

Date: April 25, 2025



**SOIL
SOLUTIONS INC.**



Soil Characterization Report

Paramedic Response Station #33 (PRS33)
2960 and 2980 Teston Road,
Vaughan, ON

Prepared For: The Regional Municipality of York
Document No.: XS.0924-10627_Rev.03

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1.0 INTRODUCTION

XS Soil Solutions Inc. (XS Soil) and Montrose Environmental Solutions Canada Inc. (Montrose; formerly Matrix Solutions Inc.) have partnered together in providing the Regional Municipality of York (York Region), Qualified Person (QP) services under Ontario Regulation (O. Reg. 406/19): On-Site and Excess Soil Management. XS Soil and Montrose were retained by York Region to conduct soil management practices in accordance with O. Reg. 406/19, for the proposed Paramedic Response Station #33 (PRS33) located at 2960 and 2980 Teston Road in Vaughan, Ontario (the Site or Project Area). The General Site Location is shown on Drawing 1 in Appendix A.

The methodology of this Soil Characterization Report (SCR) was based on the requirements of *Ontario Regulation (O. Reg.) 406/19: On-Site and Excess Soil Management*, and the associated document *Rules for Soil Management and Excess Soil Quality Standards* (the Soil Rules).

This SCR outlines the soil sampling activities conducted throughout the Site in order to assess subsurface soil quality within the proposed development area. The extent of the Project Area is shown on Drawing 2 in Appendix A. As estimated by York Region, the maximum depth of excavation will extend to 2.5 metres below ground surface (mbgs) with a calculated total volume of 2,926.24 cubic metres (m³) of excess soil to be generated from the Site to be removed off-site.

2.0 PROJECT AREA DESCRIPTION

Table 1 – Project Area Details

Municipal Site Address	2960 and 2980 Teston Road, Vaughan, Ontario
Site Location	Located on the northeast corner of Jane Street and Teston Road. A tributary branching from the Don River West Branch runs east and south of the site, flowing south toward the Don River and Lake Ontario. Residential and commercial properties are located to the north, east and south of the site. Agricultural land is located to the west of the site.
Approximate Site Plan Area	~0.26 hectares (0.64 acres)
Legal Description	2960 Teston Road: PART LOT 26 CONCESSION 4 AS IN R275257, EXCEPT PART 1, EXPROPRIATED PLAN D943; VAUGHAN – 03344-0192 (LT) 2980 Teston Road: PART LOT 26 CONCESSION 4 VAUGHAN, PARTS 1, 2 & 3 EXPROPRIATED PLAN D949, VAUGHAN – 03344-0193 (LT)
Current Site Owner and Contact (Project Leader)	York Region/The Regional Municipality of York Contact: Christine Chow, PMP Project Manager The Regional Municipality of York (289) 763-3258 Christine.chow@york.ca
Qualified Person	Karim Hosny, MEB, P.Eng., QP _{ESA} Found, Project Manager XS Soil Solutions Inc. 5353 John Lucas Drive, Burlington, ON. L7L 6G5 (647) 221-7504

	Karim.hosny@xssoil.ca
Current Site Occupant	N/A – vacant land
Current Site Building	N/A

3.0 BACKGROUND

A number of previous environmental reports were reviewed by XS Soil and Montrose, which are summarized in detail within the Assessment of Past Uses (APU) report developed by Montrose dated April 22, 2025 (Montrose APU). From the reports, a summary of the historical site condition includes, the following:

- The Site was first developed for residential use in the 1940s, which was later demolished in 2004.
- From the 2018 Phase One Environmental Site Assessment (ESA) completed by EXP Services Inc., two onsite Areas of Potential Environmental Concern (APECs) and three offsite APECs were noted, that warranted a Phase two ESA to be completed.
- From the 2018 Phase Two ESA, three boreholes were advanced across the site. Soil and groundwater samples were submitted for laboratory analysis of various parameters, which were observed to meet the O. Reg. 153/04, Table 2 standards for industrial/commercial/community (ICC) property use.
- Groundwater levels were measured at approximately 9.0 to 9.5 mbgs.
- EXP Services Inc. completed updated Phase I and II ESAs in 2021, however, no new findings were observed.

Based on findings from the Montrose APU, two onsite Potentially Contaminating Activities (PCAs) and four offsite PCAs were identified, resulting in one APEC onsite as shown in the table below. The other PCAs were investigated in 2018 and 2021 by EXP Services Inc., which resulted in no soil or groundwater contamination.

Table 2: Area of Potential Environmental Concern

Area of Potential Environmental Concern	Location of Potentially Contaminating Activity	Potentially Contaminating Activity	Location of PCA	Contaminants of Potential Concern (COPC)	Potentially Impacted Media (Soil and/or Groundwater)
APEC-1 (Fill Materials of Unknown Quality)	Entire Project Area	Item 30 - Importation of Fill Material of Unknown Quality	On-Site	PAHs Metals Hydrides	Soil

The findings from Montrose APU were utilized to complete a Sampling & Analysis Plan and a subsequent Soil Characterization Report that is presented herein.

4.0 SAMPLING AND ANALYSIS PLAN

Based on APEC-1 identified above, it is reasonable to consider the upper 2.5 m depth range to be made up of the fill material, and thus, the COPCs to be contained within this depth range as well.

Based on the above, the volume representing the known APEC onsite has been determined as a total of approximately 2,926.24 m³, which would be subject to the sampling frequency requirement outlined within the Soil Rules. As outlined within the Soil Rules, one (1) sample will be analyzed for every 200 m³ of excavated soil, including 10% for duplicate samples for quality assurance/quality control measures. In addition, as outlined in the regulation mandatory leachate analysis (mSPLP) is required on a minimum of three (3) soil samples and 10% of the bulk samples for projects generating over 600 m³, requiring a total of four (4) samples to be analysis for leachate analysis.

Samples will be collected via boreholes across the Project Area with a focus within the proposed building footprint, as majority of the excess soil volume will be generated from this area.

The Table 4 below outlines the samples to be collected and submitted for laboratory analysis:

Table 3: Proposed Sample Submission

Total Number of Proposed samples	APECs (Location)	Anticipated volume of APEC (m ³)	Laboratory Submission
14 + 1 duplicate + 4 mSPLP	APEC-1 (Entire Project Area footprint)	2,964.24 m ³	PHC/BTEX, PAH, M&I

mSPLP – modified Synthetic Precipitation Leaching Procedure (leachate analysis)

PHC – Petroleum Hydrocarbons, BTEX – Benzene, Toluene, Ethylbenzene, Xylenes

PAH – Polycyclic Aromatic Hydrocarbons, M&I – Metals and Inorganics

5.0 ONSITE SOIL SAMPLING

XS Soil conducted a soil sampling program at the Site on July 24, 2023, which consisted of the advancement of eight (8) boreholes to the maximum depth of 2.5 mbgs using the Geoprobe 420M drill rig. Strata Drilling Group was retained to complete the borehole drilling program onsite. One to three samples were collected from each borehole and containerized in laboratory-supplied glass sampling jars. Each sample was collected directly from the Standard Penetration Test (SPT) spoon, and each spoon was

decontaminated between sample depths, to eliminate the potential for cross-contamination between samples. The borehole locations are presented on Drawing 2 in Appendix A.

For excess soil characterization purposes, fourteen (14) bulk soil samples, and one (1) duplicate sample were recovered from the boreholes advanced on July 24, 2023, and were submitted for select laboratory analyses of a combination of PHC (F1-F4), BTEX, polycyclic aromatic hydrocarbons (PAH) and metals & inorganic (M&I). In addition, four (4) soil samples were collected for leachate analysis. Every soil sample collected from the borehole drilling program was submitted for laboratory analysis for characterization purposes, and thus vapour concentration readings were not necessary to obtain “worst case” soil samples for laboratory submission. However, vapour readings were measured during the sampling program at select samples from each borehole using a combustible gas detector (RKI Eagle II), calibrated to hexane and isobutylene. Visual/olfactory and field observations were also considered for laboratory parameter submissions.

A breakdown of the number of soil samples collected for the various analyses are presented in Table 5 below.

Table 4: Laboratory Submissions

Laboratory Analysis	Number of samples submitted
PHC/BTEX	14 + 1 duplicate
PAH	14 + 1 duplicate
Metals & Inorganics	14 + 1 duplicate
SPLP - Metals	4

All soil samples collected for chemical analysis were submitted to Eurofins at the sample depot in North York and were subsequently transported to their laboratory in Ottawa, Ontario. Eurofins Laboratories is an accredited member of the Canadian Association for Laboratory Accreditation Inc. Formal chain of custody records of the sample submissions were maintained between XS Soil and the staff at Eurofins.

6.0 SITE STRATIGRAPHY

The soil material throughout the Project Area within the grass covered areas (BH1-BH5) consisted of a brown silty sandy TOPSOIL with some clay and organics to a maximum depth of 0.1 m. The topsoil was followed by an underlying brown SILT with some sand FILL soil material that extended to the maximum borehole depth of 2.5 mbgs.

The material encountered in the boreholes over the asphalt surface (BH6 & BH8) was observed with approximately 0.1 mbgs of asphalt thickness, underlain by a similar SILT fill material that extended to 1.0 m (the maximum extent of the boreholes within the asphalt area).

No odours, sheen or any other evidence of contamination was observed in any of the soil samples or boreholes across the Project Area and groundwater was not encountered in any of the borehole locations.

The vapour concentrations measured in the headspace of soil samples collected are presented in the summary tables in Appendix B. Maximum vapour concentrations for hexane was observed with a reading of 30 parts per million (ppm) for sample BH8-S1, and 0 ppm for isobutylene in all the samples recovered.

A more detailed description of the soil stratigraphy is presented on the borehole logs in Appendix C.

7.0 ANALYTICAL RESULTS

For offsite removal purposes, the soil samples collected for laboratory analysis were compared to the following Excess Soil Quality Standards in a coarse textured soil:

- Table 1: Full Depth Background Site Condition Standards for Agricultural or Other Property Use Standards (Table 1 AG)
- Table 1: Full Depth Background Site Condition Standards for Residential/Parkland/Institutional and Industrial/Commercial/Community Property Use Standards (Table 1 RPIICC)
- Table 2.1: Full Depth Excess Soil Quality Standards in a Potable Ground Water Condition for Agricultural or Other Property Use Standards (Table 2.1 AG ESQS)
- Table 2.1: Full Depth Excess Soil Quality Standards in a Potable Ground Water Condition for Residential/Parkland/Institutional Property Use Standards (Table 2.1 RPI ESQS)
- Table 2.1: Full Depth Excess Soil Quality Standards in a Potable Ground Water Condition for Industrial/Commercial/Community Property Use Standards (Table 2.1 ICC ESQS)
- Table 3.1: Full Depth Excess Soil Quality Standards in a Non Potable Ground Water Condition for Residential/Parkland/Institutional Property Use Standards (Table 3.1 RPI ESQS)

A total of 14 soil samples and 1 duplicate sample were collected from the initial sampling event at the Project Area and submitted for laboratory analysis. An additional (two) soil samples were collected for delineation purposes and outlined further in Section 7.1 below.

A summary of all the soil samples submitted for laboratory analysis are included in Appendix B, the summary tables of analytical results are included in Appendix D and the Laboratory Certificates of Analysis are included in Appendix E.

Table 5 below shows the exceedances above the applicable standards:

Table 5: Sample Exceedances Summary

Sample ID	Surface Cover (Grass or Asphalt)	Sample Depth (mbgs)	Sample Exceedances above the Applicable Standard					
			Table 1 AG	Table 1 RPIICC	Table 2.1 AG	Table 2.1 RPI	Table 2.1 ICC	Table 3.1 RPI
BH2-S1	Grass surface	0.5-0.9	SAR	None	None	None	None	None
BH3-S1	Grass surface	0.5-1.0	SAR	None	None	None	None	None
BH5-S1	Grass surface	1.0-1.5	SAR	None	None	None	None	None
BH5-S3	Grass surface	1.5-2.2	SAR	None	None	None	None	None
BH6-S1	Asphalt surface	0.2-1.0	SAR PHC (F4G) (1300 µg/g vs 120 µg/g) Various PAHs	SAR PHC (F4G) (1300 µg/g vs 120 µg/g) Benzo(a)anthracene (0.38 µg/g vs 0.36 µg/g) Benzo(a)pyrene (0.41 µg/g vs 0.3 µg/g)	SAR Anthracene (0.08 µg/g vs 0.058 µg/g) Benzo(a)pyrene (0.41 µg/g vs 0.3 µg/g)	SAR Benzo(a)pyrene (0.41 µg/g vs 0.31 µg/g)	SAR Benzo(a)pyrene (0.41 µg/g vs 0.31 µg/g)	SAR
BH7-S1 TOPSOIL	Grass surface	0.0-0.9	SAR Benzo(a)anthracene (0.22 µg/g vs 0.095 µg/g)	SAR	None	None	None	None
BH8-S1	Asphalt surface	0.1-0.7	SAR Various PAHs	None	Anthracene (0.07 µg/g vs 0.058 µg/g)	None	None	None

Note: Grey text indicates exceedances satisfies Table 1 AG using Single Point Compliance from subsequent soil testing

7.1 XS Soil Additional Sampling

XS Soil conducted a delineation sampling program of BH6-S1, to confirm the presence of the PHC (F4G) and PAH exceedances. From the original sampling event, BH6-S1 was collected from a shallow depth range, directly below the asphalt surface. Due to the nature of the borehole drilling technique, there is a possibility of material caving into the borehole, including asphalt fragments from the surface. The identified exceedances of PHC (F4G) and PAH are common contaminants found within asphalt, or soil samples containing asphalt fragments, providing a false positive of parameter exceedances and not an accurate representation of the quality of the underlying soil material.

XS Soil returned to the Site on October 5, 2023, to collect additional delineation samples from the vicinity of BH6-S1. Two (2) boreholes were advanced to a maximum depth of 1.0 mbgs, in order to collect soil samples within the same depth range as the original sample. One (1) sample from each borehole was collected and submitted for laboratory analysis of PHC and PAH. The two (2) samples (BH6-S1A and BH6-S1B) from the boreholes advanced within a 2m radius from the original borehole were submitted for laboratory analysis of PHC and PAH, in an effort to apply the single-point compliance method from subsection 10 of Part II of the Soil Rules. The results of the additional sampling event are summarized in Table 6 below. The sampling locations of the supplemental boreholes are presented on Drawing 3 in Appendix A.

The soil stratigraphy at the sampling locations were consistent with the original borehole sample and consisted of a brown sandy silt with trace gravel.

Table 6 below summarizes the findings from the confirmatory sampling for sample location BH6-S1:

Table 6: Confirmatory Sampling Summary

Sample ID	Sample Location	Sample Depth (mbgs)	Soil Type	Parameters submitted for laboratory analysis	Exceedances over Table 1 RPIICC
BH6-S1	Original borehole location	0.2-1.0	Brown, sandy silt, trace gravel, moist	PHC/BTEX, M&I, PAH	SAR PHC (F4G) Benzo(a)anthracene Benzo(a)pyrene
BH6-S1A	2m north of original borehole	0.2-1.0	Brown, sandy silt, trace gravel, moist	PHC, PAH	—
BH6-S1B	2m south of original borehole	0.2-1.0	Brown, sandy silt, trace gravel, moist	PHC, PAH	—

The additional boreholes were advanced at the Project Area to confirm the soil quality from the previously advanced borehole, BH-6, and to outline potential extents for soil delineation, if required. The soil sample collected by XS Soil confirmed PHC and PAH concentrations were below the applicable Table 1 RPIICC standard and were also observed to be non-detect by the laboratory.

7.2 Meeting Excess Soil Quality Standards

As per subsections (9) and (10) of Part II of the Soil Rules, an excess soil quality standard is met if the standard is met, using either the Single-Point Compliance Method or the statistical method.

Based on the soil sampling program conducted, the Single-Point Compliance Method for meeting the applicable standard applies and is demonstrated below for the following exceedances noted in Table 6 above.

Benzo(a)pyrene: 0.17 ug/g satisfying the Table 1 RPIICC standard (0.3 ug/g)

BH6-S1 - 0.41 ug/g

BH6-S1A - <0.05 ug/g

BH6-S1B - <0.05 ug/g

Benzo(a)anthracene: 0.16 ug/g satisfying the Table 1 RPIICC standard (0.36 ug/g)

BH6-S1 - 0.38 ug/g

BH6-S1A - <0.05 ug/g

BH6-S1B - <0.05 ug/g

The Single-Point Compliance Method does not, however, reduce the **PHC (F4G)** and **Anthracene** concentrations below the applicable Table 1 RPIICC and Table 2.1 AG standards, respectively. However, as mentioned in section 7.1 above, these exceedances are considered to be caused by asphalt fragments within the soil samples and not a representation of the quality of the underlying soil material.

In addition, four SPLP samples were collected for laboratory analysis of Leachable Metals and were found to be below the Table 1: Leachate Screening Levels for Excess Soil Reuse, as reported within Appendix 2 of the Soil Rules. The SPLP samples were collected from the following sample locations:

- SPLP-1 was collected from BH1-S1 (0.5-1.25 mbgs)
- SPLP-2 was collected from BH3-S3 (1.5-2.2 mbgs)
- SPLP-3 was collected from BH7-S1 TOPSOIL (0-0.9 mbgs)
- SPLP-4 was collected from BH8-S1 (0.1-0.7 mbgs)

The original sample of SPLP-1 returned a silver value of 0.4 ug/L, above the applicable Table 1 Leachate Level. However, after consultation with Eurofins, and once the sample was rerun, the silver concentration was reduced to below the method reporting limit, and thus not considered a concern for excess soil removal. The Laboratory Certificates of Analysis are included in Appendix E.

Under O. Reg. 406/19, SAR parameters are not considered contaminants of concern if the following conditions are met:

- The excess soil is finally placed at one of the following locations:
 - o Where it is reasonable to expect that the soil will be affected by the same chemicals as a result of continued application of a substance for vehicular safety in conditions of snow or ice;
 - o At an industrial or commercial property and to which non-potable standards would be applicable; or,
 - o At least 1.5m below the surface
- The excess soil will not be finally placed at any of the following locations:
 - o Within 30m of a waterbody;

- Within 100m of a potable water well or area with an intended property use that may require a potable water well; or,
- A location that will be used for growing crops, unless the excess soil is placed 1.5m or greater below the surface.

Soil material observed with EC/SAR exceedances only, would be permitted for onsite reuse, as long as the above conditions are met.

8.0 QUALITY CONTROL/QUALITY ASSURANCE

The XS Soil field sampling program, maintained QA/QC protocols using appropriate field sampling equipment, disposable gloves between samples, laboratory supplied sample containers and maintaining laboratory supplied chain of custody records.

Samples were shipped in ice-filled coolers to maintain temperatures at less than 10°C, along with chain of custody records to Eurofins. Soil samples were collected in laboratory supplied jars and vials and were collected in accordance with *Protocol for Analytical Methods Used in the Assessment of Properties Under Part XV.1* of the Environmental Protection Act and Excess Soil Quality dated February 19, 2021 (Analytical Protocol).

One field duplicate sample was collected and submitted for similar parameters. The field duplicate sample was collected to evaluate sample precision related to the analysis of the submitted soil sample. Relative percent difference (RPD) calculations were determined for each compound if it was measured in both the submitted sample and the corresponding duplicate sample at the concentrations more than 5 times the method detection limit for the respective parameter. A summary of the RPD calculations are shown in Table 8 below:

Table 8: RPD Calculations

Sample ID	Duplicate Sample	Sample Depth (mbgs)	Parameter	Analyzed concentration (µg/g)	Duplicate Concentration (µg/g)	RPD (%)
BH4-S1	DUP-1	0.5-1.0	Barium	71	50	34.7
			Boron	6	8	28.6
			Chromium	26	21	21.3
			Cobalt	9	8	11.8
			Copper	22	16	31.6
			Lead	8	6	28.6
			Nickel	21	18	15.4
			SAR	0.63	0.43	37.7
			Vanadium	32	28	13.3
			Zinc	42	36	15.4
			pH	7.77	7.84	NA

The RPD results were compared to the limits specified within Tables 5-1 to 5-15 of the Analytical Protocol document for Analysis and Acceptability Criteria. All 11 calculable RPDs between the bulk soil analysis and the respective duplicate sample satisfied the performance criteria of $\leq 30\%$ sample duplicates for Metals and within the allotted 0.3 pH units, with the exception of three parameters:

- Barium with calculated RPD of 34.7%
- Copper with calculated RPD of 31.6%, and
- SAR with calculated RPD of 37.7%

The increased RPDs found between BH4-S1 and DUP-1 are not considered a concern with respect to sample validity and do not alter the conclusions of this SCR.

All other parameters did not have detectable concentrations in which RPDs were calculable. As such, no other quality control issues were identified within respect to the calculable RPDs in soil.

9.0 DISCUSSION

XS Soil collected 14 bulk soil samples and one duplicate sample from 8 borehole locations throughout the Project Area. The borehole locations and sample frequency were selected based on the estimated volume of excavated soil to be generated from the excavation. Samples were collected from representative locations across the Project Area based on the proposed development and findings from the historical review within the APU.

The soil samples were submitted for select laboratory analyses of PHC (F1-F4), BTEX, PAH, and M&I and were compared to the Table 1 AG, Table 1 RPIICC, Table 2.1 AG, Table 2.1 RPI, Table 2.1 ICC, and Table 3.1 RPI standards.

XS Soil returned to the Site on October 5, 2023, to collect two additional samples within 2 m from the original location and same depth of the previous borehole sample (BH6-S1) that was in exceedance of various parameters. The confirmatory soil samples returned concentration values of PHC and PAH below the detection limits, confirming the prior assumption that the original exceedance was likely caused by asphalt fragments within the soil sample, from possible borehole cave in.

Using the Single Point Compliance method, the concentrations of **Benzo(a)pyrene** and **Benzo(a)anthracene** were reduced below the Table 1 RPIICC Standards, however, **Anthracene** and **PHC (F4G)** concentrations were not. In summary, all samples satisfied the Table 1 RPIICC standard with the exception of various SAR exceedances along with the following:

- **BH6-S1** (0.2-1.0 mbgs): **Anthracene & PHC (F4G)**. However, these parameters satisfy Table 2.1 RPI

10.0 CONCLUSION

As noted above, the Project Area is considered to satisfy the Table 1 RPIICC Property Use Standard. As mentioned above and based on findings from the subsequent soil investigation, it is XS Soil's opinion that the original exceedance of PHC and PAH was a false positive caused by asphalt fragments within the soil sample collected from the borehole investigation. As such, it is reasonable to consider the entire Project Area to satisfy the Table 1 RPIICC property specific standards and can be removed off site for beneficial reuse to a receiving site that can accept such excess soil quality, and with allowable EC/SAR exceedances.

If any deleterious materials, or suspected soil impacts are identified during the excess soil handling, the XS Soil QP should be notified immediately for guidance and management support. Additional testing may be required, and the XS Soil QP will determine if an investigation into the source of the impact is necessary.

11.0 QUALIFIED PERSON DECLARATION

It is the opinion of the XS Soil QP that the project leader or operator of the project area have provided the QP or an individual supervised by the QP with all necessary information and access to the project area and authorized the qualified person or an individual supervised by the qualified person to make any inquiries of the project leader and operator's employees and agents, for the purpose of assisting the qualified person in preparing or overseeing the preparation of the documents. The XS Soil QP has prepared or overseen the preparation of the planning documents.

This Soil Characterization Report has been prepared by a QP in accordance with Ontario Regulation 406/19 and the associated Soil Rules, to the best of the QP's knowledge.

12.0 LIMITATION

It should be noted that the results of the chemical analysis refer only to the soil samples collected from the sample locations, and this report provides factual results of the chemical analysis for the specific parameters analysed. The inferred soil quality between sampling points is to the best knowledge and ability of the XS Soil QP and may vary during onsite excavation works. Confirmation of soil quality and extents of contamination can only be determined via additional soil sampling and laboratory results, if uncovered during the excavation. If any deleterious materials are identified during the excess soil handling in areas that were previously characterized for beneficial reuse, immediate segregation of the material should be completed, and additional testing may be required.

The conclusions presented in this report are based on work performed by trained, professional and technical staff in accordance with their reasonable interpretation of current and accepted engineering and scientific practices at the time the work was performed. XS Soil reserved the right to amend or supplement this report based on additional information provided upon completion of the APU, documentation or any other evidence that becomes available.

Acceptance of any excavated soil will be at the discretion of the receiving site. It is the responsibility of the receiving site and/or soil movement contractor of this material to ensure that the soil received is represented by this testing report.

The results of this testing evaluate the environmental quality of the soil samples analyzed only and does not pertain to the groundwater data, geotechnical, aesthetic, or other suitability factors for the reuse of the material.

The purpose of the testing was to assess soil reuse options and does not constitute a Phase Two Environmental Site Assessment as defined in Ontario Regulation 153/04, as amended.

Prepared by:



April 25, 2025

Adnan Soufani, B.Eng., EIT
Senior Environmental Field Technician – XS Soil Solutions

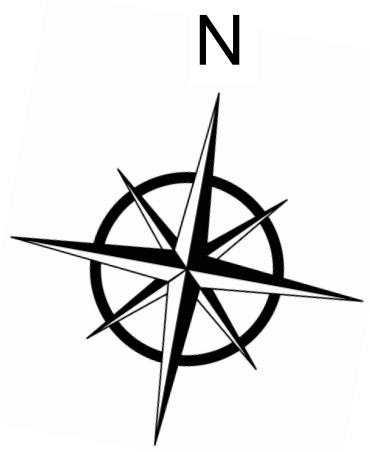
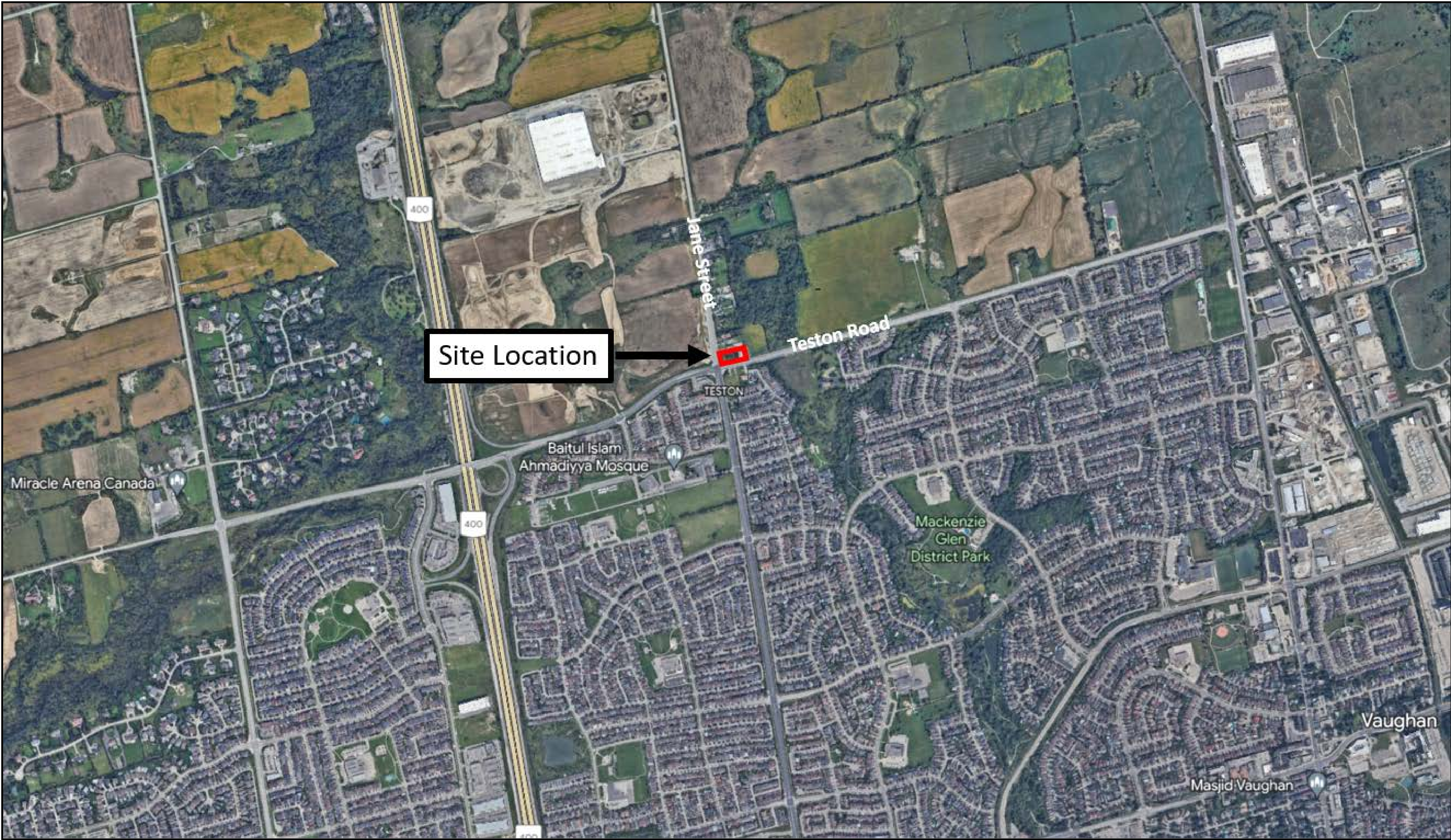
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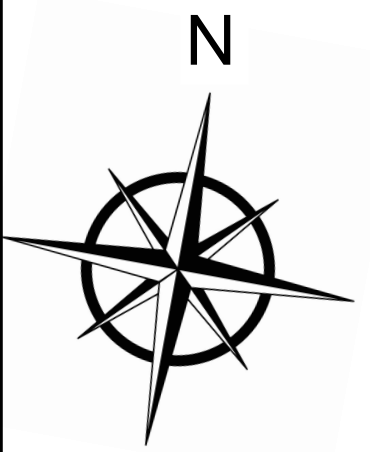
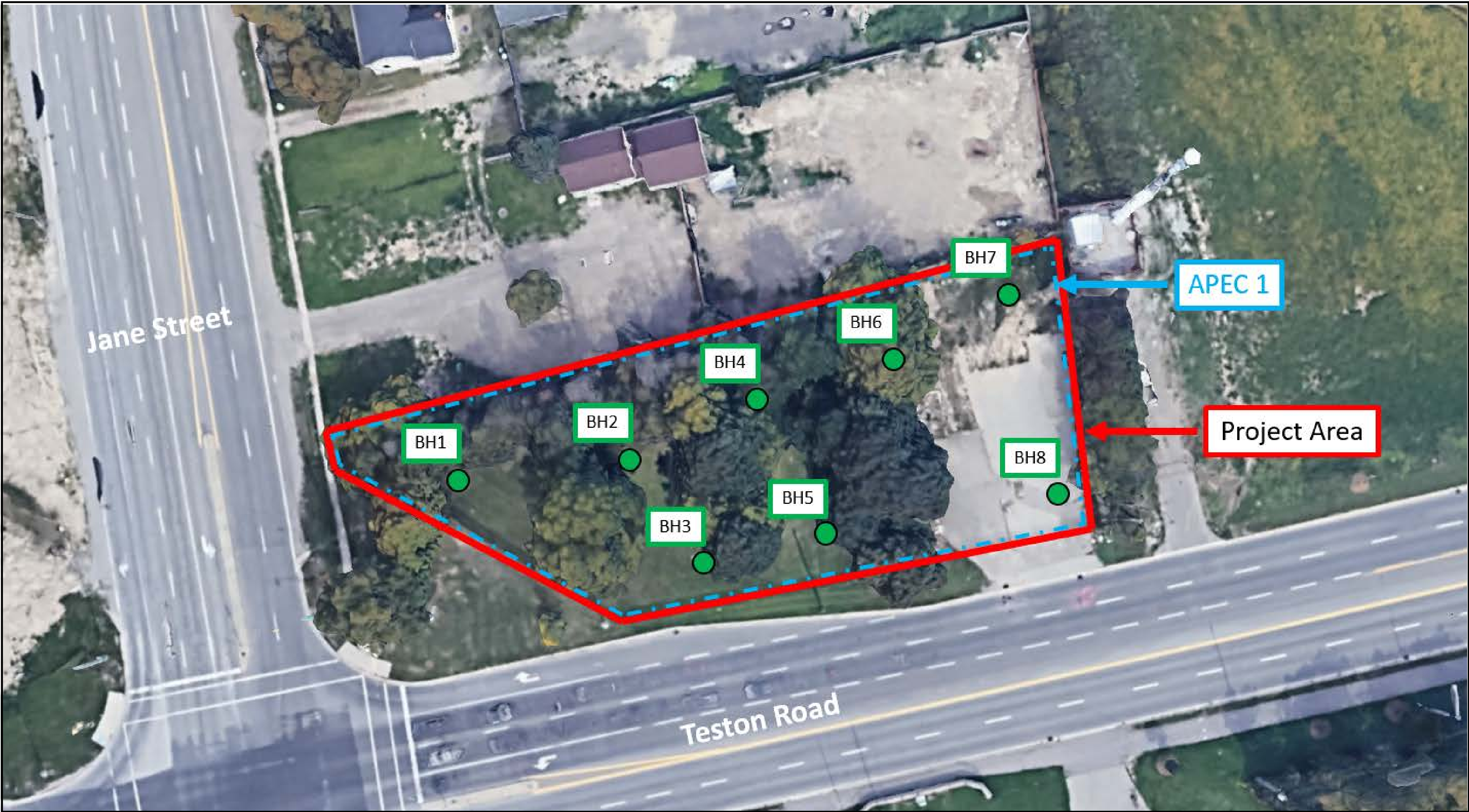
Karim Hosny, MEB, P.Eng., QP_{ESA}
Founder/Project Manager – XS Soil Solutions

APPENDIX A

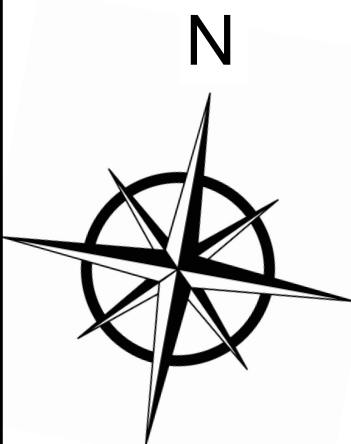
Drawings



<div><div><div>SOIL SOLUTIONS INC.</div><div>www.xssoil.ca</div></div></div>	CLIENT	PROJECT AREA ADDRESS	LEGEND	SITE LOCATION PLAN	
	The Regional Municipality of York	2960 and 2980 Teston Road, Vaughan, Ontario		Date	April 25, 2025
				Scale	Not to Scale
				Drawing Number	1



CLIENT	PROJECT AREA ADDRESS	LEGEND	BOREHOLE LOCATION PLAN	
The Regional Municipality of York	2960 and 2980 Teston Road, Vaughan, Ontario	<div><div></div>Test Pit Location</div>	Date	April 25, 2025
			Scale	Not to Scale
			Drawing Number	2



<div>CLIENT</div>	<div>PROJECT AREA ADDRESS</div>	<div>LEGEND</div>	<div>SUPPLEMENTAL BOREHOLE LOCATION PLAN</div>	
			Date	April 25, 2025
			Scale	Not to Scale
			Drawing Number	3
The Regional Municipality of York	2960 and 2980 Teston Road, Vaughan, Ontario	<div><div></div>Borehole Location</div> <div><div></div>Confirmatory Borehole Location</div>		

APPENDIX B

Detailed Soil Sample Submission Table

Detailed Soil Sample Submission

Borehole	Sample ID	Sample Depth (mbgs)	Vapor Readings (ppm) (Hex/Isb)	Soil Type	Parameters submitted for laboratory analysis
BH1	BH1-S1	0.5-1.25	0/0	Brown, sandy clay, trace gravel, moist	PHC/BTEX, M&I, PAH
	SPLP-1		N/A		Metals
BH2	BH2-S1	0.5-0.9	0/0	Brown, sandy clay, trace gravel, moist	PHC/BTEX, M&I, PAH
BH3	BH3-S1	0.5-1.0	0/0	Brown, silty sand/sandy silt, trace gravel and organics, moist	PHC/BTEX, M&I, PAH
	BH3-S2	1.0-1.5	0/0	Brown, silty sand/sandy silt, trace gravel, moist	PHC/BTEX, M&I, PAH
	BH3-S3	1.5-2.2	0/0	Brown, sandy clay, trace gravel, moist	PHC/BTEX, M&I, PAH
	SPLP-2		N/A		Metals
BH4	BH4-S1	0.5-1.0	0/0	Brown, silty sand/sandy silt, trace gravel and organics, moist	PHC/BTEX, M&I, PAH
	DUP-1		0/0		PHC/BTEX, M&I, PAH
	BH4-S2	1.0-1.5	0/0	Brown, silty sand/sandy silt, trace gravel, moist	PHC/BTEX, M&I, PAH
	BH4-S3	2.0-2.5	0/0	Brown, sandy clay, trace gravel, moist	PHC/BTEX, M&I, PAH
BH5	BH5-S1	0.4-1.0	0/0	Brown, sandy silt, trace organic and gravel, little moist	PHC/BTEX, M&I, PAH
	BH5-S2	1.0-1.5	0/0		PHC/BTEX, M&I, PAH
	BH5-S3	1.5-2.2	0/0	Brown, sandy clay, trace gravel, moist	PHC/BTEX, M&I, PAH
BH6	BH6-S1	0.2-1.0	0/0	Brown, sandy silt, trace gravel, moist	PHC/BTEX, M&I, PAH
	BH6-S1A		N/A		PHC, PAH
	BH6-S1B		N/A		PHC, PAH
BH7	BH7-S1 TOPSOIL	0.0-0.9	15/0	Brown, sand/sandy silt, some clay, trace gravel,	PHC/BTEX, M&I, PAH

	SPLP-3		N/A	moist	Metals
BH8	BH8-S1	0.1-0.7	30/0	Brown with trace black, silty sand to sandy clay, some gravel, moist	PHC/BTEX, M&I, PAH
	SPLP-4		N/A		Metals

Notes:

PHC	Petroleum Hydrocarbons	VOC	Volatile Organic Compounds
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes	M&I	Metals & Inorganics
PAH	Polycyclic Aromatic Hydrocarbons	DUP	Duplicate sample collected from the same respective bulk sample

APPENDIX C

Borehole Logs

Borehole Log - USC

Project/Site: **36257**

Well/borehole #: **23-BH1**

Client: **The Regional Municipality of York**

Logged By: **Z. Barth/A. Soutani**

Compiled By: **B. Dang**

Driller: **Strada**

Drill Equipment: **Direct Push**

Start Time: **Jul 24 2023 12:10**

Finish Time: **Jul 24 2023 12:30**

Top of Casing: --

Ground Elev: --

Top / Base of Sand Pack: --

Screened Interval: --

Slot Size: --

Total Depth: **1.8 m**

Boring Diameter: **0.05 m**

Casing Diameter: --



Legal Location: **2960 & 2980 Teston Road, Vaughan, ON**

Relative Location: **Teston Rd**

Northing: **4858344**

Easting: **617260**

Datum/Zone: **NAD83 / Zone17N**

Well / Borehole Completion Data	Depth (m) Elevation (m)	Soil / Bedrock	Soil Description	Sample Depth <i>B = Bag</i> <i>J = Jar</i> <i>V = Vial</i> <i>ST = Shelby Tube</i> Sample No. Prefix: 36257230724...
	0 0		TOPSOIL: (0-0.1 m) dark brown, dry, firm, low plasticity. @ 0-0.1 m trace organics.	0.5-1.8 m (#001) 2J/2V
			SILT: (0.1-0.5 m) trace sand (fine to medium grained), brown, dry, firm, low plasticity.	
			SILT: (0.5-1.0 m) trace sand (fine to medium grained), bright brown, dry, firm, low plasticity.	
	-1 -1		SILT: (1.0-1.8 m) trace sand (fine to medium grained), bright brown, moist, firm, low plasticity.	
	-2 -2		Bottom of Hole	
	-3 -3			
	-4 -4			
	-5 -5			

NOTE: Sample: S1

Borehole Log - USC

Project/Site: **36257**

Well/borehole #: **23-BH2**

Client: **The Regional Municipality of York**

Start Time: **Jul 24 2023 12:45**

Screened Interval: --

Legal Location: **2960 & 2980 Teston Road, Vaughan, ON**

Logged By: **Z. Barth/A. Soutani**

Finish Time: **Jul 24 2023 13:00**

Slot Size: --

Relative Location: **Teston Rd**

Compiled By: **B. Dang**

Top of Casing: --

Total Depth: **2.2 m**

Northing: **4858349**

Driller: **Strada**

Ground Elev: --







Boring Diameter: **0.05 m** Easting: **617279**

Drill Equipment: **Direct Push**

Top / Base of Sand Pack: --

Casing Diameter: --

Datum/Zone: **NAD83 / Zone17N**

Well / Borehole Completion Data	Depth (m) Elevation (m)	Soil / Bedrock	Soil Description	Sample Depth <i>B = Bag</i> <i>J = Jar</i> <i>V = Vial</i> <i>ST = Shelby Tube</i> Sample No. Prefix: 36257230724...
	0 0		TOPSOIL: (0-0.1 m) dark brown, dry, firm, low plasticity. @ 0-0.1 m trace organics.	
			SILT: (0.1-0.5 m) trace sand (fine to medium grained), brown, dry, firm, low plasticity.	
			SILT: (0.5-1.0 m) trace sand (fine to medium grained), dark brown, moist, firm, low plasticity.	0.5-1.0 m (#002) 2J/2V
	-1 -1		SILT: (1.0-1.5 m) trace sand (fine to medium grained), bright brown, moist, firm, low plasticity.	1.0-1.5 m (#003) 2J/2V
			SILT: (1.5-2.2 m) some sand (fine to medium grained), bright brown, moist, firm, low plasticity.	1.5-2.2 m (#004) 2J/2V
	-2 -2		Bottom of Hole	
	-3 -3			
	-4 -4			
	-5 -5			

NOTE: Samples: S1 S2 S3

Borehole Log - USC

Project/Site: **36257**

Well/borehole #: **23-BH3**

Client: **The Regional Municipality of York**

Logged By: **Z. Barth/A. Soutani**

Compiled By: **B. Dang**

Driller: **Strada**

Drill Equipment: **Direct Push**

Start Time: **Jul 24 2023 13:10**

Finish Time: **Jul 24 2023 13:30**

Top of Casing: **--**

Ground Elev: **--**

Top / Base of Sand Pack: **--**

Screened Interval: **--**

Slot Size: **--**

Total Depth: **2.5 m**

Boring Diameter: **0.05 m**

Casing Diameter: **--**







Legal Location: **2960 & 2980 Teston Road, Vaughan, ON**

Relative Location: **Teston Rd**

Northing: **4858340**

Easting: **617289**

Datum/Zone: **NAD83 / Zone17N**

Well / Borehole Completion Data	Depth (m) Elevation (m)	Soil / Bedrock	Soil Description	Sample Depth <i>B = Bag</i> <i>J = Jar</i> <i>V = Vial</i> <i>ST = Shelby Tube</i> Sample No. Prefix: 36257230724...
	0 0		TOPSOIL: (0-0.1 m) dark brown, dry, firm, low plasticity. @ 0-0.1 m trace organics.	0.5-1.0 m (#005) 2J/2V
			SILT: (0.1-0.5 m) trace sand (fine to medium grained), brown, dry, firm, low plasticity.	
			SILT: (0.5-1.0 m) trace sand (fine to medium grained), bright brown, dry, firm, low plasticity.	1.0-1.5 m (#006) 2J/2V
	-1 -1		SILT: (1.0-1.5 m) trace sand (fine to medium grained), bright brown, moist, firm, low plasticity.	2.0-2.5 m (#007) 2J/2V
	-2 -2		SILT: (1.5-2.5 m) trace sand (fine to medium grained), bright brown, moist, firm, low plasticity.	
			Bottom of Hole	
	-3 -3			
	-4 -4			
	-5 -5			

NOTE: Soil samples: S1 S2 S3

Borehole Log - USC

Project/Site: **36257**

Well/borehole #: **23-BH4**

Client: **The Regional Municipality of York**

Logged By: **Z. Barth/A. Soutani**

Compiled By: **B. Dang**

Driller: **Strada**

Drill Equipment: **Direct Push**

Start Time: **Jul 24 2023 13:35**

Finish Time: **Jul 24 2023 13:55**

Top of Casing: --

Ground Elev: --

Top / Base of Sand Pack: --

Screened Interval: --

Slot Size: --

Total Depth: **2.5 m**

Boring Diameter: **0.05 m**

Casing Diameter: --



Legal Location: **2960 & 2980 Teston Road, Vaughan, ON**

Relative Location: **Teston Rd**

Northing: **4858356**

Easting: **617294**

Datum/Zone: **NAD83 / Zone17N**

Well / Borehole Completion Data	Depth (m) Elevation (m)	Soil / Bedrock	Soil Description	Sample Depth <i>B = Bag</i> <i>J = Jar</i> <i>V = Vial</i> <i>ST = Shelby Tube</i> Sample No. Prefix: 36257230724...
	0 0		TOPSOIL: (0-0.1 m) dark brown, dry, firm, low plasticity. @ 0-0.1 m trace organics.	0.5-1.0 m (#008) 2J/2V
			SILT: (0.1-0.5 m) trace sand (fine to medium grained), brown, dry, firm, low plasticity.	
			SILT: (0.5-1.0 m) trace sand (fine to medium grained), brown, dry, firm, low plasticity.	1.0-1.5 m (#009) 2J/2V
	-1 -1		SILT: (1.0-1.5 m) trace sand (fine to medium grained), bright brown, moist, firm, low plasticity.	
			SILT: (1.5-2.0 m) trace sand (fine to medium grained), bright brown, moist, firm, low plasticity.	2.0-2.5 m (#010) 2J/2V
	-2 -2		SILT: (2.0-2.5 m) trace sand (fine to medium grained), bright brown, moist, firm, low plasticity.	
			Bottom of Hole	
	-3 -3			
	-4 -4			
	-5 -5			

NOTE: Samples: S1 S2 S3

Borehole Log - USC

Project/Site: **36257**

Well/borehole #: **23-BH5**

Client: **The Regional Municipality of York**

Logged By: **Z. Barth/A. Soutani**

Compiled By: **B. Dang**

Driller: **Strada**

Drill Equipment: **Direct Push**

Start Time: **Jul 24 2023 14:35**

Finish Time: **Jul 24 2023 15:00**

Top of Casing: **--**

Ground Elev: **--**

Top / Base of Sand Pack: **--**

Screened Interval: **--**

Slot Size: **--**

Total Depth: **2.5 m**

Boring Diameter: **0.05 m**

Casing Diameter: **--**



Legal Location: **2960 & 2980 Teston Road, Vaughan, ON**

Relative Location: **Teston Rd**

Northing: **4858345**

Easting: **617305**

Datum/Zone: **NAD83 / Zone17N**

Well / Borehole Completion Data	Depth (m) Elevation (m)	Soil / Bedrock	Soil Description	Sample Depth <i>B = Bag</i> <i>J = Jar</i> <i>V = Vial</i> <i>ST = Shelby Tube</i> Sample No. Prefix: 36257230724...
	0 0		TOPSOIL: (0-0.1 m) dark brown, dry, firm, low plasticity. @ 0-0.1 m trace organics. SILT: (0.1-0.6 m) trace sand (fine to medium grained), brown, dry, firm, low plasticity.	0.5-1.0 m (#011) 2J/2V
	-1 -1		SILT: (0.6-1.1 m) trace sand (fine to medium grained), brown, dry, firm, low plasticity.	1.0-1.5 m (#012) 2J/2V
			SILT: (1.1-1.5 m) trace sand (fine to medium grained), bright brown, moist, firm, low plasticity.	
			SILT: (1.5-2.0 m) trace sand (fine to medium grained), bright brown, moist, firm, low plasticity.	
	-2 -2		SILT: (2.0-2.5 m) trace sand (fine to medium grained), bright brown, moist, firm, low plasticity.	2.0-2.5 m (#013) 2J/2V
			Bottom of Hole	
	-3 -3			
	-4 -4			
	-5 -5			

NOTE: Samples: S1 S2 S3

Borehole Log - USC

Project/Site: **36257**

Well/borehole #: **23-BH6**

Client: **The Regional Municipality of York**

Logged By: **Z. Barth/A. Soutani**

Compiled By: **B. Dang**

Driller: **Strada**

Drill Equipment: **Direct Push**

Start Time: **Jul 24 2023 15:05**

Finish Time: **Jul 24 2023 15:30**

Top of Casing: **--**

Ground Elev: **--**

Top / Base of Sand Pack: **--**

Screened Interval: **--**

Slot Size: **--**

Total Depth: **1.0 m**

Boring Diameter: **0.05 m**

Casing Diameter: **--**


Legal Location: **2960 & 2980 Teston Road, Vaughan, ON**

Relative Location: **Teston Rd**

Northing: **4858357**

Easting: **617306**

Datum/Zone: **NAD83 / Zone17N**

Well / Borehole Completion Data	Depth (m) Elevation (m)	Soil / Bedrock	Soil Description	Sample Depth <i>B = Bag</i> <i>J = Jar</i> <i>V = Vial</i> <i>ST = Shelby Tube</i> Sample No. Prefix: 36257230724...
	0 0		ASPHALT: (0-0.1 m)	0.1-1.0 m (#014) 2J/2V
			SILT: (0.1-0.5 m) trace sand (fine to medium grained), brown, dry, firm, low plasticity.	
			SILT: (0.5-1.0 m) trace sand (fine to medium grained), brown, moist, firm, low plasticity.	
	-1 -1		Bottom of Hole	
	-2 -2			
	-3 -3			
	-4 -4			
	-5 -5			

NOTE: Sample: S1

Borehole Log - USC

Project/Site: **36257**

Well/borehole #: **23-BH7**

Client: **The Regional Municipality of York**

Logged By: **Z. Barth/A. Soutani**

Compiled By: **B. Dang**

Driller: **Strada**

Drill Equipment: **Direct Push**

Start Time: **Jul 24 2023 15:35**

Finish Time: **Jul 24 2023 15:55**

Top of Casing: --

Ground Elev: --

Top / Base of Sand Pack: --

Screened Interval: --

Slot Size: --

Total Depth: **1.0 m**

Boring Diameter: **0.05 m**

Casing Diameter: --





Legal Location: **2960 & 2980 Teston Road, Vaughan, ON**

Relative Location: **Teston Rd**

Northing: **4858369**

Easting: **617322**

Datum/Zone: **NAD83 / Zone17N**

Well / Borehole Completion Data	Depth (m) Elevation (m)	Soil / Bedrock	Soil Description	Sample Depth <i>B = Bag</i> <i>J = Jar</i> <i>V = Vial</i> <i>ST = Shelby Tube</i> Sample No. Prefix: 36257230724...
	0 0		ASPHALT: (0-0.1 m)	0-0.5 m (#015) 2J/2V
			SILT: (0.1-0.5 m) trace clay, brown, dry, firm, low plasticity.	
			SILT: (0.5-1.0 m) trace clay, dark brown, dry, firm, low plasticity.	
	-1 -1		Bottom of Hole	
	-2 -2			
	-3 -3			
	-4 -4			
	-5 -5			

NOTE: Sample: S1

Borehole Log - USC

Project/Site: **36257**

Well/borehole #: **23-BH8**

Client: **The Regional Municipality of York**

Logged By: **Z. Barth/A. Soutani**

Compiled By: **B. Dang**

Driller: **Strada**

Drill Equipment: **Direct Push**

Start Time: **Jul 24 2023 16:00**

Finish Time: **Jul 24 2023 16:20**

Top of Casing: **--**

Ground Elev: **--**

Top / Base of Sand Pack: **--**

Screened Interval: **--**

Slot Size: **--**

Total Depth: **1.0 m**

Boring Diameter: **0.05 m**

Casing Diameter: **--**


Legal Location: **2960 & 2980 Teston Road, Vaughan, ON**

Relative Location: **Teston Rd**

Northing: **4858348**

Easting: **617323**

Datum/Zone: **NAD83 / Zone17N**

Well / Borehole Completion Data	Depth (m) Elevation (m)	Soil / Bedrock	Soil Description	Sample Depth <i>B = Bag</i> <i>J = Jar</i> <i>V = Vial</i> <i>ST = Shelby Tube</i> Sample No. Prefix: 36257230724...
	0 0		ASPHALT: (0-0.1 m)	0.1-1.0 m (#016) 2J/2V
			SILT: (0.1-0.5 m) trace sand (fine to medium grained), brown, dry, firm, low plasticity.	
			SILT: (0.5-1.0 m) trace sand (fine to medium grained), brown, dry, firm, low plasticity.	
	-1 -1		Bottom of Hole	
	-2 -2			
	-3 -3			
	-4 -4			
	-5 -5			

NOTE: **--**

APPENDIX D

Summary of Analytical Results

O. Reg 406 - Excess Soil - Full Depth - Res/Park/Ins/Ind/Comm - Table 1

[illegible]

Document Control:	
Client Name:	XS Soil Solutions Inc.
Contact Name:	Karim Hosny
Date Received:	2023-07-24
Date Reported:	2023-07-24

Guideline 0. Reg 406 - Excess Soil - Full Depth - Res/Park/Ins/Ind/Comm - Table 1

eurofins	Environment Testing	Eurofins Sample # Client Sample ID Sample Date Sample Matrix Guideline Limit	Units	1696460 BH1-S1 2023-07-24 Soil153	1696461 BH2-S1 2023-07-24 Soil153	1696462 BH3-S1 2023-07-24 Soil153	1696463 BH3-S2 2023-07-24 Soil153	1696464 BH4-S3 2023-07-24 Soil153	1696465 BH4-S1 2023-07-24 Soil153	1696466 BH4-S2 2023-07-24 Soil153	1696467 BH4-S3 2023-07-24 Soil153	1696468 BH5-S1 2023-07-24 Soil153	1696469 BH5-S2 2023-07-24 Soil153	1696470 BH5-S3 2023-07-24 Soil153	1696471 BH6-S1 2023-07-24 Soil153	1696472 BH7-S1 TOPSOIL 2023-07-24 Soil153	1696473 BH6-S1 2023-07-24 Soil153	1696474 DUP-1 2023-07-24 Soil153		
Analyte Name																				
1+ 2-Methylnaphthalene				0.59	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	
1,2,4-Trichlorobenzene				0.05	ug/g															
2,4 + 2,6-Dinitrotoluene				0.5	ug/g															
2,4,5-Trichlorophenol				0.1	ug/g															
2,4,6-Trichlorophenol				0.1	ug/g															
2,4-Dichlorophenol				0.1	ug/g															
2,4-Dimethylphenol				0.2	ug/g															
2,4-Dinitrophenol				2	ug/g															
2-Chlorophenol				0.1	ug/g															
3,3'-Dichlorobenzidine				1	ug/g															
4-Chloroaniline				0.5	ug/g															
Acenaphthene				0.072	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Acenaphthylene				0.093	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	
Anthracene				0.16	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.08	<0.05	0.07	<0.05
Benzo(a)anthracene				0.36	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.38	0.22	0.21	<0.05
Benzo(a)pyrene				0.3	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.41	<0.05	0.14	<0.05
Benzo(b)fluoranthene				0.47	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.25	<0.05	0.17	<0.05
Benzo(g,h,i)perylene				0.68	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.23	<0.05	0.07	<0.05
Benzo(k)fluoranthene				0.48	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.22	<0.05	0.14	<0.05
Biphenyl				0.05	ug/g															
Bis(2-chloroethyl)ether				0.5	ug/g															
Bis(2-chloroisopropyl)ether				0.5	ug/g															
Bis(2-ethylhexyl)phthalate				5	ug/g															
Chrysene				2.8	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.26	0.05	0.11	<0.05
Dibenz(a,h)anthracene				0.1	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	<0.05	<0.05	<0.05
Diethyl phthalate				0.5	ug/g															
Dimethyl phthalate				0.5	ug/g															
Fluoranthene				0.56	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.09	0.05	0.11	<0.05
Fluorene				0.12	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene				0.23	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.22	<0.05	0.11	<0.05
Methylnaphthalene, 1-				0.59	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methylnaphthalene, 2-				0.59	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05
Naphthalene				0.09	ug/g	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	0.020	0.020	0.020	<0.013	<0.013
Pentachlorophenol				0.1	ug/g															
Phenanthrene				0.69	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.09	<0.05	0.07	<0.05
Phenol				0.5	ug/g															
Pyrene				1	ug/g	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.16	<0.05	0.11	<0.05


Document Control:	
Client Name:	XS Soil Solutions Inc.
Contact Name:	Karim Hosny
Date Received:	2023-07-24
Date Reported:	2023-07-24

Guideline O_Reg 406 - Excess Soil - Full Depth - Res/Park/Ins/Ind/Comm - Table 1

Analyte Name	Eurofins Sample # Client Sample ID Sample Date Sample Matrix Guideline Limit	Units	1696460	1696461	1696462	1696463	1696464	1696465	1696466	1696467	1696468	1696469	1696470	1696471	1696472	1696473	1696474
			BH1-S1 2023-07-24 Soil153	BH2-S1 2023-07-24 Soil153	BH3-S1 2023-07-24 Soil153	BH3-S2 2023-07-24 Soil153	BH3-S3 2023-07-24 Soil153	BH4-S1 2023-07-24 Soil153	BH4-S2 2023-07-24 Soil153	BH4-S3 2023-07-24 Soil153	BH5-S1 2023-07-24 Soil153	BH5-S2 2023-07-24 Soil153	BH5-S3 2023-07-24 Soil153	BH6-S1 2023-07-24 Soil153	BH7-S1 TOPSOIL 2023-07-24 Soil153	BH6-S1 2023-07-24 Soil153	DUP-1 2023-07-24 Soil153
Antimony	13	ug/g	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Arsenic	18	ug/g	3	3	4	3	3	4	3	3	4	3	3	3	3	3	3
Barium	220	ug/g	45	40	45	44	42	71	58	37	57	41	41	53	49	104	50
Beryllium	2.5	ug/g	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Boron	36	ug/g	6	<5	<5	<5	5	6	5	<5	5	6	<5	5	5	10	8
Boron (Hot Water Soluble)		ug/g	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Cadmium	1.2	ug/g	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Chloride																	
Chromium	70	ug/g	18	17	22	20	18	26	23	16	24	19	18	16	41	29	21
Cobalt	21	ug/g	8	7	9	8	7	9	8	6	9	8	8	6	7	8	8
Copper	92	ug/g	17	17	22	18	16	22	18	18	20	18	16	16	16	20	16
Cyanide (Free)	0.051	ug/g	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Conductivity																	
Electrical Conductivity	0.57	mS/cm	0.18	0.14	0.20	0.29	0.18	0.13	0.17	0.14	0.16	0.16	0.38	0.46	0.30	0.42	0.15
Hexavalent Chromium	0.66	ug/g	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Lead	120	ug/g	8	6	9	7	6	8	8	5	8	7	6	18	14	7	6
Mercury	0.27	ug/g	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Molybdenum	2	ug/g	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Nickel	82	ug/g	17	16	19	18	16	21	19	14	20	16	18	14	24	19	18
pH																	
pH-CaCl2			7.94	7.87	7.79	7.82	7.88	7.77	7.83	7.82	7.74	7.92	7.85	7.76	7.85	7.71	7.84
Selenium	1.5	ug/g	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Silver	0.5	ug/g	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Sodium																	
Sodium Absorption Ratio (SAR)	2.4		0.69	1.17	1.07	0.59	0.51	0.63	0.95	0.34	1.21	0.90	2.39	7.43	2.45	1.19	0.43
Thallium	1	ug/g	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Uranium	2.5	ug/g	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5
Vanadium	86	ug/g	26	25	30	27	24	32	28	24	31	26	24	24	27	34	28
Zinc	290	ug/g	36	34	43	35	32	42	38	30	42	39	33	55	80	42	36

Document Control:	
Client Name:	XS Soil Solutions Inc.
Contact Name:	Karim Hosny
Date Received:	2023-10-05
Date Reported:	2023-10-05

Guideline O. Reg 406 - Excess Soil - Full Depth - Res/Park/Ins/Ind/Comm - Table 1


 Environment Testing	Eurofins Sample #		1705513	1705514
	Client Sample ID		BH6-S1A	BH6-S1B
Analyte Name	Sample Date		2023-10-05	2023-10-05
	Sample Matrix		Soil153	Soil153
	Guideline Limit	Units		
Benzene	0.02	ug/g		
Ethylbenzene	0.05	ug/g		
F1 (C6 to C10)	25	ug/g	<10	<10
F1-BTEX	25	ug/g		
F2 (C10 to C16)	10	ug/g	<2	<2
F3 (C16 to C34)	240	ug/g	<20	<20
F4 (C34 to C50)	120	ug/g	<20	<20
F4 (Gravimetric)	120	ug/g		
Toluene	0.2	ug/g		
Xylene (Total)	0.05	ug/g		
Xylene, m/p-				
Xylene, o-				

Document Control:	
Client Name:	XS Soil Solutions Inc.
Contact Name:	Karim Hosny
Date Received:	2023-10-05
Date Reported:	2023-10-05

Guideline O. Reg 406 - Excess Soil - Full Depth - Res/Park/Ins/Ind/Comm - Table 1

<div><div><div>eurofins</div><div>Environment Testing</div></div></div>	Eurofins Sample #		1705513	1705514				
	Client Sample ID		BH6-S1A	BH6-S1B				
Analyte Name	Sample Date		2023-10-05	2023-10-05				
	Sample Matrix	Units	Soil153	Soil153				
	Guideline Limit							
1 + 2-Methylnaphthalene	0.59	ug/g	<0.05	<0.05				
1,2,4-Trichlorobenzene	0.05	ug/g						
2,4 + 2,6-Dinitrotoluene	0.5	ug/g						
2,4,5-Trichlorophenol	0.1	ug/g						
2,4,6-Trichlorophenol	0.1	ug/g						
2,4-Dichlorophenol	0.1	ug/g						
2,4-Dimethylphenol	0.2	ug/g						
2,4-Dinitrophenol	2	ug/g						
2-Chlorophenol	0.1	ug/g						
3,3'-Dichlorobenzidine	1	ug/g						
4-Chloroaniline	0.5	ug/g						
Acenaphthene	0.072	ug/g	<0.05	<0.05				
Acenaphthylene	0.093	ug/g	<0.05	<0.05				
Anthracene	0.16	ug/g	<0.05	<0.05				
Benzo(a)anthracene	0.36	ug/g	<0.05	<0.05				
Benzo(a)pyrene	0.3	ug/g	<0.05	<0.05				
Benzo(b)fluoranthene	0.47	ug/g	<0.05	<0.05				
Benzo(g,h,i)perylene	0.68	ug/g	<0.05	<0.05				
Benzo(k)fluoranthene	0.48	ug/g	<0.05	<0.05				
Biphenyl	0.05	ug/g						
Bis(2-chloroethyl)ether	0.5	ug/g						
Bis(2-chloroisopropyl)ether	0.5	ug/g						
Bis(2-ethylhexyl)phthalate	5	ug/g						
Chrysene	2.8	ug/g	<0.05	<0.05				
Dibenzo(a,h)anthracene	0.1	ug/g	<0.05	<0.05				
Diethyl phthalate	0.5	ug/g						
Dimethyl phthalate	0.5	ug/g						
Fluoranthene	0.56	ug/g	<0.05	<0.05				
Fluorene	0.12	ug/g	<0.05	<0.05				
Indeno(1,2,3-c,d)pyrene	0.23	ug/g	<0.05	<0.05				
Methylnapthalene, 1-	0.59	ug/g	<0.05	<0.05				
Methylnapthalene, 2-	0.59	ug/g	<0.05	<0.05				
Naphthalene	0.09	ug/g	<0.013	<0.013				
Pentachlorophenol	0.1	ug/g						
Phenanthrene	0.69	ug/g	<0.05	<0.05				
Phenol	0.5	ug/g						
Pyrene	1	ug/g	<0.05	<0.05				

SPLP - Metals

Guideline		O. Reg 406 - Excess Soil - Leachate - Agri/Other - Table 1				
 Environment Testing	Eurofins Sample #		1698189	1696476	1696477	1696478
	Client Sample ID		SPLP-1	SPLP-2	SPLP-3	SPLP-4
	Sample Date		2023-07-24	2023-07-24	2023-07-24	2023-07-24
	Sample Matrix		SPLP	SPLP	SPLP	SPLP
Analyte Name	Guideline Limit	Units				
Antimony	6	ug/L	4.2	0.8	0.6	0.5
Arsenic						
Barium		ug/L	30	60	20	10
Beryllium		ug/L	<0.5	<0.5	<0.5	<0.5
Boron		ug/L	90	40	30	20
Boron (Hot Water Soluble)						
Cadmium		ug/L	<0.1	<0.1	<0.1	<0.1
Chloride						
Chromium		ug/L	<1	2	1	1
Cobalt		ug/L	<0.2	<0.2	<0.2	<0.2
Copper		ug/L	3	<1	<1	<1
Cyanide (Free)						
Conductivity						
Electrical Conductivity						
Hexavalent Chromium						
Lead						
Mercury						
Molybdenum	23	ug/L	<5	<5	<5	<5
Nickel		ug/L	<5	<5	<5	<5
pH						
pH-CaCl2						
Selenium		ug/L	<1	<1	<1	<1
Silver	0.3	ug/L	<0.1	0.2	0.1	<0.1
Sodium						
Sodium Absorption Ratio (SAR)						
Thallium	2	ug/L	<0.1	<0.1	<0.1	<0.1
Uranium		ug/L	<1	<1	<1	<1
Vanadium						
Zinc		ug/L	<10	10	<10	<10

APPENDIX E

Laboratory Certificates of Analysis

Client: XS Soil Solutions Inc.
72-700 Third Line
Oakville, Ontario
L6L 4B1
Attention: Karim Hosny
Invoice to: XS Soil Solutions Inc.
PO#:

Report Number: 1999525
Date Submitted: 2023-07-24
Date Reported: 2023-07-31
Project: 2960 Teston Rd
COC #: 223082
Temperature (C): 5
Custody Seal:

Page 1 of 25

Dear Karim Hosny:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Sample Comment Summary

Sample ID: 1696471 BH6-S1	The result for F4 (C34-C50) gravimetric must be substituted if it is greater than the result for F4 (C34-C50). Sample was cleaned with silica gel.
---------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------

Report Comments:

Raheleh Zafari, Environmental Chemist

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated

Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <https://directory.cala.ca/>

Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

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Project: 2960 Teston Rd
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Excess Soil-T1-Ag and Other

Exceedence Summary

Sample I.D.	Analyte	Result	Units	Criteria
Hydrocarbons				
BH6-S1	Petroleum Hydrocarbons F4	450	ug/g	STD 120
Inorganics				
BH2-S1	Sodium Adsorption Ratio	1.17		STD 1
BH3-S1	Sodium Adsorption Ratio	1.07		STD 1
BH5-S1	Sodium Adsorption Ratio	1.21		STD 1
BH5-S3	Sodium Adsorption Ratio	2.39		STD 1
BH6-S1	Sodium Adsorption Ratio	7.43		STD 1
BH7-S1 TOPSOIL	Sodium Adsorption Ratio	2.45		STD 1
BH8-S1	Sodium Adsorption Ratio	1.19		STD 1
PAH				
BH6-S1	1+2-methylnaphthalene	0.06	ug/g	STD 0.05
BH6-S1	Anthracene	0.08	ug/g	STD 0.05
BH6-S1	Benz[a]anthracene	0.38	ug/g	STD 0.095
BH6-S1	Benzo[a]pyrene	0.41	ug/g	STD 0.05
BH6-S1	Benzo[ghi]perylene	0.23	ug/g	STD 0.2
BH6-S1	Benzo[k]fluoranthene	0.22	ug/g	STD 0.05
BH6-S1	Chrysene	0.26	ug/g	STD 0.18
BH6-S1	Indeno[1 2 3-cd]pyrene	0.22	ug/g	STD 0.11
BH7-S1 TOPSOIL	Benz[a]anthracene	0.22	ug/g	STD 0.095
BH8-S1	Anthracene	0.07	ug/g	STD 0.05
BH8-S1	Benz[a]anthracene	0.21	ug/g	STD 0.095
BH8-S1	Benzo[a]pyrene	0.14	ug/g	STD 0.05
BH8-S1	Benzo[k]fluoranthene	0.14	ug/g	STD 0.05

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

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Date Submitted: 2023-07-24
Date Reported: 2023-07-31
Project: 2960 Teston Rd
COC #: 223082

Guideline = Excess Soil-T1-Ag and Other

Hydrocarbons

Analyte	Batch No	MRL	Units	Guideline	<div> <div>Lab I.D.</div> <div>Sample Matrix</div> <div>Sample Type</div> <div>Sample Date</div> <div>Sampling Time</div> <div>Sample I.D.</div> </div>				
					1696460 Soil153	1696461 Soil153	1696462 Soil153	1696463 Soil153	1696464 Soil153
					2023-07-24 11:30 BH1-S1	2023-07-24 11:30 BH2-S1	2023-07-24 11:30 BH3-S1	2023-07-24 11:30 BH3-S2	2023-07-24 11:30 BH3-S3
PHC's F1	446149	10	ug/g	STD 17	<10	<10	<10	<10	<10
PHC's F1-BTEX	446330	10	ug/g		<10	<10	<10	<10	<10
PHC's F2	446156	2	ug/g	STD 10	<2				
	446199	2	ug/g	STD 10		<2	<2	2	
	446205	2	ug/g	STD 10					3
PHC's F2-Napth	446176	2	ug/g		<2				
	446265	2	ug/g			<2	<2	2	3
PHC's F3	446156	20	ug/g	STD 240	<20				
	446199	20	ug/g	STD 240		<20	<20	20	
	446205	20	ug/g	STD 240					<20
PHC's F3-PAH	446177	20	ug/g		<20				
	446268	20	ug/g			<20	<20	20	<20
PHC's F4	446156	20	ug/g	STD 120	<20				
	446199	20	ug/g	STD 120		20	<20	20	
	446205	20	ug/g	STD 120					<20

Results relate only to the parameters tested on the samples submitted.
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MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: XS Soil Solutions Inc.
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COC #: 223082

Guideline = Excess Soil-T1-Ag and Other

Hydrocarbons

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Sample I.D.	1696465 Soil153 2023-07-24 11:30 BH4-S1	1696466 Soil153 2023-07-24 11:30 BH4-S2	1696467 Soil153 2023-07-24 11:30 BH4-S3	1696468 Soil153 2023-07-24 11:30 BH5-S1	1696469 Soil153 2023-07-24 11:30 BH5-S2
PHC's F1	446149	10	ug/g	STD 17		<10	<10	<10	<10	<10
PHC's F1-BTEX	446330	10	ug/g			<10	<10	<10	<10	<10
PHC's F2	446199	2	ug/g	STD 10			<2			
	446205	2	ug/g	STD 10		<2		<2	<2	<2
PHC's F2-Naph	446265	2	ug/g			<2	<2	<2	<2	<2
PHC's F3	446199	20	ug/g	STD 240			<20			
	446205	20	ug/g	STD 240		<20		<20	<20	<20
PHC's F3-PAH	446268	20	ug/g			<20	<20	<20	<20	<20
PHC's F4	446199	20	ug/g	STD 120			<20			
	446205	20	ug/g	STD 120		<20		<20	<20	<20

Hydrocarbons

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Sample I.D.	1696470 Soil153 2023-07-24 11:30 BH5-S3	1696471 Soil153 2023-07-24 11:30 BH6-S1	1696472 Soil153 2023-07-24 11:30 BH7-S1 TOPSOIL	1696473 Soil153 2023-07-24 11:30 BH8-S1	1696474 Soil153 2023-07-24 11:30 DUP-1
PHC's F1	446149	10	ug/g	STD 17		<10	<10	<10	<10	<10
PHC's F1-BTEX	446330	10	ug/g			<10	<10	<10	<10	<10
PHC's F2	446205	2	ug/g	STD 10		<2	<2	2	<2	<2
PHC's F2-Naph	446265	2	ug/g			<2	<2	2	<2	<2
PHC's F3	446205	20	ug/g	STD 240		<20	130	20	40	<20
PHC's F3-PAH	446268	20	ug/g			<20	130	20	40	<20
PHC's F4	446205	20	ug/g	STD 120		<20	450*	20	100	<20
PHC's F4g	446349	100	ug/g				1300			

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MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

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Oakville, Ontario
L6L 4B1
Attention: Karim Hosny
PO#:
Invoice to: XS Soil Solutions Inc.

Report Number: 1999525
Date Submitted: 2023-07-24
Date Reported: 2023-07-31
Project: 2960 Teston Rd
COC #: 223082

Guideline = Excess Soil-T1-Ag and Other

Metals

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Sample I.D.				
					1696460 Soil153	1696461 Soil153	1696462 Soil153	1696463 Soil153	1696464 Soil153
					2023-07-24 11:30 BH1-S1	2023-07-24 11:30 BH2-S1	2023-07-24 11:30 BH3-S1	2023-07-24 11:30 BH3-S2	2023-07-24 11:30 BH3-S3
Antimony	446241	1	ug/g	STD 1	<1	<1	<1	<1	<1
Arsenic	446241	1	ug/g	STD 11	3	3	4	3	3
Barium	446241	1	ug/g	STD 210	45	40	45	44	42
Beryllium	446241	1	ug/g	STD 2.5	<1	<1	<1	<1	<1
Boron (Hot Water Soluble)	446243	0.5	ug/g	STD N/A	<0.5	<0.5	<0.5	<0.5	<0.5
Boron (total)	446241	5	ug/g	STD 36	6	<5	<5	<5	5
Cadmium	446241	0.4	ug/g	STD 1	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium Total	446241	1	ug/g	STD 67	18	17	22	20	18
Chromium VI	446342	0.20	ug/g	STD 0.66	<0.20	<0.20	<0.20	<0.20	<0.20
Cobalt	446241	1	ug/g	STD 19	8	7	9	8	7
Copper	446241	1	ug/g	STD 62	17	17	22	18	16
Lead	446241	1	ug/g	STD 45	8	6	9	7	6
Mercury	446241	0.1	ug/g	STD 0.16	<0.1	<0.1	<0.1	<0.1	<0.1
Molybdenum	446241	1	ug/g	STD 2	<1	<1	<1	<1	<1
Nickel	446241	1	ug/g	STD 37	17	16	19	18	16
Selenium	446241	0.5	ug/g	STD 1.2	<0.5	<0.5	<0.5	<0.5	<0.5
Silver	446241	0.2	ug/g	STD 0.5	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium	446241	1	ug/g	STD 1	<1	<1	<1	<1	<1
Uranium	446241	0.5	ug/g	STD 1.9	<0.5	<0.5	<0.5	<0.5	<0.5
Vanadium	446241	2	ug/g	STD 86	26	25	30	27	24
Zinc	446241	2	ug/g	STD 290	36	34	43	35	32

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MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: XS Soil Solutions Inc.
72-700 Third Line
Oakville, Ontario
L6L 4B1
Attention: Karim Hosny
PO#:
Invoice to: XS Soil Solutions Inc.

Report Number: 1999525
Date Submitted: 2023-07-24
Date Reported: 2023-07-31
Project: 2960 Teston Rd
COC #: 223082

Guideline = Excess Soil-T1-Ag and Other

Metals

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sample Date	Sampling Time	Sample I.D.
					1696465	1696466	1696467	1696468	1696469	1696469
					Soil153	Soil153	Soil153	Soil153	Soil153	Soil153
					2023-07-24	2023-07-24	2023-07-24	2023-07-24	2023-07-24	2023-07-24
					11:30	11:30	11:30	11:30	11:30	11:30
					BH4-S1	BH4-S2	BH4-S3	BH5-S1	BH5-S2	BH5-S2
Antimony	446241	1	ug/g	STD 1	<1	<1	<1	<1	<1	<1
Arsenic	446241	1	ug/g	STD 11	4	3	3	4	3	3
Barium	446241	1	ug/g	STD 210	71	58	37	57	41	41
Beryllium	446241	1	ug/g	STD 2.5	<1	<1	<1	<1	<1	<1
Boron (Hot Water Soluble)	446243	0.5	ug/g	STD N/A	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Boron (total)	446241	5	ug/g	STD 36	6	6	<5	5	6	6
Cadmium	446241	0.4	ug/g	STD 1	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium Total	446241	1	ug/g	STD 67	26	23	16	24	19	19
Chromium VI	446342	0.20	ug/g	STD 0.66	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Cobalt	446241	1	ug/g	STD 19	9	8	6	9	8	8
Copper	446241	1	ug/g	STD 62	22	18	18	20	18	18
Lead	446241	1	ug/g	STD 45	8	8	5	8	7	7
Mercury	446241	0.1	ug/g	STD 0.16	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Molybdenum	446241	1	ug/g	STD 2	<1	<1	<1	<1	<1	<1
Nickel	446241	1	ug/g	STD 37	21	19	14	20	16	16
Selenium	446241	0.5	ug/g	STD 1.2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Silver	446241	0.2	ug/g	STD 0.5	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium	446241	1	ug/g	STD 1	<1	<1	<1	<1	<1	<1
Uranium	446241	0.5	ug/g	STD 1.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Vanadium	446241	2	ug/g	STD 86	32	28	24	31	26	26
Zinc	446241	2	ug/g	STD 290	42	38	30	42	39	39

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Guideline = Excess Soil-T1-Ag and Other

Metals

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Sample I.D.				
					1696470 Soil153	1696471 Soil153	1696472 Soil153	1696473 Soil153	1696474 Soil153
					2023-07-24 11:30 BH5-S3	2023-07-24 11:30 BH6-S1	2023-07-24 11:30 BH7-S1 TOPSOIL	2023-07-24 11:30 BH8-S1	2023-07-24 11:30 DUP-1
Antimony	446241	1	ug/g	STD 1	<1	<1	<1	<1	<1
Arsenic	446241	1	ug/g	STD 11	3	3	3	3	3
Barium	446241	1	ug/g	STD 210	41	53	49	104	50
Beryllium	446241	1	ug/g	STD 2.5	<1	<1	<1	<1	<1
Boron (Hot Water Soluble)	446243	0.5	ug/g	STD N/A	<0.5	<0.5	<0.5	<0.5	<0.5
Boron (total)	446241	5	ug/g	STD 36	<5	5	5	10	8
Cadmium	446241	0.4	ug/g	STD 1	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium Total	446241	1	ug/g	STD 67	18	16	41	29	21
Chromium VI	446342	0.20	ug/g	STD 0.66	<0.20	<0.20	<0.20	<0.20	<0.20
Cobalt	446241	1	ug/g	STD 19	8	6	7	8	8
Copper	446241	1	ug/g	STD 62	16	18	16	20	16
Lead	446241	1	ug/g	STD 45	6	18	14	7	6
Mercury	446241	0.1	ug/g	STD 0.16	<0.1	<0.1	<0.1	<0.1	<0.1
Molybdenum	446241	1	ug/g	STD 2	<1	<1	<1	<1	<1
Nickel	446241	1	ug/g	STD 37	18	14	24	19	18
Selenium	446241	0.5	ug/g	STD 1.2	0.5	<0.5	<0.5	<0.5	<0.5
Silver	446241	0.2	ug/g	STD 0.5	<0.2	<0.2	<0.2	<0.2	<0.2
Thallium	446241	1	ug/g	STD 1	<1	<1	<1	<1	<1
Uranium	446241	0.5	ug/g	STD 1.9	0.5	<0.5	<0.5	<0.5	<0.5
Vanadium	446241	2	ug/g	STD 86	24	24	27	34	28
Zinc	446241	2	ug/g	STD 290	33	55	80	42	36

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COC #: 223082

Guideline = Excess Soil-T1-Ag and Other

PAH

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Sample I.D.				
					1696460 Soil153	1696461 Soil153	1696462 Soil153	1696463 Soil153	1696464 Soil153
					2023-07-24 11:30 BH1-S1	2023-07-24 11:30 BH2-S1	2023-07-24 11:30 BH3-S1	2023-07-24 11:30 BH3-S2	2023-07-24 11:30 BH3-S3
1+2-methylnaphthalene	446283	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	446140	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	446140	0.05	ug/g	STD 0.093	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	446140	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benz[a]anthracene	446140	0.05	ug/g	STD 0.095	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[a]pyrene	446140	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[b]fluoranthene	446140	0.05	ug/g	STD 0.3	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[ghi]perylene	446140	0.05	ug/g	STD 0.2	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[k]fluoranthene	446140	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	446140	0.05	ug/g	STD 0.18	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz[a h]anthracene	446140	0.05	ug/g	STD 0.1	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	446140	0.05	ug/g	STD 0.24	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	446140	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno[1 2 3-cd]pyrene	446140	0.05	ug/g	STD 0.11	<0.05	<0.05	<0.05	<0.05	<0.05
Methylnaphthalene, 1-	446140	0.05	ug/g		<0.05	<0.05	<0.05	<0.05	<0.05
Methylnaphthalene, 2-	446140	0.05	ug/g		<0.05	<0.05	<0.05	<0.05	<0.05
Naphthalene	446140	0.013	ug/g	STD 0.05	<0.013	<0.013	<0.013	<0.013	<0.013
Phenanthrene	446140	0.05	ug/g	STD 0.19	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	446140	0.05	ug/g	STD 0.19	<0.05	<0.05	<0.05	<0.05	<0.05

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Date Reported: 2023-07-31
Project: 2960 Teston Rd
COC #: 223082

Guideline = Excess Soil-T1-Ag and Other

PAH

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Sample I.D.				
					1696465 Soil153	1696466 Soil153	1696467 Soil153	1696468 Soil153	1696469 Soil153
					2023-07-24 11:30 BH4-S1	2023-07-24 11:30 BH4-S2	2023-07-24 11:30 BH4-S3	2023-07-24 11:30 BH5-S1	2023-07-24 11:30 BH5-S2
1+2-methylnaphthalene	446283	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthene	446140	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	446140	0.05	ug/g	STD 0.093	0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	446140	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benz[a]anthracene	446140	0.05	ug/g	STD 0.095	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[a]pyrene	446140	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[b]fluoranthene	446140	0.05	ug/g	STD 0.3	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[ghi]perylene	446140	0.05	ug/g	STD 0.2	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo[k]fluoranthene	446140	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chrysene	446140	0.05	ug/g	STD 0.18	<0.05	<0.05	<0.05	<0.05	<0.05
Dibenz[a h]anthracene	446140	0.05	ug/g	STD 0.1	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	446140	0.05	ug/g	STD 0.24	<0.05	<0.05	<0.05	<0.05	<0.05
Fluorene	446140	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno[1 2 3-cd]pyrene	446140	0.05	ug/g	STD 0.11	<0.05	<0.05	<0.05	<0.05	<0.05
Methylnaphthalene, 1-	446140	0.05	ug/g		<0.05	<0.05	<0.05	<0.05	<0.05
Methylnaphthalene, 2-	446140	0.05	ug/g		<0.05	<0.05	<0.05	<0.05	<0.05
Naphthalene	446140	0.013	ug/g	STD 0.05	<0.013	<0.013	<0.013	<0.013	<0.013
Phenanthrene	446140	0.05	ug/g	STD 0.19	<0.05	<0.05	<0.05	<0.05	<0.05
Pyrene	446140	0.05	ug/g	STD 0.19	<0.05	<0.05	<0.05	<0.05	<0.05

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COC #: 223082

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PAH

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Sample I.D.				
					1696470 Soil153	1696471 Soil153	1696472 Soil153	1696473 Soil153	1696474 Soil153
					2023-07-24 11:30 BH5-S3	2023-07-24 11:30 BH6-S1	2023-07-24 11:30 BH7-S1 TOPSOIL	2023-07-24 11:30 BH8-S1	2023-07-24 11:30 DUP-1
1+2-methylnaphthalene	446283	0.05	ug/g	STD 0.05	<0.05	0.06*	<0.05	<0.05	<0.05
Acenaphthene	446140	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Acenaphthylene	446140	0.05	ug/g	STD 0.093	<0.05	<0.05	<0.05	<0.05	<0.05
Anthracene	446140	0.05	ug/g	STD 0.05	<0.05	0.08*	<0.05	0.07*	<0.05
Benz[a]anthracene	446140	0.05	ug/g	STD 0.095	<0.05	0.38*	0.22*	0.21*	<0.05
Benzo[a]pyrene	446140	0.05	ug/g	STD 0.05	<0.05	0.41*	<0.05	0.14*	<0.05
Benzo[b]fluoranthene	446140	0.05	ug/g	STD 0.3	<0.05	0.25	<0.05	0.17	<0.05
Benzo[ghi]perylene	446140	0.05	ug/g	STD 0.2	<0.05	0.23*	<0.05	0.07	<0.05
Benzo[k]fluoranthene	446140	0.05	ug/g	STD 0.05	<0.05	0.22*	<0.05	0.14*	<0.05
Chrysene	446140	0.05	ug/g	STD 0.18	<0.05	0.26*	0.05	0.11	<0.05
Dibenz[a h]anthracene	446140	0.05	ug/g	STD 0.1	<0.05	<0.05	<0.05	<0.05	<0.05
Fluoranthene	446140	0.05	ug/g	STD 0.24	<0.05	0.09	0.05	0.11	<0.05
Fluorene	446140	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno[1 2 3-cd]pyrene	446140	0.05	ug/g	STD 0.11	<0.05	0.22*	<0.05	0.11	<0.05
Methylnaphthalene, 1-	446140	0.05	ug/g		<0.05	<0.05	<0.05	<0.05	<0.05
Methylnaphthalene, 2-	446140	0.05	ug/g		<0.05	0.06	<0.05	<0.05	<0.05
Naphthalene	446140	0.013	ug/g	STD 0.05	<0.013	0.020	0.020	0.020	<0.013
Phenanthrene	446140	0.05	ug/g	STD 0.19	<0.05	0.09	<0.05	0.07	<0.05
Pyrene	446140	0.05	ug/g	STD 0.19	<0.05	0.16	<0.05	0.11	<0.05

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COC #: 223082

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Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sample Date	Sampling Time	Sample I.D.
					1696460	Soil153	1696461	Soil153	1696462	Soil153
					2023-07-24	11:30	BH1-S1	2023-07-24	11:30	BH2-S1
					2023-07-24	11:30	BH3-S1	2023-07-24	11:30	BH3-S2
					2023-07-24	11:30	BH3-S3	2023-07-24	11:30	BH3-S3
Benzene	446138	0.0068	ug/g	STD 0.02	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068
Ethylbenzene	446138	0.018	ug/g	STD 0.05	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018
Toluene	446138	0.08	ug/g	STD 0.2	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Xylene Mixture	446329	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylene, m/p-	446138	0.05	ug/g		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylene, o-	446138	0.05	ug/g		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sample Date	Sampling Time	Sample I.D.
					1696465	Soil153	1696466	Soil153	1696467	Soil153
					2023-07-24	11:30	BH4-S1	2023-07-24	11:30	BH4-S2
					2023-07-24	11:30	BH4-S3	2023-07-24	11:30	BH5-S1
					2023-07-24	11:30	BH5-S2	2023-07-24	11:30	BH5-S2
Benzene	446138	0.0068	ug/g	STD 0.02	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068
Ethylbenzene	446138	0.018	ug/g	STD 0.05	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018
Toluene	446138	0.08	ug/g	STD 0.2	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08
Xylene Mixture	446329	0.05	ug/g	STD 0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylene, m/p-	446138	0.05	ug/g		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Xylene, o-	446138	0.05	ug/g		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05

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Volatiles

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sample Date	Sampling Time	Sample I.D.
					1696470	Soil153	1696471	Soil153	1696472	Soil153
					2023-07-24	11:30	2023-07-24	11:30	2023-07-24	11:30
					BH5-S3		BH6-S1		BH7-S1	
									TOPSOIL	
Benzene	446138	0.0068	ug/g	STD 0.02	<0.0068		<0.0068		<0.0068	
Ethylbenzene	446138	0.018	ug/g	STD 0.05	<0.018		<0.018		<0.018	
Toluene	446138	0.08	ug/g	STD 0.2	<0.08		<0.08		<0.08	
Xylene Mixture	446329	0.05	ug/g	STD 0.05	<0.05		<0.05		<0.05	
Xylene, m/p-	446138	0.05	ug/g		<0.05		<0.05		<0.05	
Xylene, o-	446138	0.05	ug/g		<0.05		<0.05		<0.05	

Inorganics

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sample Date	Sampling Time	Sample I.D.
					1696460	Soil153	1696461	Soil153	1696462	Soil153
					2023-07-24	11:30	2023-07-24	11:30	2023-07-24	11:30
					BH1-S1		BH2-S1		BH3-S1	
									BH3-S2	
										BH3-S3
Cyanide (CN-)	446350	0.005	ug/g	STD 0.051	<0.005		<0.005		<0.005	
Electrical Conductivity	446224	0.05	mS/cm	STD 0.47	0.18		0.14		0.20	
pH - CaCl2	446210	2.00			7.94		7.87		7.79	
Sodium Adsorption Ratio	446239	0.01		STD 1	0.69		1.17*		1.07*	

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MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: XS Soil Solutions Inc.
72-700 Third Line
Oakville, Ontario
L6L 4B1

Attention: Karim Hosny

PO#:

Invoice to: XS Soil Solutions Inc.

Report Number: 1999525
Date Submitted: 2023-07-24
Date Reported: 2023-07-31
Project: 2960 Teston Rd
COC #: 223082

Guideline = Excess Soil-T1-Ag and Other

Inorganics

Guideline = Excess Soil-T1-Ag and Other									
Analyte	Batch No	MRL	Units	Lab I.D.	1696465	1696466	1696467	1696468	1696469
				Sample Matrix	Soil153	Soil153	Soil153	Soil153	Soil153
				Sample Type					
				Sample Date	2023-07-24	2023-07-24	2023-07-24	2023-07-24	2023-07-24
				Sampling Time	11:30	11:30	11:30	11:30	11:30
Sample I.D.	BH4-S1	BH4-S2	BH4-S3	BH5-S1	BH5-S2				
Guideline									
Cyanide (CN-)	446350	0.005	ug/g	STD 0.051	<0.005	<0.005	<0.005	<0.005	<0.005
Electrical Conductivity	446224	0.05	mS/cm	STD 0.47	0.13	0.17	0.14	0.16	0.16
pH - CaCl2	446210	2.00			7.77	7.83	7.82	7.74	7.92
Sodium Adsorption Ratio	446239	0.01		STD 1	0.63	0.95	0.34	1.21*	0.90

Inorganics

<u>Inorganics</u>					Lab I.D.	1696470	1696471	1696472	1696473	1696474
					Sample Matrix	Soil153	Soil153	Soil153	Soil153	Soil153
					Sample Type					
					Sample Date	2023-07-24	2023-07-24	2023-07-24	2023-07-24	2023-07-24
					Sampling Time	11:30	11:30	11:30	11:30	11:30
					Sample I.D.	BH5-S3	BH6-S1	BH7-S1	BH8-S1	DUP-1
Analyte	Batch No	MRL	Units	Guideline				TOPSOIL		
Cyanide (CN-)	446350	0.005	ug/g	STD 0.051	<0.005	<0.005		<0.005	<0.005	<0.005
Electrical Conductivity	446224	0.05	mS/cm	STD 0.47	0.38	0.46	0.30	0.42	0.15	
pH - CaCl2	446210	2.00			7.85	7.76	7.85	7.71	7.84	
Sodium Adsorption Ratio	446239	0.01		STD 1	2.39*	7.43*	2.45*	1.19*	0.43	

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Client: XS Soil Solutions Inc.
72-700 Third Line
Oakville, Ontario
L6L 4B1
Attention: Karim Hosny
PO#:
Invoice to: XS Soil Solutions Inc.

Report Number: 1999525
Date Submitted: 2023-07-24
Date Reported: 2023-07-31
Project: 2960 Teston Rd
COC #: 223082

Guideline = Excess Soil-T1-Ag and Other

Moisture

Analyte

Batch No

MRL

Units

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

Guideline

1696460
Soil153
2023-07-24
11:30
BH1-S1

1696461
Soil153
2023-07-24
11:30
BH2-S1

1696462
Soil153
2023-07-24
11:30
BH3-S1

1696463
Soil153
2023-07-24
11:30
BH3-S2

1696464
Soil153
2023-07-24
11:30
BH3-S3

Moisture-Humidite

446156

0.1

%

11.6

446199

0.1

%

10.3

11.8

11.0

446205

0.1

%

10.3

Moisture

Analyte

Batch No

MRL

Units

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

Guideline

1696465
Soil153
2023-07-24
11:30
BH4-S1

1696466
Soil153
2023-07-24
11:30
BH4-S2

1696467
Soil153
2023-07-24
11:30
BH4-S3

1696468
Soil153
2023-07-24
11:30
BH5-S1

1696469
Soil153
2023-07-24
11:30
BH5-S2

Moisture-Humidite

446199

0.1

%

12.9

446205

0.1

%

12.4

16.0

9.8

10.2

Results relate only to the parameters tested on the samples submitted.
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Project: 2960 Teston Rd
COC #: 223082

Guideline = Excess Soil-T1-Ag and Other

Moisture

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sample Date	Sampling Time	Sample I.D.
					1696470	Soil153	1696471	Soil153	1696472	Soil153
Moisture-Humidite	446205	0.1	%		2023-07-24	11:30	2023-07-24	11:30	2023-07-24	11:30
					BH5-S3		BH6-S1		BH7-S1	
									TOPSOIL	
									BH8-S1	
										DUP-1
					11.2		6.5		11.6	4.5
										10.3

PHC Surrogate

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sample Date	Sampling Time	Sample I.D.
					1696460	Soil153	1696461	Soil153	1696462	Soil153
Alpha-androstrane	446156	0	%		2023-07-24	11:30	2023-07-24	11:30	2023-07-24	11:30
	446199	0	%		BH1-S1		BH2-S1		BH3-S1	
	446205	0	%						BH3-S2	
										BH3-S3
					67		79		76	89
										95

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Project: 2960 Teston Rd
COC #: 223082

Guideline = Excess Soil-T1-Ag and Other

PHC Surrogate

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sample Date	Sampling Time	Sample I.D.
					1696465	Soil153	1696466	Soil153	1696467	Soil153
Alpha-androstrane	446199	0	%		2023-07-24	11:30	2023-07-24	11:30	2023-07-24	11:30
	446205	0	%		BH4-S1	BH4-S2	BH4-S3	BH5-S1	BH5-S2	
						75				
					74		96	93	102	

PHC Surrogate

Analyte	Batch No	MRL	Units	Guideline	Lab I.D.	Sample Matrix	Sample Type	Sample Date	Sampling Time	Sample I.D.
					1696470	Soil153	1696471	Soil153	1696472	Soil153
Alpha-androstrane	446205	0	%		2023-07-24	11:30	2023-07-24	11:30	2023-07-24	11:30
					BH5-S3	BH6-S1	BH7-S1	BH8-S1	DUP-1	
					88	83	89	64	67	

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Date Reported: 2023-07-31
Project: 2960 Teston Rd
COC #: 223082

Guideline = Excess Soil-T1-Ag and Other

VOCs Surrogates

Analyte

Batch No

MRL

Units

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

Guideline

1696460
Soil153
2023-07-24
11:30
BH1-S1

1696461
Soil153
2023-07-24
11:30
BH2-S1

1696462
Soil153
2023-07-24
11:30
BH3-S1

1696463
Soil153
2023-07-24
11:30
BH3-S2

1696464
Soil153
2023-07-24
11:30
BH3-S3

Toluene-d8

446138

0

%

99

98

73

96

98

VOCs Surrogates

Analyte

Batch No

MRL

Units

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

Guideline

1696465
Soil153
2023-07-24
11:30
BH4-S1

1696466
Soil153
2023-07-24
11:30
BH4-S2

1696467
Soil153
2023-07-24
11:30
BH4-S3

1696468
Soil153
2023-07-24
11:30
BH5-S1

1696469
Soil153
2023-07-24
11:30
BH5-S2

Toluene-d8

446138

0

%

100

98

94

96

97

Results relate only to the parameters tested on the samples submitted.
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Date Submitted: 2023-07-24
Date Reported: 2023-07-31
Project: 2960 Teston Rd
COC #: 223082

Guideline = Excess Soil-T1-Ag and Other

VOCs Surrogates

Analyte

Batch No

MRL

Units

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.
Guideline

1696470
Soil153

2023-07-24
11:30
BH5-S3

1696471
Soil153

2023-07-24
11:30
BH6-S1

1696472
Soil153

2023-07-24
11:30
BH7-S1
TOPSOIL

1696473
Soil153

2023-07-24
11:30
BH8-S1

1696474
Soil153

2023-07-24
11:30
DUP-1

Toluene-d8

446138

0

%

95

98

99

98

97

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Date Submitted: 2023-07-24
Date Reported: 2023-07-31
Project: 2960 Teston Rd
COC #: 223082

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
446138	Benzene	<0.0068	116	60-130	114	50-140	0	0-50
446138	Ethylbenzene	<0.018 ug/g	112	60-130	121	50-140	0	0-50
446138	Xylene, m/p-	<0.05 ug/g	116	60-130	112	50-140	0	0-50
446138	Xylene, o-	<0.05 ug/g	110	60-130	118	50-140	0	0-50
446138	Toluene	<0.08 ug/g	117	60-130	114	50-140	0	0-50
446140	Methylnaphthalene, 1-	<0.05 ug/g	75	50-140	60	50-140	0	0-40
446140	Methylnaphthalene, 2-	<0.05 ug/g	68	50-140	59	50-140	0	0-40
446140	Acenaphthene	<0.05 ug/g	63	50-140	57	50-140	0	0-40
446140	Acenaphthylene	<0.05 ug/g	59	50-140	53	50-140	0	0-40
446140	Anthracene	<0.05 ug/g	77	50-140	73	50-140	0	0-40
446140	Benz[a]anthracene	<0.05 ug/g	69	50-140	62	50-140	0	0-40
446140	Benzo[a]pyrene	<0.05 ug/g	65	50-140	65	50-140	0	0-40
446140	Benzo[b]fluoranthene	<0.05 ug/g	53	50-140	55	50-140	0	0-40
446140	Benzo[ghi]perylene	<0.05 ug/g	51	50-140	66	50-140	0	0-40
446140	Benzo[k]fluoranthene	<0.05 ug/g	55	50-140	51		0	0-40
446140	Chrysene	<0.05 ug/g	69	50-140	69	50-140	0	0-40
446140	Dibenz[a h]anthracene	<0.05 ug/g	57	50-140	60	50-140	0	0-40
446140	Fluoranthene	<0.05 ug/g	80	50-140	72	50-140	0	0-40
446140	Fluorene	<0.05 ug/g	60	50-140	54	50-140	0	0-40
446140	Indeno[1 2 3-cd]pyrene	<0.05 ug/g	57	50-140	58	50-140	0	0-40
446140	Naphthalene	<0.013 ug/g	76	50-140	68	50-140	0	0-40
446140	Phenanthrene	<0.05 ug/g	64	50-140	62	50-140	0	0-40
446140	Pyrene	<0.05 ug/g	75	50-140	71	50-140	0	0-40
446149	PHC's F1	<10 ug/g	95	80-120	105	60-140	0	0-30
446156	PHC's F2	<2 ug/g	95	80-120	89	60-140	0	0-30
446156	PHC's F3	<20 ug/g	96	80-120	89	60-140	0	0-30
446156	PHC's F4	<20 ug/g	96	80-120	89	60-140	0	0-30
446156	Moisture-Humidite	<0.1 %	100	80-120			4	
446176	PHC's F2-Napth							
446177	PHC's F3-PAH							
446199	PHC's F2	<2 ug/g	95	80-120	89	60-140	0	0-30
446199	PHC's F3	<20 ug/g	96	80-120	89	60-140	0	0-30

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Client: XS Soil Solutions Inc.
72-700 Third Line
Oakville, Ontario
L6L 4B1
Attention: Karim Hosny
PO#:
Invoice to: XS Soil Solutions Inc.

Report Number: 1999525
Date Submitted: 2023-07-24
Date Reported: 2023-07-31
Project: 2960 Teston Rd
COC #: 223082

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
446199	PHC's F4	<20 ug/g	96	80-120	89	60-140	0	0-30
446199	Moisture-Humidite	<0.1 %	100	80-120			4	
446205	PHC's F2	<2 ug/g	80	80-120	100	60-140	0	0-30
446205	PHC's F3	<20 ug/g	80	80-120	100	60-140	0	0-30
446205	PHC's F4	<20 ug/g	80	80-120	100	60-140	0	0-30
446205	Moisture-Humidite	<0.1 %	100	80-120			3	
446210	pH - CaCl2	5.61	97	90-110			0	
446224	Electrical Conductivity	<0.05	103	90-110			0	0-10
446239	Sodium Adsorption Ratio	<0.01					7	
446241	Silver	<0.2 ug/g	80	70-130	100	70-130	0	0-20
446241	Arsenic	<1 ug/g	90	70-130	98	70-130	0	0-20
446241	Boron (total)	<5 ug/g	100	70-130	134	70-130	0	0-20
446241	Barium	<1 ug/g	93	70-130	123	70-130	1	0-20
446241	Beryllium	<1 ug/g	102	70-130	104	70-130	0	0-20
446241	Cadmium	<0.4 ug/g	91	70-130	99	70-130	0	0-20
446241	Cobalt	<1 ug/g	84	70-130	98	70-130	1	0-20
446241	Chromium Total	<1 ug/g	87	70-130	123	70-130	3	0-20
446241	Copper	<1 ug/g	86	70-130	91	70-130	2	0-20
446241	Mercury	<0.1 ug/g	90	70-130	89	70-130	0	0-20
446241	Molybdenum	<1 ug/g	74	70-130	95	70-130	0	0-20
446241	Nickel	<1 ug/g	86	70-130	99	70-130	1	0-20
446241	Lead	<1 ug/g	77	70-130	81	70-130	0	0-20
446241	Antimony	<1 ug/g	71	70-130	87	70-130	0	0-20
446241	Selenium	<0.5 ug/g	96	70-130	102	70-130	0	0-20
446241	Thallium	<1 ug/g	78	70-130	86	70-130	0	0-20
446241	Uranium	<0.5 ug/g	76	70-130	83	70-130	0	0-20
446241	Vanadium	<2 ug/g	87	70-130	139	70-130	1	0-20
446241	Zinc	<2 ug/g	99	70-130	113	70-130	1	0-20
446243	Boron (Hot Water Soluble)	<0.5 ug/g	98	70-130	97	60-140	0	0-30
446265	PHC's F2-Napth							
446268	PHC's F3-PAH							
446283	1+2-methylnaphthalene							
446329	Xylene Mixture							

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COC #: 223082

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
446330	PHC's F1-BTEX							
446342	Chromium VI	<0.20 ug/g	101	70-130	89	70-130	0	0-35
446349	PHC's F4g	<100 ug/g		80-120		60-140		0-30
446350	Cyanide (CN-)	<0.005 ug/g	89	75-125	99	70-130	0	0-20

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Test Summary

Batch No	Analyte	Instrument	Preparation Date	Analysis Date	Analyst	Method
446138	Benzene	GC-MS	2023-07-26	2023-07-26	SS	V 8260B
446138	Ethylbenzene	GC-MS	2023-07-26	2023-07-26	SS	V 8260B
446138	Xylene, m/p-	GC-MS	2023-07-26	2023-07-26	SS	V 8260B
446138	Xylene, o-	GC-MS	2023-07-26	2023-07-26	SS	V 8260B
446138	Toluene	GC-MS	2023-07-26	2023-07-26	SS	V 8260B
446140	Methylnaphthalene, 1-	GC-MS	2023-07-27	2023-07-27	C_M	P 8270
446140	Methylnaphthalene, 2-	GC-MS	2023-07-27	2023-07-27	C_M	P 8270
446140	Acenaphthene	GC-MS	2023-07-27	2023-07-27	C_M	P 8270
446140	Acenaphthylene	GC-MS	2023-07-27	2023-07-27	C_M	P 8270
446140	Anthracene	GC-MS	2023-07-27	2023-07-27	C_M	P 8270
446140	Benz[a]anthracene	GC-MS	2023-07-27	2023-07-27	C_M	P 8270
446140	Benzo[a]pyrene	GC-MS	2023-07-27	2023-07-27	C_M	P 8270
446140	Benzo[b]fluoranthene	GC-MS	2023-07-27	2023-07-27	C_M	P 8270
446140	Benzo[ghi]perylene	GC-MS	2023-07-27	2023-07-27	C_M	P 8270
446140	Benzo[k]fluoranthene	GC-MS	2023-07-27	2023-07-27	C_M	P 8270
446140	Chrysene	GC-MS	2023-07-27	2023-07-27	C_M	P 8270
446140	Dibenz[a h]anthracene	GC-MS	2023-07-27	2023-07-27	C_M	P 8270
446140	Fluoranthene	GC-MS	2023-07-27	2023-07-27	C_M	P 8270
446140	Fluorene	GC-MS	2023-07-27	2023-07-27	C_M	P 8270
446140	Indeno[1 2 3-cd]pyrene	GC-MS	2023-07-27	2023-07-27	C_M	P 8270
446140	Naphthalene	GC-MS	2023-07-27	2023-07-27	C_M	P 8270
446140	Phenanthrene	GC-MS	2023-07-27	2023-07-27	C_M	P 8270
446140	Pyrene	GC-MS	2023-07-27	2023-07-27	C_M	P 8270
446149	PHC's F1	GC/FID	2023-07-27	2023-07-27	SS	CCME
446156	PHC's F2	GC/FID	2023-07-27	2023-07-27	R_G	CCME
446156	PHC's F3	GC/FID	2023-07-27	2023-07-27	R_G	CCME
446156	PHC's F4	GC/FID	2023-07-27	2023-07-27	R_G	CCME
446156	Moisture-Humidite	Oven	2023-07-27	2023-07-27	R_G	ASTM 2216
446176	PHC's F2-Napth	GC/FID	2023-07-28	2023-07-28	H_S	CCME
446177	PHC's F3-PAH	GC/FID	2023-07-28	2023-07-28	H_S	CCME
446199	PHC's F2	GC/FID	2023-07-28	2023-07-28	H_S	CCME
446199	PHC's F3	GC/FID	2023-07-28	2023-07-28	H_S	CCME

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Client: XS Soil Solutions Inc.
72-700 Third Line
Oakville, Ontario
L6L 4B1
Attention: Karim Hosny
PO#:
Invoice to: XS Soil Solutions Inc.

Report Number: 1999525
Date Submitted: 2023-07-24
Date Reported: 2023-07-31
Project: 2960 Teston Rd
COC #: 223082

Test Summary

Batch No	Analyte	Instrument	Preparation Date	Analysis Date	Analyst	Method
446199	PHC's F4	GC/FID	2023-07-28	2023-07-28	H_S	CCME
446199	Moisture-Humidite	Oven	2023-07-28	2023-07-28	H_S	ASTM 2216
446205	PHC's F2	GC/FID	2023-07-28	2023-07-28	H_S	CCME
446205	PHC's F3	GC/FID	2023-07-28	2023-07-28	H_S	CCME
446205	PHC's F4	GC/FID	2023-07-28	2023-07-28	H_S	CCME
446205	Moisture-Humidite	Oven	2023-07-28	2023-07-28	H_S	ASTM 2216
446210	pH - CaCl2	pH Meter	2023-07-28	2023-07-28	IP	Ag Soil
446224	Electrical Conductivity	Electrical Conductivity Meter	2023-07-28	2023-07-28	Z_S	Cond-Soil
446239	Sodium Adsorption Ratio	iCAP OES	2023-07-28	2023-07-28	Z_S	Ag Soil
446241	Silver	ICAPQ-MS	2023-07-28	2023-07-28	SD	EPA 200.8/6020
446241	Arsenic	ICAPQ-MS	2023-07-28	2023-07-28	SD	EPA 200.8/6020
446241	Boron (total)	ICAPQ-MS	2023-07-28	2023-07-28	SD	EPA 200.8/6020
446241	Barium	ICAPQ-MS	2023-07-28	2023-07-28	SD	EPA 200.8/6020
446241	Beryllium	ICAPQ-MS	2023-07-28	2023-07-28	SD	EPA 200.8/6020
446241	Cadmium	ICAPQ-MS	2023-07-28	2023-07-28	SD	EPA 200.8/6020
446241	Cobalt	ICAPQ-MS	2023-07-28	2023-07-28	SD	EPA 200.8/6020
446241	Chromium Total	ICAPQ-MS	2023-07-28	2023-07-28	SD	EPA 200.8/6020
446241	Copper	ICAPQ-MS	2023-07-28	2023-07-28	SD	EPA 200.8/6020
446241	Mercury	ICAPQ-MS	2023-07-28	2023-07-28	SD	EPA 200.8/6020
446241	Molybdenum	ICAPQ-MS	2023-07-28	2023-07-28	SD	EPA 200.8/6020
446241	Nickel	ICAPQ-MS	2023-07-28	2023-07-28	SD	EPA 200.8/6020
446241	Lead	ICAPQ-MS	2023-07-28	2023-07-28	SD	EPA 200.8/6020
446241	Antimony	ICAPQ-MS	2023-07-28	2023-07-28	SD	EPA 200.8/6020
446241	Selenium	ICAPQ-MS	2023-07-28	2023-07-28	SD	EPA 200.8/6020
446241	Thallium	ICAPQ-MS	2023-07-28	2023-07-28	SD	EPA 200.8/6020
446241	Uranium	ICAPQ-MS	2023-07-28	2023-07-28	SD	EPA 200.8/6020
446241	Vanadium	ICAPQ-MS	2023-07-28	2023-07-28	SD	EPA 200.8/6020
446241	Zinc	ICAPQ-MS	2023-07-28	2023-07-28	SD	EPA 200.8/6020
446243	Boron (Hot Water Soluble)	iCAP OES	2023-07-28	2023-07-28	Z_S	MOECC E3470
446265	PHC's F2-Naphth	GC/FID	2023-07-28	2023-07-28	H_S	CCME
446268	PHC's F3-PAH	GC/FID	2023-07-28	2023-07-28	H_S	CCME
446283	1+2-methylnaphthalene	GC-MS	2023-07-31	2023-07-31	R_G	P 8270
446329	Xylene Mixture	GC-MS	2023-07-31	2023-07-31	SS	V 8260B

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Client: XS Soil Solutions Inc.
72-700 Third Line
Oakville, Ontario
L6L 4B1
Attention: Karim Hosny
PO#:
Invoice to: XS Soil Solutions Inc.

Report Number: 1999525
Date Submitted: 2023-07-24
Date Reported: 2023-07-31
Project: 2960 Teston Rd
COC #: 223082

Test Summary

Batch No	Analyte	Instrument	Preparation Date	Analysis Date	Analyst	Method
446330	PHC's F1-BTEX	GC/FID	2023-07-31	2023-07-31	SS	CCME
446342	Chromium VI	FAA	2023-07-31	2023-07-31	Z_S	M US EPA 3060A
446349	PHC's F4g	Gravimetric	2023-07-31	2023-07-31	H_S	CCME
446350	Cyanide (CN-)	Skalar CN Analyzer	2023-07-31	2023-07-31	Z_S	MOECC E3015

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Environment Testing

Client: XS Soil Solutions Inc.
72-700 Third Line
Oakville, Ontario
L6L 4B1
Attention: Karim Hosny
PO#:
Invoice to: XS Soil Solutions Inc.

Report Number: 1999525
Date Submitted: 2023-07-24
Date Reported: 2023-07-31
Project: 2960 Teston Rd
COC #: 223082

CWS for Petroleum Hydrocarbons in Soil - Tier 1**Notes:**

1. The laboratory method complies with CCME Tier 1 reference method for PHC in soil. It is validated for laboratory use.
2. Where the F1 fraction (C6 to C10) and BTEX are both measured, F1-BTEX is reported.
3. Where the F2 fraction (C10 to C16) and naphthalene are both measured, F2-naphthalene is reported.
4. Where the F3 fraction (C16 to C34) and PAHs* are both measured, F3-PAH is reported.
5. F4G is analyzed if the chromatogram does not descend to baseline before C50. Where F4 (C34 to C50) and F4G are both reported, the higher result is compared to the standard.
6. Unless otherwise stated in the sample comments, the following criteria have been met where applicable:
 - nC6 and nC10 response factors within 30% of response factor for toluene;
 - nC10, nC16, and nC34 response factors within 10% of each other;
 - C50 response factors within 70% of nC10 + nC16 + nC34 average; and,
 - Linearity is within 15%.
7. Unless otherwise stated in the sample comments, sampling requirements and analytical holding times have been met.
8. Gravimetric heavy hydrocarbons (F4G) cannot be added to the C6 and C50 hydrocarbons.
9. *PAHs = phenanthrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-c,d)pyrene and pyrene.

Client: XS Soil Solutions Inc.
72-700 Third Line
Oakville, Ontario
L6L 4B1
Attention: Karim Hosny
Invoice to: XS Soil Solutions Inc.
PO#:

Report Number: 3001950
Date Submitted: 2023-10-05
Date Reported: 2023-10-12
Project: York - Teston - TP6
delin
COC #: 223375
Temperature (C): 27
Custody Seal:

Page 1 of 8

Dear Karim Hosny:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Raheleh Zafari, Environmental Chemist

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated

Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <https://directory.cala.ca/>

Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Environment Testing

Client: XS Soil Solutions Inc.
72-700 Third Line
Oakville, Ontario
L6L 4B1
Attention: Karim Hosny
PO#:
Invoice to: XS Soil Solutions Inc.

Report Number: 3001950
Date Submitted: 2023-10-05
Date Reported: 2023-10-12
Project: York - Teston - TP6 delin
COC #: 223375

Exceedence Summary

Sample I.D.	Analyte	Result	Units	Criteria

Client: XS Soil Solutions Inc.
72-700 Third Line
Oakville, Ontario
L6L 4B1
Attention: Karim Hosny
PO#:
Invoice to: XS Soil Solutions Inc.

Report Number: 3001950
Date Submitted: 2023-10-05
Date Reported: 2023-10-12
Project: York - Teston - TP6 delin
COC #: 223375

Guideline = Excess Soil-T1-Ag and Other

Hydrocarbons

					Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Sample I.D.	
Analyte	Batch No	MRL	Units	Guideline	1705513 Soil153 2023-10-05 09:00 BH6-S1A	1705514 Soil153 2023-10-05 09:00 BH6-S1B
PHC's F1	450198	10	ug/g	STD 17	<10	<10
PHC's F2	450250	2	ug/g	STD 10		<2
	450257	2	ug/g	STD 10	<2	
PHC's F2-Naph	450276	2	ug/g		<2	<2
PHC's F3	450250	20	ug/g	STD 240		<20
	450257	20	ug/g	STD 240	<20	
PHC's F3-PAH	450278	20	ug/g		<20	<20
PHC's F4	450250	20	ug/g	STD 120		<20
	450257	20	ug/g	STD 120	<20	

PAH

					Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Sample I.D.	
Analyte	Batch No	MRL	Units	Guideline	1705513 Soil153 2023-10-05 09:00 BH6-S1A	1705514 Soil153 2023-10-05 09:00 BH6-S1B
1+2-methylnaphthalene	450241	0.05	ug/g	STD 0.05	<0.05	<0.05
Acenaphthene	450240	0.05	ug/g	STD 0.05	<0.05	<0.05
Acenaphthylene	450240	0.05	ug/g	STD 0.093	<0.05	<0.05
Anthracene	450240	0.05	ug/g	STD 0.05	<0.05	<0.05
Benz[a]anthracene	450240	0.05	ug/g	STD 0.095	<0.05	<0.05
Benzo[a]pyrene	450240	0.05	ug/g	STD 0.05	<0.05	<0.05
Benzo[b]fluoranthene	450240	0.05	ug/g	STD 0.3	<0.05	<0.05
Benzo[ghi]perylene	450240	0.05	ug/g	STD 0.2	<0.05	<0.05
Benzo[k]fluoranthene	450240	0.05	ug/g	STD 0.05	<0.05	<0.05
Chrysene	450240	0.05	ug/g	STD 0.18	<0.05	<0.05

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72-700 Third Line
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Report Number: 3001950
Date Submitted: 2023-10-05
Date Reported: 2023-10-12
Project: York - Teston - TP6 delin
COC #: 223375

Guideline = Excess Soil-T1-Ag and Other

PAH

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Sample I.D.	
					1705513 Soil153	1705514 Soil153
Dibenz[a h]anthracene	450240	0.05	ug/g	STD 0.1	2023-10-05 09:00 BH6-S1A	2023-10-05 09:00 BH6-S1B
Fluoranthene	450240	0.05	ug/g	STD 0.24	<0.05	<0.05
Fluorene	450240	0.05	ug/g	STD 0.05	<0.05	<0.05
Indeno[1 2 3-cd]pyrene	450240	0.05	ug/g	STD 0.11	<0.05	<0.05
Methlynaphthalene, 1-	450240	0.05	ug/g		<0.05	<0.05
Methlynaphthalene, 2-	450240	0.05	ug/g		<0.05	<0.05
Naphthalene	450240	0.013	ug/g	STD 0.05	<0.013	<0.013
Phenanthrene	450240	0.05	ug/g	STD 0.19	<0.05	<0.05
Pyrene	450240	0.05	ug/g	STD 0.19	<0.05	<0.05

Moisture

Analyte	Batch No	MRL	Units	Guideline	Lab I.D. Sample Matrix Sample Type Sample Date Sampling Time Sample I.D.	
					1705513 Soil153	1705514 Soil153
Moisture-Humidite	450250	0.1	%			8.5
	450257	0.1	%		13.9	

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Client: XS Soil Solutions Inc.
72-700 Third Line
Oakville, Ontario
L6L 4B1
Attention: Karim Hosny
PO#:
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Report Number: 3001950
Date Submitted: 2023-10-05
Date Reported: 2023-10-12
Project: York - Teston - TP6 delin
COC #: 223375

Guideline = Excess Soil-T1-Ag and Other

PHC Surrogate

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1705513
Soil153
2023-10-05
09:00
BH6-S1A

1705514
Soil153
2023-10-05
09:00
BH6-S1B

Analyte

Batch No

MRL

Units

Guideline

Alpha-androstrane

450250

0

%

67

450257

0

%

92

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Report Number: 3001950
Date Submitted: 2023-10-05
Date Reported: 2023-10-12
Project: York - Teston - TP6 delin
COC #: 223375

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
450198	PHC's F1	<10 ug/g	90	80-120	83	60-140	0	0-30
450240	Methlynaphthalene, 1-	<0.05 ug/g	68	50-140	64	50-140	0	0-40
450240	Methlynaphthalene, 2-	<0.05 ug/g	65	50-140	59	50-140	0	0-40
450240	Acenaphthene	<0.05 ug/g	68	50-140	64	50-140	0	0-40
450240	Acenaphthylene	<0.05 ug/g	65	50-140	62	50-140	0	0-40
450240	Anthracene	<0.05 ug/g	72	50-140	65	50-140	0	0-40
450240	Benz[a]anthracene	<0.05 ug/g	85	50-140	79	50-140	0	0-40
450240	Benzo[a]pyrene	<0.05 ug/g	81	50-140	74	50-140	0	0-40
450240	Benzo[b]fluoranthene	<0.05 ug/g	88	50-140	88	50-140	0	0-40
450240	Benzo[ghi]perylene	<0.05 ug/g	53	50-140	53	50-140	0	0-40
450240	Benzo[k]fluoranthene	<0.05 ug/g	97	50-140	88		0	0-40
450240	Chrysene	<0.05 ug/g	73	50-140	65	50-140	0	0-40
450240	Dibenz[a h]anthracene	<0.05 ug/g	54	50-140	56	50-140	0	0-40
450240	Fluoranthene	<0.05 ug/g	94	50-140	52	50-140	0	0-40
450240	Fluorene	<0.05 ug/g	60	50-140	60	50-140	0	0-40
450240	Indeno[1 2 3-cd]pyrene	<0.05 ug/g	51	50-140	52	50-140	0	0-40
450240	Naphthalene	<0.013 ug/g	66	50-140	62	50-140	0	0-40
450240	Phenanthrene	<0.05 ug/g	74	50-140	68	50-140	0	0-40
450240	Pyrene	<0.05 ug/g	102	50-140	57	50-140	0	0-40
450241	1+2-methylnaphthalene							
450250	PHC's F2	<2 ug/g	111	80-120	113	60-140	0	0-30
450250	PHC's F3	<20 ug/g	112	80-120	113	60-140	0	0-30
450250	PHC's F4	<20 ug/g	112	80-120	113	60-140	0	0-30
450250	Moisture-Humidite	<0.1 %	100	80-120			33	
450257	PHC's F2	<2 ug/g	92	80-120	101	60-140	0	0-30
450257	PHC's F3	<20 ug/g	92	80-120	101	60-140	0	0-30
450257	PHC's F4	<20 ug/g	92	80-120	101	60-140	0	0-30
450257	Moisture-Humidite	<0.1 %	100	80-120			2	
450276	PHC's F2-Napth							
450278	PHC's F3-PAH							

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Report Number: 3001950
Date Submitted: 2023-10-05
Date Reported: 2023-10-12
Project: York - Teston - TP6 delin
COC #: 223375

Test Summary

Batch No	Analyte	Instrument	Preparation Date	Analysis Date	Analyst	Method
450198	PHC's F1	GC/FID	2023-10-10	2023-10-11	SS	CCME
450240	Methylnaphthalene, 1-	GC-MS	2023-10-11	2023-10-11	C_M	P 8270
450240	Methylnaphthalene, 2-	GC-MS	2023-10-11	2023-10-11	C_M	P 8270
450240	Acenaphthene	GC-MS	2023-10-11	2023-10-11	C_M	P 8270
450240	Acenaphthylene	GC-MS	2023-10-11	2023-10-11	C_M	P 8270
450240	Anthracene	GC-MS	2023-10-11	2023-10-11	C_M	P 8270
450240	Benz[a]anthracene	GC-MS	2023-10-11	2023-10-11	C_M	P 8270
450240	Benzo[a]pyrene	GC-MS	2023-10-11	2023-10-11	C_M	P 8270
450240	Benzo[b]fluoranthene	GC-MS	2023-10-11	2023-10-11	C_M	P 8270
450240	Benzo[ghi]perylene	GC-MS	2023-10-11	2023-10-11	C_M	P 8270
450240	Benzo[k]fluoranthene	GC-MS	2023-10-11	2023-10-11	C_M	P 8270
450240	Chrysene	GC-MS	2023-10-11	2023-10-11	C_M	P 8270
450240	Dibenz[a h]anthracene	GC-MS	2023-10-11	2023-10-11	C_M	P 8270
450240	Fluoranthene	GC-MS	2023-10-11	2023-10-11	C_M	P 8270
450240	Fluorene	GC-MS	2023-10-11	2023-10-11	C_M	P 8270
450240	Indeno[1 2 3-cd]pyrene	GC-MS	2023-10-11	2023-10-11	C_M	P 8270
450240	Naphthalene	GC-MS	2023-10-11	2023-10-11	C_M	P 8270
450240	Phenanthrene	GC-MS	2023-10-11	2023-10-11	C_M	P 8270
450240	Pyrene	GC-MS	2023-10-11	2023-10-11	C_M	P 8270
450241	1+2-methylnaphthalene	GC-MS	2023-10-12	2023-10-12	C_M	P 8270
450250	PHC's F2	GC/FID	2023-10-12	2023-10-12	H_S	CCME
450250	PHC's F3	GC/FID	2023-10-12	2023-10-12	H_S	CCME
450250	PHC's F4	GC/FID	2023-10-12	2023-10-12	H_S	CCME
450250	Moisture-Humidite	Oven	2023-10-12	2023-10-12	H_S	ASTM 2216
450257	PHC's F2	GC/FID	2023-10-12	2023-10-12	H_S	CCME
450257	PHC's F3	GC/FID	2023-10-12	2023-10-12	H_S	CCME
450257	PHC's F4	GC/FID	2023-10-12	2023-10-12	H_S	CCME
450257	Moisture-Humidite	Oven	2023-10-12	2023-10-12	H_S	ASTM 2216
450276	PHC's F2-Napth	GC/FID	2023-10-12	2023-10-12	H_S	CCME
450278	PHC's F3-PAH	GC/FID	2023-10-12	2023-10-12	H_S	CCME

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Environment Testing

Client: XS Soil Solutions Inc.
72-700 Third Line
Oakville, Ontario
L6L 4B1
Attention: Karim Hosny
PO#:
Invoice to: XS Soil Solutions Inc.

Report Number: 3001950
Date Submitted: 2023-10-05
Date Reported: 2023-10-12
Project: York - Teston - TP6 delin
COC #: 223375

CWS for Petroleum Hydrocarbons in Soil - Tier 1**Notes:**

1. The laboratory method complies with CCME Tier 1 reference method for PHC in soil. It is validated for laboratory use.
2. Where the F1 fraction (C6 to C10) and BTEX are both measured, F1-BTEX is reported.
3. Where the F2 fraction (C10 to C16) and naphthalene are both measured, F2-naphthalene is reported.
4. Where the F3 fraction (C16 to C34) and PAHs* are both measured, F3-PAH is reported.
5. F4G is analyzed if the chromatogram does not descend to baseline before C50. Where F4 (C34 to C50) and F4G are both reported, the higher result is compared to the standard.
6. Unless otherwise stated in the sample comments, the following criteria have been met where applicable:
 - nC6 and nC10 response factors within 30% of response factor for toluene;
 - nC10, nC16, and nC34 response factors within 10% of each other;
 - C50 response factors within 70% of nC10 + nC16 + nC34 average; and,
 - Linearity is within 15%.
7. Unless otherwise stated in the sample comments, sampling requirements and analytical holding times have been met.
8. Gravimetric heavy hydrocarbons (F4G) cannot be added to the C6 and C50 hydrocarbons.
9. *PAHs = phenanthrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-c,d)pyrene and pyrene.

Client: XS Soil Solutions Inc.
72-700 Third Line
Oakville, Ontario
L6L 4B1
Attention: Karim Hosny
Invoice to: XS Soil Solutions Inc.
PO#:

Report Number: 1999526
Date Submitted: 2023-07-24
Date Reported: 2023-07-31
Project: 2960 Teston Rd
COC #: 223083
Temperature (C): 5
Custody Seal:

Page 1 of 7

Dear Karim Hosny:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Raheleh Zafari, Environmental Chemist

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated

Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <https://directory.cala.ca/>

Please note: Field data, where presented on the report, has been provided by the client and is presented for informational purposes only. Guideline or regulatory limits listed on this report are provided for ease of use (informational purposes) only. Eurofins recommends consulting the official guideline or regulation as required. Unless otherwise stated, measurement uncertainty is not taken into account when determining guideline or regulatory exceedances.

Client: XS Soil Solutions Inc.
72-700 Third Line
Oakville, Ontario
L6L 4B1
Attention: Karim Hosny
PO#:
Invoice to: XS Soil Solutions Inc.

Report Number: 1999526
Date Submitted: 2023-07-24
Date Reported: 2023-07-31
Project: 2960 Teston Rd
COC #: 223083

Excess Soil-Leach T1-Ag and Others***Exceedence Summary***

Sample I.D.	Analyte	Result	Units	Criteria
Metals				
SPLP-1	Silver	0.4	ug/L	STD 0.3

Client: XS Soil Solutions Inc.
72-700 Third Line
Oakville, Ontario
L6L 4B1
Attention: Karim Hosny
PO#:
Invoice to: XS Soil Solutions Inc.

Report Number: 1999526
Date Submitted: 2023-07-24
Date Reported: 2023-07-31
Project: 2960 Teston Rd
COC #: 223083

Guideline = Excess Soil-Leach T1-Ag and Others

Metals

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1696475 SPLP	1696476 SPLP	1696477 SPLP	1696478 SPLP
2023-07-24 11:30 SPLP-1	2023-07-24 11:30 SPLP-2	2023-07-24 11:30 SPLP-3	2023-07-24 11:30 SPLP-4

Analyte	Batch No	MRL	Units	Guideline	1696475 SPLP	1696476 SPLP	1696477 SPLP	1696478 SPLP
Antimony	446232	0.5	ug/L	STD 6	1.2	0.8	0.6	0.5
Barium	446232	10	ug/L		80	60	20	10
Beryllium	446232	0.5	ug/L		<0.5	<0.5	<0.5	<0.5
Boron (total)	446232	10	ug/L		60	40	30	20
Cadmium	446232	0.1	ug/L		<0.1	<0.1	<0.1	<0.1
Chromium Total	446232	1	ug/L		1	2	1	1
Cobalt	446232	0.2	ug/L		<0.2	<0.2	<0.2	<0.2
Copper	446232	1	ug/L		<1	<1	<1	<1
Molybdenum	446232	5	ug/L	STD 23	<5	<5	<5	<5
Nickel	446232	5	ug/L		<5	<5	<5	<5
Selenium	446232	1	ug/L		<1	<1	<1	<1
Silver	446232	0.1	ug/L	STD 0.3	0.4*	0.2	0.1	<0.1
Thallium	446232	0.1	ug/L	STD 2	<0.1	<0.1	<0.1	<0.1
Uranium	446232	1	ug/L		<1	<1	<1	<1
Zinc	446232	10	ug/L		<10	10	<10	<10

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: XS Soil Solutions Inc.
72-700 Third Line
Oakville, Ontario
L6L 4B1
Attention: Karim Hosny
PO#:
Invoice to: XS Soil Solutions Inc.

Report Number: 1999526
Date Submitted: 2023-07-24
Date Reported: 2023-07-31
Project: 2960 Teston Rd
COC #: 223083

Guideline = Excess Soil-Leach T1-Ag and Others

SPLP

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1696475 SPLP	1696476 SPLP	1696477 SPLP	1696478 SPLP
2023-07-24 11:30 SPLP-1	2023-07-24 11:30 SPLP-2	2023-07-24 11:30 SPLP-3	2023-07-24 11:30 SPLP-4

Analyte	Batch No	MRL	Units	Guideline
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SPLP Extraction	446113				y	y	y	y
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Moisture

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1696475 SPLP	1696476 SPLP	1696477 SPLP	1696478 SPLP
2023-07-24 11:30 SPLP-1	2023-07-24 11:30 SPLP-2	2023-07-24 11:30 SPLP-3	2023-07-24 11:30 SPLP-4

Analyte	Batch No	MRL	Units	Guideline
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Moisture-Humidite	446114	0.1	%		12.4	12.5	11.2	3.8
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Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: XS Soil Solutions Inc.
72-700 Third Line
Oakville, Ontario
L6L 4B1
Attention: Karim Hosny
PO#:
Invoice to: XS Soil Solutions Inc.

Report Number: 1999526
Date Submitted: 2023-07-24
Date Reported: 2023-07-31
Project: 2960 Teston Rd
COC #: 223083

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
446113	SPLP Extraction							
446114	Moisture-Humidite			80-120				
446232	Silver	<0.1 ug/L	96	80-120		70-130		0-20
446232	Boron (total)	<10 ug/L	95	80-120		80-120		0-20
446232	Barium	<10 ug/L	87	80-120		70-130		0-20
446232	Beryllium	<0.5 ug/L	89	80-120		70-130		0-20
446232	Cadmium	<0.1 ug/L	84	80-120		70-130		0-20
446232	Cobalt	<0.2 ug/L	89	80-120		70-130		0-20
446232	Chromium Total	<1 ug/L	90	80-120		70-130		0-20
446232	Copper	<1 ug/L	92	80-120		70-130		0-20
446232	Molybdenum	<5 ug/L	84	80-120		70-130		0-20
446232	Nickel	<5 ug/L	92	80-120		70-130		0-20
446232	Antimony	<0.5 ug/L	82	80-120		70-130		0-20
446232	Selenium	<1 ug/L	98	80-120		70-130		0-20
446232	Thallium	<0.1 ug/L	91	80-120		70-130		0-20
446232	Uranium	<1 ug/L	89	80-120		70-130		0-20
446232	Zinc	<10 ug/L	84	80-120		70-130		0-20

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: XS Soil Solutions Inc.
72-700 Third Line
Oakville, Ontario
L6L 4B1
Attention: Karim Hosny
PO#:
Invoice to: XS Soil Solutions Inc.

Report Number: 1999526
Date Submitted: 2023-07-24
Date Reported: 2023-07-31
Project: 2960 Teston Rd
COC #: 223083

Test Summary

Batch No	Analyte	Instrument	Preparation Date	Analysis Date	Analyst	Method
446113	SPLP Extraction		2023-07-26	2023-07-27	AsA	mSPLP E9003/EPA 1312
446114	Moisture-Humidite	Oven	2023-07-26	2023-07-26	AsA	ASTM 2216
446232	Silver	ICAPQ-MS	2023-07-28	2023-07-28	AaN	EPA 200.8
446232	Boron (total)	ICAPQ-MS	2023-07-28	2023-07-28	AaN	EPA 200.8
446232	Barium	ICAPQ-MS	2023-07-28	2023-07-28	AaN	EPA 200.8
446232	Beryllium	ICAPQ-MS	2023-07-28	2023-07-28	AaN	EPA 200.8
446232	Cadmium	ICAPQ-MS	2023-07-28	2023-07-28	AaN	EPA 200.8
446232	Cobalt	ICAPQ-MS	2023-07-28	2023-07-28	AaN	EPA 200.8
446232	Chromium Total	ICAPQ-MS	2023-07-28	2023-07-28	AaN	EPA 200.8
446232	Copper	ICAPQ-MS	2023-07-28	2023-07-28	AaN	EPA 200.8
446232	Molybdenum	ICAPQ-MS	2023-07-28	2023-07-28	AaN	EPA 200.8
446232	Nickel	ICAPQ-MS	2023-07-28	2023-07-28	AaN	EPA 200.8
446232	Antimony	ICAPQ-MS	2023-07-28	2023-07-28	AaN	EPA 200.8
446232	Selenium	ICAPQ-MS	2023-07-28	2023-07-28	AaN	EPA 200.8
446232	Thallium	ICAPQ-MS	2023-07-28	2023-07-28	AaN	EPA 200.8
446232	Uranium	ICAPQ-MS	2023-07-28	2023-07-28	AaN	EPA 200.8
446232	Zinc	ICAPQ-MS	2023-07-28	2023-07-28	AaN	EPA 200.8

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Client: XS Soil Solutions Inc.
72-700 Third Line
Oakville, Ontario
L6L 4B1
Attention: Karim Hosny
PO#:
Invoice to: XS Soil Solutions Inc.

Report Number: 1999526
Date Submitted: 2023-07-24
Date Reported: 2023-07-31
Project: 2960 Teston Rd
COC #: 223083

CWS for Petroleum Hydrocarbons in Soil - Tier 1**Notes:**

1. The laboratory method complies with CCME Tier 1 reference method for PHC in soil. It is validated for laboratory use.
2. Where the F1 fraction (C6 to C10) and BTEX are both measured, F1-BTEX is reported.
3. Where the F2 fraction (C10 to C16) and naphthalene are both measured, F2-naphthalene is reported.
4. Where the F3 fraction (C16 to C34) and PAHs* are both measured, F3-PAH is reported.
5. F4G is analyzed if the chromatogram does not descend to baseline before C50. Where F4 (C34 to C50) and F4G are both reported, the higher result is compared to the standard.
6. Unless otherwise stated in the sample comments, the following criteria have been met where applicable:
 - nC6 and nC10 response factors within 30% of response factor for toluene;
 - nC10, nC16, and nC34 response factors within 10% of each other;
 - C50 response factors within 70% of nC10 + nC16 + nC34 average; and,
 - Linearity is within 15%.
7. Unless otherwise stated in the sample comments, sampling requirements and analytical holding times have been met.
8. Gravimetric heavy hydrocarbons (F4G) cannot be added to the C6 and C50 hydrocarbons.
9. *PAHs = phenanthrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-c,d)pyrene and pyrene.

Client: XS Soil Solutions Inc.
72-700 Third Line
Oakville, Ontario
L6L 4B1
Attention: Karim Hosny
Invoice to: XS Soil Solutions Inc.
PO#:

Report Number: 3000012
Date Submitted: 2023-08-03
Date Reported: 2023-08-11
Project: 2960 Teston Rd
COC #: 909705
Temperature (C): 5
Custody Seal:

Page 1 of 7

Dear Karim Hosny:

Please find attached the analytical results for your samples. If you have any questions regarding this report, please do not hesitate to call (613-727-5692).

Report Comments:

Raheleh Zafari, Environmental Chemist

All analysis is completed at Eurofins Environment Testing Canada Inc. (Ottawa, Ontario) unless otherwise stated

Eurofins Environment Testing Canada Inc. is accredited by CALA, Canadian Association for Laboratory Accreditation to ISO/IEC 17025 for tests which appear on the scope of accreditation. The scope is available at <https://directory.cala.ca/>

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Client: XS Soil Solutions Inc.
 72-700 Third Line
 Oakville, Ontario
 L6L 4B1
 Attention: Karim Hosny
 PO#:
 Invoice to: XS Soil Solutions Inc.

Report Number: 3000012
 Date Submitted: 2023-08-03
 Date Reported: 2023-08-11
 Project: 2960 Teston Rd
 COC #: 909705

Exceedence Summary

Sample I.D.	Analyte	Result	Units	Criteria

Client: XS Soil Solutions Inc.
72-700 Third Line
Oakville, Ontario
L6L 4B1
Attention: Karim Hosny
PO#:
Invoice to: XS Soil Solutions Inc.

Report Number: 3000012
Date Submitted: 2023-08-03
Date Reported: 2023-08-11
Project: 2960 Teston Rd
COC #: 909705

Guideline = Excess Soil-Leach T1-Ag and Others

Metals

Lab I.D.
Sample Matrix
Sample Type
Sample Date
Sampling Time
Sample I.D.

1698189
SPLP
2023-07-24
11:30
SPLP-1

Analyte	Batch No	MRL	Units	Guideline	
Antimony	447062	0.5	ug/L	STD 6	4.2
Barium	447062	10	ug/L		30
Beryllium	447062	0.5	ug/L		<0.5
Boron (total)	447062	10	ug/L		90
Cadmium	447062	0.1	ug/L		<0.1
Chromium Total	447062	1	ug/L		<1
Cobalt	447062	0.2	ug/L		<0.2
Copper	447062	1	ug/L		3
Molybdenum	447062	5	ug/L	STD 23	<5
Nickel	447062	5	ug/L		<5
Selenium	447062	1	ug/L		<1
Silver	447010	0.1	ug/L	STD 0.3	<0.1
Thallium	447062	0.1	ug/L	STD 2	<0.1
Uranium	447062	1	ug/L		<1
Zinc	447062	10	ug/L		<10

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: XS Soil Solutions Inc.
72-700 Third Line
Oakville, Ontario
L6L 4B1
Attention: Karim Hosny
PO#:
Invoice to: XS Soil Solutions Inc.

Report Number: 3000012
Date Submitted: 2023-08-03
Date Reported: 2023-08-11
Project: 2960 Teston Rd
COC #: 909705

Guideline = Excess Soil-Leach T1-Ag and Others

SPLP

Lab I.D. 1698189
Sample Matrix SPLP
Sample Type
Sample Date 2023-07-24
Sampling Time 11:30
Sample I.D. SPLP-1

Analyte Batch No MRL Units Guideline

SPLP Extraction	446867				y
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Moisture

Lab I.D. 1698189
Sample Matrix SPLP
Sample Type
Sample Date 2023-07-24
Sampling Time 11:30
Sample I.D. SPLP-1

Analyte Batch No MRL Units Guideline

Moisture-Humidite	446868	0.1	%		11.8
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Results relate only to the parameters tested on the samples submitted.
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MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: XS Soil Solutions Inc.
72-700 Third Line
Oakville, Ontario
L6L 4B1
Attention: Karim Hosny
PO#:
Invoice to: XS Soil Solutions Inc.

Report Number: 3000012
Date Submitted: 2023-08-03
Date Reported: 2023-08-11
Project: 2960 Teston Rd
COC #: 909705

Quality Assurance Summary

Batch No	Analyte	Blank	QC % Rec	QC Limits	Spike % Rec	Spike Limits	Dup % RPD	Duplicate Limits
446867	SPLP Extraction							
446868	Moisture-Humidite			80-120				
447010	Silver	<0.1 ug/L	99	80-120		70-130		0-20
447062	Boron (total)	<10 ug/L	93	80-120	71	80-120	0	0-20
447062	Barium	<10 ug/L	95	80-120	85	70-130	1	0-20
447062	Beryllium	<0.5 ug/L	99	80-120	102	70-130	0	0-20
447062	Cadmium	<0.1 ug/L	101	80-120	91	70-130	0	0-20
447062	Cobalt	<0.2 ug/L	99	80-120	100	70-130	0	0-20
447062	Chromium Total	<1 ug/L	118	80-120	99	70-130	0	0-20
447062	Copper	<1 ug/L	102	80-120	94	70-130	0	0-20
447062	Molybdenum	<5 ug/L	90	80-120	107	70-130	0	0-20
447062	Nickel	<5 ug/L	100	80-120	98	70-130	0	0-20
447062	Antimony	<0.5 ug/L	96	80-120	80	70-130	0	0-20
447062	Selenium	<1 ug/L	98	80-120	90	70-130	0	0-20
447062	Thallium	<0.1 ug/L	99	80-120	88	70-130	0	0-20
447062	Uranium	<1 ug/L	93	80-120	94	70-130	0	0-20
447062	Zinc	<10 ug/L	105	80-120	80	70-130	0	0-20

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Client: XS Soil Solutions Inc.
72-700 Third Line
Oakville, Ontario
L6L 4B1
Attention: Karim Hosny
PO#:
Invoice to: XS Soil Solutions Inc.

Report Number: 3000012
Date Submitted: 2023-08-03
Date Reported: 2023-08-11
Project: 2960 Teston Rd
COC #: 909705

Test Summary

Batch No	Analyte	Instrument	Preparation Date	Analysis Date	Analyst	Method
446867	SPLP Extraction		2023-08-08	2023-08-09	AsA	mSPLP E9003/EPA 1312
446868	Moisture-Humidite	Oven	2023-08-08	2023-08-08	AsA	ASTM 2216
447010	Silver	ICAPQ-MS	2023-08-10	2023-08-10	SD	EPA 200.8
447062	Boron (total)	ICAPQ-MS	2023-08-11	2023-08-11	SD	EPA 200.8
447062	Barium	ICAPQ-MS	2023-08-11	2023-08-11	SD	EPA 200.8
447062	Beryllium	ICAPQ-MS	2023-08-11	2023-08-11	SD	EPA 200.8
447062	Cadmium	ICAPQ-MS	2023-08-11	2023-08-11	SD	EPA 200.8
447062	Cobalt	ICAPQ-MS	2023-08-11	2023-08-11	SD	EPA 200.8
447062	Chromium Total	ICAPQ-MS	2023-08-11	2023-08-11	SD	EPA 200.8
447062	Copper	ICAPQ-MS	2023-08-11	2023-08-11	SD	EPA 200.8
447062	Molybdenum	ICAPQ-MS	2023-08-11	2023-08-11	SD	EPA 200.8
447062	Nickel	ICAPQ-MS	2023-08-11	2023-08-11	SD	EPA 200.8
447062	Antimony	ICAPQ-MS	2023-08-11	2023-08-11	SD	EPA 200.8
447062	Selenium	ICAPQ-MS	2023-08-11	2023-08-11	SD	EPA 200.8
447062	Thallium	ICAPQ-MS	2023-08-11	2023-08-11	SD	EPA 200.8
447062	Uranium	ICAPQ-MS	2023-08-11	2023-08-11	SD	EPA 200.8
447062	Zinc	ICAPQ-MS	2023-08-11	2023-08-11	SD	EPA 200.8

Results relate only to the parameters tested on the samples submitted.
Methods references and/or additional QA/QC information available on request.

MRL = Method Reporting Limit, AO = Aesthetic Objective, OG = Operational Guideline, MAC = Maximum Acceptable Concentration, IMAC = Interim Maximum Acceptable Concentration, STD = Standard, PWQO = Provincial Water Quality Guideline, IPWQO = Interim Provincial Water Quality Objective, TDR = Typical Desired Range

Environment Testing

Client: XS Soil Solutions Inc.
72-700 Third Line
Oakville, Ontario
L6L 4B1
Attention: Karim Hosny
PO#:
Invoice to: XS Soil Solutions Inc.

Report Number: 3000012
Date Submitted: 2023-08-03
Date Reported: 2023-08-11
Project: 2960 Teston Rd
COC #: 909705

CWS for Petroleum Hydrocarbons in Soil - Tier 1**Notes:**

1. The laboratory method complies with CCME Tier 1 reference method for PHC in soil. It is validated for laboratory use.
2. Where the F1 fraction (C6 to C10) and BTEX are both measured, F1-BTEX is reported.
3. Where the F2 fraction (C10 to C16) and naphthalene are both measured, F2-naphthalene is reported.
4. Where the F3 fraction (C16 to C34) and PAHs* are both measured, F3-PAH is reported.
5. F4G is analyzed if the chromatogram does not descend to baseline before C50. Where F4 (C34 to C50) and F4G are both reported, the higher result is compared to the standard.
6. Unless otherwise stated in the sample comments, the following criteria have been met where applicable:
 - nC6 and nC10 response factors within 30% of response factor for toluene;
 - nC10, nC16, and nC34 response factors within 10% of each other;
 - C50 response factors within 70% of nC10 + nC16 + nC34 average; and,
 - Linearity is within 15%.
7. Unless otherwise stated in the sample comments, sampling requirements and analytical holding times have been met.
8. Gravimetric heavy hydrocarbons (F4G) cannot be added to the C6 and C50 hydrocarbons.
9. *PAHs = phenanthrene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, fluoranthene, dibenz(a,h)anthracene, indeno(1,2,3-c,d)pyrene and pyrene.