,6,9	11			
			SS	4	4,5,6,7	11			
			SS	5	3,2,4,4	6			
			SS	6	2,2,2,2	4			
	95.39	**Silty Sand/Sandy Silt** Brown, trace gravel, trace clay, very loose to loose.	SS	7	0,0,2,3	2			
			SS	8	1,2,4,5	6			
	94.21	**Silty Clay/Clayey Silt** Grey, trace sand and gravel, firm.	SS	9	1,2,3,3	5			
	93.40	End of Borehole							

Moisture Content w% (10 20 30 40)
Standard Penetration Test blows/300mm (20 40 60 80)

Drill Method: Solid Stem Augers
Drill Date: July 26, 2023
Hole Size: 150 Millimetres
Drilling Contractor: Davis Drilling Ltd.

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Sheet: 1 of 1

Log of Borehole No. 5

Project No: SM 220717-E
Project Manager: Peter Markesic, B.Sc.
Project: Phase Two ESA
Borehole Location: See Drawing No.1
Location: Dorchester Road, Niagara Falls
UTM Coordinates - N: 4769504
Client: Upper Canada Planning & Engineering Ltd.
E: 653896

Depth (ft / m)	Elevation (m)	Description	Type	Number	Blow Counts	Blows/300mm	Recovery	PP (kgf/cm2)	U.Wt.(kN/m3)
0 / 0	100.12	Ground Surface							
0 / 0	99.92	**Granular Fill** Approximately 200 millimetres of compact granular fill.	SS	1	10,22,22,12	44			
		Silty Clay/Clayey Silt Brown, trace sand and gravel, reworked in the upper levels, firm to stiff.							
3 / 1			SS	2	2,3,5,8	8			
6 / 2			SS	3	4,5,8,12	13			
9 / 3			SS	4	4,6,7,10	13			
11 / 3			SS	5	3,5,7,7	12			
12 / 4	96.50	End of Borehole							

Moisture Content w% (10 20 30 40)
Standard Penetration Test blows/300mm (20 40 60 80)

NOTES:

1. Borehole was advanced using solid stem auger equipment on July 27, 2023 to termination at a depth of 3.6 metres.

2. Borehole was recorded as open and 'dry' upon completion and backfilled as per Ontario Regulation 903.

3. Soil samples will be discarded after 3 months unless otherwise directed by our client.

Drill Method: Solid Stem Augers
Drill Date: July 27, 2023
Hole Size: 150 Millimetres
Drilling Contractor: Davis Drilling Ltd.

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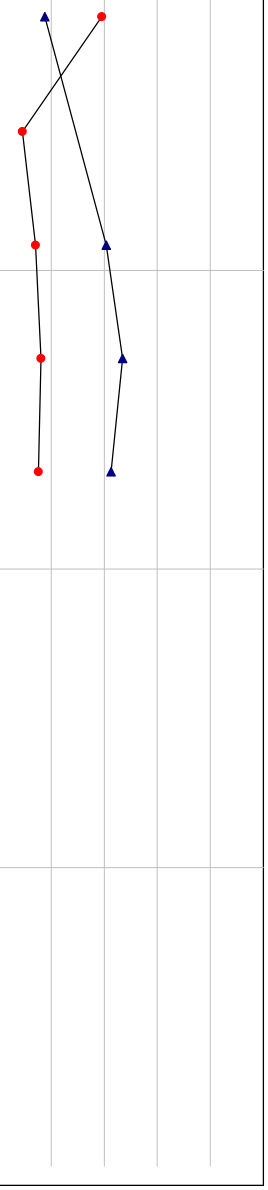
Log of Borehole No. 6

Project No: SM 220717-E
Project: Phase Two ESA
Location: Dorchester Road, Niagara Falls
Client: Upper Canada Planning & Engineering Ltd.

Project Manager: Peter Markesic, B.Sc.
Borehole Location: See Drawing No.1
UTM Coordinates - N: 4769494
E: 653855

Depth (ft)	Depth (m)	Elevation (m)	Description	Type	Number	Blow Counts	Blows/300mm	Recovery	PP (kgf/cm2)	U.Wt.(kN/m3)
		100.10	Ground Surface							
0	0	99.90	**Granular Fill** Approximately 200 millimetres of compact granular fill.	SS	1	9,27,12,3	39			
1			**Silty Clay/Clayey Silt** Brown, trace sand and gravel, reworked in the upper levels, firm to stiff.							
2	1			SS	2	3,4,5,7	9			
3										
4										
5				SS	3	3,6,8,12	14			
6	2									
7										
8				SS	4	3,7,9,11	16			
9										
10	3									
11				SS	5	4,6,9,11	15			
12		96.40								
13	4		End of Borehole							
14										
15			NOTES:							
16	5		1. Borehole was advanced using solid stem auger equipment on July 27, 2023 to termination at a depth of 3.7 metres.							
17										
18			2. Borehole was recorded as open and 'dry' upon completion and backfilled as per Ontario Regulation 903.							
19										
20	6		3. Soil samples will be discarded after 3 months unless otherwise directed by our client.							
21										
22										
23	7									
24										
25										
26										

Moisture Content w% (10 20 30 40)
Standard Penetration Test blows/300mm (20 40 60 80)



Drill Method: Solid Stem Augers
Drill Date: July 27, 2023
Hole Size: 150 Millimetres
Drilling Contractor: Davis Drilling Ltd.

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Sheet: 1 of 1

Log of Borehole No. 7

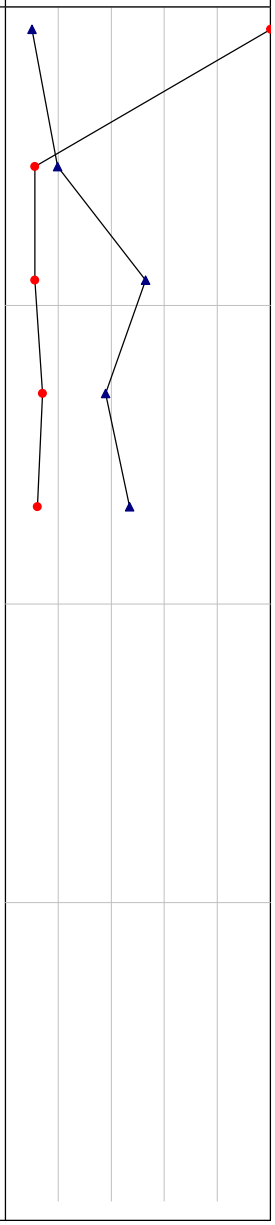
Project No: SM 220717-E
Project: Phase Two ESA
Location: Dorchester Road, Niagara Falls
Client: Upper Canada Planning & Engineering Ltd.

Project Manager: Peter Markesic, B.Sc.
Borehole Location: See Drawing No.1
UTM Coordinates - N: 4769453
E: 653814

Depth (ft)	Depth (m)	Elevation (m)	Description	Well Data	SAMPLE Type	SAMPLE Number	SAMPLE Blow Counts	SAMPLE Blows/300mm	SAMPLE Recovery	PP (kgf/cm2)	U.Wt.(kN/m3)
		100.16	Ground Surface								
0	0	99.96	**Granular Fill** Approximately 200 millimetres of compact granular fill.		SS	1	12,50/3"	100			
1			**Silty Clay/Clayey Silt** Brown, trace sand and gravel, reworked in the upper levels, firm to stiff.								
2	1				SS	2	2,4,7,9	11			
3											
4					SS	3	1,4,7,8	11			
5											
6	2				SS	4	3,6,8,10	14			
7											
8					SS	5	3,5,7,9	12			
9	3										
10											
11		96.50									
12			End of Borehole								
13	4										
14			NOTES:								
15			1. Borehole was advanced using solid stem auger equipment on July 27, 2023 to termination at a depth of 3.7 metres.								
16	5										
17			2. Borehole was recorded as open and 'dry' upon completion and backfilled as per Ontario Regulation 903.								
18											
19			3. Soil samples will be discarded after 3 months unless otherwise directed by our client.								
20	6										
21											
22											
23	7										
24											
25											
26											

Moisture Content w%: 10 20 30 40

Standard Penetration Test blows/300mm: 20 40 60 80



Drill Method: Solid Stem Augers
Drill Date: July 27, 2023
Hole Size: 150 Millimetres
Drilling Contractor: Davis Drilling Ltd.

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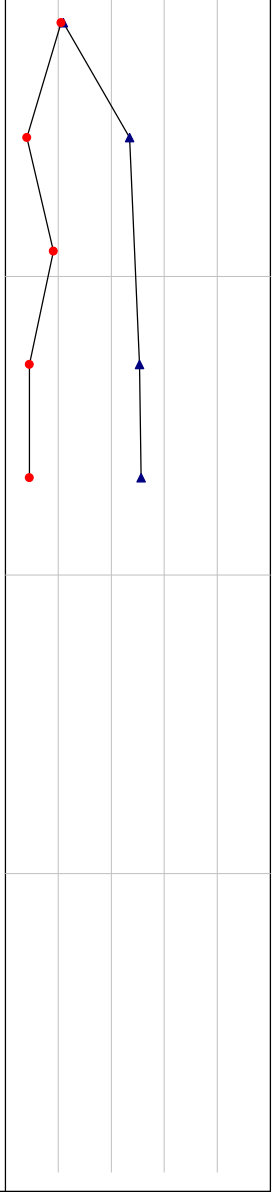
Log of Borehole No. 8

Project No: SM 220717-E
Project Manager: Peter Markesic, B.Sc.
Project: Phase Two ESA
Borehole Location: See Drawing No.1
Location: Dorchester Road, Niagara Falls
UTM Coordinates - N: 4769418
Client: Upper Canada Planning & Engineering Ltd.
E: 653832

Depth (ft / m)	Elevation (m)	Symbol	Description	Well Data	SAMPLE Type	Number	Blow Counts	Blows/300mm	Recovery	PP (kgf/cm2)	U.Wt.(kN/m3)
	100.23		Ground Surface								
0 / 0	100.03		**Granular Fill** Approximately 200 millimetres of compact granular fill.								
			Silty Clay/Clayey Silt Brown, trace sand and gravel, reworked in the upper levels, very stiff to stiff.		SS	1	9,14,7,3	21			
3 / 1					SS	2	2,3,5,7	8			
6 / 2					SS	3	3,9,9,8	18			
					SS	4	3,4,5,7	9			
10 / 3					SS	5	2,4,5,8	9			
12	96.50		End of Borehole								
13 / 4			NOTES: 1. Borehole was advanced using solid stem auger equipment on July 27, 2023 to termination at a depth of 3.7 metres. 2. Borehole was recorded as open and 'dry' upon completion and backfilled as per Ontario Regulation 903. 3. Soil samples will be discarded after 3 months unless otherwise directed by our client.								
16 / 5											
19 / 6											
23 / 7											
26											

Moisture Content w%: 10 20 30 40
Standard Penetration Test blows/300mm: 20 40 60 80



Drill Method: Solid Stem Augers
Drill Date: July 27, 2023
Hole Size: 150 Millimetres
Drilling Contractor: Davis Drilling Ltd.

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Log of Borehole No. 9

Project No: SM 220717-E
Project Manager: Peter Markesic, B.Sc.
Project: Phase Two ESA
Borehole Location: See Drawing No.1
Location: Dorchester Road, Niagara Falls
UTM Coordinates - N: 4769444
Client: Upper Canada Planning & Engineering Ltd.
E: 653869

Depth (ft)	Depth (m)	Elevation (m)	Description	Type	Number	Blow Counts	Blows/300mm	Recovery	PP (kgf/cm2)	U.Wt.(kN/m3)
		100.22	Ground Surface							
0	0	100.07	**Granular Fill** Approximately 150 millimetres of compact granular fill.							
1			**Silty Clay/Clayey Silt** Brown, with trace sand and gravel. Trace organics in the upper level with a reworked appearance. stiff.	SS	1	5,13,5,4	18			
2										
3	1			SS	2	4,5,7,9	12			
4										
5				SS	3	2,5,7,10	12			
6	2									
7				SS	4	4,6,8,9	14			
8										
9										
10	3			SS	5	2,5,5,7	10			
11										
12		96.50								
13	4		End of Borehole							
14										
15			NOTES:							
16	5		1. Borehole was advanced using solid stem auger equipment on July 27, 2023 to termination at a depth of 3.7 metres.							
17										
18			2. Borehole was recorded as open and 'dry' upon completion and backfilled as per Ontario Regulation 903.							
19										
20	6		3. Soil samples will be discarded after 3 months unless otherwise directed by our client.							
21										
22										
23	7									
24										
25										
26										

Well Data

SAMPLE

Moisture Content w% (10 20 30 40)

Standard Penetration Test blows/300mm (20 40 60 80)

Drill Method: Solid Stem Augers
Drill Date: July 27, 2023
Hole Size: 150 Millimetres
Drilling Contractor: Davis Drilling Ltd.

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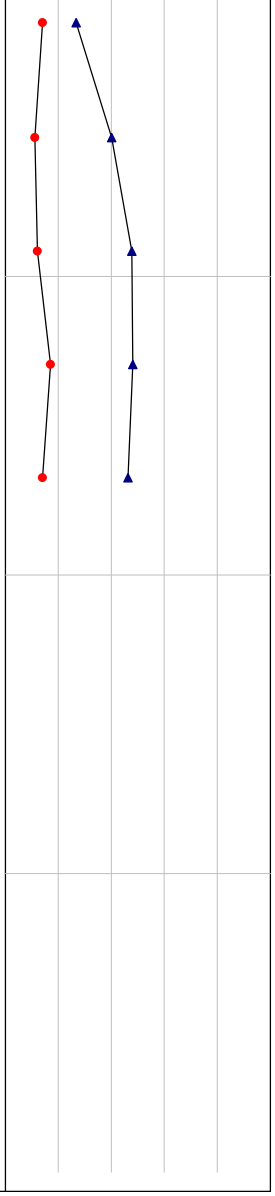
Log of Borehole No. 10

Project No: SM 220717-E
Project: Phase Two ESA
Location: Dorchester Road, Niagara Falls
Client: Upper Canada Planning & Engineering Ltd.

Project Manager: Peter Markesic, B.Sc.
Borehole Location: See Drawing No.1
UTM Coordinates - N: 4769482
E: 653908

Depth (ft)	Depth (m)	Elevation (m)	Description	Well Data	SAMPLE Type	SAMPLE Number	SAMPLE Blow Counts	SAMPLE Blows/300mm	SAMPLE Recovery	PP (kgf/cm2)	U.Wt.(kN/m3)
		100.13	Ground Surface								
0	0	99.98	**Granular Fill** Approximately 150 millimetres of compact granular fill.								
1			**Silty Clay/Clayey Silt** Brown, with trace sand and gravel, stiff to very stiff.		SS	1	8,11,3,3	14			
2											
3	1				SS	2	2,4,7,11	11			
4											
5					SS	3	3,5,7,11	12			
6	2										
7					SS	4	5,7,10,11	17			
8											
9											
10	3				SS	5	4,7,7,9	14			
11											
12		96.40	End of Borehole								
13	4		NOTES: 1. Borehole was advanced using solid stem auger equipment on July 27, 2023 to termination at a depth of 3.7 metres. 2. Borehole was recorded as open and 'dry' upon completion and backfilled as per Ontario Regulation 903. 3. Soil samples will be discarded after 3 months unless otherwise directed by our client.								
14											
15											
16	5										
17											
18											
19											
20	6										
21											
22											
23	7										
24											
25											
26											



Drill Method: Solid Stem Augers
Drill Date: July 27, 2023
Hole Size: 150 Millimetres
Drilling Contractor: Davis Drilling Ltd.

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Appendix ‘C’

1. AGAT Certificate of Analysis – Soil

AGAT Laboratories

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MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT
401 GRAYS ROAD
HAMILTON, ON L8E 2Z3
(905) 318-7440

ATTENTION TO: Peter Markesic

PROJECT: 220717

AGAT WORK ORDER: 23T052426

SOIL ANALYSIS REVIEWED BY: Nivine Basily, Inorganics Report Writer

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

DATE REPORTED: Aug 03, 2023

PAGES (INCLUDING COVER): 33

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

Notes

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CANADA L4Z 1Y2
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FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 23T052426

PROJECT: 220717

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Road, Niagara Falls

SAMPLED BY:NS

O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2023-07-28

DATE REPORTED: 2023-08-03

		SAMPLE DESCRIPTION:		BH1 SS3	BH1 SS7	BH2 SS3	BH2 SS9	BH5 SS2	BH6 SS	BH6 SS4	BH7 SS2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2023-07-26	2023-07-26	2023-07-26	2023-07-26	2023-07-27	2023-07-27	2023-07-27	2023-07-27
Parameter	Unit	G / S	RDL	5177591	5177593	5177594	5177595	5177602	5177604	5177605	5177606
Antimony	µg/g	7.5	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	5	4	7	5	6	5	7	7
Barium	µg/g	390	2.0	157	147	145	186	136	162	173	196
Beryllium	µg/g	4	0.5	1.2	<0.5	0.8	0.7	1.0	0.9	1.2	1.2
Boron	µg/g	120	5	20	7	10	14	13	11	21	18
Boron (Hot Water Soluble)	µg/g	1.5	0.10	0.29	0.16	0.16	0.34	<0.10	0.34	0.18	0.15
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	160	5	35	11	26	24	31	29	36	35
Cobalt	µg/g	22	0.8	17.0	6.8	14.1	12.4	13.7	10.5	18.6	17.5
Copper	µg/g	140	1.0	28.0	8.2	28.5	21.2	26.1	29.3	29.4	26.9
Lead	µg/g	120	1	12	4	9	9	10	34	13	13
Molybdenum	µg/g	6.9	0.5	0.8	<0.5	0.6	0.7	0.7	1.0	0.9	0.7
Nickel	µg/g	100	1	36	13	28	27	31	24	38	35
Selenium	µg/g	2.4	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	µg/g	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g	23	0.50	1.29	0.58	0.97	1.72	0.62	0.83	1.05	0.87
Vanadium	µg/g	86	2.0	49.4	17.1	36.5	31.3	45.4	39.4	52.1	52.9
Zinc	µg/g	340	5	77	31	64	62	67	88	82	70
Chromium, Hexavalent	µg/g	8	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, WAD	µg/g	0.051	0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.7	0.005	0.244	0.212	0.277	0.297	0.369	0.390	0.247	0.329
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	N/A	0.526	0.591	0.458	0.613	0.900	0.401	0.358	0.502
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA	7.12	7.22	7.17	7.29	7.19	7.20	7.29	7.21

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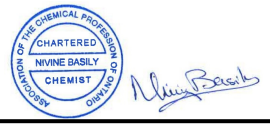

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AGAT WORK ORDER: 23T052426

PROJECT: 220717

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Road, Niagara Falls

SAMPLED BY:NS

O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2023-07-28

DATE REPORTED: 2023-08-03

		SAMPLE DESCRIPTION:		BH8 SS2	BH8 SS3	BH9 SS1	BH10 SS2	BH10 SS3	TP1	TP2	TP3
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2023-07-27	2023-07-27	2023-07-27	2023-07-27	2023-07-27	2023-07-27	2023-07-27	2023-07-27
Parameter	Unit	G / S	RDL	5177607	5177608	5177609	5177610	5177611	5177623	5177624	5177625
Antimony	µg/g	7.5	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	6	7	4	6	6	5	5	6
Barium	µg/g	390	2.0	171	160	60.8	157	182	64.6	94.9	137
Beryllium	µg/g	4	0.5	1.3	1.0	<0.5	1.1	1.2	0.5	0.8	1.0
Boron	µg/g	120	5	18	16	<5	11	16	7	8	13
Boron (Hot Water Soluble)	µg/g	1.5	0.10	0.23	0.15	0.27	0.12	0.18	0.26	0.40	0.26
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	160	5	35	31	16	31	35	18	26	33
Cobalt	µg/g	22	0.8	17.0	18.0	8.2	16.6	18.9	8.4	9.7	14.0
Copper	µg/g	140	1.0	22.4	28.9	14.8	26.5	28.7	17.5	18.7	22.4
Lead	µg/g	120	1	15	12	20	13	14	23	27	18
Molybdenum	µg/g	6.9	0.5	0.9	0.6	0.6	<0.5	0.8	0.6	0.9	0.9
Nickel	µg/g	100	1	33	36	17	32	39	15	21	31
Selenium	µg/g	2.4	0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8	<0.8
Silver	µg/g	20	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g	23	0.50	1.30	1.40	<0.50	0.67	1.15	<0.50	0.61	0.78
Vanadium	µg/g	86	2.0	52.6	45.5	21.8	44.9	51.5	24.0	37.3	47.6
Zinc	µg/g	340	5	80	68	94	68	79	70	84	78
Chromium, Hexavalent	µg/g	8	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, WAD	µg/g	0.051	0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.7	0.005	0.389	0.251	0.280	0.235	0.248	0.191	0.314	0.249
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	N/A	0.437	0.484	1.51	0.434	0.370	0.154	0.469	0.451
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA	7.31	7.27	6.54	7.06	7.07	7.00	7.05	7.09

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AGAT WORK ORDER: 23T052426

PROJECT: 220717

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Road, Niagara Falls

SAMPLED BY:NS

O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2023-07-28

DATE REPORTED: 2023-08-03

		SAMPLE DESCRIPTION:		TP4	TP5	DUP3	DUP4
		SAMPLE TYPE:		Soil	Soil	Soil	Soil
		DATE SAMPLED:		2023-07-27	2023-07-27	2023-07-27	2023-07-27
Parameter	Unit	G / S	RDL	5177626	5177627	5177631	5177632
Antimony	µg/g	7.5	0.8	<0.8	<0.8	<0.8	<0.8
Arsenic	µg/g	18	1	6	6	4	6
Barium	µg/g	390	2.0	116	88.9	64.8	123
Beryllium	µg/g	4	0.5	0.8	0.6	<0.5	1.0
Boron	µg/g	120	5	8	7	<5	10
Boron (Hot Water Soluble)	µg/g	1.5	0.10	0.36	0.36	0.30	0.25
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	<0.5	<0.5
Chromium	µg/g	160	5	29	22	15	32
Cobalt	µg/g	22	0.8	11.1	9.3	8.3	12.4
Copper	µg/g	140	1.0	17.4	24.5	17.3	21.8
Lead	µg/g	120	1	24	21	23	21
Molybdenum	µg/g	6.9	0.5	1.0	1.5	0.6	0.8
Nickel	µg/g	100	1	25	31	15	29
Selenium	µg/g	2.4	0.8	<0.8	<0.8	<0.8	<0.8
Silver	µg/g	20	0.5	<0.5	<0.5	<0.5	<0.5
Thallium	µg/g	1	0.5	<0.5	<0.5	<0.5	<0.5
Uranium	µg/g	23	0.50	0.73	0.61	<0.50	0.74
Vanadium	µg/g	86	2.0	42.4	32.1	21.6	45.6
Zinc	µg/g	340	5	88	104	70	85
Chromium, Hexavalent	µg/g	8	0.2	<0.2	<0.2	<0.2	<0.2
Cyanide, WAD	µg/g	0.051	0.040	<0.040	<0.040	<0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10	<0.10	<0.10	<0.10
Electrical Conductivity (2:1)	mS/cm	0.7	0.005	0.235	0.264	0.193	0.264
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	N/A	0.186	0.145	0.124	0.382
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA	7.06	7.06	7.09	7.16

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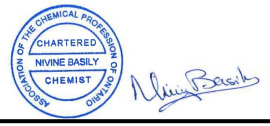

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AGAT WORK ORDER: 23T052426

PROJECT: 220717

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Road, Niagara Falls

SAMPLED BY:NS

O. Reg. 153(511) - Metals & Inorganics (Soil)

DATE RECEIVED: 2023-07-28 **DATE REPORTED: 2023-08-03**

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ON T2 S RPI CT
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5177591-5177632 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

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AGAT WORK ORDER: 23T052426

PROJECT: 220717

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Road, Niagara Falls

SAMPLED BY:NS

O. Reg. 153(511) - BNA (full) + PAHs (Soil)

DATE RECEIVED: 2023-07-28

DATE REPORTED: 2023-08-03

		SAMPLE DESCRIPTION:		BH1 SS3	BH1 SS7	BH2 SS3	BH2 SS9	DUP1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2023-07-26	2023-07-26	2023-07-26	2023-07-26	2023-07-26
Parameter	Unit	G / S	RDL	5177591	5177593	5177594	5177595	5177629
Naphthalene	µg/g	0.6	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.15	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g	7.9	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	µg/g	62	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g	6.2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	µg/g	0.67	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g	0.69	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	µg/g	78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benz(a)anthracene	µg/g	0.5	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	µg/g	7	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.38	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenzo(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	6.6	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenol	µg/g	9.4	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bis(2-chloroethyl)ether	µg/g	0.5	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2-Chlorophenol	µg/g	1.6	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
o-Cresol	µg/g		0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Bis(2-chloroisopropyl)ether	µg/g	0.67	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
m & p - Cresol	µg/g		0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2,4-Dimethylphenol	µg/g	38	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
2,4-Dichlorophenol	µg/g	0.19	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,2,4-Trichlorobenzene	µg/g	0.36	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
p-Chloroaniline	µg/g	0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1 and 2 Methlynaphthalene	µg/g	0.99	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
2,4,6-Trichlorophenol	µg/g	2.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2,4,5-Trichlorophenol	µg/g	4.4	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
1,1-Biphenyl	µg/g	0.31	0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Certified By: N Popnikolof

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AGAT WORK ORDER: 23T052426

PROJECT: 220717

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Road, Niagara Falls

SAMPLED BY:NS

O. Reg. 153(511) - BNA (full) + PAHs (Soil)

DATE RECEIVED: 2023-07-28

DATE REPORTED: 2023-08-03

		SAMPLE DESCRIPTION:		BH1 SS3	BH1 SS7	BH2 SS3	BH2 SS9	DUP1
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2023-07-26	2023-07-26	2023-07-26	2023-07-26	2023-07-26
Parameter	**Unit**	**G / S**	**RDL**	**5177591**	**5177593**	**5177594**	**5177595**	**5177629**
Dimethyl Phthalate	µg/g	0.5	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
2,4 and 2,6-Dinitrotoluene	µg/g	0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Diethyl Phthalate	µg/g	0.5	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Pentachlorophenol	µg/g	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
3,3'-Dichlorobenzidine	µg/g	1	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
2,4-Dinitrophenol	µg/g	2	2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Bis(2-Ethylhexyl)phthalate	µg/g	5	0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Moisture Content	%		0.1	13.3	16.1	15.6	18.5	17.8
wet weight BNA	g		0.01	10.51	10.51	10.39	10.54	10.18
Surrogate	**Unit**	**Acceptable Limits**						
phenol-d6 surrogate	%	50-140		105	96	85	79	106
2-Fluorophenol	%	50-140		79	85	79	85	79
2,4,6-Tribromophenol	%	50-140		85	84	85	84	85
Chrysene-d12	%	50-140		84	84	84	79	84

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ON T2 S RPI CT
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5177591-5177629 Results are based on the dry weight of the soil.
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&(j)Fluoranthene isomers because the isomers co-elute on the GC column.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popnikolof

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Certificate of Analysis

AGAT WORK ORDER: 23T052426

PROJECT: 220717

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Road, Niagara Falls

SAMPLED BY:NS

O. Reg. 153(511) - PAHs (Soil)

DATE RECEIVED: 2023-07-28

DATE REPORTED: 2023-08-03

		SAMPLE DESCRIPTION:		BH5 SS2	BH6 SS	BH6 SS4	BH7 SS2	BH8 SS2	BH8 SS3	BH9 SS1	BH10 SS2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2023-07-27	2023-07-27	2023-07-27	2023-07-27	2023-07-27	2023-07-27	2023-07-27	2023-07-27
Parameter	**Unit**	**G / S**	**RDL**	**5177602**	**5177604**	**5177605**	**5177606**	**5177607**	**5177608**	**5177609**	**5177610**
Naphthalene	µg/g	0.6	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.15	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	µg/g	7.9	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	µg/g	62	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g	6.2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	µg/g	0.67	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g	0.69	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	µg/g	78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benz(a)anthracene	µg/g	0.5	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	µg/g	7	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.78	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.38	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	6.6	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1 and 2 Methlynaphthalene	µg/g	0.99	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	16.1	19.2	22.0	18.7	18.6	17.5	21.3	14.5
Surrogate	**Unit**	**Acceptable Limits**									
Naphthalene-d8	%	50-140		75	70	80	70	85	70	75	80
Acridine-d9	%	50-140		95	80	75	100	70	80	75	90
Terphenyl-d14	%	50-140		90	110	110	80	100	95	110	85

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AGAT WORK ORDER: 23T052426

PROJECT: 220717

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Road, Niagara Falls

SAMPLED BY:NS

O. Reg. 153(511) - PAHs (Soil)

DATE RECEIVED: 2023-07-28

DATE REPORTED: 2023-08-03

		SAMPLE DESCRIPTION:		BH10 SS3
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2023-07-27
Parameter	**Unit**	**G / S**	**RDL**	**5177611**
Naphthalene	µg/g	0.6	0.05	<0.05
Acenaphthylene	µg/g	0.15	0.05	<0.05
Acenaphthene	µg/g	7.9	0.05	<0.05
Fluorene	µg/g	62	0.05	<0.05
Phenanthrene	µg/g	6.2	0.05	<0.05
Anthracene	µg/g	0.67	0.05	<0.05
Fluoranthene	µg/g	0.69	0.05	<0.05
Pyrene	µg/g	78	0.05	<0.05
Benz(a)anthracene	µg/g	0.5	0.05	<0.05
Chrysene	µg/g	7	0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.78	0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.78	0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.38	0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05
Benzo(g,h,i)perylene	µg/g	6.6	0.05	<0.05
1 and 2 Methlynaphthalene	µg/g	0.99	0.05	<0.05
Moisture Content	%		0.1	19.0
Surrogate	**Unit**	**Acceptable Limits**		
Naphthalene-d8	%	50-140		80
Acridine-d9	%	50-140		75
Terphenyl-d14	%	50-140		90

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ON T2 S RPI CT
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5177602-5177611 Results are based on the dry weight of the soil.
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popnikolof

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Certificate of Analysis

AGAT WORK ORDER: 23T052426

PROJECT: 220717

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Road, Niagara Falls

SAMPLED BY:NS

O. Reg. 153(511) - PHCs F1 - F4 (Soil)

DATE RECEIVED: 2023-07-28

DATE REPORTED: 2023-08-03

		SAMPLE DESCRIPTION:		BH3 SS2	BH3 SS7	BH4 SS2	BH4 SS8	TP1	TP2	TP3	TP4
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2023-07-26	2023-07-26	2023-07-26	2023-07-26	2023-07-27	2023-07-27	2023-07-27	2023-07-27
Parameter	**Unit**	**G / S**	**RDL**	**5177596**	**5177597**	**5177598**	**5177599**	**5177623**	**5177624**	**5177625**	**5177626**
Benzene	µg/g	0.21	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Toluene	µg/g	2.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	µg/g	1.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
m & p-Xylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes (Total)	µg/g	3.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 - C10)	µg/g	55	5	<5	<5	<5	<5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5	<5	<5	<5	<5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g	98	10	<10	17	<10	<10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	300	50	<50	69	<50	<50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	2800	50	<50	<50	<50	<50	57	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	2800	50	NA	NA	NA	NA	NA	NA	NA	NA
Moisture Content	%		0.1	15.2	29.0	22.4	18.0	15.3	19.8	21.5	20.4
Surrogate	**Unit**	**Acceptable Limits**									
Toluene-d8	% Recovery	60-140		107	87	89	91	81	84	78	73
Terphenyl	%	60-140		74	94	73	76	90	77	76	86

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AGAT WORK ORDER: 23T052426

PROJECT: 220717

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Road, Niagara Falls

SAMPLED BY:NS

O. Reg. 153(511) - PHCs F1 - F4 (Soil)

DATE RECEIVED: 2023-07-28

DATE REPORTED: 2023-08-03

		SAMPLE DESCRIPTION:		TP5	BH3 SS9	DUP2	DUP3	DUP4
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2023-07-27	2023-07-26	2023-07-26	2023-07-27	2023-07-27
Parameter	**Unit**	**G / S**	**RDL**	**5177627**	**5177628**	**5177630**	**5177631**	**5177632**
Benzene	µg/g	0.21	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Toluene	µg/g	2.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	µg/g	1.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
m & p-Xylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	µg/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes (Total)	µg/g	3.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
F1 (C6 - C10)	µg/g	55	5	<5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5	<5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g	98	10	<10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	300	50	91	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	2800	50	107	<50	<50	53	<50
Gravimetric Heavy Hydrocarbons	µg/g	2800	50	NA	NA	NA	NA	NA
Moisture Content	%		0.1	24.7	28.9	15.6	15.0	21.7
Surrogate	**Unit**	**Acceptable Limits**						
Toluene-d8	% Recovery	60-140		80	75	76	69	67
Terphenyl	%	60-140		85	78	80	83	72

Certified By: NPopowich

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AGAT WORK ORDER: 23T052426

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CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Road, Niagara Falls

SAMPLED BY:NS

O. Reg. 153(511) - PHCs F1 - F4 (Soil)

DATE RECEIVED: 2023-07-28

DATE REPORTED: 2023-08-03

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ON T2 S RPI CT
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5177596-5177632 Results are based on sample dry weight.
The C6-C10 fraction is calculated using Toluene response factor.
Xylenes is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.
Quality Control Data is available upon request.

Analysis performed at AGAT Toronto (unless marked by *)

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AGAT WORK ORDER: 23T052426

PROJECT: 220717

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Road, Niagara Falls

SAMPLED BY:NS

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

DATE RECEIVED: 2023-07-28

DATE REPORTED: 2023-08-03

		SAMPLE DESCRIPTION:		BH1 SS3	BH1 SS7	BH2 SS3	BH2 SS9	BH5 SS2	BH6 SS	BH6 SS4	BH7 SS2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2023-07-26	2023-07-26	2023-07-26	2023-07-26	2023-07-27	2023-07-27	2023-07-27	2023-07-27
Parameter	**Unit**	**G / S**	**RDL**	**5177591**	**5177593**	**5177594**	**5177595**	**5177602**	**5177604**	**5177605**	**5177606**
F1 (C6 - C10)	µg/g	55	5	<5	<5	<5	<5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5	<5	<5	<5	<5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g	98	10	<10	<10	<10	<10	<10	<10	<10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10	<10	<10	<10	<10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	300	50	<50	<50	<50	<50	<50	<50	<50	<50
F3 (C16 to C34) minus PAHs	µg/g		50	<50	<50	<50	<50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	2800	50	<50	<50	<50	<50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	2800	50	NA	NA	NA	NA	NA	NA	NA	NA
Moisture Content	%		0.1	13.3	16.1	15.6	18.5	16.1	19.2	22.0	18.7
Surrogate	**Unit**	**Acceptable Limits**									
Toluene-d8	%	50-140		93	92	96	94	97	92	97	96
Terphenyl	%	60-140		98	75	72	65	76	74	81	74

		SAMPLE DESCRIPTION:		BH8 SS2	BH8 SS3	BH9 SS1	BH10 SS2	BH10 SS3
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2023-07-27	2023-07-27	2023-07-27	2023-07-27	2023-07-27
Parameter	**Unit**	**G / S**	**RDL**	**5177607**	**5177608**	**5177609**	**5177610**	**5177611**
F1 (C6 - C10)	µg/g	55	5	<5	<5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5	<5	<5	<5	<5	<5
F2 (C10 to C16)	µg/g	98	10	<10	<10	<10	<10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10	<10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	300	50	<50	<50	<50	<50	<50
F3 (C16 to C34) minus PAHs	µg/g		50	<50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	2800	50	<50	<50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	2800	50	NA	NA	NA	NA	NA
Moisture Content	%		0.1	18.6	17.5	21.3	14.5	19.0
Surrogate	**Unit**	**Acceptable Limits**						
Toluene-d8	%	50-140		92	92	92	90	92
Terphenyl	%	60-140		86	71	81	97	78

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AGAT WORK ORDER: 23T052426

PROJECT: 220717

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Road, Niagara Falls

SAMPLED BY:NS

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)

DATE RECEIVED: 2023-07-28 **DATE REPORTED: 2023-08-03**

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ON T2 S RPI CT
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5177591-5177611 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popowich

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PROJECT: 220717

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Road, Niagara Falls

SAMPLED BY:NS

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2023-07-28

DATE REPORTED: 2023-08-03

		SAMPLE DESCRIPTION:		BH1 SS3	BH1 SS7	BH2 SS3	BH2 SS9	BH5 SS2	BH6 SS	BH6 SS4	BH7 SS2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2023-07-26	2023-07-26	2023-07-26	2023-07-26	2023-07-27	2023-07-27	2023-07-27	2023-07-27
Parameter	Unit	G / S	RDL	5177591	5177593	5177594	5177595	5177602	5177604	5177605	5177606
Dichlorodifluoromethane	µg/g	16	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acetone	ug/g	16	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.084	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.75	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	0.47	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	16	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	1.9	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	0.38	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzene	ug/g	0.21	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.061	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	1.5	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	1.7	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Toluene	ug/g	2.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g	2.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	0.28	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.058	0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g	2.4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	1.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
m & p-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Certified By: N Popnikolof

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Certificate of Analysis

AGAT WORK ORDER: 23T052426

PROJECT: 220717

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Road, Niagara Falls

SAMPLED BY:NS

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2023-07-28

DATE REPORTED: 2023-08-03

		SAMPLE DESCRIPTION:		BH1 SS3	BH1 SS7	BH2 SS3	BH2 SS9	BH5 SS2	BH6 SS	BH6 SS4	BH7 SS2
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2023-07-26	2023-07-26	2023-07-26	2023-07-26	2023-07-27	2023-07-27	2023-07-27	2023-07-27
Parameter	**Unit**	**G / S**	**RDL**	**5177591**	**5177593**	**5177594**	**5177595**	**5177602**	**5177604**	**5177605**	**5177606**
Bromoform	ug/g	0.27	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	ug/g	0.7	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	4.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.083	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	1.2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes (Total)	ug/g	3.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
n-Hexane	µg/g	2.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	13.3	16.1	15.6	18.5	16.1	19.2	22.0	18.7
Surrogate	**Unit**	**Acceptable Limits**									
Toluene-d8	% Recovery	50-140		93	92	96	94	97	92	97	96
4-Bromofluorobenzene	% Recovery	50-140		83	84	85	84	84	81	89	88

Certified By: N Popnikolof

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Certificate of Analysis

AGAT WORK ORDER: 23T052426

PROJECT: 220717

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Road, Niagara Falls

SAMPLED BY:NS

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2023-07-28

DATE REPORTED: 2023-08-03

		SAMPLE DESCRIPTION:		BH8 SS2	BH8 SS3	BH9 SS1	BH10 SS2	BH10 SS3
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2023-07-27	2023-07-27	2023-07-27	2023-07-27	2023-07-27
Parameter	Unit	G / S	RDL	5177607	5177608	5177609	5177610	5177611
Dichlorodifluoromethane	µg/g	16	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trichlorofluoromethane	ug/g	4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acetone	ug/g	16	0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.084	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl tert-butyl Ether	ug/g	0.75	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	0.47	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Methyl Ethyl Ketone	ug/g	16	0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cis- 1,2-Dichloroethylene	ug/g	1.9	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Chloroform	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03	<0.03
1,1,1-Trichloroethane	ug/g	0.38	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzene	ug/g	0.21	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
1,2-Dichloropropane	ug/g	0.05	0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Trichloroethylene	ug/g	0.061	0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Bromodichloromethane	ug/g	1.5	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methyl Isobutyl Ketone	ug/g	1.7	0.50	<0.50	<0.50	<0.50	<0.50	<0.50
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Toluene	ug/g	2.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dibromochloromethane	ug/g	2.3	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Tetrachloroethylene	ug/g	0.28	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.058	0.04	<0.04	<0.04	<0.04	<0.04	<0.04
Chlorobenzene	ug/g	2.4	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ethylbenzene	ug/g	1.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
m & p-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05

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Certificate of Analysis

AGAT WORK ORDER: 23T052426

PROJECT: 220717

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Road, Niagara Falls

SAMPLED BY:NS

O. Reg. 153(511) - VOCs (with PHC) (Soil)

DATE RECEIVED: 2023-07-28

DATE REPORTED: 2023-08-03

		SAMPLE DESCRIPTION:		BH8 SS2	BH8 SS3	BH9 SS1	BH10 SS2	BH10 SS3
		SAMPLE TYPE:		Soil	Soil	Soil	Soil	Soil
		DATE SAMPLED:		2023-07-27	2023-07-27	2023-07-27	2023-07-27	2023-07-27
Parameter	**Unit**	**G / S**	**RDL**	**5177607**	**5177608**	**5177609**	**5177610**	**5177611**
Bromoform	ug/g	0.27	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Styrene	ug/g	0.7	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
o-Xylene	ug/g		0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	4.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.083	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	1.2	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylenes (Total)	ug/g	3.1	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
n-Hexane	µg/g	2.8	0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Moisture Content	%		0.1	18.6	17.5	21.3	14.5	19.0
Surrogate	**Unit**	**Acceptable Limits**						
Toluene-d8	% Recovery	50-140		92	92	92	90	92
4-Bromofluorobenzene	% Recovery	50-140		87	90	90	89	83

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ON T2 S RPI CT
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5177591-5177611 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popnikolof

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Quality Assurance

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

AGAT WORK ORDER: 23T052426

PROJECT: 220717

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Road, Niagara Falls

SAMPLED BY:NS

Soil Analysis

RPT Date: Aug 03, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Soil)															
Antimony	5177591	5177591	<0.8	<0.8	NA	< 0.8	124%	70%	130%	112%	80%	120%	106%	70%	130%
Arsenic	5177591	5177591	5	5	2.5%	< 1	131%	70%	130%	103%	80%	120%	100%	70%	130%
Barium	5177591	5177591	157	158	0.6%	< 2.0	114%	70%	130%	109%	80%	120%	108%	70%	130%
Beryllium	5177591	5177591	1.2	1.2	NA	< 0.5	112%	70%	130%	103%	80%	120%	100%	70%	130%
Boron	5177591	5177591	20	21	NA	< 5	93%	70%	130%	106%	80%	120%	100%	70%	130%
Boron (Hot Water Soluble)	5177591	5177591	0.29	0.29	NA	< 0.10	106%	60%	140%	100%	70%	130%	103%	60%	140%
Cadmium	5177591	5177591	<0.5	<0.5	NA	< 0.5	89%	70%	130%	108%	80%	120%	100%	70%	130%
Chromium	5177591	5177591	35	36	0.6%	< 5	111%	70%	130%	108%	80%	120%	105%	70%	130%
Cobalt	5177591	5177591	17.0	16.4	3.8%	< 0.8	112%	70%	130%	111%	80%	120%	102%	70%	130%
Copper	5177591	5177591	28.0	27.9	0.3%	< 1.0	106%	70%	130%	114%	80%	120%	108%	70%	130%
Lead	5177591	5177591	12	12	3.8%	< 1	107%	70%	130%	113%	80%	120%	100%	70%	130%
Molybdenum	5177591	5177591	0.8	0.7	NA	< 0.5	122%	70%	130%	113%	80%	120%	107%	70%	130%
Nickel	5177591	5177591	36	35	2.5%	< 1	109%	70%	130%	109%	80%	120%	96%	70%	130%
Selenium	5177591	5177591	<0.8	<0.8	NA	< 0.8	102%	70%	130%	111%	80%	120%	103%	70%	130%
Silver	5177591	5177591	<0.5	<0.5	NA	< 0.5	115%	70%	130%	116%	80%	120%	105%	70%	130%
Thallium	5177591	5177591	<0.5	<0.5	NA	< 0.5	123%	70%	130%	113%	80%	120%	105%	70%	130%
Uranium	5177591	5177591	1.29	1.26	NA	< 0.50	122%	70%	130%	110%	80%	120%	108%	70%	130%
Vanadium	5177591	5177591	49.4	49.4	0.0%	< 2.0	116%	70%	130%	109%	80%	120%	107%	70%	130%
Zinc	5177591	5177591	77	77	0.0%	< 5	112%	70%	130%	116%	80%	120%	111%	70%	130%
Chromium, Hexavalent	5177593	5177593	<0.2	<0.2	NA	< 0.2	102%	70%	130%	92%	80%	120%	83%	70%	130%
Cyanide, WAD	5177595	5177595	<0.040	<0.040	NA	< 0.040	87%	70%	130%	105%	80%	120%	105%	70%	130%
Mercury	5177591	5177591	<0.10	<0.10	NA	< 0.10	101%	70%	130%	97%	80%	120%	93%	70%	130%
Electrical Conductivity (2:1)	5177632	5177632	0.264	0.227	15.2%	< 0.005	106%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	5177632	5177632	0.382	0.341	11.5%	NA									
pH, 2:1 CaCl2 Extraction	5177689		6.52	6.75	3.5%	NA	101%	80%	120%						

Comments: NA signifies Not Applicable.
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.
Duplicate NA: results are under 5X the RDL and will not be calculated.

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

O. Reg. 153(511) - Metals & Inorganics (Soil)															
pH, 2:1 CaCl2 Extraction	5177609	5177609	6.54	6.76	3.3%	NA	101%	80%	120%						

Comments: NA signifies Not Applicable.
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.

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Quality Assurance

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

AGAT WORK ORDER: 23T052426

PROJECT: 220717

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Road, Niagara Falls

SAMPLED BY:NS

Trace Organics Analysis

RPT Date: Aug 03, 2023

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)															
F1 (C6 - C10)	5177611	5177611	<5	<5	NA	< 5	94%	60%	140%	113%	60%	140%	-8%	60%	140%
F2 (C10 to C16)	5177591	5177591	< 10	< 10	NA	< 10	109%	60%	140%	66%	60%	140%	92%	60%	140%
F3 (C16 to C34)	5177591	5177591	< 50	< 50	NA	< 50	111%	60%	140%	63%	60%	140%	76%	60%	140%
F4 (C34 to C50)	5177591	5177591	< 50	< 50	NA	< 50	92%	60%	140%	77%	60%	140%	83%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Soil)															
Dichlorodifluoromethane	5177611	5177611	<0.05	<0.05	NA	< 0.05	75%	50%	140%	71%	50%	140%	77%	50%	140%
Vinyl Chloride	5177611	5177611	<0.02	<0.02	NA	< 0.02	104%	50%	140%	117%	50%	140%	110%	50%	140%
Bromomethane	5177611	5177611	<0.05	<0.05	NA	< 0.05	118%	50%	140%	97%	50%	140%	97%	50%	140%
Trichlorofluoromethane	5177611	5177611	<0.05	<0.05	NA	< 0.05	92%	50%	140%	75%	50%	140%	113%	50%	140%
Acetone	5177611	5177611	<0.50	<0.50	NA	< 0.50	98%	50%	140%	85%	50%	140%	102%	50%	140%
1,1-Dichloroethylene	5177611	5177611	<0.05	<0.05	NA	< 0.05	94%	50%	140%	79%	60%	130%	107%	50%	140%
Methylene Chloride	5177611	5177611	<0.05	<0.05	NA	< 0.05	87%	50%	140%	109%	60%	130%	112%	50%	140%
Trans- 1,2-Dichloroethylene	5177611	5177611	<0.05	<0.05	NA	< 0.05	86%	50%	140%	86%	60%	130%	83%	50%	140%
Methyl tert-butyl Ether	5177611	5177611	<0.05	<0.05	NA	< 0.05	93%	50%	140%	105%	60%	130%	94%	50%	140%
1,1-Dichloroethane	5177611	5177611	<0.02	<0.02	NA	< 0.02	90%	50%	140%	92%	60%	130%	83%	50%	140%
Methyl Ethyl Ketone	5177611	5177611	<0.50	<0.50	NA	< 0.50	105%	50%	140%	76%	50%	140%	103%	50%	140%
Cis- 1,2-Dichloroethylene	5177611	5177611	<0.02	<0.02	NA	< 0.02	86%	50%	140%	85%	60%	130%	104%	50%	140%
Chloroform	5177611	5177611	<0.04	<0.04	NA	< 0.04	101%	50%	140%	106%	60%	130%	97%	50%	140%
1,2-Dichloroethane	5177611	5177611	<0.03	<0.03	NA	< 0.03	89%	50%	140%	98%	60%	130%	106%	50%	140%
1,1,1-Trichloroethane	5177611	5177611	<0.05	<0.05	NA	< 0.05	113%	50%	140%	108%	60%	130%	109%	50%	140%
Carbon Tetrachloride	5177611	5177611	<0.05	<0.05	NA	< 0.05	107%	50%	140%	110%	60%	130%	110%	50%	140%
Benzene	5177611	5177611	<0.02	<0.02	NA	< 0.02	83%	50%	140%	83%	60%	130%	78%	50%	140%
1,2-Dichloropropane	5177611	5177611	<0.03	<0.03	NA	< 0.03	75%	50%	140%	82%	60%	130%	99%	50%	140%
Trichloroethylene	5177611	5177611	<0.03	<0.03	NA	< 0.03	100%	50%	140%	95%	60%	130%	103%	50%	140%
Bromodichloromethane	5177611	5177611	<0.05	<0.05	NA	< 0.05	109%	50%	140%	118%	60%	130%	115%	50%	140%
Methyl Isobutyl Ketone	5177611	5177611	<0.50	<0.50	NA	< 0.50	95%	50%	140%	90%	50%	140%	104%	50%	140%
1,1,2-Trichloroethane	5177611	5177611	<0.04	<0.04	NA	< 0.04	91%	50%	140%	80%	60%	130%	98%	50%	140%
Toluene	5177611	5177611	<0.05	<0.05	NA	< 0.05	90%	50%	140%	71%	60%	130%	114%	50%	140%
Dibromochloromethane	5177611	5177611	<0.05	<0.05	NA	< 0.05	90%	50%	140%	90%	60%	130%	93%	50%	140%
Ethylene Dibromide	5177611	5177611	<0.04	<0.04	NA	< 0.04	86%	50%	140%	75%	60%	130%	107%	50%	140%
Tetrachloroethylene	5177611	5177611	<0.05	<0.05	NA	< 0.05	106%	50%	140%	79%	60%	130%	113%	50%	140%
1,1,1,2-Tetrachloroethane	5177611	5177611	<0.04	<0.04	NA	< 0.04	106%	50%	140%	100%	60%	130%	97%	50%	140%
Chlorobenzene	5177611	5177611	<0.05	<0.05	NA	< 0.05	91%	50%	140%	74%	60%	130%	87%	50%	140%
Ethylbenzene	5177611	5177611	<0.05	<0.05	NA	< 0.05	81%	50%	140%	76%	60%	130%	74%	50%	140%
m & p-Xylene	5177611	5177611	<0.05	<0.05	NA	< 0.05	87%	50%	140%	91%	60%	130%	101%	50%	140%
Bromoform	5177611	5177611	<0.05	<0.05	NA	< 0.05	117%	50%	140%	116%	60%	130%	94%	50%	140%
Styrene	5177611	5177611	<0.05	<0.05	NA	< 0.05	77%	50%	140%	73%	60%	130%	98%	50%	140%
1,1,2,2-Tetrachloroethane	5177611	5177611	<0.05	<0.05	NA	< 0.05	81%	50%	140%	79%	60%	130%	80%	50%	140%
o-Xylene	5177611	5177611	<0.05	<0.05	NA	< 0.05	90%	50%	140%	76%	60%	130%	112%	50%	140%

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Quality Assurance

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

AGAT WORK ORDER: 23T052426

PROJECT: 220717

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Road, Niagara Falls

SAMPLED BY:NS

Trace Organics Analysis (Continued)

RPT Date: Aug 03, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,3-Dichlorobenzene	5177611	5177611	<0.05	<0.05	NA	< 0.05	89%	50%	140%	107%	60%	130%	122%	50%	140%
1,4-Dichlorobenzene	5177611	5177611	<0.05	<0.05	NA	< 0.05	98%	50%	140%	76%	60%	130%	81%	50%	140%
1,2-Dichlorobenzene	5177611	5177611	<0.05	<0.05	NA	< 0.05	98%	50%	140%	96%	60%	130%	78%	50%	140%
n-Hexane	5177611	5177611	<0.05	<0.05	NA	< 0.05	73%	50%	140%	76%	60%	130%	94%	50%	140%
O. Reg. 153(511) - BNA (full) + PAHs (Soil)															
Naphthalene	5159664		< 0.05	< 0.05	NA	< 0.05	78%	50%	140%	105%	50%	140%	105%	50%	140%
Acenaphthylene	5159664		< 0.05	< 0.05	NA	< 0.05	80%	50%	140%	90%	50%	140%	98%	50%	140%
Acenaphthene	5159664		< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	96%	50%	140%	89%	50%	140%
Fluorene	5159664		< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	95%	50%	140%	96%	50%	140%
Phenanthrene	5159664		< 0.05	< 0.05	NA	< 0.05	89%	50%	140%	98%	50%	140%	93%	50%	140%
Anthracene	5159664		< 0.05	< 0.05	NA	< 0.05	96%	50%	140%	78%	50%	140%	92%	50%	140%
Fluoranthene	5159664		< 0.05	< 0.05	NA	< 0.05	90%	50%	140%	80%	50%	140%	105%	50%	140%
Pyrene	5159664		< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	74%	50%	140%	78%	50%	140%
Benz(a)anthracene	5159664		< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	105%	50%	140%	85%	50%	140%
Chrysene	5159664		< 0.05	< 0.05	NA	< 0.05	90%	50%	140%	96%	50%	140%	90%	50%	140%
Benzo(b)fluoranthene	5159664		< 0.05	< 0.05	NA	< 0.05	105%	50%	140%	90%	50%	140%	86%	50%	140%
Benzo(k)fluoranthene	5159664		< 0.05	< 0.05	NA	< 0.05	98%	50%	140%	98%	50%	140%	90%	50%	140%
Benzo(a)pyrene	5159664		< 0.05	< 0.05	NA	< 0.05	89%	50%	140%	78%	50%	140%	98%	50%	140%
Indeno(1,2,3-cd)pyrene	5159664		< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	75%	50%	140%	78%	50%	140%
Dibenzo(a,h)anthracene	5159664		< 0.05	< 0.05	NA	< 0.05	99%	50%	140%	106%	50%	140%	85%	50%	140%
Benzo(g,h,i)perylene	5159664		< 0.05	< 0.05	NA	< 0.05	93%	50%	140%	98%	50%	140%	105%	50%	140%
Phenol	5159664		< 0.5	< 0.5	NA	< 0.5	90%	30%	130%	98%	30%	130%	98%	30%	130%
Bis(2-chloroethyl)ether	5159664		< 0.1	< 0.1	NA	< 0.1	98%	50%	140%	105%	50%	140%	78%	50%	140%
2-Chlorophenol	5159664		< 0.1	< 0.1	NA	< 0.1	85%	50%	140%	87%	50%	140%	85%	50%	140%
o-Cresol	5159664		< 0.1	< 0.1	NA	< 0.1	74%	50%	140%	78%	50%	140%	99%	50%	140%
Bis(2-chloroisopropyl)ether	5159664		< 0.1	< 0.1	NA	< 0.1	80%	50%	140%	85%	50%	140%	82%	50%	140%
m & p - Cresol	5159664		< 0.1	< 0.1	NA	< 0.1	105%	50%	140%	99%	50%	140%	105%	50%	140%
2,4-Dimethylphenol	5159664		< 0.2	< 0.2	NA	< 0.2	98%	30%	130%	86%	30%	130%	98%	30%	130%
2,4-Dichlorophenol	5159664		< 0.1	< 0.1	NA	< 0.1	109%	50%	140%	95%	50%	140%	94%	50%	140%
1,2,4-Trichlorobenzene	5159664		< 0.05	< 0.05	NA	< 0.05	108%	50%	140%	93%	50%	140%	84%	50%	140%
p-Chloroaniline	5159664		< 0.5	< 0.5	NA	< 0.5	110%	30%	130%	71%	30%	130%	86%	30%	130%
2,4,6-Trichlorophenol	5159664		< 0.1	< 0.1	NA	< 0.1	99%	50%	140%	90%	50%	140%	82%	50%	140%
2,4,5-Trichlorophenol	5159664		< 0.1	< 0.1	NA	< 0.1	105%	50%	140%	101%	50%	140%	81%	50%	140%
1,1-Biphenyl	5159664		< 0.05	< 0.05	NA	< 0.05	110%	50%	140%	99%	50%	140%	94%	50%	140%
Dimethyl Phthalate	5159664		< 0.1	< 0.1	NA	< 0.1	103%	50%	140%	104%	50%	140%	94%	50%	140%
Diethyl Phthalate	5159664		< 0.1	< 0.1	NA	< 0.1	109%	50%	140%	73%	50%	140%	84%	50%	140%
Pentachlorophenol	5159664		< 0.1	< 0.1	NA	< 0.1	106%	50%	140%	91%	50%	140%	95%	50%	140%
3,3'-Dichlorobenzidine	5159664		< 0.5	< 0.5	NA	< 0.5	87%	30%	130%	66%	30%	130%	64%	30%	130%
2,4-Dinitrophenol	5159664		< 2.0	< 2.0	NA	< 2.0	76%	30%	130%	95%	30%	130%	112%	30%	130%

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Quality Assurance

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

AGAT WORK ORDER: 23T052426

PROJECT: 220717

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Road, Niagara Falls

SAMPLED BY:NS

Trace Organics Analysis (Continued)

RPT Date: Aug 03, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Bis(2-Ethylhexyl)phthalate	5159664		< 0.2	< 0.2	NA	< 0.2	101%	50%	140%	67%	50%	140%	80%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (Soil)															
Benzene	5177632	5177632	<0.02	<0.02	NA	< 0.02	77%	60%	140%	87%	60%	140%	75%	60%	140%
Toluene	5177632	5177632	<0.05	<0.05	NA	< 0.05	88%	60%	140%	101%	60%	140%	91%	60%	140%
Ethylbenzene	5177632	5177632	<0.05	<0.05	NA	< 0.05	106%	60%	140%	110%	60%	140%	101%	60%	140%
m & p-Xylene	5177632	5177632	<0.05	<0.05	NA	< 0.05	102%	60%	140%	94%	60%	140%	95%	60%	140%
o-Xylene	5177632	5177632	<0.05	<0.05	NA	< 0.05	102%	60%	140%	103%	60%	140%	114%	60%	140%
F1 (C6 - C10)	5177632	5177632	<5	<5	NA	< 5	109%	60%	140%	109%	60%	140%	104%	60%	140%
O. Reg. 153(511) - PAHs (Soil)															
Naphthalene	5174523		<0.05	<0.05	NA	< 0.05	98%	50%	140%	78%	50%	140%	100%	50%	140%
Acenaphthylene	5174523		<0.05	<0.05	NA	< 0.05	110%	50%	140%	83%	50%	140%	73%	50%	140%
Acenaphthene	5174523		<0.05	<0.05	NA	< 0.05	111%	50%	140%	75%	50%	140%	80%	50%	140%
Fluorene	5174523		<0.05	<0.05	NA	< 0.05	99%	50%	140%	103%	50%	140%	85%	50%	140%
Phenanthrene	5174523		<0.05	<0.05	NA	< 0.05	100%	50%	140%	73%	50%	140%	73%	50%	140%
Anthracene	5174523		<0.05	<0.05	NA	< 0.05	98%	50%	140%	73%	50%	140%	78%	50%	140%
Fluoranthene	5174523		<0.05	<0.05	NA	< 0.05	96%	50%	140%	83%	50%	140%	80%	50%	140%
Pyrene	5174523		<0.05	<0.05	NA	< 0.05	98%	50%	140%	75%	50%	140%	93%	50%	140%
Benz(a)anthracene	5174523		<0.05	<0.05	NA	< 0.05	75%	50%	140%	75%	50%	140%	83%	50%	140%
Chrysene	5174523		<0.05	<0.05	NA	< 0.05	113%	50%	140%	75%	50%	140%	75%	50%	140%
Benzo(b)fluoranthene	5174523		<0.05	<0.05	NA	< 0.05	99%	50%	140%	78%	50%	140%	73%	50%	140%
Benzo(k)fluoranthene	5174523		<0.05	<0.05	NA	< 0.05	96%	50%	140%	73%	50%	140%	85%	50%	140%
Benzo(a)pyrene	5174523		<0.05	<0.05	NA	< 0.05	92%	50%	140%	90%	50%	140%	88%	50%	140%
Indeno(1,2,3-cd)pyrene	5174523		<0.05	<0.05	NA	< 0.05	82%	50%	140%	93%	50%	140%	80%	50%	140%
Dibenz(a,h)anthracene	5174523		<0.05	<0.05	NA	< 0.05	74%	50%	140%	90%	50%	140%	83%	50%	140%
Benzo(g,h,i)perylene	5174523		<0.05	<0.05	NA	< 0.05	95%	50%	140%	105%	50%	140%	78%	50%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By: N Popnikolof

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QA Violation

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

AGAT WORK ORDER: 23T052426

PROJECT: 220717

ATTENTION TO: Peter Markesic

RPT Date: Aug 03, 2023

PARAMETER	Sample Id	Sample Description	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
				Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Soil)											
Arsenic	5177591	BH1 SS3	131%	70%	130%	103%	80%	120%	100%	70%	130%

Comments: NA signifies Not Applicable.
pH duplicates QA acceptance criteria was met relative as stated in Table 5-15 of Analytical Protocol document.
Duplicate NA: results are under 5X the RDL and will not be calculated.

More than 90% of the elements met acceptance limits and overall data quality is acceptable for use. For a multi-element scan up to 10% of analytes may exceed the quoted limits by up to 10% absolute.

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QA Violation

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AGAT WORK ORDER: 23T052426

PROJECT: 220717

ATTENTION TO: Peter Markesic

RPT Date: Aug 03, 2023

PARAMETER	Sample Id	Sample Description	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
				Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)											
F1 (C6 - C10)	5177611	BH1 SS3	94%	60%	140%	113%	60%	140%	-8%	60%	140%

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Method Summary

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

AGAT WORK ORDER: 23T052426

PROJECT: 220717

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Road, Niagara Falls

SAMPLED BY:NS

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET 93 -6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, WAD	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	SEGMENTED FLOW ANALYSIS
Mercury	MET-93-6103	modified from EPA 7471B and SM 3112 B	ICP-MS
Electrical Conductivity (2:1)	INOR-93-6075	modified from MSA PART 3, CH 14 and SM 2510 B	PC TITRATE
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES
pH, 2:1 CaCl2 Extraction	INOR-93-6075	modified from EPA 9045D, MCKEAGUE 3.11 E3137	PC TITRATE

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Method Summary

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

AGAT WORK ORDER: 23T052426

PROJECT: 220717

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Road, Niagara Falls

SAMPLED BY:NS

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Acenaphthylene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Acenaphthene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Fluorene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Phenanthrene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Anthracene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Fluoranthene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Pyrene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Benz(a)anthracene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Chrysene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Benzo(b)fluoranthene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Benzo(k)fluoranthene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Benzo(a)pyrene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Dibenzo(a,h)anthracene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Benzo(g,h,i)perylene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Phenol	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Bis(2-chloroethyl)ether	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
2-Chlorophenol	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
o-Cresol	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Bis(2-chloroisopropyl)ether	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
m & p - Cresol	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
2,4-Dimethylphenol	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
2,4-Dichlorophenol	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
1,2,4-Trichlorobenzene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
p-Chloroaniline	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
1 and 2 Methlynaphthalene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	CALCULATION

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Method Summary

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SAMPLING SITE:Dorchester Road, Niagara Falls

SAMPLED BY:NS

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
2,4,6-Trichlorophenol	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
2,4,5-Trichlorophenol	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
1,1-Biphenyl	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Dimethyl Phthalate	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
2,4 and 2,6-Dinitrotoluene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	CALCULATION
Diethyl Phthalate	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Pentachlorophenol	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
3,3'-Dichlorobenzidine	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
2,4-Dinitrophenol	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Bis(2-Ethylhexyl)phthalate	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
phenol-d6 surrogate	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
2-Fluorophenol	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
2,4,6-Tribromophenol	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Chrysene-d12	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
wet weight BNA	ORG-91-5114		BALANCE
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS

AGAT Laboratories

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MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Method Summary

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

AGAT WORK ORDER: 23T052426

PROJECT: 220717

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Road, Niagara Falls

SAMPLED BY:NS

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
1 and 2 Methlynaphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acridine-d9	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Terphenyl-d14	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Toluene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Ethylbenzene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
m & p-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
o-Xylene	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
Xylenes (Total)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/MS
F1 (C6 - C10)	VOL-91-5009	modified from CCME Tier 1 Method	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
Toluene-d8	VOL-91-5009	modified from EPA SW-846 5030C & 8260D	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16) minus Naphthalene	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

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http://www.agatlabs.com

Method Summary

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

AGAT WORK ORDER: 23T052426

PROJECT: 220717

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Road, Niagara Falls

SAMPLED BY:NS

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

AGAT WORK ORDER: 23T052426

PROJECT: 220717

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Road, Niagara Falls

SAMPLED BY:NS

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035A and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5035A & EPA 8260D	(P&T)GC/MS

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Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Report Information:

Company: Soil-Mat
Contact:
Address:
Phone: Fax:
Reports to be sent to:
1. Email: Peter.Markesic
2. Email: Nathan.Sears

Project Information:

Project: 220717
Site Location: Dorchester Road, Niagara Falls
Sampled By: NS
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☑ No ☐
Company:
Contact:
Address:
Email:

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04 — Table 1 (Indicate One) — ☐ Ind/Com ☐ Res/Park ☐ Agriculture
Soil Texture *(Check One)* ☐ Coarse ☐ Fine

☐ Regulation 406 — Table (Indicate One)
☐ Regulation 558
☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm — Region
☐ Prov. Water Quality Objectives (PWQO)
☐ Other (Indicate One)

Is this submission for a **Record of Site Condition?** ☐ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☐ Yes ☐ No

Laboratory Use Only

Work Order #: 23T052426
Cooler Quantity: 2 lg
Arrival Temperatures: 8.8 | 8.1 | 8.5 | 8.7 | 7.9 | 7.1
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: FREE ICE

Turnaround Time (TAT) Required:

Regular TAT ☑ 5 to 7 Business Days
Rush TAT (Rush Surcharges Apply)
☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day
OR Date Required (Rush Surcharges May Apply):
Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*
For 'Same Day' analysis, please contact your AGAT CPM

Sample Matrix Legend

GW	Ground Water
O	Oil
P	Paint
S	Soil
SD	Sediment
SW	Surface Water

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC Y/N	O. Reg 153: Metals & Inorganics	Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	BTEX, F1-F4 PHCs	VOC	PAHs	PCBs	PCBs: Aroclors ☐	O. Reg 558: Landfill Disposal Characterization TCLP: TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Regulation 406 SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	Regulation 406 Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: ☐ Moisture ☐ Sulphide	ABNs	Potentially Hazardous or High Concentration (Y/N)
1. BH 1553	July 26	AM PM	4	S			✓		✓	✓								✓	
2. BH 1557		AM PM							✓	✓									
3. BH 2553		AM PM							✓	✓									
4. BH 2559		AM PM							✓										
5. BH 3553		AM PM	2						✓										
6. BH 3558		AM PM							✓										
7. BH 4552		AM PM							✓	✓									
8. BH 4558		AM PM																	
9. BH 5552	July 27	AM PM	4				✓		✓	✓	✓								
10. BH 6552		AM PM							✓	✓									
11. BH 6554		AM PM																	

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
			Rhiana C RC	July 28	7:50

Page 1 of 3

N°: T - 145978

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webearth.agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Report Information:

Company: Soil-Mat
Contact:
Address:
Phone: Fax:
Reports to be sent to:
1. Email: Peter Markesic
2. Email: Nathan Sears

Project Information:

Project: 220717
Site Location: Dorchester Road, NF
Sampled By: NS
AGAT Quote #: 761549 PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☑ No ☐
Company:
Contact:
Address:
Email:

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04 — Table 1 (Indicate One) ☐ Ind/Com ☐ Res/Park ☐ Agriculture
Soil Texture (Check One) ☐ Coarse ☐ Fine

☐ Regulation 406 — Table (Indicate One)
☐ Regulation 558
☐ CCME

☐ Sewer Use ☐ Sanitary ☐ Storm — Region
☐ Prov. Water Quality Objectives (PWQO)
☐ Other — Indicate One

Is this submission for a **Record of Site Condition?** ☐ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☐ Yes ☐ No

Laboratory Use Only

Work Order #: 23T052426
Cooler Quantity: see pg 1
Arrival Temperatures:
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: FREE ICE

Turnaround Time (TAT) Required:

Regular TAT ☑ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*

For 'Same Day' analysis, please contact your AGAT CPM

Sample Matrix Legend

GW	Ground Water
O	Oil
P	Paint
S	Soil
SD	Sediment
SW	Surface Water

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: VOC	O. Reg 153: PAHs	O. Reg 153: PCBs	PCBs: Arochlors ☐	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Regulation 406 SPLP Rainwater Leach ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Regulation 406 Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: ☐ Moisture ☐ Sulphide	Potentially Hazardous or High Concentration (Y/N)
1. BH7SS2	July 27	AM PM	4	S														
2. BH8SS2		AM PM																
3. BH8SS3		AM PM																
4. BH9SS1		AM PM																
5. BH10SS2		AM PM																
6. BH10SS3		AM PM																
7. TP1		AM PM	3															
8. TP2		AM PM																
9. TP3		AM PM																
10. TP4		AM PM																
11. TP5		AM PM																

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
			Rhiana C RL	July 28	1450

Page 2 of 3

N°: T - 145980

Date Issued: Mar 30, 2023

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Ph: 905.712.5100 Fax: 905.712.5122
webearth.agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Laboratory Use Only

Work Order #: 23T052426

Cooler Quantity:

Arrival Temperatures: See Pg 1

Custody Seal Intact: ☐ Yes ☐ No ☐ N/A

Notes: FREE ICE

Report Information:

Company: Soil-Mat

Contact:

Address:

Phone: Fax:

Reports to be sent to:

1. Email: Peter Markesic

2. Email: Nathan Sears

Regulatory Requirements:

(Please check all applicable boxes)

☑ Regulation 153/04
Table 1 (Indicate One)
☐ Ind/Com
☐ Res/Park
☐ Agriculture
Soil Texture (Check One)
☐ Coarse
☐ Fine

☐ Regulation 406
Table ____ (Indicate One)

☐ Regulation 558

☐ CCME

☐ Sewer Use
☐ Sanitary ☐ Storm
____ (Region)

☐ Prov. Water Quality Objectives (PWQO)

☐ Other
____ (Indicate One)

Is this submission for a **Record of Site Condition?** ☐ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☐ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT ☑ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

Please provide prior notification for rush TAT

*TAT is exclusive of weekends and statutory holidays

For 'Same Day' analysis, please contact your AGAT CPM

Project Information:

Project: 220717

Site Location: Dorchester Road NF

Sampled By: NS

AGAT Quote #: 761549 PO:

Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☑ No ☐

Company:

Contact:

Address:

Email:

Sample Matrix Legend

GW	Ground Water
O	Oil
P	Paint
S	Soil
SD	Sediment
SW	Surface Water

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	VOC	PAHs	PCBs	PCBs: Aroclors ☐	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Regulation 406 SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	Regulation 406 Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Corrosivity: ☐ Moisture ☐ Sulphide	ABN						Potentially Hazardous or High Concentration (Y/N)
1. BH3559	Jul 26	AM/PM	2	S					✓									✓						
2. DUP1	Jul 26	AM/PM	1						✓															
3. DUP2	Jul 26	AM/PM	2				✓		✓															
4. DUP3	Jul 27	AM/PM	3				✓		✓															
5. DUP4	Jul 27	AM/PM	3																					
6.		AM/PM																						
7.		AM/PM																						
8.		AM/PM																						
9.		AM/PM																						
10.		AM/PM																						
11.		AM/PM																						

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign): Rhiana C		Date July 28	Time 450	
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):		Date	Time	Page 3 of 3
Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):		Date	Time	N°: T - 145981

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Appendix ‘D’

1. AGAT Certificate of Analysis – Water

AGAT Laboratories

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MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT
401 GRAYS ROAD
HAMILTON, ON L8E 2Z3
(905) 318-7440

ATTENTION TO: Peter Markesic

PROJECT: 220717

AGAT WORK ORDER: 23H056536

TRACE ORGANICS REVIEWED BY: Pinkal Patel, Report Reviewer

WATER ANALYSIS REVIEWED BY: Yris Verastegui, Report Reviewer

DATE REPORTED: Aug 16, 2023

PAGES (INCLUDING COVER): 20

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

Notes

Disclaimer:

- *All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.*
- *All samples will be disposed of within 30 days following analysis, unless expressly agreed otherwise in writing. Please contact your Client Project Manager if you require additional sample storage time.*
- *AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.*
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- *Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the information contained in this document.*
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MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 23H056536

PROJECT: 220717

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Rd.

SAMPLED BY:Shaa. D.

O. Reg. 153(511) - BNA (full) + PAHs (Water)

DATE RECEIVED: 2023-08-10

DATE REPORTED: 2023-08-16

		SAMPLE DESCRIPTION:		MW3	MW4	DUP
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2023-08-10	2023-08-10	2023-08-10
Parameter	Unit	G / S	RDL	5205447	5205463	5205464
Naphthalene	µg/L	11	0.20	<0.20	<0.20	<0.20
Acenaphthylene	µg/L	1	0.20	<0.20	<0.20	<0.20
Acenaphthene	µg/L	4.1	0.20	<0.20	<0.20	<0.20
Fluorene	µg/L	120	0.20	<0.20	<0.20	<0.20
Phenanthrene	µg/L	1	0.10	<0.10	<0.10	<0.10
Anthracene	µg/L	2.4	0.10	<0.10	<0.10	<0.10
Fluoranthene	µg/L	0.41	0.20	<0.20	<0.20	<0.20
Pyrene	µg/L	4.1	0.20	<0.20	<0.20	<0.20
Benzo(a)anthracene	µg/L	1	0.20	<0.20	<0.20	<0.20
Chrysene	µg/L	0.1	0.10	<0.10	<0.10	<0.10
Benzo(b)fluoranthene	µg/L	0.1	0.10	<0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.1	0.10	<0.10	<0.10	<0.10
Benzo(a)pyrene	µg/L	0.01	0.01	<0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.20	<0.20	<0.20	<0.20
Dibenz(a,h)anthracene	µg/L	0.2	0.20	<0.20	<0.20	<0.20
Benzo(g,h,i)perylene	µg/L	0.2	0.20	<0.20	<0.20	<0.20
Phenol	µg/L	890	1.0	<1.0	<1.0	<1.0
Bis(2-chloroethyl)ether	µg/L	5	0.5	<0.5	<0.5	<0.5
2-Chlorophenol	µg/L	8.9	0.5	<0.5	<0.5	<0.5
o-Cresol	µg/L		0.5	<0.5	<0.5	<0.5
Bis(2-chloroisopropyl)ether	µg/L	120	0.5	<0.5	<0.5	<0.5
m&p-Cresol	µg/L		0.6	<0.6	<0.6	<0.6
2,4-Dimethylphenol	µg/L	59	0.5	<0.5	<0.5	<0.5
2,4-Dichlorophenol	µg/L	20	0.3	<0.3	<0.3	<0.3
1,2,4-Trichlorobenzene	µg/L		0.5	<0.5	<0.5	<0.5
p-Chloroaniline	µg/L	10	1.0	<1.0	<1.0	<1.0
2-and 1-methyl Naphthalene	µg/L	3.2	0.20	<0.20	<0.20	<0.20
2,4,6-Trichlorophenol	µg/L	2	0.20	<0.20	<0.20	<0.20
2,4,5-Trichlorophenol	µg/L	8.9	0.20	<0.20	<0.20	<0.20
1,1'-Biphenyl	µg/L	0.5	0.50	<0.50	<0.50	<0.50

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AGAT WORK ORDER: 23H056536

PROJECT: 220717

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Rd.

SAMPLED BY:Shaa. D.

O. Reg. 153(511) - BNA (full) + PAHs (Water)

DATE RECEIVED: 2023-08-10

DATE REPORTED: 2023-08-16

		SAMPLE DESCRIPTION:		MW3	MW4	DUP
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2023-08-10	2023-08-10	2023-08-10
Parameter	**Unit**	**G / S**	**RDL**	**5205447**	**5205463**	**5205464**
Dimethyl phthalate	µg/L	38	0.50	<0.50	<0.50	<0.50
2,4 and 2,6-Dinitrotoluene	µg/L	5	0.50	<0.50	<0.50	<0.50
Diethyl phthalate	µg/L	38	0.50	<0.50	<0.50	<0.50
Pentachlorophenol	µg/L	30	0.50	<0.50	<0.50	<0.50
3,3'-dichlorobenzidine	µg/L	0.5	0.50	<0.50	<0.50	<0.50
Bis(2-Ethylhexyl)phthalate	µg/L	10	0.50	<0.50	<0.50	<0.50
2,4-Dinitrophenol	µg/L	10	10	<10	<10	<10
Sediment				3	3	3
Surrogate	**Unit**	**Acceptable Limits**				
2-Fluorophenol	%	50-140		69	79	89
phenol-d6 surrogate	%	50-140		78	89	98
2,4,6-Tribromophenol	%	50-140		87	96	70
Chrysene-d12	%	50-140		68	93	102

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ON T2 PGW CT
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5205447-5205464 To meet the MOE Reporting limits the sample extract was analysed using two separate GC/MS methods. The full scan BNA method is capable of detecting most of the compounds at the RDLs except for several PAHs. The PAHs were analysed using a SIM mode GC/MS method.
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&(j)Fluoranthene isomers because the isomers co-elute on the GC column.

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amount

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Jinkal Patel

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AGAT WORK ORDER: 23H056536

PROJECT: 220717

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Rd.

SAMPLED BY:Shaa. D.

O. Reg. 153(511) - PHCs F1 - F4 (Water)

DATE RECEIVED: 2023-08-10 **DATE REPORTED: 2023-08-16**

		SAMPLE DESCRIPTION:		MW1	MW2
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2023-08-10	2023-08-10
Parameter	Unit	G / S	RDL	5205439	5205445
Benzene	µg/L	5.0	0.20	<0.20	<0.20
Toluene	µg/L	24	0.20	<0.20	<0.20
Ethylbenzene	µg/L	2.4	0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20	<0.20
o-Xylene	µg/L		0.10	<0.10	<0.10
Xylenes (Total)	µg/L	300	0.20	<0.20	<0.20
F1 (C6 - C10)	µg/L	750	25	<25	<25
C6 - C10 (F1 minus BTEX)	µg/L	750	25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	NA
Sediment				2	1
Surrogate	**Unit**	**Acceptable Limits**			
Toluene-d8	% Recovery	60-140		105	95
Terphenyl	% Recovery	60-140		79	90

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AGAT WORK ORDER: 23H056536

PROJECT: 220717

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Rd.

SAMPLED BY:Shaa. D.

O. Reg. 153(511) - PHCs F1 - F4 (Water)

DATE RECEIVED: 2023-08-10 **DATE REPORTED: 2023-08-16**

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ON T2 PGW CT
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5205439-5205445 The C6-C10 fraction is calculated using Toluene response factor.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and nC34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16 - C50 and are only determined if the chromatogram of the C34 - C50 Hydrocarbons indicated that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6-C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified with the contribution of PAHs. Under Ontario Regulation 153/04, results are considered valid without determining the PAH contribution if not requested by the client.
NA = Not Applicable

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amounts

Analysis performed at AGAT Toronto (unless marked by *)

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AGAT WORK ORDER: 23H056536

PROJECT: 220717

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Rd.

SAMPLED BY:Shaa. D.

O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)

DATE RECEIVED: 2023-08-10 **DATE REPORTED: 2023-08-16**

		SAMPLE DESCRIPTION:		MW3	MW4	DUP
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2023-08-10	2023-08-10	2023-08-10
Parameter	Unit	G / S	RDL	5205447	5205463	5205464
F1 (C6-C10)	µg/L	750	25	<25	<25	<25
F1 (C6 to C10) minus BTEX	µg/L	750	25	<25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100	<100
F2 (C10 to C16) minus Naphthalene	µg/L		100	<100	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100	<100
F3 (C16 to C34) minus PAHs	µg/L		100	<100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA	NA	NA
Sediment				3	3	3
Surrogate	**Unit**	**Acceptable Limits**				
Toluene-d8	%	50-140		104	103	95
Terphenyl	% Recovery	60-140		73	85	101

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ON T2 PGW CT
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5205447-5205464 The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.
Legend: 1 = no sediment present; 2 = sediment present; 3 = sediment present in trace amounts

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Jinkal Patel

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AGAT WORK ORDER: 23H056536

PROJECT: 220717

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Rd.

SAMPLED BY:Shaa. D.

O. Reg. 153(511) - VOCs (with PHC) (Water)

DATE RECEIVED: 2023-08-10

DATE REPORTED: 2023-08-16

		SAMPLE DESCRIPTION:		MW3	MW4	DUP
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2023-08-10	2023-08-10	2023-08-10
Parameter	Unit	G / S	RDL	5205447	5205463	5205464
Dichlorodifluoromethane	µg/L	590	0.40	<0.40	<0.40	<0.40
Vinyl Chloride	µg/L	0.5	0.17	<0.17	<0.17	<0.17
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20	<0.20
Trichlorofluoromethane	µg/L	150	0.40	<0.40	<0.40	<0.40
Acetone	µg/L	2700	1.0	<1.0	<1.0	<1.0
1,1-Dichloroethylene	µg/L	1.6	0.30	<0.30	<0.30	<0.30
Methylene Chloride	µg/L	50	0.30	<0.30	<0.30	<0.30
trans- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	5	0.30	<0.30	<0.30	<0.30
Methyl Ethyl Ketone	µg/L	1800	1.0	<1.0	<1.0	<1.0
cis- 1,2-Dichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20
Chloroform	µg/L	2.4	0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	1.6	0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	200	0.30	<0.30	<0.30	<0.30
Carbon Tetrachloride	µg/L	0.79	0.20	<0.20	<0.20	<0.20
Benzene	µg/L	5.0	0.20	<0.20	<0.20	<0.20
1,2-Dichloropropane	µg/L	5	0.20	<0.20	<0.20	<0.20
Trichloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	16	0.20	<0.20	<0.20	<0.20
Methyl Isobutyl Ketone	µg/L	640	1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	µg/L	4.7	0.20	<0.20	<0.20	<0.20
Toluene	µg/L	24	0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	25	0.10	<0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	1.6	0.20	<0.20	<0.20	<0.20
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10	<0.10
Chlorobenzene	µg/L	30	0.10	<0.10	<0.10	<0.10
Ethylbenzene	µg/L	2.4	0.10	<0.10	<0.10	<0.10
m & p-Xylene	µg/L		0.20	<0.20	<0.20	<0.20

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AGAT WORK ORDER: 23H056536

PROJECT: 220717

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Rd.

SAMPLED BY:Shaa. D.

O. Reg. 153(511) - VOCs (with PHC) (Water)

DATE RECEIVED: 2023-08-10 **DATE REPORTED: 2023-08-16**

		SAMPLE DESCRIPTION:		MW3	MW4	DUP
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2023-08-10	2023-08-10	2023-08-10
Parameter	Unit	G / S	RDL	5205447	5205463	5205464
Bromoform	µg/L	25	0.10	<0.10	<0.10	<0.10
Styrene	µg/L	5.4	0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	1	0.10	<0.10	<0.10	<0.10
o-Xylene	µg/L		0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	59	0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	1	0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	3	0.10	<0.10	<0.10	<0.10
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	<0.30	<0.30
Xylenes (Total)	µg/L	300	0.20	<0.20	<0.20	<0.20
n-Hexane	µg/L	51	0.20	<0.20	<0.20	<0.20
Surrogate	**Unit**	**Acceptable Limits**				
Toluene-d8	% Recovery	50-140		104	103	95
4-Bromofluorobenzene	% Recovery	50-140		87	82	86

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ON T2 PGW CT
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5205447-5205464 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Jinkal Patel

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AGAT WORK ORDER: 23H056536

PROJECT: 220717

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Rd.

SAMPLED BY:Shaa. D.

O. Reg. 153(511) - Metals & Inorganics (Water)

DATE RECEIVED: 2023-08-10

DATE REPORTED: 2023-08-16

		SAMPLE DESCRIPTION:		MW3	MW4	DUP
		SAMPLE TYPE:		Water	Water	Water
		DATE SAMPLED:		2023-08-10	2023-08-10	2023-08-10
Parameter	Unit	G / S	RDL	5205447	5205463	5205464
Dissolved Antimony	µg/L	6	1.0	<1.0	<1.0	<1.0
Dissolved Arsenic	µg/L	25	1.0	1.9	2.3	2.1
Dissolved Barium	µg/L	1000	2.0	30.3	43.4	44.2
Dissolved Beryllium	µg/L	4	0.50	<0.50	<0.50	<0.50
Dissolved Boron	µg/L	5000	10.0	131	105	109
Dissolved Cadmium	µg/L	2.7	0.20	<0.20	<0.20	<0.20
Dissolved Chromium	µg/L	50	2.0	<2.0	<2.0	<2.0
Dissolved Cobalt	µg/L	3.8	0.50	0.75	<0.50	1.39
Dissolved Copper	µg/L	87	1.0	15.3	4.6	2.7
Dissolved Lead	µg/L	10	0.50	<0.50	<0.50	<0.50
Dissolved Molybdenum	µg/L	70	0.50	13.7	10.2	8.33
Dissolved Nickel	µg/L	100	1.0	8.6	1.3	1.9
Dissolved Selenium	µg/L	10	1.0	<1.0	<1.0	<1.0
Dissolved Silver	µg/L	1.5	0.20	<0.20	<0.20	<0.20
Dissolved Thallium	µg/L	2	0.30	<0.30	<0.30	<0.30
Dissolved Uranium	µg/L	20	0.50	6.66	10.5	12.6
Dissolved Vanadium	µg/L	6.2	0.40	1.01	1.74	2.58
Dissolved Zinc	µg/L	1100	5.0	7.8	<5.0	<5.0
Mercury	µg/L	0.29	0.02	<0.02	<0.02	<0.02
Chromium VI	µg/L	25	2.000	<2.000	<2.000	<2.000
Cyanide, WAD	µg/L	66	2	<2	<2	<2
Dissolved Sodium	µg/L	490000	50	49400	37700	39900
Chloride	µg/L	790000	100	8170	9170	11500
Electrical Conductivity	uS/cm	NA	2	1120	1100	1100
pH	pH Units		NA	8.07	8.04	8.02

Certified By: Iris Verástegui

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AGAT WORK ORDER: 23H056536

PROJECT: 220717

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Rd.

SAMPLED BY:Shaa. D.

O. Reg. 153(511) - Metals & Inorganics (Water)

DATE RECEIVED: 2023-08-10 **DATE REPORTED: 2023-08-16**

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to ON T2 PGW CT
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

5205447-5205464 Metals analysis completed on a filtered sample.
pH is a recommended field analysis taken within 15 minutes of sample collection. Due to the potential for rapid change in sample equilibrium chemistry laboratory results may differ from field measured results

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Iris Verástegui

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Quality Assurance

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

AGAT WORK ORDER: 23H056536

PROJECT: 220717

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Rd.

SAMPLED BY:Shaa. D.

Trace Organics Analysis

RPT Date: Aug 16, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (Water)															
Benzene	5196199		<0.20	<0.20	NA	< 0.20	88%	60%	140%	107%	60%	140%	93%	60%	140%
Toluene	5196199		<0.20	<0.20	NA	< 0.20	117%	60%	140%	109%	60%	140%	113%	60%	140%
Ethylbenzene	5196199		<0.10	<0.10	NA	< 0.10	86%	60%	140%	107%	60%	140%	117%	60%	140%
m & p-Xylene	5196199		<0.20	<0.20	NA	< 0.20	91%	60%	140%	99%	60%	140%	106%	60%	140%
o-Xylene	5196199		<0.10	<0.10	NA	< 0.10	103%	60%	140%	106%	60%	140%	102%	60%	140%
F1 (C6 - C10)	5196199		<25	<25	NA	< 25	97%	60%	140%	84%	60%	140%	89%	60%	140%
F2 (C10 to C16)	5205266		<100	<100	NA	< 100	95%	60%	140%	73%	60%	140%	76%	60%	140%
F3 (C16 to C34)	5205266		<100	<100	NA	< 100	102%	60%	140%	93%	60%	140%	93%	60%	140%
F4 (C34 to C50)	5205266		<100	<100	NA	< 100	94%	60%	140%	101%	60%	140%	113%	60%	140%
O. Reg. 153(511) - VOCs (with PHC) (Water)															
Dichlorodifluoromethane	5200876		<0.40	<0.40	NA	< 0.40	95%	50%	140%	72%	50%	140%	81%	50%	140%
Vinyl Chloride	5200876		<0.17	<0.17	NA	< 0.17	100%	50%	140%	100%	50%	140%	116%	50%	140%
Bromomethane	5200876		<0.20	<0.20	NA	< 0.20	96%	50%	140%	98%	50%	140%	116%	50%	140%
Trichlorofluoromethane	5200876		<0.40	<0.40	NA	< 0.40	90%	50%	140%	87%	50%	140%	110%	50%	140%
Acetone	5200876		<1.0	<1.0	NA	< 1.0	97%	50%	140%	116%	50%	140%	110%	50%	140%
1,1-Dichloroethylene	5200876		<0.30	<0.30	NA	< 0.30	71%	50%	140%	94%	60%	130%	103%	50%	140%
Methylene Chloride	5200876		<0.30	<0.30	NA	< 0.30	79%	50%	140%	101%	60%	130%	106%	50%	140%
trans- 1,2-Dichloroethylene	5200876		<0.20	<0.20	NA	< 0.20	80%	50%	140%	97%	60%	130%	102%	50%	140%
Methyl tert-butyl ether	5200876		<0.20	<0.20	NA	< 0.20	107%	50%	140%	110%	60%	130%	105%	50%	140%
1,1-Dichloroethane	5200876		<0.30	<0.30	NA	< 0.30	76%	50%	140%	95%	60%	130%	102%	50%	140%
Methyl Ethyl Ketone	5200876		<1.0	<1.0	NA	< 1.0	105%	50%	140%	106%	50%	140%	87%	50%	140%
cis- 1,2-Dichloroethylene	5200876		<0.20	<0.20	NA	< 0.20	79%	50%	140%	100%	60%	130%	98%	50%	140%
Chloroform	5200876		<0.20	<0.20	NA	< 0.20	87%	50%	140%	102%	60%	130%	94%	50%	140%
1,2-Dichloroethane	5200876		<0.20	<0.20	NA	< 0.20	87%	50%	140%	96%	60%	130%	93%	50%	140%
1,1,1-Trichloroethane	5200876		<0.30	<0.30	NA	< 0.30	77%	50%	140%	96%	60%	130%	83%	50%	140%
Carbon Tetrachloride	5200876		<0.20	<0.20	NA	< 0.20	80%	50%	140%	98%	60%	130%	80%	50%	140%
Benzene	5200876		<0.20	<0.20	NA	< 0.20	82%	50%	140%	93%	60%	130%	89%	50%	140%
1,2-Dichloropropane	5200876		<0.20	<0.20	NA	< 0.20	88%	50%	140%	96%	60%	130%	89%	50%	140%
Trichloroethylene	5200876		<0.20	<0.20	NA	< 0.20	95%	50%	140%	101%	60%	130%	115%	50%	140%
Bromodichloromethane	5200876		<0.20	<0.20	NA	< 0.20	94%	50%	140%	99%	60%	130%	88%	50%	140%
Methyl Isobutyl Ketone	5200876		<1.0	<1.0	NA	< 1.0	88%	50%	140%	98%	50%	140%	107%	50%	140%
1,1,2-Trichloroethane	5200876		<0.20	<0.20	NA	< 0.20	105%	50%	140%	104%	60%	130%	107%	50%	140%
Toluene	5200876		<0.20	<0.20	NA	< 0.20	105%	50%	140%	106%	60%	130%	111%	50%	140%
Dibromochloromethane	5200876		<0.10	<0.10	NA	< 0.10	104%	50%	140%	111%	60%	130%	104%	50%	140%
Ethylene Dibromide	5200876		<0.10	<0.10	NA	< 0.10	95%	50%	140%	99%	60%	130%	103%	50%	140%
Tetrachloroethylene	5200876		<0.20	<0.20	NA	< 0.20	106%	50%	140%	109%	60%	130%	111%	50%	140%
1,1,1,2-Tetrachloroethane	5200876		<0.10	<0.10	NA	< 0.10	93%	50%	140%	97%	60%	130%	99%	50%	140%
Chlorobenzene	5200876		<0.10	<0.10	NA	< 0.10	104%	50%	140%	99%	60%	130%	107%	50%	140%
Ethylbenzene	5200876		<0.10	<0.10	NA	< 0.10	99%	50%	140%	99%	60%	130%	106%	50%	140%

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Quality Assurance

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AGAT WORK ORDER: 23H056536

PROJECT: 220717

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Rd.

SAMPLED BY:Shaa. D.

Trace Organics Analysis (Continued)

RPT Date: Aug 16, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
m & p-Xylene	5200876		<0.20	<0.20	NA	< 0.20	105%	50%	140%	106%	60%	130%	113%	50%	140%
Bromoform	5200876		<0.10	<0.10	NA	< 0.10	101%	50%	140%	97%	60%	130%	90%	50%	140%
Styrene	5200876		<0.10	<0.10	NA	< 0.10	94%	50%	140%	103%	60%	130%	107%	50%	140%
1,1,2,2-Tetrachloroethane	5200876		<0.10	<0.10	NA	< 0.10	106%	50%	140%	103%	60%	130%	81%	50%	140%
o-Xylene	5200876		<0.10	<0.10	NA	< 0.10	100%	50%	140%	99%	60%	130%	103%	50%	140%
1,3-Dichlorobenzene	5200876		<0.10	<0.10	NA	< 0.10	115%	50%	140%	114%	60%	130%	99%	50%	140%
1,4-Dichlorobenzene	5200876		<0.10	<0.10	NA	< 0.10	106%	50%	140%	113%	60%	130%	98%	50%	140%
1,2-Dichlorobenzene	5200876		<0.10	<0.10	NA	< 0.10	97%	50%	140%	106%	60%	130%	108%	50%	140%
n-Hexane	5200876		<0.20	<0.20	NA	< 0.20	85%	50%	140%	82%	60%	130%	94%	50%	140%
O. Reg. 153(511) - BNA (full) + PAHs (Water)															
Naphthalene	5191467		< 0.20	< 0.20	NA	< 0.20	85%	50%	140%	96%	50%	140%	106%	50%	140%
Acenaphthylene	5191467		< 0.20	< 0.20	NA	< 0.20	74%	50%	140%	85%	50%	140%	85%	50%	140%
Acenaphthene	5191467		< 0.20	< 0.20	NA	< 0.20	79%	50%	140%	84%	50%	140%	85%	50%	140%
Fluorene	5191467		< 0.20	< 0.20	NA	< 0.20	85%	50%	140%	89%	50%	140%	84%	50%	140%
Phenanthrene	5191467		< 0.10	< 0.10	NA	< 0.10	84%	50%	140%	67%	50%	140%	76%	50%	140%
Anthracene	5191467		< 0.10	< 0.10	NA	< 0.10	74%	50%	140%	70%	50%	140%	83%	50%	140%
Fluoranthene	5191467		< 0.20	< 0.20	NA	< 0.20	74%	50%	140%	73%	50%	140%	85%	50%	140%
Pyrene	5191467		< 0.20	< 0.20	NA	< 0.20	76%	50%	140%	74%	50%	140%	77%	50%	140%
Benzo(a)anthracene	5191467		< 0.20	< 0.20	NA	< 0.20	70%	50%	140%	72%	50%	140%	89%	50%	140%
Chrysene	5191467		< 0.10	< 0.10	NA	< 0.10	81%	50%	140%	72%	50%	140%	92%	50%	140%
Benzo(b)fluoranthene	5191467		< 0.10	< 0.10	NA	< 0.10	89%	50%	140%	105%	50%	140%	89%	50%	140%
Benzo(k)fluoranthene	5191467		< 0.10	< 0.10	NA	< 0.10	108%	50%	140%	97%	50%	140%	62%	50%	140%
Benzo(a)pyrene	5191467		< 0.01	< 0.01	NA	< 0.01	84%	50%	140%	79%	50%	140%	106%	50%	140%
Indeno(1,2,3-cd)pyrene	5191467		< 0.20	< 0.20	NA	< 0.20	58%	50%	140%	85%	50%	140%	79%	50%	140%
Dibenz(a,h)anthracene	5191467		< 0.20	< 0.20	NA	< 0.20	66%	50%	140%	87%	50%	140%	68%	50%	140%
Benzo(g,h,i)perylene	5191467		< 0.20	< 0.20	NA	< 0.20	81%	50%	140%	80%	50%	140%	73%	50%	140%
Phenol	5191467		< 1.0	< 1.0	NA	< 1.0	78%	30%	130%	78%	30%	130%	67%	30%	130%
Bis(2-chloroethyl)ether	5191467		< 0.5	< 0.5	NA	< 0.5	89%	50%	140%	85%	50%	140%	115%	50%	140%
2-Chlorophenol	5191467		< 0.5	< 0.5	NA	< 0.5	78%	50%	140%	67%	50%	140%	67%	50%	140%
o-Cresol	5191467		< 0.5	< 0.5	NA	< 0.5	87%	50%	140%	68%	50%	140%	87%	50%	140%
Bis(2-chloroisopropyl)ether	5191467		< 0.5	< 0.5	NA	< 0.5	79%	50%	140%	115%	50%	140%	82%	50%	140%
m&p-Cresol	5191467		< 0.6	< 0.6	NA	< 0.6	88%	50%	140%	76%	50%	140%	68%	50%	140%
2,4-Dimethylphenol	5191467		< 0.5	< 0.5	NA	< 0.5	70%	30%	130%	66%	30%	130%	77%	30%	130%
2,4-Dichlorophenol	5191467		< 0.3	< 0.3	NA	< 0.3	95%	50%	140%	68%	50%	140%	68%	50%	140%
1,2,4-Trichlorobenzene	5191467		< 0.5	< 0.5	NA	< 0.5	95%	50%	140%	84%	50%	140%	76%	50%	140%
p-Chloroaniline	5191467		< 1.0	< 1.0	NA	< 1.0	79%	30%	130%	79%	30%	130%	84%	30%	130%
2,4,6-Trichlorophenol	5191467		< 0.20	< 0.20	NA	< 0.20	76%	50%	140%	79%	50%	140%	66%	50%	140%
2,4,5-Trichlorophenol	5191467		< 0.20	< 0.20	NA	< 0.20	68%	50%	140%	78%	50%	140%	68%	50%	140%
1,1'-Biphenyl	5191467		< 0.50	< 0.50	NA	< 0.50	79%	50%	140%	84%	50%	140%	79%	50%	140%

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Quality Assurance

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AGAT WORK ORDER: 23H056536

PROJECT: 220717

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Rd.

SAMPLED BY:Shaa. D.

Trace Organics Analysis (Continued)

RPT Date: Aug 16, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Dimethyl phthalate	5191467		< 0.50	< 0.50	NA	< 0.50	85%	50%	140%	79%	50%	140%	85%	50%	140%
Diethyl phthalate	5191467		< 0.50	< 0.50	NA	< 0.50	79%	50%	140%	89%	50%	140%	85%	50%	140%
Pentachlorophenol	5191467		< 0.50	< 0.50	NA	< 0.50	69%	50%	140%	77%	50%	140%	67%	50%	140%
3,3'-dichlorobenzidine	5191467		< 0.50	< 0.50	NA	< 0.50	82%	30%	130%	85%	30%	130%	79%	30%	130%
Bis(2-Ethylhexyl)phthalate	5191467		< 0.50	< 0.50	NA	< 0.50	85%	50%	140%	84%	50%	140%	85%	50%	140%
2,4-Dinitrophenol	5191467		< 10	< 10	NA	< 10	68%	30%	130%	78%	30%	130%	67%	30%	130%
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)															
F1 (C6-C10)	5200876		<25	<25	NA	< 25	99%	60%	140%	98%	60%	140%	81%	60%	140%
F2 (C10 to C16)	5205266		<100	<100	NA	< 100	95%	60%	140%	73%	60%	140%	76%	60%	140%
F3 (C16 to C34)	5205266		<100	<100	NA	< 100	102%	60%	140%	93%	60%	140%	93%	60%	140%
F4 (C34 to C50)	5205266		<100	<100	NA	< 100	94%	60%	140%	101%	60%	140%	113%	60%	140%

Comments: When the average of the sample and duplicate results is less than 5x the RDL, the Relative Percent Difference (RPD) will be indicated as Not Applicable (NA).

Certified By:

AGAT Laboratories

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AGAT WORK ORDER: 23H056536

PROJECT: 220717

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Rd.

SAMPLED BY:Shaa. D.

Water Analysis

RPT Date: Aug 16, 2023			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Water)															
Dissolved Antimony	5206963		<1.0	<1.0	NA	< 1.0	106%	70%	130%	113%	80%	120%	110%	70%	130%
Dissolved Arsenic	5206963		<1.0	<1.0	NA	< 1.0	100%	70%	130%	104%	80%	120%	109%	70%	130%
Dissolved Barium	5206963		71.9	68.8	4.4%	< 2.0	101%	70%	130%	107%	80%	120%	115%	70%	130%
Dissolved Beryllium	5206963		<0.50	<0.50	NA	< 0.50	94%	70%	130%	108%	80%	120%	102%	70%	130%
Dissolved Boron	5206963		53.9	52.5	2.6%	< 10.0	99%	70%	130%	99%	80%	120%	97%	70%	130%
Dissolved Cadmium	5206963		<0.20	<0.20	NA	< 0.20	100%	70%	130%	96%	80%	120%	104%	70%	130%
Dissolved Chromium	5206963		<2.0	<2.0	NA	< 2.0	98%	70%	130%	105%	80%	120%	114%	70%	130%
Dissolved Cobalt	5206963		1.34	1.07	NA	< 0.50	109%	70%	130%	105%	80%	120%	109%	70%	130%
Dissolved Copper	5206963		<1.0	1.3	NA	< 1.0	100%	70%	130%	101%	80%	120%	103%	70%	130%
Dissolved Lead	5206963		<0.50	<0.50	NA	< 0.50	86%	70%	130%	87%	80%	120%	88%	70%	130%
Dissolved Molybdenum	5206963		5.88	6.58	11.2%	< 0.50	106%	70%	130%	106%	80%	120%	118%	70%	130%
Dissolved Nickel	5206963		2.1	1.6	NA	< 1.0	111%	70%	130%	99%	80%	120%	109%	70%	130%
Dissolved Selenium	5206963		<1.0	<1.0	NA	< 1.0	100%	70%	130%	110%	80%	120%	112%	70%	130%
Dissolved Silver	5206963		<0.20	<0.20	NA	< 0.20	109%	70%	130%	98%	80%	120%	98%	70%	130%
Dissolved Thallium	5206963		<0.30	<0.30	NA	< 0.30	102%	70%	130%	106%	80%	120%	107%	70%	130%
Dissolved Uranium	5206963		0.69	0.59	NA	< 0.50	85%	70%	130%	101%	80%	120%	108%	70%	130%
Dissolved Vanadium	5206963		2.08	1.64	NA	< 0.40	112%	70%	130%	105%	80%	120%	114%	70%	130%
Dissolved Zinc	5206963		<5.0	7.9	NA	< 5.0	103%	70%	130%	117%	80%	120%	113%	70%	130%
Mercury	5205447	5205447	<0.02	<0.02	NA	< 0.02	102%	70%	130%	100%	80%	120%	106%	70%	130%
Chromium VI	5198368		<2.000	<2.000	NA	< 2	99%	70%	130%	106%	80%	120%	110%	70%	130%
Cyanide, WAD	5198503		<2	<2	NA	< 2	109%	70%	130%	91%	80%	120%	107%	70%	130%
Dissolved Sodium	5206963		82100	77600	5.6%	< 50	102%	70%	130%	110%	80%	120%	83%	70%	130%
Chloride	5205079		104000	106000	1.9%	< 100	91%	70%	130%	101%	80%	120%	108%	70%	130%
Electrical Conductivity	5205079		819	859	4.8%	< 2	99%	90%	110%						
pH	5205079		7.73	7.84	1.4%	NA	100%	90%	110%						

Comments: NA signifies Not Applicable.
Duplicate NA: results are under 5X the RDL and will not be calculated.

Certified By: Iris Verástegui

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Method Summary

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ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Rd.

SAMPLED BY:Shaa. D.

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Naphthalene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Acenaphthylene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Acenaphthene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Fluorene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Phenanthrene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Anthracene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Fluoranthene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Pyrene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Benzo(a)anthracene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Chrysene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Benzo(b)fluoranthene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Benzo(k)fluoranthene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Benzo(a)pyrene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Dibenz(a,h)anthracene	ORG-91-5114	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Phenol	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Bis(2-chloroethyl)ether	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
2-Chlorophenol	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
o-Cresol	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Bis(2-chloroisopropyl)ether	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
m&p-Cresol	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
2,4-Dimethylphenol	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
2,4-Dichlorophenol	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
1,2,4-Trichlorobenzene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
p-Chloroaniline	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	CALCULATION

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Method Summary

CLIENT NAME: SOIL MAT ENGINEERS & CONSULTANTS LT

AGAT WORK ORDER: 23H056536

PROJECT: 220717

ATTENTION TO: Peter Markesic

SAMPLING SITE:Dorchester Rd.

SAMPLED BY:Shaa. D.

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
2,4,6-Trichlorophenol	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
2,4,5-Trichlorophenol	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
1,1'-Biphenyl	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Dimethyl phthalate	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
2,4 and 2,6-Dinitrotoluene	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	CALCULATION
Diethyl phthalate	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Pentachlorophenol	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
3,3'-dichlorobenzidine	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Bis(2-Ethylhexyl)phthalate	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
2,4-Dinitrophenol	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
2-Fluorophenol	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
phenol-d6 surrogate	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
2,4,6-Tribromophenol	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Chrysene-d12	ORG-91-5114	modified from EPA 3510C, 8270E & ON MOECC E3265	GC/MS
Sediment			N/A
Benzene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
Toluene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
Ethylbenzene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
m & p-Xylene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
o-Xylene	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
Xylenes (Total)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
F1 (C6 - C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
C6 - C10 (F1 minus BTEX)	VOL - 5010	MOE E3421	(P&T)GC/MS
Toluene-d8	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/MS
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F1 (C6-C10)	VOL-91-5010	modified from MOE PHC-E3421	(P&T)GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	P&T GC/FID
Toluene-d8	VOL-91- 5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

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PROJECT: 220717

ATTENTION TO: Peter Markesic

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SAMPLED BY:Shaa. D.

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Mercury	MET-93-6100	modified from EPA 245.2 and SM 3112 B	CVAAS
Chromium VI	INOR-93-6073	modified from SM 3500-CR B	LACHAT FIA
Cyanide, WAD	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	SEGMENTED FLOW ANALYSIS
Dissolved Sodium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP/MS
Chloride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Electrical Conductivity	INOR-93-6000	SM 2510 B	PC TITRATE
pH	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE

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Have feedback? Scan here for a quick survey!

5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
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webearth.agatlabs.com

Chain of Custody Record

If this is a Drinking Water sample, please use Drinking Water Chain of Custody Form (potable water consumed by humans)

Report Information:

Company: Soil Mat
Contact: Peter Markesic
Address:
Phone: Fax:
Reports to be sent to:
1. Email: pmarkesic@soilmat.ca
2. Email:

Project Information:

Project: 220717
Site Location: Dorchester Rd.
Sampled By: Shaa.D.
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐
Company:
Contact:
Address:
Email:

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04 — Table 1 (Indicate One) — ☐ Ind/Com ☐ Res/Park ☐ Agriculture
Soil Texture *(Check One)* ☐ Coarse ☐ Fine
☐ Regulation 406 — Table (Indicate One)
☐ Regulation 558
☐ CCME
☐ Sewer Use ☐ Sanitary ☐ Storm — Region
☐ Prov. Water Quality Objectives (PWQO)
☐ Other — Indicate One

Is this submission for a **Record of Site Condition?** ☐ Yes ☐ No

Report Guideline on *Certificate of Analysis* ☐ Yes ☐ No

Sample Matrix Legend

GW	Ground Water
O	Oil
P	Paint
S	Soil
SD	Sediment
SW	Surface Water

Laboratory Use Only

Work Order #: 23H056536
Cooler Quantity: 1 Large
Arrival Temperatures: 13.1 | 12.6 | 12.8 | 8.4 | 8.1 | 8.2
Custody Seal Intact: ☐ Yes ☐ No ☒ N/A
Notes: Free Ice

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days
Rush TAT (Rush Surcharges Apply)
☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day
OR Date Required (Rush Surcharges May Apply):
Please provide prior notification for rush TAT
**TAT is exclusive of weekends and statutory holidays*
For 'Same Day' analysis, please contact your AGAT CPM

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics	O. Reg 153: Metals - ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: VOC	O. Reg 153: PAHs	O. Reg 153: PCBs	O. Reg 153: PCBs: Aroclors ☐	O. Reg 558: Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	O. Reg 406: Regulation 406 SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	O. Reg 406: Regulation 406 Characterization Package pH, ICP/MS Metals, BTEX, F1-F4	Corrosivity: ☐ Moisture ☐ Sulphide	ABN	Potentially Hazardous or High Concentration (Y/N)
1. MW1	Aug 10	AM/PM	5	GW					X										
2. MW2	"	AM/PM	5	"					X										
3. MW3	"	AM/PM	16	"			X		X	X								X	
4. MW4	"	AM/PM	16	"			X		X	X								X	
5. DUP	"	AM/PM	16	"			X		X	X								X	
6.		AM/PM																	
7.		AM/PM																	
8.		AM/PM																	
9.		AM/PM																	
10.		AM/PM																	
11.		AM/PM																	

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Shaa D.	Aug 10	2:45	Chris Tahmo	Aug/10/23	2:45pm
Chris Tahmo	Aug/10/23	3:60pm		Aug 10	4:56pm

Page 1 of 1
N°: T - 143617

Pink Copy - Client | Yellow Copy - AGAT | White Copy - AGAT

Appendix ‘E’

1. Qualifications of Assessors

COMPANY BACKGROUND

SOIL-MAT ENGINEERS & CONSULTANTS LTD. [SOIL-MAT ENGINEERS] is a Canadian Consulting Engineering firm owned by its senior staff. Over the past thirty years the principals of SOIL-MAT ENGINEERS have undertaken geotechnical investigations in all areas of Hamilton and surrounding area and are familiar with the distinct geology of the area and therefore well-versed with the various soil, bedrock and groundwater conditions. SOIL-MAT ENGINEERS has a staff of over twenty-five engineers and technical staff who specialize in geotechnical assignments, environmental assessments, hydrogeological investigations and construction quality control/assurance projects. The company commenced operation on June 15, 1992 and has undertaken over 5,000 projects since its inception. The firm and all professional staff are in good standing with Professional Engineers Ontario. The company has maintained a current Certificate of Authorisation since it was granted on April 28, 1992. The firm's office and laboratory facilities are located at 401 Grays Road in Hamilton, Ontario.

REPORT AUTHORS

Lianne Crawford
Environmental Technician

Ms. Crawford has over three years of experience in conducting Phase I ESA research and Phase II ESA fieldwork, including soil and groundwater sampling. Ms. Crawford has also been a key member on a number of projects including the supervision and direction of traditional 'dig and dump' remediation projects.

Ian Shaw, P. Eng.
[Director/ Senior Professional]

Mr. Shaw has over fourteen years of experience in the geotechnical and geo-environmental fields. Mr. Shaw has supervised the geotechnical investigations for the replacement/rehabilitation of bridge/culvert structures located within the Haldimand County, numerous residential and industrial subdivision projects, slope stability assignments associated with Hamilton Conservation Authority and Conservation Halton requirements, and several high-rise developments in Hamilton, Burlington, Oakville, Brantford, St. Catharines, and Niagara Falls. Mr. Shaw has also been involved in

numerous hydrogeological investigations, primarily within the City of Hamilton, associated with the development of residential and commercial subdivision projects. Some of Mr. Shaw's projects have included the decommissioning of underground and above ground fuel oil storage tanks, the implementation of in-situ and ex-situ remediation programmes and numerous 'dig and dump' remediation projects.

Keith Gleadall, B.A., EA Dipl.

Vice-President [Senior Professional]

Mr. Gleadall has over fourteen years of experience in conducting Phase I, II and III Environmental Site Assessments and has successfully completed the requirements of the Associated Environmental Site Assessors of Canada and a Post Graduate Diploma in Environmental Site Assessment from Niagara College. Mr. Gleadall is responsible for undertaking numerous hydrogeological investigations, primarily within the City of Hamilton, associated with the development of residential and commercial subdivision projects, together with Phase I, II and III Environmental Site Assessments. Projects have included the decommissioning of underground and above ground fuel oil storage tanks, the implementation of in-situ and ex-situ remediation programmes, the decommissioning of a former dry cleaning facility and numerous 'dig and dump' remediation projects.

Appendix ‘F’

1. Statement of Limitations

REPORT LIMITATIONS

Achieving the objectives that are stated in this report has required SOIL-MAT ENGINEERS to derive conclusions based upon the best and most recent information currently available to SOIL-MAT ENGINEERS. No investigative method can completely eliminate the possibility of obtaining partially imprecise information. SOIL-MAT ENGINEERS has expressed professional judgement in gathering and analysing the information obtained and in the formulation of its conclusions.

Information in this report was obtained from sources deemed to be reliable, however, no representation or warranty is made as to the accuracy of this information. To the best of SOIL-MAT ENGINEERS' knowledge, the information gathered from outside sources contained in this report on which SOIL-MAT ENGINEERS has formulated its opinions and conclusions, are both true and correct. SOIL-MAT ENGINEERS assumes no responsibility for any misrepresentation of facts gathered from outside sources.

This report was prepared to assess and document evidence of potential environmental contamination, and not to judge the acceptability of the risks associated with such environmental contamination. Much of the information gathered for this report is only accurate at the time of collection and a change in the Site conditions may alter the interpretation of SOIL-MAT ENGINEERS' findings. Furthermore, the reader should note that the Site reconnaissance described in this report was an environmental assessment of the Site, not a regulatory compliance or an environmental audit of the Site.

SOIL-MAT ENGINEERS & CONSULTANTS LTD. prepared this Report for the account of the UPPER CANADA PLANNING & ENGINEERING LTD. The material in it reflects SOIL-MAT ENGINEERS best judgement in light of the information available to it at the time of preparation. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. SOIL-MAT ENGINEERS accepts no responsibility for damages, if any suffered by any third party as a result of decisions made or actions based on this report.