



Downtown Brantford Reconstruction

Geotechnical Investigation Report

Project Location:

Brantford, ON

Prepared for:

City of Brantford
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Executive Summary Downtown Brantford Reconstruction

<p>Subject Corridors</p>	<ul style="list-style-type: none"> • Dalhousie Street (full length); • Colborne Street from Brant Avenue to Dalhousie Street; • Brant Avenue from Dalhousie Street to Colborne Street; • King Street from Dalhousie Street to Colborne Street; • Queen Street from Dalhousie Street to Colborne Street; • Charlotte Street from Dalhousie Street to Colborne Street; and, • Clarence Street from Dalhousie Street to Colborne Street.
<p>Proposed Scope of Work</p>	<p>Replacement of existing services and road surface restoration.</p>
<p>General Soil Conditions</p>	<p>Pavement structure and/or fill overlying native granular, silt, and glacial till deposits.</p>
<p>Groundwater Conditions</p>	<p>Saturated soil conditions were encountered at various depths within the native granular, silt, and glacial till soils. A summary table of the saturated soil conditions encountered at the time of drilling is provided in Appendix D.</p> <p>Groundwater was measured in the installed monitoring wells in Boreholes MW111-21, MW119-21, MW127-21, MW132-21, MW137-21, and MW146-21 at depths of 2.6 to 3.8 m (Elevation 200.4 to 208.0 m) on July 6, 2021. The water level for Monitoring Well MW137-21 was unable to be collected as the well casing was compromised.</p>
<p>Environmental Lab Testing Results (Soil)</p>	<p>Concentrations of lead, benzo(a)pyrene, and dibenz(a,h)anthracene were detected above the 2011 Table 3 SCS within the fill material at Boreholes BH103-21, BH104-21, BH117-21 and BH139-21. The fill materials at Boreholes BH103-21 and BH117-21 were observed to be mixed with debris, coal/ash between approximately 0.8 to 1.4 m and wood fragments between approximately 1.5 to 2.1 m, respectively.</p> <p>Fill materials exhibiting wood fragments at Borehole BH135-21 (between approximately 0.8 to 1.4 m) exceeds the more stringent 2020 Table 3.1 ESQS RPI for PHC Fraction F2 and benzene.</p> <p>Concentrations of PHCs F3 and F4/F4G at Borehole BH102-21 and benzo(a)pyrene and dibenz(a,h)anthracene at Borehole BH103-21 were detected above the 2011 Table 3 SCS within the native material beneath the fill. The source of these impacts may be related to the potential historical fuel service station adjacent to the corridor (5-17 Dalhousie Street).</p> <p>Further, the native sandy silt at Borehole BH137-21 which exhibited a hydrocarbon odour (approximately 1.5 to 2.1 m) exceeds the 2020 Table 1 ESQS for hexane. The source of the hexane may be related to the former fuel service station/auto service garage adjacent to the corridor (341 Colborne Street).</p> <p>Additional soil sampling and analysis between and beyond the boreholes noted above should be completed to better define the spatial extent of these impacts.</p>



Recommended Pavement Design	Subgrade Type A - Collector Roadways	
	Component	Thickness
	HL3 Surface Asphalt	40 mm
	HL8 Binder Asphalt	90 mm
	Granular 'A' Base	150 mm
	Granular 'B' Subbase	300 mm
	Subgrade Type A - Arterial Roadways	
	Component	Thickness
	HL3 Surface Asphalt	40 mm
	HL8 Binder Asphalt	90 mm
	Granular 'A' Base	150 mm
Granular 'B' Subbase	330 mm	



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1.0 Introduction

MTE Consultants Inc. (MTE) was retained by the City of Brantford to conduct a geotechnical investigation along specific road corridors to support the Downtown Brantford Revitalization Program (the “Corridors”). The road corridors intended for reconstruction are the following:

- Dalhousie Street (full length);
- Colborne Street from Brant Avenue to Dalhousie Street;
- Brant Avenue from Dalhousie Street to Colborne Street;
- King Street from Dalhousie Street to Colborne Street;
- Queen Street from Dalhousie Street to Colborne Street;
- Charlotte Street from Dalhousie Street to Colborne Street; and,
- Clarence Street from Dalhousie Street to Colborne Street.

The location of the corridors are shown on **Figure 1 in Appendix A**.

It is anticipated that the project will involve the full reconstruction of the existing pavement structure and replacement of the existing services along the roadways. Concrete sidewalks, curbs, and gutters are currently present along each side of the roadways and replacement of them are anticipated. Construction depths are anticipated to be approximately 2.0 to 3.0 m along the subject sections of the roadways.

The purpose of this geotechnical investigation is to determine the soil and groundwater conditions along the roadways and provide geotechnical engineering recommendations for site servicing, excavations and dewatering, pavement structure design and construction, and pavement drainage requirements. In addition, soil samples were collected from the investigated locations for laboratory chemical analysis for preliminary soil management.

2.0 Screening Level Phase I ESA Review

Prior to completing the geotechnical investigation, MTE completed a Screening Level Phase I ESA for the Corridors, provided under separate cover. The purpose of the Screening Level Phase I ESA was to identify potential environmental concerns along, or near, the Corridors that may affect soil or groundwater quality.

The findings of this report were used to: determine potential locations for the environmental assessment in conjunction with the geotechnical boreholes to adequately assess areas of potential environmental concern; to develop the preliminary soil and groundwater sampling and analysis work plan for the proposed drilling activities; and to determine the general environmental quality of the on-site soil for preliminary soil management discussion purposes ahead of the planned construction activities.

For the readers' benefit, the current Ministry of Environment, Conservation and Parks (MECP) was previously the Ontario Ministry of the Environment (MOE) and the Ontario Ministry of the Environment and Climate Change (MOECC).

The Screening Level Phase I ESA included:

- Review of environmental information related to the Corridors and surrounding properties including published and online records (as available) from the Ministry of the Environment, Conservation and Parks (“MECP”), Ministry of Natural Resources and Forestry (“MNR”), Environment Canada, Technical Standards and Safety Authority (“TSSA”), County of Brant and the City of Brantford.
- Review of physical setting information including aerial photographs, topographic maps and geologic reference materials;
- Review of an Environmental Risk Information Services Ltd. (“ERIS”) database report for the Corridors and surrounding properties;
- Review of published municipal directories and Fire Insurance Plans (FIPs) applicable for the study area, where available;
- A tour of the Corridors for visual inspection of the property and features;
- An interview request with a key individual knowledgeable about the history of roads construction and maintenance of the Corridors;
- Photographic log of the Corridors; and
- Assessment of known and potential environmental concerns associated with the Corridors and surrounding properties.

2.1 Findings of Screening Level Phase I ESA

The proposed Revitalization Program includes streetscaping and underground infrastructure improvements to support the Downtown Brantford Revitalization Program along the Corridors listed below:

- Colborne Street East from Brant Avenue/Icomm Drive to Dalhousie Street/Colborne Street East Conjunction;
- Dalhousie Street from Brant Avenue to Colborne Street East/ Dalhousie Street junction;
- Brant Avenue from Dalhousie Street to Icomm Dive;
- Clarence Street from Dalhousie Street to Colborne Street East;
- King Street, Queen Street, Charlotte Street all from Dalhousie Street to Colborne Street East;
- Market Street/Square from Dalhousie Street to Colborne Street East; and,
- Brant Avenue/Icomm Drive/Colborne Street East/Colborne Street West intersection.

The Corridors extend approximately 2.1 kilometers (km), beginning at Brant Avenue, continuing easterly along Dalhousie Street and Colborne Street East to the junction between the two streets.

Based on the findings of the Screening Level Phase I ESA, the following potential environmental concerns were identified:

- **Dalhousie Street:** Several automotive service garages, fuel service stations, dry cleaners, printing facilities and industrial operations (i.e. metal fabrication, steel manufacturing and oil production) were located along the corridor. Additionally, a railway intersects the corridor and two USTs were located within the street, close to 37 and 44 Dalhousie Street.

- **Colborne Street East:** Several automotive service garages, commercial trucking facilities, fuel service stations, dry cleaners, printing facilities and industrial operations, (i.e. metal fabrication, steel, dye and textile manufacturing, coal gasification and oil production) were located along the corridor. Additionally, a railway intersects the corridor and one USTs was located within the street, close to 458 Colborne Street East.
- **Brant Avenue:** A commercial/light industrial facility was listed along the corridor as a generator of hazardous waste.
- **King Street:** Multiple automotive service garages, fuel service stations, dry cleaners and industrial operations (i.e. sheet metal, rubber and glass manufacturing and oil production) were located along the corridor.
- **Queen:** Multiple dry cleaners, a fuel service station, automotive and/or auto body garage, commercial trucking facility and manufacturing facilities were located along the corridor.
- **Market Street:** Industrial operations, such as a power station and manufacturing facility were located along the corridor. Additionally, a fill and vent pipe were observed at the entrance to one of the current buildings.
- **Charlotte Street:** An auto body garage and potential machine shop were located along the corridor.
- **Clarence Street:** Several automotive service garages, an oil tank and machine shop were located along the corridor.

A more detailed summary of each potential environmental concern is provided in **Appendix B** and the locations of the potential environmental concerns areas are shown on **Figure 2 in Appendix A**.

Based on a review of available topographic and geological information, the local shallow groundwater in the area is inferred to be flowing in a southerly direction based on topography and the location of the Grand River.

The preliminary findings from this report were considered in the selection of borehole and monitoring well locations for this geotechnical investigation described herein.

3.0 Investigative Program

3.1 Field Program

The fieldwork for this investigation was carried out on April 27 to May 13, 2021 and involved the drilling of forty-eight (48) boreholes (Boreholes BH101-21 to BH148-20) to depths ranging from 0.5 to 5.2 m. It is noted Boreholes BH129-21, BH130-21, and BH131-21 were advanced to depths ranging from about 0.5 to 1.1 m due to existing underground utilities. The locations of the boreholes are shown on **Figure 2 in Appendix A**.

The following boreholes were advanced along each roadway;

- Dalhousie Street - BH101-21 to BH121-21
- Brant Avenue - BH122-21
- King Street - BH123-21
- Queen Street - BH124-21

- Charlotte Street - BH125-21
- Clarence Street - BH126-21
- Colborne Street - MW127-21 to BH148-21

Public utility companies were contacted prior to the start of drilling activities in order to isolate underground utilities near the boring locations.

The boreholes were advanced with a Diedrich D50T truck mounted drill rig equipped with continuous flight hollow stem augers and was supplied and operated by London Soil Test Ltd.

Representative soil samples were recovered throughout the depths explored. Standard Penetration Tests (SPT) were carried out during sampling operations in the boreholes using conventional split spoon equipment. Approximate shear strengths of the cohesive deposits were measured with a handheld pocket penetrometer. The SPT N-values and approximate shear strengths recorded are plotted on the borehole logs in **Appendix C**.

Selected soil samples collected from the boreholes (within the proposed construction depths) were subdivided for visual and olfactory screening, combustible soil vapour (CSV) headspace measurements, and/or laboratory chemical analysis. Samples for chemical analysis were collected directly into pre-cleaned, laboratory supplied, test group specific containers. For the analysis of PHC F1 and VOCs/BTEX, soil samples were collected by means of plastic syringe core samplers into Teflon lined screw cap, gas tight glass vials prepared by the subcontracted laboratory with methanol preservative.

Six (6) 50 mm diameter monitoring wells were installed in Boreholes MW111-21, MW119-21, MW127-21, MW132-21, MW137-21, and MW146-21 to allow measurement of stabilized groundwater levels and groundwater sampling and testing. The monitoring wells were installed by inserting a PVC screen and riser pipe into the open augers and a sand pack was placed around the screen with bentonite seal above. A protective aluminum flush mount casing was installed at grade and concreted into place. The monitoring wells were tagged and monitoring well records were submitted to the MECP.

Upon completion of drilling, the remaining boreholes were backfilled with soil cuttings and bentonite in accordance with Ontario Regulation 903.

Excess soil cutting obtained from the borehole locations were contained in steel drums and picked up by Ground Force Environmental Inc. (GFE). The drums were transported to GFE's quarantine area and were disposed of following reception of analytical laboratory testing results.

The fieldwork was monitored throughout by a member of our geotechnical and environmental engineering staff, who directed the drilling procedures; documented the soil stratigraphy; recorded the SPT and approximate shear strength values; monitored the groundwater conditions and monitoring well installations; and transported the recovered soil samples to our office for further classification.

The borehole coordinates and ground surface elevations were surveyed by MTE with a Leica Global Navigation Satellite System (GNSS) rover. The borehole locations are referenced to Canadian Spatial Reference System (CSRS 1997) coordinates with the zone reference (17T) excluded. The geodetic ground surface elevations are based on GNSS and local base station telemetry and have a vertical root mean squared error of less than 20 mm.

3.2 Geotechnical Laboratory Program

All of the soil samples collected were submitted for moisture content testing with the results shown on the borehole logs in **Appendix C**. Additionally, two soil samples were submitted for grain size distribution analyses and five soils samples were submitted for particle size distribution analyses. The results of the geotechnical laboratory testing are provided in **Tables 101 and 102 in Appendix D**. The remaining soil samples will be stored for a period of 3 months and will be discarded of at that time without prior request from the client to extend storage time.

3.3 Environmental Laboratory Program

Environmental analyses were conducted on selected soil samples, representing material considered likely to be excavated or removed as part of the reconstruction project. All samples were submitted to ALS Environmental (ALS), a CALA-accredited laboratory, for analysis of one or more of the parameters of potential concern identified for the subject corridor (as warranted based on field observations and headspace results). A summary of the environmental testing that was conducted is provided in **Appendix E**.

Standard QA/QC protocols for bottle preparation, sample collection and transportation were followed as outlined in the Ministry of Environment's (MOE's) 1996 document entitled, "Guidance on Sampling and Analytical Methods of Use at Contaminated Sites in Ontario". In addition, as noted in Table 3 above, blind field duplicate soil and groundwater samples were submitted to the laboratory for chemical analysis for QA/QC purposes. Refer to the Certificates of Analysis included in **Appendix F** for submission details.

4.0 Soil Conditions

Reference is provided to the appended borehole logs for soil stratigraphy details, SPT N-values, approximate shear strengths, moisture content profiles, and groundwater observations and measurements. Soil conditions encountered along the roadways typically include pavement structure and/or fill overlying native granular, silt, and glacial till deposits.

4.1 Existing Pavement Structure

The existing pavement structure generally comprised of surficial asphaltic concrete underlain by granular base and subbase soils. A summary table of the asphaltic concrete and granular base and subbase soils thicknesses at each borehole location is provided in **Table 201 in Appendix D**.

The range and mean of the asphaltic concrete, granular base and subbase soils for each roadway are summarized in the following table;

Table 1 - Summary of the Existing Pavement Structure

Road Structure	Range	Mean
Dalhousie Street		
Asphaltic Concrete	80 – 130 mm	90 mm
Base	130 – 230 mm	190 mm
Subbase	130 – 580 mm	400 mm
Colborne Street		
Asphaltic Concrete	80 – 150 mm	100 mm
Base	100 – 230 mm	180 mm
Subbase	150 – 560 mm	450 mm
Brant Avenue		
Asphaltic Concrete	130 mm	130 mm
Base	180 mm	180 mm
Subbase	480 mm	480 mm
King Street		
Asphaltic Concrete	100 mm	100 mm
Base	180 mm	180 mm
Subbase	180 mm	180 mm
Queen Street		
Asphaltic Concrete	130 mm	130 mm
Base	180 mm	180 mm
Subbase	480 mm	480 mm
Charlotte Street		
Asphaltic Concrete	110 mm	110 mm
Base	110 mm	110 mm
Subbase	230 mm	230 mm
Clarence Street		
Asphaltic Concrete	110 mm	110 mm
Base	140 mm	140 mm
Subbase	430 mm	430 mm

The pavement structure granular materials were light brown to dark brown in colour and typically range in composition from sand and gravel to gravelly sand. Cobbles were encountered within the granular subbase soils in numerous boreholes and wood and asphalt fragments were encountered within the granular subbase soils in Boreholes BH131-21 and BH140-21. Black coal/ash seams were also encountered at the bottom of the granular subbase soils in Boreholes BH101-21 and BH102-21 and were 50 mm thick.

Insitu moisture contents in the granular materials range from about 1 to 10% indicating damp to moist conditions.

4.2 Fill

Fill was encountered beneath the pavement structure in Boreholes BH103-21 to BH112-21, BH114-21 to BH128-21, BH130-21 to BH139-21, and BH142-21 to BH148-21 and extended to depths of 0.8 to 2.7 m. It is noted the fill extended to the termination depth of Boreholes BH130-21 and BH131-21. The fill is brown to black in colour and typically ranges in composition from silty sand and gravel to silt with some clay and sand. Topsoil, organics, and wood fragments were encountered within the fill in Boreholes BH117-21, BH118-21, BH121-21, BH135-21, and BH147-21. Brick and debris fragments were encountered within the fill in Boreholes MW111-21, BH128-21, MW132-21, and BH148-21 and coal and ash was encountered within the fill in Borehole BH103-21. Cobbles were encountered within the fill in Boreholes BH105-21, BH135-21, and BH139-21.

SPT N-values in the fill range from 4 to above 50 blows per 300 mm penetration of the split spoon sampler indicating loose to very dense conditions.

Insitu moisture contents in the fill range from about 2 to 25% indicating damp to wet conditions.

4.3 Granular Deposits

Native granular deposits were encountered in all of the boreholes, except Boreholes BH108-21, BH129-21 to BH131-21, and BH138-21. The granular deposits extended to variable depths including the termination depth in the majority of the boreholes. The granular deposits were brown to grey in colour and typically range in composition from sand and gravel to sand and silt. Cobbles were encountered throughout the granular deposits. The results of grain size distribution analyses conducted on samples of the granular deposits are provided in **Appendix D** and summarized in the following table;

Table 2 - Results of Granular Deposits Grain Size Distribution Analyses

Borehole Number	Sample Depth (mbgs)	Gravel (%)	Sand (%)	Fines (%)
BH101-21	1.5 - 2.1	45	45	10
BH113-21	2.3 - 2.9	24	66	10

The results of particle size distribution analyses conducted on samples of the granular deposits are provided in **Appendix D** and summarized in the following table;

Table 3 - Results of Granular Deposits Particle Size Distribution Analyses

Borehole Number	Sample Depth (mbgs)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)
MW119-21	2.3 - 2.9	-	78	19	3
BH144-21	2.3 - 2.9	29	65	6	-

SPT N-values measured in the granular deposits range from 3 to above 50 blows per 300 mm penetration of the split spoon sampler indicating very loose to very dense conditions.

Insitu moisture contents in the granular deposits range from about 1 to 27% indicating damp to saturated conditions.

4.4 Silt

Silt deposits were encountered beneath the fill and/or granular deposits in Boreholes BH101-21, BH102-21, BH106-21 to BH108-21, BH112-21, MW119-21, BH122-21, BH124-21, BH125-21, MW127-21, and MW132-21. The silt deposits extended to the termination depth of each borehole, except Borehole BH106-21 where the silt deposit is 1.7 m thick. The silt is brown to grey in colour and typically ranges in composition from silt and sand to silt and clay. The results of a particle size distribution analysis conducted on a sample of the silt are provided in **Appendix D** and summarized in the following table;

Table 4 - Results of Silt Particle Size Distribution Analysis

Borehole Number	Sample Depth (mbgs)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)
MW127-21	3.0 - 3.7	-	11	82	7

SPT N-values measured in the silt range from 4 to 21 blows per 300 mm penetration of the split spoon sampler indicating loose to compact conditions. Approximate shear strengths measured in the cohesive portions of the silt ranged from about 25 to 50 kPa, indicating soft to stiff consistencies.

Insitu moisture contents in the silt range from about 11 to 37%. The non-cohesive portions of silt appeared to range from very moist to saturated conditions. The cohesive portions of silt appeared to be wetter than the plastic limit.

4.5 Glacial Till

Glacial till was encountered beneath the fill and/or granular deposits in Boreholes BH107-21, BH109-21, BH110-21, BH121-21, BH133-21, BH134-21, BH138-21, BH140-21, and BH144-21. The till extended to the termination depth of each borehole, except Boreholes BH107-21 and BH121-21 where the till was 1.1 m and 0.6 m thick, respectively. The till is brown to grey in colour and typically ranges in composition from silt with some clay to sandy silty gravel. The results of particle size distribution analyses conducted on samples of the glacial till are provided in **Appendix D** and summarized in the following table;

Table 5 - Results of Glacial Till Particle Size Distribution Analyses

Borehole Number	Sample Depth (mbgs)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)
BH107-21	1.5 - 2.1	4	14	65	17
BH138-21	1.5 - 2.1	39	27	22	12

SPT N-values measured in the till range from 6 to 44 blows per 300 mm penetration of the split spoon sampler indicating loose to dense conditions.

Insitu moisture contents in the till range from about 8 to 26% indicating moist to saturated conditions.

5.0 Groundwater Conditions

Groundwater observations and measurements were carried out in the open boreholes at the time of drilling and are summarized on the borehole logs. Saturated soil conditions were encountered at various depths within the native granular, silt, and glacial till soils. A summary table of the saturated soil conditions encountered at the time of drilling is provided in **Table 301 in Appendix D**.

As previously discussed, monitoring wells were installed at the locations of Boreholes MW111-21, MW119-21, MW127-21, MW132-21, MW137-21, and MW146-21 to facilitate the collection of groundwater samples and measurement of groundwater elevation. Water level measurements taken on July 6, 2021 are summarized in the following table;

Table 6 - Water Level Measurements Taken on July 6, 2021

Borehole Number	Borehole Elevation (masl)	Groundwater Depth (mbgs)	Groundwater Elevation (masl)
MW111-21	203.7	2.6	201.1
MW119-21	204.6	3.0	201.6
MW127-21	211.8	3.8	208.0
MW132-21	205.2	3.0	202.2
MW137-21	208.4	N/A*	N/A*
MW146-21	203.7	3.3	200.4

*Note: The water level for Monitoring Well MW137-21 was unable to be collected as the well casing was compromised

It should be noted that the groundwater levels can vary and are subject to seasonal fluctuations and local variations.

6.0 Environmental Soil Test Results

Headspace screening of organic vapour concentrations was conducted using a RKI Eagle II meter. The field headspace readings were generally measured to be between 0 parts per million (ppm) and 25 ppm for organic vapour, indicative of low concentrations of volatiles in the recovered soil samples. Headspace readings between 35 and 40 ppm were recorded at Borehole MW137-21, associated with a hydrocarbon odour (as noted below).

The following indicators of possible environmental impact were noted:

- Black fill with possible coal/ash or weathered hydrocarbons was noted within the fill material at Boreholes BH101-21 (0.7 mbgs), BH102-21 (0.8 mbgs), BH103-21 (0.6 mbgs);
- Debris (i.e. clay bricks) was noted at Boreholes MW111-21 (0.9 mbgs) and BH128-21 (1.5 mbgs);
- Asphalt encountered within the roadway granulars at Boreholes BH131-21 and BH140-21;
- Trace red brick within the fill at Boreholes MW132-21 (0.8 mbgs) and BH148-21 (0.7 mbgs);

- Hydrocarbon odour and associated staining was encountered at Borehole MW137-21 (between 1.5 and 2.3 mbgs); and
- Slight hydrocarbon odour was encountered within the fill material at Borehole BH146-21 (0.8 mbgs).

The Corridors as a “Project Area” were assessed in 2021 during the transitional period for the MECP’s new Ontario Regulation 406/19 for Excess Soil and the associated Rules for Soil Management and Excess Soil Quality Standards (“Rules”), and well in advance of the final reconstruction design stage when the actual volume and locations of excess soil to be generated will be determined.

Note 1: For ease of discussion in the following sections, the following definitions are provided:

- 2011 Site Condition Standards (“SCS”) - As identified in ‘Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act (as amended April 15, 2011). Prior to 2021, commonly used to determine excess soil quality.
- 2020 Excess Soil Quality Standards (“ESQS”) - As identified in Appendix 1 of the Rules for Soil Management adopted by reference in O. Reg. 406/19 made under the Environmental Protection Act (December 8, 2020). Current applicable Standards to determine excess soil quality.

Note 2: 2011 Table 1 SCS are identical to 2020 Table 1 ESQS.

Note 3: 2020 Table 3.1 ESQS are generally equal to, or more stringent than, their respective 2011 Table 3 SCS for a non-potable groundwater condition (depending on the subject parameter).

To determine the general environmental quality of the soil and groundwater within the work area in relation to **on-site reuse**, the soil results have been compared to the 2011 Table 3 Full Depth Generic Site Condition Standards (SCS) in a Non-Potable Groundwater Condition of the “Soil, Groundwater and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act” (April 15, 2011) for industrial/commercial/community property use and all types of property use with coarse textured soils, respectively (the “2011 Table 3 SCS”).

Excess soil is typically generated during road construction activities requiring export off-site. To determine appropriate **off site reuse/disposal/management** options for excess soils resulting from the construction activities, which are planned in 2023, the analytical results have also been compared to the 2020 Table 1 Full Depth Background Excess Soil Quality Standards (ESQS) for residential/parkland/institutional/industrial/commercial/community property use (“2020 Table 1 ESQS”) and the Table 3.1 Full Depth Generic ESQS) in a Non-Potable Groundwater Condition for residential/parkland/ institutional (RPI) and industrial/commercial/ community (ICC) property use from Appendix 1 of the Rules for Soil Management associated with O.Reg.406/19 (the “2020 Table 3.1 ESQS”).

6.1 Soil Quality

The results of the soil chemical analyses are summarized in **Tables 401 to 405** and **501 to 505** in **Appendix E** and copies of the ALS Laboratory Certificates of Analysis are included in **Appendix F**.

The analytical results for the selected soil samples representing the proposed work area along the Corridors (or Project Area) indicate that Metals, PAH and/or PHC related concentrations exceed the 2011 Table 3 SCS along Dalhousie Street and Colborne Street. In addition, SAR and EC (salt) levels exceed the above-noted criterion at varying depths, generally across the Corridors.

The impacted soils throughout the Corridors are further summarized below:

Table 7 – On-site Reuse: Locations Exceeding the 2011 Table 3 SCS (thus considered to be impacted and not suitable for reuse at another property)

Sample ID	Subject Corridor	Approx. Depth (mbgs)	Soil Type	Parameter Exceeding Table 3 Standards
All analyzed locations	Each Subject Corridor	Various	Fill and native soils	SAR and/or EC
BH102-21 SS2	Dalhousie Street	0.8-1.4	Native sand and gravel	PHC F3 and F4G
BH103-21 SS2		0.8-1.4	Fill (some black coal/ash)	PAHs: Benzo(a)pyrene and Dibenz(a,h)anthracene
BH103-21 SS3		1.5-2.1	Native sand	
BH104-21 SS2		0.8-1.4	Fill	
BH117-21 SS3		1.5-2.1	Fill (some organics/topsoil and wood fragments)	Lead
BH139-21 SS2	Colborne Street	0.8-1.4	Fill	Lead

Toxicity Characteristic Leachate Procedure (TCLP) analyses for VOCs, Metals and Inorganics, and /or Benzo(a)pyrene were subsequently conducted on the impacted fill material at Boreholes BH104-21 and BH117-21. The results of TCLP analysis confirm that the material meets the O.Reg. 347 Schedule 4 leachate criteria (**Appendix F**), and is characterized as non-hazardous for disposal purposes.

The following table summarizes the locations where the analyzed parameters were detected at concentrations exceeding the 2020 Table 1 ESQS and Table 3.1 ESQS).

Table 8 – Off-site Re-use: Locations Exceeding the 2020 Table 1 ESQS and 2020 Table 3.1 ESQS (and thus may result in some restriction for off-site reuse at another property)

Sample ID	Subject Corridor	Approx. Depth (mbgs)	Soil Type	Parameter Exceeding Table 1 RPI/ICC ESQS	Parameter Exceeding Table 3.1 RPI ESQS	Parameter Exceeding Table 3.1 ICC ESQS
BH106-21 SS2	Dalhousie Street	0.8-1.4	Fill	PHC F4 and F4G	N/A	N/A
BH109-21 SS2		0.8-1.4	Fill	PHC F4 and F4G	N/A	N/A
BH122-21	Icomm Drive	0.8-1.4	Fill	Antimony	N/A	N/A
BH131-21 SS2	Colborne Street	0.8-1.1	Fill	PHC F4, F4G, Benzene	Benzene	N/A
BH135-21 SS2		0.8-1.4	Fill (some organics and wood fragments)	PHC F2 and Benzene	PHC F2 and Benzene	N/A

Sample ID	Subject Corridor	Approx. Depth (mbgs)	Soil Type	Parameter Exceeding Table 1 RPI/ICC ESQS	Parameter Exceeding Table 3.1 RPI ESQS	Parameter Exceeding Table 3.1 ICC ESQS
BH137-21 SS3		1.5-2.1	Native sandy silt (hydrocarbon odour)	Hexane	N/A	N/A
BH143-21 SS2		0.8-1.4	Fill	PHC F4G	N/A	N/A

All other results indicate that the analyzed soils meet the 2020 Table 1 and Table 3.1 ESQS (RPI and ICC) for the analyzed parameters and are therefore suitable for reuse at another property.

7.0 Discussion and Recommendations

The “Project” will involve the full reconstruction of the existing pavement structure and replacement of the existing services along the following roadways in downtown Brantford, Ontario;

- Dalhousie Street (full length);
- Colborne Street from Brant Avenue to Dalhousie Street;
- Brant Avenue from Dalhousie Street to Colborne Street;
- King Street from Dalhousie Street to Colborne Street;
- Queen Street from Dalhousie Street to Colborne Street;
- Charlotte Street from Dalhousie Street to Colborne Street; and,
- Clarence Street from Dalhousie Street to Colborne Street.

The subsurface stratigraphy along the roadways generally comprises pavement structure and/or fill overlying native granular, silt, and glacial till deposits. Saturated soil conditions were encountered at various depths within the native granular, silt, and glacial till soils and are summarized on **Table 301 in Appendix D**. Groundwater was measured in the installed monitoring wells in Boreholes MW111-21, MW119-21, MW127-21, MW132-21, MW137-21, and MW146-21 at depths of 2.6 to 3.8 m (Elevation 200.4 to 208.0 m) on July 6, 2021. The water level for Monitoring Well MW137-21 was unable to be collected as the well casing was compromised.

Based on the results of this geotechnical investigation, full reconstruction of the pavement structure and service replacement is feasible for the roadways; however, the encountered groundwater conditions will affect design and construction. The following subsections of this report contain geotechnical and environmental recommendations pertaining to excess soil management, site servicing, excavations and dewatering, pavement structure design and construction, and pavement drainage requirements.

7.1 Preliminary Excess Soil Management

7.1.1 Excess Soil in Ontario – Regulatory Update and Discussion

Ontario Regulation (O. Reg.) 406/19 and the associated Rules for Soil Management and Excess Soil Quality Standards (the Rules) became law on January 1, 2021, with some components coming to effect at that time and some components to be phased in between January 1, 2022 and 2025. However, most recently on April 20, 2022, The MECP paused certain requirements of the regulation until January 1, 2023 when they will be restarted. Most notably, the following Planning Documents are paused for the remainder of 2022:

1. Assessment of Past Uses
2. Sampling and Analysis Plan (including minimum sample frequency and parameter testing)
3. Characterization Report
4. Soil Destination Report
5. Soil tracking
6. Online (public) Registry

Based on the planned construction schedule (after January 1, 2023), this Project may be captured under the Regulation unless other exemptions can be demonstrated as applicable.

Project exemptions to the above-noted major Planning Documents (Items 1 to 3 above) can be demonstrated if soil-related studies have already been completed before January 1, 2022 to avoid repeat work/effort. In addition, movements of soil from one infrastructure project to another infrastructure project are exempt, with temporary storage allowed between such projects, if applicable for the City.

In the event that no pause or exemption to the Planning Requirements of the Regulation are available when the project commences, then the Registration, Planning and soil tracking requirements would be triggered by any of the following:

1. If the Project Area is within or includes an Enhanced Investigation Property such as an industrial use, auto service garage, retail fuel outlet or dry cleaner;
2. A volume of greater than 2,000 m³ of excess soil to be generated; or
3. If the purpose of the excavation is to remediate soil.

Although the Screening Level Phase I ESA and preliminary soil sampling and analysis completed do not meet all of the requirements defined in the Regulation or Rules, due to the nature of the pre-design process, completing preliminary assessment of related to past uses and excess soil sampling and analysis in conjunction with this geotechnical investigation is considered a **reasonable and very appropriate “first step”**. However, it is possible that additional work associated with excess soil management will be required at a future time (e.g. expanding upon existing information to meet the Planning Requirements).

The ultimate step in determining whether or not the Planning Requirements under the new Regulation apply and to what extent, is through the subsequent design work when the volume of excess soil will be confirmed. It is recommended that the above-noted Planning Requirements be considered during the design stage and that supplemental excess soil assessment and reporting, if required, be reviewed a minimum of four to six months ahead of the planned construction.

Regardless of the above, as a minimum the Project Leader (typically the owner, not the contractor) will be responsible for the following:

- Understanding and determining appropriate reuse and disposal sites, and obtaining written consent from the reuse site(s) before excess soil from this project can be received.
- A written procedure outlining the process and steps to be taken, should impacted soils be encountered during construction (e.g. visual/olfactory) must be prepared for the Project.
- Understanding and adhering to soil storage requirements including management of: noise; dust; mud tracking; run-off and erosion; leaching into groundwater, and potential odour issues. Soils tested and found to be of different quality must be segregated. Individual stockpiles must not exceed 2,500 m³ each, and must be placed greater than 10 m from a property boundary (not applicable for linear infrastructure projects) or 30 m from a water body.

If soils are contaminated, such material must be transported using MECP licensed haulers. Vehicles transporting/hauling of excess soil must be safe, appropriate, leak proof (if applicable), covered when appropriate, etc. All vehicle operators will be expected to know, and provide the following information (written or electronic record), if requested: loading location, date/time it was loaded, quantity, contact information for person in charge at project area, transport company/driver information, license plate, and reuse site location.

At a minimum, the above information should be considered in preparation of construction tenders and documents.

7.1.2 Summary of Findings

Concentrations of lead, benzo(a)pyrene, and dibenz(a,h)anthracene were detected above the 2011 Table 3 SCS within the fill material at Boreholes BH103-21, BH104-21, BH117-21 and BH139-21. The fill materials at Boreholes BH103-21 and BH117-21 were observed to be mixed with debris, coal/ash between approximately 0.8 to 1.4 m and wood fragments between approximately 1.5 to 2.1 m, respectively.

Fill materials exhibiting wood fragments at Borehole BH135-21 (between approximately 0.8 to 1.4 m) exceeds the more stringent 2020 Table 3.1 ESQS RPI for PHC Fraction F2 and benzene. Additional debris (coal/ash and bricks) was noted at Boreholes BH101-21 (0.7 m), BH102-21 (0.8 m), MW111-21 (0.9 m) and BH128-21 (1.5 m).

Concentrations of PHCs F3 and F4/F4G at Borehole BH102-21 and benzo(a)pyrene and dibenz(a,h)anthracene at Borehole BH103-21 were detected above the 2011 Table 3 SCS within the native material beneath the fill. **The source of these impacts may be related to the potential historical fuel service station adjacent to the corridor (5-17 Dalhousie Street).**

Further, the native sandy silt at Borehole BH137-21 which exhibited a hydrocarbon odour (approximately 1.5 to 2.1 m) exceeds the 2020 Table 1 ESQS for hexane. **The source of the hexane may be related to the former fuel service station/auto service garage adjacent to the corridor (341 Colborne Street).**

Additional soil sampling and analysis between and beyond the boreholes noted above should be completed to better define the spatial extent of these impacts.

In addition, SAR impacted soils with levels above one or more of the 2020 ESQS were identified at variable depths, generally across the work area. The detection of elevated levels of SAR is an indication of de-icing road salt impacts. SAR is a parameter of ecological significance, which is a measure of the exchange of sodium and calcium and magnesium ions on the permeability of aggregate soils. As such, given that the elevated levels of SAR are likely related to de-icing activities and are parameters of ecological significance, they are not considered contaminants of concern in accordance with O.Reg. 153/04, as amended. However, an intended receiver of any excess soil from this work area must be made aware of the elevated levels of SAR (salt use related), so that they may place, or dispose of the soil appropriately and in accordance with the Soil Rules.

7.1.3 Excavation and Excess Soil Management Options

The discussion and recommendations provided herein are based on:

1. Components of Regulation 406/19 and its associated Rules;
2. Current industry best management practices; and,
3. The soil samples collected and analyzed from the forty-eight (48) boreholes (Boreholes BH101-21 to BH148-20) completed for this assignment between April 27 to May 13, 2021 only.

It is noted that the final requirements for the management of excess soil for the project must be reviewed at the on-set of the design stage, once the estimated volume of excess soil is determined.

A. Contaminated Soils - Above the 2011 Table 3 SCS

Based on the analytical results, the Metals, PAH and PHC impacted fill material at Boreholes BH102-21, BH103-21, BH104-21, BH117-21 and BH139-21 should be delineated, separated and transferred to an appropriate reuse/disposal site.

In accordance with O.Reg. 406/19, appropriate receivers may include:

- MECP licensed landfill/waste receiver (prior to 2025 and via MECP licensed haulers);
- Class 1 Soil Management Sites; and
- Local Waste Transfer Facility.

TCLP analysis indicates that the impacted fill material at Boreholes BH104-21 and BH117-21 are characterized as non-hazardous for disposal purposes.

It is recommended that these fill materials be handled by workers with caution. The contractor should include appropriate precautions with respect to handling impacted soil in their Health and Safety Plan for the duration of the excavation(s) and construction.

B. On-Site Reuse

All remaining soils analyzed at the investigated locations are considered to be environmentally suitable for reuse within the Project Area, if geotechnically suitable and if placed beneath asphalt and not along a property boundary. Any reuse of the on-site soils (all assumed to be impacted by salt) should be restricted to below a 1.5 m depth within the boulevards and, as such, assumed to be below penetration depths of plant root systems.

MTE notes that due to the presence of organics and/or debris, some existing fill material may not be geotechnically suitable for on-Site reuse.

C. Excess Soil – Above the 2020 Table 3.1 RPI ESQS (below 2020 Table 3.1 ICC ESQS)

Reuse Site options for the PHC and benzene fill material above the 2020 Table 3.1 RPI ESQS (but below the 2020 Table 3.1 ICC ESQS) at Boreholes BH131-21 and BH135-21 may include, but may not be limited to:

- Other ICC development projects, in accordance with the Soil Rules;
- Site Alteration Permit Properties (SAPPs) having appropriate approval to accept such PHC, benzene and salt-impacted soil;
- Class 2 Soil Management Sites;
- Local Waste Transfer Facility; and
- Class 1 Soil Management Sites.

Should excess soil be exported from the Project Area for off-site reuse, such soils must be free of staining, PHC or solvent-like odours, and/or debris.

D. Excess Soil – Above Table 1 ESQS (All Other Concentrations Below the Table 3.1 RPI and ICC ESQS) and Salt Impacted Soils

All remaining soil (excluding soils described under A, C and D above) are considered to be environmentally suitable for reuse at an appropriate reuse site, however, the antimony, PHC, hexane, and SAR/ EC levels (at the boreholes identified in Table 8 above) must be considered. Should excess soil be exported from the work area for off-site reuse, such soils must be free of staining; PHC- or solvent-like odours, and/or debris.

Reuse Site options may include, but may not be limited to:

- Other development projects, in accordance with the Soil Rules;
- Site Alteration Permit Properties (SAPPs) having appropriate approval to accept such PHC- and salt-impacted soil; and
- Aggregate pits having appropriate approval to accept such salt-impacted soil.

The deposit of the material on a Reuse Site (described under C and D above) is also subject to the following conditions:

1. The updated analytical results documented herein should be forwarded to the owner/manager of the Reuse Site(s) prior to proceeding with the shipment of soil.
2. In accordance with O. Reg. 406/19, the Reuse Site must provide written consent to accept the soil.
3. The intended Reuse Site must be made aware of the elevated levels of SAR/EC, so that they may dispose of, or place, the soil appropriately and in accordance with the Soil Rules (Rules for Specific Soil Types – Salt Impacted Excess Soil). For example, the excess soil is placed at least 1.5 m below the surface of the soil, and is not finally placed within 30 m of a waterbody; or within 100 m of a potable water well or area with an intended property use that may require a potable water well.
4. The Reuse Site must have a beneficial purpose for the material being imported and the quantity of soil must be suitable and placed for that purpose. Consultation with a geotechnical engineer may be required.
5. The moisture content of the material is suitable for transportation.

6. The excess soil must be finally placed no later than two years after it is deposited at the Reuse Site.

Other considerations should include:

- Ensuring appropriate drainage patterns are maintained during and following placement at the Reuse Site.
- Ensuring the protection of natural heritage features (wetlands and woodlands) during the and following placement at the receiving site, including the use of erosion controls.

Alternatively, these soils could also be transferred to Class 1 or Class 2 Soil Management Sites or a Local Waste Transfer Facility.

The subsurface soil condition and environmental quality of the soils within the work area may vary between and beyond the borehole and sampled locations. If soils are encountered during the construction activities that appear to have been environmentally impacted and not addressed herein, these soils should be segregated into separate stockpiles (plastic sheeting placed below and above the stockpile), inspected, and sampled and analyzed at that time to determine appropriate handling and/or disposal requirements.

7.2 Site Servicing

7.2.1 Excavations

It is understood that the existing services will be replaced along the roadways. It is anticipated that the services will be constructed at conventional depths extending up to 3.0 m below grade.

Temporary excavations to conventional depths for installation of underground pipes at this site must comply with the Ontario Occupational Health and Safety Act and Regulations for Construction Projects. The predominate soils encountered along the roadways are classified as Type 3 soils (O. Reg. 213/91, s. 226 (4)). Temporary side slopes through this material must be cut at an inclination of 1.0 horizontal to 1.0 vertical or less from the base of the excavation, exclusive of groundwater effects. Where wet to saturated conditions are encountered, excavation side slopes should be expected to slough to flatter inclinations, potentially 3.0 horizontal to 1.0 vertical or flatter.

Trench side slopes must be continuously inspected especially after periods of heavy rainfall or snow melt to identify areas of instability. Surface water should be directed away from entering the trench.

Where spatial limitations (from utility poles, existing underground services, above ground structures, etc.) do not permit overburden cut slopes at the inclinations above, a steeper cut slope can be employed if trench boxes are used to protect workers. Some movement or slumping of the soils adjacent to the trench box should be expected if this option is used.

7.2.2 Dewatering

Moderate to significant groundwater inflow should be expected where excavations extend into the saturated granular deposits encountered throughout the roadways. Groundwater was measured in the installed monitoring wells in Boreholes MW111-21, MW119-21, MW127-21, MW132-21, MW137-21, and MW146-21 at depths of 2.6 to 3.8 m (Elevation 200.4 to 208.0 m) on July 6, 2021. The water level for Monitoring Well MW137-21 was unable to be collected as the well casing was compromised.

If excavations extend to these depths, proactive dewatering will be required in these areas to allow for a stable and dry excavation to permit the installation of the services. It is our opinion that extensive pumping may be required to handle the groundwater infiltration in these areas.

It will be necessary to flatten or support the excavation side slopes where groundwater seepage is occurring to ensure stability. Every excavation that a worker may be required to enter shall be kept reasonably free of water (O. Reg. 213/91, s. 230).

It should be noted that an Environmental Activity and Sector Registry (EASR) or Permit to Take Water (PTTW), issued by the Ministry of Environment, Conservation and Parks, will be required if the dewatering system/sumps result in a water taking of more than 50,000 L/day to 400,000 L/day, respectively. The design of the dewatering system should be left to the contractor's discretion to control groundwater at least 0.5 m below the invert level in order to provide stable excavation base. The contractor should notify the prime consultant in the event that he feels that an EASR/PTTW will be needed.

7.2.3 Pipe Bedding

It is anticipated that the invert elevations of the pipes will be at conventional 2 to 3 m depths below ground surface. No bearing problems are anticipated for pipes set on properly dewatered native inorganic subsoil. The bedding material may need to be thickened if excavations encounter soft or spongy soil at the base of the service trench.

The existing fill soils are not suitable to support pipes without undergoing possible detrimental post-construction settlement. The fill should be subexcavated from below the pipes and replaced with granular fill (compacted to a minimum of 95% standard Proctor maximum dry density (SPMDD)), a Controlled Density (flowable) Fill material, or the pipes should be constructed in structurally supported pipe conduits.

Pipe bedding for services should be conventional Class 'B' pipe bedding comprising a minimum 150 mm thick layer of OPSS 1010 Granular 'A' aggregate below the pipe invert. Granular 'A' type aggregate should be provided around the pipe to at least 300 mm above the pipe and the bedding aggregate should be compacted to a minimum 98% SPMDD, as per The City of Brantford's Linear Municipal Infrastructure Standards - Design and Construction Manual, dated January 2021.

A well-graded clear stone such as Coarse Aggregate for HL4 Asphaltic Concrete (OPSS 1003) could be used in the sewer trenches as bedding below the spring line of the pipe to facilitate sump pump dewatering, if necessary. The clear stone should be compacted with a plate tamper and fully wrapped with a non-woven geotextile to prevent the migration of fine particles from the saturated soils.

7.2.4 Trench Backfilling

The trenches above the specified pipe bedding should be backfilled with inorganic on-site soils placed in maximum 300 mm thick lifts and compacted to at least 98% SPMDD, as per The City of Brantford's Linear Municipal Infrastructure Standards - Design and Construction Manual, dated January 2021. Organic materials and debris fragments were encountered within the fill and are not considered suitable for reuse as trench backfill and should be separated. Based on the analytical testing, the non-organic soils on the site are environmentally suitable for reuse for this purpose, with exception of the soil samples exceeding the Table 3 SCS and observed to contain deleterious materials (see Section 6.0 and 6.1 above for further details). These locations within 2011 Table 3 SCS were collected from Boreholes BH102-21, BH103-21, BH104-21, BH117-21, BH139-21. Debris (coal/ash, brick or asphalt) was additionally noted in Boreholes BH101-21, MW111-21, BH128-21, BH131-21, MW132-21, BH140-21, and BH148-21.

Wet or saturated native soils are not considered suitable for reuse as trench backfill. Any additional material required at the site should comprise imported inorganic soils such as OPSS 1010 Select Subgrade Material.

To minimize potential problems, backfilling operations should follow closely after excavation so that only a minimal length of trench is exposed. Care should be taken to protect side slopes of excavations by diverting surface run-off away from the excavations. If construction extends into the winter, then additional steps should be taken to minimize frost and ensure that frozen material is not used as backfill.

7.3 Surface Works

7.3.1 Curbs, Gutter, and Sidewalks

The concrete for curbs, gutters and sidewalks should be proportioned, mixed, placed and cured in accordance with the requirements of OPSS 353, and OPSS 1350 and shall meet the following specific requirements (OPSS 353.05.01):

- Minimum compressive strength = 32 MPa at 28 days
- Coarse aggregate = 19.0 mm nominal max. size
- Maximum slump = 60 mm for curbs and gutter, 70 mm for sidewalks
- Air entrainment = $6.5 \pm 1.5\%$

A minimum of 150 mm of OPSS 1010 Granular 'A' material compacted to at least 98% SPMDD is required as a base for curbs and sidewalks. During cold weather any freshly placed concrete must be covered with insulating blankets to protect against freezing as per OPSS 904. Three cylinders from each day's pour should be taken for compressive strength testing. Air entrainment, temperature and slump tests should be conducted on the same batch of concrete from the test cylinders made.

7.3.2 Pavement Construction

Replacement of the services and a full reconstruction of the pavement structure is proposed along the subject roadways. The full reconstruction of the pavement structure would consist of removing the existing pavement structure materials and placement of imported OPSS 1010 Granular 'B' subbase soils, OPSS 1010 Granular 'A' base soils and hot-mix asphalt.

The existing fill materials are generally considered suitable to be left below the road structure. The subgrade soils **should be proof rolled and inspected by qualified geotechnical personnel** to ensure stability. Areas with excessive organic content and/or topsoil must be subexcavated and if the subgrade is wet and unstable, additional granular subbase will be required. Depending on finished grades at the site the pavement subgrade soils will comprise of compacted trench backfill, existing fill materials, or native soils.

It is understood that the subject roadways would be classified as either collector or arterial roadways. The pavement component thicknesses in the following table are recommended based on the proposed pavement usage and the frost-susceptibility and strength of the subgrade soils and The City of Brantford's Linear Municipal Infrastructure Standards - Design and Construction Manual, dated January 2021.

Table 9 - Pavement Design

Pavement Component	Subgrade Type A - Collector Roadways	Subgrade Type A - Arterial Roadways
HL3 Surface Hot Mix Asphalt	40 mm	40 mm
HL8 Binder Hot Mix Asphalt	90 mm	90 mm
OPSS 1010 Granular 'A' Base	150 mm	150 mm
OPSS 1010 Granular 'B' Subbase	300 mm	330 mm

Samples of aggregates should be checked for conformance to OPSS 1010 prior to utilization on-site and during construction. The Granular 'B' subbase and Granular 'A' base courses must be compacted to 100% SPMD, as verified by insitu density testing.

The hot mix asphalt paving materials should conform to the requirements of OPSS 1150. The asphalt should be placed and compacted in accordance with OPSS 310. The Performance Graded Asphalt Cement (PG-AC) designation for the asphaltic concrete is 58-28.

The surface asphalt should be placed in one lift. The binder asphalt should be placed in two lifts. It is recommended to place the surface asphalt as soon as possible following placement of the binder asphalt to ensure the full pavement strength is provided for regular traffic.

A joint transition treatment will be required where old and new pavement meet. Provided the existing pavement is 100 mm thick or greater, the recommended transition treatment comprises milling of the old surface layer approximately 0.3 m wide and 50 mm deep. Where the existing pavement is less than 100 mm thick, the transition treatment should comprise saw cutting the existing asphalt to provide a clean face to tie the new asphalt into.

It is recommended to clean all of the construction joints with stiff bristle brooms and compressed air to remove all dirt, dust, and other foreign matter. A tack coat should be applied to all construction joints prior to the placement of hot mix asphalt to ensure an adequate bond is achieved between the pavement layers.

The necessity for continuous repair work and paving supervision as well as quality assurance testing during road reconstruction projects cannot be over emphasized. An annual maintenance program is also recommended to maintain the pavements at a suitable level.

The pavement design is based on the assumption that construction will be carried out during the drier time of the year and that the subgrade soil is stable as determined by proof-rolling inspected by qualified geotechnical personnel. The subgrade and subbase materials can be significantly damaged and lose internal strength if construction is conducted in unfavorable weather. If the subgrade is wet and unstable, additional granular subbase will be required.

All materials and construction services required for the work should be in accordance with the relevant sections of the Ontario Provincial Standard Specifications.

7.3.3 Pavement Drainage

Adequate subsurface drainage is considered critical to the performance and lifespan of pavement. The pavement subgrade should be sloped at a minimum of 3% to promote drainage, and the pavement granular courses and asphalt should be sloped at a minimum of 2% to promote rainwater drainage. Surface water should not be allowed to pond along the outside pavement edges.

It is recommended that continuous pavement subdrains should be constructed to drain the pavement structure. The purpose of the subdrains is to remove excess subsurface water in order to improve overall pavement serviceability and increase the pavement life.

The work of subdrain installation shall be in accordance with OPSS 405 and OPSS 216.021. The subdrain shall be 150 mm diameter perforated pipe conforming to OPSS 1801 or 1840, and prewrapped with geotextile conforming to OPSS 1860. A typical detail of a pavement subdrain is provided on **Figure 3 in Appendix A**.

7.3.4 Construction Inspection and Testing

MTE recommends that geotechnical inspection and testing procedures be conducted throughout the various phases of the project.

Engineer site visits should be conducted to confirm suitable subgrade conditions and soil compaction testing should be carried out on trench backfill. Imported granular materials should be tested for conformance to specifications prior to importation to the site. Field compaction testing of the pavement structure components (granulars and hot mix asphalt) should be conducted. Samples of the hot mix asphalt should be collected during pavement and laboratory testing for compliance completed. It is recommended to collect hot mix asphalt samples at a minimum frequency of 1 sample for each 500 tonnes placed onsite.

During placement of concrete at the site, testing should be performed onsite to confirm the slump and air content of the concrete are within specifications. Concrete test cylinders should be cast for compressive strength testing from the same samples tested for slump and air content. Concrete should be tested at a frequency of once every 100 m³ or daily, whichever is greater.

MTE offers soil compaction, concrete, and asphalt testing, as well as soil inspection services through our Stratford and London offices.

8.0 Limitations of Report

Services performed by MTE Consultants Inc. (MTE) were conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the Geotechnical Engineering & Consulting profession practicing under similar conditions in the same geographic area where the services are provided. No other warranty or representation expressed or implied as to the accuracy of the information, conclusions or recommendations is included or intended in this report.

This report was completed for the sole use of the Client. This report is not intended to be exhaustive in scope or to imply a risk-free site. As such, this report may not deal with all issues potentially applicable to the site and may omit aspects which are or may be of interest to the reader.

In addition, it should be recognized that a soil sample result represents one distinct portion of a site at the time it is collected, and that the findings of this report are based on conditions as they existed during the time period of the investigation. The material in the report reflects our best judgment using the information available at the time the report was written. The soil and groundwater conditions between and beyond the test holes may differ from those encountered in the test holes. Should subsurface conditions arise that are different from those in the test holes MTE should be notified to determine whether or not changes should be made as a result of these conditions.

It should be recognized that the passage of time may affect the views, conclusions and recommendations (if any) provided in this report because conditions of a property can change, along with regulatory requirements. All design details were not known at the time of submission of this report and it is recommended MTE should be retained to review the final design documents prior to construction to confirm they are consistent with our report recommendations. Should additional or new information become available, MTE recommends that it be brought to our attention in order that we may determine whether it affects the contents of this report.

Any use which another party makes of this report, or any reliance on, or decisions to be made based upon it, are the responsibility of such parties. MTE accepts no responsibility for liabilities incurred by or damages, if any, suffered by another party as a result of decisions made or actions taken, based upon this report. Others with interest in the site should undertake their own investigations and studies to determine how or if the condition affects them or their plans. The contractors bidding on this project or undertaking the construction should make their own interpretation of the factual information and draw their own conclusions as to how subsurface conditions may affect their work.

The benchmark and elevations provided in this report are primarily established to identify differences between the test hole locations and should not be used for other purposes such as, planning, development, grading, and excavation.

All of which is respectfully submitted,
MTE Consultants Inc.



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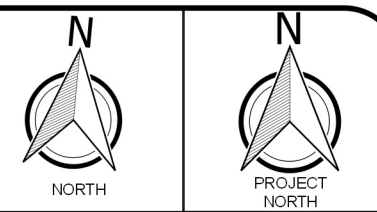
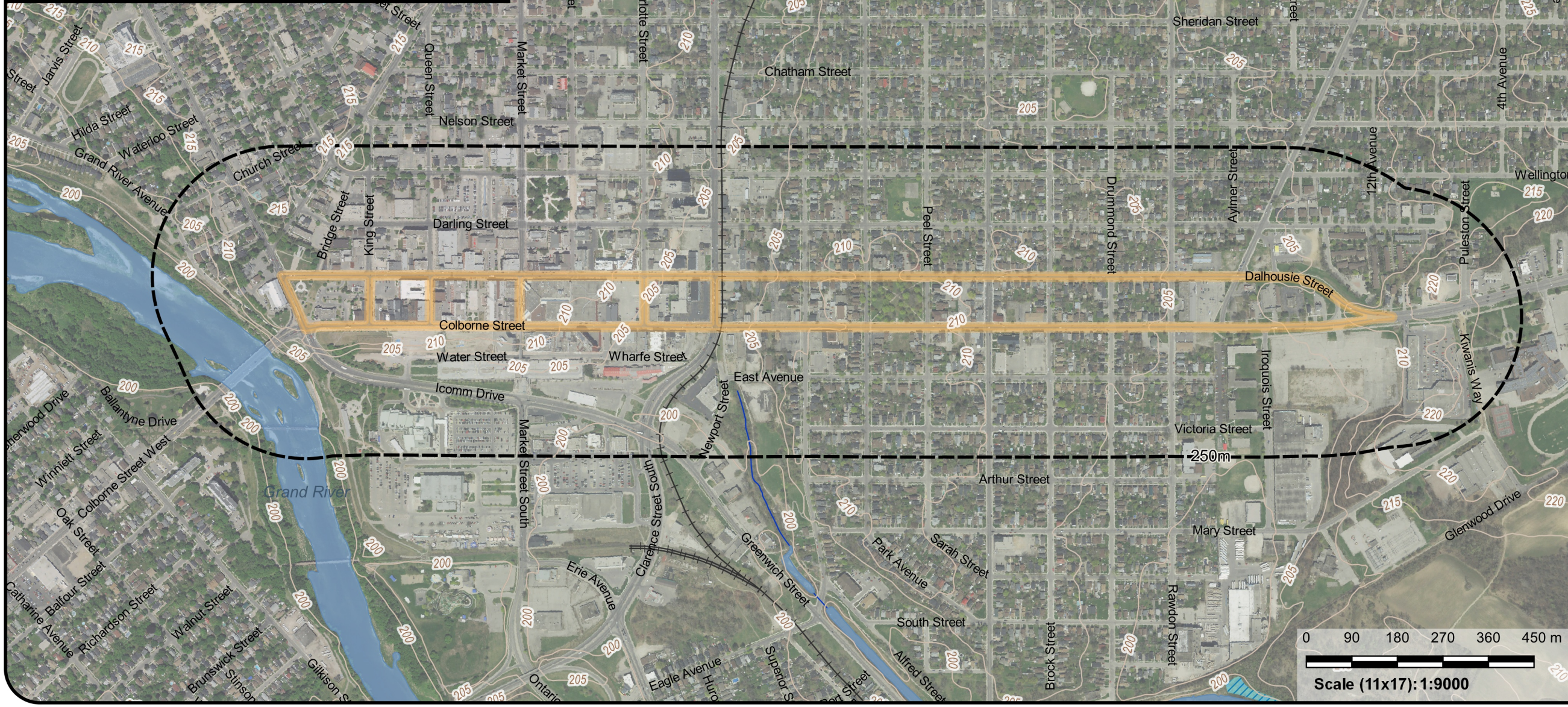
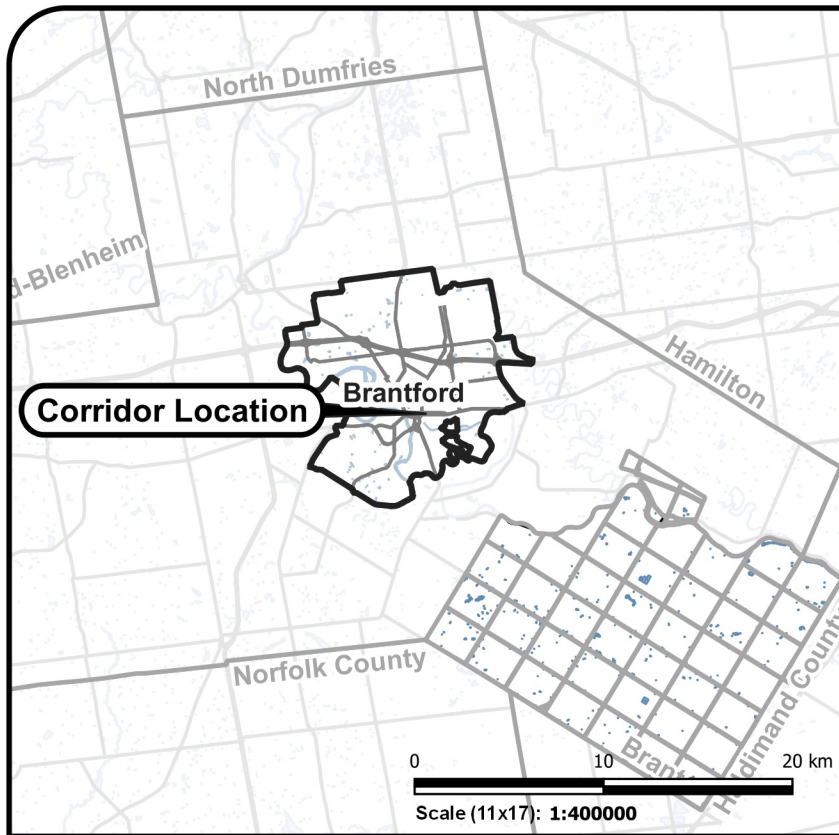
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Appendix A

Figures



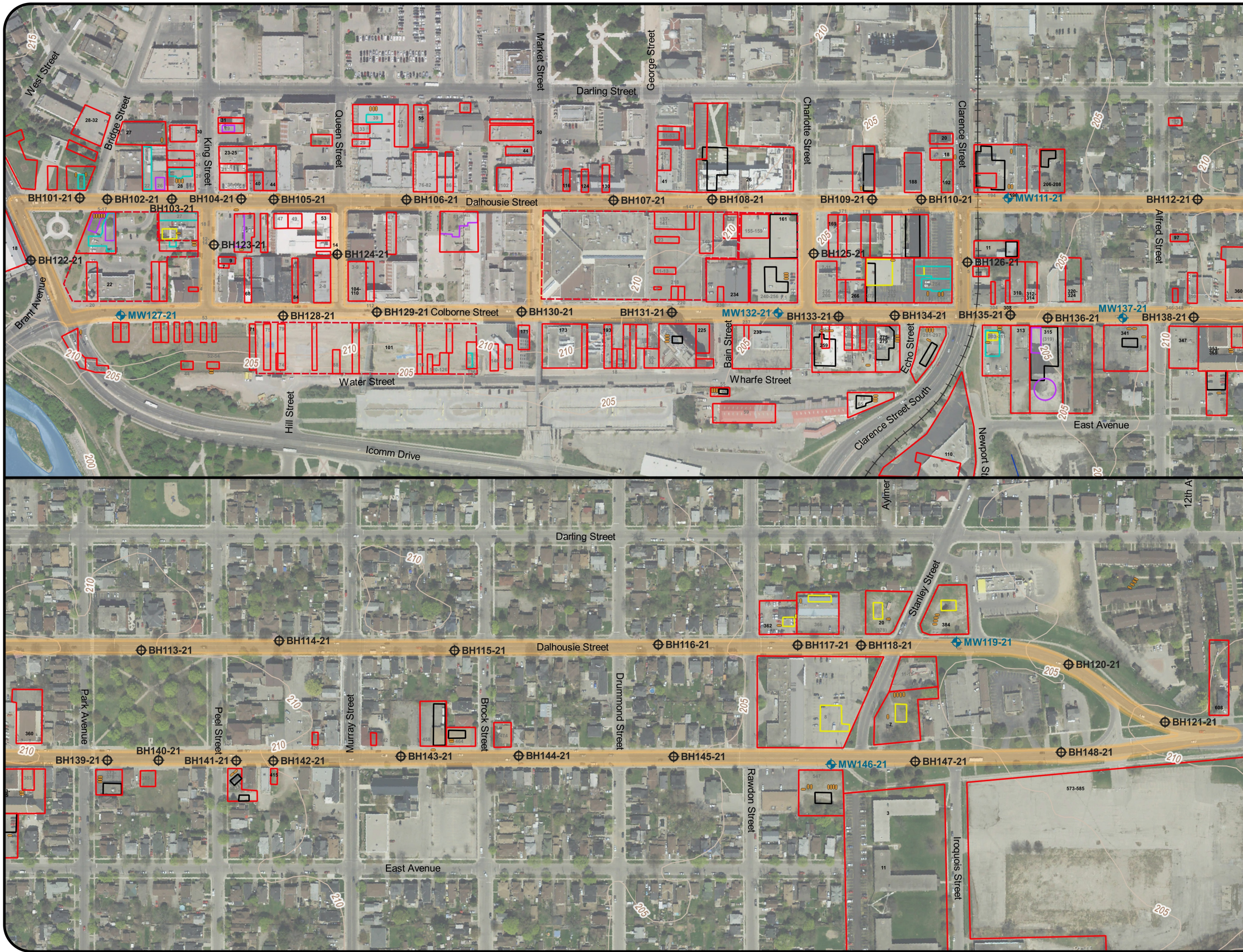
Legend

- Corridor Boundary
- 250m Study Area
- 5m Contours
- Railroad
- Non-Provincially Significant Wetland (Evaluated)
- Unevaluated Wetland
- Waterbody
- Water Courses
- ANSI

Data Sources:
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 Southwestern Ontario Orthophotography Project (2015)
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 Project CRS: NAD83 / UTM zone 17N



Client	City of Brantford	
Project	Geotechnical Investigation	
Site	Downtown Brantford	
Title	Corridor Location	
Reviewed By	SCA	Project No 46995-100
Prepared By	SAR	Figure No
Drawn By	DRC	1
Date	June 2021	



Legend

- Corridor Boundary
- Building Footprint in multiple FIPs
- Building Footprint 1915 FIP
- Building Footprint 1950 FIP
- Building Footprint 1965 FIP
- Property of Potential Environmental Concern
- Former UST
- Former AST
- 28 Municipal Address (MN)
- 26 No Longer a MN Address
- Railroad
- Waterbody
- Water Courses

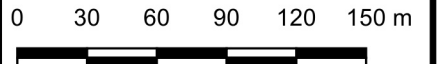
Monitoring Locations

- Monitoring Well
- Borehole

Data Sources:

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Southwestern Ontario Orthophotography Project (2015)
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Scale (11x17): 1:3250

Project CRS: NAD83 / UTM zone 17N



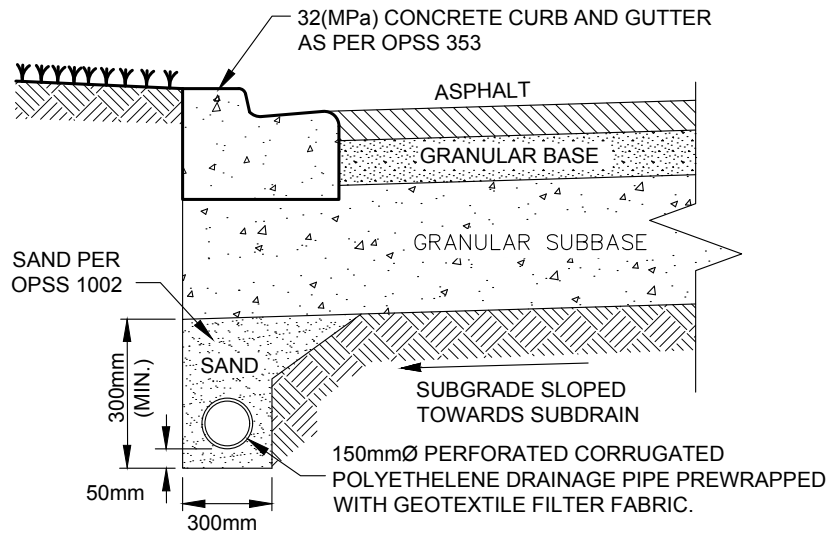
Client
City of Brantford

Project
Geotechnical Investigation

Site
Downtown Brantford

Title
Potential Environmental Concerns Along Corridor

Reviewed By	SCA	Project No	46995-100
Prepared By	SAR	Figure No	2
Drawn By	DRC		
Date	June 2021		



NOTE:
 INSTALLATION OF SUBDRAIN WILL BE REQUIRED TO RUN CONTINUOUSLY
 ALONG BOTH SIDES OF THE ROAD WITH CURB AND GUTTER.

GENERAL REQUIREMENTS FOR PAVEMENT SUBDRAINS:

1. PERFORATED CORRUGATED POLYETHYLENE DRAINAGE PIPE SHALL MEET THE REQUIREMENTS OF OPSS 1840.
2. PIPE FILTER FABRIC CONFORMING TO OPSS 1860 FOR GEOTEXTILE CLASS 1 WITH A FILTRATION OPENING SIZE OF 150 TO 450 MICRONS SHALL BE SUPPLIED ON ALL SECTIONS OF PERFORATED PIPE.
3. THE OPEN UPSTREAM ENDS OF PIPES SHOULD BE CAPPED.
4. SUBDRAIN PIPES TO BE SET ON AT LEAST 1% GRADE DRAINING TO A POSITIVE FROST-FREE OUTLET. IF THE SUBDRAINS ARE OUTLETTED TO A DITCH THEN THE LAST 1.5 M OF THE OUTLET PIPE SHOULD CONSIST OF A CORRUGATED GALVANIZED STEEL PIPE EQUIPPED WITH A RODENT GATE.
5. BEDDING AND BACKFILL MATERIAL SHALL BE CONCRETE SAND MEETING THE GRADATION REQUIREMENTS OF OPSS 1002 (FINE AGGREGATE FOR CONCRETE).
6. THIS IS NOT A DESIGN DRAWING OR CONTRACT SPECIFICATION.



Engineers, Scientists, Surveyors
 Ph. (519) 743-6500

Not to Scale

CLIENT	City of Brantford		TITLE	TYPICAL PAVEMENT SUBDRAIN DETAIL	
PROJECT	Geotechnical Investigation		Reviewed By	BH	
SITE	Downtown Brantford		Prepared By	DH	
			Drawn By	DH	
			Date	April 2022	
			Project No.	46995-100	
			Figure No.	3	

Appendix B

Summary of Potential Environmental Concerns

Appendix B: Summary of Potential Environmental Concerns

Address	Proximity	Potential Concern
NA	Road allowance	PCA 30- Fill of unknown quality
NA	Road allowance	PCA 47- A rail line intersects Dalhousie Street and Colborne Street East, east of Clarence Street.
NA	Road allowance	PCA 28- A historical UST located north-adjacent to 37 Dalhousie Street, south-adjacent to 458 Colborne Street East and east-adjacent to 11 Clarence Street, respectively, were depicted on the 1950 FIP.
NA	Road allowance	SPL- 401 Colborne Street East was listed with a spill resulting in confirmed soil and surface water impacts. An unknown quantity of furnace oil was released to the catch basin, assumed to be located within the road allowance.
NA	Road allowance	SPL- 474 Colborne Street East was listed with a spill resulting in possible environmental impact. Approximately 135 L of oily water was released on September 17, 2009 to the catch basin, assumed to be located within the road allowance.
Intersection between Brant Avenue/Iconn Driver/Colborne Street East	Road allowance	SPL- The intersection was listed with three spills, all of which resulted in possible environmental impact. The quantity and/or contaminant were not reported in the listings; however, a sheen was observed in 2012 at outflow #79 along the Grand River.
Intersection between Colborne Street East/King Street	Road allowance	SPL- The intersection was listed with a spill resulting in possible environmental impact. An unknown quantity of soap was released to a catch basin along the Corridors s in 2005.
Intersection between Colborne Street East/Queen Street	Road allowance	SPL- The intersection was listed with a spill resulting in no anticipated environmental impact. An unknown quantity of sewage was released to a catch basin along the Corridors s in 2000.
Intersection between Colborne Street East/Murray Street	Road allowance	SPL- The intersection was listed with a spill resulting in possible environmental impact. An unknown quantity of diesel fuel was released to the road in 2004.
Intersection between Dalhousie Street/Clarence Street	Road allowance	SPL- The intersection was listed with two spills, both of which result in possible environmental impact. Approximately 227 L of gasoline was released to the ground surface in 1999 and was reportedly cleaned up. Approximately 40 L of duel was released to the ground surface in 2016.
2 Dalhousie Street (appears to have amalgamated with 6 Dalhousie Street)	North-adjacent to the Corridors	PCA 37 – The property was listed in the municipal directories as a potential dry cleaner in 1921. PCA 39- A historical operation of a carriage factory which included wood working and painting areas, was depicted on the 1915 FIP.
8 Dalhousie Street (appears to have amalgamated with 6 Dalhousie Street)	North-adjacent to the Corridors	PCA 37 – A potential dry cleaner was depicted in the 1915 FIP. Additionally, the property was listed in the municipal directories with a potential dry cleaner in 1916.
5-17 Dalhousie Street (appears to have amalgamated with 22 Colborne Street East)	South-adjacent to the Corridors	PCA 28 – A potential historical fuel service station, which included USTs was depicted on the 1950 and 1965 FIPs. PCA 34 – A historical machine and repair shop was depicted on the 1915 FIP. Additionally, an occupant “Herod Machine & Stamping Co.” was listed in the municipal directories in 1912. PCA 52 – A historical automotive service garage, was depicted on the 1950 and 1965 FIPs. Additionally, several automotive facilities were listed in the municipal directories between 1916-1991.

Address	Proximity	Potential Concern
		PCA Other - Historical coal storage was depicted in the 1915, 1950 and 1965 FIPs
12 Dalhousie Street (appears to have amalgamated with 6 Dalhousie Street)	North-adjacent to the Corridors	PCA 28 – A historical fuel service station, which included two USTs was depicted in the 1950 FIP. Additionally, a service station was listed in the municipal directories between 1936-1960. PCA 38 – A potential bulk oil facility was listed in the municipal directories between 1926-1931.
22 Dalhousie Street (appears to have amalgamated with 28 Dalhousie Street)	North-adjacent to the Corridors	PCA 52- A historical automotive garage was depicted on the 1950 FIP. Additionally, automotive facilities were listed in the municipal directories between 1921-1955.
26 Dalhousie Street (appears to have amalgamated with 28 Dalhousie Street)	North-adjacent to the Corridors	PCA 37- A potential dry cleaner was depicted on the 1915 FIP. Additionally, a potential dry cleaner was listed in the municipal directories between 1916-1921.
27 Dalhousie Street (appears to have amalgamated with 16 King Street)	South-and west-adjacent to the Corridors	PCA 34 – The property was listed in the municipal directories with multiple manufacturing facilities between 1912-1916. PCA 52- A potential historical automotive garage labeled “R&M Motors” was depicted on the 1950 FIP. Additionally, an automotive service facility was listed in the municipal directories between 1921-1931. Two monitoring wells within the parking lot at Kentucky Fried Chicken (KFC) were observed during the inspection of the Corridors . It is suspected that the monitoring wells were installed to assess the soil and groundwater quality at the property.
28 Dalhousie Street	North-adjacent to the Corridors	PCA 28- A historical fuel service station, which included USTs was depicted on the 1950 and 1965 FIPs. Additionally, a potential fuel service station was listed in the municipal directories in 1970. PCA 52- An automotive garage was depicted on the 1950 and 1965 FIP. Additionally, several automotive service stations were listed in the municipal directories between 1931-2012. During an inspection of the Corridors , an automotive service facility, including a fuel canopy was observed.
30-38 Dalhousie Street (appears to have amalgamated with 36 Dalhousie Street)	North-adjacent to the Corridors	PCA 37 – A potential dry cleaner was listed in the municipal directories between 1936-1946 PCA 52 – A potential automotive service station was listed in the municipal directories in 1926. GEN- Historical generator of hazardous wastes, which included light fuels in 2010.
37 Dalhousie Street (appears to have amalgamated with 41 Dalhousie Street)	South-adjacent to the Corridors	PCA 28- A historical storage tank south of the building was depicted on the 1915, 1950 and 1965 FIPs. PCA 52- A historical automotive garage was depicted on the 1915 FIP.
40 Dalhousie Street	North-adjacent to the Corridors	PCA 37- A potential dry cleaner was depicted on the 1915 FIP. Additionally, a potential dry cleaner was listed in the municipal directories between 1912-1916 and between 1941-1970.

Address	Proximity	Potential Concern
		PCA 52- A historical automotive garage was depicted on the 1950 FIP. PCA 54 –A potential textile facility was listed in the municipal directories in 1986.
43 Dalhousie Street (appears to have amalgamated with 41 Dalhousie Street)	South-adjacent to the Corridors	PCA 39 – A potential bulk storage facility of paint was listed in the municipal directories in 1912 and 1965.
44 Dalhousie Street	North-adjacent to the Corridors	PCA28 - An UST was located south of the building within the road allowance as depicted on the 1950 FIP. PCA 52 – A historical automotive garage was depicted on the 1950 FIP. Additionally, multiple automotive service garages were listed in the municipal directories between 1921-1955.
47 Dalhousie Street (appears to have amalgamated with 53 Dalhousie Street)	South-adjacent to the Corridors	PCA 29 – A potential glass manufacturing facility was listed in the municipal directories between 1931-1946. PCA 47- A potential historical rubber processing facility was depicted on the 1915 FIP (“Rubber Goon”)
49 Dalhousie Street (appears to have amalgamated with 53 Dalhousie Street)	South-adjacent to the Corridors	PCA 52 – A historical automotive sales facility was depicted on the 1915 FIP. Additionally, a potential automotive facility was listed in the municipal directories between 1916-1931.
53 Dalhousie Street	South-and west-adjacent to the Corridors	PCA Other – The property was registered with an RSC, which outlines risk management measures to address soil impacts. GEN- The property was listed as a generator of hazardous waste, which included petroleum distillates, waste oils and lubricants, other polymeric wastes, alkaline wastes and inorganic and organic laboratory chemicals for select years between 1989-2009.
67 Dalhousie Street (appears to have amalgamated with 75 Dalhousie Street)	South-adjacent to the Corridors	PCA Other – Possible electronic and computer equipment facility was listed in the municipal directories between 1936-1941.
60-70 Dalhousie Street	North-adjacent to the Corridors	PCA other- Known/documented impacted soil was identified for the property in the federal contaminated sites inventory.
76-82 Dalhousie Street (inferred west-adjacent to 86 Dalhousie Street)	North-adjacent to the Corridors	PCA 29 – A glass manufacturing facility was listed in the municipal directories in 2012. PCA 36 – A potential oil production facility (“Imperial Oil”) was listed in the municipal directories in 1970. PCA 37 – A potential dry cleaner was listed in the municipal directories in 1975. SPL- An unknown quantity of antifreeze was released on March 11, 2005 behind 78 Dalhousie Street to the catch basin resulting in possible environmental impact. PCA Other – A potential coal storage facility was listed in the municipal directories between 1926-1946. Additionally, the property was registered with a RSC, which outlines risk management measures to address soil impacts.
86 Dalhousie Street	North-adjacent to the Corridors	PCA 36 – A potential oil production facility was listed in the municipal directories in 1921.
81-89 Dalhousie Street	South-adjacent to the Corridors	PCA Other- A historical fire was depicted on the 1915 FIP. Additionally, a potential coal storage facility was listed in the municipal directories between 1926-1941.

Address	Proximity	Potential Concern
(appears to have amalgamated with 148 Colborne Street East)		
102 Dalhousie Street (appears to have amalgamated with 38 Market Street)	North-adjacent to the Corridors	GEN- The property was listed as a generator of hazardous waste, which included light fuels in 2009
116 Dalhousie Street	North-adjacent to the Corridors	PCA 37 – A potential dry cleaner was listed in the municipal directories in 2012
124 Dalhousie Street	North-adjacent to the Corridors	PCA Other – A potential coal storage facility was listed in the municipal directories in 1931.
130 Dalhousie Street	North-adjacent to the Corridors	PCA 39 –A potential bulk paint storage facility was listed in the municipal directories between 1940-1960.
137-141 Dalhousie Street (appears to have amalgamated with 1 Market Street)	South-adjacent to the Corridors	PCA 37 – A potential dry cleaner was listed in the municipal directories between 1950-1965.
147 Dalhousie Street (appears to have amalgamated with 1 Market Street)	South-adjacent to the Corridors	PCA 12 – A potential cement manufacturing facility was listed in the municipal directories between 1931-1941.
149 Dalhousie Street (appears to have amalgamated with 1 Market Street)	South-adjacent to the Corridors	PCA 52 – An automotive service facility was listed in the municipal directories in 1931.
150 Dalhousie Street (appears to have amalgamated with 26 Charlotte Street)	North-adjacent to the Corridors	PCA Other – Roofing company with the potential of bulk storage of roofing tar was listed in the municipal directories in 1936. PCA 28 – A potential fuel service station was listed in the municipal directories between 1946-1960. PCA 29- A historical glass manufacturing facility was depicted on the 1950 and 1965 FIPs. Additionally, a glass manufacturing facility was listed in the municipal directories in 1950 and between 1986-2007. PCA 52 – An automotive service facility was listed in the municipal directories between 1950-1960. GEN- The property was listed as a generator of hazardous wastes, which included (but not limited to) aromatic solvents in 2006, acid waste between 2016-2019 and aliphatic solvents and chemicals between 2018-2019. SPL- The property was listed with two spills resulting in potential/confirmed environmental impact
153 Dalhousie Street (appears to have amalgamated with 1 Market Street)	South-adjacent to the Corridors	PCA 37- A potential dry cleaner was depicted on the 1915 FIP. Additionally, a potential dry cleaner was listed in the municipal directories between 1912-1960.
155-159 Dalhousie Street	South-adjacent to the Corridors	PCA 52 –Several automotive service facility were listed in the municipal directories for select years between 1921-1970

Address	Proximity	Potential Concern
161 Dalhousie Street	South-and west-adjacent to the Corridors	PCA 52- A historical automotive garage was depicted on the 1950 and 1965 FIPs. Additionally, several automotive service facilities were listed in the municipal directories between 1950-1965.
169 Dalhousie Street	South-adjacent to the Corridors	PCA 31 – A printing facility was listed in the municipal directories between 1986-1991
171 Dalhousie Street (appears to have amalgamated with 175 Dalhousie Street)	South-adjacent to the Corridors	PCA 10 – A potential autobody shop was listed in the municipal directories between 1965-1970
179 Dalhousie Street	South-adjacent to the Corridors	PCA 31 – A printing facility was listed in the municipal directories between 1916-1975.
180 Dalhousie Street (appears to have amalgamated with 135 Darling Street)	North-adjacent to the Corridors	PCA 11 – A commercial trucking facility was listed in the municipal directories in 1941. PCA 28- An UST was located west of the garage as depicted on the 1950 and 1965 FIPs. PCA 52- A historical automotive garage was depicted on the 1950 and 1965 FIPs. Additionally, an automotive service facility was listed in the municipal directories between 1950-1965.
181-183 Dalhousie Street (appears to have amalgamated with 274 Colborne Street East)	South-adjacent to the Corridors	PCA 28- An UST was located south of the garage as depicted on the 1950 FIP. PCA 52- A historical automotive garage was depicted on the 1950 FIP. Additionally, automotive service facility was listed in the municipal directories between 1950-1960.
182 Dalhousie Street	North-adjacent to the Corridors	PCA 37 – A potential dry cleaner was listed in the municipal directories between 1912-1946.
185-189 Dalhousie Street (appears to have amalgamated with 187 Dalhousie Street)	South-adjacent to the Corridors	PCA 34- A historical machine shop was depicted on the 1950 FIP. PCA 52- A historical automotive garage was depicted on the 1950 and 1965 FIPs. Additionally, automotive service facilities were listed in the municipal directories between 1936-1941.
188 Dalhousie Street	North-adjacent to the Corridors	PCA 34- A historical machine shop was depicted on the 1965 FIP. PCA 52- A historical automotive garage was depicted on the 1965 FIP. Additionally, an automotive service garage was listed in the municipal directories between 1955-1970. During the inspection of the Corridors , a building labelled "Auto Parts" was observed at the property. GEN- The property was listed as a generator of hazardous waste, which included halogenated solvents between 1992-1999 and waste oils and lubricants and emulsified oils between 1992-1998.
192 Dalhousie Street (appears to have amalgamated with 188 Dalhousie Street)	North-adjacent to the Corridors	SPL- The property was listed with a spill of an unknown quantity of gasoline resulting in no anticipated environmental concern.
194 Dalhousie Street (appears to have amalgamated with 196 Dalhousie Street)	North-adjacent to the Corridors	PCA 52 – Several automotive service garages were listed in the municipal directories between 1912-1941.

Address	Proximity	Potential Concern
196 Dalhousie Street	North-adjacent to the Corridors	<p>PCA 28- Two USTs were located east of building as depicted on the 1950 and 1965 FIPs. According to records, the property was listed with one active 22,700 L gasoline containing, single walled UST and two active 36,300 L gasoline containing, single walled USTs. During the inspection of the Corridors , a fuel service station was observed.</p> <p>PCA 34- A historical machine shop as depicted on the 1915, 1950 and 1965 FIPs.</p> <p>PCA 52- Current and historical automotive garage as depicted on the 1915, 1950 and 1965 FIPs. Additionally, several automotive service garages were listed in the municipal directories between 1946-2012.</p>
206-208 Dalhousie Street	North-adjacent to the Corridors	<p>PCA 10 – Several autobody repair shops were listed in the municipal directories between 1965-2012.</p> <p>PCA 34 – A historical machine shop was depicted on the 1965 FIP.</p> <p>PCA 52 – Several automotive service garages were listed in the municipal directories between 1950-1965.</p>
362 Dalhousie Street	North-adjacent to the Corridors	<p>PCA 28 - An UST was evident in the central portion of the property as depicted on the 1965 FIP. During the inspection of the Corridors , an AST was located east adjacent to the site building.</p> <p>PCA 52 – A historical automotive garage was depicted on the 1965 FIP. Additionally, several automotive service garages were listed in the municipal directories for select years between 1965-2012. During the inspection of the Corridors , a service garage was observed that included an AST east-adjacent to the building.</p>
366 Dalhousie Street (appears to have amalgamated with 370 Dalhousie Street)	North-adjacent to the Corridors	<p>PCA 28 - An UST was evident west of the garage as depicted on the 1965 FIP. Additionally, it is inferred that the property was listed in the TSSA database with a private fuel outlet.</p> <p>PCA 52- A historical automotive garage was depicted on the 1965 FIP. Additionally, an automotive service garage was listed in the municipal directories in 1995/1996.</p>
378 Dalhousie Street (appears to have amalgamated with 20 Stanley Street)	North-adjacent to the Corridors	<p>PCA 28 - An UST was evident east of the garage as depicted on the 1965 FIP.</p> <p>PCA 52 – A historical automotive garage was depicted on the 1965 FIP.</p>
384 Dalhousie Street	North-adjacent to the Corridors	<p>PCA 28- An UST was evident south of the building as depicted on the 1965 FIP. Additionally, the property was listed in the TSSA database with a retail storage tank.</p> <p>PCA 52- A potential historical automotive garage was depicted on the 1965 FIP. Additionally, several automotive service garages were listed in the municipal directories between 1960-1991.</p> <p>GEN- The property was listed as a generator of hazardous waste, which included light fuels and oil skimmings and sludges between 2013-2019.</p> <p>SPL- The property was listed in the database with free product observed within a monitoring well.</p> <p>During the inspection of the property, two monitoring wells were observed.</p>
11 Colborne Street East	South-adjacent to the Corridors	<p>PCA 28- An UST was evident east of the garage as depicted on the 1915 and 1950 FIPs.</p>

Address	Proximity	Potential Concern
(No longer a municipal address)		PCA 52-A historical automotive garage was depicted on the 1915, 1950 and 1965 FIPs. Additionally, several automotive service garages were listed in the municipal directories between 1912-1950.
20 Colborne Street East (appears to have amalgamated with 16 Colborne Street East)	North-adjacent to the Corridors	PCA 34 – A potential metal fabricating facility was listed in the municipal directories in 1960.
22 Colborne Street East	North-adjacent to the Corridors	GEN- The property was listed as a generator of hazardous waste, which included oils and lubricants in 2015 and light fuels and inert organic wastes in 2017
29 Colborne Street East (appears to have amalgamated with 37 Colborne Street East)	South-adjacent to the Corridors	PCA 17 – A potential dye and cleaning facility was listed in the municipal directories in 1912.
31 Colborne Street East (appears to have amalgamated with 39 Colborne Street East)	South-adjacent to the Corridors	PCA 17 – A potential dye and cleaning facility was listed in the municipal directories in 1965. PCA Other – A manufacturing facility was listed in the municipal directories in 1960.
40 Colborne Street East (appears to have amalgamated with 22 Colborne Street East)	North-adjacent to the Corridors	PCA 34- A historical machine shop was depicted on the 1965 FIP. Additionally, a potential metal fabrication facility was listed in the municipal directories in 1981.
41 Colborne Street East (appears to have amalgamated with 47 Colborne Street East)	South-adjacent to the Corridors	PCA 34- A potential metal fabrication facility was listed in the municipal directories between 1986-2007.
43 Colborne Street East (appears to have amalgamated with 49 Colborne Street East)	South-adjacent to the Corridors	PCA 31 – A printing service facility was listed in the municipal directories in 1981. PCA Other – A potential manufacturing facility was listed in the municipal directories between 1912-1916.
44 Colborne Street East (appears to have amalgamated with 22 Colborne Street East)	North-adjacent to the Corridors	GEN- The property was listed as a generator of hazardous waste, which included other specified inorganics and light fuels between 1992-2003
47 Colborne Street East	South-adjacent to the Corridors	PCA 17 – A potential dye and cleaning facility was listed in the municipal directories in 1916.

Address	Proximity	Potential Concern
51 Colborne Street East (appears to be amalgamated with 55 Colborne Street East)	South-adjacent to the Corridors	PCA 37 – A potential dry cleaner was depicted on the 1915 FIP. Additionally, a potential dry cleaner was listed in the municipal directories between 1912-1916.
53 Colborne Street East (appears to be amalgamated with 59 Colborne Street East)	South-adjacent to the Corridors	PCA 39 – A potential bulk paint storage facility was listed in the municipal directories in 1941.
57 Colborne Street East (appears to be amalgamated with 63 Colborne Street East)	South-adjacent to the Corridors	PCA 37 – A potential dry cleaner was listed in the municipal directories between 1912-1921.
68 Colborne Street East	North-adjacent to the Corridors	PCA Other – A specialty manufacturing facility was listed in the municipal directories in 1926.
71 Colborne Street East	South-adjacent to the Corridors	PCA Other – An unknown “cleaner” was listed in the municipal directories between 1921-1936.
75 Colborne Street East (appears to have amalgamated with 101 Colborne Street East)	South-adjacent to the Corridors	PCA 28 - The property was listed in the database with a 90,920 L retail storage tank. Additionally, the property was listed in the database with two active 50,000 L gasoline containing USTs, installed in 1993 and four decommissioned 22,730 L gasoline containing USTs, installed in 1973.
79 Colborne Street East (appears to have amalgamated with 101 Colborne Street East)	South-adjacent to the Corridors	PCA Other – A potential electronic and computer sale and service was listed in the municipal directories between 1950-1965.
84 Colborne Street East	North-adjacent to the Corridors	PCA 39 – A potential bulk paint storage facility was listed in the municipal directories between 1960-1975.
91 Colborne Street East (appears to have amalgamated with 101 Colborne Street East)	South-adjacent to the Corridors	PCA 37 – A potential dry cleaner was listed in the municipal directories in 1926.
101 Colborne Street East	South-adjacent to the Corridors	PCA Other – The property was registered with a RSC, which outlines risk management measures to address soil impacts.
104-110 Colborne Street East	North-adjacent to the Corridors	PCA 19 – A potential electronic and computer sale and service facility was listed in the municipal directories between 1936-1941. PCA Other- A potential steel distributor was listed in the municipal directories between 1926-1931.
107 Colborne Street East	South-adjacent to the Corridors	PCA 19 - A potential electronic and computer sales and service facility was listed in the municipal directories between 1941-1946.

Address	Proximity	Potential Concern
(appears to have amalgamated with 101 Colborne Street East)		
112 Colborne Street East (appears to have amalgamated with 120 Colborne Street East)	North-adjacent to the Corridors	PCA 54 – A textile manufacturing facility was listed in the municipal directories in 1975.
129 Colborne Street East (appears to have amalgamated with 101 Colborne Street East)	South-adjacent to the Corridors	PCA 28 - The property was listed in the database with a gasoline, oil and natural gas service station GEN - The property was listed as a generator between 2003-2004, however, no waste codes were provided in the listing
137 Colborne Street East (appears to have amalgamated with 101 Colborne Street East)	South-adjacent to the Corridors	PCA 39 – A potential bulk paint storage of facility was listed in the municipal directories in 1970.
171 Colborne Street East	South-adjacent to the Corridors	GEN- The property was listed as a generator of hazardous waste, which included halogenated solvents between 1989-2001 and waste oils and lubricants between 2015-2016.
173 Colborne Street East	South-adjacent to the Corridors	GEN- The property was listed as a generator of hazardous wastes, which included PCBs between 1990-2004, waste oils and lubricants in 2009, and compressed gases, paints/pigments/coatings, organic chemicals, non-halogenated pesticides and herbicides, and waste crankcase oils and lubricants in 2019. No records were available for 1991. SPL- The property was listed with a spill resulting in confirmed environmental impact. An unknown quantity of fire waste was released to sewers and canal resulting on October 19, 2003.
187 Colborne Street (appears to have amalgamated with 173 Colborne Street East)	South-adjacent to the Corridors	PCA 17 – A potential dye manufacturing facility was listed in the municipal directories between 1916-1921.
193 Colborne Street East	South-adjacent to the Corridors	GEN- The property was listed as a generator of hazardous waste, which included light fuels in 2013.
201 Colborne Street (appears to have amalgamated with 201-203 Colborne Street East)	South-adjacent to the Corridors	PCA 54 – A potential textile facility was listed in the municipal directories between 1912-1926.
203 Colborne Street East (appears to have amalgamated with	South-adjacent to the Corridors	PCA 19 – A potential electronic and computer sales and service facility was listed in the municipal directories in 1931 and between 1941-2007.

Address	Proximity	Potential Concern
201-203 Colborne Street East)		
205-207 Colborne Street East (appears to have amalgamated with 205-211 Colborne Street East)	South-adjacent to the Corridors	SCT- The property was listed as a paint and coating manufacturing facility, established 1997.
218 Colborne Street East (appears to have amalgamated with 1 Market Street)	North-adjacent to the Corridors	PCA 37 – A dry cleaner was listed in the municipal directories between 1965-1970.
219 Colborne Street East (appears to have amalgamated with 219-225 Colborne Street)	South-adjacent to the Corridors	PCA 28- A historical fuel service station was depicted on the 1950 and 1965 FIPs, which included three USTs located west of the building in 1950 and one UST in 1965. PCA 52 – A historical automotive service station was depicted on the 1950 and 1965 FIPs. Additionally, service stations were listed in the municipal directories between 1936-1965.
220 Colborne Street East (appears to have amalgamated with 1 Market Street)	North-adjacent to the Corridors	PCA 18 – A potential power station was listed in the municipal directories in 2012.
225 Colborne Street East (appears to have amalgamated with 219-225 Colborne Street East)	South-adjacent to the Corridors	PCA 37 – A historical cleaning and pressing facility as depicted on the 1950 FIP Additionally, a potential dry cleaning facility was listed in the municipal directories between 1950-1955. PCA 52 – An automotive service garage was listed in the municipal directories in 1931.
230 Colborne Street East (appears to have amalgamated with 234 Colborne Street East)	North-adjacent to the Corridors	PCA 54 – A potential textile manufacturing facility was listed in the municipal directories in 1960.
233 Colborne Street East	South-adjacent to the Corridors	GEN - The property was listed as a generator of hazardous waste, which included waste oils and lubricants between 1986-1998.
234 Colborne Street East	North-adjacent to the Corridors	GEN- The property was listed as a generator of hazardous waste in 2012, however, no waste codes were provided
237 Colborne Street East (appears to have amalgamated with 233 Colborne Street East)	South-adjacent to the Corridors	PCA 18 – A electricity generation facility was listed in the municipal directories between 1931-1955.
240 Colborne Street East (appears to have amalgamated with	North-adjacent to the Corridors	PCA 52 – An automotive service garage was listed in the municipal directories in 1970.

Address	Proximity	Potential Concern
256 Colborne Street East)		
242-264 Colborne Street East (appears to have amalgamated with 256 Colborne Street East)	North-and west-adjacent to the Corridors	PCA 28- A potential historical fuel service station was depicted on the 1950 and 1965 FIPs, which included three USTs located northeast of the garage in 1950 and one UST in 1965. PCA 52- A historical automotive garage as depicted on the 1950 and 1965 FIPs. Additionally, several automotive garages were listed in the municipal directories between 1931-1965. Additionally, automotive service stations were listed in the municipal directories between 1931-1950.
257 Colborne Street East (appears to have amalgamated with 255 Colborne Street East)	South-adjacent to the Corridors	PCA 11 – A potential commercial trucking terminal was listed in the municipal directories between 1946-1955 PCA 52 – A automotive service garage was listed in the municipal directories in 1941.
259 Colborne Street East (appears to have amalgamated with 255 Colborne Street East)	South-adjacent to the Corridors	PCA 28- A potential historical fuel service station was depicted on the 1950 and 1965 FIPs, which included three USTs north and one UST east of the building in 1950 and one UST located north and east of the building in 1965. PCA 52- A historical automotive garage as depicted on the 1915 and 1950 FIPs. Additionally, an automotive service station was listed in municipal directories between 1921-1960. PCA Other- Historical coal storage as depicted on the 1915 FIP.
256-260 Colborne Street East (appears to have amalgamated with 262 Colborne Street East)	North-and East-adjacent to the Corridors	PCA 34 – A historical machine shops was depicted on the 1915 and 1950 FIPs. Additionally, a machine shop was listed in the municipal directories between 1946-1960. PCA 52 – An automotive service garage was listed in the municipal directories between 1950-1955.
262 Colborne Street East	North-adjacent to the Corridors	PCA 37 – A potential dry cleaner was listed in the municipal directories between 1912-1921.
263 Colborne Street East (appears to have amalgamated with 255-263 Colborne Street East)	South-adjacent to the Corridors	PCA 37 – A potential dry cleaner was listed in the municipal directories in 1921
266 Colborne Street East	North-adjacent to the Corridors	PCA 37 – A potential dry cleaner was listed in the municipal directories in 1960
267 Colborne Street East (appears to have amalgamated with 267-275 Colborne Street East)	South-adjacent to the Corridors	PCA Other - A potential coal storage facility was listed in the municipal directories in 1912.
269 Colborne Street East (appears to have amalgamated with	South-adjacent to the Corridors	PCA 11 – A potential commercial trucking terminal was listed in the municipal directories between 1960-1986.

Address	Proximity	Potential Concern
267-275 Colborne Street East)		
270 Colborne Street East (appears to have amalgamated with 274 Colborne Street East)	North-adjacent to the Corridors	PCA 37 – A potential dry cleaner was listed in the municipal directories in 1960.
270-284 Colborne Street East (appears to have amalgamated with 274 Colborne Street East)	North-adjacent to the Corridors	PCA 34 – A potential metal fabrication shop was listed in the municipal directories in 1936. PCA 39 – A historical carriage factory, which included a large painting building was depicted on the 1915 FIP. PCA 52 – A historical automotive garage was depicted on the 1950 FIP. Several automotive service garages were listed in the municipal directories between 1926-1975. The property was also registered with a standby diesel generator. During the inspection of the Corridors , several flushmount monitoring wells were observed within the parking lot.
275 & 279 Colborne Street East	South-adjacent to the Corridors	PCA 28 - A potential historical fuel service station, which included three USTs east of the building as depicted on the 1950 FIP. PCA 52 – A historical automotive garage was depicted on the 1950 FIP. Additionally, several automotive service garages were listed in the municipal directories between 1926-1970. PCA Other - A potential coal storage facility was listed in the municipal directories in 1916.
281 Colborne Street East	South-adjacent to the Corridors	PCA 28- A potential historical fuel service station, was depicted on the 1950 and 1965 FIPs, which included three USTs south-adjacent to Colborne Street East in 1950 and one UST northwest of the building in 1965. Additionally, the property was listed in the database with one 2,000 L retail fuel tank, one 81,700 L retail fuel tank and one 136,380 L retail fuel tank. According to the TSSA, a historical fuel service gasoline station was located at the property, which included five storage tanks. PCA 52 - A historical automotive garage as depicted on the 1950 and 1965 FIPs. Additionally, automotive service garages were listed in the municipal directories in 1941 and between 1970-2007.
284 Colborne Street East (appears to have amalgamated with 274 Colborne Street East)	North-adjacent to the Corridors	PCA 28- A potential historical fuel service station was depicted on the 1950 and 1965 FIPs, which included three USTs south of the garage in 1950 and one in 1965. During the inspection of the Corridors , several flushmount monitoring wells were observed within the parking lot.
297 Colborne Street East (appears to have amalgamated with 281 Colborne Street East)	South-adjacent to the Corridors	PCA 28 – A potential fuel service station was listed in the municipal directories in 1955.
303-311 Colborne Street East	South-adjacent to the Corridors	PCA 18 – A potential power plant was listed in the municipal directories between 1912-1916.

Address	Proximity	Potential Concern
(appears to have amalgamated with 303 Colborne Street East)		PCA 28 - Two USTs located north of the garage and one UST south of the garage as depicted on the 1950 and 1965 FIPs, respectively. PCA 52- A historical automotive garage was depicted on the 1950 and 1965 FIPs. Several automotive service garages were listed in the municipal directories between 1926-2012. During the inspection of the Corridors , Total tire was observed at the property.
304 Colborne Street East (appears to have amalgamated with 298-306 Colborne Street East)	North-adjacent to the Corridors	PCA 37- A potential dry cleaner was listed in the municipal directories between 1931-1936. PCA 52 – A potential automotive service station was listed in the municipal directories in 1986.
308 Colborne Street East	North-adjacent to the Corridors	PCA 6 – A potential battery storage facility was listed in the municipal directories between 1926-1936.
310 Colborne Street East	North-adjacent to the Corridors	GEN- The property was listed as a generator of hazardous wastes, which include oil skimmings and sludges in 2006.
312-314 Colborne Street East	North-adjacent to the Corridors	PCA 11 – A bulk storage facility of cleaning chemicals was listed in the municipal directories in 1986.
313 Colborne Street East	South-adjacent to the Corridors	PCA 52 – A potential automotive service garage was listed in the municipal directories between 1926-1931.
315 Colborne Street East	South-adjacent to the Corridors	GEN - The property was listed as a generator of hazardous waste, which includes (but not limited to) heavy fuels between 1988-2016, aliphatic solvents between 1992-2016 and oil skimmings and sludges between 2014-2016.
319 Colborne Street East (appears to have amalgamated with 315 Colborne Street East)	South-adjacent to the Corridors	PCA 9- Historical coal gasification plant, including a gasometer pit as depicted on the 1915 FIP. Additionally, "Gas Co" was listed in the municipal directories in 1912. PCA 37 – A potential dry cleaner was listed in the municipal directories between 1955-1960.
320-324 Colborne Street East	North-adjacent to the Corridors	PCA 37 - Several potential dry cleaner were listed in the municipal directories between 1936-1950.
321-323 Colborne Street East (appears to have been severed into 321-323 Colborne Street East and 16 East Avenue)	South-adjacent to the Corridors	PCA Other- A historical coal storage was depicted on the 1915 and 1950 FIPs. Additionally, a potential coal storage facility was listed in the municipal directories between 1955-1960.
341 Colborne Street East	South-adjacent to the Corridors	PCA 28 - Operated a fuel service station as depicted on the 1950 FIP, which included two USTs north of the garage. One UST was located west of the auto service building as depicted on the 1965 FIP. PCA 37 – A potential dry cleaner was listed in the municipal directories between 1916-1931. PCA 52- A historical automotive garage was depicted on the 1950 and 1965 FIPs. Additionally, several automotive service garages were listed in the municipal directories between 1950-1981.

Address	Proximity	Potential Concern
346-348 Colborne Street East (appears to have been amalgamated with 348 Colborne Street East)	North-adjacent to the Corridors	PCA 37- A historical dry cleaner was depicted on the 1915 and 1965 FIPs. Additionally, potential dry cleaner was listed in the municipal directories between 1912-1965.
347 Colborne Street East	South-adjacent to the Corridors	PCA 28 - One UST located south of the garage, approximately 60 m south of the Corridors s as depicted on the 1965 FIP. PCA 27 – A historical automotive garage was depicted on the 1950 and 1965 FIPs. Additionally, several automotive service garages were listed in the municipal directories between 1950-1965, with the potential to have operated until approximately 2007.
350 Colborne Street East (appears to have amalgamated with 350-352 Colborne Street East)	North-adjacent to the Corridors	PCA 52 – Several automotive service garages were listed in the municipal directories between 1970-2012.
353-365 Colborne Street East (appears to have amalgamated to 351-365 Colborne Street East)	South-adjacent to the Corridors	PCA 28 – Two potential fuel storage tanks was depicted on the 1915 and 1950 FIPs.
360 Colborne Street East	North-adjacent to the Corridors	GEN - The property was registered as a generator of hazardous wastes, which included light fuels in 2015.
363 Colborne Street East (appears to have amalgamated with 351-365 Colborne Street East)	South-adjacent to the Corridors	GEN - The property was registered as a generator of hazardous wastes, which included light fuels between 2007-2008.
373-375 Colborne Street East (375 Colborne Street East appears to have amalgamated with 373 Colborne Street East)	South-adjacent to the Corridors	PCA 28 –A historical fuel service station as depicted on the 1950 FIP, which included three USTs northwest of the garage. One UST was located northwest of the auto service building as depicted on the 1965 FIP. PCA 52 – A historical automotive garage as depicted on the 1950 and 1965 FIPs. Additionally, automotive service garages were listed in the municipal directories between 1934-1974.
385 Colborne Street East (appears to have amalgamated 393 Colborne Street)	South-adjacent to the Corridors	PCA 37 – A potential historical dry cleaner (“Laundromat”) as depicted on the 1965 FIP. Additionally, “Speed Queen Self-Serve Laundry” was listed in the municipal directories between 1979-1990.
403 Colborne Street East (appears to have been severed 403	South-adjacent to the Corridors	PCA 28 - Operated a former fuel service station as depicted on the 1950 FIP, which included two USTs northwest of the building. One UST was located northwest of the auto service building as depicted

Address	Proximity	Potential Concern
Colborne Street East and 409 Colborne Street East)		on the 1965 FIP. Additionally, a gas bar was listed in the municipal directories between 1959-1985. PCA 52 – A historical automotive garage was depicted on the 1950 and 1965 FIPs. Additionally, several automotive service garages were listed in the municipal directories between 1934-1959. SPL - The property was listed with a spill resulting in confirmed environmental impact. An unknown quantity of furnace oil was released to the catch basin on November 16, 2010.
415 Colborne Street East	South-adjacent to the Corridors	PCA 37- A potential historical dry cleaner was depicted on the 1965 FIP.
426 Colborne Street East (appears to have amalgamated to 428 Colborne Street East)	North-adjacent to the Corridors	SPL- The property was listed with a spill resulting in possible environmental impact. An unknown quantity of douse water was released on June 4, 2017 to air, land and surface water.
442 Colborne Street East (appears to have amalgamated to 444 Colborne Street East)	North-adjacent to the Corridors	PCA 37 – A historical dry cleaner was depicted on the 1915 FIP. PCA 52 – An automotive service garage was listed in the 1924 municipal directories in 1924.
458 Colborne Street East (appears to have amalgamated with 466 Colborne Street East)	North-adjacent to the Corridors	PCA 39 – A historical paint shop as depicted on the 1965 FIP. PCA 52 – A historical automotive garage was depicted on the 1950 and 1965 FIPs. Additionally, several automotive service garages were listed in the municipal directories between 1924-1974.
464 Colborne Street East (appears to have amalgamated with 466 Colborne Street East)	North-adjacent to the Corridors	PCA 28 –A historical fuel service station was depicted on the 1950 FIP, which included two USTs located south of the building. One UST was located south of the automotive garage as depicted on the 1965 FIP. PCA 52 – A historical automotive garage was depicted on the 1950 and 1965 FIP. Additionally, a service station was listed in the municipal directories in 1959.
474 Colborne Street East (appears to have amalgamated with 472 Colborne Street East)	North-adjacent to the Corridors	SPL- The property was listed with a spill resulting in possible environment impact. Approximately 135 L of oily water was released to the catch basin on September 17, 2009.
547 Colborne Street East (appears to have amalgamated with 549 Colborne Street East)	South-adjacent to the Corridors	PCA 28 – A historical fuel service station as depicted on the 1950 FIP, which included six USTs located north of the building. One UST was located west of the automotive garage as depicted on the 1965 FIP. According to the TSSA, the property was listed with an expired serve gasoline station. Additionally, suspected fuel service stations were listed in the municipal directories between 1926-1981. PCA 52 – A historical automotive garage was depicted on the 1965 FIP. Several automotive service garages were listed in the municipal directories between 1921-1996.

Address	Proximity	Potential Concern
		<p>GEN- The property was registered as a generator of hazardous waste, which included light fuels, waste oils and sludges and waste crankcase oils and lubricants between 2013-2019.</p> <p>SPL- The property was listed with a spill of unknown quantity and substance on January 26, 1989.</p> <p>During the inspection of the Corridors , the property appeared vacant and included five monitoring wells.</p>
550 Colborne Street East (Inferred to have amalgamated with 7 Stanley Street)	North-adjacent to the Corridors	PCA 28 – A suspected fuel service station is listed in the municipal directories between 1931-1936.
573 Colborne Street East	South-adjacent to the Corridors	<p>PCA 28 - The property was listed in the database with a 20,000 L retail storage tank. Additionally, the property was listed in the TSSA database with a self serve gasoline station, which included four storage tanks.</p> <p>PCA 52 – An automotive service garage was listed in the municipal directories between 1975-2007.</p> <p>GEN- The property was registered as a generator of hazardous waste, which included light fuels and other specified inorganics in 2005.</p> <p>SPL- The property was listed in the database with a spill resulting in no anticipated environmental impact. Approximately 40 L of gasoline was released to the pavement and sewer on February 13, 1998 and reportedly cleaned up.</p>
583 Colborne Street East	South-adjacent to the Corridors	SPL- The property was listed in the database with a spill resulting in no anticipated environmental impact. Approximately 4L of gasoline was released to a catch basin on November 1996 and was reportedly cleaned up.
585 Colborne Street East	South-adjacent to the Corridors	<p>PCA 37 – A potential dry cleaner was listed in the municipal directories between 1975-1991.</p> <p>PCA 52 – An automotive service garage was listed in the municipal directories in 1991.</p> <p>During the inspection of the Corridors , two monitoring wells were observed at the property.</p>
608 Colborne Street East	North-adjacent to the Corridors	SCT - The property was listed in the database as a manufacturing facility, established in 1997.
18 Brant Avenue	West-adjacent to the Corridors	<p>GEN - The property was listed as a generator of hazardous wastes, which included light fuels, aliphatic solvents, petroleum distillates, and waste oils and lubricants between 1986-2019, paint/pigments/coating residues and halogenated solvents between 1986-2016 and, acid wastes (other metals), alkaline wastes (heavy metals), inorganic laboratory chemicals and oil skimmings and sludged between 1992-2016.</p>
27 Bridge Street	Approximately 50 m north of the Corridors	PCA 28 - One fuel oil tank
24 Bridge Street	Approximately 30 m north of the Corridors	PCA 34 – A potential machine shop was listed in the municipal directories between 1921-1926.

Address	Proximity	Potential Concern
(appears to have amalgamated with 6 Dalhousie Street)		
28 & 32 Bridge Street (28 Bridge Street appears to have amalgamated with 32 Bridge Street)	Approximately 50 m north of the Corridors	PCA 34- A historical machine shop was depicted on the 1915 and 1950 FIPs. Additionally, a machine shop was listed in the municipal directories between 1936-1950.
4 King Street (appears to have amalgamated with 50 Colborne Street)	West-adjacent to the Corridors	PCA 28 – The property was listed in the TSSA database with one active oil storage tank.
7 King Street	East-adjacent to the Corridors	PCA 19 – A potential electrical sales and service facility was listed in the municipal directories between 1955-1965. PCA other – An unknown manufacturing facility was listed in the municipal directories in 1931.
9 King Street	East-adjacent to the Corridors	PCA 19 – A potential electronic sales and service facility was listed in the municipal directories in 1931. GEN- The Property was registered as a generator of hazardous waste, which included alkaline wastes (other metals) in 2010
12-14 King Street (appears to have severed into 16 King Street and 22 Colborne Street East)	West-adjacent to the Corridors	PCA 37 – A dry cleaner was listed in the municipal directories in 1912 and 1955. PCA 45 – A rubber vulcanizer facility was listed in the municipal directories in 1916. PCA 52 – An automotive service garage was listed in the municipal directories between 1936-1946.
14 King Street (appears to have amalgamated with 16 King Street)	South-and west-adjacent to the Corridors	PCA 28 –A historical fuel service station was depicted on the 1950 FIP, which included two USTs west-adjacent to King Street. One UST was located east of the automotive garage as depicted on the 1965 FIP. PCA 52- A historical automotive garage was depicted on the 1965 FIP.
17 King Street (address location unknown; inferred to be have amalgamated with 41 Dalhousie Street)	East-adjacent to the Corridors	PCA 28 – The property was listed in the TSSA database with one active oil storage tank.
18 King Street (appears to have amalgamated with 16 King Street)	West-adjacent to the Corridors	PCA 45 – A potential rubber manufacturing facility was listed in the municipal directories in 1931.
20 King Street (appears to have amalgamated with 28 Dalhousie Street)	West-adjacent to the Corridors	PCA 52 - Several automotive service garages were listed in the municipal directories between 1950-1965.
21 King Street (appears to have amalgamated with	Approximately 18 m north of the Corridors	PCA 37 – A potential dry cleaner was listed in the municipal directories between 1926-1946. During the inspection of the Corridor, a building labelled “King Laundry” was observed.

Address	Proximity	Potential Concern
34-38 Dalhousie Street)		
23-25 King Street (25 King Street appears to have amalgamated with 23 King Street)	Approximately 25 m north of the Corridors	PCA 29- A historical glass manufacturing facility was depicted on the 1915 FIP. Additionally, a glass manufacturing facility was listed in the municipal directories in 1916. PCA 32 – A historical sheet metal manufacturing facility was depicted on the 1915 FIP. Additionally, automotive service garages were listed in the automotive service garages between 1931-1941.
24 King Street (appears to have amalgamated with 28 Dalhousie Street)	North-adjacent to the Corridors	PCA 52 – An automotive service garage was listed in the municipal directories between 1931-1936.
26 King Street (appears to have amalgamated with 30-32 King Street)	Approximately 30 m north of the Corridors	PCA Other – Multiple printing facilities were listed in the municipal directories between 1916-1950.
29 King (appears to have amalgamated with 23 King Street)	Approximately 45 m north of the Corridors	PCA 37- A historical dry cleaner was depicted on the 1915 FIP.
29-31 King Street	Approximately 45 m north of the Corridors	PCA 37 – Several potential dry cleaners were listed in the municipal directories between 1912-1986.
30 King Street	Approximately 55 m north of the Corridors	PCA 36 – A potential oil production facility was listed in the municipal directories in 1975. PCA 28 – The property was listed in the TSSA database with one active oil tank. PCA 52 – A potential automotive service garage was listed in the municipal directories in 1936.
2-8 Queen Street (appears to have amalgamated with 90-100 Colborne Street East)	North-and West-adjacent to the Corridors	PCA 11 – A potential commercial trucking terminal was listed in the municipal directories between 1936. PCA Other - An unknown manufacturing facility was listed in the municipal directories between 1936-1941.
3-9 Queen Street (appears to have amalgamated with 104-110 Colborne Street East)	East-adjacent to the Corridors	PCA 34 – A potential metal fabrication facility was listed in the municipal directories in 1936.
10 Queen Street (appears to have amalgamated with 53 Dalhousie Street)	West-adjacent to the Corridors	PCA 28 – A potential fuel service station was listed in the municipal directories in 1921.
14 Queen Street (appears to have amalgamated with 53 Dalhousie Street)	West-adjacent to the Corridors	PCA 37 – A dry cleaner was listed in the municipal directories between 1916-1931.
29 Queen Street (appears to have amalgamated with 58 Dalhousie Street)	Approximately 40 m north of the Corridors	PCA 37 – A historical dry cleaner was depicted on the 1915 and 1950 FIPs. Additionally a dry cleaner was listed in the municipal directories between 1916-1950.

Address	Proximity	Potential Concern
32 Queen Street (appears to have amalgamated with 40 Queen Street)	Approximately 45 m north of the Corridors	PCA 18 – A potential electric power station was listed in the municipal directories in 1931. PCA 34- A historical machine shop was depicted on the 1915 FIPs.
33 Queen Street (appears to have amalgamated with 60-70 Dalhousie Street)	Approximately 55 m north of the Corridors	PCA 10 – An auto body repair garage was listed in the municipal directories between 1931-1941. PCA 52 – An automotive service garage was listed in the municipal directories in 1946.
1 Market Street	North-and-south adjacent to the Corridors	PCA 18 – A potential electric power station was listed in the municipal directories between 2007-2012. PCA 28 - A potential fill and vent pipe was located on the south-central portion of the building, north-adjacent to Colborne Street East. PCA 34- The property was listed as an industrial and commercial machinery and equipment facility. GEN - The property was registered as a generator of hazardous wastes, which included aliphatic wastes between 2018-2019.
44 Market Street	Approximately 35 m north of the Corridors	PCA 39 – A potential bulk paint storage facility was listed in the municipal directories between 1946-1975. PCA other – A potential coal storage facility was listed in the municipal directories in 1912.
50 Market Street (appears to have amalgamated with 50 Market Street)	Approximately 45 m north of the Corridors	PCA Other – The property was registered with a CPU for the property.
54 Market Street (appears to have amalgamated with 50 Market Street)	Approximately 60 m north of the Corridors	PCA 36 – A potential bulk oil storage facility was listed in the municipal directories in 1912.
3 George Street (appears to have amalgamated with 1 Market Street)	Approximately 15 m north of the Corridors	PCA 37 – A suspected dry cleaner was listed in the municipal directory between 1946-1975.
11-13 George Street (appears to have amalgamated with 1 Market Street)	Approximately 25 m north of the Corridors	PCA 18 – A potential electrical power station was listed in the municipal directories in 1916 and between 1970-1975. PCA 37 – A suspected dry cleaner was listed in the municipal directories between 1975-1981. PCA 54 – A textile manufacturing facility was listed in the municipal directories between 1970-1981.
23 George Street (appears to have amalgamated with 1 Market Street)	Approximately 20 m south of the Corridors	PCA 37 – A suspected dry cleaner was listed in the municipal directories in 1941.
41 George Street	North-adjacent to the Corridors	GEN- The property was registered as a generator of hazardous wastes between 2003-2004, however, no records were provided
45-47 George Street (appears to have amalgamated with 41 George Street)	Approximately 20 m north of the Corridors	PCA 52 – Several automotive service garages were listed in the municipal directories between 1926-1941.

Address	Proximity	Potential Concern
51-53 George Street (appears to have amalgamated with 41 George Street)	Approximately 50 m north of the Corridors	PCA 12 – A potential concrete manufacturing facility was listed in the municipal directories between 1916-1921. PCA 19 – A potential electrical sales and service facility was listed in the municipal directories between 1965-1970.
7-11 Charlotte Street (appears to have amalgamated with 262 Colborne Street East)	West-adjacent to the Corridors	PCA 10 – A potential automotive service garage was listed in the municipal directories between 1941-1960. PCA 34 - A potential machine shop ("Eagle Press") was listed in the municipal directories in 1950
5 Clarence Street (appears to have amalgamated with 298-306 Colborne Street East)	East-adjacent to the Corridors	PCA 52 – A suspected automotive service garage was listed in the municipal directories between 1981-1991.
11 Clarence Street	East-adjacent to the Corridors	PCA 28 – The property was listed in the TSSA database with one active oil tank. PCA 52 – A historical automotive garage was depicted on the 1965 FIP. Additionally, automotive service garages were listed in the municipal directories between 1960-2012. During the inspection of the Corridors , an automotive service garage was observed.
18 Clarence Street	Approximately 30 m north of the Corridors	PCA 34- Historical machine shop as depicted on the 1950 and 1965 FIPs. Additionally, several machine shops were listed in the municipal directories between 1936-1975.
20 Clarence Street	Approximately 40 m north of the Corridors	PCA 52 –A historical automotive garage was depicted on the 1950 and 1965 FIPs. Additionally, an automotive service garage was listed between 1921-1950. During the inspection of the Corridors s, one monitoring well and evidence of boreholes were observed within the parking lot.
21 Clarence Street (appears to have amalgamated with 196 Dalhousie Street)	Approximately 10 m north of the Corridors	PCA 52 – An automotive service garage was listed in the municipal directories in 1921.
97 Alfred Street	Approximately 20 m south of Dalhousie Street	PCA 37 – A historical dry cleaner was reported in the Phase One ESA completed for 81 Peel Street in Brantford. Additionally, the building was labeled "Cleaner" as depicted on the 1965 FIP. Additionally, a dry cleaner was listed in the municipal directories between 1955-2002. GEN - The property was registered as a generator of halogenated solvents between 1984-2004 with the exception in 1990 and 1991.
113 Alfred Street (appears to have amalgamated with 187 Darling Street)	Approximately 60 m north of the Corridors	PCA 52 – Suspected private automotive service garaged were listed in the municipal directories between 1950-1986.
7 Stanley Street	North-adjacent to the Corridors	PCA 28 - One UST was located west of the service building as depicted on the 1965 FIP. Additionally, several fuel service stations were listed in the municipal directories between 1955-1991. PCA 52 – A historical automotive garage was depicted on the 1965 FIP.

Address	Proximity	Potential Concern
		<p>GEN- The property was registered as a generator of light fuels between 1992-1998 and 2014-2019 and waste oils and sludges between 2010-2011 and 2013-2019.</p> <p>SPL- On August 27, 1991, gasoline contaminated soil was found at the property from the former service station.</p>
8 Stanley Street (appears to have amalgamated with 10 Stanley Street)	North-adjacent to the Corridors	PCA 52 – A historical automotive garage was depicted on the 1950 and 1965 FIPs, which included a painting shop in 1965.
11-15 Stanley Street (appears to have amalgamated with 9 Stanley Street)	South-adjacent to the Corridors	PCA 11 – A commercial trucking terminal was listed in the municipal directories between 1950-1970.
20 Stanley Street	North-adjacent to the Corridors	PCA 52 – Multiple automotive service garages were listed in the municipal directories between 1960-1970.
39 Darling Street (appears to have amalgamated with 60-70 Dalhousie Street)	Approximately 65 m north of the Corridors	<p>PCA 28 – A potential historical fuel service station was depicted on the 1950 FIP, which included three USTs located north of the garage.</p> <p>PCA 52 – A historical automotive garage was depicted on the 1950 FIP.</p>
47-49 Darling Street (appears to have amalgamated with 53-55 Darling Street)	Approximately 40 m north of the Corridors	PCA 52- A historical automotive garage was depicted on the 1950 FIP. Additionally, several automotive service garages were listed in the municipal directories between 1921-1950.
55 Darling Street	Approximately 40 m north of the Corridors	PCA 52 – A historical automotive garage was depicted on the 1915 FIP. Additionally, multiple automotive service garages were listed in the municipal directories between 1912-1921.
63 Darling Street (appears to have amalgamated with 88 Dalhousie Street)	Approximately 70 m north of the Corridors	PCA 37 – A suspected dry cleaner was listed in the municipal directories between 1936-1941 whereas a dry cleaner was listed between 1965-1975.
20-26 Water Street (No longer a municipal address)	Approximately 35 m south of the Corridors	PCA 52 – An automotive service garage was listed in the municipal directories in 1946. A potential service garage was listed between 1950-1955.
44 Water Street (appears to have amalgamated with 49 Colborne Street East)	Approximately 35 m south of the Corridors	PCA 52 – Several automotive service garages were listed in the municipal directories between 1936-1960.
52-54 Water Street (appears to have amalgamated with 50 Water Street)	Approximately 35 m south of the Corridors	<p>PCA 28 - Two historical USTs located south of the garage as depicted on the 1950 FIP.</p> <p>PCA 52 – A historical transport garage was depicted on the 1950 FIP. Additionally, automotive service garages were listed in the municipal directories between 1950-1955.</p>
74 Water Street (appears to have amalgamated with 101 Colborne Street East)	Approximately 30 m south of the Corridors	PCA 52 – A suspected automotive service garage was listed in the municipal directories in 1955.

Address	Proximity	Potential Concern
88 Water Street (appears to have amalgamated with 101 Colborne Street East)	Approximately 30 m south of the Corridors	PCA 52 – A potential automotive service garage was listed in the municipal directories in 1926.
100 Water Street (address location unknown; inferred to have amalgamated with 101 Colborne Street East)	Inferred approximately 30 m south of the Corridors	GEN - The property was registered as a generator of hazardous wastes, including oil skimmings and sludged in 2016.
116 Water Street (appears to have amalgamated with 101 Colborne Street East)	Approximately 35 m south of the Corridors	PCA 52 – A potential automotive service garage was listed in the municipal directories in 1981.
120-126 Water Street (appears to have amalgamated with 101 Colborne Street East)	Approximately 35 m south of the Corridors	PCA 52 – Several potential automotive service garages were listed in the municipal directories between 1950-195
126 Water Street (appears to have amalgamated with 99 Colborne Street East)	Approximately 30 m south of the Corridors	PCA 34 – A historical machine shop was depicted on the 1965 FIP.
136-142 Water Street (appears to have amalgamated with 99 Colborne Street East)	Approximately 30 m south of the Corridors	PCA 52 – A historical automotive garage was depicted on the 1950 FIP.
146 Water Street (appears to have amalgamated with 171 Colborne Street East)	Approximately 20 m south of the Corridors	PCA 52 – An automotive service garage was listed in the municipal directories between 1946-1950.
150 Water Street (appears to have amalgamated with 171 Colborne Street East)	Approximately 30 m south of the Corridors	PCA 52 – A historical automotive garage was depicted on the 1950 and 1965 FIPs.
6 Wharfe Street (address location unknown; Inferred to have amalgamated with 173 Colborne Street East)	Approximately 30 m south of the Corridors	PCA 47 – A rubber manufacturing facility was listed in the municipal directories between 1912-1931.

Address	Proximity	Potential Concern
18 Wharfe Street (appears to have amalgamated with 197 Colborne Street East)	Approximately 30 m south of the Corridors	PCA 39 – A potential bulk paint storage facility was listed in the municipal directories between 1970-1975.
20 Wharfe Street (appears to have amalgamated with 197 Colborne Street East)	Approximately 30 m south of the Corridors	PCA 11 – A potential commercial trucking terminal was listed in the municipal directories in 1931.
30-32 Wharfe Street (appears to have amalgamated with 205-211 Colborne Street East)	Approximately 30 m south of the Corridors	PCA 10 – A potential auto body repair shop was listed in the municipal directories between 1936-1950. PCA 52 – Multiple automotive service garages were listed in the municipal directories between 1941-2002.
52 Wharfe Street (inferred to have amalgamated with 225 Colborne Street East)	Approximately 30 m south of the Corridors	PCA 11 – A potential commercial trucking terminal was listed in the municipal directories in 1936 and 1946. PCA 52 – Several automotive service garages were listed in the municipal directories between 1936-1955.
55 Wharfe Street (appears to have amalgamated with 63 Wharf Street)	Approximately 65 m south of the Corridors	PCA 28- Three USTs located west of the automotive garage as depicted on the 1950 FIP. PCA 52- A historical automotive garage was depicted on the 1950 and 1965 FIPs. Additionally, multiple automotive service garages were listed in the municipal directories between 1960-1975 (listed under 35 Wharfe Street, inferred to be 55 Wharfe Street based on FIP records)
59 Wharfe Street (appears to have amalgamated with 63 Wharf Street)	Approximately 70 m south of the Corridors	PCA Other- A historical coal storage was depicted on the 1950 FIP.
62 Wharfe Street (address location unknown)	Approximately 30m south of the Corridors	PCA 52 – An automotive service garage was listed in the municipal directories in 1946.
65-69 Wharfe Street (65 appears to have amalgamated with 63 Wharfe, and 69 appears to have amalgamated with 1100 Clarence Street South)	Approximately 65 m south of the Corridors	PCA 52 – Multiple automotive service garages were listed in the municipal directories between 1965-1986.
79 Wharfe Street (appears to have amalgamated with 63 Wharfe Street)	Approximately 65 m south of the Corridors)	PCA 28- A potential historical fuel service station was depicted on the 1950 FIP, which included three USTs east of the building. PCA 52- A historical automotive garage was depicted on the 1950 and 1965 FIPs.
3 & 11 Iroquois Street	South-adjacent to the Corridors	GEN- The property was registered as a generator of hazardous waste, which included light fuels between 2002-2004.

Address	Proximity	Potential Concern
110 Icomm Drive (appears to have amalgamated with 1100 Clarence Street South)	Approximately 70 m south of the Corridors	PCA Other- A historical coal storage was depicted on the 1950 FIP.
7 Bain Street (appears to have amalgamated with 225 Colborne Street East)	Approximately 40 m south of the Corridors	PCA 52 – A potential automotive service garage was listed in the municipal directories between 1940-1950.

Notes:

Table should be read in conjunction with Figure 2

PCA # assigned in accordance with Schedule D, Table 2 of Ontario Regulation 153/04

Appendix C

Borehole Logs



The following are abbreviations and symbols commonly used on borehole logs, figures and reports.

Sample Types

AS	Auger Sample
CS	Chunk Sample
BS	Bulk Sample
GS	Grab Sample
WS	Wash Sample
SS	Split Spoon
RC	Rock Core
SC	Soil Core
TW	Thinwall, Open
TP	Thinwall, Piston

Soil Tests

PP	Pocket Penetrometer
FV	Field Vane
SPT	Standard Penetration Test
CPT	Cone Penetration Test
WC	Water Content
WL	Water Level

Penetration Resistance

Standard Penetration Test, N (ASTM D1586)	The number of blows by a 63.5 kg (140 lb) hammer dropped 760 mm (30 in.) required to drive a 50 mm (2 in.) open split spoon sampler for a distance of 300 mm (12 in.).
Dynamic Cone Penetration Resistance	The number of blows by a 63.5 kg (140 lb) hammer dropped 760 mm (30 in.) required to drive an uncased 50 mm (2 in.) diameter, 60o cone attached to "A" size drill rods for a distance of 300 mm (12 in.).

Soil Description

Cohesive Soils	Undrained Shear Strength (Cu)	
	kPa	psf
Very Soft	0 to 12	0 to 250
Soft	12 to 25	250 to 500
Firm	25 to 50	500 to 1,000
Stiff	50 to 100	1,000 to 2,000
Very Stiff	100 to 200	2,000 to 4,000
Hard	Above 200	Above 4,000

WH	Sampler advanced by static weight of hammer
WR	Sampler advanced by static weight of drilling rods
PH	Sampler advanced by hydraulic force
PM	Sampler advanced by manual force

DTPL	Drier than Plastic Limit
APL	About Plastic Limit
WTPL	Wetter than Plastic Limit
mbgs	Metres below Ground Surface

Cohesionless Soils	
Relative Density	SPT N Value
Very Loose	0 to 4
Loose	4 to 10
Compact	10 to 30
Dense	30 to 50
Very Dense	Above 50

ID No.: BH101-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Dalhousie Street, Brantford, ON

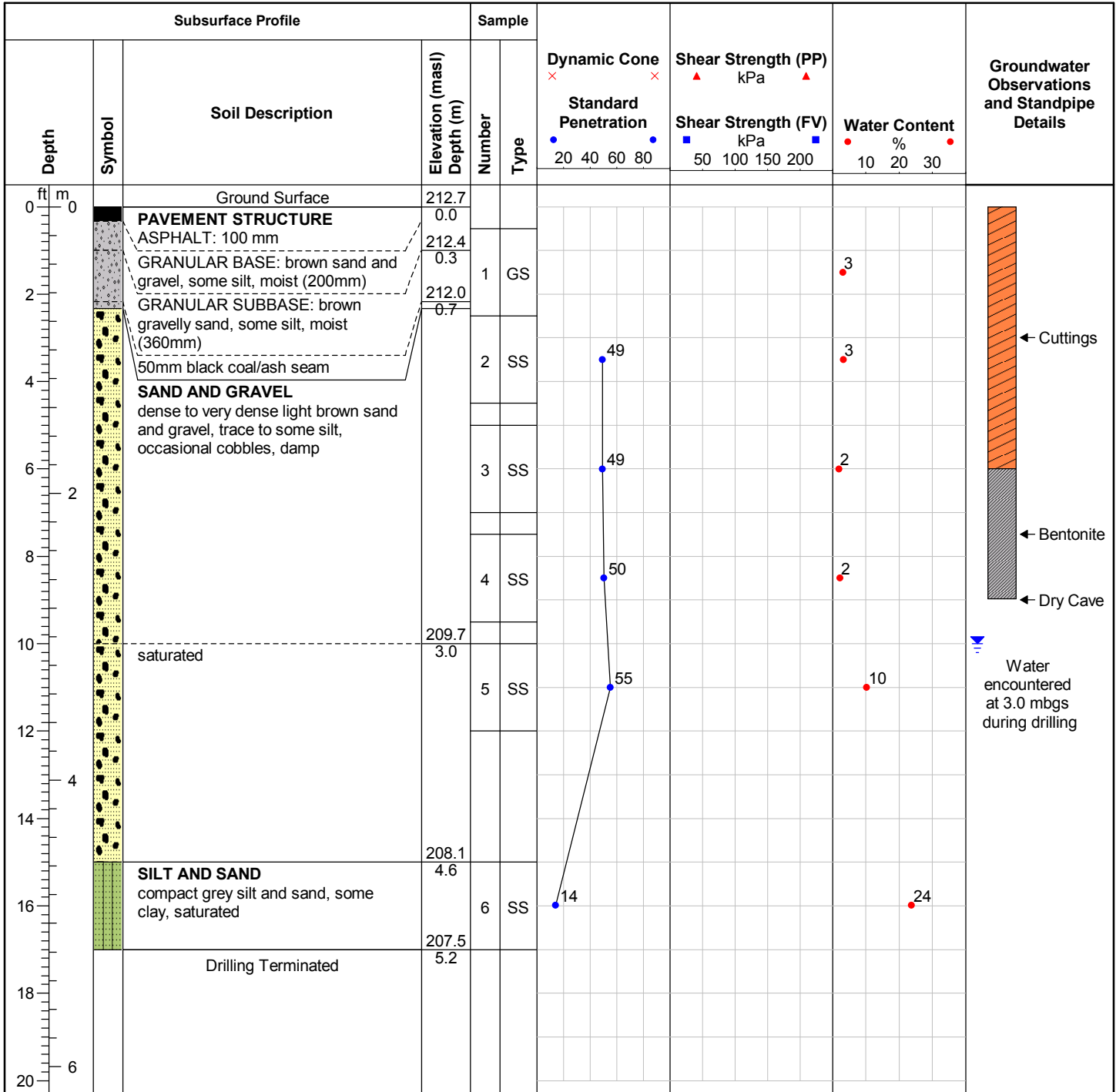
Date Completed: 5/6/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH102-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Dalhousie Street, Brantford, ON

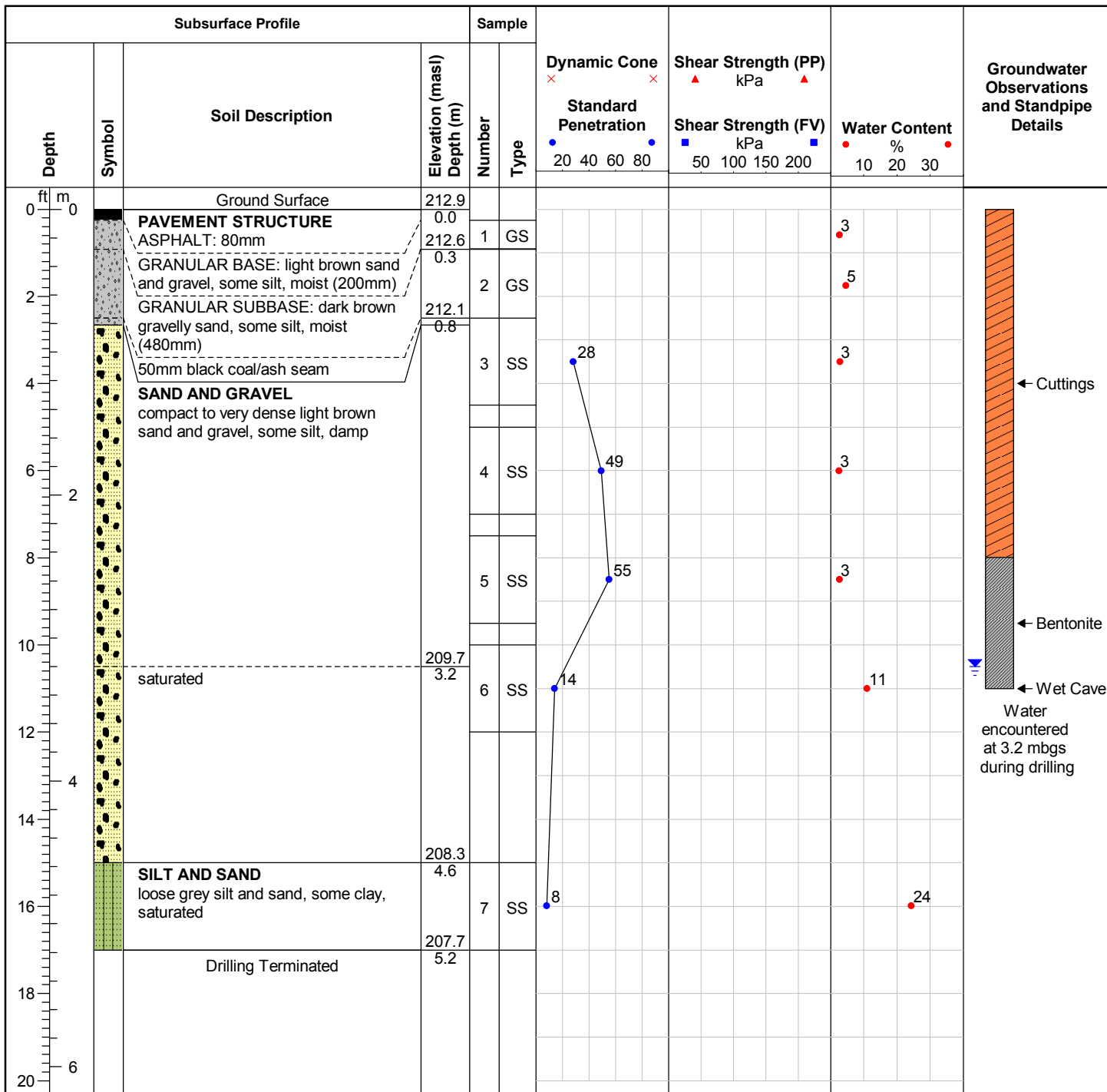
Date Completed: 5/6/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH103-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Dalhousie Street, Brantford, ON

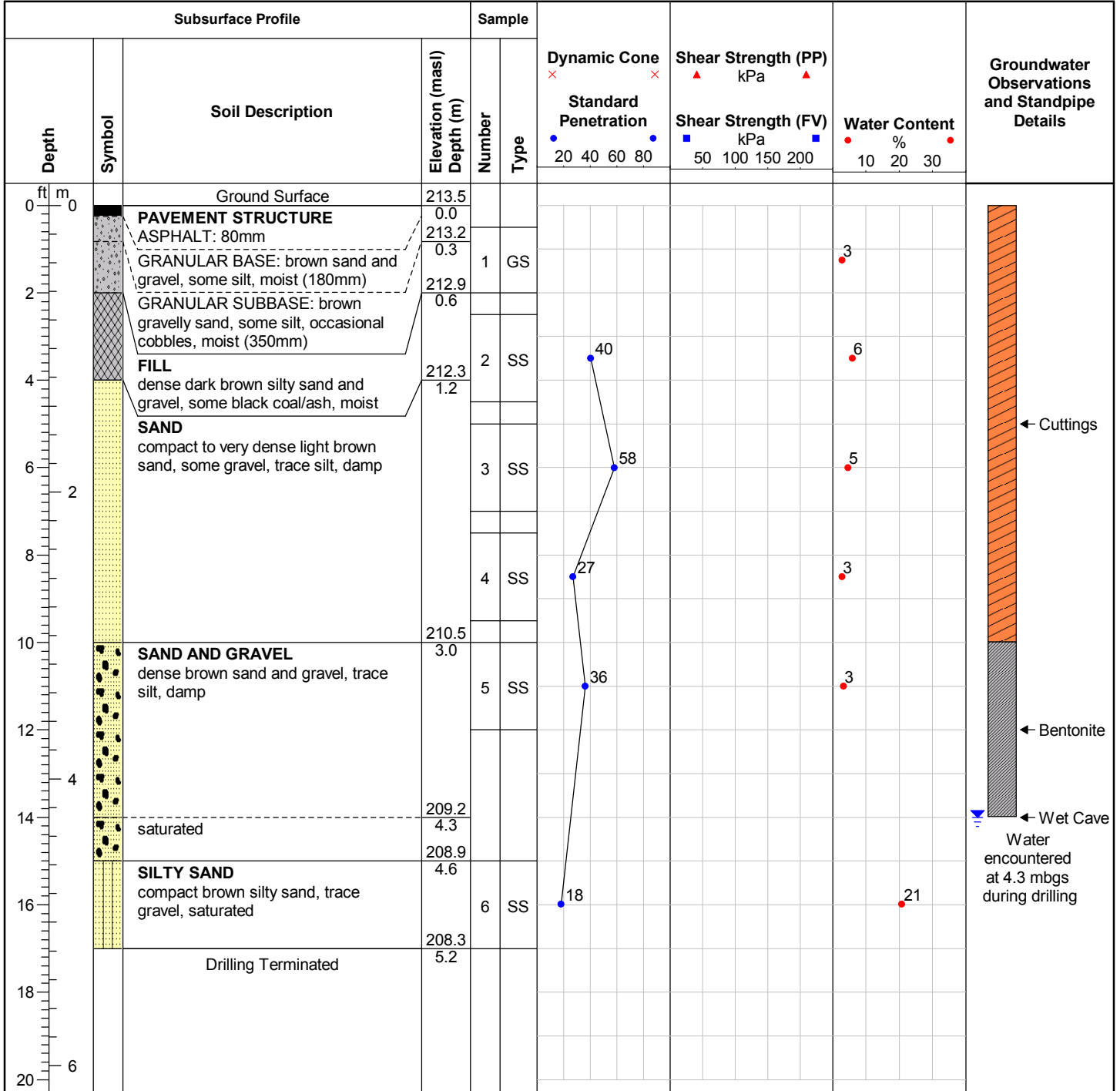
Date Completed: 5/6/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH104-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Dalhousie Street, Brantford, ON

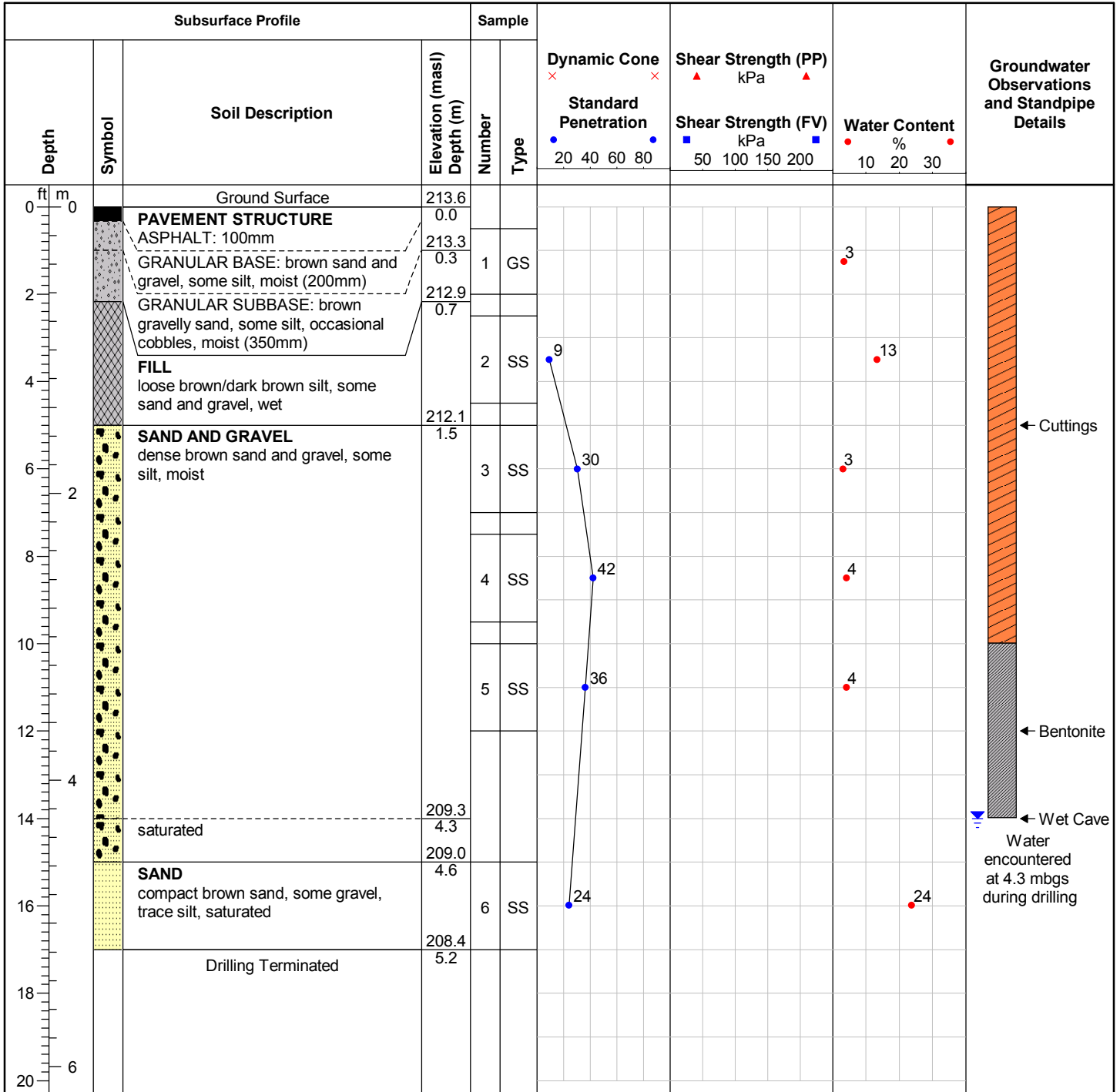
Date Completed: 5/6/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH105-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Dalhousie Street, Brantford, ON

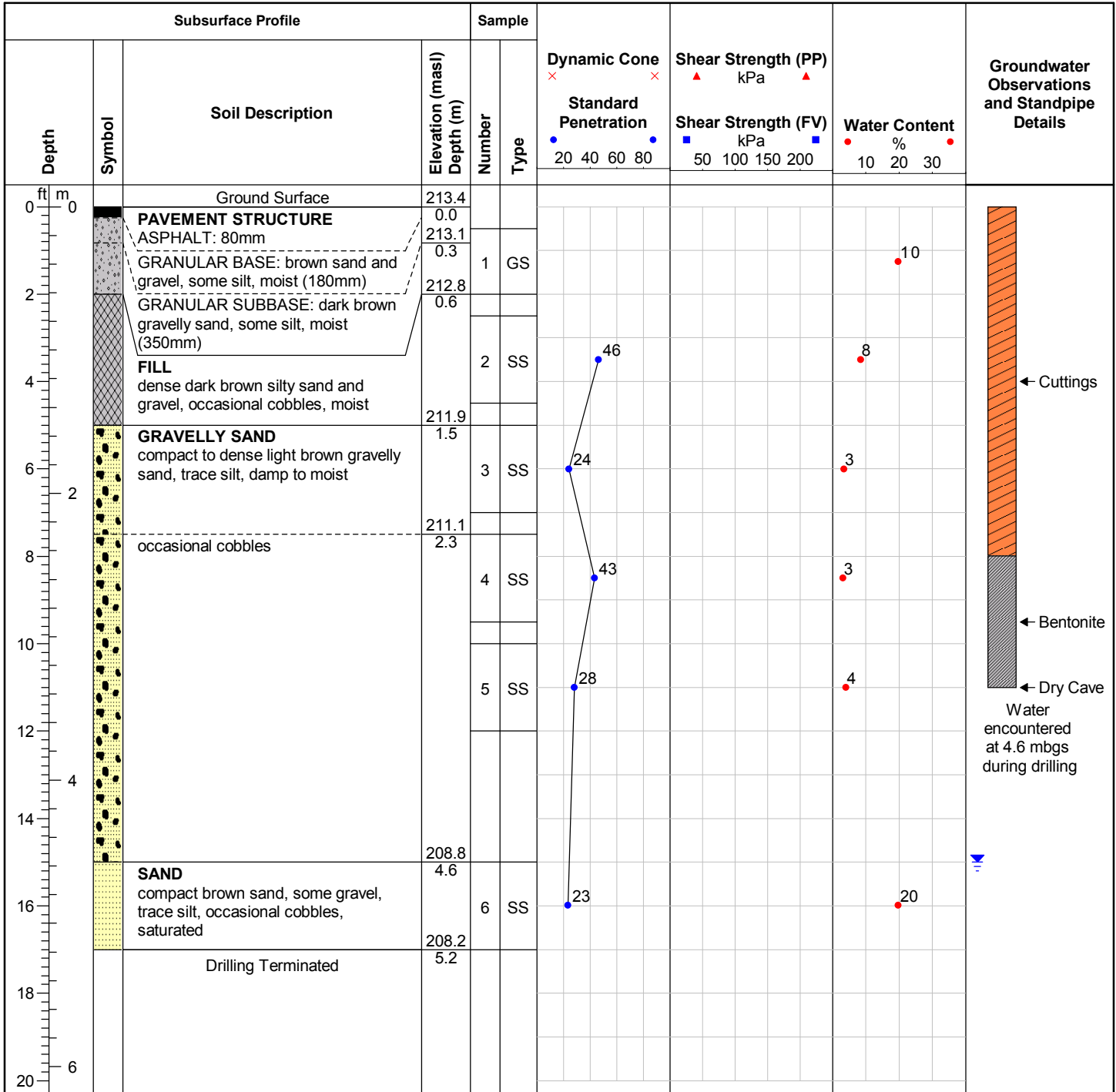
Date Completed: 5/6/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gosner



ID No.: BH106-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Dalhousie Street, Brantford, ON

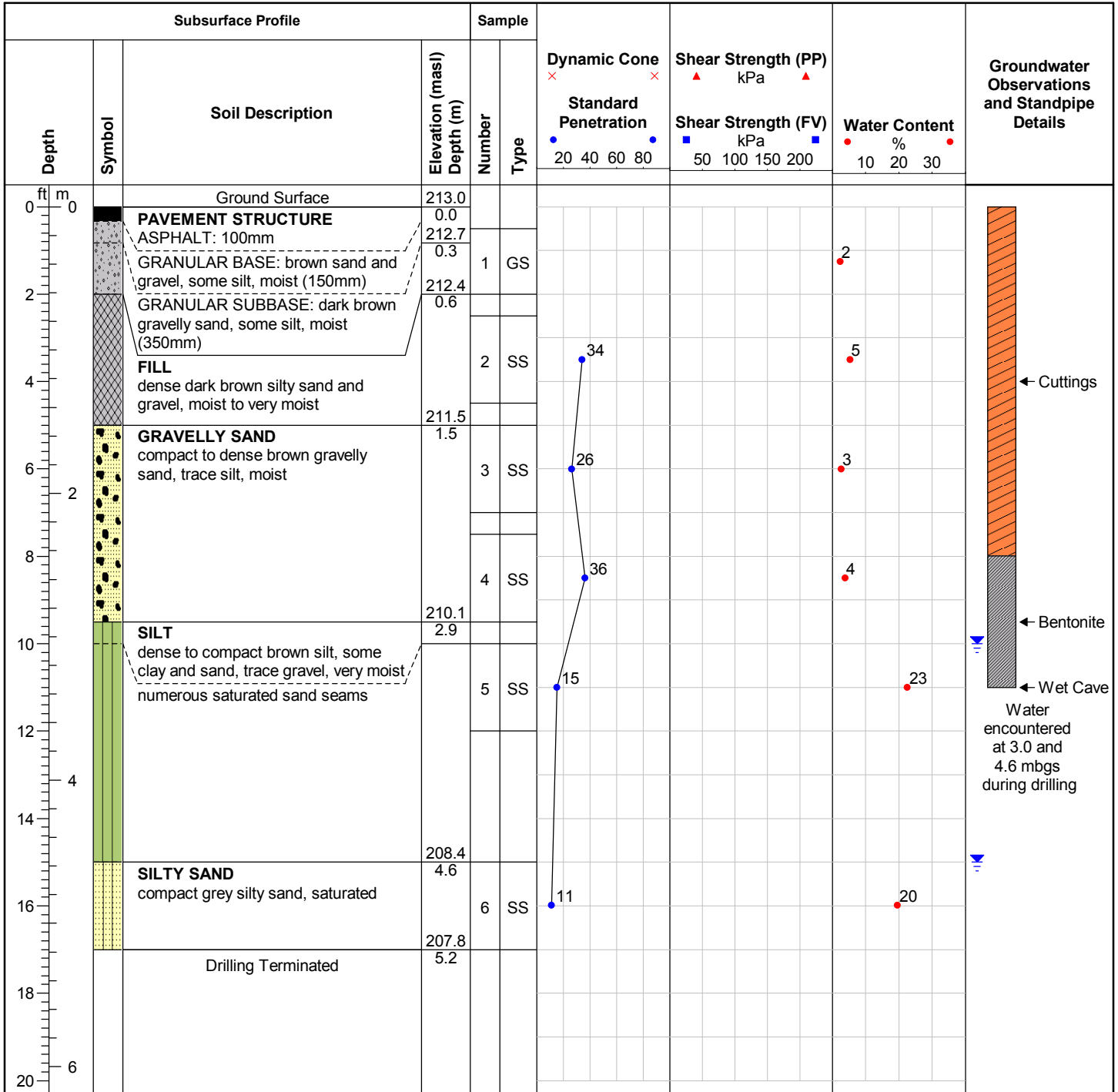
Date Completed: 5/6/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH107-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Dalhousie Street, Brantford, ON

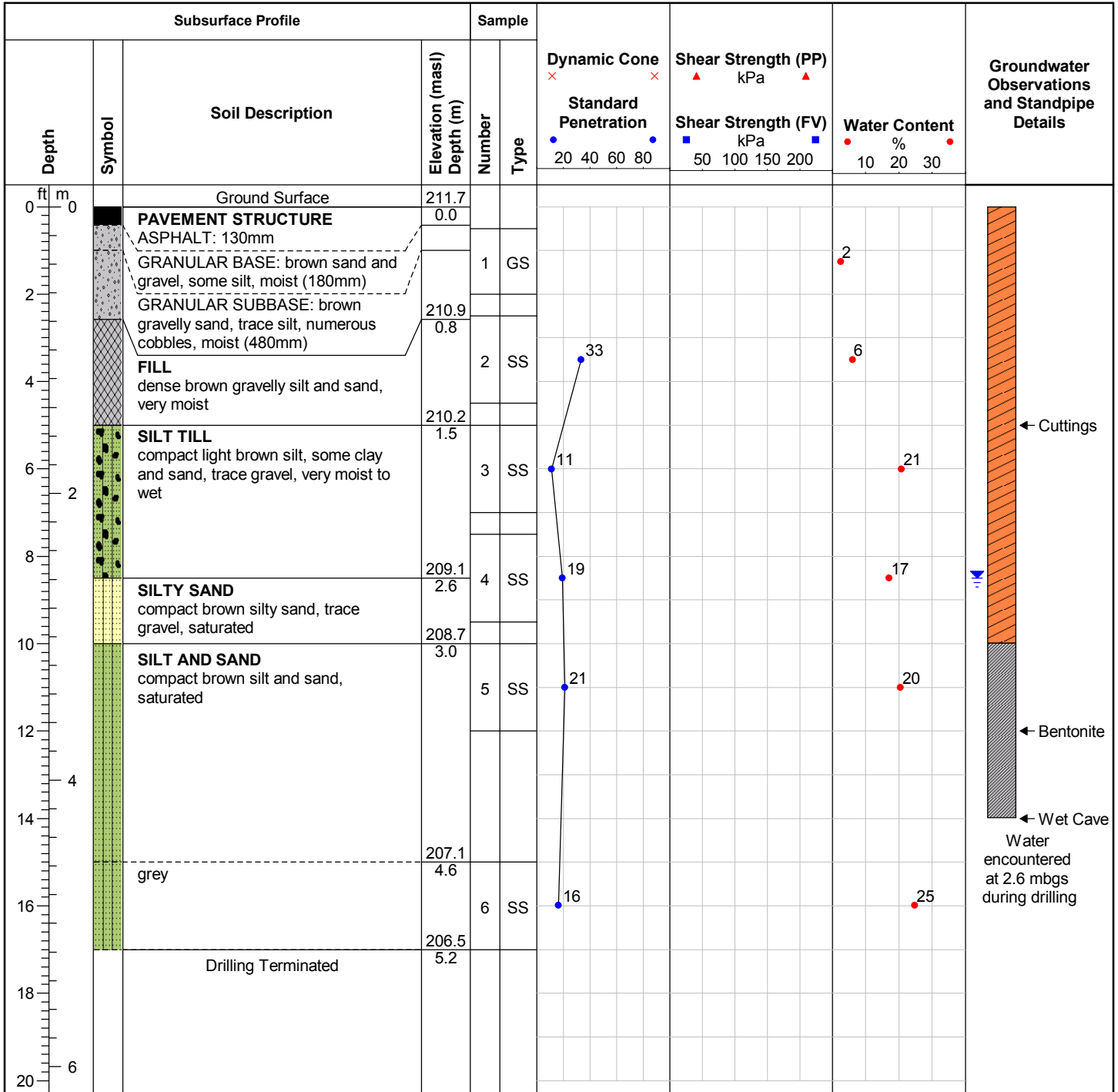
Date Completed: 5/5/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH108-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Dalhousie Street, Brantford, ON

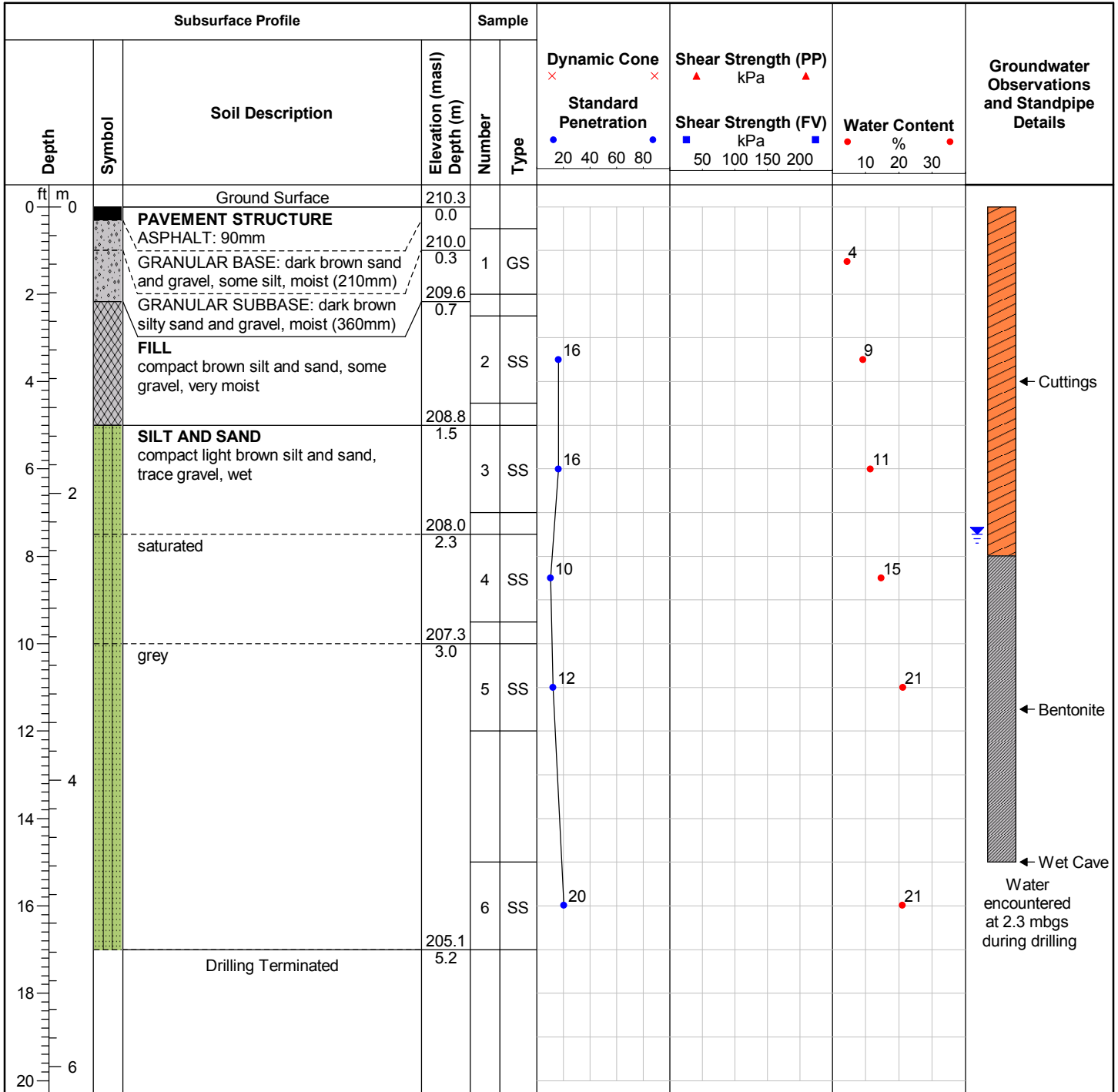
Date Completed: 5/5/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH109-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Dalhousie Street, Brantford, ON

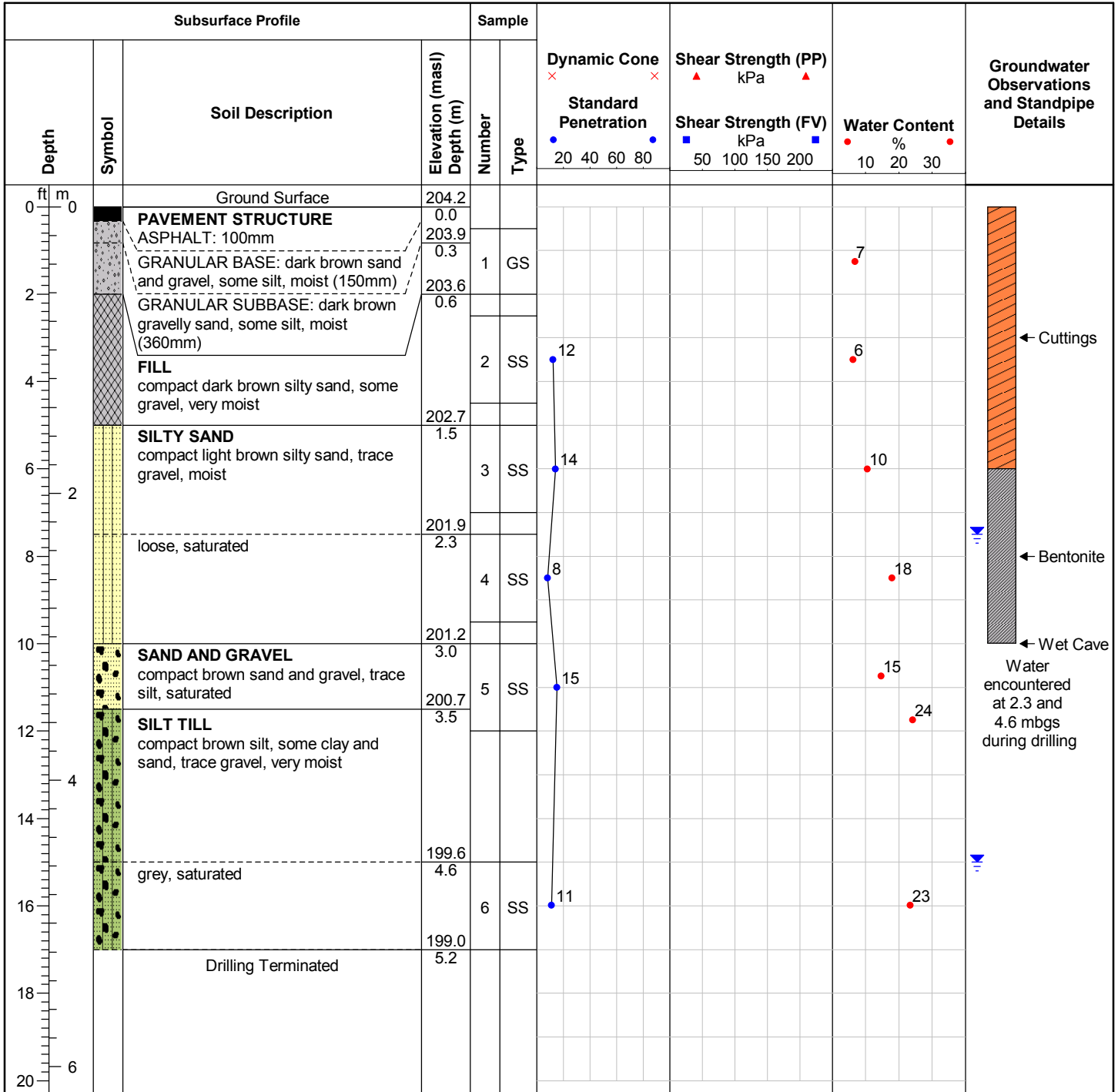
Date Completed: 5/5/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH110-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Dalhousie Street, Brantford, ON

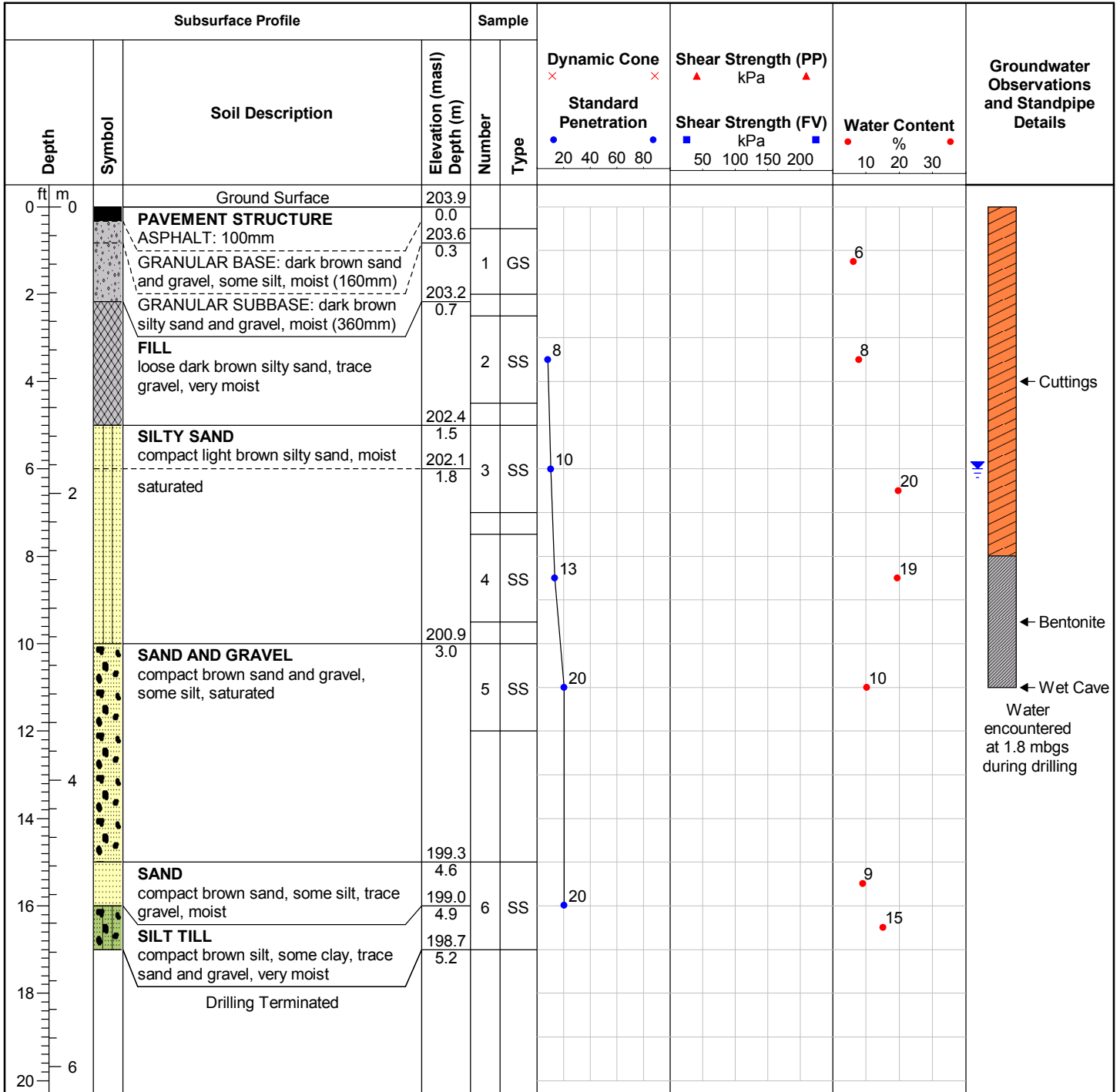
Date Completed: 5/5/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: MW111-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Dalhousie Street, Brantford, ON

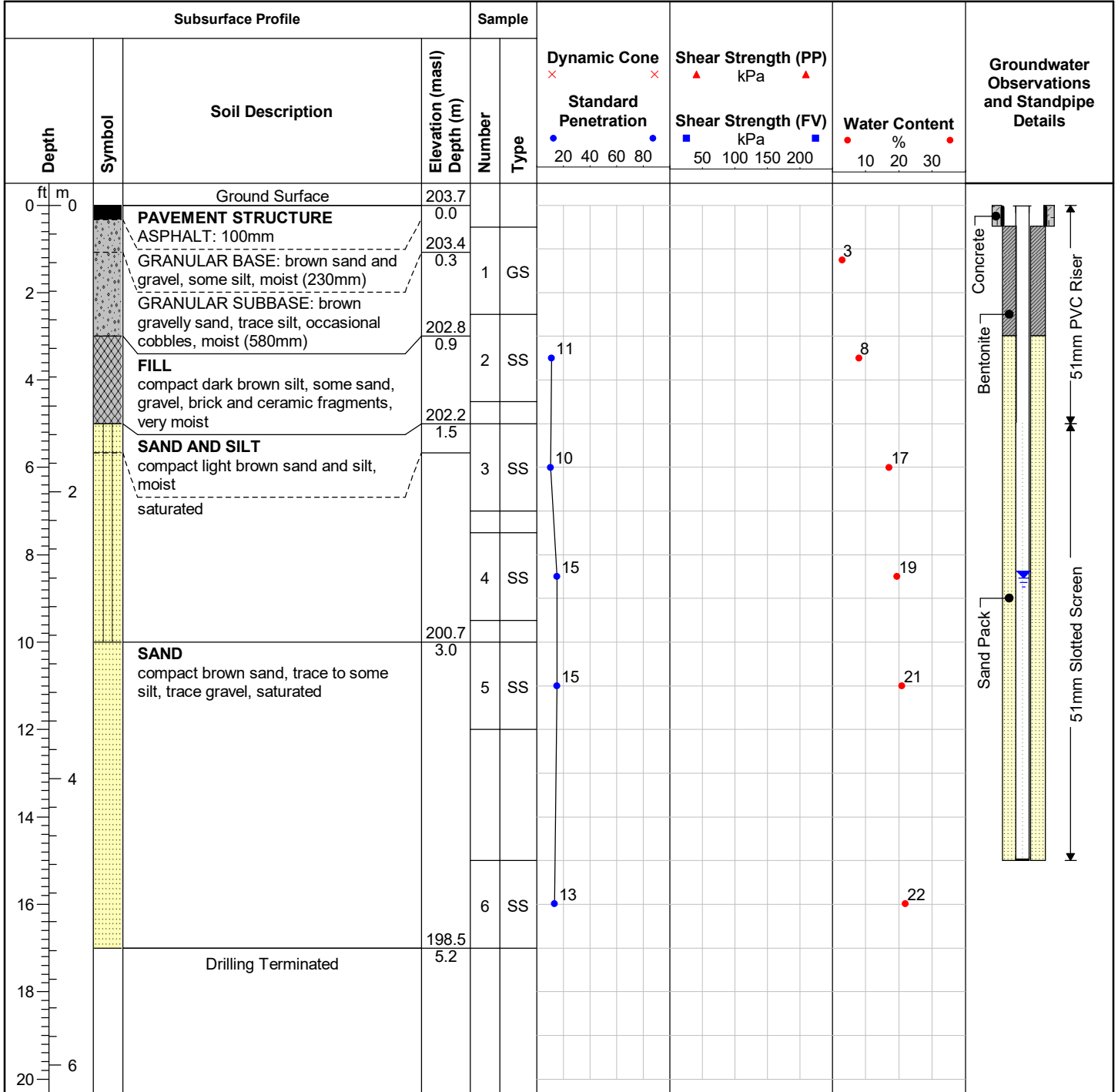
Date Completed: 5/5/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalglish

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



Sheet: 1 of 1

Notes:

Water encountered at 1.7mbgs (Elevation 202.0masl) during drilling.
Water measured at 2.6mbgs (Elevation 201.1masl) on July 6, 2021.

ID No.: BH112-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Dalhousie Street, Brantford, ON

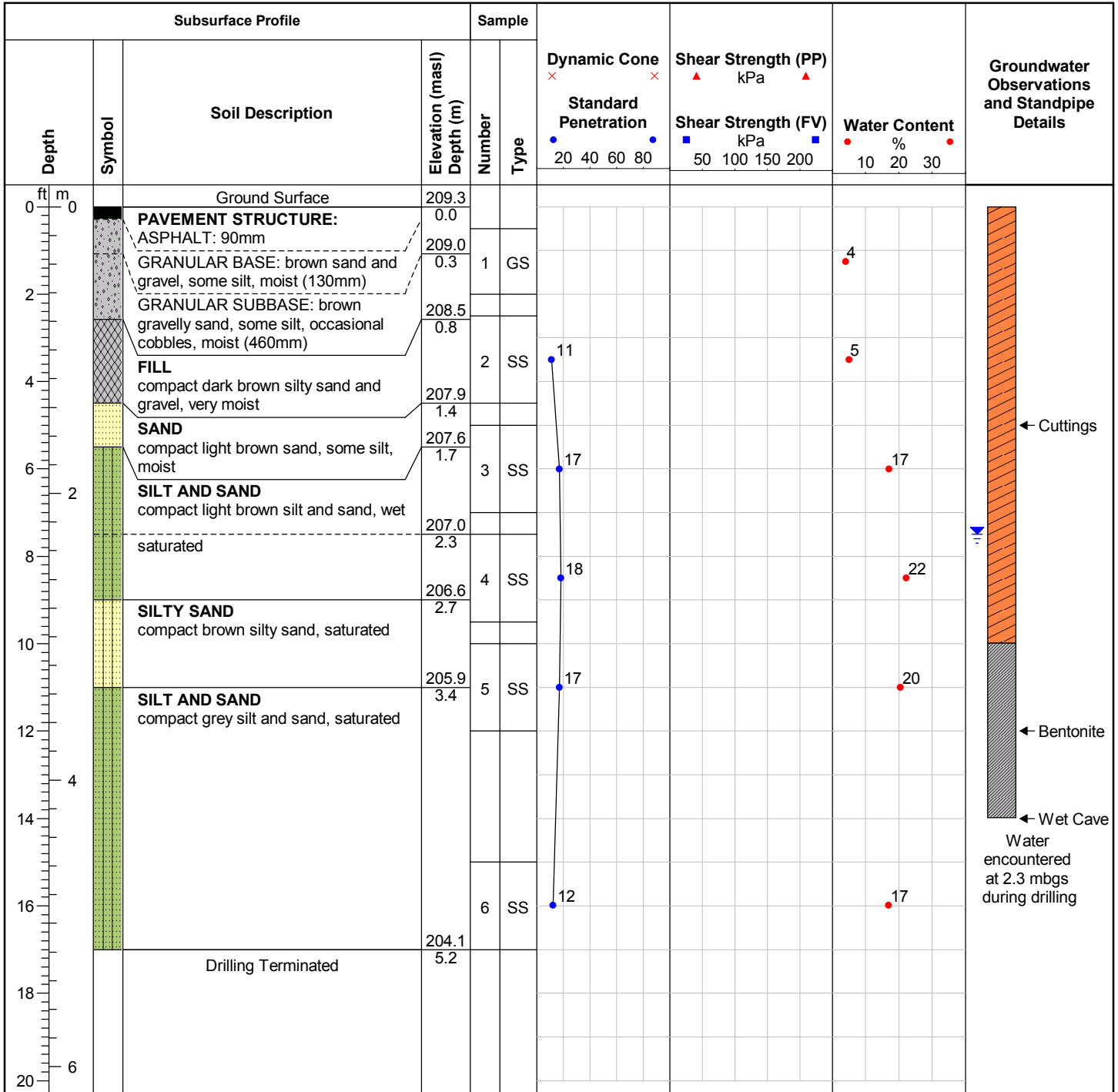
Date Completed: 5/4/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH113-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Dalhousie Street, Brantford, ON

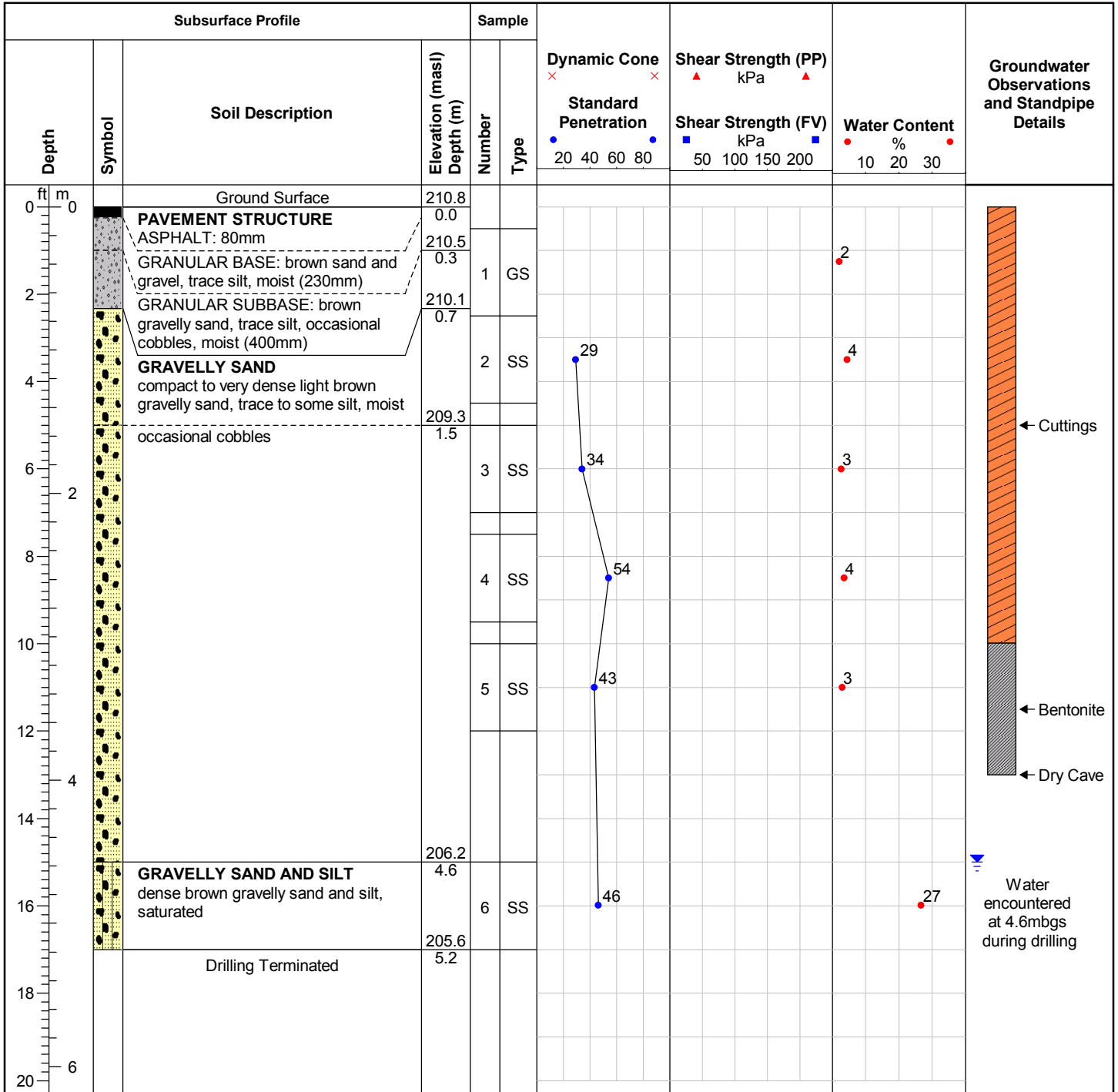
Date Completed: 5/3/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH114-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Dalhousie Street, Brantford, ON

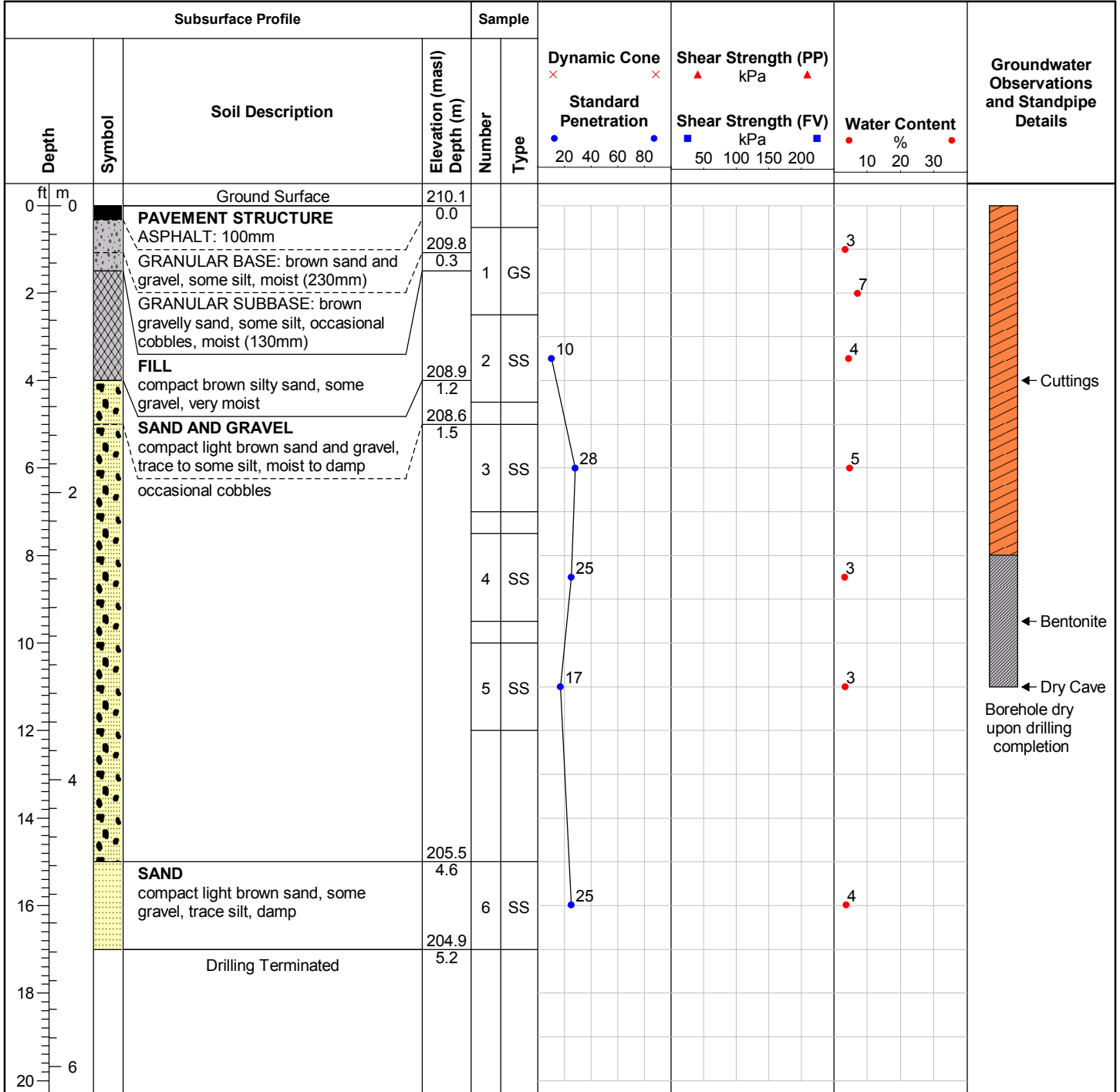
Date Completed: 5/3/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH115-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Dalhousie Street, Brantford, ON

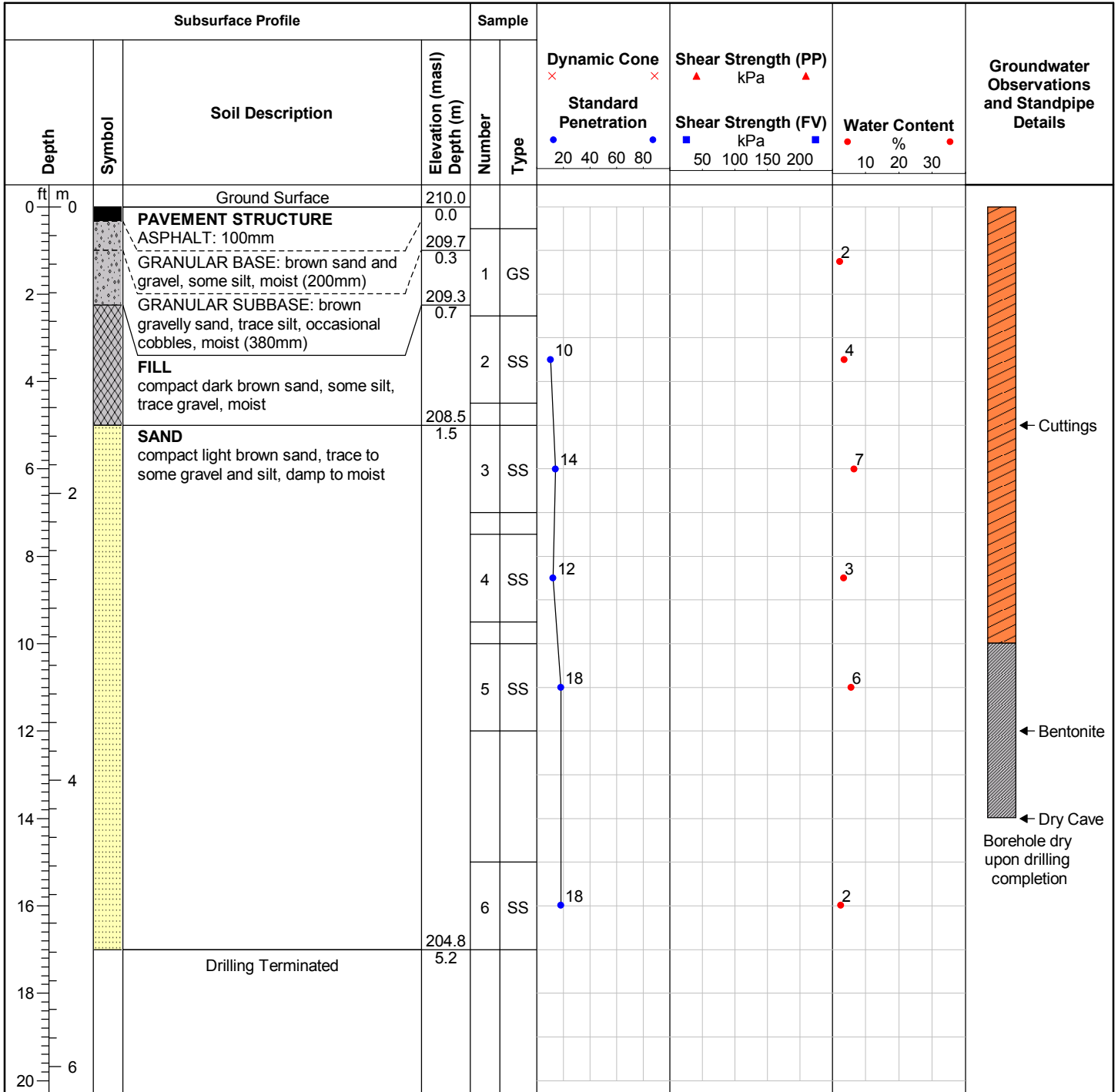
Date Completed: 5/3/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalglish

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH116-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Dalhousie Street, Brantford, ON

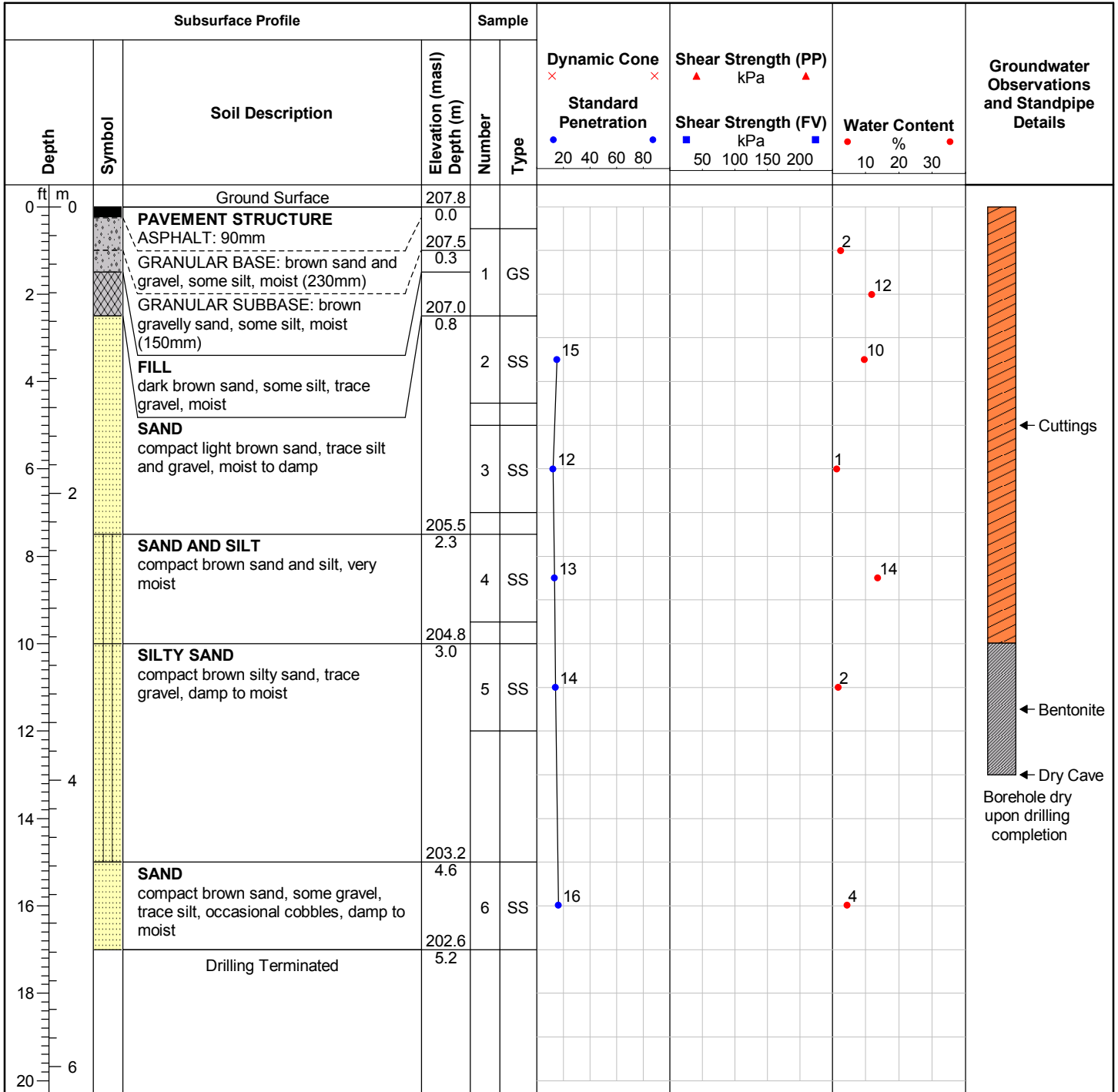
Date Completed: 5/3/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH117-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Dalhousie Street, Brantford, ON

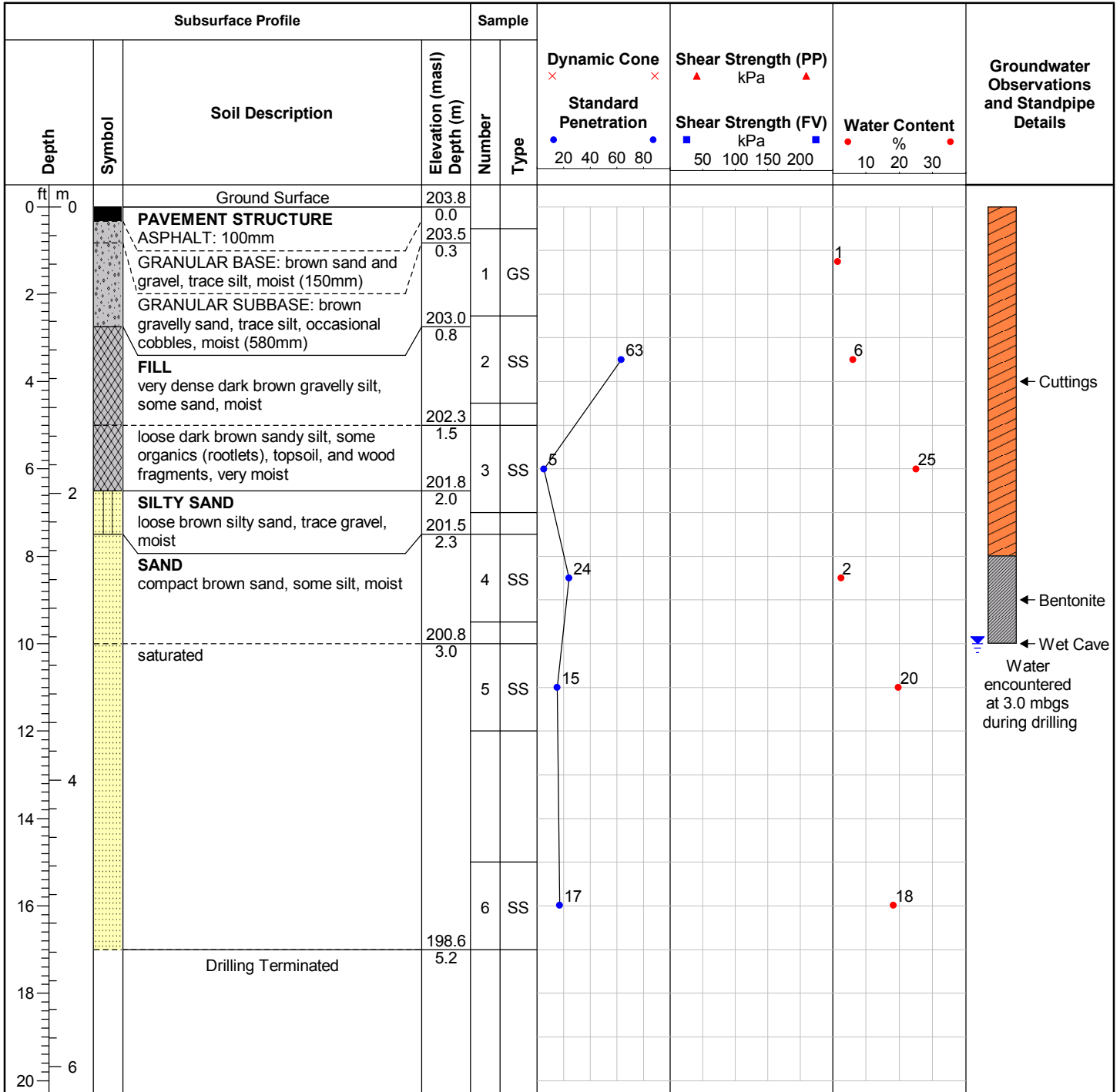
Date Completed: 4/30/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH118-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Dalhousie Street, Brantford, ON

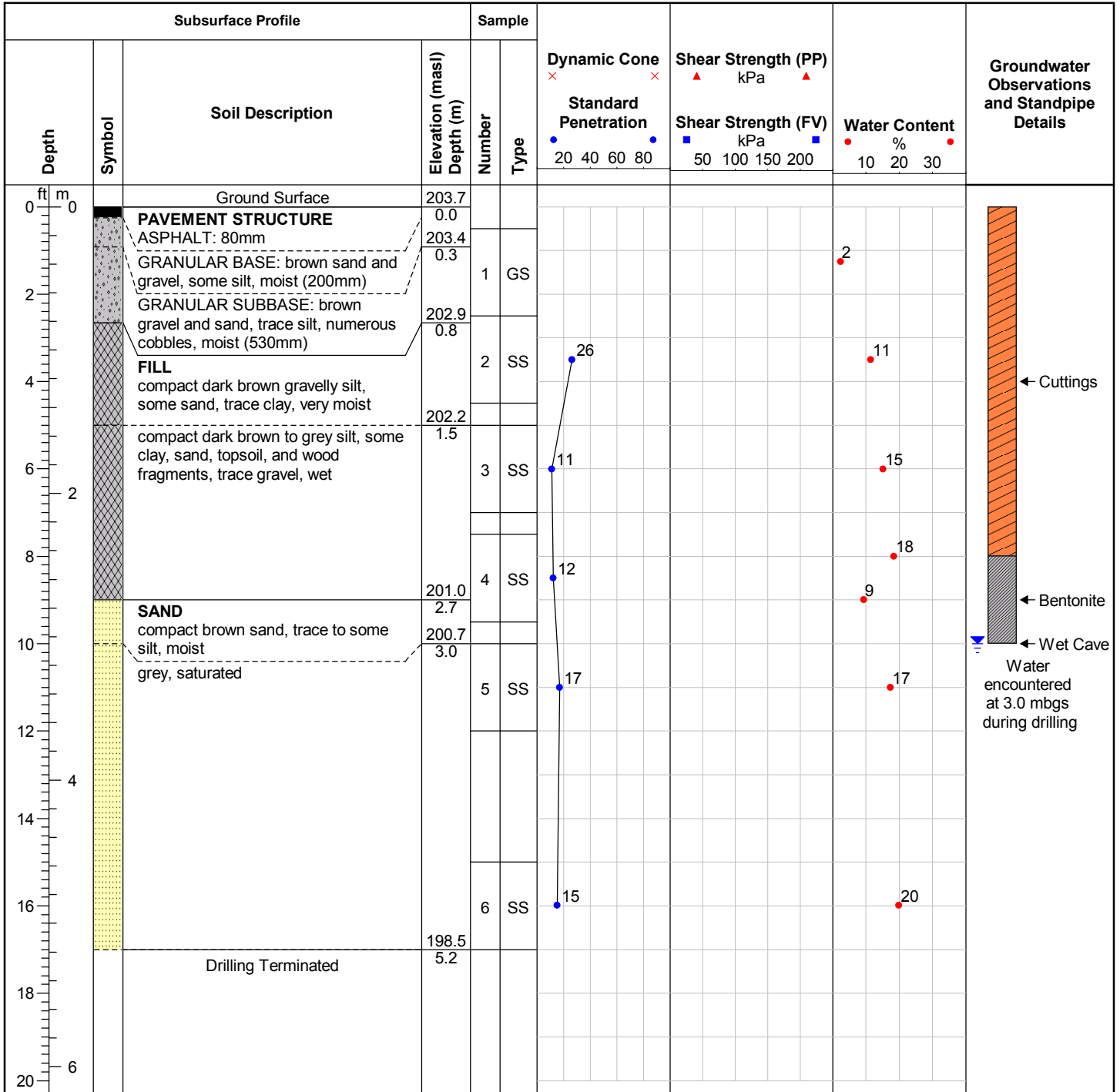
Date Completed: 4/30/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: MW119-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Dalhousie Street, Brantford, ON

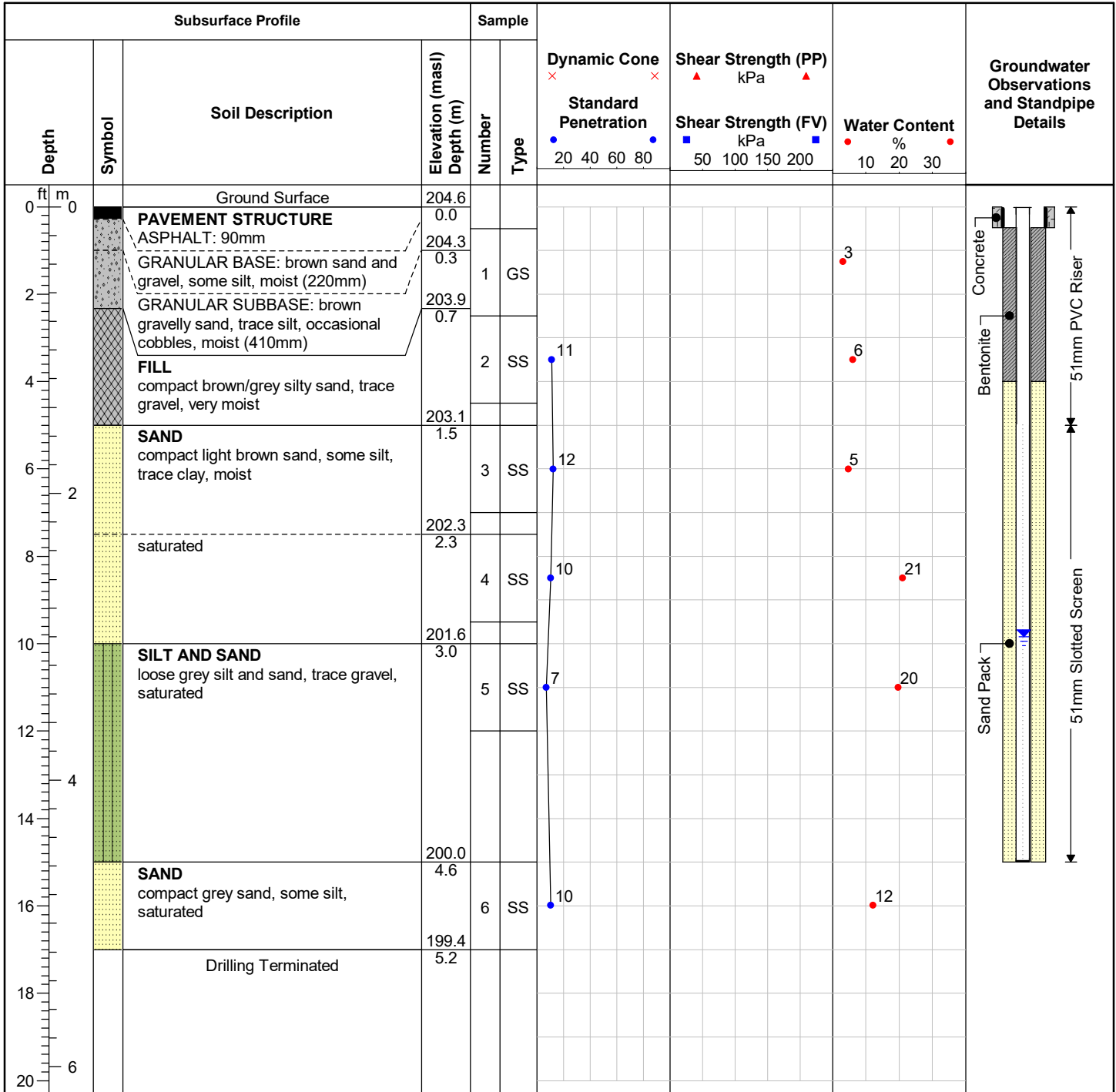
Date Completed: 4/30/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: Flush Mount



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



Sheet: 1 of 1

Notes:

Water encountered at 2.3mbgs (Elevation 202.3masl) during drilling.
Water measured at 3.0mbgs (Elevation 201.6masl) on July 6, 2021.

ID No.: BH120-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Dalhousie Street, Brantford, ON

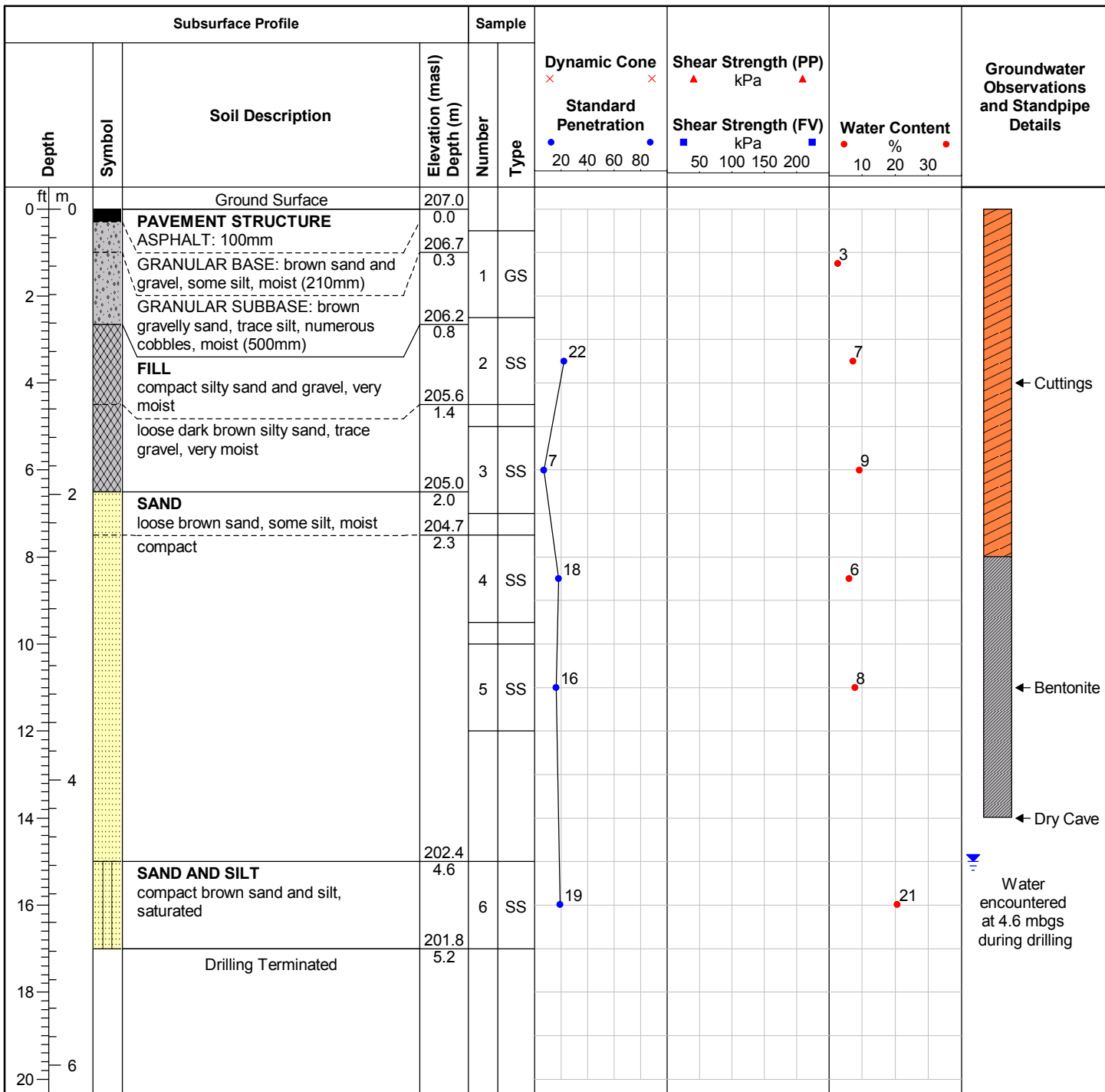
Date Completed: 4/30/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH121-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Dalhousie Street, Brantford, ON

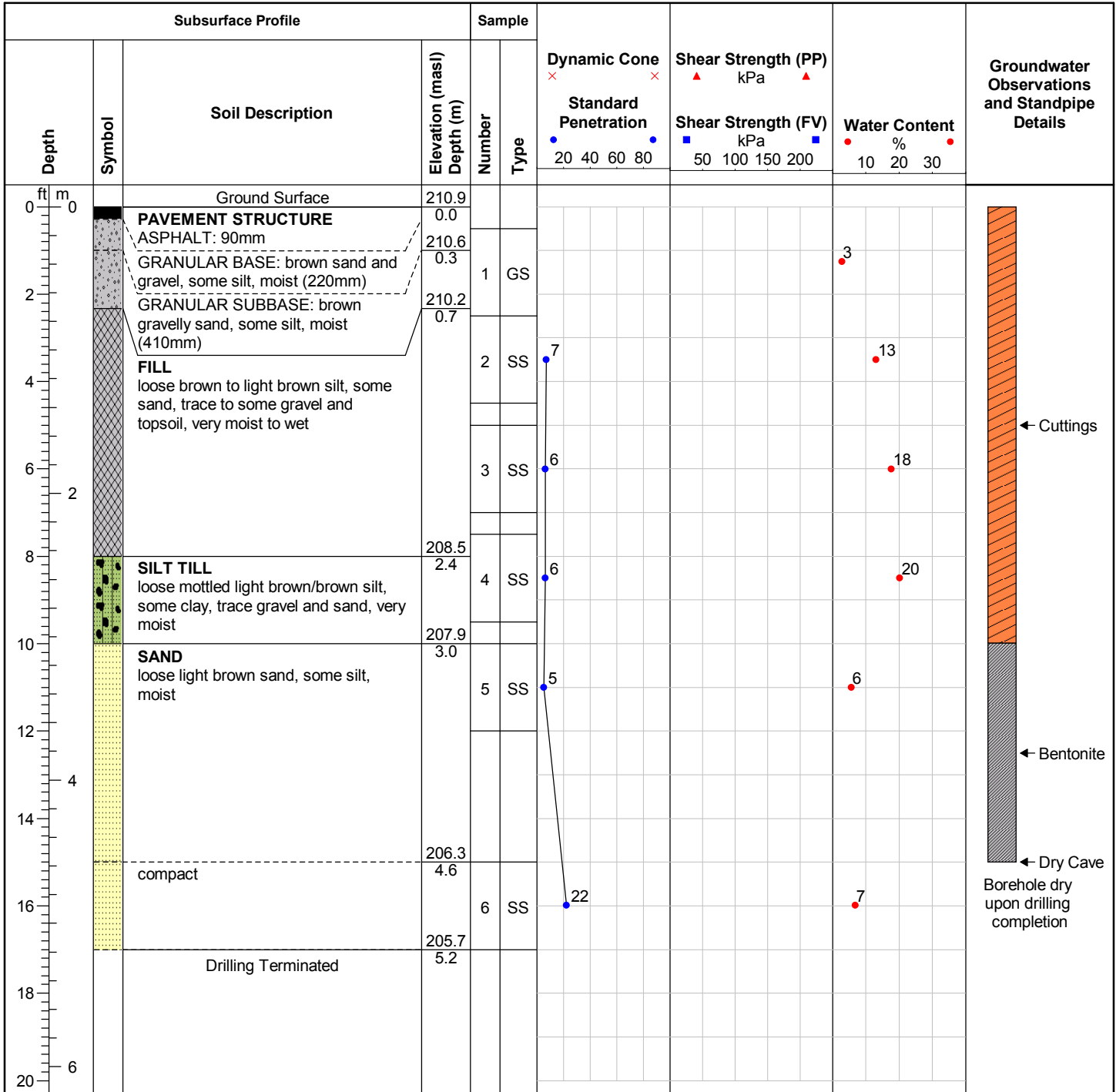
Date Completed: 4/30/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH122-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Brant Avenue, Brantford, ON

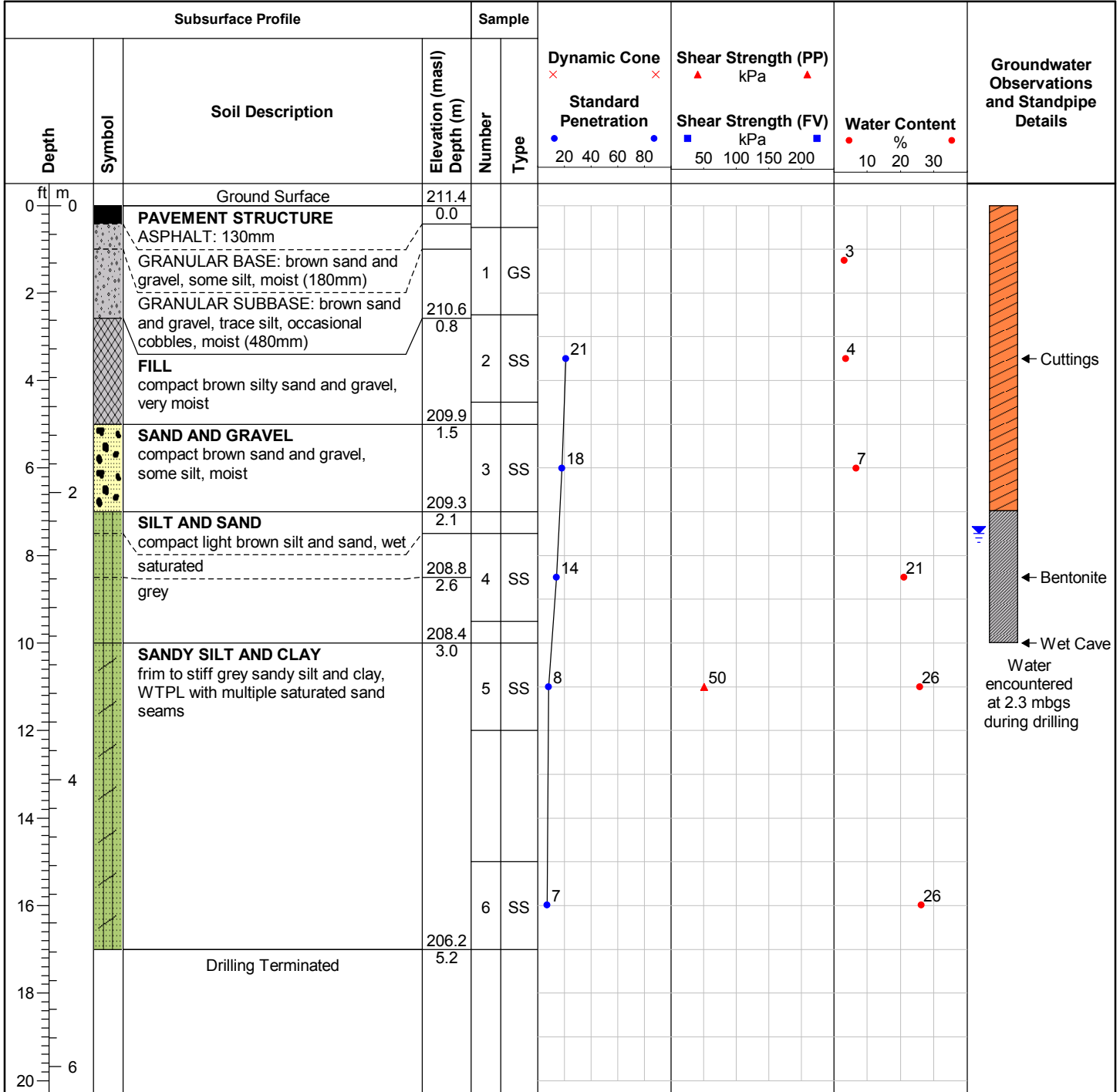
Date Completed: 5/11/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH123-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: King Street, Brantford, ON

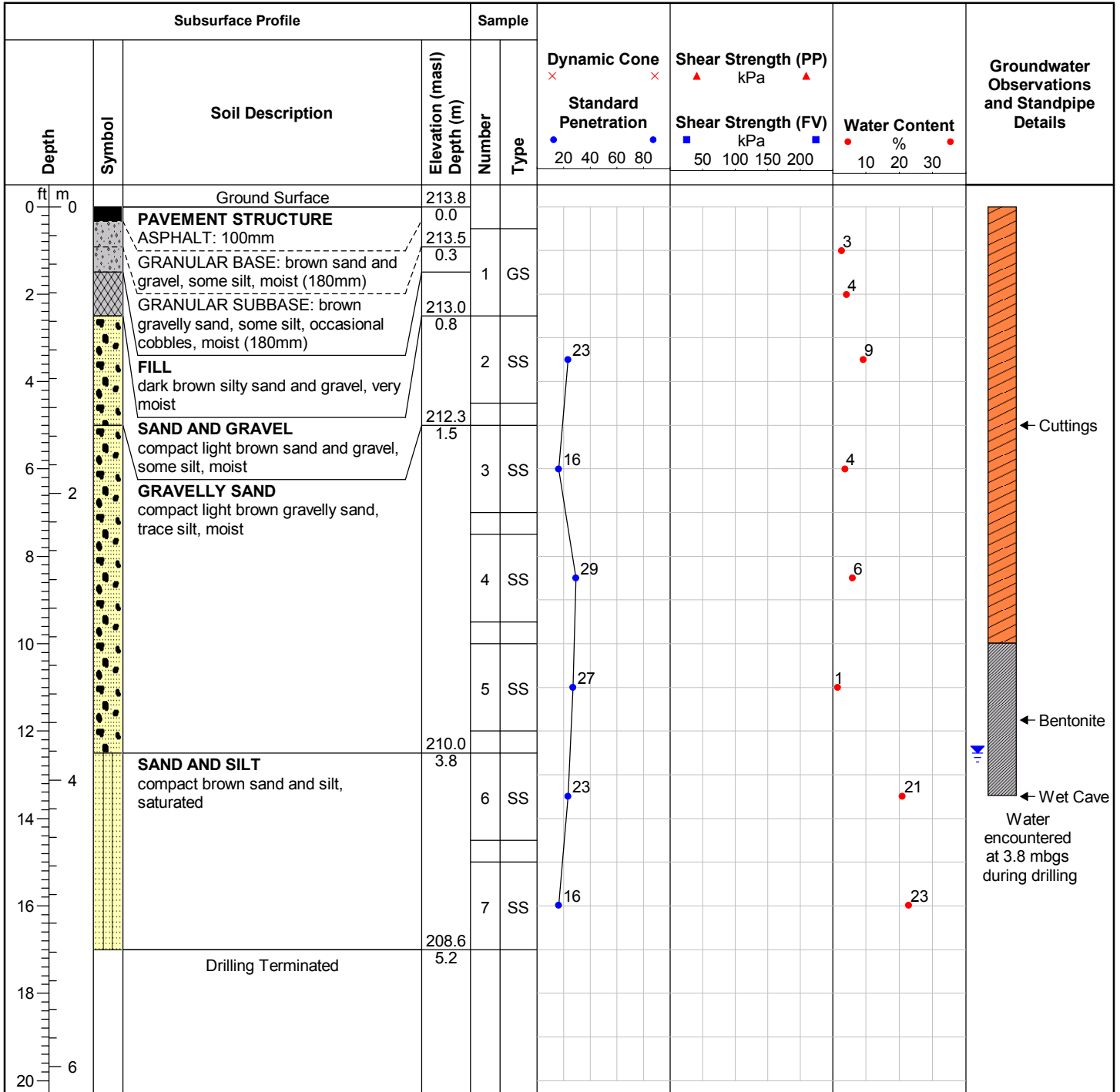
Date Completed: 5/11/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalglish

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH124-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Queen Street, Brantford, ON

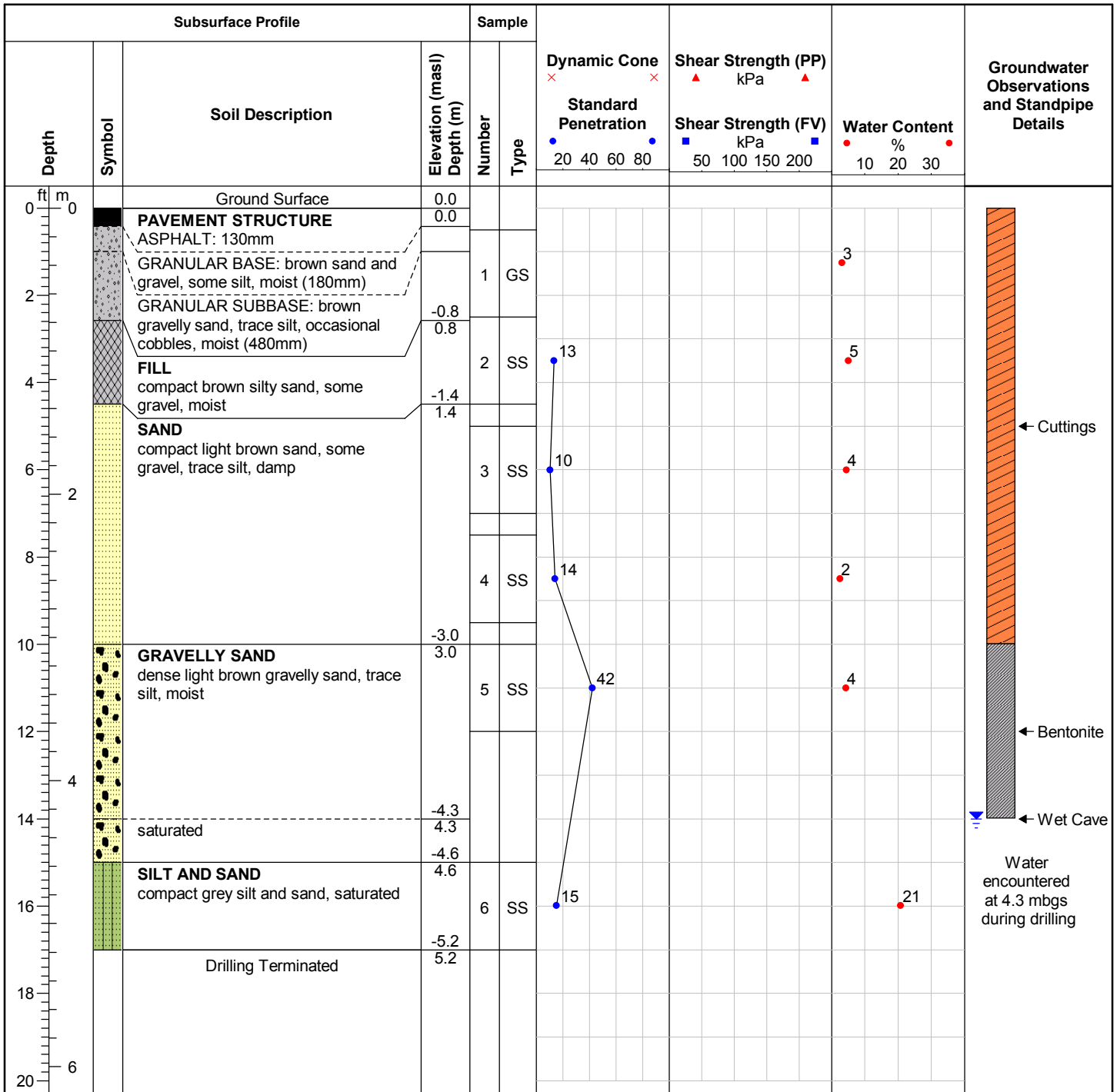
Date Completed: 5/12/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH125-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Charlotte Street, Brantford, ON

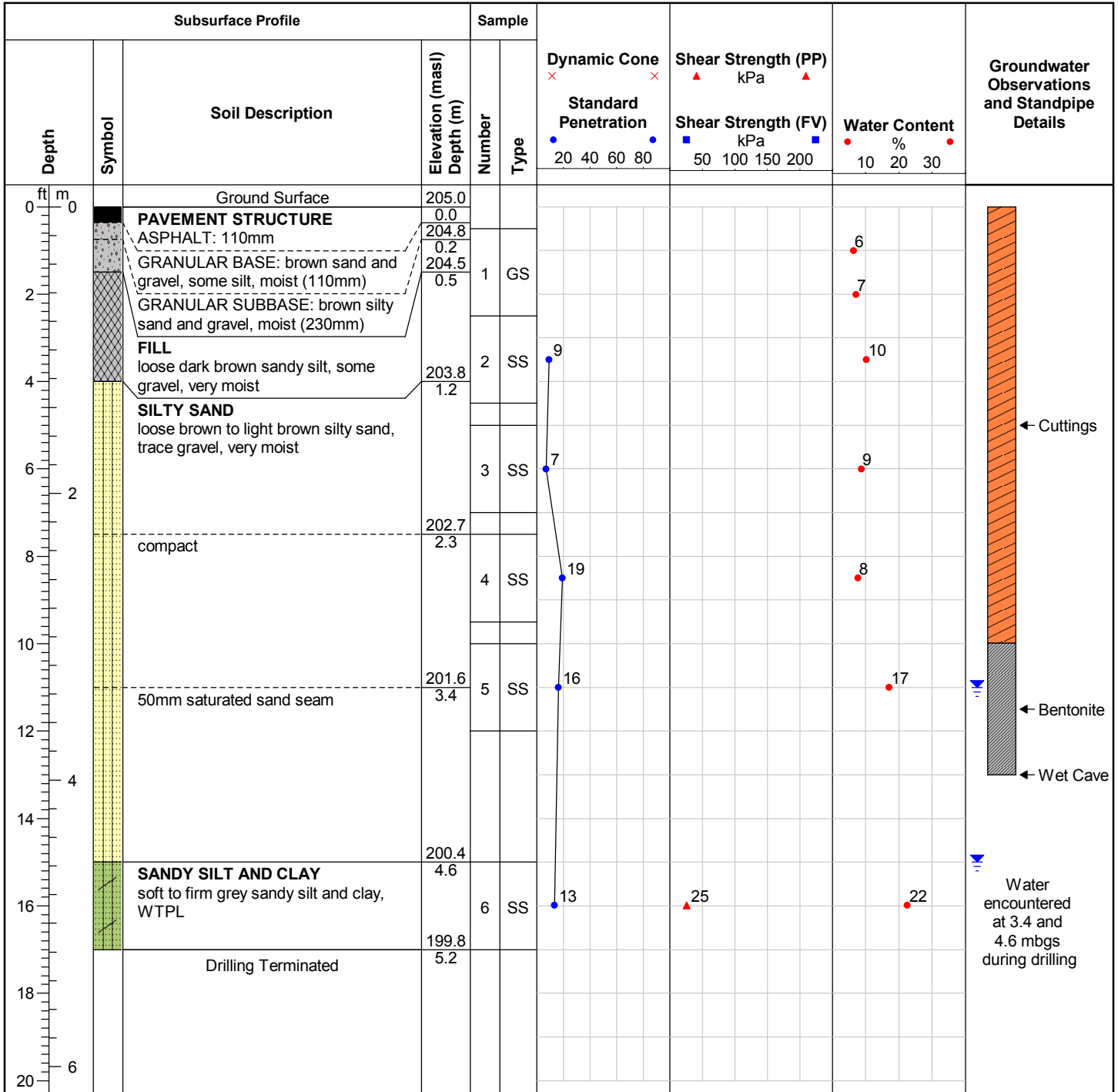
Date Completed: 5/11/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH126-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Clarence Street, Brantford, ON

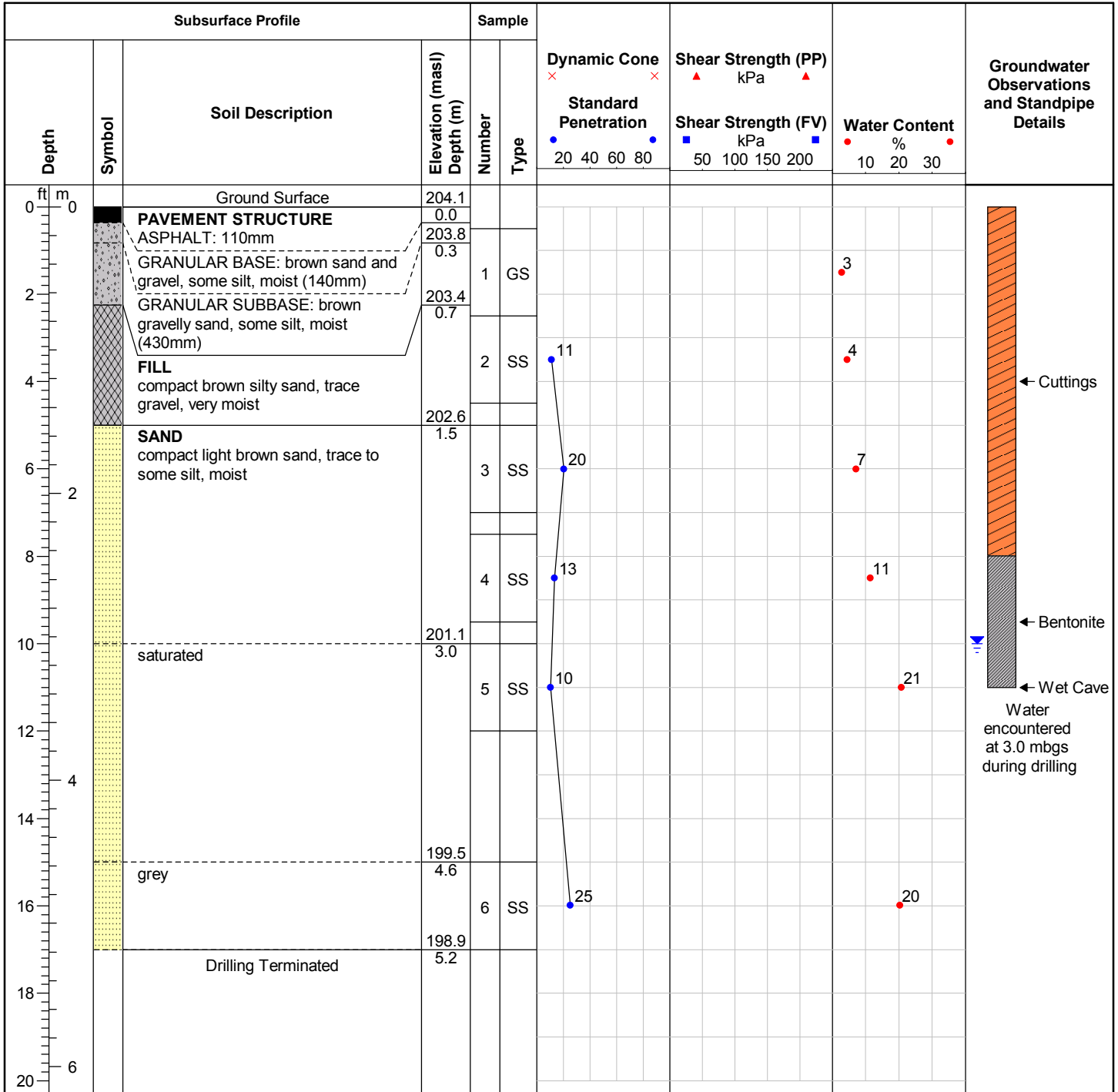
Date Completed: 5/11/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: MW127-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Colborne Street, Brantford, ON

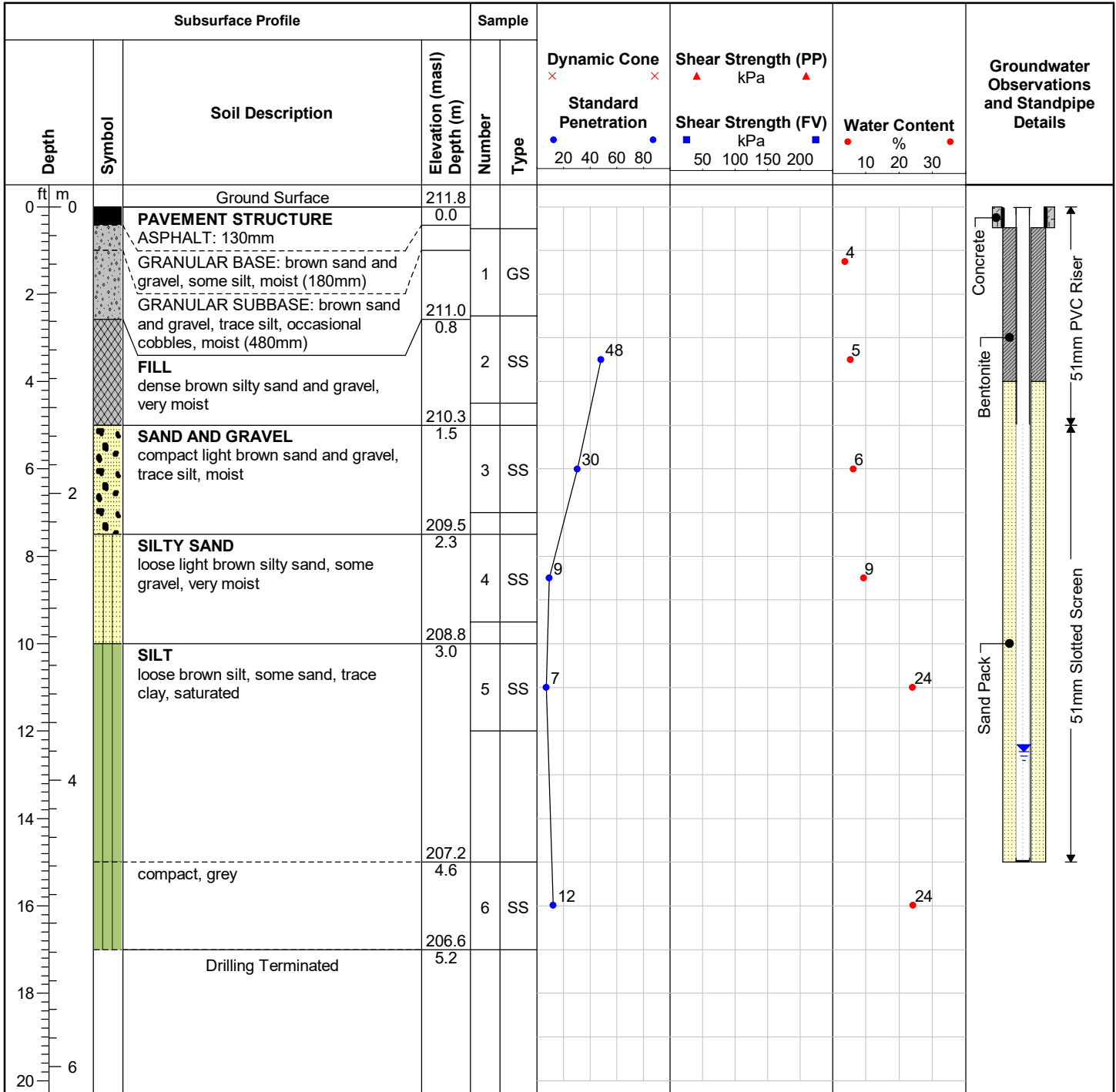
Date Completed: 5/12/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: Flush Mount



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



Sheet: 1 of 1

Notes:

Water encountered at 3.0mbs (Elevation 208.8masl) during drilling.
Water measured at 3.8mbs (Elevation 208.0masl) on July 6, 2021.

ID No.: BH128-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Colborne Street, Brantford, ON

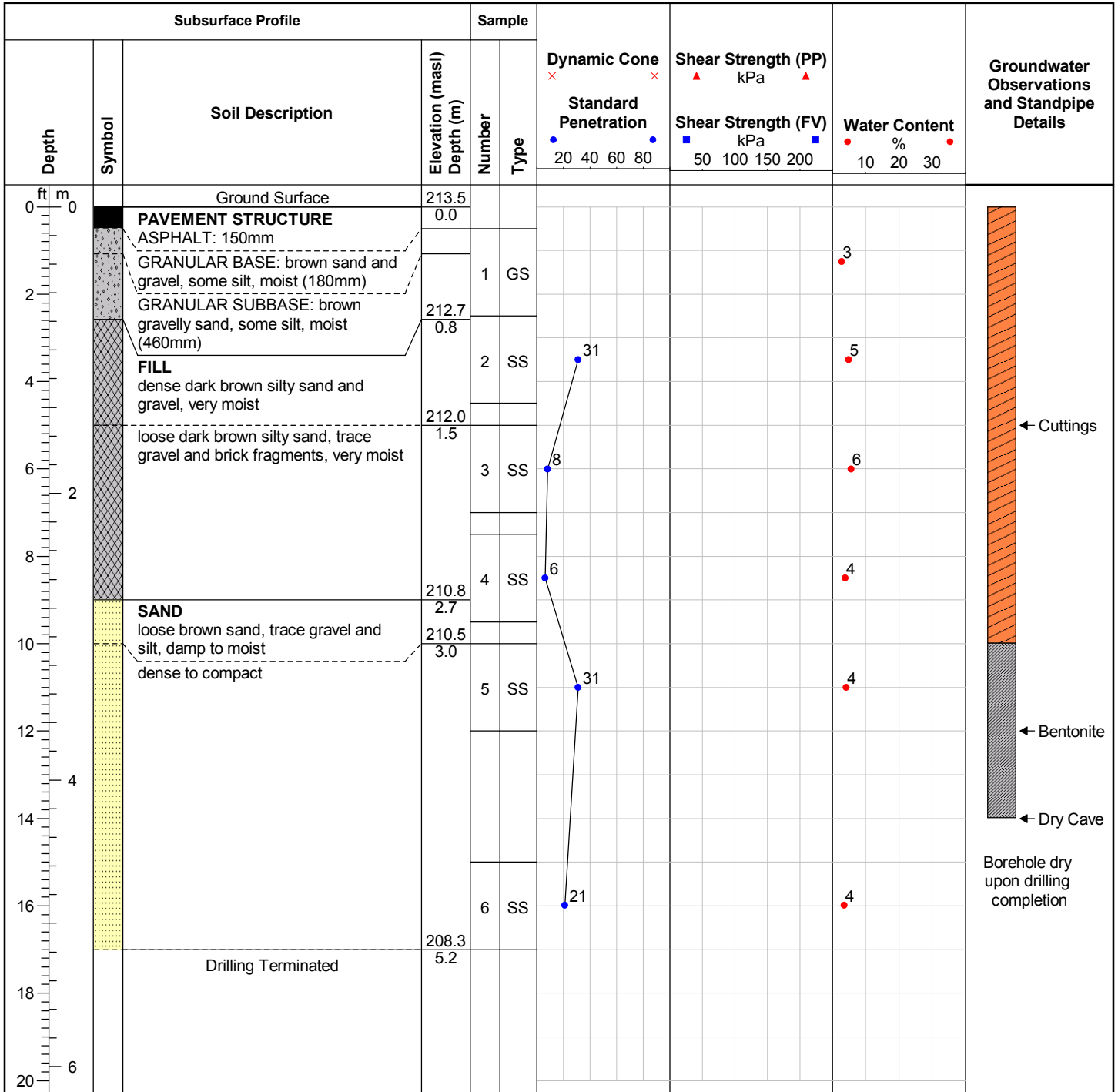
Date Completed: 5/12/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH129-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Colborne Street, Brantford, ON

Date Completed: 5/13/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A

Subsurface Profile				Sample		Dynamic Cone × × Standard Penetration ● ● 20 40 60 80	Shear Strength (PP) ▲ ▲ kPa Shear Strength (FV) ■ ■ kPa 50 100 150 200	Water Content ● ● %	Groundwater Observations and Standpipe Details
Depth	Symbol	Soil Description	Elevation (masl) Depth (m)	Number	Type				
0		Ground Surface	213.2						
0	■	PAVEMENT STRUCTURE	0.0						
0	■	ASPHALT: 150mm		1	GS			2	
2	■	GRANULAR BASE: brown sand and gravel, some silt, moist (150mm)							
2	■	GRANULAR SUBBASE: brown gravelly sand, some silt, moist (150mm)							
4		Drilling Terminated							
6									
8									
10									
12									
14									
16									
18									
20									

 ← Cuttings
 ← Dry Cave
 Borehole dry upon drilling completion

Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH130-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Colborne Street, Brantford, ON

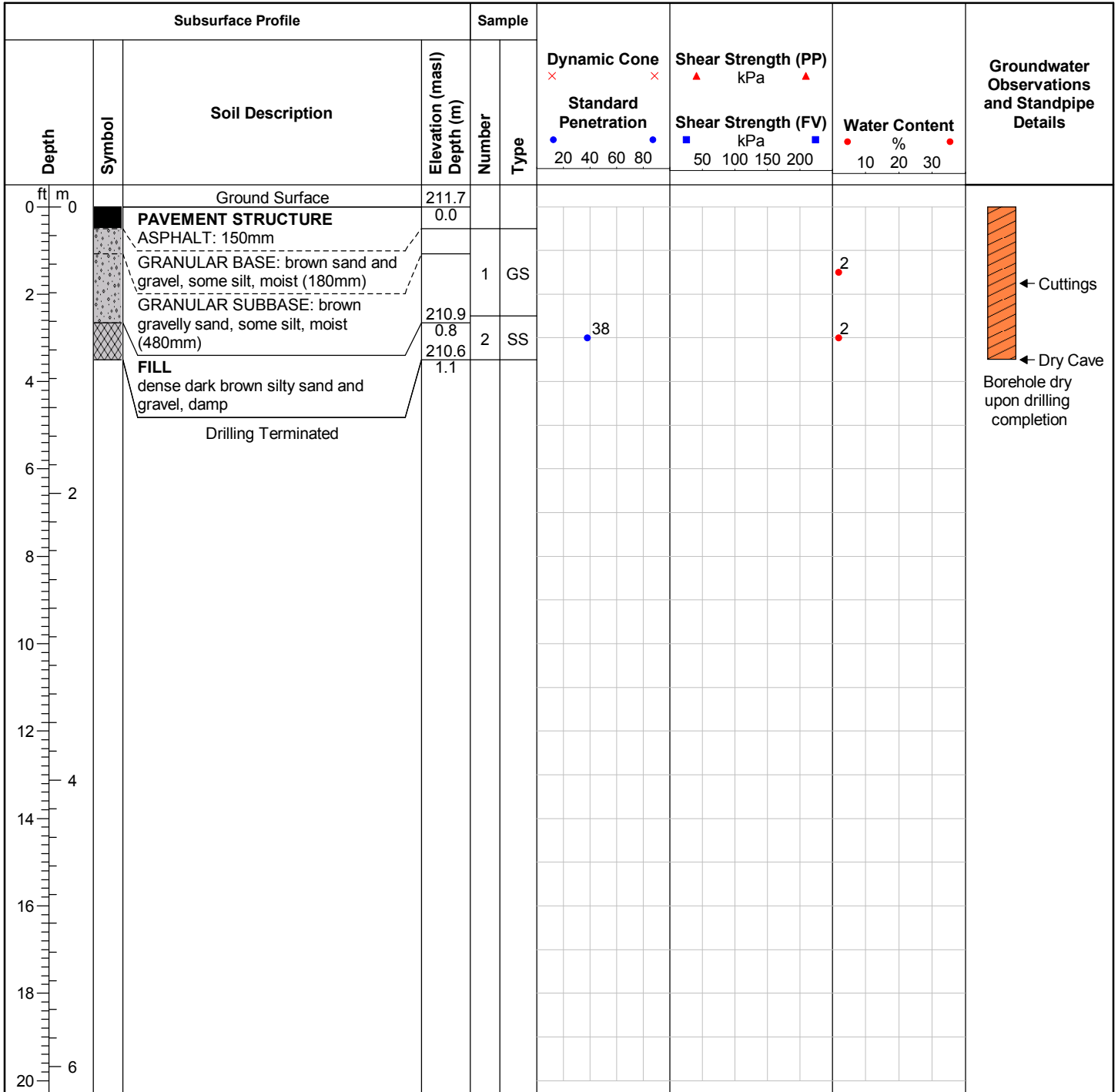
Date Completed: 5/13/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH131-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Colborne Street, Brantford, ON

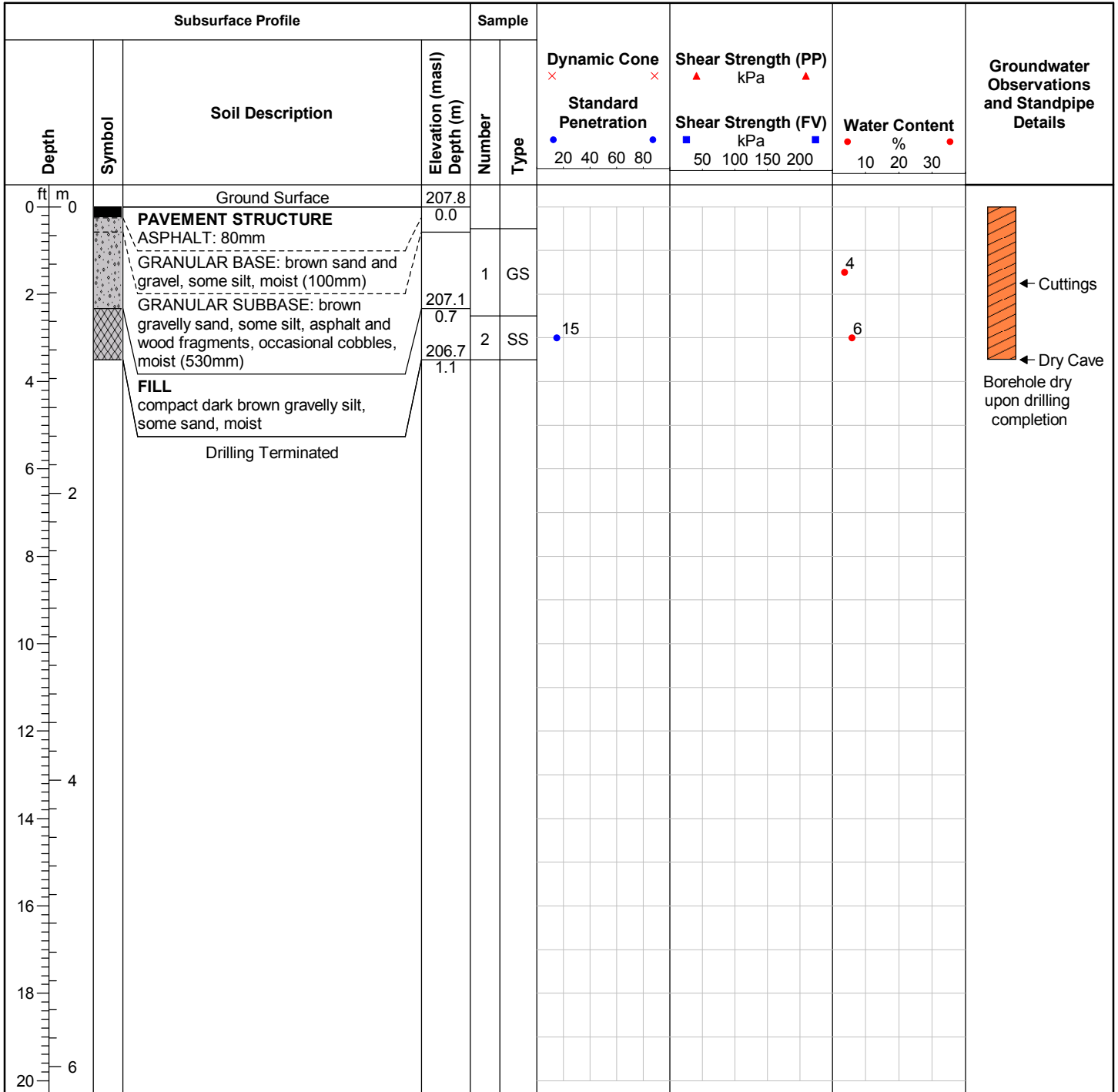
Date Completed: 5/13/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: MW132-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Colborne Street, Brantford, ON

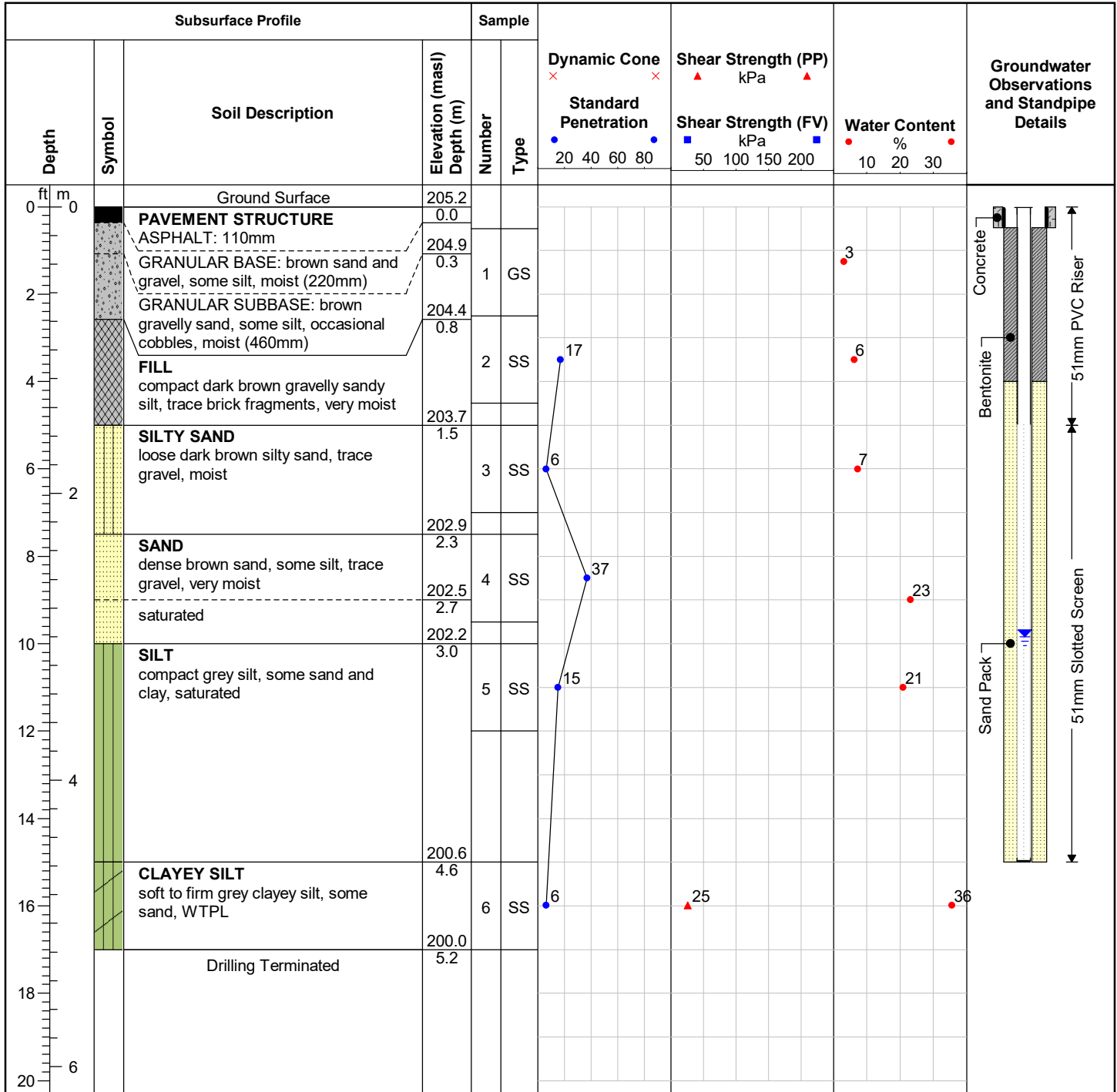
Date Completed: 5/13/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: Flush Mount



Field Technician: M. Dalglish

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



Sheet: 1 of 1

Notes:

Water encountered at 2.7mbgs (Elevation 202.5masl) during drilling.
Water measured at 3.0mbgs (Elevation 202.2masl) on July 6, 2021.

ID No.: BH133-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Colborne Street, Brantford, ON

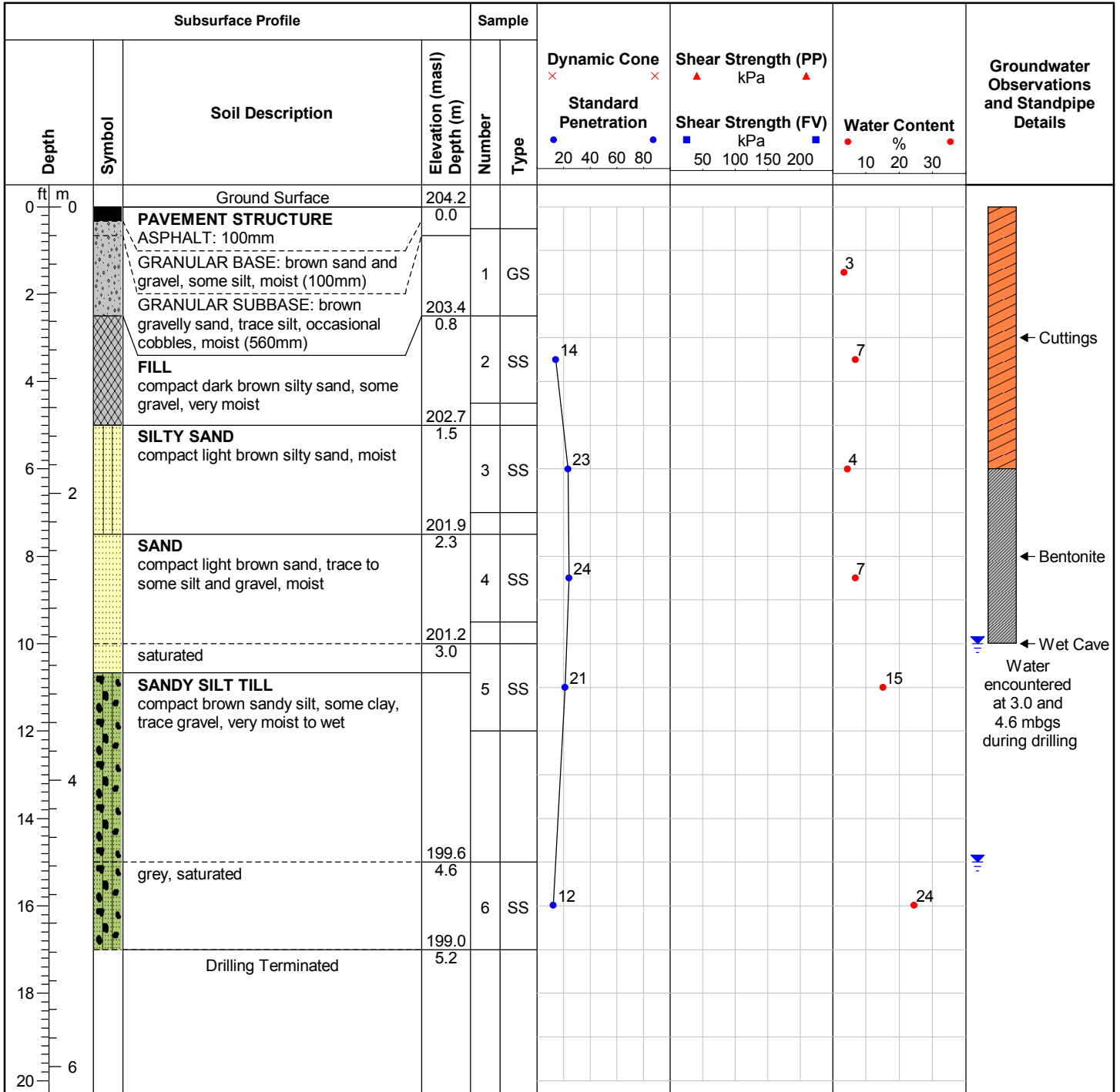
Date Completed: 4/27/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH134-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Colborne Street, Brantford, ON

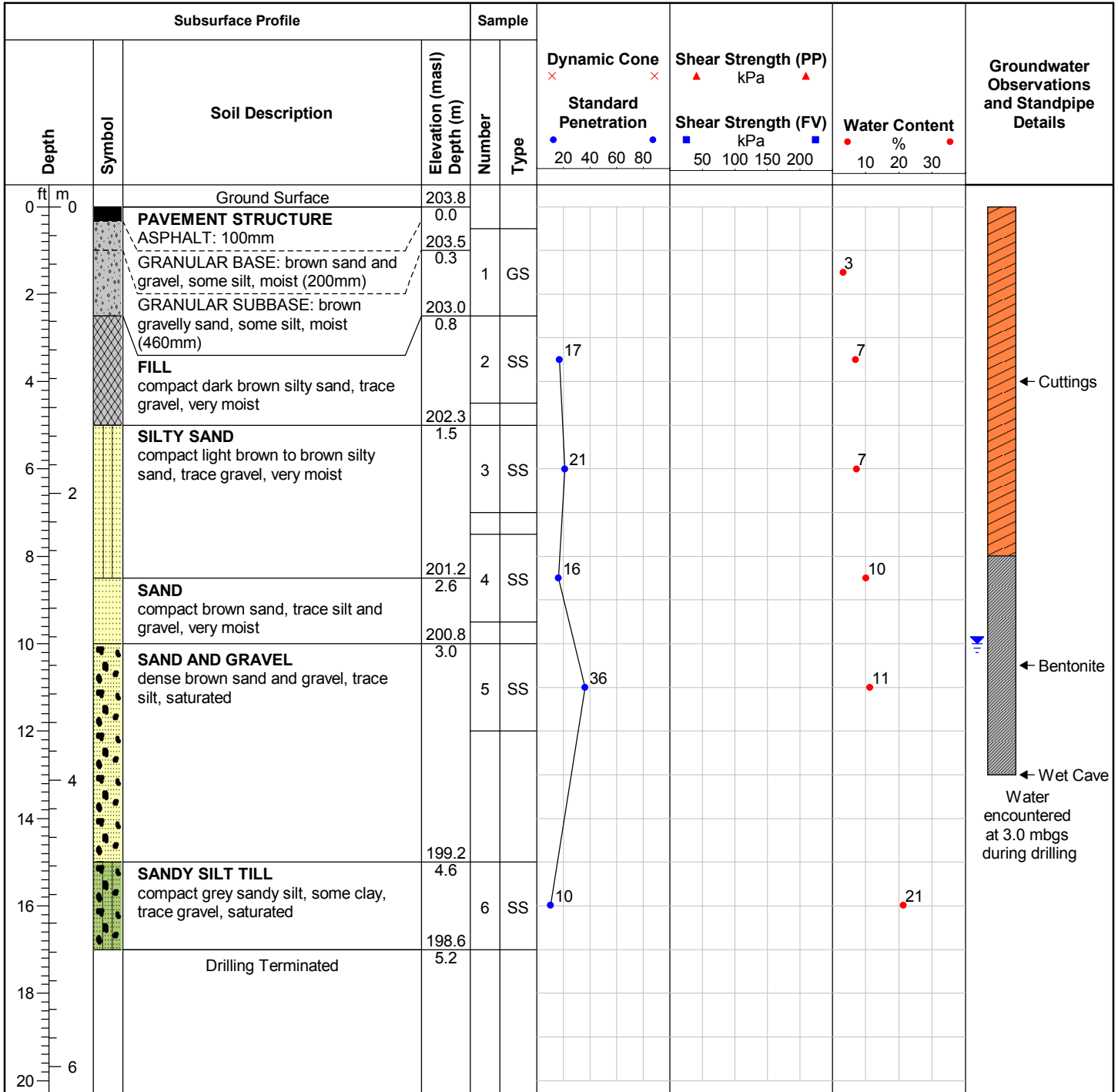
Date Completed: 4/27/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH135-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Colborne Street, Brantford, ON

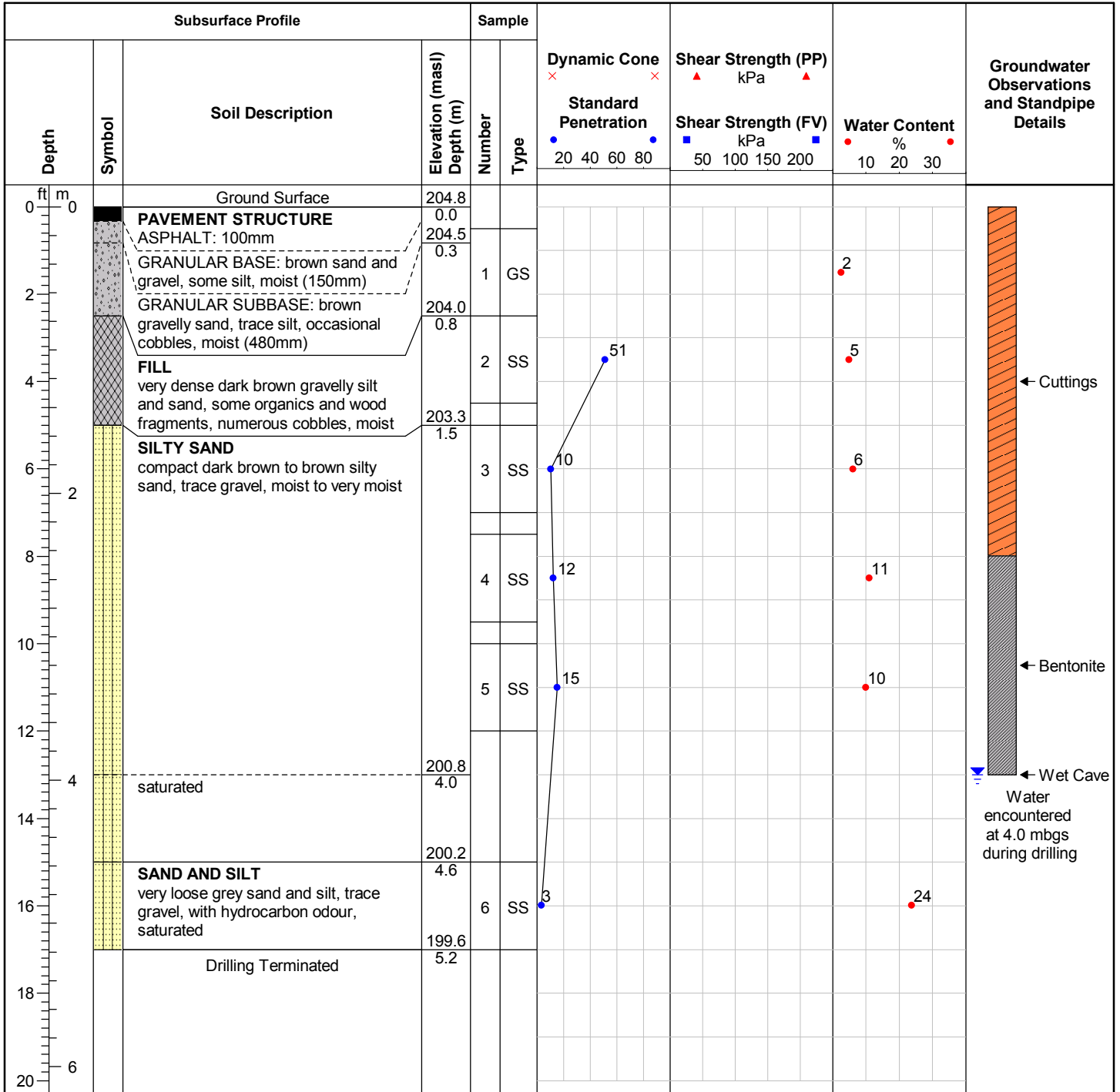
Date Completed: 4/27/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH136-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Colborne Street, Brantford, ON

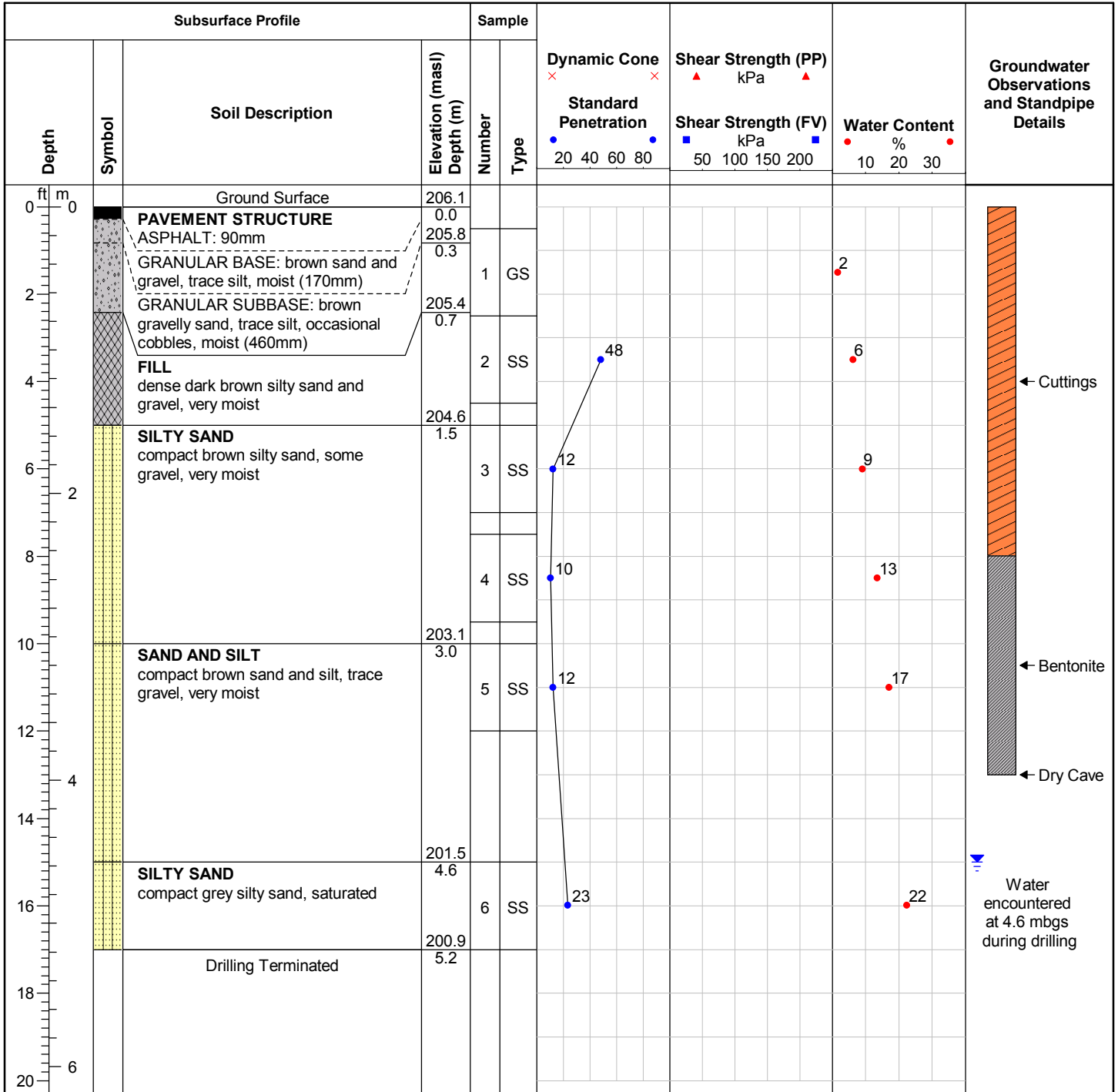
Date Completed: 4/27/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: MW137-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Colborne Street, Brantford, ON

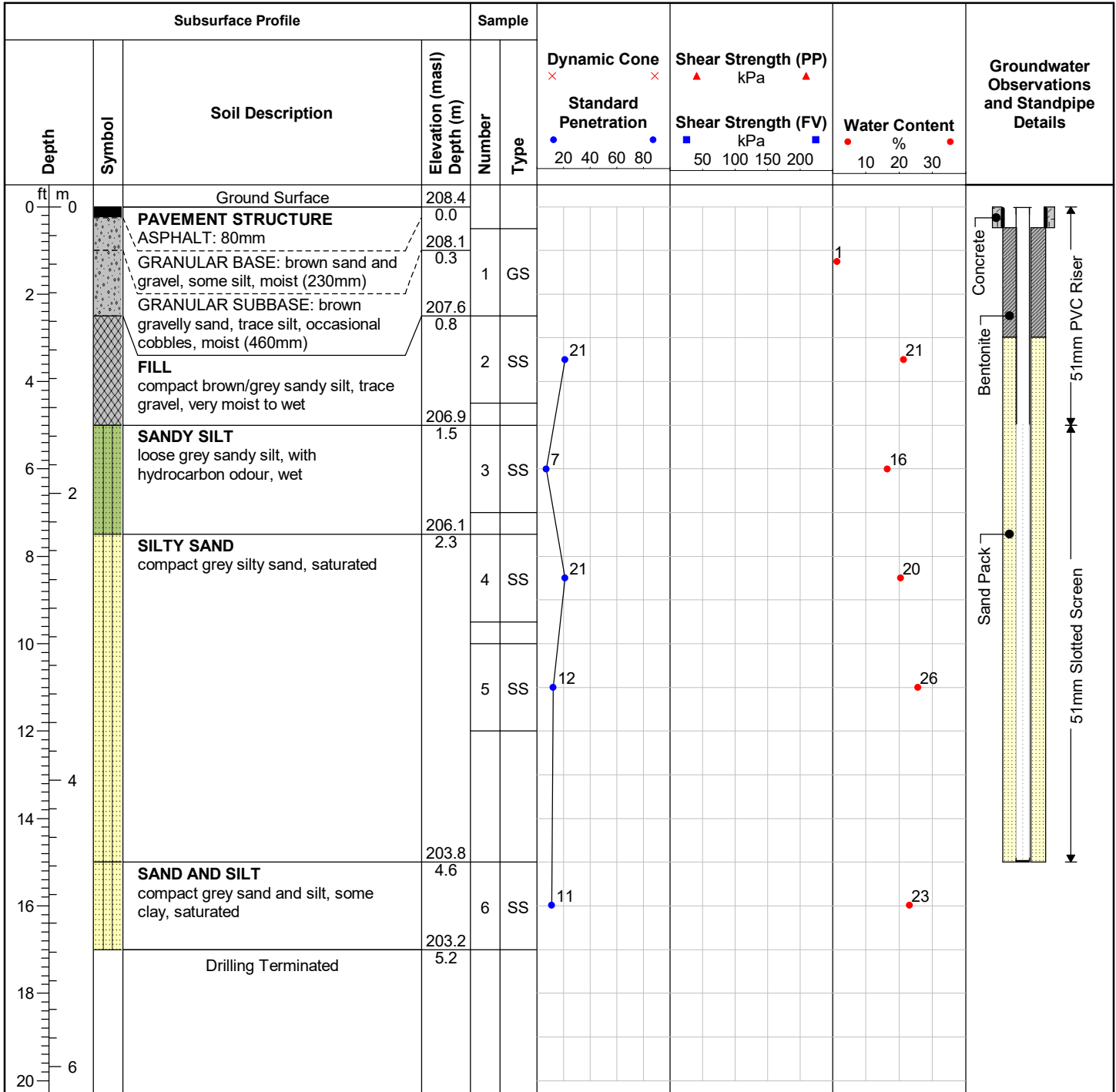
Date Completed: 4/27/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: Flush Mount



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



Notes:

Water encountered at 2.3mbs (Elevation 206.1masl) during drilling. The water level was unable to be measured as the well casing was compromised.

ID No.: BH138-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Colborne Street, Brantford, ON

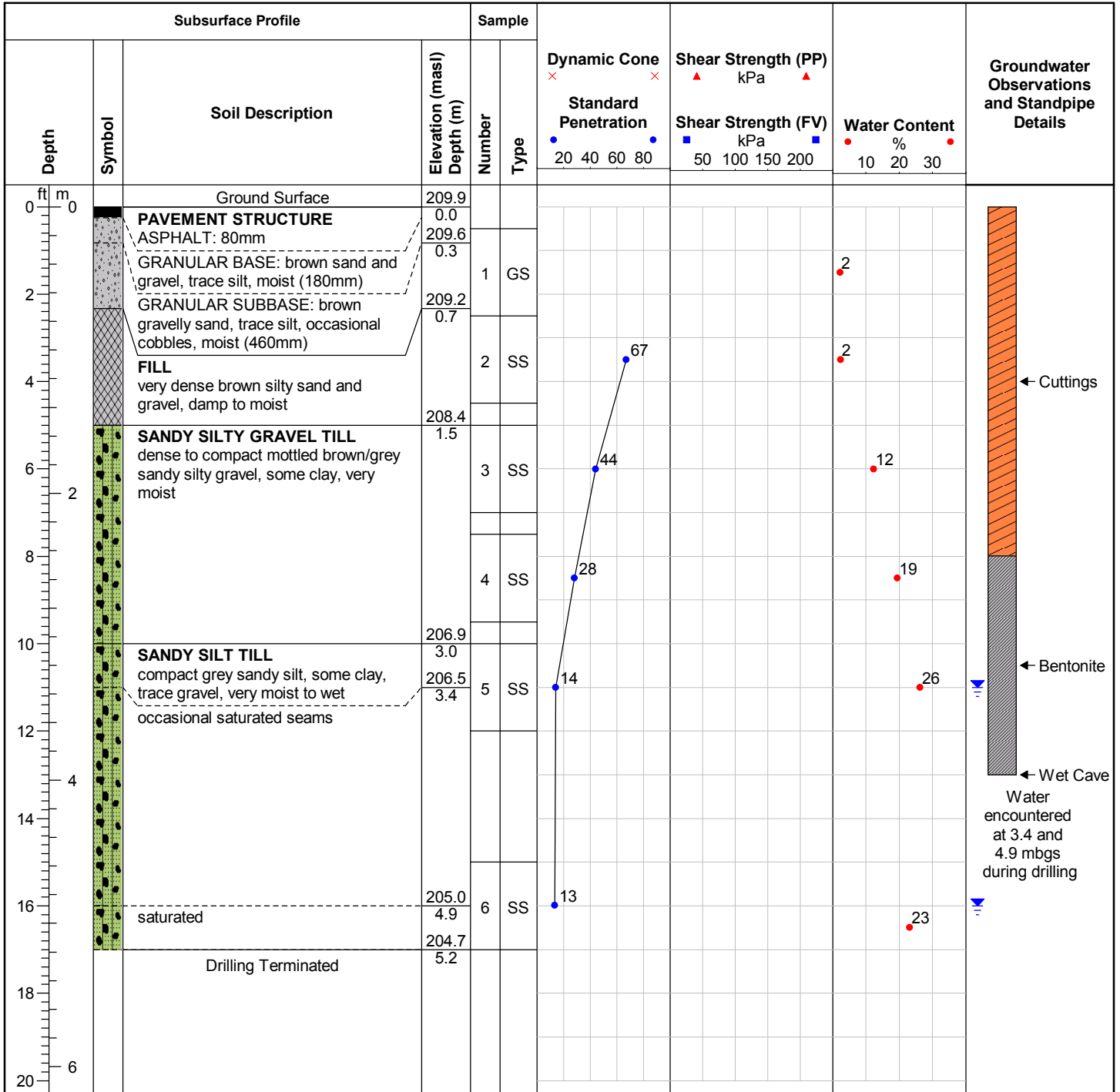
Date Completed: 4/27/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH139-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Colborne Street, Brantford, ON

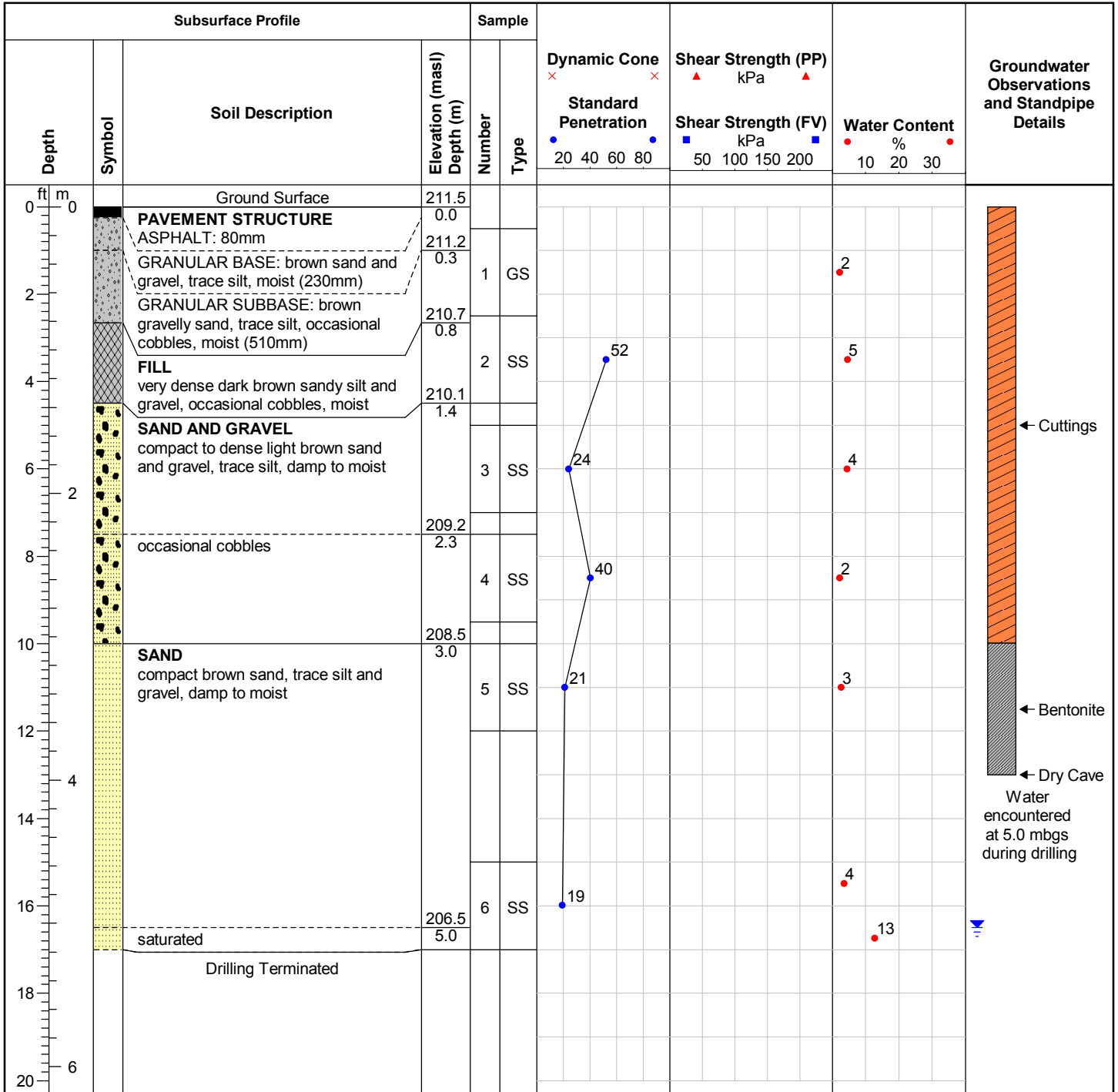
Date Completed: 4/28/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH140-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Colborne Street, Brantford, ON

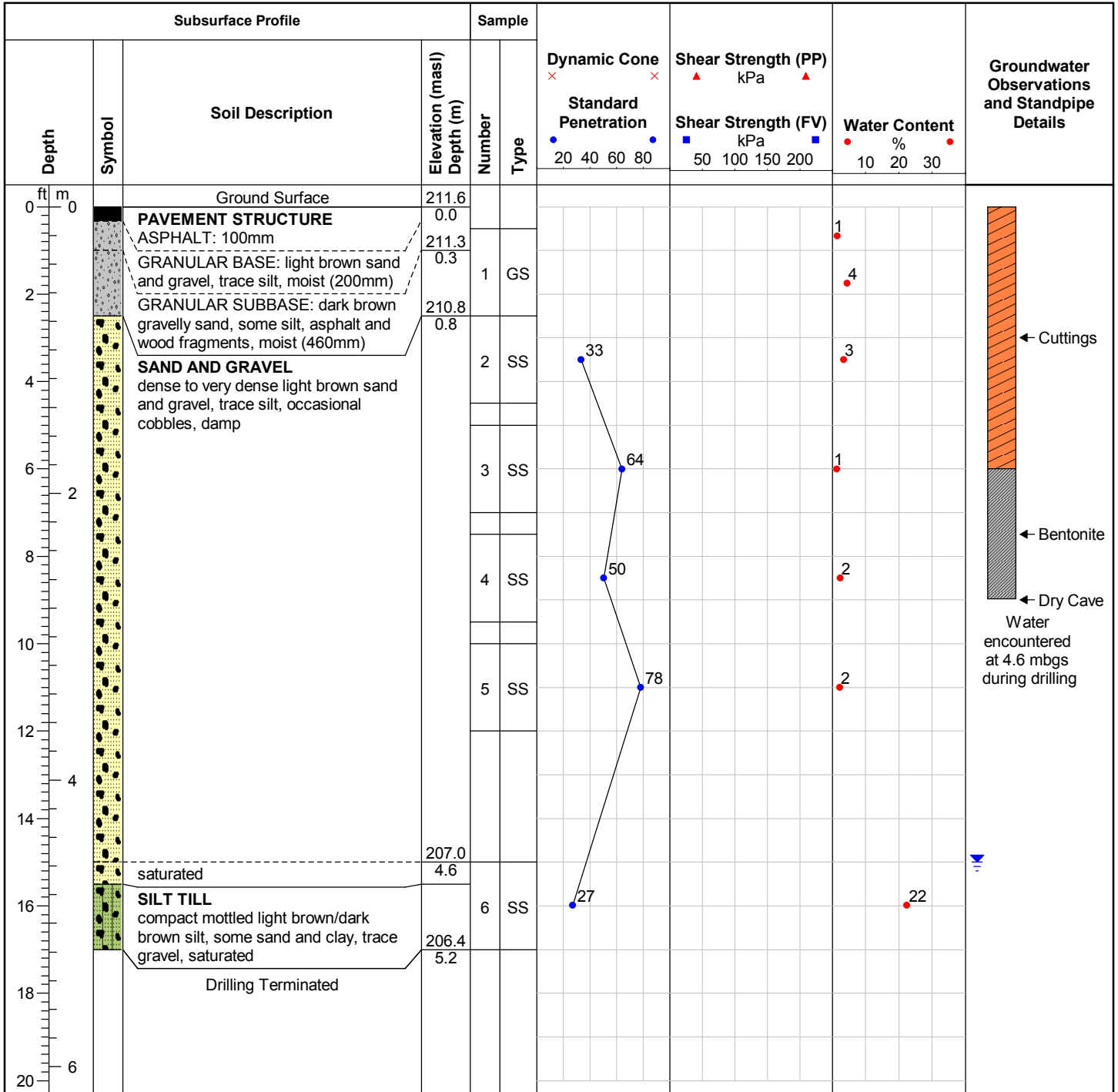
Date Completed: 4/28/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH141-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Colborne Street, Brantford, ON

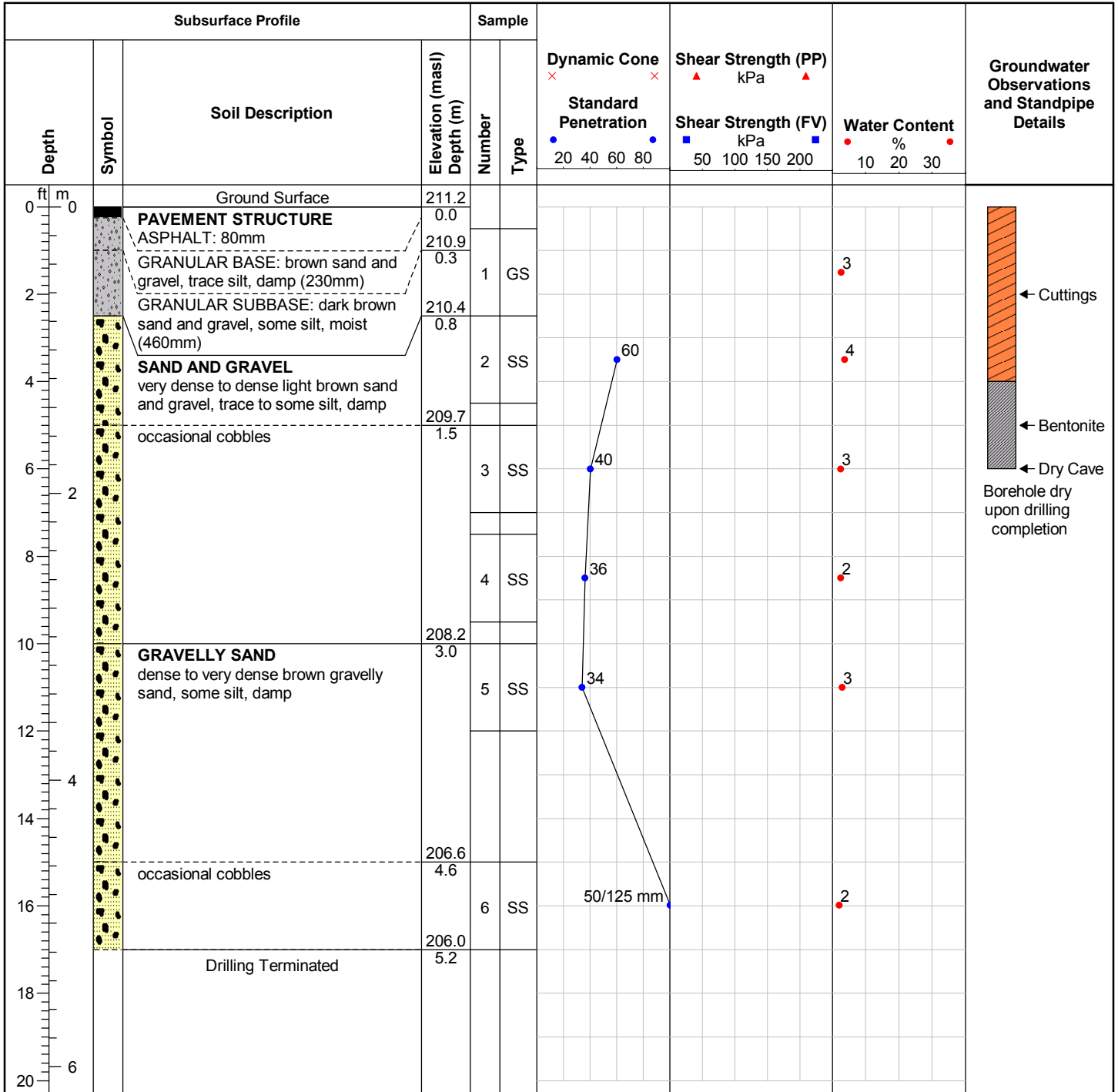
Date Completed: 4/28/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH142-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Colborne Street, Brantford, ON

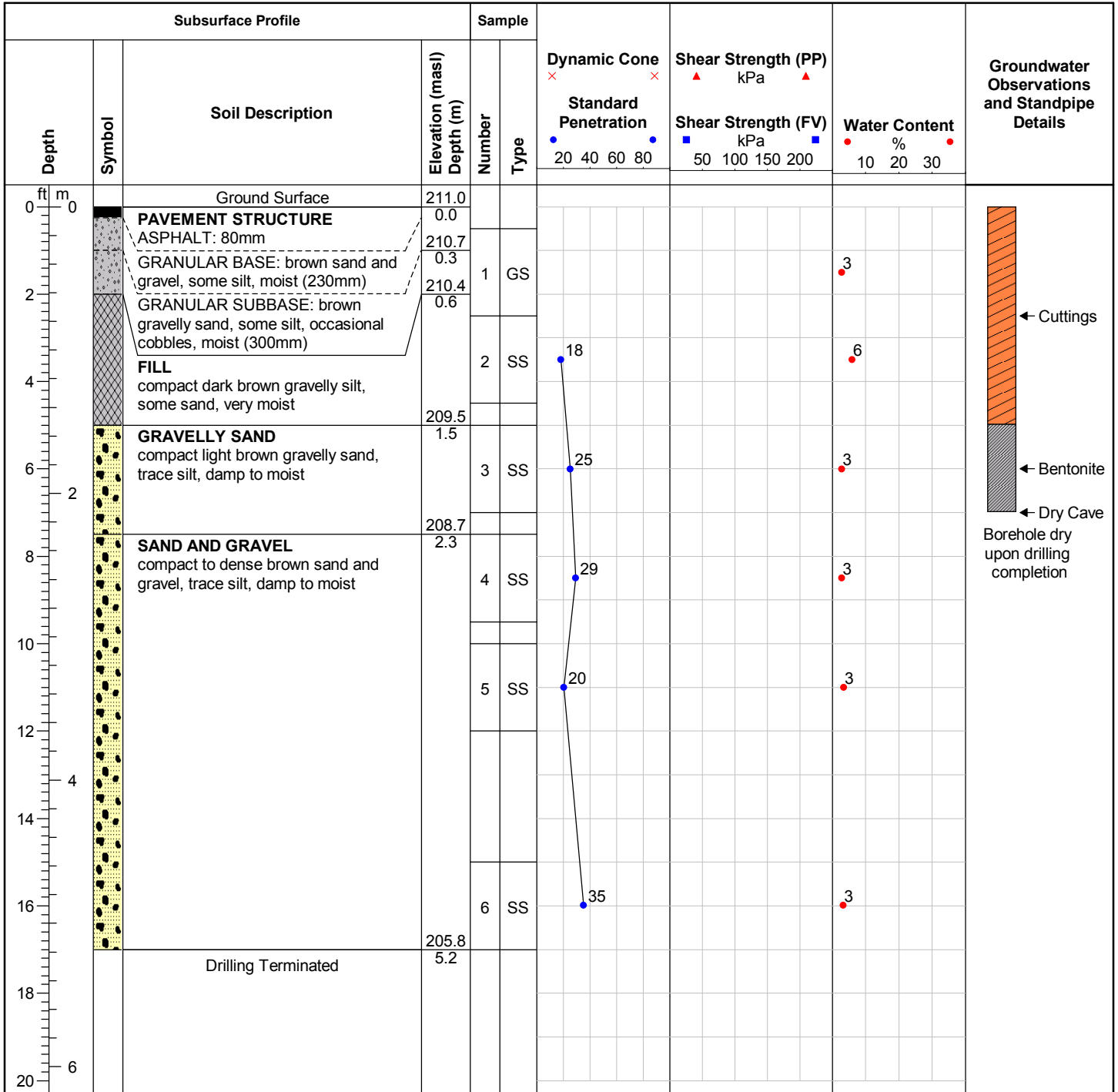
Date Completed: 4/28/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH143-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Colborne Street, Brantford, ON

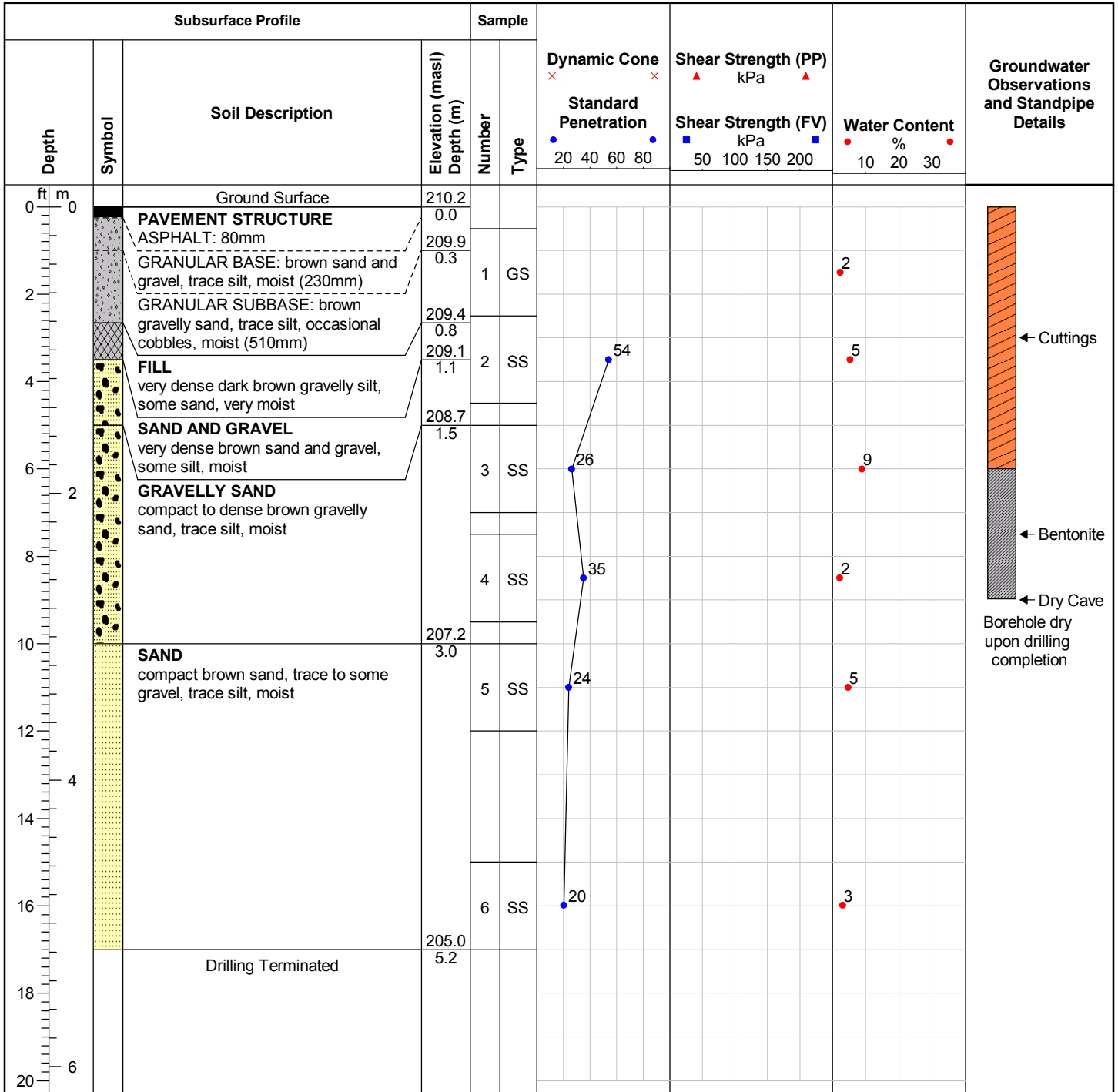
Date Completed: 4/28/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH144-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Colborne Street, Brantford, ON

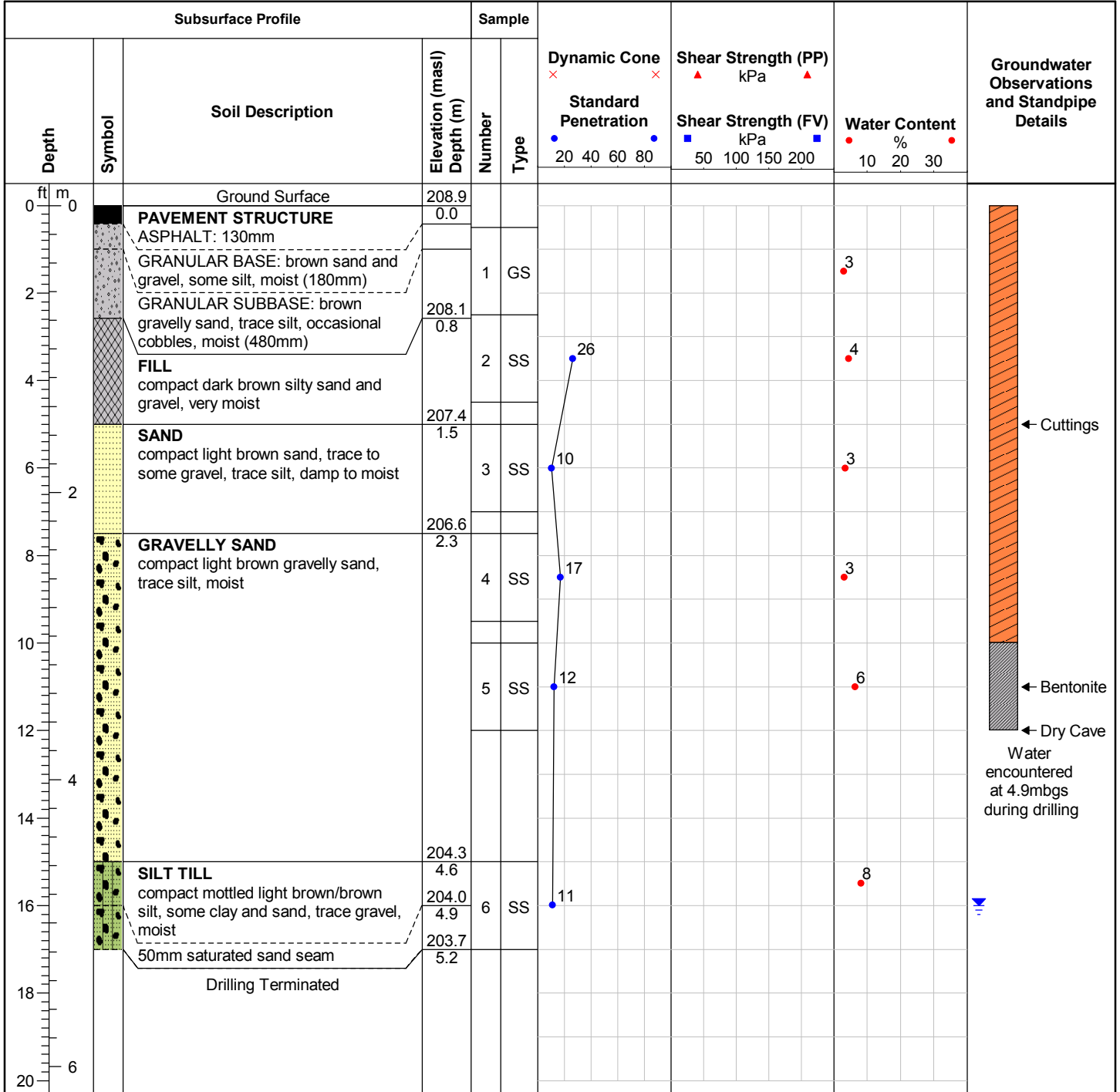
Date Completed: 5/4/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH145-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Colborne Street, Brantford, ON

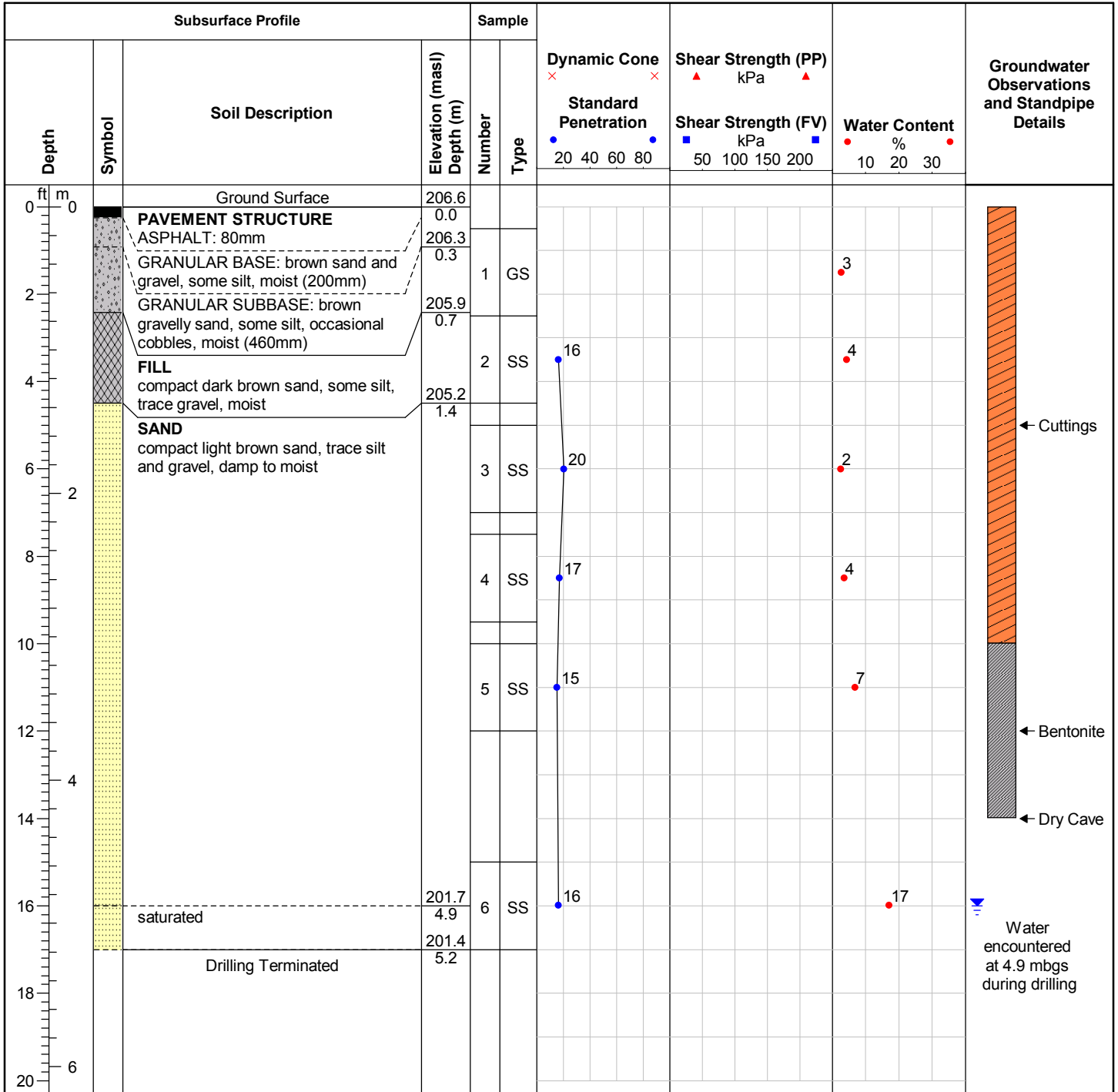
Date Completed: 5/4/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: MW146-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Colborne Street, Brantford, ON

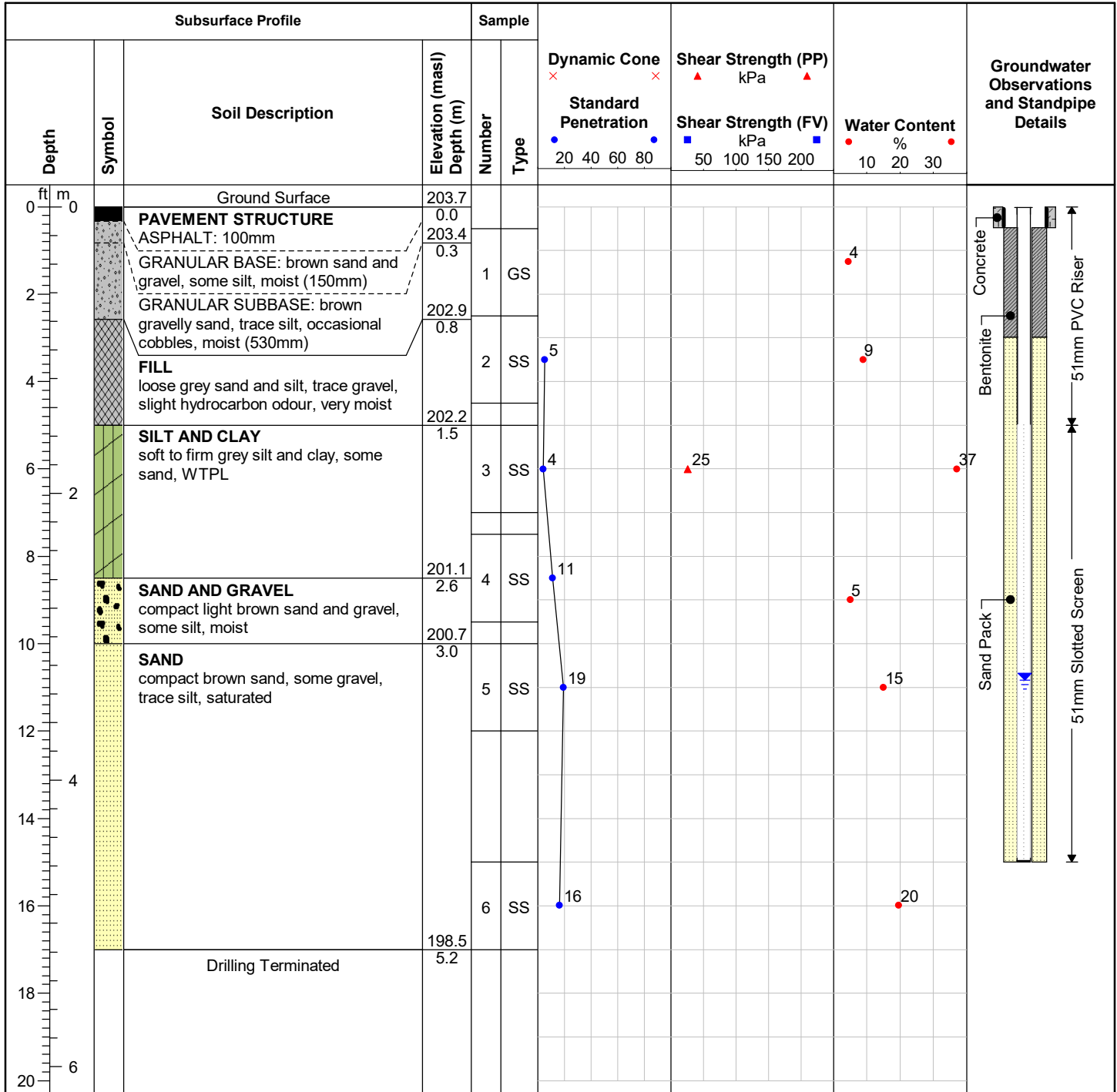
Date Completed: 5/4/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: Flush Mount



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



Notes:

Water encountered at 1.5 and 3.0mbgs (Elevation 202.2 and 200.7masl) during drilling.
Water measured at 3.3mbgs (Elevation 200.4masl) on July 6, 2021.

ID No.: BH147-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Colborne Street, Brantford, ON

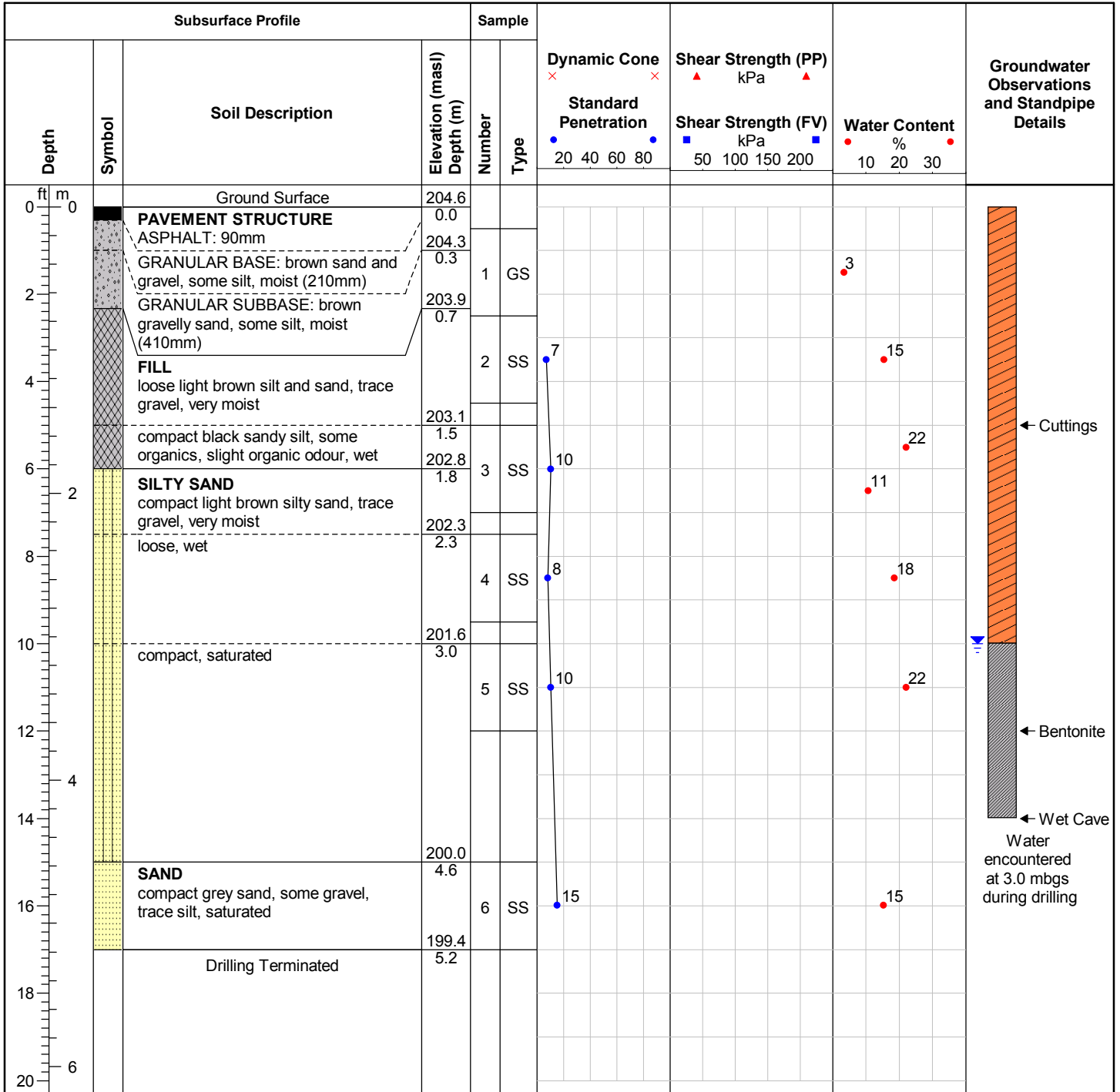
Date Completed: 5/4/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



ID No.: BH148-21

Project Name: Downtown Brantford Reconstruction

MTE File No.: 46995-100

Client: City of Brantford

Site Location: Colborne Street, Brantford, ON

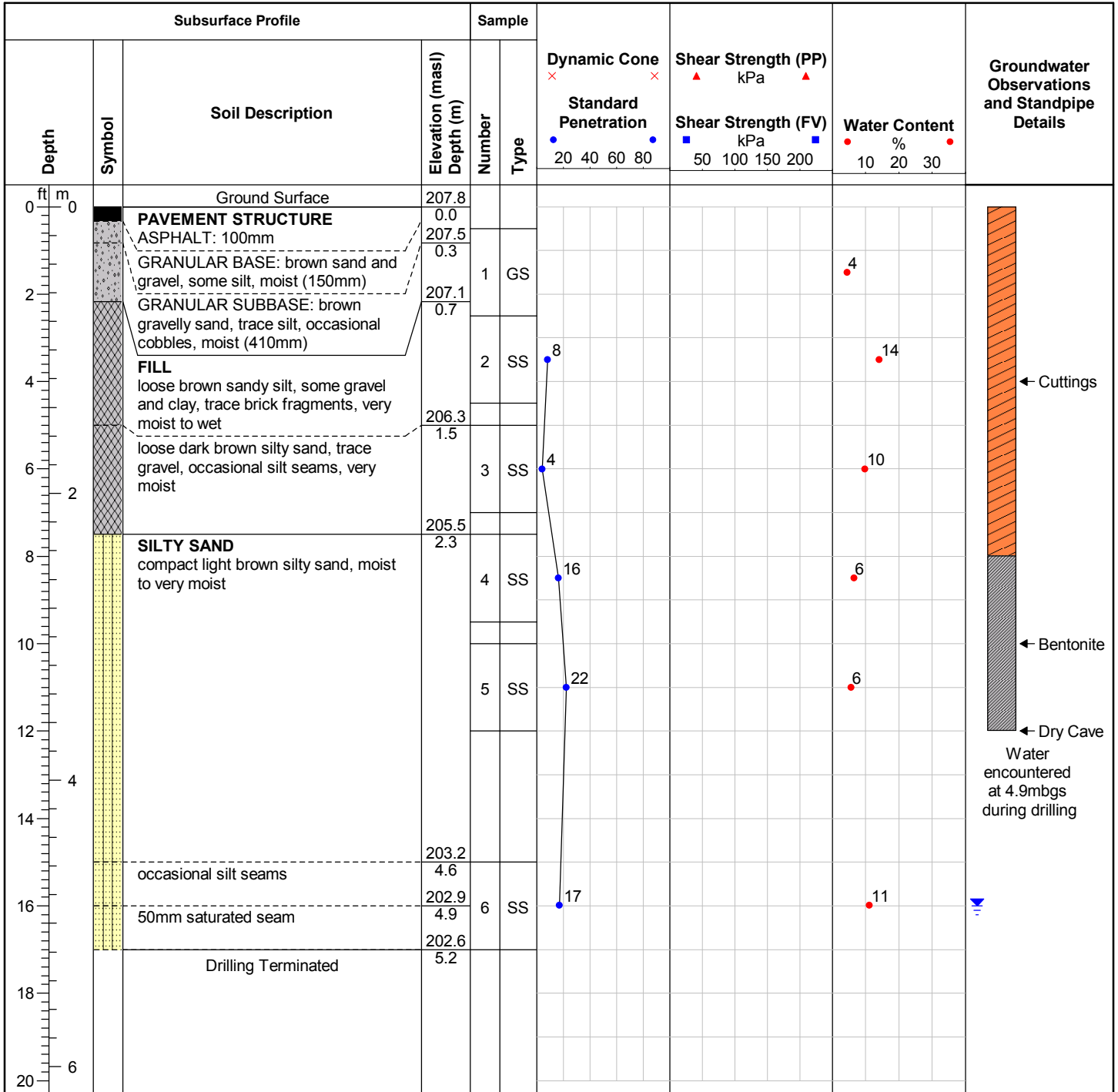
Date Completed: 4/30/2021

Drilling Contractor: London Soil Test Ltd.

Drill Rig: D50T Truck Mount

Drill Method: Hollow Stem Augers

Protective Cover: N/A



Field Technician: M. Dalgliesh

Drafted by: B. Ehgoetz

Reviewed by: D. Gonser



Appendix D

Geotechnical Tables

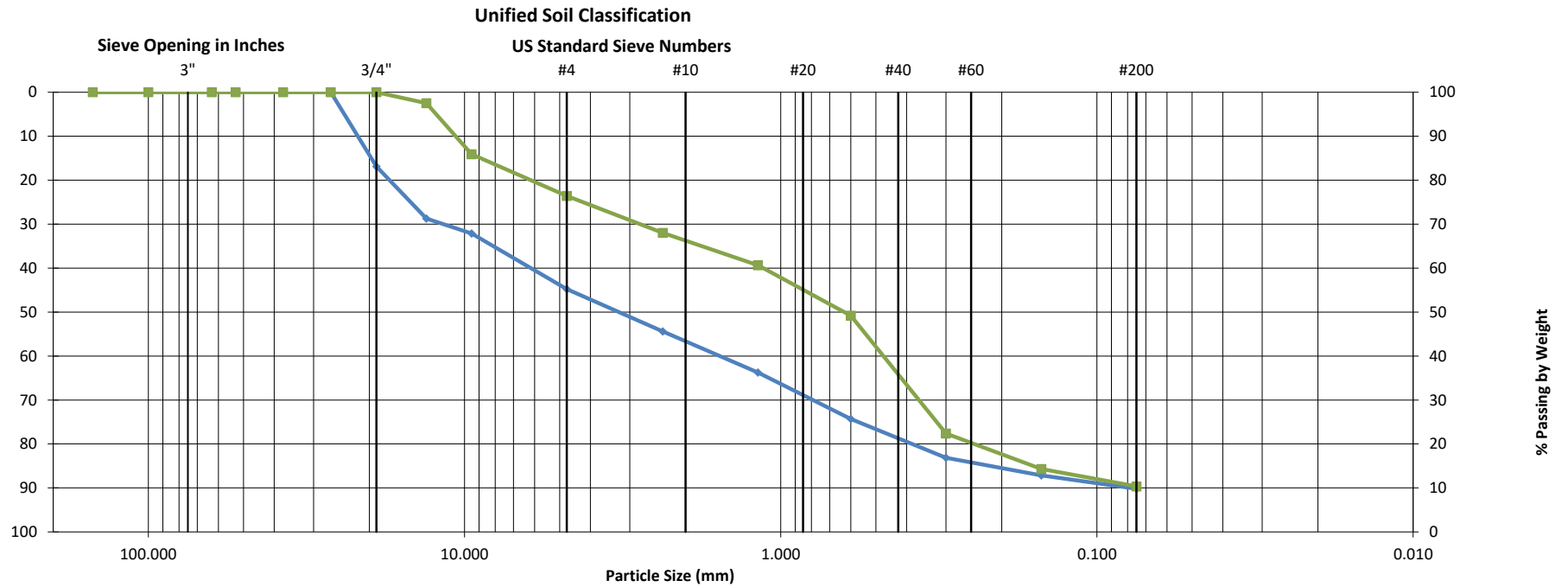


Particle Size Distribution Analysis Test Results

Project Name: Branford Downtown Reconstruction
 Client: City of Brantford
 Location: Brantford, ON

Date Sampled: Apr. 27 - May 13, 2021
 Date Tested: May 26-28, 2021

MTE File No.: 46995-100
 Table No.: 101



Coarse	Fine	Coarse	Medium	Fine	Silt
% Gravel		% Sand			% Fines

Symbol	Borehole ID	Sample #	Sample Depth	Description
—◆—	BH101-21	SS-3	1.5-2.1 mbgs	SAND and GRAVEL, some Silt
—■—	BH113-21	SS-4	2.3-2.9 mbgs	Gravelly SAND, some Silt



NOTES:



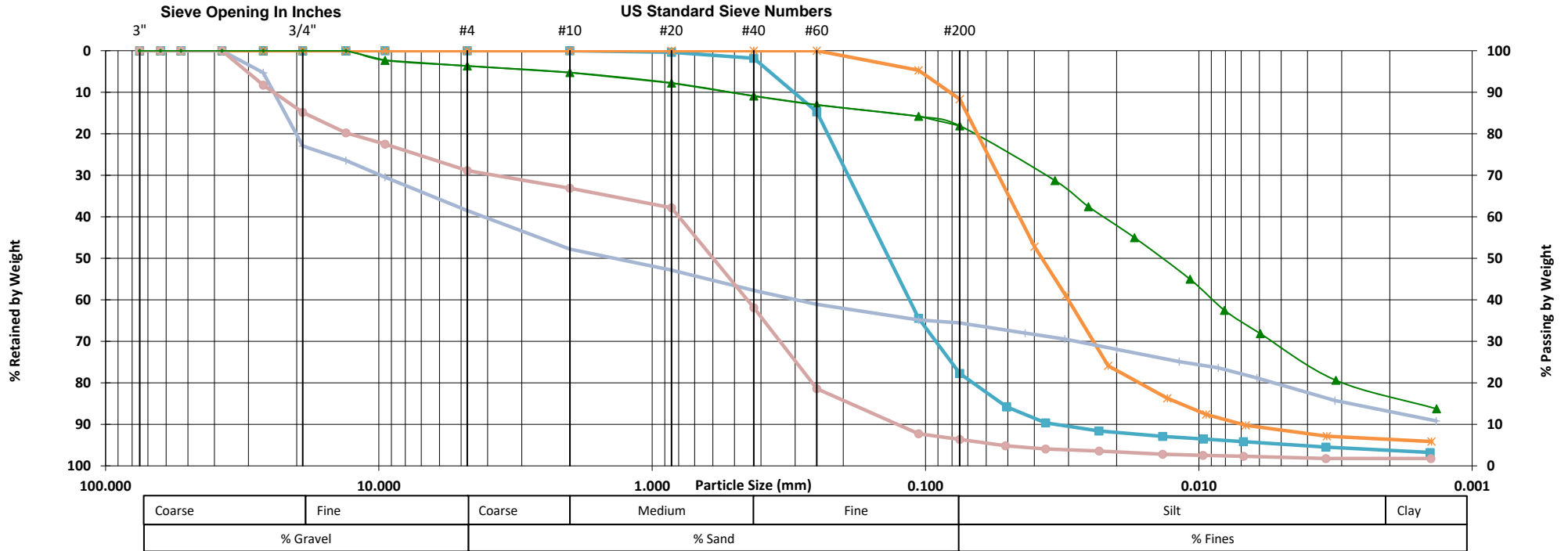
Particle Size Distribution Analysis Test Results

Project Name: Brantford Downtown Reconstruction
 Client: City of Brantford
 Project Location: Brantford, ON

Date Sampled: Apr. 27 - May 13, 2021
 Date Tested: May 27 - Apr. 4, 2021

MTE File No.: 46995-100
 Table No: 102

Unified Soil Classification



Symbol	Borehole ID	Sample #	Sample Depth	Description
▲	BH107-21	SS-3	1.5-2.1 mbgs	SILT, some Clay and Sand, trace Gravel
■	MW119-21	SS-4	2.3-2.9 mbgs	SAND, some Silt, trace Clay
×	MW127-21	SS-5	3.0-3.7 mbgs	SILT, some Sand, trace Clay
▲	BH138-21	SS-3	1.5-2.1 mbgs	Sandy Silty GRAVEL, some Clay
●	BH144-21	SS-4	2.3-2.9 mbgs	Gravelly SAND, trace Silt



NOTES:

Table 201 - Existing Pavement Structure Thicknesses

Borehole Number	Asphaltic Concrete (mm)	Base Thickness (mm)	Subbase Thickness (mm)
Dalhousie Street			
BH101-20	100	200	360
BH102-20	80	200	480
BH103-20	80	180	350
BH104-20	100	200	350
BH105-20	80	180	350
BH106-20	100	150	350
BH107-20	130	180	480
BH108-20	90	210	360
BH109-20	100	150	360
BH110-21	100	160	360
MW111-21	100	230	580
BH112-21	90	130	460
BH113-21	80	230	400
BH114-21	100	230	130
BH115-21	100	200	380
BH116-21	90	230	150
BH117-21	100	150	580
BH118-21	80	200	530
MW119-21	90	220	410
BH120-21	100	210	500
BH121-21	90	220	410
Brant Avenue			
BH122-21	130	180	480
King Street			
BH123-21	100	180	180
Queen Street			
BH124-21	130	180	480
Charlotte Street			
BH125-21	110	110	230
Clarence Street			
BH126-21	110	140	430
Colborne Street			

MW127-21	130	180	480
BH128-21	150	180	460
BH129-21	150	150	150
BH130-21	150	180	480
BH131-21	80	100	530
MW132-21	110	220	460
BH133-21	100	100	560
BH134-21	100	200	460
BH135-21	100	150	480
BH136-21	90	170	460
MW137-21	80	230	460
BH138-21	80	180	460
BH139-21	80	230	510
BH140-21	100	200	460
BH141-21	80	230	460
BH142-21	80	230	300
BH143-21	80	230	510
BH144-21	130	180	480
BH145-21	80	200	460
MW146-21	100	150	530
BH147-21	90	210	410
BH148-21	100	150	410

Table 301 - Saturated Soil Conditions at the time of Drilling

Borehole Number	Saturated Native Soil Type	Depth of Saturated Soil (mbgs)	Elevation of Saturated Soil (masl)
Dalhousie Street			
BH101-21	Sand and Gravel, Silt and Sand	3.0	209.7
BH102-21	Sand and Gravel, Silt and Sand	3.2	209.7
BH103-21	Sand and Gravel, Silty Sand	4.3	209.2
BH104-21	Sand and Gravel, Sand	4.3	209.3
BH105-21	Sand	4.6	208.8
BH106-21	Saturated Sand Seams within Silt Deposit	3.0	210.0
	Silty Sand	4.6	208.4
BH107-21	Silty Sand, Silt and Sand	2.6	209.1
BH108-21	Silt and Sand	2.3	208.0
BH109-21	Silty Sand, Sand and Gravel	2.3	201.9
	Silt Till	4.6	199.6
BH110-21	Silty Sand, Sand and Gravel	1.8	202.1
MW111-21	Sand and Silt, Sand	1.7	202.0
BH112-21	Silt and Sand, Silty Sand	2.3	207.0
BH113-21	Gravelly Sand and Silt	4.6	206.2
BH114-21	Dry		
BH115-21	Dry		
BH116-21	Dry		
BH117-21	Sand	3.0	200.8
BH118-21	Sand	3.0	200.7
MW119-21	Sand, Silt and Sand	2.3	202.3
BH120-21	Sand and Silt	4.6	202.4
BH121-21	Dry		
Brant Avenue			
BH122-21	Silt and Sand, Sandy Silt and Clay	2.3	209.1
King Street			
BH123-21	Sand and Silt	3.8	210.0

Queen Street			
BH124-21	Gravelly Sand, Silt and Sand	4.3	N/A
Charlotte Street			
BH125-21	50 mm Saturated Seam within Silty Sand Deposit	3.4	201.6
	Sandy Silt and Clay	4.6	200.4
Clarence Street			
BH126-21	Sand	3.0	201.1
Colborne Street			
MW127-21	Silt	3.0	208.8
BH128-21	Dry		
BH129-21	Dry*		
BH130-21	Dry*		
BH131-21	Dry*		
MW132-21	Sand, Silt, Clayey Silt	2.7	202.5
BH133-21	Sand	3.0	201.2
	Sandy Silt Till	4.6	199.6
BH134-21	Sand and Gravel, Sandy Silt Till	3.0	200.8
BH135-21	Silty Sand, Sand and Silt	4.0	200.8
BH136-21	Silty Sand	4.6	201.5
MW137-21	Silty Sand, Sand and Silt	2.3	206.1
BH138-21	Saturated Seams within Sandy Silt Till Deposit	3.4	206.5
	Sandy Silt Till	4.9	205.0
BH139-21	Sand	5.0	206.5
BH140-21	Sand and Gravel, Silt Till	4.6	207.0
BH141-21	Dry		
BH142-21	Dry		
BH143-21	Dry		
BH144-21	50 mm Saturated Sand Seam within Silt Till Deposit	4.9	204.0
BH145-21	Sand	4.9	201.7
MW146-21	Silt and Clay	1.5	202.2
	Sand	3.0	200.7
BH147-21	Silty Sand, Sand	3.0	201.6

BH148-21	50 mm Saturated Seam within Silty Sand Deposit	4.9	202.9
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*Note: Boreholes were advanced to depths ranging from about 0.5 to 1.1 m due to existing underground utilities.

Appendix E

Environmental Tables

Table 401: Metals and Inorganics Analysis in Soil

Parameters	Unit	RDL	2011 Table 3 SCS (I/C/C, Coarse)	Sample Location															
				Sample Name	BH101-21 SS3 5-7 FT	BH102-21 SS2 2.5-4.5 FT	BH103-21 SS3 5-7 FT	BH105-21 SS4 7.5-9.5 FT	BH106-21 SS2 2.5-4.5 FT	BH107-21 SS2 2.5-4.5 FT	BH108-21 SS4 7.5-9.5 FT	BH109-21 SS2 2.5-4.5 FT	BH110-21 SS3 5-7 FT	BH111-21 SS2 2.5-4.5 FT	BH111-21 SS3 5-7 FT	BH112-21 SS2 2.5-4.5 FT	BH112-21 SS4 7.5-9.5 FT		
				Lab Job #	L2585298	L2585298	L2585298	L2585298	L2585298	L2584509	L2584509	L2584509	L2584509	L2584509	L2584509	L2584509	L2584509	L2584522	L2584522
				Laboratory ID	L2585298-24	L2585298-19	L2585298-15	L2585298-8	L2585298-2	L2584509-18	L2584509-16	L2584509-10	L2584509-7	L2584509-2	L2584509-3	L2584509-3	L2584522-18	L2584522-20	
				Sampling Date	06-May-2021	06-May-2021	06-May-2021	06-May-2021	06-May-2021	05-May-2021	05-May-2021	05-May-2021	05-May-2021	05-May-2021	05-May-2021	05-May-2021	04-May-2021	04-May-2021	
				Sample Depth (m bgs)	1.5-2.1	0.8-1.4	1.5-2.1	2.3-2.9	0.8-1.4	0.8-1.4	2.3-2.9	0.8-1.4	1.5-2.1	0.8-1.4	1.5-2.1	0.8-1.4	1.5-2.1	2.3-2.9	
Maximum Concentration																			
Metals and Inorganics																			
Antimony	µg/g	1	40	2.1	<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	
Arsenic	µg/g	1	18	10.1	3.1	8.3	-	2.5	5.3	3.7	2.4	1.8	<1.0	1.6	2.2	3	2.9	2.9	
Barium	µg/g	1	670	382	19.3	9.3	-	20.2	52.5	40.3	24.6	17.8	9.8	24.6	15.6	19.5	43.4	43.4	
Beryllium	µg/g	0.5	8	1.29	<0.50	<0.50	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Boron	µg/g	5	120	30.1	6.9	<5.0	-	5.8	9.3	6.1	5.4	<5.0	<5.0	<5.0	<5.0	6.5	7.6	7.6	
Boron (Hot Water Soluble)	µg/g	0.1	2	0.21	-	0.18	-	-	-	-	-	-	-	0.21	-	-	-	-	
Cadmium	µg/g	0.5	1.9	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Chromium	µg/g	1	160	39.3	7.3	6.8	-	12.6	26.3	13	8.6	7.4	5.2	7.8	6.7	12.4	12.6	12.6	
Chromium VI	µg/g	0.2	8	0.22	-	<0.20	-	-	-	-	-	-	-	0.22	-	-	-	-	
Cobalt	µg/g	1	80	14.8	3.3	1.9	-	2.9	5.6	4.9	3.9	2.1	1.6	2.8	2.8	3.4	5.4	5.4	
Copper	µg/g	1	230	58	19.5	8.7	-	14.8	30.8	18.6	15.6	8.9	6.4	5	8.7	19.5	13.7	13.7	
Lead	µg/g	1	120	672	8.1	4.4	-	10.8	44.5	14.5	6.6	10.6	4	3.1	4.2	17.8	6.4	6.4	
Mercury	µg/g	0.005	3.9	0.144	-	<0.0050	-	-	-	-	-	-	-	0.144	-	-	-	-	
Molybdenum	µg/g	1	40	1.4	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1	<1.0	<1.0	
Nickel	µg/g	1	270	30.8	6.6	4.1	-	6.3	13.9	10.9	7.6	4.7	3.9	5.1	5.5	7.3	11	11	
Selenium	µg/g	1	5.5	1.5	<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	
Silver	µg/g	0.2	40	0.21	<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	
Thallium	µg/g	0.5	3.3	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Uranium	µg/g	1	33	1.1	<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	
Vanadium	µg/g	1	86	53.3	13.9	16	-	17.5	32.5	24.3	17	13.9	11	16.9	13.7	18.2	24.6	24.6	
Zinc	µg/g	5	340	194	88.9	35.9	-	76.5	155	71.2	48.5	39.1	22.5	15.9	27.8	80.4	29.2	29.2	
Electrical Conductivity	mS/cm	0.004	1.4	5.56	0.739	-	1.32	1.95	-	1.04	0.69	-	-	-	0.649	0.264	-	-	
Sodium Adsorption Ratio (SAR)	unitless	0.1	12	75.2	3.02	-	20.9	58	-	66.5	25.6	-	-	-	25.1	8.35	-	-	
pH	pH units	0.1	NR	8.2	8.06	-	-	-	-	7.99	-	-	-	-	7.66	-	-	-	

Notes:
 2011 Site Condition Standards (SCS) - As identified in 'Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act' (as amended April 15, 2011)

Bold - Exceeds 2011 Table 3 SCS

* - parameter not analyzed
 RDL - Reported detection limit
 NR - Not Relevant
 NV - No Value
 NA - Not Applicable
 * < - Less than the Reporting Detection Limit

Table 401: Metals and Inorganics Analysis in Soil

Parameters	Unit	RDL	2011 Table 3 SCS (I/C/C, Coarse)	BH114-21	BH114-21	BH115-21	BH116-21	BH117-21	BH117-21	BH118-21	BH118-21	BH119-21	BH120-21	BH121-21	BH122-21	BH123-21	BH124-21	BH125-21		
				BH114-21 SS2 2.5-4.0 FT	BH114-21 SS3 5-7 FT	BH115-21 SS2 2.5-4.5 FT	BH116-21 SS4 7.5-9.5 FT	BH117-21 SS2 2.5-4.5 FT	BH117-21 SS3 5-7 FT	BH118-21 SS2 2.5-4.5 FT	BH118-21 SS3 5-7 FT	BH119-21 SS4 7.5-9.5 FT	BH120-21 SS3 5-7 FT	BH121-21 SS2 2.5-4.5 FT	BH122-21 SS2 2.5-4.5 FT	BH123-21 GS1B 18"-2.5FT	BH124-21 SS3 5-7FT	BH125-21 SS2 2.5-4.5FT		
				L2583155	L2583155	L2583155	L2583155	L2583126	L2583126	L2583126	L2583126	L2583126	L2583126	L2583126	L2583126	L2586911	L2586911	L2586911	L2586911	L2586911
				L2583155-12	L2583155-13	L2583155-7	L2583155-5	L2583126-22	L2583126-23	L2583126-18	L2583126-19	L2583126-16	L2583126-11	L2583126-6	L2586911-2	L2586911-12	L2586898-3	L2586911-19		
03-May-2021	03-May-2021	03-May-2021	03-May-2021	30-Apr-2021	30-Apr-2021	30-Apr-2021	30-Apr-2021	30-Apr-2021	30-Apr-2021	30-Apr-2021	30-Apr-2021	11-May-2021	11-May-2021	12-May-2021	11-May-2021					
0.8-1.4	1.5-2.1	0.8-1.4	2.3-2.9	0.8-1.4	1.5-2.1	0.8-1.4	1.5-2.1	2.3-2.9	1.5-2.1	0.8-1.4	0.8-1.4	0.5-0.8	1.5-2.1	0.8-1.4						
Metals and Inorganics																				
Antimony	µg/g	1	40	<1.0	<1.0	<1.0	<1.0	<1.0	2	<1.0	<1.0	<1.0	<1.0	<1.0	2.1	<1.0	<1.0	<1.0		
Arsenic	µg/g	1	18	4.3	1.8	2.5	1.6	2.6	5	3	10.1	3.7	1.7	4.2	3.5	3.7	2.7	1.8		
Barium	µg/g	1	670	23.8	10.5	13.5	10.4	77.8	382	34.6	86.4	12.2	13.3	54.7	35.5	38.9	12.5	25.1		
Beryllium	µg/g	0.5	8	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.76	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
Boron	µg/g	5	120	6.3	6.1	6.6	<5.0	9.5	30.1	7.1	13.9	<5.0	<5.0	9.4	8.7	8.5	<5.0	<5.0		
Boron (Hot Water Soluble)	µg/g	0.1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Cadmium	µg/g	0.5	1.9	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
Chromium	µg/g	1	160	11.9	5.4	7.9	5.9	9.9	23.5	9	26.6	4.9	7.3	15.2	18	12.7	7.7	11.2		
Chromium VI	µg/g	0.2	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Cobalt	µg/g	1	80	3.8	1.7	2.7	2.2	2.8	4.4	3.7	11.9	1.9	2.6	5.9	3.8	4	2.8	3.4		
Copper	µg/g	1	230	18.9	10.2	15	8.9	23.9	58	21.5	31	5.1	7.3	37.9	24.4	25.2	14.2	5		
Lead	µg/g	1	120	9	7.3	6.8	4.1	117	672	26.1	14.3	3.1	4.6	49.5	39.5	66.5	7	6.8		
Mercury	µg/g	0.005	3.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Molybdenum	µg/g	1	40	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.4	<1.0	<1.0	<1.0	1.4	<1.0	<1.0	<1.0		
Nickel	µg/g	1	270	9.3	3.7	6	4.2	6	10.2	7.8	26.2	3.7	5.6	12.8	9.7	8.2	6.3	6.7		
Selenium	µg/g	1	5.5	<1.0	<1.0	<1.0	<1.0	<1.0	1.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		
Silver	µg/g	0.2	40	<0.20	<0.20	<0.20	<0.20	<0.20	0.21	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20		
Thallium	µg/g	0.5	3.3	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50		
Uranium	µg/g	1	33	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0		
Vanadium	µg/g	1	86	22.7	10.7	17.8	14	12.7	17.8	16.6	38.1	9.8	17.1	24.2	18.2	24.9	14.5	27.7		
Zinc	µg/g	5	340	50.7	36.5	61.2	21.1	123	194	146	76.1	17.7	24.5	95.3	98.8	145	49.6	40.1		
Electrical Conductivity	mS/cm	0.004	1.4	-	-	-	5.56	-	-	-	1.36	1.17	-	-	1.22	-	0.502	-		
Sodium Adsorption Ratio (SAR)	unitless	0.1	12	17.5	-	-	16	-	-	-	60.3	25.4	-	-	71.9	-	35.5	-		
pH	pH units	0.1	NR	7.92	-	-	-	-	-	-	-	7.97	-	-	7.78	-	7.98	-		

Notes:
 2011 Site Condition Standards (SCS) - As identified in 'Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act' (as amended April 15, 2011)

Bold - Exceeds 2011 Table 3 SCS

* - parameter not analyzed
 RDL - Reported detection limit
 NR - Not Relevant
 NV - No Value
 NA - Not Applicable
 * < - Less than the Reporting Detection Limit

Table 401: Metals and Inorganics Analysis in Soil

Parameters	Unit	RDL	2011 Table 3 SCS (I/C/C, Coarse)	BH125-21	BH126-21	BH126-21	BH127-21	BH128-21	BH128-21	BH130-21	BH131-21	BH132-21	BH132-21	BH133-21	BH134-21	BH135-21	BH135-21	BH137-21
				BH125-21 SS3 5-7FT	BH126-21 SS2 2.5-4.5FT	BH126-21 SS3 5-7FT	BH127-21 SS3 5-7FT	BH128-21 SS2 2.5-4.5FT	BH128-21 SS3 5-7FT	BH130-21 SS2 2.5-3.5FT	BH131-21 SS2 2.5-3.5FT	BH132-21 SS2 2.5-4.5FT	BH132-21 SS4 7.5-9.5FT	BH 133-21 SS2 2.5-4.5 FT	BH 134-21 SS3 5-7 FT	BH 135-21 SS2 2.5-4.5 FT	BH 135-21 SS4 7.5-9.5 FT	BH 137-21 SS2 2.5-4.5 FT
				L2586911	L2586911	L2586911	L2586898	L2586898	L2586898	L2587890	L2587890	L2587890	L2587890	L2581807	L2581807	L2581807	L2581807	L2581807
				L2586911-20	L2586911-7	L2586911-8	L2586898-8	L2586898-13	L2586898-14	L2587890-3	L2587890-5	L2587890-7	L2587890-9	L2581807-2	L2581807-7	L2581807-10	L2581807-12	L2581807-18
				11-May-2021	11-May-2021	11-May-2021	12-May-2021	12-May-2021	12-May-2021	13-May-2021	13-May-2021	13-May-2021	13-May-2021	27-Apr-2021	27-Apr-2021	27-Apr-2021	27-Apr-2021	27-Apr-2021
Metals and Inorganics																		
Antimony	µg/g	1	40	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0	1	<1.0	<1.0	<1.0	<1.0	-	-
Arsenic	µg/g	1	18	3.7	1.9	2.6	2.4	2.4	2.5	-	2.7	2.1	1.4	2.3	2	3.7	-	-
Barium	µg/g	1	670	14.7	16.3	26.3	32.7	22	27.9	-	25.9	26.3	9	24	16.1	40.2	-	-
Beryllium	µg/g	0.5	8	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	-
Boron	µg/g	5	120	<5.0	<5.0	5.2	5.3	<5.0	<5.0	-	8.5	<5.0	<5.0	<5.0	5.2	5	-	-
Boron (Hot Water Soluble)	µg/g	0.1	2	-	-	-	-	-	0.16	-	-	-	-	0.18	-	-	-	-
Cadmium	µg/g	0.5	1.9	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	-
Chromium	µg/g	1	160	11.2	10.9	11.8	15.6	8	9	-	9.4	10.1	7.2	9.4	7.5	12	-	-
Chromium VI	µg/g	0.2	8	-	-	-	-	<0.20	<0.20	-	-	-	-	<0.20	-	-	-	-
Cobalt	µg/g	1	80	3.1	3.4	3.3	3	2.9	3.2	-	3.3	3	1.8	2.7	2.7	4.3	-	-
Copper	µg/g	1	230	14.4	5.3	12.6	12.9	12.8	13.1	-	13	8.9	5	11.1	9.2	17.5	-	-
Lead	µg/g	1	120	6.8	7.5	6.3	20.4	28.8	19.8	-	29.4	32	4.4	26.7	5.8	49	-	-
Mercury	µg/g	0.005	3.9	-	-	-	-	-	0.126	-	-	-	-	0.125	-	-	-	-
Molybdenum	µg/g	1	40	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-
Nickel	µg/g	1	270	7.2	5.4	7.4	6.6	5.8	6.6	-	7.1	6.1	3.8	5.4	5.5	8.2	-	-
Selenium	µg/g	1	5.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-
Silver	µg/g	0.2	40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	-
Thallium	µg/g	0.5	3.3	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	-
Uranium	µg/g	1	33	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-
Vanadium	µg/g	1	86	26.8	27.2	24.8	15.5	14.7	17.6	-	17.1	24	20.9	19.8	17.6	24.7	-	-
Zinc	µg/g	5	340	41.9	26.9	37.1	53.9	51.6	51.3	-	60.4	45.9	28.9	42.9	29.1	67.8	-	-
Electrical Conductivity	mS/cm	0.004	1.4	-	1.43	-	0.771	-	-	1.33	-	-	-	1.15	1.74	1.64	-	2.24
Sodium Adsorption Ratio (SAR)	unitless	0.1	12	-	58.6	-	36.2	-	-	57.5	-	-	47.8	68.4	49.7	-	66.8	75.2
pH	pH units	0.1	NR	-	-	-	-	-	-	-	8.2	-	-	-	7.96	-	-	-

Notes:

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Bold - Exceeds 2011 Table 3 SCS

* - parameter not analyzed

RDL - Reported detection limit

NR - Not Relevant

NV - No Value

NA - Not Applicable

*< - Less than the Reporting Detection Limit

Table 401: Metals and Inorganics Analysis in Soil

Parameters	Unit	RDL	2011 Table 3 SCS (I/C/C, Coarse)	BH137-21	BH138-21	BH139-21	BH140-21	BH141-21	BH142-21	BH143-21	BH144-21	BH145-21	BH146-21	BH147-21	BH148-21
				BH 137-21 SS3 5-7 FT	BH 138-21 SS2 2.5-4.5 FT	BH 139-21 SS2 2.5-4.5 FT	BH 140-21 GS1B 12"-2.5 FT	BH 141-21 SS3 5-7 FT	BH 142-21 SS2 2.5-4.5 FT	BH 143-21 SS2 2.5-4.5 FT	BH144-21 SS2 2.5 4.5FT	BH145-21 SS2 2.5 4.5FT	BH146-21 SS3 5-7FT	BH147-21 SS2 2.5 4.5FT	BH148-21 SS2 2.5 4.5 FT
				L2581807	L2581807	L2581830	L2581830	L2581830	L2581830	L2581830	L2584522	L2584522	L2584522	L2584522	L2583126
				L2581807-19	L2581807-22	L2581830-2	L2581830-9	L2581830-12	L2581830-15	L2581830-19	L2584522-6	L2584522-10	L2584522-15	L2584522-2	L2583126-2
				27-Apr-2021	27-Apr-2021	28-Apr-2021	28-Apr-2021	28-Apr-2021	28-Apr-2021	28-Apr-2021	04-May-2021	04-May-2021	04-May-2021	04-May-2021	30-Apr-2021
Metals and Inorganics															
Antimony	µg/g	1	40	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0
Arsenic	µg/g	1	18	3.5	3.4	6.6	3.8	6.7	3.9	2.9	-	1.9	2.8	1.4	2.1
Barium	µg/g	1	670	61	26.3	50.8	50.1	18.9	44.4	24	-	10	184	19.2	35.7
Beryllium	µg/g	0.5	8	<0.50	<0.50	0.66	<0.50	<0.50	<0.50	<0.50	-	<0.50	1.29	<0.50	<0.50
Boron	µg/g	5	120	9.5	8.4	10	5.9	12.1	7.6	6.3	-	<5.0	16.3	5.2	5.5
Boron (Hot Water Soluble)	µg/g	0.1	2	-	-	-	-	-	-	0.2	-	-	-	-	-
Cadmium	µg/g	0.5	1.9	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	<0.50
Chromium	µg/g	1	160	17.3	12.2	18.3	16	8.7	19.8	10.5	-	5.4	39.3	4.9	12
Chromium VI	µg/g	0.2	8	-	-	-	-	-	-	<0.20	-	-	-	-	-
Cobalt	µg/g	1	80	7.1	3.7	6	4.5	4.5	4.4	3	-	2	14.8	1.9	3.6
Copper	µg/g	1	230	18.8	23.6	45.3	20.6	28.7	30.4	13.9	-	8.6	18.3	6.7	7.7
Lead	µg/g	1	120	7.7	19.7	214	61.6	16.3	19.8	20.1	-	7.7	16.3	13.3	6.4
Mercury	µg/g	0.005	3.9	-	-	-	-	-	-	0.0565	-	-	-	-	-
Molybdenum	µg/g	1	40	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0
Nickel	µg/g	1	270	14.9	8.3	16.2	8.8	8.6	9.7	6.6	-	4.1	30.8	3.8	7.3
Selenium	µg/g	1	5.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0
Silver	µg/g	0.2	40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	<0.20	<0.20	<0.20	<0.20
Thallium	µg/g	0.5	3.3	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	<0.50
Uranium	µg/g	1	33	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0
Vanadium	µg/g	1	86	27.9	16	33.7	24.2	23.1	25	19.1	-	14.1	53.3	9.7	24.1
Zinc	µg/g	5	340	44.6	85.8	114	110	71.9	80.6	56.2	-	31.2	91	26.6	39.6
Electrical Conductivity	mS/cm	0.004	1.4	-	-	3.48	-	1.12	2.1	-	1.04	-	3.93	-	1.04
Sodium Adsorption Ratio (SAR)	unitless	0.1	12	-	-	64.1	-	31	63.5	-	11.4	-	47	-	37
pH	pH units	0.1	NR	-	8.19	-	-	-	8.01	-	-	-	7.97	-	7.79

Notes:
 2011 Site Condition Standards (SCS) - As identified in 'Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act' (as amended April 15, 2011)

- Bold** - Exceeds 2011 Table 3 SCS
- * - parameter not analyzed
- RDL - Reported detection limit
- NR - Not Relevant
- NV - No Value
- NA - Not Applicable
- "<" - Less than the Reporting Detection Limit

Table 402: Polychlorinated Biphenyls (PCBs) Analysis in Soil

Parameters	Unit	RDL	2011 Table 3 SCS (I/C/C, Coarse)	Sample Location			
				Sample Name	BH103-21	BH130-21	
					BH103-21 SS2 2.5-4.5 FT	BH130-21 SS2 2.5-3.5FT	
				Lab Job #	L2585298	L2587890	
				Laboratory ID	L2585298-14	L2587890-3	
				Sampling Date	06-May-2021	13-May-2021	
				Sample Depth (m bgs)	0.8-1.4	0.8-1.1	
Maximum Concentration							
Polychlorinated Biphenyls (PCBs)							
Aroclor 1242	µg/g	0.01	NR	<	0.01	<0.010	<0.010
Aroclor 1248	µg/g	0.01	NR	<	0.01	<0.010	<0.010
Aroclor 1254	µg/g	0.01	NR	<	0.01	<0.010	<0.010
Aroclor 1260	µg/g	0.01	NR	<	0.01	<0.010	<0.010
Total Polychlorinated Biphenyls	µg/g	0.02	1.1	<	0.02	<0.020	<0.020

Notes:

2011 Site Condition Standards (SCS) - As identified in 'Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act' (as amended April 15, 2011)

Bold - Exceeds 2011 Table 3 SCS

- "-" - parameter not analyzed
- RDL - Reported detection limit
- NR - Not Relevant
- NV- No Value
- NA - Not Applicable
- "<" - Less than the Reporting Detection Limit

Table 403: Polycyclic Aromatic Hydrocarbons (PAHs) Analysis in Soil

Parameters	Unit	RDL	2011 Table 3 SCS (I/C/C, Coarse)	Sample Location	BH101-21	BH102-21	BH103-21	BH103-21	BH104-21	BH106-21
				Sample Name	BH101-21 SS3 5-7 FT	BH102-21 SS2 2.5-4.5 FT	BH103-21 SS2 2.5-4.5 FT	BH103-21 SS3 5-7 FT	BH104-21 SS2 2.5-4.5 FT	BH106-21 SS2 2.5-4.5 FT
				Lab Job #	L2585298	L2585298	L2585298	L2585298	L2585298	L2585298
				Laboratory ID	L2585298-24	L2585298-19	L2585298-14	L2585298-15	L2585298-10	L2585298-2
				Sampling Date	06-May-2021	06-May-2021	06-May-2021	06-May-2021	06-May-2021	06-May-2021
				Sample Depth (m bgs)	1.5-2.1	0.8-1.4	0.8-1.4	1.5-2.1	0.8-1.4	0.8-1.4
				Maximum Concentration						
Polycyclic Aromatic Hydrocarbons (PAHs)										
Acenaphthene	µg/g	0.05 - 0.4	96	<	0.05	<0.050	<0.050	<0.050	<0.050	<0.050
Acenaphthylene	µg/g	0.05 - 0.125	0.15		0.052	<0.050	<0.050	<0.050	<0.050	<0.050
Anthracene	µg/g	0.05 - 0.125	0.67	<	0.05	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(a)anthracene	µg/g	0.05 - 0.125	0.96		0.412	<0.050	<0.050	0.227	0.346	0.412
Benzo(a)pyrene	µg/g	0.05 - 0.125	0.3		0.926	<0.050	<0.050	0.362	0.501	0.926
Benzo(b)fluoranthene	µg/g	0.05 - 0.125	0.96		0.361	<0.050	<0.050	0.159	0.221	0.361
Benzo(g,h,i)perylene	µg/g	0.05 - 0.15	9.6		0.861	<0.050	<0.050	0.255	0.375	0.861
Benzo(k)fluoranthene	µg/g	0.05 - 0.125	0.96		0.103	<0.050	<0.050	<0.050	<0.050	0.069
Chrysene	µg/g	0.05 - 0.125	9.6		0.57	<0.050	<0.050	0.268	0.418	0.57
Dibenz(a,h)anthracene	µg/g	0.05 - 0.125	0.1		0.494	<0.050	<0.050	0.171	0.237	0.494
Fluoranthene	µg/g	0.05 - 0.5	9.6		0.324	<0.050	<0.050	<0.050	<0.050	<0.050
Fluorene	µg/g	0.05 - 0.125	62	<	0.05	<0.050	<0.050	<0.050	<0.050	<0.050
Indeno(1,2,3-cd)pyrene	µg/g	0.05 - 0.125	0.76		0.365	<0.050	<0.050	0.124	0.164	0.365
1-Methylnaphthalene	µg/g	0.03 - 0.075	76	<	0.03	<0.030	<0.030	<0.030	<0.030	<0.030
2-Methylnaphthalene	µg/g	0.03 - 0.075	76	<	0.03	<0.030	<0.030	<0.030	<0.030	<0.030
1+2-Methylnaphthalene	µg/g	0.0424 - 0.106	76	<	0.042	<0.042	<0.042	<0.042	<0.042	<0.042
Naphthalene	µg/g	0.013 - 0.32	9.6	<	0.013	<0.013	<0.013	<0.013	<0.013	<0.013
Phenanthrene	µg/g	0.046 - 0.46	12		0.144	<0.046	<0.046	<0.046	<0.046	<0.046
Pyrene	µg/g	0.05 - 0.5	96		0.315	<0.050	<0.050	0.134	0.205	0.259

Notes:

2011 Site Condition Standards (SCS) - As identified in 'Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act' (as amended April 15, 2011)

Bold - Exceeds 2011 Table 3 SCS

- "-" - parameter not analyzed
- RDL - Reported detection limit
- NR - Not Relevant
- NV- No Value
- NA - Not Applicable
- "<" - Less than the Reporting Detection Limit

Table 403: Polycyclic Aromatic Hydrocarbons (PAHs) Analysis in Soil

Parameters	Unit	RDL	2011 Table 3 SCS (I/C/C, Coarse)	BH111-21	BH111-21	BH123-21	BH137-21	BH143-21	BH143-21	BH146-21	BH148-21
				BH111-21 SS2 2.5-45FT	BH111-21 SS3 5-7FT	BH123-21 GS1B 18"-2.5FT	BH 137-21 SS3 5-7 FT	BH 143-21 SS2 2.5-4.5 FT	BH 143-21 SS3 5-7 FT	BH146-21 SS2 2.5-4.5FT	BH148-21 SS2 2.5-4.5 FT
				L2584509	L2584509	L2586911	L2581807	L2581830	L2581830	L2584522	L2583126
				L2584509-2	L2584509-3	L2586911-12	L2581807-19	L2581830-19	L2581830-20	L2584522-14	L2583126-2
				05-May-2021	05-May-2021	11-May-2021	27-Apr-2021	28-Apr-2021	28-Apr-2021	04-May-2021	30-Apr-2021
				0.8-1.4	1.5-2.1	0.5-0.8	1.5-2.1	0.8-1.4	1.5-2.1	0.8-1.4	0.8-1.4
Polycyclic Aromatic Hydrocarbons (PAHs)											
Acenaphthene	µg/g	0.05 - 0.4	96	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Acenaphthylene	µg/g	0.05 - 0.125	0.15	<0.050	<0.050	0.052	<0.050	<0.050	<0.050	<0.050	<0.050
Anthracene	µg/g	0.05 - 0.125	0.67	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(a)anthracene	µg/g	0.05 - 0.125	0.96	<0.050	<0.050	0.249	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(a)pyrene	µg/g	0.05 - 0.125	0.3	<0.050	<0.050	0.244	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(b)fluoranthene	µg/g	0.05 - 0.125	0.96	<0.050	<0.050	0.315	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(g,h,i)perylene	µg/g	0.05 - 0.15	9.6	<0.050	<0.050	0.165	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(k)fluoranthene	µg/g	0.05 - 0.125	0.96	<0.050	<0.050	0.103	<0.050	<0.050	<0.050	<0.050	<0.050
Chrysene	µg/g	0.05 - 0.125	9.6	<0.050	<0.050	0.217	<0.050	<0.050	<0.050	<0.050	<0.050
Dibenz(a,h)anthracene	µg/g	0.05 - 0.125	0.1	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Fluoranthene	µg/g	0.05 - 0.5	9.6	<0.050	<0.050	0.324	<0.050	<0.050	<0.050	<0.050	<0.050
Fluorene	µg/g	0.05 - 0.125	62	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Indeno(1,2,3-cd)pyrene	µg/g	0.05 - 0.125	0.76	<0.050	<0.050	0.153	<0.050	<0.050	<0.050	<0.050	<0.050
1-Methylnaphthalene	µg/g	0.03 - 0.075	76	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
2-Methylnaphthalene	µg/g	0.03 - 0.075	76	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
1+2-Methylnaphthalene	µg/g	0.0424 - 0.106	76	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042
Naphthalene	µg/g	0.013 - 0.32	9.6	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013
Phenanthrene	µg/g	0.046 - 0.46	12	<0.046	<0.046	0.067	<0.046	<0.046	<0.046	<0.046	<0.046
Pyrene	µg/g	0.05 - 0.5	96	<0.050	<0.050	0.315	<0.050	<0.050	<0.050	<0.050	<0.050

Notes:

2011 Site Condition Standards (SCS) - As identified in 'Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act' (as amended April 15, 2011)

Bold - Exceeds 2011 Table 3 SCS

- "-" - parameter not analyzed
- RDL - Reported detection limit
- NR - Not Relevant
- NV- No Value
- NA - Not Applicable
- "<" - Less than the Reporting Detection Limit

Table 404: Petroleum Hydrocarbons (PHCs) Analysis in Soil

Parameters	Unit	RDL	2011 Table 3 SCS (I/C/C, Coarse)	Sample Location	BH101-21	BH102-21	BH103-21	BH103-21	BH104-21	BH105-21	BH106-21	BH107-21	BH107-21	BH108-21	BH109-21	BH110-21	BH111-21	BH111-21				
				Sample Name	BH101-21 SS4 7.5-9.5 FT	BH102-21 SS2 2.5-4.5 FT	BH103-21 SS2 2.5-4.5 FT	BH103-21 SS3 5- 7 FT	BH104-21 SS2 2.5-4.5 FT	BH105-21 SS4 7.5-9.5 FT	BH106-21 SS2 2.5-4.5 FT	BH107-21 SS2 2.5-4.5FT	BH107-21 SS4 7.5-9.5FT	BH108-21 SS4 7.5-9.5FT	BH109-21 SS2 2.5-4.5FT	BH110-21 SS3 5- 7FT	BH111-21 SS2 2.5-45FT	BH111-21 SS3 5- 7FT				
				Lab Job #	L2585298	L2585298	L2585298	L2585298	L2585298	L2585298	L2585298	L2585298	L2585298	L2585298	L2585298	L2585298	L2585298	L2585298	L2585298	L2585298	L2585298	L2585298
				Laboratory ID	L2585298-25	L2585298-19	L2585298-14	L2585298-15	L2585298-10	L2585298-8	L2585298-2	L2585298-18	L2585298-20	L2585298-16	L2585298-10	L2585298-7	L2585298-2	L2585298-3				
				Sampling Date	06-May-2021	06-May-2021	06-May-2021	06-May-2021	06-May-2021	06-May-2021	06-May-2021	06-May-2021	06-May-2021	06-May-2021	06-May-2021	06-May-2021	06-May-2021	06-May-2021	06-May-2021	06-May-2021	06-May-2021	06-May-2021
				Sample Depth (m bgs)	2.3-2.9	0.8-1.4	0.8-1.4	1.5-2.1	0.8-1.4	2.3-2.9	0.8-1.4	0.8-1.4	2.3-2.9	0.8-1.4	2.3-2.9	0.8-1.4	1.5-2.1	0.8-1.4	1.5-2.1	0.8-1.4	1.5-2.1	1.5-2.1
				Maximum Concentration																		
Petroleum Hydrocarbons (PHCs)																						
F1 (C6 to C10)	µg/g	5	55	<	5	<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				
F1 (C6 to C10) minus BTEX	µg/g	5	55	<	5	<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				
F2 (C10 to C16)	µg/g	10 - 50	230		22	<10	<50	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10				
F3 (C16 to C34)	µg/g	50 - 250	1700		89	<50	4720	442	100	444	89	124	<50	<50	<50	82	<50	<50				
F4 (C34 to C50)	µg/g	50 - 250	3300		168	<50	1900	181	<50	249	79	290	<50	<50	<50	284	<50	<50				
Reached Baseline at C50	unitless		NR		NA	YES	NO	NO	YES	NO	YES	NO	YES	YES	YES	NO	YES	YES				
F4G (Gravimetric)	µg/g	250	3300		730	-	5880	940	-	410	-	960	-	-	-	1470	-	-				

Notes:
 2011 Site Condition Standards (SCS) - As identified in 'Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act' (as amended April 15, 2011)

Bold - Exceeds 2011 Table 3 SCS

- * - parameter not analyzed
- RDL - Reported detection limit
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- NV - No Value
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- < - Less than the Reporting Detection Limit

Table 404: Petroleum Hydrocarbons (PHCs) Analysis in Soil

Parameters	Unit	RDL	2011 Table 3 SCS (I/C/C, Coarse)	BH112-21	BH114-21	BH114-21	BH115-21	BH116-21	BH117-21	BH118-21	BH118-21	BH119-21	BH121-21	BH122-21	BH122-21	BH123-21	BH124-21	BH125-21	
				BH112-21 SS2 2.5-4.5FT	BH114-21 SS2 2.5-4.0 FT	BH114-21 SS3 5- 7 FT	BH115-21 SS2 2.5-4.5 FT	BH116-21 SS4 7.5-9.5 FT	BH117-21 SS2 2.5-4.5 FT	BH118-21 SS2 2.5-4.5 FT	BH118-21 SS3 5- 7 FT	BH119-21 SS4 7.5-9.5 FT	BH121-21 SS2 2.5-4.5 FT	BH122-21 SS2 2.5-4.5FT	BH122-21 SS4 7.5-9.5FT	BH123-21 GS1B 18"-2.5FT	BH124-21 SS3 5- 7FT	BH125-21 SS3 5- 7FT	
				L2584522	L2583155	L2583155	L2583155	L2583155	L2583126	L2583126	L2583126	L2583126	L2583126	L2586911	L2586911	L2586911	L2586911	L2586898	L2586911
				L2584522-18	L2583155-12	L2583155-13	L2583155-7	L2583155-5	L2583126-22	L2583126-18	L2583126-19	L2583126-16	L2583126-6	L2586911-2	L2586911-4	L2586911-12	L2586898-3	L2586911-20	
				04-May-2021	03-May-2021	03-May-2021	03-May-2021	03-May-2021	30-Apr-2021	30-Apr-2021	30-Apr-2021	30-Apr-2021	30-Apr-2021	11-May-2021	11-May-2021	11-May-2021	12-May-2021	11-May-2021	
Petroleum Hydrocarbons (PHCs)																			
F1 (C6 to C10)	µg/g	5	55	<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	<5.0	
F1 (C6 to C10) minus BTEX	µg/g	5	55	<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	<5.0	
F2 (C10 to C16)	µg/g	10 - 50	230	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
F3 (C16 to C34)	µg/g	50 - 250	1700	<50	<50	<50	<50	<50	<50	<50	<50	<50	55	72	<50	50	<50	<50	
F4 (C34 to C50)	µg/g	50 - 250	3300	<50	<50	<50	<50	<50	<50	<50	<50	<50	60	94	<50	94	<50	<50	
Reached Baseline at C50	unitless		NR	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	
F4G (Gravimetric)	µg/g	250	3300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Notes:

2011 Site Condition Standards (SCS) - As identified in 'Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act' (as amended April 15, 2011)

Bold - Exceeds 2011 Table 3 SCS

"-" - parameter not analyzed

RDL - Reported detection limit

NR - Not Relevant

NV - No Value

NA - Not Applicable

"<" - Less than the Reporting Detection Limit

Table 404: Petroleum Hydrocarbons (PHCs) Analysis in Soil

Parameters	Unit	RDL	2011 Table 3 SCS (I/C/C, Coarse)	BH126-21	BH127-21	BH128-21	BH128-21	BH130-21	BH131-21	BH132-21	BH132-21	BH133-21	BH134-21	BH135-21	BH135-21	BH136-21	BH137-21
				BH126-21 SS2 2.5-4.5FT	BH127-21 SS3 5-7F	BH128-21 SS2 2.5-4.5	BH128-21 SS3 5-7F	BH130-21 SS2 2.5-3.5FT	BH131-21 SS2 2.5-3.5FT	BH132-21 SS2 2.5-4.5FT	BH132-21 SS4 7.5-9.5FT	BH133-21 SS2 2.5-4.5 FT	BH134-21 SS3 5-7 FT	BH135-21 SS2 2.5-4.5 FT	BH135-21 SS4 7.5-9.5 FT	BH136-21 SS3 5-7 FT	BH137-21 SS2 2.5-4.5 FT
				L2586911	L2586898	L2586898	L2586898	L2587890	L2587890	L2587890	L2587890	L2587890	L2581807	L2581807	L2581807	L2581807	L2581807
				L2586911-7	L2586898-8	L2586898-13	L2586898-14	L2587890-3	L2587890-5	L2587890-7	L2587890-9	L2581807-2	L2581807-7	L2581807-10	L2581807-12	L2581807-15	L2581807-18
				11-May-2021	5/12/2021 9:50	5/12/2021 11:20	5/12/2021 11:30	13-May-2021	13-May-2021	13-May-2021	13-May-2021	27-Apr-2021	27-Apr-2021	27-Apr-2021	27-Apr-2021	27-Apr-2021	27-Apr-2021
				0.8-1.4	1.5-2.1	0.8-1.4	1.5-2.1	0.8-1.1	0.8-1.1	0.8-1.4	2.3-2.9	0.8-1.4	1.5-2.1	0.8-1.4	2.3-2.9	1.5-2.1	0.8-1.4
Petroleum Hydrocarbons (PHCs)																	
F1 (C6 to C10)	µg/g	5	55	<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
F1 (C6 to C10) minus BTEX	µg/g	5	55	<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
F2 (C10 to C16)	µg/g	10 - 50	230	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	22	<10	<10	<10
F3 (C16 to C34)	µg/g	50 - 250	1700	<50	79	<50	<50	<50	<50	<50	<50	<50	<50	89	<50	<50	<50
F4 (C34 to C50)	µg/g	50 - 250	3300	<50	168	<50	<50	<50	126	<50	<50	<50	<50	<50	<50	<50	<50
Reached Baseline at C50	unitless		NR	YES	NO	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES	YES	YES
F4G (Gravimetric)	µg/g	250	3300	-	700	-	-	-	670	-	-	-	-	-	-	-	-

Notes:
 2011 Site Condition Standards (SCS) - As identified in 'Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act' (as amended April 15, 2011)

Bold - Exceeds 2011 Table 3 SCS

- * - parameter not analyzed
- RDL - Reported detection limit
- NR - Not Relevant
- NV - No Value
- NA - Not Applicable
- "<" - Less than the Reporting Detection Limit

Table 404: Petroleum Hydrocarbons (PHCs) Analysis in Soil

Parameters	Unit	RDL	2011 Table 3 SCS (I/C/C, Coarse)	BH137-21	BH139-21	BH139-21	BH141-21	BH142-21	BH143.21	BH144-21	BH145-21	BH146-21	BH147-21	BH147-21	BH148-21
				BH 137-21 SS3 5-7 FT	BH 139-21 SS2 2.5-4.5 FT	BH 139-21 SS4 7.5-9.5 FT	BH 141-21 SS3 5-7 FT	BH 142-21 SS2 2.5-4.5 FT	BH 143-21 SS2 2.5-4.5 FT	BH144-21 SS2 2.5-4.5FT	BH145-21 SS2 2.5-4.5FT	BH146-21 SS2 2.5-4.5FT	BH147-21 SS2 2.5-4.5FT	BH147-21 SS4 7.5-9.5FT	BH148-21 SS2 2.5-4.5 FT
				L2581807	L2581830	L2581830	L2581830	L2581830	L2581830	L2584522	L2584522	L2584522	L2584522	L2584522	L2583126
				L2581807-19	L2581830-2	L2581830-4	L2581830-12	L2581830-15	L2581830-19	L2584522-6	L2584522-10	L2584522-14	L2584522-2	L2584522-4	L2583126-2
				27-Apr-2021	28-Apr-2021	28-Apr-2021	28-Apr-2021	28-Apr-2021	28-Apr-2021	04-May-2021	04-May-2021	04-May-2021	04-May-2021	04-May-2021	30-Apr-2021
	1.5-2.1	0.8-1.4	2.3-2.9	1.5-2.1	0.8-1.4	0.8-1.4	0.8-1.4	0.8-1.4	0.8-1.4	0.8-1.4	2.3-2.9	0.8-1.4			
Petroleum Hydrocarbons (PHCs)															
F1 (C6 to C10)	µg/g	5	55	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
F1 (C6 to C10) minus BTEX	µg/g	5	55	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
F2 (C10 to C16)	µg/g	10 - 50	230	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	50 - 250	1700	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	50 - 250	3300	<50	<50	<50	<50	67	78	<50	<50	<50	<50	<50	<50
Reached Baseline at C50	unitless		NR	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES
F4G (Gravimetric)	µg/g	250	3300	-	-	-	-	-	730	-	-	-	-	-	-

Notes:
 2011 Site Condition Standards (SCS) - As identified in 'Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act' (as amended April 15, 2011)

Bold - Exceeds 2011 Table 3 SCS

- * - parameter not analyzed
- RDL - Reported detection limit
- NR - Not Relevant
- NV - No Value
- NA - Not Applicable
- "<" - Less than the Reporting Detection Limit

Table 405: Volatile Organic Compounds (VOCs) Analysis in Soil

Parameters	Unit	RDL	2011 Table 3 SCS (I/C/C, Coarse)	Sample Location	BH101-21	BH102-21	BH103-21	BH103-21	BH104-21	BH105-21	BH106-21	BH107-21	BH107-21	BH108-21	BH109-21	BH110-21	BH111-21	
				Sample Name	BH101-21 SS4	BH102-21 SS2	BH103-21 SS2	BH103-21 SS3 5-	BH104-21 SS2	BH105-21 SS4	BH106-21 SS2	BH107-21 SS2	BH107-21 SS4	BH108-21 SS4	BH109-21 SS2	BH110-21 SS3 5-	BH111-21 SS2	
				Lab Job #	7.5-9.5 FT	2.5-4.5 FT	2.5-4.5 FT	7 FT	2.5-4.5 FT	7.5-9.5 FT	2.5-4.5 FT	2.5-4.5 FT	2.5-4.5 FT	7.5-9.5 FT	2.5-4.5 FT	7 FT	2.5-4.5 FT	
				Laboratory ID	L2585298	L2585298	L2585298	L2585298	L2585298	L2585298	L2585298	L2585298	L2584509	L2584509	L2584509	L2584509	L2584509	L2584509
				Sampling Date	06-May-2021	06-May-2021	06-May-2021	06-May-2021	06-May-2021	06-May-2021	06-May-2021	06-May-2021	05-May-2021	05-May-2021	05-May-2021	05-May-2021	05-May-2021	05-May-2021
Sample Depth (m bgs)	2.3-2.9	0.8-1.4	0.8-1.4	1.5-2.1	0.8-1.4				2.3-2.9	0.8-1.4	0.8-1.4	2.3-2.9	2.3-2.9	0.8-1.4	1.5-2.1	0.8-1.4		
Maximum Concentration																		
Volatile Organic Compounds (VOCs)																		
Acetone	µg/g	0.5	16	<	0.5	-	-	-	-	-	<0.50	-	-	-	<0.50	-	-	
Benzene	µg/g	0.0068	0.32	<	0.0259	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	
Bromodichloromethane	µg/g	0.05	18	<	0.05	-	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
Bromoform	µg/g	0.05	0.61	<	0.05	-	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
Bromomethane	µg/g	0.05	0.05	<	0.05	-	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
Carbon Tetrachloride	µg/g	0.05	0.21	<	0.05	-	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
Chlorobenzene	µg/g	0.05	2.4	<	0.05	-	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
Chloroform	µg/g	0.05	0.47	<	0.05	-	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
Dibromochloromethane	µg/g	0.05	13	<	0.05	-	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
1,2-Dichlorobenzene	µg/g	0.05	6.8	<	0.05	-	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
1,3-Dichlorobenzene	µg/g	0.05	9.6	<	0.05	-	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
1,4-Dichlorobenzene	µg/g	0.05	0.2	<	0.05	-	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
Dichlorodifluoromethane	µg/g	0.05	16	<	0.05	-	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
1,1-Dichloroethane	µg/g	0.05	17	<	0.05	-	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
1,2-Dichloroethane	µg/g	0.05	0.05	<	0.05	-	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
1,1-Dichloroethylene	µg/g	0.05	0.064	<	0.05	-	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
Ethylbenzene	µg/g	0.018	9.5	<	0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	
cis-1,2-Dichloroethylene	µg/g	0.05	55	<	0.05	-	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
trans-1,2-Dichloroethylene	µg/g	0.05	1.3	<	0.05	-	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
1,2-Dichloropropane	µg/g	0.05	0.16	<	0.05	-	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
cis-1,3-Dichloropropene	µg/g	0.03	NR	<	0.03	-	-	-	-	<0.030	-	-	-	<0.030	-	-	-	
trans-1,3-Dichloropropene	µg/g	0.03	NR	<	0.03	-	-	-	-	<0.030	-	-	-	<0.030	-	-	-	
1,3-Dichloropropene	µg/g	0.042	0.18	<	0.042	-	-	-	-	<0.042	-	-	-	<0.042	-	-	-	
Ethylene Dibromide	µg/g	0.05	0.05	<	0.05	-	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
Hexane (n)	µg/g	0.05	46	<	0.052	-	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
Methyl Ethyl Ketone	µg/g	0.5	70	<	0.5	-	-	-	-	<0.50	-	-	-	<0.50	-	-	-	
Methyl Isobutyl Ketone	µg/g	0.5	31	<	0.5	-	-	-	-	<0.50	-	-	-	<0.50	-	-	-	
Methyl Tert-Butyl Ether	µg/g	0.05	11	<	0.05	-	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
Methylene Chloride	µg/g	0.05	1.6	<	0.05	-	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
Styrene	µg/g	0.05	34	<	0.05	-	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
1,1,1,2-Tetrachloroethane	µg/g	0.05	0.087	<	0.05	-	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
1,1,1,2,2-Tetrachloroethane	µg/g	0.05	0.05	<	0.05	-	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
Tetrachloroethylene	µg/g	0.05	4.5	<	0.05	-	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
Toluene	µg/g	0.08	68	<	0.08	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	
1,1,1-Trichloroethane	µg/g	0.05	6.1	<	0.05	-	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
1,1,2-Trichloroethane	µg/g	0.05	0.05	<	0.05	-	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
Trichloroethylene	µg/g	0.01	0.91	<	0.01	-	-	-	-	<0.010	-	-	-	<0.010	-	-	-	
Trichlorofluoromethane	µg/g	0.05	4	<	0.05	-	-	-	-	<0.050	-	-	-	<0.050	-	-	-	
Vinyl Chloride	µg/g	0.02	0.032	<	0.02	-	-	-	-	<0.020	-	-	-	<0.020	-	-	-	
o-Xylene	µg/g	0.02	NR	<	0.02	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	
m+p-Xylene	µg/g	0.03	NR	<	0.03	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	
Xylene Mixture	µg/g	0.05	26	<	0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	

Notes:
 2011 Site Condition Standards (SCS) - As identified in 'Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act' (as amended April 15, 2011)

Bold - Exceeds 2011 Table 3 SCS

"-" - parameter not analyzed

RDL - Reported detection limit

NR - Not Relevant

NV - No Value

NA - Not Applicable

"<" - Less than the Reporting Detection Limit

Table 405: Volatile Organic Compounds (VOCs) Analysis in Soil

Parameters	Unit	RDL	2011 Table 3 SCS (I/C/C, Coarse)	BH111-21	BH112-21	BH114-21	BH114-21	BH115-21	BH116-21	BH117-21	BH118-21	BH118-21	BH119-21	BH121-21	BH122-21	BH122-21	BH123-21
				BH111-21 SS3 5-7FT	BH112-21 SS2 2.5-4.5FT	BH114-21 SS2 2.5-4.0 FT	BH114-21 SS3 5-7 FT	BH115-21 SS2 2.5-4.5 FT	BH116-21 SS4 7.5-9.5 FT	BH117-21 SS2 2.5-4.5 FT	BH118-21 SS2 2.5-4.5 FT	BH118-21 SS3 5-7 FT	BH119-21 SS4 7.5-9.5 FT	BH121-21 SS2 2.5-4.5 FT	BH122-21 SS2 2.5-4.5FT	BH122-21 SS4 7.5-9.5FT	BH123-21 GS1B 18"-2.5FT
				L2584509-3 05-May-2021	L2584522-18 04-May-2021	L2583155-12 03-May-2021	L2583155-13 03-May-2021	L2583155-7 03-May-2021	L2583155-5 03-May-2021	L2583126-22 30-Apr-2021	L2583126-18 30-Apr-2021	L2583126-19 30-Apr-2021	L2583126-16 30-Apr-2021	L2583126-6 30-Apr-2021	L2586911-2 11-May-2021	L2586911-4 11-May-2021	L2586911-12 11-May-2021
Volatile Organic Compounds (VOCs)																	
Acetone	µg/g	0.5	16	-	-	-	-	-	-	-	-	-	-	<0.50	-	-	-
Benzene	µg/g	0.0068	0.32	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068
Bromodichloromethane	µg/g	0.05	18	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-
Bromoform	µg/g	0.05	0.61	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-
Bromomethane	µg/g	0.05	0.05	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-
Carbon Tetrachloride	µg/g	0.05	0.21	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-
Chlorobenzene	µg/g	0.05	2.4	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-
Chloroform	µg/g	0.05	0.47	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-
Dibromochloromethane	µg/g	0.05	13	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-
1,2-Dichlorobenzene	µg/g	0.05	6.8	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-
1,3-Dichlorobenzene	µg/g	0.05	9.6	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-
1,4-Dichlorobenzene	µg/g	0.05	0.2	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-
Dichlorodifluoromethane	µg/g	0.05	16	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-
1,1-Dichloroethane	µg/g	0.05	17	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-
1,2-Dichloroethane	µg/g	0.05	0.05	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-
1,1-Dichloroethylene	µg/g	0.05	0.064	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-
Ethylbenzene	µg/g	0.018	9.5	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018
cis-1,2-Dichloroethylene	µg/g	0.05	55	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-
trans-1,2-Dichloroethylene	µg/g	0.05	1.3	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-
1,2-Dichloropropane	µg/g	0.05	0.16	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-
cis-1,3-Dichloropropene	µg/g	0.03	NR	-	-	-	-	-	-	-	-	-	-	<0.030	-	-	-
trans-1,3-Dichloropropene	µg/g	0.03	NR	-	-	-	-	-	-	-	-	-	-	<0.030	-	-	-
1,3-Dichloropropene	µg/g	0.042	0.18	-	-	-	-	-	-	-	-	-	-	<0.042	-	-	-
Ethylene Dibromide	µg/g	0.05	0.05	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-
Hexane (n)	µg/g	0.05	46	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-
Methyl Ethyl Ketone	µg/g	0.5	70	-	-	-	-	-	-	-	-	-	-	<0.50	-	-	-
Methyl Isobutyl Ketone	µg/g	0.5	31	-	-	-	-	-	-	-	-	-	-	<0.50	-	-	-
Methyl Tert-Butyl Ether	µg/g	0.05	11	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-
Methylene Chloride	µg/g	0.05	1.6	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-
Styrene	µg/g	0.05	34	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-
1,1,1,2-Tetrachloroethane	µg/g	0.05	0.087	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-
1,1,1,2-Tetrachloroethane	µg/g	0.05	0.05	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-
Tetrachloroethylene	µg/g	0.05	4.5	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-
Toluene	µg/g	0.08	68	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
1,1,1-Trichloroethane	µg/g	0.05	6.1	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-
1,1,2-Trichloroethane	µg/g	0.05	0.05	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-
Trichloroethylene	µg/g	0.01	0.91	-	-	-	-	-	-	-	-	-	-	<0.010	-	-	-
Trichlorofluoromethane	µg/g	0.05	4	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	-
Vinyl Chloride	µg/g	0.02	0.032	-	-	-	-	-	-	-	-	-	-	<0.020	-	-	-
o-Xylene	µg/g	0.02	NR	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
m+p-Xylene	µg/g	0.03	NR	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Xylene Mixture	µg/g	0.05	26	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050

Notes:

2011 Site Condition Standards (SCS) - As identified in 'Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act' (as amended April 15, 2011)

Bold - Exceeds 2011 Table 3 SCS

"*" - parameter not analyzed

RDL - Reported detection limit

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NV - No Value

NA - Not Applicable

"<" - Less than the Reporting Detection Limit

Table 405: Volatile Organic Compounds (VOCs) Analysis in Soil

Parameters	Unit	RDL	2011 Table 3 SCS (I/C/C, Coarse)	BH124-21	BH125-21	BH126-21	BH127-21	BH128-21	BH128-21	BH130-21	BH131-21	BH132-21	BH132-21	BH133-21	BH134-21	BH135-21	BH135-21
				BH124-21 SS3 5-7FT	BH125-21 SS3 5-7FT	BH126-21 SS2 2.5-4.5FT	BH127-21 SS3 5-7FT	BH128-21 SS2 2.5-4.5FT	BH128-21 SS3 5-7FT	BH130-21 SS2 2.5-3.5FT	BH131-21 SS2 2.5-3.5FT	BH132-21 SS2 2.5-4.5FT	BH132-21 SS4 7.5-9.5FT	BH133-21 SS2 2.5-4.5 FT	BH134-21 SS3 5-7 FT	BH135-21 SS2 2.5-4.5 FT	BH135-21 SS4 7.5-9.5 FT
				L2586898	L2586911	L2586911	L2586898	L2586898	L2586898	L2587890	L2587890	L2587890	L2587890	L2581807	L2581807	L2581807	L2581807
				L2586898-3	L2586911-20	L2586911-7	L2586898-8	L2586898-13	L2586898-14	L2587890-3	L2587890-5	L2587890-7	L2587890-9	L2581807-2	L2581807-7	L2581807-10	L2581807-12
				12-May-2021	11-May-2021	11-May-2021	12-May-2021	12-May-2021	12-May-2021	13-May-2021	13-May-2021	13-May-2021	13-May-2021	27-Apr-2021	27-Apr-2021	27-Apr-2021	27-Apr-2021
	1.5-2.1	1.5-2.1	0.8-1.4	1.5-2.1	0.8-1.4	1.5-2.1	0.8-1.1	0.8-1.1	0.8-1.4	2.3-2.9	0.8-1.4	1.5-2.1	0.8-1.4	2.3-2.9			
Volatile Organic Compounds (VOCs)																	
Acetone	µg/g	0.5	16	-	<0.50	-	-	-	-	-	-	-	<0.50	-	-	-	-
Benzene	µg/g	0.0068	0.32	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068	0.0237	<0.0068	<0.0068	0.0069	<0.0068	0.0259	<0.0068
Bromodichloromethane	µg/g	0.05	18	-	<0.050	-	-	-	-	-	-	-	<0.050	-	-	-	-
Bromoform	µg/g	0.05	0.61	-	<0.050	-	-	-	-	-	-	-	<0.050	-	-	-	-
Bromomethane	µg/g	0.05	0.05	-	<0.050	-	-	-	-	-	-	-	<0.050	-	-	-	-
Carbon Tetrachloride	µg/g	0.05	0.21	-	<0.050	-	-	-	-	-	-	-	<0.050	-	-	-	-
Chlorobenzene	µg/g	0.05	2.4	-	<0.050	-	-	-	-	-	-	-	<0.050	-	-	-	-
Chloroform	µg/g	0.05	0.47	-	<0.050	-	-	-	-	-	-	-	<0.050	-	-	-	-
Dibromochloromethane	µg/g	0.05	13	-	<0.050	-	-	-	-	-	-	-	<0.050	-	-	-	-
1,2-Dichlorobenzene	µg/g	0.05	6.8	-	<0.050	-	-	-	-	-	-	-	<0.050	-	-	-	-
1,3-Dichlorobenzene	µg/g	0.05	9.6	-	<0.050	-	-	-	-	-	-	-	<0.050	-	-	-	-
1,4-Dichlorobenzene	µg/g	0.05	0.2	-	<0.050	-	-	-	-	-	-	-	<0.050	-	-	-	-
Dichlorodifluoromethane	µg/g	0.05	16	-	<0.050	-	-	-	-	-	-	-	<0.050	-	-	-	-
1,1-Dichloroethane	µg/g	0.05	17	-	<0.050	-	-	-	-	-	-	-	<0.050	-	-	-	-
1,2-Dichloroethane	µg/g	0.05	0.05	-	<0.050	-	-	-	-	-	-	-	<0.050	-	-	-	-
1,1-Dichloroethylene	µg/g	0.05	0.064	-	<0.050	-	-	-	-	-	-	-	<0.050	-	-	-	-
Ethylbenzene	µg/g	0.018	9.5	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018	<0.018
cis-1,2-Dichloroethylene	µg/g	0.05	55	-	<0.050	-	-	-	-	-	-	-	<0.050	-	-	-	-
trans-1,2-Dichloroethylene	µg/g	0.05	1.3	-	<0.050	-	-	-	-	-	-	-	<0.050	-	-	-	-
1,2-Dichloropropane	µg/g	0.05	0.16	-	<0.050	-	-	-	-	-	-	-	<0.050	-	-	-	-
cis-1,3-Dichloropropene	µg/g	0.03	NR	-	<0.030	-	-	-	-	-	-	-	<0.030	-	-	-	-
trans-1,3-Dichloropropene	µg/g	0.03	NR	-	<0.030	-	-	-	-	-	-	-	<0.030	-	-	-	-
1,3-Dichloropropene	µg/g	0.042	0.18	-	<0.042	-	-	-	-	-	-	-	<0.042	-	-	-	-
Ethylene Dibromide	µg/g	0.05	0.05	-	<0.050	-	-	-	-	-	-	-	<0.050	-	-	-	-
Hexane (n)	µg/g	0.05	46	-	<0.050	-	-	-	-	-	-	-	<0.050	-	-	-	-
Methyl Ethyl Ketone	µg/g	0.5	70	-	<0.50	-	-	-	-	-	-	-	<0.50	-	-	-	-
Methyl Isobutyl Ketone	µg/g	0.5	31	-	<0.50	-	-	-	-	-	-	-	<0.50	-	-	-	-
Methyl Tert-Butyl Ether	µg/g	0.05	11	-	<0.050	-	-	-	-	-	-	-	<0.050	-	-	-	-
Methylene Chloride	µg/g	0.05	1.6	-	<0.050	-	-	-	-	-	-	-	<0.050	-	-	-	-
Styrene	µg/g	0.05	34	-	<0.050	-	-	-	-	-	-	-	<0.050	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/g	0.05	0.087	-	<0.050	-	-	-	-	-	-	-	<0.050	-	-	-	-
1,1,1,2,2-Tetrachloroethane	µg/g	0.05	0.05	-	<0.050	-	-	-	-	-	-	-	<0.050	-	-	-	-
Tetrachloroethylene	µg/g	0.05	4.5	-	<0.050	-	-	-	-	-	-	-	<0.050	-	-	-	-
Toluene	µg/g	0.08	68	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080	<0.080
1,1,1-Trichloroethane	µg/g	0.05	6.1	-	<0.050	-	-	-	-	-	-	-	<0.050	-	-	-	-
1,1,2-Trichloroethane	µg/g	0.05	0.05	-	<0.050	-	-	-	-	-	-	-	<0.050	-	-	-	-
Trichloroethylene	µg/g	0.01	0.91	-	<0.010	-	-	-	-	-	-	-	<0.010	-	-	-	-
Trichlorofluoromethane	µg/g	0.05	4	-	<0.050	-	-	-	-	-	-	-	<0.050	-	-	-	-
Vinyl Chloride	µg/g	0.02	0.032	-	<0.020	-	-	-	-	-	-	-	<0.020	-	-	-	-
o-Xylene	µg/g	0.02	NR	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
m+p-Xylene	µg/g	0.03	NR	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
Xylene Mixture	µg/g	0.05	26	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050

Notes:
 2011 Site Condition Standards (SCS) - As identified in 'Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act' (as amended April 15, 2011)

Bold - Exceeds 2011 Table 3 SCS

- * - parameter not analyzed
- RDL - Reported detection limit
- NR - Not Relevant
- NV - No Value
- NA - Not Applicable
- * < - Less than the Reporting Detection Limit

Table 405: Volatile Organic Compounds (VOCs) Analysis in Soil

Parameters	Unit	RDL	2011 Table 3 SCS (I/C/C, Coarse)	BH146-21	BH147-21	BH147-21	BH148-21
				BH146-21 SS2	BH147-21 SS2	BH147-21 SS4	BH148-21 SS2
				2.5-4.5FT	2.5-4.5FT	7.5-9.5FT	2.5-4.5 FT
				L2584522	L2584522	L2584522	L2583126
				L2584522-14	L2584522-2	L2584522-4	L2583126-2
04-May-2021	04-May-2021	04-May-2021	30-Apr-2021				
				0.8-1.4	0.8-1.4	2.3-2.9	0.8-1.4
Volatile Organic Compounds (VOCs)							
Acetone	µg/g	0.5	16	-	-	-	-
Benzene	µg/g	0.0068	0.32	<0.0068	<0.0068	<0.0068	<0.0068
Bromodichloromethane	µg/g	0.05	18	-	-	-	-
Bromoform	µg/g	0.05	0.61	-	-	-	-
Bromomethane	µg/g	0.05	0.05	-	-	-	-
Carbon Tetrachloride	µg/g	0.05	0.21	-	-	-	-
Chlorobenzene	µg/g	0.05	2.4	-	-	-	-
Chloroform	µg/g	0.05	0.47	-	-	-	-
Dibromochloromethane	µg/g	0.05	13	-	-	-	-
1,2-Dichlorobenzene	µg/g	0.05	6.8	-	-	-	-
1,3-Dichlorobenzene	µg/g	0.05	9.6	-	-	-	-
1,4-Dichlorobenzene	µg/g	0.05	0.2	-	-	-	-
Dichlorodifluoromethane	µg/g	0.05	16	-	-	-	-
1,1-Dichloroethane	µg/g	0.05	17	-	-	-	-
1,2-Dichloroethane	µg/g	0.05	0.05	-	-	-	-
1,1-Dichloroethylene	µg/g	0.05	0.064	-	-	-	-
Ethylbenzene	µg/g	0.018	9.5	<0.018	<0.018	<0.018	<0.018
cis-1,2-Dichloroethylene	µg/g	0.05	55	-	-	-	-
trans-1,2-Dichloroethylene	µg/g	0.05	1.3	-	-	-	-
1,2-Dichloropropane	µg/g	0.05	0.16	-	-	-	-
cis-1,3-Dichloropropene	µg/g	0.03	NR	-	-	-	-
trans-1,3-Dichloropropene	µg/g	0.03	NR	-	-	-	-
1,3-Dichloropropene	µg/g	0.042	0.18	-	-	-	-
Ethylene Dibromide	µg/g	0.05	0.05	-	-	-	-
Hexane (n)	µg/g	0.05	46	-	-	-	-
Methyl Ethyl Ketone	µg/g	0.5	70	-	-	-	-
Methyl Isobutyl Ketone	µg/g	0.5	31	-	-	-	-
Methyl Tert-Butyl Ether	µg/g	0.05	11	-	-	-	-
Methylene Chloride	µg/g	0.05	1.6	-	-	-	-
Styrene	µg/g	0.05	34	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/g	0.05	0.087	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/g	0.05	0.05	-	-	-	-
Tetrachloroethylene	µg/g	0.05	4.5	-	-	-	-
Toluene	µg/g	0.08	68	<0.080	<0.080	<0.080	<0.080
1,1,1-Trichloroethane	µg/g	0.05	6.1	-	-	-	-
1,1,2-Trichloroethane	µg/g	0.05	0.05	-	-	-	-
Trichloroethylene	µg/g	0.01	0.91	-	-	-	-
Trichlorofluoromethane	µg/g	0.05	4	-	-	-	-
Vinyl Chloride	µg/g	0.02	0.032	-	-	-	-
o-Xylene	µg/g	0.02	NR	<0.020	<0.020	<0.020	<0.020
m+p-Xylene	µg/g	0.03	NR	<0.030	<0.030	<0.030	<0.030
Xylene Mixture	µg/g	0.05	26	<0.050	<0.050	<0.050	<0.050

Notes:

2011 Site Condition Standards (SCS) - As identified in 'Soil, Ground Water and Sediment Standards for Use Under Part XV.1 of the Environmental Protection Act' (as amended April 15, 2011)

Bold - Exceeds 2011 Table 3 SCS

"-" - parameter not analyzed

RDL - Reported detection limit

NR - Not Relevant

NV - No Value

NA - Not Applicable

"<" - Less than the Reporting Detection Limit

Table 501: Metals and Inorganics Analysis in Soil

Parameters	Unit	RDL	Table 1 ESQS (R/P/I or I/C/C)	Table 3.1 ESQS (R/P/I)	Table 3.1 ESQS (I/C/C)	Sample Location											
						Sample Name	BH101-21 SS3 5-7 FT	BH102-21 SS2 2.5 4.5 FT	BH103-21 SS3 5-7 FT	BH105-21 SS4 7.5 9.5 FT	BH106-21 SS2 2.5 4.5 FT	BH107-21 SS2 2.5 4.5 FT	BH108-21 SS4 7.5 9.5 FT	BH109-21 SS2 2.5 4.5 FT	BH110-21 SS3 5-7 FT	BH111-21 SS2 2.5 4.5 FT	
						Lab Job #	L2585298	L2585298	L2585298	L2585298	L2585298	L2584509	L2584509	L2584509	L2584509	L2584509	L2584509
						Laboratory ID	L2585298-24	L2585298-19	L2585298-15	L2585298-8	L2585298-2	L2584509-18	L2584509-16	L2584509-10	L2584509-7	L2584509-2	
						Sampling Date	06-May-2021	06-May-2021	06-May-2021	06-May-2021	06-May-2021	05-May-2021	05-May-2021	05-May-2021	05-May-2021	05-May-2021	
						Sample Depth (m bgs)	1.5-2.1	0.8-1.4	1.5-2.1	2.3-2.9	0.8-1.4	0.8-1.4	2.3-2.9	0.8-1.4	1.5-2.1	0.8-1.4	
						Maximum Concentration											
Metals and Inorganics																	
Antimony	µg/g	1	1.3	7.5	40	2.1	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Arsenic	µg/g	1	18	18	18	10.1	3.1	8.3	-	2.5	5.3	3.7	2.4	1.8	<1.0	1.6	
Barium	µg/g	1	220	390	670	382	19.3	9.3	-	20.2	52.5	40.3	24.6	17.8	9.8	24.6	
Beryllium	µg/g	0.5	2.5	4	8	1.29	<0.50	<0.50	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Boron	µg/g	5	36	120	120	30.1	6.9	<5.0	-	5.8	9.3	6.1	5.4	<5.0	<5.0	<5.0	
Boron (Hot Water Soluble)	µg/g	0.1	NA	1.5	2	0.21	-	0.18	-	-	-	-	-	-	-	0.21	
Cadmium	µg/g	0.5	1.2	1.2	1.9	<	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Chromium	µg/g	1	70	160	160	39.3	7.3	6.8	-	12.6	26.3	13	8.6	7.4	5.2	7.8	
Chromium VI	µg/g	0.2	0.66	8	8	0.22	-	<0.20	-	-	-	-	-	-	-	0.22	
Cobalt	µg/g	1	21	22	80	14.8	3.3	1.9	-	2.9	5.6	4.9	3.9	2.1	1.6	2.8	
Copper	µg/g	1	92	140	230	58	19.5	8.7	-	14.8	30.8	18.6	15.6	8.9	6.4	5	
Lead	µg/g	1	120	120	120	672	8.1	4.4	-	10.8	44.5	14.5	6.6	10.6	4	3.1	
Mercury	µg/g	0.005	0.27	0.27	0.27	0.144	-	<0.0050	-	-	-	-	-	-	-	0.144	
Molybdenum	µg/g	1	2	6.9	40	1.4	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Nickel	µg/g	1	82	100	270	30.8	6.6	4.1	-	6.3	13.9	10.9	7.6	4.7	3.9	5.1	
Selenium	µg/g	1	1.5	2.4	5.5	1.5	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Silver	µg/g	0.2	0.5	20	40	0.21	<0.20	<0.20	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
Thallium	µg/g	0.5	1	1	3.3	<	0.5	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
Uranium	µg/g	1	2.5	23	33	1.1	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
Vanadium	µg/g	1	86	86	86	53.3	13.9	16	-	17.5	32.5	24.3	17	13.9	11	16.9	
Zinc	µg/g	5	290	340	340	194	88.9	35.9	-	76.5	155	71.2	48.5	39.1	22.5	15.9	
Electrical Conductivity	mS/cm	0.004	0.57	0.7	1.4	5.56	0.739	-	1.32	1.95	-	1.04	0.69	-	-	-	
Sodium Adsorption Ratio (SAR)	unitless	0.1	2.4	5	12	75.2	3.02	-	20.9	58	-	66.5	25.6	-	-	-	
pH	pH units	0.1	NR	NR	NR	8.2	8.06	-	-	-	-	7.99	-	-	-	-	

Notes:

2020 Excess Soil Quality Standards (ESQS) - As identified in Appendix 1 of the Rules for Soil Management adopted by reference in O.Reg. 406/19 made under the Environmental Protection Act (December 8, 2020)

Bold	- Exceeds Table 1 ESQS (R/P/I or I/C/C)
Bold	- Exceeds Table 3.1 ESQS (R/P/I)
Bold	- Exceeds Table 3.1 ESQS (I/C/C)

*- parameter not analyzed

RDL - Reported detection limit

NR - Not Relevant

NV - No Value

NA - Not Applicable

*- Less than the Reporting Detection Limit

Table 501: Metals and Inorganics Analysis in Soil

Parameters	Unit	RDL	Table 1 ESQS (R/P/I or I/C/C)	Table 3.1 ESQS (R/P/I)	Table 3.1 ESQS (I/C/C)	BH111-21	BH112-21	BH112-21	BH114-21	BH114-21	BH115-21	BH116-21	BH117-21	BH117-21	BH118-21	BH118-21	BH119-21
						BH111-21 SS3 5-7FT	BH112-21 SS2 2.5-4.5FT	BH112-21 SS4 7.5-9.5FT	BH114-21 SS2 2.5-4.0 FT	BH114-21 SS3 5-7 FT	BH115-21 SS2 2.5-4.5 FT	BH116-21 SS4 7.5-9.5 FT	BH117-21 SS2 2.5-4.5 FT	BH117-21 SS3 5-7 FT	BH118-21 SS2 2.5-4.5 FT	BH118-21 SS3 5-7 FT	BH119-21 SS4 7.5-9.5 FT
						L2584509	L2584522	L2584522	L2583155	L2583155	L2583155	L2583155	L2583126	L2583126	L2583126	L2583126	L2583126
						L2584509-3	L2584522-18	L2584522-20	L2583155-12	L2583155-13	L2583155-7	L2583155-5	L2583126-22	L2583126-23	L2583126-18	L2583126-19	L2583126-16
						05-May-2021	04-May-2021	04-May-2021	03-May-2021	03-May-2021	03-May-2021	03-May-2021	30-Apr-2021	30-Apr-2021	30-Apr-2021	30-Apr-2021	30-Apr-2021
	1.5-2.1	0.8-1.4	2.3-2.9	0.8-1.4	1.5-2.1	0.8-1.4	2.3-2.9	0.8-1.4	1.5-2.1	0.8-1.4	1.5-2.1	2.3-2.9					
Metals and Inorganics																	
Antimony	µg/g	1	1.3	7.5	40	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	2	<1.0	<1.0	<1.0
Arsenic	µg/g	1	18	18	18	2.2	3	2.9	4.3	1.8	2.5	1.6	2.6	5	3	10.1	3.7
Barium	µg/g	1	220	390	670	15.6	19.5	43.4	23.8	10.5	13.5	10.4	77.8	382	34.6	86.4	12.2
Beryllium	µg/g	0.5	2.5	4	8	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.76	<0.50
Boron	µg/g	5	36	120	120	<5.0	6.5	7.6	6.3	6.1	6.6	<5.0	9.5	30.1	7.1	13.9	<5.0
Boron (Hot Water Soluble)	µg/g	0.1	NA	1.5	2	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	µg/g	0.5	1.2	1.2	1.9	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chromium	µg/g	1	70	160	160	6.7	12.4	12.6	11.9	5.4	7.9	5.9	9.9	23.5	9	26.6	4.9
Chromium VI	µg/g	0.2	0.66	8	8	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	µg/g	1	21	22	80	2.8	3.4	5.4	3.8	1.7	2.7	2.2	2.8	4.4	3.7	11.9	1.9
Copper	µg/g	1	92	140	230	8.7	19.5	13.7	18.9	10.2	15	8.9	23.9	58	21.5	31	5.1
Lead	µg/g	1	120	120	120	4.2	17.8	6.4	9	7.3	6.8	4.1	117	672	26.1	14.3	3.1
Mercury	µg/g	0.005	0.27	0.27	0.27	-	-	-	-	-	-	-	-	-	-	-	-
Molybdenum	µg/g	1	2	6.9	40	<1.0	1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.4	<1.0
Nickel	µg/g	1	82	100	270	5.5	7.3	11	9.3	3.7	6	4.2	6	10.2	7.8	26.2	3.7
Selenium	µg/g	1	1.5	2.4	5.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.5	<1.0	<1.0	<1.0
Silver	µg/g	0.2	0.5	20	40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.21	<0.20	<0.20	<0.20
Thallium	µg/g	0.5	1	1	3.3	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Uranium	µg/g	1	2.5	23	33	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.1	<1.0
Vanadium	µg/g	1	86	86	86	13.7	18.2	24.6	22.7	10.7	17.8	14	12.7	17.8	16.6	38.1	9.8
Zinc	µg/g	5	290	340	340	27.8	80.4	29.2	50.7	36.5	61.2	21.1	123	194	146	76.1	17.7
Electrical Conductivity	mS/cm	0.004	0.57	0.7	1.4	0.649	0.264	-	-	-	-	5.56	-	-	-	1.36	1.17
Sodium Adsorption Ratio (SAR)	unitless	0.1	2.4	5	12	25.1	8.35	-	17.5	-	-	16	-	-	-	60.3	25.4
pH	pH units	0.1	NR	NR	NR	7.66	-	-	7.92	-	-	-	-	-	-	-	7.97

Notes:

2020 Excess Soil Quality Standards (ESQS) - As identified in Appendix 1 of the Rules for Soil Management adopted by reference in O.Reg. 406/19 made under the Environmental Protection Act (December 8, 2020)

Bold	- Exceeds Table 1 ESQS (R/P/I or I/C/C)
Bold	- Exceeds Table 3.1 ESQS (R/P/I)
Bold	- Exceeds Table 3.1 ESQS (I/C/C)

*- parameter not analyzed

RDL - Reported detection limit

NR - Not Relevant

NV - No Value

NA - Not Applicable

*- Less than the Reporting Detection Limit

Table 501: Metals and Inorganics Analysis in Soil

Parameters	Unit	RDL	Table 1 ESQS (R/P/I or I/C/C)	Table 3.1 ESQS (R/P/I)	Table 3.1 ESQS (I/C/C)	BH120-21	BH121-21	BH122-21	BH123-21	BH124-21	BH125-21	BH125-21	BH126-21	BH126-21	BH127-21	BH128-21	BH128-21
						BH120-21 SS3 5-7 FT	BH121-21 SS2 2.5-4.5 FT	BH122-21 SS2 2.5-4.5FT	BH123-21 GS1B 18"-2.5FT	BH124-21 SS3 5-7FT	BH125-21 SS2 2.5-4.5FT	BH125-21 SS3 5-7FT	BH126-21 SS2 2.5-4.5FT	BH126-21 SS3 5-7FT	BH127-21 SS3 5-7FT	BH128-21 SS2 2.5-4.5FT	BH128-21 SS3 5-7FT
						L2583126	L2583126	L2586911	L2586911	L2586898	L2586911	L2586911	L2586911	L2586911	L2586911	L2586898	L2586898
						L2583126-11	L2583126-6	L2586911-2	L2586911-12	L2586898-3	L2586911-19	L2586911-20	L2586911-7	L2586911-8	L2586898-8	L2586898-13	L2586898-14
30-Apr-2021	30-Apr-2021	11-May-2021	11-May-2021	12-May-2021	11-May-2021	11-May-2021	11-May-2021	11-May-2021	11-May-2021	12-May-2021	12-May-2021	12-May-2021					
1.5-2.1	0.8-1.4	0.8-1.4	0.5-0.8	1.5-2.1	0.8-1.4	1.5-2.1	0.8-1.4	1.5-2.1	0.8-1.4	1.5-2.1	0.8-1.4	1.5-2.1					
Metals and Inorganics																	
Antimony	µg/g	1	1.3	7.5	40	<1.0	<1.0	2.1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic	µg/g	1	18	18	18	1.7	4.2	3.5	3.7	2.7	1.8	3.7	1.9	2.6	2.4	2.4	2.5
Barium	µg/g	1	220	390	670	13.3	54.7	35.5	38.9	12.5	25.1	14.7	16.3	26.3	32.7	22	27.9
Beryllium	µg/g	0.5	2.5	4	8	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Boron	µg/g	5	36	120	120	<5.0	9.4	8.7	8.5	<5.0	<5.0	<5.0	<5.0	5.2	5.3	<5.0	<5.0
Boron (Hot Water Soluble)	µg/g	0.1	NA	1.5	2	-	-	-	-	-	-	-	-	-	-	-	0.16
Cadmium	µg/g	0.5	1.2	1.2	1.9	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Chromium	µg/g	1	70	160	160	7.3	15.2	18	12.7	7.7	11.2	11.2	10.9	11.8	15.6	8	9
Chromium VI	µg/g	0.2	0.66	8	8	-	-	-	-	-	-	-	-	-	-	-	<0.20
Cobalt	µg/g	1	21	22	80	2.6	5.9	3.8	4	2.8	3.4	3.1	3.4	3.3	3	2.9	3.2
Copper	µg/g	1	92	140	230	7.3	37.9	24.4	25.2	14.2	5	14.4	5.3	12.6	12.9	12.8	13.1
Lead	µg/g	1	120	120	120	4.6	49.5	39.5	66.5	7	6.8	6.8	7.5	6.3	20.4	28.8	19.8
Mercury	µg/g	0.005	0.27	0.27	0.27	-	-	-	-	-	-	-	-	-	-	-	0.126
Molybdenum	µg/g	1	2	6.9	40	<1.0	<1.0	1.4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Nickel	µg/g	1	82	100	270	5.6	12.8	9.7	8.2	6.3	6.7	7.2	5.4	7.4	6.6	5.8	6.6
Selenium	µg/g	1	1.5	2.4	5.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Silver	µg/g	0.2	0.5	20	40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Thallium	µg/g	0.5	1	1	3.3	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Uranium	µg/g	1	2.5	23	33	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Vanadium	µg/g	1	86	86	86	17.1	24.2	18.2	24.9	14.5	27.7	26.8	27.2	24.8	15.5	14.7	17.6
Zinc	µg/g	5	290	340	340	24.5	95.3	98.8	145	49.6	40.1	41.9	26.9	37.1	53.9	51.6	51.3
Electrical Conductivity	mS/cm	0.004	0.57	0.7	1.4	-	-	1.22	-	0.502	-	-	1.43	-	0.771	-	-
Sodium Adsorption Ratio (SAR)	unitless	0.1	2.4	5	12	-	-	71.9	-	35.5	-	-	58.6	-	36.2	-	-
pH	pH units	0.1	NR	NR	NR	-	-	7.78	-	7.98	-	-	-	-	-	-	-

Notes:

2020 Excess Soil Quality Standards (ESQS) - As identified in Appendix 1 of the Rules for Soil Management adopted by reference in O.Reg. 406/19 made under the Environmental Protection Act (December 8, 2020)

Bold	- Exceeds Table 1 ESQS (R/P/I or I/C/C)
Bold	- Exceeds Table 3.1 ESQS (R/P/I)
Bold	- Exceeds Table 3.1 ESQS (I/C/C)

- *- parameter not analyzed
- RDL - Reported detection limit
- NR - Not Relevant
- NV - No Value
- NA - Not Applicable
- *- - Less than the Reporting Detection Limit

Table 501: Metals and Inorganics Analysis in Soil

Parameters	Unit	RDL	Table 1 ESQS (R/P/I or I/C/C)	Table 3.1 ESQS (R/P/I)	Table 3.1 ESQS (I/C/C)	BH130-21	BH131-21	BH132-21	BH132-21	BH133-21	BH134-21	BH135-21	BH135-21	BH137-21	BH137-21	BH138-21	BH139-21
						BH130-21 SS2 2.5-3.5FT	BH131-21 SS2 2.5-3.5FT	BH132-21 SS2 2.5-4.5FT	BH132-21 SS4 7.5-9.5FT	BH 133-21 SS2 2.5-4.5 FT	BH 134-21 SS3 5-7 FT	BH 135-21 SS2 2.5-4.5 FT	BH 135-21 SS4 7.5-9.5 FT	BH 137-21 SS2 2.5-4.5 FT	BH 137-21 SS3 5-7 FT	BH 138-21 SS2 2.5-4.5 FT	BH 139-21 SS2 2.5-4.5 FT
						L2587890	L2587890	L2587890	L2587890	L2581807	L2581807	L2581807	L2581807	L2581807	L2581807	L2581807	L2581830
						L2587890-3	L2587890-5	L2587890-7	L2587890-9	L2581807-2	L2581807-7	L2581807-10	L2581807-12	L2581807-18	L2581807-19	L2581807-22	L2581830-2
						13-May-2021	13-May-2021	13-May-2021	13-May-2021	27-Apr-2021	27-Apr-2021	27-Apr-2021	27-Apr-2021	27-Apr-2021	27-Apr-2021	27-Apr-2021	28-Apr-2021
0.8-1.1	0.8-1.1	0.8-1.4	2.3-2.9	0.8-1.4	1.5-2.1	0.8-1.4	2.3-2.9	0.8-1.4	1.5-2.1	0.8-1.4	0.8-1.4						
Metals and Inorganics																	
Antimony	µg/g	1	1.3	7.5	40	-	<1.0	1	<1.0	<1.0	<1.0	<1.0	-	-	<1.0	<1.0	<1.0
Arsenic	µg/g	1	18	18	18	-	2.7	2.1	1.4	2.3	2	3.7	-	-	3.5	3.4	6.6
Barium	µg/g	1	220	390	670	-	25.9	26.3	9	24	16.1	40.2	-	-	61	26.3	50.8
Beryllium	µg/g	0.5	2.5	4	8	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	-	<0.50	<0.50	0.66
Boron	µg/g	5	36	120	120	-	8.5	<5.0	<5.0	<5.0	5.2	5	-	-	9.5	8.4	10
Boron (Hot Water Soluble)	µg/g	0.1	NA	1.5	2	-	-	-	-	0.18	-	-	-	-	-	-	-
Cadmium	µg/g	0.5	1.2	1.2	1.9	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	-	<0.50	<0.50	<0.50
Chromium	µg/g	1	70	160	160	-	9.4	10.1	7.2	9.4	7.5	12	-	-	17.3	12.2	18.3
Chromium VI	µg/g	0.2	0.66	8	8	-	-	-	-	<0.20	-	-	-	-	-	-	-
Cobalt	µg/g	1	21	22	80	-	3.3	3	1.8	2.7	2.7	4.3	-	-	7.1	3.7	6
Copper	µg/g	1	92	140	230	-	13	8.9	5	11.1	13	17.5	-	-	18.8	23.6	45.3
Lead	µg/g	1	120	120	120	-	29.4	32	4.4	26.7	5.8	49	-	-	7.7	19.7	214
Mercury	µg/g	0.005	0.27	0.27	0.27	-	-	-	-	0.125	-	-	-	-	-	-	-
Molybdenum	µg/g	1	2	6.9	40	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	<1.0	<1.0	<1.0
Nickel	µg/g	1	82	100	270	-	7.1	6.1	3.8	5.4	5.5	8.2	-	-	14.9	8.3	16.2
Selenium	µg/g	1	1.5	2.4	5.5	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	<1.0	<1.0	<1.0
Silver	µg/g	0.2	0.5	20	40	-	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	-	-	<0.20	<0.20	<0.20
Thallium	µg/g	0.5	1	1	3.3	-	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	-	-	<0.50	<0.50	<0.50
Uranium	µg/g	1	2.5	23	33	-	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-	<1.0	<1.0	<1.0
Vanadium	µg/g	1	86	86	86	-	17.1	24	20.9	19.8	17.6	24.7	-	-	27.9	16	33.7
Zinc	µg/g	5	290	340	340	-	60.4	45.9	28.9	42.9	29.1	67.8	-	-	44.6	85.8	114
Electrical Conductivity	mS/cm	0.004	0.57	0.7	1.4	1.33	-	-	1.15	1.74	1.64	-	2.24	1.68	-	-	3.48
Sodium Adsorption Ratio (SAR)	unitless	0.1	2.4	5	12	57.5	-	-	47.8	68.4	49.7	-	66.8	75.2	-	-	64.1
pH	pH units	0.1	NR	NR	NR	-	8.2	-	-	-	7.96	-	-	-	-	8.19	-

Notes:

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Bold	- Exceeds Table 3.1 ESQS (R/P/I)
Bold	- Exceeds Table 3.1 ESQS (I/C/C)

*- parameter not analyzed

RDL - Reported detection limit

NR - Not Relevant

NV - No Value

NA - Not Applicable

*< - Less than the Reporting Detection Limit

Table 501: Metals and Inorganics Analysis in Soil

Parameters	Unit	RDL	Table 1 ESQS (R/P/I or I/C/C)	Table 3.1 ESQS (R/P/I)	Table 3.1 ESQS (I/C/C)	BH140-21	BH141-21	BH142-21	BH143-21	BH144-21	BH145-21	BH146-21	BH147-21	BH148-21
						BH 140-21 GS1B	BH 141-21 SS3 5-	BH 142-21 SS2	BH 143-21 SS2	BH144-21 SS2 2.5	BH145-21 SS2 2.5	BH146-21 SS3 5-	BH147-21 SS2 2.5	BH148-21 SS2 2.5
						12"-2.5 FT	7 FT	2.5-4.5 FT	2.5-4.5 FT	4.5FT	4.5FT	7FT	4.5FT	4.5 FT
						L2581830	L2581830	L2581830	L2581830	L2584522	L2584522	L2584522	L2584522	L2583126
						L2581830-9	L2581830-12	L2581830-15	L2581830-19	L2584522-6	L2584522-10	L2584522-15	L2584522-2	L2583126-2
28-Apr-2021	28-Apr-2021	28-Apr-2021	28-Apr-2021	04-May-2021	04-May-2021	04-May-2021	04-May-2021	30-Apr-2021						
						0.3-0.8	1.5-2.1	0.8-1.4	0.8-1.4	0.8-1.4	0.8-1.4	1.5-2.1	0.8-1.4	0.8-1.4
Metals and Inorganics														
Antimony	µg/g	1	1.3	7.5	40	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0
Arsenic	µg/g	1	18	18	18	3.8	6.7	3.9	2.9	-	1.9	2.8	1.4	2.1
Barium	µg/g	1	220	390	670	50.1	18.9	44.4	24	-	10	184	19.2	35.7
Beryllium	µg/g	0.5	2.5	4	8	<0.50	<0.50	<0.50	<0.50	-	<0.50	1.29	<0.50	<0.50
Boron	µg/g	5	36	120	120	5.9	12.1	7.6	6.3	-	<5.0	16.3	5.2	5.5
Boron (Hot Water Soluble)	µg/g	0.1	NA	1.5	2	-	-	-	0.2	-	-	-	-	-
Cadmium	µg/g	0.5	1.2	1.2	1.9	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	<0.50
Chromium	µg/g	1	70	160	160	16	8.7	19.8	10.5	-	5.4	39.3	4.9	12
Chromium VI	µg/g	0.2	0.66	8	8	-	-	-	<0.20	-	-	-	-	-
Cobalt	µg/g	1	21	22	80	4.5	4.5	4.4	3	-	2	14.8	1.9	3.6
Copper	µg/g	1	92	140	230	20.6	28.7	30.4	13.9	-	8.6	18.3	6.7	7.7
Lead	µg/g	1	120	120	120	61.6	16.3	19.8	20.1	-	7.7	16.3	13.3	6.4
Mercury	µg/g	0.005	0.27	0.27	0.27	-	-	-	0.0565	-	-	-	-	-
Molybdenum	µg/g	1	2	6.9	40	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0
Nickel	µg/g	1	82	100	270	8.8	8.6	9.7	6.6	-	4.1	30.8	3.8	7.3
Selenium	µg/g	1	1.5	2.4	5.5	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0
Silver	µg/g	0.2	0.5	20	40	<0.20	<0.20	<0.20	<0.20	-	<0.20	<0.20	<0.20	<0.20
Thallium	µg/g	0.5	1	1	3.3	<0.50	<0.50	<0.50	<0.50	-	<0.50	<0.50	<0.50	<0.50
Uranium	µg/g	1	2.5	23	33	<1.0	<1.0	<1.0	<1.0	-	<1.0	<1.0	<1.0	<1.0
Vanadium	µg/g	1	86	86	86	24.2	23.1	25	19.1	-	14.1	53.3	9.7	24.1
Zinc	µg/g	5	290	340	340	110	71.9	80.6	56.2	-	31.2	91	26.6	39.6
Electrical Conductivity	mS/cm	0.004	0.57	0.7	1.4	-	1.12	2.1	-	1.04	-	3.93	-	1.04
Sodium Adsorption Ratio (SAR)	unitless	0.1	2.4	5	12	-	31	63.5	-	11.4	-	47	-	37
pH	pH units	0.1	NR	NR	NR	-	-	8.01	-	-	-	7.97	-	7.79

Notes:

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Bold	- Exceeds Table 1 ESQS (R/P/I or I/C/C)
Bold	- Exceeds Table 3.1 ESQS (R/P/I)
Bold	- Exceeds Table 3.1 ESQS (I/C/C)

*- parameter not analyzed

RDL - Reported detection limit

NR - Not Relevant

NV - No Value

NA - Not Applicable

*- - Less than the Reporting Detection Limit

Table 502: Polychlorinated Biphenyls (PCBs) Analysis in Soil

Parameters	Unit	RDL	Table 1 ESQS (R/P/I or I/C/C)	Table 3.1 ESQS (R/P/I)	Table 3.1 ESQS (I/C/C)	Sample Location			
						Sample Name	BH103-21	BH130-21	
							BH103-21 SS2 2.5-4.5 FT	BH130-21 SS2 2.5-3.5FT	
						Lab Job #	L2585298	L2587890	
						Laboratory ID	L2585298-14	L2587890-3	
						Sampling Date	06-May-2021	13-May-2021	
						Sample Depth (m bgs)	0.8-1.4	0.8-1.1	
Maximum Concentration									
Polychlorinated Biphenyls (PCBs)									
Aroclor 1242	µg/g	0.01	NR	NV	NV	<	0.01	<0.010	<0.010
Aroclor 1248	µg/g	0.01	NR	NV	NV	<	0.01	<0.010	<0.010
Aroclor 1254	µg/g	0.01	NR	NV	NV	<	0.01	<0.010	<0.010
Aroclor 1260	µg/g	0.01	NR	NV	NV	<	0.01	<0.010	<0.010
Total Polychlorinated Biphenyls	µg/g	0.02	0.3	0.35	0.78	<	0.02	<0.020	<0.020

Notes:

2020 Excess Soil Quality Standards (ESQS) - As identified in Appendix 1 of the Rules for Soil Management adopted by reference in O.Reg. 406/19 made under the Environmental Protection Act (December 8, 2020)

Bold	- Exceeds Table 1 ESQS (R/P/I or I/C/C)
Bold	- Exceeds Table 3.1 ESQS (R/P/I)
Bold	- Exceeds Table 3.1 ESQS (I/C/C)

- "-" - parameter not analyzed
- RDL - Reported detection limit
- NR - Not Relevant
- NV - No Value
- NA - Not Applicable
- "<" - Less than the Reporting Detection Limit

Table 503: Polycyclic Aromatic Hydrocarbons (PAHs) Analysis in Soil

Parameters	Unit	RDL	Table 1 ESQS (R/P/I or I/C/C)	Table 3.1 ESQS (R/P/I)	Table 3.1 ESQS (I/C/C)	Sample Location	BH101-21	BH102-21	BH103-21	BH103-21	BH104-21	BH106-21
						Sample Name	BH101-21 SS3 5-7 FT	BH102-21 SS2 2.5-4.5 FT	BH103-21 SS2 2.5-4.5 FT	BH103-21 SS3 5-7 FT	BH104-21 SS2 2.5-4.5 FT	BH106-21 SS2 2.5-4.5 FT
						Lab Job #	L2585298	L2585298	L2585298	L2585298	L2585298	L2585298
						Laboratory ID	L2585298-24	L2585298-19	L2585298-14	L2585298-15	L2585298-10	L2585298-2
						Sampling Date	06-May-2021	06-May-2021	06-May-2021	06-May-2021	06-May-2021	06-May-2021
						Sample Depth (m bgs)	1.5-2.1	0.8-1.4	0.8-1.4	1.5-2.1	0.8-1.4	0.8-1.4
						Maximum Concentration						
Polycyclic Aromatic Hydrocarbons (PAHs)												
Acenaphthene	µg/g	0.05 - 0.4	0.072	14	15	<	0.05	<0.050	<0.050	<0.050	<0.050	<0.050
Acenaphthylene	µg/g	0.05 - 0.125	0.093	0.093	0.093		0.052	<0.050	<0.050	<0.050	<0.050	<0.050
Anthracene	µg/g	0.05 - 0.125	0.16	0.16	0.16	<	0.05	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(a)anthracene	µg/g	0.05 - 0.125	0.36	0.5	1		0.412	<0.050	<0.050	0.227	0.346	0.412
Benzo(a)pyrene	µg/g	0.05 - 0.125	0.3	0.57	0.7		0.926	<0.050	<0.050	0.362	0.501	0.926
Benzo(b)fluoranthene	µg/g	0.05 - 0.125	0.47	5.7	7		0.361	<0.050	<0.050	0.159	0.221	0.361
Benzo(g,h,i)perylene	µg/g	0.05 - 0.15	0.68	6.6	13		0.861	<0.050	<0.050	0.255	0.375	0.861
Benzo(k)fluoranthene	µg/g	0.05 - 0.125	0.48	5.7	7		0.103	<0.050	<0.050	<0.050	<0.050	0.069
Chrysene	µg/g	0.05 - 0.125	2.8	7	14		0.57	<0.050	<0.050	0.268	0.418	0.57
Dibenz(a,h)anthracene	µg/g	0.05 - 0.125	0.1	0.57	0.7		0.494	<0.050	<0.050	0.171	0.237	0.494
Fluoranthene	µg/g	0.05 - 0.5	0.56	0.69	70		0.324	<0.050	<0.050	<0.050	<0.050	<0.050
Fluorene	µg/g	0.05 - 0.125	0.12	6.8	6.8	<	0.05	<0.050	<0.050	<0.050	<0.050	<0.050
Indeno(1,2,3-cd)pyrene	µg/g	0.05 - 0.125	0.23	0.38	0.76		0.365	<0.050	<0.050	0.124	0.164	0.365
1-Methylnaphthalene	µg/g	0.03 - 0.075	0.59	NV	NV	<	0.03	<0.030	<0.030	<0.030	<0.030	<0.030
2-Methylnaphthalene	µg/g	0.03 - 0.075	0.59	NV	NV	<	0.03	<0.030	<0.030	<0.030	<0.030	<0.030
1+2-Methylnaphthalene	µg/g	0.0424 - 0.106	0.59	0.92	8.7	<	0.042	<0.042	<0.042	<0.042	<0.042	<0.042
Naphthalene	µg/g	0.013 - 0.32	0.09	0.59	1.8	<	0.013	<0.013	<0.013	<0.013	<0.013	<0.013
Phenanthrene	µg/g	0.046 - 0.46	0.69	6.2	12		0.144	<0.046	<0.046	<0.046	<0.046	<0.046
Pyrene	µg/g	0.05 - 0.5	1	70	70		0.315	<0.050	<0.050	0.134	0.205	0.259

Notes:

2020 Excess Soil Quality Standards (ESQS) - As identified in Appendix 1 of the Rules for Soil Management adopted by reference in O.Reg. 406/19 made under the Environmental Protection Act (December 8, 2020)

- Bold** - Exceeds Table 1 ESQS (R/P/I or I/C/C)
- Bold** - Exceeds Table 3.1 ESQS (R/P/I)
- Bold** - Exceeds Table 3.1 ESQS (I/C/C)

- "-" - parameter not analyzed
- RDL - Reported detection limit
- NR - Not Relevant
- NV- No Value
- NA - Not Applicable
- "<" - Less than the Reporting Detection Limit

Table 503: Polycyclic Aromatic Hydrocarbons (PAHs) Analysis in Soil

Parameters	Unit	RDL	Table 1 ESQS (R/P/I or I/C/C)	Table 3.1 ESQS (R/P/I)	Table 3.1 ESQS (I/C/C)	BH111-21	BH111-21	BH123-21	BH137-21	BH143-21	BH143-21	BH146-21	BH148-21
						BH111-21 SS2	BH111-21 SS3 5-	BH123-21 GS1B	BH 137-21 SS3 5-	BH 143-21 SS2	BH 143-21 SS3 5-	BH146-21 SS2	BH148-21 SS2
						2.5-45FT	7FT	18"-2.5FT	7 FT	2.5-4.5 FT	7 FT	2.5-4.5FT	2.5-4.5 FT
						L2584509	L2584509	L2586911	L2581807	L2581830	L2581830	L2584522	L2583126
						L2584509-2	L2584509-3	L2586911-12	L2581807-19	L2581830-19	L2581830-20	L2584522-14	L2583126-2
05-May-2021	05-May-2021	11-May-2021	27-Apr-2021	28-Apr-2021	28-Apr-2021	04-May-2021	30-Apr-2021						
Polycyclic Aromatic Hydrocarbons (PAHs)													
Acenaphthene	µg/g	0.05 - 0.4	0.072	14	15	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Acenaphthylene	µg/g	0.05 - 0.125	0.093	0.093	0.093	<0.050	<0.050	0.052	<0.050	<0.050	<0.050	<0.050	<0.050
Anthracene	µg/g	0.05 - 0.125	0.16	0.16	0.16	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(a)anthracene	µg/g	0.05 - 0.125	0.36	0.5	1	<0.050	<0.050	0.249	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(a)pyrene	µg/g	0.05 - 0.125	0.3	0.57	0.7	<0.050	<0.050	0.244	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(b)fluoranthene	µg/g	0.05 - 0.125	0.47	5.7	7	<0.050	<0.050	0.315	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(g,h,i)perylene	µg/g	0.05 - 0.15	0.68	6.6	13	<0.050	<0.050	0.165	<0.050	<0.050	<0.050	<0.050	<0.050
Benzo(k)fluoranthene	µg/g	0.05 - 0.125	0.48	5.7	7	<0.050	<0.050	0.103	<0.050	<0.050	<0.050	<0.050	<0.050
Chrysene	µg/g	0.05 - 0.125	2.8	7	14	<0.050	<0.050	0.217	<0.050	<0.050	<0.050	<0.050	<0.050
Dibenz(a,h)anthracene	µg/g	0.05 - 0.125	0.1	0.57	0.7	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Fluoranthene	µg/g	0.05 - 0.5	0.56	0.69	70	<0.050	<0.050	0.324	<0.050	<0.050	<0.050	<0.050	<0.050
Fluorene	µg/g	0.05 - 0.125	0.12	6.8	6.8	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Indeno(1,2,3-cd)pyrene	µg/g	0.05 - 0.125	0.23	0.38	0.76	<0.050	<0.050	0.153	<0.050	<0.050	<0.050	<0.050	<0.050
1-Methylnaphthalene	µg/g	0.03 - 0.075	0.59	NV	NV	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
2-Methylnaphthalene	µg/g	0.03 - 0.075	0.59	NV	NV	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030	<0.030
1+2-Methylnaphthalene	µg/g	0.0424 - 0.106	0.59	0.92	8.7	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042	<0.042
Naphthalene	µg/g	0.013 - 0.32	0.09	0.59	1.8	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013	<0.013
Phenanthrene	µg/g	0.046 - 0.46	0.69	6.2	12	<0.046	<0.046	0.067	<0.046	<0.046	<0.046	<0.046	<0.046
Pyrene	µg/g	0.05 - 0.5	1	70	70	<0.050	<0.050	0.315	<0.050	<0.050	<0.050	<0.050	<0.050

Notes:

2020 Excess Soil Quality Standards (ESQS) - As identified in Appendix 1 of the Rules for Soil Management adopted by reference in O.Reg. 406/19 made under the Environmental Protection Act (December 8, 2020)

- Bold** - Exceeds Table 1 ESQS (R/P/I or I/C/C)
- Bold** - Exceeds Table 3.1 ESQS (R/P/I)
- Bold** - Exceeds Table 3.1 ESQS (I/C/C)

- "-" - parameter not analyzed
- RDL - Reported detection limit
- NR - Not Relevant
- NV- No Value
- NA - Not Applicable
- "<" - Less than the Reporting Detection Limit

Table 504: Petroleum Hydrocarbons (PHCs) Analysis in Soil

Parameters	Unit	RDL	Table 1 ESQS (R/P/I or I/C/C)	Table 3.1 ESQS (R/P/I)	Table 3.1 ESQS (I/C/C)	Sample Location											
						Sample Name	BH101-21	BH102-21	BH103-21	BH103-21	BH104-21	BH105-21	BH106-21	BH107-21	BH107-21	BH108-21	
							BH101-21 SS4	BH102-21 SS2	BH103-21 SS2	BH103-21 SS3 5-7 FT	BH104-21 SS2	BH105-21 SS4	BH106-21 SS2	BH107-21 SS2	BH107-21 SS4	BH108-21 SS4	
						Lab Job #	L2585298	L2585298	L2585298	L2585298	L2585298	L2585298	L2585298	L2585298	L2585298	L2585298	
						Laboratory ID	L2585298-25	L2585298-19	L2585298-14	L2585298-15	L2585298-10	L2585298-8	L2585298-2	L2585298-18	L2585298-20	L2585298-16	
						Sampling Date	06-May-2021	06-May-2021	06-May-2021	06-May-2021	06-May-2021	06-May-2021	06-May-2021	05-May-2021	05-May-2021	05-May-2021	
						Sample Depth (m bgs)	2.3-2.9	0.8-1.4	0.8-1.4	1.5-2.1	0.8-1.4	2.3-2.9	0.8-1.4	0.8-1.4	2.3-2.9	2.3-2.9	
Maximum Concentration																	
Petroleum Hydrocarbons (PHCs)																	
F1 (C6 to C10)	µg/g	5	25	NV	NV	<	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
F1 (C6 to C10) minus BTEX	µg/g	5	25	25	25	<	5	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
F2 (C10 to C16)	µg/g	10 - 50	10	10	26		22	<10	<50	<10	<10	<10	<10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	50 - 250	240	300	1700		89	<50	4720	442	100	444	89	124	<50	<50	<50
F4 (C34 to C50)	µg/g	50 - 250	120	2800	3300		168	<50	1900	181	<50	249	79	290	<50	<50	<50
Reached Baseline at C50	unitless		NR	NR	NR		NA	YES	NO	NO	YES	NO	YES	NO	YES	YES	YES
F4G (Gravimetric)	µg/g	250	120	2800	3300		730	-	5880	940	-	410	-	960	-	-	-

Notes:

2020 Excess Soil Quality Standards (ESQS) - As identified in Appendix 1 of the Rules for Soil Management adopted by reference in O.Reg. 406/19 made under the Environmental Protection Act (December 8, 2020)

- Bold** - Exceeds Table 1 ESQS (R/P/I or I/C/C)
- Bold** - Exceeds Table 3.1 ESQS (R/P/I)
- Bold** - Exceeds Table 3.1 ESQS (I/C/C)
- Bold** - Detection limit exceeds at least one of Table 1 ESQS (R/P/I or I/C/C), Table 3.1 ESQS (R/P/I), Table 3.1 ESQS (I/C/C)

- * - parameter not analyzed
- RDL - Reported detection limit
- NR - Not Relevant
- NV - No Value
- NA - Not Applicable
- < - Less than the Reporting Detection Limit

Table 504: Petroleum Hydrocarbons (PHCs) Analysis in Soil

Parameters	Unit	RDL	Table 1 ESQS (R/P/I or I/C/C)	Table 3.1 ESQS (R/P/I)	Table 3.1 ESQS (I/C/C)	BH109-21	BH110-21	BH111-21	BH111-21	BH112-21	BH114-21	BH114-21	BH115-21	BH116-21	BH117-21	BH118-21	BH118-21
						BH109-21 SS2 2.5-4.5FT	BH110-21 SS3 5- 7FT	BH111-21 SS2 2.5-4.5FT	BH111-21 SS3 5- 7FT	BH112-21 SS2 2.5-4.5FT	BH114-21 SS2 2.5-4.0 FT	BH114-21 SS3 5- 7 FT	BH115-21 SS2 2.5-4.5 FT	BH116-21 SS4 7.5-9.5 FT	BH117-21 SS2 2.5-4.5 FT	BH118-21 SS2 2.5-4.5 FT	BH118-21 SS3 5- 7 FT
						L2584509	L2584509	L2584509	L2584509	L2584522	L2583155	L2583155	L2583155	L2583155	L2583126	L2583126	L2583126
						L2584509-10	L2584509-7	L2584509-2	L2584509-3	L2584522-18	L2583155-12	L2583155-13	L2583155-7	L2583155-5	L2583126-22	L2583126-18	L2583126-19
						05-May-2021	05-May-2021	05-May-2021	05-May-2021	04-May-2021	03-May-2021	03-May-2021	03-May-2021	03-May-2021	30-Apr-2021	30-Apr-2021	30-Apr-2021
0.8-1.4	1.5-2.1	0.8-1.4	1.5-2.1	0.8-1.4	0.8-1.4	1.5-2.1	0.8-1.4	2.3-2.9	0.8-1.4	0.8-1.4	1.5-2.1						
Petroleum Hydrocarbons (PHCs)																	
F1 (C6 to C10)	µg/g	5	25	NV	NV	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
F1 (C6 to C10) minus BTEX	µg/g	5	25	25	25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
F2 (C10 to C16)	µg/g	10 - 50	10	10	26	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	50 - 250	240	300	1700	82	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	50 - 250	120	2800	3300	284	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Reached Baseline at C50	unitless		NR	NR	NR	NO	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
F4G (Gravimetric)	µg/g	250	120	2800	3300	1470	-	-	-	-	-	-	-	-	-	-	-

Notes:

2020 Excess Soil Quality Standards (ESQS) - As identified in Appendix 1 of the Rules for Soil Management adopted by reference in O.Reg. 406/19 made under the Environmental Protection Act (December 8, 2020)

Bold	- Exceeds Table 1 ESQS (R/P/I or I/C/C)
Bold	- Exceeds Table 3.1 ESQS (R/P/I)
Bold	- Exceeds Table 3.1 ESQS (I/C/C)
Bold	- Detection limit exceeds at least one of Table 1 ESQS (R/P/I or I/C/C), Table 3.1 ESQS (R/P/I), Table 3.1 ESQS (I/C/C)

- * - parameter not analyzed
- RDL - Reported detection limit
- NR - Not Relevant
- NV - No Value
- NA - Not Applicable
- "<" - Less than the Reporting Detection Limit

Table 504: Petroleum Hydrocarbons (PHCs) Analysis in Soil

Parameters	Unit	RDL	Table 1 ESQS (R/P/I or I/C/C)	Table 3.1 ESQS (R/P/I)	Table 3.1 ESQS (I/C/C)	BH119-21	BH121-21	BH122-21	BH122-21	BH123-21	BH124-21	BH125-21	BH126-21	BH127-21	BH128-21	BH128-21	BH130-21
						BH119-21 SS4 7.5-9.5 FT	BH121-21 SS2 2.5-4.5 FT	BH122-21 SS2 2.5-4.5FT	BH122-21 SS4 7.5-9.5FT	BH123-21 GS1B 18"-2.5FT	BH124-21 SS3 5- 7FT	BH125-21 SS3 5- 7FT	BH126-21 SS2 2.5-4.5FT	BH127-21 SS3 5-7F	BH128-21 SS2 2.5-4.5	BH128-21 SS3 5-7F	BH130-21 SS2 2.5-3.5FT
						L2583126	L2583126	L2586911	L2586911	L2586911	L2586898	L2586911	L2586911	L2586898	L2586898	L2586898	L2587890
						L2583126-16	L2583126-6	L2586911-2	L2586911-4	L2586911-12	L2586898-3	L2586911-20	L2586911-7	L2586898-8	L2586898-13	L2586898-14	L2587890-3
						30-Apr-2021	30-Apr-2021	11-May-2021	11-May-2021	11-May-2021	12-May-2021	11-May-2021	11-May-2021	5/12/2021 9:50	5/12/2021 11:20	5/12/2021 11:30	13-May-2021
						2.3-2.9	0.8-1.4	0.8-1.4	2.3-2.9	0.5-0.8	1.5-2.1	1.5-2.1	0.8-1.4	1.5-2.1	0.8-1.4	1.5-2.1	0.8-1.1
Petroleum Hydrocarbons (PHCs)																	
F1 (C6 to C10)	µg/g	5	25	NV	NV	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
F1 (C6 to C10) minus BTEX	µg/g	5	25	25	25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
F2 (C10 to C16)	µg/g	10 - 50	10	10	26	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	50 - 250	240	300	1700	<50	55	72	<50	50	<50	<50	<50	79	<50	<50	<50
F4 (C34 to C50)	µg/g	50 - 250	120	2800	3300	<50	<50	60	<50	94	<50	<50	<50	168	<50	<50	<50
Reached Baseline at C50	unitless		NR	NR	NR	YES	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES	YES
F4G (Gravimetric)	µg/g	250	120	2800	3300	-	-	-	-	-	-	-	-	700	-	-	-

Notes:

2020 Excess Soil Quality Standards (ESQS) - As identified in Appendix 1 of the Rules for Soil Management adopted by reference in O.Reg. 406/19 made under the Environmental Protection Act (December 8, 2020)

Bold	- Exceeds Table 1 ESQS (R/P/I or I/C/C)
Bold	- Exceeds Table 3.1 ESQS (R/P/I)
Bold	- Exceeds Table 3.1 ESQS (I/C/C)
Bold	- Detection limit exceeds at least one of Table 1 ESQS (R/P/I or I/C/C), Table 3.1 ESQS (R/P/I), Table 3.1 ESQS (I/C/C)

- "-" - parameter not analyzed
- RDL - Reported detection limit
- NR - Not Relevant
- NV - No Value
- NA - Not Applicable
- "<" - Less than the Reporting Detection Limit

Table 504: Petroleum Hydrocarbons (PHCs) Analysis in Soil

Parameters	Unit	RDL	Table 1 ESQS (R/P/I or I/C/C)	Table 3.1 ESQS (R/P/I)	Table 3.1 ESQS (I/C/C)	BH131-21	BH132-21	BH132-21	BH133-21	BH134-21	BH135-21	BH135-21	BH136-21	BH137-21
						BH131-21 SS2 2.5-3.5FT	BH132-21 SS2 2.5-4.5FT	BH132-21 SS4 7.5-9.5FT	BH 133-21 SS2 2.5-4.5 FT	BH 134-21 SS3 5- 7 FT	BH 135-21 SS2 2.5-4.5 FT	BH 135-21 SS4 7.5-9.5 FT	BH 136-21 SS3 5- 7 FT	BH 137-21 SS2 2.5-4.5 FT
						L2587890	L2587890	L2587890	L2581807	L2581807	L2581807	L2581807	L2581807	
						L2587890-5	L2587890-7	L2587890-9	L2581807-2	L2581807-7	L2581807-10	L2581807-12	L2581807-15	L2581807-18
						13-May-2021	13-May-2021	13-May-2021	27-Apr-2021	27-Apr-2021	27-Apr-2021	27-Apr-2021	27-Apr-2021	27-Apr-2021
						0.8-1.1	0.8-1.4	2.3-2.9	0.8-1.4	1.5-2.1	0.8-1.4	2.3-2.9	1.5-2.1	0.8-1.4
Petroleum Hydrocarbons (PHCs)														
F1 (C6 to C10)	µg/g	5	25	NV	NV	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
F1 (C6 to C10) minus BTEX	µg/g	5	25	25	25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
F2 (C10 to C16)	µg/g	10 - 50	10	10	26	<10	<10	<10	<10	<10	22	<10	<10	<10
F3 (C16 to C34)	µg/g	50 - 250	240	300	1700	<50	<50	<50	<50	<50	89	<50	<50	<50
F4 (C34 to C50)	µg/g	50 - 250	120	2800	3300	126	<50	<50	<50	<50	<50	<50	<50	<50
Reached Baseline at C50	unitless		NR	NR	NR	NO	YES	YES	YES	YES	YES	YES	YES	YES
F4G (Gravimetric)	µg/g	250	120	2800	3300	670	-	-	-	-	-	-	-	-

Notes:

2020 Excess Soil Quality Standards (ESQS) - As identified in Appendix 1 of the Rules for Soil Management adopted by reference in O.Reg. 406/19 made under the Environmental Protection Act (December 8, 2020)

- Bold** - Exceeds Table 1 ESQS (R/P/I or I/C/C)
- Bold** - Exceeds Table 3.1 ESQS (R/P/I)
- Bold** - Exceeds Table 3.1 ESQS (I/C/C)
- Bold** - Detection limit exceeds at least one of Table 1 ESQS (R/P/I or I/C/C), Table 3.1 ESQS (R/P/I), Table 3.1 ESQS (I/C/C)

- * - parameter not analyzed
- RDL - Reported detection limit
- NR - Not Relevant
- NV - No Value
- NA - Not Applicable
- "<" - Less than the Reporting Detection Limit

Table 504: Petroleum Hydrocarbons (PHCs) Analysis in Soil

Parameters	Unit	RDL	Table 1 ESQS (R/P/I or I/C/C)	Table 3.1 ESQS (R/P/I)	Table 3.1 ESQS (I/C/C)	BH137-21	BH139-21	BH139-21	BH141-21	BH142-21	BH143.21	BH144-21	BH145-21	BH146-21	BH147-21	BH147-21	BH148-21
						BH 137-21 SS3 5-7 FT	BH 139-21 SS2 2.5-4.5 FT	BH 139-21 SS4 7.5-9.5 FT	BH 141-21 SS3 5-7 FT	BH 142-21 SS2 2.5-4.5 FT	BH 143-21 SS2 2.5-4.5 FT	BH144-21 SS2 2.5-4.5FT	BH145-21 SS2 2.5-4.5FT	BH146-21 SS2 2.5-4.5FT	BH147-21 SS2 2.5-4.5FT	BH147-21 SS4 7.5-9.5FT	BH148-21 SS2 2.5-4.5 FT
						L2581807	L2581830	L2581830	L2581830	L2581830	L2581830	L2584522	L2584522	L2584522	L2584522	L2584522	L2583126
						L2581807-19	L2581830-2	L2581830-4	L2581830-12	L2581830-15	L2581830-19	L2584522-6	L2584522-10	L2584522-14	L2584522-2	L2584522-4	L2583126-2
						27-Apr-2021	28-Apr-2021	28-Apr-2021	28-Apr-2021	28-Apr-2021	28-Apr-2021	04-May-2021	04-May-2021	04-May-2021	04-May-2021	04-May-2021	30-Apr-2021
						1.5-2.1	0.8-1.4	2.3-2.9	1.5-2.1	0.8-1.4	0.8-1.4	0.8-1.4	0.8-1.4	0.8-1.4	0.8-1.4	2.3-2.9	0.8-1.4
Petroleum Hydrocarbons (PHCs)																	
F1 (C6 to C10)	µg/g	5	25	NV	NV	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
F1 (C6 to C10) minus BTEX	µg/g	5	25	25	25	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
F2 (C10 to C16)	µg/g	10 - 50	10	10	26	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
F3 (C16 to C34)	µg/g	50 - 250	240	300	1700	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
F4 (C34 to C50)	µg/g	50 - 250	120	2800	3300	<50	<50	<50	<50	67	78	<50	<50	<50	<50	<50	<50
Reached Baseline at C50	unitless		NR	NR	NR	YES	YES	YES	YES	YES	NO	YES	YES	YES	YES	YES	YES
F4G (Gravimetric)	µg/g	250	120	2800	3300	-	-	-	-	-	730	-	-	-	-	-	-

Notes:

2020 Excess Soil Quality Standards (ESQS) - As identified in Appendix 1 of the Rules for Soil Management adopted by reference in O.Reg. 406/19 made under the Environmental Protection Act (December 8, 2020)

Bold	- Exceeds Table 1 ESQS (R/P/I or I/C/C)
Bold	- Exceeds Table 3.1 ESQS (R/P/I)
Bold	- Exceeds Table 3.1 ESQS (I/C/C)
Bold	- Detection limit exceeds at least one of Table 1 ESQS (R/P/I or I/C/C), Table 3.1 ESQS (R/P/I), Table 3.1 ESQS (I/C/C)

- * - parameter not analyzed
- RDL - Reported detection limit
- NR - Not Relevant
- NV - No Value
- NA - Not Applicable
- "<" - Less than the Reporting Detection Limit

Table 505: Volatile Organic Compounds (VOCs) Analysis in Soil

Parameters	Unit	RDL	Table 1 ESQS (R/P/I or I/C/C)	Table 3.1 ESQS (R/P/I)	Table 3.1 ESQS (I/C/C)	BH145-21	BH146-21	BH147-21	BH147-21	BH148-21
						BH145-21 SS2	BH146-21 SS2	BH147-21 SS2	BH147-21 SS4	BH148-21 SS2
						2.5-4.5FT	2.5-4.5FT	2.5-4.5FT	7.5-9.5FT	2.5-4.5 FT
						L2584522	L2584522	L2584522	L2584522	L2583126
						L2584522-10	L2584522-14	L2584522-2	L2584522-4	L2583126-2
04-May-2021	04-May-2021	04-May-2021	04-May-2021	30-Apr-2021						
						0.8-1.4	0.8-1.4	0.8-1.4	2.3-2.9	0.8-1.4
Volatile Organic Compounds (VOCs)										
Acetone	µg/g	0.5	0.5	1.8	1.8	-	-	-	-	-
Benzene	µg/g	0.0068	0.02	0.02	0.034	<0.0068	<0.0068	<0.0068	<0.0068	<0.0068
Bromodichloromethane	µg/g	0.05	0.05	5.8	5.8	-	-	-	-	-
Bromoform	µg/g	0.05	0.05	2.5	2.5	-	-	-	-	-
Bromomethane	µg/g	0.05	0.05	0.05	0.05	-	-	-	-	-
Carbon Tetrachloride	µg/g	0.05	0.05	0.05	0.05	-	-	-	-	-
Chlorobenzene	µg/g	0.05	0.05	0.28	0.28	-	-	-	-	-
Chloroform	µg/g	0.05	0.05	0.08	0.26	-	-	-	-	-
Dibromochloromethane	µg/g	0.05	0.05	5.5	5.5	-	-	-	-	-
1,2-Dichlorobenzene	µg/g	0.05	0.05	3.4	6.8	-	-	-	-	-
1,3-Dichlorobenzene	µg/g	0.05	0.05	4.8	6.8	-	-	-	-	-
1,4-Dichlorobenzene	µg/g	0.05	0.05	0.05	0.05	-	-	-	-	-
Dichlorodifluoromethane	µg/g	0.05	0.05	1.8	1.8	-	-	-	-	-
1,1-Dichloroethane	µg/g	0.05	0.05	0.14	0.57	-	-	-	-	-
1,2-Dichloroethane	µg/g	0.05	0.05	0.05	0.05	-	-	-	-	-
1,1-Dichloroethylene	µg/g	0.05	0.05	0.05	0.05	-	-	-	-	-
Ethylbenzene	µg/g	0.018	0.05	1.9	1.9	<0.018	<0.018	<0.018	<0.018	<0.018
cis-1,2-Dichloroethylene	µg/g	0.05	0.05	0.05	0.05	-	-	-	-	-
trans-1,2-Dichloroethylene	µg/g	0.05	0.05	0.05	0.05	-	-	-	-	-
1,2-Dichloropropane	µg/g	0.05	0.05	0.05	0.05	-	-	-	-	-
cis-1,3-Dichloropropene	µg/g	0.03	NR	NV	NV	-	-	-	-	-
trans-1,3-Dichloropropene	µg/g	0.03	NR	NV	NV	-	-	-	-	-
1,3-Dichloropropene	µg/g	0.042	0.05	0.05	0.05	-	-	-	-	-
Ethylene Dibromide	µg/g	0.05	0.05	0.05	0.05	-	-	-	-	-
Hexane (n)	µg/g	0.05	0.05	2.5	2.5	-	-	-	-	-
Methyl Ethyl Ketone	µg/g	0.5	0.5	14	26	-	-	-	-	-
Methyl Isobutyl Ketone	µg/g	0.5	0.5	0.89	17	-	-	-	-	-
Methyl Tert-Butyl Ether	µg/g	0.05	0.05	0.05	0.05	-	-	-	-	-
Methylene Chloride	µg/g	0.05	0.05	0.06	0.2	-	-	-	-	-
Styrene	µg/g	0.05	0.05	0.5	6.8	-	-	-	-	-
1,1,1,2-Tetrachloroethane	µg/g	0.05	0.05	0.05	0.05	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/g	0.05	0.05	0.05	0.05	-	-	-	-	-
Tetrachloroethylene	µg/g	0.05	0.05	0.05	0.05	-	-	-	-	-
Toluene	µg/g	0.08	0.2	0.99	7.8	<0.080	<0.080	<0.080	<0.080	<0.080
1,1,1-Trichloroethane	µg/g	0.05	0.05	0.11	0.4	-	-	-	-	-
1,1,2-Trichloroethane	µg/g	0.05	0.05	0.05	0.05	-	-	-	-	-
Trichloroethylene	µg/g	0.01	0.05	0.05	0.05	-	-	-	-	-
Trichlorofluoromethane	µg/g	0.05	0.25	0.46	0.46	-	-	-	-	-
Vinyl Chloride	µg/g	0.02	0.02	0.02	0.02	-	-	-	-	-
o-Xylene	µg/g	0.02	NR	NV	NV	<0.020	<0.020	<0.020	<0.020	<0.020
m+p-Xylene	µg/g	0.03	NR	NV	NV	<0.030	<0.030	<0.030	<0.030	<0.030
Xylene Mixture	µg/g	0.05	0.05	0.9	3	<0.050	<0.050	<0.050	<0.050	<0.050

Notes:

2020 Excess Soil Quality Standards (ESQS) - As identified in Appendix 1 of the Rules for Soil Management adopted by reference in O.Reg. 406/19 made under the Environmental Protection Act (December 8, 2020)

Bold	- Exceeds Table 1 ESQS (R/P/I or I/C/C)
Bold	- Exceeds Table 3.1 ESQS (R/P/I)
Bold	- Exceeds Table 3.1 ESQS (I/C/C)

"-" - parameter not analyzed

RDL - Reported detection limit

NR - Not Relevant

NV - No Value

NA - Not Applicable

"<" - Less than the Reporting Detection Limit

Appendix F

Laboratory Certificates of Analysis





MTE CONSULTANTS INC. (Kitchener)
ATTN: JEN LAMBKE
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9


Date Received: 29-APR-21
Report Date: 05-MAY-21 14:06 (MT)
Version: FINAL

Client Phone: 519-743-6500

Certificate of Analysis

Lab Work Order #: L2581830
Project P.O. #: NOT SUBMITTED
Job Reference: 46995-100
C of C Numbers:
Legal Site Desc:

Comments: ADDITIONAL 29-APR-21 15:23
ADDITIONAL 29-APR-21 12:25



Emily Hansen
Account Manager

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ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2581830-2	BH 139-21 SS2 2.5-4.5 FT							
Sampled By: MATT D on 28-APR-21 @ 08:45								
Matrix: SOIL								
Physical Tests								
	Conductivity	3.48		0.0040	mS/cm	03-MAY-21	*0.57	*1.4
	% Moisture	4.85		0.25	%	30-APR-21		
Saturated Paste Extractables								
	SAR	64.1		0.10	SAR	03-MAY-21	*2.4	*12
	Calcium (Ca)	8.27		0.50	mg/L	03-MAY-21		
	Magnesium (Mg)	0.88		0.50	mg/L	03-MAY-21		
	Sodium (Na)	726		0.50	mg/L	03-MAY-21		
Metals								
	Antimony (Sb)	<1.0		1.0	ug/g	03-MAY-21	1.3	40
	Arsenic (As)	6.6		1.0	ug/g	03-MAY-21	18	18
	Barium (Ba)	50.8		1.0	ug/g	03-MAY-21	220	670
	Beryllium (Be)	0.66		0.50	ug/g	03-MAY-21	2.5	8
	Boron (B)	10.0		5.0	ug/g	03-MAY-21	36	120
	Cadmium (Cd)	<0.50		0.50	ug/g	03-MAY-21	1.2	1.9
	Chromium (Cr)	18.3		1.0	ug/g	03-MAY-21	70	160
	Cobalt (Co)	6.0		1.0	ug/g	03-MAY-21	21	80
	Copper (Cu)	45.3		1.0	ug/g	03-MAY-21	92	230
	Lead (Pb)	214		1.0	ug/g	03-MAY-21	*120	*120
	Molybdenum (Mo)	<1.0		1.0	ug/g	03-MAY-21	2	40
	Nickel (Ni)	16.2		1.0	ug/g	03-MAY-21	82	270
	Selenium (Se)	<1.0		1.0	ug/g	03-MAY-21	1.5	5.5
	Silver (Ag)	<0.20		0.20	ug/g	03-MAY-21	0.5	40
	Thallium (Tl)	<0.50		0.50	ug/g	03-MAY-21	1	3.3
	Uranium (U)	<1.0		1.0	ug/g	03-MAY-21	2.5	33
	Vanadium (V)	33.7		1.0	ug/g	03-MAY-21	86	86
	Zinc (Zn)	114		5.0	ug/g	03-MAY-21	290	340
Volatile Organic Compounds								
	Benzene	<0.0068		0.0068	ug/g	03-MAY-21	0.02	0.034
	Ethylbenzene	<0.018		0.018	ug/g	03-MAY-21	0.05	1.9
	Toluene	<0.080		0.080	ug/g	03-MAY-21	0.2	7.8
	o-Xylene	<0.020		0.020	ug/g	03-MAY-21		
	m+p-Xylenes	<0.030		0.030	ug/g	03-MAY-21		
	Xylenes (Total)	<0.050		0.050	ug/g	03-MAY-21	0.05	3
	Surrogate: 4-Bromofluorobenzene	109.7		50-140	%	03-MAY-21		
	Surrogate: 1,4-Difluorobenzene	109.8		50-140	%	03-MAY-21		
Hydrocarbons								
	F1 (C6-C10)	<5.0		5.0	ug/g	03-MAY-21	25	25
	F1-BTEX	<5.0		5.0	ug/g	03-MAY-21	25	25
	F2 (C10-C16)	<10		10	ug/g	03-MAY-21	10	26
	F3 (C16-C34)	<50		50	ug/g	03-MAY-21	240	1700
	F4 (C34-C50)	<50		50	ug/g	03-MAY-21	120	3300
	Total Hydrocarbons (C6-C50)	<72		72	ug/g	03-MAY-21		
	Chrom. to baseline at nC50	YES			No Unit	03-MAY-21		
	Surrogate: 2-Bromobenzotrifluoride	94.6		60-140	%	03-MAY-21		
	Surrogate: 3,4-Dichlorotoluene	97.8		60-140	%	03-MAY-21		

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2581830-4	BH 139-21 SS4 7.5-9.5 FT							
Sampled By: MATT D on 28-APR-21 @ 09:00								
Matrix: SOIL								
Physical Tests								
% Moisture		2.58		0.25	%	30-APR-21		
Volatile Organic Compounds								
Benzene		<0.0068		0.0068	ug/g	03-MAY-21	0.02	0.034
Ethylbenzene		<0.018		0.018	ug/g	03-MAY-21	0.05	1.9
Toluene		<0.080		0.080	ug/g	03-MAY-21	0.2	7.8
o-Xylene		<0.020		0.020	ug/g	03-MAY-21		
m+p-Xylenes		<0.030		0.030	ug/g	03-MAY-21		
Xylenes (Total)		<0.050		0.050	ug/g	03-MAY-21	0.05	3
Surrogate: 4-Bromofluorobenzene		126.4		50-140	%	03-MAY-21		
Surrogate: 1,4-Difluorobenzene		126.4		50-140	%	03-MAY-21		
Hydrocarbons								
F1 (C6-C10)		<5.0		5.0	ug/g	03-MAY-21	25	25
F1-BTEX		<5.0		5.0	ug/g	03-MAY-21	25	25
F2 (C10-C16)		<10		10	ug/g	03-MAY-21	10	26
F3 (C16-C34)		<50		50	ug/g	03-MAY-21	240	1700
F4 (C34-C50)		<50		50	ug/g	03-MAY-21	120	3300
Total Hydrocarbons (C6-C50)		<72		72	ug/g	03-MAY-21		
Chrom. to baseline at nC50		YES			No Unit	03-MAY-21		
Surrogate: 2-Bromobenzotrifluoride		90.9		60-140	%	03-MAY-21		
Surrogate: 3,4-Dichlorotoluene		107.2		60-140	%	03-MAY-21		
L2581830-8	BH 140-21 SS4 7.5-9.5 FT							
Sampled By: MATT D on 28-APR-21 @ 10:20								
Matrix: SOIL								
Physical Tests								
% Moisture		2.40		0.25	%	30-APR-21		
Volatile Organic Compounds								
Acetone		<0.50		0.50	ug/g	05-MAY-21	0.5	1.8
Benzene		<0.0068		0.0068	ug/g	05-MAY-21	0.02	0.034
Bromodichloromethane		<0.050		0.050	ug/g	05-MAY-21	0.05	5.8
Bromoform		<0.050		0.050	ug/g	05-MAY-21	0.05	2.5
Bromomethane		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
Carbon tetrachloride		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
Chlorobenzene		<0.050		0.050	ug/g	05-MAY-21	0.05	0.28
Dibromochloromethane		<0.050		0.050	ug/g	05-MAY-21	0.05	5.5
Chloroform		<0.050		0.050	ug/g	05-MAY-21	0.05	0.26
1,2-Dibromoethane		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
1,2-Dichlorobenzene		<0.050		0.050	ug/g	05-MAY-21	0.05	6.8
1,3-Dichlorobenzene		<0.050		0.050	ug/g	05-MAY-21	0.05	6.8
1,4-Dichlorobenzene		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
Dichlorodifluoromethane		<0.050		0.050	ug/g	05-MAY-21	0.05	1.8
1,1-Dichloroethane		<0.050		0.050	ug/g	05-MAY-21	0.05	0.57
1,2-Dichloroethane		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
1,1-Dichloroethylene		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
cis-1,2-Dichloroethylene		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
trans-1,2-Dichloroethylene		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2581830-8	BH 140-21 SS4 7.5-9.5 FT							
Sampled By: MATT D on 28-APR-21 @ 10:20								
Matrix: SOIL								
Volatile Organic Compounds								
	Methylene Chloride	<0.050		0.050	ug/g	05-MAY-21	0.05	0.2
	1,2-Dichloropropane	<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
	cis-1,3-Dichloropropene	<0.030		0.030	ug/g	05-MAY-21		
	trans-1,3-Dichloropropene	<0.030		0.030	ug/g	05-MAY-21		
	1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g	05-MAY-21	0.05	0.05
	Ethylbenzene	<0.018		0.018	ug/g	05-MAY-21	0.05	1.9
	n-Hexane	<0.050		0.050	ug/g	05-MAY-21	0.05	2.5
	Methyl Ethyl Ketone	<0.50		0.50	ug/g	05-MAY-21	0.5	26
	Methyl Isobutyl Ketone	<0.50		0.50	ug/g	05-MAY-21	0.5	17
	MTBE	<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
	Styrene	<0.050		0.050	ug/g	05-MAY-21	0.05	6.8
	1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
	1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
	Tetrachloroethylene	<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
	Toluene	<0.080		0.080	ug/g	05-MAY-21	0.2	7.8
	1,1,1-Trichloroethane	<0.050		0.050	ug/g	05-MAY-21	0.05	0.4
	1,1,2-Trichloroethane	<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
	Trichloroethylene	<0.010		0.010	ug/g	05-MAY-21	0.05	0.05
	Trichlorofluoromethane	<0.050		0.050	ug/g	05-MAY-21	0.25	0.46
	Vinyl chloride	<0.020		0.020	ug/g	05-MAY-21	0.02	0.02
	o-Xylene	<0.020		0.020	ug/g	05-MAY-21		
	m+p-Xylenes	<0.030		0.030	ug/g	05-MAY-21		
	Xylenes (Total)	<0.050		0.050	ug/g	05-MAY-21	0.05	3
	Surrogate: 4-Bromofluorobenzene	115.7		50-140	%	05-MAY-21		
	Surrogate: 1,4-Difluorobenzene	148.4	SURR-ND	50-140	%	05-MAY-21		
L2581830-9	BH 140-21 GS1B 12"-2.5 FT							
Sampled By: MATT D on 28-APR-21 @ 09:50								
Matrix: SOIL								
Metals								
	Antimony (Sb)	<1.0		1.0	ug/g	03-MAY-21	1.3	40
	Arsenic (As)	3.8		1.0	ug/g	03-MAY-21	18	18
	Barium (Ba)	50.1		1.0	ug/g	03-MAY-21	220	670
	Beryllium (Be)	<0.50		0.50	ug/g	03-MAY-21	2.5	8
	Boron (B)	5.9		5.0	ug/g	03-MAY-21	36	120
	Cadmium (Cd)	<0.50		0.50	ug/g	03-MAY-21	1.2	1.9
	Chromium (Cr)	16.0		1.0	ug/g	03-MAY-21	70	160
	Cobalt (Co)	4.5		1.0	ug/g	03-MAY-21	21	80
	Copper (Cu)	20.6		1.0	ug/g	03-MAY-21	92	230
	Lead (Pb)	61.6		1.0	ug/g	03-MAY-21	120	120
	Molybdenum (Mo)	<1.0		1.0	ug/g	03-MAY-21	2	40
	Nickel (Ni)	8.8		1.0	ug/g	03-MAY-21	82	270
	Selenium (Se)	<1.0		1.0	ug/g	03-MAY-21	1.5	5.5
	Silver (Ag)	<0.20		0.20	ug/g	03-MAY-21	0.5	40
	Thallium (Tl)	<0.50		0.50	ug/g	03-MAY-21	1	3.3

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2581830-9	BH 140-21 GS1B 12"-2.5 FT							
Sampled By: MATT D on 28-APR-21 @ 09:50								
Matrix: SOIL								
Metals								
Uranium (U)		<1.0		1.0	ug/g	03-MAY-21	2.5	33
Vanadium (V)		24.2		1.0	ug/g	03-MAY-21	86	86
Zinc (Zn)		110		5.0	ug/g	03-MAY-21	290	340
L2581830-12	BH 141-21 SS3 5-7 FT							
Sampled By: MATT D on 28-APR-21 @ 11:15								
Matrix: SOIL								
Physical Tests								
Conductivity		1.12		0.0040	mS/cm	03-MAY-21	*0.57	1.4
% Moisture		3.22		0.25	%	30-APR-21		
Saturated Paste Extractables								
SAR		31.0		0.10	SAR	03-MAY-21	*2.4	*12
Calcium (Ca)		2.41		0.50	mg/L	03-MAY-21		
Magnesium (Mg)		0.74		0.50	mg/L	03-MAY-21		
Sodium (Na)		214		0.50	mg/L	03-MAY-21		
Metals								
Antimony (Sb)		<1.0		1.0	ug/g	03-MAY-21	1.3	40
Arsenic (As)		6.7		1.0	ug/g	03-MAY-21	18	18
Barium (Ba)		18.9		1.0	ug/g	03-MAY-21	220	670
Beryllium (Be)		<0.50		0.50	ug/g	03-MAY-21	2.5	8
Boron (B)		12.1		5.0	ug/g	03-MAY-21	36	120
Cadmium (Cd)		<0.50		0.50	ug/g	03-MAY-21	1.2	1.9
Chromium (Cr)		8.7		1.0	ug/g	03-MAY-21	70	160
Cobalt (Co)		4.5		1.0	ug/g	03-MAY-21	21	80
Copper (Cu)		28.7		1.0	ug/g	03-MAY-21	92	230
Lead (Pb)		16.3		1.0	ug/g	03-MAY-21	120	120
Molybdenum (Mo)		<1.0		1.0	ug/g	03-MAY-21	2	40
Nickel (Ni)		8.6		1.0	ug/g	03-MAY-21	82	270
Selenium (Se)		<1.0		1.0	ug/g	03-MAY-21	1.5	5.5
Silver (Ag)		<0.20		0.20	ug/g	03-MAY-21	0.5	40
Thallium (Tl)		<0.50		0.50	ug/g	03-MAY-21	1	3.3
Uranium (U)		<1.0		1.0	ug/g	03-MAY-21	2.5	33
Vanadium (V)		23.1		1.0	ug/g	03-MAY-21	86	86
Zinc (Zn)		71.9		5.0	ug/g	03-MAY-21	290	340
Volatile Organic Compounds								
Benzene		<0.0068		0.0068	ug/g	03-MAY-21	0.02	0.034
Ethylbenzene		<0.018		0.018	ug/g	03-MAY-21	0.05	1.9
Toluene		<0.080		0.080	ug/g	03-MAY-21	0.2	7.8
o-Xylene		<0.020		0.020	ug/g	03-MAY-21		
m+p-Xylenes		<0.030		0.030	ug/g	03-MAY-21		
Xylenes (Total)		<0.050		0.050	ug/g	03-MAY-21	0.05	3
Surrogate: 4-Bromofluorobenzene		124.0		50-140	%	03-MAY-21		
Surrogate: 1,4-Difluorobenzene		122.6		50-140	%	03-MAY-21		
Hydrocarbons								
F1 (C6-C10)		<5.0		5.0	ug/g	03-MAY-21	25	25

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Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2581830-12	BH 141-21 SS3 5-7 FT							
Sampled By: MATT D on 28-APR-21 @ 11:15								
Matrix: SOIL								
Hydrocarbons								
F1-BTEX		<5.0		5.0	ug/g	03-MAY-21	25	25
F2 (C10-C16)		<10		10	ug/g	03-MAY-21	10	26
F3 (C16-C34)		<50		50	ug/g	03-MAY-21	240	1700
F4 (C34-C50)		<50		50	ug/g	03-MAY-21	120	3300
Total Hydrocarbons (C6-C50)		<72		72	ug/g	03-MAY-21		
Chrom. to baseline at nC50		YES			No Unit	03-MAY-21		
Surrogate: 2-Bromobenzotrifluoride		93.7		60-140	%	03-MAY-21		
Surrogate: 3,4-Dichlorotoluene		105.4		60-140	%	03-MAY-21		
L2581830-15	BH 142-21 SS2 2.5-4.5 FT							
Sampled By: MATT D on 28-APR-21 @ 12:15								
Matrix: SOIL								
Physical Tests								
Conductivity		2.10		0.0040	mS/cm	03-MAY-21	*0.57	*1.4
% Moisture		8.30		0.25	%	30-APR-21		
pH		8.01		0.10	pH units	03-MAY-21		
Saturated Paste Extractables								
SAR		63.5	SAR:M	0.10	SAR	03-MAY-21	*2.4	*12
Calcium (Ca)		3.32		0.50	mg/L	03-MAY-21		
Magnesium (Mg)		<0.50		0.50	mg/L	03-MAY-21		
Sodium (Na)		420		0.50	mg/L	03-MAY-21		
Metals								
Antimony (Sb)		<1.0		1.0	ug/g	03-MAY-21	1.3	40
Arsenic (As)		3.9		1.0	ug/g	03-MAY-21	18	18
Barium (Ba)		44.4		1.0	ug/g	03-MAY-21	220	670
Beryllium (Be)		<0.50		0.50	ug/g	03-MAY-21	2.5	8
Boron (B)		7.6		5.0	ug/g	03-MAY-21	36	120
Cadmium (Cd)		<0.50		0.50	ug/g	03-MAY-21	1.2	1.9
Chromium (Cr)		19.8		1.0	ug/g	03-MAY-21	70	160
Cobalt (Co)		4.4		1.0	ug/g	03-MAY-21	21	80
Copper (Cu)		30.4		1.0	ug/g	03-MAY-21	92	230
Lead (Pb)		19.8		1.0	ug/g	03-MAY-21	120	120
Molybdenum (Mo)		<1.0		1.0	ug/g	03-MAY-21	2	40
Nickel (Ni)		9.7		1.0	ug/g	03-MAY-21	82	270
Selenium (Se)		<1.0		1.0	ug/g	03-MAY-21	1.5	5.5
Silver (Ag)		<0.20		0.20	ug/g	03-MAY-21	0.5	40
Thallium (Tl)		<0.50		0.50	ug/g	03-MAY-21	1	3.3
Uranium (U)		<1.0		1.0	ug/g	03-MAY-21	2.5	33
Vanadium (V)		25.0		1.0	ug/g	03-MAY-21	86	86
Zinc (Zn)		80.6		5.0	ug/g	03-MAY-21	290	340
Volatile Organic Compounds								
Benzene		<0.0068		0.0068	ug/g	03-MAY-21	0.02	0.034
Ethylbenzene		<0.018		0.018	ug/g	03-MAY-21	0.05	1.9
Toluene		<0.080		0.080	ug/g	03-MAY-21	0.2	7.8
o-Xylene		<0.020		0.020	ug/g	03-MAY-21		
m+p-Xylenes		<0.030		0.030	ug/g	03-MAY-21		

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Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2581830-15 BH 142-21 SS2 2.5-4.5 FT								
Sampled By: MATT D on 28-APR-21 @ 12:15								
Matrix: SOIL								
Volatile Organic Compounds								
Xylenes (Total)		<0.050		0.050	ug/g	03-MAY-21	0.05	3
Surrogate: 4-Bromofluorobenzene		125.2		50-140	%	03-MAY-21		
Surrogate: 1,4-Difluorobenzene		126.2		50-140	%	03-MAY-21		
Hydrocarbons								
F1 (C6-C10)		<5.0		5.0	ug/g	03-MAY-21	25	25
F1-BTEX		<5.0		5.0	ug/g	03-MAY-21	25	25
F2 (C10-C16)		<10		10	ug/g	03-MAY-21	10	26
F3 (C16-C34)		<50		50	ug/g	03-MAY-21	240	1700
F4 (C34-C50)		67		50	ug/g	03-MAY-21	120	3300
Total Hydrocarbons (C6-C50)		<72		72	ug/g	03-MAY-21		
Chrom. to baseline at nC50		YES			No Unit	03-MAY-21		
Surrogate: 2-Bromobenzotrifluoride		90.3		60-140	%	03-MAY-21		
Surrogate: 3,4-Dichlorotoluene		101.6		60-140	%	03-MAY-21		
L2581830-17 BH 142-21 SS4 7.5-9.5 FT								
Sampled By: MATT D on 28-APR-21 @ 12:30								
Matrix: SOIL								
Physical Tests								
% Moisture		3.68		0.25	%	30-APR-21		
Volatile Organic Compounds								
Acetone		<0.50		0.50	ug/g	05-MAY-21	0.5	1.8
Benzene		<0.0068		0.0068	ug/g	05-MAY-21	0.02	0.034
Bromodichloromethane		<0.050		0.050	ug/g	05-MAY-21	0.05	5.8
Bromoform		<0.050		0.050	ug/g	05-MAY-21	0.05	2.5
Bromomethane		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
Carbon tetrachloride		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
Chlorobenzene		<0.050		0.050	ug/g	05-MAY-21	0.05	0.28
Dibromochloromethane		<0.050		0.050	ug/g	05-MAY-21	0.05	5.5
Chloroform		<0.050		0.050	ug/g	05-MAY-21	0.05	0.26
1,2-Dibromoethane		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
1,2-Dichlorobenzene		<0.050		0.050	ug/g	05-MAY-21	0.05	6.8
1,3-Dichlorobenzene		<0.050		0.050	ug/g	05-MAY-21	0.05	6.8
1,4-Dichlorobenzene		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
Dichlorodifluoromethane		<0.050		0.050	ug/g	05-MAY-21	0.05	1.8
1,1-Dichloroethane		<0.050		0.050	ug/g	05-MAY-21	0.05	0.57
1,2-Dichloroethane		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
1,1-Dichloroethylene		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
cis-1,2-Dichloroethylene		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
trans-1,2-Dichloroethylene		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
Methylene Chloride		<0.050		0.050	ug/g	05-MAY-21	0.05	0.2
1,2-Dichloropropane		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
cis-1,3-Dichloropropene		<0.030		0.030	ug/g	05-MAY-21		
trans-1,3-Dichloropropene		<0.030		0.030	ug/g	05-MAY-21		
1,3-Dichloropropene (cis & trans)		<0.042		0.042	ug/g	05-MAY-21	0.05	0.05
Ethylbenzene		<0.018		0.018	ug/g	05-MAY-21	0.05	1.9
n-Hexane		<0.050		0.050	ug/g	05-MAY-21	0.05	2.5

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Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2581830-17 BH 142-21 SS4 7.5-9.5 FT Sampled By: MATT D on 28-APR-21 @ 12:30 Matrix: SOIL								
Volatile Organic Compounds								
	Methyl Ethyl Ketone	<0.50		0.50	ug/g	05-MAY-21	0.5	26
	Methyl Isobutyl Ketone	<0.50		0.50	ug/g	05-MAY-21	0.5	17
	MTBE	<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
	Styrene	<0.050		0.050	ug/g	05-MAY-21	0.05	6.8
	1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
	1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
	Tetrachloroethylene	<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
	Toluene	<0.080		0.080	ug/g	05-MAY-21	0.2	7.8
	1,1,1-Trichloroethane	<0.050		0.050	ug/g	05-MAY-21	0.05	0.4
	1,1,2-Trichloroethane	<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
	Trichloroethylene	<0.010		0.010	ug/g	05-MAY-21	0.05	0.05
	Trichlorofluoromethane	<0.050		0.050	ug/g	05-MAY-21	0.25	0.46
	Vinyl chloride	<0.020		0.020	ug/g	05-MAY-21	0.02	0.02
	o-Xylene	<0.020		0.020	ug/g	05-MAY-21		
	m+p-Xylenes	<0.030		0.030	ug/g	05-MAY-21		
	Xylenes (Total)	<0.050		0.050	ug/g	05-MAY-21	0.05	3
	Surrogate: 4-Bromofluorobenzene	92.0		50-140	%	05-MAY-21		
	Surrogate: 1,4-Difluorobenzene	115.0		50-140	%	05-MAY-21		
L2581830-19 BH 143-21 SS2 2.5-4.5 FT Sampled By: MATT D on 28-APR-21 @ 13:20 Matrix: SOIL								
Physical Tests								
	% Moisture	7.25		0.25	%	30-APR-21		
Metals								
	Antimony (Sb)	<1.0		1.0	ug/g	03-MAY-21	1.3	40
	Arsenic (As)	2.9		1.0	ug/g	03-MAY-21	18	18
	Barium (Ba)	24.0		1.0	ug/g	03-MAY-21	220	670
	Beryllium (Be)	<0.50		0.50	ug/g	03-MAY-21	2.5	8
	Boron (B)	6.3		5.0	ug/g	03-MAY-21	36	120
	Boron (B), Hot Water Ext.	0.20		0.10	ug/g	03-MAY-21	36	2
	Cadmium (Cd)	<0.50		0.50	ug/g	03-MAY-21	1.2	1.9
	Chromium (Cr)	10.5		1.0	ug/g	03-MAY-21	70	160
	Cobalt (Co)	3.0		1.0	ug/g	03-MAY-21	21	80
	Copper (Cu)	13.9		1.0	ug/g	03-MAY-21	92	230
	Lead (Pb)	20.1		1.0	ug/g	03-MAY-21	120	120
	Mercury (Hg)	0.0565		0.0050	ug/g	03-MAY-21	0.27	0.27
	Molybdenum (Mo)	<1.0		1.0	ug/g	03-MAY-21	2	40
	Nickel (Ni)	6.6		1.0	ug/g	03-MAY-21	82	270
	Selenium (Se)	<1.0		1.0	ug/g	03-MAY-21	1.5	5.5
	Silver (Ag)	<0.20		0.20	ug/g	03-MAY-21	0.5	40
	Thallium (Tl)	<0.50		0.50	ug/g	03-MAY-21	1	3.3
	Uranium (U)	<1.0		1.0	ug/g	03-MAY-21	2.5	33
	Vanadium (V)	19.1		1.0	ug/g	03-MAY-21	86	86
	Zinc (Zn)	56.2		5.0	ug/g	03-MAY-21	290	340
Speciated Metals								

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Table with columns: Sample Details Grouping, Analyte, Result, Qualifier, D.L., Units, Analyzed, Guideline Limits #1, #2. Rows include Speciated Metals (Chromium), Volatile Organic Compounds (Benzene, Ethylbenzene, Toluene, Xylenes), Hydrocarbons (F1-F4, Total Hydrocarbons), and Polycyclic Aromatic Hydrocarbons (Acenaphthene, Anthracene, etc.).

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2581830-20 BH 143-21 SS3 5-7 FT								
Sampled By: MATT D on 28-APR-21 @ 13:30								
Matrix: SOIL								
Physical Tests								
% Moisture		8.47		0.25	%	30-APR-21		
Volatile Organic Compounds								
Acetone		<0.50		0.50	ug/g	05-MAY-21	0.5	1.8
Benzene		<0.0068		0.0068	ug/g	05-MAY-21	0.02	0.034
Bromodichloromethane		<0.050		0.050	ug/g	05-MAY-21	0.05	5.8
Bromoform		<0.050		0.050	ug/g	05-MAY-21	0.05	2.5
Bromomethane		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
Carbon tetrachloride		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
Chlorobenzene		<0.050		0.050	ug/g	05-MAY-21	0.05	0.28
Dibromochloromethane		<0.050		0.050	ug/g	05-MAY-21	0.05	5.5
Chloroform		<0.050		0.050	ug/g	05-MAY-21	0.05	0.26
1,2-Dibromoethane		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
1,2-Dichlorobenzene		<0.050		0.050	ug/g	05-MAY-21	0.05	6.8
1,3-Dichlorobenzene		<0.050		0.050	ug/g	05-MAY-21	0.05	6.8
1,4-Dichlorobenzene		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
Dichlorodifluoromethane		<0.050		0.050	ug/g	05-MAY-21	0.05	1.8
1,1-Dichloroethane		<0.050		0.050	ug/g	05-MAY-21	0.05	0.57
1,2-Dichloroethane		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
1,1-Dichloroethylene		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
cis-1,2-Dichloroethylene		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
trans-1,2-Dichloroethylene		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
Methylene Chloride		<0.050		0.050	ug/g	05-MAY-21	0.05	0.2
1,2-Dichloropropane		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
cis-1,3-Dichloropropene		<0.030		0.030	ug/g	05-MAY-21		
trans-1,3-Dichloropropene		<0.030		0.030	ug/g	05-MAY-21		
1,3-Dichloropropene (cis & trans)		<0.042		0.042	ug/g	05-MAY-21	0.05	0.05
Ethylbenzene		<0.018		0.018	ug/g	05-MAY-21	0.05	1.9
n-Hexane		<0.050		0.050	ug/g	05-MAY-21	0.05	2.5
Methyl Ethyl Ketone		<0.50		0.50	ug/g	05-MAY-21	0.5	26
Methyl Isobutyl Ketone		<0.50		0.50	ug/g	05-MAY-21	0.5	17
MTBE		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
Styrene		<0.050		0.050	ug/g	05-MAY-21	0.05	6.8
1,1,1,2-Tetrachloroethane		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
1,1,2,2-Tetrachloroethane		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
Tetrachloroethylene		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
Toluene		<0.080		0.080	ug/g	05-MAY-21	0.2	7.8
1,1,1-Trichloroethane		<0.050		0.050	ug/g	05-MAY-21	0.05	0.4
1,1,2-Trichloroethane		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
Trichloroethylene		<0.010		0.010	ug/g	05-MAY-21	0.05	0.05
Trichlorofluoromethane		<0.050		0.050	ug/g	05-MAY-21	0.25	0.46
Vinyl chloride		<0.020		0.020	ug/g	05-MAY-21	0.02	0.02
o-Xylene		<0.020		0.020	ug/g	05-MAY-21		
m+p-Xylenes		<0.030		0.030	ug/g	05-MAY-21		
Xylenes (Total)		<0.050		0.050	ug/g	05-MAY-21	0.05	3
Surrogate: 4-Bromofluorobenzene		94.2		50-140	%	05-MAY-21		
Surrogate: 1,4-Difluorobenzene		119.7		50-140	%	05-MAY-21		

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2581830-20	BH 143-21 SS3 5-7 FT							
Sampled By: MATT D on 28-APR-21 @ 13:30								
Matrix: SOIL								
Polycyclic Aromatic Hydrocarbons								
	Acenaphthene	<0.050		0.050	ug/g	03-MAY-21	0.072	15
	Acenaphthylene	<0.050		0.050	ug/g	03-MAY-21	0.093	0.093
	Anthracene	<0.050		0.050	ug/g	03-MAY-21	0.16	0.16
	Benzo(a)anthracene	<0.050		0.050	ug/g	03-MAY-21	0.36	1
	Benzo(a)pyrene	<0.050		0.050	ug/g	03-MAY-21	0.3	0.7
	Benzo(b&j)fluoranthene	<0.050		0.050	ug/g	03-MAY-21	0.47	7
	Benzo(g,h,i)perylene	<0.050		0.050	ug/g	03-MAY-21	0.68	13
	Benzo(k)fluoranthene	<0.050		0.050	ug/g	03-MAY-21	0.48	7
	Chrysene	<0.050		0.050	ug/g	03-MAY-21	2.8	14
	Dibenz(a,h)anthracene	<0.050		0.050	ug/g	03-MAY-21	0.1	0.7
	Fluoranthene	<0.050		0.050	ug/g	03-MAY-21	0.56	70
	Fluorene	<0.050		0.050	ug/g	03-MAY-21	0.12	6.8
	Indeno(1,2,3-cd)pyrene	<0.050		0.050	ug/g	03-MAY-21	0.23	0.76
	1+2-Methylnaphthalenes	<0.042		0.042	ug/g	03-MAY-21	0.59	8.7
	1-Methylnaphthalene	<0.030		0.030	ug/g	03-MAY-21	0.59	8.7
	2-Methylnaphthalene	<0.030		0.030	ug/g	03-MAY-21	0.59	8.7
	Naphthalene	<0.013		0.013	ug/g	03-MAY-21	0.09	1.8
	Phenanthrene	<0.046		0.046	ug/g	03-MAY-21	0.69	12
	Pyrene	<0.050		0.050	ug/g	03-MAY-21	1	70
	Surrogate: 2-Fluorobiphenyl	82.8		50-140	%	03-MAY-21		
	Surrogate: d14-Terphenyl	80.2		50-140	%	03-MAY-21		

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

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Reference Information

Sample Parameter Qualifier key listed:

Qualifier	Description
SURR-ND	Surrogate recovery marginally exceeded ALS DQO. Reported non-detect results for associated samples were deemed to be unaffected.
SAR:M	Reported SAR represents a maximum value. Actual SAR may be lower if both Ca and Mg were detectable.

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference***
B-HWS-R511-WT	Soil	Boron-HWE-O.Reg 153/04 (July 2011)	HW EXTR, EPA 6010B

A dried solid sample is extracted with calcium chloride, the sample undergoes a heating process. After cooling the sample is filtered and analyzed by ICP/OES.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

BTX-511-HS-WT	Soil	BTEX-O.Reg 153/04 (July 2011)	SW846 8260
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BTX is determined by extracting a soil or sediment sample as received with methanol, then analyzing by headspace-GC/MS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

CR-CR6-IC-WT	Soil	Hexavalent Chromium in Soil	SW846 3060A/7199
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This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Method 7199, published by the United States Environmental Protection Agency (EPA). The procedure involves analysis for chromium (VI) by ion chromatography using diphenylcarbazide in a sulphuric acid solution.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

EC-WT	Soil	Conductivity (EC)	MOEE E3138
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A representative subsample is tumbled with de-ionized (DI) water. The ratio of water to soil is 2:1 v/w. After tumbling the sample is then analyzed by a conductivity meter.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

F1-F4-511-CALC-WT	Soil	F1-F4 Hydrocarbon Calculated Parameters	CCME CWS-PHC, Pub #1310, Dec 2001-S
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Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

Hydrocarbon results are expressed on a dry weight basis.

In cases where results for both F4 and F4G are reported, the greater of the two results must be used in any application of the CWS PHC guidelines and the gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.

In samples where BTEX and F1 were analyzed, F1-BTEX represents a value where the sum of Benzene, Toluene, Ethylbenzene and total Xylenes has been subtracted from F1.

In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.

Unless otherwise qualified, the following quality control criteria have been met for the F1 hydrocarbon range:

1. All extraction and analysis holding times were met.
2. Instrument performance showing response factors for C6 and C10 within 30% of the response factor for toluene.
3. Linearity of gasoline response within 15% throughout the calibration range.

Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:

1. All extraction and analysis holding times were met.
2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.
3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.
4. Linearity of diesel or motor oil response within 15% throughout the calibration range.

F1-HS-511-WT	Soil	F1-O.Reg 153/04 (July 2011)	E3398/CCME TIER 1-HS
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Fraction F1 is determined by extracting a soil or sediment sample as received with methanol, then analyzing by headspace-GC/FID.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

Reference Information

F2-F4-511-WT Soil F2-F4-O.Reg 153/04 (July 2011) CCME Tier 1

Petroleum Hydrocarbons (F2-F4 fractions) are extracted from soil with 1:1 hexane:acetone using a rotary extractor. Extracts are treated with silica gel to remove polar organic interferences. F2, F3, & F4 are analyzed by GC-FID. F4G-sg is analyzed gravimetrically.

Notes:

1. F2 (C10-C16): Sum of all hydrocarbons that elute between nC10 and nC16.
2. F3 (C16-C34): Sum of all hydrocarbons that elute between nC16 and nC34.
3. F4 (C34-C50): Sum of all hydrocarbons that elute between nC34 and nC50.
4. F4G: Gravimetric Heavy Hydrocarbons
5. F4G-sg: Gravimetric Heavy Hydrocarbons (F4G) after silica gel treatment.
6. Where both F4 (C34-C50) and F4G-sg are reported for a sample, the larger of the two values is used for comparison against the relevant CCME guideline for F4.
7. F4G-sg cannot be added to the C6 to C50 hydrocarbon results to obtain an estimate of total extractable hydrocarbons.
8. This method is validated for use.
9. Data from analysis of validation and quality control samples is available upon request.
10. Reported results are expressed as milligrams per dry kilogram, unless otherwise indicated.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

F4G-ADD-511-WT Soil F4G SG-O.Reg 153/04 (July 2011) MOE DECPH-E3398/CCME TIER 1

F4G, gravimetric analysis, is determined if the chromatogram does not return to baseline at or before C50. A soil sample is extracted with a solvent mix, the solvent is evaporated and the weight of the residue is determined.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

HG-200.2-CVAA-WT Soil Mercury in Soil by CVAAS EPA 200.2/1631E (mod)

Soil samples are digested with nitric and hydrochloric acids, followed by analysis by CVAAS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

MET-200.2-CCMS-WT Soil Metals in Soil by CRC ICPMS EPA 200.2/6020B (mod)

Soil/sediment is dried, disaggregated, and sieved (2 mm). For tests intended to support Ontario regulations, the <2mm fraction is ground to pass through a 0.355 mm sieve. Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H₂S) may be excluded if lost during sampling, storage, or digestion.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

METHYLNAPS-CALC-WT Soil ABN-Calculated Parameters SW846 8270

MOISTURE-WT Soil % Moisture CCME PHC in Soil - Tier 1 (mod)

PAH-511-WT Soil PAH-O.Reg 153/04 (July 2011) SW846 3510/8270

A representative sub-sample of soil is fortified with deuterium-labelled surrogates and a mechanical shaking technique is used to extract the sample with a mixture of methanol and toluene. The extracts are concentrated and analyzed by GC/MS. Results for benzo(b) fluoranthene may include contributions from benzo(j) fluoranthene, if also present in the sample.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

PH-WT Soil pH MOEE E3137A

A minimum 10g portion of the sample is extracted with 20mL of 0.01M calcium chloride solution by shaking for at least 30 minutes. The aqueous layer is separated from the soil and then analyzed using a pH meter and electrode.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

Reference Information

SAR-R511-WT Soil SAR-O.Reg 153/04 (July 2011) SW846 6010C

A dried, disaggregated solid sample is extracted with deionized water, the aqueous extract is separated from the solid, acidified and then analyzed using a ICP/OES. The concentrations of Na, Ca and Mg are reported as per CALA requirements for calculated parameters. These individual parameters are not for comparison to any guideline.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

VOC-1,3-DCP-CALC-WT Soil Regulation 153 VOCs SW8260B/SW8270C
VOC-511-HS-WT Soil VOC-O.Reg 153/04 (July 2011) SW846 8260 (511)

Soil and sediment samples are extracted in methanol and analyzed by headspace-GC/MS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

XYLENES-SUM-CALC- Soil Sum of Xylene Isomer CALCULATION
WT Concentrations

Total xylenes represents the sum of o-xylene and m&p-xylene.

*** ALS test methods may incorporate modifications from specified reference methods to improve performance.

Chain of Custody numbers:

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA		

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guideline limits are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.



Quality Control Report

Workorder: L2581830

Report Date: 05-MAY-21

Page 1 of 20

Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
B-HWS-R511-WT		Soil						
Batch	R5445879							
WG3527727-4	DUP	L2580237-1						
Boron (B), Hot Water Ext.		<0.10	<0.10	RPD-NA	ug/g	N/A	30	03-MAY-21
WG3527727-2	IRM	WT SAR4						
Boron (B), Hot Water Ext.			100.3		%		70-130	03-MAY-21
WG3527727-3	LCS							
Boron (B), Hot Water Ext.			105.0		%		70-130	03-MAY-21
WG3527727-1	MB							
Boron (B), Hot Water Ext.			<0.10		ug/g		0.1	03-MAY-21
BTX-511-HS-WT		Soil						
Batch	R5444410							
WG3526849-4	DUP	WG3526849-3						
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	03-MAY-21
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	03-MAY-21
m+p-Xylenes		<0.030	<0.030	RPD-NA	ug/g	N/A	40	03-MAY-21
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	03-MAY-21
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	03-MAY-21
WG3526849-2	LCS							
Benzene			97.3		%		70-130	03-MAY-21
Ethylbenzene			86.7		%		70-130	03-MAY-21
m+p-Xylenes			89.4		%		70-130	03-MAY-21
o-Xylene			88.5		%		70-130	03-MAY-21
Toluene			88.2		%		70-130	03-MAY-21
WG3526849-1	MB							
Benzene			<0.0068		ug/g		0.0068	03-MAY-21
Ethylbenzene			<0.018		ug/g		0.018	03-MAY-21
m+p-Xylenes			<0.030		ug/g		0.03	03-MAY-21
o-Xylene			<0.020		ug/g		0.02	03-MAY-21
Toluene			<0.080		ug/g		0.08	03-MAY-21
Surrogate: 1,4-Difluorobenzene			127.9		%		50-140	03-MAY-21
Surrogate: 4-Bromofluorobenzene			126.4		%		50-140	03-MAY-21
WG3526849-5	MS	WG3526849-3						
Benzene			93.3		%		60-140	03-MAY-21
Ethylbenzene			80.8		%		60-140	03-MAY-21
m+p-Xylenes			85.5		%		60-140	03-MAY-21
o-Xylene			83.1		%		60-140	03-MAY-21
Toluene			83.4		%		60-140	03-MAY-21



Quality Control Report

Workorder: L2581830

Report Date: 05-MAY-21

Page 2 of 20

Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CR-CR6-IC-WT		Soil						
Batch	R5447879							
WG3527738-4	CRM	WT-SQC012						
Chromium, Hexavalent			100.5		%		70-130	04-MAY-21
WG3527738-3	DUP	L2581807-2						
Chromium, Hexavalent		<0.20	<0.20	RPD-NA	ug/g	N/A	35	04-MAY-21
WG3527738-2	LCS							
Chromium, Hexavalent			95.5		%		80-120	04-MAY-21
WG3527738-1	MB							
Chromium, Hexavalent			<0.20		ug/g		0.2	04-MAY-21
EC-WT		Soil						
Batch	R5445497							
WG3527714-4	DUP	WG3527714-3						
Conductivity		0.491	0.449		mS/cm	8.9	20	03-MAY-21
WG3527714-2	IRM	WT SAR4						
Conductivity			104.0		%		70-130	03-MAY-21
WG3527895-1	LCS							
Conductivity			96.7		%		90-110	03-MAY-21
WG3527714-1	MB							
Conductivity			<0.0040		mS/cm		0.004	03-MAY-21
Batch	R5445883							
WG3527729-4	DUP	WG3527729-3						
Conductivity		1.68	1.70		mS/cm	1.4	20	03-MAY-21
WG3527729-2	IRM	WT SAR4						
Conductivity			100.8		%		70-130	03-MAY-21
WG3527893-1	LCS							
Conductivity			96.5		%		90-110	03-MAY-21
WG3527729-1	MB							
Conductivity			<0.0040		mS/cm		0.004	03-MAY-21
F1-HS-511-WT		Soil						
Batch	R5444410							
WG3526849-4	DUP	WG3526849-3						
F1 (C6-C10)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	03-MAY-21
WG3526849-2	LCS							
F1 (C6-C10)			97.0		%		80-120	03-MAY-21
WG3526849-1	MB							
F1 (C6-C10)			<5.0		ug/g		5	03-MAY-21
Surrogate: 3,4-Dichlorotoluene			107.1		%		60-140	03-MAY-21
WG3526849-5	MS	WG3526849-3						



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT								
Soil								
Batch R5444410								
WG3526849-5 MS								
WG3526849-3								
F1 (C6-C10)			87.1		%		60-140	03-MAY-21
F2-F4-511-WT								
Soil								
Batch R5445396								
WG3526745-8 DUP								
WG3526745-10								
F2 (C10-C16)		<10	<10	RPD-NA	ug/g	N/A	30	03-MAY-21
F3 (C16-C34)		<50	<50	RPD-NA	ug/g	N/A	30	03-MAY-21
F4 (C34-C50)		<50	<50	RPD-NA	ug/g	N/A	30	03-MAY-21
WG3526745-7 LCS								
F2 (C10-C16)			98.8		%		80-120	03-MAY-21
F3 (C16-C34)			98.4		%		80-120	03-MAY-21
F4 (C34-C50)			94.0		%		80-120	03-MAY-21
WG3526745-6 MB								
F2 (C10-C16)			<10		ug/g		10	03-MAY-21
F3 (C16-C34)			<50		ug/g		50	03-MAY-21
F4 (C34-C50)			<50		ug/g		50	03-MAY-21
Surrogate: 2-Bromobenzotrifluoride			97.3		%		60-140	03-MAY-21
WG3526745-9 MS								
WG3526745-10								
F2 (C10-C16)			93.3		%		60-140	03-MAY-21
F3 (C16-C34)			96.4		%		60-140	03-MAY-21
F4 (C34-C50)			91.8		%		60-140	03-MAY-21
F4G-ADD-511-WT								
Soil								
Batch R5445957								
WG3528184-2 LCS								
F4G-SG (GHH-Silica)			79.3		%		60-140	30-APR-21
WG3528184-1 MB								
F4G-SG (GHH-Silica)			<250		ug/g		250	30-APR-21
HG-200.2-CVAA-WT								
Soil								
Batch R5444839								
WG3527724-2 CRM								
WT-SS-2								
Mercury (Hg)			123.6		%		70-130	03-MAY-21
WG3527724-6 DUP								
WG3527724-5								
Mercury (Hg)		0.0299	0.0330		ug/g	9.8	40	03-MAY-21
WG3527724-3 LCS								
Mercury (Hg)			98.5		%		80-120	03-MAY-21
WG3527724-1 MB								



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-200.2-CVAA-WT								
Soil								
Batch	R5444839							
WG3527724-1	MB							
Mercury (Hg)			<0.0050		mg/kg		0.005	03-MAY-21
MET-200.2-CCMS-WT								
Soil								
Batch	R5445917							
WG3527718-2	CRM	WT-SS-2						
Antimony (Sb)			112.6		%		70-130	03-MAY-21
Arsenic (As)			111.0		%		70-130	03-MAY-21
Barium (Ba)			104.5		%		70-130	03-MAY-21
Beryllium (Be)			112.5		%		70-130	03-MAY-21
Boron (B)			10.4		mg/kg		3.5-13.5	03-MAY-21
Cadmium (Cd)			99.9		%		70-130	03-MAY-21
Chromium (Cr)			116.4		%		70-130	03-MAY-21
Cobalt (Co)			107.3		%		70-130	03-MAY-21
Copper (Cu)			106.7		%		70-130	03-MAY-21
Lead (Pb)			106.1		%		70-130	03-MAY-21
Molybdenum (Mo)			112.4		%		70-130	03-MAY-21
Nickel (Ni)			105.2		%		70-130	03-MAY-21
Selenium (Se)			0.13		mg/kg		0-0.34	03-MAY-21
Silver (Ag)			112.4		%		70-130	03-MAY-21
Thallium (Tl)			0.084		mg/kg		0.029-0.129	03-MAY-21
Uranium (U)			100.5		%		70-130	03-MAY-21
Vanadium (V)			112.2		%		70-130	03-MAY-21
Zinc (Zn)			99.8		%		70-130	03-MAY-21
WG3527718-4	DUP	L2582553-1						
Antimony (Sb)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	03-MAY-21
Arsenic (As)		6.5	6.1		ug/g	6.2	30	03-MAY-21
Barium (Ba)		114	108		ug/g	4.9	40	03-MAY-21
Beryllium (Be)		0.88	0.90		ug/g	2.3	30	03-MAY-21
Boron (B)		15.9	15.5		ug/g	2.4	30	03-MAY-21
Cadmium (Cd)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	03-MAY-21
Chromium (Cr)		31.5	30.1		ug/g	4.3	30	03-MAY-21
Cobalt (Co)		12.0	11.4		ug/g	5.7	30	03-MAY-21
Copper (Cu)		31.1	29.7		ug/g	4.4	30	03-MAY-21
Lead (Pb)		24.4	24.2		ug/g	0.9	40	03-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
	Soil							
Batch	R5445917							
WG3527718-4	DUP	L2582553-1						
Molybdenum (Mo)		<1.0	<1.0	RPD-NA	ug/g	N/A	40	03-MAY-21
Nickel (Ni)		28.3	26.9		ug/g	5.1	30	03-MAY-21
Selenium (Se)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	03-MAY-21
Silver (Ag)		<0.20	<0.20	RPD-NA	ug/g	N/A	40	03-MAY-21
Thallium (Tl)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	03-MAY-21
Uranium (U)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	03-MAY-21
Vanadium (V)		42.5	41.3		ug/g	2.8	30	03-MAY-21
Zinc (Zn)		92.2	88.6		ug/g	4.0	30	03-MAY-21
WG3527718-3	LCS							
Antimony (Sb)			104.7		%		80-120	03-MAY-21
Arsenic (As)			101.3		%		80-120	03-MAY-21
Barium (Ba)			96.5		%		80-120	03-MAY-21
Beryllium (Be)			94.7		%		80-120	03-MAY-21
Boron (B)			93.2		%		80-120	03-MAY-21
Cadmium (Cd)			98.3		%		80-120	03-MAY-21
Chromium (Cr)			98.1		%		80-120	03-MAY-21
Cobalt (Co)			98.2		%		80-120	03-MAY-21
Copper (Cu)			96.8		%		80-120	03-MAY-21
Lead (Pb)			98.3		%		80-120	03-MAY-21
Molybdenum (Mo)			95.7		%		80-120	03-MAY-21
Nickel (Ni)			97.3		%		80-120	03-MAY-21
Selenium (Se)			99.2		%		80-120	03-MAY-21
Silver (Ag)			86.2		%		80-120	03-MAY-21
Thallium (Tl)			100.4		%		80-120	03-MAY-21
Uranium (U)			89.2		%		80-120	03-MAY-21
Vanadium (V)			100.7		%		80-120	03-MAY-21
Zinc (Zn)			93.8		%		80-120	03-MAY-21
WG3527718-1	MB							
Antimony (Sb)			<0.10		mg/kg		0.1	03-MAY-21
Arsenic (As)			<0.10		mg/kg		0.1	03-MAY-21
Barium (Ba)			<0.50		mg/kg		0.5	03-MAY-21
Beryllium (Be)			<0.10		mg/kg		0.1	03-MAY-21
Boron (B)			<5.0		mg/kg		5	03-MAY-21
Cadmium (Cd)			<0.020		mg/kg		0.02	03-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
Soil								
Batch R5445917								
WG3527718-1 MB								
Chromium (Cr)			<0.50		mg/kg		0.5	03-MAY-21
Cobalt (Co)			<0.10		mg/kg		0.1	03-MAY-21
Copper (Cu)			<0.50		mg/kg		0.5	03-MAY-21
Lead (Pb)			<0.50		mg/kg		0.5	03-MAY-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	03-MAY-21
Nickel (Ni)			<0.50		mg/kg		0.5	03-MAY-21
Selenium (Se)			<0.20		mg/kg		0.2	03-MAY-21
Silver (Ag)			<0.10		mg/kg		0.1	03-MAY-21
Thallium (Tl)			<0.050		mg/kg		0.05	03-MAY-21
Uranium (U)			<0.050		mg/kg		0.05	03-MAY-21
Vanadium (V)			<0.20		mg/kg		0.2	03-MAY-21
Zinc (Zn)			<2.0		mg/kg		2	03-MAY-21
Batch R5446102								
WG3527712-2 CRM								
WT-SS-2								
Antimony (Sb)			105.5		%		70-130	03-MAY-21
Arsenic (As)			116.9		%		70-130	03-MAY-21
Barium (Ba)			107.5		%		70-130	03-MAY-21
Beryllium (Be)			108.5		%		70-130	03-MAY-21
Boron (B)			9.5		mg/kg		3.5-13.5	03-MAY-21
Chromium (Cr)			111.3		%		70-130	03-MAY-21
Cobalt (Co)			108.7		%		70-130	03-MAY-21
Copper (Cu)			111.2		%		70-130	03-MAY-21
Lead (Pb)			113.3		%		70-130	03-MAY-21
Molybdenum (Mo)			108.5		%		70-130	03-MAY-21
Nickel (Ni)			107.7		%		70-130	03-MAY-21
Selenium (Se)			0.15		mg/kg		0-0.34	03-MAY-21
Silver (Ag)			101.9		%		70-130	03-MAY-21
Thallium (Tl)			0.080		mg/kg		0.029-0.129	03-MAY-21
Uranium (U)			99.3		%		70-130	03-MAY-21
Vanadium (V)			112.2		%		70-130	03-MAY-21
Zinc (Zn)			104.0		%		70-130	03-MAY-21
WG3527712-6 DUP								
WG3527712-5								
Antimony (Sb)		0.37	0.38		ug/g	4.5	30	03-MAY-21
Arsenic (As)		5.63	6.19		ug/g	9.4	30	03-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
	Soil							
Batch	R5446102							
WG3527712-6	DUP	WG3527712-5						
Barium (Ba)		200	220		ug/g	9.2	40	03-MAY-21
Beryllium (Be)		0.76	0.83		ug/g	8.3	30	03-MAY-21
Boron (B)		12.7	12.9		ug/g	1.5	30	03-MAY-21
Cadmium (Cd)		0.218	0.224		ug/g	2.8	30	03-MAY-21
Chromium (Cr)		22.7	24.8		ug/g	8.6	30	03-MAY-21
Cobalt (Co)		10.5	11.7		ug/g	10	30	03-MAY-21
Copper (Cu)		73.0	80.6		ug/g	9.9	30	03-MAY-21
Lead (Pb)		10.9	12.0		ug/g	9.2	40	03-MAY-21
Molybdenum (Mo)		0.76	0.91		ug/g	17	40	03-MAY-21
Nickel (Ni)		24.7	27.3		ug/g	9.8	30	03-MAY-21
Selenium (Se)		<0.20	0.21	RPD-NA	ug/g	N/A	30	03-MAY-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	03-MAY-21
Thallium (Tl)		0.120	0.121		ug/g	0.8	30	03-MAY-21
Uranium (U)		0.709	0.810		ug/g	13	30	03-MAY-21
Vanadium (V)		32.5	34.6		ug/g	6.5	30	03-MAY-21
Zinc (Zn)		84.1	91.8		ug/g	8.8	30	03-MAY-21
WG3527712-4	LCS							
Antimony (Sb)			115.5		%		80-120	03-MAY-21
Arsenic (As)			106.3		%		80-120	03-MAY-21
Barium (Ba)			105.2		%		80-120	03-MAY-21
Beryllium (Be)			98.3		%		80-120	03-MAY-21
Boron (B)			95.9		%		80-120	03-MAY-21
Cadmium (Cd)			101.8		%		80-120	03-MAY-21
Chromium (Cr)			103.7		%		80-120	03-MAY-21
Cobalt (Co)			102.0		%		80-120	03-MAY-21
Copper (Cu)			99.0		%		80-120	03-MAY-21
Lead (Pb)			106.6		%		80-120	03-MAY-21
Molybdenum (Mo)			104.0		%		80-120	03-MAY-21
Nickel (Ni)			101.6		%		80-120	03-MAY-21
Selenium (Se)			106.5		%		80-120	03-MAY-21
Silver (Ag)			94.1		%		80-120	03-MAY-21
Thallium (Tl)			107.8		%		80-120	03-MAY-21
Uranium (U)			96.3		%		80-120	03-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
	Soil							
Batch	R5446102							
WG3527712-4	LCS							
Vanadium (V)			104.9		%		80-120	03-MAY-21
Zinc (Zn)			100.3		%		80-120	03-MAY-21
WG3527712-1	MB							
Antimony (Sb)			<0.10		mg/kg		0.1	03-MAY-21
Arsenic (As)			<0.10		mg/kg		0.1	03-MAY-21
Barium (Ba)			<0.50		mg/kg		0.5	03-MAY-21
Beryllium (Be)			<0.10		mg/kg		0.1	03-MAY-21
Boron (B)			<5.0		mg/kg		5	03-MAY-21
Cadmium (Cd)			<0.020		mg/kg		0.02	03-MAY-21
Chromium (Cr)			<0.50		mg/kg		0.5	03-MAY-21
Cobalt (Co)			<0.10		mg/kg		0.1	03-MAY-21
Copper (Cu)			<0.50		mg/kg		0.5	03-MAY-21
Lead (Pb)			<0.50		mg/kg		0.5	03-MAY-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	03-MAY-21
Nickel (Ni)			<0.50		mg/kg		0.5	03-MAY-21
Selenium (Se)			<0.20		mg/kg		0.2	03-MAY-21
Silver (Ag)			<0.10		mg/kg		0.1	03-MAY-21
Thallium (Tl)			<0.050		mg/kg		0.05	03-MAY-21
Uranium (U)			<0.050		mg/kg		0.05	03-MAY-21
Vanadium (V)			<0.20		mg/kg		0.2	03-MAY-21
Zinc (Zn)			<2.0		mg/kg		2	03-MAY-21
Batch	R5446104							
WG3527724-2	CRM	WT-SS-2						
Antimony (Sb)			100.1		%		70-130	03-MAY-21
Arsenic (As)			109.5		%		70-130	03-MAY-21
Barium (Ba)			94.7		%		70-130	03-MAY-21
Beryllium (Be)			101.2		%		70-130	03-MAY-21
Boron (B)			9.1		mg/kg		3.5-13.5	03-MAY-21
Cadmium (Cd)			96.4		%		70-130	03-MAY-21
Chromium (Cr)			106.8		%		70-130	03-MAY-21
Cobalt (Co)			101.8		%		70-130	03-MAY-21
Copper (Cu)			97.2		%		70-130	03-MAY-21
Lead (Pb)			104.3		%		70-130	03-MAY-21
Molybdenum (Mo)			97.6		%		70-130	03-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
Soil								
Batch	R5446104							
WG3527724-2	CRM	WT-SS-2						
Nickel (Ni)			100.6		%		70-130	03-MAY-21
Selenium (Se)			0.13		mg/kg		0-0.34	03-MAY-21
Silver (Ag)			91.3		%		70-130	03-MAY-21
Thallium (Tl)			0.079		mg/kg		0.029-0.129	03-MAY-21
Uranium (U)			97.1		%		70-130	03-MAY-21
Vanadium (V)			105.2		%		70-130	03-MAY-21
Zinc (Zn)			97.1		%		70-130	03-MAY-21
WG3527724-6	DUP	WG3527724-5						
Antimony (Sb)		0.15	0.15		ug/g	0.9	30	03-MAY-21
Arsenic (As)		9.75	9.32		ug/g	4.5	30	03-MAY-21
Barium (Ba)		183	179		ug/g	2.3	40	03-MAY-21
Beryllium (Be)		1.07	1.00		ug/g	6.6	30	03-MAY-21
Boron (B)		23.2	22.2		ug/g	4.4	30	03-MAY-21
Cadmium (Cd)		0.395	0.386		ug/g	2.4	30	03-MAY-21
Chromium (Cr)		44.1	42.6		ug/g	3.4	30	03-MAY-21
Cobalt (Co)		16.8	16.3		ug/g	3.2	30	03-MAY-21
Copper (Cu)		21.5	21.2		ug/g	1.3	30	03-MAY-21
Lead (Pb)		14.1	13.8		ug/g	1.8	40	03-MAY-21
Molybdenum (Mo)		1.11	1.11		ug/g	0.5	40	03-MAY-21
Nickel (Ni)		53.4	51.3		ug/g	4.0	30	03-MAY-21
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	03-MAY-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	03-MAY-21
Thallium (Tl)		0.265	0.252		ug/g	5.2	30	03-MAY-21
Uranium (U)		0.818	0.775		ug/g	5.4	30	03-MAY-21
Vanadium (V)		52.4	51.6		ug/g	1.5	30	03-MAY-21
Zinc (Zn)		84.8	82.4		ug/g	2.9	30	03-MAY-21
WG3527724-4	LCS							
Antimony (Sb)			106.4		%		80-120	03-MAY-21
Arsenic (As)			99.1		%		80-120	03-MAY-21
Barium (Ba)			92.7		%		80-120	03-MAY-21
Beryllium (Be)			93.7		%		80-120	03-MAY-21
Boron (B)			89.9		%		80-120	03-MAY-21
Cadmium (Cd)			96.1		%		80-120	03-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	Soil							
Batch	R5446104							
WG3527724-4	LCS							
Chromium (Cr)			95.3		%		80-120	03-MAY-21
Cobalt (Co)			94.7		%		80-120	03-MAY-21
Copper (Cu)			93.2		%		80-120	03-MAY-21
Lead (Pb)			93.7		%		80-120	03-MAY-21
Molybdenum (Mo)			95.9		%		80-120	03-MAY-21
Nickel (Ni)			93.8		%		80-120	03-MAY-21
Selenium (Se)			101.5		%		80-120	03-MAY-21
Silver (Ag)			87.9		%		80-120	03-MAY-21
Thallium (Tl)			99.7		%		80-120	03-MAY-21
Uranium (U)			87.8		%		80-120	03-MAY-21
Vanadium (V)			97.1		%		80-120	03-MAY-21
Zinc (Zn)			95.2		%		80-120	03-MAY-21
WG3527724-1	MB							
Antimony (Sb)			<0.10		mg/kg		0.1	03-MAY-21
Arsenic (As)			<0.10		mg/kg		0.1	03-MAY-21
Barium (Ba)			<0.50		mg/kg		0.5	03-MAY-21
Beryllium (Be)			<0.10		mg/kg		0.1	03-MAY-21
Boron (B)			<5.0		mg/kg		5	03-MAY-21
Cadmium (Cd)			<0.020		mg/kg		0.02	03-MAY-21
Chromium (Cr)			<0.50		mg/kg		0.5	03-MAY-21
Cobalt (Co)			<0.10		mg/kg		0.1	03-MAY-21
Copper (Cu)			<0.50		mg/kg		0.5	03-MAY-21
Lead (Pb)			<0.50		mg/kg		0.5	03-MAY-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	03-MAY-21
Nickel (Ni)			<0.50		mg/kg		0.5	03-MAY-21
Selenium (Se)			<0.20		mg/kg		0.2	03-MAY-21
Silver (Ag)			<0.10		mg/kg		0.1	03-MAY-21
Thallium (Tl)			<0.050		mg/kg		0.05	03-MAY-21
Uranium (U)			<0.050		mg/kg		0.05	03-MAY-21
Vanadium (V)			<0.20		mg/kg		0.2	03-MAY-21
Zinc (Zn)			<2.0		mg/kg		2	03-MAY-21

MOISTURE-WT **Soil**



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT		Soil						
Batch	R5443525							
WG3526741-3	DUP	L2580541-21						
% Moisture		18.1	17.8		%	1.4	20	30-APR-21
WG3526741-2	LCS							
% Moisture			100.3		%		90-110	30-APR-21
WG3526741-1	MB							
% Moisture			<0.25		%		0.25	30-APR-21
PAH-511-WT		Soil						
Batch	R5443768							
WG3526746-3	DUP	WG3526746-5						
1-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	30-APR-21
2-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	30-APR-21
Acenaphthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	30-APR-21
Acenaphthylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	30-APR-21
Anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	30-APR-21
Benzo(a)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	30-APR-21
Benzo(a)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	30-APR-21
Benzo(b&j)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	30-APR-21
Benzo(g,h,i)perylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	30-APR-21
Benzo(k)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	30-APR-21
Chrysene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	30-APR-21
Dibenz(a,h)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	30-APR-21
Fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	30-APR-21
Fluorene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	30-APR-21
Indeno(1,2,3-cd)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	30-APR-21
Naphthalene		<0.013	<0.013	RPD-NA	ug/g	N/A	40	30-APR-21
Phenanthrene		<0.046	<0.046	RPD-NA	ug/g	N/A	40	30-APR-21
Pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	30-APR-21
WG3526746-2	LCS							
1-Methylnaphthalene			92.9		%		50-140	30-APR-21
2-Methylnaphthalene			90.2		%		50-140	30-APR-21
Acenaphthene			88.8		%		50-140	30-APR-21
Acenaphthylene			85.4		%		50-140	30-APR-21
Anthracene			80.5		%		50-140	30-APR-21
Benzo(a)anthracene			92.0		%		50-140	30-APR-21
Benzo(a)pyrene			78.8		%		50-140	30-APR-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Soil							
Batch	R5443768							
WG3526746-2 LCS								
Benzo(b&j)fluoranthene			77.4		%		50-140	30-APR-21
Benzo(g,h,i)perylene			82.8		%		50-140	30-APR-21
Benzo(k)fluoranthene			95.5		%		50-140	30-APR-21
Chrysene			89.6		%		50-140	30-APR-21
Dibenz(a,h)anthracene			82.5		%		50-140	30-APR-21
Fluoranthene			87.3		%		50-140	30-APR-21
Fluorene			87.4		%		50-140	30-APR-21
Indeno(1,2,3-cd)pyrene			85.9		%		50-140	30-APR-21
Naphthalene			88.0		%		50-140	30-APR-21
Phenanthrene			90.2		%		50-140	30-APR-21
Pyrene			87.0		%		50-140	30-APR-21
WG3526746-1 MB								
1-Methylnaphthalene			<0.030		ug/g		0.03	30-APR-21
2-Methylnaphthalene			<0.030		ug/g		0.03	30-APR-21
Acenaphthene			<0.050		ug/g		0.05	30-APR-21
Acenaphthylene			<0.050		ug/g		0.05	30-APR-21
Anthracene			<0.050		ug/g		0.05	30-APR-21
Benzo(a)anthracene			<0.050		ug/g		0.05	30-APR-21
Benzo(a)pyrene			<0.050		ug/g		0.05	30-APR-21
Benzo(b&j)fluoranthene			<0.050		ug/g		0.05	30-APR-21
Benzo(g,h,i)perylene			<0.050		ug/g		0.05	30-APR-21
Benzo(k)fluoranthene			<0.050		ug/g		0.05	30-APR-21
Chrysene			<0.050		ug/g		0.05	30-APR-21
Dibenz(a,h)anthracene			<0.050		ug/g		0.05	30-APR-21
Fluoranthene			<0.050		ug/g		0.05	30-APR-21
Fluorene			<0.050		ug/g		0.05	30-APR-21
Indeno(1,2,3-cd)pyrene			<0.050		ug/g		0.05	30-APR-21
Naphthalene			<0.013		ug/g		0.013	30-APR-21
Phenanthrene			<0.046		ug/g		0.046	30-APR-21
Pyrene			<0.050		ug/g		0.05	30-APR-21
Surrogate: 2-Fluorobiphenyl			92.9		%		50-140	30-APR-21
Surrogate: d14-Terphenyl			90.2		%		50-140	30-APR-21
WG3526746-4 MS		WG3526746-5						
1-Methylnaphthalene			92.5		%		50-140	30-APR-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SAR-R511-WT		Soil						
Batch R5445918								
WG3527714-5 LCS								
Calcium (Ca)			109.0		%		80-120	03-MAY-21
Sodium (Na)			104.2		%		80-120	03-MAY-21
Magnesium (Mg)			104.2		%		80-120	03-MAY-21
WG3527714-1 MB								
Calcium (Ca)			<0.50		mg/L		0.5	03-MAY-21
Sodium (Na)			<0.50		mg/L		0.5	03-MAY-21
Magnesium (Mg)			<0.50		mg/L		0.5	03-MAY-21
Batch R5446105								
WG3527729-4 DUP		WG3527729-3						
Calcium (Ca)		1.46	1.63		mg/L	11	30	03-MAY-21
Sodium (Na)		330	338		mg/L	2.4	30	03-MAY-21
Magnesium (Mg)		<0.50	<0.50	RPD-NA	mg/L	N/A	30	03-MAY-21
WG3527729-2 IRM		WT SAR4						
Calcium (Ca)			98.4		%		70-130	03-MAY-21
Sodium (Na)			94.3		%		70-130	03-MAY-21
Magnesium (Mg)			98.3		%		70-130	03-MAY-21
WG3527729-5 LCS								
Calcium (Ca)			108.3		%		80-120	03-MAY-21
Sodium (Na)			103.6		%		80-120	03-MAY-21
Magnesium (Mg)			104.0		%		80-120	03-MAY-21
WG3527729-1 MB								
Calcium (Ca)			<0.50		mg/L		0.5	03-MAY-21
Sodium (Na)			<0.50		mg/L		0.5	03-MAY-21
Magnesium (Mg)			<0.50		mg/L		0.5	03-MAY-21
VOC-511-HS-WT		Soil						
Batch R5450317								
WG3526811-4 DUP		WG3526811-3						
1,1,1,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
1,1,2,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
1,1,1-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
1,1,2-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
1,1-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
1,1-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
1,2-Dibromoethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT		Soil						
Batch	R5450317							
WG3526811-4	DUP	WG3526811-3						
1,2-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
1,2-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
1,2-Dichloropropane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
1,3-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
1,4-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
Acetone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	05-MAY-21
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	05-MAY-21
Bromodichloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
Bromoform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
Bromomethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
Carbon tetrachloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
Chlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
Chloroform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
cis-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
cis-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	05-MAY-21
Dibromochloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
Dichlorodifluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	05-MAY-21
n-Hexane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
Methylene Chloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
MTBE		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
m+p-Xylenes		<0.030	<0.030	RPD-NA	ug/g	N/A	40	05-MAY-21
Methyl Ethyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	05-MAY-21
Methyl Isobutyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	05-MAY-21
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	05-MAY-21
Styrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
Tetrachloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	05-MAY-21
trans-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
trans-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	05-MAY-21
Trichloroethylene		<0.010	<0.010	RPD-NA	ug/g	N/A	40	05-MAY-21
Trichlorofluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
Vinyl chloride		<0.020	<0.020		ug/g			05-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT								
	Soil							
Batch	R5450317							
WG3526811-4	DUP	WG3526811-3						
Vinyl chloride		<0.020	<0.020	RPD-NA	ug/g	N/A	40	05-MAY-21
WG3526811-2	LCS							
1,1,1,2-Tetrachloroethane			119.7		%		60-130	05-MAY-21
1,1,2,2-Tetrachloroethane			124.7		%		60-130	05-MAY-21
1,1,1-Trichloroethane			117.0		%		60-130	05-MAY-21
1,1,2-Trichloroethane			119.0		%		60-130	05-MAY-21
1,1-Dichloroethane			120.6		%		60-130	05-MAY-21
1,1-Dichloroethylene			117.2		%		60-130	05-MAY-21
1,2-Dibromoethane			118.7		%		70-130	05-MAY-21
1,2-Dichlorobenzene			115.8		%		70-130	05-MAY-21
1,2-Dichloroethane			123.6		%		60-130	05-MAY-21
1,2-Dichloropropane			121.6		%		70-130	05-MAY-21
1,3-Dichlorobenzene			117.6		%		70-130	05-MAY-21
1,4-Dichlorobenzene			116.3		%		70-130	05-MAY-21
Acetone			140.0		%		60-140	05-MAY-21
Benzene			118.8		%		70-130	05-MAY-21
Bromodichloromethane			130.4		%		50-140	05-MAY-21
Bromoform			132.9	LCS-ND	%		70-130	05-MAY-21
Bromomethane			112.9		%		50-140	05-MAY-21
Carbon tetrachloride			119.2		%		70-130	05-MAY-21
Chlorobenzene			123.0		%		70-130	05-MAY-21
Chloroform			125.5		%		70-130	05-MAY-21
cis-1,2-Dichloroethylene			122.5		%		70-130	05-MAY-21
cis-1,3-Dichloropropene			125.5		%		70-130	05-MAY-21
Dibromochloromethane			118.2		%		60-130	05-MAY-21
Dichlorodifluoromethane			86.4		%		50-140	05-MAY-21
Ethylbenzene			117.3		%		70-130	05-MAY-21
n-Hexane			110.9		%		70-130	05-MAY-21
Methylene Chloride			125.5		%		70-130	05-MAY-21
MTBE			111.8		%		70-130	05-MAY-21
m+p-Xylenes			122.6		%		70-130	05-MAY-21
Methyl Ethyl Ketone			131.4		%		60-140	05-MAY-21
Methyl Isobutyl Ketone			118.6		%		60-140	05-MAY-21
o-Xylene			129.9		%		70-130	05-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT		Soil						
Batch	R5450317							
WG3526811-2	LCS							
Styrene			121.9		%		70-130	05-MAY-21
Tetrachloroethylene			116.1		%		60-130	05-MAY-21
Toluene			117.0		%		70-130	05-MAY-21
trans-1,2-Dichloroethylene			125.1		%		60-130	05-MAY-21
trans-1,3-Dichloropropene			121.5		%		70-130	05-MAY-21
Trichloroethylene			119.7		%		60-130	05-MAY-21
Trichlorofluoromethane			113.7		%		50-140	05-MAY-21
Vinyl chloride			114.1		%		60-140	05-MAY-21
WG3526811-1	MB							
1,1,1,2-Tetrachloroethane			<0.050		ug/g		0.05	05-MAY-21
1,1,2,2-Tetrachloroethane			<0.050		ug/g		0.05	05-MAY-21
1,1,1-Trichloroethane			<0.050		ug/g		0.05	05-MAY-21
1,1,2-Trichloroethane			<0.050		ug/g		0.05	05-MAY-21
1,1-Dichloroethane			<0.050		ug/g		0.05	05-MAY-21
1,1-Dichloroethylene			<0.050		ug/g		0.05	05-MAY-21
1,2-Dibromoethane			<0.050		ug/g		0.05	05-MAY-21
1,2-Dichlorobenzene			<0.050		ug/g		0.05	05-MAY-21
1,2-Dichloroethane			<0.050		ug/g		0.05	05-MAY-21
1,2-Dichloropropane			<0.050		ug/g		0.05	05-MAY-21
1,3-Dichlorobenzene			<0.050		ug/g		0.05	05-MAY-21
1,4-Dichlorobenzene			<0.050		ug/g		0.05	05-MAY-21
Acetone			<0.50		ug/g		0.5	05-MAY-21
Benzene			<0.0068		ug/g		0.0068	05-MAY-21
Bromodichloromethane			<0.050		ug/g		0.05	05-MAY-21
Bromoform			<0.050		ug/g		0.05	05-MAY-21
Bromomethane			<0.050		ug/g		0.05	05-MAY-21
Carbon tetrachloride			<0.050		ug/g		0.05	05-MAY-21
Chlorobenzene			<0.050		ug/g		0.05	05-MAY-21
Chloroform			<0.050		ug/g		0.05	05-MAY-21
cis-1,2-Dichloroethylene			<0.050		ug/g		0.05	05-MAY-21
cis-1,3-Dichloropropene			<0.030		ug/g		0.03	05-MAY-21
Dibromochloromethane			<0.050		ug/g		0.05	05-MAY-21
Dichlorodifluoromethane			<0.050		ug/g		0.05	05-MAY-21
Ethylbenzene			<0.018		ug/g		0.018	05-MAY-21



Quality Control Report

Workorder: L2581830

Report Date: 05-MAY-21

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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT								
	Soil							
Batch	R5450317							
WG3526811-1 MB								
n-Hexane			<0.050		ug/g		0.05	05-MAY-21
Methylene Chloride			<0.050		ug/g		0.05	05-MAY-21
MTBE			<0.050		ug/g		0.05	05-MAY-21
m+p-Xylenes			<0.030		ug/g		0.03	05-MAY-21
Methyl Ethyl Ketone			<0.50		ug/g		0.5	05-MAY-21
Methyl Isobutyl Ketone			<0.50		ug/g		0.5	05-MAY-21
o-Xylene			<0.020		ug/g		0.02	05-MAY-21
Styrene			<0.050		ug/g		0.05	05-MAY-21
Tetrachloroethylene			<0.050		ug/g		0.05	05-MAY-21
Toluene			<0.080		ug/g		0.08	05-MAY-21
trans-1,2-Dichloroethylene			<0.050		ug/g		0.05	05-MAY-21
trans-1,3-Dichloropropene			<0.030		ug/g		0.03	05-MAY-21
Trichloroethylene			<0.010		ug/g		0.01	05-MAY-21
Trichlorofluoromethane			<0.050		ug/g		0.05	05-MAY-21
Vinyl chloride			<0.020		ug/g		0.02	05-MAY-21
Surrogate: 1,4-Difluorobenzene			123.8		%		50-140	05-MAY-21
Surrogate: 4-Bromofluorobenzene			104.7		%		50-140	05-MAY-21
WG3526811-5 MS		WG3526811-3						
1,1,1,2-Tetrachloroethane			126.1		%		50-140	05-MAY-21
1,1,2,2-Tetrachloroethane			134.2		%		50-140	05-MAY-21
1,1,1-Trichloroethane			121.9		%		50-140	05-MAY-21
1,1,2-Trichloroethane			125.5		%		50-140	05-MAY-21
1,1-Dichloroethane			125.4		%		50-140	05-MAY-21
1,1-Dichloroethylene			124.1		%		50-140	05-MAY-21
1,2-Dibromoethane			123.7		%		50-140	05-MAY-21
1,2-Dichlorobenzene			125.8		%		50-140	05-MAY-21
1,2-Dichloroethane			128.6		%		50-140	05-MAY-21
1,2-Dichloropropane			123.9		%		50-140	05-MAY-21
1,3-Dichlorobenzene			127.1		%		50-140	05-MAY-21
1,4-Dichlorobenzene			125.3		%		50-140	05-MAY-21
Acetone			146.8	MES	%		50-140	05-MAY-21
Benzene			122.3		%		50-140	05-MAY-21
Bromodichloromethane			135.0		%		50-140	05-MAY-21
Bromoform			140.6	MES	%		50-140	05-MAY-21



Quality Control Report

Workorder: L2581830

Report Date: 05-MAY-21

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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT								
	Soil							
Batch	R5450317							
WG3526811-5	MS	WG3526811-3						
Bromomethane			119.9		%		50-140	05-MAY-21
Carbon tetrachloride			124.1		%		50-140	05-MAY-21
Chlorobenzene			130.3		%		50-140	05-MAY-21
Chloroform			130.6		%		50-140	05-MAY-21
cis-1,2-Dichloroethylene			125.7		%		50-140	05-MAY-21
cis-1,3-Dichloropropene			123.7		%		50-140	05-MAY-21
Dibromochloromethane			124.6		%		50-140	05-MAY-21
Dichlorodifluoromethane			114.4		%		50-140	05-MAY-21
Ethylbenzene			121.5		%		50-140	05-MAY-21
n-Hexane			120.3		%		50-140	05-MAY-21
Methylene Chloride			131.5		%		50-140	05-MAY-21
MTBE			123.7		%		50-140	05-MAY-21
m+p-Xylenes			130.1		%		50-140	05-MAY-21
Methyl Ethyl Ketone			126.2		%		50-140	05-MAY-21
Methyl Isobutyl Ketone			113.6		%		50-140	05-MAY-21
o-Xylene			135.0		%		50-140	05-MAY-21
Styrene			126.3		%		50-140	05-MAY-21
Tetrachloroethylene			120.2		%		50-140	05-MAY-21
Toluene			122.4		%		50-140	05-MAY-21
trans-1,2-Dichloroethylene			129.9		%		50-140	05-MAY-21
trans-1,3-Dichloropropene			123.1		%		50-140	05-MAY-21
Trichloroethylene			121.5		%		50-140	05-MAY-21
Trichlorofluoromethane			123.2		%		50-140	05-MAY-21
Vinyl chloride			124.1		%		50-140	05-MAY-21

Quality Control Report

Workorder: L2581830

Report Date: 05-MAY-21

Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9
Contact: JEN LAMBKE

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
J	Duplicate results and limits are expressed in terms of absolute difference.
LCS-ND	Lab Control Sample recovery was slightly outside ALS DQO. Reported non-detect results for associated samples were unaffected.
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

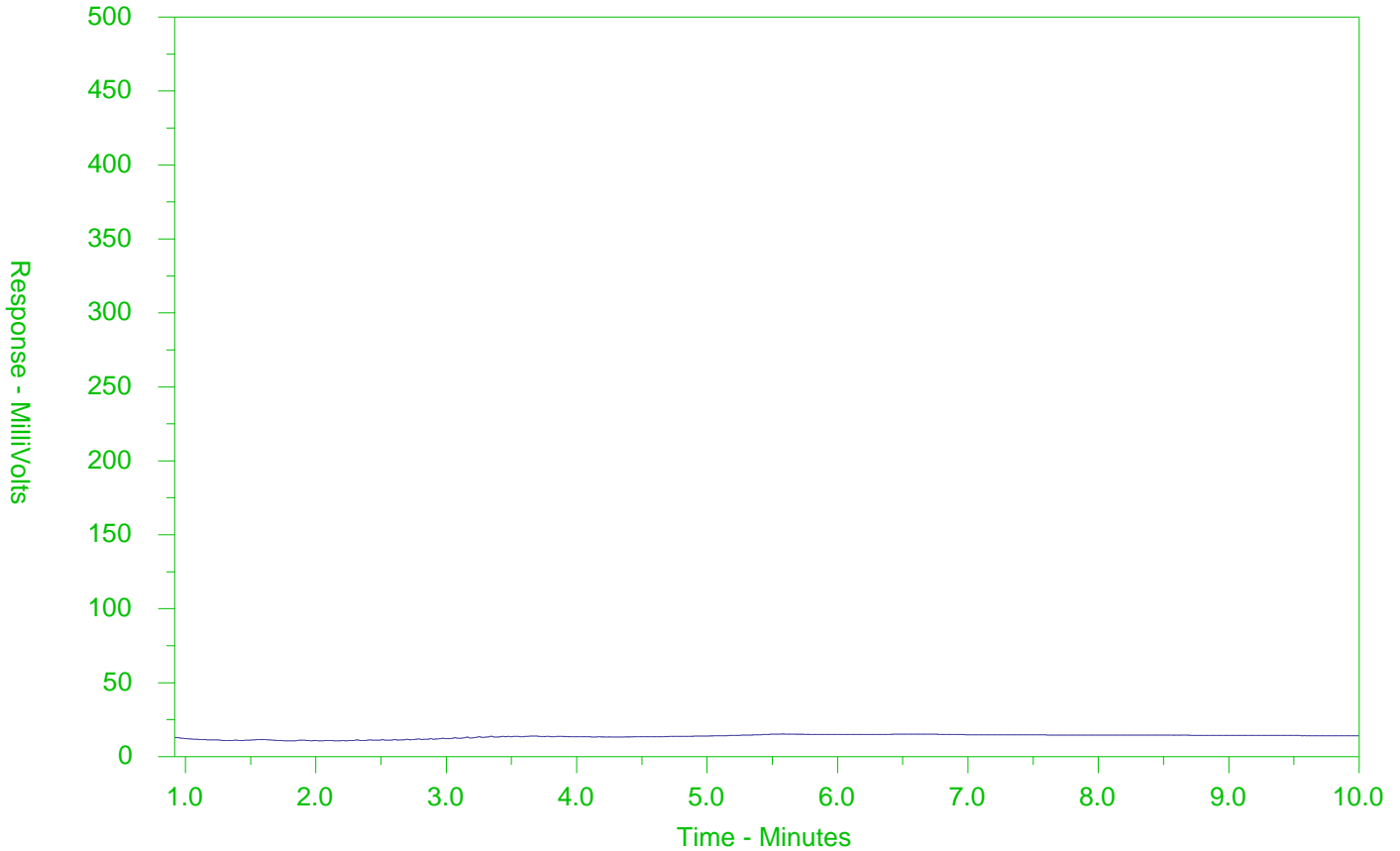
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2581830-2
 Client Sample ID: BH 139-21 SS2 2.5-4.5 FT



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

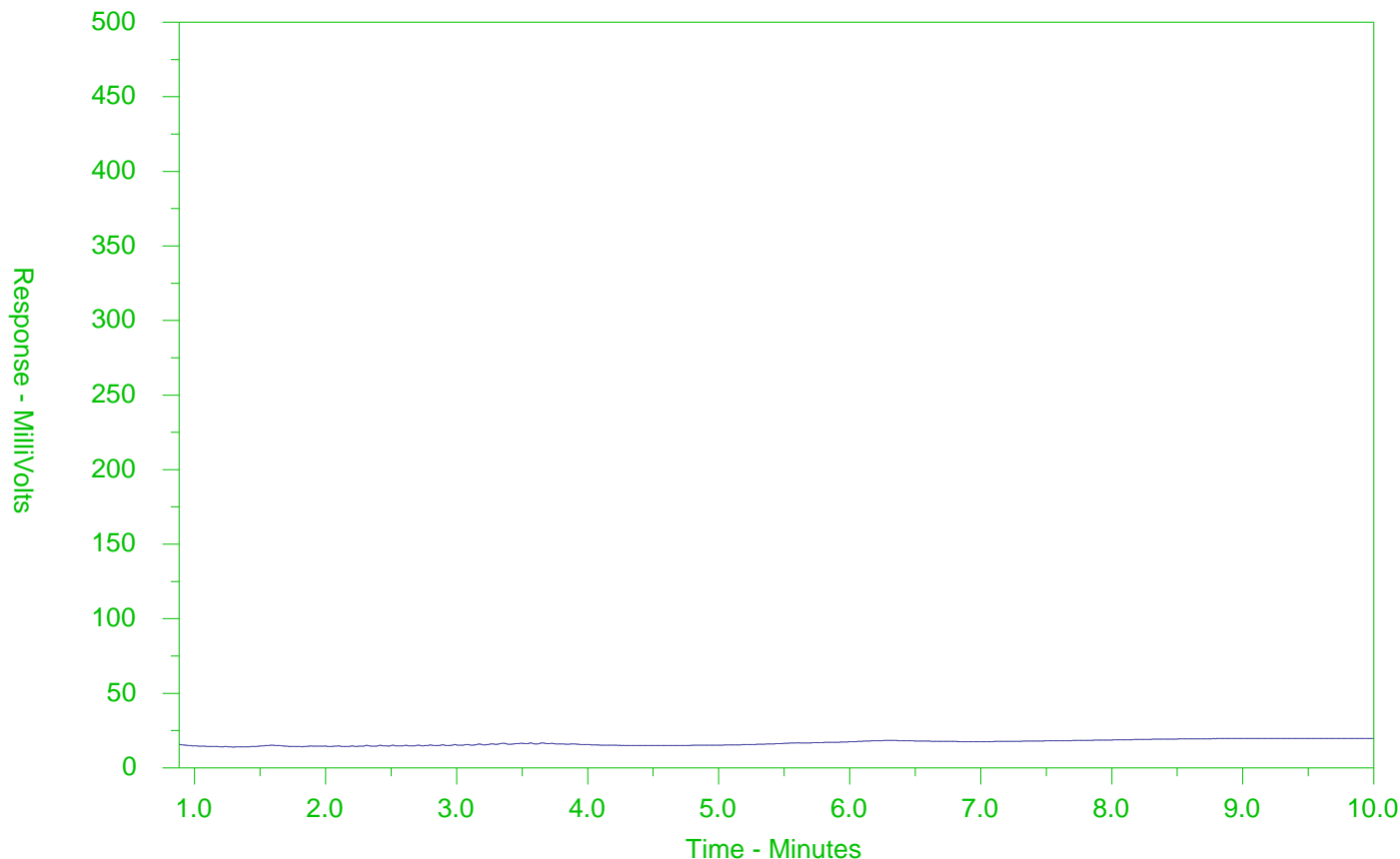
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2581830-4
 Client Sample ID: BH 139-21 SS4 7.5-9.5 FT



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

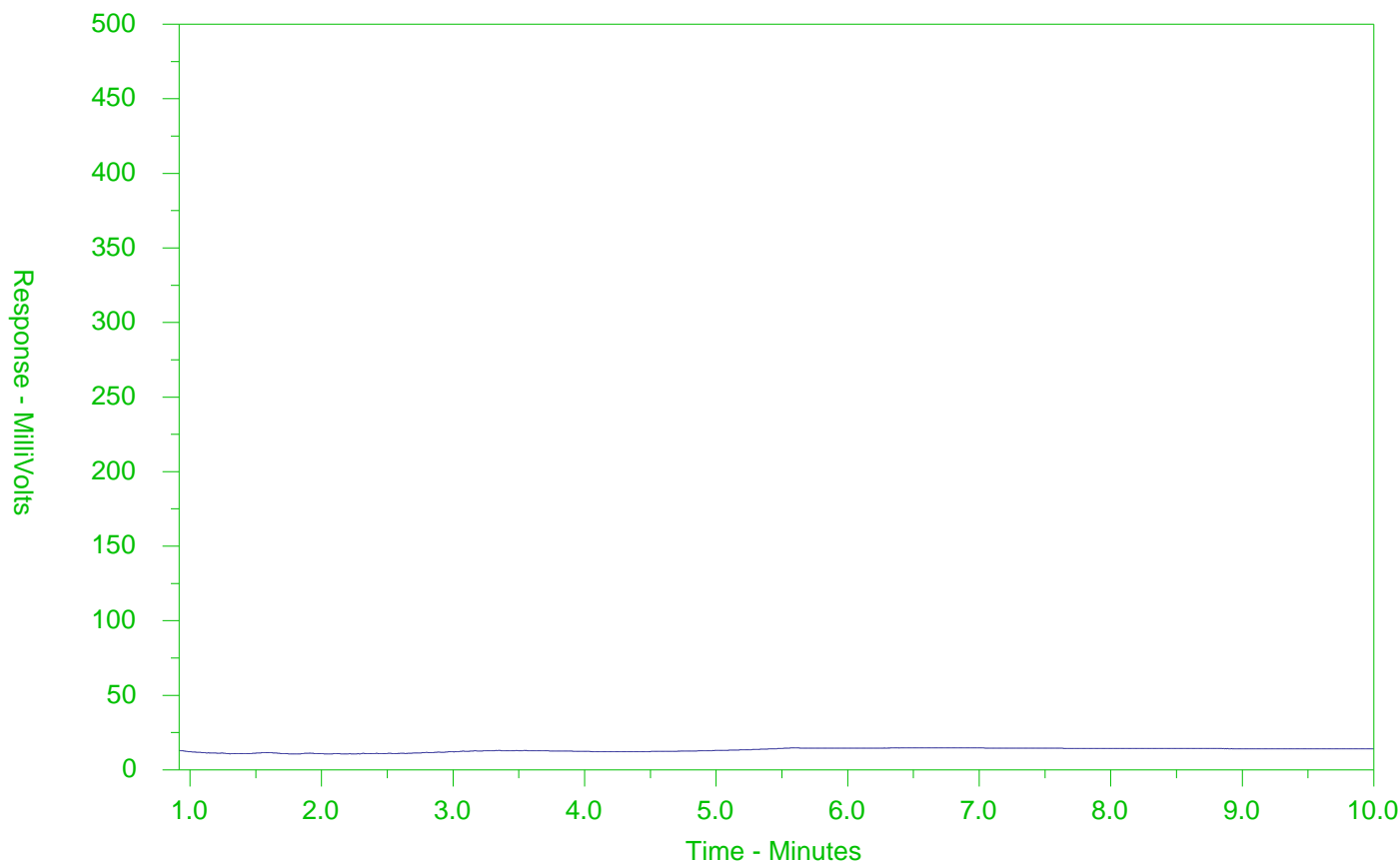
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2581830-12
 Client Sample ID: BH 141-21 SS3 5-7 FT



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

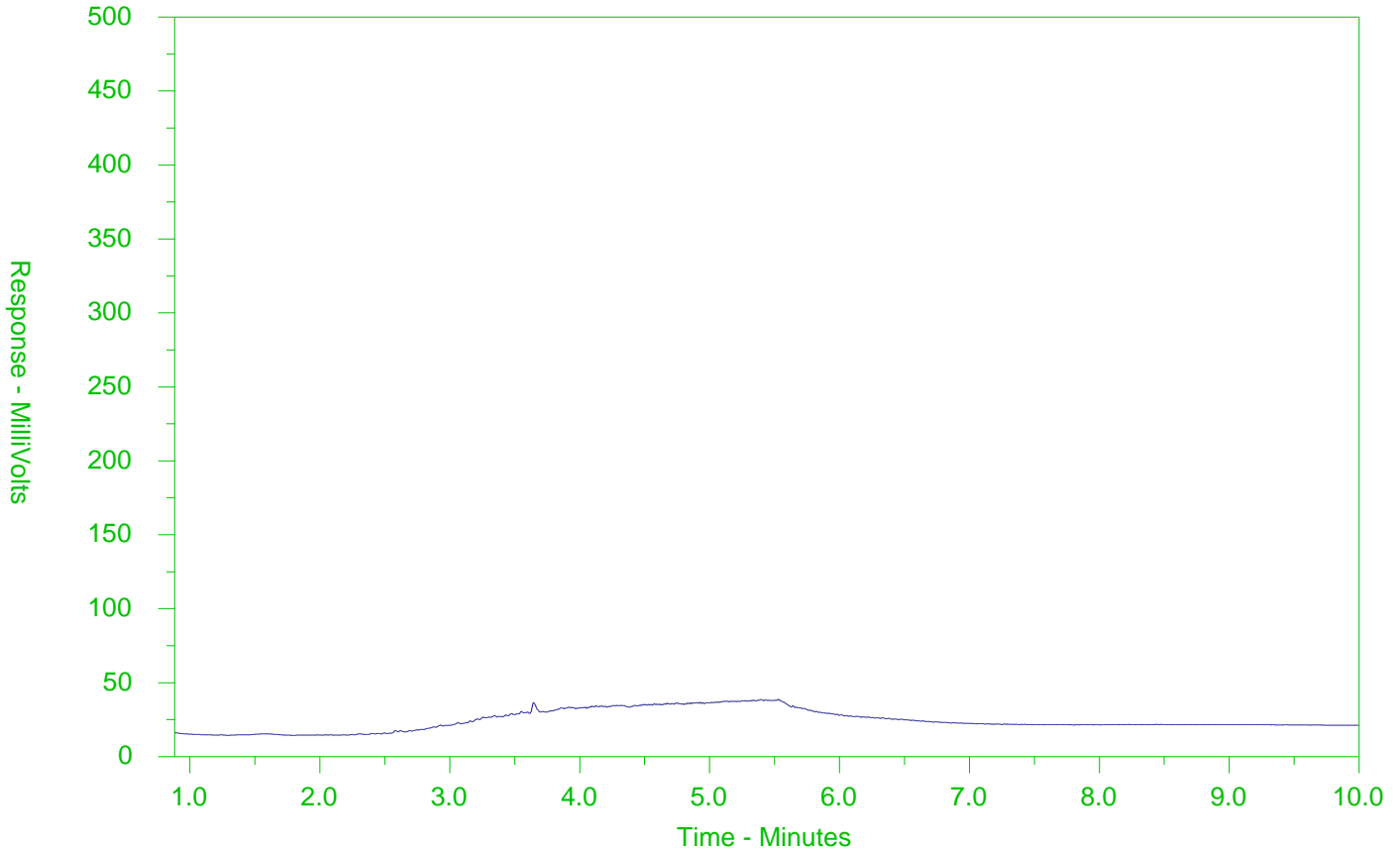
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2581830-15
 Client Sample ID: BH 142-21 SS2 2.5-4.5 FT



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

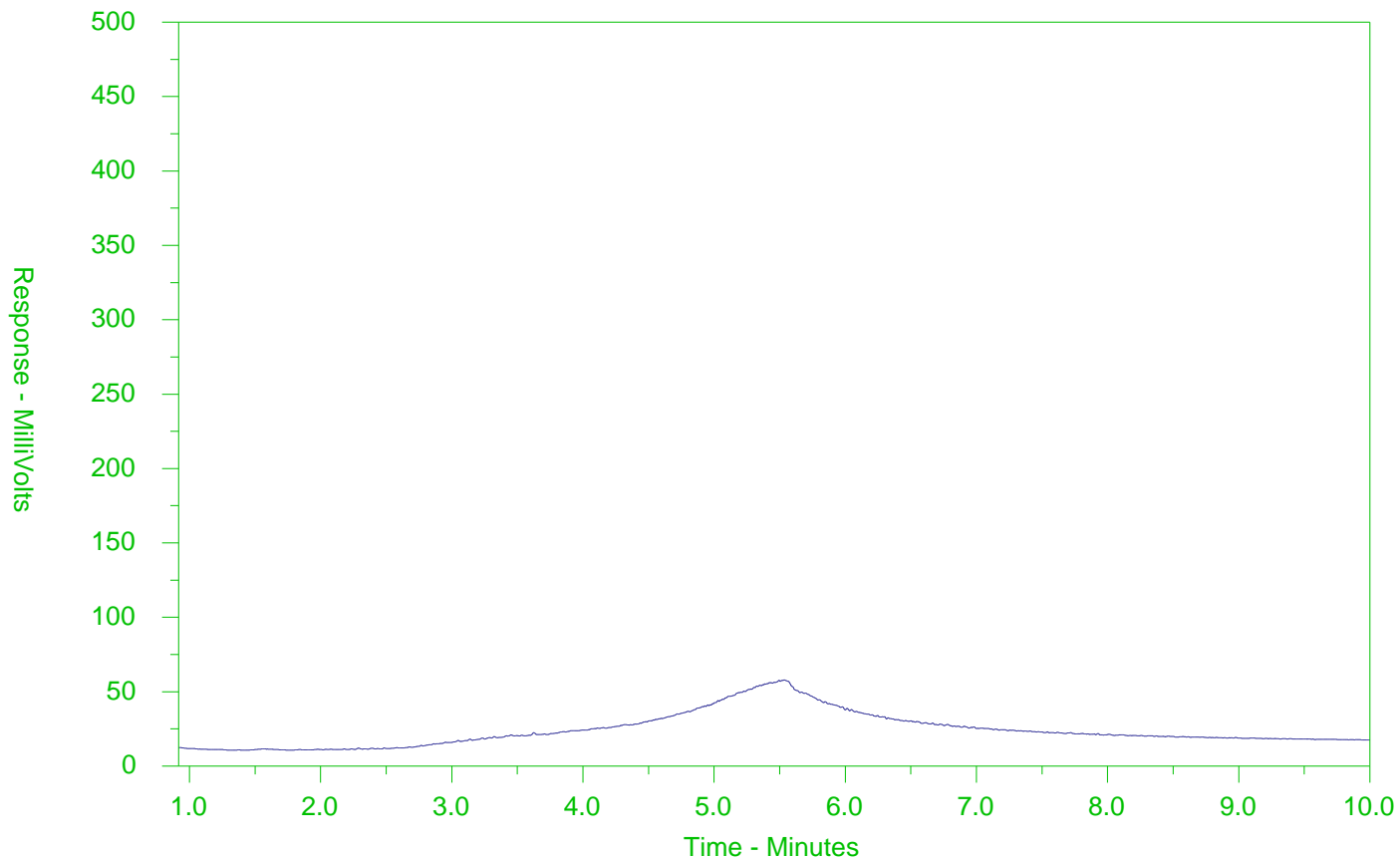
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2581830-19
 Client Sample ID: BH 143-21 SS2 2.5-4.5 FT



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.



Chain of Custody (COC) / Analytical Request Form



COC Number: 17 -

Page 1 of 3

Canada Toll Free: 1 800 668 9878

L2581830-COFC

Day 2 Site L

Report To Contact and company name below will appear on the final report		Report Format Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL)		Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)					
Company: MTE		Quality Control (QC) Report with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply		EMERGENCY			
Contact: Jen Lambke		<input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked		4 day [P4-20%] <input type="checkbox"/>		1 Business day [E - 100%] <input type="checkbox"/>			
Phone: 519-502-3268		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX		3 day [P3-25%] <input type="checkbox"/>		Same Day, Weekend or Statutory holiday [E2 -200%] <input type="checkbox"/>			
Company address below will appear on the final report		Email 1 or Fax: jlambke@mte85.com		2 day [P2-50%] <input type="checkbox"/>		(Laboratory opening fees may apply) <input type="checkbox"/>			
Street: 520 Binghamans Centre Drive		Email 2: jlamb@mte85.com		Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm					
City/Province: Kitchener		Email 3:		For tests that can not be performed according to the service level selected, you will be contacted.					
Postal Code:				Analysis Request					
Invoice To		Invoice Distribution		Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below					
Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX							
Copy of Invoice with Report <input type="checkbox"/> YES <input type="checkbox"/> NO		Email 1 or Fax: jlambke@mte85.com		NUMBER OF CONTAINERS				SAMPLES ON HOLD	
Company:		Email 2:							
Contact:		Email 3:		PHC F1 to F4 and BTEX				SUSPECTED HAZARD (see Special Instructions)	
Project Information		Oil and Gas Required Fields (client use)							
ALS Account # / Quote #: Q75730		AFE/Cost Center:		PO#		Metals Scan		Metals Complete	
Job #: 46995-100		Major/Minor Code:		Routing Code:		PAHs		SAR & EC	
PO / AFE:		Requisitioner:		Location:		pH		PCBs	
LSD:		ALS Lab Work Order # (lab use only): L2581830		ALS Contact: Emily H		PHC F2 to F4			
		Sampler: Matt D							
ALS Sample # (lab use only)		Sample Identification and/or Coordinates (This description will appear on the report)		Date (dd-mmm-yy)		Time (hh:mm)		Sample Type	
BH139-21		GSI 6"-2.5FT		28-04-21		8:40		So:1	
↓		SS2 2.5-4.5FT		↓		8:45		↓	
↓		SS3 5-7FT		↓		8:50		↓	
↓		SS4 7.5-9.5FT		↓		9:00		↓	
↓		MSPLP 2'8"-4'6"		↓		9:15		↓	
BH140-21		GSI A 4"-12"		28-04-21		9:45		↓	
↓		SS2 2.5"-4.5FT		↓		10:00		↓	
↓		SS3 5-7FT		↓		10:10		↓	
↓		SS4 7.5-9.5FT		↓		10:20		↓	
↓		MSPLP 12"-2.5FT		↓		10:30		↓	
↓		GSI B 12"-2.5FT		↓		9:50		↓	
BH141-21		GSI 3"-2.5FT		28-04-21		11am		So:1	
Drinking Water (DW) Samples (client use)		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)		SAMPLE CONDITION AS RECEIVED (lab use only)					
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO		Table 1 Res, Table 3.1 R/P/I, Table 3.1 I/C/C (ESQS, O.Reg. 406/19) - coarse, AND Table 3 I/C/C (SCS, O.Reg. 153/04) - coarse		Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>					
Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO				Ice Packs <input checked="" type="checkbox"/> Ice Cubes <input checked="" type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>					
				Cooling Initiated <input type="checkbox"/>					
				INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C		
							26 38 4.7		
SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)			
Released by:		Date:		Received by:		Date:		Time:	

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

JUNE 2016 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

Day 2 Site L



L2581830-COFC

Day 2 Site L

Report To Contact and company name below will appear on the final report		Report Format / Distribution		Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)																																																																																																
Company: MTE		Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL)		Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply																																																																																																
Contact: Jen Lambke		Quality Control (QC) Report with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		PRIORITY (Business Days) 4 day [P4-20%] <input type="checkbox"/> 3 day [P3-25%] <input type="checkbox"/> 2 day [P2-50%] <input type="checkbox"/>		EMERGENCY 1 Business day [E - 100%] <input type="checkbox"/> Same Day, Weekend or Statutory holiday [E2 - 200% (Laboratory opening fees may apply)] <input type="checkbox"/>																																																																																														
Phone: 519-502-3268		<input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked																																																																																																		
Company address below will appear on the final report		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX		Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm																																																																																																
Street: 520 Bingham Centre Drive		Email 1 or Fax: j.lambke@mte85.com		For tests that can not be performed according to the service level selected, you will be contacted.																																																																																																
City/Province: Kitchener		Email 2: jball@mte85.com		Analysis Request Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below																																																																																																
Postal Code:		Email 3:																																																																																																		
Invoice To: Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Invoice Distribution		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td rowspan="10" style="writing-mode: vertical-rl; transform: rotate(180deg);">NUMBER OF CONTAINERS</td> <td>PHC F1 to F4 and BTEX</td> <td>PHC F1 to F4 and VOCs</td> <td>Metals Scan</td> <td>Metals Complete</td> <td>PAHs</td> <td>SAR & EC</td> <td>pH</td> <td>PCBs</td> <td>PHC F2 to F4</td> <td rowspan="10" style="writing-mode: vertical-rl; transform: rotate(180deg);">SAMPLES ON HOLD</td> <td rowspan="10" style="writing-mode: vertical-rl; transform: rotate(180deg);">SUSPECTED HAZARD (see Special Instructions)</td> </tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </table>				NUMBER OF CONTAINERS	PHC F1 to F4 and BTEX	PHC F1 to F4 and VOCs	Metals Scan	Metals Complete	PAHs	SAR & EC	pH	PCBs	PHC F2 to F4	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)																																																																																	
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Copy of Invoice with Report <input type="checkbox"/> YES <input type="checkbox"/> NO		Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX																																																																																																		
Company:		Email 1 or Fax: j.lambke@mte85.com																																																																																																		
Contact:		Email 2:																																																																																																		
Project Information		Oil and Gas Required Fields (client use)																																																																																																		
ALS Account # / Quote #: Q75730		AFE/Cost Center: PO#																																																																																																		
Job #: 46995-100		Major/Minor Code: Routing Code:																																																																																																		
PO / AFE:		Requisitioner:																																																																																																		
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ALS Lab Work Order # (lab use only): L2581830		ALS Contact: Emily H		Sampler: Matt D																																																																																																
ALS Sample # (lab use only)		Sample Identification and/or Coordinates (This description will appear on the report)		Date (dd-mmm-yy)		Time (hh:mm)		Sample Type																																																																																												
		BH141-21 SS2 2.5-4.5 FT		28-04-21		11:05		Soil																																																																																												
		SS3 5-7 FT				11:15																																																																																														
		SS4 7.5-9.5 FT				11:25																																																																																														
		MSPLP 12"-2.5 FT				11:40																																																																																														
		BH142-21 GS1 3"-2.5 FT		28-04-21		12:05		Soil																																																																																												
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		SS3 5-7 FT				1:30																																																																																														
Drinking Water (DW) Samples¹ (client use)		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)		SAMPLE CONDITION AS RECEIVED (lab use only)																																																																																																
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO				Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>																																																																																																
Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO		Table 1 Res, Table 3.1 R/P/I, Table 3.1 I/C/C (ESQS, O.Reg. 406/19) - coarse, AND Table 3 I/C/C (SCS, O.Reg. 153/04) - coarse		Ice Packs <input checked="" type="checkbox"/> Ice Cubes <input checked="" type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>																																																																																																
				Cooling Initiated <input type="checkbox"/>																																																																																																
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SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)		FINAL SHIPMENT RECEPTION (lab use only)																																																																																																
Released by: Date: Time:		Received by: Date: Time:		Received by: Date: Time:																																																																																																



Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878



L2581830-COFC

COC Number: 17 -

Page 3 of 3

Day 2 Site L

Report To Contact and company name below will appear on the final report		Report Format		Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)																
Company: MTE		Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL)		Regular (R) <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply																
Contact: Jen Lambke		Quality Control (QC) Report with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		PROPERTY (Business Days) 4 day [P4-20%] <input type="checkbox"/> 3 day [P3-25%] <input type="checkbox"/> 2 day [P2-50%] <input type="checkbox"/>		EMERGENCY 1 Business day [E - 100%] <input type="checkbox"/> Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] <input type="checkbox"/>														
Phone: 519-502-3268		<input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked																		
Company address below will appear on the final report		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX																		
Street: 520 Bingemans Centre Drive		Email 1 or Fax: jlambke@mte85.com		Date and Time Required for all E&P TATs:		dd-mmm-yy hh:mm														
City/Province: Kitchener		Email 2: jbali@mte85.com		For tests that cannot be performed according to the service level selected, you will be contacted.																
Postal Code:		Email 3:		Analysis Request																
Invoice To		Invoice Distribution		NUMBER OF CONTAINERS																
Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX																		
Copy of Invoice with Report <input type="checkbox"/> YES <input type="checkbox"/> NO		Email 1 or Fax: jlambke@mte85.com																		
Company:		Email 2:																		
Contact:																				
Project Information		Oil and Gas Required Fields (client use)			SAMPLES ON HOLD															
ALS Account # / Quote #: Q75730		AFE/Cost Center:		PO#																
Job #: 46995-100		Major/Minor Code:		Routing Code:																
PO / AFE:		Requisitioner:																		
LSD:		Location:																		
ALS Lab Work Order # (lab use only): L2581830		ALS Contact: Emily H		Sampler: Matt D		SUSPECTED HAZARD (see Special Instructions)														
ALS Sample # (lab use only)		Sample Identification and/or Coordinates (This description will appear on the report)		Date (dd-mmm-yy)	Time (hh:mm)						Sample Type	PHC F1 to F4 and BTEX	PHC F1 to F4 and VOCs	Metals Scan	Metals Complete	PAHs	SAR & EC	PH	PCBs	PHC F2 to F4
		BH143-21 554 7.5-9.5ft		28-04-21	1:40						Soil									
		MSPLP 2'8"-3'6"		↓	2:00						↓									
Drinking Water (DW) Samples¹ (client use)		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)			SAMPLE CONDITION AS RECEIVED (lab use only)															
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO		Table 1 Res, Table 3.1 R/P/I, Table 3.1 I/C/C (ESQS, O.Reg. 406/19) - coarse, AND Table 3 I/C/C (SCS, O.Reg. 153/04) - coarse			Frozen <input type="checkbox"/>		SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>		Ice Packs <input checked="" type="checkbox"/> Ice Cubes <input checked="" type="checkbox"/>			Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>		Cooling Initiated <input type="checkbox"/>						
Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO					INITIAL COOLER TEMPERATURES °C		FINAL COOLER TEMPERATURES °C													
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)															
Released by:		Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:								



MTE CONSULTANTS INC. (Kitchener)
ATTN: JEN LAMBKE
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9


Date Received: 29-APR-21
Report Date: 07-MAY-21 13:37 (MT)
Version: FINAL

Client Phone: 519-743-6500

Certificate of Analysis

Lab Work Order #: L2581807
Project P.O. #: NOT SUBMITTED
Job Reference: 46995-100
C of C Numbers:
Legal Site Desc:

Comments: ADDITIONAL 29-APR-21 12:22



Emily Hansen
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 60 Northland Road, Unit 1, Waterloo, ON N2V 2B8 Canada | Phone: +1 519 886 6910 | Fax: +1 519 886 9047
ALS CANADA LTD Part of the ALS Group An ALS Limited Company



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2581807-2	BH 133-21 SS2 2.5-4.5 FT							
Sampled By: MATT D on 27-APR-21 @ 09:30								
Matrix: SOIL								
Physical Tests								
	Conductivity	1.74		0.0040	mS/cm	03-MAY-21	*0.57	*1.4
	% Moisture	8.70		0.25	%	30-APR-21		
Saturated Paste Extractables								
	SAR	68.4	SAR:M	0.10	SAR	03-MAY-21	*2.4	*12
	Calcium (Ca)	1.93		0.50	mg/L	03-MAY-21		
	Magnesium (Mg)	<0.50		0.50	mg/L	03-MAY-21		
	Sodium (Na)	345		0.50	mg/L	03-MAY-21		
Metals								
	Antimony (Sb)	<1.0		1.0	ug/g	03-MAY-21	1.3	40
	Arsenic (As)	2.3		1.0	ug/g	03-MAY-21	18	18
	Barium (Ba)	24.0		1.0	ug/g	03-MAY-21	220	670
	Beryllium (Be)	<0.50		0.50	ug/g	03-MAY-21	2.5	8
	Boron (B)	<5.0		5.0	ug/g	03-MAY-21	36	120
	Boron (B), Hot Water Ext.	0.18		0.10	ug/g	03-MAY-21	36	2
	Cadmium (Cd)	<0.50		0.50	ug/g	03-MAY-21	1.2	1.9
	Chromium (Cr)	9.4		1.0	ug/g	03-MAY-21	70	160
	Cobalt (Co)	2.7		1.0	ug/g	03-MAY-21	21	80
	Copper (Cu)	11.1		1.0	ug/g	03-MAY-21	92	230
	Lead (Pb)	26.7		1.0	ug/g	03-MAY-21	120	120
	Mercury (Hg)	0.125		0.0050	ug/g	03-MAY-21	0.27	0.27
	Molybdenum (Mo)	<1.0		1.0	ug/g	03-MAY-21	2	40
	Nickel (Ni)	5.4		1.0	ug/g	03-MAY-21	82	270
	Selenium (Se)	<1.0		1.0	ug/g	03-MAY-21	1.5	5.5
	Silver (Ag)	<0.20		0.20	ug/g	03-MAY-21	0.5	40
	Thallium (Tl)	<0.50		0.50	ug/g	03-MAY-21	1	3.3
	Uranium (U)	<1.0		1.0	ug/g	03-MAY-21	2.5	33
	Vanadium (V)	19.8		1.0	ug/g	03-MAY-21	86	86
	Zinc (Zn)	42.9		5.0	ug/g	03-MAY-21	290	340
Speciated Metals								
	Chromium, Hexavalent	<0.20		0.20	ug/g	04-MAY-21	0.66	8
Volatile Organic Compounds								
	Benzene	0.0069		0.0068	ug/g	07-MAY-21	0.02	0.034
	Ethylbenzene	<0.018		0.018	ug/g	07-MAY-21	0.05	1.9
	Toluene	<0.080		0.080	ug/g	07-MAY-21	0.2	7.8
	o-Xylene	<0.020		0.020	ug/g	07-MAY-21		
	m+p-Xylenes	<0.030		0.030	ug/g	07-MAY-21		
	Xylenes (Total)	<0.050		0.050	ug/g	07-MAY-21	0.05	3
	Surrogate: 4-Bromofluorobenzene	125.8		50-140	%	07-MAY-21		
	Surrogate: 1,4-Difluorobenzene	128.7		50-140	%	07-MAY-21		
Hydrocarbons								
	F1 (C6-C10)	<5.0		5.0	ug/g	07-MAY-21	25	25
	F1-BTEX	<5.0		5.0	ug/g	07-MAY-21	25	25
	F2 (C10-C16)	<10		10	ug/g	03-MAY-21	10	26
	F3 (C16-C34)	<50		50	ug/g	03-MAY-21	240	1700
	F4 (C34-C50)	<50		50	ug/g	03-MAY-21	120	3300

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2581807-2	BH 133-21 SS2 2.5-4.5 FT							
Sampled By: MATT D on 27-APR-21 @ 09:30								
Matrix: SOIL								
Hydrocarbons								
Total Hydrocarbons (C6-C50)		<72		72	ug/g	07-MAY-21		
Chrom. to baseline at nC50		YES			No Unit	03-MAY-21		
Surrogate: 2-Bromobenzotrifluoride		97.3		60-140	%	03-MAY-21		
Surrogate: 3,4-Dichlorotoluene		112.8		60-140	%	07-MAY-21		
L2581807-7	BH 134-21 SS3 5-7 FT							
Sampled By: MATT D on 27-APR-21 @ 10:40								
Matrix: SOIL								
Physical Tests								
Conductivity		1.64		0.0040	mS/cm	03-MAY-21	*0.57	*1.4
% Moisture		8.40		0.25	%	30-APR-21		
pH		7.96		0.10	pH units	03-MAY-21		
Saturated Paste Extractables								
SAR		49.7	SAR:M	0.10	SAR	03-MAY-21	*2.4	*12
Calcium (Ca)		3.06		0.50	mg/L	03-MAY-21		
Magnesium (Mg)		<0.50		0.50	mg/L	03-MAY-21		
Sodium (Na)		316		0.50	mg/L	03-MAY-21		
Metals								
Antimony (Sb)		<1.0		1.0	ug/g	03-MAY-21	1.3	40
Arsenic (As)		2.0		1.0	ug/g	03-MAY-21	18	18
Barium (Ba)		16.1		1.0	ug/g	03-MAY-21	220	670
Beryllium (Be)		<0.50		0.50	ug/g	03-MAY-21	2.5	8
Boron (B)		5.2		5.0	ug/g	03-MAY-21	36	120
Cadmium (Cd)		<0.50		0.50	ug/g	03-MAY-21	1.2	1.9
Chromium (Cr)		7.5		1.0	ug/g	03-MAY-21	70	160
Cobalt (Co)		2.7		1.0	ug/g	03-MAY-21	21	80
Copper (Cu)		9.2		1.0	ug/g	03-MAY-21	92	230
Lead (Pb)		5.8		1.0	ug/g	03-MAY-21	120	120
Molybdenum (Mo)		<1.0		1.0	ug/g	03-MAY-21	2	40
Nickel (Ni)		5.5		1.0	ug/g	03-MAY-21	82	270
Selenium (Se)		<1.0		1.0	ug/g	03-MAY-21	1.5	5.5
Silver (Ag)		<0.20		0.20	ug/g	03-MAY-21	0.5	40
Thallium (Tl)		<0.50		0.50	ug/g	03-MAY-21	1	3.3
Uranium (U)		<1.0		1.0	ug/g	03-MAY-21	2.5	33
Vanadium (V)		17.6		1.0	ug/g	03-MAY-21	86	86
Zinc (Zn)		29.1		5.0	ug/g	03-MAY-21	290	340
Volatile Organic Compounds								
Benzene		<0.0068		0.0068	ug/g	07-MAY-21	0.02	0.034
Ethylbenzene		<0.018		0.018	ug/g	07-MAY-21	0.05	1.9
Toluene		<0.080		0.080	ug/g	07-MAY-21	0.2	7.8
o-Xylene		<0.020		0.020	ug/g	07-MAY-21		
m+p-Xylenes		<0.030		0.030	ug/g	07-MAY-21		
Xylenes (Total)		<0.050		0.050	ug/g	07-MAY-21	0.05	3
Surrogate: 4-Bromofluorobenzene		126.1		50-140	%	07-MAY-21		
Surrogate: 1,4-Difluorobenzene		121.6		50-140	%	07-MAY-21		
Hydrocarbons								

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2581807-7	BH 134-21 SS3 5-7 FT							
Sampled By: MATT D on 27-APR-21 @ 10:40								
Matrix: SOIL								
Hydrocarbons								
F1 (C6-C10)		<5.0		5.0	ug/g	07-MAY-21	25	25
F1-BTEX		<5.0		5.0	ug/g	07-MAY-21	25	25
F2 (C10-C16)		<10		10	ug/g	03-MAY-21	10	26
F3 (C16-C34)		<50		50	ug/g	03-MAY-21	240	1700
F4 (C34-C50)		<50		50	ug/g	03-MAY-21	120	3300
Total Hydrocarbons (C6-C50)		<72		72	ug/g	07-MAY-21		
Chrom. to baseline at nC50		YES			No Unit	03-MAY-21		
Surrogate: 2-Bromobenzotrifluoride		95.4		60-140	%	03-MAY-21		
Surrogate: 3,4-Dichlorotoluene		73.2		60-140	%	07-MAY-21		
L2581807-10	BH 135-21 SS2 2.5-4.5 FT							
Sampled By: MATT D on 27-APR-21 @ 11:35								
Matrix: SOIL								
Physical Tests								
% Moisture		6.22		0.25	%	30-APR-21		
Metals								
Antimony (Sb)		<1.0		1.0	ug/g	03-MAY-21	1.3	40
Arsenic (As)		3.7		1.0	ug/g	03-MAY-21	18	18
Barium (Ba)		40.2		1.0	ug/g	03-MAY-21	220	670
Beryllium (Be)		<0.50		0.50	ug/g	03-MAY-21	2.5	8
Boron (B)		5.0		5.0	ug/g	03-MAY-21	36	120
Cadmium (Cd)		<0.50		0.50	ug/g	03-MAY-21	1.2	1.9
Chromium (Cr)		12.0		1.0	ug/g	03-MAY-21	70	160
Cobalt (Co)		4.3		1.0	ug/g	03-MAY-21	21	80
Copper (Cu)		17.5		1.0	ug/g	03-MAY-21	92	230
Lead (Pb)		49.0		1.0	ug/g	03-MAY-21	120	120
Molybdenum (Mo)		<1.0		1.0	ug/g	03-MAY-21	2	40
Nickel (Ni)		8.2		1.0	ug/g	03-MAY-21	82	270
Selenium (Se)		<1.0		1.0	ug/g	03-MAY-21	1.5	5.5
Silver (Ag)		<0.20		0.20	ug/g	03-MAY-21	0.5	40
Thallium (Tl)		<0.50		0.50	ug/g	03-MAY-21	1	3.3
Uranium (U)		<1.0		1.0	ug/g	03-MAY-21	2.5	33
Vanadium (V)		24.7		1.0	ug/g	03-MAY-21	86	86
Zinc (Zn)		67.8		5.0	ug/g	03-MAY-21	290	340
Volatile Organic Compounds								
Benzene		0.0259		0.0068	ug/g	07-MAY-21	*0.02	0.034
Ethylbenzene		<0.018		0.018	ug/g	07-MAY-21	0.05	1.9
Toluene		<0.080		0.080	ug/g	07-MAY-21	0.2	7.8
o-Xylene		<0.020		0.020	ug/g	07-MAY-21		
m+p-Xylenes		<0.030		0.030	ug/g	07-MAY-21		
Xylenes (Total)		<0.050		0.050	ug/g	07-MAY-21	0.05	3
Surrogate: 4-Bromofluorobenzene		98.4		50-140	%	07-MAY-21		
Surrogate: 1,4-Difluorobenzene		99.9		50-140	%	07-MAY-21		
Hydrocarbons								
F1 (C6-C10)		<5.0		5.0	ug/g	07-MAY-21	25	25
F1-BTEX		<5.0		5.0	ug/g	07-MAY-21	25	25

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2581807-10	BH 135-21 SS2 2.5-4.5 FT							
Sampled By: MATT D on 27-APR-21 @ 11:35								
Matrix: SOIL								
Hydrocarbons								
F2 (C10-C16)		22		10	ug/g	03-MAY-21	*10	26
F3 (C16-C34)		89		50	ug/g	03-MAY-21	240	1700
F4 (C34-C50)		<50		50	ug/g	03-MAY-21	120	3300
Total Hydrocarbons (C6-C50)		111		72	ug/g	07-MAY-21		
Chrom. to baseline at nC50		YES			No Unit	03-MAY-21		
Surrogate: 2-Bromobenzotrifluoride		92.0		60-140	%	03-MAY-21		
Surrogate: 3,4-Dichlorotoluene		79.5		60-140	%	07-MAY-21		
L2581807-12	BH 135-21 SS4 7.5-9.5 FT							
Sampled By: MATT D on 27-APR-21 @ 11:55								
Matrix: SOIL								
Physical Tests								
Conductivity		2.24		0.0040	mS/cm	03-MAY-21	*0.57	*1.4
% Moisture		9.98		0.25	%	30-APR-21		
Saturated Paste Extractables								
SAR		66.8	SAR:M	0.10	SAR	03-MAY-21	*2.4	*12
Calcium (Ca)		3.38		0.50	mg/L	03-MAY-21		
Magnesium (Mg)		<0.50		0.50	mg/L	03-MAY-21		
Sodium (Na)		446		0.50	mg/L	03-MAY-21		
Volatile Organic Compounds								
Benzene		<0.0068		0.0068	ug/g	07-MAY-21	0.02	0.034
Ethylbenzene		<0.018		0.018	ug/g	07-MAY-21	0.05	1.9
Toluene		<0.080		0.080	ug/g	07-MAY-21	0.2	7.8
o-Xylene		<0.020		0.020	ug/g	07-MAY-21		
m+p-Xylenes		<0.030		0.030	ug/g	07-MAY-21		
Xylenes (Total)		<0.050		0.050	ug/g	07-MAY-21	0.05	3
Surrogate: 4-Bromofluorobenzene		112.1		50-140	%	07-MAY-21		
Surrogate: 1,4-Difluorobenzene		113.6		50-140	%	07-MAY-21		
Hydrocarbons								
F1 (C6-C10)		<5.0		5.0	ug/g	07-MAY-21	25	25
F1-BTEX		<5.0		5.0	ug/g	07-MAY-21	25	25
F2 (C10-C16)		<10		10	ug/g	03-MAY-21	10	26
F3 (C16-C34)		<50		50	ug/g	03-MAY-21	240	1700
F4 (C34-C50)		<50		50	ug/g	03-MAY-21	120	3300
Total Hydrocarbons (C6-C50)		<72		72	ug/g	07-MAY-21		
Chrom. to baseline at nC50		YES			No Unit	03-MAY-21		
Surrogate: 2-Bromobenzotrifluoride		93.7		60-140	%	03-MAY-21		
Surrogate: 3,4-Dichlorotoluene		91.3		60-140	%	07-MAY-21		
L2581807-15	BH 136-21 SS3 5-7 FT							
Sampled By: MATT D on 27-APR-21 @ 12:40								
Matrix: SOIL								
Physical Tests								
% Moisture		7.44		0.25	%	30-APR-21		
Volatile Organic Compounds								
Benzene		0.0100		0.0068	ug/g	07-MAY-21	0.02	0.034

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Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2581807-15	BH 136-21 SS3 5-7 FT Sampled By: MATT D on 27-APR-21 @ 12:40 Matrix: SOIL							
Volatile Organic Compounds								
	Ethylbenzene	<0.018		0.018	ug/g	07-MAY-21	0.05	1.9
	Toluene	<0.080		0.080	ug/g	07-MAY-21	0.2	7.8
	o-Xylene	<0.020		0.020	ug/g	07-MAY-21		
	m+p-Xylenes	<0.030		0.030	ug/g	07-MAY-21		
	Xylenes (Total)	<0.050		0.050	ug/g	07-MAY-21	0.05	3
	Surrogate: 4-Bromofluorobenzene	112.3		50-140	%	07-MAY-21		
	Surrogate: 1,4-Difluorobenzene	115.2		50-140	%	07-MAY-21		
Hydrocarbons								
	F1 (C6-C10)	<5.0		5.0	ug/g	07-MAY-21	25	25
	F1-BTEX	<5.0		5.0	ug/g	07-MAY-21	25	25
	F2 (C10-C16)	<10		10	ug/g	03-MAY-21	10	26
	F3 (C16-C34)	<50		50	ug/g	03-MAY-21	240	1700
	F4 (C34-C50)	<50		50	ug/g	03-MAY-21	120	3300
	Total Hydrocarbons (C6-C50)	<72		72	ug/g	07-MAY-21		
	Chrom. to baseline at nC50	YES			No Unit	03-MAY-21		
	Surrogate: 2-Bromobenzotrifluoride	92.0		60-140	%	03-MAY-21		
	Surrogate: 3,4-Dichlorotoluene	89.4		60-140	%	07-MAY-21		
L2581807-18	BH 137-21 SS2 2.5-4.5 FT Sampled By: MATT D on 27-APR-21 @ 14:45 Matrix: SOIL							
Physical Tests								
	Conductivity	1.68		0.0040	mS/cm	03-MAY-21	*0.57	*1.4
	% Moisture	12.8		0.25	%	30-APR-21		
Saturated Paste Extractables								
	SAR	75.2	SAR:M	0.10	SAR	03-MAY-21	*2.4	*12
	Calcium (Ca)	1.46		0.50	mg/L	03-MAY-21		
	Magnesium (Mg)	<0.50		0.50	mg/L	03-MAY-21		
	Sodium (Na)	330		0.50	mg/L	03-MAY-21		
Volatile Organic Compounds								
	Benzene	<0.0068		0.0068	ug/g	07-MAY-21	0.02	0.034
	Ethylbenzene	<0.018		0.018	ug/g	07-MAY-21	0.05	1.9
	Toluene	<0.080		0.080	ug/g	07-MAY-21	0.2	7.8
	o-Xylene	<0.020		0.020	ug/g	07-MAY-21		
	m+p-Xylenes	<0.030		0.030	ug/g	07-MAY-21		
	Xylenes (Total)	<0.050		0.050	ug/g	07-MAY-21	0.05	3
	Surrogate: 4-Bromofluorobenzene	102.6		50-140	%	07-MAY-21		
	Surrogate: 1,4-Difluorobenzene	105.1		50-140	%	07-MAY-21		
Hydrocarbons								
	F1 (C6-C10)	<5.0		5.0	ug/g	07-MAY-21	25	25
	F1-BTEX	<5.0		5.0	ug/g	07-MAY-21	25	25
	F2 (C10-C16)	<10		10	ug/g	03-MAY-21	10	26
	F3 (C16-C34)	<50		50	ug/g	03-MAY-21	240	1700
	F4 (C34-C50)	<50		50	ug/g	03-MAY-21	120	3300
	Total Hydrocarbons (C6-C50)	<72		72	ug/g	07-MAY-21		
	Chrom. to baseline at nC50	YES			No Unit	03-MAY-21		

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Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2581807-18	BH 137-21 SS2 2.5-4.5 FT							
Sampled By: MATT D on 27-APR-21 @ 14:45								
Matrix: SOIL								
Hydrocarbons								
Surrogate: 2-Bromobenzotrifluoride		97.8		60-140	%	03-MAY-21		
Surrogate: 3,4-Dichlorotoluene		86.4		60-140	%	07-MAY-21		
L2581807-19	BH 137-21 SS3 5-7 FT							
Sampled By: MATT D on 27-APR-21 @ 14:50								
Matrix: SOIL								
Physical Tests								
% Moisture		14.3		0.25	%	30-APR-21		
Metals								
Antimony (Sb)		<1.0		1.0	ug/g	03-MAY-21	1.3	40
Arsenic (As)		3.5		1.0	ug/g	03-MAY-21	18	18
Barium (Ba)		61.0		1.0	ug/g	03-MAY-21	220	670
Beryllium (Be)		<0.50		0.50	ug/g	03-MAY-21	2.5	8
Boron (B)		9.5		5.0	ug/g	03-MAY-21	36	120
Cadmium (Cd)		<0.50		0.50	ug/g	03-MAY-21	1.2	1.9
Chromium (Cr)		17.3		1.0	ug/g	03-MAY-21	70	160
Cobalt (Co)		7.1		1.0	ug/g	03-MAY-21	21	80
Copper (Cu)		18.8		1.0	ug/g	03-MAY-21	92	230
Lead (Pb)		7.7		1.0	ug/g	03-MAY-21	120	120
Molybdenum (Mo)		<1.0		1.0	ug/g	03-MAY-21	2	40
Nickel (Ni)		14.9		1.0	ug/g	03-MAY-21	82	270
Selenium (Se)		<1.0		1.0	ug/g	03-MAY-21	1.5	5.5
Silver (Ag)		<0.20		0.20	ug/g	03-MAY-21	0.5	40
Thallium (Tl)		<0.50		0.50	ug/g	03-MAY-21	1	3.3
Uranium (U)		<1.0		1.0	ug/g	03-MAY-21	2.5	33
Vanadium (V)		27.9		1.0	ug/g	03-MAY-21	86	86
Zinc (Zn)		44.6		5.0	ug/g	03-MAY-21	290	340
Volatile Organic Compounds								
Acetone		<0.50		0.50	ug/g	05-MAY-21	0.5	1.8
Benzene		<0.0068		0.0068	ug/g	05-MAY-21	0.02	0.034
Bromodichloromethane		<0.050		0.050	ug/g	05-MAY-21	0.05	5.8
Bromoform		<0.050		0.050	ug/g	05-MAY-21	0.05	2.5
Bromomethane		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
Carbon tetrachloride		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
Chlorobenzene		<0.050		0.050	ug/g	05-MAY-21	0.05	0.28
Dibromochloromethane		<0.050		0.050	ug/g	05-MAY-21	0.05	5.5
Chloroform		<0.050		0.050	ug/g	05-MAY-21	0.05	0.26
1,2-Dibromoethane		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
1,2-Dichlorobenzene		<0.050		0.050	ug/g	05-MAY-21	0.05	6.8
1,3-Dichlorobenzene		<0.050		0.050	ug/g	05-MAY-21	0.05	6.8
1,4-Dichlorobenzene		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
Dichlorodifluoromethane		<0.050		0.050	ug/g	05-MAY-21	0.05	1.8
1,1-Dichloroethane		<0.050		0.050	ug/g	05-MAY-21	0.05	0.57
1,2-Dichloroethane		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
1,1-Dichloroethylene		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05

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Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2581807-19 BH 137-21 SS3 5-7 FT								
Sampled By: MATT D on 27-APR-21 @ 14:50								
Matrix: SOIL								
Volatile Organic Compounds								
	cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
	trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
	Methylene Chloride	<0.050		0.050	ug/g	05-MAY-21	0.05	0.2
	1,2-Dichloropropane	<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
	cis-1,3-Dichloropropene	<0.030		0.030	ug/g	05-MAY-21		
	trans-1,3-Dichloropropene	<0.030		0.030	ug/g	05-MAY-21		
	1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g	05-MAY-21	0.05	0.05
	Ethylbenzene	<0.018		0.018	ug/g	05-MAY-21	0.05	1.9
	n-Hexane	0.052		0.050	ug/g	05-MAY-21	*0.05	2.5
	Methyl Ethyl Ketone	<0.50		0.50	ug/g	05-MAY-21	0.5	26
	Methyl Isobutyl Ketone	<0.50		0.50	ug/g	05-MAY-21	0.5	17
	MTBE	<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
	Styrene	<0.050		0.050	ug/g	05-MAY-21	0.05	6.8
	1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
	1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
	Tetrachloroethylene	<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
	Toluene	<0.080		0.080	ug/g	05-MAY-21	0.2	7.8
	1,1,1-Trichloroethane	<0.050		0.050	ug/g	05-MAY-21	0.05	0.4
	1,1,2-Trichloroethane	<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
	Trichloroethylene	<0.010		0.010	ug/g	05-MAY-21	0.05	0.05
	Trichlorofluoromethane	<0.050		0.050	ug/g	05-MAY-21	0.25	0.46
	Vinyl chloride	<0.020		0.020	ug/g	05-MAY-21	0.02	0.02
	o-Xylene	<0.020		0.020	ug/g	05-MAY-21		
	m+p-Xylenes	<0.030		0.030	ug/g	05-MAY-21		
	Xylenes (Total)	<0.050		0.050	ug/g	05-MAY-21	0.05	3
	Surrogate: 4-Bromofluorobenzene	92.8		50-140	%	05-MAY-21		
	Surrogate: 1,4-Difluorobenzene	114.0		50-140	%	05-MAY-21		
Hydrocarbons								
	F1 (C6-C10)	<5.0		5.0	ug/g	05-MAY-21	25	25
	F1-BTEX	<5.0		5.0	ug/g	05-MAY-21	25	25
	F2 (C10-C16)	<10		10	ug/g	03-MAY-21	10	26
	F2-Naphth	<10		10	ug/g	05-MAY-21		
	F3 (C16-C34)	<50		50	ug/g	03-MAY-21	240	1700
	F3-PAH	<50		50	ug/g	05-MAY-21		
	F4 (C34-C50)	<50		50	ug/g	03-MAY-21	120	3300
	Total Hydrocarbons (C6-C50)	<72		72	ug/g	05-MAY-21		
	Chrom. to baseline at nC50	YES			No Unit	03-MAY-21		
	Surrogate: 2-Bromobenzotrifluoride	93.8		60-140	%	03-MAY-21		
	Surrogate: 3,4-Dichlorotoluene	82.4		60-140	%	05-MAY-21		
Polycyclic Aromatic Hydrocarbons								
	Acenaphthene	<0.050		0.050	ug/g	30-APR-21	0.072	15
	Acenaphthylene	<0.050		0.050	ug/g	30-APR-21	0.093	0.093
	Anthracene	<0.050		0.050	ug/g	30-APR-21	0.16	0.16
	Benzo(a)anthracene	<0.050		0.050	ug/g	30-APR-21	0.36	1
	Benzo(a)pyrene	<0.050		0.050	ug/g	30-APR-21	0.3	0.7
	Benzo(b&j)fluoranthene	<0.050		0.050	ug/g	30-APR-21	0.47	7

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Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details Grouping	Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits						
L2581807-19 BH 137-21 SS3 5-7 FT Sampled By: MATT D on 27-APR-21 @ 14:50 Matrix: SOIL Polycyclic Aromatic Hydrocarbons	Benzo(g,h,i)perylene	<0.050		0.050	ug/g	30-APR-21	#1	#2					
	Benzo(k)fluoranthene	<0.050		0.050	ug/g	30-APR-21	0.68	13					
	Chrysene	<0.050		0.050	ug/g	30-APR-21	0.48	7					
	Dibenz(a,h)anthracene	<0.050		0.050	ug/g	30-APR-21	2.8	14					
	Fluoranthene	<0.050		0.050	ug/g	30-APR-21	0.1	0.7					
	Fluorene	<0.050		0.050	ug/g	30-APR-21	0.56	70					
	Indeno(1,2,3-cd)pyrene	<0.050		0.050	ug/g	30-APR-21	0.12	6.8					
	1+2-Methylnaphthalenes	<0.042		0.042	ug/g	30-APR-21	0.23	0.76					
	1-Methylnaphthalene	<0.030		0.030	ug/g	30-APR-21	0.59	8.7					
	2-Methylnaphthalene	<0.030		0.030	ug/g	30-APR-21	0.59	8.7					
	Naphthalene	<0.013		0.013	ug/g	30-APR-21	0.59	8.7					
	Phenanthrene	<0.046		0.046	ug/g	30-APR-21	0.09	1.8					
	Pyrene	<0.050		0.050	ug/g	30-APR-21	0.69	12					
	Surrogate: 2-Fluorobiphenyl	85.2		50-140	%	30-APR-21	1	70					
	Surrogate: d14-Terphenyl	85.0		50-140	%	30-APR-21							
L2581807-22 BH 138-21 SS2 2.5-4.5 FT Sampled By: MATT D on 27-APR-21 @ 16:30 Matrix: SOIL Physical Tests pH Metals	pH	8.19		0.10	pH units	03-MAY-21	#1	#2					
	Antimony (Sb)	<1.0		1.0	ug/g	03-MAY-21	1.3	40					
	Arsenic (As)	3.4		1.0	ug/g	03-MAY-21	18	18					
	Barium (Ba)	26.3		1.0	ug/g	03-MAY-21	220	670					
	Beryllium (Be)	<0.50		0.50	ug/g	03-MAY-21	2.5	8					
	Boron (B)	8.4		5.0	ug/g	03-MAY-21	36	120					
	Cadmium (Cd)	<0.50		0.50	ug/g	03-MAY-21	1.2	1.9					
	Chromium (Cr)	12.2		1.0	ug/g	03-MAY-21	70	160					
	Cobalt (Co)	3.7		1.0	ug/g	03-MAY-21	21	80					
	Copper (Cu)	23.6		1.0	ug/g	03-MAY-21	92	230					
	Lead (Pb)	19.7		1.0	ug/g	03-MAY-21	120	120					
	Molybdenum (Mo)	<1.0		1.0	ug/g	03-MAY-21	2	40					
	Nickel (Ni)	8.3		1.0	ug/g	03-MAY-21	82	270					
	Selenium (Se)	<1.0		1.0	ug/g	03-MAY-21	1.5	5.5					
	Silver (Ag)	<0.20		0.20	ug/g	03-MAY-21	0.5	40					
	Thallium (Tl)	<0.50		0.50	ug/g	03-MAY-21	1	3.3					
	Uranium (U)	<1.0		1.0	ug/g	03-MAY-21	2.5	33					
	Vanadium (V)	16.0		1.0	ug/g	03-MAY-21	86	86					
	Zinc (Zn)	85.8		5.0	ug/g	03-MAY-21	290	340					
	L2581807-24 BH 138-21 SS4 7.5-9.5 FT Sampled By: MATT D on 27-APR-21 @ 16:40 Matrix: SOIL Physical Tests							#1	#2				

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2581807-24	BH 138-21 SS4 7.5-9.5 FT							
Sampled By: MATT D on 27-APR-21 @ 16:40								
Matrix: SOIL								
Physical Tests								
% Moisture		16.8		0.25	%	30-APR-21		
Volatile Organic Compounds								
Acetone		<0.50		0.50	ug/g	05-MAY-21	0.5	1.8
Benzene		<0.0068		0.0068	ug/g	05-MAY-21	0.02	0.034
Bromodichloromethane		<0.050		0.050	ug/g	05-MAY-21	0.05	5.8
Bromoform		<0.050		0.050	ug/g	05-MAY-21	0.05	2.5
Bromomethane		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
Carbon tetrachloride		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
Chlorobenzene		<0.050		0.050	ug/g	05-MAY-21	0.05	0.28
Dibromochloromethane		<0.050		0.050	ug/g	05-MAY-21	0.05	5.5
Chloroform		<0.050		0.050	ug/g	05-MAY-21	0.05	0.26
1,2-Dibromoethane		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
1,2-Dichlorobenzene		<0.050		0.050	ug/g	05-MAY-21	0.05	6.8
1,3-Dichlorobenzene		<0.050		0.050	ug/g	05-MAY-21	0.05	6.8
1,4-Dichlorobenzene		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
Dichlorodifluoromethane		<0.050		0.050	ug/g	05-MAY-21	0.05	1.8
1,1-Dichloroethane		<0.050		0.050	ug/g	05-MAY-21	0.05	0.57
1,2-Dichloroethane		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
1,1-Dichloroethylene		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
cis-1,2-Dichloroethylene		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
trans-1,2-Dichloroethylene		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
Methylene Chloride		<0.050		0.050	ug/g	05-MAY-21	0.05	0.2
1,2-Dichloropropane		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
cis-1,3-Dichloropropene		<0.030		0.030	ug/g	05-MAY-21		
trans-1,3-Dichloropropene		<0.030		0.030	ug/g	05-MAY-21		
1,3-Dichloropropene (cis & trans)		<0.042		0.042	ug/g	05-MAY-21	0.05	0.05
Ethylbenzene		<0.018		0.018	ug/g	05-MAY-21	0.05	1.9
n-Hexane		<0.050		0.050	ug/g	05-MAY-21	0.05	2.5
Methyl Ethyl Ketone		<0.50		0.50	ug/g	05-MAY-21	0.5	26
Methyl Isobutyl Ketone		<0.50		0.50	ug/g	05-MAY-21	0.5	17
MTBE		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
Styrene		<0.050		0.050	ug/g	05-MAY-21	0.05	6.8
1,1,1,2-Tetrachloroethane		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
1,1,2,2-Tetrachloroethane		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
Tetrachloroethylene		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
Toluene		<0.080		0.080	ug/g	05-MAY-21	0.2	7.8
1,1,1-Trichloroethane		<0.050		0.050	ug/g	05-MAY-21	0.05	0.4
1,1,2-Trichloroethane		<0.050		0.050	ug/g	05-MAY-21	0.05	0.05
Trichloroethylene		<0.010		0.010	ug/g	05-MAY-21	0.05	0.05
Trichlorofluoromethane		<0.050		0.050	ug/g	05-MAY-21	0.25	0.46
Vinyl chloride		<0.020		0.020	ug/g	05-MAY-21	0.02	0.02
o-Xylene		<0.020		0.020	ug/g	05-MAY-21		
m+p-Xylenes		<0.030		0.030	ug/g	05-MAY-21		
Xylenes (Total)		<0.050		0.050	ug/g	05-MAY-21	0.05	3
Surrogate: 4-Bromofluorobenzene		100.2		50-140	%	05-MAY-21		
Surrogate: 1,4-Difluorobenzene		125.1		50-140	%	05-MAY-21		

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

Reference Information

Sample Parameter Qualifier key listed:

Qualifier	Description
SAR:M	Reported SAR represents a maximum value. Actual SAR may be lower if both Ca and Mg were detectable.

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference***
B-HWS-R511-WT	Soil	Boron-HWE-O.Reg 153/04 (July 2011)	HW EXTR, EPA 6010B

A dried solid sample is extracted with calcium chloride, the sample undergoes a heating process. After cooling the sample is filtered and analyzed by ICP/OES.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

BTX-511-HS-WT	Soil	BTEX-O.Reg 153/04 (July 2011)	SW846 8260
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BTX is determined by extracting a soil or sediment sample as received with methanol, then analyzing by headspace-GC/MS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

CR-CR6-IC-WT	Soil	Hexavalent Chromium in Soil	SW846 3060A/7199
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This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Method 7199, published by the United States Environmental Protection Agency (EPA). The procedure involves analysis for chromium (VI) by ion chromatography using diphenylcarbazide in a sulphuric acid solution.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

EC-WT	Soil	Conductivity (EC)	MOEE E3138
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A representative subsample is tumbled with de-ionized (DI) water. The ratio of water to soil is 2:1 v/w. After tumbling the sample is then analyzed by a conductivity meter.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

F1-F4-511-CALC-WT	Soil	F1-F4 Hydrocarbon Calculated Parameters	CCME CWS-PHC, Pub #1310, Dec 2001-S
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Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

Hydrocarbon results are expressed on a dry weight basis.

In cases where results for both F4 and F4G are reported, the greater of the two results must be used in any application of the CWS PHC guidelines and the gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.

In samples where BTEX and F1 were analyzed, F1-BTEX represents a value where the sum of Benzene, Toluene, Ethylbenzene and total Xylenes has been subtracted from F1.

In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.

Unless otherwise qualified, the following quality control criteria have been met for the F1 hydrocarbon range:

1. All extraction and analysis holding times were met.
2. Instrument performance showing response factors for C6 and C10 within 30% of the response factor for toluene.
3. Linearity of gasoline response within 15% throughout the calibration range.

Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:

1. All extraction and analysis holding times were met.
2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.
3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.
4. Linearity of diesel or motor oil response within 15% throughout the calibration range.

F1-HS-511-WT	Soil	F1-O.Reg 153/04 (July 2011)	E3398/CCME TIER 1-HS
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Fraction F1 is determined by extracting a soil or sediment sample as received with methanol, then analyzing by headspace-GC/FID.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

Reference Information

F2-F4-511-WT Soil F2-F4-O.Reg 153/04 (July 2011) CCME Tier 1

Petroleum Hydrocarbons (F2-F4 fractions) are extracted from soil with 1:1 hexane:acetone using a rotary extractor. Extracts are treated with silica gel to remove polar organic interferences. F2, F3, & F4 are analyzed by GC-FID. F4G-sg is analyzed gravimetrically.

Notes:

1. F2 (C10-C16): Sum of all hydrocarbons that elute between nC10 and nC16.
2. F3 (C16-C34): Sum of all hydrocarbons that elute between nC16 and nC34.
3. F4 (C34-C50): Sum of all hydrocarbons that elute between nC34 and nC50.
4. F4G: Gravimetric Heavy Hydrocarbons
5. F4G-sg: Gravimetric Heavy Hydrocarbons (F4G) after silica gel treatment.
6. Where both F4 (C34-C50) and F4G-sg are reported for a sample, the larger of the two values is used for comparison against the relevant CCME guideline for F4.
7. F4G-sg cannot be added to the C6 to C50 hydrocarbon results to obtain an estimate of total extractable hydrocarbons.
8. This method is validated for use.
9. Data from analysis of validation and quality control samples is available upon request.
10. Reported results are expressed as milligrams per dry kilogram, unless otherwise indicated.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

HG-200.2-CVAA-WT Soil Mercury in Soil by CVAAS EPA 200.2/1631E (mod)

Soil samples are digested with nitric and hydrochloric acids, followed by analysis by CVAAS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

MET-200.2-CCMS-WT Soil Metals in Soil by CRC ICPMS EPA 200.2/6020B (mod)

Soil/sediment is dried, disaggregated, and sieved (2 mm). For tests intended to support Ontario regulations, the <2mm fraction is ground to pass through a 0.355 mm sieve. Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H₂S) may be excluded if lost during sampling, storage, or digestion.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

METHYLNAPS-CALC-WT Soil ABN-Calculated Parameters SW846 8270
 MOISTURE-WT Soil % Moisture CCME PHC in Soil - Tier 1 (mod)
 PAH-511-WT Soil PAH-O.Reg 153/04 (July 2011) SW846 3510/8270

A representative sub-sample of soil is fortified with deuterium-labelled surrogates and a mechanical shaking technique is used to extract the sample with a mixture of methanol and toluene. The extracts are concentrated and analyzed by GC/MS. Results for benzo(b) fluoranthene may include contributions from benzo(j)fluoranthene, if also present in the sample.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

PH-WT Soil pH MOEE E3137A

A minimum 10g portion of the sample is extracted with 20mL of 0.01M calcium chloride solution by shaking for at least 30 minutes. The aqueous layer is separated from the soil and then analyzed using a pH meter and electrode.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

SAR-R511-WT Soil SAR-O.Reg 153/04 (July 2011) SW846 6010C

A dried, disaggregated solid sample is extracted with deionized water, the aqueous extract is separated from the solid, acidified and then analyzed using a ICP/OES. The concentrations of Na, Ca and Mg are reported as per CALA requirements for calculated parameters. These individual parameters are not for comparison to any guideline.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

VOC-1,3-DCP-CALC-WT Soil Regulation 153 VOCs SW8260B/SW8270C

Reference Information

VOC-511-HS-WT Soil VOC-O.Reg 153/04 (July 2011) SW846 8260 (511)

Soil and sediment samples are extracted in methanol and analyzed by headspace-GC/MS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

XYLENES-SUM-CALC- Soil Sum of Xylene Isomer CALCULATION
WT Concentrations

Total xylenes represents the sum of o-xylene and m&p-xylene.

*** ALS test methods may incorporate modifications from specified reference methods to improve performance.

Chain of Custody numbers:

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA		

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guideline limits are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.



Quality Control Report

Workorder: L2581807

Report Date: 07-MAY-21

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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
B-HWS-R511-WT								
	Soil							
Batch	R5445879							
WG3527727-4	DUP	L2580237-1						
Boron (B), Hot Water Ext.		<0.10	<0.10	RPD-NA	ug/g	N/A	30	03-MAY-21
WG3527727-2	IRM	WT SAR4						
Boron (B), Hot Water Ext.			100.3		%		70-130	03-MAY-21
WG3527727-3	LCS							
Boron (B), Hot Water Ext.			105.0		%		70-130	03-MAY-21
WG3527727-1	MB							
Boron (B), Hot Water Ext.			<0.10		ug/g		0.1	03-MAY-21
BTX-511-HS-WT								
	Soil							
Batch	R5454064							
WG3526484-4	DUP	WG3526484-3						
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	07-MAY-21
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	07-MAY-21
m+p-Xylenes		<0.030	<0.030	RPD-NA	ug/g	N/A	40	07-MAY-21
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	07-MAY-21
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	07-MAY-21
WG3526484-2	LCS							
Benzene			93.7		%		70-130	07-MAY-21
Ethylbenzene			82.6		%		70-130	07-MAY-21
m+p-Xylenes			84.9		%		70-130	07-MAY-21
o-Xylene			84.8		%		70-130	07-MAY-21
Toluene			85.2		%		70-130	07-MAY-21
WG3526484-1	MB							
Benzene			<0.0068		ug/g		0.0068	07-MAY-21
Ethylbenzene			<0.018		ug/g		0.018	07-MAY-21
m+p-Xylenes			<0.030		ug/g		0.03	07-MAY-21
o-Xylene			<0.020		ug/g		0.02	07-MAY-21
Toluene			<0.080		ug/g		0.08	07-MAY-21
Surrogate: 1,4-Difluorobenzene			114.2		%		50-140	07-MAY-21
Surrogate: 4-Bromofluorobenzene			114.4		%		50-140	07-MAY-21
WG3526484-5	MS	WG3526484-3						
Benzene			109.3		%		60-140	07-MAY-21
Ethylbenzene			89.4		%		60-140	07-MAY-21
m+p-Xylenes			94.8		%		60-140	07-MAY-21
o-Xylene			94.2		%		60-140	07-MAY-21
Toluene			94.3		%		60-140	07-MAY-21



Quality Control Report

Workorder: L2581807

Report Date: 07-MAY-21

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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CR-CR6-IC-WT		Soil						
Batch	R5447879							
WG3527738-4	CRM	WT-SQC012						
Chromium, Hexavalent			100.5		%		70-130	04-MAY-21
WG3527738-3	DUP	L2581807-2						
Chromium, Hexavalent		<0.20	<0.20	RPD-NA	ug/g	N/A	35	04-MAY-21
WG3527738-2	LCS							
Chromium, Hexavalent			95.5		%		80-120	04-MAY-21
WG3527738-1	MB							
Chromium, Hexavalent			<0.20		ug/g		0.2	04-MAY-21
EC-WT		Soil						
Batch	R5445497							
WG3527714-4	DUP	WG3527714-3						
Conductivity		0.491	0.449		mS/cm	8.9	20	03-MAY-21
WG3527714-2	IRM	WT SAR4						
Conductivity			104.0		%		70-130	03-MAY-21
WG3527895-1	LCS							
Conductivity			96.7		%		90-110	03-MAY-21
WG3527714-1	MB							
Conductivity			<0.0040		mS/cm		0.004	03-MAY-21
Batch	R5445883							
WG3527729-4	DUP	WG3527729-3						
Conductivity		1.68	1.70		mS/cm	1.4	20	03-MAY-21
WG3527729-2	IRM	WT SAR4						
Conductivity			100.8		%		70-130	03-MAY-21
WG3527893-1	LCS							
Conductivity			96.5		%		90-110	03-MAY-21
WG3527729-1	MB							
Conductivity			<0.0040		mS/cm		0.004	03-MAY-21
F1-HS-511-WT		Soil						
Batch	R5450317							
WG3526811-4	DUP	WG3526811-3						
F1 (C6-C10)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	05-MAY-21
WG3526811-2	LCS							
F1 (C6-C10)			100.2		%		80-120	05-MAY-21
WG3526811-1	MB							
F1 (C6-C10)			<5.0		ug/g		5	05-MAY-21
Surrogate: 3,4-Dichlorotoluene			88.8		%		60-140	05-MAY-21
WG3526811-5	MS	WG3526811-3						



Quality Control Report

Workorder: L2581807

Report Date: 07-MAY-21

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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT		Soil						
Batch	R5450317							
WG3526811-5	MS	WG3526811-3						
F1 (C6-C10)			100.1		%		60-140	05-MAY-21
Batch	R5454064							
WG3526484-4	DUP	WG3526484-3						
F1 (C6-C10)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	07-MAY-21
WG3526484-2	LCS		96.7		%		80-120	07-MAY-21
F1 (C6-C10)								
WG3526484-1	MB		<5.0		ug/g		5	07-MAY-21
F1 (C6-C10)								
Surrogate: 3,4-Dichlorotoluene			97.3		%		60-140	07-MAY-21
WG3526484-5	MS	WG3526484-3						
F1 (C6-C10)			97.0		%		60-140	07-MAY-21
F2-F4-511-WT		Soil						
Batch	R5445396							
WG3526745-8	DUP	WG3526745-10						
F2 (C10-C16)		<10	<10	RPD-NA	ug/g	N/A	30	03-MAY-21
F3 (C16-C34)		<50	<50	RPD-NA	ug/g	N/A	30	03-MAY-21
F4 (C34-C50)		<50	<50	RPD-NA	ug/g	N/A	30	03-MAY-21
WG3526745-7	LCS		98.8		%		80-120	03-MAY-21
F2 (C10-C16)								
F3 (C16-C34)			98.4		%		80-120	03-MAY-21
F4 (C34-C50)			94.0		%		80-120	03-MAY-21
WG3526745-6	MB		<10		ug/g		10	03-MAY-21
F2 (C10-C16)								
F3 (C16-C34)			<50		ug/g		50	03-MAY-21
F4 (C34-C50)			<50		ug/g		50	03-MAY-21
Surrogate: 2-Bromobenzotrifluoride			97.3		%		60-140	03-MAY-21
WG3526745-9	MS	WG3526745-10						
F2 (C10-C16)			93.3		%		60-140	03-MAY-21
F3 (C16-C34)			96.4		%		60-140	03-MAY-21
F4 (C34-C50)			91.8		%		60-140	03-MAY-21
HG-200.2-CVAA-WT		Soil						
Batch	R5444839							
WG3527724-2	CRM	WT-SS-2						
Mercury (Hg)			123.6		%		70-130	03-MAY-21
WG3527724-6	DUP	WG3527724-5						



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-200.2-CVAA-WT								
	Soil							
Batch	R5444839							
WG3527724-6	DUP	WG3527724-5						
Mercury (Hg)		0.0299	0.0330		ug/g	9.8	40	03-MAY-21
WG3527724-3	LCS							
Mercury (Hg)			98.5		%		80-120	03-MAY-21
WG3527724-1	MB							
Mercury (Hg)			<0.0050		mg/kg		0.005	03-MAY-21
MET-200.2-CCMS-WT								
	Soil							
Batch	R5445917							
WG3527718-2	CRM	WT-SS-2						
Antimony (Sb)			112.6		%		70-130	03-MAY-21
Arsenic (As)			111.0		%		70-130	03-MAY-21
Barium (Ba)			104.5		%		70-130	03-MAY-21
Beryllium (Be)			112.5		%		70-130	03-MAY-21
Boron (B)			10.4		mg/kg		3.5-13.5	03-MAY-21
Cadmium (Cd)			99.9		%		70-130	03-MAY-21
Chromium (Cr)			116.4		%		70-130	03-MAY-21
Cobalt (Co)			107.3		%		70-130	03-MAY-21
Copper (Cu)			106.7		%		70-130	03-MAY-21
Lead (Pb)			106.1		%		70-130	03-MAY-21
Molybdenum (Mo)			112.4		%		70-130	03-MAY-21
Nickel (Ni)			105.2		%		70-130	03-MAY-21
Selenium (Se)			0.13		mg/kg		0-0.34	03-MAY-21
Silver (Ag)			112.4		%		70-130	03-MAY-21
Thallium (Tl)			0.084		mg/kg		0.029-0.129	03-MAY-21
Uranium (U)			100.5		%		70-130	03-MAY-21
Vanadium (V)			112.2		%		70-130	03-MAY-21
Zinc (Zn)			99.8		%		70-130	03-MAY-21
WG3527718-4	DUP	L2582553-1						
Antimony (Sb)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	03-MAY-21
Arsenic (As)		6.5	6.1		ug/g	6.2	30	03-MAY-21
Barium (Ba)		114	108		ug/g	4.9	40	03-MAY-21
Beryllium (Be)		0.88	0.90		ug/g	2.3	30	03-MAY-21
Boron (B)		15.9	15.5		ug/g	2.4	30	03-MAY-21
Cadmium (Cd)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	03-MAY-21
Chromium (Cr)		31.5	30.1		ug/g	4.3	30	03-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
	Soil							
Batch	R5445917							
WG3527718-4	DUP	L2582553-1						
Cobalt (Co)		12.0	11.4		ug/g	5.7	30	03-MAY-21
Copper (Cu)		31.1	29.7		ug/g	4.4	30	03-MAY-21
Lead (Pb)		24.4	24.2		ug/g	0.9	40	03-MAY-21
Molybdenum (Mo)		<1.0	<1.0	RPD-NA	ug/g	N/A	40	03-MAY-21
Nickel (Ni)		28.3	26.9		ug/g	5.1	30	03-MAY-21
Selenium (Se)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	03-MAY-21
Silver (Ag)		<0.20	<0.20	RPD-NA	ug/g	N/A	40	03-MAY-21
Thallium (Tl)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	03-MAY-21
Uranium (U)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	03-MAY-21
Vanadium (V)		42.5	41.3		ug/g	2.8	30	03-MAY-21
Zinc (Zn)		92.2	88.6		ug/g	4.0	30	03-MAY-21
WG3527718-3	LCS							
Antimony (Sb)			104.7		%		80-120	03-MAY-21
Arsenic (As)			101.3		%		80-120	03-MAY-21
Barium (Ba)			96.5		%		80-120	03-MAY-21
Beryllium (Be)			94.7		%		80-120	03-MAY-21
Boron (B)			93.2		%		80-120	03-MAY-21
Cadmium (Cd)			98.3		%		80-120	03-MAY-21
Chromium (Cr)			98.1		%		80-120	03-MAY-21
Cobalt (Co)			98.2		%		80-120	03-MAY-21
Copper (Cu)			96.8		%		80-120	03-MAY-21
Lead (Pb)			98.3		%		80-120	03-MAY-21
Molybdenum (Mo)			95.7		%		80-120	03-MAY-21
Nickel (Ni)			97.3		%		80-120	03-MAY-21
Selenium (Se)			99.2		%		80-120	03-MAY-21
Silver (Ag)			86.2		%		80-120	03-MAY-21
Thallium (Tl)			100.4		%		80-120	03-MAY-21
Uranium (U)			89.2		%		80-120	03-MAY-21
Vanadium (V)			100.7		%		80-120	03-MAY-21
Zinc (Zn)			93.8		%		80-120	03-MAY-21
WG3527718-1	MB							
Antimony (Sb)			<0.10		mg/kg		0.1	03-MAY-21
Arsenic (As)			<0.10		mg/kg		0.1	03-MAY-21
Barium (Ba)			<0.50		mg/kg		0.5	



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
Soil								
Batch R5445917								
WG3527718-1 MB								
Barium (Ba)			<0.50		mg/kg		0.5	03-MAY-21
Beryllium (Be)			<0.10		mg/kg		0.1	03-MAY-21
Boron (B)			<5.0		mg/kg		5	03-MAY-21
Cadmium (Cd)			<0.020		mg/kg		0.02	03-MAY-21
Chromium (Cr)			<0.50		mg/kg		0.5	03-MAY-21
Cobalt (Co)			<0.10		mg/kg		0.1	03-MAY-21
Copper (Cu)			<0.50		mg/kg		0.5	03-MAY-21
Lead (Pb)			<0.50		mg/kg		0.5	03-MAY-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	03-MAY-21
Nickel (Ni)			<0.50		mg/kg		0.5	03-MAY-21
Selenium (Se)			<0.20		mg/kg		0.2	03-MAY-21
Silver (Ag)			<0.10		mg/kg		0.1	03-MAY-21
Thallium (Tl)			<0.050		mg/kg		0.05	03-MAY-21
Uranium (U)			<0.050		mg/kg		0.05	03-MAY-21
Vanadium (V)			<0.20		mg/kg		0.2	03-MAY-21
Zinc (Zn)			<2.0		mg/kg		2	03-MAY-21
Batch R5446104								
WG3527724-2 CRM								
WT-SS-2								
Antimony (Sb)			100.1		%		70-130	03-MAY-21
Arsenic (As)			109.5		%		70-130	03-MAY-21
Barium (Ba)			94.7		%		70-130	03-MAY-21
Beryllium (Be)			101.2		%		70-130	03-MAY-21
Boron (B)			9.1		mg/kg		3.5-13.5	03-MAY-21
Cadmium (Cd)			96.4		%		70-130	03-MAY-21
Chromium (Cr)			106.8		%		70-130	03-MAY-21
Cobalt (Co)			101.8		%		70-130	03-MAY-21
Copper (Cu)			97.2		%		70-130	03-MAY-21
Lead (Pb)			104.3		%		70-130	03-MAY-21
Molybdenum (Mo)			97.6		%		70-130	03-MAY-21
Nickel (Ni)			100.6		%		70-130	03-MAY-21
Selenium (Se)			0.13		mg/kg		0-0.34	03-MAY-21
Silver (Ag)			91.3		%		70-130	03-MAY-21
Thallium (Tl)			0.079		mg/kg		0.029-0.129	03-MAY-21
Uranium (U)			97.1		%		70-130	03-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
Soil								
Batch	R5446104							
WG3527724-2	CRM	WT-SS-2						
Vanadium (V)			105.2		%		70-130	03-MAY-21
Zinc (Zn)			97.1		%		70-130	03-MAY-21
WG3527724-6	DUP	WG3527724-5						
Antimony (Sb)		0.15	0.15		ug/g	0.9	30	03-MAY-21
Arsenic (As)		9.75	9.32		ug/g	4.5	30	03-MAY-21
Barium (Ba)		183	179		ug/g	2.3	40	03-MAY-21
Beryllium (Be)		1.07	1.00		ug/g	6.6	30	03-MAY-21
Boron (B)		23.2	22.2		ug/g	4.4	30	03-MAY-21
Cadmium (Cd)		0.395	0.386		ug/g	2.4	30	03-MAY-21
Chromium (Cr)		44.1	42.6		ug/g	3.4	30	03-MAY-21
Cobalt (Co)		16.8	16.3		ug/g	3.2	30	03-MAY-21
Copper (Cu)		21.5	21.2		ug/g	1.3	30	03-MAY-21
Lead (Pb)		14.1	13.8		ug/g	1.8	40	03-MAY-21
Molybdenum (Mo)		1.11	1.11		ug/g	0.5	40	03-MAY-21
Nickel (Ni)		53.4	51.3		ug/g	4.0	30	03-MAY-21
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	03-MAY-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	03-MAY-21
Thallium (Tl)		0.265	0.252		ug/g	5.2	30	03-MAY-21
Uranium (U)		0.818	0.775		ug/g	5.4	30	03-MAY-21
Vanadium (V)		52.4	51.6		ug/g	1.5	30	03-MAY-21
Zinc (Zn)		84.8	82.4		ug/g	2.9	30	03-MAY-21
WG3527724-4	LCS							
Antimony (Sb)			106.4		%		80-120	03-MAY-21
Arsenic (As)			99.1		%		80-120	03-MAY-21
Barium (Ba)			92.7		%		80-120	03-MAY-21
Beryllium (Be)			93.7		%		80-120	03-MAY-21
Boron (B)			89.9		%		80-120	03-MAY-21
Cadmium (Cd)			96.1		%		80-120	03-MAY-21
Chromium (Cr)			95.3		%		80-120	03-MAY-21
Cobalt (Co)			94.7		%		80-120	03-MAY-21
Copper (Cu)			93.2		%		80-120	03-MAY-21
Lead (Pb)			93.7		%		80-120	03-MAY-21
Molybdenum (Mo)			95.9		%		80-120	03-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
Soil								
Batch R5446104								
WG3527724-4 LCS								
Nickel (Ni)			93.8		%		80-120	03-MAY-21
Selenium (Se)			101.5		%		80-120	03-MAY-21
Silver (Ag)			87.9		%		80-120	03-MAY-21
Thallium (Tl)			99.7		%		80-120	03-MAY-21
Uranium (U)			87.8		%		80-120	03-MAY-21
Vanadium (V)			97.1		%		80-120	03-MAY-21
Zinc (Zn)			95.2		%		80-120	03-MAY-21
WG3527724-1 MB								
Antimony (Sb)			<0.10		mg/kg		0.1	03-MAY-21
Arsenic (As)			<0.10		mg/kg		0.1	03-MAY-21
Barium (Ba)			<0.50		mg/kg		0.5	03-MAY-21
Beryllium (Be)			<0.10		mg/kg		0.1	03-MAY-21
Boron (B)			<5.0		mg/kg		5	03-MAY-21
Cadmium (Cd)			<0.020		mg/kg		0.02	03-MAY-21
Chromium (Cr)			<0.50		mg/kg		0.5	03-MAY-21
Cobalt (Co)			<0.10		mg/kg		0.1	03-MAY-21
Copper (Cu)			<0.50		mg/kg		0.5	03-MAY-21
Lead (Pb)			<0.50		mg/kg		0.5	03-MAY-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	03-MAY-21
Nickel (Ni)			<0.50		mg/kg		0.5	03-MAY-21
Selenium (Se)			<0.20		mg/kg		0.2	03-MAY-21
Silver (Ag)			<0.10		mg/kg		0.1	03-MAY-21
Thallium (Tl)			<0.050		mg/kg		0.05	03-MAY-21
Uranium (U)			<0.050		mg/kg		0.05	03-MAY-21
Vanadium (V)			<0.20		mg/kg		0.2	03-MAY-21
Zinc (Zn)			<2.0		mg/kg		2	03-MAY-21
Batch R5447299								
WG3527711-2 CRM								
WT-SS-2								
Antimony (Sb)			107.6		%		70-130	03-MAY-21
Arsenic (As)			106.5		%		70-130	03-MAY-21
Barium (Ba)			105.8		%		70-130	03-MAY-21
Beryllium (Be)			108.0		%		70-130	03-MAY-21
Boron (B)			10.0		mg/kg		3.5-13.5	03-MAY-21
Cadmium (Cd)			108.0		%		70-130	03-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT		Soil						
Batch	R5447299							
WG3527711-2	CRM	WT-SS-2						
Chromium (Cr)			106.9		%		70-130	03-MAY-21
Cobalt (Co)			105.2		%		70-130	03-MAY-21
Copper (Cu)			99.4		%		70-130	03-MAY-21
Lead (Pb)			100.2		%		70-130	03-MAY-21
Molybdenum (Mo)			112.7		%		70-130	03-MAY-21
Nickel (Ni)			107.8		%		70-130	03-MAY-21
Selenium (Se)			0.15		mg/kg		0-0.34	03-MAY-21
Silver (Ag)			99.3		%		70-130	03-MAY-21
Thallium (Tl)			0.075		mg/kg		0.029-0.129	03-MAY-21
Uranium (U)			109.5		%		70-130	03-MAY-21
Vanadium (V)			109.0		%		70-130	03-MAY-21
Zinc (Zn)			97.9		%		70-130	03-MAY-21
WG3527711-6	DUP	WG3527711-5						
Antimony (Sb)		<0.10	<0.10	RPD-NA	ug/g	N/A	30	03-MAY-21
Arsenic (As)		1.20	1.14		ug/g	5.1	30	03-MAY-21
Barium (Ba)		66.8	65.8		ug/g	1.5	40	03-MAY-21
Beryllium (Be)		0.21	0.20		ug/g	4.9	30	03-MAY-21
Boron (B)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	03-MAY-21
Cadmium (Cd)		0.028	0.029		ug/g	3.7	30	03-MAY-21
Chromium (Cr)		23.1	21.9		ug/g	5.3	30	03-MAY-21
Cobalt (Co)		4.10	3.88		ug/g	5.5	30	03-MAY-21
Copper (Cu)		10.4	10.2		ug/g	2.2	30	03-MAY-21
Lead (Pb)		17.5	20.5		ug/g	15	40	03-MAY-21
Molybdenum (Mo)		0.17	0.18		ug/g	4.6	40	03-MAY-21
Nickel (Ni)		13.5	13.0		ug/g	3.9	30	03-MAY-21
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	03-MAY-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	03-MAY-21
Thallium (Tl)		<0.050	<0.050	RPD-NA	ug/g	N/A	30	03-MAY-21
Uranium (U)		0.523	0.548		ug/g	4.6	30	03-MAY-21
Vanadium (V)		27.5	25.7		ug/g	6.5	30	03-MAY-21
Zinc (Zn)		16.4	15.6		ug/g	4.8	30	03-MAY-21
WG3527711-4	LCS							
Antimony (Sb)			103.9		%		80-120	03-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT		Soil						
Batch	R5447299							
WG3527711-4	LCS							
Arsenic (As)			106.7		%		80-120	03-MAY-21
Barium (Ba)			104.4		%		80-120	03-MAY-21
Beryllium (Be)			99.2		%		80-120	03-MAY-21
Boron (B)			98.4		%		80-120	03-MAY-21
Cadmium (Cd)			100.2		%		80-120	03-MAY-21
Chromium (Cr)			101.5		%		80-120	03-MAY-21
Cobalt (Co)			101.4		%		80-120	03-MAY-21
Copper (Cu)			99.4		%		80-120	03-MAY-21
Lead (Pb)			102.5		%		80-120	03-MAY-21
Molybdenum (Mo)			102.8		%		80-120	03-MAY-21
Nickel (Ni)			100.6		%		80-120	03-MAY-21
Selenium (Se)			101.6		%		80-120	03-MAY-21
Silver (Ag)			96.0		%		80-120	03-MAY-21
Thallium (Tl)			99.95		%		80-120	03-MAY-21
Uranium (U)			106.2		%		80-120	03-MAY-21
Vanadium (V)			105.2		%		80-120	03-MAY-21
Zinc (Zn)			97.8		%		80-120	03-MAY-21
WG3527711-1	MB							
Antimony (Sb)			<0.10		mg/kg		0.1	03-MAY-21
Arsenic (As)			<0.10		mg/kg		0.1	03-MAY-21
Barium (Ba)			<0.50		mg/kg		0.5	03-MAY-21
Beryllium (Be)			<0.10		mg/kg		0.1	03-MAY-21
Boron (B)			<5.0		mg/kg		5	03-MAY-21
Cadmium (Cd)			<0.020		mg/kg		0.02	03-MAY-21
Chromium (Cr)			<0.50		mg/kg		0.5	03-MAY-21
Cobalt (Co)			<0.10		mg/kg		0.1	03-MAY-21
Copper (Cu)			<0.50		mg/kg		0.5	03-MAY-21
Lead (Pb)			<0.50		mg/kg		0.5	03-MAY-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	03-MAY-21
Nickel (Ni)			<0.50		mg/kg		0.5	03-MAY-21
Selenium (Se)			<0.20		mg/kg		0.2	03-MAY-21
Silver (Ag)			<0.10		mg/kg		0.1	03-MAY-21
Thallium (Tl)			<0.050		mg/kg		0.05	03-MAY-21
Uranium (U)			<0.050		mg/kg		0.05	03-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
	Soil							
Batch	R5447299							
WG3527711-1	MB							
Vanadium (V)			<0.20		mg/kg		0.2	03-MAY-21
Zinc (Zn)			<2.0		mg/kg		2	03-MAY-21
MOISTURE-WT								
	Soil							
Batch	R5443525							
WG3526741-3	DUP	L2580541-21						
% Moisture		18.1	17.8		%	1.4	20	30-APR-21
WG3526741-2	LCS							
% Moisture			100.3		%		90-110	30-APR-21
WG3526741-1	MB							
% Moisture			<0.25		%		0.25	30-APR-21
Batch	R5443528							
WG3526740-3	DUP	L2581807-2						
% Moisture		8.70	7.89		%	9.8	20	30-APR-21
WG3526740-2	LCS							
% Moisture			99.9		%		90-110	30-APR-21
WG3526740-1	MB							
% Moisture			<0.25		%		0.25	30-APR-21
PAH-511-WT								
	Soil							
Batch	R5443768							
WG3526746-3	DUP	WG3526746-5						
1-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	30-APR-21
2-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	30-APR-21
Acenaphthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	30-APR-21
Acenaphthylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	30-APR-21
Anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	30-APR-21
Benzo(a)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	30-APR-21
Benzo(a)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	30-APR-21
Benzo(b&j)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	30-APR-21
Benzo(g,h,i)perylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	30-APR-21
Benzo(k)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	30-APR-21
Chrysene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	30-APR-21
Dibenz(a,h)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	30-APR-21
Fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	30-APR-21
Fluorene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	30-APR-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT								
	Soil							
Batch	R5443768							
WG3526746-3 DUP		WG3526746-5						
Indeno(1,2,3-cd)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	30-APR-21
Naphthalene		<0.013	<0.013	RPD-NA	ug/g	N/A	40	30-APR-21
Phenanthrene		<0.046	<0.046	RPD-NA	ug/g	N/A	40	30-APR-21
Pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	30-APR-21
WG3526746-2 LCS								
1-Methylnaphthalene			92.9		%		50-140	30-APR-21
2-Methylnaphthalene			90.2		%		50-140	30-APR-21
Acenaphthene			88.8		%		50-140	30-APR-21
Acenaphthylene			85.4		%		50-140	30-APR-21
Anthracene			80.5		%		50-140	30-APR-21
Benzo(a)anthracene			92.0		%		50-140	30-APR-21
Benzo(a)pyrene			78.8		%		50-140	30-APR-21
Benzo(b&j)fluoranthene			77.4		%		50-140	30-APR-21
Benzo(g,h,i)perylene			82.8		%		50-140	30-APR-21
Benzo(k)fluoranthene			95.5		%		50-140	30-APR-21
Chrysene			89.6		%		50-140	30-APR-21
Dibenz(a,h)anthracene			82.5		%		50-140	30-APR-21
Fluoranthene			87.3		%		50-140	30-APR-21
Fluorene			87.4		%		50-140	30-APR-21
Indeno(1,2,3-cd)pyrene			85.9		%		50-140	30-APR-21
Naphthalene			88.0		%		50-140	30-APR-21
Phenanthrene			90.2		%		50-140	30-APR-21
Pyrene			87.0		%		50-140	30-APR-21
WG3526746-1 MB								
1-Methylnaphthalene			<0.030		ug/g		0.03	30-APR-21
2-Methylnaphthalene			<0.030		ug/g		0.03	30-APR-21
Acenaphthene			<0.050		ug/g		0.05	30-APR-21
Acenaphthylene			<0.050		ug/g		0.05	30-APR-21
Anthracene			<0.050		ug/g		0.05	30-APR-21
Benzo(a)anthracene			<0.050		ug/g		0.05	30-APR-21
Benzo(a)pyrene			<0.050		ug/g		0.05	30-APR-21
Benzo(b&j)fluoranthene			<0.050		ug/g		0.05	30-APR-21
Benzo(g,h,i)perylene			<0.050		ug/g		0.05	30-APR-21
Benzo(k)fluoranthene			<0.050		ug/g		0.05	30-APR-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT								
	Soil							
Batch	R5443768							
WG3526746-1	MB							
Chrysene			<0.050		ug/g		0.05	30-APR-21
Dibenz(a,h)anthracene			<0.050		ug/g		0.05	30-APR-21
Fluoranthene			<0.050		ug/g		0.05	30-APR-21
Fluorene			<0.050		ug/g		0.05	30-APR-21
Indeno(1,2,3-cd)pyrene			<0.050		ug/g		0.05	30-APR-21
Naphthalene			<0.013		ug/g		0.013	30-APR-21
Phenanthrene			<0.046		ug/g		0.046	30-APR-21
Pyrene			<0.050		ug/g		0.05	30-APR-21
Surrogate: 2-Fluorobiphenyl			92.9		%		50-140	30-APR-21
Surrogate: d14-Terphenyl			90.2		%		50-140	30-APR-21
WG3526746-4	MS	WG3526746-5						
1-Methylnaphthalene			92.5		%		50-140	30-APR-21
2-Methylnaphthalene			89.8		%		50-140	30-APR-21
Acenaphthene			89.1		%		50-140	30-APR-21
Acenaphthylene			85.0		%		50-140	30-APR-21
Anthracene			80.3		%		50-140	30-APR-21
Benzo(a)anthracene			94.7		%		50-140	30-APR-21
Benzo(a)pyrene			78.6		%		50-140	30-APR-21
Benzo(b&j)fluoranthene			88.6		%		50-140	30-APR-21
Benzo(g,h,i)perylene			73.1		%		50-140	30-APR-21
Benzo(k)fluoranthene			87.2		%		50-140	30-APR-21
Chrysene			88.7		%		50-140	30-APR-21
Dibenz(a,h)anthracene			74.4		%		50-140	30-APR-21
Fluoranthene			90.6		%		50-140	30-APR-21
Fluorene			88.2		%		50-140	30-APR-21
Indeno(1,2,3-cd)pyrene			80.9		%		50-140	30-APR-21
Naphthalene			86.9		%		50-140	30-APR-21
Phenanthrene			90.2		%		50-140	30-APR-21
Pyrene			90.9		%		50-140	30-APR-21
PH-WT								
	Soil							
Batch	R5446223							
WG3526743-1	DUP	L2581807-7						
pH		7.96	8.03	J	pH units	0.07	0.3	03-MAY-21
WG3527906-1	LCS							



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PH-WT	Soil							
Batch	R5446223							
WG3527906-1	LCS							
pH			6.93		pH units		6.9-7.1	03-MAY-21
SAR-R511-WT	Soil							
Batch	R5445918							
WG3527714-4	DUP	WG3527714-3						
Calcium (Ca)		47.9	41.4		mg/L	15	30	03-MAY-21
Sodium (Na)		28.7	27.2		mg/L	5.4	30	03-MAY-21
Magnesium (Mg)		17.2	14.7		mg/L	16	30	03-MAY-21
WG3527714-2	IRM	WT SAR4						
Calcium (Ca)			104.0		%		70-130	03-MAY-21
Sodium (Na)			93.0		%		70-130	03-MAY-21
Magnesium (Mg)			100.9		%		70-130	03-MAY-21
WG3527714-5	LCS							
Calcium (Ca)			109.0		%		80-120	03-MAY-21
Sodium (Na)			104.2		%		80-120	03-MAY-21
Magnesium (Mg)			104.2		%		80-120	03-MAY-21
WG3527714-1	MB							
Calcium (Ca)			<0.50		mg/L		0.5	03-MAY-21
Sodium (Na)			<0.50		mg/L		0.5	03-MAY-21
Magnesium (Mg)			<0.50		mg/L		0.5	03-MAY-21
Batch	R5446105							
WG3527729-4	DUP	WG3527729-3						
Calcium (Ca)		1.46	1.63		mg/L	11	30	03-MAY-21
Sodium (Na)		330	338		mg/L	2.4	30	03-MAY-21
Magnesium (Mg)		<0.50	<0.50	RPD-NA	mg/L	N/A	30	03-MAY-21
WG3527729-2	IRM	WT SAR4						
Calcium (Ca)			98.4		%		70-130	03-MAY-21
Sodium (Na)			94.3		%		70-130	03-MAY-21
Magnesium (Mg)			98.3		%		70-130	03-MAY-21
WG3527729-5	LCS							
Calcium (Ca)			108.3		%		80-120	03-MAY-21
Sodium (Na)			103.6		%		80-120	03-MAY-21
Magnesium (Mg)			104.0		%		80-120	03-MAY-21
WG3527729-1	MB							
Calcium (Ca)			<0.50		mg/L		0.5	03-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SAR-R511-WT	Soil							
Batch	R5446105							
WG3527729-1 MB								
Sodium (Na)			<0.50		mg/L		0.5	03-MAY-21
Magnesium (Mg)			<0.50		mg/L		0.5	03-MAY-21
VOC-511-HS-WT	Soil							
Batch	R5450317							
WG3526811-4 DUP		WG3526811-3						
1,1,1,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
1,1,2,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
1,1,1-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
1,1,2-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
1,1-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
1,1-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
1,2-Dibromoethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
1,2-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
1,2-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
1,2-Dichloropropane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
1,3-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
1,4-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
Acetone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	05-MAY-21
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	05-MAY-21
Bromodichloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
Bromoform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
Bromomethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
Carbon tetrachloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
Chlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
Chloroform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
cis-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
cis-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	05-MAY-21
Dibromochloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
Dichlorodifluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	05-MAY-21
n-Hexane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
Methylene Chloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
MTBE		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT		Soil						
Batch	R5450317							
WG3526811-4	DUP	WG3526811-3						
m+p-Xylenes		<0.030	<0.030	RPD-NA	ug/g	N/A	40	05-MAY-21
Methyl Ethyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	05-MAY-21
Methyl Isobutyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	05-MAY-21
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	05-MAY-21
Styrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
Tetrachloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	05-MAY-21
trans-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
trans-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	05-MAY-21
Trichloroethylene		<0.010	<0.010	RPD-NA	ug/g	N/A	40	05-MAY-21
Trichlorofluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-MAY-21
Vinyl chloride		<0.020	<0.020	RPD-NA	ug/g	N/A	40	05-MAY-21
WG3526811-2	LCS							
1,1,1,2-Tetrachloroethane			119.7		%		60-130	05-MAY-21
1,1,1,2,2-Tetrachloroethane			124.7		%		60-130	05-MAY-21
1,1,1-Trichloroethane			117.0		%		60-130	05-MAY-21
1,1,2-Trichloroethane			119.0		%		60-130	05-MAY-21
1,1-Dichloroethane			120.6		%		60-130	05-MAY-21
1,1-Dichloroethylene			117.2		%		60-130	05-MAY-21
1,2-Dibromoethane			118.7		%		70-130	05-MAY-21
1,2-Dichlorobenzene			115.8		%		70-130	05-MAY-21
1,2-Dichloroethane			123.6		%		60-130	05-MAY-21
1,2-Dichloropropane			121.6		%		70-130	05-MAY-21
1,3-Dichlorobenzene			117.6		%		70-130	05-MAY-21
1,4-Dichlorobenzene			116.3		%		70-130	05-MAY-21
Acetone			140.0		%		60-140	05-MAY-21
Benzene			118.8		%		70-130	05-MAY-21
Bromodichloromethane			130.4		%		50-140	05-MAY-21
Bromoform			132.9	LCS-ND	%		70-130	05-MAY-21
Bromomethane			112.9		%		50-140	05-MAY-21
Carbon tetrachloride			119.2		%		70-130	05-MAY-21
Chlorobenzene			123.0		%		70-130	05-MAY-21
Chloroform			125.5		%		70-130	05-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT		Soil						
Batch	R5450317							
WG3526811-2	LCS							
cis-1,2-Dichloroethylene			122.5		%		70-130	05-MAY-21
cis-1,3-Dichloropropene			125.5		%		70-130	05-MAY-21
Dibromochloromethane			118.2		%		60-130	05-MAY-21
Dichlorodifluoromethane			86.4		%		50-140	05-MAY-21
Ethylbenzene			117.3		%		70-130	05-MAY-21
n-Hexane			110.9		%		70-130	05-MAY-21
Methylene Chloride			125.5		%		70-130	05-MAY-21
MTBE			111.8		%		70-130	05-MAY-21
m+p-Xylenes			122.6		%		70-130	05-MAY-21
Methyl Ethyl Ketone			131.4		%		60-140	05-MAY-21
Methyl Isobutyl Ketone			118.6		%		60-140	05-MAY-21
o-Xylene			129.9		%		70-130	05-MAY-21
Styrene			121.9		%		70-130	05-MAY-21
Tetrachloroethylene			116.1		%		60-130	05-MAY-21
Toluene			117.0		%		70-130	05-MAY-21
trans-1,2-Dichloroethylene			125.1		%		60-130	05-MAY-21
trans-1,3-Dichloropropene			121.5		%		70-130	05-MAY-21
Trichloroethylene			119.7		%		60-130	05-MAY-21
Trichlorofluoromethane			113.7		%		50-140	05-MAY-21
Vinyl chloride			114.1		%		60-140	05-MAY-21
WG3526811-1	MB							
1,1,1,2-Tetrachloroethane			<0.050		ug/g		0.05	05-MAY-21
1,1,2,2-Tetrachloroethane			<0.050		ug/g		0.05	05-MAY-21
1,1,1-Trichloroethane			<0.050		ug/g		0.05	05-MAY-21
1,1,2-Trichloroethane			<0.050		ug/g		0.05	05-MAY-21
1,1-Dichloroethane			<0.050		ug/g		0.05	05-MAY-21
1,1-Dichloroethylene			<0.050		ug/g		0.05	05-MAY-21
1,2-Dibromoethane			<0.050		ug/g		0.05	05-MAY-21
1,2-Dichlorobenzene			<0.050		ug/g		0.05	05-MAY-21
1,2-Dichloroethane			<0.050		ug/g		0.05	05-MAY-21
1,2-Dichloropropane			<0.050		ug/g		0.05	05-MAY-21
1,3-Dichlorobenzene			<0.050		ug/g		0.05	05-MAY-21
1,4-Dichlorobenzene			<0.050		ug/g		0.05	05-MAY-21
Acetone			<0.50		ug/g		0.5	05-MAY-21



Quality Control Report

Workorder: L2581807

Report Date: 07-MAY-21

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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT								
	Soil							
Batch	R5450317							
WG3526811-1 MB								
Benzene			<0.0068		ug/g		0.0068	05-MAY-21
Bromodichloromethane			<0.050		ug/g		0.05	05-MAY-21
Bromoform			<0.050		ug/g		0.05	05-MAY-21
Bromomethane			<0.050		ug/g		0.05	05-MAY-21
Carbon tetrachloride			<0.050		ug/g		0.05	05-MAY-21
Chlorobenzene			<0.050		ug/g		0.05	05-MAY-21
Chloroform			<0.050		ug/g		0.05	05-MAY-21
cis-1,2-Dichloroethylene			<0.050		ug/g		0.05	05-MAY-21
cis-1,3-Dichloropropene			<0.030		ug/g		0.03	05-MAY-21
Dibromochloromethane			<0.050		ug/g		0.05	05-MAY-21
Dichlorodifluoromethane			<0.050		ug/g		0.05	05-MAY-21
Ethylbenzene			<0.018		ug/g		0.018	05-MAY-21
n-Hexane			<0.050		ug/g		0.05	05-MAY-21
Methylene Chloride			<0.050		ug/g		0.05	05-MAY-21
MTBE			<0.050		ug/g		0.05	05-MAY-21
m+p-Xylenes			<0.030		ug/g		0.03	05-MAY-21
Methyl Ethyl Ketone			<0.50		ug/g		0.5	05-MAY-21
Methyl Isobutyl Ketone			<0.50		ug/g		0.5	05-MAY-21
o-Xylene			<0.020		ug/g		0.02	05-MAY-21
Styrene			<0.050		ug/g		0.05	05-MAY-21
Tetrachloroethylene			<0.050		ug/g		0.05	05-MAY-21
Toluene			<0.080		ug/g		0.08	05-MAY-21
trans-1,2-Dichloroethylene			<0.050		ug/g		0.05	05-MAY-21
trans-1,3-Dichloropropene			<0.030		ug/g		0.03	05-MAY-21
Trichloroethylene			<0.010		ug/g		0.01	05-MAY-21
Trichlorofluoromethane			<0.050		ug/g		0.05	05-MAY-21
Vinyl chloride			<0.020		ug/g		0.02	05-MAY-21
Surrogate: 1,4-Difluorobenzene			123.8		%		50-140	05-MAY-21
Surrogate: 4-Bromofluorobenzene			104.7		%		50-140	05-MAY-21
WG3526811-5 MS		WG3526811-3						
1,1,1,2-Tetrachloroethane			126.1		%		50-140	05-MAY-21
1,1,1,2,2-Tetrachloroethane			134.2		%		50-140	05-MAY-21
1,1,1-Trichloroethane			121.9		%		50-140	05-MAY-21
1,1,2-Trichloroethane			125.5		%		50-140	05-MAY-21



Quality Control Report

Workorder: L2581807

Report Date: 07-MAY-21

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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT								
	Soil							
Batch	R5450317							
WG3526811-5 MS		WG3526811-3						
1,1-Dichloroethane			125.4		%		50-140	05-MAY-21
1,1-Dichloroethylene			124.1		%		50-140	05-MAY-21
1,2-Dibromoethane			123.7		%		50-140	05-MAY-21
1,2-Dichlorobenzene			125.8		%		50-140	05-MAY-21
1,2-Dichloroethane			128.6		%		50-140	05-MAY-21
1,2-Dichloropropane			123.9		%		50-140	05-MAY-21
1,3-Dichlorobenzene			127.1		%		50-140	05-MAY-21
1,4-Dichlorobenzene			125.3		%		50-140	05-MAY-21
Acetone			146.8	MES	%		50-140	05-MAY-21
Benzene			122.3		%		50-140	05-MAY-21
Bromodichloromethane			135.0		%		50-140	05-MAY-21
Bromoform			140.6	MES	%		50-140	05-MAY-21
Bromomethane			119.9		%		50-140	05-MAY-21
Carbon tetrachloride			124.1		%		50-140	05-MAY-21
Chlorobenzene			130.3		%		50-140	05-MAY-21
Chloroform			130.6		%		50-140	05-MAY-21
cis-1,2-Dichloroethylene			125.7		%		50-140	05-MAY-21
cis-1,3-Dichloropropene			123.7		%		50-140	05-MAY-21
Dibromochloromethane			124.6		%		50-140	05-MAY-21
Dichlorodifluoromethane			114.4		%		50-140	05-MAY-21
Ethylbenzene			121.5		%		50-140	05-MAY-21
n-Hexane			120.3		%		50-140	05-MAY-21
Methylene Chloride			131.5		%		50-140	05-MAY-21
MTBE			123.7		%		50-140	05-MAY-21
m+p-Xylenes			130.1		%		50-140	05-MAY-21
Methyl Ethyl Ketone			126.2		%		50-140	05-MAY-21
Methyl Isobutyl Ketone			113.6		%		50-140	05-MAY-21
o-Xylene			135.0		%		50-140	05-MAY-21
Styrene			126.3		%		50-140	05-MAY-21
Tetrachloroethylene			120.2		%		50-140	05-MAY-21
Toluene			122.4		%		50-140	05-MAY-21
trans-1,2-Dichloroethylene			129.9		%		50-140	05-MAY-21
trans-1,3-Dichloropropene			123.1		%		50-140	05-MAY-21



Quality Control Report

Workorder: L2581807

Report Date: 07-MAY-21

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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT								
	Soil							
Batch	R5450317							
WG3526811-5 MS		WG3526811-3						
Trichloroethylene			121.5		%		50-140	05-MAY-21
Trichlorofluoromethane			123.2		%		50-140	05-MAY-21
Vinyl chloride			124.1		%		50-140	05-MAY-21

Quality Control Report

Workorder: L2581807

Report Date: 07-MAY-21

Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9
Contact: JEN LAMBKE

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
J	Duplicate results and limits are expressed in terms of absolute difference.
LCS-ND	Lab Control Sample recovery was slightly outside ALS DQO. Reported non-detect results for associated samples were unaffected.
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

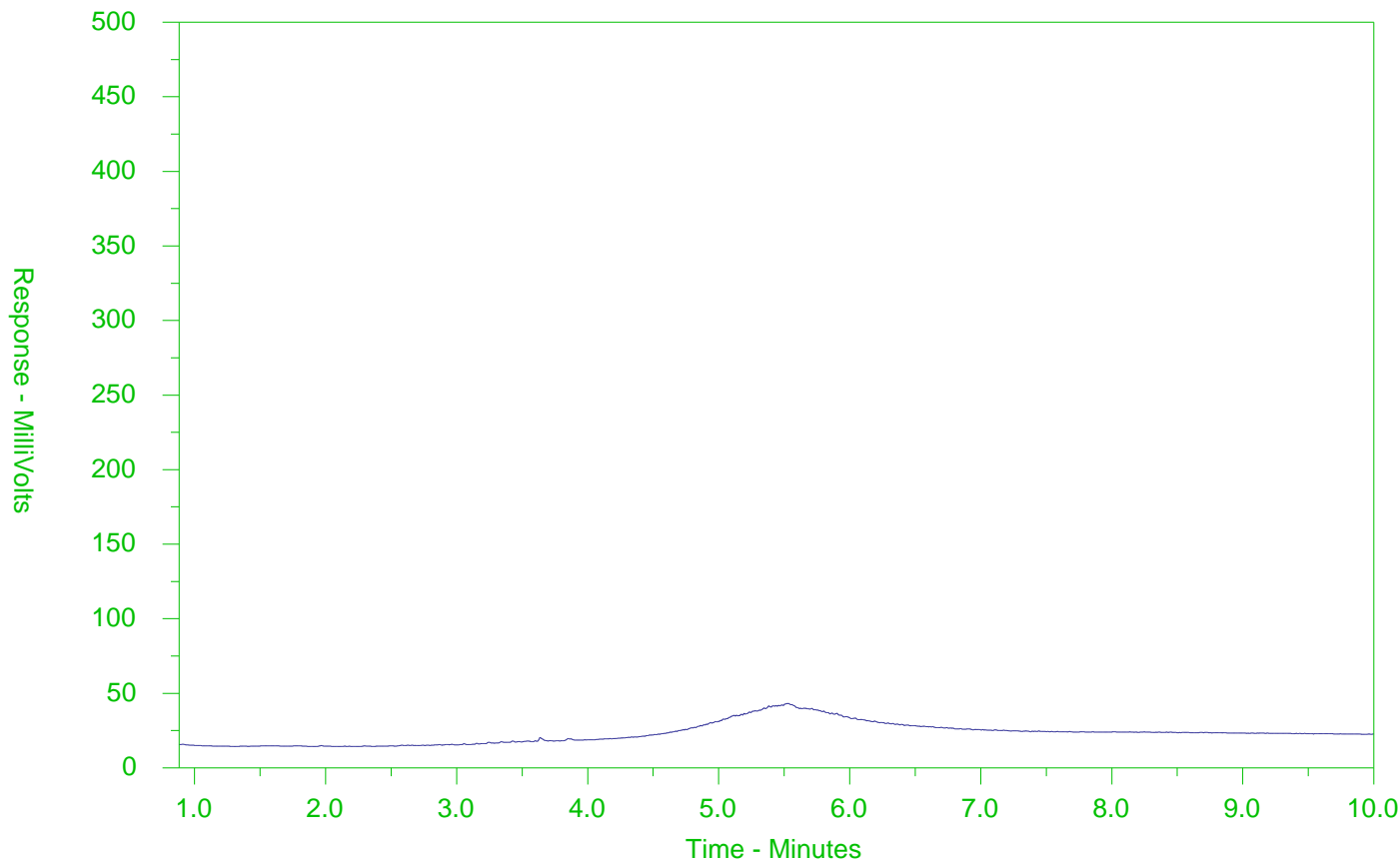
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2581807-2
 Client Sample ID: BH 133-21 SS2 2.5-4.5 FT



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

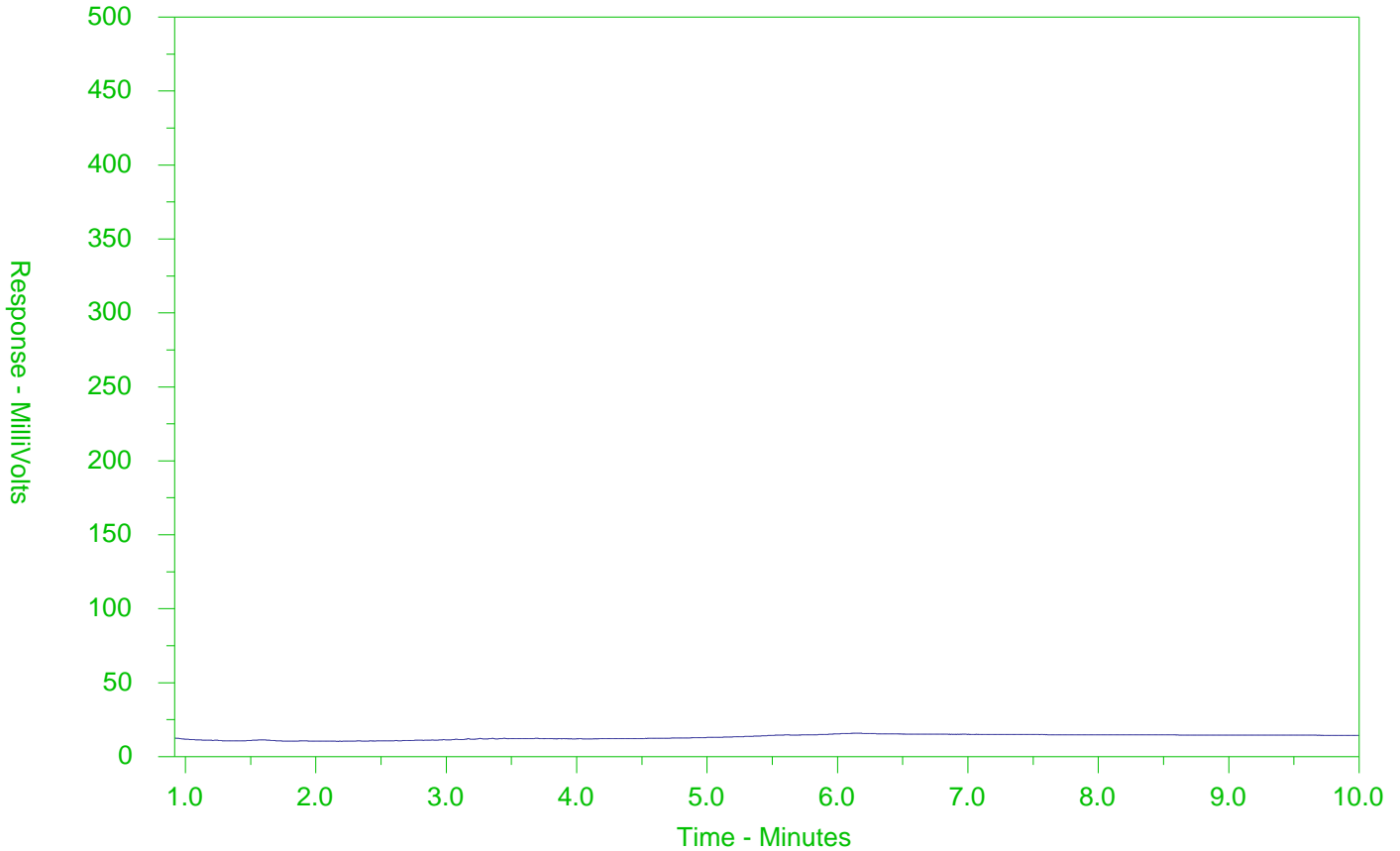
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2581807-7
 Client Sample ID: BH 134-21 SS3 5-7 FT



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

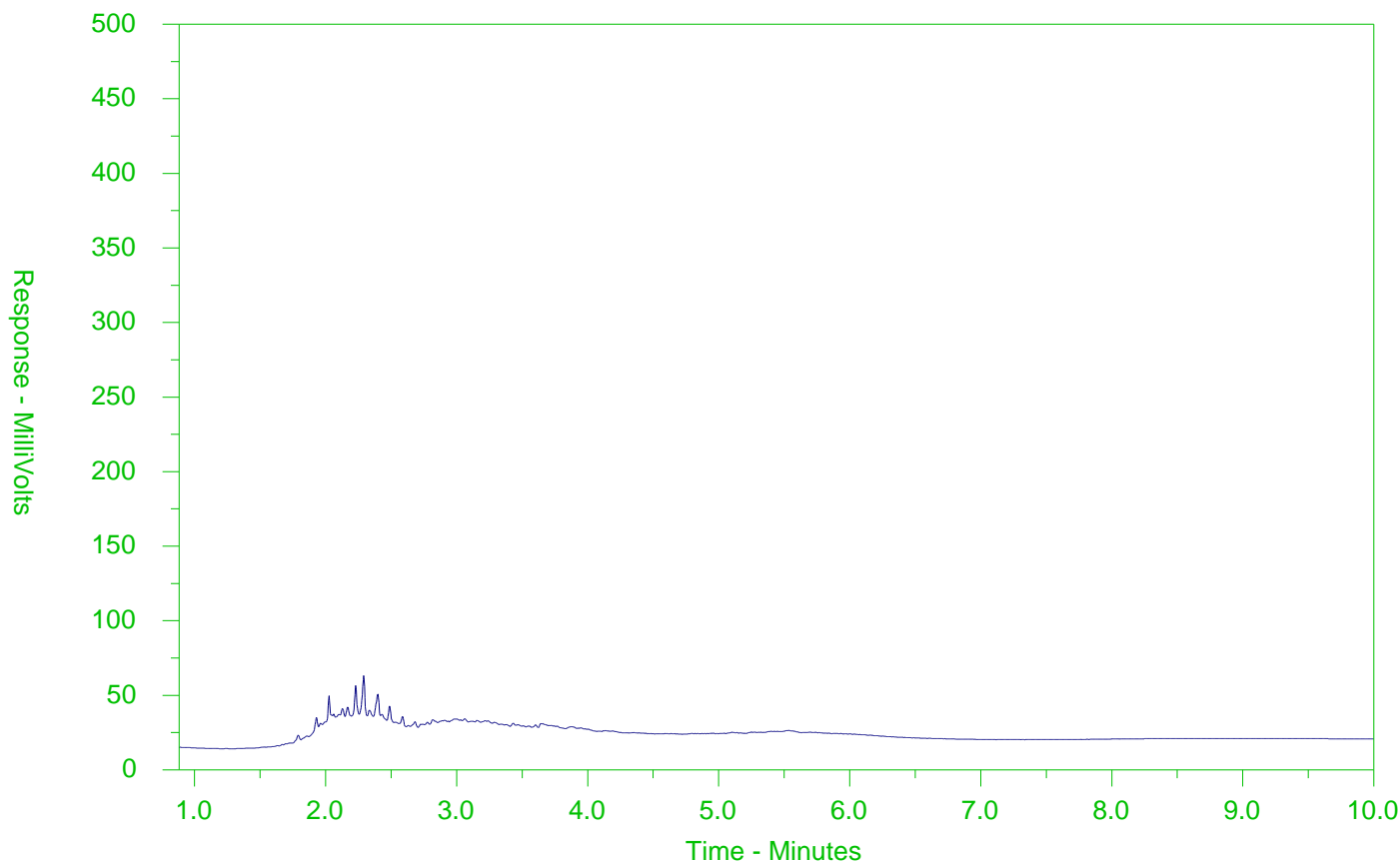
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2581807-10
 Client Sample ID: BH 135-21 SS2 2.5-4.5 FT



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

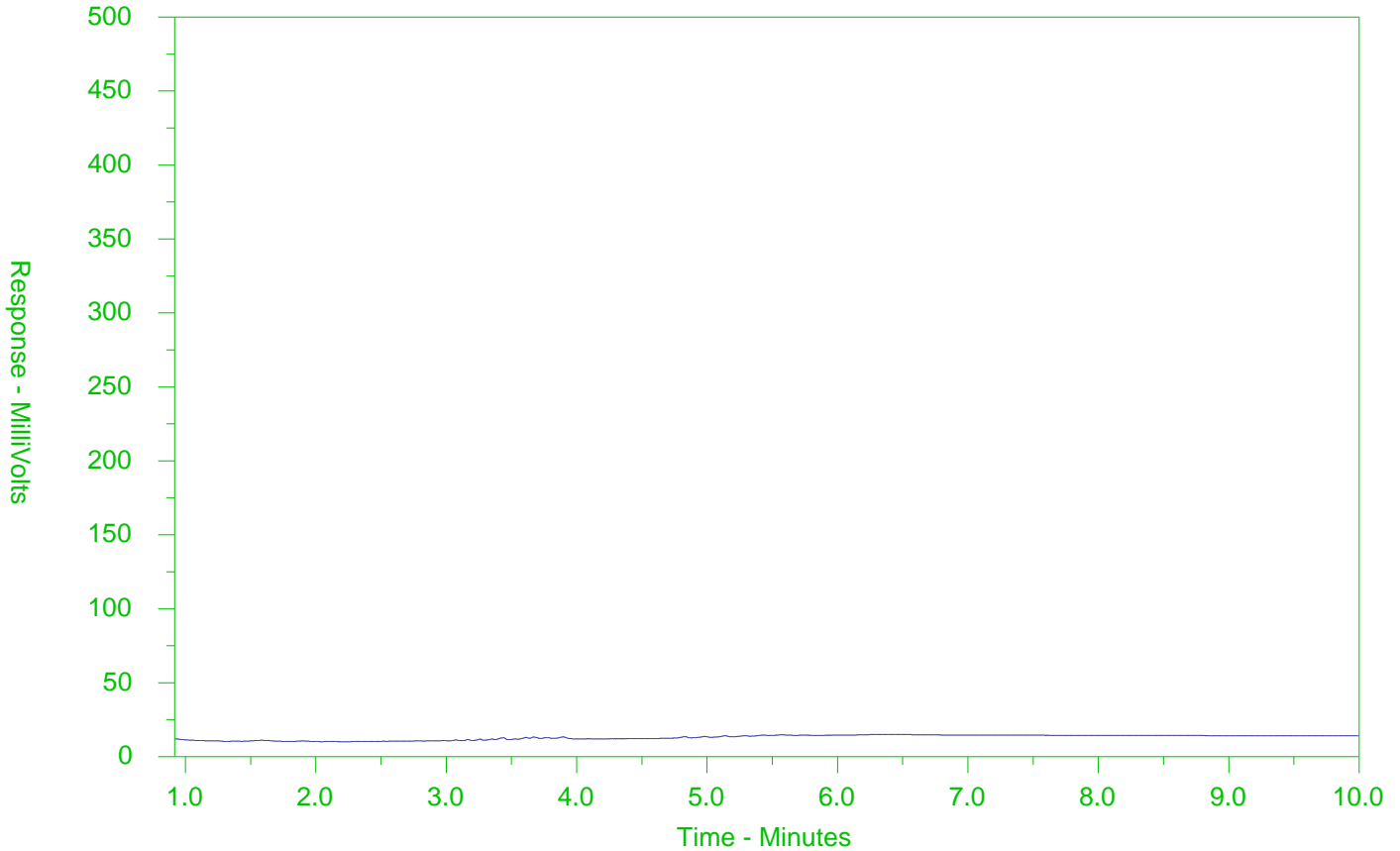
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2581807-12
 Client Sample ID: BH 135-21 SS4 7.5-9.5 FT



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

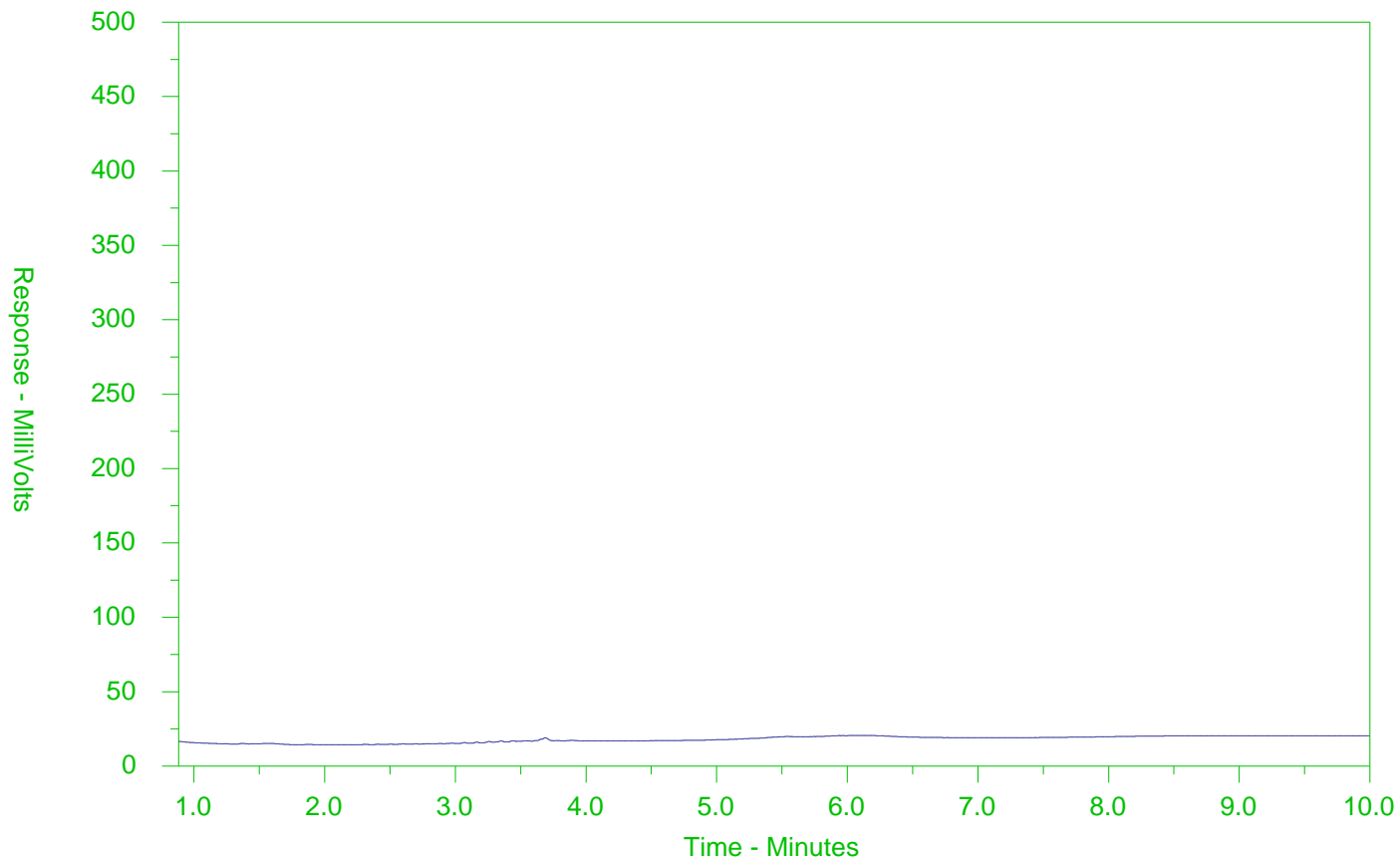
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2581807-15
 Client Sample ID: BH 136-21 SS3 5-7 FT



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

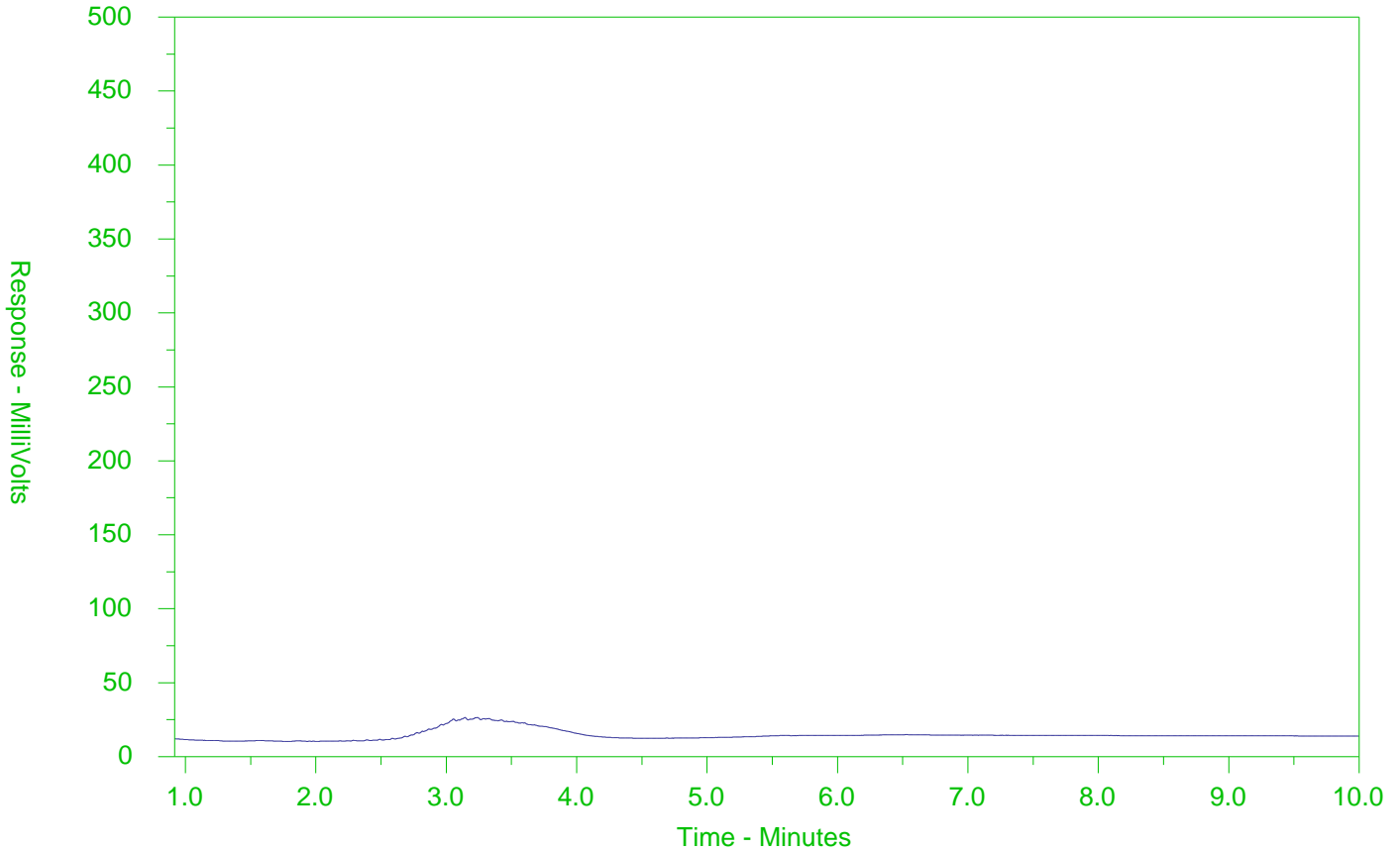
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2581807-18
 Client Sample ID: BH 137-21 SS2 2.5-4.5 FT



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

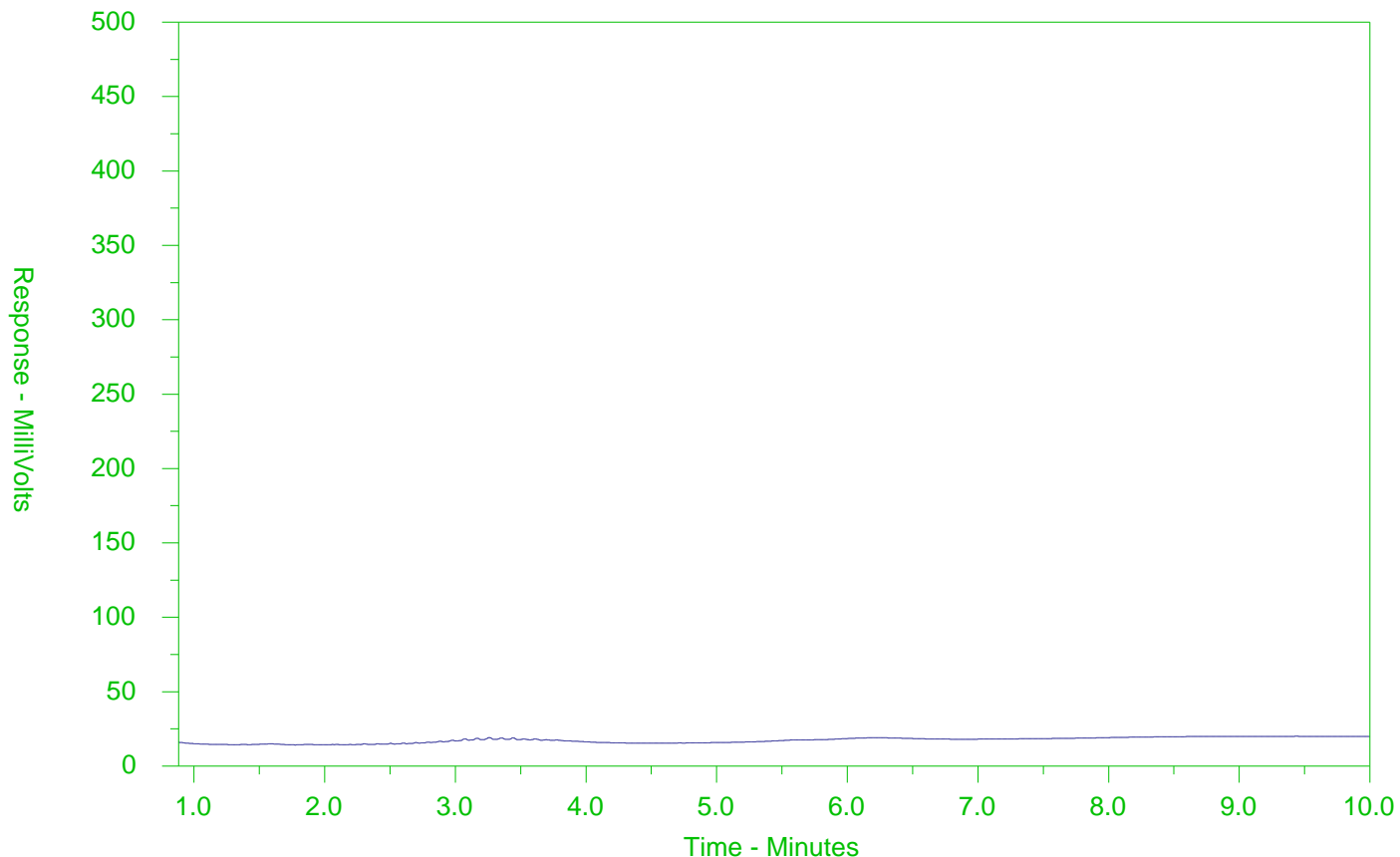
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2581807-19
 Client Sample ID: BH 137-21 SS3 5-7 FT



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

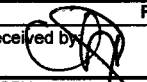
The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.




Report To Contact and company name below will appear on the final report		Report Format / Dis		Contact your AM to confirm all E&P TATs (surcharges may apply)																			
Company: MTE		Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL)		Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply					EMERGENCY														
Contact: Jen Lambke		Quality Control (QC) Report with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		4 day [P4-20%] <input type="checkbox"/>		3 day [P3-25%] <input type="checkbox"/>		2 day [P2-50%] <input type="checkbox"/>		1 Business day [E - 100%] <input type="checkbox"/>													
Phone: 519-502-3268		<input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked																					
Company address below will appear on the final report		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX																					
Street: 520 Bingham Centre Drive		Email 1 or Fax: jlambke@mte85.com		Date and Time Required for all E&P TATs:					dd-mmm-yy hh:mm														
City/Province: Kitchener		Email 2: jball@mte85.com		For tests that can not be performed according to the service level selected, you will be contacted.																			
Postal Code:		Email 3:		Analysis Request																			
Invoice To		Invoice Distribution		Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below																			
Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX		NUMBER OF CONTAINERS	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)																	
Copy of Invoice with Report <input type="checkbox"/> YES <input type="checkbox"/> NO		Email 1 or Fax: jlambke@mte85.com																					
Company:		Email 2:																					
Contact:		Email 3:																					
Project Information		Oil and Gas Required Fields (client use)																					
ALS Account # / Quote #: Q75730		AFE/Cost Center:					PO#																
Job #: 46995-100		Major/Minor Code:					Routing Code:																
PO / AFE:		Requisitioner:																					
LSD:		Location:																					
ALS Lab Work Order # (lab use only): L2581807		ALS Contact: Emily H					Sampler: Matt D																
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)			Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	PHC F1 to F4 and BTEX	PHC F1 to F4 and VOCs	Metals Scan	Metals Complete	PAHs	SAR & EC	PH	PCBs	PHC F2 to F4								
	BH133-21 GSI 6"-2.5 Ft			27-04-21	9:27	Soil										X							
	SS2 2.5-4.5 Ft				9:30											X							
	SS3 5-7 Ft				9:35											X							
	SS4 7.5-9.5 Ft				9:45											X							
	M SPLP				10:00											X							
	BH134-21 GSI 6"-2 Ft			27-04-21	10:20	Soil										X							
	SS2 2.5-4.5 Ft				10:30											X							
	SS3 5-7 Ft				10:40											X							
	SS4 7.5-9.5 Ft				10:45											X							
	M SPLP				11:00											X							
	BH135-21 GSI 6"-2.5 Ft			27-04-21	11:30	Soil										X							
	SS2 2.5-4.5 Ft				11:35											X							
Drinking Water (DW) Samples¹ (client use)		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)																					
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO																							
Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO		Table 1 Res, Table 3.1 R/P/I, Table 3.1 I/C/C (ESQS, O.Reg. 406/19) - coarse, AND Table 3 I/C/C (SCS, O.Reg. 153/04) - coarse																					
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)				SAMPLE CONDITION AS RECEIVED (lab use only)																	
Released by:	Date:	Time:	Received by:	Date:	Time:	Frozen	<input type="checkbox"/>	SIF Observations	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Ice Packs	<input checked="" type="checkbox"/>	Ice Cubes	<input checked="" type="checkbox"/>	Custody seal intact	Yes	<input type="checkbox"/>	No	<input type="checkbox"/>	Cooling Initiated	<input type="checkbox"/>
						INITIAL COOLER TEMPERATURES °C																	
						FINAL COOLER TEMPERATURES °C																	
						2.6 3.8 4.1																	
						Received by:  Date: 4/29/11 Time: 4:50																	



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Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878



L2581807-COFC

COC Number: 17 -

Page 2 of 3

Day 1 Site K

Report To Contact and company name below will appear on the final report		Report Format / Distribution			Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)																						
Company: MTE		Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL)			Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply																						
Contact: Jen Lambke		Quality Control (QC) Report with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			PRIORITY (Business Days)	4 day [P4-20%] <input type="checkbox"/>					EMERGENCY	1 Business day [E - 100%] <input type="checkbox"/>															
Phone: 519-502-3268		<input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked				3 day [P3-25%] <input type="checkbox"/>						Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] <input type="checkbox"/>															
Company address below will appear on the final report		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX				2 day [P2-50%] <input type="checkbox"/>																					
Street: 520 Bingham Centre Drive		Email 1 or Fax: j.lambke@mte85.com			Date and Time Required for all E&P TATs:					dd-mmm-yy hh:mm																	
City/Province: Kitchener		Email 2: jball@mte85.com			For tests that can not be performed according to the service level selected, you will be contacted.																						
Postal Code:		Email 3:			Analysis Request																						
Invoice To: Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Invoice Distribution			Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below																						
Copy of Invoice with Report <input type="checkbox"/> YES <input type="checkbox"/> NO		Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX																									
Company:		Email 1 or Fax: j.lambke@mte85.com			NUMBER OF CONTAINERS	PHC F1 to F4 and BTEX	PHC F1 to F4 and VOCs	Metals Scan	Metals Complete	PAHs	SAR & EC	pH	PCBs	PHC F2 to F4	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)											
Project Information		Oil and Gas Required Fields (client use)																									
ALS Account # / Quote #: Q75730		AFE/Cost Center:		PO#																							
Job #: 46995-100		Major/Minor Code:		Routing Code:																							
PO / AFE:		Requisitioner:																									
LSD:		Location:																									
ALS Lab Work Order # (lab use only): L2581807		ALS Contact: Emily H		Sampler: Matt D																							
Sample Identification and/or Coordinates (This description will appear on the report)		Date (dd-mmm-yy)		Time (hh:mm)													Sample Type										
BH135-21 553 5-7 FT		27-04-21		11:45													Soil										
↓ 554 7.5-9.5 FT		↓		11:55													↓										
↓ M SPLP		↓		12:00		↓																					
BH136-21 651 6"-2.5 FT		27-04-21		12:30		Soil																					
↓ 552 2.5-4.5 FT		↓		12:35		↓																					
↓ 553 5-7 FT		↓		12:40		↓																					
↓ 555 10-12 FT		↓		2:15		↓																					
↓ M SPLP		↓		2:20		↓																					
MW137-21 651 6"-2 FT		27-04-21		2:40		Soil																					
↓ 552 2.5-4.5 FT		↓		2:45		↓																					
↓ 553 5-7 FT		↓		2:50		↓																					
↓ 554 7.5-9.5 FT		↓		3:00		↓																					
Drinking Water (DW) Samples¹ (client use)		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)			SAMPLE CONDITION AS RECEIVED (lab use only)																						
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO		Table 1 Res, Table 3.1 R/P/I, Table 3.1 I/C/C (ESQS, O.Reg. 406/19) - coarse, AND Table 3 I/C/C (SCS, O.Reg. 153/04) - coarse			Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>																						
Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO					Ice Packs <input checked="" type="checkbox"/> Ice Cubes <input checked="" type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>																						
					Cooling Initiated <input type="checkbox"/>					INITIAL COOLER TEMPERATURES °C																	
										FINAL COOLER TEMPERATURES °C																	
										2.6 3.8 4.1																	
SHIPMENT RELEASE (client use)				INITIAL SHIPMENT RECEPTION (lab use only)				FINAL SHIPMENT RECEPTION (lab use only)																			
Released by:		Date:		Time:		Received by:		Date:		Time:		Received by:		Date:		Time:											

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.



Chain of Custody (COC) / Analytical Request Form

COC Number: 17 -

Page 3 of 3

Day 1 Site K

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Report To Contact and company name below will appear on the final report		Report Format / Distribution			Priority (Business Days)		Emergency											
Company:	MTE	Select Report Format:	<input checked="" type="checkbox"/> PDF	<input checked="" type="checkbox"/> EXCEL	<input checked="" type="checkbox"/> EDD (DIGITAL)	4 day [P4-20%]	<input type="checkbox"/>	1 Business day [E - 100%]	<input type="checkbox"/>									
Contact:	Jen Lambke	Quality Control (QC) Report with Report	<input checked="" type="checkbox"/> YES	<input type="checkbox"/> NO	<input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked	3 day [P3-25%]	<input type="checkbox"/>	Same Day, Weekend or Statutory holiday [E2 -200%]	<input type="checkbox"/>									
Phone:	519-502-3268	Select Distribution:	<input checked="" type="checkbox"/> EMAIL	<input type="checkbox"/> MAIL	<input type="checkbox"/> FAX	2 day [P2-50%]	<input type="checkbox"/>	(Laboratory opening fees may apply)										
Company address below will appear on the final report		Email 1 or Fax:	jlambke@mte85.com			Date and Time Required for all E&P TATs:		dd-mmm-yy hh:mm										
Street:	520 Bingham Centre Drive	Email 2:	jball@mte85.com			For tests that can not be performed according to the service level selected, you will be contacted.												
City/Province:	Kitchener	Email 3:																
Postal Code:																		
Invoice To	Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Invoice Distribution																
	Copy of Invoice with Report <input type="checkbox"/> YES <input type="checkbox"/> NO	Select Invoice Distribution:	<input checked="" type="checkbox"/> EMAIL	<input type="checkbox"/> MAIL	<input type="checkbox"/> FAX	ANALYSIS REQUEST Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below												
Company:		Email 1 or Fax:	jlambke@mte85.com															
Contact:		Email 2:																
Project Information		Oil and Gas Required Fields (client use)																
ALS Account # / Quote #:	Q75730	AFE/Cost Center:			PO#:													
Job #:	46995-100	Major/Minor Code:			Routing Code:													
PO / AFE:		Requisitioner:																
LSD:		Location:																
ALS Lab Work Order # (lab use only):		ALS Contact:	Emily H	Sampler:	Matt D													
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	PHC F1 to F4 and BTEX	PHC F1 to F4 and VOCs	Metals Scan	Metals Complete	PAHs	SAR & EC	pH	PCBs	PHC F2 to F4	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)		
	MW 137-21 m SPLP	27-04-21	3:30	Soil													X	
	BH 138-21 GSI 6" - 2.5 FT		4:25	Soil													X	
	SS2 2.5 - 4.5 FT		4:30														X	
	SS3 5 - 7 FT		4:35														X	
	SS4 7.5 - 9.5 FT		4:40														X	
	M SPLP		5:10											X				
Drinking Water (DW) Samples¹ (client use)		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)			SAMPLE CONDITION AS RECEIVED (lab use only)													
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO		Table 1 Res, Table 3.1 R/P/I, Table 3.1 I/C/C (ESQS, O.Reg. 406/19) - coarse, AND Table 3 I/C/C (SCS, O.Reg. 153/04) - coarse			Frozen <input type="checkbox"/>		SIF Observations		Yes <input type="checkbox"/>	No <input type="checkbox"/>								
Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO					Ice Packs <input checked="" type="checkbox"/>		Ice Cubes <input checked="" type="checkbox"/>		Custody seal intact		Yes <input type="checkbox"/>	No <input type="checkbox"/>						
					Cooling Initiated <input type="checkbox"/>		INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C							
											2.6 384.1							
SHIPMENT RELEASE (client use)				INITIAL SHIPMENT RECEPTION (lab use only)				FINAL SHIPMENT RECEPTION (lab use only)										
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:				

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.



MTE CONSULTANTS INC. (Kitchener)
ATTN: JEN LAMBKE
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9


Date Received: 04-MAY-21
Report Date: 10-MAY-21 10:19 (MT)
Version: FINAL

Client Phone: 519-743-6500

Certificate of Analysis

Lab Work Order #: L2583155
Project P.O. #: NOT SUBMITTED
Job Reference: 46995-100
C of C Numbers:
Legal Site Desc:

Comments: ADDITIONAL 04-MAY-21 14:09



Emily Hansen
Account Manager

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ADDRESS: 60 Northland Road, Unit 1, Waterloo, ON N2V 2B8 Canada | Phone: +1 519 886 6910 | Fax: +1 519 886 9047
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ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte						#1	#2	#3
L2583155-5	BH116-21 SS4 7.5-9.5 FT								
Sampled By: MATT D on 03-MAY-21 @ 09:10									
Matrix: SOIL									
Physical Tests									
	Conductivity	5.56		0.0040	mS/cm	06-MAY-21	*0.57	*1.4	*0.7
	% Moisture	6.39		0.25	%	05-MAY-21			
Saturated Paste Extractables									
	SAR	>16.	SAR:L	0.10	SAR	06-MAY-21	*2.4	*12	*5
	Calcium (Ca)	<0.50		0.50	mg/L	06-MAY-21			
	Magnesium (Mg)	<0.50		0.50	mg/L	06-MAY-21			
	Sodium (Na)	65.9		0.50	mg/L	06-MAY-21			
Metals									
	Antimony (Sb)	<1.0		1.0	ug/g	06-MAY-21	1.3	40	7.5
	Arsenic (As)	1.6		1.0	ug/g	06-MAY-21	18	18	18
	Barium (Ba)	10.4		1.0	ug/g	06-MAY-21	220	670	390
	Beryllium (Be)	<0.50		0.50	ug/g	06-MAY-21	2.5	8	4
	Boron (B)	<5.0		5.0	ug/g	06-MAY-21	36	120	120
	Cadmium (Cd)	<0.50		0.50	ug/g	06-MAY-21	1.2	1.9	1.2
	Chromium (Cr)	5.9		1.0	ug/g	06-MAY-21	70	160	160
	Cobalt (Co)	2.2		1.0	ug/g	06-MAY-21	21	80	22
	Copper (Cu)	8.9		1.0	ug/g	06-MAY-21	92	230	140
	Lead (Pb)	4.1		1.0	ug/g	06-MAY-21	120	120	120
	Molybdenum (Mo)	<1.0		1.0	ug/g	06-MAY-21	2	40	6.9
	Nickel (Ni)	4.2		1.0	ug/g	06-MAY-21	82	270	100
	Selenium (Se)	<1.0		1.0	ug/g	06-MAY-21	1.5	5.5	2.4
	Silver (Ag)	<0.20		0.20	ug/g	06-MAY-21	0.5	40	20
	Thallium (Tl)	<0.50		0.50	ug/g	06-MAY-21	1	3.3	1
	Uranium (U)	<1.0		1.0	ug/g	06-MAY-21	2.5	33	23
	Vanadium (V)	14.0		1.0	ug/g	06-MAY-21	86	86	86
	Zinc (Zn)	21.1		5.0	ug/g	06-MAY-21	290	340	340
Volatile Organic Compounds									
	Benzene	<0.0068		0.0068	ug/g	06-MAY-21	0.02	0.034	0.02
	Ethylbenzene	<0.018		0.018	ug/g	06-MAY-21	0.05	1.9	1.9
	Toluene	<0.080		0.080	ug/g	06-MAY-21	0.2	7.8	0.99
	o-Xylene	<0.020		0.020	ug/g	06-MAY-21			
	m+p-Xylenes	<0.030		0.030	ug/g	06-MAY-21			
	Xylenes (Total)	<0.050		0.050	ug/g	06-MAY-21	0.05	3	0.9
	Surrogate: 4-Bromofluorobenzene	119.2		50-140	%	06-MAY-21			
	Surrogate: 1,4-Difluorobenzene	118.4		50-140	%	06-MAY-21			
Hydrocarbons									
	F1 (C6-C10)	<5.0		5.0	ug/g	06-MAY-21	25	25	25
	F1-BTEX	<5.0		5.0	ug/g	06-MAY-21	25	25	25
	F2 (C10-C16)	<10		10	ug/g	06-MAY-21	10	26	10
	F3 (C16-C34)	<50		50	ug/g	06-MAY-21	240	1700	300
	F4 (C34-C50)	<50		50	ug/g	06-MAY-21	120	3300	2800
	Total Hydrocarbons (C6-C50)	<72		72	ug/g	06-MAY-21			
	Chrom. to baseline at nC50	YES			No Unit	06-MAY-21			
	Surrogate: 2-Bromobenzotrifluoride	84.1		60-140	%	06-MAY-21			
	Surrogate: 3,4-Dichlorotoluene	113.9		60-140	%	06-MAY-21			

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Table with columns: Sample Details Grouping, Analyte, Result, Qualifier, D.L., Units, Analyzed, Guideline Limits (#1, #2, #3). Rows include physical tests (Moisture) and metals (Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Lead, Molybdenum, Nickel, Selenium, Silver, Thallium, Uranium, Vanadium, Zinc) and volatile organic compounds (Benzene, Ethylbenzene, Toluene, Xylenes, etc.).

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte						#1	#2	#3
L2583155-12 BH114-21 SS2 2.5-4.0 FT									
Sampled By: MATT D on 03-MAY-21 @ 11:25									
Matrix: SOIL									
Saturated Paste Extractables									
SAR		17.5		0.10	SAR	06-MAY-21	*2.4	*12	*5
Calcium (Ca)		1.23		0.50	mg/L	06-MAY-21			
Magnesium (Mg)		1.17		0.50	mg/L	06-MAY-21			
Sodium (Na)		113		0.50	mg/L	06-MAY-21			
Metals									
Antimony (Sb)		<1.0		1.0	ug/g	06-MAY-21	1.3	40	7.5
Arsenic (As)		4.3		1.0	ug/g	06-MAY-21	18	18	18
Barium (Ba)		23.8		1.0	ug/g	06-MAY-21	220	670	390
Beryllium (Be)		<0.50		0.50	ug/g	06-MAY-21	2.5	8	4
Boron (B)		6.3		5.0	ug/g	06-MAY-21	36	120	120
Cadmium (Cd)		<0.50		0.50	ug/g	06-MAY-21	1.2	1.9	1.2
Chromium (Cr)		11.9		1.0	ug/g	06-MAY-21	70	160	160
Cobalt (Co)		3.8		1.0	ug/g	06-MAY-21	21	80	22
Copper (Cu)		18.9		1.0	ug/g	06-MAY-21	92	230	140
Lead (Pb)		9.0		1.0	ug/g	06-MAY-21	120	120	120
Molybdenum (Mo)		<1.0		1.0	ug/g	06-MAY-21	2	40	6.9
Nickel (Ni)		9.3		1.0	ug/g	06-MAY-21	82	270	100
Selenium (Se)		<1.0		1.0	ug/g	06-MAY-21	1.5	5.5	2.4
Silver (Ag)		<0.20		0.20	ug/g	06-MAY-21	0.5	40	20
Thallium (Tl)		<0.50		0.50	ug/g	06-MAY-21	1	3.3	1
Uranium (U)		<1.0		1.0	ug/g	06-MAY-21	2.5	33	23
Vanadium (V)		22.7		1.0	ug/g	06-MAY-21	86	86	86
Zinc (Zn)		50.7		5.0	ug/g	06-MAY-21	290	340	340
Volatile Organic Compounds									
Benzene		<0.0068		0.0068	ug/g	06-MAY-21	0.02	0.034	0.02
Ethylbenzene		<0.018		0.018	ug/g	06-MAY-21	0.05	1.9	1.9
Toluene		<0.080		0.080	ug/g	06-MAY-21	0.2	7.8	0.99
o-Xylene		<0.020		0.020	ug/g	06-MAY-21			
m+p-Xylenes		<0.030		0.030	ug/g	06-MAY-21			
Xylenes (Total)		<0.050		0.050	ug/g	06-MAY-21	0.05	3	0.9
Surrogate: 4-Bromofluorobenzene		116.7		50-140	%	06-MAY-21			
Surrogate: 1,4-Difluorobenzene		117.6		50-140	%	06-MAY-21			
Hydrocarbons									
F1 (C6-C10)		<5.0		5.0	ug/g	06-MAY-21	25	25	25
F1-BTEX		<5.0		5.0	ug/g	06-MAY-21	25	25	25
F2 (C10-C16)		<10		10	ug/g	06-MAY-21	10	26	10
F3 (C16-C34)		<50		50	ug/g	06-MAY-21	240	1700	300
F4 (C34-C50)		<50		50	ug/g	06-MAY-21	120	3300	2800
Total Hydrocarbons (C6-C50)		<72		72	ug/g	06-MAY-21			
Chrom. to baseline at nC50		YES			No Unit	06-MAY-21			
Surrogate: 2-Bromobenzotrifluoride		83.0		60-140	%	06-MAY-21			
Surrogate: 3,4-Dichlorotoluene		109.3		60-140	%	06-MAY-21			
L2583155-13 BH114-21 SS3 5-7 FT									
Sampled By: MATT D on 03-MAY-21 @ 11:35									
Matrix: SOIL									
							#1	#2	#3

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte						#1	#2	#3
L2583155-13 BH114-21 SS3 5-7 FT									
Sampled By: MATT D on 03-MAY-21 @ 11:35									
Matrix: SOIL									
Physical Tests									
% Moisture		3.50		0.25	%	05-MAY-21			
Metals									
Antimony (Sb)		<1.0		1.0	ug/g	06-MAY-21	1.3	40	7.5
Arsenic (As)		1.8		1.0	ug/g	06-MAY-21	18	18	18
Barium (Ba)		10.5		1.0	ug/g	06-MAY-21	220	670	390
Beryllium (Be)		<0.50		0.50	ug/g	06-MAY-21	2.5	8	4
Boron (B)		6.1		5.0	ug/g	06-MAY-21	36	120	120
Cadmium (Cd)		<0.50		0.50	ug/g	06-MAY-21	1.2	1.9	1.2
Chromium (Cr)		5.4		1.0	ug/g	06-MAY-21	70	160	160
Cobalt (Co)		1.7		1.0	ug/g	06-MAY-21	21	80	22
Copper (Cu)		10.2		1.0	ug/g	06-MAY-21	92	230	140
Lead (Pb)		7.3		1.0	ug/g	06-MAY-21	120	120	120
Molybdenum (Mo)		<1.0		1.0	ug/g	06-MAY-21	2	40	6.9
Nickel (Ni)		3.7		1.0	ug/g	06-MAY-21	82	270	100
Selenium (Se)		<1.0		1.0	ug/g	06-MAY-21	1.5	5.5	2.4
Silver (Ag)		<0.20		0.20	ug/g	06-MAY-21	0.5	40	20
Thallium (Tl)		<0.50		0.50	ug/g	06-MAY-21	1	3.3	1
Uranium (U)		<1.0		1.0	ug/g	06-MAY-21	2.5	33	23
Vanadium (V)		10.7		1.0	ug/g	06-MAY-21	86	86	86
Zinc (Zn)		36.5		5.0	ug/g	06-MAY-21	290	340	340
Volatile Organic Compounds									
Benzene		<0.0068		0.0068	ug/g	06-MAY-21	0.02	0.034	0.02
Ethylbenzene		<0.018		0.018	ug/g	06-MAY-21	0.05	1.9	1.9
Toluene		<0.080		0.080	ug/g	06-MAY-21	0.2	7.8	0.99
o-Xylene		<0.020		0.020	ug/g	06-MAY-21			
m+p-Xylenes		<0.030		0.030	ug/g	06-MAY-21			
Xylenes (Total)		<0.050		0.050	ug/g	06-MAY-21	0.05	3	0.9
Surrogate: 4-Bromofluorobenzene		127.8		50-140	%	06-MAY-21			
Surrogate: 1,4-Difluorobenzene		129.8		50-140	%	06-MAY-21			
Hydrocarbons									
F1 (C6-C10)		<5.0		5.0	ug/g	06-MAY-21	25	25	25
F1-BTEX		<5.0		5.0	ug/g	06-MAY-21	25	25	25
F2 (C10-C16)		<10		10	ug/g	06-MAY-21	10	26	10
F3 (C16-C34)		<50		50	ug/g	06-MAY-21	240	1700	300
F4 (C34-C50)		<50		50	ug/g	06-MAY-21	120	3300	2800
Total Hydrocarbons (C6-C50)		<72		72	ug/g	06-MAY-21			
Chrom. to baseline at nC50		YES			No Unit	06-MAY-21			
Surrogate: 2-Bromobenzotrifluoride		86.0		60-140	%	06-MAY-21			
Surrogate: 3,4-Dichlorotoluene		98.1		60-140	%	06-MAY-21			

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use

Reference Information

Sample Parameter Qualifier key listed:

Qualifier	Description
SAR:L	SAR is incalculable due to Ca and Mg below DL (with Na above DL). Lowest possible SAR is reported as minimum value.

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference***
BTX-511-HS-WT	Soil	BTEX-O.Reg 153/04 (July 2011)	SW846 8260

BTX is determined by extracting a soil or sediment sample as received with methanol, then analyzing by headspace-GC/MS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

EC-WT	Soil	Conductivity (EC)	MOEE E3138
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A representative subsample is tumbled with de-ionized (DI) water. The ratio of water to soil is 2:1 v/w. After tumbling the sample is then analyzed by a conductivity meter.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

F1-F4-511-CALC-WT	Soil	F1-F4 Hydrocarbon Calculated Parameters	CCME CWS-PHC, Pub #1310, Dec 2001-S
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Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

Hydrocarbon results are expressed on a dry weight basis.

In cases where results for both F4 and F4G are reported, the greater of the two results must be used in any application of the CWS PHC guidelines and the gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.

In samples where BTEX and F1 were analyzed, F1-BTEX represents a value where the sum of Benzene, Toluene, Ethylbenzene and total Xylenes has been subtracted from F1.

In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.

Unless otherwise qualified, the following quality control criteria have been met for the F1 hydrocarbon range:

1. All extraction and analysis holding times were met.
2. Instrument performance showing response factors for C6 and C10 within 30% of the response factor for toluene.
3. Linearity of gasoline response within 15% throughout the calibration range.

Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:

1. All extraction and analysis holding times were met.
2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.
3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.
4. Linearity of diesel or motor oil response within 15% throughout the calibration range.

F1-HS-511-WT	Soil	F1-O.Reg 153/04 (July 2011)	E3398/CCME TIER 1-HS
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Fraction F1 is determined by extracting a soil or sediment sample as received with methanol, then analyzing by headspace-GC/FID.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

F2-F4-511-WT	Soil	F2-F4-O.Reg 153/04 (July 2011)	CCME Tier 1
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Petroleum Hydrocarbons (F2-F4 fractions) are extracted from soil with 1:1 hexane:acetone using a rotary extractor. Extracts are treated with silica gel to remove polar organic interferences. F2, F3, & F4 are analyzed by GC-FID. F4G-sg is analyzed gravimetrically.

Notes:

1. F2 (C10-C16): Sum of all hydrocarbons that elute between nC10 and nC16.
2. F3 (C16-C34): Sum of all hydrocarbons that elute between nC16 and nC34.
3. F4 (C34-C50): Sum of all hydrocarbons that elute between nC34 and nC50.
4. F4G: Gravimetric Heavy Hydrocarbons
5. F4G-sg: Gravimetric Heavy Hydrocarbons (F4G) after silica gel treatment.
6. Where both F4 (C34-C50) and F4G-sg are reported for a sample, the larger of the two values is used for comparison against the relevant CCME guideline for F4.
7. F4G-sg cannot be added to the C6 to C50 hydrocarbon results to obtain an estimate of total extractable hydrocarbons.
8. This method is validated for use.
9. Data from analysis of validation and quality control samples is available upon request.
10. Reported results are expressed as milligrams per dry kilogram, unless otherwise indicated.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

Reference Information

MET-200.2-CCMS-WT Soil Metals in Soil by CRC ICPMS EPA 200.2/6020B (mod)

Soil/sediment is dried, disaggregated, and sieved (2 mm). For tests intended to support Ontario regulations, the <2mm fraction is ground to pass through a 0.355 mm sieve. Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H₂S) may be excluded if lost during sampling, storage, or digestion.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)
PH-WT	Soil	pH	MOEE E3137A

A minimum 10g portion of the sample is extracted with 20mL of 0.01M calcium chloride solution by shaking for at least 30 minutes. The aqueous layer is separated from the soil and then analyzed using a pH meter and electrode.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

SAR-R511-WT	Soil	SAR-O.Reg 153/04 (July 2011)	SW846 6010C
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A dried, disaggregated solid sample is extracted with deionized water, the aqueous extract is separated from the solid, acidified and then analyzed using a ICP/OES. The concentrations of Na, Ca and Mg are reported as per CALA requirements for calculated parameters. These individual parameters are not for comparison to any guideline.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

XYLENES-SUM-CALC-WT	Soil	Sum of Xylene Isomer Concentrations	CALCULATION
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Total xylenes represents the sum of o-xylene and m&p-xylene.

*** ALS test methods may incorporate modifications from specified reference methods to improve performance.

Chain of Custody numbers:

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA		

Reference Information

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guideline limits are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.



Quality Control Report

Workorder: L2583155

Report Date: 10-MAY-21

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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
BTX-511-HS-WT		Soil						
Batch	R5451664							
WG3529129-4	DUP	WG3529129-3						
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	06-MAY-21
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	06-MAY-21
m+p-Xylenes		<0.030	<0.030	RPD-NA	ug/g	N/A	40	06-MAY-21
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	06-MAY-21
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	06-MAY-21
WG3529129-2	LCS							
Benzene			98.6		%		70-130	06-MAY-21
Ethylbenzene			92.9		%		70-130	06-MAY-21
m+p-Xylenes			94.0		%		70-130	06-MAY-21
o-Xylene			93.3		%		70-130	06-MAY-21
Toluene			93.4		%		70-130	06-MAY-21
WG3529129-1	MB							
Benzene			<0.0068		ug/g		0.0068	06-MAY-21
Ethylbenzene			<0.018		ug/g		0.018	06-MAY-21
m+p-Xylenes			<0.030		ug/g		0.03	06-MAY-21
o-Xylene			<0.020		ug/g		0.02	06-MAY-21
Toluene			<0.080		ug/g		0.08	06-MAY-21
Surrogate: 1,4-Difluorobenzene			129.7		%		50-140	06-MAY-21
Surrogate: 4-Bromofluorobenzene			133.9		%		50-140	06-MAY-21
WG3529129-5	MS	WG3529129-3						
Benzene			96.0		%		60-140	06-MAY-21
Ethylbenzene			84.1		%		60-140	06-MAY-21
m+p-Xylenes			89.0		%		60-140	06-MAY-21
o-Xylene			85.6		%		60-140	06-MAY-21
Toluene			87.4		%		60-140	06-MAY-21
EC-WT		Soil						
Batch	R5453259							
WG3529798-4	DUP	WG3529798-3						
Conductivity		0.325	0.322		mS/cm	0.9	20	06-MAY-21
WG3529798-2	IRM	WT SAR4						
Conductivity			112.3		%		70-130	06-MAY-21
WG3530078-1	LCS							
Conductivity			96.9		%		90-110	06-MAY-21
WG3529798-1	MB							
Conductivity			<0.0040		mS/cm		0.004	06-MAY-21



Quality Control Report

Workorder: L2583155

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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT		Soil						
Batch	R5451664							
WG3529129-4	DUP	WG3529129-3						
F1 (C6-C10)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	06-MAY-21
WG3529129-2	LCS							
F1 (C6-C10)			99.3		%		80-120	06-MAY-21
WG3529129-1	MB							
F1 (C6-C10)			<5.0		ug/g		5	06-MAY-21
Surrogate: 3,4-Dichlorotoluene			123.2		%		60-140	06-MAY-21
WG3529129-5	MS	WG3529129-3						
F1 (C6-C10)			97.1		%		60-140	06-MAY-21
F2-F4-511-WT		Soil						
Batch	R5452440							
WG3529039-3	DUP	WG3529039-3						
F2 (C10-C16)		<10	<10	RPD-NA	ug/g	N/A	30	06-MAY-21
F3 (C16-C34)		<50	<50	RPD-NA	ug/g	N/A	30	06-MAY-21
F4 (C34-C50)		<50	<50	RPD-NA	ug/g	N/A	30	06-MAY-21
WG3529039-2	LCS							
F2 (C10-C16)			89.4		%		80-120	06-MAY-21
F3 (C16-C34)			92.2		%		80-120	06-MAY-21
F4 (C34-C50)			89.7		%		80-120	06-MAY-21
WG3529039-1	MB							
F2 (C10-C16)			<10		ug/g		10	06-MAY-21
F3 (C16-C34)			<50		ug/g		50	06-MAY-21
F4 (C34-C50)			<50		ug/g		50	06-MAY-21
Surrogate: 2-Bromobenzotrifluoride			85.9		%		60-140	06-MAY-21
WG3529039-4	MS	WG3529039-5						
F2 (C10-C16)			73.0		%		60-140	06-MAY-21
F3 (C16-C34)			76.0		%		60-140	06-MAY-21
F4 (C34-C50)			75.8		%		60-140	06-MAY-21
MET-200.2-CCMS-WT		Soil						
Batch	R5453396							
WG3529802-2	CRM	WT-SS-2						
Antimony (Sb)			96.3		%		70-130	06-MAY-21
Arsenic (As)			102.5		%		70-130	06-MAY-21
Barium (Ba)			108.7		%		70-130	06-MAY-21
Beryllium (Be)			95.3		%		70-130	06-MAY-21
Boron (B)			8.6		mg/kg		3.5-13.5	06-MAY-21



Quality Control Report

Workorder: L2583155

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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
	Soil							
Batch	R5453396							
WG3529802-2	CRM	WT-SS-2						
Cadmium (Cd)			101.9		%		70-130	06-MAY-21
Chromium (Cr)			96.7		%		70-130	06-MAY-21
Cobalt (Co)			99.1		%		70-130	06-MAY-21
Copper (Cu)			101.8		%		70-130	06-MAY-21
Lead (Pb)			106.1		%		70-130	06-MAY-21
Molybdenum (Mo)			105.3		%		70-130	06-MAY-21
Nickel (Ni)			100.2		%		70-130	06-MAY-21
Selenium (Se)			0.12		mg/kg		0-0.34	06-MAY-21
Silver (Ag)			80.6		%		70-130	06-MAY-21
Thallium (Tl)			0.076		mg/kg		0.029-0.129	06-MAY-21
Uranium (U)			95.8		%		70-130	06-MAY-21
Vanadium (V)			98.1		%		70-130	06-MAY-21
Zinc (Zn)			96.9		%		70-130	06-MAY-21
WG3529802-4	DUP	L2581910-3						
Antimony (Sb)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	06-MAY-21
Arsenic (As)		2.6	2.4		ug/g	8.1	30	06-MAY-21
Barium (Ba)		84.1	81.2		ug/g	3.5	40	06-MAY-21
Beryllium (Be)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	06-MAY-21
Boron (B)		9.1	8.2		ug/g	10	30	06-MAY-21
Cadmium (Cd)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	06-MAY-21
Chromium (Cr)		16.8	15.7		ug/g	7.0	30	06-MAY-21
Cobalt (Co)		5.8	5.6		ug/g	3.5	30	06-MAY-21
Copper (Cu)		12.9	12.3		ug/g	4.9	30	06-MAY-21
Lead (Pb)		5.8	5.6		ug/g	3.6	40	06-MAY-21
Molybdenum (Mo)		<1.0	<1.0	RPD-NA	ug/g	N/A	40	06-MAY-21
Nickel (Ni)		12.8	12.1		ug/g	6.1	30	06-MAY-21
Selenium (Se)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	06-MAY-21
Silver (Ag)		<0.20	<0.20	RPD-NA	ug/g	N/A	40	06-MAY-21
Thallium (Tl)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	06-MAY-21
Uranium (U)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	06-MAY-21
Vanadium (V)		28.9	26.9		ug/g	7.1	30	06-MAY-21
Zinc (Zn)		28.4	26.8		ug/g	5.8	30	06-MAY-21
WG3529802-3	LCS							



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
	Soil							
Batch	R5453396							
WG3529802-3	LCS							
Antimony (Sb)			119.0		%		80-120	06-MAY-21
Arsenic (As)			109.9		%		80-120	06-MAY-21
Barium (Ba)			109.8		%		80-120	06-MAY-21
Beryllium (Be)			102.2		%		80-120	06-MAY-21
Boron (B)			95.8		%		80-120	06-MAY-21
Cadmium (Cd)			111.8		%		80-120	06-MAY-21
Chromium (Cr)			107.9		%		80-120	06-MAY-21
Cobalt (Co)			107.4		%		80-120	06-MAY-21
Copper (Cu)			105.0		%		80-120	06-MAY-21
Lead (Pb)			115.2		%		80-120	06-MAY-21
Molybdenum (Mo)			114.4		%		80-120	06-MAY-21
Nickel (Ni)			105.0		%		80-120	06-MAY-21
Selenium (Se)			108.7		%		80-120	06-MAY-21
Silver (Ag)			95.4		%		80-120	06-MAY-21
Thallium (Tl)			115.2		%		80-120	06-MAY-21
Uranium (U)			110.5		%		80-120	06-MAY-21
Vanadium (V)			110.1		%		80-120	06-MAY-21
Zinc (Zn)			103.6		%		80-120	06-MAY-21
WG3529802-1	MB							
Antimony (Sb)			<0.10		mg/kg		0.1	06-MAY-21
Arsenic (As)			<0.10		mg/kg		0.1	06-MAY-21
Barium (Ba)			<0.50		mg/kg		0.5	06-MAY-21
Beryllium (Be)			<0.10		mg/kg		0.1	06-MAY-21
Boron (B)			<5.0		mg/kg		5	06-MAY-21
Cadmium (Cd)			<0.020		mg/kg		0.02	06-MAY-21
Chromium (Cr)			<0.50		mg/kg		0.5	06-MAY-21
Cobalt (Co)			<0.10		mg/kg		0.1	06-MAY-21
Copper (Cu)			<0.50		mg/kg		0.5	06-MAY-21
Lead (Pb)			<0.50		mg/kg		0.5	06-MAY-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	06-MAY-21
Nickel (Ni)			<0.50		mg/kg		0.5	06-MAY-21
Selenium (Se)			<0.20		mg/kg		0.2	06-MAY-21
Silver (Ag)			<0.10		mg/kg		0.1	06-MAY-21
Thallium (Tl)			<0.050		mg/kg		0.05	06-MAY-21



Quality Control Report

Workorder: L2583155

Report Date: 10-MAY-21

Page 5 of 6

Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
	Soil							
Batch	R5453396							
WG3529802-1	MB							
Uranium (U)			<0.050		mg/kg		0.05	06-MAY-21
Vanadium (V)			<0.20		mg/kg		0.2	06-MAY-21
Zinc (Zn)			<2.0		mg/kg		2	06-MAY-21
MOISTURE-WT								
	Soil							
Batch	R5449341							
WG3529035-3	DUP	L2583126-16						
% Moisture		16.2	17.6		%	8.3	20	05-MAY-21
WG3529035-2	LCS							
% Moisture			99.6		%		90-110	05-MAY-21
WG3529035-1	MB							
% Moisture			<0.25		%		0.25	05-MAY-21
PH-WT								
	Soil							
Batch	R5450039							
WG3529038-1	DUP	L2583510-1						
pH		7.87	7.98	J	pH units	0.11	0.3	05-MAY-21
WG3529239-1	LCS							
pH			7.01		pH units		6.9-7.1	05-MAY-21
SAR-R511-WT								
	Soil							
Batch	R5453297							
WG3529798-4	DUP	WG3529798-3						
Calcium (Ca)		2.16	1.97		mg/L	9.2	30	06-MAY-21
Sodium (Na)		57.0	56.7		mg/L	0.5	30	06-MAY-21
Magnesium (Mg)		1.33	1.18		mg/L	12	30	06-MAY-21
WG3529798-2	IRM	WT SAR4						
Calcium (Ca)			110.3		%		70-130	06-MAY-21
Sodium (Na)			101.4		%		70-130	06-MAY-21
Magnesium (Mg)			112.8		%		70-130	06-MAY-21
WG3529798-5	LCS							
Calcium (Ca)			105.0		%		80-120	06-MAY-21
Sodium (Na)			97.0		%		80-120	06-MAY-21
Magnesium (Mg)			100.2		%		80-120	06-MAY-21
WG3529798-1	MB							
Calcium (Ca)			<0.50		mg/L		0.5	06-MAY-21
Sodium (Na)			<0.50		mg/L		0.5	06-MAY-21
Magnesium (Mg)			<0.50		mg/L		0.5	06-MAY-21

Quality Control Report

Workorder: L2583155

Report Date: 10-MAY-21

Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9
Contact: JEN LAMBKE

Page 6 of 6

Legend:

Limit ALS Control Limit (Data Quality Objectives)
DUP Duplicate
RPD Relative Percent Difference
N/A Not Available
LCS Laboratory Control Sample
SRM Standard Reference Material
MS Matrix Spike
MSD Matrix Spike Duplicate
ADE Average Desorption Efficiency
MB Method Blank
IRM Internal Reference Material
CRM Certified Reference Material
CCV Continuing Calibration Verification
CVS Calibration Verification Standard
LCSD Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
J	Duplicate results and limits are expressed in terms of absolute difference.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

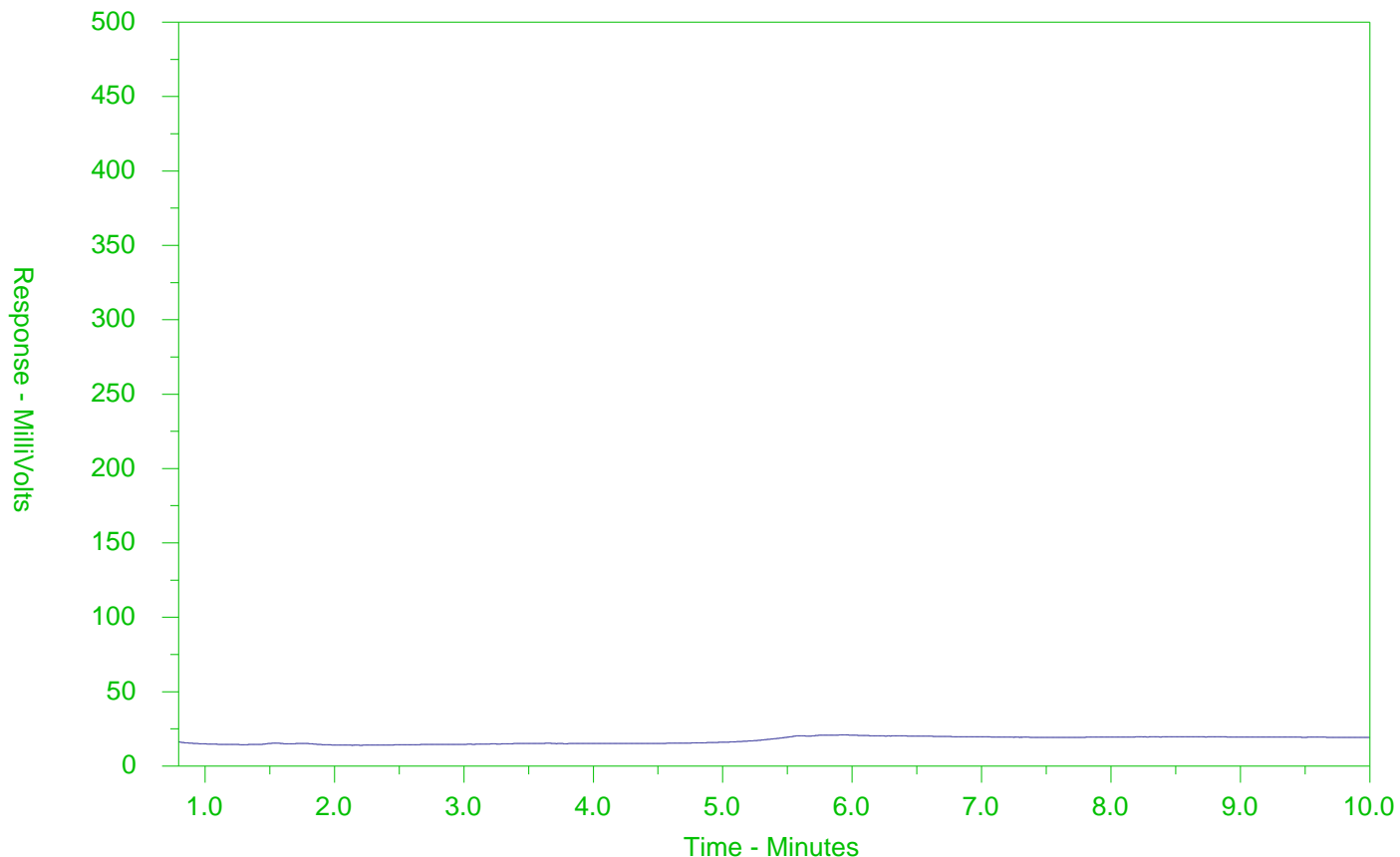
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2583155-5
 Client Sample ID: BH116-21 SS4 7.5-9.5 FT



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

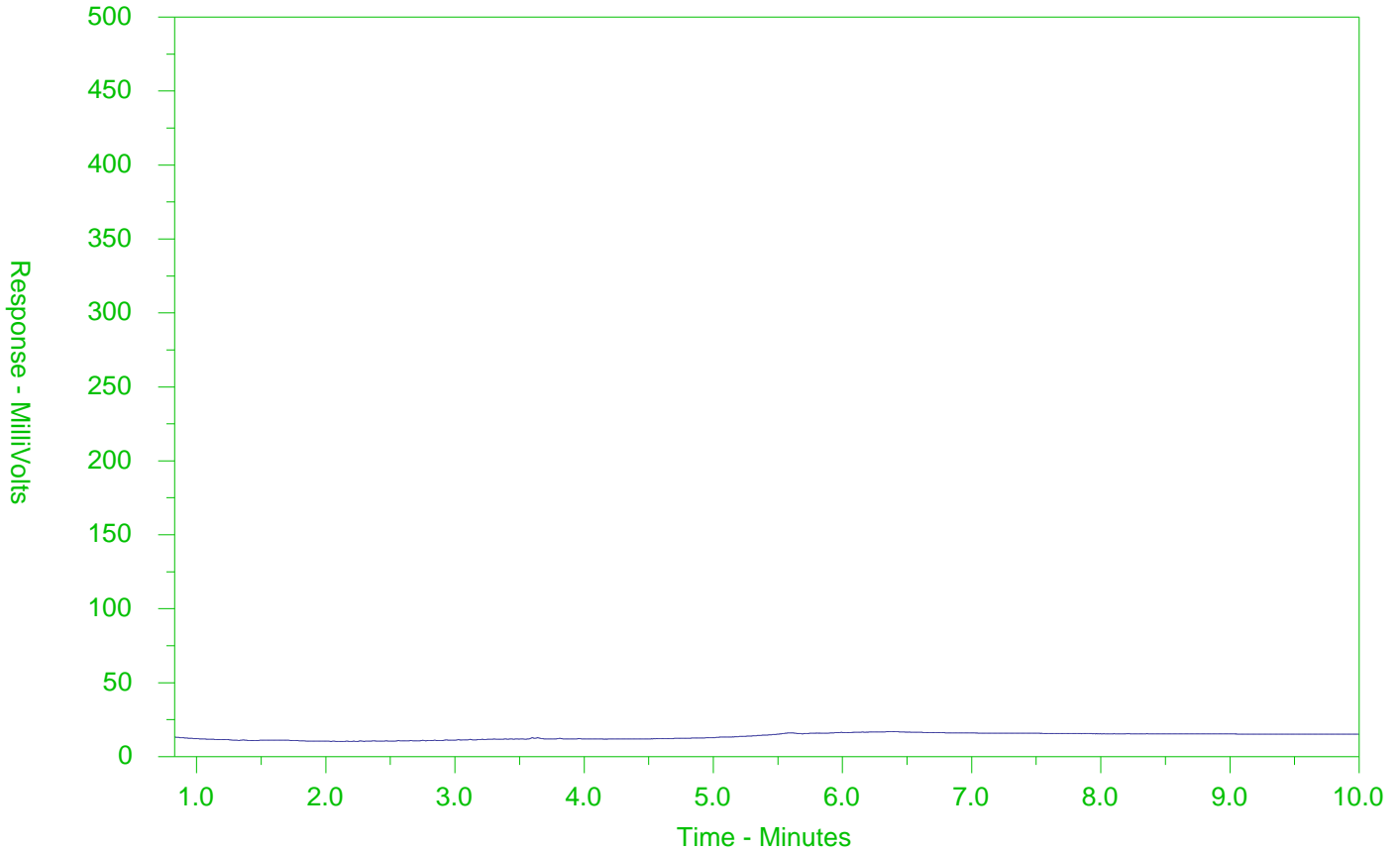
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2583155-7
 Client Sample ID: BH115-21 SS2 2.5-4.5 FT



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

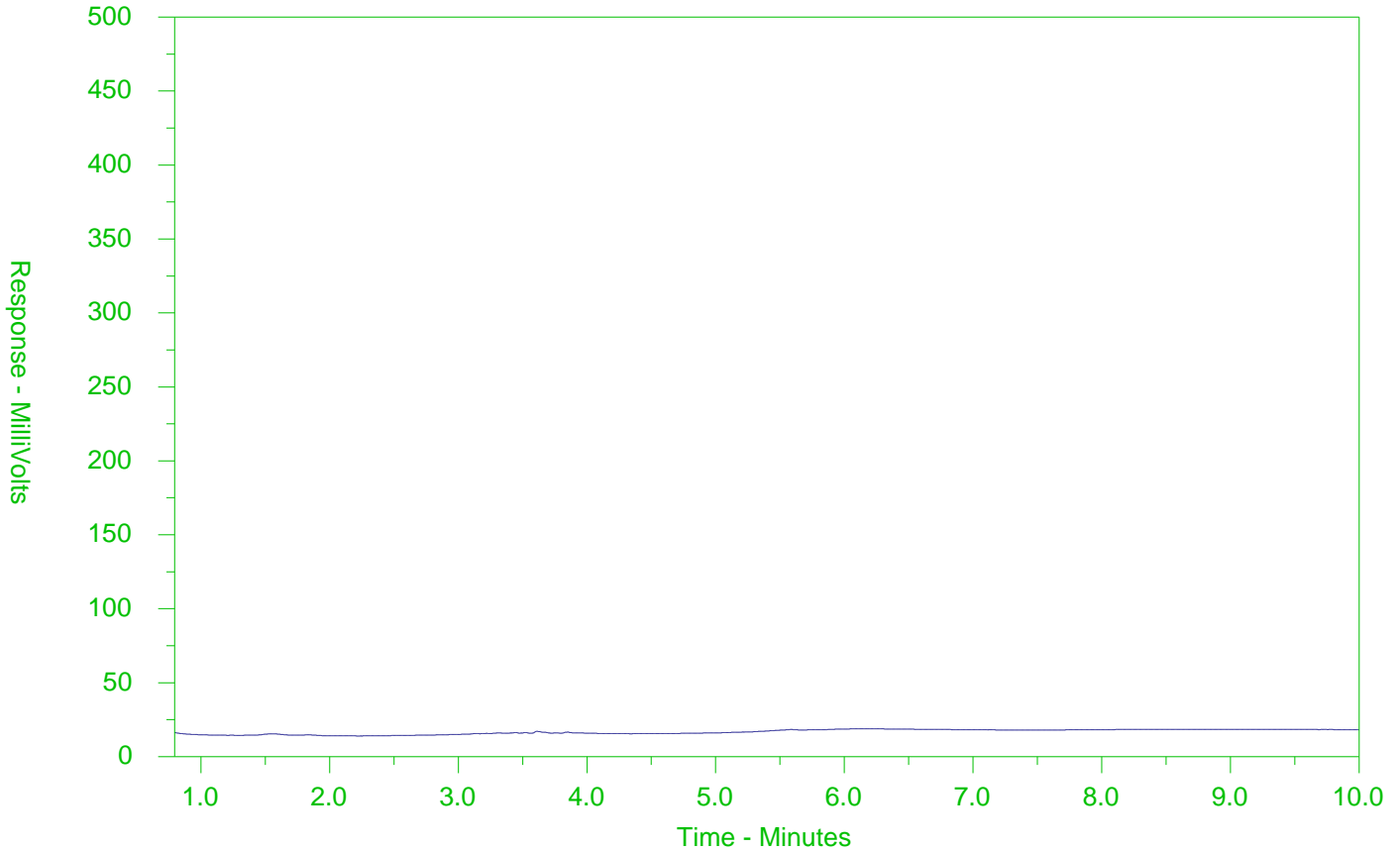
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2583155-12
 Client Sample ID: BH114-21 SS2 2.5-4.0 FT



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

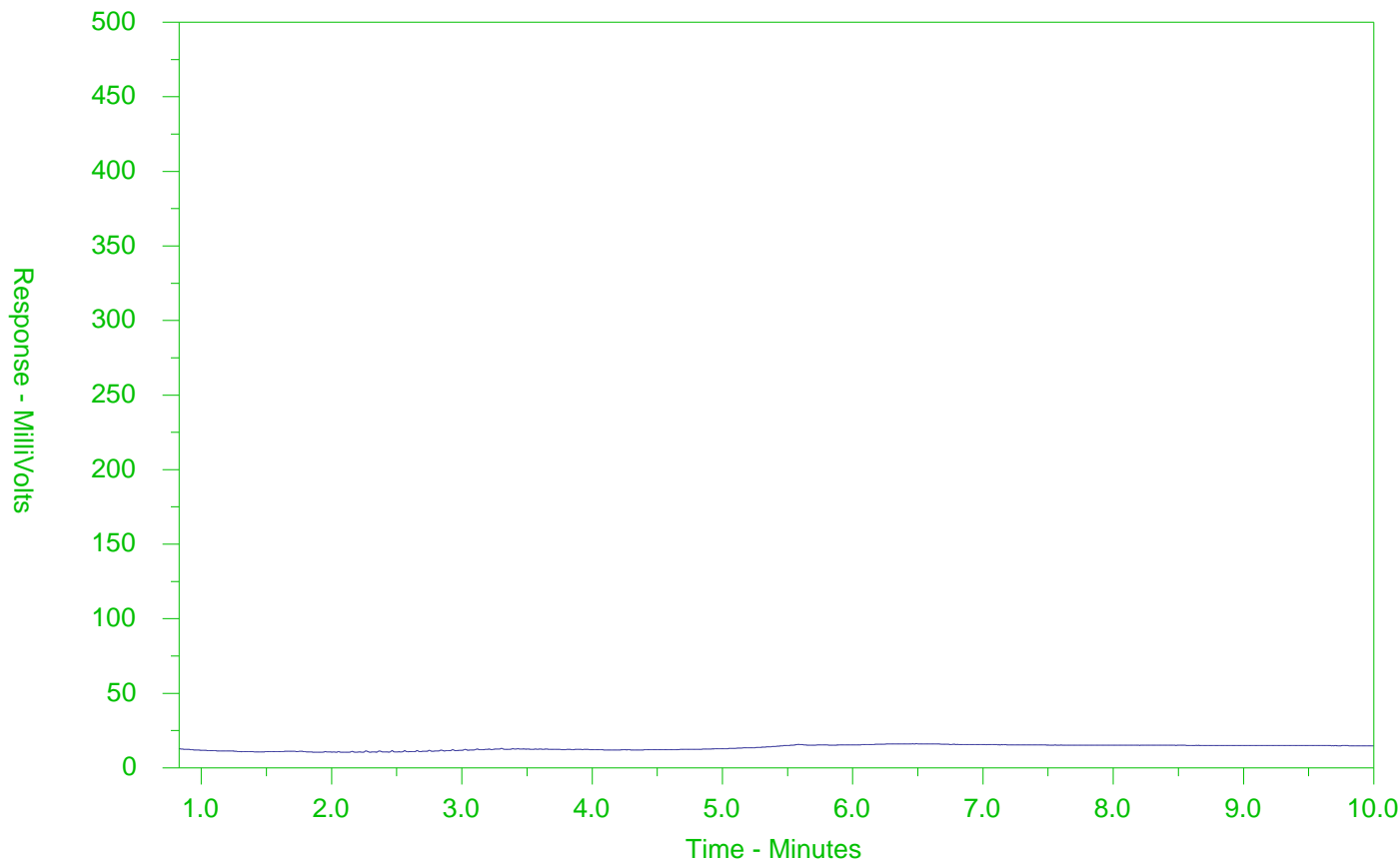
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2583155-13
 Client Sample ID: BH114-21 SS3 5-7 FT



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878



Number: 17 -

Page 2 of 2

Site C

Report To
Company: MTE
Contact: Jen Lambke
Phone: 519-502-3268
Street: 520 Bingemans Centre Drive
City/Province: Kitchener
Postal Code: _____

Invoice To
Same as Report To YES NO
Copy of Invoice with Report YES NO

Report Format / Distrib.
Select Report Format: PDF EXCEL EDD (DIGITAL)
Quality Control (QC) Report with Report YES NO
 Compare Results to Criteria on Report - provide details below if box checked
Select Distribution: EMAIL MAIL FAX
Email 1 or Fax: j.lambke@mte85.com
Email 2: jball@mte85.com
Email 3: _____

Regular [R] Standard if received by 3 pm - business days - no surcharges apply
PROBITY (Business Days)
 4 day [P4-20%]
 3 day [P3-25%]
 2 day [P2-50%]
EMERGENCY
 1 Business day [E - 100%]
 Same Day, Weekend or Statutory holiday [E2 -20%] (Laboratory opening fees may apply)

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm
For tests that can not be performed according to the service level selected, you will be contacted.

Project Information
ALS Account # / Quote #: Q75730
Job #: 46995-100
PO / AFE: _____
LSD: _____

ALS Lab Work Order # (lab use only): *2583155*

Invoice Distribution
Select Invoice Distribution: EMAIL MAIL FAX
Email 1 or Fax: j.lambke@mte85.com
Email 2: _____

Oil and Gas Required Fields (client use)
AFE/Cost Center: _____ PO#: _____
Major/Minor Code: _____ Routing Code: _____
Requisitioner: _____
Location: _____

ALS Contact: Emily H
Sampler: Matt D

Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type
BH114-21 GS1A 6"-1.5FT	03-05-21	11:15	Soil
GS1B 1.5-2.5FT		11:20	
SS2 2.5-4.0FT		11:25	
SS3 5-7 FT		11:35	
SS4 MSP LP 7.5-9.5FT	03-05-21	11:45	
BH113-21 GS1 6"-2.5		12:20	
SS2 2.5-4.5FT		12:40	Soil
SS3 5-7 FT		12:50	
SS4 MSP LP 7.5-9.5FT		1:00	
2-3 FT		1:10	
		1:20	

ANALYSIS REQUEST
Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below

NUMBER OF CONTAINERS	Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below											SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)	
	PHC F1 to F4 and BTEX	PHC F1 to F4 and VOCs	Metals Scan	Metals Complete	PAHs	SAR & EC	pH	PCBs	PHC F2 to F4					
													X	
													X	
													X	
													X	
													X	
													X	
													X	
													X	
													X	

Drinking Water (DW) Samples (client use)
 Are samples taken from a Regulated DW System? YES NO
 Are samples for human consumption/ use? YES NO

Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)
 Table 1 Res, Table 3.1 R/P/I, Table 3.1 I/C/C (ESQS, O.Reg. 406/19) - coarse, AND
 Table 3 I/C/C (SCS, O.Reg. 153/04) - coarse

SAMPLE CONDITION AS RECEIVED (lab use only)
 Frozen
 Ice Packs
 Ice Cubes
 Cooling Initiated
 SIF Observations Yes No
 Custody seal intact Yes No

SHIPMENT RELEASE (client use)
 Released by: _____ Date: _____

INITIAL SHIPMENT RECEPTION (lab use only)
 Received by: _____ Date: _____
 INITIAL COOLER TEMPERATURES °C: _____
 FINAL COOLER TEMPERATURES °C: *1.3 1.0 0.9*

FINAL SHIPMENT RECEPTION (lab use only)
 Received by: _____ Date: _____

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION
 Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.
 1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.

WHITE - LABORATORY COPY YELLOW - CLIENT COPY
 JUNE 2015 FORM



Chain of Custody (COC) / Analytical Request Form



COC Number: 17 -

Page 1 of 2
Site C

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

L2583155-COFC

Report To Contact and company name below will appear on the final report		Report Format / Distribution		contact your AM to confirm all E&P TATs (surcharges may apply)		
Company:	MTE	Select Report Format:	<input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL)	Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply		
Contact:	Jen Lambke	Quality Control (QC) Report with Report:	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	PRIORITY (Business Days)	EMERGENCY	
Phone:	519-502-3268	<input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked		4 day [P4-20%] <input type="checkbox"/>	1 Business day [E - 100%] <input type="checkbox"/>	
Company address below will appear on the final report		Select Distribution:	<input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX	3 day [P3-25%] <input type="checkbox"/>	Same Day, Weekend or Statutory holiday [E2 -200%] <input type="checkbox"/>	
Street:	520 Bingham Centre Drive	Email 1 or Fax:	jilambke@mte85.com	2 day [P2-50%] <input type="checkbox"/>	Same Day, Weekend or Statutory holiday [E2 -200%] (Laboratory opening fees may apply) <input type="checkbox"/>	
City/Province:	Kitchener	Email 2:	jball@mte85.com	Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm		
Postal Code:		Email 3:		For tests that can not be performed according to the service level selected, you will be contacted.		
Invoice To	Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Invoice Distribution		Analysis Request		
	Copy of Invoice with Report <input type="checkbox"/> YES <input type="checkbox"/> NO	Select Invoice Distribution:	<input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX	Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below		
Company:		Email 1 or Fax:	jilambke@mte85.com	NUMBER OF CONTAINERS	SAMPLES ON HOLD	
Contact:		Email 2:				SUSPECTED HAZARD (see Special Instructions)
Project Information		Oil and Gas Required Fields (client use)				
ALS Account # / Quote #:	Q75730	AFE/Cost Center:	PO#:			
Job #:	46995-100	Major/Minor Code:	Routing Code:			
PO / AFE:		Requisitioner:		PHC F1 to F4 and BTEX	PHC F1 to F4 and VOCs	
LSD:		Location:		Metals Scan	Metals Complete	
ALS Lab Work Order # (lab use only):	L2583155	ALS Contact:	Emily H	PAHs	SAR & EC	
		Sampler:	Matt D	PH	PCBs	
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	PHC F2 to F4		
	BH116-21 GS1A 6"-1.5FT	03-05-21	8:45			
	GS1B 1.5-2.5FT		8:50		X	
	SS2 2.5-4.5FT		8:55		X	
	SS3 5-7 FT		9:00		X	
	SS4 7.5-9.5FT		9:10		X	
	MSPLP 1.5-2.5FT		9:25		X	
	BH115-21 GS1 6"-2.5FT	03-05-21	10:00		X	
	SS2 2.5-4.5FT		10:05		X	
	SS3 5-7 FT		10:10		X	
	SS4 7.5-9.5FT		10:20		X	
	MSPLP MSPLP		10:35		X	
Drinking Water (DW) Samples¹ (client use)		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)		SAMPLE CONDITION AS RECEIVED (lab use only)		
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO		Table 1 Res, Table 3.1 R/P/I, Table 3.1 I/C/C (ESQS, O.Reg. 406/19) - coarse, AND Table 3 I/C/C (SCS, O.Reg. 153/04) - coarse		Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>		
Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO				Ice Packs <input checked="" type="checkbox"/> Ice Cubes <input checked="" type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>		
				Cooling Initiated <input type="checkbox"/>		
				INITIAL COOLER TEMPERATURES °C		
				FINAL COOLER TEMPERATURES °C		
				1.3 1.82.1		
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)		FINAL SHIPMENT RECEPTION (lab use only)		
Released by:	Date:	Received by:	Date:	Received by:	Date:	

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

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1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.



MTE CONSULTANTS INC. (Kitchener)
ATTN: JEN LAMBKE
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9


Date Received: 04-MAY-21
Report Date: 11-MAY-21 08:07 (MT)
Version: FINAL

Client Phone: 519-743-6500

Certificate of Analysis

Lab Work Order #: L2583126
Project P.O. #: NOT SUBMITTED
Job Reference: 46995-100
C of C Numbers: DAY 3 SITE D & M 148
Legal Site Desc:

Comments: ADDITIONAL 04-MAY-21 11:15



Emily Hansen
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 60 Northland Road, Unit 1, Waterloo, ON N2V 2B8 Canada | Phone: +1 519 886 6910 | Fax: +1 519 886 9047
ALS CANADA LTD Part of the ALS Group An ALS Limited Company



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte						#1	#2	#3
L2583126-2	BH148-21 SS2 2.5-4.5 FT								
Sampled By: MATT D on 30-APR-21 @ 08:25									
Matrix: SOIL									
Physical Tests									
Conductivity		1.04		0.0040	mS/cm	06-MAY-21	*0.57	1.4	*0.7
% Moisture		12.3		0.25	%	05-MAY-21			
pH		7.79		0.10	pH units	05-MAY-21			
Saturated Paste Extractables									
SAR		37.0	SAR:M	0.10	SAR	06-MAY-21	*2.4	*12	*5
Calcium (Ca)		3.01		0.50	mg/L	06-MAY-21			
Magnesium (Mg)		<0.50		0.50	mg/L	06-MAY-21			
Sodium (Na)		233		0.50	mg/L	06-MAY-21			
Metals									
Antimony (Sb)		<1.0		1.0	ug/g	06-MAY-21	1.3	40	7.5
Arsenic (As)		2.1		1.0	ug/g	06-MAY-21	18	18	18
Barium (Ba)		35.7		1.0	ug/g	06-MAY-21	220	670	390
Beryllium (Be)		<0.50		0.50	ug/g	06-MAY-21	2.5	8	4
Boron (B)		5.5		5.0	ug/g	06-MAY-21	36	120	120
Cadmium (Cd)		<0.50		0.50	ug/g	06-MAY-21	1.2	1.9	1.2
Chromium (Cr)		12.0		1.0	ug/g	06-MAY-21	70	160	160
Cobalt (Co)		3.6		1.0	ug/g	06-MAY-21	21	80	22
Copper (Cu)		7.7		1.0	ug/g	06-MAY-21	92	230	140
Lead (Pb)		6.4		1.0	ug/g	06-MAY-21	120	120	120
Molybdenum (Mo)		<1.0		1.0	ug/g	06-MAY-21	2	40	6.9
Nickel (Ni)		7.3		1.0	ug/g	06-MAY-21	82	270	100
Selenium (Se)		<1.0		1.0	ug/g	06-MAY-21	1.5	5.5	2.4
Silver (Ag)		<0.20		0.20	ug/g	06-MAY-21	0.5	40	20
Thallium (Tl)		<0.50		0.50	ug/g	06-MAY-21	1	3.3	1
Uranium (U)		<1.0		1.0	ug/g	06-MAY-21	2.5	33	23
Vanadium (V)		24.1		1.0	ug/g	06-MAY-21	86	86	86
Zinc (Zn)		39.6		5.0	ug/g	06-MAY-21	290	340	340
Volatile Organic Compounds									
Benzene		<0.0068		0.0068	ug/g	06-MAY-21	0.02	0.034	0.02
Ethylbenzene		<0.018		0.018	ug/g	06-MAY-21	0.05	1.9	1.9
Toluene		<0.080		0.080	ug/g	06-MAY-21	0.2	7.8	0.99
o-Xylene		<0.020		0.020	ug/g	06-MAY-21			
m+p-Xylenes		<0.030		0.030	ug/g	06-MAY-21			
Xylenes (Total)		<0.050		0.050	ug/g	06-MAY-21	0.05	3	0.9
Surrogate: 4-Bromofluorobenzene		119.0		50-140	%	06-MAY-21			
Surrogate: 1,4-Difluorobenzene		118.5		50-140	%	06-MAY-21			
Hydrocarbons									
F1 (C6-C10)		<5.0		5.0	ug/g	06-MAY-21	25	25	25
F1-BTEX		<5.0		5.0	ug/g	06-MAY-21	25	25	25
F2 (C10-C16)		<10		10	ug/g	06-MAY-21	10	26	10
F2-Naphth		<10		10	ug/g	06-MAY-21			
F3 (C16-C34)		<50		50	ug/g	06-MAY-21	240	1700	300
F3-PAH		<50		50	ug/g	06-MAY-21			
F4 (C34-C50)		<50		50	ug/g	06-MAY-21	120	3300	2800
Total Hydrocarbons (C6-C50)		<72		72	ug/g	06-MAY-21			
Chrom. to baseline at nC50		YES			No Unit	06-MAY-21			

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte						#1	#2	#3
L2583126-2	BH148-21 SS2 2.5-4.5 FT								
Sampled By: MATT D on 30-APR-21 @ 08:25									
Matrix: SOIL									
Hydrocarbons									
Surrogate: 2-Bromobenzotrifluoride		89.2		60-140	%	06-MAY-21			
Surrogate: 3,4-Dichlorotoluene		103.8		60-140	%	06-MAY-21			
Polycyclic Aromatic Hydrocarbons									
Acenaphthene		<0.050		0.050	ug/g	06-MAY-21	0.072	15	0.093
Acenaphthylene		<0.050		0.050	ug/g	06-MAY-21	0.093	0.093	14
Anthracene		<0.050		0.050	ug/g	06-MAY-21	0.16	0.16	0.16
Benzo(a)anthracene		<0.050		0.050	ug/g	06-MAY-21	0.36	1	0.5
Benzo(a)pyrene		<0.050		0.050	ug/g	06-MAY-21	0.3	0.7	0.57
Benzo(b&j)fluoranthene		<0.050		0.050	ug/g	06-MAY-21	0.47	7	5.7
Benzo(g,h,i)perylene		<0.050		0.050	ug/g	06-MAY-21	0.68	13	6.6
Benzo(k)fluoranthene		<0.050		0.050	ug/g	06-MAY-21	0.48	7	5.7
Chrysene		<0.050		0.050	ug/g	06-MAY-21	2.8	14	7
Dibenz(a,h)anthracene		<0.050		0.050	ug/g	06-MAY-21	0.1	0.7	0.57
Fluoranthene		<0.050		0.050	ug/g	06-MAY-21	0.56	70	0.69
Fluorene		<0.050		0.050	ug/g	06-MAY-21	0.12	6.8	6.8
Indeno(1,2,3-cd)pyrene		<0.050		0.050	ug/g	06-MAY-21	0.23	0.76	0.38
1+2-Methylnaphthalenes		<0.042		0.042	ug/g	06-MAY-21	0.59	8.7	0.92
1-Methylnaphthalene		<0.030		0.030	ug/g	06-MAY-21	0.59	8.7	0.92
2-Methylnaphthalene		<0.030		0.030	ug/g	06-MAY-21	0.59	8.7	0.92
Naphthalene		<0.013		0.013	ug/g	06-MAY-21	0.09	1.8	0.59
Phenanthrene		<0.046		0.046	ug/g	06-MAY-21	0.69	12	6.2
Pyrene		<0.050		0.050	ug/g	06-MAY-21	1	70	70
Surrogate: 2-Fluorobiphenyl		92.0		50-140	%	06-MAY-21			
Surrogate: d14-Terphenyl		95.2		50-140	%	06-MAY-21			
L2583126-6	BH121-21 SS2 2.5-4.5 FT								
Sampled By: MATT D on 30-APR-21 @ 09:35									
Matrix: SOIL									
Physical Tests									
% Moisture		12.0		0.25	%	05-MAY-21			
Metals									
Antimony (Sb)		<1.0		1.0	ug/g	06-MAY-21	1.3	40	7.5
Arsenic (As)		4.2		1.0	ug/g	06-MAY-21	18	18	18
Barium (Ba)		54.7		1.0	ug/g	06-MAY-21	220	670	390
Beryllium (Be)		<0.50		0.50	ug/g	06-MAY-21	2.5	8	4
Boron (B)		9.4		5.0	ug/g	06-MAY-21	36	120	120
Cadmium (Cd)		<0.50		0.50	ug/g	06-MAY-21	1.2	1.9	1.2
Chromium (Cr)		15.2		1.0	ug/g	06-MAY-21	70	160	160
Cobalt (Co)		5.9		1.0	ug/g	06-MAY-21	21	80	22
Copper (Cu)		37.9		1.0	ug/g	06-MAY-21	92	230	140
Lead (Pb)		49.5		1.0	ug/g	06-MAY-21	120	120	120
Molybdenum (Mo)		<1.0		1.0	ug/g	06-MAY-21	2	40	6.9
Nickel (Ni)		12.8		1.0	ug/g	06-MAY-21	82	270	100
Selenium (Se)		<1.0		1.0	ug/g	06-MAY-21	1.5	5.5	2.4
Silver (Ag)		<0.20		0.20	ug/g	06-MAY-21	0.5	40	20

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte						#1	#2	#3
L2583126-6	BH121-21 SS2 2.5-4.5 FT								
Sampled By: MATT D on 30-APR-21 @ 09:35									
Matrix: SOIL									
Metals									
	Thallium (Tl)	<0.50		0.50	ug/g	06-MAY-21	1	3.3	1
	Uranium (U)	<1.0		1.0	ug/g	06-MAY-21	2.5	33	23
	Vanadium (V)	24.2		1.0	ug/g	06-MAY-21	86	86	86
	Zinc (Zn)	95.3		5.0	ug/g	06-MAY-21	290	340	340
Volatile Organic Compounds									
	Benzene	<0.0068		0.0068	ug/g	06-MAY-21	0.02	0.034	0.02
	Ethylbenzene	<0.018		0.018	ug/g	06-MAY-21	0.05	1.9	1.9
	Toluene	<0.080		0.080	ug/g	06-MAY-21	0.2	7.8	0.99
	o-Xylene	<0.020		0.020	ug/g	06-MAY-21			
	m+p-Xylenes	<0.030		0.030	ug/g	06-MAY-21			
	Xylenes (Total)	<0.050		0.050	ug/g	06-MAY-21	0.05	3	0.9
	Surrogate: 4-Bromofluorobenzene	115.3		50-140	%	06-MAY-21			
	Surrogate: 1,4-Difluorobenzene	114.5		50-140	%	06-MAY-21			
Hydrocarbons									
	F1 (C6-C10)	<5.0		5.0	ug/g	06-MAY-21	25	25	25
	F1-BTEX	<5.0		5.0	ug/g	06-MAY-21	25	25	25
	F2 (C10-C16)	<10		10	ug/g	06-MAY-21	10	26	10
	F3 (C16-C34)	55		50	ug/g	06-MAY-21	240	1700	300
	F4 (C34-C50)	<50		50	ug/g	06-MAY-21	120	3300	2800
	Total Hydrocarbons (C6-C50)	<72		72	ug/g	06-MAY-21			
	Chrom. to baseline at nC50	YES			No Unit	06-MAY-21			
	Surrogate: 2-Bromobenzotrifluoride	79.8		60-140	%	06-MAY-21			
	Surrogate: 3,4-Dichlorotoluene	99.9		60-140	%	06-MAY-21			
L2583126-11	BH120-21 SS3 5-7 FT								
Sampled By: MATT D on 30-APR-21 @ 10:30									
Matrix: SOIL									
Metals									
	Antimony (Sb)	<1.0		1.0	ug/g	06-MAY-21	1.3	40	7.5
	Arsenic (As)	1.7		1.0	ug/g	06-MAY-21	18	18	18
	Barium (Ba)	13.3		1.0	ug/g	06-MAY-21	220	670	390
	Beryllium (Be)	<0.50		0.50	ug/g	06-MAY-21	2.5	8	4
	Boron (B)	<5.0		5.0	ug/g	06-MAY-21	36	120	120
	Cadmium (Cd)	<0.50		0.50	ug/g	06-MAY-21	1.2	1.9	1.2
	Chromium (Cr)	7.3		1.0	ug/g	06-MAY-21	70	160	160
	Cobalt (Co)	2.6		1.0	ug/g	06-MAY-21	21	80	22
	Copper (Cu)	7.3		1.0	ug/g	06-MAY-21	92	230	140
	Lead (Pb)	4.6		1.0	ug/g	06-MAY-21	120	120	120
	Molybdenum (Mo)	<1.0		1.0	ug/g	06-MAY-21	2	40	6.9
	Nickel (Ni)	5.6		1.0	ug/g	06-MAY-21	82	270	100
	Selenium (Se)	<1.0		1.0	ug/g	06-MAY-21	1.5	5.5	2.4
	Silver (Ag)	<0.20		0.20	ug/g	06-MAY-21	0.5	40	20
	Thallium (Tl)	<0.50		0.50	ug/g	06-MAY-21	1	3.3	1
	Uranium (U)	<1.0		1.0	ug/g	06-MAY-21	2.5	33	23
	Vanadium (V)	17.1		1.0	ug/g	06-MAY-21	86	86	86
	Zinc (Zn)	24.5		5.0	ug/g	06-MAY-21	290	340	340

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte						#1	#2	#3
L2583126-11	BH120-21 SS3 5-7 FT								
Sampled By: MATT D on 30-APR-21 @ 10:30									
Matrix: SOIL									
L2583126-16	BH119-21 SS4 7.5-9.5 FT								
Sampled By: MATT D on 30-APR-21 @ 11:30									
Matrix: SOIL									
Physical Tests									
Conductivity		1.17		0.0040	mS/cm	06-MAY-21	*0.57	1.4	*0.7
% Moisture		16.2		0.25	%	05-MAY-21			
pH		7.97		0.10	pH units	05-MAY-21			
Saturated Paste Extractables									
SAR		25.4		0.10	SAR	06-MAY-21	*2.4	*12	*5
Calcium (Ca)		6.24		0.50	mg/L	06-MAY-21			
Magnesium (Mg)		0.53		0.50	mg/L	06-MAY-21			
Sodium (Na)		246		0.50	mg/L	06-MAY-21			
Metals									
Antimony (Sb)		<1.0		1.0	ug/g	06-MAY-21	1.3	40	7.5
Arsenic (As)		3.7		1.0	ug/g	06-MAY-21	18	18	18
Barium (Ba)		12.2		1.0	ug/g	06-MAY-21	220	670	390
Beryllium (Be)		<0.50		0.50	ug/g	06-MAY-21	2.5	8	4
Boron (B)		<5.0		5.0	ug/g	06-MAY-21	36	120	120
Cadmium (Cd)		<0.50		0.50	ug/g	06-MAY-21	1.2	1.9	1.2
Chromium (Cr)		4.9		1.0	ug/g	06-MAY-21	70	160	160
Cobalt (Co)		1.9		1.0	ug/g	06-MAY-21	21	80	22
Copper (Cu)		5.1		1.0	ug/g	06-MAY-21	92	230	140
Lead (Pb)		3.1		1.0	ug/g	06-MAY-21	120	120	120
Molybdenum (Mo)		<1.0		1.0	ug/g	06-MAY-21	2	40	6.9
Nickel (Ni)		3.7		1.0	ug/g	06-MAY-21	82	270	100
Selenium (Se)		<1.0		1.0	ug/g	06-MAY-21	1.5	5.5	2.4
Silver (Ag)		<0.20		0.20	ug/g	06-MAY-21	0.5	40	20
Thallium (Tl)		<0.50		0.50	ug/g	06-MAY-21	1	3.3	1
Uranium (U)		<1.0		1.0	ug/g	06-MAY-21	2.5	33	23
Vanadium (V)		9.8		1.0	ug/g	06-MAY-21	86	86	86
Zinc (Zn)		17.7		5.0	ug/g	06-MAY-21	290	340	340
Volatile Organic Compounds									
Acetone		<0.50		0.50	ug/g	10-MAY-21	0.5	1.8	1.8
Benzene		<0.0068		0.0068	ug/g	10-MAY-21	0.02	0.034	0.02
Bromodichloromethane		<0.050		0.050	ug/g	10-MAY-21	0.05	5.8	5.8
Bromoform		<0.050		0.050	ug/g	10-MAY-21	0.05	2.5	2.5
Bromomethane		<0.050		0.050	ug/g	10-MAY-21	0.05	0.05	0.05
Carbon tetrachloride		<0.050		0.050	ug/g	10-MAY-21	0.05	0.05	0.05
Chlorobenzene		<0.050		0.050	ug/g	10-MAY-21	0.05	0.28	0.28
Dibromochloromethane		<0.050		0.050	ug/g	10-MAY-21	0.05	5.5	5.5
Chloroform		<0.050		0.050	ug/g	10-MAY-21	0.05	0.26	0.08
1,2-Dibromoethane		<0.050		0.050	ug/g	10-MAY-21	0.05	0.05	0.05
1,2-Dichlorobenzene		<0.050		0.050	ug/g	10-MAY-21	0.05	6.8	3.4
1,3-Dichlorobenzene		<0.050		0.050	ug/g	10-MAY-21	0.05	6.8	4.8
1,4-Dichlorobenzene		<0.050		0.050	ug/g	10-MAY-21	0.05	0.05	0.05
Dichlorodifluoromethane		<0.050		0.050	ug/g	10-MAY-21	0.05	1.8	1.8

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Table with columns: Sample Details Grouping, Analyte, Result, Qualifier, D.L., Units, Analyzed, Guideline Limits #1, #2, #3. Includes sections for Volatile Organic Compounds and Hydrocarbons.

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte						#1	#2	#3
L2583126-18 BH118-21 SS2 2.5-4.5 FT									
Sampled By: MATT D on 30-APR-21 @ 12:55									
Matrix: SOIL									
Metals									
	Antimony (Sb)	<1.0		1.0	ug/g	06-MAY-21	1.3	40	7.5
	Arsenic (As)	3.0		1.0	ug/g	06-MAY-21	18	18	18
	Barium (Ba)	34.6		1.0	ug/g	06-MAY-21	220	670	390
	Beryllium (Be)	<0.50		0.50	ug/g	06-MAY-21	2.5	8	4
	Boron (B)	7.1		5.0	ug/g	06-MAY-21	36	120	120
	Cadmium (Cd)	<0.50		0.50	ug/g	06-MAY-21	1.2	1.9	1.2
	Chromium (Cr)	9.0		1.0	ug/g	06-MAY-21	70	160	160
	Cobalt (Co)	3.7		1.0	ug/g	06-MAY-21	21	80	22
	Copper (Cu)	21.5		1.0	ug/g	06-MAY-21	92	230	140
	Lead (Pb)	26.1		1.0	ug/g	06-MAY-21	120	120	120
	Molybdenum (Mo)	<1.0		1.0	ug/g	06-MAY-21	2	40	6.9
	Nickel (Ni)	7.8		1.0	ug/g	06-MAY-21	82	270	100
	Selenium (Se)	<1.0		1.0	ug/g	06-MAY-21	1.5	5.5	2.4
	Silver (Ag)	<0.20		0.20	ug/g	06-MAY-21	0.5	40	20
	Thallium (Tl)	<0.50		0.50	ug/g	06-MAY-21	1	3.3	1
	Uranium (U)	<1.0		1.0	ug/g	06-MAY-21	2.5	33	23
	Vanadium (V)	16.6		1.0	ug/g	06-MAY-21	86	86	86
	Zinc (Zn)	146		5.0	ug/g	06-MAY-21	290	340	340
Volatile Organic Compounds									
	Benzene	<0.0068		0.0068	ug/g	06-MAY-21	0.02	0.034	0.02
	Ethylbenzene	<0.018		0.018	ug/g	06-MAY-21	0.05	1.9	1.9
	Toluene	<0.080		0.080	ug/g	06-MAY-21	0.2	7.8	0.99
	o-Xylene	<0.020		0.020	ug/g	06-MAY-21			
	m+p-Xylenes	<0.030		0.030	ug/g	06-MAY-21			
	Xylenes (Total)	<0.050		0.050	ug/g	06-MAY-21	0.05	3	0.9
	Surrogate: 4-Bromofluorobenzene	113.9		50-140	%	06-MAY-21			
	Surrogate: 1,4-Difluorobenzene	114.2		50-140	%	06-MAY-21			
Hydrocarbons									
	F1 (C6-C10)	<5.0		5.0	ug/g	06-MAY-21	25	25	25
	F1-BTEX	<5.0		5.0	ug/g	06-MAY-21	25	25	25
	F2 (C10-C16)	<10		10	ug/g	06-MAY-21	10	26	10
	F3 (C16-C34)	<50		50	ug/g	06-MAY-21	240	1700	300
	F4 (C34-C50)	<50		50	ug/g	06-MAY-21	120	3300	2800
	Total Hydrocarbons (C6-C50)	<72		72	ug/g	06-MAY-21			
	Chrom. to baseline at nC50	YES			No Unit	06-MAY-21			
	Surrogate: 2-Bromobenzotrifluoride	82.3		60-140	%	06-MAY-21			
	Surrogate: 3,4-Dichlorotoluene	103.5		60-140	%	06-MAY-21			
L2583126-19 BH118-21 SS3 5-7 FT									
Sampled By: MATT D on 30-APR-21 @ 13:00									
Matrix: SOIL									
Physical Tests									
	Conductivity	1.36		0.0040	mS/cm	06-MAY-21	*0.57	1.4	*0.7
	% Moisture	19.3		0.25	%	05-MAY-21			
Saturated Paste Extractables									
	SAR	60.3	DLHC	0.10	SAR	06-MAY-21	*2.4	*12	*5

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte						#1	#2	#3
L2583126-19	BH118-21 SS3 5-7 FT								
Sampled By: MATT D on 30-APR-21 @ 13:00									
Matrix: SOIL									
Saturated Paste Extractables									
	Calcium (Ca)	20	DLHC	10	mg/L	06-MAY-21			
	Magnesium (Mg)	<10	DLHC	10	mg/L	06-MAY-21			
	Sodium (Na)	972	DLHC	10	mg/L	06-MAY-21			
Metals									
	Antimony (Sb)	<1.0		1.0	ug/g	06-MAY-21	1.3	40	7.5
	Arsenic (As)	10.1		1.0	ug/g	06-MAY-21	18	18	18
	Barium (Ba)	86.4		1.0	ug/g	06-MAY-21	220	670	390
	Beryllium (Be)	0.76		0.50	ug/g	06-MAY-21	2.5	8	4
	Boron (B)	13.9		5.0	ug/g	06-MAY-21	36	120	120
	Cadmium (Cd)	<0.50		0.50	ug/g	06-MAY-21	1.2	1.9	1.2
	Chromium (Cr)	26.6		1.0	ug/g	06-MAY-21	70	160	160
	Cobalt (Co)	11.9		1.0	ug/g	06-MAY-21	21	80	22
	Copper (Cu)	31.0		1.0	ug/g	06-MAY-21	92	230	140
	Lead (Pb)	14.3		1.0	ug/g	06-MAY-21	120	120	120
	Molybdenum (Mo)	1.4		1.0	ug/g	06-MAY-21	2	40	6.9
	Nickel (Ni)	26.2		1.0	ug/g	06-MAY-21	82	270	100
	Selenium (Se)	<1.0		1.0	ug/g	06-MAY-21	1.5	5.5	2.4
	Silver (Ag)	<0.20		0.20	ug/g	06-MAY-21	0.5	40	20
	Thallium (Tl)	<0.50		0.50	ug/g	06-MAY-21	1	3.3	1
	Uranium (U)	1.1		1.0	ug/g	06-MAY-21	2.5	33	23
	Vanadium (V)	38.1		1.0	ug/g	06-MAY-21	86	86	86
	Zinc (Zn)	76.1		5.0	ug/g	06-MAY-21	290	340	340
Volatile Organic Compounds									
	Benzene	<0.0068		0.0068	ug/g	06-MAY-21	0.02	0.034	0.02
	Ethylbenzene	<0.018		0.018	ug/g	06-MAY-21	0.05	1.9	1.9
	Toluene	<0.080		0.080	ug/g	06-MAY-21	0.2	7.8	0.99
	o-Xylene	<0.020		0.020	ug/g	06-MAY-21			
	m+p-Xylenes	<0.030		0.030	ug/g	06-MAY-21			
	Xylenes (Total)	<0.050		0.050	ug/g	06-MAY-21	0.05	3	0.9
	Surrogate: 4-Bromofluorobenzene	111.0		50-140	%	06-MAY-21			
	Surrogate: 1,4-Difluorobenzene	112.3		50-140	%	06-MAY-21			
Hydrocarbons									
	F1 (C6-C10)	<5.0		5.0	ug/g	06-MAY-21	25	25	25
	F1-BTEX	<5.0		5.0	ug/g	06-MAY-21	25	25	25
	F2 (C10-C16)	<10		10	ug/g	06-MAY-21	10	26	10
	F3 (C16-C34)	<50		50	ug/g	06-MAY-21	240	1700	300
	F4 (C34-C50)	<50		50	ug/g	06-MAY-21	120	3300	2800
	Total Hydrocarbons (C6-C50)	<72		72	ug/g	06-MAY-21			
	Chrom. to baseline at nC50	YES			No Unit	06-MAY-21			
	Surrogate: 2-Bromobenzotrifluoride	97.2		60-140	%	06-MAY-21			
	Surrogate: 3,4-Dichlorotoluene	88.8		60-140	%	06-MAY-21			
L2583126-22	BH117-21 SS2 2.5-4.5 FT								
Sampled By: MATT D on 30-APR-21 @ 13:50									
Matrix: SOIL									
Physical Tests									
							#1	#2	#3

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte						#1	#2	#3
L2583126-22	BH117-21 SS2 2.5-4.5 FT								
Sampled By: MATT D on 30-APR-21 @ 13:50									
Matrix: SOIL									
Physical Tests									
% Moisture		9.69		0.25	%	05-MAY-21			
Metals									
Antimony (Sb)		<1.0		1.0	ug/g	06-MAY-21	1.3	40	7.5
Arsenic (As)		2.6		1.0	ug/g	06-MAY-21	18	18	18
Barium (Ba)		77.8		1.0	ug/g	06-MAY-21	220	670	390
Beryllium (Be)		<0.50		0.50	ug/g	06-MAY-21	2.5	8	4
Boron (B)		9.5		5.0	ug/g	06-MAY-21	36	120	120
Cadmium (Cd)		<0.50		0.50	ug/g	06-MAY-21	1.2	1.9	1.2
Chromium (Cr)		9.9		1.0	ug/g	06-MAY-21	70	160	160
Cobalt (Co)		2.8		1.0	ug/g	06-MAY-21	21	80	22
Copper (Cu)		23.9		1.0	ug/g	06-MAY-21	92	230	140
Lead (Pb)		117		1.0	ug/g	06-MAY-21	120	120	120
Molybdenum (Mo)		<1.0		1.0	ug/g	06-MAY-21	2	40	6.9
Nickel (Ni)		6.0		1.0	ug/g	06-MAY-21	82	270	100
Selenium (Se)		<1.0		1.0	ug/g	06-MAY-21	1.5	5.5	2.4
Silver (Ag)		<0.20		0.20	ug/g	06-MAY-21	0.5	40	20
Thallium (Tl)		<0.50		0.50	ug/g	06-MAY-21	1	3.3	1
Uranium (U)		<1.0		1.0	ug/g	06-MAY-21	2.5	33	23
Vanadium (V)		12.7		1.0	ug/g	06-MAY-21	86	86	86
Zinc (Zn)		123		5.0	ug/g	06-MAY-21	290	340	340
Volatile Organic Compounds									
Benzene		<0.0068		0.0068	ug/g	06-MAY-21	0.02	0.034	0.02
Ethylbenzene		<0.018		0.018	ug/g	06-MAY-21	0.05	1.9	1.9
Toluene		<0.080		0.080	ug/g	06-MAY-21	0.2	7.8	0.99
o-Xylene		<0.020		0.020	ug/g	06-MAY-21			
m+p-Xylenes		<0.030		0.030	ug/g	06-MAY-21			
Xylenes (Total)		<0.050		0.050	ug/g	06-MAY-21	0.05	3	0.9
Surrogate: 4-Bromofluorobenzene		120.5		50-140	%	06-MAY-21			
Surrogate: 1,4-Difluorobenzene		120.1		50-140	%	06-MAY-21			
Hydrocarbons									
F1 (C6-C10)		<5.0		5.0	ug/g	06-MAY-21	25	25	25
F1-BTEX		<5.0		5.0	ug/g	06-MAY-21	25	25	25
F2 (C10-C16)		<10		10	ug/g	06-MAY-21	10	26	10
F3 (C16-C34)		<50		50	ug/g	06-MAY-21	240	1700	300
F4 (C34-C50)		<50		50	ug/g	06-MAY-21	120	3300	2800
Total Hydrocarbons (C6-C50)		<72		72	ug/g	06-MAY-21			
Chrom. to baseline at nC50		YES			No Unit	06-MAY-21			
Surrogate: 2-Bromobenzotrifluoride		80.4		60-140	%	06-MAY-21			
Surrogate: 3,4-Dichlorotoluene		101.6		60-140	%	06-MAY-21			
L2583126-23	BH117-21 SS3 5-7 FT								
Sampled By: MATT D on 30-APR-21 @ 14:00									
Matrix: SOIL									
Metals									
Antimony (Sb)		2.0		1.0	ug/g	06-MAY-21	*1.3	40	7.5
Arsenic (As)		5.0		1.0	ug/g	06-MAY-21	18	18	18

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte						#1	#2	#3
L2583126-23	BH117-21 SS3 5-7 FT								
Sampled By: MATT D on 30-APR-21 @ 14:00									
Matrix: SOIL									
Metals									
Barium (Ba)		382		1.0	ug/g	06-MAY-21	*220	670	390
Beryllium (Be)		<0.50		0.50	ug/g	06-MAY-21	2.5	8	4
Boron (B)		30.1		5.0	ug/g	06-MAY-21	36	120	120
Cadmium (Cd)		<0.50		0.50	ug/g	06-MAY-21	1.2	1.9	1.2
Chromium (Cr)		23.5		1.0	ug/g	06-MAY-21	70	160	160
Cobalt (Co)		4.4		1.0	ug/g	06-MAY-21	21	80	22
Copper (Cu)		58.0		1.0	ug/g	06-MAY-21	92	230	140
Lead (Pb)		672		1.0	ug/g	06-MAY-21	*120	*120	*120
Molybdenum (Mo)		<1.0		1.0	ug/g	06-MAY-21	2	40	6.9
Nickel (Ni)		10.2		1.0	ug/g	06-MAY-21	82	270	100
Selenium (Se)		1.5		1.0	ug/g	06-MAY-21	1.5	5.5	2.4
Silver (Ag)		0.21		0.20	ug/g	06-MAY-21	0.5	40	20
Thallium (Tl)		<0.50		0.50	ug/g	06-MAY-21	1	3.3	1
Uranium (U)		<1.0		1.0	ug/g	06-MAY-21	2.5	33	23
Vanadium (V)		17.8		1.0	ug/g	06-MAY-21	86	86	86
Zinc (Zn)		194		5.0	ug/g	06-MAY-21	290	340	340

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use

Reference Information

Sample Parameter Qualifier key listed:

Qualifier	Description
SAR:M	Reported SAR represents a maximum value. Actual SAR may be lower if both Ca and Mg were detectable.
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference***
BTX-511-HS-WT	Soil	BTEX-O.Reg 153/04 (July 2011)	SW846 8260

BTX is determined by extracting a soil or sediment sample as received with methanol, then analyzing by headspace-GC/MS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

EC-WT	Soil	Conductivity (EC)	MOEE E3138
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A representative subsample is tumbled with de-ionized (DI) water. The ratio of water to soil is 2:1 v/w. After tumbling the sample is then analyzed by a conductivity meter.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

F1-F4-511-CALC-WT	Soil	F1-F4 Hydrocarbon Calculated Parameters	CCME CWS-PHC, Pub #1310, Dec 2001-S
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Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

Hydrocarbon results are expressed on a dry weight basis.

In cases where results for both F4 and F4G are reported, the greater of the two results must be used in any application of the CWS PHC guidelines and the gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.

In samples where BTEX and F1 were analyzed, F1-BTEX represents a value where the sum of Benzene, Toluene, Ethylbenzene and total Xylenes has been subtracted from F1.

In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.

Unless otherwise qualified, the following quality control criteria have been met for the F1 hydrocarbon range:

1. All extraction and analysis holding times were met.
2. Instrument performance showing response factors for C6 and C10 within 30% of the response factor for toluene.
3. Linearity of gasoline response within 15% throughout the calibration range.

Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:

1. All extraction and analysis holding times were met.
2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.
3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.
4. Linearity of diesel or motor oil response within 15% throughout the calibration range.

F1-HS-511-WT	Soil	F1-O.Reg 153/04 (July 2011)	E3398/CCME TIER 1-HS
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Fraction F1 is determined by extracting a soil or sediment sample as received with methanol, then analyzing by headspace-GC/FID.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

Reference Information

F2-F4-511-WT Soil F2-F4-O.Reg 153/04 (July 2011) CCME Tier 1

Petroleum Hydrocarbons (F2-F4 fractions) are extracted from soil with 1:1 hexane:acetone using a rotary extractor. Extracts are treated with silica gel to remove polar organic interferences. F2, F3, & F4 are analyzed by GC-FID. F4G-sg is analyzed gravimetrically.

Notes:

1. F2 (C10-C16): Sum of all hydrocarbons that elute between nC10 and nC16.
2. F3 (C16-C34): Sum of all hydrocarbons that elute between nC16 and nC34.
3. F4 (C34-C50): Sum of all hydrocarbons that elute between nC34 and nC50.
4. F4G: Gravimetric Heavy Hydrocarbons
5. F4G-sg: Gravimetric Heavy Hydrocarbons (F4G) after silica gel treatment.
6. Where both F4 (C34-C50) and F4G-sg are reported for a sample, the larger of the two values is used for comparison against the relevant CCME guideline for F4.
7. F4G-sg cannot be added to the C6 to C50 hydrocarbon results to obtain an estimate of total extractable hydrocarbons.
8. This method is validated for use.
9. Data from analysis of validation and quality control samples is available upon request.
10. Reported results are expressed as milligrams per dry kilogram, unless otherwise indicated.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

MET-200.2-CCMS-WT Soil Metals in Soil by CRC ICPMS EPA 200.2/6020B (mod)

Soil/sediment is dried, disaggregated, and sieved (2 mm). For tests intended to support Ontario regulations, the <2mm fraction is ground to pass through a 0.355 mm sieve. Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H₂S) may be excluded if lost during sampling, storage, or digestion.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

METHYLNAPS-CALC-WT	Soil	ABN-Calculated Parameters	SW846 8270
MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)
PAH-511-WT	Soil	PAH-O.Reg 153/04 (July 2011)	SW846 3510/8270

A representative sub-sample of soil is fortified with deuterium-labelled surrogates and a mechanical shaking technique is used to extract the sample with a mixture of methanol and toluene. The extracts are concentrated and analyzed by GC/MS. Results for benzo(b) fluoranthene may include contributions from benzo(j)fluoranthene, if also present in the sample.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

PH-WT	Soil	pH	MOEE E3137A
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A minimum 10g portion of the sample is extracted with 20mL of 0.01M calcium chloride solution by shaking for at least 30 minutes. The aqueous layer is separated from the soil and then analyzed using a pH meter and electrode.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

SAR-R511-WT	Soil	SAR-O.Reg 153/04 (July 2011)	SW846 6010C
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A dried, disaggregated solid sample is extracted with deionized water, the aqueous extract is separated from the solid, acidified and then analyzed using a ICP/OES. The concentrations of Na, Ca and Mg are reported as per CALA requirements for calculated parameters. These individual parameters are not for comparison to any guideline.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

VOC-1,3-DCP-CALC-WT	Soil	Regulation 153 VOCs	SW8260B/SW8270C
VOC-511-HS-WT	Soil	VOC-O.Reg 153/04 (July 2011)	SW846 8260 (511)

Soil and sediment samples are extracted in methanol and analyzed by headspace-GC/MS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

XYLENES-SUM-CALC-WT	Soil	Sum of Xylene Isomer Concentrations	CALCULATION
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Total xylenes represents the sum of o-xylene and m&p-xylene.

Reference Information

*** ALS test methods may incorporate modifications from specified reference methods to improve performance.

Chain of Custody numbers:

DAY 3 SITE D & M 148

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA		

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guideline limits are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.



Quality Control Report

Workorder: L2583126

Report Date: 11-MAY-21

Page 1 of 14

Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
BTX-511-HS-WT		Soil						
Batch	R5451664							
WG3529129-4	DUP	WG3529129-3						
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	06-MAY-21
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	06-MAY-21
m+p-Xylenes		<0.030	<0.030	RPD-NA	ug/g	N/A	40	06-MAY-21
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	06-MAY-21
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	06-MAY-21
WG3529129-2	LCS							
Benzene			98.6		%		70-130	06-MAY-21
Ethylbenzene			92.9		%		70-130	06-MAY-21
m+p-Xylenes			94.0		%		70-130	06-MAY-21
o-Xylene			93.3		%		70-130	06-MAY-21
Toluene			93.4		%		70-130	06-MAY-21
WG3529129-1	MB							
Benzene			<0.0068		ug/g		0.0068	06-MAY-21
Ethylbenzene			<0.018		ug/g		0.018	06-MAY-21
m+p-Xylenes			<0.030		ug/g		0.03	06-MAY-21
o-Xylene			<0.020		ug/g		0.02	06-MAY-21
Toluene			<0.080		ug/g		0.08	06-MAY-21
Surrogate: 1,4-Difluorobenzene			129.7		%		50-140	06-MAY-21
Surrogate: 4-Bromofluorobenzene			133.9		%		50-140	06-MAY-21
WG3529129-5	MS	WG3529129-3						
Benzene			96.0		%		60-140	06-MAY-21
Ethylbenzene			84.1		%		60-140	06-MAY-21
m+p-Xylenes			89.0		%		60-140	06-MAY-21
o-Xylene			85.6		%		60-140	06-MAY-21
Toluene			87.4		%		60-140	06-MAY-21
EC-WT		Soil						
Batch	R5453259							
WG3529798-4	DUP	WG3529798-3						
Conductivity		0.325	0.322		mS/cm	0.9	20	06-MAY-21
WG3529798-2	IRM	WT SAR4						
Conductivity			112.3		%		70-130	06-MAY-21
WG3530078-1	LCS							
Conductivity			96.9		%		90-110	06-MAY-21
WG3529798-1	MB							
Conductivity			<0.0040		mS/cm		0.004	06-MAY-21



Quality Control Report

Workorder: L2583126

Report Date: 11-MAY-21

Page 2 of 14

Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT		Soil						
Batch	R5451664							
WG3529129-4	DUP	WG3529129-3						
F1 (C6-C10)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	06-MAY-21
WG3529129-2	LCS							
F1 (C6-C10)			99.3		%		80-120	06-MAY-21
WG3529129-1	MB							
F1 (C6-C10)			<5.0		ug/g		5	06-MAY-21
Surrogate: 3,4-Dichlorotoluene			123.2		%		60-140	06-MAY-21
WG3529129-5	MS	WG3529129-3						
F1 (C6-C10)			97.1		%		60-140	06-MAY-21
Batch		R5455373						
WG3529280-4	DUP	WG3529280-3						
F1 (C6-C10)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	10-MAY-21
WG3529280-2	LCS							
F1 (C6-C10)			103.6		%		80-120	10-MAY-21
WG3529280-1	MB							
F1 (C6-C10)			<5.0		ug/g		5	10-MAY-21
Surrogate: 3,4-Dichlorotoluene			106.7		%		60-140	10-MAY-21
WG3529280-5	MS	WG3529280-3						
F1 (C6-C10)			113.5		%		60-140	10-MAY-21
F2-F4-511-WT		Soil						
Batch	R5452396							
WG3529281-3	DUP	WG3529281-5						
F2 (C10-C16)		<10	<10	RPD-NA	ug/g	N/A	30	06-MAY-21
F3 (C16-C34)		<50	<50	RPD-NA	ug/g	N/A	30	06-MAY-21
F4 (C34-C50)		<50	<50	RPD-NA	ug/g	N/A	30	06-MAY-21
WG3529281-2	LCS							
F2 (C10-C16)			92.1		%		80-120	06-MAY-21
F3 (C16-C34)			92.4		%		80-120	06-MAY-21
F4 (C34-C50)			89.5		%		80-120	06-MAY-21
WG3529281-1	MB							
F2 (C10-C16)			<10		ug/g		10	06-MAY-21
F3 (C16-C34)			<50		ug/g		50	06-MAY-21
F4 (C34-C50)			<50		ug/g		50	06-MAY-21
Surrogate: 2-Bromobenzotrifluoride			89.9		%		60-140	06-MAY-21
WG3529281-4	MS	WG3529281-5						
F2 (C10-C16)			86.7		%		60-140	06-MAY-21
F3 (C16-C34)			87.3		%		60-140	06-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F2-F4-511-WT	Soil							
Batch	R5452396							
WG3529281-4	MS	WG3529281-5						
F4 (C34-C50)			85.6		%		60-140	06-MAY-21
MET-200.2-CCMS-WT	Soil							
Batch	R5453396							
WG3529802-2	CRM	WT-SS-2						
Antimony (Sb)			96.3		%		70-130	06-MAY-21
Arsenic (As)			102.5		%		70-130	06-MAY-21
Barium (Ba)			108.7		%		70-130	06-MAY-21
Beryllium (Be)			95.3		%		70-130	06-MAY-21
Boron (B)			8.6		mg/kg		3.5-13.5	06-MAY-21
Cadmium (Cd)			101.9		%		70-130	06-MAY-21
Chromium (Cr)			96.7		%		70-130	06-MAY-21
Cobalt (Co)			99.1		%		70-130	06-MAY-21
Copper (Cu)			101.8		%		70-130	06-MAY-21
Lead (Pb)			106.1		%		70-130	06-MAY-21
Molybdenum (Mo)			105.3		%		70-130	06-MAY-21
Nickel (Ni)			100.2		%		70-130	06-MAY-21
Selenium (Se)			0.12		mg/kg		0-0.34	06-MAY-21
Silver (Ag)			80.6		%		70-130	06-MAY-21
Thallium (Tl)			0.076		mg/kg		0.029-0.129	06-MAY-21
Uranium (U)			95.8		%		70-130	06-MAY-21
Vanadium (V)			98.1		%		70-130	06-MAY-21
Zinc (Zn)			96.9		%		70-130	06-MAY-21
WG3529802-4	DUP	L2581910-3						
Antimony (Sb)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	06-MAY-21
Arsenic (As)		2.6	2.4		ug/g	8.1	30	06-MAY-21
Barium (Ba)		84.1	81.2		ug/g	3.5	40	06-MAY-21
Beryllium (Be)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	06-MAY-21
Boron (B)		9.1	8.2		ug/g	10	30	06-MAY-21
Cadmium (Cd)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	06-MAY-21
Chromium (Cr)		16.8	15.7		ug/g	7.0	30	06-MAY-21
Cobalt (Co)		5.8	5.6		ug/g	3.5	30	06-MAY-21
Copper (Cu)		12.9	12.3		ug/g	4.9	30	06-MAY-21
Lead (Pb)		5.8	5.6		ug/g	3.6	40	06-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
	Soil							
Batch	R5453396							
WG3529802-4	DUP	L2581910-3						
Molybdenum (Mo)		<1.0	<1.0	RPD-NA	ug/g	N/A	40	06-MAY-21
Nickel (Ni)		12.8	12.1		ug/g	6.1	30	06-MAY-21
Selenium (Se)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	06-MAY-21
Silver (Ag)		<0.20	<0.20	RPD-NA	ug/g	N/A	40	06-MAY-21
Thallium (Tl)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	06-MAY-21
Uranium (U)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	06-MAY-21
Vanadium (V)		28.9	26.9		ug/g	7.1	30	06-MAY-21
Zinc (Zn)		28.4	26.8		ug/g	5.8	30	06-MAY-21
WG3529802-3	LCS							
Antimony (Sb)			119.0		%		80-120	06-MAY-21
Arsenic (As)			109.9		%		80-120	06-MAY-21
Barium (Ba)			109.8		%		80-120	06-MAY-21
Beryllium (Be)			102.2		%		80-120	06-MAY-21
Boron (B)			95.8		%		80-120	06-MAY-21
Cadmium (Cd)			111.8		%		80-120	06-MAY-21
Chromium (Cr)			107.9		%		80-120	06-MAY-21
Cobalt (Co)			107.4		%		80-120	06-MAY-21
Copper (Cu)			105.0		%		80-120	06-MAY-21
Lead (Pb)			115.2		%		80-120	06-MAY-21
Molybdenum (Mo)			114.4		%		80-120	06-MAY-21
Nickel (Ni)			105.0		%		80-120	06-MAY-21
Selenium (Se)			108.7		%		80-120	06-MAY-21
Silver (Ag)			95.4		%		80-120	06-MAY-21
Thallium (Tl)			115.2		%		80-120	06-MAY-21
Uranium (U)			110.5		%		80-120	06-MAY-21
Vanadium (V)			110.1		%		80-120	06-MAY-21
Zinc (Zn)			103.6		%		80-120	06-MAY-21
WG3529802-1	MB							
Antimony (Sb)			<0.10		mg/kg		0.1	06-MAY-21
Arsenic (As)			<0.10		mg/kg		0.1	06-MAY-21
Barium (Ba)			<0.50		mg/kg		0.5	06-MAY-21
Beryllium (Be)			<0.10		mg/kg		0.1	06-MAY-21
Boron (B)			<5.0		mg/kg		5	06-MAY-21
Cadmium (Cd)			<0.020		mg/kg		0.02	06-MAY-21



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 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
	Soil							
Batch	R5453396							
WG3529802-1	MB							
Chromium (Cr)			<0.50		mg/kg		0.5	06-MAY-21
Cobalt (Co)			<0.10		mg/kg		0.1	06-MAY-21
Copper (Cu)			<0.50		mg/kg		0.5	06-MAY-21
Lead (Pb)			<0.50		mg/kg		0.5	06-MAY-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	06-MAY-21
Nickel (Ni)			<0.50		mg/kg		0.5	06-MAY-21
Selenium (Se)			<0.20		mg/kg		0.2	06-MAY-21
Silver (Ag)			<0.10		mg/kg		0.1	06-MAY-21
Thallium (Tl)			<0.050		mg/kg		0.05	06-MAY-21
Uranium (U)			<0.050		mg/kg		0.05	06-MAY-21
Vanadium (V)			<0.20		mg/kg		0.2	06-MAY-21
Zinc (Zn)			<2.0		mg/kg		2	06-MAY-21
MOISTURE-WT								
	Soil							
Batch	R5449341							
WG3529035-3	DUP	L2583126-16						
% Moisture		16.2	17.6		%	8.3	20	05-MAY-21
WG3529035-2	LCS							
% Moisture			99.6		%		90-110	05-MAY-21
WG3529035-1	MB							
% Moisture			<0.25		%		0.25	05-MAY-21
PAH-511-WT								
	Soil							
Batch	R5451797							
WG3529092-3	DUP	WG3529092-5						
1-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	06-MAY-21
2-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	06-MAY-21
Acenaphthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	06-MAY-21
Acenaphthylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	06-MAY-21
Anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	06-MAY-21
Benzo(a)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	06-MAY-21
Benzo(a)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	06-MAY-21
Benzo(b&j)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	06-MAY-21
Benzo(g,h,i)perylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	06-MAY-21
Benzo(k)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	06-MAY-21
Chrysene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	06-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT		Soil						
Batch	R5451797							
WG3529092-3 DUP		WG3529092-5						
Dibenz(a,h)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	06-MAY-21
Fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	06-MAY-21
Fluorene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	06-MAY-21
Indeno(1,2,3-cd)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	06-MAY-21
Naphthalene		<0.013	<0.013	RPD-NA	ug/g	N/A	40	06-MAY-21
Phenanthrene		<0.046	<0.046	RPD-NA	ug/g	N/A	40	06-MAY-21
Pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	06-MAY-21
WG3529092-2 LCS								
1-Methylnaphthalene			99.8		%		50-140	06-MAY-21
2-Methylnaphthalene			97.5		%		50-140	06-MAY-21
Acenaphthene			97.5		%		50-140	06-MAY-21
Acenaphthylene			94.8		%		50-140	06-MAY-21
Anthracene			87.1		%		50-140	06-MAY-21
Benzo(a)anthracene			103.0		%		50-140	06-MAY-21
Benzo(a)pyrene			86.0		%		50-140	06-MAY-21
Benzo(b&j)fluoranthene			90.8		%		50-140	06-MAY-21
Benzo(g,h,i)perylene			94.9		%		50-140	06-MAY-21
Benzo(k)fluoranthene			97.3		%		50-140	06-MAY-21
Chrysene			96.0		%		50-140	06-MAY-21
Dibenz(a,h)anthracene			95.6		%		50-140	06-MAY-21
Fluoranthene			98.7		%		50-140	06-MAY-21
Fluorene			95.6		%		50-140	06-MAY-21
Indeno(1,2,3-cd)pyrene			96.4		%		50-140	06-MAY-21
Naphthalene			94.2		%		50-140	06-MAY-21
Phenanthrene			99.4		%		50-140	06-MAY-21
Pyrene			98.9		%		50-140	06-MAY-21
WG3529092-1 MB								
1-Methylnaphthalene			<0.030		ug/g		0.03	06-MAY-21
2-Methylnaphthalene			<0.030		ug/g		0.03	06-MAY-21
Acenaphthene			<0.050		ug/g		0.05	06-MAY-21
Acenaphthylene			<0.050		ug/g		0.05	06-MAY-21
Anthracene			<0.050		ug/g		0.05	06-MAY-21
Benzo(a)anthracene			<0.050		ug/g		0.05	06-MAY-21
Benzo(a)pyrene			<0.050		ug/g		0.05	06-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Soil							
Batch	R5451797							
WG3529092-1 MB								
Benzo(b&j)fluoranthene			<0.050		ug/g		0.05	06-MAY-21
Benzo(g,h,i)perylene			<0.050		ug/g		0.05	06-MAY-21
Benzo(k)fluoranthene			<0.050		ug/g		0.05	06-MAY-21
Chrysene			<0.050		ug/g		0.05	06-MAY-21
Dibenz(a,h)anthracene			<0.050		ug/g		0.05	06-MAY-21
Fluoranthene			<0.050		ug/g		0.05	06-MAY-21
Fluorene			<0.050		ug/g		0.05	06-MAY-21
Indeno(1,2,3-cd)pyrene			<0.050		ug/g		0.05	06-MAY-21
Naphthalene			<0.013		ug/g		0.013	06-MAY-21
Phenanthrene			<0.046		ug/g		0.046	06-MAY-21
Pyrene			<0.050		ug/g		0.05	06-MAY-21
Surrogate: 2-Fluorobiphenyl			99.0		%		50-140	06-MAY-21
Surrogate: d14-Terphenyl			102.6		%		50-140	06-MAY-21
WG3529092-4 MS		WG3529092-5						
1-Methylnaphthalene			96.4		%		50-140	06-MAY-21
2-Methylnaphthalene			93.7		%		50-140	06-MAY-21
Acenaphthene			93.3		%		50-140	06-MAY-21
Acenaphthylene			90.2		%		50-140	06-MAY-21
Anthracene			83.0		%		50-140	06-MAY-21
Benzo(a)anthracene			97.6		%		50-140	06-MAY-21
Benzo(a)pyrene			81.3		%		50-140	06-MAY-21
Benzo(b&j)fluoranthene			71.9		%		50-140	06-MAY-21
Benzo(g,h,i)perylene			88.6		%		50-140	06-MAY-21
Benzo(k)fluoranthene			93.1		%		50-140	06-MAY-21
Chrysene			92.1		%		50-140	06-MAY-21
Dibenz(a,h)anthracene			90.6		%		50-140	06-MAY-21
Fluoranthene			92.6		%		50-140	06-MAY-21
Fluorene			91.6		%		50-140	06-MAY-21
Indeno(1,2,3-cd)pyrene			89.6		%		50-140	06-MAY-21
Naphthalene			89.4		%		50-140	06-MAY-21
Phenanthrene			93.9		%		50-140	06-MAY-21
Pyrene			92.6		%		50-140	06-MAY-21

PH-WT **Soil**



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PH-WT		Soil						
Batch	R5450039							
WG3529038-1	DUP	L2583510-1						
pH		7.87	7.98	J	pH units	0.11	0.3	05-MAY-21
WG3529239-1	LCS							
pH			7.01		pH units		6.9-7.1	05-MAY-21
SAR-R511-WT		Soil						
Batch	R5453297							
WG3529798-4	DUP	WG3529798-3						
Calcium (Ca)		2.16	1.97		mg/L	9.2	30	06-MAY-21
Sodium (Na)		57.0	56.7		mg/L	0.5	30	06-MAY-21
Magnesium (Mg)		1.33	1.18		mg/L	12	30	06-MAY-21
WG3529798-2	IRM	WT SAR4						
Calcium (Ca)			110.3		%		70-130	06-MAY-21
Sodium (Na)			101.4		%		70-130	06-MAY-21
Magnesium (Mg)			112.8		%		70-130	06-MAY-21
WG3529798-5	LCS							
Calcium (Ca)			105.0		%		80-120	06-MAY-21
Sodium (Na)			97.0		%		80-120	06-MAY-21
Magnesium (Mg)			100.2		%		80-120	06-MAY-21
WG3529798-1	MB							
Calcium (Ca)			<0.50		mg/L		0.5	06-MAY-21
Sodium (Na)			<0.50		mg/L		0.5	06-MAY-21
Magnesium (Mg)			<0.50		mg/L		0.5	06-MAY-21
VOC-511-HS-WT		Soil						
Batch	R5455373							
WG3529280-4	DUP	WG3529280-3						
1,1,1,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
1,1,2,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
1,1,1-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
1,1,2-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
1,1-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
1,1-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
1,2-Dibromoethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
1,2-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
1,2-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
1,2-Dichloropropane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT		Soil						
Batch	R5455373							
WG3529280-4	DUP	WG3529280-3						
1,3-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
1,4-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
Acetone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	10-MAY-21
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	10-MAY-21
Bromodichloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
Bromoform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
Bromomethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
Carbon tetrachloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
Chlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
Chloroform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
cis-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
cis-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	10-MAY-21
Dibromochloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
Dichlorodifluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	10-MAY-21
n-Hexane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
Methylene Chloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
MTBE		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
m+p-Xylenes		<0.030	<0.030	RPD-NA	ug/g	N/A	40	10-MAY-21
Methyl Ethyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	10-MAY-21
Methyl Isobutyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	10-MAY-21
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	10-MAY-21
Styrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
Tetrachloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	10-MAY-21
trans-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
trans-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	10-MAY-21
Trichloroethylene		<0.010	<0.010	RPD-NA	ug/g	N/A	40	10-MAY-21
Trichlorofluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
Vinyl chloride		<0.020	<0.020	RPD-NA	ug/g	N/A	40	10-MAY-21
WG3529280-2	LCS							
1,1,1,2-Tetrachloroethane			105.4		%		60-130	10-MAY-21
1,1,2,2-Tetrachloroethane			96.4		%		60-130	10-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT		Soil						
Batch	R5455373							
WG3529280-2	LCS							
1,1,1-Trichloroethane			109.7		%		60-130	10-MAY-21
1,1,2-Trichloroethane			101.5		%		60-130	10-MAY-21
1,1-Dichloroethane			103.3		%		60-130	10-MAY-21
1,1-Dichloroethylene			107.3		%		60-130	10-MAY-21
1,2-Dibromoethane			96.5		%		70-130	10-MAY-21
1,2-Dichlorobenzene			106.6		%		70-130	10-MAY-21
1,2-Dichloroethane			105.6		%		60-130	10-MAY-21
1,2-Dichloropropane			104.7		%		70-130	10-MAY-21
1,3-Dichlorobenzene			108.7		%		70-130	10-MAY-21
1,4-Dichlorobenzene			106.8		%		70-130	10-MAY-21
Acetone			103.5		%		60-140	10-MAY-21
Benzene			105.1		%		70-130	10-MAY-21
Bromodichloromethane			113.7		%		50-140	10-MAY-21
Bromoform			111.0		%		70-130	10-MAY-21
Bromomethane			96.6		%		50-140	10-MAY-21
Carbon tetrachloride			113.8		%		70-130	10-MAY-21
Chlorobenzene			109.2		%		70-130	10-MAY-21
Chloroform			111.9		%		70-130	10-MAY-21
cis-1,2-Dichloroethylene			108.0		%		70-130	10-MAY-21
cis-1,3-Dichloropropene			97.6		%		70-130	10-MAY-21
Dibromochloromethane			101.3		%		60-130	10-MAY-21
Dichlorodifluoromethane			76.9		%		50-140	10-MAY-21
Ethylbenzene			100.7		%		70-130	10-MAY-21
n-Hexane			101.5		%		70-130	10-MAY-21
Methylene Chloride			108.5		%		70-130	10-MAY-21
MTBE			106.9		%		70-130	10-MAY-21
m+p-Xylenes			108.6		%		70-130	10-MAY-21
Methyl Ethyl Ketone			97.5		%		60-140	10-MAY-21
Methyl Isobutyl Ketone			83.1		%		60-140	10-MAY-21
o-Xylene			109.9		%		70-130	10-MAY-21
Styrene			109.9		%		70-130	10-MAY-21
Tetrachloroethylene			108.2		%		60-130	10-MAY-21
Toluene			103.0		%		70-130	10-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT		Soil						
Batch	R5455373							
WG3529280-2	LCS							
trans-1,2-Dichloroethylene			109.8		%		60-130	10-MAY-21
trans-1,3-Dichloropropene			94.7		%		70-130	10-MAY-21
Trichloroethylene			109.4		%		60-130	10-MAY-21
Trichlorofluoromethane			105.7		%		50-140	10-MAY-21
Vinyl chloride			98.8		%		60-140	10-MAY-21
WG3529280-1	MB							
1,1,1,2-Tetrachloroethane			<0.050		ug/g		0.05	10-MAY-21
1,1,2,2-Tetrachloroethane			<0.050		ug/g		0.05	10-MAY-21
1,1,1-Trichloroethane			<0.050		ug/g		0.05	10-MAY-21
1,1,2-Trichloroethane			<0.050		ug/g		0.05	10-MAY-21
1,1-Dichloroethane			<0.050		ug/g		0.05	10-MAY-21
1,1-Dichloroethylene			<0.050		ug/g		0.05	10-MAY-21
1,2-Dibromoethane			<0.050		ug/g		0.05	10-MAY-21
1,2-Dichlorobenzene			<0.050		ug/g		0.05	10-MAY-21
1,2-Dichloroethane			<0.050		ug/g		0.05	10-MAY-21
1,2-Dichloropropane			<0.050		ug/g		0.05	10-MAY-21
1,3-Dichlorobenzene			<0.050		ug/g		0.05	10-MAY-21
1,4-Dichlorobenzene			<0.050		ug/g		0.05	10-MAY-21
Acetone			<0.50		ug/g		0.5	10-MAY-21
Benzene			<0.0068		ug/g		0.0068	10-MAY-21
Bromodichloromethane			<0.050		ug/g		0.05	10-MAY-21
Bromoform			<0.050		ug/g		0.05	10-MAY-21
Bromomethane			<0.050		ug/g		0.05	10-MAY-21
Carbon tetrachloride			<0.050		ug/g		0.05	10-MAY-21
Chlorobenzene			<0.050		ug/g		0.05	10-MAY-21
Chloroform			<0.050		ug/g		0.05	10-MAY-21
cis-1,2-Dichloroethylene			<0.050		ug/g		0.05	10-MAY-21
cis-1,3-Dichloropropene			<0.030		ug/g		0.03	10-MAY-21
Dibromochloromethane			<0.050		ug/g		0.05	10-MAY-21
Dichlorodifluoromethane			<0.050		ug/g		0.05	10-MAY-21
Ethylbenzene			<0.018		ug/g		0.018	10-MAY-21
n-Hexane			<0.050		ug/g		0.05	10-MAY-21
Methylene Chloride			<0.050		ug/g		0.05	10-MAY-21
MTBE			<0.050		ug/g		0.05	10-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT								
	Soil							
Batch	R5455373							
WG3529280-1 MB								
m+p-Xylenes			<0.030		ug/g		0.03	10-MAY-21
Methyl Ethyl Ketone			<0.50		ug/g		0.5	10-MAY-21
Methyl Isobutyl Ketone			<0.50		ug/g		0.5	10-MAY-21
o-Xylene			<0.020		ug/g		0.02	10-MAY-21
Styrene			<0.050		ug/g		0.05	10-MAY-21
Tetrachloroethylene			<0.050		ug/g		0.05	10-MAY-21
Toluene			<0.080		ug/g		0.08	10-MAY-21
trans-1,2-Dichloroethylene			<0.050		ug/g		0.05	10-MAY-21
trans-1,3-Dichloropropene			<0.030		ug/g		0.03	10-MAY-21
Trichloroethylene			<0.010		ug/g		0.01	10-MAY-21
Trichlorofluoromethane			<0.050		ug/g		0.05	10-MAY-21
Vinyl chloride			<0.020		ug/g		0.02	10-MAY-21
Surrogate: 1,4-Difluorobenzene			113.5		%		50-140	10-MAY-21
Surrogate: 4-Bromofluorobenzene			93.2		%		50-140	10-MAY-21
WG3529280-5 MS		WG3529280-3						
1,1,1,2-Tetrachloroethane			111.4		%		50-140	10-MAY-21
1,1,2,2-Tetrachloroethane			103.7		%		50-140	10-MAY-21
1,1,1-Trichloroethane			114.1		%		50-140	10-MAY-21
1,1,2-Trichloroethane			107.6		%		50-140	10-MAY-21
1,1-Dichloroethane			107.4		%		50-140	10-MAY-21
1,1-Dichloroethylene			111.5		%		50-140	10-MAY-21
1,2-Dibromoethane			101.6		%		50-140	10-MAY-21
1,2-Dichlorobenzene			112.1		%		50-140	10-MAY-21
1,2-Dichloroethane			110.9		%		50-140	10-MAY-21
1,2-Dichloropropane			109.8		%		50-140	10-MAY-21
1,3-Dichlorobenzene			112.5		%		50-140	10-MAY-21
1,4-Dichlorobenzene			110.5		%		50-140	10-MAY-21
Acetone			116.8		%		50-140	10-MAY-21
Benzene			109.3		%		50-140	10-MAY-21
Bromodichloromethane			119.7		%		50-140	10-MAY-21
Bromoform			118.4		%		50-140	10-MAY-21
Bromomethane			96.5		%		50-140	10-MAY-21
Carbon tetrachloride			118.5		%		50-140	10-MAY-21
Chlorobenzene			114.1		%		50-140	10-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch	R5455373							
WG3529280-5 MS		WG3529280-3						
Chloroform			117.0		%		50-140	10-MAY-21
cis-1,2-Dichloroethylene			111.4		%		50-140	10-MAY-21
cis-1,3-Dichloropropene			95.0		%		50-140	10-MAY-21
Dibromochloromethane			107.2		%		50-140	10-MAY-21
Dichlorodifluoromethane			85.5		%		50-140	10-MAY-21
Ethylbenzene			104.8		%		50-140	10-MAY-21
n-Hexane			108.7		%		50-140	10-MAY-21
Methylene Chloride			112.8		%		50-140	10-MAY-21
MTBE			112.8		%		50-140	10-MAY-21
m+p-Xylenes			112.9		%		50-140	10-MAY-21
Methyl Ethyl Ketone			95.8		%		50-140	10-MAY-21
Methyl Isobutyl Ketone			87.0		%		50-140	10-MAY-21
o-Xylene			114.9		%		50-140	10-MAY-21
Styrene			114.5		%		50-140	10-MAY-21
Tetrachloroethylene			110.5		%		50-140	10-MAY-21
Toluene			106.9		%		50-140	10-MAY-21
trans-1,2-Dichloroethylene			111.9		%		50-140	10-MAY-21
trans-1,3-Dichloropropene			91.4		%		50-140	10-MAY-21
Trichloroethylene			111.8		%		50-140	10-MAY-21
Trichlorofluoromethane			112.2		%		50-140	10-MAY-21
Vinyl chloride			102.0		%		50-140	10-MAY-21

Quality Control Report

Workorder: L2583126

Report Date: 11-MAY-21

Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9
Contact: JEN LAMBKE

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
J	Duplicate results and limits are expressed in terms of absolute difference.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

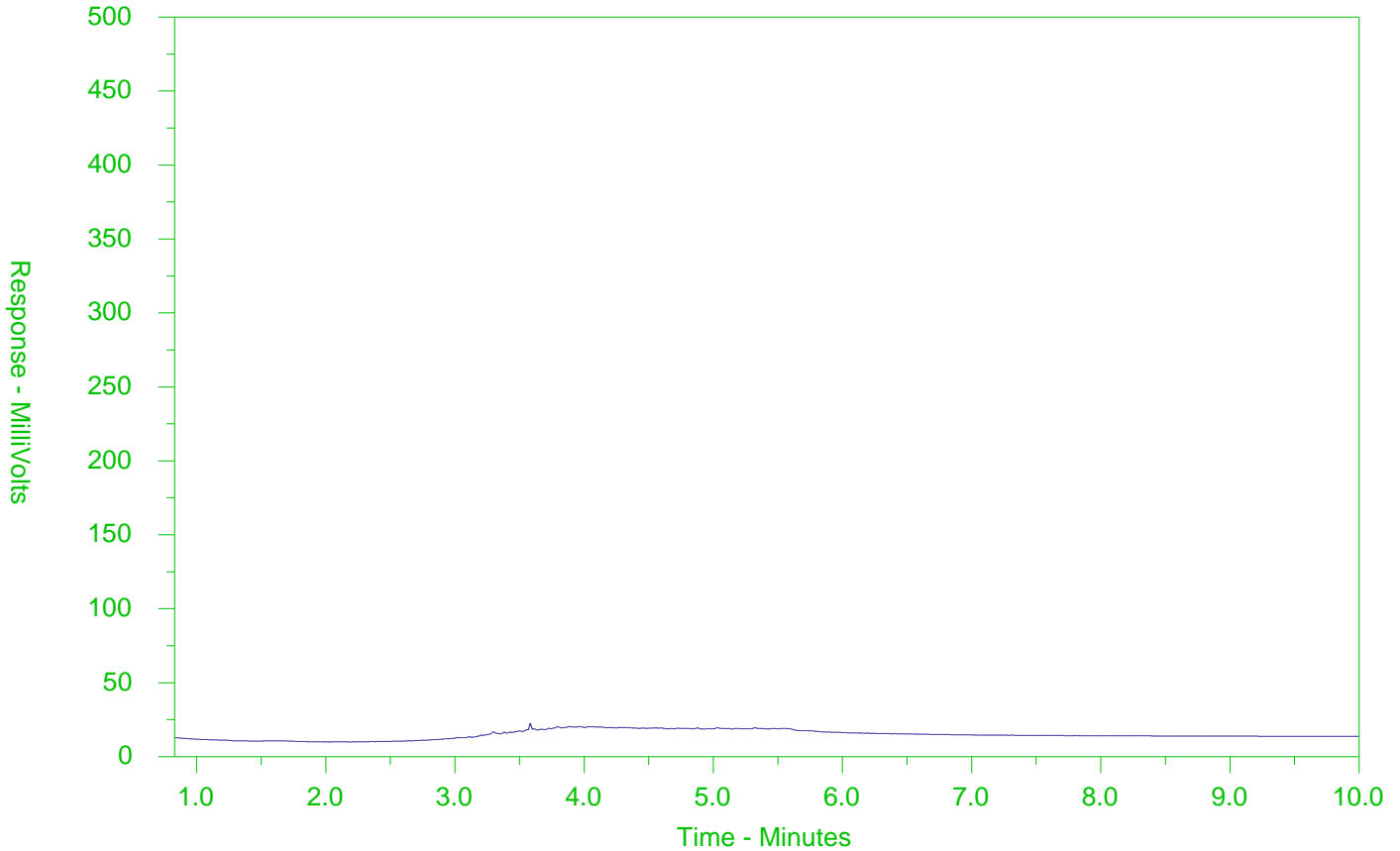
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2583126-2
 Client Sample ID: BH148-21 SS2 2.5-4.5 FT



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

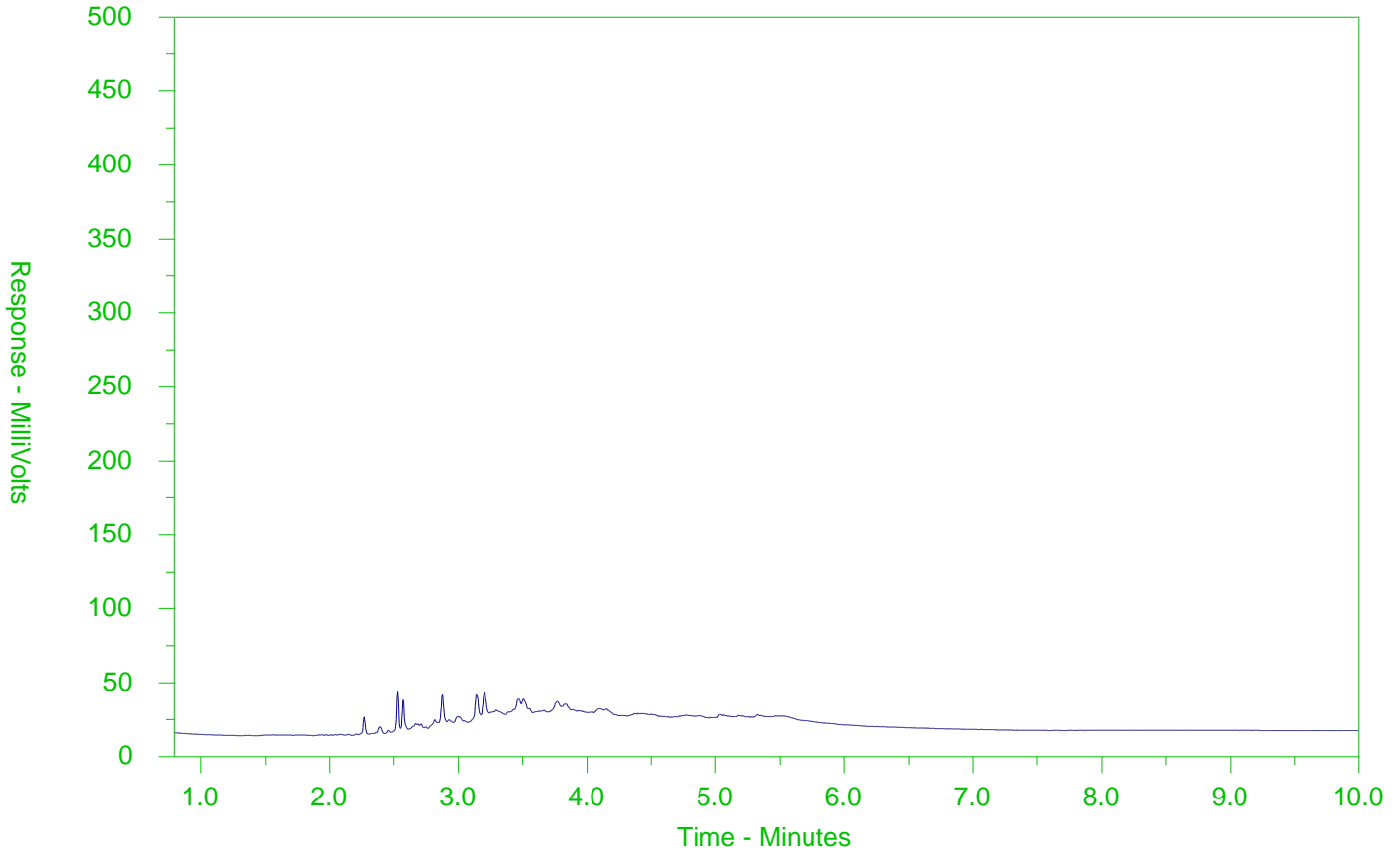
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2583126-6
 Client Sample ID: BH121-21 SS2 2.5-4.5 FT



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

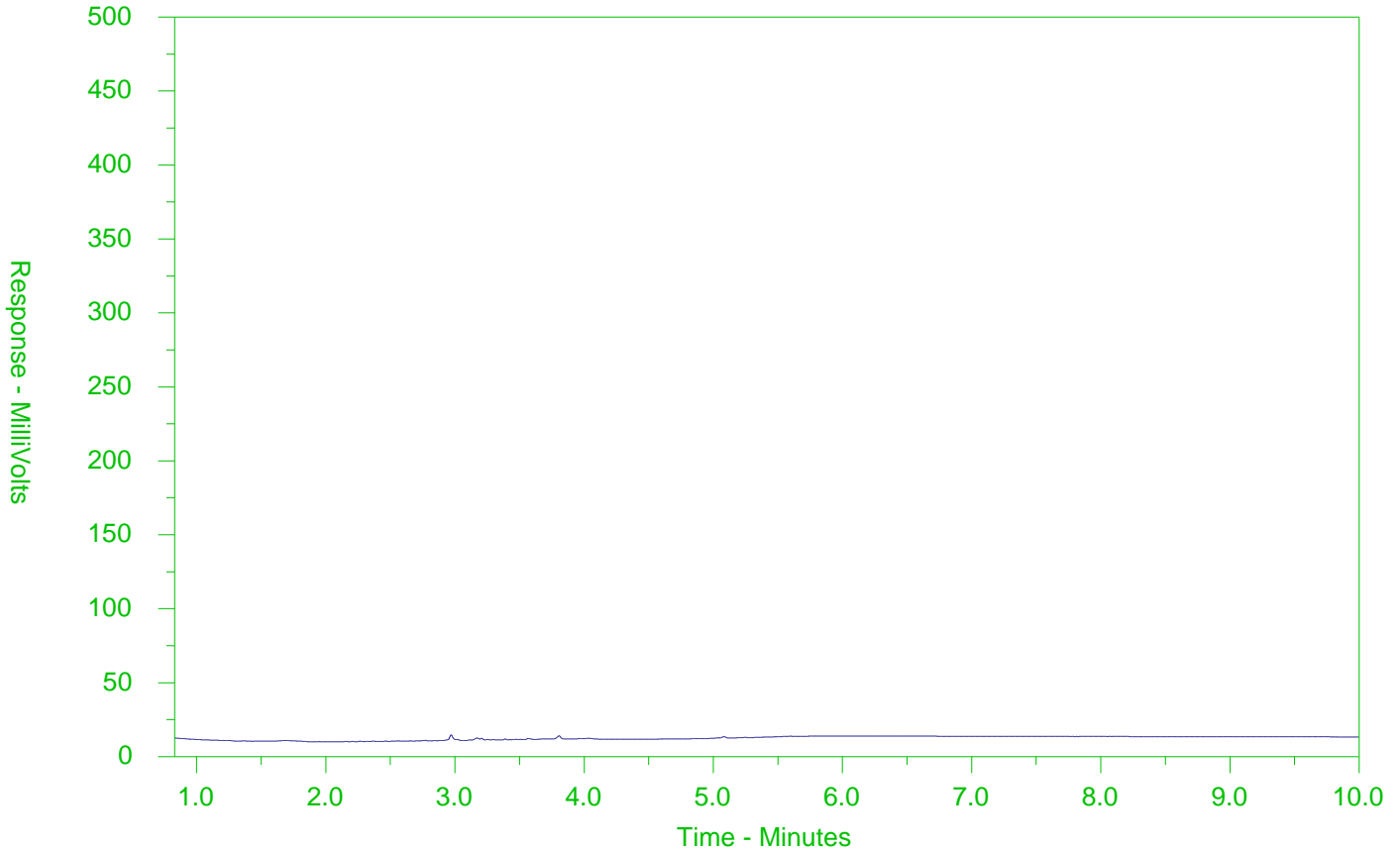
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2583126-16
 Client Sample ID: BH119-21 SS4 7.5-9.5 FT



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

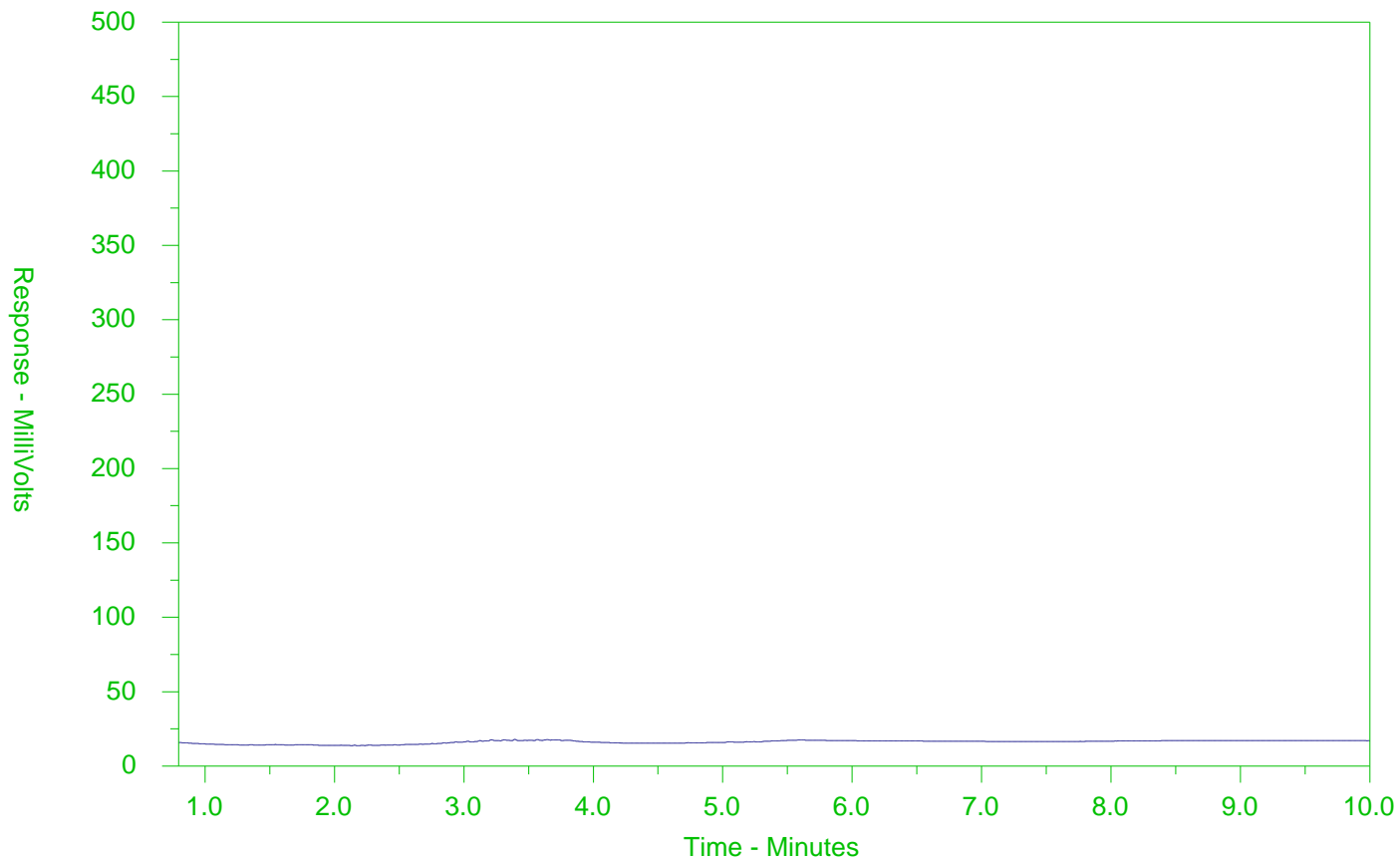
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2583126-18
 Client Sample ID: BH118-21 SS2 2.5-4.5 FT



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

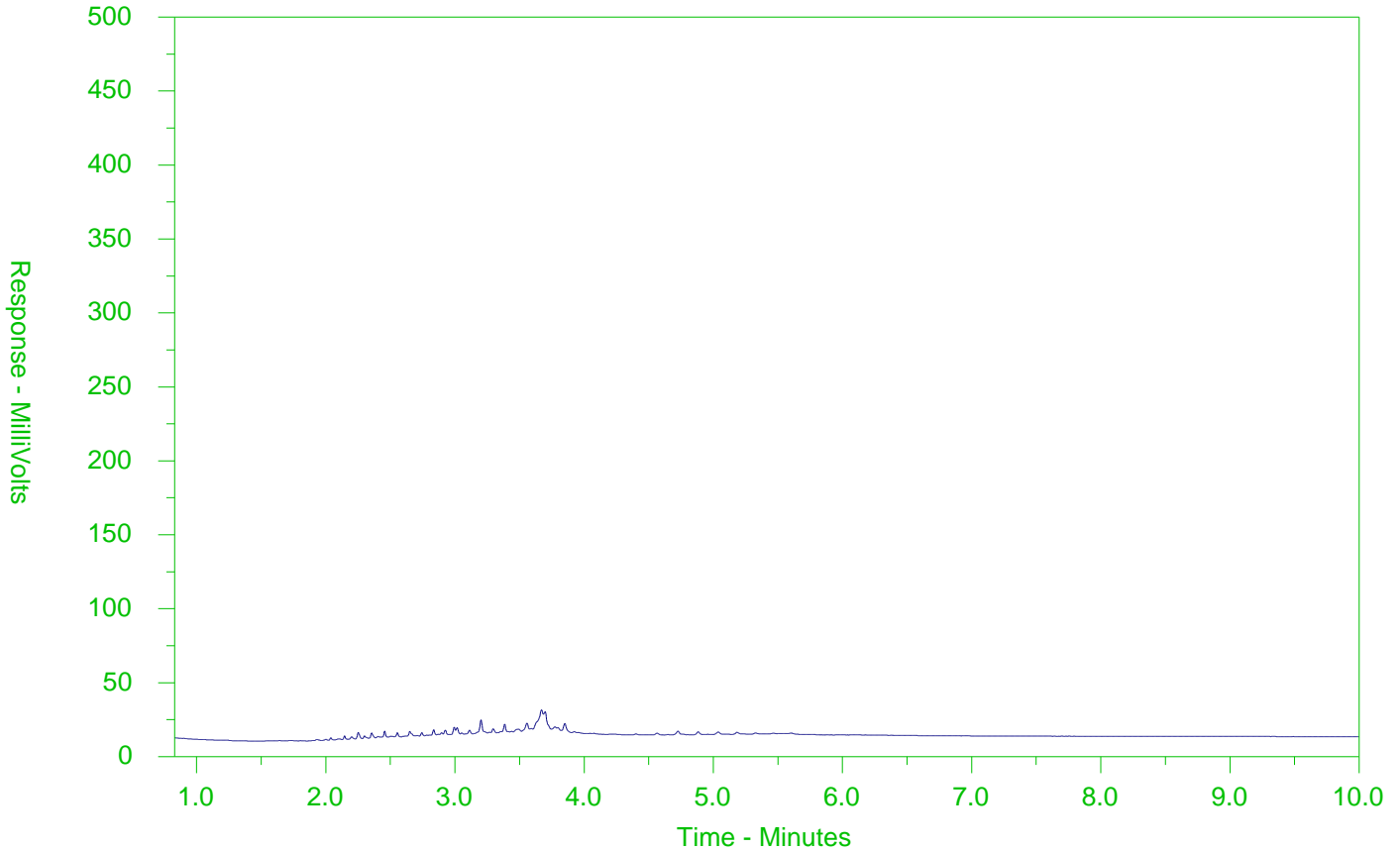
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2583126-19
 Client Sample ID: BH118-21 SS3 5-7 FT



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

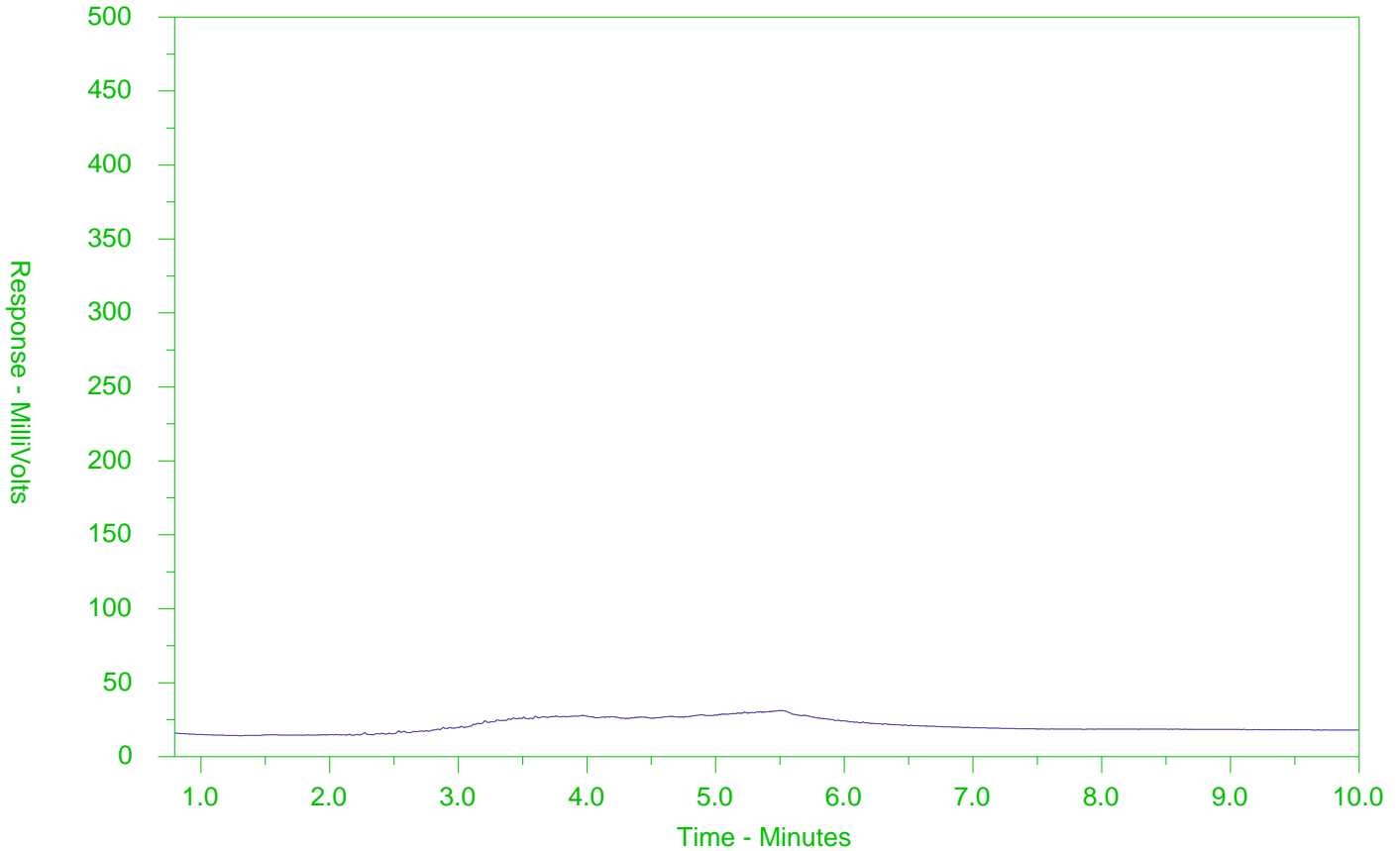
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2583126-22
 Client Sample ID: BH117-21 SS2 2.5-4.5 FT



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.



www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878



L2583126-COFC

COC Number: 17 -

Page 7 of 3
Day 3 Site D + M148

Report To: MTE, Report Format: PDF, EXCEL, EDD, Quality Control: YES, Distribution: EMAIL, Invoice To: Same as Report To, Project Information: ALS Account # Q75730, Job # 46995-100, ALS Lab Work Order # L2583126, Sample Identification table with columns for Sample #, Date, Time, Sample Type, and analysis results for various parameters like PHC F1, Metals Scan, etc.

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.



Environmental

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Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878



L2583126-COFC

COC Number: 17 -

Page 1 of 3

Day 3 site D + 148^M

Report To Contact and company name below will appear on the final report		Report Format / I	
Company:	MTE	Select Report Format:	<input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> I
Contact:	Jen Lambke	Quality Control (QC) Report with Report	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
Phone:	519-502-3268	<input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked	
Company address below will appear on the final report		Select Distribution:	<input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX
Street:	520 Bingemans Centre Drive	Email 1 or Fax	j.lambke@mte85.com
City/Province:	Kitchener	Email 2	jball@mte85.com
Postal Code:		Email 3	

contact your AM to confirm all E&P TATs (surcharges may apply)

PRIORITY (Business days)	<input type="checkbox"/> 4 day [P4-20%]	<input type="checkbox"/>	EMERGENCY	<input type="checkbox"/> 1 Business day [E - 100%]
	<input type="checkbox"/> 3 day [P3-25%]	<input type="checkbox"/>		<input type="checkbox"/> Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)]
	<input type="checkbox"/> 2 day [P2-50%]	<input type="checkbox"/>		

Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm

For tests that can not be performed according to the service level selected, you will be contacted.

Invoice To	Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Invoice Distribution	
	Copy of Invoice with Report <input type="checkbox"/> YES <input type="checkbox"/> NO	Select Invoice Distribution:	<input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX
Company:		Email 1 or Fax	j.lambke@mte85.com
Contact:		Email 2	

Project Information		Oil and Gas Required Fields (client use)	
ALS Account # / Quote #:	Q75730	AFE/Cost Center:	PO#
Job #:	46995-100	Major/Minor Code:	Routing Code:
PO / AFE:		Requisitioner:	
LSD:		Location:	

ALS Lab Work Order # (lab use only): **L2583126**

ALS Contact: **Emily H** Sampler: **Matt D**

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type
	BH148-21 GSI 4" 2' 2"	30-04-21	8:20	Soil
	SS2 2.5-4.5Ft		8:25	
	SS3 5-7Ft		8:35	
	SS4 7.5-9.5Ft		8:45	
	MSPLP 2.5-7.5Ft		8:53	
	BH121-21 GSI 6" 2Ft	30-04-21	9:30	Soil
	SS2 2.5-4.5Ft		9:35	
	SS3 5-7Ft		9:45	
	SS4 7.5-9.5Ft		9:50	
	MSPLP 2.5-8Ft		9:58	
	BH120-21 GSI 6" 2.5Ft	30-04-21	10:15	Soil
	SS2 2.5-4.5Ft		10:20	

NUMBER OF CONTAINERS	Analysis Request										SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)
	PHC F1 to F4 and BTEX	PHC F1 to F4 and VOCs	Metals Scan	Metals Complete	PAHS	SAR & EC	pH	PCBs	PHC F2 to F4			
											X	
											X	
											X	
											X	
											X	
											X	
											X	
											X	
											X	
											X	

Drinking Water (DW) Samples¹ (client use)	Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO	Table 1 Res, Table 3.1 R/P/I, Table 3.1 I/C/C (ESQS, O.Reg. 406/19) - coarse, AND Table 3 I/C/C (SCS, O.Reg. 153/04) - coarse
Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO	

SAMPLE CONDITION AS RECEIVED (lab use only)			
Frozen <input type="checkbox"/>	SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>	Ice Packs <input checked="" type="checkbox"/>	Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>
Ice Cubes <input checked="" type="checkbox"/>		Cooling Initiated <input type="checkbox"/>	
INITIAL COOLER TEMPERATURES °C		FINAL COOLER TEMPERATURES °C	
		1.3 1.8 2.1	

SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)				FINAL SHIPMENT RECEPTION (lab use only)			
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:	Received by:
							5/4/21		



MTE CONSULTANTS INC. (Kitchener)
ATTN: JEN LAMBKE
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9


Date Received: 06-MAY-21
Report Date: 13-MAY-21 14:51 (MT)
Version: FINAL

Client Phone: 519-743-6500

Certificate of Analysis

Lab Work Order #: L2584522
Project P.O. #: NOT SUBMITTED
Job Reference: 46995-100
C of C Numbers:
Legal Site Desc:

Comments: ADDITIONAL 06-MAY-21 15:04
ADDITIONAL 06-MAY-21 12:43



Emily Hansen
Account Manager

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ADDRESS: 60 Northland Road, Unit 1, Waterloo, ON N2V 2B8 Canada | Phone: +1 519 886 6910 | Fax: +1 519 886 9047
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ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits			
Grouping	Analyte									
L2584522-2 BH147-21 SS2 2.5-4.5FT										
Sampled By: CLIENT on 04-MAY-21 @ 08:20										
Matrix: SOIL							#1	#2		
Physical Tests										
% Moisture		13.8		0.25	%	08-MAY-21				
Metals										
Antimony (Sb)		<1.0		1.0	ug/g	12-MAY-21	1.3	40		
Arsenic (As)		1.4		1.0	ug/g	12-MAY-21	18	18		
Barium (Ba)		19.2		1.0	ug/g	12-MAY-21	220	670		
Beryllium (Be)		<0.50		0.50	ug/g	12-MAY-21	2.5	8		
Boron (B)		5.2		5.0	ug/g	12-MAY-21	36	120		
Cadmium (Cd)		<0.50		0.50	ug/g	12-MAY-21	1.2	1.9		
Chromium (Cr)		4.9		1.0	ug/g	12-MAY-21	70	160		
Cobalt (Co)		1.9		1.0	ug/g	12-MAY-21	21	80		
Copper (Cu)		6.7		1.0	ug/g	12-MAY-21	92	230		
Lead (Pb)		13.3		1.0	ug/g	12-MAY-21	120	120		
Molybdenum (Mo)		<1.0		1.0	ug/g	12-MAY-21	2	40		
Nickel (Ni)		3.8		1.0	ug/g	12-MAY-21	82	270		
Selenium (Se)		<1.0		1.0	ug/g	12-MAY-21	1.5	5.5		
Silver (Ag)		<0.20		0.20	ug/g	12-MAY-21	0.5	40		
Thallium (Tl)		<0.50		0.50	ug/g	12-MAY-21	1	3.3		
Uranium (U)		<1.0		1.0	ug/g	12-MAY-21	2.5	33		
Vanadium (V)		9.7		1.0	ug/g	12-MAY-21	86	86		
Zinc (Zn)		26.6		5.0	ug/g	12-MAY-21	290	340		
Volatile Organic Compounds										
Benzene		<0.0068		0.0068	ug/g	13-MAY-21	0.02	0.034		
Ethylbenzene		<0.018		0.018	ug/g	13-MAY-21	0.05	1.9		
Toluene		<0.080		0.080	ug/g	13-MAY-21	0.2	7.8		
o-Xylene		<0.020		0.020	ug/g	13-MAY-21				
m+p-Xylenes		<0.030		0.030	ug/g	13-MAY-21				
Xylenes (Total)		<0.050		0.050	ug/g	13-MAY-21	0.05	3		
Surrogate: 4-Bromofluorobenzene		110.2		50-140	%	13-MAY-21				
Surrogate: 1,4-Difluorobenzene		106.5		50-140	%	13-MAY-21				
Hydrocarbons										
F1 (C6-C10)		<5.0		5.0	ug/g	13-MAY-21	25	25		
F1-BTEX		<5.0		5.0	ug/g	13-MAY-21	25	25		
F2 (C10-C16)		<10		10	ug/g	07-MAY-21	10	26		
F3 (C16-C34)		<50		50	ug/g	07-MAY-21	240	1700		
F4 (C34-C50)		<50		50	ug/g	07-MAY-21	120	3300		
Total Hydrocarbons (C6-C50)		<72		72	ug/g	13-MAY-21				
Chrom. to baseline at nC50		YES			No Unit	07-MAY-21				
Surrogate: 2-Bromobenzotrifluoride		85.6		60-140	%	07-MAY-21				
Surrogate: 3,4-Dichlorotoluene		107.8		60-140	%	13-MAY-21				
L2584522-4 BH147-21 SS4 7.5-9.5FT										
Sampled By: CLIENT on 04-MAY-21 @ 08:40										
Matrix: SOIL							#1	#2		
Physical Tests										
% Moisture		13.2		0.25	%	08-MAY-21				
Volatile Organic Compounds										

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2584522-4	BH147-21 SS4 7.5-9.5FT							
Sampled By: CLIENT on 04-MAY-21 @ 08:40								
Matrix: SOIL								
Volatile Organic Compounds								
Benzene		<0.0068		0.0068	ug/g	13-MAY-21	0.02	0.034
Ethylbenzene		<0.018		0.018	ug/g	13-MAY-21	0.05	1.9
Toluene		<0.080		0.080	ug/g	13-MAY-21	0.2	7.8
o-Xylene		<0.020		0.020	ug/g	13-MAY-21		
m+p-Xylenes		<0.030		0.030	ug/g	13-MAY-21		
Xylenes (Total)		<0.050		0.050	ug/g	13-MAY-21	0.05	3
Surrogate: 4-Bromofluorobenzene		107.5		50-140	%	13-MAY-21		
Surrogate: 1,4-Difluorobenzene		106.2		50-140	%	13-MAY-21		
Hydrocarbons								
F1 (C6-C10)		<5.0		5.0	ug/g	13-MAY-21	25	25
F1-BTEX		<5.0		5.0	ug/g	13-MAY-21	25	25
F2 (C10-C16)		<10		10	ug/g	07-MAY-21	10	26
F3 (C16-C34)		<50		50	ug/g	07-MAY-21	240	1700
F4 (C34-C50)		<50		50	ug/g	07-MAY-21	120	3300
Total Hydrocarbons (C6-C50)		<72		72	ug/g	13-MAY-21		
Chrom. to baseline at nC50		YES			No Unit	07-MAY-21		
Surrogate: 2-Bromobenzotrifluoride		83.4		60-140	%	07-MAY-21		
Surrogate: 3,4-Dichlorotoluene		106.8		60-140	%	13-MAY-21		
L2584522-6	BH144-21 SS2 2.5-4.5FT							
Sampled By: CLIENT on 04-MAY-21 @ 09:25								
Matrix: SOIL								
Physical Tests								
Conductivity		1.04		0.0040	mS/cm	12-MAY-21	*0.57	1.4
% Moisture		7.56		0.25	%	08-MAY-21		
Saturated Paste Extractables								
SAR		11.4		0.10	SAR	12-MAY-21	*2.4	12
Calcium (Ca)		7.18		0.50	mg/L	12-MAY-21		
Magnesium (Mg)		11.9		0.50	mg/L	12-MAY-21		
Sodium (Na)		215		0.50	mg/L	12-MAY-21		
Volatile Organic Compounds								
Benzene		<0.0068		0.0068	ug/g	13-MAY-21	0.02	0.034
Ethylbenzene		<0.018		0.018	ug/g	13-MAY-21	0.05	1.9
Toluene		<0.080		0.080	ug/g	13-MAY-21	0.2	7.8
o-Xylene		<0.020		0.020	ug/g	13-MAY-21		
m+p-Xylenes		<0.030		0.030	ug/g	13-MAY-21		
Xylenes (Total)		<0.050		0.050	ug/g	13-MAY-21	0.05	3
Surrogate: 4-Bromofluorobenzene		109.0		50-140	%	13-MAY-21		
Surrogate: 1,4-Difluorobenzene		106.1		50-140	%	13-MAY-21		
Hydrocarbons								
F1 (C6-C10)		<5.0		5.0	ug/g	13-MAY-21	25	25
F1-BTEX		<5.0		5.0	ug/g	13-MAY-21	25	25
F2 (C10-C16)		<10		10	ug/g	07-MAY-21	10	26
F3 (C16-C34)		<50		50	ug/g	07-MAY-21	240	1700
F4 (C34-C50)		<50		50	ug/g	07-MAY-21	120	3300
Total Hydrocarbons (C6-C50)		<72		72	ug/g	13-MAY-21		

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details	Analyte	Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping							#1	#2
L2584522-6	BH144-21 SS2 2.5-4.5FT							
Sampled By: CLIENT on 04-MAY-21 @ 09:25								
Matrix: SOIL								
Hydrocarbons								
Chrom. to baseline at nC50		YES			No Unit	07-MAY-21		
Surrogate: 2-Bromobenzotrifluoride		89.6		60-140	%	07-MAY-21		
Surrogate: 3,4-Dichlorotoluene		109.0		60-140	%	13-MAY-21		
L2584522-10	BH145-21 SS2 2.5-4.5FT							
Sampled By: CLIENT on 04-MAY-21 @ 10:40								
Matrix: SOIL								
Physical Tests								
% Moisture		3.44		0.25	%	08-MAY-21		
Metals								
Antimony (Sb)		<1.0		1.0	ug/g	12-MAY-21	1.3	40
Arsenic (As)		1.9		1.0	ug/g	12-MAY-21	18	18
Barium (Ba)		10.0		1.0	ug/g	12-MAY-21	220	670
Beryllium (Be)		<0.50		0.50	ug/g	12-MAY-21	2.5	8
Boron (B)		<5.0		5.0	ug/g	12-MAY-21	36	120
Cadmium (Cd)		<0.50		0.50	ug/g	12-MAY-21	1.2	1.9
Chromium (Cr)		5.4		1.0	ug/g	12-MAY-21	70	160
Cobalt (Co)		2.0		1.0	ug/g	12-MAY-21	21	80
Copper (Cu)		8.6		1.0	ug/g	12-MAY-21	92	230
Lead (Pb)		7.7		1.0	ug/g	12-MAY-21	120	120
Molybdenum (Mo)		<1.0		1.0	ug/g	12-MAY-21	2	40
Nickel (Ni)		4.1		1.0	ug/g	12-MAY-21	82	270
Selenium (Se)		<1.0		1.0	ug/g	12-MAY-21	1.5	5.5
Silver (Ag)		<0.20		0.20	ug/g	12-MAY-21	0.5	40
Thallium (Tl)		<0.50		0.50	ug/g	12-MAY-21	1	3.3
Uranium (U)		<1.0		1.0	ug/g	12-MAY-21	2.5	33
Vanadium (V)		14.1		1.0	ug/g	12-MAY-21	86	86
Zinc (Zn)		31.2		5.0	ug/g	12-MAY-21	290	340
Volatile Organic Compounds								
Benzene		<0.0068		0.0068	ug/g	13-MAY-21	0.02	0.034
Ethylbenzene		<0.018		0.018	ug/g	13-MAY-21	0.05	1.9
Toluene		<0.080		0.080	ug/g	13-MAY-21	0.2	7.8
o-Xylene		<0.020		0.020	ug/g	13-MAY-21		
m+p-Xylenes		<0.030		0.030	ug/g	13-MAY-21		
Xylenes (Total)		<0.050		0.050	ug/g	13-MAY-21	0.05	3
Surrogate: 4-Bromofluorobenzene		116.2		50-140	%	13-MAY-21		
Surrogate: 1,4-Difluorobenzene		113.3		50-140	%	13-MAY-21		
Hydrocarbons								
F1 (C6-C10)		<5.0		5.0	ug/g	13-MAY-21	25	25
F1-BTEX		<5.0		5.0	ug/g	13-MAY-21	25	25
F2 (C10-C16)		<10		10	ug/g	07-MAY-21	10	26
F3 (C16-C34)		<50		50	ug/g	07-MAY-21	240	1700
F4 (C34-C50)		<50		50	ug/g	07-MAY-21	120	3300
Total Hydrocarbons (C6-C50)		<72		72	ug/g	13-MAY-21		
Chrom. to baseline at nC50		YES			No Unit	07-MAY-21		
Surrogate: 2-Bromobenzotrifluoride		80.1		60-140	%	07-MAY-21		

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2584522-10	BH145-21 SS2 2.5-4.5FT							
Sampled By: CLIENT on 04-MAY-21 @ 10:40								
Matrix: SOIL								
Hydrocarbons								
Surrogate: 3,4-Dichlorotoluene		111.8		60-140	%	13-MAY-21		
L2584522-14	BH146-21 SS2 2.5-4.5FT							
Sampled By: CLIENT on 04-MAY-21 @ 11:40								
Matrix: SOIL								
Physical Tests								
% Moisture		9.48		0.25	%	08-MAY-21		
Volatile Organic Compounds								
Benzene		<0.0068		0.0068	ug/g	13-MAY-21	0.02	0.034
Ethylbenzene		<0.018		0.018	ug/g	13-MAY-21	0.05	1.9
Toluene		<0.080		0.080	ug/g	13-MAY-21	0.2	7.8
o-Xylene		<0.020		0.020	ug/g	13-MAY-21		
m+p-Xylenes		<0.030		0.030	ug/g	13-MAY-21		
Xylenes (Total)		<0.050		0.050	ug/g	13-MAY-21	0.05	3
Surrogate: 4-Bromofluorobenzene		110.1		50-140	%	13-MAY-21		
Surrogate: 1,4-Difluorobenzene		109.1		50-140	%	13-MAY-21		
Hydrocarbons								
F1 (C6-C10)		<5.0		5.0	ug/g	13-MAY-21	25	25
F1-BTEX		<5.0		5.0	ug/g	13-MAY-21	25	25
F2 (C10-C16)		<10		10	ug/g	07-MAY-21	10	26
F2-Naphth		<10		10	ug/g	13-MAY-21		
F3 (C16-C34)		<50		50	ug/g	07-MAY-21	240	1700
F3-PAH		<50		50	ug/g	13-MAY-21		
F4 (C34-C50)		<50		50	ug/g	07-MAY-21	120	3300
Total Hydrocarbons (C6-C50)		<72		72	ug/g	13-MAY-21		
Chrom. to baseline at nC50		YES			No Unit	07-MAY-21		
Surrogate: 2-Bromobenzotrifluoride		83.6		60-140	%	07-MAY-21		
Surrogate: 3,4-Dichlorotoluene		104.7		60-140	%	13-MAY-21		
Polycyclic Aromatic Hydrocarbons								
Acenaphthene		<0.050		0.050	ug/g	10-MAY-21	0.072	15
Acenaphthylene		<0.050		0.050	ug/g	10-MAY-21	0.093	0.093
Anthracene		<0.050		0.050	ug/g	10-MAY-21	0.16	0.16
Benzo(a)anthracene		<0.050		0.050	ug/g	10-MAY-21	0.36	1
Benzo(a)pyrene		<0.050		0.050	ug/g	10-MAY-21	0.3	0.7
Benzo(b&j)fluoranthene		<0.050		0.050	ug/g	10-MAY-21	0.47	7
Benzo(g,h,i)perylene		<0.050		0.050	ug/g	10-MAY-21	0.68	13
Benzo(k)fluoranthene		<0.050		0.050	ug/g	10-MAY-21	0.48	7
Chrysene		<0.050		0.050	ug/g	10-MAY-21	2.8	14
Dibenz(a,h)anthracene		<0.050		0.050	ug/g	10-MAY-21	0.1	0.7
Fluoranthene		<0.050		0.050	ug/g	10-MAY-21	0.56	70
Fluorene		<0.050		0.050	ug/g	10-MAY-21	0.12	6.8
Indeno(1,2,3-cd)pyrene		<0.050		0.050	ug/g	10-MAY-21	0.23	0.76
1+2-Methylnaphthalenes		<0.042		0.042	ug/g	10-MAY-21	0.59	8.7
1-Methylnaphthalene		<0.030		0.030	ug/g	10-MAY-21	0.59	8.7
2-Methylnaphthalene		<0.030		0.030	ug/g	10-MAY-21	0.59	8.7
Naphthalene		<0.013		0.013	ug/g	10-MAY-21	0.09	1.8

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2584522-14	BH146-21 SS2 2.5-4.5FT							
Sampled By: CLIENT on 04-MAY-21 @ 11:40								
Matrix: SOIL								
Polycyclic Aromatic Hydrocarbons								
	Phenanthrene	<0.046		0.046	ug/g	10-MAY-21	0.69	12
	Pyrene	<0.050		0.050	ug/g	10-MAY-21	1	70
	Surrogate: 2-Fluorobiphenyl	87.6		50-140	%	10-MAY-21		
	Surrogate: d14-Terphenyl	87.4		50-140	%	10-MAY-21		
L2584522-15	BH146-21 SS3 5-7FT							
Sampled By: CLIENT on 04-MAY-21 @ 11:50								
Matrix: SOIL								
Physical Tests								
	Conductivity	3.93		0.0040	mS/cm	12-MAY-21	*0.57	*1.4
	pH	7.97		0.10	pH units	10-MAY-21		
Saturated Paste Extractables								
	SAR	>47.	SAR:L	0.10	SAR	12-MAY-21	*2.4	*12
	Calcium (Ca)	<10	DLHC	10	mg/L	12-MAY-21		
	Magnesium (Mg)	<10	DLHC	10	mg/L	12-MAY-21		
	Sodium (Na)	870	DLHC	10	mg/L	12-MAY-21		
Metals								
	Antimony (Sb)	<1.0		1.0	ug/g	12-MAY-21	1.3	40
	Arsenic (As)	2.8		1.0	ug/g	12-MAY-21	18	18
	Barium (Ba)	184		1.0	ug/g	12-MAY-21	220	670
	Beryllium (Be)	1.29		0.50	ug/g	12-MAY-21	2.5	8
	Boron (B)	16.3		5.0	ug/g	12-MAY-21	36	120
	Cadmium (Cd)	<0.50		0.50	ug/g	12-MAY-21	1.2	1.9
	Chromium (Cr)	39.3		1.0	ug/g	12-MAY-21	70	160
	Cobalt (Co)	14.8		1.0	ug/g	12-MAY-21	21	80
	Copper (Cu)	18.3		1.0	ug/g	12-MAY-21	92	230
	Lead (Pb)	16.3		1.0	ug/g	12-MAY-21	120	120
	Molybdenum (Mo)	<1.0		1.0	ug/g	12-MAY-21	2	40
	Nickel (Ni)	30.8		1.0	ug/g	12-MAY-21	82	270
	Selenium (Se)	<1.0		1.0	ug/g	12-MAY-21	1.5	5.5
	Silver (Ag)	<0.20		0.20	ug/g	12-MAY-21	0.5	40
	Thallium (Tl)	<0.50		0.50	ug/g	12-MAY-21	1	3.3
	Uranium (U)	<1.0		1.0	ug/g	12-MAY-21	2.5	33
	Vanadium (V)	53.3		1.0	ug/g	12-MAY-21	86	86
	Zinc (Zn)	91.0		5.0	ug/g	12-MAY-21	290	340
L2584522-18	BH112-21 SS2 2.5-4.5FT							
Sampled By: CLIENT on 04-MAY-21 @ 13:50								
Matrix: SOIL								
Physical Tests								
	Conductivity	0.264		0.0040	mS/cm	11-MAY-21	0.57	1.4
	% Moisture	3.94		0.25	%	08-MAY-21		
Saturated Paste Extractables								
	SAR	8.35		0.10	SAR	11-MAY-21	*2.4	12
	Calcium (Ca)	1.44		0.50	mg/L	11-MAY-21		

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2584522-18	BH112-21 SS2 2.5-4.5FT							
Sampled By: CLIENT on 04-MAY-21 @ 13:50								
Matrix: SOIL								
Saturated Paste Extractables								
	Magnesium (Mg)	1.16		0.50	mg/L	11-MAY-21		
	Sodium (Na)	55.5		0.50	mg/L	11-MAY-21		
Metals								
	Antimony (Sb)	<1.0		1.0	ug/g	11-MAY-21	1.3	40
	Arsenic (As)	3.0		1.0	ug/g	11-MAY-21	18	18
	Barium (Ba)	19.5		1.0	ug/g	11-MAY-21	220	670
	Beryllium (Be)	<0.50		0.50	ug/g	11-MAY-21	2.5	8
	Boron (B)	6.5		5.0	ug/g	11-MAY-21	36	120
	Cadmium (Cd)	<0.50		0.50	ug/g	11-MAY-21	1.2	1.9
	Chromium (Cr)	12.4		1.0	ug/g	11-MAY-21	70	160
	Cobalt (Co)	3.4		1.0	ug/g	11-MAY-21	21	80
	Copper (Cu)	19.5		1.0	ug/g	11-MAY-21	92	230
	Lead (Pb)	17.8		1.0	ug/g	11-MAY-21	120	120
	Molybdenum (Mo)	1.0		1.0	ug/g	11-MAY-21	2	40
	Nickel (Ni)	7.3		1.0	ug/g	11-MAY-21	82	270
	Selenium (Se)	<1.0		1.0	ug/g	11-MAY-21	1.5	5.5
	Silver (Ag)	<0.20		0.20	ug/g	11-MAY-21	0.5	40
	Thallium (Tl)	<0.50		0.50	ug/g	11-MAY-21	1	3.3
	Uranium (U)	<1.0		1.0	ug/g	11-MAY-21	2.5	33
	Vanadium (V)	18.2		1.0	ug/g	11-MAY-21	86	86
	Zinc (Zn)	80.4		5.0	ug/g	11-MAY-21	290	340
Volatile Organic Compounds								
	Benzene	<0.0068		0.0068	ug/g	13-MAY-21	0.02	0.034
	Ethylbenzene	<0.018		0.018	ug/g	13-MAY-21	0.05	1.9
	Toluene	<0.080		0.080	ug/g	13-MAY-21	0.2	7.8
	o-Xylene	<0.020		0.020	ug/g	13-MAY-21		
	m+p-Xylenes	<0.030		0.030	ug/g	13-MAY-21		
	Xylenes (Total)	<0.050		0.050	ug/g	13-MAY-21	0.05	3
	Surrogate: 4-Bromofluorobenzene	113.3		50-140	%	13-MAY-21		
	Surrogate: 1,4-Difluorobenzene	110.9		50-140	%	13-MAY-21		
Hydrocarbons								
	F1 (C6-C10)	<5.0		5.0	ug/g	13-MAY-21	25	25
	F1-BTEX	<5.0		5.0	ug/g	13-MAY-21	25	25
	F2 (C10-C16)	<10		10	ug/g	11-MAY-21	10	26
	F3 (C16-C34)	<50		50	ug/g	11-MAY-21	240	1700
	F4 (C34-C50)	<50		50	ug/g	11-MAY-21	120	3300
	Total Hydrocarbons (C6-C50)	<72		72	ug/g	13-MAY-21		
	Chrom. to baseline at nC50	YES			No Unit	11-MAY-21		
	Surrogate: 2-Bromobenzotrifluoride	88.4		60-140	%	11-MAY-21		
	Surrogate: 3,4-Dichlorotoluene	110.8		60-140	%	13-MAY-21		
L2584522-20	BH112-21 SS4 7.5-9.5FT							
Sampled By: CLIENT on 04-MAY-21 @ 14:10								
Matrix: SOIL								
Metals								
	Antimony (Sb)	<1.0		1.0	ug/g	11-MAY-21	1.3	40

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2584522-20	BH112-21 SS4 7.5-9.5FT							
Sampled By: CLIENT on 04-MAY-21 @ 14:10								
Matrix: SOIL								
Metals								
Arsenic (As)		2.9		1.0	ug/g	11-MAY-21	18	18
Barium (Ba)		43.4		1.0	ug/g	11-MAY-21	220	670
Beryllium (Be)		<0.50		0.50	ug/g	11-MAY-21	2.5	8
Boron (B)		7.6		5.0	ug/g	11-MAY-21	36	120
Cadmium (Cd)		<0.50		0.50	ug/g	11-MAY-21	1.2	1.9
Chromium (Cr)		12.6		1.0	ug/g	11-MAY-21	70	160
Cobalt (Co)		5.4		1.0	ug/g	11-MAY-21	21	80
Copper (Cu)		13.7		1.0	ug/g	11-MAY-21	92	230
Lead (Pb)		6.4		1.0	ug/g	11-MAY-21	120	120
Molybdenum (Mo)		<1.0		1.0	ug/g	11-MAY-21	2	40
Nickel (Ni)		11.0		1.0	ug/g	11-MAY-21	82	270
Selenium (Se)		<1.0		1.0	ug/g	11-MAY-21	1.5	5.5
Silver (Ag)		<0.20		0.20	ug/g	11-MAY-21	0.5	40
Thallium (Tl)		<0.50		0.50	ug/g	11-MAY-21	1	3.3
Uranium (U)		<1.0		1.0	ug/g	11-MAY-21	2.5	33
Vanadium (V)		24.6		1.0	ug/g	11-MAY-21	86	86
Zinc (Zn)		29.2		5.0	ug/g	11-MAY-21	290	340

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

Reference Information

Sample Parameter Qualifier key listed:

Qualifier	Description
SAR:L	SAR is incalculable due to Ca and Mg below DL (with Na above DL). Lowest possible SAR is reported as minimum value.
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference***
BTX-511-HS-WT	Soil	BTEX-O.Reg 153/04 (July 2011)	SW846 8260

BTX is determined by extracting a soil or sediment sample as received with methanol, then analyzing by headspace-GC/MS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

EC-WT	Soil	Conductivity (EC)	MOEE E3138
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A representative subsample is tumbled with de-ionized (DI) water. The ratio of water to soil is 2:1 v/w. After tumbling the sample is then analyzed by a conductivity meter.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

F1-F4-511-CALC-WT	Soil	F1-F4 Hydrocarbon Calculated Parameters	CCME CWS-PHC, Pub #1310, Dec 2001-S
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Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

Hydrocarbon results are expressed on a dry weight basis.

In cases where results for both F4 and F4G are reported, the greater of the two results must be used in any application of the CWS PHC guidelines and the gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.

In samples where BTEX and F1 were analyzed, F1-BTEX represents a value where the sum of Benzene, Toluene, Ethylbenzene and total Xylenes has been subtracted from F1.

In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.

Unless otherwise qualified, the following quality control criteria have been met for the F1 hydrocarbon range:

1. All extraction and analysis holding times were met.
2. Instrument performance showing response factors for C6 and C10 within 30% of the response factor for toluene.
3. Linearity of gasoline response within 15% throughout the calibration range.

Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:

1. All extraction and analysis holding times were met.
2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.
3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.
4. Linearity of diesel or motor oil response within 15% throughout the calibration range.

F1-HS-511-WT	Soil	F1-O.Reg 153/04 (July 2011)	E3398/CCME TIER 1-HS
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Fraction F1 is determined by extracting a soil or sediment sample as received with methanol, then analyzing by headspace-GC/FID.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

Reference Information

F2-F4-511-WT Soil F2-F4-O.Reg 153/04 (July 2011) CCME Tier 1

Petroleum Hydrocarbons (F2-F4 fractions) are extracted from soil with 1:1 hexane:acetone using a rotary extractor. Extracts are treated with silica gel to remove polar organic interferences. F2, F3, & F4 are analyzed by GC-FID. F4G-sg is analyzed gravimetrically.

Notes:

1. F2 (C10-C16): Sum of all hydrocarbons that elute between nC10 and nC16.
2. F3 (C16-C34): Sum of all hydrocarbons that elute between nC16 and nC34.
3. F4 (C34-C50): Sum of all hydrocarbons that elute between nC34 and nC50.
4. F4G: Gravimetric Heavy Hydrocarbons
5. F4G-sg: Gravimetric Heavy Hydrocarbons (F4G) after silica gel treatment.
6. Where both F4 (C34-C50) and F4G-sg are reported for a sample, the larger of the two values is used for comparison against the relevant CCME guideline for F4.
7. F4G-sg cannot be added to the C6 to C50 hydrocarbon results to obtain an estimate of total extractable hydrocarbons.
8. This method is validated for use.
9. Data from analysis of validation and quality control samples is available upon request.
10. Reported results are expressed as milligrams per dry kilogram, unless otherwise indicated.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

MET-200.2-CCMS-WT Soil Metals in Soil by CRC ICPMS EPA 200.2/6020B (mod)

Soil/sediment is dried, disaggregated, and sieved (2 mm). For tests intended to support Ontario regulations, the <2mm fraction is ground to pass through a 0.355 mm sieve. Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H₂S) may be excluded if lost during sampling, storage, or digestion.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

METHYLNAPS-CALC-WT	Soil	ABN-Calculated Parameters	SW846 8270
MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)
PAH-511-WT	Soil	PAH-O.Reg 153/04 (July 2011)	SW846 3510/8270

A representative sub-sample of soil is fortified with deuterium-labelled surrogates and a mechanical shaking technique is used to extract the sample with a mixture of methanol and toluene. The extracts are concentrated and analyzed by GC/MS. Results for benzo(b) fluoranthene may include contributions from benzo(j)fluoranthene, if also present in the sample.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

PH-WT Soil pH MOEE E3137A

A minimum 10g portion of the sample is extracted with 20mL of 0.01M calcium chloride solution by shaking for at least 30 minutes. The aqueous layer is separated from the soil and then analyzed using a pH meter and electrode.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

SAR-R511-WT Soil SAR-O.Reg 153/04 (July 2011) SW846 6010C

A dried, disaggregated solid sample is extracted with deionized water, the aqueous extract is separated from the solid, acidified and then analyzed using a ICP/OES. The concentrations of Na, Ca and Mg are reported as per CALA requirements for calculated parameters. These individual parameters are not for comparison to any guideline.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

XYLENES-SUM-CALC-WT	Soil	Sum of Xylene Isomer Concentrations	CALCULATION
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Total xylenes represents the sum of o-xylene and m&p-xylene.

*** ALS test methods may incorporate modifications from specified reference methods to improve performance.

Chain of Custody numbers:

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Reference Information

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA		

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guideline limits are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.



Quality Control Report

Workorder: L2584522

Report Date: 13-MAY-21

Page 1 of 15

Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
BTX-511-HS-WT		Soil						
Batch	R5457087							
WG3530628-4	DUP	WG3530628-3						
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	13-MAY-21
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	13-MAY-21
m+p-Xylenes		<0.030	<0.030	RPD-NA	ug/g	N/A	40	13-MAY-21
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	13-MAY-21
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	13-MAY-21
WG3530628-2	LCS							
Benzene			108.6		%		70-130	13-MAY-21
Ethylbenzene			104.4		%		70-130	13-MAY-21
m+p-Xylenes			95.9		%		70-130	13-MAY-21
o-Xylene			103.8		%		70-130	13-MAY-21
Toluene			102.1		%		70-130	13-MAY-21
WG3530628-1	MB							
Benzene			<0.0068		ug/g		0.0068	13-MAY-21
Ethylbenzene			<0.018		ug/g		0.018	13-MAY-21
m+p-Xylenes			<0.030		ug/g		0.03	13-MAY-21
o-Xylene			<0.020		ug/g		0.02	13-MAY-21
Toluene			<0.080		ug/g		0.08	13-MAY-21
Surrogate: 1,4-Difluorobenzene			108.6		%		50-140	13-MAY-21
Surrogate: 4-Bromofluorobenzene			108.7		%		50-140	13-MAY-21
WG3530628-5	MS	WG3530628-3						
Benzene			114.7		%		60-140	13-MAY-21
Ethylbenzene			114.3		%		60-140	13-MAY-21
m+p-Xylenes			104.7		%		60-140	13-MAY-21
o-Xylene			113.1		%		60-140	13-MAY-21
Toluene			116.0		%		60-140	13-MAY-21
EC-WT		Soil						
Batch	R5455733							
WG3532202-4	DUP	WG3532202-3						
Conductivity		1.16	1.15		mS/cm	0.9	20	11-MAY-21
WG3532202-2	IRM	WT SAR4						
Conductivity			95.3		%		70-130	11-MAY-21
WG3532500-1	LCS							
Conductivity			104.9		%		90-110	11-MAY-21
WG3532202-1	MB							
Conductivity			<0.0040		mS/cm		0.004	11-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
EC-WT		Soil						
Batch R5456367								
WG3532811-4	DUP	WG3532811-3						
Conductivity		2.88	2.87		mS/cm	0.3	20	12-MAY-21
WG3532811-2	IRM	WT SAR4						
Conductivity			103.6		%		70-130	12-MAY-21
WG3533269-1	LCS							
Conductivity			103.6		%		90-110	12-MAY-21
WG3532811-1	MB							
Conductivity			<0.0040		mS/cm		0.004	12-MAY-21
Batch R5456443								
WG3533040-4	DUP	WG3533040-3						
Conductivity		0.307	0.293		mS/cm	4.7	20	12-MAY-21
WG3533040-2	IRM	WT SAR4						
Conductivity			100.6		%		70-130	12-MAY-21
WG3533489-1	LCS							
Conductivity			103.8		%		90-110	12-MAY-21
WG3533040-1	MB							
Conductivity			<0.0040		mS/cm		0.004	12-MAY-21
F1-HS-511-WT		Soil						
Batch R5457087								
WG3530628-4	DUP	WG3530628-3						
F1 (C6-C10)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	13-MAY-21
WG3530628-2	LCS							
F1 (C6-C10)			83.3		%		80-120	13-MAY-21
WG3530628-1	MB							
F1 (C6-C10)			<5.0		ug/g		5	13-MAY-21
Surrogate: 3,4-Dichlorotoluene			108.9		%		60-140	13-MAY-21
WG3530628-5	MS	WG3530628-3						
F1 (C6-C10)			123.9		%		60-140	13-MAY-21
F2-F4-511-WT		Soil						
Batch R5454421								
WG3530536-3	DUP	WG3530536-5						
F2 (C10-C16)		<10	<10	RPD-NA	ug/g	N/A	30	07-MAY-21
F3 (C16-C34)		<50	<50	RPD-NA	ug/g	N/A	30	07-MAY-21
F4 (C34-C50)		<50	<50	RPD-NA	ug/g	N/A	30	07-MAY-21
WG3530536-2	LCS							
F2 (C10-C16)			92.1		%		80-120	07-MAY-21
F3 (C16-C34)			91.9		%		80-120	07-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F2-F4-511-WT		Soil						
Batch	R5454421							
WG3530536-2	LCS							
F4 (C34-C50)			76.0	LCS-L	%		80-120	07-MAY-21
WG3530536-1	MB							
F2 (C10-C16)			<10		ug/g		10	07-MAY-21
F3 (C16-C34)			<50		ug/g		50	07-MAY-21
F4 (C34-C50)			<50		ug/g		50	07-MAY-21
Surrogate: 2-Bromobenzotrifluoride			87.3		%		60-140	07-MAY-21
WG3530536-4	MS	WG3530536-5						
F2 (C10-C16)			90.1		%		60-140	07-MAY-21
F3 (C16-C34)			91.5		%		60-140	07-MAY-21
F4 (C34-C50)			90.6		%		60-140	07-MAY-21
Batch	R5455694							
WG3532108-3	DUP	WG3532108-5						
F2 (C10-C16)		<10	<10	RPD-NA	ug/g	N/A	30	11-MAY-21
F3 (C16-C34)		<50	<50	RPD-NA	ug/g	N/A	30	11-MAY-21
F4 (C34-C50)		<50	<50	RPD-NA	ug/g	N/A	30	11-MAY-21
WG3532108-2	LCS							
F2 (C10-C16)			96.3		%		80-120	11-MAY-21
F3 (C16-C34)			98.8		%		80-120	11-MAY-21
F4 (C34-C50)			97.9		%		80-120	11-MAY-21
WG3532108-1	MB							
F2 (C10-C16)			<10		ug/g		10	11-MAY-21
F3 (C16-C34)			<50		ug/g		50	11-MAY-21
F4 (C34-C50)			<50		ug/g		50	11-MAY-21
Surrogate: 2-Bromobenzotrifluoride			94.5		%		60-140	11-MAY-21
WG3532108-4	MS	WG3532108-5						
F2 (C10-C16)			94.2		%		60-140	11-MAY-21
F3 (C16-C34)			95.1		%		60-140	11-MAY-21
F4 (C34-C50)			96.1		%		60-140	11-MAY-21
MET-200.2-CCMS-WT		Soil						
Batch	R5455707							
WG3532200-2	CRM	WT-SS-2						
Antimony (Sb)			102.9		%		70-130	11-MAY-21
Arsenic (As)			105.8		%		70-130	11-MAY-21
Barium (Ba)			99.6		%		70-130	11-MAY-21
Beryllium (Be)			104.4		%		70-130	11-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
Soil								
Batch	R5455707							
WG3532200-2	CRM	WT-SS-2						
Boron (B)			9.7		mg/kg		3.5-13.5	11-MAY-21
Cadmium (Cd)			113.3		%		70-130	11-MAY-21
Chromium (Cr)			104.9		%		70-130	11-MAY-21
Cobalt (Co)			103.8		%		70-130	11-MAY-21
Copper (Cu)			106.4		%		70-130	11-MAY-21
Lead (Pb)			105.4		%		70-130	11-MAY-21
Molybdenum (Mo)			105.3		%		70-130	11-MAY-21
Nickel (Ni)			106.0		%		70-130	11-MAY-21
Selenium (Se)			0.14		mg/kg		0-0.34	11-MAY-21
Silver (Ag)			89.6		%		70-130	11-MAY-21
Thallium (Tl)			0.084		mg/kg		0.029-0.129	11-MAY-21
Uranium (U)			104.0		%		70-130	11-MAY-21
Vanadium (V)			104.6		%		70-130	11-MAY-21
Zinc (Zn)			100.3		%		70-130	11-MAY-21
WG3532200-6	DUP	WG3532200-5						
Antimony (Sb)		0.10	0.11		ug/g	3.5	30	11-MAY-21
Arsenic (As)		4.65	4.69		ug/g	1.0	30	11-MAY-21
Barium (Ba)		67.5	67.0		ug/g	0.6	40	11-MAY-21
Beryllium (Be)		1.02	0.97		ug/g	5.5	30	11-MAY-21
Boron (B)		10.5	9.9		ug/g	5.8	30	11-MAY-21
Cadmium (Cd)		0.066	0.061		ug/g	8.8	30	11-MAY-21
Chromium (Cr)		30.6	30.4		ug/g	0.6	30	11-MAY-21
Cobalt (Co)		11.0	11.0		ug/g	0.4	30	11-MAY-21
Copper (Cu)		16.7	16.5		ug/g	1.3	30	11-MAY-21
Lead (Pb)		4.42	4.37		ug/g	1.1	40	11-MAY-21
Molybdenum (Mo)		0.38	0.39		ug/g	2.6	40	11-MAY-21
Nickel (Ni)		28.9	28.6		ug/g	1.0	30	11-MAY-21
Selenium (Se)		0.24	0.22		ug/g	6.9	30	11-MAY-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	11-MAY-21
Thallium (Tl)		0.161	0.154		ug/g	4.7	30	11-MAY-21
Uranium (U)		0.874	0.820		ug/g	6.4	30	11-MAY-21
Vanadium (V)		41.7	41.4		ug/g	0.8	30	11-MAY-21
Zinc (Zn)		71.4	70.0		ug/g	1.9	30	11-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT		Soil						
Batch	R5455707							
WG3532200-4	LCS							
Antimony (Sb)			112.9		%		80-120	11-MAY-21
Arsenic (As)			112.2		%		80-120	11-MAY-21
Barium (Ba)			112.1		%		80-120	11-MAY-21
Beryllium (Be)			110.9		%		80-120	11-MAY-21
Boron (B)			111.7		%		80-120	11-MAY-21
Cadmium (Cd)			107.1		%		80-120	11-MAY-21
Chromium (Cr)			111.8		%		80-120	11-MAY-21
Cobalt (Co)			110.7		%		80-120	11-MAY-21
Copper (Cu)			108.3		%		80-120	11-MAY-21
Lead (Pb)			112.7		%		80-120	11-MAY-21
Molybdenum (Mo)			109.0		%		80-120	11-MAY-21
Nickel (Ni)			109.9		%		80-120	11-MAY-21
Selenium (Se)			111.1		%		80-120	11-MAY-21
Silver (Ag)			109.3		%		80-120	11-MAY-21
Thallium (Tl)			112.3		%		80-120	11-MAY-21
Uranium (U)			111.2		%		80-120	11-MAY-21
Vanadium (V)			114.9		%		80-120	11-MAY-21
Zinc (Zn)			105.8		%		80-120	11-MAY-21
WG3532200-1	MB							
Antimony (Sb)			<0.10		mg/kg		0.1	11-MAY-21
Arsenic (As)			<0.10		mg/kg		0.1	11-MAY-21
Barium (Ba)			<0.50		mg/kg		0.5	11-MAY-21
Beryllium (Be)			<0.10		mg/kg		0.1	11-MAY-21
Boron (B)			<5.0		mg/kg		5	11-MAY-21
Cadmium (Cd)			<0.020		mg/kg		0.02	11-MAY-21
Chromium (Cr)			<0.50		mg/kg		0.5	11-MAY-21
Cobalt (Co)			<0.10		mg/kg		0.1	11-MAY-21
Copper (Cu)			<0.50		mg/kg		0.5	11-MAY-21
Lead (Pb)			<0.50		mg/kg		0.5	11-MAY-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	11-MAY-21
Nickel (Ni)			<0.50		mg/kg		0.5	11-MAY-21
Selenium (Se)			<0.20		mg/kg		0.2	11-MAY-21
Silver (Ag)			<0.10		mg/kg		0.1	11-MAY-21
Thallium (Tl)			<0.050		mg/kg		0.05	11-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
Soil								
Batch R5455707								
WG3532200-1 MB								
Uranium (U)			<0.050		mg/kg		0.05	11-MAY-21
Vanadium (V)			<0.20		mg/kg		0.2	11-MAY-21
Zinc (Zn)			<2.0		mg/kg		2	11-MAY-21
Batch R5456310								
WG3533026-2 CRM								
WT-SS-2								
Antimony (Sb)			94.0		%		70-130	12-MAY-21
Arsenic (As)			93.0		%		70-130	12-MAY-21
Barium (Ba)			93.3		%		70-130	12-MAY-21
Beryllium (Be)			105.0		%		70-130	12-MAY-21
Boron (B)			8.9		mg/kg		3.5-13.5	12-MAY-21
Cadmium (Cd)			97.2		%		70-130	12-MAY-21
Chromium (Cr)			91.1		%		70-130	12-MAY-21
Cobalt (Co)			94.0		%		70-130	12-MAY-21
Copper (Cu)			90.5		%		70-130	12-MAY-21
Lead (Pb)			95.3		%		70-130	12-MAY-21
Molybdenum (Mo)			102.9		%		70-130	12-MAY-21
Nickel (Ni)			95.9		%		70-130	12-MAY-21
Selenium (Se)			0.14		mg/kg		0-0.34	12-MAY-21
Silver (Ag)			100.6		%		70-130	12-MAY-21
Thallium (Tl)			0.072		mg/kg		0.029-0.129	12-MAY-21
Uranium (U)			91.0		%		70-130	12-MAY-21
Vanadium (V)			93.2		%		70-130	12-MAY-21
Zinc (Zn)			90.3		%		70-130	12-MAY-21
WG3533026-6 DUP								
WG3533026-5								
Antimony (Sb)		<0.10	<0.10	RPD-NA	ug/g	N/A	30	12-MAY-21
Arsenic (As)		1.26	1.35		ug/g	7.4	30	12-MAY-21
Barium (Ba)		13.1	14.0		ug/g	7.2	40	12-MAY-21
Beryllium (Be)		0.17	0.20		ug/g	19	30	12-MAY-21
Boron (B)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	12-MAY-21
Cadmium (Cd)		0.053	0.050		ug/g	4.4	30	12-MAY-21
Chromium (Cr)		8.05	8.26		ug/g	2.5	30	12-MAY-21
Cobalt (Co)		1.96	2.02		ug/g	2.8	30	12-MAY-21
Copper (Cu)		2.29	2.47		ug/g	7.6	30	12-MAY-21
Lead (Pb)		2.41	2.62		ug/g	8.2	40	12-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
	Soil							
Batch	R5456310							
WG3533026-6	DUP	WG3533026-5						
Molybdenum (Mo)		0.15	0.17		ug/g	12	40	12-MAY-21
Nickel (Ni)		3.85	4.29		ug/g	11	30	12-MAY-21
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	12-MAY-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	12-MAY-21
Thallium (Tl)		<0.050	<0.050	RPD-NA	ug/g	N/A	30	12-MAY-21
Uranium (U)		0.480	0.502		ug/g	4.4	30	12-MAY-21
Vanadium (V)		21.4	22.2		ug/g	3.7	30	12-MAY-21
Zinc (Zn)		9.5	10.4		ug/g	8.8	30	12-MAY-21
WG3533026-4	LCS							
Antimony (Sb)			107.6		%		80-120	12-MAY-21
Arsenic (As)			103.8		%		80-120	12-MAY-21
Barium (Ba)			99.4		%		80-120	12-MAY-21
Beryllium (Be)			102.2		%		80-120	12-MAY-21
Boron (B)			98.8		%		80-120	12-MAY-21
Cadmium (Cd)			103.9		%		80-120	12-MAY-21
Chromium (Cr)			104.3		%		80-120	12-MAY-21
Cobalt (Co)			102.7		%		80-120	12-MAY-21
Copper (Cu)			99.8		%		80-120	12-MAY-21
Lead (Pb)			102.3		%		80-120	12-MAY-21
Molybdenum (Mo)			106.9		%		80-120	12-MAY-21
Nickel (Ni)			101.0		%		80-120	12-MAY-21
Selenium (Se)			100.8		%		80-120	12-MAY-21
Silver (Ag)			106.2		%		80-120	12-MAY-21
Thallium (Tl)			100.8		%		80-120	12-MAY-21
Uranium (U)			100.7		%		80-120	12-MAY-21
Vanadium (V)			105.5		%		80-120	12-MAY-21
Zinc (Zn)			100.3		%		80-120	12-MAY-21
WG3533026-1	MB							
Antimony (Sb)			<0.10		mg/kg		0.1	12-MAY-21
Arsenic (As)			<0.10		mg/kg		0.1	12-MAY-21
Barium (Ba)			<0.50		mg/kg		0.5	12-MAY-21
Beryllium (Be)			<0.10		mg/kg		0.1	12-MAY-21
Boron (B)			<5.0		mg/kg		5	12-MAY-21
Cadmium (Cd)			<0.020		mg/kg		0.02	12-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
Soil								
Batch R5456310								
WG3533026-1 MB								
Chromium (Cr)			<0.50		mg/kg		0.5	12-MAY-21
Cobalt (Co)			<0.10		mg/kg		0.1	12-MAY-21
Copper (Cu)			<0.50		mg/kg		0.5	12-MAY-21
Lead (Pb)			<0.50		mg/kg		0.5	12-MAY-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	12-MAY-21
Nickel (Ni)			<0.50		mg/kg		0.5	12-MAY-21
Selenium (Se)			<0.20		mg/kg		0.2	12-MAY-21
Silver (Ag)			<0.10		mg/kg		0.1	12-MAY-21
Thallium (Tl)			<0.050		mg/kg		0.05	12-MAY-21
Uranium (U)			<0.050		mg/kg		0.05	12-MAY-21
Vanadium (V)			<0.20		mg/kg		0.2	12-MAY-21
Zinc (Zn)			<2.0		mg/kg		2	12-MAY-21
Batch R5456921								
WG3532875-2 CRM								
WT-SS-2								
Antimony (Sb)			112.0		%		70-130	12-MAY-21
Arsenic (As)			113.5		%		70-130	12-MAY-21
Barium (Ba)			104.9		%		70-130	12-MAY-21
Beryllium (Be)			117.3		%		70-130	12-MAY-21
Boron (B)			9.3		mg/kg		3.5-13.5	12-MAY-21
Cadmium (Cd)			111.6		%		70-130	12-MAY-21
Chromium (Cr)			103.7		%		70-130	12-MAY-21
Cobalt (Co)			114.6		%		70-130	12-MAY-21
Copper (Cu)			121.2		%		70-130	12-MAY-21
Lead (Pb)			112.1		%		70-130	12-MAY-21
Molybdenum (Mo)			105.2		%		70-130	12-MAY-21
Nickel (Ni)			120.5		%		70-130	12-MAY-21
Selenium (Se)			0.16		mg/kg		0-0.34	12-MAY-21
Silver (Ag)			113.0		%		70-130	12-MAY-21
Thallium (Tl)			0.076		mg/kg		0.029-0.129	12-MAY-21
Uranium (U)			99.4		%		70-130	12-MAY-21
Vanadium (V)			108.7		%		70-130	12-MAY-21
Zinc (Zn)			114.2		%		70-130	12-MAY-21
WG3532875-4 DUP								
L2583009-11								
Antimony (Sb)		<0.10	<0.10	RPD-NA	ug/g	N/A	30	12-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
	Soil							
Batch	R5456921							
WG3532875-4	DUP	L2583009-11						
Arsenic (As)		1.69	2.00		ug/g	17	30	12-MAY-21
Barium (Ba)		34.7	42.5		ug/g	20	40	12-MAY-21
Beryllium (Be)		0.27	0.32		ug/g	15	30	12-MAY-21
Boron (B)		<5.0	5.2	RPD-NA	ug/g	N/A	30	12-MAY-21
Cadmium (Cd)		0.060	0.070		ug/g	16	30	12-MAY-21
Chromium (Cr)		11.5	13.6		ug/g	17	30	12-MAY-21
Cobalt (Co)		4.49	5.33		ug/g	17	30	12-MAY-21
Copper (Cu)		10.3	12.3		ug/g	18	30	12-MAY-21
Lead (Pb)		4.94	5.60		ug/g	13	40	12-MAY-21
Molybdenum (Mo)		0.16	0.21		ug/g	27	40	12-MAY-21
Nickel (Ni)		8.78	10.4		ug/g	17	30	12-MAY-21
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	12-MAY-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	12-MAY-21
Thallium (Tl)		0.073	0.088		ug/g	19	30	12-MAY-21
Uranium (U)		0.375	0.461		ug/g	21	30	12-MAY-21
Vanadium (V)		19.8	23.7		ug/g	18	30	12-MAY-21
Zinc (Zn)		24.0	28.6		ug/g	17	30	12-MAY-21
WG3532875-3	LCS							
Antimony (Sb)			116.0		%		80-120	12-MAY-21
Arsenic (As)			107.4		%		80-120	12-MAY-21
Barium (Ba)			97.3		%		80-120	12-MAY-21
Beryllium (Be)			109.8		%		80-120	12-MAY-21
Boron (B)			106.4		%		80-120	12-MAY-21
Cadmium (Cd)			107.1		%		80-120	12-MAY-21
Chromium (Cr)			110.8		%		80-120	12-MAY-21
Cobalt (Co)			109.4		%		80-120	12-MAY-21
Copper (Cu)			110.0		%		80-120	12-MAY-21
Lead (Pb)			103.8		%		80-120	12-MAY-21
Molybdenum (Mo)			106.4		%		80-120	12-MAY-21
Nickel (Ni)			109.7		%		80-120	12-MAY-21
Selenium (Se)			111.7		%		80-120	12-MAY-21
Silver (Ag)			104.9		%		80-120	12-MAY-21
Thallium (Tl)			101.6		%		80-120	12-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
	Soil							
Batch	R5456921							
WG3532875-3	LCS							
Uranium (U)			104.9		%		80-120	12-MAY-21
Vanadium (V)			109.3		%		80-120	12-MAY-21
Zinc (Zn)			105.3		%		80-120	12-MAY-21
WG3532875-1	MB							
Antimony (Sb)			<0.10		mg/kg		0.1	12-MAY-21
Arsenic (As)			<0.10		mg/kg		0.1	12-MAY-21
Barium (Ba)			<0.50		mg/kg		0.5	12-MAY-21
Beryllium (Be)			<0.10		mg/kg		0.1	12-MAY-21
Boron (B)			<5.0		mg/kg		5	12-MAY-21
Cadmium (Cd)			<0.020		mg/kg		0.02	12-MAY-21
Chromium (Cr)			<0.50		mg/kg		0.5	12-MAY-21
Cobalt (Co)			<0.10		mg/kg		0.1	12-MAY-21
Copper (Cu)			<0.50		mg/kg		0.5	12-MAY-21
Lead (Pb)			<0.50		mg/kg		0.5	12-MAY-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	12-MAY-21
Nickel (Ni)			<0.50		mg/kg		0.5	12-MAY-21
Selenium (Se)			<0.20		mg/kg		0.2	12-MAY-21
Silver (Ag)			<0.10		mg/kg		0.1	12-MAY-21
Thallium (Tl)			<0.050		mg/kg		0.05	12-MAY-21
Uranium (U)			<0.050		mg/kg		0.05	12-MAY-21
Vanadium (V)			<0.20		mg/kg		0.2	12-MAY-21
Zinc (Zn)			<2.0		mg/kg		2	12-MAY-21
MOISTURE-WT								
	Soil							
Batch	R5454135							
WG3530580-3	DUP	L2584531-9						
% Moisture		5.98	6.53		%	8.8	20	08-MAY-21
WG3530580-2	LCS							
% Moisture			99.8		%		90-110	08-MAY-21
WG3530580-1	MB							
% Moisture			<0.25		%		0.25	08-MAY-21
PAH-511-WT								
	Soil							
Batch	R5455080							
WG3530579-3	DUP	WG3530579-5						
1-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	10-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT								
	Soil							
Batch	R5455080							
WG3530579-3	DUP	WG3530579-5						
2-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	10-MAY-21
Acenaphthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
Acenaphthylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
Anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
Benzo(a)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
Benzo(a)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
Benzo(b&j)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
Benzo(g,h,i)perylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
Benzo(k)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
Chrysene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
Dibenz(a,h)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
Fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
Fluorene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
Indeno(1,2,3-cd)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
Naphthalene		<0.013	<0.013	RPD-NA	ug/g	N/A	40	10-MAY-21
Phenanthrene		<0.046	<0.046	RPD-NA	ug/g	N/A	40	10-MAY-21
Pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	10-MAY-21
WG3530579-2	LCS							
1-Methylnaphthalene			92.4		%		50-140	10-MAY-21
2-Methylnaphthalene			90.3		%		50-140	10-MAY-21
Acenaphthene			89.5		%		50-140	10-MAY-21
Acenaphthylene			86.3		%		50-140	10-MAY-21
Anthracene			79.7		%		50-140	10-MAY-21
Benzo(a)anthracene			92.4		%		50-140	10-MAY-21
Benzo(a)pyrene			78.9		%		50-140	10-MAY-21
Benzo(b&j)fluoranthene			75.9		%		50-140	10-MAY-21
Benzo(g,h,i)perylene			84.5		%		50-140	10-MAY-21
Benzo(k)fluoranthene			107.8		%		50-140	10-MAY-21
Chrysene			87.3		%		50-140	10-MAY-21
Dibenz(a,h)anthracene			85.5		%		50-140	10-MAY-21
Fluoranthene			88.2		%		50-140	10-MAY-21
Fluorene			89.3		%		50-140	10-MAY-21
Indeno(1,2,3-cd)pyrene			95.7		%		50-140	10-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Soil							
Batch	R5455080							
WG3530579-2	LCS							
Naphthalene			87.4		%		50-140	10-MAY-21
Phenanthrene			90.7		%		50-140	10-MAY-21
Pyrene			87.8		%		50-140	10-MAY-21
WG3530579-1	MB							
1-Methylnaphthalene			<0.030		ug/g		0.03	10-MAY-21
2-Methylnaphthalene			<0.030		ug/g		0.03	10-MAY-21
Acenaphthene			<0.050		ug/g		0.05	10-MAY-21
Acenaphthylene			<0.050		ug/g		0.05	10-MAY-21
Anthracene			<0.050		ug/g		0.05	10-MAY-21
Benzo(a)anthracene			<0.050		ug/g		0.05	10-MAY-21
Benzo(a)pyrene			<0.050		ug/g		0.05	10-MAY-21
Benzo(b&j)fluoranthene			<0.050		ug/g		0.05	10-MAY-21
Benzo(g,h,i)perylene			<0.050		ug/g		0.05	10-MAY-21
Benzo(k)fluoranthene			<0.050		ug/g		0.05	10-MAY-21
Chrysene			<0.050		ug/g		0.05	10-MAY-21
Dibenz(a,h)anthracene			<0.050		ug/g		0.05	10-MAY-21
Fluoranthene			<0.050		ug/g		0.05	10-MAY-21
Fluorene			<0.050		ug/g		0.05	10-MAY-21
Indeno(1,2,3-cd)pyrene			<0.050		ug/g		0.05	10-MAY-21
Naphthalene			<0.013		ug/g		0.013	10-MAY-21
Phenanthrene			<0.046		ug/g		0.046	10-MAY-21
Pyrene			<0.050		ug/g		0.05	10-MAY-21
Surrogate: 2-Fluorobiphenyl			90.7		%		50-140	10-MAY-21
Surrogate: d14-Terphenyl			91.4		%		50-140	10-MAY-21
WG3530579-4	MS	WG3530579-5						
1-Methylnaphthalene			89.2		%		50-140	10-MAY-21
2-Methylnaphthalene			87.1		%		50-140	10-MAY-21
Acenaphthene			86.1		%		50-140	10-MAY-21
Acenaphthylene			81.2		%		50-140	10-MAY-21
Anthracene			75.5		%		50-140	10-MAY-21
Benzo(a)anthracene			87.5		%		50-140	10-MAY-21
Benzo(a)pyrene			75.1		%		50-140	10-MAY-21
Benzo(b&j)fluoranthene			71.9		%		50-140	10-MAY-21
Benzo(g,h,i)perylene			81.9		%		50-140	10-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT		Soil						
Batch	R5455080							
WG3530579-4 MS		WG3530579-5						
Benzo(k)fluoranthene			87.3		%		50-140	10-MAY-21
Chrysene			84.3		%		50-140	10-MAY-21
Dibenz(a,h)anthracene			81.7		%		50-140	10-MAY-21
Fluoranthene			84.3		%		50-140	10-MAY-21
Fluorene			85.7		%		50-140	10-MAY-21
Indeno(1,2,3-cd)pyrene			89.3		%		50-140	10-MAY-21
Naphthalene			84.5		%		50-140	10-MAY-21
Phenanthrene			87.5		%		50-140	10-MAY-21
Pyrene			83.8		%		50-140	10-MAY-21
PH-WT		Soil						
Batch	R5455118							
WG3531178-1 DUP		L2584522-15						
pH		7.97	8.08	J	pH units	0.11	0.3	10-MAY-21
WG3531834-1 LCS			7.00		pH units		6.9-7.1	10-MAY-21
SAR-R511-WT		Soil						
Batch	R5455768							
WG3532202-4 DUP		WG3532202-3						
Calcium (Ca)		26.2	26.6		mg/L	1.5	30	11-MAY-21
Sodium (Na)		192	193		mg/L	0.5	30	11-MAY-21
Magnesium (Mg)		14.7	14.8		mg/L	0.7	30	11-MAY-21
WG3532202-2 IRM		WT SAR4						
Calcium (Ca)			97.0		%		70-130	11-MAY-21
Sodium (Na)			91.6		%		70-130	11-MAY-21
Magnesium (Mg)			96.6		%		70-130	11-MAY-21
WG3532202-5 LCS								
Calcium (Ca)			106.0		%		80-120	11-MAY-21
Sodium (Na)			100.4		%		80-120	11-MAY-21
Magnesium (Mg)			100.8		%		80-120	11-MAY-21
WG3532202-1 MB								
Calcium (Ca)			<0.50		mg/L		0.5	11-MAY-21
Sodium (Na)			<0.50		mg/L		0.5	11-MAY-21
Magnesium (Mg)			<0.50		mg/L		0.5	11-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SAR-R511-WT								
	Soil							
Batch	R5456429							
WG3532811-4	DUP	WG3532811-3						
Calcium (Ca)		5.12	5.06		mg/L	1.2	30	12-MAY-21
Sodium (Na)		587	586		mg/L	0.2	30	12-MAY-21
Magnesium (Mg)		<0.50	0.76	RPD-NA	mg/L	N/A	30	12-MAY-21
WG3532811-2	IRM	WT SAR4						
Calcium (Ca)			92.3		%		70-130	12-MAY-21
Sodium (Na)			99.4		%		70-130	12-MAY-21
Magnesium (Mg)			97.4		%		70-130	12-MAY-21
WG3532811-5	LCS							
Calcium (Ca)			107.0		%		80-120	12-MAY-21
Sodium (Na)			100.8		%		80-120	12-MAY-21
Magnesium (Mg)			101.8		%		80-120	12-MAY-21
WG3532811-1	MB							
Calcium (Ca)			<0.50		mg/L		0.5	12-MAY-21
Sodium (Na)			<0.50		mg/L		0.5	12-MAY-21
Magnesium (Mg)			<0.50		mg/L		0.5	12-MAY-21
Batch	R5456498							
WG3533040-4	DUP	WG3533040-3						
Calcium (Ca)		39.2	37.1		mg/L	5.5	30	12-MAY-21
Sodium (Na)		19.2	18.3		mg/L	4.8	30	12-MAY-21
Magnesium (Mg)		1.05	1.01		mg/L	3.9	30	12-MAY-21
WG3533040-2	IRM	WT SAR4						
Calcium (Ca)			89.2		%		70-130	12-MAY-21
Sodium (Na)			95.4		%		70-130	12-MAY-21
Magnesium (Mg)			94.0		%		70-130	12-MAY-21
WG3533040-5	LCS							
Calcium (Ca)			104.3		%		80-120	12-MAY-21
Sodium (Na)			98.2		%		80-120	12-MAY-21
Magnesium (Mg)			99.0		%		80-120	12-MAY-21
WG3533040-1	MB							
Calcium (Ca)			<0.50		mg/L		0.5	12-MAY-21
Sodium (Na)			<0.50		mg/L		0.5	12-MAY-21
Magnesium (Mg)			<0.50		mg/L		0.5	12-MAY-21

Quality Control Report

Workorder: L2584522

Report Date: 13-MAY-21

Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9
Contact: JEN LAMBKE

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
J	Duplicate results and limits are expressed in terms of absolute difference.
LCS-L	Lab Control Sample recovery was below ALS DQO. Reference Material and/or Matrix Spike results were acceptable. Non-detected sample results are considered reliable. Other results, if reported, have been qualified.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

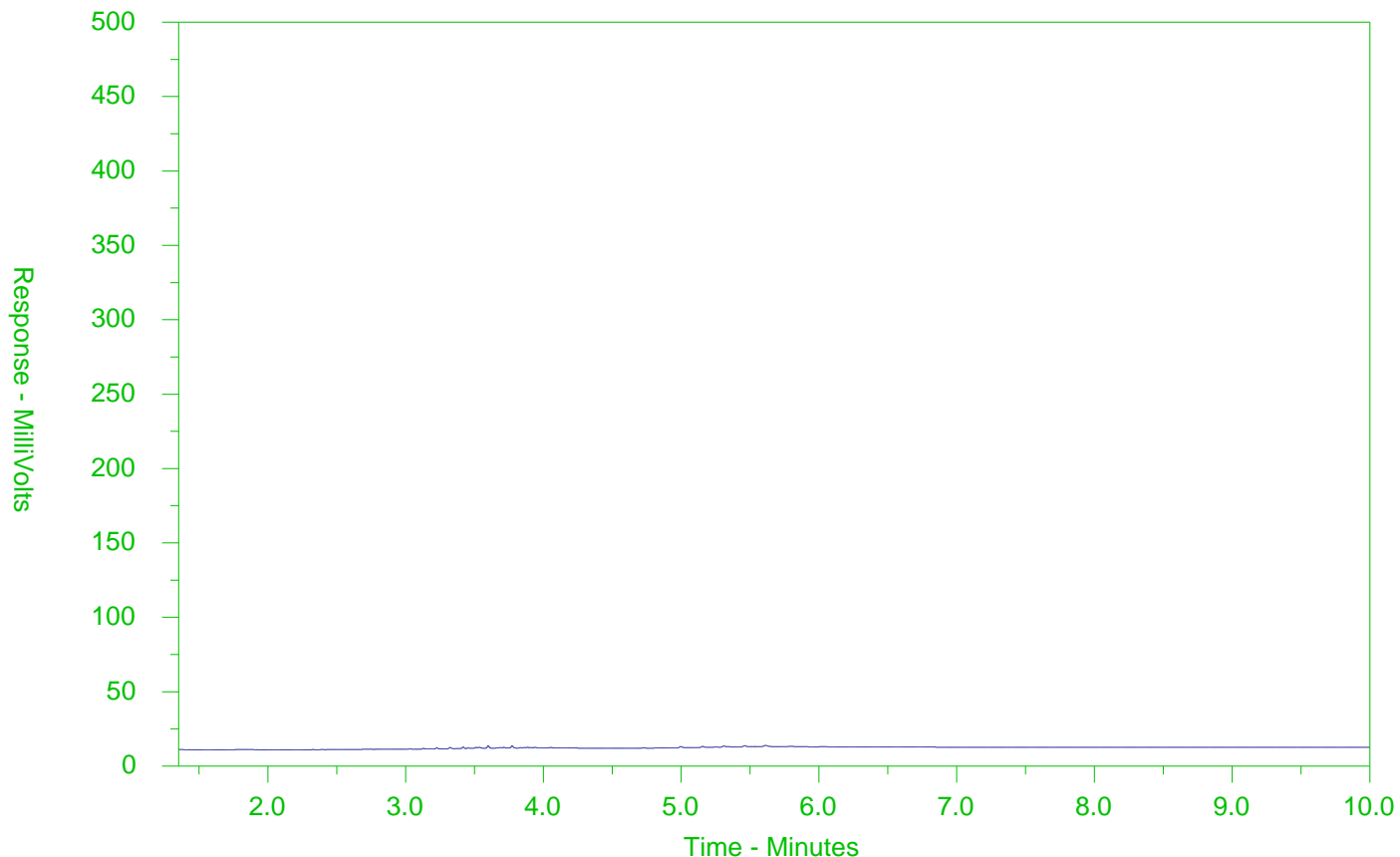
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2584522-2
 Client Sample ID: BH147-21 SS2 2.5-4.5FT



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

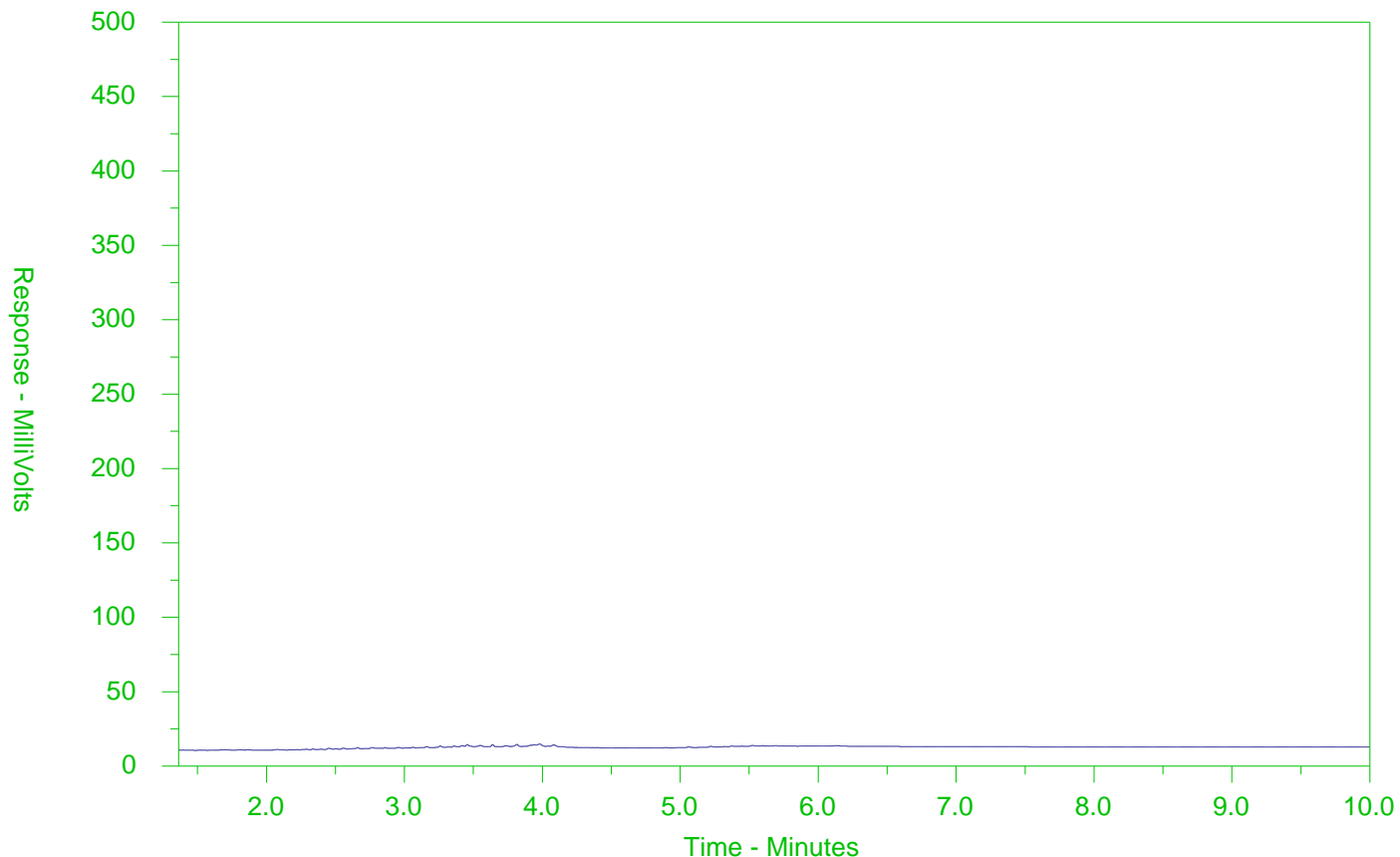
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2584522-4
 Client Sample ID: BH147-21 SS4 7.5-9.5FT



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

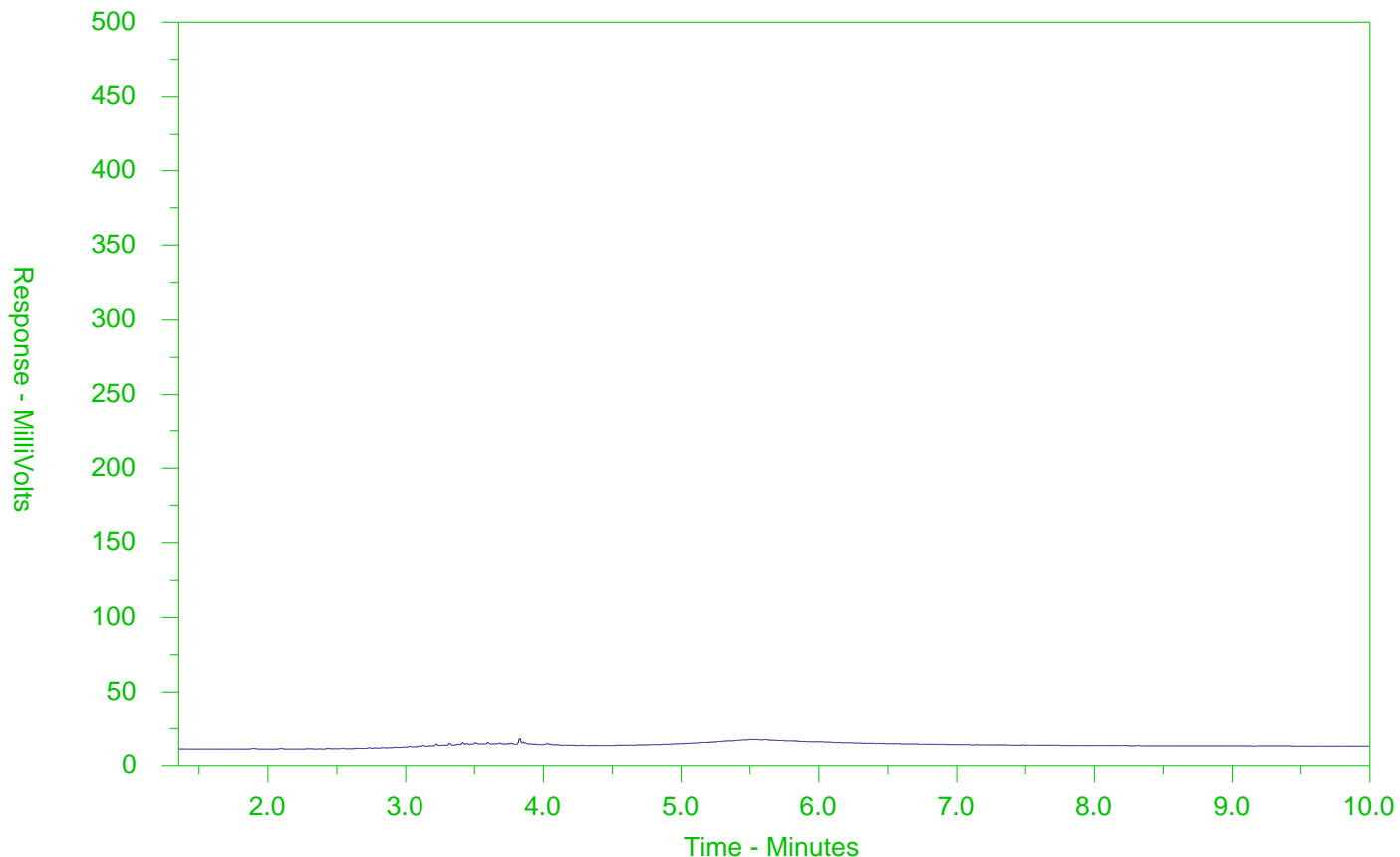
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2584522-6
 Client Sample ID: BH144-21 SS2 2.5-4.5FT



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

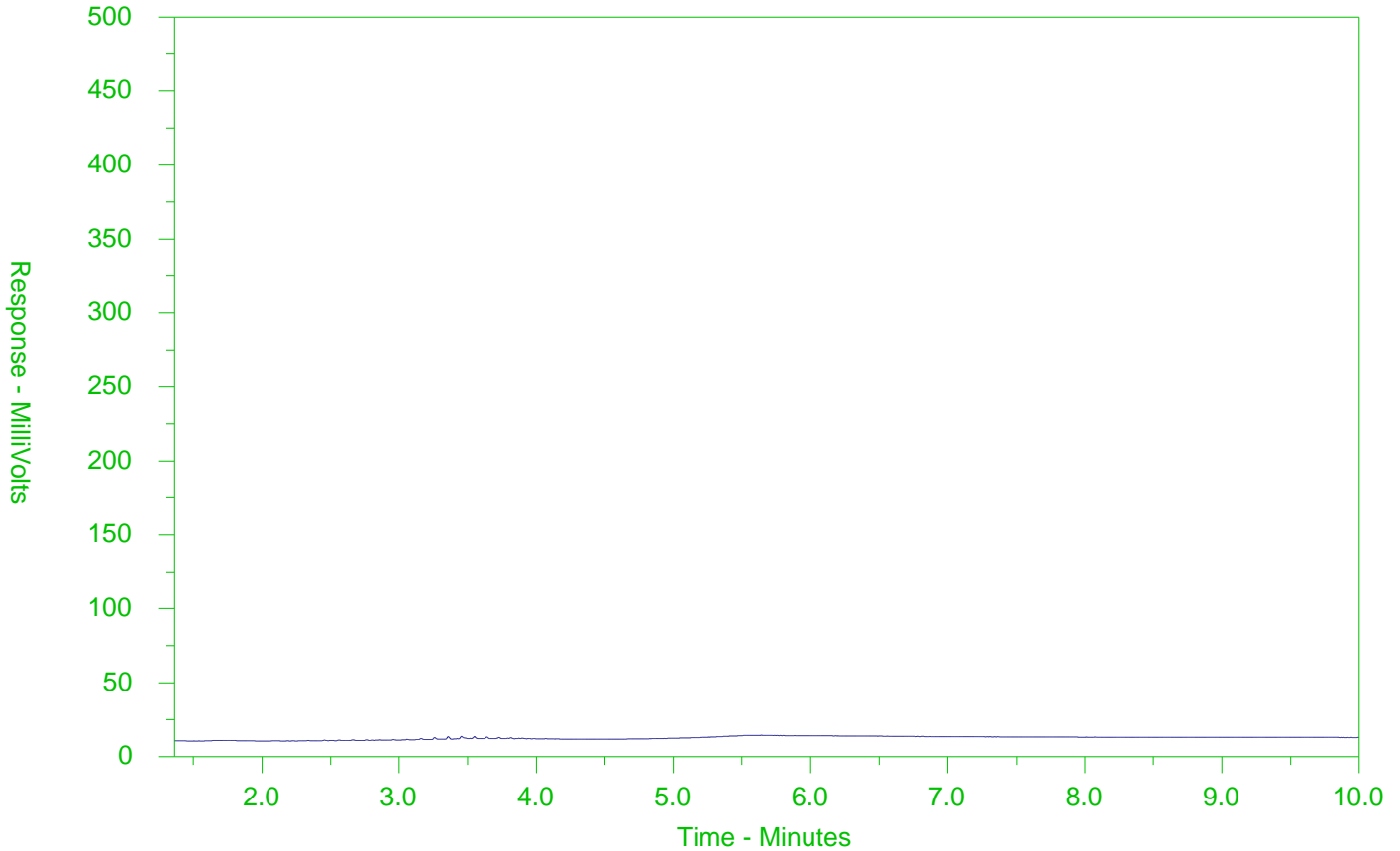
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2584522-10
 Client Sample ID: BH145-21 SS2 2.5-4.5FT



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

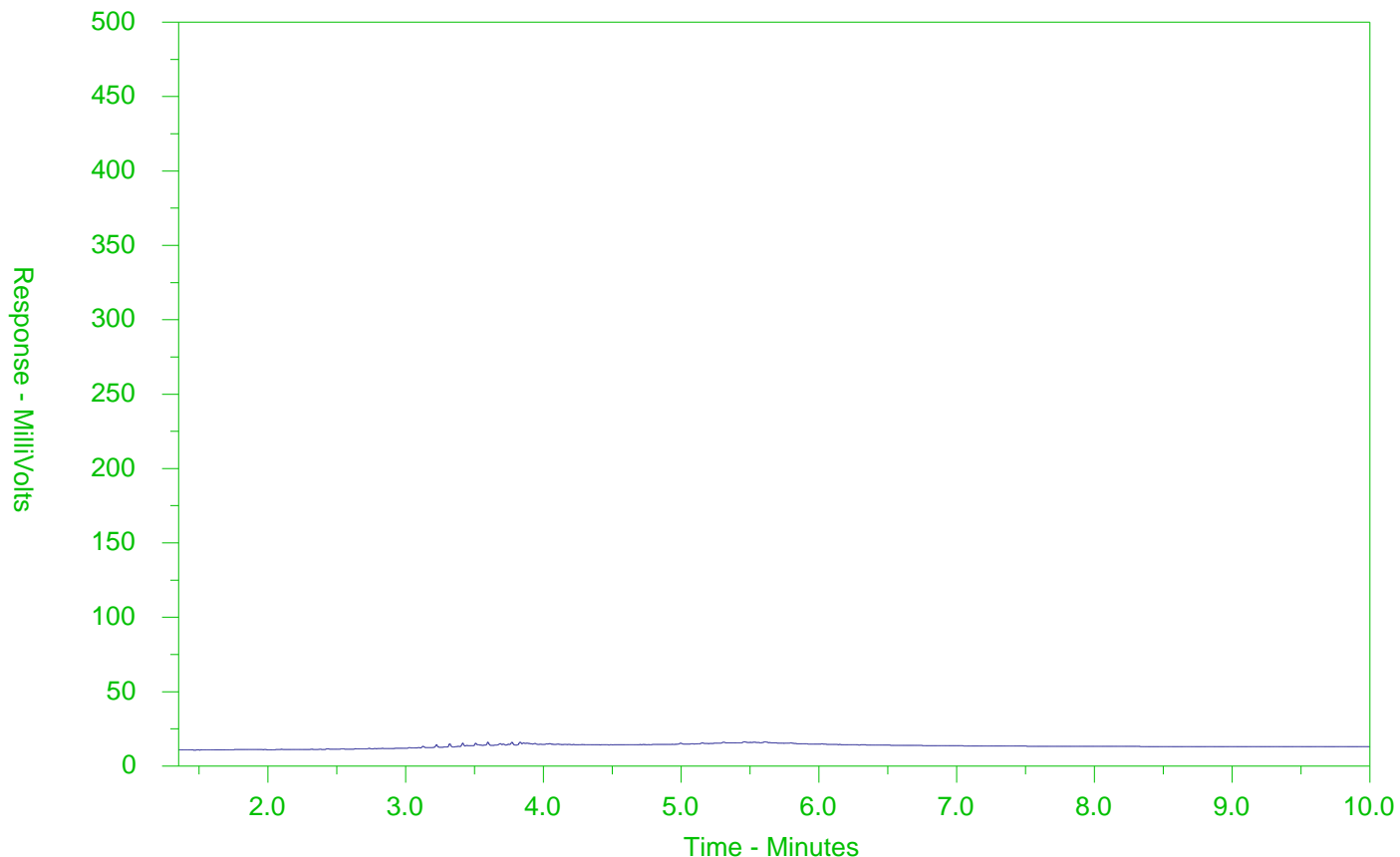
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2584522-14
 Client Sample ID: BH146-21 SS2 2.5-4.5FT



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

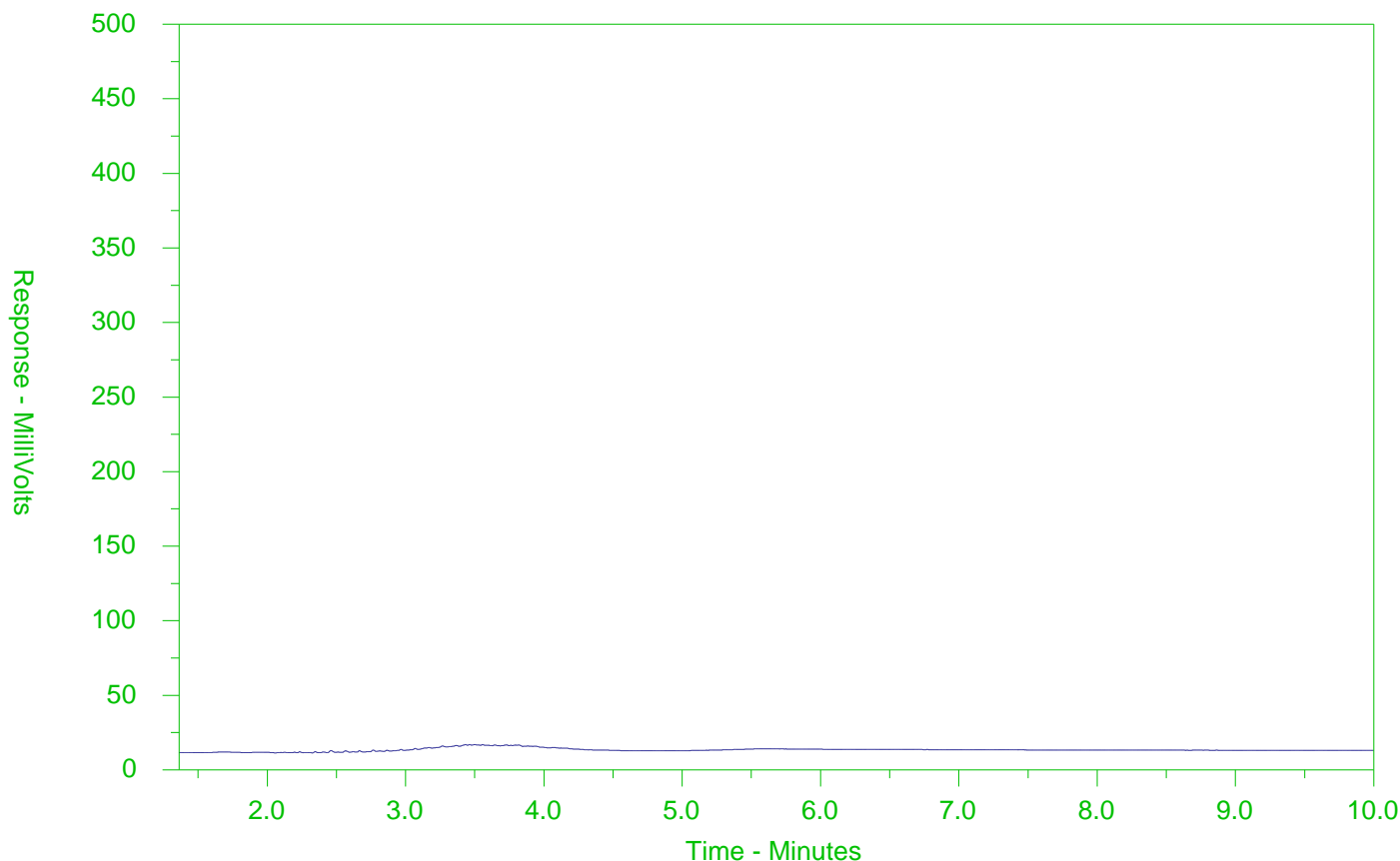
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2584522-18
 Client Sample ID: BH112-21 SS2 2.5-4.5FT



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.



Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878



L2584522-COFC

COC Number: 17 -

Page 1 of 3

Site M + Site B #12

www.alsglobal.com

Report To Contact and company name below will appear on the final report		Report Format / D			Below - Contact your AM to confirm all E&P TATs (surcharges may apply)												
Company: MTE		Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL)			Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply					EMERGENCY							
Contact: Jen Lambke		Quality Control (QC) Report with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			4 day [P4-20%] <input type="checkbox"/>					1 Business day [E - 100%] <input type="checkbox"/>							
Phone: 519-502-3268		<input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked			3 day [P3-25%] <input type="checkbox"/>					Same Day, Weekend or Statutory holiday [E2 - 200% - (Laboratory opening fees may apply)] <input type="checkbox"/>							
Company address below will appear on the final report		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX			2 day [P2-50%] <input type="checkbox"/>												
Street: 520 Bingham Centre Drive		Email 1 or Fax: jlbmbke@mte85.com			Date and Time Required for all E&P TATs:					dd-mmm-yy hh:mm							
City/Province: Kitchener		Email 2: jball@mte85.com			For tests that can not be performed according to the service level selected, you will be contacted.												
Postal Code:		Email 3:			Analysis Request												
Invoice To: Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Invoice Distribution			Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below												
Copy of Invoice with Report <input type="checkbox"/> YES <input type="checkbox"/> NO		Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX															
Company:		Email 1 or Fax: jlbmbke@mte85.com			NUMBER OF CONTAINERS	PHC F1 to F4 and BTEX	PHC F1 to F4 and VOCs	Metals Scan	Metals Complete	PAHs	SAR & EC	pH	PCBs	PHC F2 to F4	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)	
Contact:		Email 2:															
Project Information		Oil and Gas Required Fields (client use)															
ALS Account # / Quote #: Q75730		AFE/Cost Center:															
Job #: 46995-100		Major/Minor Code:															
PO / AFE:		Routing Code:															
LSD:		Requisitioner:															
ALS Lab Work Order # (lab use only): L2584522		Location:															
ALS Contact: Emily H		Sampler: Matt D															
ALS Sample # (lab use only)		Sample Identification and/or Coordinates (This description will appear on the report)															Date (dd-mmm-yy)
		BH147-21 GSI 6"-2.5FT			04-05-21	8:15	Soil										
		SS2 2.5-4.5FT				8:20											
		SS3A 5-6FT				8:30											
		SS4 7.5-9.5FT				8:40											
		MSPLP 2'4"-6FT				9:00											
		BH144-21 GSI 6"-2.5FT				9:20	Soil										
		SS2 2.5-4.5FT				9:25											
		SS3 5-7FT				9:30											
		SS4 7.5-9.5FT				9:40											
		MSPLP 2'7"-5FT				9:50											
		BH145-21 GSI 6"-2.5FT				10:30	Soil										
		SS2 2.5-4.5FT				10:40											
Drinking Water (DW) Samples¹ (client use)		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)															
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO		Table 1 Res, Table 3.1 R/P/I, Table 3.1 I/C/C (ESQS, O.Reg. 406/19) - coarse, AND Table 3 I/C/C (SCS, O.Reg. 153/04) - coarse															
Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO																	
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)			SAMPLE CONDITION AS RECEIVED (lab use only)												
Released by:		Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:	Frozen <input type="checkbox"/>	Ice Packs <input checked="" type="checkbox"/>	Ice Cubes <input type="checkbox"/>	Cooling Initiated <input type="checkbox"/>	SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>	Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>		

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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JUNE 2018 FRONT



Chain of Custody (COC) / Analytical Request Form



L2584522-COFC

XC Number: 17 -

Page 2 of 3

Site M + Site B #12

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Canada Toll Free: 1 800 668 9878

Report To Contact and company name below will appear on the final report		Report Format / Distribution			Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)												
Company:	MTE	Select Report Format:	<input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL)	Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply													
Contact:	Jen Lambke	Quality Control (QC) Report with Report	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	PRIORITY (Business Days)	4 day [P4-20%] <input type="checkbox"/>		EMERGENCY	1 Business day [E - 100%] <input type="checkbox"/>									
Phone:	519-502-3268	<input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked			3 day [P3-25%] <input type="checkbox"/>			Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] <input type="checkbox"/>									
Company address below will appear on the final report		Select Distribution:	<input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX	Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm													
Street:	520 Bingham Centre Drive	Email 1 or Fax	jilambke@mte85.com	For tests that can not be performed according to the service level selected, you will be contacted.													
City/Province:	Kitchener	Email 2	jball@mte85.com	Analysis Request													
Postal Code:		Email 3		Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below													
Invoice To	Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Invoice Distribution			NUMBER OF CONTAINERS	PHC F1 to F4 and BTEX	PHC F1 to F4 and VOCs	Metals Scan	Metals Complete	PAHs	SAR & EC	pH	PCBs	PHC F2 to F4	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)	
	Copy of Invoice with Report <input type="checkbox"/> YES <input type="checkbox"/> NO	Select Invoice Distribution:	<input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX														
Company:		Email 1 or Fax	jilambke@mte85.com														
Contact:		Email 2															
Project Information		Oil and Gas Required Fields (client use)															
ALS Account # / Quote #:	Q75730	AFE/Cost Center:		PO#:													
Job #:	46995-100	Major/Minor Code:		Routing Code:													
PO / AFE:		Requisitioner:															
LSD:		Location:															
ALS Lab Work Order # (lab use only):	L2584500	ALS Contact:	Emily H	Sampler:													Matt D
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type													
	BH145-21 SS3 5-7 FT	04-05-21	10:50	Soil													
	↓ SS4 7.5-9.5 FT	↓	11:00	↓													
	M SPLP 2'5" - 4'6"	↓	11:15	↓													
	BH146-21 GS1 6"-2.5 FT	↓	11:30	Soil													
	↓ SS2 2.5-4.5 FT	↓	11:40	↓													
	SS3 5-7 FT	↓	11:50	↓													
	SS4 7.5-8.5 FT	↓	12:00	↓													
	M SPLP 2'7" - 5 FT	↓	12:40	↓													
	BH112-21 GS1 6"-2.5 FT	↓	1:40	Soil													
	↓ SS2 2.5-4.5 FT	↓	1:50	↓													
	SS3 5-7 FT	↓	2:00	↓													
	SS4 7.5-9.5 FT	↓	2:10	↓													
Drinking Water (DW) Samples¹ (client use)		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)			SAMPLE CONDITION AS RECEIVED (lab use only)												
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO		Table 1 Res, Table 3.1 R/P/I, Table 3.1 I/C/C (ESQS, O.Reg. 406/19) - coarse, AND Table 3 I/C/C (SCS, O.Reg. 153/04) - coarse			Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>												
Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO					Ice Packs <input type="checkbox"/> Ice Cubes <input type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>												
					Cooling Initiated <input type="checkbox"/>												
					INITIAL COOLER TEMPERATURES °C												
					FINAL COOLER TEMPERATURES °C												
					8.6												
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)												
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:						
							05/06/22	1300									

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MTE CONSULTANTS INC. (Kitchener)
ATTN: JEN LAMBKE
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

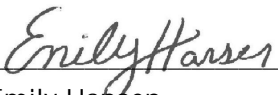
Date Received: 06-MAY-21
Report Date: 18-MAY-21 12:25 (MT)
Version: FINAL

Client Phone: 519-743-6500

Certificate of Analysis

Lab Work Order #: L2584509
Project P.O. #: NOT SUBMITTED
Job Reference: 46995-100
C of C Numbers:
Legal Site Desc:

Comments: ADDITIONAL 06-MAY-21 15:24
ADDITIONAL 06-MAY-21 12:42



Emily Hansen
Account Manager

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ADDRESS: 60 Northland Road, Unit 1, Waterloo, ON N2V 2B8 Canada | Phone: +1 519 886 6910 | Fax: +1 519 886 9047
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ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte						#1	#2	#3
L2584509-2	BH111-21 SS2 2.5-45FT								
Sampled By: CLIENT on 05-MAY-21 @ 08:30									
Matrix: SOIL									
Physical Tests									
	% Moisture	11.5		0.25	%	12-MAY-21			
Metals									
	Antimony (Sb)	<1.0		1.0	ug/g	17-MAY-21	1.3	40	7.5
	Arsenic (As)	1.6		1.0	ug/g	17-MAY-21	18	18	18
	Barium (Ba)	24.6		1.0	ug/g	17-MAY-21	220	670	390
	Beryllium (Be)	<0.50		0.50	ug/g	17-MAY-21	2.5	8	4
	Boron (B)	<5.0		5.0	ug/g	17-MAY-21	36	120	120
	Boron (B), Hot Water Ext.	0.21		0.10	ug/g	17-MAY-21	36	2	1.5
	Cadmium (Cd)	<0.50		0.50	ug/g	17-MAY-21	1.2	1.9	1.2
	Chromium (Cr)	7.8		1.0	ug/g	17-MAY-21	70	160	160
	Cobalt (Co)	2.8		1.0	ug/g	17-MAY-21	21	80	22
	Copper (Cu)	5.0		1.0	ug/g	17-MAY-21	92	230	140
	Lead (Pb)	3.1		1.0	ug/g	17-MAY-21	120	120	120
	Mercury (Hg)	0.144		0.0050	ug/g	17-MAY-21	0.27	0.27	0.27
	Molybdenum (Mo)	<1.0		1.0	ug/g	17-MAY-21	2	40	6.9
	Nickel (Ni)	5.1		1.0	ug/g	17-MAY-21	82	270	100
	Selenium (Se)	<1.0		1.0	ug/g	17-MAY-21	1.5	5.5	2.4
	Silver (Ag)	<0.20		0.20	ug/g	17-MAY-21	0.5	40	20
	Thallium (Tl)	<0.50		0.50	ug/g	17-MAY-21	1	3.3	1
	Uranium (U)	<1.0		1.0	ug/g	17-MAY-21	2.5	33	23
	Vanadium (V)	16.9		1.0	ug/g	17-MAY-21	86	86	86
	Zinc (Zn)	15.9		5.0	ug/g	17-MAY-21	290	340	340
Speciated Metals									
	Chromium, Hexavalent	0.22		0.20	ug/g	14-MAY-21	0.66	8	8
Volatile Organic Compounds									
	Benzene	<0.0068		0.0068	ug/g	14-MAY-21	0.02	0.034	0.02
	Ethylbenzene	<0.018		0.018	ug/g	14-MAY-21	0.05	1.9	1.9
	Toluene	<0.080		0.080	ug/g	14-MAY-21	0.2	7.8	0.99
	o-Xylene	<0.020		0.020	ug/g	14-MAY-21			
	m+p-Xylenes	<0.030		0.030	ug/g	14-MAY-21			
	Xylenes (Total)	<0.050		0.050	ug/g	14-MAY-21	0.05	3	0.9
	Surrogate: 4-Bromofluorobenzene	111.3		50-140	%	14-MAY-21			
	Surrogate: 1,4-Difluorobenzene	112.4		50-140	%	14-MAY-21			
Hydrocarbons									
	F1 (C6-C10)	<5.0		5.0	ug/g	14-MAY-21	25	25	25
	F1-BTEX	<5.0		5.0	ug/g	14-MAY-21	25	25	25
	F2 (C10-C16)	<10		10	ug/g	14-MAY-21	10	26	10
	F2-Naphth	<10		10	ug/g	14-MAY-21			
	F3 (C16-C34)	<50		50	ug/g	14-MAY-21	240	1700	300
	F3-PAH	<50		50	ug/g	14-MAY-21			
	F4 (C34-C50)	<50		50	ug/g	14-MAY-21	120	3300	2800
	Total Hydrocarbons (C6-C50)	<72		72	ug/g	14-MAY-21			
	Chrom. to baseline at nC50	YES			No Unit	14-MAY-21			
	Surrogate: 2-Bromobenzotrifluoride	84.1		60-140	%	14-MAY-21			
	Surrogate: 3,4-Dichlorotoluene	89.3		60-140	%	14-MAY-21			
Polycyclic Aromatic Hydrocarbons									

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte						#1	#2	#3
L2584509-2	BH111-21 SS2 2.5-45FT								
Sampled By: CLIENT on 05-MAY-21 @ 08:30									
Matrix: SOIL									
Polycyclic Aromatic Hydrocarbons									
	Acenaphthene	<0.050		0.050	ug/g	13-MAY-21	0.072	15	0.093
	Acenaphthylene	<0.050		0.050	ug/g	13-MAY-21	0.093	0.093	14
	Anthracene	<0.050		0.050	ug/g	13-MAY-21	0.16	0.16	0.16
	Benzo(a)anthracene	<0.050		0.050	ug/g	13-MAY-21	0.36	1	0.5
	Benzo(a)pyrene	<0.050		0.050	ug/g	13-MAY-21	0.3	0.7	0.57
	Benzo(b&j)fluoranthene	<0.050		0.050	ug/g	13-MAY-21	0.47	7	5.7
	Benzo(g,h,i)perylene	<0.050		0.050	ug/g	13-MAY-21	0.68	13	6.6
	Benzo(k)fluoranthene	<0.050		0.050	ug/g	13-MAY-21	0.48	7	5.7
	Chrysene	<0.050		0.050	ug/g	13-MAY-21	2.8	14	7
	Dibenz(a,h)anthracene	<0.050		0.050	ug/g	13-MAY-21	0.1	0.7	0.57
	Fluoranthene	<0.050		0.050	ug/g	13-MAY-21	0.56	70	0.69
	Fluorene	<0.050		0.050	ug/g	13-MAY-21	0.12	6.8	6.8
	Indeno(1,2,3-cd)pyrene	<0.050		0.050	ug/g	13-MAY-21	0.23	0.76	0.38
	1+2-Methylnaphthalenes	<0.042		0.042	ug/g	13-MAY-21	0.59	8.7	0.92
	1-Methylnaphthalene	<0.030		0.030	ug/g	13-MAY-21	0.59	8.7	0.92
	2-Methylnaphthalene	<0.030		0.030	ug/g	13-MAY-21	0.59	8.7	0.92
	Naphthalene	<0.013		0.013	ug/g	13-MAY-21	0.09	1.8	0.59
	Phenanthrene	<0.046		0.046	ug/g	13-MAY-21	0.69	12	6.2
	Pyrene	<0.050		0.050	ug/g	13-MAY-21	1	70	70
	Surrogate: 2-Fluorobiphenyl	92.0		50-140	%	13-MAY-21			
	Surrogate: d14-Terphenyl	91.3		50-140	%	13-MAY-21			
L2584509-3	BH111-21 SS3 5-7FT								
Sampled By: CLIENT on 05-MAY-21 @ 08:40									
Matrix: SOIL									
Physical Tests									
	Conductivity	0.649		0.0040	mS/cm	17-MAY-21	*0.57	1.4	0.7
	% Moisture	8.30		0.25	%	12-MAY-21			
	pH	7.66		0.10	pH units	13-MAY-21			
Saturated Paste Extractables									
	SAR	25.1	SAR:M	0.10	SAR	17-MAY-21	*2.4	*12	*5
	Calcium (Ca)	2.00		0.50	mg/L	17-MAY-21			
	Magnesium (Mg)	<0.50		0.50	mg/L	17-MAY-21			
	Sodium (Na)	129		0.50	mg/L	17-MAY-21			
Metals									
	Antimony (Sb)	<1.0		1.0	ug/g	17-MAY-21	1.3	40	7.5
	Arsenic (As)	2.2		1.0	ug/g	17-MAY-21	18	18	18
	Barium (Ba)	15.6		1.0	ug/g	17-MAY-21	220	670	390
	Beryllium (Be)	<0.50		0.50	ug/g	17-MAY-21	2.5	8	4
	Boron (B)	<5.0		5.0	ug/g	17-MAY-21	36	120	120
	Cadmium (Cd)	<0.50		0.50	ug/g	17-MAY-21	1.2	1.9	1.2
	Chromium (Cr)	6.7		1.0	ug/g	17-MAY-21	70	160	160
	Cobalt (Co)	2.8		1.0	ug/g	17-MAY-21	21	80	22
	Copper (Cu)	8.7		1.0	ug/g	17-MAY-21	92	230	140
	Lead (Pb)	4.2		1.0	ug/g	17-MAY-21	120	120	120
	Molybdenum (Mo)	<1.0		1.0	ug/g	17-MAY-21	2	40	6.9

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte						#1	#2	#3
L2584509-3	BH111-21 SS3 5-7FT								
Sampled By: CLIENT on 05-MAY-21 @ 08:40									
Matrix: SOIL									
Metals									
	Nickel (Ni)	5.5		1.0	ug/g	17-MAY-21	82	270	100
	Selenium (Se)	<1.0		1.0	ug/g	17-MAY-21	1.5	5.5	2.4
	Silver (Ag)	<0.20		0.20	ug/g	17-MAY-21	0.5	40	20
	Thallium (Tl)	<0.50		0.50	ug/g	17-MAY-21	1	3.3	1
	Uranium (U)	<1.0		1.0	ug/g	17-MAY-21	2.5	33	23
	Vanadium (V)	13.7		1.0	ug/g	17-MAY-21	86	86	86
	Zinc (Zn)	27.8		5.0	ug/g	17-MAY-21	290	340	340
Volatile Organic Compounds									
	Benzene	<0.0068		0.0068	ug/g	14-MAY-21	0.02	0.034	0.02
	Ethylbenzene	<0.018		0.018	ug/g	14-MAY-21	0.05	1.9	1.9
	Toluene	<0.080		0.080	ug/g	14-MAY-21	0.2	7.8	0.99
	o-Xylene	<0.020		0.020	ug/g	14-MAY-21			
	m+p-Xylenes	<0.030		0.030	ug/g	14-MAY-21			
	Xylenes (Total)	<0.050		0.050	ug/g	14-MAY-21	0.05	3	0.9
	Surrogate: 4-Bromofluorobenzene	104.3		50-140	%	14-MAY-21			
	Surrogate: 1,4-Difluorobenzene	107.6		50-140	%	14-MAY-21			
Hydrocarbons									
	F1 (C6-C10)	<5.0		5.0	ug/g	14-MAY-21	25	25	25
	F1-BTEX	<5.0		5.0	ug/g	14-MAY-21	25	25	25
	F2 (C10-C16)	<10		10	ug/g	14-MAY-21	10	26	10
	F2-Naphth	<10		10	ug/g	14-MAY-21			
	F3 (C16-C34)	<50		50	ug/g	14-MAY-21	240	1700	300
	F3-PAH	<50		50	ug/g	14-MAY-21			
	F4 (C34-C50)	<50		50	ug/g	14-MAY-21	120	3300	2800
	Total Hydrocarbons (C6-C50)	<72		72	ug/g	14-MAY-21			
	Chrom. to baseline at nC50	YES			No Unit	14-MAY-21			
	Surrogate: 2-Bromobenzotrifluoride	88.1		60-140	%	14-MAY-21			
	Surrogate: 3,4-Dichlorotoluene	84.3		60-140	%	14-MAY-21			
Polycyclic Aromatic Hydrocarbons									
	Acenaphthene	<0.050		0.050	ug/g	13-MAY-21	0.072	15	0.093
	Acenaphthylene	<0.050		0.050	ug/g	13-MAY-21	0.093	0.093	14
	Anthracene	<0.050		0.050	ug/g	13-MAY-21	0.16	0.16	0.16
	Benzo(a)anthracene	<0.050		0.050	ug/g	13-MAY-21	0.36	1	0.5
	Benzo(a)pyrene	<0.050		0.050	ug/g	13-MAY-21	0.3	0.7	0.57
	Benzo(b&j)fluoranthene	<0.050		0.050	ug/g	13-MAY-21	0.47	7	5.7
	Benzo(g,h,i)perylene	<0.050		0.050	ug/g	13-MAY-21	0.68	13	6.6
	Benzo(k)fluoranthene	<0.050		0.050	ug/g	13-MAY-21	0.48	7	5.7
	Chrysene	<0.050		0.050	ug/g	13-MAY-21	2.8	14	7
	Dibenz(a,h)anthracene	<0.050		0.050	ug/g	13-MAY-21	0.1	0.7	0.57
	Fluoranthene	<0.050		0.050	ug/g	13-MAY-21	0.56	70	0.69
	Fluorene	<0.050		0.050	ug/g	13-MAY-21	0.12	6.8	6.8
	Indeno(1,2,3-cd)pyrene	<0.050		0.050	ug/g	13-MAY-21	0.23	0.76	0.38
	1+2-Methylnaphthalenes	<0.042		0.042	ug/g	13-MAY-21	0.59	8.7	0.92
	1-Methylnaphthalene	<0.030		0.030	ug/g	13-MAY-21	0.59	8.7	0.92
	2-Methylnaphthalene	<0.030		0.030	ug/g	13-MAY-21	0.59	8.7	0.92
	Naphthalene	<0.013		0.013	ug/g	13-MAY-21	0.09	1.8	0.59

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte						#1	#2	#3
L2584509-3	BH111-21 SS3 5-7FT								
Sampled By: CLIENT on 05-MAY-21 @ 08:40									
Matrix: SOIL									
Polycyclic Aromatic Hydrocarbons									
	Phenanthrene	<0.046		0.046	ug/g	13-MAY-21	0.69	12	6.2
	Pyrene	<0.050		0.050	ug/g	13-MAY-21	1	70	70
	Surrogate: 2-Fluorobiphenyl	88.8		50-140	%	13-MAY-21			
	Surrogate: d14-Terphenyl	86.0		50-140	%	13-MAY-21			
L2584509-7	BH110-21 SS3 5-7FT								
Sampled By: CLIENT on 05-MAY-21 @ 10:10									
Matrix: SOIL									
Physical Tests									
	% Moisture	12.9		0.25	%	12-MAY-21			
Metals									
	Antimony (Sb)	<1.0		1.0	ug/g	14-MAY-21	1.3	40	7.5
	Arsenic (As)	<1.0		1.0	ug/g	14-MAY-21	18	18	18
	Barium (Ba)	9.8		1.0	ug/g	14-MAY-21	220	670	390
	Beryllium (Be)	<0.50		0.50	ug/g	14-MAY-21	2.5	8	4
	Boron (B)	<5.0		5.0	ug/g	14-MAY-21	36	120	120
	Cadmium (Cd)	<0.50		0.50	ug/g	14-MAY-21	1.2	1.9	1.2
	Chromium (Cr)	5.2		1.0	ug/g	14-MAY-21	70	160	160
	Cobalt (Co)	1.6		1.0	ug/g	14-MAY-21	21	80	22
	Copper (Cu)	6.4		1.0	ug/g	14-MAY-21	92	230	140
	Lead (Pb)	4.0		1.0	ug/g	14-MAY-21	120	120	120
	Molybdenum (Mo)	<1.0		1.0	ug/g	14-MAY-21	2	40	6.9
	Nickel (Ni)	3.9		1.0	ug/g	14-MAY-21	82	270	100
	Selenium (Se)	<1.0		1.0	ug/g	14-MAY-21	1.5	5.5	2.4
	Silver (Ag)	<0.20		0.20	ug/g	14-MAY-21	0.5	40	20
	Thallium (Tl)	<0.50		0.50	ug/g	14-MAY-21	1	3.3	1
	Uranium (U)	<1.0		1.0	ug/g	14-MAY-21	2.5	33	23
	Vanadium (V)	11.0		1.0	ug/g	14-MAY-21	86	86	86
	Zinc (Zn)	22.5		5.0	ug/g	14-MAY-21	290	340	340
Volatile Organic Compounds									
	Benzene	<0.0068		0.0068	ug/g	14-MAY-21	0.02	0.034	0.02
	Ethylbenzene	<0.018		0.018	ug/g	14-MAY-21	0.05	1.9	1.9
	Toluene	<0.080		0.080	ug/g	14-MAY-21	0.2	7.8	0.99
	o-Xylene	<0.020		0.020	ug/g	14-MAY-21			
	m+p-Xylenes	<0.030		0.030	ug/g	14-MAY-21			
	Xylenes (Total)	<0.050		0.050	ug/g	14-MAY-21	0.05	3	0.9
	Surrogate: 4-Bromofluorobenzene	121.3		50-140	%	14-MAY-21			
	Surrogate: 1,4-Difluorobenzene	128.0		50-140	%	14-MAY-21			
Hydrocarbons									
	F1 (C6-C10)	<5.0		5.0	ug/g	14-MAY-21	25	25	25
	F1-BTEX	<5.0		5.0	ug/g	14-MAY-21	25	25	25
	F2 (C10-C16)	<10		10	ug/g	14-MAY-21	10	26	10
	F3 (C16-C34)	<50		50	ug/g	14-MAY-21	240	1700	300
	F4 (C34-C50)	<50		50	ug/g	14-MAY-21	120	3300	2800
	Total Hydrocarbons (C6-C50)	<72		72	ug/g	14-MAY-21			
	Chrom. to baseline at nC50	YES			No Unit	14-MAY-21			

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte						#1	#2	#3
L2584509-7	BH110-21 SS3 5-7FT								
Sampled By: CLIENT on 05-MAY-21 @ 10:10									
Matrix: SOIL									
Hydrocarbons									
Surrogate: 2-Bromobenzotrifluoride		90.8		60-140	%	14-MAY-21			
Surrogate: 3,4-Dichlorotoluene		91.0		60-140	%	14-MAY-21			
L2584509-10	BH109-21 SS2 2.5-4.5FT								
Sampled By: CLIENT on 05-MAY-21 @ 11:10									
Matrix: SOIL									
Physical Tests									
% Moisture		6.94		0.25	%	12-MAY-21			
Metals									
Antimony (Sb)		<1.0		1.0	ug/g	14-MAY-21	1.3	40	7.5
Arsenic (As)		1.8		1.0	ug/g	14-MAY-21	18	18	18
Barium (Ba)		17.8		1.0	ug/g	14-MAY-21	220	670	390
Beryllium (Be)		<0.50		0.50	ug/g	14-MAY-21	2.5	8	4
Boron (B)		<5.0		5.0	ug/g	14-MAY-21	36	120	120
Cadmium (Cd)		<0.50		0.50	ug/g	14-MAY-21	1.2	1.9	1.2
Chromium (Cr)		7.4		1.0	ug/g	14-MAY-21	70	160	160
Cobalt (Co)		2.1		1.0	ug/g	14-MAY-21	21	80	22
Copper (Cu)		8.9		1.0	ug/g	14-MAY-21	92	230	140
Lead (Pb)		10.6		1.0	ug/g	14-MAY-21	120	120	120
Molybdenum (Mo)		<1.0		1.0	ug/g	14-MAY-21	2	40	6.9
Nickel (Ni)		4.7		1.0	ug/g	14-MAY-21	82	270	100
Selenium (Se)		<1.0		1.0	ug/g	14-MAY-21	1.5	5.5	2.4
Silver (Ag)		<0.20		0.20	ug/g	14-MAY-21	0.5	40	20
Thallium (Tl)		<0.50		0.50	ug/g	14-MAY-21	1	3.3	1
Uranium (U)		<1.0		1.0	ug/g	14-MAY-21	2.5	33	23
Vanadium (V)		13.9		1.0	ug/g	14-MAY-21	86	86	86
Zinc (Zn)		39.1		5.0	ug/g	14-MAY-21	290	340	340
Volatile Organic Compounds									
Benzene		<0.0068		0.0068	ug/g	14-MAY-21	0.02	0.034	0.02
Ethylbenzene		<0.018		0.018	ug/g	14-MAY-21	0.05	1.9	1.9
Toluene		<0.080		0.080	ug/g	14-MAY-21	0.2	7.8	0.99
o-Xylene		<0.020		0.020	ug/g	14-MAY-21			
m+p-Xylenes		<0.030		0.030	ug/g	14-MAY-21			
Xylenes (Total)		<0.050		0.050	ug/g	14-MAY-21	0.05	3	0.9
Surrogate: 4-Bromofluorobenzene		108.3		50-140	%	14-MAY-21			
Surrogate: 1,4-Difluorobenzene		115.9		50-140	%	14-MAY-21			
Hydrocarbons									
F1 (C6-C10)		<5.0		5.0	ug/g	14-MAY-21	25	25	25
F1-BTEX		<5.0		5.0	ug/g	14-MAY-21	25	25	25
F2 (C10-C16)		<10		10	ug/g	14-MAY-21	10	26	10
F3 (C16-C34)		82		50	ug/g	14-MAY-21	240	1700	300
F4 (C34-C50)		284		50	ug/g	14-MAY-21	*120	3300	2800
F4G-SG (GHH-Silica)		1470		250	ug/g	14-MAY-21	*120	3300	2800
Total Hydrocarbons (C6-C50)		367		72	ug/g	14-MAY-21			
Chrom. to baseline at nC50		NO			No Unit	14-MAY-21			
Surrogate: 2-Bromobenzotrifluoride		85.3		60-140	%	14-MAY-21			

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte						#1	#2	#3
L2584509-10	BH109-21 SS2 2.5-4.5FT Sampled By: CLIENT on 05-MAY-21 @ 11:10 Matrix: SOIL								
Hydrocarbons									
Surrogate: 3,4-Dichlorotoluene		59.6	SURR-ND	60-140	%	14-MAY-21			
L2584509-16	BH108-21 SS4 7.5-9.5FT Sampled By: CLIENT on 05-MAY-21 @ 13:00 Matrix: SOIL								
Physical Tests									
Conductivity		0.690		0.0040	mS/cm	17-MAY-21	*0.57	1.4	0.7
% Moisture		15.4		0.25	%	12-MAY-21			
Saturated Paste Extractables									
SAR		25.6	SAR:M	0.10	SAR	17-MAY-21	*2.4	*12	*5
Calcium (Ca)		1.99		0.50	mg/L	17-MAY-21			
Magnesium (Mg)		<0.50		0.50	mg/L	17-MAY-21			
Sodium (Na)		131		0.50	mg/L	17-MAY-21			
Metals									
Antimony (Sb)		<1.0		1.0	ug/g	17-MAY-21	1.3	40	7.5
Arsenic (As)		2.4		1.0	ug/g	17-MAY-21	18	18	18
Barium (Ba)		24.6		1.0	ug/g	17-MAY-21	220	670	390
Beryllium (Be)		<0.50		0.50	ug/g	17-MAY-21	2.5	8	4
Boron (B)		5.4		5.0	ug/g	17-MAY-21	36	120	120
Cadmium (Cd)		<0.50		0.50	ug/g	17-MAY-21	1.2	1.9	1.2
Chromium (Cr)		8.6		1.0	ug/g	17-MAY-21	70	160	160
Cobalt (Co)		3.9		1.0	ug/g	17-MAY-21	21	80	22
Copper (Cu)		15.6		1.0	ug/g	17-MAY-21	92	230	140
Lead (Pb)		6.6		1.0	ug/g	17-MAY-21	120	120	120
Molybdenum (Mo)		<1.0		1.0	ug/g	17-MAY-21	2	40	6.9
Nickel (Ni)		7.6		1.0	ug/g	17-MAY-21	82	270	100
Selenium (Se)		<1.0		1.0	ug/g	17-MAY-21	1.5	5.5	2.4
Silver (Ag)		<0.20		0.20	ug/g	17-MAY-21	0.5	40	20
Thallium (Tl)		<0.50		0.50	ug/g	17-MAY-21	1	3.3	1
Uranium (U)		<1.0		1.0	ug/g	17-MAY-21	2.5	33	23
Vanadium (V)		17.0		1.0	ug/g	17-MAY-21	86	86	86
Zinc (Zn)		48.5		5.0	ug/g	17-MAY-21	290	340	340
Volatile Organic Compounds									
Acetone		<0.50		0.50	ug/g	14-MAY-21	0.5	1.8	1.8
Benzene		<0.0068		0.0068	ug/g	14-MAY-21	0.02	0.034	0.02
Bromodichloromethane		<0.050		0.050	ug/g	14-MAY-21	0.05	5.8	5.8
Bromoform		<0.050		0.050	ug/g	14-MAY-21	0.05	2.5	2.5
Bromomethane		<0.050		0.050	ug/g	14-MAY-21	0.05	0.05	0.05
Carbon tetrachloride		<0.050		0.050	ug/g	14-MAY-21	0.05	0.05	0.05
Chlorobenzene		<0.050		0.050	ug/g	14-MAY-21	0.05	0.28	0.28
Dibromochloromethane		<0.050		0.050	ug/g	14-MAY-21	0.05	5.5	5.5
Chloroform		<0.050		0.050	ug/g	14-MAY-21	0.05	0.26	0.08
1,2-Dibromoethane		<0.050		0.050	ug/g	14-MAY-21	0.05	0.05	0.05
1,2-Dichlorobenzene		<0.050		0.050	ug/g	14-MAY-21	0.05	6.8	3.4
1,3-Dichlorobenzene		<0.050		0.050	ug/g	14-MAY-21	0.05	6.8	4.8

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte						#1	#2	#3
L2584509-16	BH108-21 SS4 7.5-9.5FT								
Sampled By: CLIENT on 05-MAY-21 @ 13:00									
Matrix: SOIL									
Volatile Organic Compounds									
	1,4-Dichlorobenzene	<0.050		0.050	ug/g	14-MAY-21	0.05	0.05	0.05
	Dichlorodifluoromethane	<0.050		0.050	ug/g	14-MAY-21	0.05	1.8	1.8
	1,1-Dichloroethane	<0.050		0.050	ug/g	14-MAY-21	0.05	0.57	0.14
	1,2-Dichloroethane	<0.050		0.050	ug/g	14-MAY-21	0.05	0.05	0.05
	1,1-Dichloroethylene	<0.050		0.050	ug/g	14-MAY-21	0.05	0.05	0.05
	cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	14-MAY-21	0.05	0.05	0.05
	trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	14-MAY-21	0.05	0.05	0.05
	Methylene Chloride	<0.050		0.050	ug/g	14-MAY-21	0.05	0.2	0.06
	1,2-Dichloropropane	<0.050		0.050	ug/g	14-MAY-21	0.05	0.05	0.05
	cis-1,3-Dichloropropene	<0.030		0.030	ug/g	14-MAY-21			
	trans-1,3-Dichloropropene	<0.030		0.030	ug/g	14-MAY-21			
	1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g	14-MAY-21	0.05	0.05	0.05
	Ethylbenzene	<0.018		0.018	ug/g	14-MAY-21	0.05	1.9	1.9
	n-Hexane	<0.050		0.050	ug/g	14-MAY-21	0.05	2.5	2.5
	Methyl Ethyl Ketone	<0.50		0.50	ug/g	14-MAY-21	0.5	26	14
	Methyl Isobutyl Ketone	<0.50		0.50	ug/g	14-MAY-21	0.5	17	0.89
	MTBE	<0.050		0.050	ug/g	14-MAY-21	0.05	0.05	0.05
	Styrene	<0.050		0.050	ug/g	14-MAY-21	0.05	6.8	0.5
	1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	14-MAY-21	0.05	0.05	0.05
	1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	14-MAY-21	0.05	0.05	0.05
	Tetrachloroethylene	<0.050		0.050	ug/g	14-MAY-21	0.05	0.05	0.05
	Toluene	<0.080		0.080	ug/g	14-MAY-21	0.2	7.8	0.99
	1,1,1-Trichloroethane	<0.050		0.050	ug/g	14-MAY-21	0.05	0.4	0.11
	1,1,2-Trichloroethane	<0.050		0.050	ug/g	14-MAY-21	0.05	0.05	0.05
	Trichloroethylene	<0.010		0.010	ug/g	14-MAY-21	0.05	0.05	0.05
	Trichlorofluoromethane	<0.050		0.050	ug/g	14-MAY-21	0.25	0.46	0.46
	Vinyl chloride	<0.020		0.020	ug/g	14-MAY-21	0.02	0.02	0.02
	o-Xylene	<0.020		0.020	ug/g	14-MAY-21			
	m+p-Xylenes	<0.030		0.030	ug/g	14-MAY-21			
	Xylenes (Total)	<0.050		0.050	ug/g	14-MAY-21	0.05	3	0.9
	Surrogate: 4-Bromofluorobenzene	102.8		50-140	%	14-MAY-21			
	Surrogate: 1,4-Difluorobenzene	121.0		50-140	%	14-MAY-21			
Hydrocarbons									
	F1 (C6-C10)	<5.0		5.0	ug/g	14-MAY-21	25	25	25
	F1-BTEX	<5.0		5.0	ug/g	14-MAY-21	25	25	25
	F2 (C10-C16)	<10		10	ug/g	14-MAY-21	10	26	10
	F3 (C16-C34)	<50		50	ug/g	14-MAY-21	240	1700	300
	F4 (C34-C50)	<50		50	ug/g	14-MAY-21	120	3300	2800
	Total Hydrocarbons (C6-C50)	<72		72	ug/g	14-MAY-21			
	Chrom. to baseline at nC50	YES			No Unit	14-MAY-21			
	Surrogate: 2-Bromobenzotrifluoride	88.7		60-140	%	14-MAY-21			
	Surrogate: 3,4-Dichlorotoluene	101.9		60-140	%	14-MAY-21			
L2584509-18	BH107-21 SS2 2.5-4.5FT								
Sampled By: CLIENT on 05-MAY-21 @ 13:40									
Matrix: SOIL									
							#1	#2	#3

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte						#1	#2	#3
L2584509-18 BH107-21 SS2 2.5-4.5FT									
Sampled By: CLIENT on 05-MAY-21 @ 13:40									
Matrix: SOIL									
Physical Tests									
Conductivity		1.04		0.0040	mS/cm	17-MAY-21	*0.57	1.4	*0.7
% Moisture		9.21		0.25	%	12-MAY-21			
pH		7.99		0.10	pH units	14-MAY-21			
Saturated Paste Extractables									
SAR		66.5	SAR:M	0.10	SAR	17-MAY-21	*2.4	*12	*5
Calcium (Ca)		0.77		0.50	mg/L	17-MAY-21			
Magnesium (Mg)		<0.50		0.50	mg/L	17-MAY-21			
Sodium (Na)		212		0.50	mg/L	17-MAY-21			
Metals									
Antimony (Sb)		<1.0		1.0	ug/g	17-MAY-21	1.3	40	7.5
Arsenic (As)		3.7		1.0	ug/g	17-MAY-21	18	18	18
Barium (Ba)		40.3		1.0	ug/g	17-MAY-21	220	670	390
Beryllium (Be)		<0.50		0.50	ug/g	17-MAY-21	2.5	8	4
Boron (B)		6.1		5.0	ug/g	17-MAY-21	36	120	120
Cadmium (Cd)		<0.50		0.50	ug/g	17-MAY-21	1.2	1.9	1.2
Chromium (Cr)		13.0		1.0	ug/g	17-MAY-21	70	160	160
Cobalt (Co)		4.9		1.0	ug/g	17-MAY-21	21	80	22
Copper (Cu)		18.6		1.0	ug/g	17-MAY-21	92	230	140
Lead (Pb)		14.5		1.0	ug/g	17-MAY-21	120	120	120
Molybdenum (Mo)		<1.0		1.0	ug/g	17-MAY-21	2	40	6.9
Nickel (Ni)		10.9		1.0	ug/g	17-MAY-21	82	270	100
Selenium (Se)		<1.0		1.0	ug/g	17-MAY-21	1.5	5.5	2.4
Silver (Ag)		<0.20		0.20	ug/g	17-MAY-21	0.5	40	20
Thallium (Tl)		<0.50		0.50	ug/g	17-MAY-21	1	3.3	1
Uranium (U)		<1.0		1.0	ug/g	17-MAY-21	2.5	33	23
Vanadium (V)		24.3		1.0	ug/g	17-MAY-21	86	86	86
Zinc (Zn)		71.2		5.0	ug/g	17-MAY-21	290	340	340
Volatile Organic Compounds									
Benzene		<0.0068		0.0068	ug/g	14-MAY-21	0.02	0.034	0.02
Ethylbenzene		<0.018		0.018	ug/g	14-MAY-21	0.05	1.9	1.9
Toluene		<0.080		0.080	ug/g	14-MAY-21	0.2	7.8	0.99
o-Xylene		<0.020		0.020	ug/g	14-MAY-21			
m+p-Xylenes		<0.030		0.030	ug/g	14-MAY-21			
Xylenes (Total)		<0.050		0.050	ug/g	14-MAY-21	0.05	3	0.9
Surrogate: 4-Bromofluorobenzene		119.9		50-140	%	14-MAY-21			
Surrogate: 1,4-Difluorobenzene		126.0		50-140	%	14-MAY-21			
Hydrocarbons									
F1 (C6-C10)		<5.0		5.0	ug/g	14-MAY-21	25	25	25
F1-BTEX		<5.0		5.0	ug/g	14-MAY-21	25	25	25
F2 (C10-C16)		<10		10	ug/g	14-MAY-21	10	26	10
F3 (C16-C34)		<50		50	ug/g	14-MAY-21	240	1700	300
F4 (C34-C50)		<50		50	ug/g	14-MAY-21	120	3300	2800
Total Hydrocarbons (C6-C50)		<72		72	ug/g	14-MAY-21			
Chrom. to baseline at nC50		YES			No Unit	14-MAY-21			
Surrogate: 2-Bromobenzotrifluoride		85.2		60-140	%	14-MAY-21			
Surrogate: 3,4-Dichlorotoluene		92.4		60-140	%	14-MAY-21			

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte						#1	#2	#3
L2584509-20	BH107-21 SS4 7.5-9.5FT								
Sampled By: CLIENT on 05-MAY-21 @ 14:00									
Matrix: SOIL									
Physical Tests									
% Moisture		15.8		0.25	%	12-MAY-21			
Volatile Organic Compounds									
Benzene		<0.0068		0.0068	ug/g	14-MAY-21	0.02	0.034	0.02
Ethylbenzene		<0.018		0.018	ug/g	14-MAY-21	0.05	1.9	1.9
Toluene		<0.080		0.080	ug/g	14-MAY-21	0.2	7.8	0.99
o-Xylene		<0.020		0.020	ug/g	14-MAY-21			
m+p-Xylenes		<0.030		0.030	ug/g	14-MAY-21			
Xylenes (Total)		<0.050		0.050	ug/g	14-MAY-21	0.05	3	0.9
Surrogate: 4-Bromofluorobenzene		103.8		50-140	%	14-MAY-21			
Surrogate: 1,4-Difluorobenzene		104.0		50-140	%	14-MAY-21			
Hydrocarbons									
F1 (C6-C10)		<5.0		5.0	ug/g	14-MAY-21	25	25	25
F1-BTEX		<5.0		5.0	ug/g	14-MAY-21	25	25	25
F2 (C10-C16)		<10		10	ug/g	14-MAY-21	10	26	10
F3 (C16-C34)		<50		50	ug/g	14-MAY-21	240	1700	300
F4 (C34-C50)		<50		50	ug/g	14-MAY-21	120	3300	2800
Total Hydrocarbons (C6-C50)		<72		72	ug/g	14-MAY-21			
Chrom. to baseline at nC50		YES			No Unit	14-MAY-21			
Surrogate: 2-Bromobenzotrifluoride		88.4		60-140	%	14-MAY-21			
Surrogate: 3,4-Dichlorotoluene		90.0		60-140	%	14-MAY-21			

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use

Reference Information

Sample Parameter Qualifier key listed:

Qualifier	Description
SURR-ND	Surrogate recovery marginally exceeded ALS DQO. Reported non-detect results for associated samples were deemed to be unaffected.
SAR:M	Reported SAR represents a maximum value. Actual SAR may be lower if both Ca and Mg were detectable.

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference***
B-HWS-R511-WT	Soil	Boron-HWE-O.Reg 153/04 (July 2011)	HW EXTR, EPA 6010B

A dried solid sample is extracted with calcium chloride, the sample undergoes a heating process. After cooling the sample is filtered and analyzed by ICP/OES.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

BTX-511-HS-WT	Soil	BTEX-O.Reg 153/04 (July 2011)	SW846 8260
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BTX is determined by extracting a soil or sediment sample as received with methanol, then analyzing by headspace-GC/MS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

CR-CR6-IC-WT	Soil	Hexavalent Chromium in Soil	SW846 3060A/7199
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This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Method 7199, published by the United States Environmental Protection Agency (EPA). The procedure involves analysis for chromium (VI) by ion chromatography using diphenylcarbazide in a sulphuric acid solution.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

EC-WT	Soil	Conductivity (EC)	MOEE E3138
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A representative subsample is tumbled with de-ionized (DI) water. The ratio of water to soil is 2:1 v/w. After tumbling the sample is then analyzed by a conductivity meter.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

F1-F4-511-CALC-WT	Soil	F1-F4 Hydrocarbon Calculated Parameters	CCME CWS-PHC, Pub #1310, Dec 2001-S
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Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

Hydrocarbon results are expressed on a dry weight basis.

In cases where results for both F4 and F4G are reported, the greater of the two results must be used in any application of the CWS PHC guidelines and the gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.

In samples where BTEX and F1 were analyzed, F1-BTEX represents a value where the sum of Benzene, Toluene, Ethylbenzene and total Xylenes has been subtracted from F1.

In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.

Unless otherwise qualified, the following quality control criteria have been met for the F1 hydrocarbon range:

1. All extraction and analysis holding times were met.
2. Instrument performance showing response factors for C6 and C10 within 30% of the response factor for toluene.
3. Linearity of gasoline response within 15% throughout the calibration range.

Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:

1. All extraction and analysis holding times were met.
2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.
3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.
4. Linearity of diesel or motor oil response within 15% throughout the calibration range.

F1-HS-511-WT	Soil	F1-O.Reg 153/04 (July 2011)	E3398/CCME TIER 1-HS
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Fraction F1 is determined by extracting a soil or sediment sample as received with methanol, then analyzing by headspace-GC/FID.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

Reference Information

F2-F4-511-WT Soil F2-F4-O.Reg 153/04 (July 2011) CCME Tier 1

Petroleum Hydrocarbons (F2-F4 fractions) are extracted from soil with 1:1 hexane:acetone using a rotary extractor. Extracts are treated with silica gel to remove polar organic interferences. F2, F3, & F4 are analyzed by GC-FID. F4G-sg is analyzed gravimetrically.

Notes:

1. F2 (C10-C16): Sum of all hydrocarbons that elute between nC10 and nC16.
2. F3 (C16-C34): Sum of all hydrocarbons that elute between nC16 and nC34.
3. F4 (C34-C50): Sum of all hydrocarbons that elute between nC34 and nC50.
4. F4G: Gravimetric Heavy Hydrocarbons
5. F4G-sg: Gravimetric Heavy Hydrocarbons (F4G) after silica gel treatment.
6. Where both F4 (C34-C50) and F4G-sg are reported for a sample, the larger of the two values is used for comparison against the relevant CCME guideline for F4.
7. F4G-sg cannot be added to the C6 to C50 hydrocarbon results to obtain an estimate of total extractable hydrocarbons.
8. This method is validated for use.
9. Data from analysis of validation and quality control samples is available upon request.
10. Reported results are expressed as milligrams per dry kilogram, unless otherwise indicated.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

F4G-ADD-511-WT Soil F4G SG-O.Reg 153/04 (July 2011) MOE DECPH-E3398/CCME TIER 1

F4G, gravimetric analysis, is determined if the chromatogram does not return to baseline at or before C50. A soil sample is extracted with a solvent mix, the solvent is evaporated and the weight of the residue is determined.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

HG-200.2-CVAA-WT Soil Mercury in Soil by CVAAS EPA 200.2/1631E (mod)

Soil samples are digested with nitric and hydrochloric acids, followed by analysis by CVAAS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

MET-200.2-CCMS-WT Soil Metals in Soil by CRC ICPMS EPA 200.2/6020B (mod)

Soil/sediment is dried, disaggregated, and sieved (2 mm). For tests intended to support Ontario regulations, the <2mm fraction is ground to pass through a 0.355 mm sieve. Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H₂S) may be excluded if lost during sampling, storage, or digestion.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

METHYLNAPS-CALC-WT Soil ABN-Calculated Parameters SW846 8270

MOISTURE-WT Soil % Moisture CCME PHC in Soil - Tier 1 (mod)

PAH-511-WT Soil PAH-O.Reg 153/04 (July 2011) SW846 3510/8270

A representative sub-sample of soil is fortified with deuterium-labelled surrogates and a mechanical shaking technique is used to extract the sample with a mixture of methanol and toluene. The extracts are concentrated and analyzed by GC/MS. Results for benzo(b) fluoranthene may include contributions from benzo(j) fluoranthene, if also present in the sample.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

PH-WT Soil pH MOEE E3137A

A minimum 10g portion of the sample is extracted with 20mL of 0.01M calcium chloride solution by shaking for at least 30 minutes. The aqueous layer is separated from the soil and then analyzed using a pH meter and electrode.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

Reference Information

SAR-R511-WT Soil SAR-O.Reg 153/04 (July 2011) SW846 6010C

A dried, disaggregated solid sample is extracted with deionized water, the aqueous extract is separated from the solid, acidified and then analyzed using a ICP/OES. The concentrations of Na, Ca and Mg are reported as per CALA requirements for calculated parameters. These individual parameters are not for comparison to any guideline.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

VOC-1,3-DCP-CALC-WT Soil Regulation 153 VOCs SW8260B/SW8270C
 VOC-511-HS-WT Soil VOC-O.Reg 153/04 (July 2011) SW846 8260 (511)

Soil and sediment samples are extracted in methanol and analyzed by headspace-GC/MS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

XYLENES-SUM-CALC- Soil Sum of Xylene Isomer CALCULATION
 WT Concentrations

Total xylenes represents the sum of o-xylene and m&p-xylene.

*** ALS test methods may incorporate modifications from specified reference methods to improve performance.

Chain of Custody numbers:

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA		

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guideline limits are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.



Quality Control Report

Workorder: L2584509

Report Date: 18-MAY-21

Page 1 of 20

Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
B-HWS-R511-WT								
	Soil							
Batch	R5458718							
WG3535092-4	DUP	L2584205-24						
Boron (B), Hot Water Ext.		0.17	0.17		ug/g	1.8	30	17-MAY-21
WG3535092-2	IRM	WT SAR4						
Boron (B), Hot Water Ext.			102.3		%		70-130	17-MAY-21
WG3535092-3	LCS							
Boron (B), Hot Water Ext.			103.0		%		70-130	17-MAY-21
WG3535092-1	MB							
Boron (B), Hot Water Ext.			<0.10		ug/g		0.1	17-MAY-21
BTX-511-HS-WT								
	Soil							
Batch	R5457515							
WG3531268-4	DUP	WG3531268-3						
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	14-MAY-21
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	14-MAY-21
m+p-Xylenes		<0.030	<0.030	RPD-NA	ug/g	N/A	40	14-MAY-21
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	14-MAY-21
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	14-MAY-21
WG3531268-2	LCS							
Benzene			119.2		%		70-130	14-MAY-21
Ethylbenzene			114.0		%		70-130	14-MAY-21
m+p-Xylenes			104.8		%		70-130	14-MAY-21
o-Xylene			111.5		%		70-130	14-MAY-21
Toluene			112.8		%		70-130	14-MAY-21
WG3531268-1	MB							
Benzene			<0.0068		ug/g		0.0068	14-MAY-21
Ethylbenzene			<0.018		ug/g		0.018	14-MAY-21
m+p-Xylenes			<0.030		ug/g		0.03	14-MAY-21
o-Xylene			<0.020		ug/g		0.02	14-MAY-21
Toluene			<0.080		ug/g		0.08	14-MAY-21
Surrogate: 1,4-Difluorobenzene			115.4		%		50-140	14-MAY-21
Surrogate: 4-Bromofluorobenzene			114.7		%		50-140	14-MAY-21
WG3531268-5	MS	WG3531268-3						
Benzene			136.2		%		60-140	14-MAY-21
Ethylbenzene			130.4		%		60-140	14-MAY-21
m+p-Xylenes			120.9		%		60-140	14-MAY-21
o-Xylene			128.1		%		60-140	14-MAY-21
Toluene			129.9		%		60-140	14-MAY-21



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520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CR-CR6-IC-WT		Soil						
Batch R5457795								
WG3533077-4	CRM	WT-SQC012						
Chromium, Hexavalent			102.7		%		70-130	14-MAY-21
WG3533077-3	DUP	L2584586-3						
Chromium, Hexavalent		<0.20	<0.20	RPD-NA	ug/g	N/A	35	14-MAY-21
WG3533077-2	LCS							
Chromium, Hexavalent			89.8		%		80-120	14-MAY-21
WG3533077-1	MB							
Chromium, Hexavalent			<0.20		ug/g		0.2	14-MAY-21
EC-WT		Soil						
Batch R5458801								
WG3535758-4	DUP	WG3535758-3						
Conductivity		0.690	0.697		mS/cm	1.0	20	17-MAY-21
WG3535758-2	IRM	WT SAR4						
Conductivity			100.6		%		70-130	17-MAY-21
WG3535923-1	LCS							
Conductivity			98.4		%		90-110	17-MAY-21
WG3535758-1	MB							
Conductivity			<0.0040		mS/cm		0.004	17-MAY-21
F1-HS-511-WT		Soil						
Batch R5457445								
WG3532273-4	DUP	WG3532273-3						
F1 (C6-C10)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	14-MAY-21
WG3532273-2	LCS							
F1 (C6-C10)			113.8		%		80-120	14-MAY-21
WG3532273-1	MB							
F1 (C6-C10)			<5.0		ug/g		5	14-MAY-21
Surrogate: 3,4-Dichlorotoluene			104.1		%		60-140	14-MAY-21
WG3532273-5	MS	WG3532273-3						
F1 (C6-C10)			118.3		%		60-140	14-MAY-21
Batch R5457515								
WG3531268-4	DUP	WG3531268-3						
F1 (C6-C10)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	14-MAY-21
WG3531268-2	LCS							
F1 (C6-C10)			119.6		%		80-120	14-MAY-21
WG3531268-1	MB							
F1 (C6-C10)			<5.0		ug/g		5	14-MAY-21
Surrogate: 3,4-Dichlorotoluene			104.3		%		60-140	14-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT	Soil							
Batch	R5457515							
WG3531268-5	MS	WG3531268-3						
F1 (C6-C10)			118.5		%		60-140	14-MAY-21
F2-F4-511-WT	Soil							
Batch	R5457498							
WG3533054-3	DUP	WG3533054-5						
F2 (C10-C16)		<10	<10	RPD-NA	ug/g	N/A	30	14-MAY-21
F3 (C16-C34)		<50	<50	RPD-NA	ug/g	N/A	30	14-MAY-21
F4 (C34-C50)		<50	<50	RPD-NA	ug/g	N/A	30	14-MAY-21
WG3533054-2	LCS							
F2 (C10-C16)			100.2		%		80-120	14-MAY-21
F3 (C16-C34)			101.3		%		80-120	14-MAY-21
F4 (C34-C50)			100.8		%		80-120	14-MAY-21
WG3533054-1	MB							
F2 (C10-C16)			<10		ug/g		10	14-MAY-21
F3 (C16-C34)			<50		ug/g		50	14-MAY-21
F4 (C34-C50)			<50		ug/g		50	14-MAY-21
Surrogate: 2-Bromobenzotrifluoride			93.9		%		60-140	14-MAY-21
WG3533054-4	MS	WG3533054-5						
F2 (C10-C16)			100.0		%		60-140	14-MAY-21
F3 (C16-C34)			100.9		%		60-140	14-MAY-21
F4 (C34-C50)			100.9		%		60-140	14-MAY-21
F4G-ADD-511-WT	Soil							
Batch	R5457904							
WG3535189-2	LCS							
F4G-SG (GHH-Silica)			81.7		%		60-140	14-MAY-21
WG3535189-1	MB							
F4G-SG (GHH-Silica)			<250		ug/g		250	14-MAY-21
HG-200.2-CVAA-WT	Soil							
Batch	R5458556							
WG3534969-2	CRM	WT-SS-2						
Mercury (Hg)			98.5		%		70-130	17-MAY-21
WG3534969-6	DUP	WG3534969-5						
Mercury (Hg)		<0.0050	<0.0050	RPD-NA	ug/g	N/A	40	17-MAY-21
WG3534969-3	LCS							
Mercury (Hg)			98.5		%		80-120	17-MAY-21
WG3534969-1	MB							



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-200.2-CVAA-WT Soil								
Batch	R5458556							
WG3534969-1	MB							
Mercury (Hg)			<0.0050		mg/kg		0.005	17-MAY-21
MET-200.2-CCMS-WT Soil								
Batch	R5457702							
WG3534566-2	CRM	WT-SS-2						
Antimony (Sb)			81.8		%		70-130	14-MAY-21
Arsenic (As)			95.5		%		70-130	14-MAY-21
Barium (Ba)			94.6		%		70-130	14-MAY-21
Beryllium (Be)			98.7		%		70-130	14-MAY-21
Boron (B)			8.3		mg/kg		3.5-13.5	14-MAY-21
Cadmium (Cd)			107.3		%		70-130	14-MAY-21
Chromium (Cr)			93.2		%		70-130	14-MAY-21
Cobalt (Co)			93.3		%		70-130	14-MAY-21
Copper (Cu)			96.7		%		70-130	14-MAY-21
Lead (Pb)			97.8		%		70-130	14-MAY-21
Molybdenum (Mo)			91.3		%		70-130	14-MAY-21
Nickel (Ni)			95.1		%		70-130	14-MAY-21
Selenium (Se)			0.10		mg/kg		0-0.34	14-MAY-21
Silver (Ag)			94.5		%		70-130	14-MAY-21
Thallium (Tl)			0.070		mg/kg		0.029-0.129	14-MAY-21
Uranium (U)			89.6		%		70-130	14-MAY-21
Vanadium (V)			94.0		%		70-130	14-MAY-21
Zinc (Zn)			90.8		%		70-130	14-MAY-21
WG3534566-4	DUP	L2584722-6						
Antimony (Sb)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	14-MAY-21
Arsenic (As)		4.1	4.2		ug/g	3.7	30	14-MAY-21
Barium (Ba)		68.3	70.5		ug/g	3.2	40	14-MAY-21
Beryllium (Be)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	14-MAY-21
Boron (B)		16.7	17.4		ug/g	4.1	30	14-MAY-21
Cadmium (Cd)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	14-MAY-21
Chromium (Cr)		23.3	19.2		ug/g	19	30	14-MAY-21
Cobalt (Co)		6.4	6.5		ug/g	2.1	30	14-MAY-21
Copper (Cu)		16.0	16.4		ug/g	2.6	30	14-MAY-21
Lead (Pb)		19.1	20.4		ug/g	6.3	40	14-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
	Soil							
Batch	R5457702							
WG3534566-4	DUP	L2584722-6						
Molybdenum (Mo)		<1.0	<1.0	RPD-NA	ug/g	N/A	40	14-MAY-21
Nickel (Ni)		14.4	14.7		ug/g	2.2	30	14-MAY-21
Selenium (Se)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	14-MAY-21
Silver (Ag)		<0.20	<0.20	RPD-NA	ug/g	N/A	40	14-MAY-21
Thallium (Tl)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	14-MAY-21
Uranium (U)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	14-MAY-21
Vanadium (V)		28.5	29.2		ug/g	2.5	30	14-MAY-21
Zinc (Zn)		45.7	46.0		ug/g	0.7	30	14-MAY-21
WG3534566-3	LCS							
Antimony (Sb)			101.9		%		80-120	14-MAY-21
Arsenic (As)			102.2		%		80-120	14-MAY-21
Barium (Ba)			104.8		%		80-120	14-MAY-21
Beryllium (Be)			100.6		%		80-120	14-MAY-21
Boron (B)			97.7		%		80-120	14-MAY-21
Cadmium (Cd)			98.8		%		80-120	14-MAY-21
Chromium (Cr)			100.2		%		80-120	14-MAY-21
Cobalt (Co)			99.9		%		80-120	14-MAY-21
Copper (Cu)			99.6		%		80-120	14-MAY-21
Lead (Pb)			103.5		%		80-120	14-MAY-21
Molybdenum (Mo)			102.3		%		80-120	14-MAY-21
Nickel (Ni)			98.2		%		80-120	14-MAY-21
Selenium (Se)			102.0		%		80-120	14-MAY-21
Silver (Ag)			103.5		%		80-120	14-MAY-21
Thallium (Tl)			105.4		%		80-120	14-MAY-21
Uranium (U)			98.5		%		80-120	14-MAY-21
Vanadium (V)			103.2		%		80-120	14-MAY-21
Zinc (Zn)			95.6		%		80-120	14-MAY-21
WG3534566-1	MB							
Antimony (Sb)			<0.10		mg/kg		0.1	14-MAY-21
Arsenic (As)			<0.10		mg/kg		0.1	14-MAY-21
Barium (Ba)			<0.50		mg/kg		0.5	14-MAY-21
Beryllium (Be)			<0.10		mg/kg		0.1	14-MAY-21
Boron (B)			<5.0		mg/kg		5	14-MAY-21
Cadmium (Cd)			<0.020		mg/kg		0.02	14-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
Soil								
Batch R5457702								
WG3534566-1 MB								
Chromium (Cr)			<0.50		mg/kg		0.5	14-MAY-21
Cobalt (Co)			<0.10		mg/kg		0.1	14-MAY-21
Copper (Cu)			<0.50		mg/kg		0.5	14-MAY-21
Lead (Pb)			<0.50		mg/kg		0.5	14-MAY-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	14-MAY-21
Nickel (Ni)			<0.50		mg/kg		0.5	14-MAY-21
Selenium (Se)			<0.20		mg/kg		0.2	14-MAY-21
Silver (Ag)			<0.10		mg/kg		0.1	14-MAY-21
Thallium (Tl)			<0.050		mg/kg		0.05	14-MAY-21
Uranium (U)			<0.050		mg/kg		0.05	14-MAY-21
Vanadium (V)			<0.20		mg/kg		0.2	14-MAY-21
Zinc (Zn)			<2.0		mg/kg		2	14-MAY-21
Batch R5459094								
WG3534969-2 CRM								
WT-SS-2								
Antimony (Sb)			107.8		%		70-130	17-MAY-21
Arsenic (As)			110.8		%		70-130	17-MAY-21
Barium (Ba)			112.5		%		70-130	17-MAY-21
Beryllium (Be)			109.2		%		70-130	17-MAY-21
Boron (B)			9.8		mg/kg		3.5-13.5	17-MAY-21
Cadmium (Cd)			110.9		%		70-130	17-MAY-21
Chromium (Cr)			114.8		%		70-130	17-MAY-21
Cobalt (Co)			109.2		%		70-130	17-MAY-21
Copper (Cu)			107.3		%		70-130	17-MAY-21
Lead (Pb)			112.3		%		70-130	17-MAY-21
Molybdenum (Mo)			126.9		%		70-130	17-MAY-21
Nickel (Ni)			114.0		%		70-130	17-MAY-21
Selenium (Se)			0.14		mg/kg		0-0.34	17-MAY-21
Silver (Ag)			123.5		%		70-130	17-MAY-21
Thallium (Tl)			0.084		mg/kg		0.029-0.129	17-MAY-21
Uranium (U)			108.7		%		70-130	17-MAY-21
Vanadium (V)			114.8		%		70-130	17-MAY-21
Zinc (Zn)			108.3		%		70-130	17-MAY-21
WG3534969-6 DUP								
WG3534969-5								
Antimony (Sb)		0.51	0.49		ug/g	2.9	30	17-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT		Soil						
Batch	R5459094							
WG3534969-6	DUP	WG3534969-5						
Arsenic (As)		6.84	7.01		ug/g	2.4	30	17-MAY-21
Barium (Ba)		119	116		ug/g	2.4	40	17-MAY-21
Beryllium (Be)		0.91	0.89		ug/g	2.0	30	17-MAY-21
Boron (B)		23.9	24.6		ug/g	2.9	30	17-MAY-21
Cadmium (Cd)		0.120	0.117		ug/g	3.0	30	17-MAY-21
Chromium (Cr)		25.6	26.3		ug/g	2.9	30	17-MAY-21
Cobalt (Co)		13.9	14.2		ug/g	2.2	30	17-MAY-21
Copper (Cu)		7.78	8.03		ug/g	3.0	30	17-MAY-21
Lead (Pb)		12.2	12.0		ug/g	1.8	40	17-MAY-21
Molybdenum (Mo)		1.04	1.04		ug/g	0.7	40	17-MAY-21
Nickel (Ni)		30.4	31.5		ug/g	3.3	30	17-MAY-21
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	17-MAY-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	17-MAY-21
Thallium (Tl)		0.110	0.113		ug/g	3.0	30	17-MAY-21
Uranium (U)		0.614	0.596		ug/g	3.0	30	17-MAY-21
Vanadium (V)		32.1	33.9		ug/g	5.4	30	17-MAY-21
Zinc (Zn)		66.0	65.7		ug/g	0.4	30	17-MAY-21
WG3534969-4	LCS							
Antimony (Sb)			104.2		%		80-120	17-MAY-21
Arsenic (As)			111.5		%		80-120	17-MAY-21
Barium (Ba)			111.3		%		80-120	17-MAY-21
Beryllium (Be)			86.7		%		80-120	17-MAY-21
Boron (B)			82.9		%		80-120	17-MAY-21
Cadmium (Cd)			110.3		%		80-120	17-MAY-21
Chromium (Cr)			109.3		%		80-120	17-MAY-21
Cobalt (Co)			108.4		%		80-120	17-MAY-21
Copper (Cu)			105.0		%		80-120	17-MAY-21
Lead (Pb)			97.2		%		80-120	17-MAY-21
Molybdenum (Mo)			97.8		%		80-120	17-MAY-21
Nickel (Ni)			105.8		%		80-120	17-MAY-21
Selenium (Se)			105.0		%		80-120	17-MAY-21
Silver (Ag)			99.4		%		80-120	17-MAY-21
Thallium (Tl)			93.8		%		80-120	17-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
	Soil							
Batch	R5459094							
WG3534969-4	LCS							
Uranium (U)			98.3		%		80-120	17-MAY-21
Vanadium (V)			112.8		%		80-120	17-MAY-21
Zinc (Zn)			106.6		%		80-120	17-MAY-21
WG3534969-1	MB							
Antimony (Sb)			<0.10		mg/kg		0.1	17-MAY-21
Arsenic (As)			<0.10		mg/kg		0.1	17-MAY-21
Barium (Ba)			<0.50		mg/kg		0.5	17-MAY-21
Beryllium (Be)			<0.10		mg/kg		0.1	17-MAY-21
Boron (B)			<5.0		mg/kg		5	17-MAY-21
Cadmium (Cd)			<0.020		mg/kg		0.02	17-MAY-21
Chromium (Cr)			<0.50		mg/kg		0.5	17-MAY-21
Cobalt (Co)			<0.10		mg/kg		0.1	17-MAY-21
Copper (Cu)			<0.50		mg/kg		0.5	17-MAY-21
Lead (Pb)			<0.50		mg/kg		0.5	17-MAY-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	17-MAY-21
Nickel (Ni)			<0.50		mg/kg		0.5	17-MAY-21
Selenium (Se)			<0.20		mg/kg		0.2	17-MAY-21
Silver (Ag)			<0.10		mg/kg		0.1	17-MAY-21
Thallium (Tl)			<0.050		mg/kg		0.05	17-MAY-21
Uranium (U)			<0.050		mg/kg		0.05	17-MAY-21
Vanadium (V)			<0.20		mg/kg		0.2	17-MAY-21
Zinc (Zn)			<2.0		mg/kg		2	17-MAY-21
Batch	R5459102							
WG3535754-2	CRM	WT-SS-2						
Antimony (Sb)			91.6		%		70-130	17-MAY-21
Arsenic (As)			100.7		%		70-130	17-MAY-21
Barium (Ba)			106.0		%		70-130	17-MAY-21
Beryllium (Be)			93.2		%		70-130	17-MAY-21
Boron (B)			7.8		mg/kg		3.5-13.5	17-MAY-21
Cadmium (Cd)			97.0		%		70-130	17-MAY-21
Chromium (Cr)			101.1		%		70-130	17-MAY-21
Cobalt (Co)			102.3		%		70-130	17-MAY-21
Copper (Cu)			103.8		%		70-130	17-MAY-21
Lead (Pb)			94.6		%		70-130	17-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
	Soil							
Batch	R5459102							
WG3535754-2	CRM	WT-SS-2						
Molybdenum (Mo)			98.0		%		70-130	17-MAY-21
Nickel (Ni)			102.7		%		70-130	17-MAY-21
Selenium (Se)			0.14		mg/kg		0-0.34	17-MAY-21
Thallium (Tl)			0.070		mg/kg		0.029-0.129	17-MAY-21
Uranium (U)			92.8		%		70-130	17-MAY-21
Vanadium (V)			102.0		%		70-130	17-MAY-21
Zinc (Zn)			101.8		%		70-130	17-MAY-21
WG3535754-6	DUP	WG3535754-5						
Antimony (Sb)		0.15	0.13		ug/g	11	30	17-MAY-21
Arsenic (As)		4.42	4.22		ug/g	4.6	30	17-MAY-21
Barium (Ba)		115	101		ug/g	12	40	17-MAY-21
Beryllium (Be)		0.78	0.70		ug/g	11	30	17-MAY-21
Boron (B)		10.5	9.2		ug/g	13	30	17-MAY-21
Cadmium (Cd)		0.149	0.147		ug/g	1.8	30	17-MAY-21
Chromium (Cr)		28.4	26.6		ug/g	6.3	30	17-MAY-21
Cobalt (Co)		11.5	11.0		ug/g	4.7	30	17-MAY-21
Copper (Cu)		22.5	21.1		ug/g	6.3	30	17-MAY-21
Lead (Pb)		8.94	8.55		ug/g	4.5	40	17-MAY-21
Molybdenum (Mo)		0.36	0.32		ug/g	10	40	17-MAY-21
Nickel (Ni)		25.6	24.4		ug/g	4.9	30	17-MAY-21
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	17-MAY-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	17-MAY-21
Thallium (Tl)		0.162	0.151		ug/g	6.9	30	17-MAY-21
Uranium (U)		0.529	0.522		ug/g	1.3	30	17-MAY-21
Vanadium (V)		41.1	38.6		ug/g	6.2	30	17-MAY-21
Zinc (Zn)		55.8	51.9		ug/g	7.2	30	17-MAY-21
WG3535754-4	LCS							
Antimony (Sb)			107.0		%		80-120	17-MAY-21
Arsenic (As)			101.4		%		80-120	17-MAY-21
Barium (Ba)			99.5		%		80-120	17-MAY-21
Beryllium (Be)			91.4		%		80-120	17-MAY-21
Boron (B)			90.0		%		80-120	17-MAY-21
Cadmium (Cd)			97.9		%		80-120	17-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	Soil							
Batch	R5459102							
WG3535754-4	LCS							
Chromium (Cr)			98.2		%		80-120	17-MAY-21
Cobalt (Co)			98.4		%		80-120	17-MAY-21
Copper (Cu)			95.7		%		80-120	17-MAY-21
Lead (Pb)			96.4		%		80-120	17-MAY-21
Molybdenum (Mo)			102.7		%		80-120	17-MAY-21
Nickel (Ni)			97.2		%		80-120	17-MAY-21
Selenium (Se)			101.7		%		80-120	17-MAY-21
Silver (Ag)			103.4		%		80-120	17-MAY-21
Thallium (Tl)			97.9		%		80-120	17-MAY-21
Uranium (U)			100.2		%		80-120	17-MAY-21
Vanadium (V)			101.7		%		80-120	17-MAY-21
Zinc (Zn)			97.0		%		80-120	17-MAY-21
WG3535754-1	MB							
Antimony (Sb)			<0.10		mg/kg		0.1	17-MAY-21
Arsenic (As)			<0.10		mg/kg		0.1	17-MAY-21
Barium (Ba)			<0.50		mg/kg		0.5	17-MAY-21
Beryllium (Be)			<0.10		mg/kg		0.1	17-MAY-21
Boron (B)			<5.0		mg/kg		5	17-MAY-21
Cadmium (Cd)			<0.020		mg/kg		0.02	17-MAY-21
Chromium (Cr)			<0.50		mg/kg		0.5	17-MAY-21
Cobalt (Co)			<0.10		mg/kg		0.1	17-MAY-21
Copper (Cu)			<0.50		mg/kg		0.5	17-MAY-21
Lead (Pb)			<0.50		mg/kg		0.5	17-MAY-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	17-MAY-21
Nickel (Ni)			<0.50		mg/kg		0.5	17-MAY-21
Selenium (Se)			<0.20		mg/kg		0.2	17-MAY-21
Silver (Ag)			<0.10		mg/kg		0.1	17-MAY-21
Thallium (Tl)			<0.050		mg/kg		0.05	17-MAY-21
Uranium (U)			<0.050		mg/kg		0.05	17-MAY-21
Vanadium (V)			<0.20		mg/kg		0.2	17-MAY-21
Zinc (Zn)			<2.0		mg/kg		2	17-MAY-21

MOISTURE-WT **Soil**



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT		Soil						
Batch	R5456725							
WG3533063-3	DUP	L2584426-3						
% Moisture		19.1	19.0		%	0.7	20	12-MAY-21
WG3533063-2	LCS							
% Moisture			101.7		%		90-110	12-MAY-21
WG3533063-1	MB							
% Moisture			<0.25		%		0.25	12-MAY-21
Batch	R5456726							
WG3533065-3	DUP	L2584571-1						
% Moisture		9.71	9.43		%	2.9	20	12-MAY-21
WG3533065-2	LCS							
% Moisture			98.6		%		90-110	12-MAY-21
WG3533065-1	MB							
% Moisture			<0.25		%		0.25	12-MAY-21
PAH-511-WT		Soil						
Batch	R5456977							
WG3533811-3	DUP	WG3533811-5						
1-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	13-MAY-21
2-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	13-MAY-21
Acenaphthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-MAY-21
Acenaphthylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-MAY-21
Anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-MAY-21
Benzo(a)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-MAY-21
Benzo(a)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-MAY-21
Benzo(b&j)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-MAY-21
Benzo(g,h,i)perylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-MAY-21
Benzo(k)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-MAY-21
Chrysene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-MAY-21
Dibenz(a,h)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-MAY-21
Fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-MAY-21
Fluorene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-MAY-21
Indeno(1,2,3-cd)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-MAY-21
Naphthalene		<0.013	<0.013	RPD-NA	ug/g	N/A	40	13-MAY-21
Phenanthrene		<0.046	<0.046	RPD-NA	ug/g	N/A	40	13-MAY-21
Pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-MAY-21
WG3533811-2	LCS							



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Soil							
Batch	R5456977							
WG3533811-2 LCS								
1-Methylnaphthalene			97.7		%		50-140	13-MAY-21
2-Methylnaphthalene			94.8		%		50-140	13-MAY-21
Acenaphthene			94.5		%		50-140	13-MAY-21
Acenaphthylene			91.9		%		50-140	13-MAY-21
Anthracene			81.5		%		50-140	13-MAY-21
Benzo(a)anthracene			98.3		%		50-140	13-MAY-21
Benzo(a)pyrene			82.3		%		50-140	13-MAY-21
Benzo(b&j)fluoranthene			88.1		%		50-140	13-MAY-21
Benzo(g,h,i)perylene			92.9		%		50-140	13-MAY-21
Benzo(k)fluoranthene			91.3		%		50-140	13-MAY-21
Chrysene			92.7		%		50-140	13-MAY-21
Dibenz(a,h)anthracene			91.8		%		50-140	13-MAY-21
Fluoranthene			91.6		%		50-140	13-MAY-21
Fluorene			93.5		%		50-140	13-MAY-21
Indeno(1,2,3-cd)pyrene			91.0		%		50-140	13-MAY-21
Naphthalene			91.4		%		50-140	13-MAY-21
Phenanthrene			92.8		%		50-140	13-MAY-21
Pyrene			90.2		%		50-140	13-MAY-21
WG3533811-1 MB								
1-Methylnaphthalene			<0.030		ug/g		0.03	13-MAY-21
2-Methylnaphthalene			<0.030		ug/g		0.03	13-MAY-21
Acenaphthene			<0.050		ug/g		0.05	13-MAY-21
Acenaphthylene			<0.050		ug/g		0.05	13-MAY-21
Anthracene			<0.050		ug/g		0.05	13-MAY-21
Benzo(a)anthracene			<0.050		ug/g		0.05	13-MAY-21
Benzo(a)pyrene			<0.050		ug/g		0.05	13-MAY-21
Benzo(b&j)fluoranthene			<0.050		ug/g		0.05	13-MAY-21
Benzo(g,h,i)perylene			<0.050		ug/g		0.05	13-MAY-21
Benzo(k)fluoranthene			<0.050		ug/g		0.05	13-MAY-21
Chrysene			<0.050		ug/g		0.05	13-MAY-21
Dibenz(a,h)anthracene			<0.050		ug/g		0.05	13-MAY-21
Fluoranthene			<0.050		ug/g		0.05	13-MAY-21
Fluorene			<0.050		ug/g		0.05	13-MAY-21
Indeno(1,2,3-cd)pyrene			<0.050		ug/g		0.05	13-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT								
	Soil							
Batch	R5456977							
WG3533811-1	MB							
Naphthalene			<0.013		ug/g		0.013	13-MAY-21
Phenanthrene			<0.046		ug/g		0.046	13-MAY-21
Pyrene			<0.050		ug/g		0.05	13-MAY-21
Surrogate: 2-Fluorobiphenyl			95.6		%		50-140	13-MAY-21
Surrogate: d14-Terphenyl			91.5		%		50-140	13-MAY-21
WG3533811-4	MS	WG3533811-5						
1-Methylnaphthalene			103.3		%		50-140	13-MAY-21
2-Methylnaphthalene			100.0		%		50-140	13-MAY-21
Acenaphthene			99.9		%		50-140	13-MAY-21
Acenaphthylene			95.4		%		50-140	13-MAY-21
Anthracene			88.0		%		50-140	13-MAY-21
Benzo(a)anthracene			108.1		%		50-140	13-MAY-21
Benzo(a)pyrene			89.5		%		50-140	13-MAY-21
Benzo(b&j)fluoranthene			100.4		%		50-140	13-MAY-21
Benzo(g,h,i)perylene			99.4		%		50-140	13-MAY-21
Benzo(k)fluoranthene			97.1		%		50-140	13-MAY-21
Chrysene			99.6		%		50-140	13-MAY-21
Dibenz(a,h)anthracene			99.0		%		50-140	13-MAY-21
Fluoranthene			102.0		%		50-140	13-MAY-21
Fluorene			99.8		%		50-140	13-MAY-21
Indeno(1,2,3-cd)pyrene			116.6		%		50-140	13-MAY-21
Naphthalene			93.8		%		50-140	13-MAY-21
Phenanthrene			99.2		%		50-140	13-MAY-21
Pyrene			98.5		%		50-140	13-MAY-21
PH-WT								
	Soil							
Batch	R5457093							
WG3533760-1	DUP	L2584920-27						
pH		7.70	7.75	J	pH units	0.05	0.3	13-MAY-21
WG3534028-1	LCS		6.94		pH units		6.9-7.1	13-MAY-21
Batch	R5457700							
WG3533466-1	DUP	L2584587-2						
pH		8.18	8.12	J	pH units	0.06	0.3	14-MAY-21
WG3534040-1	LCS							



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PH-WT		Soil						
Batch	R5457700							
WG3534040-1	LCS							
pH			6.99		pH units		6.9-7.1	14-MAY-21
SAR-R511-WT		Soil						
Batch	R5458840							
WG3535758-4	DUP		WG3535758-3					
Calcium (Ca)		1.99	2.06		mg/L	3.5	30	17-MAY-21
Sodium (Na)		131	134		mg/L	2.3	30	17-MAY-21
Magnesium (Mg)		<0.50	<0.50	RPD-NA	mg/L	N/A	30	17-MAY-21
WG3535758-2	IRM		WT SAR4					
Calcium (Ca)			95.6		%		70-130	17-MAY-21
Sodium (Na)			97.4		%		70-130	17-MAY-21
Magnesium (Mg)			98.3		%		70-130	17-MAY-21
WG3535758-5	LCS							
Calcium (Ca)			103.7		%		80-120	17-MAY-21
Sodium (Na)			97.8		%		80-120	17-MAY-21
Magnesium (Mg)			98.2		%		80-120	17-MAY-21
WG3535758-1	MB							
Calcium (Ca)			<0.50		mg/L		0.5	17-MAY-21
Sodium (Na)			<0.50		mg/L		0.5	17-MAY-21
Magnesium (Mg)			<0.50		mg/L		0.5	17-MAY-21
VOC-511-HS-WT		Soil						
Batch	R5457445							
WG3532273-4	DUP		WG3532273-3					
1,1,1,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
1,1,2,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
1,1,1-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
1,1,2-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
1,1-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
1,1-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
1,2-Dibromoethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
1,2-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
1,2-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
1,2-Dichloropropane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
1,3-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT		Soil						
Batch	R5457445							
WG3532273-4 DUP		WG3532273-3						
1,4-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
Acetone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	14-MAY-21
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	14-MAY-21
Bromodichloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
Bromoform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
Bromomethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
Carbon tetrachloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
Chlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
Chloroform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
cis-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
cis-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	14-MAY-21
Dibromochloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
Dichlorodifluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	14-MAY-21
n-Hexane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
Methylene Chloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
MTBE		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
m+p-Xylenes		<0.030	<0.030	RPD-NA	ug/g	N/A	40	14-MAY-21
Methyl Ethyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	14-MAY-21
Methyl Isobutyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	14-MAY-21
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	14-MAY-21
Styrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
Tetrachloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	14-MAY-21
trans-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
trans-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	14-MAY-21
Trichloroethylene		<0.010	<0.010	RPD-NA	ug/g	N/A	40	14-MAY-21
Trichlorofluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
Vinyl chloride		<0.020	<0.020	RPD-NA	ug/g	N/A	40	14-MAY-21
WG3532273-2 LCS								
1,1,1,2-Tetrachloroethane			109.1		%		60-130	14-MAY-21
1,1,2,2-Tetrachloroethane			105.0		%		60-130	14-MAY-21
1,1,1-Trichloroethane			127.3		%		60-130	14-MAY-21



Quality Control Report

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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch	R5457445							
WG3532273-2	LCS							
1,1,2-Trichloroethane			108.1		%		60-130	14-MAY-21
1,1-Dichloroethane			121.0		%		60-130	14-MAY-21
1,1-Dichloroethylene			129.2		%		60-130	14-MAY-21
1,2-Dibromoethane			102.9		%		70-130	14-MAY-21
1,2-Dichlorobenzene			112.3		%		70-130	14-MAY-21
1,2-Dichloroethane			121.9		%		60-130	14-MAY-21
1,2-Dichloropropane			115.1		%		70-130	14-MAY-21
1,3-Dichlorobenzene			117.2		%		70-130	14-MAY-21
1,4-Dichlorobenzene			120.7		%		70-130	14-MAY-21
Acetone			135.2		%		60-140	14-MAY-21
Benzene			122.8		%		70-130	14-MAY-21
Bromodichloromethane			128.4		%		50-140	14-MAY-21
Bromoform			113.2		%		70-130	14-MAY-21
Bromomethane			117.5		%		50-140	14-MAY-21
Carbon tetrachloride			134.5	MES	%		70-130	14-MAY-21
Chlorobenzene			112.6		%		70-130	14-MAY-21
Chloroform			126.6		%		70-130	14-MAY-21
cis-1,2-Dichloroethylene			118.6		%		70-130	14-MAY-21
cis-1,3-Dichloropropene			122.4		%		70-130	14-MAY-21
Dibromochloromethane			106.5		%		60-130	14-MAY-21
Dichlorodifluoromethane			100.2		%		50-140	14-MAY-21
Ethylbenzene			109.0		%		70-130	14-MAY-21
n-Hexane			126.9		%		70-130	14-MAY-21
Methylene Chloride			148.3	LCS-H	%		70-130	14-MAY-21
MTBE			113.7		%		70-130	14-MAY-21
m+p-Xylenes			122.6		%		70-130	14-MAY-21
Methyl Ethyl Ketone			104.8		%		60-140	14-MAY-21
Methyl Isobutyl Ketone			102.6		%		60-140	14-MAY-21
o-Xylene			117.4		%		70-130	14-MAY-21
Styrene			106.5		%		70-130	14-MAY-21
Tetrachloroethylene			110.3		%		60-130	14-MAY-21
Toluene			110.9		%		70-130	14-MAY-21
trans-1,2-Dichloroethylene			150.1	LCS-H	%		60-130	14-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT		Soil						
Batch	R5457445							
WG3532273-2	LCS							
trans-1,3-Dichloropropene			123.4		%		70-130	14-MAY-21
Trichloroethylene			118.6		%		60-130	14-MAY-21
Trichlorofluoromethane			129.2		%		50-140	14-MAY-21
Vinyl chloride			124.9		%		60-140	14-MAY-21
WG3532273-1	MB							
1,1,1,2-Tetrachloroethane			<0.050		ug/g		0.05	14-MAY-21
1,1,2,2-Tetrachloroethane			<0.050		ug/g		0.05	14-MAY-21
1,1,1-Trichloroethane			<0.050		ug/g		0.05	14-MAY-21
1,1,2-Trichloroethane			<0.050		ug/g		0.05	14-MAY-21
1,1-Dichloroethane			<0.050		ug/g		0.05	14-MAY-21
1,1-Dichloroethylene			<0.050		ug/g		0.05	14-MAY-21
1,2-Dibromoethane			<0.050		ug/g		0.05	14-MAY-21
1,2-Dichlorobenzene			<0.050		ug/g		0.05	14-MAY-21
1,2-Dichloroethane			<0.050		ug/g		0.05	14-MAY-21
1,2-Dichloropropane			<0.050		ug/g		0.05	14-MAY-21
1,3-Dichlorobenzene			<0.050		ug/g		0.05	14-MAY-21
1,4-Dichlorobenzene			<0.050		ug/g		0.05	14-MAY-21
Acetone			<0.50		ug/g		0.5	14-MAY-21
Benzene			<0.0068		ug/g		0.0068	14-MAY-21
Bromodichloromethane			<0.050		ug/g		0.05	14-MAY-21
Bromoform			<0.050		ug/g		0.05	14-MAY-21
Bromomethane			<0.050		ug/g		0.05	14-MAY-21
Carbon tetrachloride			<0.050		ug/g		0.05	14-MAY-21
Chlorobenzene			<0.050		ug/g		0.05	14-MAY-21
Chloroform			<0.050		ug/g		0.05	14-MAY-21
cis-1,2-Dichloroethylene			<0.050		ug/g		0.05	14-MAY-21
cis-1,3-Dichloropropene			<0.030		ug/g		0.03	14-MAY-21
Dibromochloromethane			<0.050		ug/g		0.05	14-MAY-21
Dichlorodifluoromethane			<0.050		ug/g		0.05	14-MAY-21
Ethylbenzene			<0.018		ug/g		0.018	14-MAY-21
n-Hexane			<0.050		ug/g		0.05	14-MAY-21
Methylene Chloride			<0.050		ug/g		0.05	14-MAY-21
MTBE			<0.050		ug/g		0.05	14-MAY-21
m+p-Xylenes			<0.030		ug/g		0.03	14-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT								
	Soil							
Batch	R5457445							
WG3532273-1 MB								
Methyl Ethyl Ketone			<0.50		ug/g		0.5	14-MAY-21
Methyl Isobutyl Ketone			<0.50		ug/g		0.5	14-MAY-21
o-Xylene			<0.020		ug/g		0.02	14-MAY-21
Styrene			<0.050		ug/g		0.05	14-MAY-21
Tetrachloroethylene			<0.050		ug/g		0.05	14-MAY-21
Toluene			<0.080		ug/g		0.08	14-MAY-21
trans-1,2-Dichloroethylene			<0.050		ug/g		0.05	14-MAY-21
trans-1,3-Dichloropropene			<0.030		ug/g		0.03	14-MAY-21
Trichloroethylene			<0.010		ug/g		0.01	14-MAY-21
Trichlorofluoromethane			<0.050		ug/g		0.05	14-MAY-21
Vinyl chloride			<0.020		ug/g		0.02	14-MAY-21
Surrogate: 1,4-Difluorobenzene			119.3		%		50-140	14-MAY-21
Surrogate: 4-Bromofluorobenzene			101.0		%		50-140	14-MAY-21
WG3532273-5 MS		WG3532273-3						
1,1,1,2-Tetrachloroethane			113.0		%		50-140	14-MAY-21
1,1,2,2-Tetrachloroethane			114.2		%		50-140	14-MAY-21
1,1,1-Trichloroethane			120.3		%		50-140	14-MAY-21
1,1,2-Trichloroethane			116.7		%		50-140	14-MAY-21
1,1-Dichloroethane			115.3		%		50-140	14-MAY-21
1,1-Dichloroethylene			119.6		%		50-140	14-MAY-21
1,2-Dibromoethane			113.2		%		50-140	14-MAY-21
1,2-Dichlorobenzene			106.3		%		50-140	14-MAY-21
1,2-Dichloroethane			123.9		%		50-140	14-MAY-21
1,2-Dichloropropane			116.7		%		50-140	14-MAY-21
1,3-Dichlorobenzene			107.6		%		50-140	14-MAY-21
1,4-Dichlorobenzene			108.3		%		50-140	14-MAY-21
Acetone			148.2	MES	%		50-140	14-MAY-21
Benzene			118.1		%		50-140	14-MAY-21
Bromodichloromethane			129.2		%		50-140	14-MAY-21
Bromoform			124.0		%		50-140	14-MAY-21
Bromomethane			110.0		%		50-140	14-MAY-21
Carbon tetrachloride			124.5		%		50-140	14-MAY-21
Chlorobenzene			113.3		%		50-140	14-MAY-21
Chloroform			122.7		%		50-140	14-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch	R5457445							
WG3532273-5 MS		WG3532273-3						
cis-1,2-Dichloroethylene			115.8		%		50-140	14-MAY-21
cis-1,3-Dichloropropene			121.6		%		50-140	14-MAY-21
Dibromochloromethane			114.1		%		50-140	14-MAY-21
Dichlorodifluoromethane			94.3		%		50-140	14-MAY-21
Ethylbenzene			108.0		%		50-140	14-MAY-21
n-Hexane			124.2		%		50-140	14-MAY-21
Methylene Chloride			137.3		%		50-140	14-MAY-21
MTBE			116.2		%		50-140	14-MAY-21
m+p-Xylenes			119.7		%		50-140	14-MAY-21
Methyl Ethyl Ketone			116.2		%		50-140	14-MAY-21
Methyl Isobutyl Ketone			117.2		%		50-140	14-MAY-21
o-Xylene			118.0		%		50-140	14-MAY-21
Styrene			109.2		%		50-140	14-MAY-21
Tetrachloroethylene			103.7		%		50-140	14-MAY-21
Toluene			111.4		%		50-140	14-MAY-21
trans-1,2-Dichloroethylene			136.7		%		50-140	14-MAY-21
trans-1,3-Dichloropropene			129.6		%		50-140	14-MAY-21
Trichloroethylene			110.7		%		50-140	14-MAY-21
Trichlorofluoromethane			118.9		%		50-140	14-MAY-21
Vinyl chloride			114.6		%		50-140	14-MAY-21

Quality Control Report

Workorder: L2584509

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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
J	Duplicate results and limits are expressed in terms of absolute difference.
LCS-H	Lab Control Sample recovery was above ALS DQO. Non-detected sample results are considered reliable. Other results, if reported, have been qualified.
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

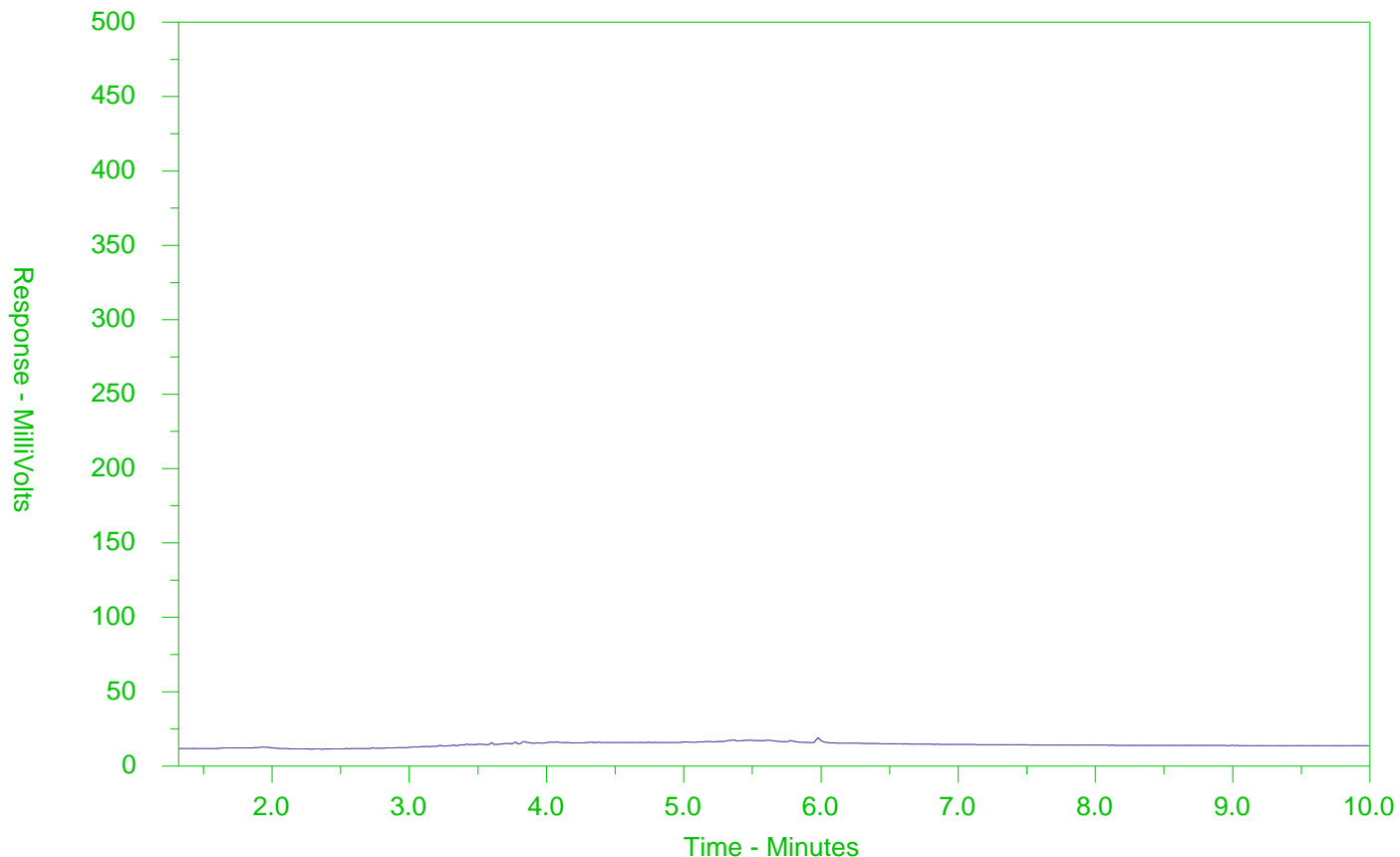
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2584509-2
 Client Sample ID: BH111-21 SS2 2.5-45FT



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

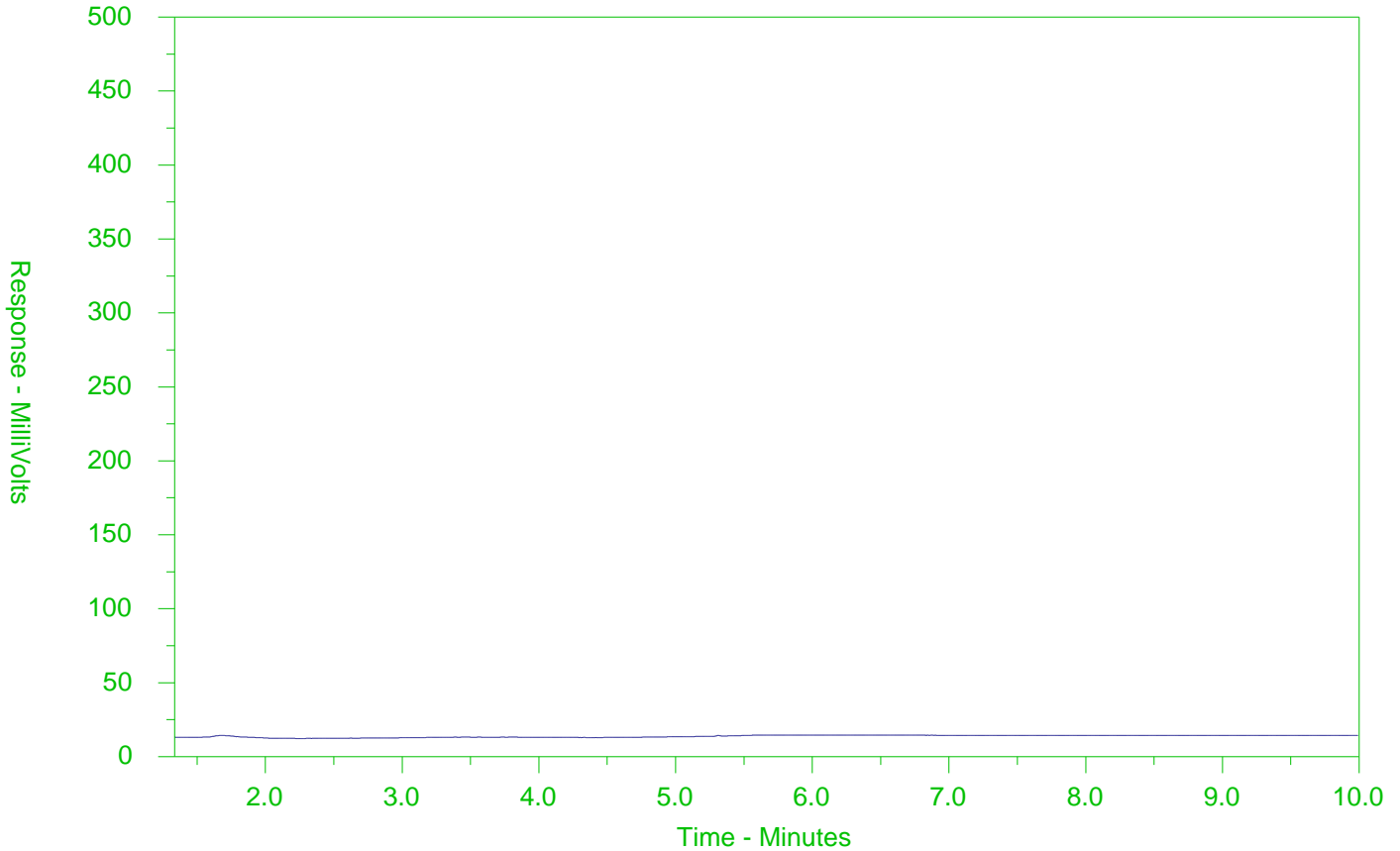
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2584509-3
 Client Sample ID: BH111-21 SS3 5-7FT



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

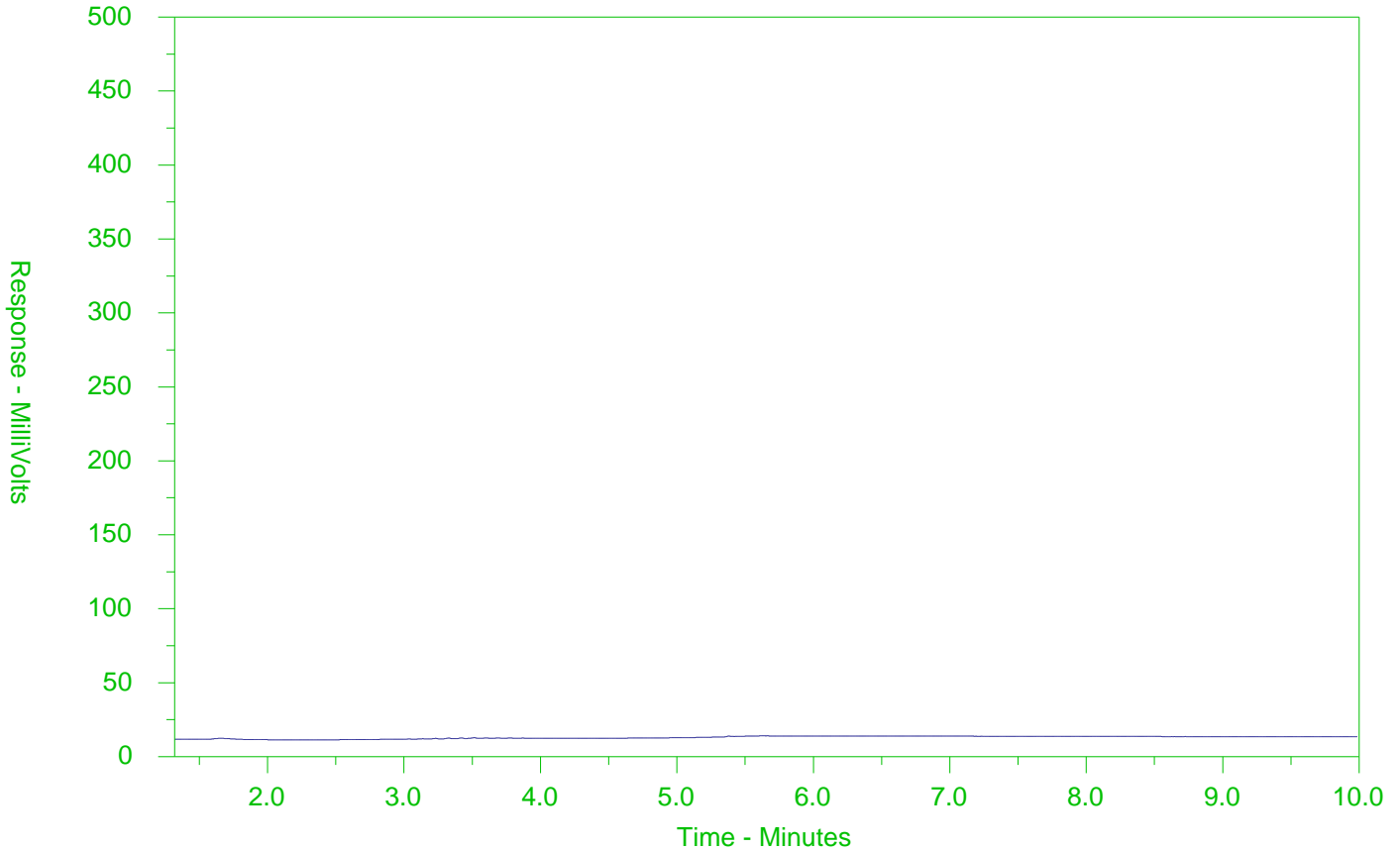
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2584509-7
 Client Sample ID: BH110-21 SS3 5-7FT



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

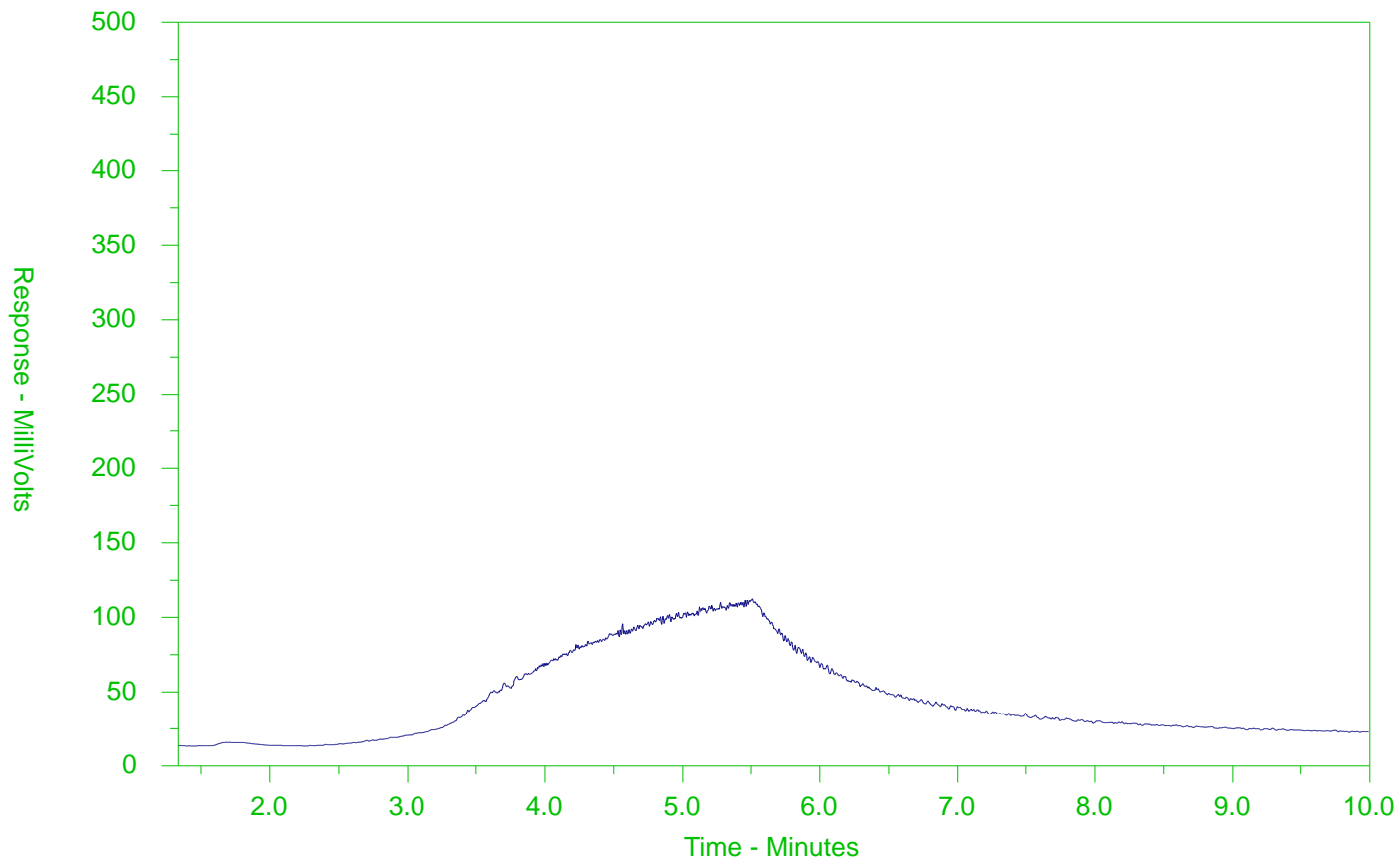
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2584509-10
 Client Sample ID: BH109-21 SS2 2.5-4.5FT



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

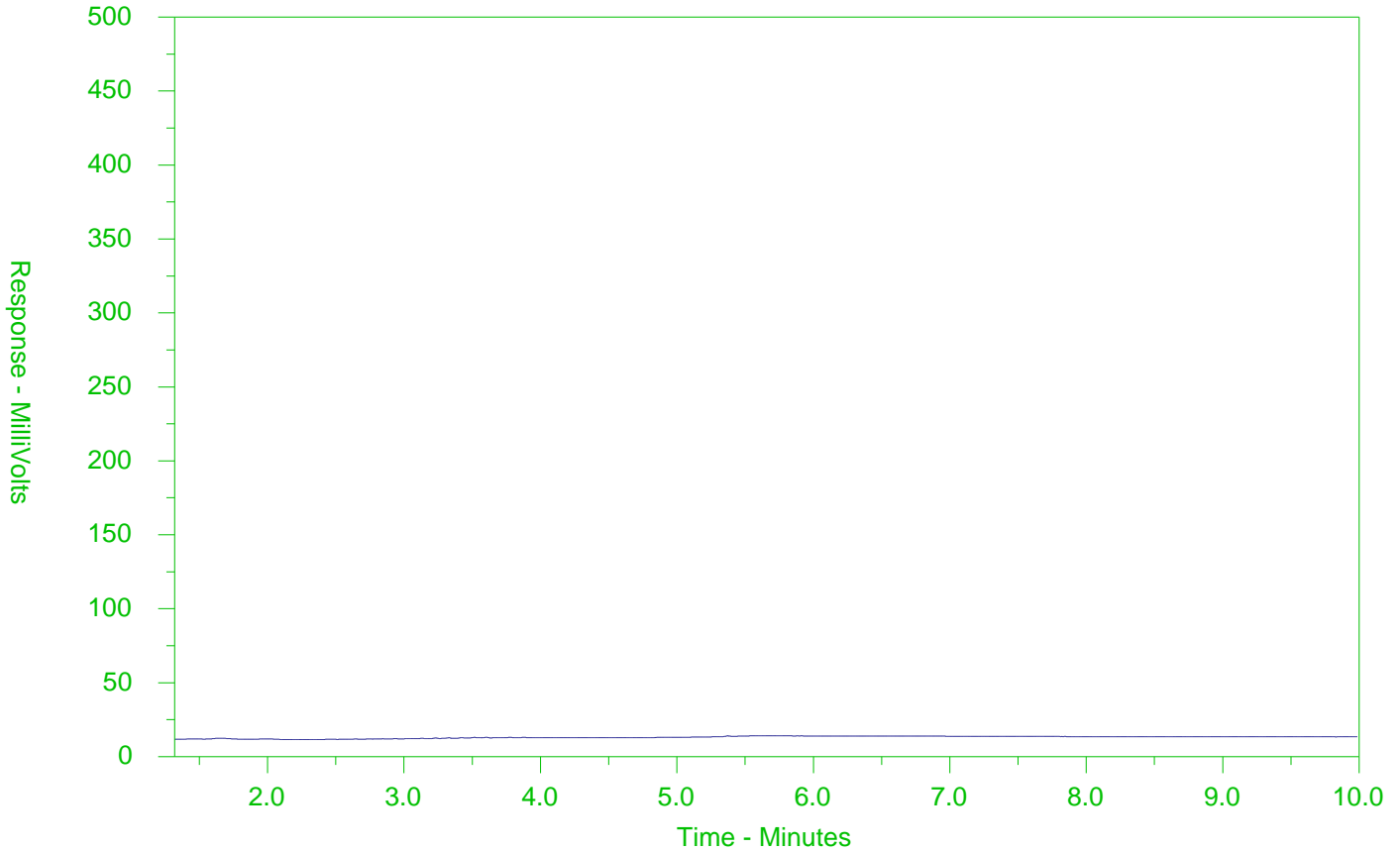
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2584509-16
 Client Sample ID: BH108-21 SS4 7.5-9.5FT



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

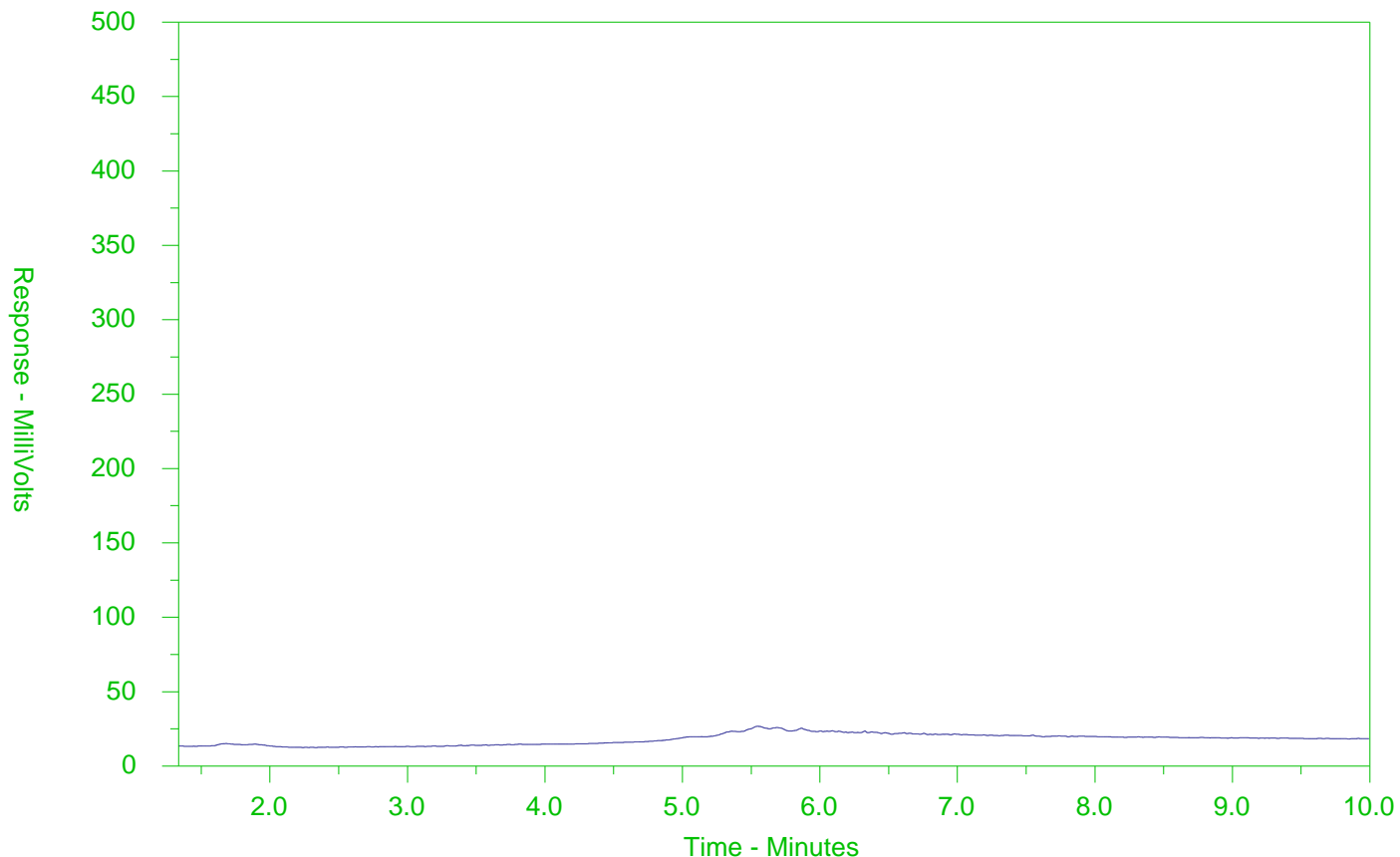
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2584509-18
 Client Sample ID: BH107-21 SS2 2.5-4.5FT



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

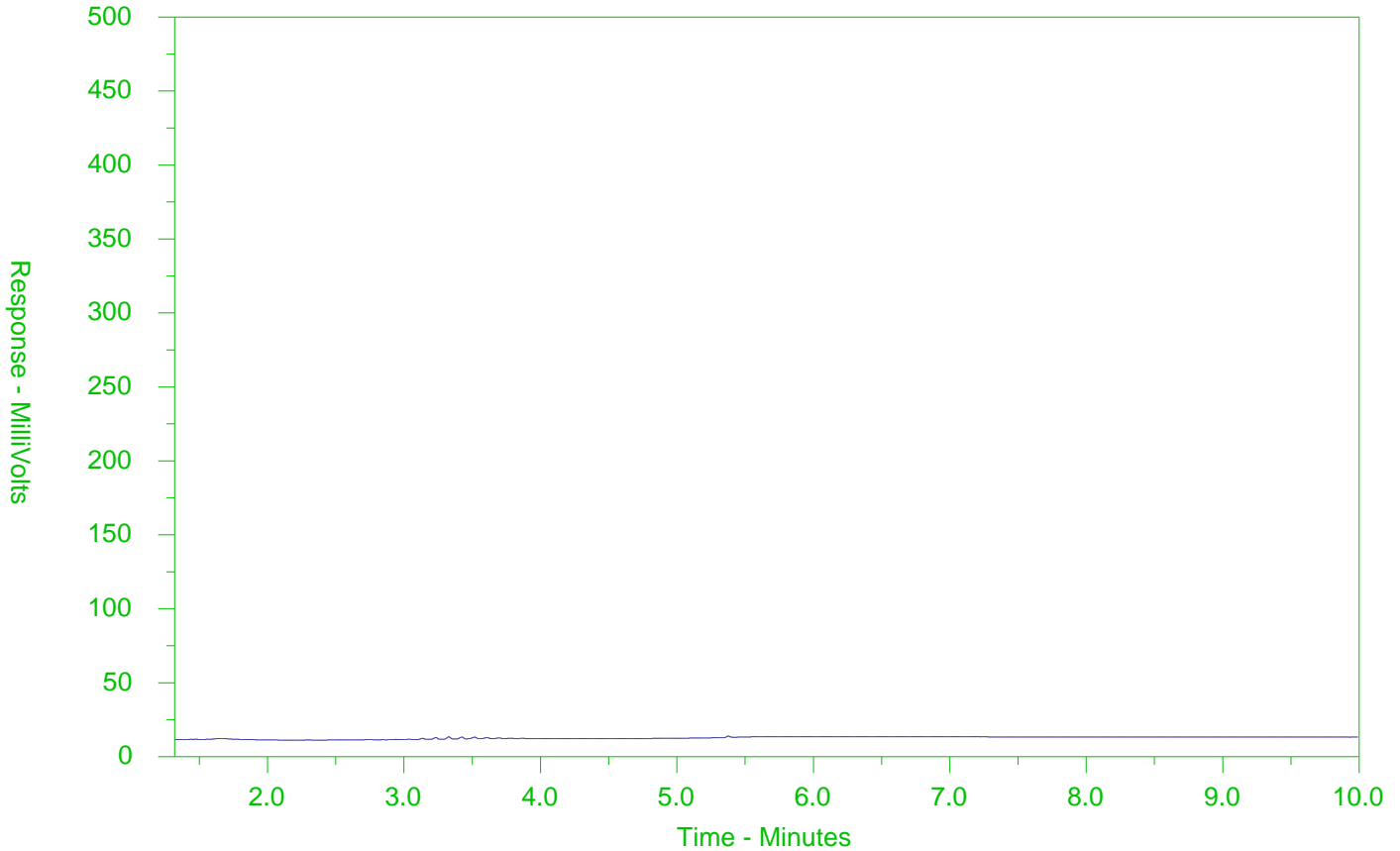
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2584509-20
 Client Sample ID: BH107-21 SS4 7.5-9.5FT



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.



www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878



L2584509-COFC

COC Number: 17 -

Page 1 of 3 site B

CG

Report To Contact and company name below will appear on the final report		Report Format / D.		select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)		
Company:	MTE	Select Report Format:	<input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL)	Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply		
Contact:	Jen Lambke	Quality Control (QC) Report with Report	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	PRIORITY (Business Days)	EMERGENCY	
Phone:	519-502-3268	<input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked		4 day [P4-20%] <input type="checkbox"/>	1 Business day [E - 100%] <input type="checkbox"/>	
Company address below will appear on the final report		Select Distribution:	<input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX	3 day [P3-25%] <input type="checkbox"/>	Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] <input type="checkbox"/>	
Street:	520 Bingham Centre Drive	Email 1 or Fax	jilambke@mte85.com	2 day [P2-50%] <input type="checkbox"/>		
City/Province:	Kitchener	Email 2	jball@mte85.com	Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm		
Postal Code:		Email 3		For tests that can not be performed according to the service level selected, you will be contacted.		
Invoice To	Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Invoice Distribution		Analysis Request		
	Copy of Invoice with Report <input type="checkbox"/> YES <input type="checkbox"/> NO	Select Invoice Distribution:	<input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX	Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below		
Company:		Email 1 or Fax	jilambke@mte85.com	NUMBER OF CONTAINERS	SAMPLES ON HOLD	
Contact:		Email 2				SUSPECTED HAZARD (see Special Instructions)
Project Information		Oil and Gas Required Fields (client use)				
ALS Account # / Quote #:	Q75730	AFE/Cost Center:	PO#			
Job #:	46995-100	Major/Minor Code:	Routing Code:			
PO / AFE:		Requisitioner:				
LSD:		Location:				
ALS Lab Work Order # (lab use only):	L2584509	ALS Contact:	Emily H			
		Sampler:	Matt D			
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)			
	BH111-21 GSI 6"-2.5FF	05-05-21	8:20	Soil		
	SS2 2.5-4.5FF		8:30		X	
	SS3 5-7FF		8:40		X	
	SS4 7.5-9.5FF		8:50		X	
	MSPLP 3-5FF		9:20		X	
	BH110-21 GSI 6"-2FF		10:00	Soil		
	SS2 2.5-4.5FF		10:05		X	
	SS3 5-7FF		10:10		X	
	SS4 7.5-9.5FF		10:20		X	
	MSPLP 2'2"-5FF		10:30		X	
	BH109-21 GSI 6"-2.5FF		11:00	Soil		
	SS2 2.5-4.5FF		11:10		X	

Drinking Water (DW) Samples¹ (client use) Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)

Are samples taken from a Regulated DW System? YES NO

Are samples for human consumption/ use? YES NO

Table 1 Res, Table 3.1 R/P/I, Table 3.1 I/C/C (ESQS, O.Reg. 406/19) - coarse, AND Table 3 I/C/C (SCS, O.Reg. 153/04) - coarse

SHIPMENT RELEASE (client use) INITIAL SHIPMENT RECEPTION (lab use only) FINAL SHIPMENT RECEPTION (lab use only)

Released by: Date: Time: Received by: Date: Time: Received by: Date: Time:

8.6

05/06/20 1300



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L2584509-COFC

Number: 17 -

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Site B

Report To Contact and company name below will appear on the final report		Report Format / Distribution			Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)																				
Company: MTE		Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL)			Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply																				
Contact: Jen Lambke		Quality Control (QC) Report with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			PRIORITY (Business days) 4 day [P4-20%] <input type="checkbox"/> 3 day [P3-25%] <input type="checkbox"/> 2 day [P2-50%] <input type="checkbox"/>		EMERGENCY 1 Business day [E - 100%] <input type="checkbox"/> Same Day, Weekend or Statutory holiday [E2 - 200%] (Laboratory opening fees may apply) <input type="checkbox"/>																		
Phone: 519-502-3268		<input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked																							
Company address below will appear on the final report		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX			Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm																				
Street: 520 Bingemans Centre Drive		Email 1 or Fax: jlamcke@mte85.com			For tests that can not be performed according to the service level selected, you will be contacted.																				
City/Province: Kitchener		Email 2: jball@mte85.com			Analysis Request Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below																				
Postal Code:		Email 3:																							
Invoice To		Invoice Distribution			NUMBER OF CONTAINERS							SAMPLES ON HOLD							SUSPECTED HAZARD (see Special Instructions)						
Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX																							
Copy of Invoice with Report <input type="checkbox"/> YES <input type="checkbox"/> NO		Email 1 or Fax: jlamcke@mte85.com																							
Company:		Email 2:																							
Project Information		Oil and Gas Required Fields (client use)			PHC F1 to F4 and BTEX PHC F1 to F4 and VOCs Metals Scan Metals Complete PAHs SAR & EC pH PCBs PHC F2 to F4																				
ALS Account # / Quote #: Q75730		AFE/Cost Center: PO#																							
Job #: 46995-100		Major/Minor Code: Routing Code:																							
PO / AFE:		Requisitioner:																							
LSD:		Location:			ALS Lab Work Order # (lab use only):																				
ALS Lab Work Order # (lab use only):		ALS Contact: Emily H		Sampler: Matt D																					
ALS Sample # (lab use only)		Sample Identification and/or Coordinates (This description will appear on the report)			Date (dd-mmm-yy)		Time (hh:mm)		Sample Type																
BH109-21		SS3 5-7ft			05-05-21		11:20		Soil																
↓		SS4 7.5-9.5ft			↓		11:30																		
↓		MSPLP 2'0"-5ft			↓		11:40																		
BH108-21		GSI 6"-2.5ft					12:30																		
↓		SS2 2.5-4.5ft					12:40																		
↓		SS3 5-7ft					12:50																		
↓		SS4 7.5-9.5ft					1:00																		
↓		MSPLP 2'2"-5ft					1:20																		
BH107-21		GSI 6"-2.5ft					1:30																		
↓		SS2 2.5-4.5ft					1:40																		
↓		SS3 5-7ft					1:50																		
↓		SS4 7.5-9.5ft					2:00																		
Drinking Water (DW) Samples¹ (client use)		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)			SAMPLE CONDITION AS RECEIVED (lab use only)																				
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO		Table 1 Res, Table 3.1 R/P/I, Table 3.1 I/C (ESQS, O.Reg. 406/19) - coarse, AND Table 3 I/C (SCS, O.Reg. 153/04) - coarse			Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>																				
Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO					Ice Packs <input checked="" type="checkbox"/> Ice Cubes <input type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>																				
					Cooling Initiated <input type="checkbox"/>																				
					INITIAL COOLER TEMPERATURES °C																				
					FINAL COOLER TEMPERATURES °C																				
					8.6																				
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)																				
Released by:		Date:		Time:		Received by:		Date:		Time:		Received by:			Date:		Time:								
								05/06/21		1300															

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

JUNE 2016 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.



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Canada Toll Free: 1 800 668 9878



L2584509-COFC

COC Number: 17 -

Page 3 of 3 Site B

Report To Contact and company name below will appear on the final report		Report Format		Select Service Level below - Contact your AM to confirm all E&P TATs (surcharges may apply)											
Company:	MTE	Select Report Format:	<input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL)	Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply		EMERGENCY									
Contact:	Jen Lambke	Quality Control (QC) Report with Report	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	4 day [P4-20%]	<input type="checkbox"/>	1 Business day [E - 100%] <input type="checkbox"/>									
Phone:	519-502-3268	<input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked		3 day [P3-25%]	<input type="checkbox"/>	Same Day, Weekend or Statutory holiday [E2 -200%] <input type="checkbox"/>									
Company address below will appear on the final report		Select Distribution:	<input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX	2 day [P2-50%]	<input type="checkbox"/>	(Laboratory opening fees may apply) <input type="checkbox"/>									
Street:	520 Bingemans Centre Drive	Email 1 or Fax	jlambke@mte85.com	Date and Time Required for all E&P TATs:		dd-mmm-yy hh:mm									
City/Province:	Kitchener	Email 2	jball@mte85.com	For tests that can not be performed according to the service level selected, you will be contacted.											
Postal Code:		Email 3		Analysis Request											
Invoice To	Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Invoice Distribution		Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below											
	Copy of Invoice with Report <input type="checkbox"/> YES <input type="checkbox"/> NO	Select Invoice Distribution:	<input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX	NUMBER OF CONTAINERS	PHC F1 to F4 and BTEX	PHC F1 to F4 and VOCs	Metals Scan	Metals Complete	PAHs	SAR & EC	pH	PCBs	PHC F2 to F4	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)
Company:		Email 1 or Fax	jlambke@mte85.com												
Contact:		Email 2													
Project Information		Oil and Gas Required Fields (client use)													
ALS Account # / Quote #: Q75730	AFE/Cost Center:	PO#													
Job #: 46995-100	Major/Minor Code:	Routing Code:													
PO / AFE:	Requisitioner:														
LSD:	Location:														
ALS Lab Work Order # (lab use only):	ALS Contact: Emily H	Sampler: Matt D													
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)												
	BH107-21 MSPLP 2' 7" - 5ft	05-05-21	2:30	Soil											
Drinking Water (DW) Samples¹ (client use)		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)		SAMPLE CONDITION AS RECEIVED (lab use only)											
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO		Table 1 Res, Table 3.1 R/P/I, Table 3.1 I/C/C (ESQS, O.Reg. 406/19) - coarse, AND Table 3 I/C/C (SCS, O.Reg. 153/04) - coarse		Frozen <input type="checkbox"/>		SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>									
Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO				Ice Packs <input checked="" type="checkbox"/> Ice Cubes <input type="checkbox"/>		Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>									
				Cooling Initiated <input type="checkbox"/>											
				INITIAL COOLER TEMPERATURES °C		FINAL COOLER TEMPERATURES °C									
						8.6									
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)		FINAL SHIPMENT RECEPTION (lab use only)											
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:								
							05/06/21								
							1300								



MTE CONSULTANTS INC. (Kitchener)
ATTN: JEN LAMBKE
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9


Date Received: 07-MAY-21
Report Date: 18-MAY-21 07:54 (MT)
Version: FINAL

Client Phone: 519-743-6500

Certificate of Analysis

Lab Work Order #: L2585298
Project P.O. #: NOT SUBMITTED
Job Reference: 46995-100
C of C Numbers:
Legal Site Desc:

Comments: ADDITIONAL 10-MAY-21 08:25
ADDITIONAL 07-MAY-21 15:09



Emily Hansen
Account Manager

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ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte						#1	#2	#3
L2585298-2	BH106-21 SS2 2.5-4.5 FT								
Sampled By: MATT D on 06-MAY-21 @ 08:50									
Matrix: SOIL									
Physical Tests									
	% Moisture	5.21		0.25	%	12-MAY-21			
Metals									
	Antimony (Sb)	<1.0		1.0	ug/g	17-MAY-21	1.3	40	7.5
	Arsenic (As)	5.3		1.0	ug/g	17-MAY-21	18	18	18
	Barium (Ba)	52.5		1.0	ug/g	17-MAY-21	220	670	390
	Beryllium (Be)	<0.50		0.50	ug/g	17-MAY-21	2.5	8	4
	Boron (B)	9.3		5.0	ug/g	17-MAY-21	36	120	120
	Cadmium (Cd)	<0.50		0.50	ug/g	17-MAY-21	1.2	1.9	1.2
	Chromium (Cr)	26.3		1.0	ug/g	17-MAY-21	70	160	160
	Cobalt (Co)	5.6		1.0	ug/g	17-MAY-21	21	80	22
	Copper (Cu)	30.8		1.0	ug/g	17-MAY-21	92	230	140
	Lead (Pb)	44.5		1.0	ug/g	17-MAY-21	120	120	120
	Molybdenum (Mo)	<1.0		1.0	ug/g	17-MAY-21	2	40	6.9
	Nickel (Ni)	13.9		1.0	ug/g	17-MAY-21	82	270	100
	Selenium (Se)	<1.0		1.0	ug/g	17-MAY-21	1.5	5.5	2.4
	Silver (Ag)	<0.20		0.20	ug/g	17-MAY-21	0.5	40	20
	Thallium (Tl)	<0.50		0.50	ug/g	17-MAY-21	1	3.3	1
	Uranium (U)	<1.0		1.0	ug/g	17-MAY-21	2.5	33	23
	Vanadium (V)	32.5		1.0	ug/g	17-MAY-21	86	86	86
	Zinc (Zn)	155		5.0	ug/g	17-MAY-21	290	340	340
Volatile Organic Compounds									
	Benzene	<0.0068		0.0068	ug/g	17-MAY-21	0.02	0.034	0.02
	Ethylbenzene	<0.018		0.018	ug/g	17-MAY-21	0.05	1.9	1.9
	Toluene	<0.080		0.080	ug/g	17-MAY-21	0.2	7.8	0.99
	o-Xylene	<0.020		0.020	ug/g	17-MAY-21			
	m+p-Xylenes	<0.030		0.030	ug/g	17-MAY-21			
	Xylenes (Total)	<0.050		0.050	ug/g	17-MAY-21	0.05	3	0.9
	Surrogate: 4-Bromofluorobenzene	118.2		50-140	%	17-MAY-21			
	Surrogate: 1,4-Difluorobenzene	114.9		50-140	%	17-MAY-21			
Hydrocarbons									
	F1 (C6-C10)	<5.0		5.0	ug/g	17-MAY-21	25	25	25
	F1-BTEX	<5.0		5.0	ug/g	17-MAY-21	25	25	25
	F2 (C10-C16)	<10		10	ug/g	12-MAY-21	10	26	10
	F2-Naphth	<10		10	ug/g	17-MAY-21			
	F3 (C16-C34)	124		50	ug/g	12-MAY-21	240	1700	300
	F3-PAH	123		50	ug/g	17-MAY-21			
	F4 (C34-C50)	290		50	ug/g	12-MAY-21	*120	3300	2800
	F4G-SG (GHH-Silica)	960		250	ug/g	13-MAY-21	*120	3300	2800
	Total Hydrocarbons (C6-C50)	414		72	ug/g	17-MAY-21			
	Chrom. to baseline at nC50	NO			No Unit	12-MAY-21			
	Surrogate: 2-Bromobenzotrifluoride	101.7		60-140	%	12-MAY-21			
	Surrogate: 3,4-Dichlorotoluene	101.3		60-140	%	17-MAY-21			
Polycyclic Aromatic Hydrocarbons									
	Acenaphthene	<0.050		0.050	ug/g	13-MAY-21	0.072	15	0.093
	Acenaphthylene	<0.050		0.050	ug/g	13-MAY-21	0.093	0.093	14
	Anthracene	<0.050		0.050	ug/g	13-MAY-21	0.16	0.16	0.16

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte						#1	#2	#3
L2585298-2	BH106-21 SS2 2.5-4.5 FT								
Sampled By: MATT D on 06-MAY-21 @ 08:50									
Matrix: SOIL									
Polycyclic Aromatic Hydrocarbons									
	Benzo(a)anthracene	0.134		0.050	ug/g	13-MAY-21	0.36	1	0.5
	Benzo(a)pyrene	0.133		0.050	ug/g	13-MAY-21	0.3	0.7	0.57
	Benzo(b&j)fluoranthene	0.170		0.050	ug/g	13-MAY-21	0.47	7	5.7
	Benzo(g,h,i)perylene	0.102		0.050	ug/g	13-MAY-21	0.68	13	6.6
	Benzo(k)fluoranthene	0.054		0.050	ug/g	13-MAY-21	0.48	7	5.7
	Chrysene	0.130		0.050	ug/g	13-MAY-21	2.8	14	7
	Dibenz(a,h)anthracene	<0.050		0.050	ug/g	13-MAY-21	0.1	0.7	0.57
	Fluoranthene	0.222		0.050	ug/g	13-MAY-21	0.56	70	0.69
	Fluorene	<0.050		0.050	ug/g	13-MAY-21	0.12	6.8	6.8
	Indeno(1,2,3-cd)pyrene	0.091		0.050	ug/g	13-MAY-21	0.23	0.76	0.38
	1+2-Methylnaphthalenes	<0.042		0.042	ug/g	13-MAY-21	0.59	8.7	0.92
	1-Methylnaphthalene	<0.030		0.030	ug/g	13-MAY-21	0.59	8.7	0.92
	2-Methylnaphthalene	<0.030		0.030	ug/g	13-MAY-21	0.59	8.7	0.92
	Naphthalene	<0.013		0.013	ug/g	13-MAY-21	0.09	1.8	0.59
	Phenanthrene	0.144		0.046	ug/g	13-MAY-21	0.69	12	6.2
	Pyrene	0.226		0.050	ug/g	13-MAY-21	1	70	70
	Surrogate: 2-Fluorobiphenyl	88.3		50-140	%	13-MAY-21			
	Surrogate: d14-Terphenyl	88.0		50-140	%	13-MAY-21			
L2585298-8	BH105-21 SS4 7.5-9.5 FT								
Sampled By: MATT D on 06-MAY-21 @ 10:30									
Matrix: SOIL									
Physical Tests									
	Conductivity	1.95		0.0040	mS/cm	17-MAY-21	*0.57	*1.4	*0.7
	% Moisture	2.84		0.25	%	12-MAY-21			
Saturated Paste Extractables									
	SAR	58.0	SAR:M	0.10	SAR	17-MAY-21	*2.4	*12	*5
	Calcium (Ca)	3.05		0.50	mg/L	17-MAY-21			
	Magnesium (Mg)	<0.50		0.50	mg/L	17-MAY-21			
	Sodium (Na)	368		0.50	mg/L	17-MAY-21			
Metals									
	Antimony (Sb)	<1.0		1.0	ug/g	17-MAY-21	1.3	40	7.5
	Arsenic (As)	2.5		1.0	ug/g	17-MAY-21	18	18	18
	Barium (Ba)	20.2		1.0	ug/g	17-MAY-21	220	670	390
	Beryllium (Be)	<0.50		0.50	ug/g	17-MAY-21	2.5	8	4
	Boron (B)	5.8		5.0	ug/g	17-MAY-21	36	120	120
	Cadmium (Cd)	<0.50		0.50	ug/g	17-MAY-21	1.2	1.9	1.2
	Chromium (Cr)	12.6		1.0	ug/g	17-MAY-21	70	160	160
	Cobalt (Co)	2.9		1.0	ug/g	17-MAY-21	21	80	22
	Copper (Cu)	14.8		1.0	ug/g	17-MAY-21	92	230	140
	Lead (Pb)	10.8		1.0	ug/g	17-MAY-21	120	120	120
	Molybdenum (Mo)	<1.0		1.0	ug/g	17-MAY-21	2	40	6.9
	Nickel (Ni)	6.3		1.0	ug/g	17-MAY-21	82	270	100
	Selenium (Se)	<1.0		1.0	ug/g	17-MAY-21	1.5	5.5	2.4
	Silver (Ag)	<0.20		0.20	ug/g	17-MAY-21	0.5	40	20
	Thallium (Tl)	<0.50		0.50	ug/g	17-MAY-21			

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte						#1	#2	#3
L2585298-8	BH105-21 SS4 7.5-9.5 FT								
Sampled By: MATT D on 06-MAY-21 @ 10:30									
Matrix: SOIL									
Metals									
	Uranium (U)	<1.0		1.0	ug/g	17-MAY-21	2.5	3.3	1
	Vanadium (V)	17.5		1.0	ug/g	17-MAY-21	86	86	86
	Zinc (Zn)	76.5		5.0	ug/g	17-MAY-21	290	340	340
Volatile Organic Compounds									
	Acetone	<0.50		0.50	ug/g	14-MAY-21	0.5	1.8	1.8
	Benzene	<0.0068		0.0068	ug/g	14-MAY-21	0.02	0.034	0.02
	Bromodichloromethane	<0.050		0.050	ug/g	14-MAY-21	0.05	5.8	5.8
	Bromoform	<0.050		0.050	ug/g	14-MAY-21	0.05	2.5	2.5
	Bromomethane	<0.050		0.050	ug/g	14-MAY-21	0.05	0.05	0.05
	Carbon tetrachloride	<0.050		0.050	ug/g	14-MAY-21	0.05	0.05	0.05
	Chlorobenzene	<0.050		0.050	ug/g	14-MAY-21	0.05	0.28	0.28
	Dibromochloromethane	<0.050		0.050	ug/g	14-MAY-21	0.05	5.5	5.5
	Chloroform	<0.050		0.050	ug/g	14-MAY-21	0.05	0.26	0.08
	1,2-Dibromoethane	<0.050		0.050	ug/g	14-MAY-21	0.05	0.05	0.05
	1,2-Dichlorobenzene	<0.050		0.050	ug/g	14-MAY-21	0.05	6.8	3.4
	1,3-Dichlorobenzene	<0.050		0.050	ug/g	14-MAY-21	0.05	6.8	4.8
	1,4-Dichlorobenzene	<0.050		0.050	ug/g	14-MAY-21	0.05	0.05	0.05
	Dichlorodifluoromethane	<0.050		0.050	ug/g	14-MAY-21	0.05	1.8	1.8
	1,1-Dichloroethane	<0.050		0.050	ug/g	14-MAY-21	0.05	0.57	0.14
	1,2-Dichloroethane	<0.050		0.050	ug/g	14-MAY-21	0.05	0.05	0.05
	1,1-Dichloroethylene	<0.050		0.050	ug/g	14-MAY-21	0.05	0.05	0.05
	cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	14-MAY-21	0.05	0.05	0.05
	trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	14-MAY-21	0.05	0.05	0.05
	Methylene Chloride	<0.050		0.050	ug/g	14-MAY-21	0.05	0.2	0.06
	1,2-Dichloropropane	<0.050		0.050	ug/g	14-MAY-21	0.05	0.05	0.05
	cis-1,3-Dichloropropene	<0.030		0.030	ug/g	14-MAY-21			
	trans-1,3-Dichloropropene	<0.030		0.030	ug/g	14-MAY-21			
	1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g	14-MAY-21	0.05	0.05	0.05
	Ethylbenzene	<0.018		0.018	ug/g	14-MAY-21	0.05	1.9	1.9
	n-Hexane	<0.050		0.050	ug/g	14-MAY-21	0.05	2.5	2.5
	Methyl Ethyl Ketone	<0.50		0.50	ug/g	14-MAY-21	0.5	26	14
	Methyl Isobutyl Ketone	<0.50		0.50	ug/g	14-MAY-21	0.5	17	0.89
	MTBE	<0.050		0.050	ug/g	14-MAY-21	0.05	0.05	0.05
	Styrene	<0.050		0.050	ug/g	14-MAY-21	0.05	6.8	0.5
	1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	14-MAY-21	0.05	0.05	0.05
	1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	14-MAY-21	0.05	0.05	0.05
	Tetrachloroethylene	<0.050		0.050	ug/g	14-MAY-21	0.05	0.05	0.05
	Toluene	<0.080		0.080	ug/g	14-MAY-21	0.2	7.8	0.99
	1,1,1-Trichloroethane	<0.050		0.050	ug/g	14-MAY-21	0.05	0.4	0.11
	1,1,2-Trichloroethane	<0.050		0.050	ug/g	14-MAY-21	0.05	0.05	0.05
	Trichloroethylene	<0.010		0.010	ug/g	14-MAY-21	0.05	0.05	0.05
	Trichlorofluoromethane	<0.050		0.050	ug/g	14-MAY-21	0.25	0.46	0.46
	Vinyl chloride	<0.020		0.020	ug/g	14-MAY-21	0.02	0.02	0.02
	o-Xylene	<0.020		0.020	ug/g	14-MAY-21			
	m+p-Xylenes	<0.030		0.030	ug/g	14-MAY-21			

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte						#1	#2	#3
L2585298-8	BH105-21 SS4 7.5-9.5 FT								
Sampled By: MATT D on 06-MAY-21 @ 10:30									
Matrix: SOIL									
Volatile Organic Compounds									
	Xylenes (Total)	<0.050		0.050	ug/g	14-MAY-21	0.05	3	0.9
	Surrogate: 4-Bromofluorobenzene	100.2		50-140	%	14-MAY-21			
	Surrogate: 1,4-Difluorobenzene	110.8		50-140	%	14-MAY-21			
Hydrocarbons									
	F1 (C6-C10)	<5.0		5.0	ug/g	14-MAY-21	25	25	25
	F1-BTEX	<5.0		5.0	ug/g	14-MAY-21	25	25	25
	F2 (C10-C16)	<10		10	ug/g	12-MAY-21	10	26	10
	F3 (C16-C34)	89		50	ug/g	12-MAY-21	240	1700	300
	F4 (C34-C50)	79		50	ug/g	12-MAY-21	120	3300	2800
	Total Hydrocarbons (C6-C50)	168		72	ug/g	14-MAY-21			
	Chrom. to baseline at nC50	YES			No Unit	12-MAY-21			
	Surrogate: 2-Bromobenzotrifluoride	85.4		60-140	%	12-MAY-21			
	Surrogate: 3,4-Dichlorotoluene	86.6		60-140	%	14-MAY-21			
L2585298-10	BH104-21 SS2 2.5-4.5 FT								
Sampled By: MATT D on 06-MAY-21 @ 11:10									
Matrix: SOIL									
Physical Tests									
	% Moisture	13.0		0.25	%	12-MAY-21			
Volatile Organic Compounds									
	Benzene	<0.0068		0.0068	ug/g	17-MAY-21	0.02	0.034	0.02
	Ethylbenzene	<0.018		0.018	ug/g	17-MAY-21	0.05	1.9	1.9
	Toluene	<0.080		0.080	ug/g	17-MAY-21	0.2	7.8	0.99
	o-Xylene	<0.020		0.020	ug/g	17-MAY-21			
	m+p-Xylenes	<0.030		0.030	ug/g	17-MAY-21			
	Xylenes (Total)	<0.050		0.050	ug/g	17-MAY-21	0.05	3	0.9
	Surrogate: 4-Bromofluorobenzene	120.5		50-140	%	17-MAY-21			
	Surrogate: 1,4-Difluorobenzene	119.4		50-140	%	17-MAY-21			
Hydrocarbons									
	F1 (C6-C10)	<5.0		5.0	ug/g	17-MAY-21	25	25	25
	F1-BTEX	<5.0		5.0	ug/g	17-MAY-21	25	25	25
	F2 (C10-C16)	<10		10	ug/g	12-MAY-21	10	26	10
	F2-Naphth	<10		10	ug/g	17-MAY-21			
	F3 (C16-C34)	444		50	ug/g	12-MAY-21	*240	1700	*300
	F3-PAH	441		50	ug/g	17-MAY-21			
	F4 (C34-C50)	249		50	ug/g	12-MAY-21	*120	3300	2800
	F4G-SG (GHH-Silica)	410		250	ug/g	13-MAY-21	*120	3300	2800
	Total Hydrocarbons (C6-C50)	694		72	ug/g	17-MAY-21			
	Chrom. to baseline at nC50	NO			No Unit	12-MAY-21			
	Surrogate: 2-Bromobenzotrifluoride	95.8		60-140	%	12-MAY-21			
	Surrogate: 3,4-Dichlorotoluene	108.3		60-140	%	17-MAY-21			
Polycyclic Aromatic Hydrocarbons									
	Acenaphthene	<0.050		0.050	ug/g	13-MAY-21	0.072	15	0.093
	Acenaphthylene	<0.050		0.050	ug/g	13-MAY-21	0.093	0.093	14
	Anthracene	<0.050		0.050	ug/g	13-MAY-21	0.16	0.16	0.16
	Benzo(a)anthracene	0.412		0.050	ug/g	13-MAY-21	*0.36	1	0.5

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte						#1	#2	#3
L2585298-10	BH104-21 SS2 2.5-4.5 FT								
Sampled By: MATT D on 06-MAY-21 @ 11:10									
Matrix: SOIL									
Polycyclic Aromatic Hydrocarbons									
	Benzo(a)pyrene	0.926		0.050	ug/g	13-MAY-21	*0.3	*0.7	*0.57
	Benzo(b&j)fluoranthene	0.361		0.050	ug/g	13-MAY-21	0.47	7	5.7
	Benzo(g,h,i)perylene	0.861		0.050	ug/g	13-MAY-21	*0.68	13	6.6
	Benzo(k)fluoranthene	0.069		0.050	ug/g	13-MAY-21	0.48	7	5.7
	Chrysene	0.570		0.050	ug/g	13-MAY-21	2.8	14	7
	Dibenz(a,h)anthracene	0.494		0.050	ug/g	13-MAY-21	*0.1	0.7	0.57
	Fluoranthene	<0.050		0.050	ug/g	13-MAY-21	0.56	70	0.69
	Fluorene	<0.050		0.050	ug/g	13-MAY-21	0.12	6.8	6.8
	Indeno(1,2,3-cd)pyrene	0.365		0.050	ug/g	13-MAY-21	*0.23	0.76	0.38
	1+2-Methylnaphthalenes	<0.042		0.042	ug/g	13-MAY-21	0.59	8.7	0.92
	1-Methylnaphthalene	<0.030		0.030	ug/g	13-MAY-21	0.59	8.7	0.92
	2-Methylnaphthalene	<0.030		0.030	ug/g	13-MAY-21	0.59	8.7	0.92
	Naphthalene	<0.013		0.013	ug/g	13-MAY-21	0.09	1.8	0.59
	Phenanthrene	<0.046		0.046	ug/g	13-MAY-21	0.69	12	6.2
	Pyrene	0.259		0.050	ug/g	13-MAY-21	1	70	70
	Surrogate: 2-Fluorobiphenyl	90.5		50-140	%	13-MAY-21			
	Surrogate: d14-Terphenyl	94.7		50-140	%	13-MAY-21			
L2585298-14	BH103-21 SS2 2.5-4.5 FT								
Sampled By: MATT D on 06-MAY-21 @ 12:30									
Matrix: SOIL									
Physical Tests									
	% Moisture	3.17		0.25	%	12-MAY-21			
Volatile Organic Compounds									
	Benzene	<0.0068		0.0068	ug/g	17-MAY-21	0.02	0.034	0.02
	Ethylbenzene	<0.018		0.018	ug/g	17-MAY-21	0.05	1.9	1.9
	Toluene	<0.080		0.080	ug/g	17-MAY-21	0.2	7.8	0.99
	o-Xylene	<0.020		0.020	ug/g	17-MAY-21			
	m+p-Xylenes	<0.030		0.030	ug/g	17-MAY-21			
	Xylenes (Total)	<0.050		0.050	ug/g	17-MAY-21	0.05	3	0.9
	Surrogate: 4-Bromofluorobenzene	112.4		50-140	%	17-MAY-21			
	Surrogate: 1,4-Difluorobenzene	119.0		50-140	%	17-MAY-21			
Hydrocarbons									
	F1 (C6-C10)	<5.0		5.0	ug/g	17-MAY-21	25	25	25
	F1-BTEX	<5.0		5.0	ug/g	17-MAY-21	25	25	25
	F2 (C10-C16)	<10		10	ug/g	12-MAY-21	10	26	10
	F2-Naphth	<10		10	ug/g	17-MAY-21			
	F3 (C16-C34)	442		50	ug/g	12-MAY-21	*240	1700	*300
	F3-PAH	441		50	ug/g	17-MAY-21			
	F4 (C34-C50)	181		50	ug/g	12-MAY-21	*120	3300	2800
	F4G-SG (GHH-Silica)	940		250	ug/g	13-MAY-21	*120	3300	2800
	Total Hydrocarbons (C6-C50)	623		72	ug/g	17-MAY-21			
	Chrom. to baseline at nC50	NO			No Unit	12-MAY-21			
	Surrogate: 2-Bromobenzotrifluoride	79.2		60-140	%	12-MAY-21			
	Surrogate: 3,4-Dichlorotoluene	60.4		60-140	%	17-MAY-21			
Polycyclic Aromatic Hydrocarbons									

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte						#1	#2	#3
L2585298-14	BH103-21 SS2 2.5-4.5 FT								
Sampled By: MATT D on 06-MAY-21 @ 12:30									
Matrix: SOIL									
Polycyclic Aromatic Hydrocarbons									
	Acenaphthene	<0.050		0.050	ug/g	13-MAY-21	0.072	15	0.093
	Acenaphthylene	<0.050		0.050	ug/g	13-MAY-21	0.093	0.093	14
	Anthracene	<0.050		0.050	ug/g	13-MAY-21	0.16	0.16	0.16
	Benzo(a)anthracene	0.227		0.050	ug/g	13-MAY-21	0.36	1	0.5
	Benzo(a)pyrene	0.362		0.050	ug/g	13-MAY-21	*0.3	0.7	0.57
	Benzo(b&j)fluoranthene	0.159		0.050	ug/g	13-MAY-21	0.47	7	5.7
	Benzo(g,h,i)perylene	0.255		0.050	ug/g	13-MAY-21	0.68	13	6.6
	Benzo(k)fluoranthene	<0.050		0.050	ug/g	13-MAY-21	0.48	7	5.7
	Chrysene	0.268		0.050	ug/g	13-MAY-21	2.8	14	7
	Dibenz(a,h)anthracene	0.171		0.050	ug/g	13-MAY-21	*0.1	0.7	0.57
	Fluoranthene	<0.050		0.050	ug/g	13-MAY-21	0.56	70	0.69
	Fluorene	<0.050		0.050	ug/g	13-MAY-21	0.12	6.8	6.8
	Indeno(1,2,3-cd)pyrene	0.124		0.050	ug/g	13-MAY-21	0.23	0.76	0.38
	1+2-Methylnaphthalenes	<0.042		0.042	ug/g	13-MAY-21	0.59	8.7	0.92
	1-Methylnaphthalene	<0.030		0.030	ug/g	13-MAY-21	0.59	8.7	0.92
	2-Methylnaphthalene	<0.030		0.030	ug/g	13-MAY-21	0.59	8.7	0.92
	Naphthalene	<0.013		0.013	ug/g	13-MAY-21	0.09	1.8	0.59
	Phenanthrene	<0.046		0.046	ug/g	13-MAY-21	0.69	12	6.2
	Pyrene	0.134		0.050	ug/g	13-MAY-21	1	70	70
	Surrogate: 2-Fluorobiphenyl	79.1		50-140	%	13-MAY-21			
	Surrogate: d14-Terphenyl	79.1		50-140	%	13-MAY-21			
Polychlorinated Biphenyls									
	Aroclor 1242	<0.010		0.010	ug/g	13-MAY-21			
	Aroclor 1248	<0.010		0.010	ug/g	13-MAY-21			
	Aroclor 1254	<0.010		0.010	ug/g	13-MAY-21			
	Aroclor 1260	<0.010		0.010	ug/g	13-MAY-21			
	Total PCBs	<0.020		0.020	ug/g	13-MAY-21	0.3	0.78	0.35
	Surrogate: d14-Terphenyl	85.9		60-140	%	13-MAY-21			
L2585298-15	BH103-21 SS3 5-7 FT								
Sampled By: MATT D on 06-MAY-21 @ 12:40									
Matrix: SOIL									
Physical Tests									
	Conductivity	1.32		0.0040	mS/cm	17-MAY-21	*0.57	1.4	*0.7
	% Moisture	4.10		0.25	%	12-MAY-21			
Saturated Paste Extractables									
	SAR	20.9		0.10	SAR	17-MAY-21	*2.4	*12	*5
	Calcium (Ca)	6.83		0.50	mg/L	17-MAY-21			
	Magnesium (Mg)	2.13		0.50	mg/L	17-MAY-21			
	Sodium (Na)	244		0.50	mg/L	17-MAY-21			
Volatile Organic Compounds									
	Benzene	<0.0068		0.0068	ug/g	17-MAY-21	0.02	0.034	0.02
	Ethylbenzene	<0.018		0.018	ug/g	17-MAY-21	0.05	1.9	1.9
	Toluene	<0.080		0.080	ug/g	17-MAY-21	0.2	7.8	0.99
	o-Xylene	<0.020		0.020	ug/g	17-MAY-21			
	m+p-Xylenes	<0.030		0.030	ug/g	17-MAY-21			

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte						#1	#2	#3
L2585298-15	BH103-21 SS3 5-7 FT								
Sampled By: MATT D on 06-MAY-21 @ 12:40									
Matrix: SOIL									
Volatile Organic Compounds									
	Xylenes (Total)	<0.050		0.050	ug/g	17-MAY-21	0.05	3	0.9
	Surrogate: 4-Bromofluorobenzene	114.5		50-140	%	17-MAY-21			
	Surrogate: 1,4-Difluorobenzene	113.9		50-140	%	17-MAY-21			
Hydrocarbons									
	F1 (C6-C10)	<5.0		5.0	ug/g	17-MAY-21	25	25	25
	F1-BTEX	<5.0		5.0	ug/g	17-MAY-21	25	25	25
	F2 (C10-C16)	<10		10	ug/g	12-MAY-21	10	26	10
	F2-Naphth	<10		10	ug/g	17-MAY-21			
	F3 (C16-C34)	100		50	ug/g	12-MAY-21	240	1700	300
	F3-PAH	99		50	ug/g	17-MAY-21			
	F4 (C34-C50)	<50		50	ug/g	12-MAY-21	120	3300	2800
	Total Hydrocarbons (C6-C50)	100		72	ug/g	17-MAY-21			
	Chrom. to baseline at nC50	YES			No Unit	12-MAY-21			
	Surrogate: 2-Bromobenzotrifluoride	78.5		60-140	%	12-MAY-21			
	Surrogate: 3,4-Dichlorotoluene	105.3		60-140	%	17-MAY-21			
Polycyclic Aromatic Hydrocarbons									
	Acenaphthene	<0.050		0.050	ug/g	13-MAY-21	0.072	15	0.093
	Acenaphthylene	<0.050		0.050	ug/g	13-MAY-21	0.093	0.093	14
	Anthracene	<0.050		0.050	ug/g	13-MAY-21	0.16	0.16	0.16
	Benzo(a)anthracene	0.346		0.050	ug/g	13-MAY-21	0.36	1	0.5
	Benzo(a)pyrene	0.501		0.050	ug/g	13-MAY-21	*0.3	0.7	0.57
	Benzo(b&j)fluoranthene	0.221		0.050	ug/g	13-MAY-21	0.47	7	5.7
	Benzo(g,h,i)perylene	0.375		0.050	ug/g	13-MAY-21	0.68	13	6.6
	Benzo(k)fluoranthene	<0.050		0.050	ug/g	13-MAY-21	0.48	7	5.7
	Chrysene	0.418		0.050	ug/g	13-MAY-21	2.8	14	7
	Dibenz(a,h)anthracene	0.237		0.050	ug/g	13-MAY-21	*0.1	0.7	0.57
	Fluoranthene	<0.050		0.050	ug/g	13-MAY-21	0.56	70	0.69
	Fluorene	<0.050		0.050	ug/g	13-MAY-21	0.12	6.8	6.8
	Indeno(1,2,3-cd)pyrene	0.164		0.050	ug/g	13-MAY-21	0.23	0.76	0.38
	1+2-Methylnaphthalenes	<0.042		0.042	ug/g	13-MAY-21	0.59	8.7	0.92
	1-Methylnaphthalene	<0.030		0.030	ug/g	13-MAY-21	0.59	8.7	0.92
	2-Methylnaphthalene	<0.030		0.030	ug/g	13-MAY-21	0.59	8.7	0.92
	Naphthalene	<0.013		0.013	ug/g	13-MAY-21	0.09	1.8	0.59
	Phenanthrene	<0.046		0.046	ug/g	13-MAY-21	0.69	12	6.2
	Pyrene	0.205		0.050	ug/g	13-MAY-21	1	70	70
	Surrogate: 2-Fluorobiphenyl	86.3		50-140	%	13-MAY-21			
	Surrogate: d14-Terphenyl	87.5		50-140	%	13-MAY-21			
L2585298-19	BH102-21 SS2 2.5-4.5 FT								
Sampled By: MATT D on 06-MAY-21 @ 13:55									
Matrix: SOIL									
Physical Tests									
	% Moisture	6.90		0.25	%	12-MAY-21			
Metals									
	Antimony (Sb)	<1.0		1.0	ug/g	17-MAY-21	1.3	40	7.5
	Arsenic (As)	8.3		1.0	ug/g	17-MAY-21	18	18	18

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use



ANALYTICAL GUIDELINE REPORT

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Table with columns: Sample Details Grouping, Analyte, Result, Qualifier, D.L., Units, Analyzed, and Guideline Limits (#1, #2, #3). Rows include Metals (Barium, Beryllium, Boron, etc.), Speciated Metals (Chromium), Volatile Organic Compounds (Benzene, Ethylbenzene, etc.), Hydrocarbons (F1, F2, F3, etc.), and Polycyclic Aromatic Hydrocarbons (Acenaphthene, Anthracene, etc.).

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

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#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use



ANALYTICAL GUIDELINE REPORT

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Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte						#1	#2	#3
L2585298-19	BH102-21 SS2 2.5-4.5 FT								
Sampled By: MATT D on 06-MAY-21 @ 13:55									
Matrix: SOIL									
Polycyclic Aromatic Hydrocarbons									
	Benzo(a)anthracene	<0.050		0.050	ug/g	13-MAY-21	0.36	1	0.5
	Benzo(a)pyrene	<0.050		0.050	ug/g	13-MAY-21	0.3	0.7	0.57
	Benzo(b&j)fluoranthene	<0.050		0.050	ug/g	13-MAY-21	0.47	7	5.7
	Benzo(g,h,i)perylene	<0.050		0.050	ug/g	13-MAY-21	0.68	13	6.6
	Benzo(k)fluoranthene	<0.050		0.050	ug/g	13-MAY-21	0.48	7	5.7
	Chrysene	<0.050		0.050	ug/g	13-MAY-21	2.8	14	7
	Dibenz(a,h)anthracene	<0.050		0.050	ug/g	13-MAY-21	0.1	0.7	0.57
	Fluoranthene	<0.050		0.050	ug/g	13-MAY-21	0.56	70	0.69
	Fluorene	<0.050		0.050	ug/g	13-MAY-21	0.12	6.8	6.8
	Indeno(1,2,3-cd)pyrene	<0.050		0.050	ug/g	13-MAY-21	0.23	0.76	0.38
	1+2-Methylnaphthalenes	<0.042		0.042	ug/g	13-MAY-21	0.59	8.7	0.92
	1-Methylnaphthalene	<0.030		0.030	ug/g	13-MAY-21	0.59	8.7	0.92
	2-Methylnaphthalene	<0.030		0.030	ug/g	13-MAY-21	0.59	8.7	0.92
	Naphthalene	<0.013		0.013	ug/g	13-MAY-21	0.09	1.8	0.59
	Phenanthrene	<0.046		0.046	ug/g	13-MAY-21	0.69	12	6.2
	Pyrene	<0.050		0.050	ug/g	13-MAY-21	1	70	70
	Surrogate: 2-Fluorobiphenyl	84.3		50-140	%	13-MAY-21			
	Surrogate: d14-Terphenyl	82.9		50-140	%	13-MAY-21			
L2585298-24	BH101-21 SS3 5-7 FT								
Sampled By: MATT D on 06-MAY-21 @ 15:20									
Matrix: SOIL									
Physical Tests									
	Conductivity	0.739		0.0040	mS/cm	17-MAY-21	*0.57	1.4	*0.7
	% Moisture	2.75		0.25	%	12-MAY-21			
	pH	8.06		0.10	pH units	12-MAY-21			
Saturated Paste Extractables									
	SAR	3.02		0.10	SAR	17-MAY-21	*2.4	12	5
	Calcium (Ca)	35.5		0.50	mg/L	17-MAY-21			
	Magnesium (Mg)	12.1		0.50	mg/L	17-MAY-21			
	Sodium (Na)	81.7		0.50	mg/L	17-MAY-21			
Metals									
	Antimony (Sb)	<1.0		1.0	ug/g	17-MAY-21	1.3	40	7.5
	Arsenic (As)	3.1		1.0	ug/g	17-MAY-21	18	18	18
	Barium (Ba)	19.3		1.0	ug/g	17-MAY-21	220	670	390
	Beryllium (Be)	<0.50		0.50	ug/g	17-MAY-21	2.5	8	4
	Boron (B)	6.9		5.0	ug/g	17-MAY-21	36	120	120
	Cadmium (Cd)	<0.50		0.50	ug/g	17-MAY-21	1.2	1.9	1.2
	Chromium (Cr)	7.3		1.0	ug/g	17-MAY-21	70	160	160
	Cobalt (Co)	3.3		1.0	ug/g	17-MAY-21	21	80	22
	Copper (Cu)	19.5		1.0	ug/g	17-MAY-21	92	230	140
	Lead (Pb)	8.1		1.0	ug/g	17-MAY-21	120	120	120
	Molybdenum (Mo)	<1.0		1.0	ug/g	17-MAY-21	2	40	6.9
	Nickel (Ni)	6.6		1.0	ug/g	17-MAY-21	82	270	100
	Selenium (Se)	<1.0		1.0	ug/g	17-MAY-21	1.5	5.5	2.4
	Silver (Ag)	<0.20		0.20	ug/g	17-MAY-21	0.5	40	20

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Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use



ANALYTICAL GUIDELINE REPORT

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Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte						#1	#2	#3
L2585298-24	BH101-21 SS3 5-7 FT								
Sampled By: MATT D on 06-MAY-21 @ 15:20									
Matrix: SOIL									
Metals									
	Thallium (Tl)	<0.50		0.50	ug/g	17-MAY-21	1	3.3	1
	Uranium (U)	<1.0		1.0	ug/g	17-MAY-21	2.5	33	23
	Vanadium (V)	13.9		1.0	ug/g	17-MAY-21	86	86	86
	Zinc (Zn)	88.9		5.0	ug/g	17-MAY-21	290	340	340
Polycyclic Aromatic Hydrocarbons									
	Acenaphthene	<0.050		0.050	ug/g	13-MAY-21	0.072	15	0.093
	Acenaphthylene	<0.050		0.050	ug/g	13-MAY-21	0.093	0.093	14
	Anthracene	<0.050		0.050	ug/g	13-MAY-21	0.16	0.16	0.16
	Benzo(a)anthracene	<0.050		0.050	ug/g	13-MAY-21	0.36	1	0.5
	Benzo(a)pyrene	<0.050		0.050	ug/g	13-MAY-21	0.3	0.7	0.57
	Benzo(b&j)fluoranthene	<0.050		0.050	ug/g	13-MAY-21	0.47	7	5.7
	Benzo(g,h,i)perylene	<0.050		0.050	ug/g	13-MAY-21	0.68	13	6.6
	Benzo(k)fluoranthene	<0.050		0.050	ug/g	13-MAY-21	0.48	7	5.7
	Chrysene	<0.050		0.050	ug/g	13-MAY-21	2.8	14	7
	Dibenz(a,h)anthracene	<0.050		0.050	ug/g	13-MAY-21	0.1	0.7	0.57
	Fluoranthene	<0.050		0.050	ug/g	13-MAY-21	0.56	70	0.69
	Fluorene	<0.050		0.050	ug/g	13-MAY-21	0.12	6.8	6.8
	Indeno(1,2,3-cd)pyrene	<0.050		0.050	ug/g	13-MAY-21	0.23	0.76	0.38
	1+2-Methylnaphthalenes	<0.042		0.042	ug/g	13-MAY-21	0.59	8.7	0.92
	1-Methylnaphthalene	<0.030		0.030	ug/g	13-MAY-21	0.59	8.7	0.92
	2-Methylnaphthalene	<0.030		0.030	ug/g	13-MAY-21	0.59	8.7	0.92
	Naphthalene	<0.013		0.013	ug/g	13-MAY-21	0.09	1.8	0.59
	Phenanthrene	<0.046		0.046	ug/g	13-MAY-21	0.69	12	6.2
	Pyrene	<0.050		0.050	ug/g	13-MAY-21	1	70	70
	Surrogate: 2-Fluorobiphenyl	87.3		50-140	%	13-MAY-21			
	Surrogate: d14-Terphenyl	85.8		50-140	%	13-MAY-21			
L2585298-25	BH101-21 SS4 7.5-9.5 FT								
Sampled By: MATT D on 06-MAY-21 @ 15:30									
Matrix: SOIL									
Physical Tests									
	% Moisture	1.89		0.25	%	12-MAY-21			
Volatile Organic Compounds									
	Benzene	<0.0068		0.0068	ug/g	17-MAY-21	0.02	0.034	0.02
	Ethylbenzene	<0.018		0.018	ug/g	17-MAY-21	0.05	1.9	1.9
	Toluene	<0.080		0.080	ug/g	17-MAY-21	0.2	7.8	0.99
	o-Xylene	<0.020		0.020	ug/g	17-MAY-21			
	m+p-Xylenes	<0.030		0.030	ug/g	17-MAY-21			
	Xylenes (Total)	<0.050		0.050	ug/g	17-MAY-21	0.05	3	0.9
	Surrogate: 4-Bromofluorobenzene	117.4		50-140	%	17-MAY-21			
	Surrogate: 1,4-Difluorobenzene	111.4		50-140	%	17-MAY-21			
Hydrocarbons									
	F1 (C6-C10)	<5.0		5.0	ug/g	17-MAY-21	25	25	25
	F1-BTEX	<5.0		5.0	ug/g	17-MAY-21	25	25	25
	F2 (C10-C16)	<10		10	ug/g	12-MAY-21	10	26	10

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Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use



ANALYTICAL GUIDELINE REPORT

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Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte						#1	#2	#3
L2585298-25 BH101-21 SS4 7.5-9.5 FT									
Sampled By: MATT D on 06-MAY-21 @ 15:30									
Matrix: SOIL									
Hydrocarbons									
F3 (C16-C34)		<50		50	ug/g	12-MAY-21	240	1700	300
F4 (C34-C50)		<50		50	ug/g	12-MAY-21	120	3300	2800
Total Hydrocarbons (C6-C50)		<72		72	ug/g	17-MAY-21			
Chrom. to baseline at nC50		YES			No Unit	12-MAY-21			
Surrogate: 2-Bromobenzotrifluoride		81.5		60-140	%	12-MAY-21			
Surrogate: 3,4-Dichlorotoluene		109.2		60-140	%	17-MAY-21			

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

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Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

#3: T3.1 - Volume Independent Soil - Res/Park/Inst Property Use

Reference Information

Sample Parameter Qualifier key listed:

Qualifier	Description
SAR:M	Reported SAR represents a maximum value. Actual SAR may be lower if both Ca and Mg were detectable.
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference***
B-HWS-R511-WT	Soil	Boron-HWE-O.Reg 153/04 (July 2011)	HW EXTR, EPA 6010B

A dried solid sample is extracted with calcium chloride, the sample undergoes a heating process. After cooling the sample is filtered and analyzed by ICP/OES.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

BTX-511-HS-WT	Soil	BTEX-O.Reg 153/04 (July 2011)	SW846 8260
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BTX is determined by extracting a soil or sediment sample as received with methanol, then analyzing by headspace-GC/MS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

CR-CR6-IC-WT	Soil	Hexavalent Chromium in Soil	SW846 3060A/7199
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This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Method 7199, published by the United States Environmental Protection Agency (EPA). The procedure involves analysis for chromium (VI) by ion chromatography using diphenylcarbazide in a sulphuric acid solution.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

EC-WT	Soil	Conductivity (EC)	MOEE E3138
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A representative subsample is tumbled with de-ionized (DI) water. The ratio of water to soil is 2:1 v/w. After tumbling the sample is then analyzed by a conductivity meter.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

F1-F4-511-CALC-WT	Soil	F1-F4 Hydrocarbon Calculated Parameters	CCME CWS-PHC, Pub #1310, Dec 2001-S
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Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

Hydrocarbon results are expressed on a dry weight basis.

In cases where results for both F4 and F4G are reported, the greater of the two results must be used in any application of the CWS PHC guidelines and the gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.

In samples where BTEX and F1 were analyzed, F1-BTEX represents a value where the sum of Benzene, Toluene, Ethylbenzene and total Xylenes has been subtracted from F1.

In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.

Unless otherwise qualified, the following quality control criteria have been met for the F1 hydrocarbon range:

1. All extraction and analysis holding times were met.
2. Instrument performance showing response factors for C6 and C10 within 30% of the response factor for toluene.
3. Linearity of gasoline response within 15% throughout the calibration range.

Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:

1. All extraction and analysis holding times were met.
2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.
3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.
4. Linearity of diesel or motor oil response within 15% throughout the calibration range.

F1-HS-511-WT	Soil	F1-O.Reg 153/04 (July 2011)	E3398/CCME TIER 1-HS
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Fraction F1 is determined by extracting a soil or sediment sample as received with methanol, then analyzing by headspace-GC/FID.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

Reference Information

F2-F4-511-WT Soil F2-F4-O.Reg 153/04 (July 2011) CCME Tier 1

Petroleum Hydrocarbons (F2-F4 fractions) are extracted from soil with 1:1 hexane:acetone using a rotary extractor. Extracts are treated with silica gel to remove polar organic interferences. F2, F3, & F4 are analyzed by GC-FID. F4G-sg is analyzed gravimetrically.

Notes:

1. F2 (C10-C16): Sum of all hydrocarbons that elute between nC10 and nC16.
2. F3 (C16-C34): Sum of all hydrocarbons that elute between nC16 and nC34.
3. F4 (C34-C50): Sum of all hydrocarbons that elute between nC34 and nC50.
4. F4G: Gravimetric Heavy Hydrocarbons
5. F4G-sg: Gravimetric Heavy Hydrocarbons (F4G) after silica gel treatment.
6. Where both F4 (C34-C50) and F4G-sg are reported for a sample, the larger of the two values is used for comparison against the relevant CCME guideline for F4.
7. F4G-sg cannot be added to the C6 to C50 hydrocarbon results to obtain an estimate of total extractable hydrocarbons.
8. This method is validated for use.
9. Data from analysis of validation and quality control samples is available upon request.
10. Reported results are expressed as milligrams per dry kilogram, unless otherwise indicated.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

F4G-ADD-511-WT Soil F4G SG-O.Reg 153/04 (July 2011) MOE DECPH-E3398/CCME TIER 1

F4G, gravimetric analysis, is determined if the chromatogram does not return to baseline at or before C50. A soil sample is extracted with a solvent mix, the solvent is evaporated and the weight of the residue is determined.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

HG-200.2-CVAA-WT Soil Mercury in Soil by CVAAS EPA 200.2/1631E (mod)

Soil samples are digested with nitric and hydrochloric acids, followed by analysis by CVAAS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

MET-200.2-CCMS-WT Soil Metals in Soil by CRC ICPMS EPA 200.2/6020B (mod)

Soil/sediment is dried, disaggregated, and sieved (2 mm). For tests intended to support Ontario regulations, the <2mm fraction is ground to pass through a 0.355 mm sieve. Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H₂S) may be excluded if lost during sampling, storage, or digestion.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

METHYLNAPS-CALC-WT Soil ABN-Calculated Parameters SW846 8270

MOISTURE-WT Soil % Moisture CCME PHC in Soil - Tier 1 (mod)

PAH-511-WT Soil PAH-O.Reg 153/04 (July 2011) SW846 3510/8270

A representative sub-sample of soil is fortified with deuterium-labelled surrogates and a mechanical shaking technique is used to extract the sample with a mixture of methanol and toluene. The extracts are concentrated and analyzed by GC/MS. Results for benzo(b) fluoranthene may include contributions from benzo(j) fluoranthene, if also present in the sample.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

PCB-511-WT Soil PCB-O.Reg 153/04 (July 2011) SW846 3510/8082

An aliquot of a solid sample is extracted with a solvent, extract is cleaned up and analyzed on the GC/MS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

PH-WT Soil pH MOEE E3137A

A minimum 10g portion of the sample is extracted with 20mL of 0.01M calcium chloride solution by shaking for at least 30 minutes. The aqueous layer is separated from the soil and then analyzed using a pH meter and electrode.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

Reference Information

SAR-R511-WT Soil SAR-O.Reg 153/04 (July 2011) SW846 6010C

A dried, disaggregated solid sample is extracted with deionized water, the aqueous extract is separated from the solid, acidified and then analyzed using a ICP/OES. The concentrations of Na, Ca and Mg are reported as per CALA requirements for calculated parameters. These individual parameters are not for comparison to any guideline.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

VOC-1,3-DCP-CALC-WT Soil Regulation 153 VOCs SW8260B/SW8270C
 VOC-511-HS-WT Soil VOC-O.Reg 153/04 (July 2011) SW846 8260 (511)

Soil and sediment samples are extracted in methanol and analyzed by headspace-GC/MS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

XYLENES-SUM-CALC- Soil Sum of Xylene Isomer CALCULATION
 WT Concentrations

Total xylenes represents the sum of o-xylene and m&p-xylene.

*** ALS test methods may incorporate modifications from specified reference methods to improve performance.

Chain of Custody numbers:

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA		

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guideline limits are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
B-HWS-R511-WT								
	Soil							
Batch	R5458680							
WG3535702-4	DUP	L2584316-1						
Boron (B), Hot Water Ext.		<0.10	<0.10	RPD-NA	ug/g	N/A	30	17-MAY-21
WG3535702-2	IRM	WT SAR4						
Boron (B), Hot Water Ext.			113.3		%		70-130	17-MAY-21
WG3535702-3	LCS							
Boron (B), Hot Water Ext.			101.0		%		70-130	17-MAY-21
WG3535702-1	MB							
Boron (B), Hot Water Ext.			<0.10		ug/g		0.1	17-MAY-21
BTX-511-HS-WT								
	Soil							
Batch	R5458645							
WG3533176-4	DUP	WG3533176-3						
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	17-MAY-21
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	17-MAY-21
m+p-Xylenes		<0.030	<0.030	RPD-NA	ug/g	N/A	40	17-MAY-21
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	17-MAY-21
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	17-MAY-21
WG3533176-2	LCS							
Benzene			109.3		%		70-130	17-MAY-21
Ethylbenzene			105.2		%		70-130	17-MAY-21
m+p-Xylenes			105.4		%		70-130	17-MAY-21
o-Xylene			107.3		%		70-130	17-MAY-21
Toluene			108.5		%		70-130	17-MAY-21
WG3533176-1	MB							
Benzene			<0.0068		ug/g		0.0068	17-MAY-21
Ethylbenzene			<0.018		ug/g		0.018	17-MAY-21
m+p-Xylenes			<0.030		ug/g		0.03	17-MAY-21
o-Xylene			<0.020		ug/g		0.02	17-MAY-21
Toluene			<0.080		ug/g		0.08	17-MAY-21
Surrogate: 1,4-Difluorobenzene			124.4		%		50-140	17-MAY-21
Surrogate: 4-Bromofluorobenzene			126.3		%		50-140	17-MAY-21
WG3533176-5	MS	WG3533176-3						
Benzene			107.4		%		60-140	17-MAY-21
Ethylbenzene			101.3		%		60-140	17-MAY-21
m+p-Xylenes			103.0		%		60-140	17-MAY-21
o-Xylene			104.2		%		60-140	17-MAY-21
Toluene			106.6		%		60-140	17-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CR-CR6-IC-WT		Soil						
Batch R5457177								
WG3532998-4 CRM		WT-SQC012						
Chromium, Hexavalent			95.8		%		70-130	13-MAY-21
WG3532998-3 DUP		L2585927-32						
Chromium, Hexavalent		0.30	0.23		ug/g	28	35	13-MAY-21
WG3532998-2 LCS								
Chromium, Hexavalent			94.7		%		80-120	13-MAY-21
WG3532998-1 MB								
Chromium, Hexavalent			<0.20		ug/g		0.2	13-MAY-21
EC-WT		Soil						
Batch R5458588								
WG3535701-4 DUP		WG3535701-3						
Conductivity		0.641	0.633		mS/cm	1.3	20	17-MAY-21
WG3535701-2 IRM		WT SAR4						
Conductivity			99.0		%		70-130	17-MAY-21
WG3535901-1 LCS								
Conductivity			99.4		%		90-110	17-MAY-21
WG3535701-1 MB								
Conductivity			<0.0040		mS/cm		0.004	17-MAY-21
F1-HS-511-WT		Soil						
Batch R5457327								
WG3533076-54 DUP		WG3533076-53						
F1 (C6-C10)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	14-MAY-21
WG3533076-52 LCS								
F1 (C6-C10)			111.9		%		80-120	13-MAY-21
WG3533076-51 MB								
F1 (C6-C10)			<5.0		ug/g		5	13-MAY-21
Surrogate: 3,4-Dichlorotoluene			97.3		%		60-140	13-MAY-21
WG3533076-55 MS		WG3533076-53						
F1 (C6-C10)			104.8		%		60-140	14-MAY-21
Batch R5458645								
WG3533176-4 DUP		WG3533176-3						
F1 (C6-C10)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	17-MAY-21
WG3533176-2 LCS								
F1 (C6-C10)			110.7		%		80-120	17-MAY-21
WG3533176-1 MB								
F1 (C6-C10)			<5.0		ug/g		5	17-MAY-21
Surrogate: 3,4-Dichlorotoluene			121.1		%		60-140	17-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT		Soil						
Batch	R5458645							
WG3533176-5	MS	WG3533176-3						
F1 (C6-C10)			104.6		%		60-140	17-MAY-21
F2-F4-511-WT		Soil						
Batch	R5456483							
WG3533007-8	DUP	WG3533007-10						
F2 (C10-C16)		<10	<10	RPD-NA	ug/g	N/A	30	12-MAY-21
F3 (C16-C34)		<50	<50	RPD-NA	ug/g	N/A	30	12-MAY-21
F4 (C34-C50)		<50	<50	RPD-NA	ug/g	N/A	30	12-MAY-21
WG3533007-7	LCS							
F2 (C10-C16)			98.1		%		80-120	12-MAY-21
F3 (C16-C34)			98.5		%		80-120	12-MAY-21
F4 (C34-C50)			100.7		%		80-120	12-MAY-21
WG3533007-6	MB							
F2 (C10-C16)			<10		ug/g		10	12-MAY-21
F3 (C16-C34)			<50		ug/g		50	12-MAY-21
F4 (C34-C50)			<50		ug/g		50	12-MAY-21
Surrogate: 2-Bromobenzotrifluoride			89.5		%		60-140	12-MAY-21
WG3533007-9	MS	WG3533007-10						
F2 (C10-C16)			93.0		%		60-140	12-MAY-21
F3 (C16-C34)			96.7		%		60-140	12-MAY-21
F4 (C34-C50)			94.1		%		60-140	12-MAY-21
Batch	R5456665							
WG3532842-3	DUP	WG3532842-5						
F2 (C10-C16)		<10	<10	RPD-NA	ug/g	N/A	30	12-MAY-21
F3 (C16-C34)		<50	<50	RPD-NA	ug/g	N/A	30	12-MAY-21
F4 (C34-C50)		<50	<50	RPD-NA	ug/g	N/A	30	12-MAY-21
WG3532842-2	LCS							
F2 (C10-C16)			94.4		%		80-120	12-MAY-21
F3 (C16-C34)			99.3		%		80-120	12-MAY-21
F4 (C34-C50)			99.2		%		80-120	12-MAY-21
WG3532842-1	MB							
F2 (C10-C16)			<10		ug/g		10	12-MAY-21
F3 (C16-C34)			<50		ug/g		50	12-MAY-21
F4 (C34-C50)			<50		ug/g		50	12-MAY-21
Surrogate: 2-Bromobenzotrifluoride			91.5		%		60-140	12-MAY-21



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520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F2-F4-511-WT	Soil							
Batch	R5456665							
WG3532842-4 MS		WG3532842-5						
F2 (C10-C16)			94.4		%		60-140	12-MAY-21
F3 (C16-C34)			100.5		%		60-140	12-MAY-21
F4 (C34-C50)			99.6		%		60-140	12-MAY-21
F4G-ADD-511-WT	Soil							
Batch	R5456765							
WG3533851-2 LCS								
F4G-SG (GHH-Silica)			66.5		%		60-140	12-MAY-21
WG3533851-1 MB								
F4G-SG (GHH-Silica)			<250		ug/g		250	12-MAY-21
Batch	R5457181							
WG3534363-2 LCS								
F4G-SG (GHH-Silica)			71.0		%		60-140	13-MAY-21
WG3534363-1 MB								
F4G-SG (GHH-Silica)			<250		ug/g		250	13-MAY-21
HG-200.2-CVAA-WT	Soil							
Batch	R5458443							
WG3535703-2 CRM		WT-SS-2						
Mercury (Hg)			100.4		%		70-130	17-MAY-21
WG3535703-6 DUP		WG3535703-5						
Mercury (Hg)		0.0147	0.0150		ug/g	2.5	40	17-MAY-21
WG3535703-3 LCS								
Mercury (Hg)			111.0		%		80-120	17-MAY-21
WG3535703-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	17-MAY-21
MET-200.2-CCMS-WT	Soil							
Batch	R5458818							
WG3535703-2 CRM		WT-SS-2						
Antimony (Sb)			110.3		%		70-130	17-MAY-21
Arsenic (As)			109.6		%		70-130	17-MAY-21
Barium (Ba)			110.3		%		70-130	17-MAY-21
Beryllium (Be)			103.8		%		70-130	17-MAY-21
Boron (B)			9.7		mg/kg		3.5-13.5	17-MAY-21
Cadmium (Cd)			116.0		%		70-130	17-MAY-21
Chromium (Cr)			112.7		%		70-130	17-MAY-21
Cobalt (Co)			107.5		%		70-130	17-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
	Soil							
Batch	R5458818							
WG3535703-2	CRM	WT-SS-2						
Copper (Cu)			105.3		%		70-130	17-MAY-21
Lead (Pb)			105.6		%		70-130	17-MAY-21
Molybdenum (Mo)			102.6		%		70-130	17-MAY-21
Nickel (Ni)			107.8		%		70-130	17-MAY-21
Selenium (Se)			0.16		mg/kg		0-0.34	17-MAY-21
Silver (Ag)			99.8		%		70-130	17-MAY-21
Thallium (Tl)			0.080		mg/kg		0.029-0.129	17-MAY-21
Uranium (U)			102.5		%		70-130	17-MAY-21
Vanadium (V)			113.7		%		70-130	17-MAY-21
Zinc (Zn)			104.5		%		70-130	17-MAY-21
WG3535703-6	DUP	WG3535703-5						
Antimony (Sb)		0.21	0.24		ug/g	10	30	17-MAY-21
Arsenic (As)		9.54	9.73		ug/g	2.0	30	17-MAY-21
Barium (Ba)		96.3	98.6		ug/g	2.3	40	17-MAY-21
Beryllium (Be)		0.58	0.59		ug/g	2.1	30	17-MAY-21
Boron (B)		11.0	11.5		ug/g	4.5	30	17-MAY-21
Cadmium (Cd)		0.091	0.093		ug/g	1.4	30	17-MAY-21
Chromium (Cr)		18.0	18.7		ug/g	3.6	30	17-MAY-21
Cobalt (Co)		11.9	12.2		ug/g	2.3	30	17-MAY-21
Copper (Cu)		104	107		ug/g	2.8	30	17-MAY-21
Lead (Pb)		10.0	10.5		ug/g	5.2	40	17-MAY-21
Molybdenum (Mo)		0.59	0.64		ug/g	7.2	40	17-MAY-21
Nickel (Ni)		22.8	23.5		ug/g	3.0	30	17-MAY-21
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	17-MAY-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	17-MAY-21
Thallium (Tl)		0.115	0.128		ug/g	11	30	17-MAY-21
Uranium (U)		0.547	0.599		ug/g	9.1	30	17-MAY-21
Vanadium (V)		26.8	28.0		ug/g	4.5	30	17-MAY-21
Zinc (Zn)		57.4	59.6		ug/g	3.8	30	17-MAY-21
WG3535703-4	LCS							
Antimony (Sb)			112.5		%		80-120	17-MAY-21
Arsenic (As)			110.5		%		80-120	17-MAY-21
Barium (Ba)			108.3		%		80-120	17-MAY-21



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520 BINGEMANS CENTRE DRIVE
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Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT		Soil						
Batch	R5458818							
WG3535703-4	LCS							
Beryllium (Be)			105.9		%		80-120	17-MAY-21
Boron (B)			102.7		%		80-120	17-MAY-21
Cadmium (Cd)			106.1		%		80-120	17-MAY-21
Chromium (Cr)			109.2		%		80-120	17-MAY-21
Cobalt (Co)			107.4		%		80-120	17-MAY-21
Copper (Cu)			105.3		%		80-120	17-MAY-21
Lead (Pb)			108.4		%		80-120	17-MAY-21
Molybdenum (Mo)			109.6		%		80-120	17-MAY-21
Nickel (Ni)			106.6		%		80-120	17-MAY-21
Selenium (Se)			104.3		%		80-120	17-MAY-21
Silver (Ag)			108.1		%		80-120	17-MAY-21
Thallium (Tl)			101.8		%		80-120	17-MAY-21
Uranium (U)			104.8		%		80-120	17-MAY-21
Vanadium (V)			112.2		%		80-120	17-MAY-21
Zinc (Zn)			106.7		%		80-120	17-MAY-21
WG3535703-1	MB							
Antimony (Sb)			<0.10		mg/kg		0.1	17-MAY-21
Arsenic (As)			<0.10		mg/kg		0.1	17-MAY-21
Barium (Ba)			<0.50		mg/kg		0.5	17-MAY-21
Beryllium (Be)			<0.10		mg/kg		0.1	17-MAY-21
Boron (B)			<5.0		mg/kg		5	17-MAY-21
Cadmium (Cd)			<0.020		mg/kg		0.02	17-MAY-21
Chromium (Cr)			<0.50		mg/kg		0.5	17-MAY-21
Cobalt (Co)			<0.10		mg/kg		0.1	17-MAY-21
Copper (Cu)			<0.50		mg/kg		0.5	17-MAY-21
Lead (Pb)			<0.50		mg/kg		0.5	17-MAY-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	17-MAY-21
Nickel (Ni)			<0.50		mg/kg		0.5	17-MAY-21
Selenium (Se)			<0.20		mg/kg		0.2	17-MAY-21
Silver (Ag)			<0.10		mg/kg		0.1	17-MAY-21
Thallium (Tl)			<0.050		mg/kg		0.05	17-MAY-21
Uranium (U)			<0.050		mg/kg		0.05	17-MAY-21
Vanadium (V)			<0.20		mg/kg		0.2	17-MAY-21
Zinc (Zn)			<2.0		mg/kg		2	17-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT		Soil						
Batch	R5456725							
WG3533063-3	DUP	L2584426-3						
% Moisture		19.1	19.0		%	0.7	20	12-MAY-21
WG3533063-2	LCS							
% Moisture			101.7		%		90-110	12-MAY-21
WG3533063-1	MB							
% Moisture			<0.25		%		0.25	12-MAY-21
PAH-511-WT		Soil						
Batch	R5456757							
WG3532996-3	DUP	WG3532996-5						
1-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	13-MAY-21
2-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	13-MAY-21
Acenaphthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-MAY-21
Acenaphthylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-MAY-21
Anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-MAY-21
Benzo(a)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-MAY-21
Benzo(a)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-MAY-21
Benzo(b&j)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-MAY-21
Benzo(g,h,i)perylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-MAY-21
Benzo(k)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-MAY-21
Chrysene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-MAY-21
Dibenz(a,h)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-MAY-21
Fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-MAY-21
Fluorene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-MAY-21
Indeno(1,2,3-cd)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-MAY-21
Naphthalene		<0.013	<0.013	RPD-NA	ug/g	N/A	40	13-MAY-21
Phenanthrene		<0.046	<0.046	RPD-NA	ug/g	N/A	40	13-MAY-21
Pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	13-MAY-21
WG3532996-2	LCS							
1-Methylnaphthalene			91.3		%		50-140	13-MAY-21
2-Methylnaphthalene			88.5		%		50-140	13-MAY-21
Acenaphthene			87.7		%		50-140	13-MAY-21
Acenaphthylene			83.3		%		50-140	13-MAY-21
Anthracene			76.2		%		50-140	13-MAY-21
Benzo(a)anthracene			86.5		%		50-140	13-MAY-21
Benzo(a)pyrene			75.4		%		50-140	13-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Soil							
Batch	R5456757							
WG3532996-2 LCS								
Benzo(b&j)fluoranthene			82.1		%		50-140	13-MAY-21
Benzo(g,h,i)perylene			85.9		%		50-140	13-MAY-21
Benzo(k)fluoranthene			86.5		%		50-140	13-MAY-21
Chrysene			87.5		%		50-140	13-MAY-21
Dibenz(a,h)anthracene			83.8		%		50-140	13-MAY-21
Fluoranthene			84.8		%		50-140	13-MAY-21
Fluorene			85.1		%		50-140	13-MAY-21
Indeno(1,2,3-cd)pyrene			82.4		%		50-140	13-MAY-21
Naphthalene			85.6		%		50-140	13-MAY-21
Phenanthrene			88.1		%		50-140	13-MAY-21
Pyrene			84.3		%		50-140	13-MAY-21
WG3532996-1 MB								
1-Methylnaphthalene			<0.030		ug/g		0.03	13-MAY-21
2-Methylnaphthalene			<0.030		ug/g		0.03	13-MAY-21
Acenaphthene			<0.050		ug/g		0.05	13-MAY-21
Acenaphthylene			<0.050		ug/g		0.05	13-MAY-21
Anthracene			<0.050		ug/g		0.05	13-MAY-21
Benzo(a)anthracene			<0.050		ug/g		0.05	13-MAY-21
Benzo(a)pyrene			<0.050		ug/g		0.05	13-MAY-21
Benzo(b&j)fluoranthene			<0.050		ug/g		0.05	13-MAY-21
Benzo(g,h,i)perylene			<0.050		ug/g		0.05	13-MAY-21
Benzo(k)fluoranthene			<0.050		ug/g		0.05	13-MAY-21
Chrysene			<0.050		ug/g		0.05	13-MAY-21
Dibenz(a,h)anthracene			<0.050		ug/g		0.05	13-MAY-21
Fluoranthene			<0.050		ug/g		0.05	13-MAY-21
Fluorene			<0.050		ug/g		0.05	13-MAY-21
Indeno(1,2,3-cd)pyrene			<0.050		ug/g		0.05	13-MAY-21
Naphthalene			<0.013		ug/g		0.013	13-MAY-21
Phenanthrene			<0.046		ug/g		0.046	13-MAY-21
Pyrene			<0.050		ug/g		0.05	13-MAY-21
Surrogate: 2-Fluorobiphenyl			88.0		%		50-140	13-MAY-21
Surrogate: d14-Terphenyl			83.8		%		50-140	13-MAY-21
WG3532996-4 MS		WG3532996-5						
1-Methylnaphthalene			94.5		%		50-140	13-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT		Soil						
Batch	R5456757							
WG3532996-4	MS	WG3532996-5						
2-Methylnaphthalene			91.6		%		50-140	13-MAY-21
Acenaphthene			92.4		%		50-140	13-MAY-21
Acenaphthylene			86.7		%		50-140	13-MAY-21
Anthracene			80.6		%		50-140	13-MAY-21
Benzo(a)anthracene			93.4		%		50-140	13-MAY-21
Benzo(a)pyrene			81.2		%		50-140	13-MAY-21
Benzo(b&j)fluoranthene			90.7		%		50-140	13-MAY-21
Benzo(g,h,i)perylene			91.1		%		50-140	13-MAY-21
Benzo(k)fluoranthene			90.7		%		50-140	13-MAY-21
Chrysene			92.1		%		50-140	13-MAY-21
Dibenz(a,h)anthracene			90.8		%		50-140	13-MAY-21
Fluoranthene			89.5		%		50-140	13-MAY-21
Fluorene			90.7		%		50-140	13-MAY-21
Indeno(1,2,3-cd)pyrene			86.6		%		50-140	13-MAY-21
Naphthalene			87.2		%		50-140	13-MAY-21
Phenanthrene			92.0		%		50-140	13-MAY-21
Pyrene			88.9		%		50-140	13-MAY-21
PCB-511-WT		Soil						
Batch	R5456772							
WG3532996-3	DUP	WG3532996-5						
Aroclor 1242		<0.010	<0.010	RPD-NA	ug/g	N/A	40	13-MAY-21
Aroclor 1248		<0.010	<0.010	RPD-NA	ug/g	N/A	40	13-MAY-21
Aroclor 1254		<0.010	<0.010	RPD-NA	ug/g	N/A	40	13-MAY-21
Aroclor 1260		<0.010	<0.010	RPD-NA	ug/g	N/A	40	13-MAY-21
WG3532996-2	LCS							
Aroclor 1242			87.2		%		60-140	13-MAY-21
Aroclor 1248			93.4		%		60-140	13-MAY-21
Aroclor 1254			88.6		%		60-140	13-MAY-21
Aroclor 1260			83.9		%		60-140	13-MAY-21
WG3532996-1	MB							
Aroclor 1242			<0.010		ug/g		0.01	13-MAY-21
Aroclor 1248			<0.010		ug/g		0.01	13-MAY-21
Aroclor 1254			<0.010		ug/g		0.01	13-MAY-21
Aroclor 1260			<0.010		ug/g		0.01	13-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed	
PCB-511-WT									
Soil									
Batch R5456772									
WG3532996-1 MB									
Surrogate: d14-Terphenyl			87.6		%		60-140	13-MAY-21	
WG3532996-4 MS									
Aroclor 1242		WG3532996-5	104.9		%		60-140	13-MAY-21	
Aroclor 1254			106.5		%		60-140	13-MAY-21	
Aroclor 1260			101.2		%		60-140	13-MAY-21	
PH-WT									
Soil									
Batch R5456379									
WG3533325-1 LCS									
pH			6.97		pH units		6.9-7.1	12-MAY-21	
SAR-R511-WT									
Soil									
Batch R5458693									
WG3535701-4 DUP									
Calcium (Ca)		WG3535701-3	16.4	15.5	mg/L	5.6	30	17-MAY-21	
Sodium (Na)			116	112	mg/L	3.5	30	17-MAY-21	
Magnesium (Mg)			1.00	0.94	mg/L	6.3	30	17-MAY-21	
WG3535701-2 IRM									
Calcium (Ca)		WT SAR4		100.9	%		70-130	17-MAY-21	
Sodium (Na)				87.9	%		70-130	17-MAY-21	
Magnesium (Mg)				96.6	%		70-130	17-MAY-21	
WG3535701-5 LCS									
Calcium (Ca)				107.3	%		80-120	17-MAY-21	
Sodium (Na)				101.8	%		80-120	17-MAY-21	
Magnesium (Mg)				102.0	%		80-120	17-MAY-21	
WG3535701-1 MB									
Calcium (Ca)				<0.50	mg/L		0.5	17-MAY-21	
Sodium (Na)				<0.50	mg/L		0.5	17-MAY-21	
Magnesium (Mg)				<0.50	mg/L		0.5	17-MAY-21	
VOC-511-HS-WT									
Soil									
Batch R5457327									
WG3533076-54 DUP									
1,1,1,2-Tetrachloroethane		WG3533076-53	<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
1,1,2,2-Tetrachloroethane			<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
1,1,1-Trichloroethane			<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
1,1,2-Trichloroethane			<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT								
	Soil							
Batch	R5457327							
WG3533076-54 DUP		WG3533076-53						
1,1-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
1,1-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
1,2-Dibromoethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
1,2-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
1,2-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
1,2-Dichloropropane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
1,3-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
1,4-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
Acetone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	14-MAY-21
Benzene		0.0506	0.0521		ug/g	2.9	40	14-MAY-21
Bromodichloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
Bromoform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
Bromomethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
Carbon tetrachloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
Chlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
Chloroform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
cis-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
cis-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	14-MAY-21
Dibromochloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
Dichlorodifluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
Ethylbenzene		0.042	0.041		ug/g	1.2	40	14-MAY-21
n-Hexane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
Methylene Chloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
MTBE		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
m+p-Xylenes		0.043	0.043		ug/g	1.1	40	14-MAY-21
Methyl Ethyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	14-MAY-21
Methyl Isobutyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	14-MAY-21
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	14-MAY-21
Styrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
Tetrachloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	14-MAY-21
trans-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
trans-1,3-Dichloropropene		<0.030	<0.030		ug/g			14-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT								
	Soil							
Batch	R5457327							
WG3533076-54 DUP		WG3533076-53						
trans-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	14-MAY-21
Trichloroethylene		<0.010	<0.010	RPD-NA	ug/g	N/A	40	14-MAY-21
Trichlorofluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-MAY-21
Vinyl chloride		<0.020	<0.020	RPD-NA	ug/g	N/A	40	14-MAY-21
WG3533076-52 LCS								
1,1,1,2-Tetrachloroethane			101.1		%		60-130	13-MAY-21
1,1,1,2,2-Tetrachloroethane			105.9		%		60-130	13-MAY-21
1,1,1-Trichloroethane			97.1		%		60-130	13-MAY-21
1,1,2-Trichloroethane			109.1		%		60-130	13-MAY-21
1,1-Dichloroethane			100.2		%		60-130	13-MAY-21
1,1-Dichloroethylene			93.7		%		60-130	13-MAY-21
1,2-Dibromoethane			108.4		%		70-130	13-MAY-21
1,2-Dichlorobenzene			106.9		%		70-130	13-MAY-21
1,2-Dichloroethane			110.2		%		60-130	13-MAY-21
1,2-Dichloropropane			104.0		%		70-130	13-MAY-21
1,3-Dichlorobenzene			108.8		%		70-130	13-MAY-21
1,4-Dichlorobenzene			109.1		%		70-130	13-MAY-21
Acetone			133.5		%		60-140	13-MAY-21
Benzene			100.5		%		70-130	13-MAY-21
Bromodichloromethane			113.5		%		50-140	13-MAY-21
Bromoform			114.5		%		70-130	13-MAY-21
Bromomethane			89.6		%		50-140	13-MAY-21
Carbon tetrachloride			103.0		%		70-130	13-MAY-21
Chlorobenzene			106.3		%		70-130	13-MAY-21
Chloroform			107.0		%		70-130	13-MAY-21
cis-1,2-Dichloroethylene			105.1		%		70-130	13-MAY-21
cis-1,3-Dichloropropene			102.0		%		70-130	13-MAY-21
Dibromochloromethane			105.0		%		60-130	13-MAY-21
Dichlorodifluoromethane			71.1		%		50-140	13-MAY-21
Ethylbenzene			103.5		%		70-130	13-MAY-21
n-Hexane			88.4		%		70-130	13-MAY-21
Methylene Chloride			104.9		%		70-130	13-MAY-21
MTBE			103.3		%		70-130	13-MAY-21
m+p-Xylenes			105.4				70-130	



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT		Soil						
Batch	R5457327							
WG3533076-52 LCS								
m+p-Xylenes			105.4		%		70-130	13-MAY-21
Methyl Ethyl Ketone			125.5		%		60-140	13-MAY-21
Methyl Isobutyl Ketone			118.1		%		60-140	13-MAY-21
o-Xylene			111.7		%		70-130	13-MAY-21
Styrene			107.7		%		70-130	13-MAY-21
Tetrachloroethylene			102.5		%		60-130	13-MAY-21
Toluene			102.2		%		70-130	13-MAY-21
trans-1,2-Dichloroethylene			102.5		%		60-130	13-MAY-21
trans-1,3-Dichloropropene			109.0		%		70-130	13-MAY-21
Trichloroethylene			103.5		%		60-130	13-MAY-21
Trichlorofluoromethane			88.1		%		50-140	13-MAY-21
Vinyl chloride			91.2		%		60-140	13-MAY-21
WG3533076-51 MB								
1,1,1,2-Tetrachloroethane			<0.050		ug/g		0.05	13-MAY-21
1,1,2,2-Tetrachloroethane			<0.050		ug/g		0.05	13-MAY-21
1,1,1-Trichloroethane			<0.050		ug/g		0.05	13-MAY-21
1,1,2-Trichloroethane			<0.050		ug/g		0.05	13-MAY-21
1,1-Dichloroethane			<0.050		ug/g		0.05	13-MAY-21
1,1-Dichloroethylene			<0.050		ug/g		0.05	13-MAY-21
1,2-Dibromoethane			<0.050		ug/g		0.05	13-MAY-21
1,2-Dichlorobenzene			<0.050		ug/g		0.05	13-MAY-21
1,2-Dichloroethane			<0.050		ug/g		0.05	13-MAY-21
1,2-Dichloropropane			<0.050		ug/g		0.05	13-MAY-21
1,3-Dichlorobenzene			<0.050		ug/g		0.05	13-MAY-21
1,4-Dichlorobenzene			<0.050		ug/g		0.05	13-MAY-21
Acetone			<0.50		ug/g		0.5	13-MAY-21
Benzene			<0.0068		ug/g		0.0068	13-MAY-21
Bromodichloromethane			<0.050		ug/g		0.05	13-MAY-21
Bromoform			<0.050		ug/g		0.05	13-MAY-21
Bromomethane			<0.050		ug/g		0.05	13-MAY-21
Carbon tetrachloride			<0.050		ug/g		0.05	13-MAY-21
Chlorobenzene			<0.050		ug/g		0.05	13-MAY-21
Chloroform			<0.050		ug/g		0.05	13-MAY-21
cis-1,2-Dichloroethylene			<0.050		ug/g		0.05	13-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT		Soil						
Batch	R5457327							
WG3533076-51 MB								
cis-1,3-Dichloropropene			<0.030		ug/g		0.03	13-MAY-21
Dibromochloromethane			<0.050		ug/g		0.05	13-MAY-21
Dichlorodifluoromethane			<0.050		ug/g		0.05	13-MAY-21
Ethylbenzene			<0.018		ug/g		0.018	13-MAY-21
n-Hexane			<0.050		ug/g		0.05	13-MAY-21
Methylene Chloride			<0.050		ug/g		0.05	13-MAY-21
MTBE			<0.050		ug/g		0.05	13-MAY-21
m+p-Xylenes			<0.030		ug/g		0.03	13-MAY-21
Methyl Ethyl Ketone			<0.50		ug/g		0.5	13-MAY-21
Methyl Isobutyl Ketone			<0.50		ug/g		0.5	13-MAY-21
o-Xylene			<0.020		ug/g		0.02	13-MAY-21
Styrene			<0.050		ug/g		0.05	13-MAY-21
Tetrachloroethylene			<0.050		ug/g		0.05	13-MAY-21
Toluene			<0.080		ug/g		0.08	13-MAY-21
trans-1,2-Dichloroethylene			<0.050		ug/g		0.05	13-MAY-21
trans-1,3-Dichloropropene			<0.030		ug/g		0.03	13-MAY-21
Trichloroethylene			<0.010		ug/g		0.01	13-MAY-21
Trichlorofluoromethane			<0.050		ug/g		0.05	13-MAY-21
Vinyl chloride			<0.020		ug/g		0.02	13-MAY-21
Surrogate: 1,4-Difluorobenzene			114.5		%		50-140	13-MAY-21
Surrogate: 4-Bromofluorobenzene			109.6		%		50-140	13-MAY-21
WG3533076-55 MS		WG3533076-53						
1,1,1,2-Tetrachloroethane			122.6		%		50-140	14-MAY-21
1,1,2,2-Tetrachloroethane			126.2		%		50-140	14-MAY-21
1,1,1-Trichloroethane			121.7		%		50-140	14-MAY-21
1,1,2-Trichloroethane			128.6		%		50-140	14-MAY-21
1,1-Dichloroethane			125.6		%		50-140	14-MAY-21
1,1-Dichloroethylene			124.5		%		50-140	14-MAY-21
1,2-Dibromoethane			124.5		%		50-140	14-MAY-21
1,2-Dichlorobenzene			127.7		%		50-140	14-MAY-21
1,2-Dichloroethane			130.1		%		50-140	14-MAY-21
1,2-Dichloropropane			126.0		%		50-140	14-MAY-21
1,3-Dichlorobenzene			126.0		%		50-140	14-MAY-21
1,4-Dichlorobenzene			126.0		%		50-140	14-MAY-21



Quality Control Report

Workorder: L2585298

Report Date: 18-MAY-21

Page 15 of 16

Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch	R5457327							
WG3533076-55 MS		WG3533076-53						
Acetone			144.5	MES	%		50-140	14-MAY-21
Benzene			123.7		%		50-140	14-MAY-21
Bromodichloromethane			136.4		%		50-140	14-MAY-21
Bromoform			134.2		%		50-140	14-MAY-21
Bromomethane			119.4		%		50-140	14-MAY-21
Carbon tetrachloride			129.1		%		50-140	14-MAY-21
Chlorobenzene			125.9		%		50-140	14-MAY-21
Chloroform			130.7		%		50-140	14-MAY-21
cis-1,2-Dichloroethylene			126.5		%		50-140	14-MAY-21
cis-1,3-Dichloropropene			115.8		%		50-140	14-MAY-21
Dibromochloromethane			124.2		%		50-140	14-MAY-21
Dichlorodifluoromethane			109.6		%		50-140	14-MAY-21
Ethylbenzene			123.5		%		50-140	14-MAY-21
n-Hexane			122.7		%		50-140	14-MAY-21
Methylene Chloride			128.8		%		50-140	14-MAY-21
MTBE			122.4		%		50-140	14-MAY-21
m+p-Xylenes			124.3		%		50-140	14-MAY-21
Methyl Ethyl Ketone			132.0		%		50-140	14-MAY-21
Methyl Isobutyl Ketone			134.3		%		50-140	14-MAY-21
o-Xylene			133.4		%		50-140	14-MAY-21
Styrene			126.2		%		50-140	14-MAY-21
Tetrachloroethylene			118.8		%		50-140	14-MAY-21
Toluene			123.1		%		50-140	14-MAY-21
trans-1,2-Dichloroethylene			125.8		%		50-140	14-MAY-21
trans-1,3-Dichloropropene			122.2		%		50-140	14-MAY-21
Trichloroethylene			123.7		%		50-140	14-MAY-21
Trichlorofluoromethane			122.9		%		50-140	14-MAY-21
Vinyl chloride			128.2		%		50-140	14-MAY-21

Quality Control Report

Workorder: L2585298

Report Date: 18-MAY-21

Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9
Contact: JEN LAMBKE

Page 16 of 16

Legend:

Limit ALS Control Limit (Data Quality Objectives)
DUP Duplicate
RPD Relative Percent Difference
N/A Not Available
LCS Laboratory Control Sample
SRM Standard Reference Material
MS Matrix Spike
MSD Matrix Spike Duplicate
ADE Average Desorption Efficiency
MB Method Blank
IRM Internal Reference Material
CRM Certified Reference Material
CCV Continuing Calibration Verification
CVS Calibration Verification Standard
LCSD Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

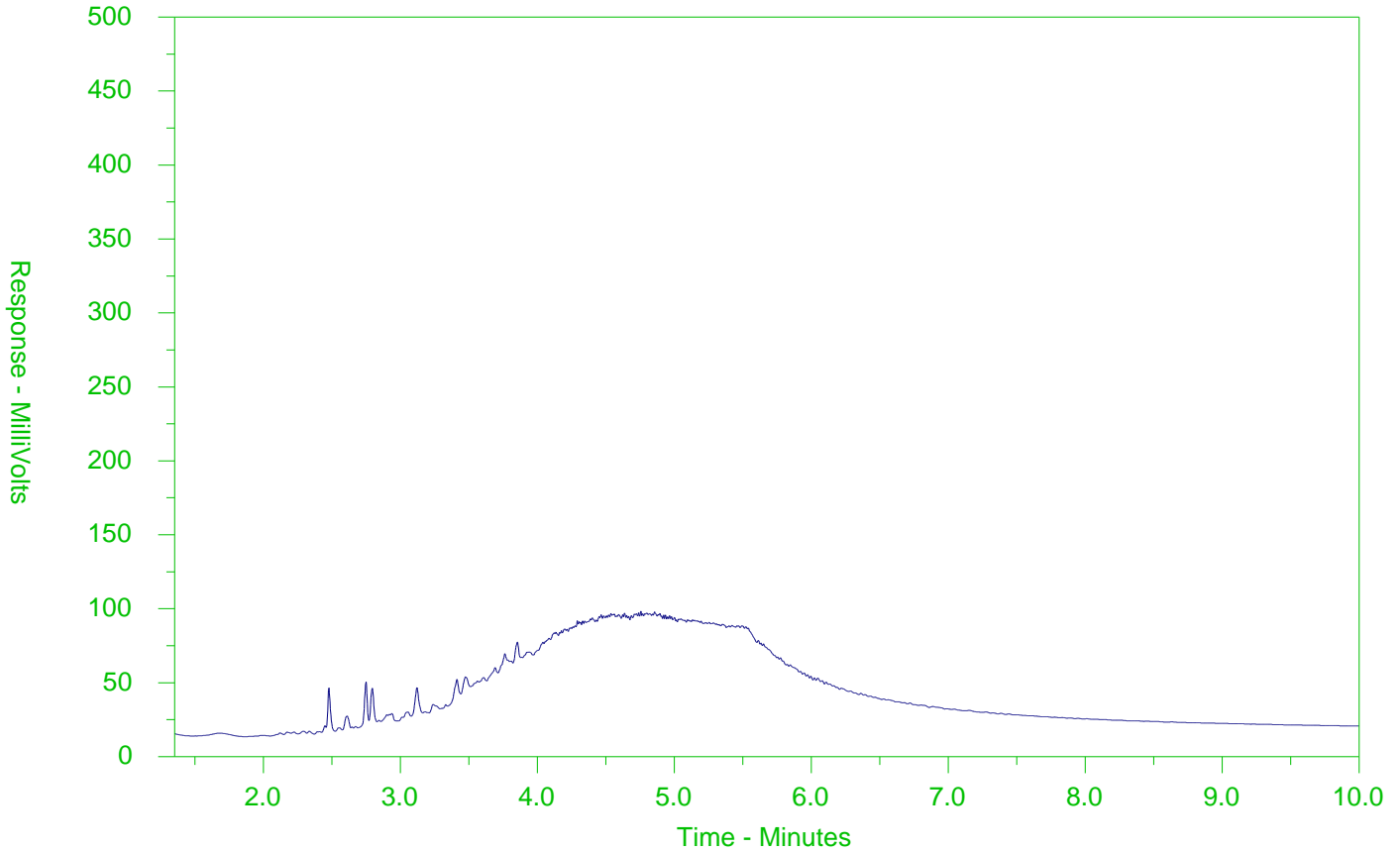
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2585298-2
 Client Sample ID: BH106-21 SS2 2.5-4.5 FT



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

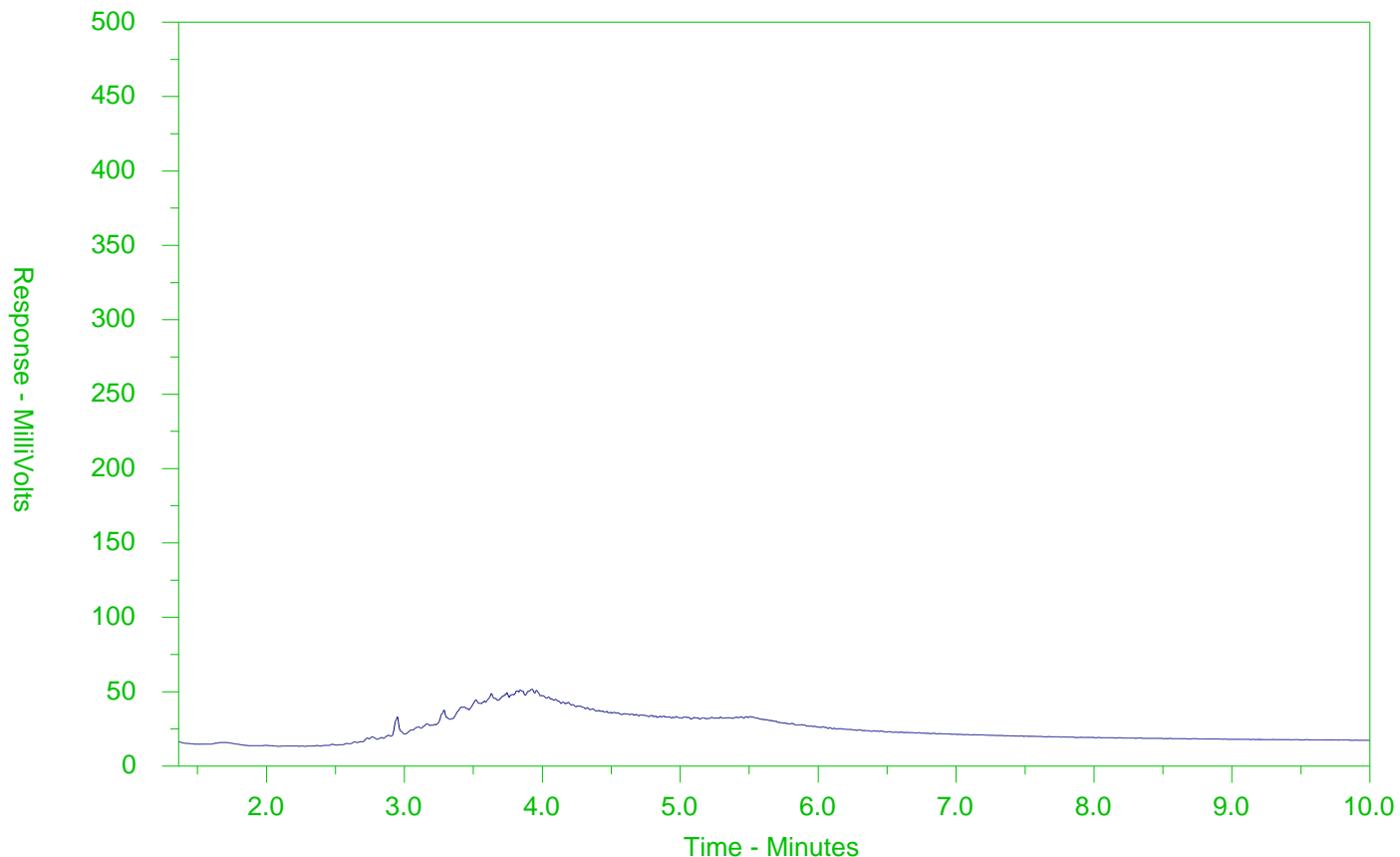
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2585298-8
 Client Sample ID: BH105-21 SS4 7.5-9.5 FT



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

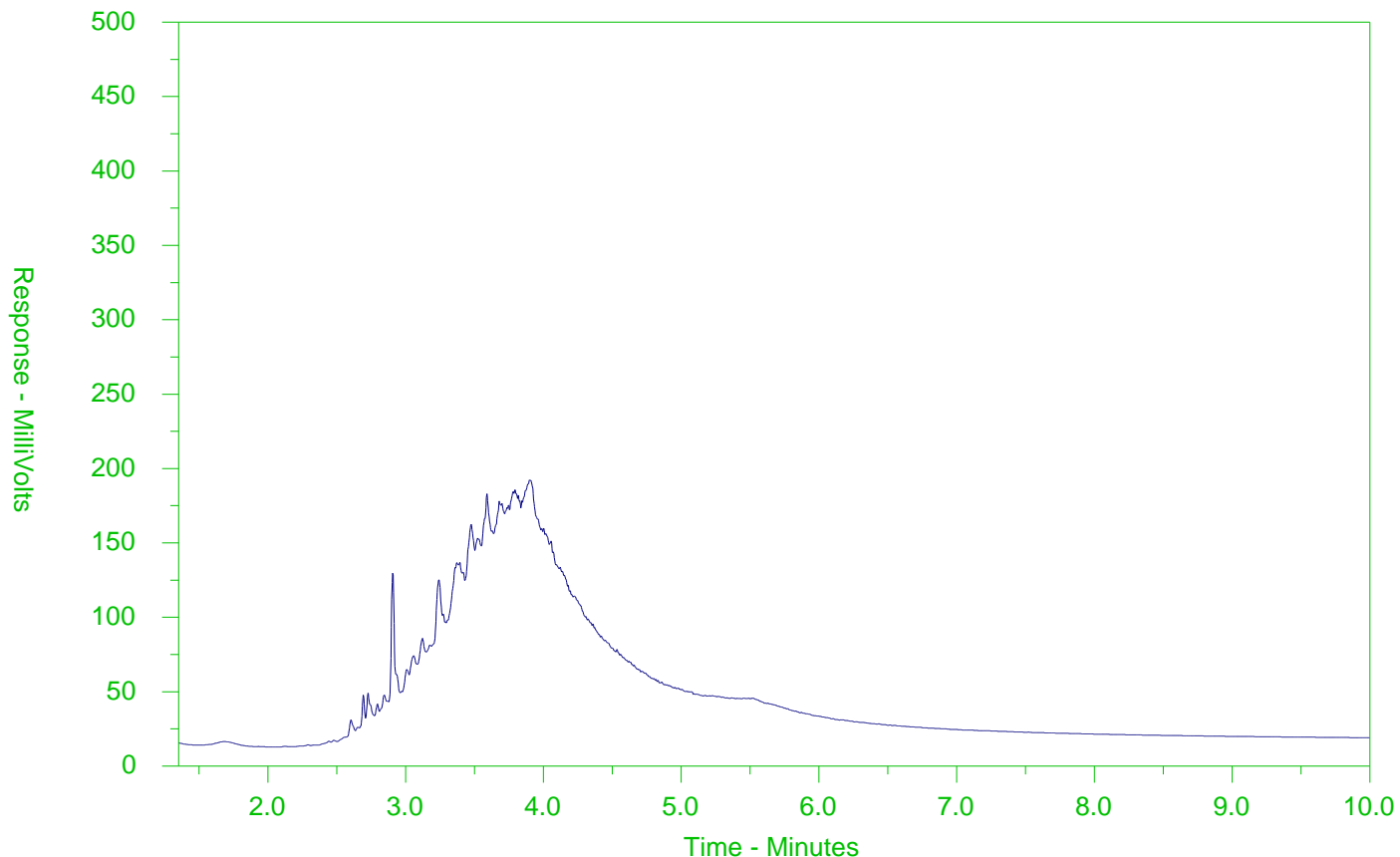
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2585298-10
 Client Sample ID: BH104-21 SS2 2.5-4.5 FT



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

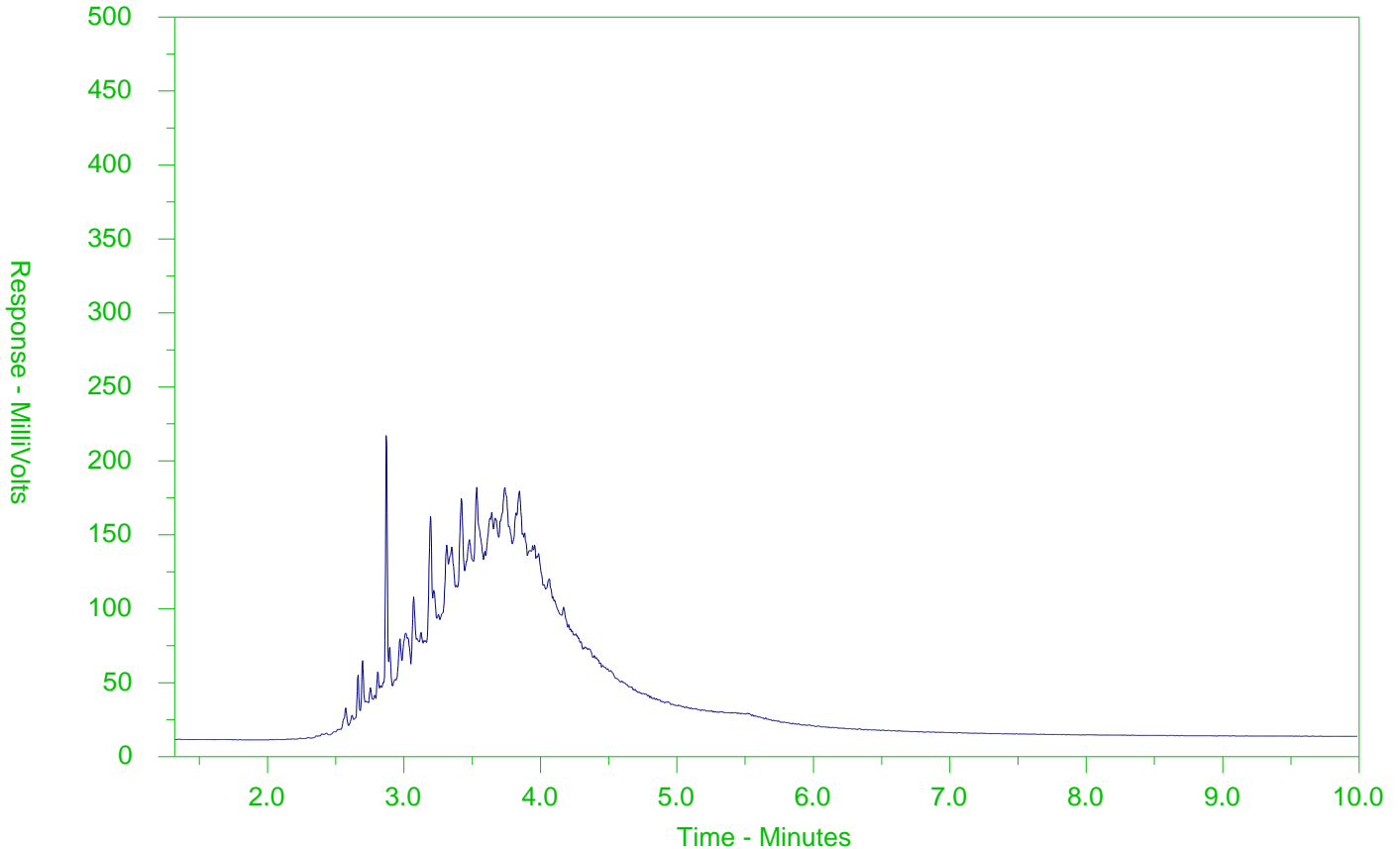
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2585298-14
 Client Sample ID: BH103-21 SS2 2.5-4.5 FT



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

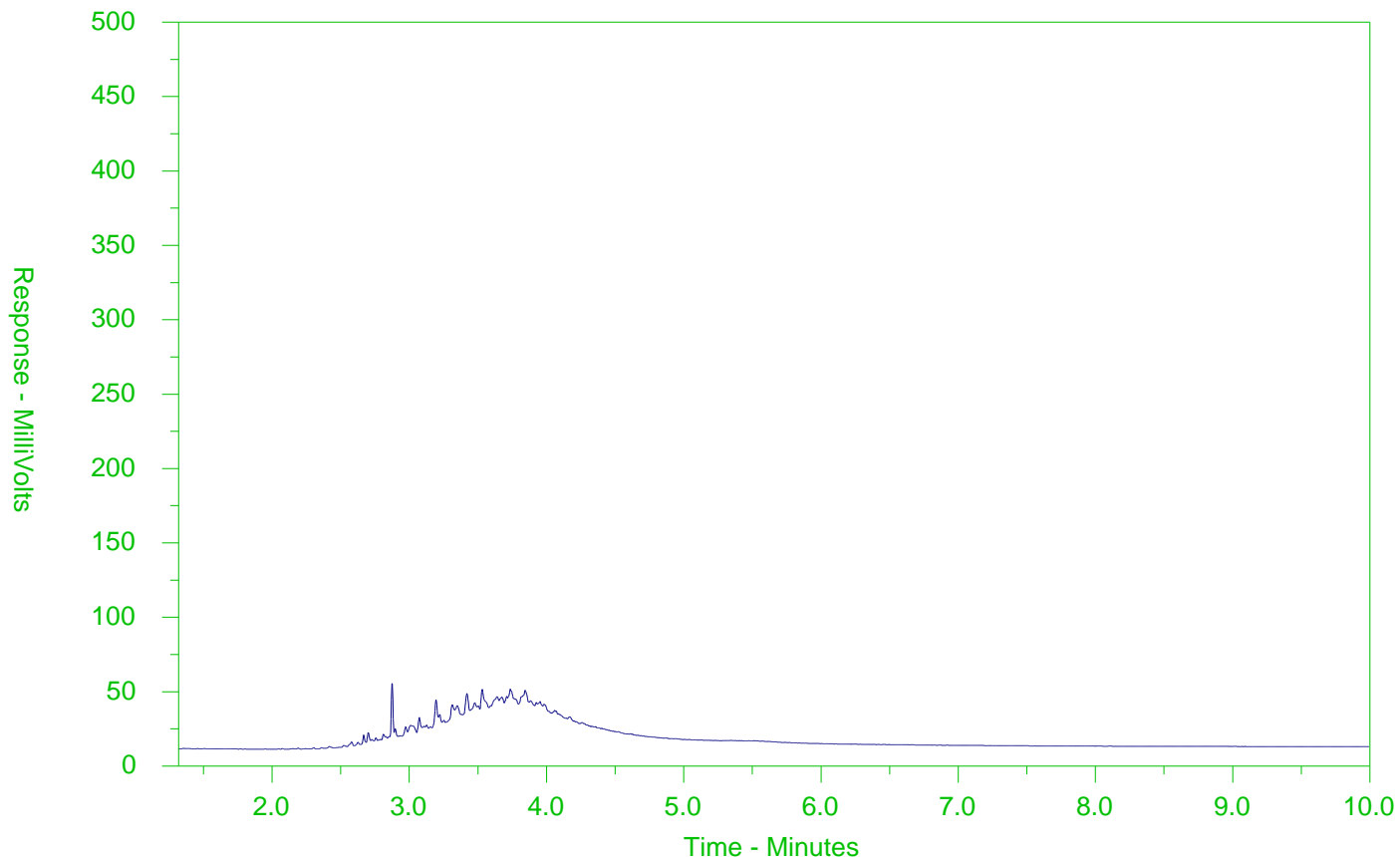
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2585298-15
 Client Sample ID: BH103-21 SS3 5-7 FT



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

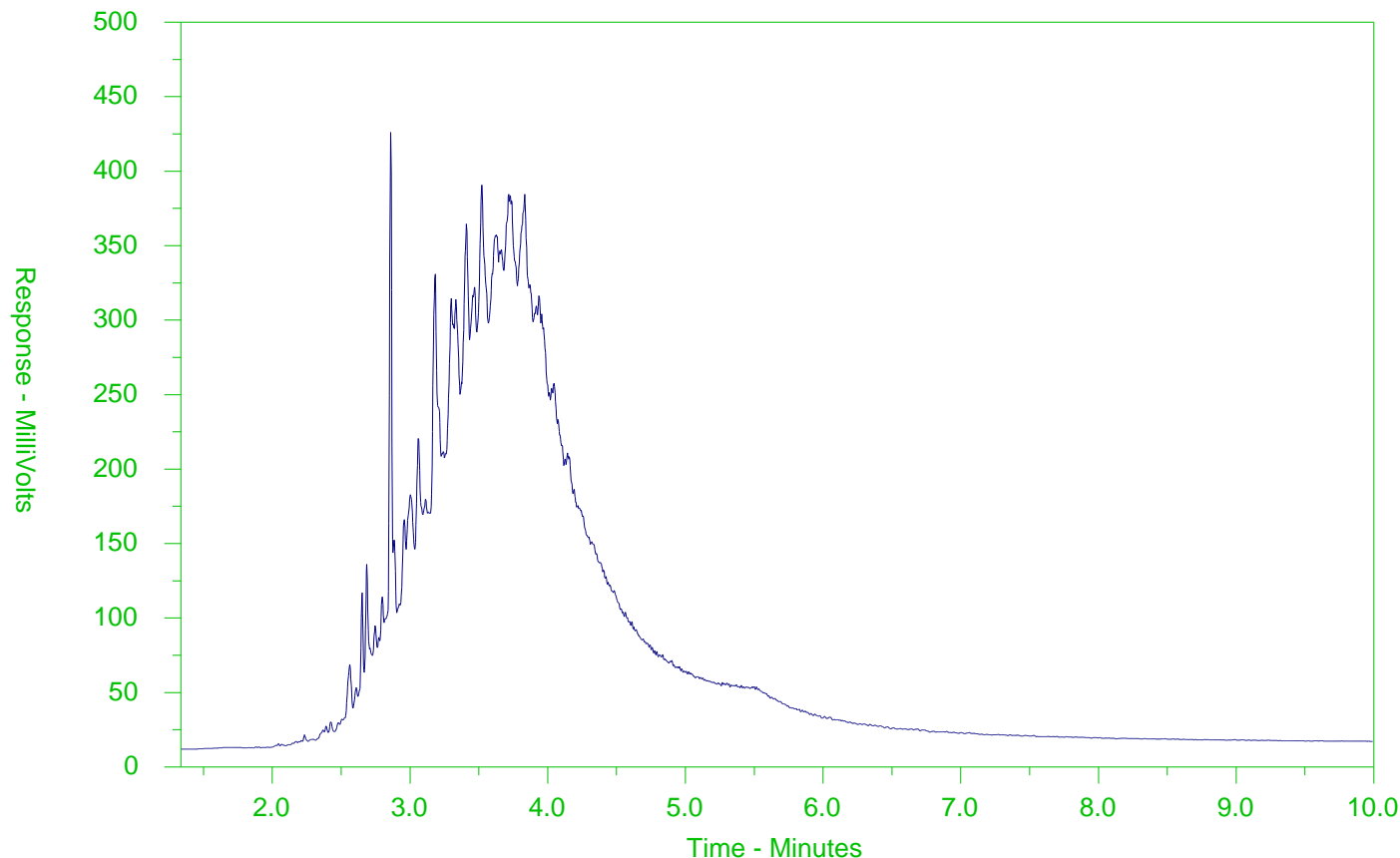
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2585298-19
 Client Sample ID: BH102-21 SS2 2.5-4.5 FT



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

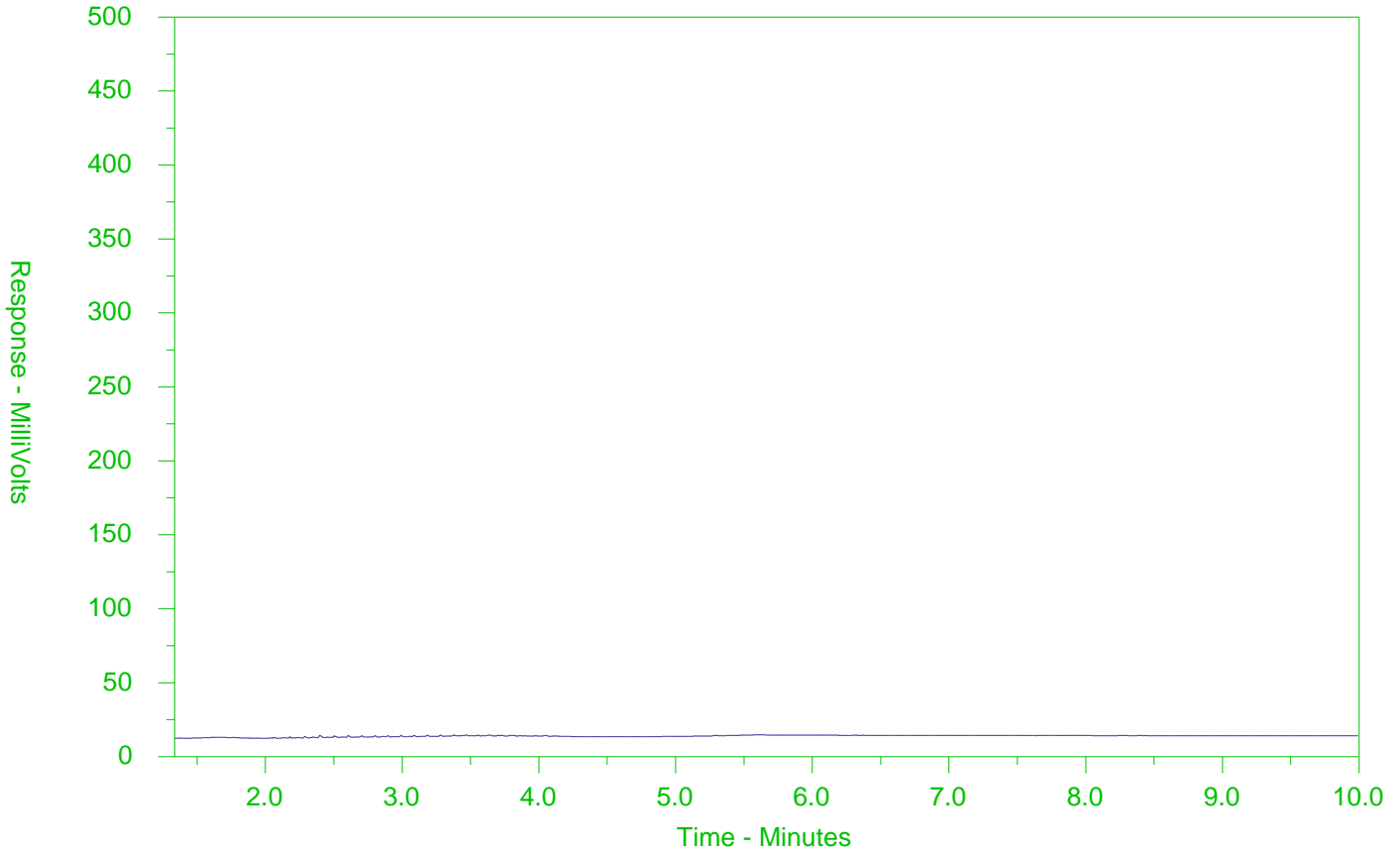
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2585298-25
 Client Sample ID: BH101-21 SS4 7.5-9.5 FT



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.



ALS Environmental

www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878



L2585298-COFC

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Page 3 of 3

Site A

Report To Contact and company name below will appear on the final report		Report Format / Distribution			Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)																																																																																																																															
Company:	MTE	Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL)			Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply																																																																																																																															
Contact:	Jen Lambke	Quality Control (QC) Report with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			PRIORITY (Business Days)		EMERGENCY																																																																																																																													
Phone:	519-502-3268	<input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked			4 day [P4-20%] <input type="checkbox"/>		1 Business day [E - 100%] <input type="checkbox"/>																																																																																																																													
Company address below will appear on the final report		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX			3 day [P3-25%] <input type="checkbox"/>		Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] <input type="checkbox"/>																																																																																																																													
Street:	520 Bingham Centre Drive	Email 1 or Fax jlbmbke@mte85.com			Date and Time Required for all E&P TATs:					dd-mmm-yy hh:mm																																																																																																																										
City/Province:	Kitchener	Email 2 jball@mte85.com			For tests that can not be performed according to the service level selected, you will be contacted.																																																																																																																															
Postal Code:		Email 3			Analysis Request																																																																																																																															
Invoice To		Invoice Distribution			<table border="1"> <tr> <td colspan="10">Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below</td> </tr> <tr> <td rowspan="4">NUMBER OF CONTAINERS</td> <td>PHC F1 to F4 and BTEX</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td rowspan="4">SAMPLES ON HOLD</td> <td rowspan="4">SUSPECTED HAZARD (see Special Instructions)</td> </tr> <tr> <td>PHC F1 to F4 and VOCs</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Metals Scan</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>Metals Complete</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> </tr> <tr> <td>PAHs</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td><td></td> </tr> <tr> <td>SAR & EC</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td><td></td> </tr> <tr> <td>pH</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td><td></td> </tr> <tr> <td>PCBs</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td><td></td> </tr> <tr> <td>PHC F2 to F4</td> <td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td> <td></td><td></td> </tr> </table>										Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below										NUMBER OF CONTAINERS	PHC F1 to F4 and BTEX										SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)	PHC F1 to F4 and VOCs										Metals Scan										Metals Complete										PAHs													SAR & EC													pH													PCBs													PHC F2 to F4												
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ALS Lab Work Order # (lab use only):		ALS Contact: Emily H		Sampler: Matt D																																																																																																																																
ALS Sample # (lab use only)	Sample identification and/or Coordinates (This description will appear on the report)			Date (dd-mmm-yy)	Time (hh:mm)	Sample Type																																																																																																																														
	BH102-21 554 7.5-9.5 FT			06-05-21	2:15	S-1																																																																																																																														
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	↓ MSPLP 12"-2'4"				3:40																																																																																																																															
Drinking Water (DW) Samples¹ (client use)		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)			SAMPLE CONDITION AS RECEIVED (lab use only)																																																																																																																															
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO		Table 1 Res, Table 3.1 R/P/I, Table 3.1 I/C/C (ESQS, O.Reg. 406/19) - coarse, AND Table 3 I/C/C (SCS, O.Reg. 153/04) - coarse			Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>																																																																																																																															
Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO					Ice Packs <input type="checkbox"/> Ice Cubes <input checked="" type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>																																																																																																																															
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REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

JUNE 2016 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.



Site A

Report To Contact and company name below will appear on the final report		Report Format / Distribution		Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)																																					
Company: MTE		Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL)		Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply																																					
Contact: Jen Lambke		Quality Control (QC) Report with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		PRIORITY (Business Days)	4 day [P4-20%] <input type="checkbox"/>		EMERGENCY																																		
Phone: 519-502-3268		<input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked			3 day [P3-25%] <input type="checkbox"/>			1 Business day [E - 100%] <input type="checkbox"/>																																	
Company address below will appear on the final report		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX		2 day [P2-50%] <input type="checkbox"/>		Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] <input type="checkbox"/>																																			
Street: 520 Bingham Centre Drive		Email 1 or Fax: jlambke@mte85.com		Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm																																					
City/Province: Kitchener		Email 2: jball@mte85.com		For tests that can not be performed according to the service level selected, you will be contacted.																																					
Postal Code:		Email 3:		Analysis Request																																					
Invoice To Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Invoice Distribution		Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below																																					
Copy of Invoice with Report <input type="checkbox"/> YES <input type="checkbox"/> NO		Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX		NUMBER OF CONTAINERS					SAMPLES ON HOLD																																
Company:		Email 1 or Fax: jlambke@mte85.com																																							
Contact:		Email 2:																																							
Project Information		Oil and Gas Required Fields (client use)																																							
ALS Account # / Quote #: Q75730		AFE/Cost Center: PO#																																							
Job #: 46995-100		Major/Minor Code: Routing Code:																																							
PO / AFE:		Requisitioner:																																							
LSD:		Location:																																							
ALS Lab Work Order # (lab use only):		ALS Contact: Emily H Sampler: Matt D																																							
ALS Sample # (lab use only)		Sample Identification and/or Coordinates (This description will appear on the report)																																							
		BH 104-21 SS3 5-7 FT		06-05-21		11:20		So.1																																	
		SS4 7.5-9.5 FT				11:30																																			
		M SPLP 2'2"-5 FT				11:45																																			
		BH 103-21 GS1 - 6"-2 FT				12:20		So.1																																	
		SS2 2.5-4.5 FT				12:30																																			
		SS3 5-7 FT				12:40																																			
		SS4 7.5-9.5 FT				12:50																																			
		M SPLP 2-4 FT				1:10																																			
		BH 102-21 GS1A 3"-11"				1:40																																			
		GS1B 11"-26"				1:50																																			
		SS2 2.5-4.5 FT				1:55																																			
		SS3 5-7 FT				2:00																																			
Drinking Water (DW) Samples¹ (client use)		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)		SAMPLE CONDITION AS RECEIVED (lab use only)																																					
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO				Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>																																					
Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO		Ice Packs <input type="checkbox"/> Ice Cubes <input checked="" type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>																																							
		Cooling Initiated <input type="checkbox"/>																																							
		INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C																																				
					4.8																																				
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)				FINAL SHIPMENT RECEPTION (lab use only)																																			
Released by:		Date:		Time:		Received by:		Date:		Time:																															
								05/07/20		1630																															

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.



MTE CONSULTANTS INC. (Kitchener)
ATTN: JEN LAMBKE
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9


Date Received: 12-MAY-21
Report Date: 20-MAY-21 14:30 (MT)
Version: FINAL

Client Phone: 519-743-6500

Certificate of Analysis

Lab Work Order #: L2586911
Project P.O. #: NOT SUBMITTED
Job Reference: 46995-100
C of C Numbers:
Legal Site Desc:

Comments: ADDITIONAL 13-MAY-21 14:59
ADDITIONAL 12-MAY-21 17:01



Emily Hansen
Account Manager

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ADDRESS: 60 Northland Road, Unit 1, Waterloo, ON N2V 2B8 Canada | Phone: +1 519 886 6910 | Fax: +1 519 886 9047
ALS CANADA LTD Part of the ALS Group An ALS Limited Company



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2586911-2	BH122-21 SS2 2.5-4.5FT							
Sampled By: MD on 11-MAY-21 @ 08:30								
Matrix: SOIL								
Physical Tests								
	Conductivity	1.22		0.0040	mS/cm	18-MAY-21	*0.57	1.4
	% Moisture	4.83		0.25	%	16-MAY-21		
	pH	7.78		0.10	pH units	18-MAY-21		
Saturated Paste Extractables								
	SAR	71.9	SAR:M	0.10	SAR	18-MAY-21	*2.4	*12
	Calcium (Ca)	0.83		0.50	mg/L	18-MAY-21		
	Magnesium (Mg)	<0.50		0.50	mg/L	18-MAY-21		
	Sodium (Na)	237		0.50	mg/L	18-MAY-21		
Metals								
	Antimony (Sb)	2.1		1.0	ug/g	18-MAY-21	*1.3	40
	Arsenic (As)	3.5		1.0	ug/g	18-MAY-21	18	18
	Barium (Ba)	35.5		1.0	ug/g	18-MAY-21	220	670
	Beryllium (Be)	<0.50		0.50	ug/g	18-MAY-21	2.5	8
	Boron (B)	8.7		5.0	ug/g	18-MAY-21	36	120
	Cadmium (Cd)	<0.50		0.50	ug/g	18-MAY-21	1.2	1.9
	Chromium (Cr)	18.0		1.0	ug/g	18-MAY-21	70	160
	Cobalt (Co)	3.8		1.0	ug/g	18-MAY-21	21	80
	Copper (Cu)	24.4		1.0	ug/g	18-MAY-21	92	230
	Lead (Pb)	39.5		1.0	ug/g	18-MAY-21	120	120
	Molybdenum (Mo)	1.4		1.0	ug/g	18-MAY-21	2	40
	Nickel (Ni)	9.7		1.0	ug/g	18-MAY-21	82	270
	Selenium (Se)	<1.0		1.0	ug/g	18-MAY-21	1.5	5.5
	Silver (Ag)	<0.20		0.20	ug/g	18-MAY-21	0.5	40
	Thallium (Tl)	<0.50		0.50	ug/g	18-MAY-21	1	3.3
	Uranium (U)	<1.0		1.0	ug/g	18-MAY-21	2.5	33
	Vanadium (V)	18.2		1.0	ug/g	18-MAY-21	86	86
	Zinc (Zn)	98.8		5.0	ug/g	18-MAY-21	290	340
Volatile Organic Compounds								
	Benzene	<0.0068		0.0068	ug/g	17-MAY-21	0.02	0.034
	Ethylbenzene	<0.018		0.018	ug/g	17-MAY-21	0.05	1.9
	Toluene	<0.080		0.080	ug/g	17-MAY-21	0.2	7.8
	o-Xylene	<0.020		0.020	ug/g	17-MAY-21		
	m+p-Xylenes	<0.030		0.030	ug/g	17-MAY-21		
	Xylenes (Total)	<0.050		0.050	ug/g	17-MAY-21	0.05	3
	Surrogate: 4-Bromofluorobenzene	110.1		50-140	%	17-MAY-21		
	Surrogate: 1,4-Difluorobenzene	110.8		50-140	%	17-MAY-21		
Hydrocarbons								
	F1 (C6-C10)	<5.0		5.0	ug/g	17-MAY-21	25	25
	F1-BTEX	<5.0		5.0	ug/g	17-MAY-21	25	25
	F2 (C10-C16)	<10		10	ug/g	17-MAY-21	10	26
	F3 (C16-C34)	72		50	ug/g	17-MAY-21	240	1700
	F4 (C34-C50)	60		50	ug/g	17-MAY-21	120	3300
	Total Hydrocarbons (C6-C50)	132		72	ug/g	17-MAY-21		
	Chrom. to baseline at nC50	YES			No Unit	17-MAY-21		
	Surrogate: 2-Bromobenzotrifluoride	85.1		60-140	%	17-MAY-21		
	Surrogate: 3,4-Dichlorotoluene	97.7		60-140	%	17-MAY-21		

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2586911-4	BH122-21 SS4 7.5-9.5FT							
Sampled By: MD on 11-MAY-21 @ 08:50								
Matrix: SOIL								
Physical Tests								
% Moisture		19.0		0.25	%	16-MAY-21		
Volatile Organic Compounds								
Benzene		<0.0068		0.0068	ug/g	17-MAY-21	0.02	0.034
Ethylbenzene		<0.018		0.018	ug/g	17-MAY-21	0.05	1.9
Toluene		<0.080		0.080	ug/g	17-MAY-21	0.2	7.8
o-Xylene		<0.020		0.020	ug/g	17-MAY-21		
m+p-Xylenes		<0.030		0.030	ug/g	17-MAY-21		
Xylenes (Total)		<0.050		0.050	ug/g	17-MAY-21	0.05	3
Surrogate: 4-Bromofluorobenzene		99.5		50-140	%	17-MAY-21		
Surrogate: 1,4-Difluorobenzene		97.1		50-140	%	17-MAY-21		
Hydrocarbons								
F1 (C6-C10)		<5.0		5.0	ug/g	17-MAY-21	25	25
F1-BTEX		<5.0		5.0	ug/g	17-MAY-21	25	25
F2 (C10-C16)		<10		10	ug/g	17-MAY-21	10	26
F3 (C16-C34)		<50		50	ug/g	17-MAY-21	240	1700
F4 (C34-C50)		<50		50	ug/g	17-MAY-21	120	3300
Total Hydrocarbons (C6-C50)		<72		72	ug/g	17-MAY-21		
Chrom. to baseline at nC50		YES			No Unit	17-MAY-21		
Surrogate: 2-Bromobenzotrifluoride		94.1		60-140	%	17-MAY-21		
Surrogate: 3,4-Dichlorotoluene		105.6		60-140	%	17-MAY-21		
L2586911-7	BH126-21 SS2 2.5-4.5FT							
Sampled By: MD on 11-MAY-21 @ 09:55								
Matrix: SOIL								
Physical Tests								
Conductivity		1.43		0.0040	mS/cm	18-MAY-21	*0.57	*1.4
% Moisture		5.05		0.25	%	16-MAY-21		
Saturated Paste Extractables								
SAR		58.6	SAR:M	0.10	SAR	18-MAY-21	*2.4	*12
Calcium (Ca)		1.73		0.50	mg/L	18-MAY-21		
Magnesium (Mg)		<0.50		0.50	mg/L	18-MAY-21		
Sodium (Na)		280		0.50	mg/L	18-MAY-21		
Metals								
Antimony (Sb)		<1.0		1.0	ug/g	18-MAY-21	1.3	40
Arsenic (As)		1.9		1.0	ug/g	18-MAY-21	18	18
Barium (Ba)		16.3		1.0	ug/g	18-MAY-21	220	670
Beryllium (Be)		<0.50		0.50	ug/g	18-MAY-21	2.5	8
Boron (B)		<5.0		5.0	ug/g	18-MAY-21	36	120
Cadmium (Cd)		<0.50		0.50	ug/g	18-MAY-21	1.2	1.9
Chromium (Cr)		10.9		1.0	ug/g	18-MAY-21	70	160
Cobalt (Co)		3.4		1.0	ug/g	18-MAY-21	21	80
Copper (Cu)		5.3		1.0	ug/g	18-MAY-21	92	230
Lead (Pb)		7.5		1.0	ug/g	18-MAY-21	120	120
Molybdenum (Mo)		<1.0		1.0	ug/g	18-MAY-21	2	40
Nickel (Ni)		5.4		1.0	ug/g	18-MAY-21	82	270
Selenium (Se)		<1.0		1.0	ug/g	18-MAY-21	1.5	5.5

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2586911-7	BH126-21 SS2 2.5-4.5FT							
Sampled By: MD on 11-MAY-21 @ 09:55								
Matrix: SOIL								
Metals								
Silver (Ag)		<0.20		0.20	ug/g	18-MAY-21	0.5	40
Thallium (Tl)		<0.50		0.50	ug/g	18-MAY-21	1	3.3
Uranium (U)		<1.0		1.0	ug/g	18-MAY-21	2.5	33
Vanadium (V)		27.2		1.0	ug/g	18-MAY-21	86	86
Zinc (Zn)		26.9		5.0	ug/g	18-MAY-21	290	340
Volatile Organic Compounds								
Benzene		<0.0068		0.0068	ug/g	17-MAY-21	0.02	0.034
Ethylbenzene		<0.018		0.018	ug/g	17-MAY-21	0.05	1.9
Toluene		<0.080		0.080	ug/g	17-MAY-21	0.2	7.8
o-Xylene		<0.020		0.020	ug/g	17-MAY-21		
m+p-Xylenes		<0.030		0.030	ug/g	17-MAY-21		
Xylenes (Total)		<0.050		0.050	ug/g	17-MAY-21	0.05	3
Surrogate: 4-Bromofluorobenzene		108.7		50-140	%	17-MAY-21		
Surrogate: 1,4-Difluorobenzene		108.2		50-140	%	17-MAY-21		
Hydrocarbons								
F1 (C6-C10)		<5.0		5.0	ug/g	17-MAY-21	25	25
F1-BTEX		<5.0		5.0	ug/g	17-MAY-21	25	25
F2 (C10-C16)		<10		10	ug/g	17-MAY-21	10	26
F3 (C16-C34)		<50		50	ug/g	17-MAY-21	240	1700
F4 (C34-C50)		<50		50	ug/g	17-MAY-21	120	3300
Total Hydrocarbons (C6-C50)		<72		72	ug/g	17-MAY-21		
Chrom. to baseline at nC50		YES			No Unit	17-MAY-21		
Surrogate: 2-Bromobenzotrifluoride		87.3		60-140	%	17-MAY-21		
Surrogate: 3,4-Dichlorotoluene		71.2		60-140	%	17-MAY-21		
L2586911-8	BH126-21 SS3 5-7FT							
Sampled By: MD on 11-MAY-21 @ 10:00								
Matrix: SOIL								
Metals								
Antimony (Sb)		<1.0		1.0	ug/g	18-MAY-21	1.3	40
Arsenic (As)		2.6		1.0	ug/g	18-MAY-21	18	18
Barium (Ba)		26.3		1.0	ug/g	18-MAY-21	220	670
Beryllium (Be)		<0.50		0.50	ug/g	18-MAY-21	2.5	8
Boron (B)		5.2		5.0	ug/g	18-MAY-21	36	120
Cadmium (Cd)		<0.50		0.50	ug/g	18-MAY-21	1.2	1.9
Chromium (Cr)		11.8		1.0	ug/g	18-MAY-21	70	160
Cobalt (Co)		3.3		1.0	ug/g	18-MAY-21	21	80
Copper (Cu)		12.6		1.0	ug/g	18-MAY-21	92	230
Lead (Pb)		6.3		1.0	ug/g	18-MAY-21	120	120
Molybdenum (Mo)		<1.0		1.0	ug/g	18-MAY-21	2	40
Nickel (Ni)		7.4		1.0	ug/g	18-MAY-21	82	270
Selenium (Se)		<1.0		1.0	ug/g	18-MAY-21	1.5	5.5
Silver (Ag)		<0.20		0.20	ug/g	18-MAY-21	0.5	40
Thallium (Tl)		<0.50		0.50	ug/g	18-MAY-21	1	3.3
Uranium (U)		<1.0		1.0	ug/g	18-MAY-21	2.5	33
Vanadium (V)		24.8		1.0	ug/g	18-MAY-21	86	86

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits			
Grouping	Analyte									
L2586911-8	BH126-21 SS3 5-7FT									
Sampled By: MD on 11-MAY-21 @ 10:00							#1	#2		
Matrix: SOIL										
Metals										
Zinc (Zn)		37.1		5.0	ug/g	18-MAY-21	290	340		
L2586911-12	BH123-21 GS1B 18"-2.5FT									
Sampled By: MD on 11-MAY-21 @ 11:30							#1	#2		
Matrix: SOIL										
Physical Tests										
% Moisture		5.07		0.25	%	16-MAY-21				
Metals										
Antimony (Sb)		<1.0		1.0	ug/g	18-MAY-21	1.3	40		
Arsenic (As)		3.7		1.0	ug/g	18-MAY-21	18	18		
Barium (Ba)		38.9		1.0	ug/g	18-MAY-21	220	670		
Beryllium (Be)		<0.50		0.50	ug/g	18-MAY-21	2.5	8		
Boron (B)		8.5		5.0	ug/g	18-MAY-21	36	120		
Cadmium (Cd)		<0.50		0.50	ug/g	18-MAY-21	1.2	1.9		
Chromium (Cr)		12.7		1.0	ug/g	18-MAY-21	70	160		
Cobalt (Co)		4.0		1.0	ug/g	18-MAY-21	21	80		
Copper (Cu)		25.2		1.0	ug/g	18-MAY-21	92	230		
Lead (Pb)		66.5		1.0	ug/g	18-MAY-21	120	120		
Molybdenum (Mo)		<1.0		1.0	ug/g	18-MAY-21	2	40		
Nickel (Ni)		8.2		1.0	ug/g	18-MAY-21	82	270		
Selenium (Se)		<1.0		1.0	ug/g	18-MAY-21	1.5	5.5		
Silver (Ag)		<0.20		0.20	ug/g	18-MAY-21	0.5	40		
Thallium (Tl)		<0.50		0.50	ug/g	18-MAY-21	1	3.3		
Uranium (U)		<1.0		1.0	ug/g	18-MAY-21	2.5	33		
Vanadium (V)		24.9		1.0	ug/g	18-MAY-21	86	86		
Zinc (Zn)		145		5.0	ug/g	18-MAY-21	290	340		
Volatile Organic Compounds										
Benzene		<0.0068		0.0068	ug/g	17-MAY-21	0.02	0.034		
Ethylbenzene		<0.018		0.018	ug/g	17-MAY-21	0.05	1.9		
Toluene		<0.080		0.080	ug/g	17-MAY-21	0.2	7.8		
o-Xylene		<0.020		0.020	ug/g	17-MAY-21				
m+p-Xylenes		<0.030		0.030	ug/g	17-MAY-21				
Xylenes (Total)		<0.050		0.050	ug/g	17-MAY-21	0.05	3		
Surrogate: 4-Bromofluorobenzene		105.3		50-140	%	17-MAY-21				
Surrogate: 1,4-Difluorobenzene		107.1		50-140	%	17-MAY-21				
Hydrocarbons										
F1 (C6-C10)		<5.0		5.0	ug/g	17-MAY-21	25	25		
F1-BTEX		<5.0		5.0	ug/g	19-MAY-21	25	25		
F2 (C10-C16)		<10		10	ug/g	17-MAY-21	10	26		
F2-Naphth		<10		10	ug/g	19-MAY-21				
F3 (C16-C34)		50		50	ug/g	17-MAY-21	240	1700		
F3-PAH		<50		50	ug/g	19-MAY-21				
F4 (C34-C50)		94		50	ug/g	17-MAY-21	120	3300		
Total Hydrocarbons (C6-C50)		145		72	ug/g	19-MAY-21				
Chrom. to baseline at nC50		YES			No Unit	17-MAY-21				
Surrogate: 2-Bromobenzotrifluoride		85.6		60-140	%	17-MAY-21				

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2586911-12	BH123-21 GS1B 18"-2.5FT							
Sampled By: MD on 11-MAY-21 @ 11:30								
Matrix: SOIL								
Hydrocarbons								
Surrogate: 3,4-Dichlorotoluene		81.9		60-140	%	17-MAY-21		
Polycyclic Aromatic Hydrocarbons								
Acenaphthene		<0.050		0.050	ug/g	19-MAY-21	0.072	15
Acenaphthylene		0.052		0.050	ug/g	19-MAY-21	0.093	0.093
Anthracene		<0.050		0.050	ug/g	19-MAY-21	0.16	0.16
Benzo(a)anthracene		0.249		0.050	ug/g	19-MAY-21	0.36	1
Benzo(a)pyrene		0.244		0.050	ug/g	19-MAY-21	0.3	0.7
Benzo(b&j)fluoranthene		0.315		0.050	ug/g	19-MAY-21	0.47	7
Benzo(g,h,i)perylene		0.165		0.050	ug/g	19-MAY-21	0.68	13
Benzo(k)fluoranthene		0.103		0.050	ug/g	19-MAY-21	0.48	7
Chrysene		0.217		0.050	ug/g	19-MAY-21	2.8	14
Dibenz(a,h)anthracene		<0.050		0.050	ug/g	19-MAY-21	0.1	0.7
Fluoranthene		0.324		0.050	ug/g	19-MAY-21	0.56	70
Fluorene		<0.050		0.050	ug/g	19-MAY-21	0.12	6.8
Indeno(1,2,3-cd)pyrene		0.153		0.050	ug/g	19-MAY-21	0.23	0.76
1+2-Methylnaphthalenes		<0.042		0.042	ug/g	19-MAY-21	0.59	8.7
1-Methylnaphthalene		<0.030		0.030	ug/g	19-MAY-21	0.59	8.7
2-Methylnaphthalene		<0.030		0.030	ug/g	19-MAY-21	0.59	8.7
Naphthalene		<0.013		0.013	ug/g	19-MAY-21	0.09	1.8
Phenanthrene		0.067		0.046	ug/g	19-MAY-21	0.69	12
Pyrene		0.315		0.050	ug/g	19-MAY-21	1	70
Surrogate: 2-Fluorobiphenyl		84.9		50-140	%	19-MAY-21		
Surrogate: d14-Terphenyl		87.3		50-140	%	19-MAY-21		
L2586911-19	BH125-21 SS2 2.5-4.5FT							
Sampled By: MD on 11-MAY-21 @ 13:20								
Matrix: SOIL								
Metals								
Antimony (Sb)		<1.0		1.0	ug/g	18-MAY-21	1.3	40
Arsenic (As)		1.8		1.0	ug/g	18-MAY-21	18	18
Barium (Ba)		25.1		1.0	ug/g	18-MAY-21	220	670
Beryllium (Be)		<0.50		0.50	ug/g	18-MAY-21	2.5	8
Boron (B)		<5.0		5.0	ug/g	18-MAY-21	36	120
Cadmium (Cd)		<0.50		0.50	ug/g	18-MAY-21	1.2	1.9
Chromium (Cr)		11.2		1.0	ug/g	18-MAY-21	70	160
Cobalt (Co)		3.4		1.0	ug/g	18-MAY-21	21	80
Copper (Cu)		5.0		1.0	ug/g	18-MAY-21	92	230
Lead (Pb)		6.8		1.0	ug/g	18-MAY-21	120	120
Molybdenum (Mo)		<1.0		1.0	ug/g	18-MAY-21	2	40
Nickel (Ni)		6.7		1.0	ug/g	18-MAY-21	82	270
Selenium (Se)		<1.0		1.0	ug/g	18-MAY-21	1.5	5.5
Silver (Ag)		<0.20		0.20	ug/g	18-MAY-21	0.5	40
Thallium (Tl)		<0.50		0.50	ug/g	18-MAY-21	1	3.3
Uranium (U)		<1.0		1.0	ug/g	18-MAY-21	2.5	33
Vanadium (V)		27.7		1.0	ug/g	18-MAY-21	86	86

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits			
Grouping	Analyte									
L2586911-19	BH125-21 SS2 2.5-4.5FT									
Sampled By: MD on 11-MAY-21 @ 13:20										
Matrix: SOIL							#1	#2		
Metals										
Zinc (Zn)		40.1		5.0	ug/g	18-MAY-21	290	340		
L2586911-20	BH125-21 SS3 5-7FT									
Sampled By: MD on 11-MAY-21 @ 13:30										
Matrix: SOIL							#1	#2		
Physical Tests										
% Moisture		8.39		0.25	%	16-MAY-21				
Metals										
Antimony (Sb)		<1.0		1.0	ug/g	19-MAY-21	1.3	40		
Arsenic (As)		3.7		1.0	ug/g	19-MAY-21	18	18		
Barium (Ba)		14.7		1.0	ug/g	19-MAY-21	220	670		
Beryllium (Be)		<0.50		0.50	ug/g	19-MAY-21	2.5	8		
Boron (B)		<5.0		5.0	ug/g	19-MAY-21	36	120		
Cadmium (Cd)		<0.50		0.50	ug/g	19-MAY-21	1.2	1.9		
Chromium (Cr)		11.2		1.0	ug/g	19-MAY-21	70	160		
Cobalt (Co)		3.1		1.0	ug/g	19-MAY-21	21	80		
Copper (Cu)		14.4		1.0	ug/g	19-MAY-21	92	230		
Lead (Pb)		6.8		1.0	ug/g	19-MAY-21	120	120		
Molybdenum (Mo)		<1.0		1.0	ug/g	19-MAY-21	2	40		
Nickel (Ni)		7.2		1.0	ug/g	19-MAY-21	82	270		
Selenium (Se)		<1.0		1.0	ug/g	19-MAY-21	1.5	5.5		
Silver (Ag)		<0.20		0.20	ug/g	19-MAY-21	0.5	40		
Thallium (Tl)		<0.50		0.50	ug/g	19-MAY-21	1	3.3		
Uranium (U)		<1.0		1.0	ug/g	19-MAY-21	2.5	33		
Vanadium (V)		26.8		1.0	ug/g	19-MAY-21	86	86		
Zinc (Zn)		41.9		5.0	ug/g	19-MAY-21	290	340		
Volatile Organic Compounds										
Acetone		<0.50		0.50	ug/g	19-MAY-21	0.5	1.8		
Benzene		<0.0068		0.0068	ug/g	19-MAY-21	0.02	0.034		
Bromodichloromethane		<0.050		0.050	ug/g	19-MAY-21	0.05	5.8		
Bromoform		<0.050		0.050	ug/g	19-MAY-21	0.05	2.5		
Bromomethane		<0.050		0.050	ug/g	19-MAY-21	0.05	0.05		
Carbon tetrachloride		<0.050		0.050	ug/g	19-MAY-21	0.05	0.05		
Chlorobenzene		<0.050		0.050	ug/g	19-MAY-21	0.05	0.28		
Dibromochloromethane		<0.050		0.050	ug/g	19-MAY-21	0.05	5.5		
Chloroform		<0.050		0.050	ug/g	19-MAY-21	0.05	0.26		
1,2-Dibromoethane		<0.050		0.050	ug/g	19-MAY-21	0.05	0.05		
1,2-Dichlorobenzene		<0.050		0.050	ug/g	19-MAY-21	0.05	6.8		
1,3-Dichlorobenzene		<0.050		0.050	ug/g	19-MAY-21	0.05	6.8		
1,4-Dichlorobenzene		<0.050		0.050	ug/g	19-MAY-21	0.05	0.05		
Dichlorodifluoromethane		<0.050		0.050	ug/g	19-MAY-21	0.05	1.8		
1,1-Dichloroethane		<0.050		0.050	ug/g	19-MAY-21	0.05	0.57		
1,2-Dichloroethane		<0.050		0.050	ug/g	19-MAY-21	0.05	0.05		
1,1-Dichloroethylene		<0.050		0.050	ug/g	19-MAY-21	0.05	0.05		
cis-1,2-Dichloroethylene		<0.050		0.050	ug/g	19-MAY-21	0.05	0.05		

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2586911-20	BH125-21 SS3 5-7FT							
Sampled By: MD on 11-MAY-21 @ 13:30								
Matrix: SOIL								
Volatile Organic Compounds								
	trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	19-MAY-21	0.05	0.05
	Methylene Chloride	<0.050		0.050	ug/g	19-MAY-21	0.05	0.2
	1,2-Dichloropropane	<0.050		0.050	ug/g	19-MAY-21	0.05	0.05
	cis-1,3-Dichloropropene	<0.030		0.030	ug/g	19-MAY-21		
	trans-1,3-Dichloropropene	<0.030		0.030	ug/g	19-MAY-21		
	1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g	19-MAY-21	0.05	0.05
	Ethylbenzene	<0.018		0.018	ug/g	19-MAY-21	0.05	1.9
	n-Hexane	<0.050		0.050	ug/g	19-MAY-21	0.05	2.5
	Methyl Ethyl Ketone	<0.50		0.50	ug/g	19-MAY-21	0.5	26
	Methyl Isobutyl Ketone	<0.50		0.50	ug/g	19-MAY-21	0.5	17
	MTBE	<0.050		0.050	ug/g	19-MAY-21	0.05	0.05
	Styrene	<0.050		0.050	ug/g	19-MAY-21	0.05	6.8
	1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	19-MAY-21	0.05	0.05
	1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	19-MAY-21	0.05	0.05
	Tetrachloroethylene	<0.050		0.050	ug/g	19-MAY-21	0.05	0.05
	Toluene	<0.080		0.080	ug/g	19-MAY-21	0.2	7.8
	1,1,1-Trichloroethane	<0.050		0.050	ug/g	19-MAY-21	0.05	0.4
	1,1,2-Trichloroethane	<0.050		0.050	ug/g	19-MAY-21	0.05	0.05
	Trichloroethylene	<0.010		0.010	ug/g	19-MAY-21	0.05	0.05
	Trichlorofluoromethane	<0.050		0.050	ug/g	19-MAY-21	0.25	0.46
	Vinyl chloride	<0.020		0.020	ug/g	19-MAY-21	0.02	0.02
	o-Xylene	<0.020		0.020	ug/g	19-MAY-21		
	m+p-Xylenes	<0.030		0.030	ug/g	19-MAY-21		
	Xylenes (Total)	<0.050		0.050	ug/g	19-MAY-21	0.05	3
	Surrogate: 4-Bromofluorobenzene	86.7		50-140	%	19-MAY-21		
	Surrogate: 1,4-Difluorobenzene	111.0		50-140	%	19-MAY-21		
Hydrocarbons								
	F1 (C6-C10)	<5.0		5.0	ug/g	20-MAY-21	25	25
	F1-BTEX	<5.0		5.0	ug/g	20-MAY-21	25	25
	F2 (C10-C16)	<10		10	ug/g	17-MAY-21	10	26
	F3 (C16-C34)	<50		50	ug/g	17-MAY-21	240	1700
	F4 (C34-C50)	<50		50	ug/g	17-MAY-21	120	3300
	Total Hydrocarbons (C6-C50)	<72		72	ug/g	20-MAY-21		
	Chrom. to baseline at nC50	YES			No Unit	17-MAY-21		
	Surrogate: 2-Bromobenzotrifluoride	92.7		60-140	%	17-MAY-21		
	Surrogate: 3,4-Dichlorotoluene	100.1		60-140	%	20-MAY-21		

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

Reference Information

Sample Parameter Qualifier key listed:

Qualifier	Description
SAR:M	Reported SAR represents a maximum value. Actual SAR may be lower if both Ca and Mg were detectable.

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference***
BTX-511-HS-WT	Soil	BTEX-O.Reg 153/04 (July 2011)	SW846 8260

BTX is determined by extracting a soil or sediment sample as received with methanol, then analyzing by headspace-GC/MS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

EC-WT	Soil	Conductivity (EC)	MOEE E3138
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A representative subsample is tumbled with de-ionized (DI) water. The ratio of water to soil is 2:1 v/w. After tumbling the sample is then analyzed by a conductivity meter.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

F1-F4-511-CALC-WT	Soil	F1-F4 Hydrocarbon Calculated Parameters	CCME CWS-PHC, Pub #1310, Dec 2001-S
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Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

Hydrocarbon results are expressed on a dry weight basis.

In cases where results for both F4 and F4G are reported, the greater of the two results must be used in any application of the CWS PHC guidelines and the gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.

In samples where BTEX and F1 were analyzed, F1-BTEX represents a value where the sum of Benzene, Toluene, Ethylbenzene and total Xylenes has been subtracted from F1.

In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.

Unless otherwise qualified, the following quality control criteria have been met for the F1 hydrocarbon range:

1. All extraction and analysis holding times were met.
2. Instrument performance showing response factors for C6 and C10 within 30% of the response factor for toluene.
3. Linearity of gasoline response within 15% throughout the calibration range.

Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:

1. All extraction and analysis holding times were met.
2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.
3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.
4. Linearity of diesel or motor oil response within 15% throughout the calibration range.

F1-HS-511-WT	Soil	F1-O.Reg 153/04 (July 2011)	E3398/CCME TIER 1-HS
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Fraction F1 is determined by extracting a soil or sediment sample as received with methanol, then analyzing by headspace-GC/FID.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

F2-F4-511-WT	Soil	F2-F4-O.Reg 153/04 (July 2011)	CCME Tier 1
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Petroleum Hydrocarbons (F2-F4 fractions) are extracted from soil with 1:1 hexane:acetone using a rotary extractor. Extracts are treated with silica gel to remove polar organic interferences. F2, F3, & F4 are analyzed by GC-FID. F4G-sg is analyzed gravimetrically.

Notes:

1. F2 (C10-C16): Sum of all hydrocarbons that elute between nC10 and nC16.
2. F3 (C16-C34): Sum of all hydrocarbons that elute between nC16 and nC34.
3. F4 (C34-C50): Sum of all hydrocarbons that elute between nC34 and nC50.
4. F4G: Gravimetric Heavy Hydrocarbons
5. F4G-sg: Gravimetric Heavy Hydrocarbons (F4G) after silica gel treatment.
6. Where both F4 (C34-C50) and F4G-sg are reported for a sample, the larger of the two values is used for comparison against the relevant CCME guideline for F4.
7. F4G-sg cannot be added to the C6 to C50 hydrocarbon results to obtain an estimate of total extractable hydrocarbons.
8. This method is validated for use.
9. Data from analysis of validation and quality control samples is available upon request.
10. Reported results are expressed as milligrams per dry kilogram, unless otherwise indicated.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

Reference Information

MET-200.2-CCMS-WT Soil Metals in Soil by CRC ICPMS EPA 200.2/6020B (mod)

Soil/sediment is dried, disaggregated, and sieved (2 mm). For tests intended to support Ontario regulations, the <2mm fraction is ground to pass through a 0.355 mm sieve. Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H₂S) may be excluded if lost during sampling, storage, or digestion.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

METHYLNAPS-CALC-WT	Soil	ABN-Calculated Parameters	SW846 8270
MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)
PAH-511-WT	Soil	PAH-O.Reg 153/04 (July 2011)	SW846 3510/8270

A representative sub-sample of soil is fortified with deuterium-labelled surrogates and a mechanical shaking technique is used to extract the sample with a mixture of methanol and toluene. The extracts are concentrated and analyzed by GC/MS. Results for benzo(b) fluoranthene may include contributions from benzo(j)fluoranthene, if also present in the sample.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

PH-WT	Soil	pH	MOEE E3137A
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A minimum 10g portion of the sample is extracted with 20mL of 0.01M calcium chloride solution by shaking for at least 30 minutes. The aqueous layer is separated from the soil and then analyzed using a pH meter and electrode.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

SAR-R511-WT	Soil	SAR-O.Reg 153/04 (July 2011)	SW846 6010C
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A dried, disaggregated solid sample is extracted with deionized water, the aqueous extract is separated from the solid, acidified and then analyzed using a ICP/OES. The concentrations of Na, Ca and Mg are reported as per CALA requirements for calculated parameters. These individual parameters are not for comparison to any guideline.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

VOC-1,3-DCP-CALC-WT	Soil	Regulation 153 VOCs	SW8260B/SW8270C
VOC-511-HS-WT	Soil	VOC-O.Reg 153/04 (July 2011)	SW846 8260 (511)

Soil and sediment samples are extracted in methanol and analyzed by headspace-GC/MS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

XYLENES-SUM-CALC-WT	Soil	Sum of Xylene Isomer Concentrations	CALCULATION
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Total xylenes represents the sum of o-xylene and m&p-xylene.

*** ALS test methods may incorporate modifications from specified reference methods to improve performance.

Chain of Custody numbers:

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA		

Reference Information

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guideline limits are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.



Quality Control Report

Workorder: L2586911

Report Date: 20-MAY-21

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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
BTX-511-HS-WT		Soil						
Batch	R5458759							
WG3534502-4	DUP	WG3534502-3						
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	17-MAY-21
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	17-MAY-21
m+p-Xylenes		<0.030	<0.030	RPD-NA	ug/g	N/A	40	17-MAY-21
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	17-MAY-21
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	17-MAY-21
WG3534502-2	LCS							
Benzene			103.2		%		70-130	17-MAY-21
Ethylbenzene			99.2		%		70-130	17-MAY-21
m+p-Xylenes			90.8		%		70-130	17-MAY-21
o-Xylene			96.7		%		70-130	17-MAY-21
Toluene			98.4		%		70-130	17-MAY-21
WG3534502-1	MB							
Benzene			<0.0068		ug/g		0.0068	17-MAY-21
Ethylbenzene			<0.018		ug/g		0.018	17-MAY-21
m+p-Xylenes			<0.030		ug/g		0.03	17-MAY-21
o-Xylene			<0.020		ug/g		0.02	17-MAY-21
Toluene			<0.080		ug/g		0.08	17-MAY-21
Surrogate: 1,4-Difluorobenzene			112.0		%		50-140	17-MAY-21
Surrogate: 4-Bromofluorobenzene			108.9		%		50-140	17-MAY-21
WG3534502-5	MS	WG3534502-3						
Benzene			104.1		%		60-140	17-MAY-21
Ethylbenzene			102.0		%		60-140	17-MAY-21
m+p-Xylenes			93.8		%		60-140	17-MAY-21
o-Xylene			99.3		%		60-140	17-MAY-21
Toluene			103.0		%		60-140	17-MAY-21
EC-WT		Soil						
Batch	R5459231							
WG3536411-4	DUP	WG3536411-3						
Conductivity		0.122	0.119		mS/cm	2.4	20	18-MAY-21
WG3536411-2	IRM	WT SAR4						
Conductivity			98.0		%		70-130	18-MAY-21
WG3536675-1	LCS							
Conductivity			97.6		%		90-110	18-MAY-21
WG3536411-1	MB							
Conductivity			<0.0040		mS/cm		0.004	18-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT		Soil						
Batch R5458759								
WG3534502-4	DUP	WG3534502-3						
F1 (C6-C10)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	17-MAY-21
WG3534502-2	LCS							
F1 (C6-C10)			121.4	LCS-H	%		80-120	17-MAY-21
WG3534502-1	MB							
F1 (C6-C10)			<5.0		ug/g		5	17-MAY-21
Surrogate: 3,4-Dichlorotoluene			107.1		%		60-140	17-MAY-21
WG3534502-5	MS	WG3534502-3						
F1 (C6-C10)			114.2		%		60-140	17-MAY-21
Batch R5459722								
WG3534616-4	DUP	WG3534616-3						
F1 (C6-C10)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	20-MAY-21
WG3534616-2	LCS							
F1 (C6-C10)			92.4		%		80-120	20-MAY-21
WG3534616-1	MB							
F1 (C6-C10)			<5.0		ug/g		5	20-MAY-21
Surrogate: 3,4-Dichlorotoluene			103.5		%		60-140	20-MAY-21
WG3534616-5	MS	WG3534616-3						
F1 (C6-C10)			100.8		%		60-140	20-MAY-21
F2-F4-511-WT		Soil						
Batch R5458880								
WG3535709-3	DUP	WG3535709-5						
F2 (C10-C16)		<10	<10	RPD-NA	ug/g	N/A	30	17-MAY-21
F3 (C16-C34)		<50	<50	RPD-NA	ug/g	N/A	30	17-MAY-21
F4 (C34-C50)		<50	<50	RPD-NA	ug/g	N/A	30	17-MAY-21
WG3535709-2	LCS							
F2 (C10-C16)			97.4		%		80-120	17-MAY-21
F3 (C16-C34)			99.4		%		80-120	17-MAY-21
F4 (C34-C50)			100.5		%		80-120	17-MAY-21
WG3535709-1	MB							
F2 (C10-C16)			<10		ug/g		10	17-MAY-21
F3 (C16-C34)			<50		ug/g		50	17-MAY-21
F4 (C34-C50)			<50		ug/g		50	17-MAY-21
Surrogate: 2-Bromobenzotrifluoride			101.9		%		60-140	17-MAY-21
WG3535709-4	MS	WG3535709-5						
F2 (C10-C16)			101.1		%		60-140	17-MAY-21
F3 (C16-C34)			104.1		%		60-140	17-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F2-F4-511-WT	Soil							
Batch	R5458880							
WG3535709-4	MS	WG3535709-5						
F4 (C34-C50)			103.8		%		60-140	17-MAY-21
MET-200.2-CCMS-WT	Soil							
Batch	R5459464							
WG3536407-2	CRM	WT-SS-2						
Antimony (Sb)			107.1		%		70-130	18-MAY-21
Arsenic (As)			112.8		%		70-130	18-MAY-21
Barium (Ba)			109.3		%		70-130	18-MAY-21
Beryllium (Be)			117.5		%		70-130	18-MAY-21
Boron (B)			10.8		mg/kg		3.5-13.5	18-MAY-21
Cadmium (Cd)			123.9		%		70-130	18-MAY-21
Chromium (Cr)			116.2		%		70-130	18-MAY-21
Cobalt (Co)			112.4		%		70-130	18-MAY-21
Copper (Cu)			112.8		%		70-130	18-MAY-21
Lead (Pb)			112.3		%		70-130	18-MAY-21
Molybdenum (Mo)			113.4		%		70-130	18-MAY-21
Nickel (Ni)			113.6		%		70-130	18-MAY-21
Selenium (Se)			0.15		mg/kg		0-0.34	18-MAY-21
Thallium (Tl)			0.089		mg/kg		0.029-0.129	18-MAY-21
Uranium (U)			117.0		%		70-130	18-MAY-21
Vanadium (V)			116.5		%		70-130	18-MAY-21
Zinc (Zn)			111.8		%		70-130	18-MAY-21
WG3536407-6	DUP	WG3536407-5						
Antimony (Sb)		0.18	0.23		ug/g	24	30	18-MAY-21
Arsenic (As)		6.71	7.63		ug/g	13	30	18-MAY-21
Barium (Ba)		264	305		ug/g	14	40	18-MAY-21
Beryllium (Be)		1.38	1.45		ug/g	5.5	30	18-MAY-21
Boron (B)		18.4	20.8		ug/g	12	30	18-MAY-21
Cadmium (Cd)		0.117	0.145		ug/g	21	30	18-MAY-21
Chromium (Cr)		38.1	42.6		ug/g	11	30	18-MAY-21
Cobalt (Co)		17.0	18.9		ug/g	11	30	18-MAY-21
Copper (Cu)		31.7	35.1		ug/g	10	30	18-MAY-21
Lead (Pb)		12.6	14.4		ug/g	13	40	18-MAY-21
Molybdenum (Mo)		0.45	0.47		ug/g	4.3	40	18-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
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Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
	Soil							
Batch	R5459464							
WG3536407-6	DUP	WG3536407-5						
Nickel (Ni)		38.2	42.6		ug/g	11	30	18-MAY-21
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	18-MAY-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	18-MAY-21
Thallium (Tl)		0.191	0.217		ug/g	12	30	18-MAY-21
Uranium (U)		0.944	1.08		ug/g	14	30	18-MAY-21
Vanadium (V)		54.0	61.0		ug/g	12	30	18-MAY-21
Zinc (Zn)		74.4	83.9		ug/g	12	30	18-MAY-21
WG3536407-4	LCS							
Antimony (Sb)			112.7		%		80-120	18-MAY-21
Arsenic (As)			113.3		%		80-120	18-MAY-21
Barium (Ba)			108.5		%		80-120	18-MAY-21
Beryllium (Be)			113.2		%		80-120	18-MAY-21
Boron (B)			111.5		%		80-120	18-MAY-21
Cadmium (Cd)			110.2		%		80-120	18-MAY-21
Chromium (Cr)			114.9		%		80-120	18-MAY-21
Cobalt (Co)			112.0		%		80-120	18-MAY-21
Copper (Cu)			111.3		%		80-120	18-MAY-21
Lead (Pb)			112.9		%		80-120	18-MAY-21
Molybdenum (Mo)			109.3		%		80-120	18-MAY-21
Nickel (Ni)			111.7		%		80-120	18-MAY-21
Selenium (Se)			112.4		%		80-120	18-MAY-21
Silver (Ag)			111.5		%		80-120	18-MAY-21
Thallium (Tl)			112.7		%		80-120	18-MAY-21
Uranium (U)			113.1		%		80-120	18-MAY-21
Vanadium (V)			115.0		%		80-120	18-MAY-21
Zinc (Zn)			111.4		%		80-120	18-MAY-21
WG3536407-1	MB							
Antimony (Sb)			<0.10		mg/kg		0.1	18-MAY-21
Arsenic (As)			<0.10		mg/kg		0.1	18-MAY-21
Barium (Ba)			<0.50		mg/kg		0.5	18-MAY-21
Beryllium (Be)			<0.10		mg/kg		0.1	18-MAY-21
Boron (B)			<5.0		mg/kg		5	18-MAY-21
Cadmium (Cd)			<0.020		mg/kg		0.02	18-MAY-21
Chromium (Cr)			<0.50		mg/kg		0.5	18-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
Soil								
Batch R5459464								
WG3536407-1 MB								
Cobalt (Co)			<0.10		mg/kg		0.1	18-MAY-21
Copper (Cu)			<0.50		mg/kg		0.5	18-MAY-21
Lead (Pb)			<0.50		mg/kg		0.5	18-MAY-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	18-MAY-21
Nickel (Ni)			<0.50		mg/kg		0.5	18-MAY-21
Selenium (Se)			<0.20		mg/kg		0.2	18-MAY-21
Silver (Ag)			<0.10		mg/kg		0.1	18-MAY-21
Thallium (Tl)			<0.050		mg/kg		0.05	18-MAY-21
Uranium (U)			<0.050		mg/kg		0.05	18-MAY-21
Vanadium (V)			<0.20		mg/kg		0.2	18-MAY-21
Zinc (Zn)			<2.0		mg/kg		2	18-MAY-21
Batch R5459804								
WG3537290-2 CRM								
		WT-SS-2						
Antimony (Sb)			101.3		%		70-130	19-MAY-21
Arsenic (As)			103.5		%		70-130	19-MAY-21
Barium (Ba)			109.3		%		70-130	19-MAY-21
Beryllium (Be)			99.8		%		70-130	19-MAY-21
Boron (B)			9.3		mg/kg		3.5-13.5	19-MAY-21
Cadmium (Cd)			101.3		%		70-130	19-MAY-21
Chromium (Cr)			103.2		%		70-130	19-MAY-21
Cobalt (Co)			99.9		%		70-130	19-MAY-21
Copper (Cu)			103.4		%		70-130	19-MAY-21
Lead (Pb)			102.3		%		70-130	19-MAY-21
Molybdenum (Mo)			100.6		%		70-130	19-MAY-21
Nickel (Ni)			103.1		%		70-130	19-MAY-21
Selenium (Se)			0.15		mg/kg		0-0.34	19-MAY-21
Silver (Ag)			87.8		%		70-130	19-MAY-21
Thallium (Tl)			0.073		mg/kg		0.029-0.129	19-MAY-21
Uranium (U)			99.5		%		70-130	19-MAY-21
Vanadium (V)			103.2		%		70-130	19-MAY-21
Zinc (Zn)			97.9		%		70-130	19-MAY-21
WG3537290-6 DUP								
		WG3537290-5						
Antimony (Sb)		0.15	0.16		ug/g	5.5	30	19-MAY-21
Arsenic (As)		6.13	6.93		ug/g	12	30	19-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
	Soil							
Batch	R5459804							
WG3537290-6	DUP	WG3537290-5						
Barium (Ba)		90.1	101		ug/g	12	40	19-MAY-21
Beryllium (Be)		0.67	0.81		ug/g	19	30	19-MAY-21
Boron (B)		10.2	11.5		ug/g	11	30	19-MAY-21
Cadmium (Cd)		0.225	0.245		ug/g	8.5	30	19-MAY-21
Chromium (Cr)		21.9	25.3		ug/g	14	30	19-MAY-21
Cobalt (Co)		12.1	13.9		ug/g	14	30	19-MAY-21
Copper (Cu)		31.4	35.8		ug/g	13	30	19-MAY-21
Lead (Pb)		28.8	33.3		ug/g	15	40	19-MAY-21
Molybdenum (Mo)		0.43	0.49		ug/g	14	40	19-MAY-21
Nickel (Ni)		26.3	30.2		ug/g	14	30	19-MAY-21
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	19-MAY-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	19-MAY-21
Thallium (Tl)		0.153	0.175		ug/g	14	30	19-MAY-21
Uranium (U)		0.532	0.607		ug/g	13	30	19-MAY-21
Vanadium (V)		31.6	36.1		ug/g	13	30	19-MAY-21
Zinc (Zn)		115	133		ug/g	15	30	19-MAY-21
WG3537290-4	LCS							
Antimony (Sb)			103.8		%		80-120	19-MAY-21
Arsenic (As)			100.7		%		80-120	19-MAY-21
Barium (Ba)			99.2		%		80-120	19-MAY-21
Beryllium (Be)			96.2		%		80-120	19-MAY-21
Boron (B)			95.5		%		80-120	19-MAY-21
Cadmium (Cd)			98.3		%		80-120	19-MAY-21
Chromium (Cr)			97.0		%		80-120	19-MAY-21
Cobalt (Co)			98.0		%		80-120	19-MAY-21
Copper (Cu)			96.2		%		80-120	19-MAY-21
Lead (Pb)			100.3		%		80-120	19-MAY-21
Molybdenum (Mo)			99.3		%		80-120	19-MAY-21
Nickel (Ni)			96.5		%		80-120	19-MAY-21
Selenium (Se)			98.8		%		80-120	19-MAY-21
Silver (Ag)			92.5		%		80-120	19-MAY-21
Thallium (Tl)			97.4		%		80-120	19-MAY-21
Uranium (U)			96.5		%		80-120	19-MAY-21



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520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
	Soil							
Batch	R5459804							
WG3537290-4	LCS							
Vanadium (V)			100.9		%		80-120	19-MAY-21
Zinc (Zn)			96.0		%		80-120	19-MAY-21
WG3537290-1	MB							
Antimony (Sb)			<0.10		mg/kg		0.1	19-MAY-21
Arsenic (As)			<0.10		mg/kg		0.1	19-MAY-21
Barium (Ba)			<0.50		mg/kg		0.5	19-MAY-21
Beryllium (Be)			<0.10		mg/kg		0.1	19-MAY-21
Boron (B)			<5.0		mg/kg		5	19-MAY-21
Cadmium (Cd)			<0.020		mg/kg		0.02	19-MAY-21
Chromium (Cr)			<0.50		mg/kg		0.5	19-MAY-21
Cobalt (Co)			<0.10		mg/kg		0.1	19-MAY-21
Copper (Cu)			<0.50		mg/kg		0.5	19-MAY-21
Lead (Pb)			<0.50		mg/kg		0.5	19-MAY-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	19-MAY-21
Nickel (Ni)			<0.50		mg/kg		0.5	19-MAY-21
Selenium (Se)			<0.20		mg/kg		0.2	19-MAY-21
Silver (Ag)			<0.10		mg/kg		0.1	19-MAY-21
Thallium (Tl)			<0.050		mg/kg		0.05	19-MAY-21
Uranium (U)			<0.050		mg/kg		0.05	19-MAY-21
Vanadium (V)			<0.20		mg/kg		0.2	19-MAY-21
Zinc (Zn)			<2.0		mg/kg		2	19-MAY-21
MOISTURE-WT								
	Soil							
Batch	R5458097							
WG3535337-3	DUP	L2586911-2						
% Moisture		4.83	4.75		%	1.7	20	16-MAY-21
WG3535337-2	LCS							
% Moisture			98.9		%		90-110	16-MAY-21
WG3535337-1	MB							
% Moisture			<0.25		%		0.25	16-MAY-21
PAH-511-WT								
	Soil							
Batch	R5459865							
WG3536067-3	DUP	WG3536067-5						
1-Methylnaphthalene		0.064	0.048		ug/g	27	40	19-MAY-21
2-Methylnaphthalene		0.069	0.045	J	ug/g	0.024	0.06	19-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT		Soil						
Batch	R5459865							
WG3536067-3	DUP	WG3536067-5						
Acenaphthene		0.126	0.111		ug/g	13	40	19-MAY-21
Acenaphthylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
Anthracene		0.065	0.056		ug/g	15	40	19-MAY-21
Benzo(a)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
Benzo(a)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
Benzo(b&j)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
Benzo(g,h,i)perylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
Benzo(k)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
Chrysene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
Dibenz(a,h)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
Fluoranthene		0.086	0.080		ug/g	6.4	40	19-MAY-21
Fluorene		0.059	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
Indeno(1,2,3-cd)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
Naphthalene		0.112	0.069	DUP-H	ug/g	47	40	19-MAY-21
Phenanthrene		0.207	0.187		ug/g	10	40	19-MAY-21
Pyrene		0.111	0.104		ug/g	6.1	40	19-MAY-21
WG3536067-2	LCS							
1-Methylnaphthalene			93.1		%		50-140	19-MAY-21
2-Methylnaphthalene			89.9		%		50-140	19-MAY-21
Acenaphthene			89.0		%		50-140	19-MAY-21
Acenaphthylene			84.5		%		50-140	19-MAY-21
Anthracene			76.1		%		50-140	19-MAY-21
Benzo(a)anthracene			86.5		%		50-140	19-MAY-21
Benzo(a)pyrene			74.6		%		50-140	19-MAY-21
Benzo(b&j)fluoranthene			84.9		%		50-140	19-MAY-21
Benzo(g,h,i)perylene			72.8		%		50-140	19-MAY-21
Benzo(k)fluoranthene			79.8		%		50-140	19-MAY-21
Chrysene			87.8		%		50-140	19-MAY-21
Dibenz(a,h)anthracene			71.2		%		50-140	19-MAY-21
Fluoranthene			84.3		%		50-140	19-MAY-21
Fluorene			86.8		%		50-140	19-MAY-21
Indeno(1,2,3-cd)pyrene			76.9		%		50-140	19-MAY-21
Naphthalene			87.4		%		50-140	19-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Soil							
Batch	R5459865							
WG3536067-2	LCS							
Phenanthrene			87.0		%		50-140	19-MAY-21
Pyrene			84.1		%		50-140	19-MAY-21
WG3536067-1	MB							
1-Methylnaphthalene			<0.030		ug/g		0.03	19-MAY-21
2-Methylnaphthalene			<0.030		ug/g		0.03	19-MAY-21
Acenaphthene			<0.050		ug/g		0.05	19-MAY-21
Acenaphthylene			<0.050		ug/g		0.05	19-MAY-21
Anthracene			<0.050		ug/g		0.05	19-MAY-21
Benzo(a)anthracene			<0.050		ug/g		0.05	19-MAY-21
Benzo(a)pyrene			<0.050		ug/g		0.05	19-MAY-21
Benzo(b&j)fluoranthene			<0.050		ug/g		0.05	19-MAY-21
Benzo(g,h,i)perylene			<0.050		ug/g		0.05	19-MAY-21
Benzo(k)fluoranthene			<0.050		ug/g		0.05	19-MAY-21
Chrysene			<0.050		ug/g		0.05	19-MAY-21
Dibenz(a,h)anthracene			<0.050		ug/g		0.05	19-MAY-21
Fluoranthene			<0.050		ug/g		0.05	19-MAY-21
Fluorene			<0.050		ug/g		0.05	19-MAY-21
Indeno(1,2,3-cd)pyrene			<0.050		ug/g		0.05	19-MAY-21
Naphthalene			<0.013		ug/g		0.013	19-MAY-21
Phenanthrene			<0.046		ug/g		0.046	19-MAY-21
Pyrene			<0.050		ug/g		0.05	19-MAY-21
Surrogate: 2-Fluorobiphenyl			80.7		%		50-140	19-MAY-21
Surrogate: d14-Terphenyl			78.1		%		50-140	19-MAY-21
WG3536067-4	MS	WG3536067-5						
1-Methylnaphthalene			106.5		%		50-140	19-MAY-21
2-Methylnaphthalene			104.6		%		50-140	19-MAY-21
Acenaphthene			106.7		%		50-140	19-MAY-21
Acenaphthylene			92.9		%		50-140	19-MAY-21
Anthracene			87.2		%		50-140	19-MAY-21
Benzo(a)anthracene			100.3		%		50-140	19-MAY-21
Benzo(a)pyrene			84.1		%		50-140	19-MAY-21
Benzo(b&j)fluoranthene			96.3		%		50-140	19-MAY-21
Benzo(g,h,i)perylene			83.6		%		50-140	19-MAY-21
Benzo(k)fluoranthene			90.5		%		50-140	19-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Soil							
Batch	R5459865							
WG3536067-4 MS		WG3536067-5						
Chrysene			97.7		%		50-140	19-MAY-21
Dibenz(a,h)anthracene			82.0		%		50-140	19-MAY-21
Fluoranthene			100.4		%		50-140	19-MAY-21
Fluorene			101.3		%		50-140	19-MAY-21
Indeno(1,2,3-cd)pyrene			81.1		%		50-140	19-MAY-21
Naphthalene			103.6		%		50-140	19-MAY-21
Phenanthrene			107.2		%		50-140	19-MAY-21
Pyrene			101.2		%		50-140	19-MAY-21
PH-WT	Soil							
Batch	R5459441							
WG3536350-1 DUP		L2587552-4						
pH		7.48	7.47	J	pH units	0.01	0.3	18-MAY-21
WG3536695-1 LCS								
pH			6.96		pH units		6.9-7.1	18-MAY-21
SAR-R511-WT	Soil							
Batch	R5459178							
WG3536411-4 DUP		WG3536411-3						
Calcium (Ca)		18.1	18.1		mg/L	0.0	30	18-MAY-21
Sodium (Na)		2.48	2.49		mg/L	0.4	30	18-MAY-21
Magnesium (Mg)		0.90	0.91		mg/L	1.1	30	18-MAY-21
WG3536411-2 IRM		WT SAR4						
Calcium (Ca)			88.5		%		70-130	18-MAY-21
Sodium (Na)			91.6		%		70-130	18-MAY-21
Magnesium (Mg)			89.7		%		70-130	18-MAY-21
WG3536411-5 LCS								
Calcium (Ca)			106.3		%		80-120	18-MAY-21
Sodium (Na)			101.4		%		80-120	18-MAY-21
Magnesium (Mg)			101.0		%		80-120	18-MAY-21
WG3536411-1 MB								
Calcium (Ca)			<0.50		mg/L		0.5	18-MAY-21
Sodium (Na)			<0.50		mg/L		0.5	18-MAY-21
Magnesium (Mg)			<0.50		mg/L		0.5	18-MAY-21
VOC-511-HS-WT	Soil							



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT		Soil						
Batch	R5459722							
WG3534616-4	DUP	WG3534616-3						
1,1,1,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
1,1,2,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
1,1,1-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
1,1,2-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
1,1-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
1,1-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
1,2-Dibromoethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
1,2-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
1,2-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
1,2-Dichloropropane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
1,3-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
1,4-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
Acetone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	19-MAY-21
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	19-MAY-21
Bromodichloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
Bromoform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
Bromomethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
Carbon tetrachloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
Chlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
Chloroform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
cis-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
cis-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	19-MAY-21
Dibromochloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
Dichlorodifluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	19-MAY-21
n-Hexane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
Methylene Chloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
MTBE		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
m+p-Xylenes		<0.030	<0.030	RPD-NA	ug/g	N/A	40	19-MAY-21
Methyl Ethyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	19-MAY-21
Methyl Isobutyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	19-MAY-21
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	19-MAY-21
Styrene		<0.050	<0.050		ug/g			19-MAY-21



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 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT								
	Soil							
Batch	R5459722							
WG3534616-4	DUP	WG3534616-3						
Styrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
Tetrachloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	19-MAY-21
trans-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
trans-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	19-MAY-21
Trichloroethylene		<0.010	<0.010	RPD-NA	ug/g	N/A	40	19-MAY-21
Trichlorofluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	19-MAY-21
Vinyl chloride		<0.020	<0.020	RPD-NA	ug/g	N/A	40	19-MAY-21
WG3534616-2	LCS							
1,1,1,2-Tetrachloroethane			95.4		%		60-130	19-MAY-21
1,1,2,2-Tetrachloroethane			90.0		%		60-130	19-MAY-21
1,1,1-Trichloroethane			111.6		%		60-130	19-MAY-21
1,1,2-Trichloroethane			92.0		%		60-130	19-MAY-21
1,1-Dichloroethane			115.8		%		60-130	19-MAY-21
1,1-Dichloroethylene			116.8		%		60-130	19-MAY-21
1,2-Dibromoethane			86.9		%		70-130	19-MAY-21
1,2-Dichlorobenzene			107.8		%		70-130	19-MAY-21
1,2-Dichloroethane			116.0		%		60-130	19-MAY-21
1,2-Dichloropropane			124.2		%		70-130	19-MAY-21
1,3-Dichlorobenzene			108.5		%		70-130	19-MAY-21
1,4-Dichlorobenzene			111.8		%		70-130	19-MAY-21
Acetone			122.2		%		60-140	19-MAY-21
Benzene			121.6		%		70-130	19-MAY-21
Bromodichloromethane			131.3		%		50-140	19-MAY-21
Bromoform			97.7		%		70-130	19-MAY-21
Bromomethane			108.2		%		50-140	19-MAY-21
Carbon tetrachloride			122.8		%		70-130	19-MAY-21
Chlorobenzene			101.5		%		70-130	19-MAY-21
Chloroform			127.3		%		70-130	19-MAY-21
cis-1,2-Dichloroethylene			106.7		%		70-130	19-MAY-21
cis-1,3-Dichloropropene			114.9		%		70-130	19-MAY-21
Dibromochloromethane			91.2		%		60-130	19-MAY-21
Dichlorodifluoromethane			88.9		%		50-140	19-MAY-21



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520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT		Soil						
Batch	R5459722							
WG3534616-2	LCS							
Ethylbenzene			93.8		%		70-130	19-MAY-21
n-Hexane			116.8		%		70-130	19-MAY-21
Methylene Chloride			133.6	LCS-ND	%		70-130	19-MAY-21
MTBE			111.9		%		70-130	19-MAY-21
m+p-Xylenes			103.8		%		70-130	19-MAY-21
Methyl Ethyl Ketone			109.9		%		60-140	19-MAY-21
Methyl Isobutyl Ketone			104.1		%		60-140	19-MAY-21
o-Xylene			99.3		%		70-130	19-MAY-21
Styrene			93.2		%		70-130	19-MAY-21
Tetrachloroethylene			97.7		%		60-130	19-MAY-21
Toluene			96.6		%		70-130	19-MAY-21
trans-1,2-Dichloroethylene			131.6	LCS-ND	%		60-130	19-MAY-21
trans-1,3-Dichloropropene			93.0		%		70-130	19-MAY-21
Trichloroethylene			119.3		%		60-130	19-MAY-21
Trichlorofluoromethane			114.2		%		50-140	19-MAY-21
Vinyl chloride			123.7		%		60-140	19-MAY-21
WG3534616-1	MB							
1,1,1,2-Tetrachloroethane			<0.050		ug/g		0.05	19-MAY-21
1,1,2,2-Tetrachloroethane			<0.050		ug/g		0.05	19-MAY-21
1,1,1-Trichloroethane			<0.050		ug/g		0.05	19-MAY-21
1,1,2-Trichloroethane			<0.050		ug/g		0.05	19-MAY-21
1,1-Dichloroethane			<0.050		ug/g		0.05	19-MAY-21
1,1-Dichloroethylene			<0.050		ug/g		0.05	19-MAY-21
1,2-Dibromoethane			<0.050		ug/g		0.05	19-MAY-21
1,2-Dichlorobenzene			<0.050		ug/g		0.05	19-MAY-21
1,2-Dichloroethane			<0.050		ug/g		0.05	19-MAY-21
1,2-Dichloropropane			<0.050		ug/g		0.05	19-MAY-21
1,3-Dichlorobenzene			<0.050		ug/g		0.05	19-MAY-21
1,4-Dichlorobenzene			<0.050		ug/g		0.05	19-MAY-21
Acetone			<0.50		ug/g		0.5	19-MAY-21
Benzene			<0.0068		ug/g		0.0068	19-MAY-21
Bromodichloromethane			<0.050		ug/g		0.05	19-MAY-21
Bromoform			<0.050		ug/g		0.05	19-MAY-21
Bromomethane			<0.050		ug/g		0.05	19-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT		Soil						
Batch	R5459722							
WG3534616-1 MB								
Carbon tetrachloride			<0.050		ug/g		0.05	19-MAY-21
Chlorobenzene			<0.050		ug/g		0.05	19-MAY-21
Chloroform			<0.050		ug/g		0.05	19-MAY-21
cis-1,2-Dichloroethylene			<0.050		ug/g		0.05	19-MAY-21
cis-1,3-Dichloropropene			<0.030		ug/g		0.03	19-MAY-21
Dibromochloromethane			<0.050		ug/g		0.05	19-MAY-21
Dichlorodifluoromethane			<0.050		ug/g		0.05	19-MAY-21
Ethylbenzene			<0.018		ug/g		0.018	19-MAY-21
n-Hexane			<0.050		ug/g		0.05	19-MAY-21
Methylene Chloride			<0.050		ug/g		0.05	19-MAY-21
MTBE			<0.050		ug/g		0.05	19-MAY-21
m+p-Xylenes			<0.030		ug/g		0.03	19-MAY-21
Methyl Ethyl Ketone			<0.50		ug/g		0.5	19-MAY-21
Methyl Isobutyl Ketone			<0.50		ug/g		0.5	19-MAY-21
o-Xylene			<0.020		ug/g		0.02	19-MAY-21
Styrene			<0.050		ug/g		0.05	19-MAY-21
Tetrachloroethylene			<0.050		ug/g		0.05	19-MAY-21
Toluene			<0.080		ug/g		0.08	19-MAY-21
trans-1,2-Dichloroethylene			<0.050		ug/g		0.05	19-MAY-21
trans-1,3-Dichloropropene			<0.030		ug/g		0.03	19-MAY-21
Trichloroethylene			<0.010		ug/g		0.01	19-MAY-21
Trichlorofluoromethane			<0.050		ug/g		0.05	19-MAY-21
Vinyl chloride			<0.020		ug/g		0.02	19-MAY-21
Surrogate: 1,4-Difluorobenzene			114.1		%		50-140	19-MAY-21
Surrogate: 4-Bromofluorobenzene			89.6		%		50-140	19-MAY-21
WG3534616-5 MS		WG3534616-3						
1,1,1,2-Tetrachloroethane			113.9		%		50-140	19-MAY-21
1,1,2,2-Tetrachloroethane			106.1		%		50-140	19-MAY-21
1,1,1-Trichloroethane			110.9		%		50-140	19-MAY-21
1,1,2-Trichloroethane			105.4		%		50-140	19-MAY-21
1,1-Dichloroethane			95.7		%		50-140	19-MAY-21
1,1-Dichloroethylene			105.3		%		50-140	19-MAY-21
1,2-Dibromoethane			102.5		%		50-140	19-MAY-21
1,2-Dichlorobenzene			111.7		%		50-140	19-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch	R5459722							
WG3534616-5 MS		WG3534616-3						
1,2-Dichloroethane			104.3		%		50-140	19-MAY-21
1,2-Dichloropropane			109.5		%		50-140	19-MAY-21
1,3-Dichlorobenzene			114.1		%		50-140	19-MAY-21
1,4-Dichlorobenzene			107.9		%		50-140	19-MAY-21
Acetone			111.2		%		50-140	19-MAY-21
Benzene			105.7		%		50-140	19-MAY-21
Bromodichloromethane			113.1		%		50-140	19-MAY-21
Bromoform			106.7		%		50-140	19-MAY-21
Bromomethane			89.0		%		50-140	19-MAY-21
Carbon tetrachloride			106.9		%		50-140	19-MAY-21
Chlorobenzene			112.6		%		50-140	19-MAY-21
Chloroform			112.4		%		50-140	19-MAY-21
cis-1,2-Dichloroethylene			102.3		%		50-140	19-MAY-21
cis-1,3-Dichloropropene			82.3		%		50-140	19-MAY-21
Dibromochloromethane			98.7		%		50-140	19-MAY-21
Dichlorodifluoromethane			101.9		%		50-140	19-MAY-21
Ethylbenzene			106.7		%		50-140	19-MAY-21
n-Hexane			101.7		%		50-140	19-MAY-21
Methylene Chloride			110.2		%		50-140	19-MAY-21
MTBE			111.7		%		50-140	19-MAY-21
m+p-Xylenes			108.5		%		50-140	19-MAY-21
Methyl Ethyl Ketone			92.7		%		50-140	19-MAY-21
Methyl Isobutyl Ketone			95.9		%		50-140	19-MAY-21
o-Xylene			114.0		%		50-140	19-MAY-21
Styrene			107.5		%		50-140	19-MAY-21
Tetrachloroethylene			101.4		%		50-140	19-MAY-21
Toluene			104.9		%		50-140	19-MAY-21
trans-1,2-Dichloroethylene			105.7		%		50-140	19-MAY-21
trans-1,3-Dichloropropene			75.3		%		50-140	19-MAY-21
Trichloroethylene			104.4		%		50-140	19-MAY-21
Trichlorofluoromethane			105.4		%		50-140	19-MAY-21
Vinyl chloride			110.1		%		50-140	19-MAY-21

Quality Control Report

Workorder: L2586911

Report Date: 20-MAY-21

Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9
Contact: JEN LAMBKE

Page 16 of 16

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
DUP-H	Duplicate results outside ALS DQO, due to sample heterogeneity.
J	Duplicate results and limits are expressed in terms of absolute difference.
LCS-H	Lab Control Sample recovery was above ALS DQO. Non-detected sample results are considered reliable. Other results, if reported, have been qualified.
LCS-ND	Lab Control Sample recovery was slightly outside ALS DQO. Reported non-detect results for associated samples were unaffected.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

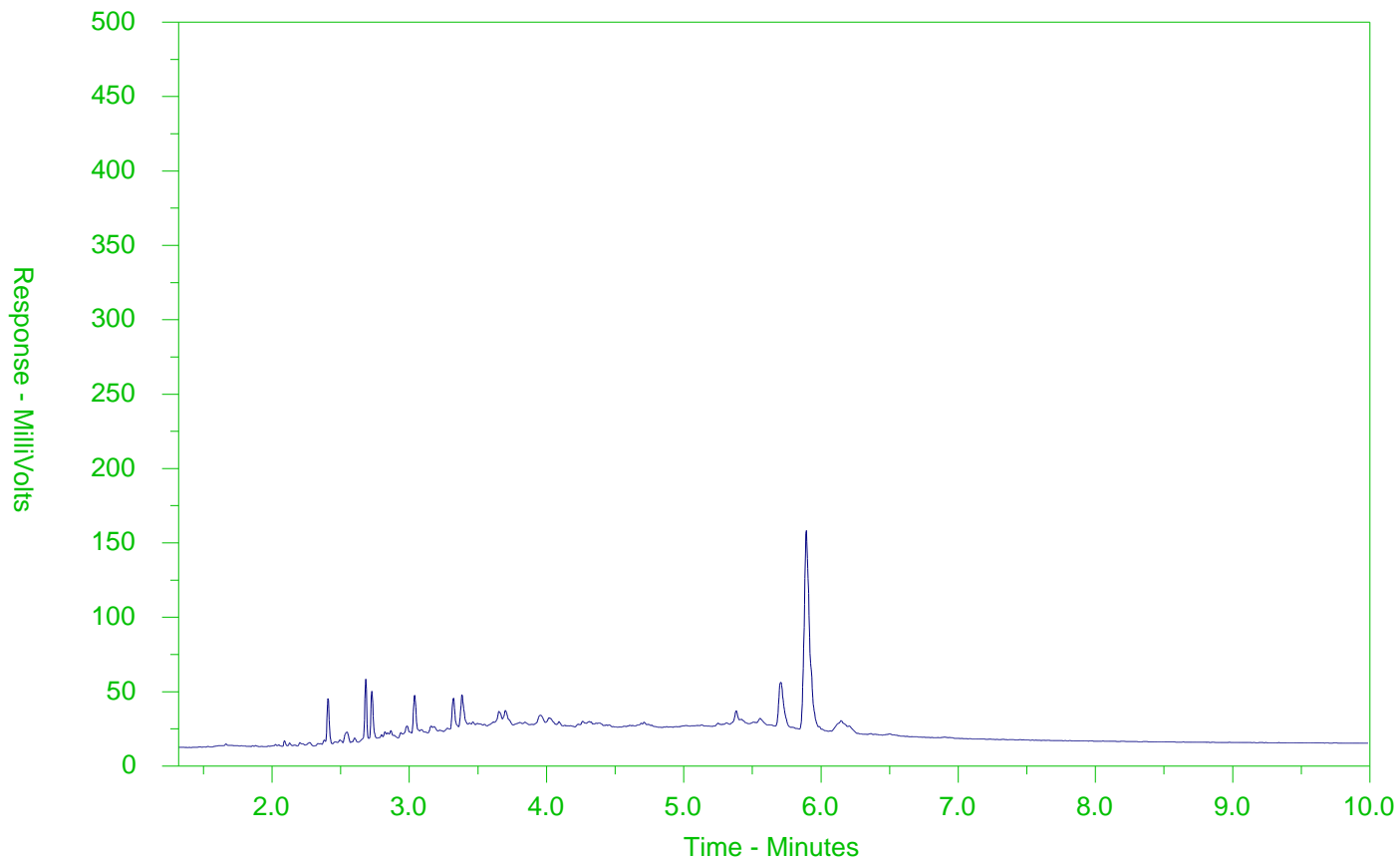
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2586911-2
 Client Sample ID: BH122-21 SS2 2.5-4.5FT



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

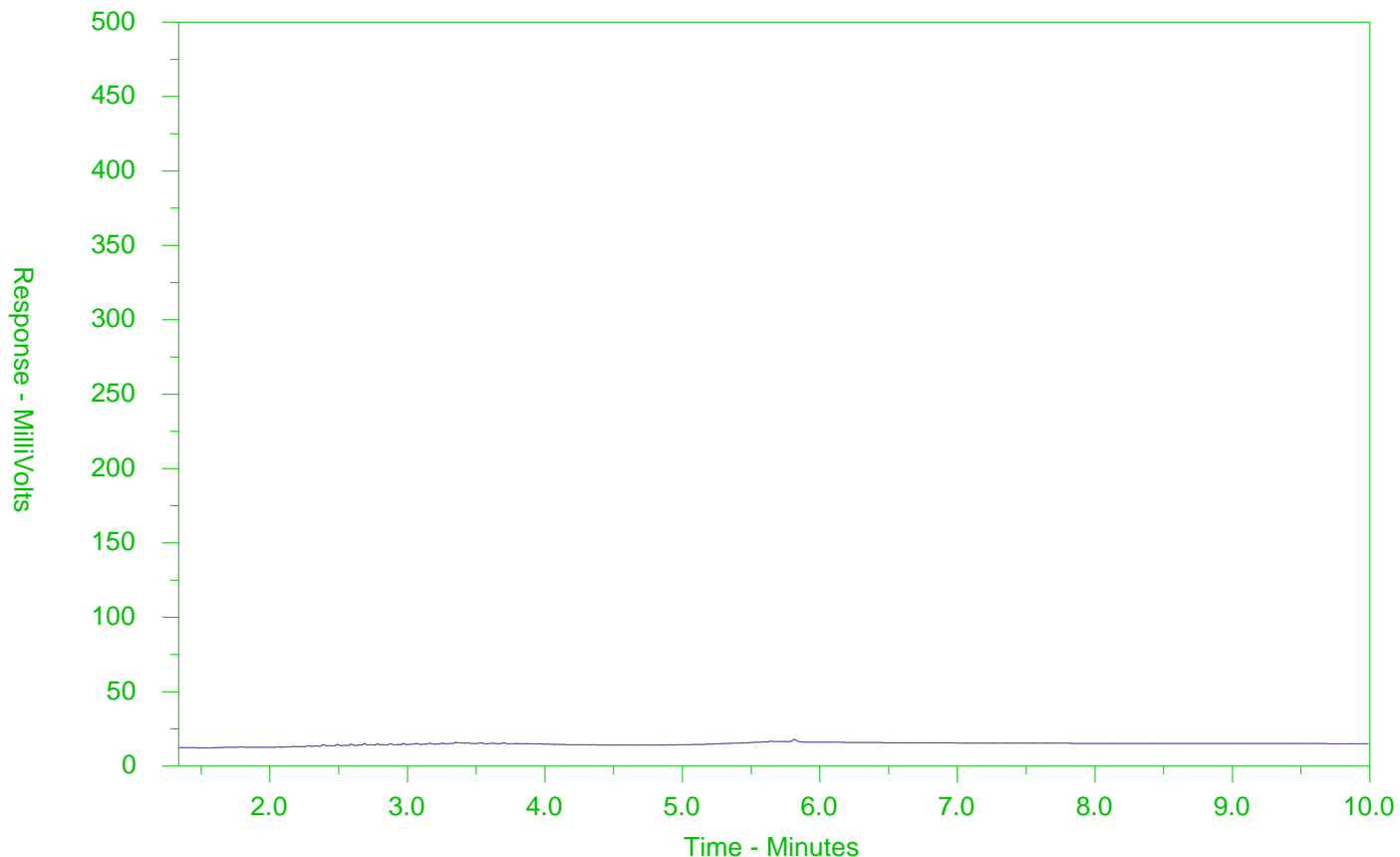
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2586911-4
 Client Sample ID: BH122-21 SS4 7.5-9.5FT



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

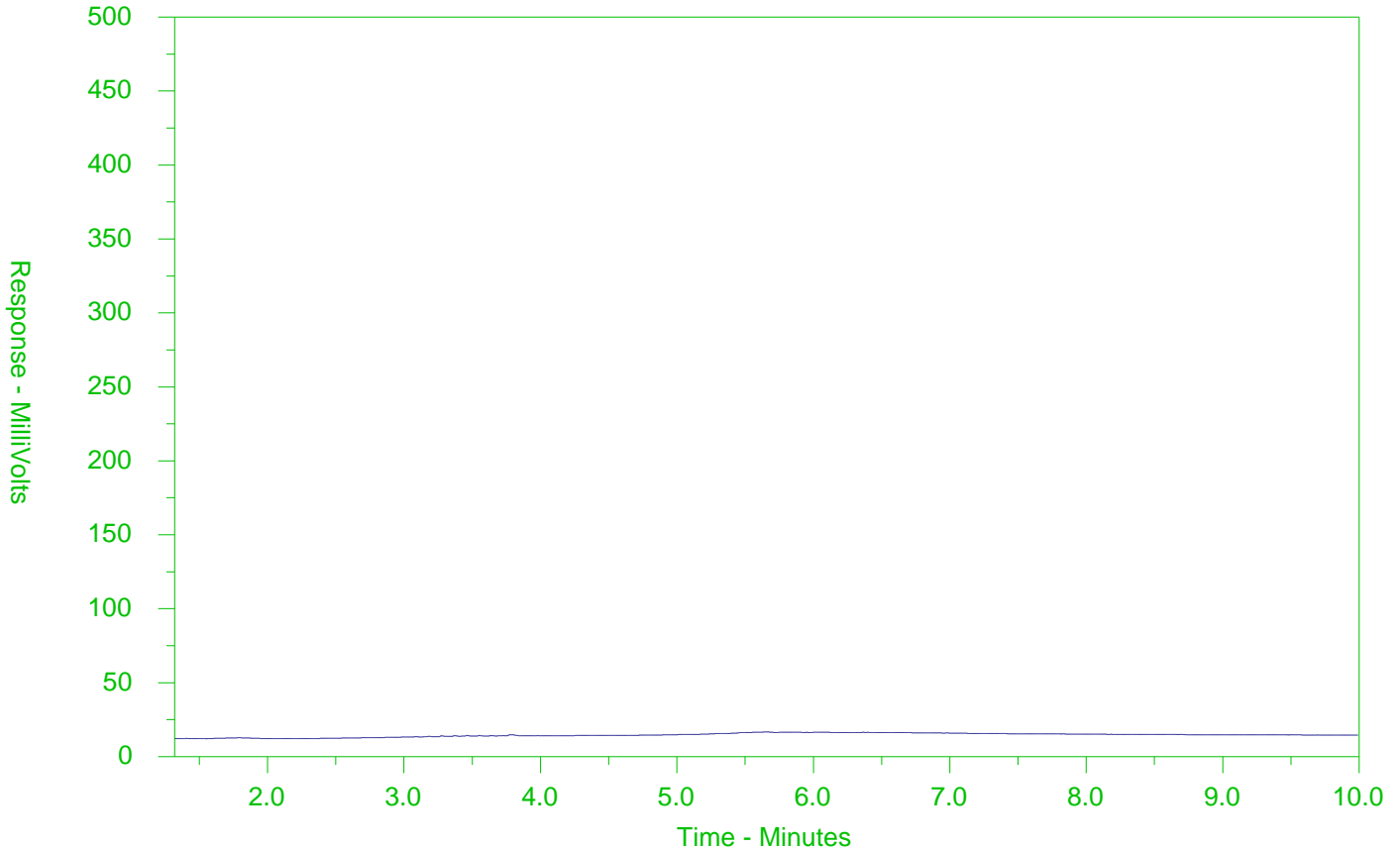
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2586911-7
 Client Sample ID: BH126-21 SS2 2.5-4.5FT



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

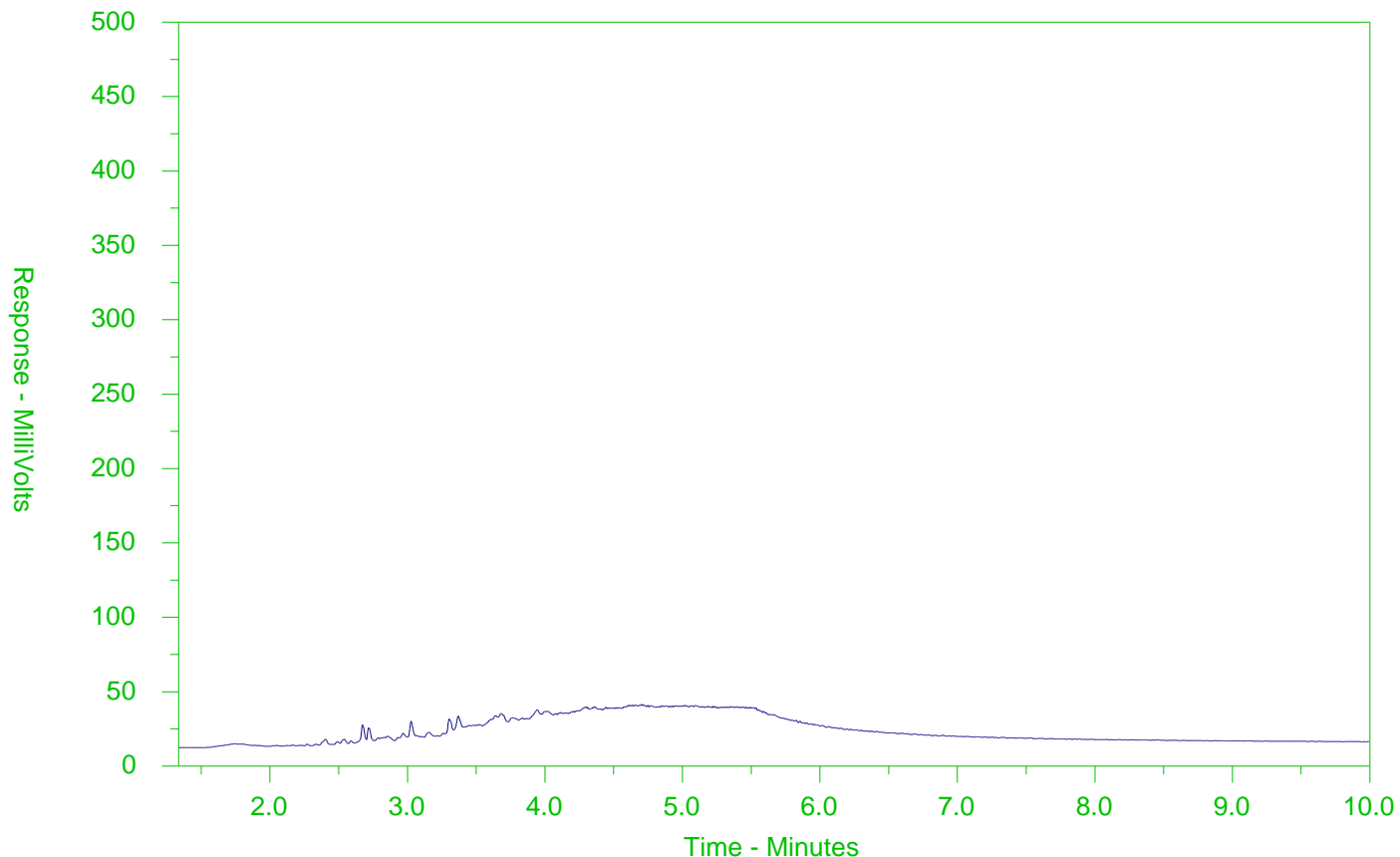
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2586911-12
 Client Sample ID: BH123-21 GS1B 18"-2.5FT



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

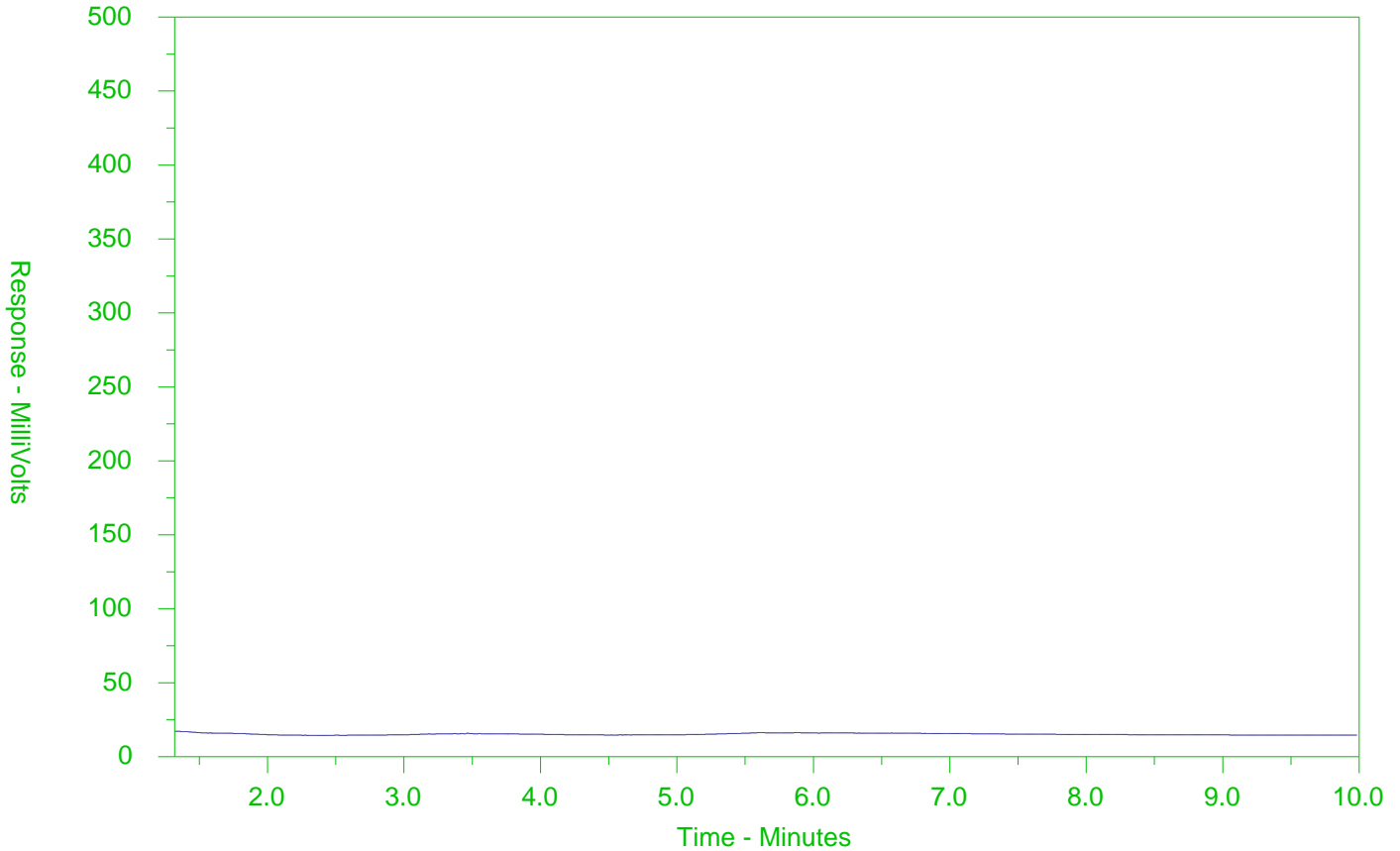
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2586911-20
 Client Sample ID: BH125-21 SS3 5-7FT



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.



ALS Environmental

www.alsglobal.com

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878



L2586911-COFC

COC Number: 17 -

Page 1 of 2

Site E, I, F, H

Report To Contact and company name below will appear on the final report		Report Format / Distribution		Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)																							
Company:	MTE	Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL)		Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply																							
Contact:	Jen Lambke	Quality Control (QC) Report with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		PRIORITY (Business Days)	4 day [P4-20%] <input type="checkbox"/>	EMERGENCY	1 Business day [E - 100%] <input type="checkbox"/>																				
Phone:	519-502-3268	<input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked			3 day [P3-25%] <input type="checkbox"/>		Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] <input type="checkbox"/>																				
Company address below will appear on the final report		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX			2 day [P2-50%] <input type="checkbox"/>																						
Street:	520 Binghamans Centre Drive	Email 1 or Fax: jlambke@mte85.com		Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm																							
City/Province:	Kitchener	Email 2: jball@mte85.com		For tests that can not be performed according to the service level selected, you will be contacted.																							
Postal Code:		Email 3:		Analysis Request																							
Invoice To	Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Invoice Distribution		Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below																							
	Copy of Invoice with Report <input type="checkbox"/> YES <input type="checkbox"/> NO	Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX																									
Company:		Email 1 or Fax: jlambke@mte85.com		NUMBER OF CONTAINERS	PHC F1 to F4 and BTEX	PHC F1 to F4 and VOCs	Metals Scan	Metals Complete	PAHs	SAR & EC	pH	PCBs	PHC F2 to F4	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)												
Contact:		Email 2:																									
Project Information		Oil and Gas Required Fields (client use)																									
ALS Account # / Quote #:	Q75730	AFE/Cost Center:	PO#																								
Job #:	46995-100	Major/Minor Code:	Routing Code:																								
PO / AFE:		Requisitioner:																									
LSD:		Location:																									
ALS Lab Work Order # (lab use only): L2586911 DD		ALS Contact:	Emily H													Sampler:	Matt D										
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)															Date (dd-mmm-yy)	Time (hh:mm)	Sample Type									
	BH 122-21	GS1	6"-2.5 FT													11-05-21	8:20	Soil									
		SS2	2.5-4.5 FT		8:30																						
		SS3	5-7 FT		8:40																						
		SS4	7.5-9.5 FT		8:50																						
		MSPLP	2'7"-5 FT		9:10																						
	BH 126-21	GS1	6"-2.5 FT	11-05-21	9:45	Soil																					
		SS2	2.5-4.5 FT		9:55																						
		SS3	5-7 FT		10:00																						
		SS4	7.5-9.5 FT		10:10																						
		MSPLP	2'3"-5 FT		10:30																						
	BH 123-21	GS1A	6"-18"	11-05-21	11:25	Soil																					
		GS1B	18"-2.5 FT		11:30																						
Drinking Water (DW) Samples¹ (client use)		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)				SAMPLE CONDITION AS RECEIVED (lab use only)																					
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO		Table 1 Res, Table 3.1 R/P/I, Table 3.1 I/C/C (ESQS, O.Reg. 406/19) - coarse, AND Table 3 I/C/C (SCS, O.Reg. 153/04) - coarse				Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>																					
Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO						Ice Packs <input checked="" type="checkbox"/> Ice Cubes <input checked="" type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>																					
						Cooling Initiated <input checked="" type="checkbox"/>																					
						INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C																		
									5.1 10.6 4.6																		
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)				FINAL SHIPMENT RECEPTION (lab use only)																					
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:																
							5/12/21	13:50																			

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

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JUNE 2018 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy. 1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.



ALS Environmental

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878



L2586911-COFC

CO Number: 17 -

Page 2 of 2

Site E, I, F, H

Handwritten initials

Report To Contact and company name below will appear on the final report		Report Format / Distribution			Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)																					
Company: MTE		Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL)			Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply																					
Contact: Jen Lambke		Quality Control (QC) Report with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			4 day [P4-20%] <input type="checkbox"/>		3 day [P3-25%] <input type="checkbox"/>		2 day [P2-50%] <input type="checkbox"/>		EMERGENCY				1 Business day [E - 100%] <input type="checkbox"/>											
Phone: 519-502-3268		<input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked			Same Day, Weekend or Statutory holiday [E2 -200%] <input type="checkbox"/> (Laboratory opening fees may apply)																					
Company address below will appear on the final report		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX			Date and Time Required for all E&P TATs:					dd-mmm-yy hh:mm																
Street: 520 Bingemans Centre Drive		Email 1 or Fax: jlbmbke@mte85.com			For tests that can not be performed according to the service level selected, you will be contacted.																					
City/Province: Kitchener		Email 2: jball@mte85.com			Analysis Request																					
Postal Code:		Email 3:			Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below																					
Invoice To		Invoice Distribution			NUMBER OF CONTAINERS										SAMPLES ON HOLD											
Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX																								
Copy of Invoice with Report <input type="checkbox"/> YES <input type="checkbox"/> NO		Email 1 or Fax: jlbmbke@mte85.com			PHC F1 to F4 and BTEX PHC F1 to F4 and VOCs Metals Scan Metals Complete PAHs SAR & EC pH PCBs PHC F2 to F4										SUSPECTED HAZARD (see Special Instructions)											
Company:		Email 2:																								
Contact:		Email 3:			Oil and Gas Required Fields (client use)																					
Project Information																										
ALS Account # / Quote #: Q75730		AFE/Cost Center:			PO#			Major/Minor Code:			Routing Code:			Requisitioner:			Location:									
Job #: 46995-100		ALS Contact: Emily H			Sampler: Matt D																					
PO / AFE:																										
LSD:																										
ALS Lab Work Order # (lab use only): L2586911																										
ALS Sample # (lab use only)		Sample Identification and/or Coordinates (This description will appear on the report)			Date (dd-mmm-yy)		Time (hh:mm)		Sample Type																	
		BH123-21 SS2 2.5-4.5ft			11-05-21		11:40		Soil		X															
		SS3 5-7ft					11:50				X															
		SS4 7.5-9.5ft					12:00				X															
		MSPLP 18"-2.5ft					12:30				X															
		BH 125-21 GSA 6"-18"			11-05-21		1:00		Soil		X															
		OS IB 18"-2.5ft					1:10				X															
		SS2 2.5-4.5ft					1:20				X															
		SS3 5-7ft					1:30				X															
		SS4 7.5-9.5ft					1:40				X															
		MSPLP 18"-4ft					2:00				X															
Drinking Water (DW) Samples¹ (client use)		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)										SAMPLE CONDITION AS RECEIVED (lab use only)														
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO		Table 1 Res, Table 3.1 R/P/I, Table 3.1 I/C/C (ESQS, O.Reg. 406/19) - coarse, AND Table 3 I/C/C (SCS, O.Reg. 153/04) - coarse										Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>														
Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO												Ice Packs <input type="checkbox"/> Ice Cubes <input checked="" type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>														
												Cooling Initiated <input checked="" type="checkbox"/>					INITIAL COOLER TEMPERATURES °C					FINAL COOLER TEMPERATURES °C				
																	5.1 10.6 4.6									
SHIPMENT RELEASE (client use)					INITIAL SHIPMENT RECEPTION (lab use only)					FINAL SHIPMENT RECEPTION (lab use only)																
Released by:		Date:		Time:		Received by:		Date:		Time:		Received by:		Date:		Time:										
												AA		5/12/21		13:50										

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1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.



MTE CONSULTANTS INC. (Kitchener)
ATTN: JEN LAMBKE
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9


Date Received: 14-MAY-21
Report Date: 25-MAY-21 10:40 (MT)
Version: FINAL

Client Phone: 519-743-6500

Certificate of Analysis

Lab Work Order #: L2587890
Project P.O. #: NOT SUBMITTED
Job Reference: 46995-100
C of C Numbers:
Legal Site Desc:

Comments: ADDITIONAL 17-MAY-21 13:03



Emily Hansen
Account Manager

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ADDRESS: 60 Northland Road, Unit 1, Waterloo, ON N2V 2B8 Canada | Phone: +1 519 886 6910 | Fax: +1 519 886 9047
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ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2587890-3	BH130-21 SS2 2.5-3.5FT							
Sampled By: MATT D on 13-MAY-21 @ 09:35								
Matrix: SOIL								
Physical Tests								
Conductivity		1.33		0.0040	mS/cm	21-MAY-21	*0.57	1.4
% Moisture		4.01		0.25	%	19-MAY-21		
Saturated Paste Extractables								
SAR		57.5	SAR:M	0.10	SAR	21-MAY-21	*2.4	*12
Calcium (Ca)		1.48		0.50	mg/L	21-MAY-21		
Magnesium (Mg)		<0.50		0.50	mg/L	21-MAY-21		
Sodium (Na)		254		0.50	mg/L	21-MAY-21		
Volatile Organic Compounds								
Benzene		<0.0068		0.0068	ug/g	25-MAY-21	0.02	0.034
Ethylbenzene		<0.018		0.018	ug/g	25-MAY-21	0.05	1.9
Toluene		<0.080		0.080	ug/g	25-MAY-21	0.2	7.8
o-Xylene		<0.020		0.020	ug/g	25-MAY-21		
m+p-Xylenes		<0.030		0.030	ug/g	25-MAY-21		
Xylenes (Total)		<0.050		0.050	ug/g	25-MAY-21	0.05	3
Surrogate: 4-Bromofluorobenzene		101.5		50-140	%	25-MAY-21		
Surrogate: 1,4-Difluorobenzene		102.8		50-140	%	25-MAY-21		
Hydrocarbons								
F1 (C6-C10)		<5.0		5.0	ug/g	25-MAY-21	25	25
F1-BTEX		<5.0		5.0	ug/g	25-MAY-21	25	25
F2 (C10-C16)		<10		10	ug/g	19-MAY-21	10	26
F3 (C16-C34)		<50		50	ug/g	19-MAY-21	240	1700
F4 (C34-C50)		<50		50	ug/g	19-MAY-21	120	3300
Total Hydrocarbons (C6-C50)		<72		72	ug/g	25-MAY-21		
Chrom. to baseline at nC50		YES			No Unit	19-MAY-21		
Surrogate: 2-Bromobenzotrifluoride		83.6		60-140	%	19-MAY-21		
Surrogate: 3,4-Dichlorotoluene		92.6		60-140	%	25-MAY-21		
Polychlorinated Biphenyls								
Aroclor 1242		<0.010		0.010	ug/g	20-MAY-21		
Aroclor 1248		<0.010		0.010	ug/g	20-MAY-21		
Aroclor 1254		<0.010		0.010	ug/g	20-MAY-21		
Aroclor 1260		<0.010		0.010	ug/g	20-MAY-21		
Total PCBs		<0.020		0.020	ug/g	20-MAY-21	0.3	0.78
Surrogate: d14-Terphenyl		112.6		60-140	%	20-MAY-21		
L2587890-5	BH131-21 SS2 2.5-3.5FT							
Sampled By: MATT D on 13-MAY-21 @ 10:30								
Matrix: SOIL								
Physical Tests								
% Moisture		3.82		0.25	%	19-MAY-21		
pH		8.20		0.10	pH units	18-MAY-21		
Metals								
Antimony (Sb)		<1.0		1.0	ug/g	21-MAY-21	1.3	40
Arsenic (As)		2.7		1.0	ug/g	21-MAY-21	18	18
Barium (Ba)		25.9		1.0	ug/g	21-MAY-21	220	670
Beryllium (Be)		<0.50		0.50	ug/g	21-MAY-21	2.5	8
Boron (B)		8.5		5.0	ug/g	21-MAY-21	36	120

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Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

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Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2587890-5	BH131-21 SS2 2.5-3.5FT							
Sampled By: MATT D on 13-MAY-21 @ 10:30								
Matrix: SOIL								
Metals								
	Cadmium (Cd)	<0.50		0.50	ug/g	21-MAY-21	1.2	1.9
	Chromium (Cr)	9.4		1.0	ug/g	21-MAY-21	70	160
	Cobalt (Co)	3.3		1.0	ug/g	21-MAY-21	21	80
	Copper (Cu)	13.0		1.0	ug/g	21-MAY-21	92	230
	Lead (Pb)	29.4		1.0	ug/g	21-MAY-21	120	120
	Molybdenum (Mo)	<1.0		1.0	ug/g	21-MAY-21	2	40
	Nickel (Ni)	7.1		1.0	ug/g	21-MAY-21	82	270
	Selenium (Se)	<1.0		1.0	ug/g	21-MAY-21	1.5	5.5
	Silver (Ag)	<0.20		0.20	ug/g	21-MAY-21	0.5	40
	Thallium (Tl)	<0.50		0.50	ug/g	21-MAY-21	1	3.3
	Uranium (U)	<1.0		1.0	ug/g	21-MAY-21	2.5	33
	Vanadium (V)	17.1		1.0	ug/g	21-MAY-21	86	86
	Zinc (Zn)	60.4		5.0	ug/g	21-MAY-21	290	340
Volatile Organic Compounds								
	Benzene	0.0237		0.0068	ug/g	25-MAY-21	*0.02	0.034
	Ethylbenzene	<0.018		0.018	ug/g	25-MAY-21	0.05	1.9
	Toluene	<0.080		0.080	ug/g	25-MAY-21	0.2	7.8
	o-Xylene	<0.020		0.020	ug/g	25-MAY-21		
	m+p-Xylenes	<0.030		0.030	ug/g	25-MAY-21		
	Xylenes (Total)	<0.050		0.050	ug/g	25-MAY-21	0.05	3
	Surrogate: 4-Bromofluorobenzene	100.1		50-140	%	25-MAY-21		
	Surrogate: 1,4-Difluorobenzene	102.2		50-140	%	25-MAY-21		
Hydrocarbons								
	F1 (C6-C10)	<5.0		5.0	ug/g	25-MAY-21	25	25
	F1-BTEX	<5.0		5.0	ug/g	25-MAY-21	25	25
	F2 (C10-C16)	<10		10	ug/g	19-MAY-21	10	26
	F3 (C16-C34)	<50		50	ug/g	19-MAY-21	240	1700
	F4 (C34-C50)	126		50	ug/g	19-MAY-21	*120	3300
	F4G-SG (GHH-Silica)	670		250	ug/g	20-MAY-21	*120	3300
	Total Hydrocarbons (C6-C50)	126		72	ug/g	25-MAY-21		
	Chrom. to baseline at nC50	NO			No Unit	19-MAY-21		
	Surrogate: 2-Bromobenzotrifluoride	85.6		60-140	%	19-MAY-21		
	Surrogate: 3,4-Dichlorotoluene	102.4		60-140	%	25-MAY-21		
L2587890-7	BH132-21 SS2 2.5-4.5FT							
Sampled By: MATT D on 13-MAY-21 @ 11:10								
Matrix: SOIL								
Physical Tests								
	% Moisture	5.44		0.25	%	19-MAY-21		
Metals								
	Antimony (Sb)	1.0		1.0	ug/g	21-MAY-21	1.3	40
	Arsenic (As)	2.1		1.0	ug/g	21-MAY-21	18	18
	Barium (Ba)	26.3		1.0	ug/g	21-MAY-21	220	670
	Beryllium (Be)	<0.50		0.50	ug/g	21-MAY-21	2.5	8
	Boron (B)	<5.0		5.0	ug/g	21-MAY-21	36	120
	Cadmium (Cd)	<0.50		0.50	ug/g	21-MAY-21	1.2	1.9

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#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2587890-7	BH132-21 SS2 2.5-4.5FT							
Sampled By: MATT D on 13-MAY-21 @ 11:10								
Matrix: SOIL								
Metals								
Chromium (Cr)		10.1		1.0	ug/g	21-MAY-21	70	160
Cobalt (Co)		3.0		1.0	ug/g	21-MAY-21	21	80
Copper (Cu)		8.9		1.0	ug/g	21-MAY-21	92	230
Lead (Pb)		32.0		1.0	ug/g	21-MAY-21	120	120
Molybdenum (Mo)		<1.0		1.0	ug/g	21-MAY-21	2	40
Nickel (Ni)		6.1		1.0	ug/g	21-MAY-21	82	270
Selenium (Se)		<1.0		1.0	ug/g	21-MAY-21	1.5	5.5
Silver (Ag)		<0.20		0.20	ug/g	21-MAY-21	0.5	40
Thallium (Tl)		<0.50		0.50	ug/g	21-MAY-21	1	3.3
Uranium (U)		<1.0		1.0	ug/g	21-MAY-21	2.5	33
Vanadium (V)		24.0		1.0	ug/g	21-MAY-21	86	86
Zinc (Zn)		45.9		5.0	ug/g	21-MAY-21	290	340
Volatile Organic Compounds								
Benzene		<0.0068		0.0068	ug/g	25-MAY-21	0.02	0.034
Ethylbenzene		<0.018		0.018	ug/g	25-MAY-21	0.05	1.9
Toluene		<0.080		0.080	ug/g	25-MAY-21	0.2	7.8
o-Xylene		<0.020		0.020	ug/g	25-MAY-21		
m+p-Xylenes		<0.030		0.030	ug/g	25-MAY-21		
Xylenes (Total)		<0.050		0.050	ug/g	25-MAY-21	0.05	3
Surrogate: 4-Bromofluorobenzene		102.3		50-140	%	25-MAY-21		
Surrogate: 1,4-Difluorobenzene		104.1		50-140	%	25-MAY-21		
Hydrocarbons								
F1 (C6-C10)		<5.0		5.0	ug/g	25-MAY-21	25	25
F1-BTEX		<5.0		5.0	ug/g	25-MAY-21	25	25
F2 (C10-C16)		<10		10	ug/g	19-MAY-21	10	26
F3 (C16-C34)		<50		50	ug/g	19-MAY-21	240	1700
F4 (C34-C50)		<50		50	ug/g	19-MAY-21	120	3300
Total Hydrocarbons (C6-C50)		<72		72	ug/g	25-MAY-21		
Chrom. to baseline at nC50		YES			No Unit	19-MAY-21		
Surrogate: 2-Bromobenzotrifluoride		84.1		60-140	%	19-MAY-21		
Surrogate: 3,4-Dichlorotoluene		106.8		60-140	%	25-MAY-21		
L2587890-9	BH132-21 SS4 7.5-9.5FT							
Sampled By: MATT D on 13-MAY-21 @ 11:30								
Matrix: SOIL								
Physical Tests								
Conductivity		1.15		0.0040	mS/cm	21-MAY-21	*0.57	1.4
% Moisture		6.73		0.25	%	19-MAY-21		
Saturated Paste Extractables								
SAR		47.8	SAR:M	0.10	SAR	21-MAY-21	*2.4	*12
Calcium (Ca)		1.65		0.50	mg/L	21-MAY-21		
Magnesium (Mg)		<0.50		0.50	mg/L	21-MAY-21		
Sodium (Na)		223		0.50	mg/L	21-MAY-21		
Metals								
Antimony (Sb)		<1.0		1.0	ug/g	21-MAY-21	1.3	40
Arsenic (As)		1.4		1.0	ug/g	21-MAY-21	18	18

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#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2587890-9	BH132-21 SS4 7.5-9.5FT							
Sampled By: MATT D on 13-MAY-21 @ 11:30								
Matrix: SOIL								
Metals								
	Barium (Ba)	9.0		1.0	ug/g	21-MAY-21	220	670
	Beryllium (Be)	<0.50		0.50	ug/g	21-MAY-21	2.5	8
	Boron (B)	<5.0		5.0	ug/g	21-MAY-21	36	120
	Cadmium (Cd)	<0.50		0.50	ug/g	21-MAY-21	1.2	1.9
	Chromium (Cr)	7.2		1.0	ug/g	21-MAY-21	70	160
	Cobalt (Co)	1.8		1.0	ug/g	21-MAY-21	21	80
	Copper (Cu)	5.0		1.0	ug/g	21-MAY-21	92	230
	Lead (Pb)	4.4		1.0	ug/g	21-MAY-21	120	120
	Molybdenum (Mo)	<1.0		1.0	ug/g	21-MAY-21	2	40
	Nickel (Ni)	3.8		1.0	ug/g	21-MAY-21	82	270
	Selenium (Se)	<1.0		1.0	ug/g	21-MAY-21	1.5	5.5
	Silver (Ag)	<0.20		0.20	ug/g	21-MAY-21	0.5	40
	Thallium (Tl)	<0.50		0.50	ug/g	21-MAY-21	1	3.3
	Uranium (U)	<1.0		1.0	ug/g	21-MAY-21	2.5	33
	Vanadium (V)	20.9		1.0	ug/g	21-MAY-21	86	86
	Zinc (Zn)	28.9		5.0	ug/g	21-MAY-21	290	340
Volatile Organic Compounds								
	Acetone	<0.50		0.50	ug/g	21-MAY-21	0.5	1.8
	Benzene	<0.0068		0.0068	ug/g	21-MAY-21	0.02	0.034
	Bromodichloromethane	<0.050		0.050	ug/g	21-MAY-21	0.05	5.8
	Bromoform	<0.050		0.050	ug/g	21-MAY-21	0.05	2.5
	Bromomethane	<0.050		0.050	ug/g	21-MAY-21	0.05	0.05
	Carbon tetrachloride	<0.050		0.050	ug/g	21-MAY-21	0.05	0.05
	Chlorobenzene	<0.050		0.050	ug/g	21-MAY-21	0.05	0.28
	Dibromochloromethane	<0.050		0.050	ug/g	21-MAY-21	0.05	5.5
	Chloroform	<0.050		0.050	ug/g	21-MAY-21	0.05	0.26
	1,2-Dibromoethane	<0.050		0.050	ug/g	21-MAY-21	0.05	0.05
	1,2-Dichlorobenzene	<0.050		0.050	ug/g	21-MAY-21	0.05	6.8
	1,3-Dichlorobenzene	<0.050		0.050	ug/g	21-MAY-21	0.05	6.8
	1,4-Dichlorobenzene	<0.050		0.050	ug/g	21-MAY-21	0.05	0.05
	Dichlorodifluoromethane	<0.050		0.050	ug/g	21-MAY-21	0.05	1.8
	1,1-Dichloroethane	<0.050		0.050	ug/g	21-MAY-21	0.05	0.57
	1,2-Dichloroethane	<0.050		0.050	ug/g	21-MAY-21	0.05	0.05
	1,1-Dichloroethylene	<0.050		0.050	ug/g	21-MAY-21	0.05	0.05
	cis-1,2-Dichloroethylene	<0.050		0.050	ug/g	21-MAY-21	0.05	0.05
	trans-1,2-Dichloroethylene	<0.050		0.050	ug/g	21-MAY-21	0.05	0.05
	Methylene Chloride	<0.050		0.050	ug/g	21-MAY-21	0.05	0.2
	1,2-Dichloropropane	<0.050		0.050	ug/g	21-MAY-21	0.05	0.05
	cis-1,3-Dichloropropene	<0.030		0.030	ug/g	21-MAY-21		
	trans-1,3-Dichloropropene	<0.030		0.030	ug/g	21-MAY-21		
	1,3-Dichloropropene (cis & trans)	<0.042		0.042	ug/g	21-MAY-21	0.05	0.05
	Ethylbenzene	<0.018		0.018	ug/g	21-MAY-21	0.05	1.9
	n-Hexane	<0.050		0.050	ug/g	21-MAY-21	0.05	2.5
	Methyl Ethyl Ketone	<0.50		0.50	ug/g	21-MAY-21	0.5	26
	Methyl Isobutyl Ketone	<0.50		0.50	ug/g	21-MAY-21	0.5	17
	MTBE	<0.050		0.050	ug/g	21-MAY-21	0.05	0.05

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Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2587890-9	BH132-21 SS4 7.5-9.5FT							
Sampled By: MATT D on 13-MAY-21 @ 11:30								
Matrix: SOIL								
Volatile Organic Compounds								
	Styrene	<0.050		0.050	ug/g	21-MAY-21	0.05	6.8
	1,1,1,2-Tetrachloroethane	<0.050		0.050	ug/g	21-MAY-21	0.05	0.05
	1,1,2,2-Tetrachloroethane	<0.050		0.050	ug/g	21-MAY-21	0.05	0.05
	Tetrachloroethylene	<0.050		0.050	ug/g	21-MAY-21	0.05	0.05
	Toluene	<0.080		0.080	ug/g	21-MAY-21	0.2	7.8
	1,1,1-Trichloroethane	<0.050		0.050	ug/g	21-MAY-21	0.05	0.4
	1,1,2-Trichloroethane	<0.050		0.050	ug/g	21-MAY-21	0.05	0.05
	Trichloroethylene	<0.010		0.010	ug/g	21-MAY-21	0.05	0.05
	Trichlorofluoromethane	<0.050		0.050	ug/g	21-MAY-21	0.25	0.46
	Vinyl chloride	<0.020		0.020	ug/g	21-MAY-21	0.02	0.02
	o-Xylene	<0.020		0.020	ug/g	21-MAY-21		
	m+p-Xylenes	<0.030		0.030	ug/g	21-MAY-21		
	Xylenes (Total)	<0.050		0.050	ug/g	21-MAY-21	0.05	3
	Surrogate: 4-Bromofluorobenzene	101.2		50-140	%	21-MAY-21		
	Surrogate: 1,4-Difluorobenzene	107.0		50-140	%	21-MAY-21		
Hydrocarbons								
	F1 (C6-C10)	<5.0		5.0	ug/g	21-MAY-21	25	25
	F1-BTEX	<5.0		5.0	ug/g	21-MAY-21	25	25
	F2 (C10-C16)	<10		10	ug/g	19-MAY-21	10	26
	F3 (C16-C34)	<50		50	ug/g	19-MAY-21	240	1700
	F4 (C34-C50)	<50		50	ug/g	19-MAY-21	120	3300
	Total Hydrocarbons (C6-C50)	<72		72	ug/g	21-MAY-21		
	Chrom. to baseline at nC50	YES			No Unit	19-MAY-21		
	Surrogate: 2-Bromobenzotrifluoride	86.5		60-140	%	19-MAY-21		
	Surrogate: 3,4-Dichlorotoluene	109.9		60-140	%	21-MAY-21		

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Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

Reference Information

Sample Parameter Qualifier key listed:

Qualifier	Description
SAR:M	Reported SAR represents a maximum value. Actual SAR may be lower if both Ca and Mg were detectable.

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference***
BTX-511-HS-WT	Soil	BTEX-O.Reg 153/04 (July 2011)	SW846 8260

BTX is determined by extracting a soil or sediment sample as received with methanol, then analyzing by headspace-GC/MS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

EC-WT	Soil	Conductivity (EC)	MOEE E3138
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A representative subsample is tumbled with de-ionized (DI) water. The ratio of water to soil is 2:1 v/w. After tumbling the sample is then analyzed by a conductivity meter.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

F1-F4-511-CALC-WT	Soil	F1-F4 Hydrocarbon Calculated Parameters	CCME CWS-PHC, Pub #1310, Dec 2001-S
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Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

Hydrocarbon results are expressed on a dry weight basis.

In cases where results for both F4 and F4G are reported, the greater of the two results must be used in any application of the CWS PHC guidelines and the gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.

In samples where BTEX and F1 were analyzed, F1-BTEX represents a value where the sum of Benzene, Toluene, Ethylbenzene and total Xylenes has been subtracted from F1.

In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.

Unless otherwise qualified, the following quality control criteria have been met for the F1 hydrocarbon range:

1. All extraction and analysis holding times were met.
2. Instrument performance showing response factors for C6 and C10 within 30% of the response factor for toluene.
3. Linearity of gasoline response within 15% throughout the calibration range.

Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:

1. All extraction and analysis holding times were met.
2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.
3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.
4. Linearity of diesel or motor oil response within 15% throughout the calibration range.

F1-HS-511-WT	Soil	F1-O.Reg 153/04 (July 2011)	E3398/CCME TIER 1-HS
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Fraction F1 is determined by extracting a soil or sediment sample as received with methanol, then analyzing by headspace-GC/FID.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

F2-F4-511-WT	Soil	F2-F4-O.Reg 153/04 (July 2011)	CCME Tier 1
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Petroleum Hydrocarbons (F2-F4 fractions) are extracted from soil with 1:1 hexane:acetone using a rotary extractor. Extracts are treated with silica gel to remove polar organic interferences. F2, F3, & F4 are analyzed by GC-FID. F4G-sg is analyzed gravimetrically.

Notes:

1. F2 (C10-C16): Sum of all hydrocarbons that elute between nC10 and nC16.
2. F3 (C16-C34): Sum of all hydrocarbons that elute between nC16 and nC34.
3. F4 (C34-C50): Sum of all hydrocarbons that elute between nC34 and nC50.
4. F4G: Gravimetric Heavy Hydrocarbons
5. F4G-sg: Gravimetric Heavy Hydrocarbons (F4G) after silica gel treatment.
6. Where both F4 (C34-C50) and F4G-sg are reported for a sample, the larger of the two values is used for comparison against the relevant CCME guideline for F4.
7. F4G-sg cannot be added to the C6 to C50 hydrocarbon results to obtain an estimate of total extractable hydrocarbons.
8. This method is validated for use.
9. Data from analysis of validation and quality control samples is available upon request.
10. Reported results are expressed as milligrams per dry kilogram, unless otherwise indicated.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

Reference Information

F4G-ADD-511-WT Soil F4G SG-O.Reg 153/04 (July 2011) MOE DECPH-E3398/CCME TIER 1

F4G, gravimetric analysis, is determined if the chromatogram does not return to baseline at or before C50. A soil sample is extracted with a solvent mix, the solvent is evaporated and the weight of the residue is determined.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

MET-200.2-CCMS-WT Soil Metals in Soil by CRC ICPMS EPA 200.2/6020B (mod)

Soil/sediment is dried, disaggregated, and sieved (2 mm). For tests intended to support Ontario regulations, the <2mm fraction is ground to pass through a 0.355 mm sieve. Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H₂S) may be excluded if lost during sampling, storage, or digestion.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

MOISTURE-WT Soil % Moisture CCME PHC in Soil - Tier 1 (mod)

PCB-511-WT Soil PCB-O.Reg 153/04 (July 2011) SW846 3510/8082

An aliquot of a solid sample is extracted with a solvent, extract is cleaned up and analyzed on the GC/MS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

PH-WT Soil pH MOEE E3137A

A minimum 10g portion of the sample is extracted with 20mL of 0.01M calcium chloride solution by shaking for at least 30 minutes. The aqueous layer is separated from the soil and then analyzed using a pH meter and electrode.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

SAR-R511-WT Soil SAR-O.Reg 153/04 (July 2011) SW846 6010C

A dried, disaggregated solid sample is extracted with deionized water, the aqueous extract is separated from the solid, acidified and then analyzed using a ICP/OES. The concentrations of Na, Ca and Mg are reported as per CALA requirements for calculated parameters. These individual parameters are not for comparison to any guideline.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

VOC-1,3-DCP-CALC-WT Soil Regulation 153 VOCs SW8260B/SW8270C

VOC-511-HS-WT Soil VOC-O.Reg 153/04 (July 2011) SW846 8260 (511)

Soil and sediment samples are extracted in methanol and analyzed by headspace-GC/MS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

XYLENES-SUM-CALC-WT Soil Sum of Xylene Isomer Concentrations CALCULATION

Total xylenes represents the sum of o-xylene and m&p-xylene.

*** ALS test methods may incorporate modifications from specified reference methods to improve performance.

Chain of Custody numbers:

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA		

Reference Information

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guideline limits are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
BTX-511-HS-WT		Soil						
Batch	R5465822							
WG3537846-4	DUP	WG3537846-3						
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	25-MAY-21
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	25-MAY-21
m+p-Xylenes		<0.030	<0.030	RPD-NA	ug/g	N/A	40	25-MAY-21
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	25-MAY-21
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	25-MAY-21
WG3537846-2	LCS							
Benzene			108.8		%		70-130	25-MAY-21
Ethylbenzene			99.3		%		70-130	25-MAY-21
m+p-Xylenes			104.8		%		70-130	25-MAY-21
o-Xylene			108.4		%		70-130	25-MAY-21
Toluene			111.2		%		70-130	25-MAY-21
WG3537846-1	MB							
Benzene			<0.0068		ug/g		0.0068	25-MAY-21
Ethylbenzene			<0.018		ug/g		0.018	25-MAY-21
m+p-Xylenes			<0.030		ug/g		0.03	25-MAY-21
o-Xylene			<0.020		ug/g		0.02	25-MAY-21
Toluene			<0.080		ug/g		0.08	25-MAY-21
Surrogate: 1,4-Difluorobenzene			114.0		%		50-140	25-MAY-21
Surrogate: 4-Bromofluorobenzene			114.4		%		50-140	25-MAY-21
WG3537846-5	MS	WG3537846-3						
Benzene			119.7		%		60-140	25-MAY-21
Ethylbenzene			108.2		%		60-140	25-MAY-21
m+p-Xylenes			106.8		%		60-140	25-MAY-21
o-Xylene			117.5		%		60-140	25-MAY-21
Toluene			120.3		%		60-140	25-MAY-21
EC-WT		Soil						
Batch	R5462399							
WG3539020-4	DUP	WG3539020-3						
Conductivity		0.223	0.219		mS/cm	1.8	20	21-MAY-21
WG3539020-2	IRM	WT SAR4						
Conductivity			104.0		%		70-130	21-MAY-21
WG3539238-1	LCS							
Conductivity			103.5		%		90-110	21-MAY-21
WG3539020-1	MB							
Conductivity			<0.0040		mS/cm		0.004	21-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT		Soil						
Batch R5462019								
WG3537420-4	DUP	WG3537420-3						
F1 (C6-C10)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	21-MAY-21
WG3537420-2	LCS							
F1 (C6-C10)			104.4		%		80-120	21-MAY-21
WG3537420-1	MB							
F1 (C6-C10)			<5.0		ug/g		5	21-MAY-21
Surrogate: 3,4-Dichlorotoluene			115.3		%		60-140	21-MAY-21
WG3537420-5	MS	WG3537420-3						
F1 (C6-C10)			120.1		%		60-140	21-MAY-21
Batch R5465822								
WG3537846-4	DUP	WG3537846-3						
F1 (C6-C10)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	25-MAY-21
WG3537846-2	LCS							
F1 (C6-C10)			104.0		%		80-120	25-MAY-21
WG3537846-1	MB							
F1 (C6-C10)			<5.0		ug/g		5	25-MAY-21
Surrogate: 3,4-Dichlorotoluene			116.7		%		60-140	25-MAY-21
WG3537846-5	MS	WG3537846-3						
F1 (C6-C10)			79.0		%		60-140	25-MAY-21
F2-F4-511-WT		Soil						
Batch R5460240								
WG3537274-3	DUP	WG3537274-5						
F2 (C10-C16)		<10	<10	RPD-NA	ug/g	N/A	30	19-MAY-21
F3 (C16-C34)		<50	<50	RPD-NA	ug/g	N/A	30	19-MAY-21
F4 (C34-C50)		<50	<50	RPD-NA	ug/g	N/A	30	19-MAY-21
WG3537274-2	LCS							
F2 (C10-C16)			92.1		%		80-120	19-MAY-21
F3 (C16-C34)			94.2		%		80-120	19-MAY-21
F4 (C34-C50)			90.5		%		80-120	19-MAY-21
WG3537274-1	MB							
F2 (C10-C16)			<10		ug/g		10	19-MAY-21
F3 (C16-C34)			<50		ug/g		50	19-MAY-21
F4 (C34-C50)			<50		ug/g		50	19-MAY-21
Surrogate: 2-Bromobenzotrifluoride			90.8		%		60-140	19-MAY-21
WG3537274-4	MS	WG3537274-5						
F2 (C10-C16)			97.2		%		60-140	19-MAY-21
F3 (C16-C34)			101.2		%		60-140	19-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F2-F4-511-WT	Soil							
Batch R5460240								
WG3537274-4 MS		WG3537274-5						
F4 (C34-C50)			101.3		%		60-140	19-MAY-21
F4G-ADD-511-WT	Soil							
Batch R5460830								
WG3538815-2 LCS								
F4G-SG (GHH-Silica)			73.3		%		60-140	20-MAY-21
WG3538815-1 MB								
F4G-SG (GHH-Silica)			<250		ug/g		250	20-MAY-21
MET-200.2-CCMS-WT	Soil							
Batch R5461837								
WG3539006-2 CRM		WT-SS-2						
Antimony (Sb)			120.5		%		70-130	21-MAY-21
Arsenic (As)			121.2		%		70-130	21-MAY-21
Barium (Ba)			124.5		%		70-130	21-MAY-21
Beryllium (Be)			125.6		%		70-130	21-MAY-21
Boron (B)			11.4		mg/kg		3.5-13.5	21-MAY-21
Cadmium (Cd)			121.5		%		70-130	21-MAY-21
Chromium (Cr)			121.5		%		70-130	21-MAY-21
Cobalt (Co)			120.5		%		70-130	21-MAY-21
Copper (Cu)			117.8		%		70-130	21-MAY-21
Lead (Pb)			123.0		%		70-130	21-MAY-21
Molybdenum (Mo)			109.8		%		70-130	21-MAY-21
Nickel (Ni)			123.3		%		70-130	21-MAY-21
Selenium (Se)			0.16		mg/kg		0-0.34	21-MAY-21
Silver (Ag)			106.6		%		70-130	21-MAY-21
Thallium (Tl)			0.100		mg/kg		0.029-0.129	21-MAY-21
Uranium (U)			123.5		%		70-130	21-MAY-21
Vanadium (V)			122.8		%		70-130	21-MAY-21
Zinc (Zn)			113.9		%		70-130	21-MAY-21
WG3539006-6 DUP		WG3539006-5						
Antimony (Sb)		0.13	0.11		ug/g	17	30	21-MAY-21
Arsenic (As)		4.40	3.68		ug/g	18	30	21-MAY-21
Barium (Ba)		101	87.0		ug/g	15	40	21-MAY-21
Beryllium (Be)		0.65	0.57		ug/g	13	30	21-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
Soil								
Batch R5461837								
WG3539006-6 DUP		WG3539006-5						
Boron (B)		14.3	12.0		ug/g	17	30	21-MAY-21
Cadmium (Cd)		0.110	0.090		ug/g	20	30	21-MAY-21
Chromium (Cr)		23.3	20.3		ug/g	14	30	21-MAY-21
Cobalt (Co)		9.41	8.26		ug/g	13	30	21-MAY-21
Copper (Cu)		19.8	17.0		ug/g	15	30	21-MAY-21
Lead (Pb)		9.41	8.27		ug/g	13	40	21-MAY-21
Molybdenum (Mo)		0.41	0.34		ug/g	20	40	21-MAY-21
Nickel (Ni)		20.4	17.6		ug/g	15	30	21-MAY-21
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	21-MAY-21
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	21-MAY-21
Thallium (Tl)		0.122	0.114		ug/g	6.2	30	21-MAY-21
Uranium (U)		0.737	0.584		ug/g	23	30	21-MAY-21
Vanadium (V)		37.0	31.8		ug/g	15	30	21-MAY-21
Zinc (Zn)		65.0	52.2		ug/g	22	30	21-MAY-21
WG3539006-4 LCS								
Antimony (Sb)			117.2		%		80-120	21-MAY-21
Arsenic (As)			115.2		%		80-120	21-MAY-21
Barium (Ba)			117.7		%		80-120	21-MAY-21
Beryllium (Be)			112.6		%		80-120	21-MAY-21
Boron (B)			107.0		%		80-120	21-MAY-21
Cadmium (Cd)			114.8		%		80-120	21-MAY-21
Chromium (Cr)			115.8		%		80-120	21-MAY-21
Cobalt (Co)			115.0		%		80-120	21-MAY-21
Copper (Cu)			113.5		%		80-120	21-MAY-21
Lead (Pb)			117.1		%		80-120	21-MAY-21
Molybdenum (Mo)			119.6		%		80-120	21-MAY-21
Nickel (Ni)			115.1		%		80-120	21-MAY-21
Selenium (Se)			114.1		%		80-120	21-MAY-21
Silver (Ag)			118.8		%		80-120	21-MAY-21
Thallium (Tl)			115.5		%		80-120	21-MAY-21
Uranium (U)			116.3		%		80-120	21-MAY-21
Vanadium (V)			118.0		%		80-120	21-MAY-21
Zinc (Zn)			111.8		%		80-120	21-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
	Soil							
Batch	R5461837							
WG3539006-1	MB							
Antimony (Sb)			<0.10		mg/kg		0.1	21-MAY-21
Arsenic (As)			<0.10		mg/kg		0.1	21-MAY-21
Barium (Ba)			<0.50		mg/kg		0.5	21-MAY-21
Beryllium (Be)			<0.10		mg/kg		0.1	21-MAY-21
Boron (B)			<5.0		mg/kg		5	21-MAY-21
Cadmium (Cd)			<0.020		mg/kg		0.02	21-MAY-21
Chromium (Cr)			<0.50		mg/kg		0.5	21-MAY-21
Cobalt (Co)			<0.10		mg/kg		0.1	21-MAY-21
Copper (Cu)			<0.50		mg/kg		0.5	21-MAY-21
Lead (Pb)			<0.50		mg/kg		0.5	21-MAY-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	21-MAY-21
Nickel (Ni)			<0.50		mg/kg		0.5	21-MAY-21
Selenium (Se)			<0.20		mg/kg		0.2	21-MAY-21
Silver (Ag)			<0.10		mg/kg		0.1	21-MAY-21
Thallium (Tl)			<0.050		mg/kg		0.05	21-MAY-21
Uranium (U)			<0.050		mg/kg		0.05	21-MAY-21
Vanadium (V)			<0.20		mg/kg		0.2	21-MAY-21
Zinc (Zn)			<2.0		mg/kg		2	21-MAY-21
MOISTURE-WT								
	Soil							
Batch	R5459585							
WG3536481-3	DUP	L2587135-14						
% Moisture		13.1	13.4		%	2.0	20	19-MAY-21
WG3536481-2	LCS							
% Moisture			100.2		%		90-110	19-MAY-21
WG3536481-1	MB							
% Moisture			<0.25		%		0.25	19-MAY-21
PCB-511-WT								
	Soil							
Batch	R5460996							
WG3537391-3	DUP	WG3537391-5						
Aroclor 1242		<0.010	<0.010	RPD-NA	ug/g	N/A	40	20-MAY-21
Aroclor 1248		<0.010	<0.010	RPD-NA	ug/g	N/A	40	20-MAY-21
Aroclor 1254		<0.010	<0.010	RPD-NA	ug/g	N/A	40	20-MAY-21
Aroclor 1260		<0.010	<0.010	RPD-NA	ug/g	N/A	40	20-MAY-21
WG3537391-2	LCS							



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB-511-WT								
	Soil							
Batch	R5460996							
WG3537391-2	LCS							
Aroclor 1242			104.1		%		60-140	20-MAY-21
Aroclor 1248			113.6		%		60-140	20-MAY-21
Aroclor 1254			115.2		%		60-140	20-MAY-21
Aroclor 1260			123.9		%		60-140	20-MAY-21
WG3537391-1	MB							
Aroclor 1242			<0.010		ug/g		0.01	20-MAY-21
Aroclor 1248			<0.010		ug/g		0.01	20-MAY-21
Aroclor 1254			<0.010		ug/g		0.01	20-MAY-21
Aroclor 1260			<0.010		ug/g		0.01	20-MAY-21
Surrogate: d14-Terphenyl			116.1		%		60-140	20-MAY-21
WG3537391-4	MS	WG3537391-5						
Aroclor 1242			113.2		%		60-140	20-MAY-21
Aroclor 1254			122.9		%		60-140	20-MAY-21
Aroclor 1260			132.7		%		60-140	20-MAY-21
PH-WT								
	Soil							
Batch	R5459154							
WG3536376-1	DUP	L2587580-5						
pH		7.25	7.19	J	pH units	0.06	0.3	18-MAY-21
WG3536700-1	LCS							
pH			6.99		pH units		6.9-7.1	18-MAY-21
SAR-R511-WT								
	Soil							
Batch	R5463020							
WG3539020-4	DUP	WG3539020-3						
Calcium (Ca)		30.4	30.1		mg/L	1.0	30	21-MAY-21
Sodium (Na)		3.57	3.47		mg/L	2.8	30	21-MAY-21
Magnesium (Mg)		6.28	6.20		mg/L	1.3	30	21-MAY-21
WG3539020-2	IRM	WT SAR4						
Calcium (Ca)			111.0		%		70-130	21-MAY-21
Sodium (Na)			95.0		%		70-130	21-MAY-21
Magnesium (Mg)			106.8		%		70-130	21-MAY-21
WG3539020-5	LCS							
Calcium (Ca)			106.3		%		80-120	21-MAY-21
Sodium (Na)			99.8		%		80-120	21-MAY-21
Magnesium (Mg)			101.4		%		80-120	21-MAY-21
WG3539020-1	MB							



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SAR-R511-WT	Soil							
Batch R5463020								
WG3539020-1 MB								
Calcium (Ca)			<0.50		mg/L		0.5	21-MAY-21
Sodium (Na)			<0.50		mg/L		0.5	21-MAY-21
Magnesium (Mg)			<0.50		mg/L		0.5	21-MAY-21
VOC-511-HS-WT	Soil							
Batch R5462019								
WG3537420-4 DUP		WG3537420-3						
1,1,1,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	21-MAY-21
1,1,2,2-Tetrachloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	21-MAY-21
1,1,1-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	21-MAY-21
1,1,2-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	21-MAY-21
1,1-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	21-MAY-21
1,1-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	21-MAY-21
1,2-Dibromoethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	21-MAY-21
1,2-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	21-MAY-21
1,2-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	21-MAY-21
1,2-Dichloropropane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	21-MAY-21
1,3-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	21-MAY-21
1,4-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	21-MAY-21
Acetone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	21-MAY-21
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	21-MAY-21
Bromodichloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	21-MAY-21
Bromoform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	21-MAY-21
Bromomethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	21-MAY-21
Carbon tetrachloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	21-MAY-21
Chlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	21-MAY-21
Chloroform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	21-MAY-21
cis-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	21-MAY-21
cis-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	21-MAY-21
Dibromochloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	21-MAY-21
Dichlorodifluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	21-MAY-21
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	21-MAY-21
n-Hexane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	21-MAY-21
Methylene Chloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	21-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT		Soil						
Batch	R5462019							
WG3537420-4	DUP	WG3537420-3						
MTBE		<0.050	<0.050	RPD-NA	ug/g	N/A	40	21-MAY-21
m+p-Xylenes		<0.030	<0.030	RPD-NA	ug/g	N/A	40	21-MAY-21
Methyl Ethyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	21-MAY-21
Methyl Isobutyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	21-MAY-21
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	21-MAY-21
Styrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	21-MAY-21
Tetrachloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	21-MAY-21
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	21-MAY-21
trans-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	21-MAY-21
trans-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	21-MAY-21
Trichloroethylene		<0.010	<0.010	RPD-NA	ug/g	N/A	40	21-MAY-21
Trichlorofluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	21-MAY-21
Vinyl chloride		<0.020	<0.020	RPD-NA	ug/g	N/A	40	21-MAY-21
WG3537420-2	LCS							
1,1,1,2-Tetrachloroethane			113.5		%		60-130	21-MAY-21
1,1,2,2-Tetrachloroethane			105.5		%		60-130	21-MAY-21
1,1,1-Trichloroethane			110.1		%		60-130	21-MAY-21
1,1,2-Trichloroethane			107.5		%		60-130	21-MAY-21
1,1-Dichloroethane			122.1		%		60-130	21-MAY-21
1,1-Dichloroethylene			104.5		%		60-130	21-MAY-21
1,2-Dibromoethane			103.9		%		70-130	21-MAY-21
1,2-Dichlorobenzene			113.0		%		70-130	21-MAY-21
1,2-Dichloroethane			109.1		%		60-130	21-MAY-21
1,2-Dichloropropane			111.8		%		70-130	21-MAY-21
1,3-Dichlorobenzene			115.5		%		70-130	21-MAY-21
1,4-Dichlorobenzene			108.2		%		70-130	21-MAY-21
Acetone			117.7		%		60-140	21-MAY-21
Benzene			107.8		%		70-130	21-MAY-21
Bromodichloromethane			116.2		%		50-140	21-MAY-21
Bromoform			114.2		%		70-130	21-MAY-21
Bromomethane			103.4		%		50-140	21-MAY-21
Carbon tetrachloride			105.6		%		70-130	21-MAY-21
Chlorobenzene			112.9		%		70-130	21-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT		Soil						
Batch	R5462019							
WG3537420-2	LCS							
Chloroform			114.5		%		70-130	21-MAY-21
cis-1,2-Dichloroethylene			115.8		%		70-130	21-MAY-21
cis-1,3-Dichloropropene			106.2		%		70-130	21-MAY-21
Dibromochloromethane			100.4		%		60-130	21-MAY-21
Dichlorodifluoromethane			78.0		%		50-140	21-MAY-21
Ethylbenzene			105.4		%		70-130	21-MAY-21
n-Hexane			99.3		%		70-130	21-MAY-21
Methylene Chloride			117.0		%		70-130	21-MAY-21
MTBE			108.9		%		70-130	21-MAY-21
m+p-Xylenes			108.6		%		70-130	21-MAY-21
Methyl Ethyl Ketone			99.7		%		60-140	21-MAY-21
Methyl Isobutyl Ketone			100.6		%		60-140	21-MAY-21
o-Xylene			112.9		%		70-130	21-MAY-21
Styrene			106.7		%		70-130	21-MAY-21
Tetrachloroethylene			102.5		%		60-130	21-MAY-21
Toluene			104.5		%		70-130	21-MAY-21
trans-1,2-Dichloroethylene			110.4		%		60-130	21-MAY-21
trans-1,3-Dichloropropene			109.2		%		70-130	21-MAY-21
Trichloroethylene			103.8		%		60-130	21-MAY-21
Trichlorofluoromethane			99.3		%		50-140	21-MAY-21
Vinyl chloride			103.1		%		60-140	21-MAY-21
WG3537420-1	MB							
1,1,1,2-Tetrachloroethane			<0.050		ug/g		0.05	21-MAY-21
1,1,2,2-Tetrachloroethane			<0.050		ug/g		0.05	21-MAY-21
1,1,1-Trichloroethane			<0.050		ug/g		0.05	21-MAY-21
1,1,2-Trichloroethane			<0.050		ug/g		0.05	21-MAY-21
1,1-Dichloroethane			<0.050		ug/g		0.05	21-MAY-21
1,1-Dichloroethylene			<0.050		ug/g		0.05	21-MAY-21
1,2-Dibromoethane			<0.050		ug/g		0.05	21-MAY-21
1,2-Dichlorobenzene			<0.050		ug/g		0.05	21-MAY-21
1,2-Dichloroethane			<0.050		ug/g		0.05	21-MAY-21
1,2-Dichloropropane			<0.050		ug/g		0.05	21-MAY-21
1,3-Dichlorobenzene			<0.050		ug/g		0.05	21-MAY-21
1,4-Dichlorobenzene			<0.050		ug/g		0.05	21-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT								
	Soil							
Batch	R5462019							
WG3537420-1	MB							
Acetone			<0.50		ug/g		0.5	21-MAY-21
Benzene			<0.0068		ug/g		0.0068	21-MAY-21
Bromodichloromethane			<0.050		ug/g		0.05	21-MAY-21
Bromoform			<0.050		ug/g		0.05	21-MAY-21
Bromomethane			<0.050		ug/g		0.05	21-MAY-21
Carbon tetrachloride			<0.050		ug/g		0.05	21-MAY-21
Chlorobenzene			<0.050		ug/g		0.05	21-MAY-21
Chloroform			<0.050		ug/g		0.05	21-MAY-21
cis-1,2-Dichloroethylene			<0.050		ug/g		0.05	21-MAY-21
cis-1,3-Dichloropropene			<0.030		ug/g		0.03	21-MAY-21
Dibromochloromethane			<0.050		ug/g		0.05	21-MAY-21
Dichlorodifluoromethane			<0.050		ug/g		0.05	21-MAY-21
Ethylbenzene			<0.018		ug/g		0.018	21-MAY-21
n-Hexane			<0.050		ug/g		0.05	21-MAY-21
Methylene Chloride			<0.050		ug/g		0.05	21-MAY-21
MTBE			<0.050		ug/g		0.05	21-MAY-21
m+p-Xylenes			<0.030		ug/g		0.03	21-MAY-21
Methyl Ethyl Ketone			<0.50		ug/g		0.5	21-MAY-21
Methyl Isobutyl Ketone			<0.50		ug/g		0.5	21-MAY-21
o-Xylene			<0.020		ug/g		0.02	21-MAY-21
Styrene			<0.050		ug/g		0.05	21-MAY-21
Tetrachloroethylene			<0.050		ug/g		0.05	21-MAY-21
Toluene			<0.080		ug/g		0.08	21-MAY-21
trans-1,2-Dichloroethylene			<0.050		ug/g		0.05	21-MAY-21
trans-1,3-Dichloropropene			<0.030		ug/g		0.03	21-MAY-21
Trichloroethylene			<0.010		ug/g		0.01	21-MAY-21
Trichlorofluoromethane			<0.050		ug/g		0.05	21-MAY-21
Vinyl chloride			<0.020		ug/g		0.02	21-MAY-21
Surrogate: 1,4-Difluorobenzene			106.4		%		50-140	21-MAY-21
Surrogate: 4-Bromofluorobenzene			98.4		%		50-140	21-MAY-21
WG3537420-5	MS	WG3537420-3						
1,1,1,2-Tetrachloroethane			130.7		%		50-140	21-MAY-21
1,1,2,2-Tetrachloroethane			136.4		%		50-140	21-MAY-21
1,1,1-Trichloroethane			119.0		%		50-140	21-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch	R5462019							
WG3537420-5 MS		WG3537420-3						
1,1,2-Trichloroethane			131.7		%		50-140	21-MAY-21
1,1-Dichloroethane			118.4		%		50-140	21-MAY-21
1,1-Dichloroethylene			112.8		%		50-140	21-MAY-21
1,2-Dibromoethane			126.7		%		50-140	21-MAY-21
1,2-Dichlorobenzene			128.6		%		50-140	21-MAY-21
1,2-Dichloroethane			125.5		%		50-140	21-MAY-21
1,2-Dichloropropane			129.7		%		50-140	21-MAY-21
1,3-Dichlorobenzene			126.2		%		50-140	21-MAY-21
1,4-Dichlorobenzene			117.5		%		50-140	21-MAY-21
Acetone			142.4	MES	%		50-140	21-MAY-21
Benzene			121.7		%		50-140	21-MAY-21
Bromodichloromethane			131.5		%		50-140	21-MAY-21
Bromoform			145.0	MES	%		50-140	21-MAY-21
Bromomethane			118.3		%		50-140	21-MAY-21
Carbon tetrachloride			112.4		%		50-140	21-MAY-21
Chlorobenzene			130.4		%		50-140	21-MAY-21
Chloroform			127.9		%		50-140	21-MAY-21
cis-1,2-Dichloroethylene			129.3		%		50-140	21-MAY-21
cis-1,3-Dichloropropene			119.9		%		50-140	21-MAY-21
Dibromochloromethane			119.6		%		50-140	21-MAY-21
Dichlorodifluoromethane			105.4		%		50-140	21-MAY-21
Ethylbenzene			122.8		%		50-140	21-MAY-21
n-Hexane			107.1		%		50-140	21-MAY-21
Methylene Chloride			126.7		%		50-140	21-MAY-21
MTBE			127.1		%		50-140	21-MAY-21
m+p-Xylenes			122.2		%		50-140	21-MAY-21
Methyl Ethyl Ketone			122.8		%		50-140	21-MAY-21
Methyl Isobutyl Ketone			126.1		%		50-140	21-MAY-21
o-Xylene			133.4		%		50-140	21-MAY-21
Styrene			128.1		%		50-140	21-MAY-21
Tetrachloroethylene			117.4		%		50-140	21-MAY-21
Toluene			121.8		%		50-140	21-MAY-21
trans-1,2-Dichloroethylene			114.4		%		50-140	21-MAY-21



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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT								
	Soil							
Batch	R5462019							
WG3537420-5 MS		WG3537420-3						
trans-1,3-Dichloropropene			129.5		%		50-140	21-MAY-21
Trichloroethylene			112.5		%		50-140	21-MAY-21
Trichlorofluoromethane			109.1		%		50-140	21-MAY-21
Vinyl chloride			122.1		%		50-140	21-MAY-21

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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9
Contact: JEN LAMBKE

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
J	Duplicate results and limits are expressed in terms of absolute difference.
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

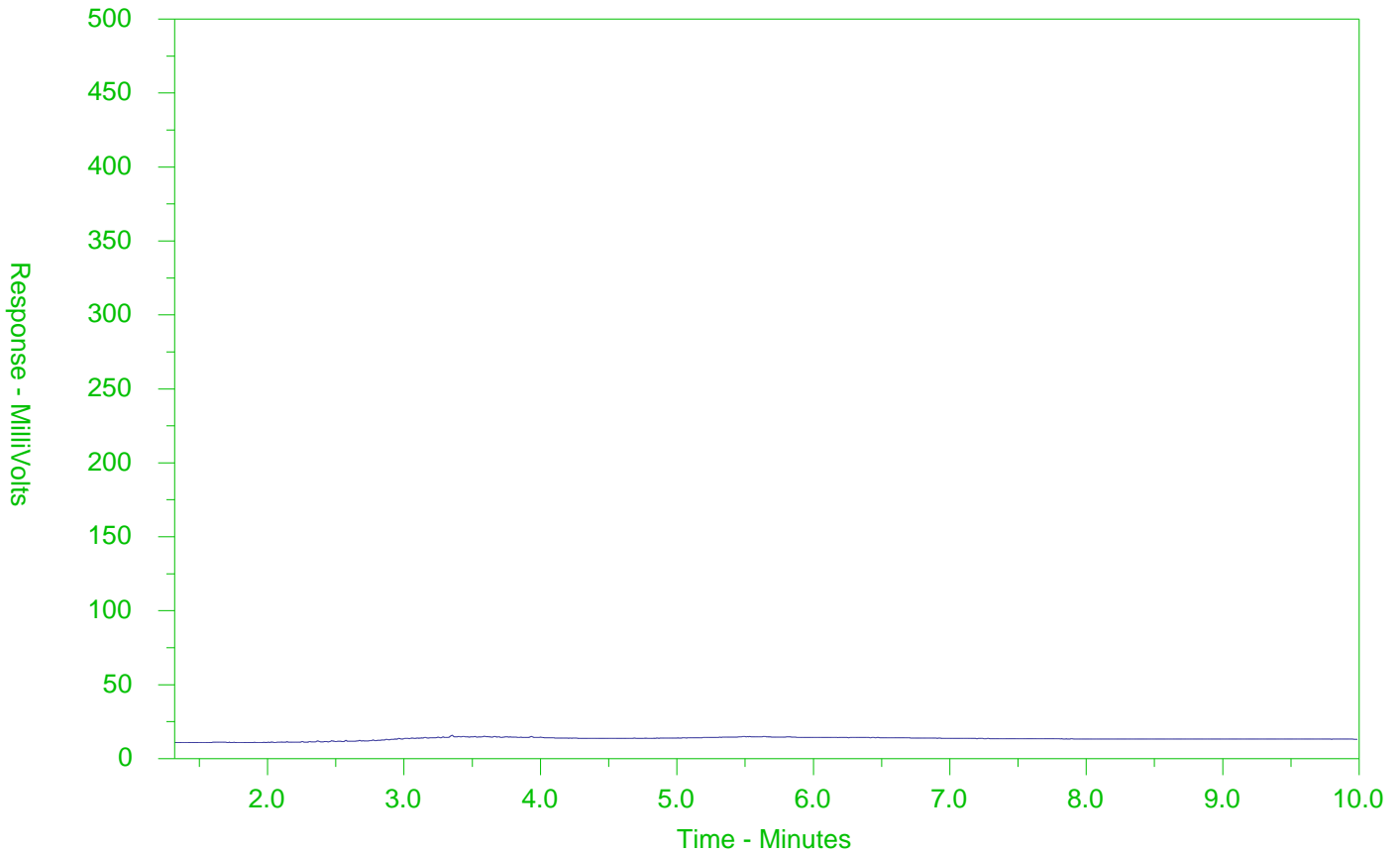
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2587890-3
 Client Sample ID: BH130-21 SS2 2.5-3.5FT



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
← Gasoline →			← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

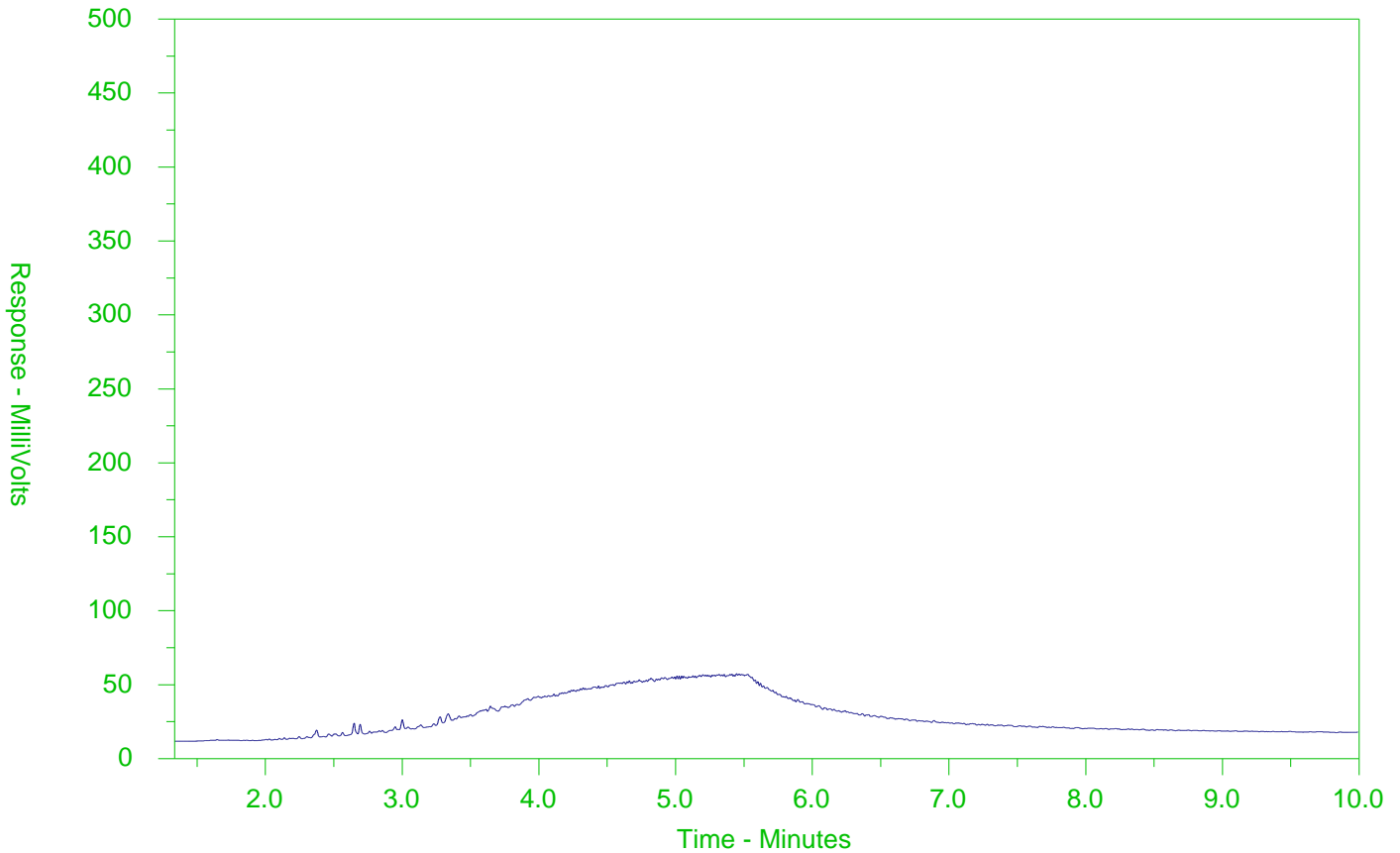
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2587890-5
 Client Sample ID: BH131-21 SS2 2.5-3.5FT



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
← Gasoline →			← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

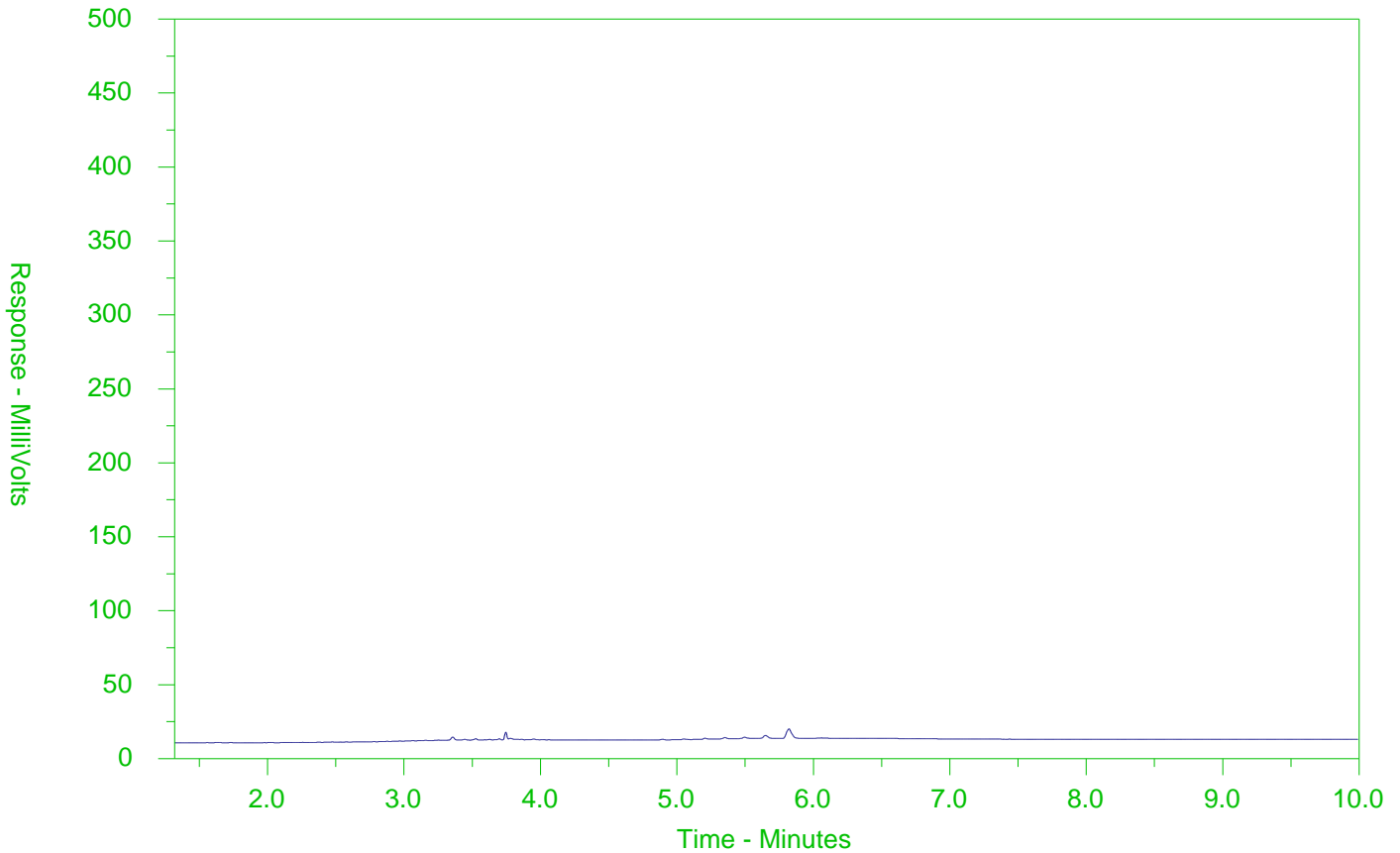
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2587890-7
 Client Sample ID: BH132-21 SS2 2.5-4.5FT



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
← Gasoline →			← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

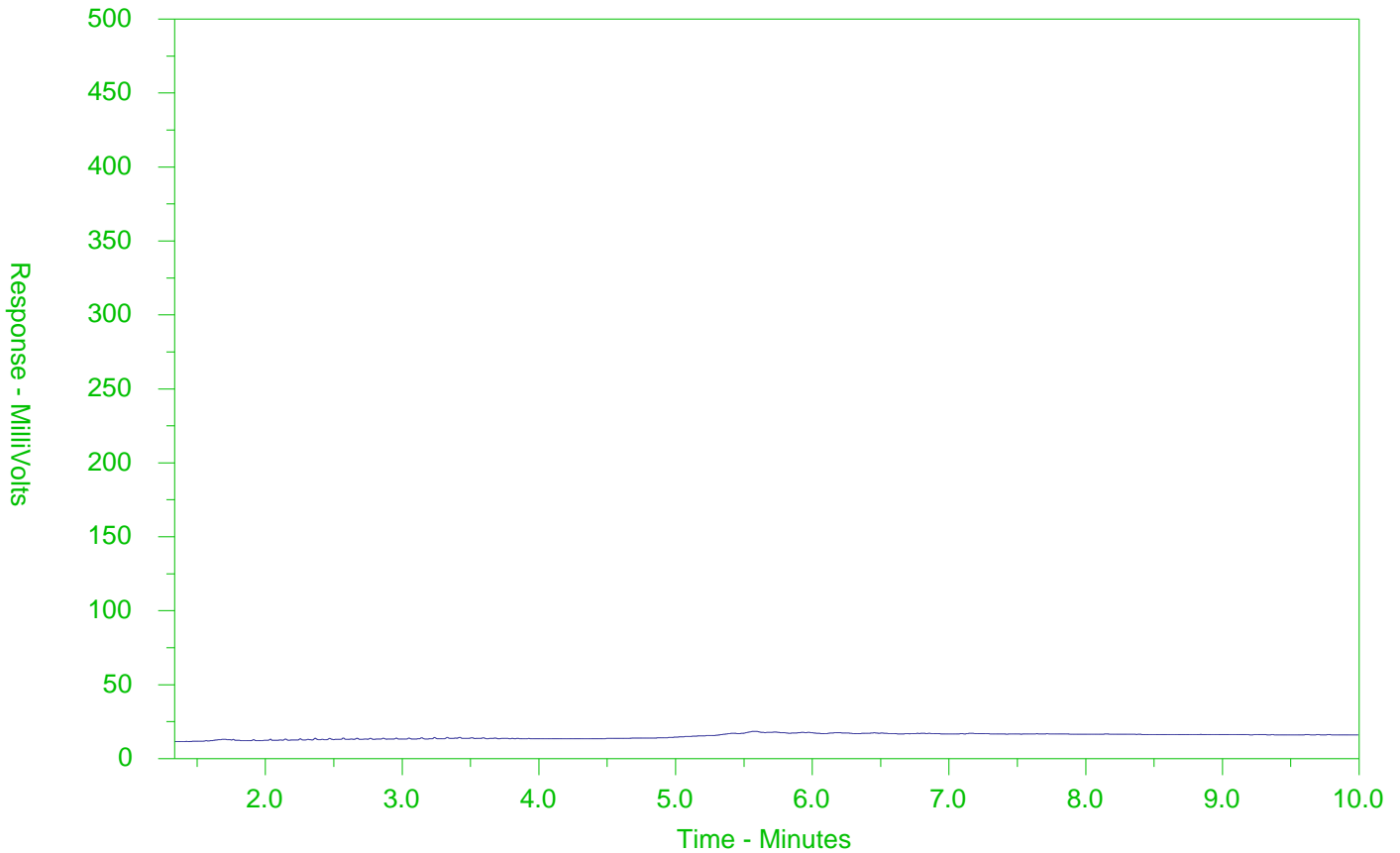
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2587890-9
 Client Sample ID: BH132-21 SS4 7.5-9.5FT



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
← Gasoline →			← Motor Oils/Lube Oils/Grease →		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.



ALS Environmental

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Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878



L2587890-COFC

Number: 17 -

Page 1 of 2 Site J

JLF

Report To Contact and company name below will appear on the final report		Report Format / Distribution			Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)																	
Company: MTE		Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL)			Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply																	
Contact: Jen Lambke		Quality Control (QC) Report with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			PRIORITY (Business Days)	4 day [P4-20%] <input type="checkbox"/>		EMERGENCY	1 Business day [E - 100%] <input type="checkbox"/>													
Phone: 519-502-3268		<input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked				3 day [P3-25%] <input type="checkbox"/>			Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] <input type="checkbox"/>													
Company address below will appear on the final report		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX				2 day [P2-50%] <input type="checkbox"/>																
Street: 520 Bingham Centre Drive		Email 1 or Fax: j.lambke@mte85.com			Date and Time Required for all E&P TATs:				dd-mmm-yy hh:mm													
City/Province: Kitchener		Email 2: jball@mte85.com			For tests that can not be performed according to the service level selected, you will be contacted.																	
Postal Code:		Email 3:			Analysis Request																	
Invoice To		Invoice Distribution			NUMBER OF CONTAINERS	Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below							SAMPLES ON HOLD	SUSPECTED HAZARD (see Special instructions)								
Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX				PHC F1 to F4 and BTEX																
Copy of Invoice with Report <input type="checkbox"/> YES <input type="checkbox"/> NO		Email 1 or Fax: j.lambke@mte85.com				PHC F1 to F4 and VOCs																
Company:		Email 2:				Metals Scan																
Contact:		Email 3:				Metals Complete																
Project Information		Oil and Gas Required Fields (client use)				PAHs																
ALS Account # / Quote #: Q75730		AFE/Cost Center:				PO#																
Job #: 46995-100		Major/Minor Code:				Routing Code:	SAR & EC															
PO / AFE:		Requisitioner:				pH																
LSD: AP		Location:				PCBs																
ALS Lab Work Order # (lab use only): L2587890		ALS Contact: Emily H		Sampler: Matt D		PHC F2 to F4																
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)			Date (dd-mmm-yy)	Time (hh:mm)	Sample Type																
	BH129-21 GSI 6"-12"			13-05-21	8:30	Soil													X			
	↓ MSPLP 6"-12"			↓	8:35	↓													X			
	BH130-21 GSI 6"-2.5FT			↓	9:30	↓													X			
	↓ SSZ 2.5-3.5FT			↓	9:35	↓													X			
	↓ MSPLP 2.5-3.5FT			↓	9:40	↓													X			
	BH131-21 GSI 6"-2.5FT			↓	10:20	↓													X			
	↓ SSZ 2.5-3.5FT			↓	10:30	↓													X			
	↓ MSPLP 2.5-3.5FT			↓	10:40	↓													X			
	BH132-21 GSI 6"-2.5FT			↓	11:00	Soil													X			
	↓ SSZ 2.5-4.5FT			↓	11:10	↓													X			
	↓ SS3 5-7FT			↓	11:20	↓													X			
Drinking Water (DW) Samples (client use)				Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)				SAMPLE CONDITION AS RECEIVED (lab use only)														
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO				Table 1 Res, Table 3.1 R/P/I, Table 3.1 I/C/C (ESQS, O.Reg. 406/19) - coarse, AND Table 3 I/C/C (SCS, O.Reg. 153/04) - coarse				Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>														
Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO								Ice Packs <input checked="" type="checkbox"/> Ice Cubes <input checked="" type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>														
								Cooling Initiated <input type="checkbox"/>														
								INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C										
												2.6										
SHIPMENT RELEASE (client use)				INITIAL SHIPMENT RECEPTION (lab use only)				FINAL SHIPMENT RECEPTION (lab use only)														
Released by:		Date:		Time:		Received by:		Date:		Time:		Received by:		Date:		Time:						
								05/14/21		11:30		JLF										



ALS Environmental

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Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878



L2587890-COFC

CO Number: 17 -

Page 2 of 2 Site 5

Report To Contact and company name below will appear on the final report		Report Format / Dis			Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)																
Company: MTE		Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL)			Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply					EMERGENCY											
Contact: Jen Lambke		Quality Control (QC) Report with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			4 day [P4-20%] <input type="checkbox"/>		1 Business day [E - 100%] <input type="checkbox"/>														
Phone: 519-502-3268		<input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked			3 day [P3-25%] <input type="checkbox"/>		Same Day, Weekend or Statutory holiday [E2 -200%] <input type="checkbox"/>														
Company address below will appear on the final report		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX			2 day [P2-50%] <input type="checkbox"/>		Same Day, Weekend or Statutory holiday [E2 -200%] <input type="checkbox"/>														
Street: 520 Bingham Centre Drive		Email 1 or Fax: j.lambke@mte85.com			Date and Time Required for all E&P TATs:					dd-mmm-yy hh:mm											
City/Province: Kitchener		Email 2: jball@mte85.com			For tests that can not be performed according to the service level selected, you will be contacted.																
Postal Code:		Email 3:			Analysis Request																
Invoice To		Invoice Distribution			Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below																
Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX																			
Copy of Invoice with Report <input type="checkbox"/> YES <input type="checkbox"/> NO		Email 1 or Fax: j.lambke@mte85.com																			
Company:		Email 2:																			
Contact:		Email 3:																			
Project Information					Oil and Gas Required Fields (client use)																
ALS Account # / Quote #: Q75730					AFE/Cost Center:		PO#														
Job #: 46995-100					Major/Minor Code:		Routing Code:														
PO / AFE:					Requisitioner:																
LSD:					Location:																
ALS Lab Work Order # (lab use only): <u>12587890</u>					ALS Contact: Emily H		Sampler: Matt D														
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)				Date (dd-mmm-yy)	Time (hh:mm)	Sample Type			NUMBER OF CONTAINERS	PHC F1 to F4 and BTEX	PHC F1 to F4 and VOCs	Metals Scan	Metals Complete	PAHs	SAR & EC	pH	PCBs	PHC F2 to F4	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)
	BH 132-21 554 7.5-9.5ft				13-05-21	11:30	Soil														
	↓ MSPLP 2'7"-5ft				↓	12:10	↓														XX
Drinking Water (DW) Samples¹ (client use)					Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)					SAMPLE CONDITION AS RECEIVED (lab use only)											
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO					Table 1 Res, Table 3.1 R/P/I, Table 3.1 I/C/C (ESQS, O.Reg. 406/19) - coarse, AND Table 3 I/C/C (SCS, O.Reg. 153/04) - coarse					Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>											
Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO										Ice Packs <input checked="" type="checkbox"/> Ice Cubes <input checked="" type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>											
										Cooling Initiated <input type="checkbox"/>											
										INITIAL COOLER TEMPERATURES °C											
										FINAL COOLER TEMPERATURES °C											
										2.6											
SHIPMENT RELEASE (client use)					INITIAL SHIPMENT RECEPTION (lab use only)					FINAL SHIPMENT RECEPTION (lab use only)											
Released by:		Date:	Time:	Received by:		Date:	Time:	Received by:		Date:	Time:	Received by:		Date:	Time:	Received by:		Date:	Time:		
								WJ		05/14/21	1130										

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

JUNE 2018 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.



MTE CONSULTANTS INC. (Kitchener)
ATTN: JEN LAMBKE
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9


Date Received: 12-MAY-21
Report Date: 26-MAY-21 13:40 (MT)
Version: FINAL

Client Phone: 519-743-6500

Certificate of Analysis

Lab Work Order #: L2586898
Project P.O. #: NOT SUBMITTED
Job Reference: 46995-100
C of C Numbers:
Legal Site Desc:

Comments: ADDITIONAL 13-MAY-21 15:40
ADDITIONAL 12-MAY-21 17:00



Emily Hansen
Account Manager

[This report shall not be reproduced except in full without the written authority of the Laboratory.]

ADDRESS: 60 Northland Road, Unit 1, Waterloo, ON N2V 2B8 Canada | Phone: +1 519 886 6910 | Fax: +1 519 886 9047
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ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2586898-3	BH124-21 SS3 5-7FT							
Sampled By: MD on 12-MAY-21 @ 08:50								
Matrix: SOIL								
Physical Tests								
Conductivity		0.502		0.0040	mS/cm	25-MAY-21	0.57	1.4
% Moisture		2.42		0.25	%	16-MAY-21		
pH		7.98		0.10	pH units	21-MAY-21		
Saturated Paste Extractables								
SAR		35.5	SAR:M	0.10	SAR	25-MAY-21	*2.4	*12
Calcium (Ca)		0.67		0.50	mg/L	25-MAY-21		
Magnesium (Mg)		<0.50		0.50	mg/L	25-MAY-21		
Sodium (Na)		105		0.50	mg/L	25-MAY-21		
Metals								
Antimony (Sb)		<1.0		1.0	ug/g	25-MAY-21	1.3	40
Arsenic (As)		2.7		1.0	ug/g	25-MAY-21	18	18
Barium (Ba)		12.5		1.0	ug/g	25-MAY-21	220	670
Beryllium (Be)		<0.50		0.50	ug/g	25-MAY-21	2.5	8
Boron (B)		<5.0		5.0	ug/g	25-MAY-21	36	120
Cadmium (Cd)		<0.50		0.50	ug/g	25-MAY-21	1.2	1.9
Chromium (Cr)		7.7		1.0	ug/g	25-MAY-21	70	160
Cobalt (Co)		2.8		1.0	ug/g	25-MAY-21	21	80
Copper (Cu)		14.2		1.0	ug/g	25-MAY-21	92	230
Lead (Pb)		7.0		1.0	ug/g	25-MAY-21	120	120
Molybdenum (Mo)		<1.0		1.0	ug/g	25-MAY-21	2	40
Nickel (Ni)		6.3		1.0	ug/g	25-MAY-21	82	270
Selenium (Se)		<1.0		1.0	ug/g	25-MAY-21	1.5	5.5
Silver (Ag)		<0.20		0.20	ug/g	25-MAY-21	0.5	40
Thallium (Tl)		<0.50		0.50	ug/g	25-MAY-21	1	3.3
Uranium (U)		<1.0		1.0	ug/g	25-MAY-21	2.5	33
Vanadium (V)		14.5		1.0	ug/g	25-MAY-21	86	86
Zinc (Zn)		49.6		5.0	ug/g	25-MAY-21	290	340
Volatile Organic Compounds								
Benzene		<0.0068		0.0068	ug/g	21-MAY-21	0.02	0.034
Ethylbenzene		<0.018		0.018	ug/g	21-MAY-21	0.05	1.9
Toluene		<0.080		0.080	ug/g	21-MAY-21	0.2	7.8
o-Xylene		<0.020		0.020	ug/g	21-MAY-21		
m+p-Xylenes		<0.030		0.030	ug/g	21-MAY-21		
Xylenes (Total)		<0.050		0.050	ug/g	21-MAY-21	0.05	3
Surrogate: 4-Bromofluorobenzene		113.7		50-140	%	21-MAY-21		
Surrogate: 1,4-Difluorobenzene		114.0		50-140	%	21-MAY-21		
Hydrocarbons								
F1 (C6-C10)		<5.0		5.0	ug/g	21-MAY-21	25	25
F1-BTEX		<5.0		5.0	ug/g	21-MAY-21	25	25
F2 (C10-C16)		<10		10	ug/g	18-MAY-21	10	26
F3 (C16-C34)		<50		50	ug/g	18-MAY-21	240	1700
F4 (C34-C50)		<50		50	ug/g	18-MAY-21	120	3300
Total Hydrocarbons (C6-C50)		<72		72	ug/g	21-MAY-21		
Chrom. to baseline at nC50		YES			No Unit	18-MAY-21		
Surrogate: 2-Bromobenzotrifluoride		89.7		60-140	%	18-MAY-21		
Surrogate: 3,4-Dichlorotoluene		114.0		60-140	%	21-MAY-21		

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2586898-8	BH127-21 SS3 5-7FT							
Sampled By: MD on 12-MAY-21 @ 09:50								
Matrix: SOIL								
Physical Tests								
	Conductivity	0.771		0.0040	mS/cm	25-MAY-21	*0.57	1.4
	% Moisture	5.26		0.25	%	16-MAY-21		
Saturated Paste Extractables								
	SAR	36.2	SAR:M	0.10	SAR	25-MAY-21	*2.4	*12
	Calcium (Ca)	1.32		0.50	mg/L	25-MAY-21		
	Magnesium (Mg)	<0.50		0.50	mg/L	25-MAY-21		
	Sodium (Na)	151		0.50	mg/L	25-MAY-21		
Metals								
	Antimony (Sb)	<1.0		1.0	ug/g	25-MAY-21	1.3	40
	Arsenic (As)	2.4		1.0	ug/g	25-MAY-21	18	18
	Barium (Ba)	32.7		1.0	ug/g	25-MAY-21	220	670
	Beryllium (Be)	<0.50		0.50	ug/g	25-MAY-21	2.5	8
	Boron (B)	5.3		5.0	ug/g	25-MAY-21	36	120
	Cadmium (Cd)	<0.50		0.50	ug/g	25-MAY-21	1.2	1.9
	Chromium (Cr)	15.6		1.0	ug/g	25-MAY-21	70	160
	Cobalt (Co)	3.0		1.0	ug/g	25-MAY-21	21	80
	Copper (Cu)	12.9		1.0	ug/g	25-MAY-21	92	230
	Lead (Pb)	20.4		1.0	ug/g	25-MAY-21	120	120
	Molybdenum (Mo)	<1.0		1.0	ug/g	25-MAY-21	2	40
	Nickel (Ni)	6.6		1.0	ug/g	25-MAY-21	82	270
	Selenium (Se)	<1.0		1.0	ug/g	25-MAY-21	1.5	5.5
	Silver (Ag)	<0.20		0.20	ug/g	25-MAY-21	0.5	40
	Thallium (Tl)	<0.50		0.50	ug/g	25-MAY-21	1	3.3
	Uranium (U)	<1.0		1.0	ug/g	25-MAY-21	2.5	33
	Vanadium (V)	15.5		1.0	ug/g	25-MAY-21	86	86
	Zinc (Zn)	53.9		5.0	ug/g	25-MAY-21	290	340
Volatile Organic Compounds								
	Benzene	<0.0068		0.0068	ug/g	21-MAY-21	0.02	0.034
	Ethylbenzene	<0.018		0.018	ug/g	21-MAY-21	0.05	1.9
	Toluene	<0.080		0.080	ug/g	21-MAY-21	0.2	7.8
	o-Xylene	<0.020		0.020	ug/g	21-MAY-21		
	m+p-Xylenes	<0.030		0.030	ug/g	21-MAY-21		
	Xylenes (Total)	<0.050		0.050	ug/g	21-MAY-21	0.05	3
	Surrogate: 4-Bromofluorobenzene	111.3		50-140	%	21-MAY-21		
	Surrogate: 1,4-Difluorobenzene	110.5		50-140	%	21-MAY-21		
Hydrocarbons								
	F1 (C6-C10)	<5.0		5.0	ug/g	21-MAY-21	25	25
	F1-BTEX	<5.0		5.0	ug/g	21-MAY-21	25	25
	F2 (C10-C16)	<10		10	ug/g	18-MAY-21	10	26
	F3 (C16-C34)	79		50	ug/g	18-MAY-21	240	1700
	F4 (C34-C50)	168		50	ug/g	18-MAY-21	*120	3300
	F4G-SG (GHH-Silica)	700		250	ug/g	18-MAY-21	*120	3300
	Total Hydrocarbons (C6-C50)	248		72	ug/g	21-MAY-21		
	Chrom. to baseline at nC50	NO			No Unit	18-MAY-21		
	Surrogate: 2-Bromobenzotrifluoride	86.8		60-140	%	18-MAY-21		
	Surrogate: 3,4-Dichlorotoluene	108.1		60-140	%	21-MAY-21		

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2586898-13	BH128-21 SS2 2.5-4.5FT							
Sampled By: MD on 12-MAY-21 @ 11:20								
Matrix: SOIL								
Physical Tests								
% Moisture		4.06		0.25	%	16-MAY-21		
Metals								
Antimony (Sb)		<1.0		1.0	ug/g	25-MAY-21	1.3	40
Arsenic (As)		2.4		1.0	ug/g	25-MAY-21	18	18
Barium (Ba)		22.0		1.0	ug/g	25-MAY-21	220	670
Beryllium (Be)		<0.50		0.50	ug/g	25-MAY-21	2.5	8
Boron (B)		<5.0		5.0	ug/g	25-MAY-21	36	120
Cadmium (Cd)		<0.50		0.50	ug/g	25-MAY-21	1.2	1.9
Chromium (Cr)		8.0		1.0	ug/g	25-MAY-21	70	160
Cobalt (Co)		2.9		1.0	ug/g	25-MAY-21	21	80
Copper (Cu)		12.8		1.0	ug/g	25-MAY-21	92	230
Lead (Pb)		28.8		1.0	ug/g	25-MAY-21	120	120
Molybdenum (Mo)		<1.0		1.0	ug/g	25-MAY-21	2	40
Nickel (Ni)		5.8		1.0	ug/g	25-MAY-21	82	270
Selenium (Se)		<1.0		1.0	ug/g	25-MAY-21	1.5	5.5
Silver (Ag)		<0.20		0.20	ug/g	25-MAY-21	0.5	40
Thallium (Tl)		<0.50		0.50	ug/g	25-MAY-21	1	3.3
Uranium (U)		<1.0		1.0	ug/g	25-MAY-21	2.5	33
Vanadium (V)		14.7		1.0	ug/g	25-MAY-21	86	86
Zinc (Zn)		51.6		5.0	ug/g	25-MAY-21	290	340
Volatile Organic Compounds								
Benzene		<0.0068		0.0068	ug/g	21-MAY-21	0.02	0.034
Ethylbenzene		<0.018		0.018	ug/g	21-MAY-21	0.05	1.9
Toluene		<0.080		0.080	ug/g	21-MAY-21	0.2	7.8
o-Xylene		<0.020		0.020	ug/g	21-MAY-21		
m+p-Xylenes		<0.030		0.030	ug/g	21-MAY-21		
Xylenes (Total)		<0.050		0.050	ug/g	21-MAY-21	0.05	3
Surrogate: 4-Bromofluorobenzene		114.2		50-140	%	21-MAY-21		
Surrogate: 1,4-Difluorobenzene		113.3		50-140	%	21-MAY-21		
Hydrocarbons								
F1 (C6-C10)		<5.0		5.0	ug/g	21-MAY-21	25	25
F1-BTEX		<5.0		5.0	ug/g	25-MAY-21	25	25
F2 (C10-C16)		<10		10	ug/g	25-MAY-21	10	26
F3 (C16-C34)		<50		50	ug/g	25-MAY-21	240	1700
F4 (C34-C50)		<50		50	ug/g	25-MAY-21	120	3300
Total Hydrocarbons (C6-C50)		<72		72	ug/g	25-MAY-21		
Chrom. to baseline at nC50		YES			No Unit	25-MAY-21		
Surrogate: 2-Bromobenzotrifluoride		90.1		60-140	%	25-MAY-21		
Surrogate: 3,4-Dichlorotoluene		116.2		60-140	%	21-MAY-21		
L2586898-14	BH128-21 SS3 5-7FT							
Sampled By: MD on 12-MAY-21 @ 11:30								
Matrix: SOIL								
Physical Tests								
% Moisture		6.12		0.25	%	16-MAY-21		
Metals								

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits	
Grouping	Analyte						#1	#2
L2586898-14	BH128-21 SS3 5-7FT							
Sampled By: MD on 12-MAY-21 @ 11:30								
Matrix: SOIL								
Metals								
	Antimony (Sb)	<1.0		1.0	ug/g	25-MAY-21	1.3	40
	Arsenic (As)	2.5		1.0	ug/g	25-MAY-21	18	18
	Barium (Ba)	27.9		1.0	ug/g	25-MAY-21	220	670
	Beryllium (Be)	<0.50		0.50	ug/g	25-MAY-21	2.5	8
	Boron (B)	<5.0		5.0	ug/g	25-MAY-21	36	120
	Boron (B), Hot Water Ext.	0.16		0.10	ug/g	25-MAY-21	36	2
	Cadmium (Cd)	<0.50		0.50	ug/g	25-MAY-21	1.2	1.9
	Chromium (Cr)	9.0		1.0	ug/g	25-MAY-21	70	160
	Cobalt (Co)	3.2		1.0	ug/g	25-MAY-21	21	80
	Copper (Cu)	13.1		1.0	ug/g	25-MAY-21	92	230
	Lead (Pb)	19.8		1.0	ug/g	25-MAY-21	120	120
	Mercury (Hg)	0.126		0.0050	ug/g	25-MAY-21	0.27	0.27
	Molybdenum (Mo)	<1.0		1.0	ug/g	25-MAY-21	2	40
	Nickel (Ni)	6.6		1.0	ug/g	25-MAY-21	82	270
	Selenium (Se)	<1.0		1.0	ug/g	25-MAY-21	1.5	5.5
	Silver (Ag)	<0.20		0.20	ug/g	25-MAY-21	0.5	40
	Thallium (Tl)	<0.50		0.50	ug/g	25-MAY-21	1	3.3
	Uranium (U)	<1.0		1.0	ug/g	25-MAY-21	2.5	33
	Vanadium (V)	17.6		1.0	ug/g	25-MAY-21	86	86
	Zinc (Zn)	51.3		5.0	ug/g	25-MAY-21	290	340
Speciated Metals								
	Chromium, Hexavalent	<0.20		0.20	ug/g	19-MAY-21	0.66	8
Volatile Organic Compounds								
	Benzene	<0.0068		0.0068	ug/g	21-MAY-21	0.02	0.034
	Ethylbenzene	<0.018		0.018	ug/g	21-MAY-21	0.05	1.9
	Toluene	<0.080		0.080	ug/g	21-MAY-21	0.2	7.8
	o-Xylene	<0.020		0.020	ug/g	21-MAY-21		
	m+p-Xylenes	<0.030		0.030	ug/g	21-MAY-21		
	Xylenes (Total)	<0.050		0.050	ug/g	21-MAY-21	0.05	3
	Surrogate: 4-Bromofluorobenzene	107.9		50-140	%	21-MAY-21		
	Surrogate: 1,4-Difluorobenzene	107.9		50-140	%	21-MAY-21		
Hydrocarbons								
	F1 (C6-C10)	<5.0		5.0	ug/g	21-MAY-21	25	25
	F1-BTEX	<5.0		5.0	ug/g	25-MAY-21	25	25
	F2 (C10-C16)	<10		10	ug/g	25-MAY-21	10	26
	F3 (C16-C34)	<50		50	ug/g	25-MAY-21	240	1700
	F4 (C34-C50)	<50		50	ug/g	25-MAY-21	120	3300
	Total Hydrocarbons (C6-C50)	<72		72	ug/g	25-MAY-21		
	Chrom. to baseline at nC50	YES			No Unit	25-MAY-21		
	Surrogate: 2-Bromobenzotrifluoride	87.5		60-140	%	25-MAY-21		
	Surrogate: 3,4-Dichlorotoluene	103.4		60-140	%	21-MAY-21		

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Regulation 406/19 - Excess Soils - 17-December-20 = [Suite] - ON-406-T1/T3.1-SOIL-RPIICC/ICC

#1: T1 - Soil - Res/Park/Inst/Ind/Com/Commu Property Use

#2: T3.1 - Volume Independent Soil - Ind/Com/Commu Property Use

Reference Information

Sample Parameter Qualifier key listed:

Qualifier	Description
SAR:M	Reported SAR represents a maximum value. Actual SAR may be lower if both Ca and Mg were detectable.

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference***
B-HWS-R511-WT	Soil	Boron-HWE-O.Reg 153/04 (July 2011)	HW EXTR, EPA 6010B

A dried solid sample is extracted with calcium chloride, the sample undergoes a heating process. After cooling the sample is filtered and analyzed by ICP/OES.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

BTX-511-HS-WT	Soil	BTEX-O.Reg 153/04 (July 2011)	SW846 8260
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BTX is determined by extracting a soil or sediment sample as received with methanol, then analyzing by headspace-GC/MS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

CR-CR6-IC-WT	Soil	Hexavalent Chromium in Soil	SW846 3060A/7199
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This analysis is carried out using procedures adapted from "Test Methods for Evaluating Solid Waste" SW-846, Method 7199, published by the United States Environmental Protection Agency (EPA). The procedure involves analysis for chromium (VI) by ion chromatography using diphenylcarbazide in a sulphuric acid solution.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

EC-WT	Soil	Conductivity (EC)	MOEE E3138
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A representative subsample is tumbled with de-ionized (DI) water. The ratio of water to soil is 2:1 v/w. After tumbling the sample is then analyzed by a conductivity meter.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

F1-F4-511-CALC-WT	Soil	F1-F4 Hydrocarbon Calculated Parameters	CCME CWS-PHC, Pub #1310, Dec 2001-S
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Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

Hydrocarbon results are expressed on a dry weight basis.

In cases where results for both F4 and F4G are reported, the greater of the two results must be used in any application of the CWS PHC guidelines and the gravimetric heavy hydrocarbons cannot be added to the C6 to C50 hydrocarbons.

In samples where BTEX and F1 were analyzed, F1-BTEX represents a value where the sum of Benzene, Toluene, Ethylbenzene and total Xylenes has been subtracted from F1.

In samples where PAHs, F2 and F3 were analyzed, F2-Naphth represents the result where Naphthalene has been subtracted from F2. F3-PAH represents a result where the sum of Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Dibenzo(a,h)anthracene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene has been subtracted from F3.

Unless otherwise qualified, the following quality control criteria have been met for the F1 hydrocarbon range:

1. All extraction and analysis holding times were met.
2. Instrument performance showing response factors for C6 and C10 within 30% of the response factor for toluene.
3. Linearity of gasoline response within 15% throughout the calibration range.

Unless otherwise qualified, the following quality control criteria have been met for the F2-F4 hydrocarbon ranges:

1. All extraction and analysis holding times were met.
2. Instrument performance showing C10, C16 and C34 response factors within 10% of their average.
3. Instrument performance showing the C50 response factor within 30% of the average of the C10, C16 and C34 response factors.
4. Linearity of diesel or motor oil response within 15% throughout the calibration range.

F1-HS-511-WT	Soil	F1-O.Reg 153/04 (July 2011)	E3398/CCME TIER 1-HS
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Fraction F1 is determined by extracting a soil or sediment sample as received with methanol, then analyzing by headspace-GC/FID.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

Reference Information

F2-F4-511-WT Soil F2-F4-O.Reg 153/04 (July 2011) CCME Tier 1

Petroleum Hydrocarbons (F2-F4 fractions) are extracted from soil with 1:1 hexane:acetone using a rotary extractor. Extracts are treated with silica gel to remove polar organic interferences. F2, F3, & F4 are analyzed by GC-FID. F4G-sg is analyzed gravimetrically.

Notes:

1. F2 (C10-C16): Sum of all hydrocarbons that elute between nC10 and nC16.
2. F3 (C16-C34): Sum of all hydrocarbons that elute between nC16 and nC34.
3. F4 (C34-C50): Sum of all hydrocarbons that elute between nC34 and nC50.
4. F4G: Gravimetric Heavy Hydrocarbons
5. F4G-sg: Gravimetric Heavy Hydrocarbons (F4G) after silica gel treatment.
6. Where both F4 (C34-C50) and F4G-sg are reported for a sample, the larger of the two values is used for comparison against the relevant CCME guideline for F4.
7. F4G-sg cannot be added to the C6 to C50 hydrocarbon results to obtain an estimate of total extractable hydrocarbons.
8. This method is validated for use.
9. Data from analysis of validation and quality control samples is available upon request.
10. Reported results are expressed as milligrams per dry kilogram, unless otherwise indicated.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

F4G-ADD-511-WT Soil F4G SG-O.Reg 153/04 (July 2011) MOE DECPH-E3398/CCME TIER 1

F4G, gravimetric analysis, is determined if the chromatogram does not return to baseline at or before C50. A soil sample is extracted with a solvent mix, the solvent is evaporated and the weight of the residue is determined.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

HG-200.2-CVAA-WT Soil Mercury in Soil by CVAAS EPA 200.2/1631E (mod)

Soil samples are digested with nitric and hydrochloric acids, followed by analysis by CVAAS.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

MET-200.2-CCMS-WT Soil Metals in Soil by CRC ICPMS EPA 200.2/6020B (mod)

Soil/sediment is dried, disaggregated, and sieved (2 mm). For tests intended to support Ontario regulations, the <2mm fraction is ground to pass through a 0.355 mm sieve. Strong Acid Leachable Metals in the <2mm fraction are solubilized by heated digestion with nitric and hydrochloric acids. Instrumental analysis is by Collision / Reaction Cell ICPMS.

Limitations: This method is intended to liberate environmentally available metals. Silicate minerals are not solubilized. Some metals may be only partially recovered (matrix dependent), including Al, Ba, Be, Cr, S, Sr, Ti, Tl, V, W, and Zr. Elemental Sulfur may be poorly recovered by this method. Volatile forms of sulfur (e.g. sulfide, H₂S) may be excluded if lost during sampling, storage, or digestion.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011), unless a subset of the Analytical Test Group (ATG) has been requested (the Protocol states that all analytes in an ATG must be reported).

MOISTURE-WT Soil % Moisture CCME PHC in Soil - Tier 1 (mod)

PH-WT Soil pH MOEE E3137A

A minimum 10g portion of the sample is extracted with 20mL of 0.01M calcium chloride solution by shaking for at least 30 minutes. The aqueous layer is separated from the soil and then analyzed using a pH meter and electrode.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

SAR-R511-WT Soil SAR-O.Reg 153/04 (July 2011) SW846 6010C

A dried, disaggregated solid sample is extracted with deionized water, the aqueous extract is separated from the solid, acidified and then analyzed using a ICP/OES. The concentrations of Na, Ca and Mg are reported as per CALA requirements for calculated parameters. These individual parameters are not for comparison to any guideline.

Analysis conducted in accordance with the Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act (July 1, 2011).

XYLENES-SUM-CALC-WT Soil Sum of Xylene Isomer Concentrations CALCULATION

Total xylenes represents the sum of o-xylene and m&p-xylene.

Reference Information

*** ALS test methods may incorporate modifications from specified reference methods to improve performance.

Chain of Custody numbers:

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA		

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guideline limits are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.



Quality Control Report

Workorder: L2586898

Report Date: 26-MAY-21

Page 1 of 8

Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
B-HWS-R511-WT								
	Soil							
Batch	R5468564							
WG3540297-4	DUP	L2587864-4						
Boron (B), Hot Water Ext.		<0.10	<0.10	RPD-NA	ug/g	N/A	30	25-MAY-21
WG3540297-2	IRM	WT SAR4						
Boron (B), Hot Water Ext.			92.4		%		70-130	25-MAY-21
WG3540297-3	LCS							
Boron (B), Hot Water Ext.			99.9		%		70-130	25-MAY-21
WG3540297-1	MB							
Boron (B), Hot Water Ext.			<0.10		ug/g		0.1	25-MAY-21
BTX-511-HS-WT								
	Soil							
Batch	R5461787							
WG3534902-4	DUP	WG3534902-3						
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	21-MAY-21
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	21-MAY-21
m+p-Xylenes		<0.030	<0.030	RPD-NA	ug/g	N/A	40	21-MAY-21
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	21-MAY-21
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	21-MAY-21
WG3534902-2	LCS							
Benzene			98.2		%		70-130	21-MAY-21
Ethylbenzene			100.1		%		70-130	21-MAY-21
m+p-Xylenes			93.8		%		70-130	21-MAY-21
o-Xylene			99.8		%		70-130	21-MAY-21
Toluene			96.7		%		70-130	21-MAY-21
WG3534902-1	MB							
Benzene			<0.0068		ug/g		0.0068	21-MAY-21
Ethylbenzene			<0.018		ug/g		0.018	21-MAY-21
m+p-Xylenes			<0.030		ug/g		0.03	21-MAY-21
o-Xylene			<0.020		ug/g		0.02	21-MAY-21
Toluene			<0.080		ug/g		0.08	21-MAY-21
Surrogate: 1,4-Difluorobenzene			110.5		%		50-140	21-MAY-21
Surrogate: 4-Bromofluorobenzene			112.2		%		50-140	21-MAY-21
WG3534902-5	MS	WG3534902-3						
Benzene			101.0		%		60-140	21-MAY-21
Ethylbenzene			105.0		%		60-140	21-MAY-21
m+p-Xylenes			98.6		%		60-140	21-MAY-21
o-Xylene			104.0		%		60-140	21-MAY-21
Toluene			101.7		%		60-140	21-MAY-21



Quality Control Report

Workorder: L2586898

Report Date: 26-MAY-21

Page 2 of 8

Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CR-CR6-IC-WT		Soil						
Batch	R5459780							
WG3536443-4	CRM	WT-SQC012						
Chromium, Hexavalent			100.6		%		70-130	19-MAY-21
WG3536443-3	DUP	L2587115-1						
Chromium, Hexavalent		<0.20	<0.20	RPD-NA	ug/g	N/A	35	19-MAY-21
WG3536443-2	LCS							
Chromium, Hexavalent			96.9		%		80-120	19-MAY-21
WG3536443-1	MB							
Chromium, Hexavalent			<0.20		ug/g		0.2	19-MAY-21
EC-WT		Soil						
Batch	R5466681							
WG3539684-4	DUP	WG3539684-3						
Conductivity		0.168	0.166		mS/cm	1.0	20	25-MAY-21
WG3539684-2	IRM	WT SAR4						
Conductivity			106.8		%		70-130	25-MAY-21
WG3540588-1	LCS							
Conductivity			101.4		%		90-110	25-MAY-21
WG3539684-1	MB							
Conductivity			<0.0040		mS/cm		0.004	25-MAY-21
F1-HS-511-WT		Soil						
Batch	R5461787							
WG3534902-4	DUP	WG3534902-3						
F1 (C6-C10)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	21-MAY-21
WG3534902-2	LCS							
F1 (C6-C10)			108.0		%		80-120	21-MAY-21
WG3534902-1	MB							
F1 (C6-C10)			<5.0		ug/g		5	21-MAY-21
Surrogate: 3,4-Dichlorotoluene			119.1		%		60-140	21-MAY-21
WG3534902-5	MS	WG3534902-3						
F1 (C6-C10)			104.5		%		60-140	21-MAY-21
F2-F4-511-WT		Soil						
Batch	R5459258							
WG3536323-3	DUP	WG3536323-5						
F2 (C10-C16)		<10	<10	RPD-NA	ug/g	N/A	30	18-MAY-21
F3 (C16-C34)		<50	<50	RPD-NA	ug/g	N/A	30	18-MAY-21
F4 (C34-C50)		<50	<50	RPD-NA	ug/g	N/A	30	18-MAY-21
WG3536323-2	LCS							
F2 (C10-C16)			106.6		%		80-120	18-MAY-21



Quality Control Report

Workorder: L2586898

Report Date: 26-MAY-21

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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F2-F4-511-WT		Soil						
Batch	R5459258							
WG3536323-2	LCS							
F3 (C16-C34)			107.1		%		80-120	18-MAY-21
F4 (C34-C50)			104.0		%		80-120	18-MAY-21
WG3536323-1	MB							
F2 (C10-C16)			<10		ug/g		10	18-MAY-21
F3 (C16-C34)			<50		ug/g		50	18-MAY-21
F4 (C34-C50)			<50		ug/g		50	18-MAY-21
Surrogate: 2-Bromobenzotrifluoride			77.6		%		60-140	18-MAY-21
WG3536323-4	MS	WG3536323-5						
F2 (C10-C16)			104.8		%		60-140	18-MAY-21
F3 (C16-C34)			102.7		%		60-140	18-MAY-21
F4 (C34-C50)			100.0		%		60-140	18-MAY-21
Batch	R5465866							
WG3536632-3	DUP	WG3536632-5						
F2 (C10-C16)		<10	<10	RPD-NA	ug/g	N/A	30	25-MAY-21
F3 (C16-C34)		<50	<50	RPD-NA	ug/g	N/A	30	25-MAY-21
F4 (C34-C50)		<50	<50	RPD-NA	ug/g	N/A	30	25-MAY-21
WG3536632-2	LCS							
F2 (C10-C16)			96.6		%		80-120	25-MAY-21
F3 (C16-C34)			100.1		%		80-120	25-MAY-21
F4 (C34-C50)			99.5		%		80-120	25-MAY-21
WG3536632-1	MB							
F2 (C10-C16)			<10		ug/g		10	25-MAY-21
F3 (C16-C34)			<50		ug/g		50	25-MAY-21
F4 (C34-C50)			<50		ug/g		50	25-MAY-21
Surrogate: 2-Bromobenzotrifluoride			95.3		%		60-140	25-MAY-21
WG3536632-4	MS	WG3536632-5						
F2 (C10-C16)			93.7		%		60-140	25-MAY-21
F3 (C16-C34)			98.7		%		60-140	25-MAY-21
F4 (C34-C50)			100.2		%		60-140	25-MAY-21
F4G-ADD-511-WT		Soil						
Batch	R5459431							
WG3537073-2	LCS							
F4G-SG (GHH-Silica)			73.6		%		60-140	18-MAY-21
WG3537073-1	MB							
F4G-SG (GHH-Silica)			<250		ug/g		250	18-MAY-21



Quality Control Report

Workorder: L2586898

Report Date: 26-MAY-21

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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-200.2-CVAA-WT		Soil						
Batch	R5465538							
WG3540295-2	CRM	WT-SS-2						
Mercury (Hg)			103.8		%		70-130	25-MAY-21
WG3540295-6	DUP	WG3540295-5						
Mercury (Hg)		0.0070	0.0077		ug/g	9.5	40	25-MAY-21
WG3540295-3	LCS							
Mercury (Hg)			104.0		%		80-120	25-MAY-21
WG3540295-1	MB							
Mercury (Hg)			<0.0050		mg/kg		0.005	25-MAY-21
MET-200.2-CCMS-WT		Soil						
Batch	R5466856							
WG3539551-9	CRM	WT-SS-2						
Antimony (Sb)			101.4		%		70-130	25-MAY-21
Arsenic (As)			109.9		%		70-130	25-MAY-21
Barium (Ba)			109.1		%		70-130	25-MAY-21
Beryllium (Be)			90.7		%		70-130	25-MAY-21
Boron (B)			7.9		mg/kg		3.5-13.5	25-MAY-21
Cadmium (Cd)			106.4		%		70-130	25-MAY-21
Chromium (Cr)			103.3		%		70-130	25-MAY-21
Cobalt (Co)			96.7		%		70-130	25-MAY-21
Copper (Cu)			107.0		%		70-130	25-MAY-21
Lead (Pb)			106.2		%		70-130	25-MAY-21
Molybdenum (Mo)			105.1		%		70-130	25-MAY-21
Nickel (Ni)			101.7		%		70-130	25-MAY-21
Selenium (Se)			0.13		mg/kg		0-0.34	25-MAY-21
Silver (Ag)			108.6		%		70-130	25-MAY-21
Thallium (Tl)			0.073		mg/kg		0.029-0.129	25-MAY-21
Uranium (U)			95.3		%		70-130	25-MAY-21
Vanadium (V)			101.0		%		70-130	25-MAY-21
Zinc (Zn)			100.3		%		70-130	25-MAY-21
WG3539551-12	DUP	L2587614-4						
Antimony (Sb)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	25-MAY-21
Arsenic (As)		3.3	3.2		ug/g	0.6	30	25-MAY-21
Barium (Ba)		51.1	49.6		ug/g	3.0	40	25-MAY-21
Beryllium (Be)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	25-MAY-21
Boron (B)		6.6	6.2		ug/g	5.0	30	25-MAY-21



Quality Control Report

Workorder: L2586898

Report Date: 26-MAY-21

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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT								
	Soil							
Batch	R5466856							
WG3539551-8	MB							
Antimony (Sb)			<0.10		mg/kg		0.1	25-MAY-21
Arsenic (As)			<0.10		mg/kg		0.1	25-MAY-21
Barium (Ba)			<0.50		mg/kg		0.5	25-MAY-21
Beryllium (Be)			<0.10		mg/kg		0.1	25-MAY-21
Boron (B)			<5.0		mg/kg		5	25-MAY-21
Cadmium (Cd)			<0.020		mg/kg		0.02	25-MAY-21
Chromium (Cr)			<0.50		mg/kg		0.5	25-MAY-21
Cobalt (Co)			<0.10		mg/kg		0.1	25-MAY-21
Copper (Cu)			<0.50		mg/kg		0.5	25-MAY-21
Lead (Pb)			<0.50		mg/kg		0.5	25-MAY-21
Molybdenum (Mo)			<0.10		mg/kg		0.1	25-MAY-21
Nickel (Ni)			<0.50		mg/kg		0.5	25-MAY-21
Selenium (Se)			<0.20		mg/kg		0.2	25-MAY-21
Silver (Ag)			<0.10		mg/kg		0.1	25-MAY-21
Thallium (Tl)			<0.050		mg/kg		0.05	25-MAY-21
Uranium (U)			<0.050		mg/kg		0.05	25-MAY-21
Vanadium (V)			<0.20		mg/kg		0.2	25-MAY-21
Zinc (Zn)			<2.0		mg/kg		2	25-MAY-21
MOISTURE-WT								
	Soil							
Batch	R5458097							
WG3535337-3	DUP	L2586911-2						
% Moisture		4.83	4.75		%	1.7	20	16-MAY-21
WG3535337-2	LCS							
% Moisture			98.9		%		90-110	16-MAY-21
WG3535337-1	MB							
% Moisture			<0.25		%		0.25	16-MAY-21
PH-WT								
	Soil							
Batch	R5462643							
WG3536477-1	DUP	L2587864-5						
pH		7.81	7.84	J	pH units	0.03	0.3	21-MAY-21
WG3539233-1	LCS							
pH			6.97		pH units		6.9-7.1	21-MAY-21
SAR-R511-WT								
	Soil							



Quality Control Report

Workorder: L2586898

Report Date: 26-MAY-21

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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SAR-R511-WT								
	Soil							
Batch	R5466984							
WG3539684-4	DUP	WG3539684-3						
Calcium (Ca)		24.6	24.1		mg/L	2.1	30	25-MAY-21
Sodium (Na)		4.56	4.38		mg/L	4.0	30	25-MAY-21
Magnesium (Mg)		3.00	2.95		mg/L	1.7	30	25-MAY-21
WG3539684-2	IRM	WT SAR4						
Calcium (Ca)			116.4		%		70-130	25-MAY-21
Sodium (Na)			97.0		%		70-130	25-MAY-21
Magnesium (Mg)			115.4		%		70-130	25-MAY-21
WG3539684-5	LCS							
Calcium (Ca)			107.0		%		80-120	25-MAY-21
Sodium (Na)			101.4		%		80-120	25-MAY-21
Magnesium (Mg)			102.4		%		80-120	25-MAY-21
WG3539684-1	MB							
Calcium (Ca)			<0.50		mg/L		0.5	25-MAY-21
Sodium (Na)			<0.50		mg/L		0.5	25-MAY-21
Magnesium (Mg)			<0.50		mg/L		0.5	25-MAY-21

Quality Control Report

Workorder: L2586898

Report Date: 26-MAY-21

Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9
Contact: JEN LAMBKE

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
J	Duplicate results and limits are expressed in terms of absolute difference.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

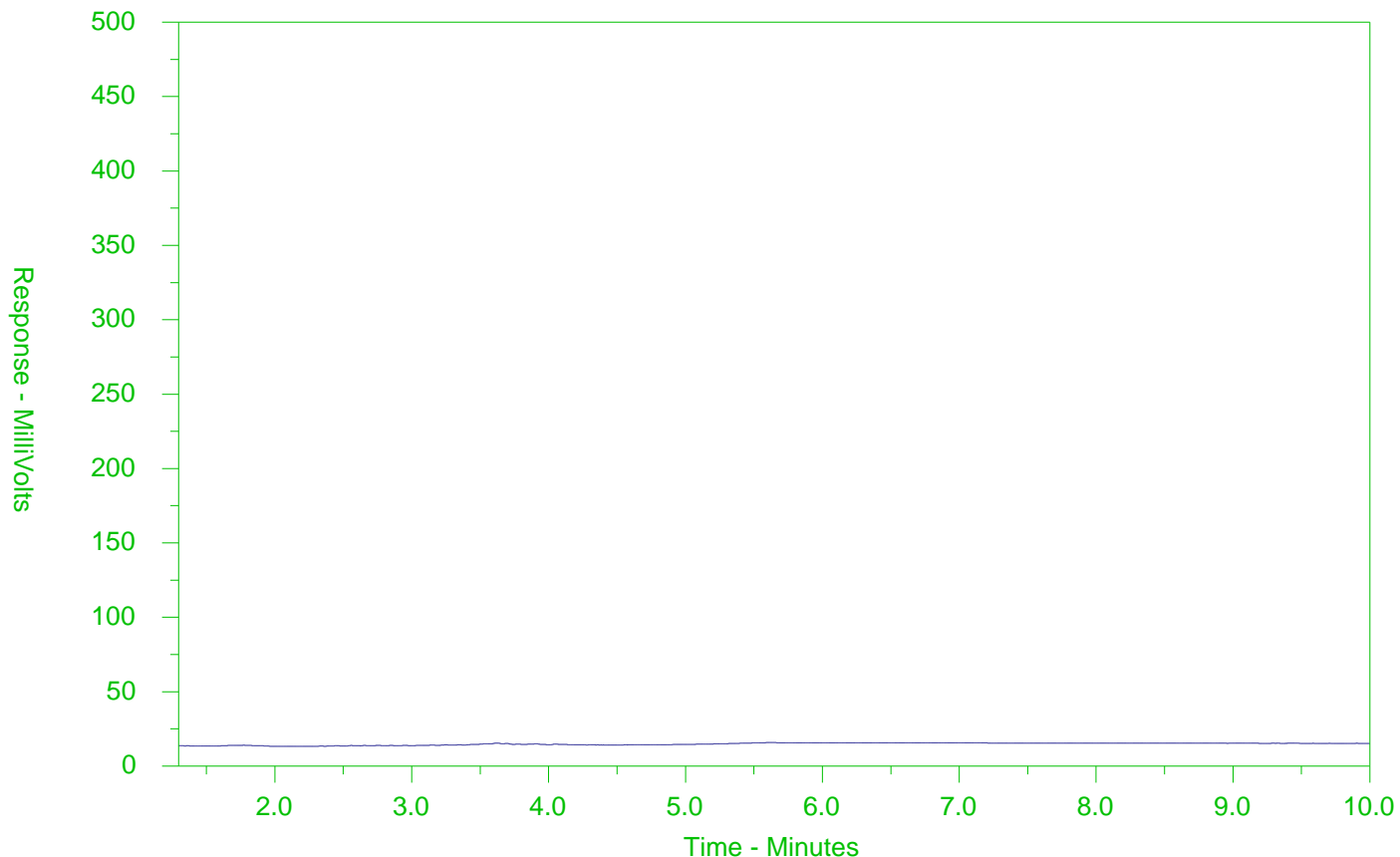
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2586898-3
 Client Sample ID: BH124-21 SS3 5-7FT



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

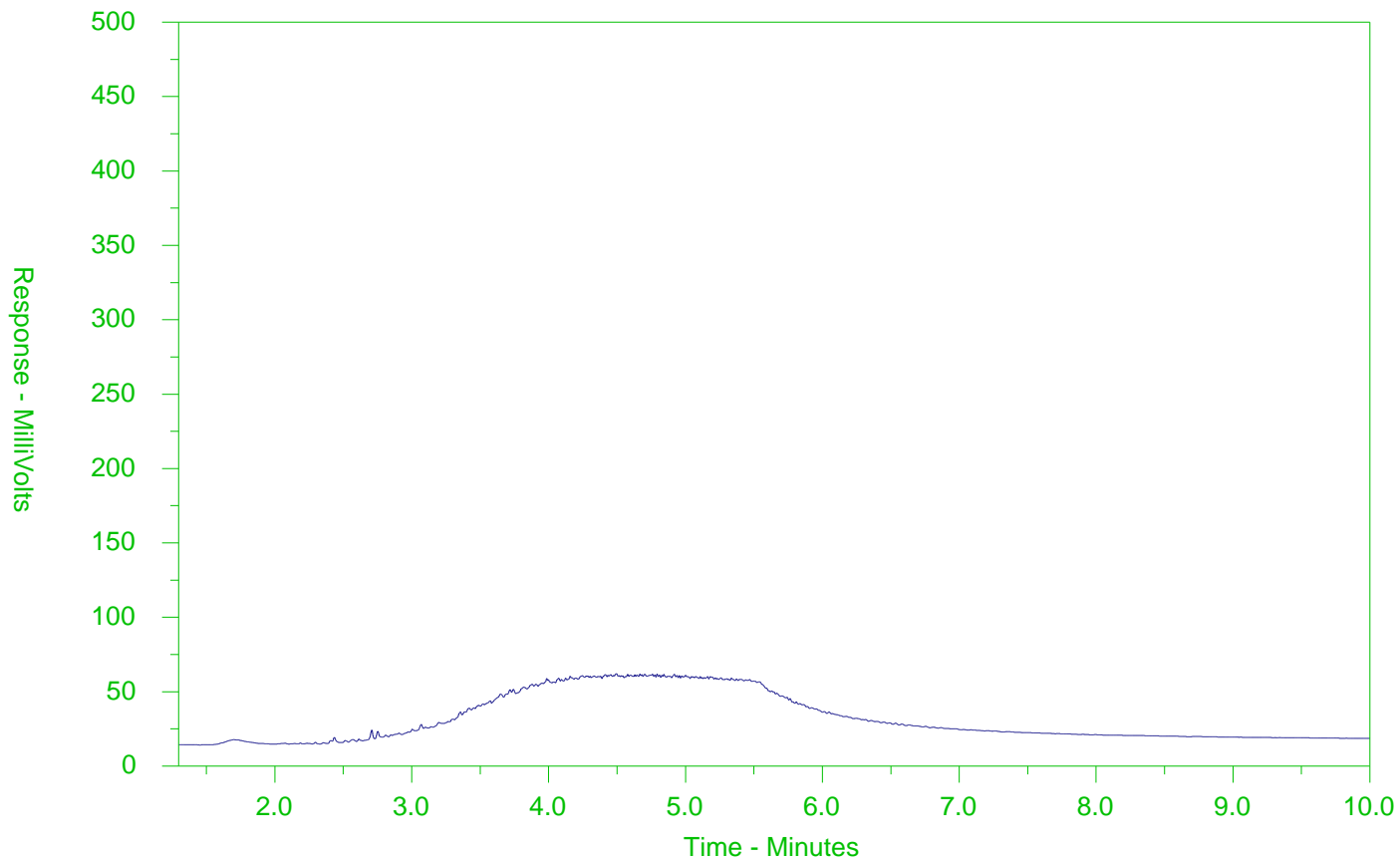
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2586898-8
 Client Sample ID: BH127-21 SS3 5-7FT



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

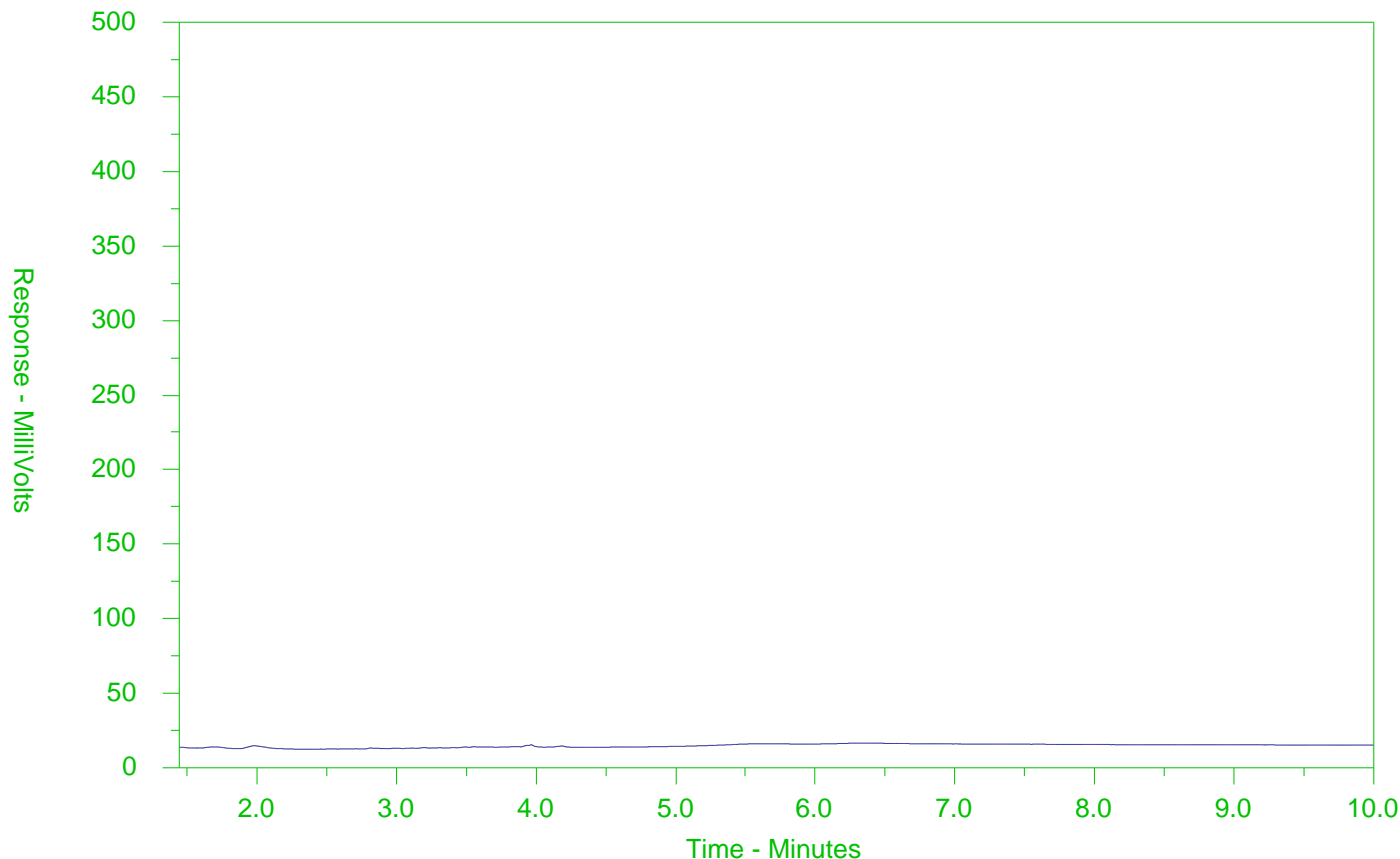
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2586898-13
 Client Sample ID: BH128-21 SS2 2.5-4.5FT



← F2 →		← F3 →		← F4 →	
nC10	nC16		nC34		nC50
174°C	287°C		481°C		575°C
346°F	549°F		898°F		1067°F
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

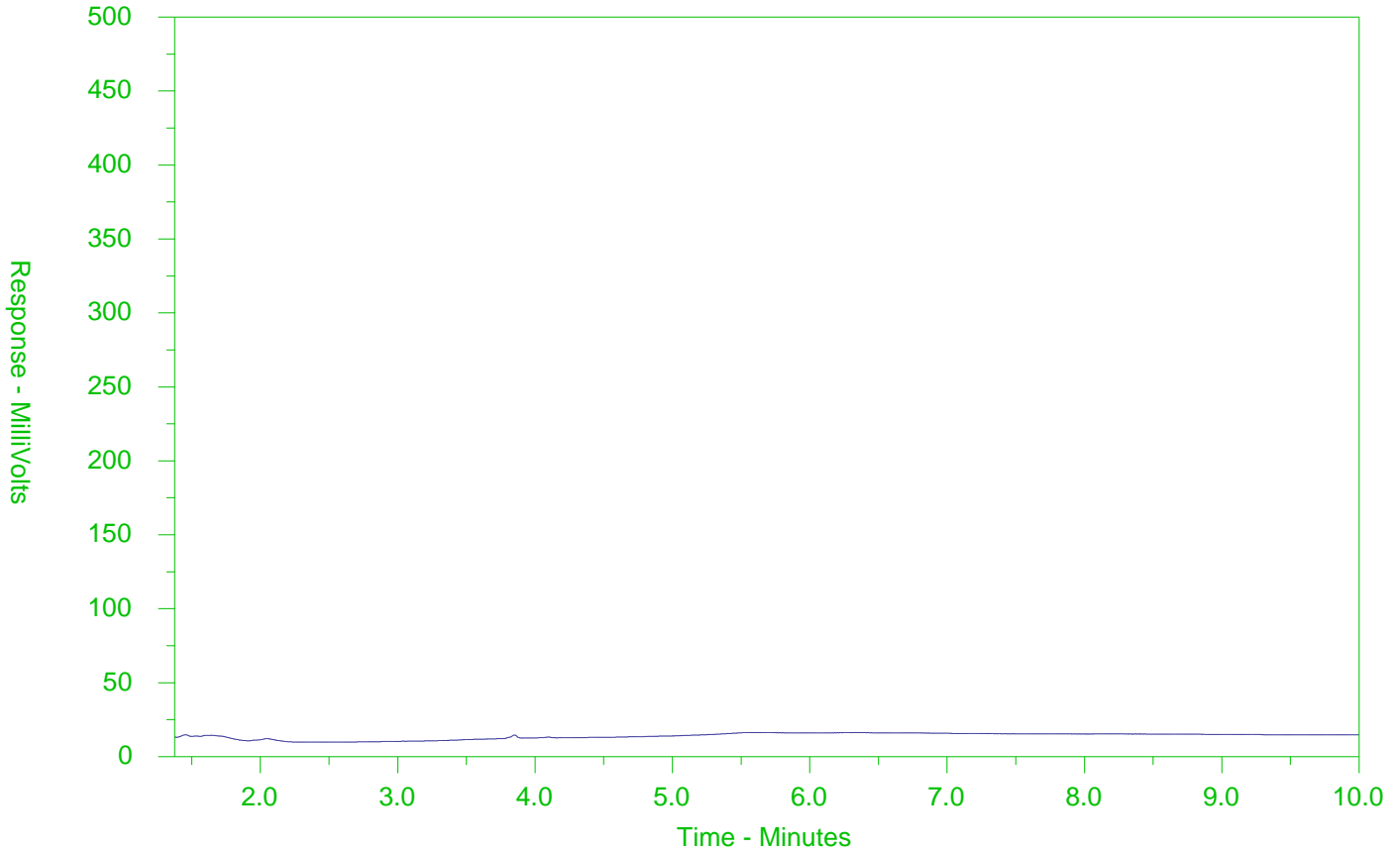
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2586898-14
 Client Sample ID: BH128-21 SS3 5-7FT



← F2 →		← F3 →		← F4 →	
nC10	nC16	nC34	nC50		
174°C	287°C	481°C	575°C		
346°F	549°F	898°F	1067°F		
Gasoline →			← Motor Oils/Lube Oils/Grease		
← Diesel/Jet Fuels →					

The CCME F2-F4 Hydrocarbon Distribution Report (HDR) is intended to assist you in characterizing hydrocarbon products that may be present in your sample.

The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products and four n-alkane hydrocarbon marker compounds. Retention times may vary between samples, but general patterns and distributions will remain similar.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

Note: This chromatogram was produced using GC conditions that are specific to ALS Canada CCME F2-F4 method. Refer to the ALS Canada CCME F2-F4 Hydrocarbon Library for a collection of chromatograms from common reference samples (fuels, oils, etc.). The HDR Library can be found at www.alsglobal.com.



Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878



L2586898-COFC

Number: 17 -

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Sik G+J

Report To Contact and company name below will appear on the final report		Report Format / Distribution		your AM to confirm all E&P TATs (surcharges may apply)		
Company:	MTE	Select Report Format:	<input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL)	Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply		
Contact:	Jen Lambke	Quality Control (QC) Report with Report:	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	EMERGENCY		
Phone:	519-502-3268	<input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked		4 day [P4-20%]	<input type="checkbox"/> 1 Business day [E - 100%]	
Company address below will appear on the final report		Select Distribution:	<input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX	3 day [P3-25%]	<input type="checkbox"/> Same Day, Weekend or Statutory holiday [E2 - 200% (Laboratory opening fees may apply)]	
Street:	520 Bingham Centre Drive	Email 1 or Fax:	jlambke@mte85.com	2 day [P2-50%]	<input type="checkbox"/>	
City/Province:	Kitchener	Email 2:	jball@mte85.com	Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm		
Postal Code:		Email 3:		For tests that can not be performed according to the service level selected, you will be contacted.		
Invoice To	Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Invoice Distribution		Analysis Request		
	Copy of Invoice with Report <input type="checkbox"/> YES <input type="checkbox"/> NO	Select Invoice Distribution:	<input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX	Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below		
Company:		Email 1 or Fax:	jlambke@mte85.com	NUMBER OF CONTAINERS	SAMPLES ON HOLD	
Contact:		Email 2:				SUSPECTED HAZARD (see Special Instructions)
Project Information		Oil and Gas Required Fields (client use)				
ALS Account # / Quote #:	Q75730	AFE/Cost Center:	PO#			
Job #:	46995-100	Major/Minor Code:	Routing Code:			
PO / AFE:		Requisitioner:				
LSD:		Location:				
ALS Lab Work Order # (lab use only):	L2586898	ALS Contact:	Emily H			
		Sampler:	Matt D			
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)			
	BH124-21 GSI 6"-2.5FT	12-05-21	8:30	Soil		
	SS2 2.5-4.5FT		8:40		X	
	SS3 5-7FT		8:50		X	
	SS4 7.5-9.5FT		9:00		X	
	MSPLP 2.5-4.5FT		9:15		X	
	BH127-21 GSI 6"-2.5FT		9:30	Soil	X	
	SS2 2.5-4.5FT		9:40		X	
	SS3 5-7FT		9:50		X	
	SS4 7.5-9.5FT		10:00		X	
	SS5 10-12FT		10:10		X	
	MSPLP 2.7"-5FT		10:20		X	
Drinking Water (DW) Samples¹ (client use)		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)		SAMPLE CONDITION AS RECEIVED (lab use only)		
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO		Table 1 Res, Table 3.1 R/P/I, Table 3.1 I/C/C (ESQS, O.Reg. 406/19) - coarse, AND Table 3 I/C/C (SCS, O.Reg. 153/04) - coarse		Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>		
Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO				Ice Packs <input type="checkbox"/> Ice Cubes <input checked="" type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>		
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)		Cooling Initiated <input checked="" type="checkbox"/>		
Released by:	Date:	Received by:	Date:	INITIAL COOLER TEMPERATURES °C		
				FINAL COOLER TEMPERATURES °C		
					5.1 10.6 4.6	
REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION		WHITE - LABORATORY COPY YELLOW - CLIENT COPY		Date: 5/12/21		
Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.		1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.		Time: 13:50		



Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878



L2586898-COFC

DOC Number: 17 -

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Site G & J

Report To Contact and company name below will appear on the final report		Report Format / Distribution		Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)															
Company:	MTE	Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL)		Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply															
Contact:	Jen Lambke	Quality Control (QC) Report with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		PRIORITY (Business Days)	4 day [P4-20%] <input type="checkbox"/>		EMERGENCY												
Phone:	519-502-3268	<input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked			3 day [P3-25%] <input type="checkbox"/>			1 Business day [E - 100%] <input type="checkbox"/>											
Company address below will appear on the final report		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX			2 day [P2-50%] <input type="checkbox"/>			Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)] <input type="checkbox"/>											
Street:	520 Bingham Centre Drive	Email 1 or Fax: jlambke@mte85.com		Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm															
City/Province:	Kitchener	Email 2: jball@mte85.com		For tests that can not be performed according to the service level selected, you will be contacted.															
Postal Code:		Email 3:		Analysis Request															
Invoice To	Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Invoice Distribution		Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below															
	Copy of Invoice with Report <input type="checkbox"/> YES <input type="checkbox"/> NO	Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX																	
Company:		Email 1 or Fax: jlambke@mte85.com		NUMBER OF CONTAINERS	PHC F1 to F4 and BTEX	PHC F1 to F4 and VOCs	Metals Scan	Metals Complete	PAHs	SAR & EC	PH	PCBs	PHC F2 to F4	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)				
Contact:		Email 2:																	
Project Information		Oil and Gas Required Fields (client use)																	
ALS Account # / Quote #:	Q75730	AFE/Cost Center:	PO#																
Job #:	46995-100	Major/Minor Code:	Routing Code:																
PO / AFE:		Requisitioner:																	
LSD:		Location:																	
ALS Lab Work Order # (lab use only):	L2586898	ALS Contact:	Emily H													Sampler:	Matt D		
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)															Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	
	128-21	G51	6"-2.5 FT													12-05-21	11:40	So.1	
		SS2	2.5-4.5 FT		11:20														
		SS3	5-7 FT		11:30														
		SS4	7.5-9.5 FT		11:40														
		MSPCP	2'-7"-9.0 FT		12:00														
Drinking Water (DW) Samples¹ (client use)		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)				SAMPLE CONDITION AS RECEIVED (lab use only)													
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO		Table 1 Res, Table 3.1 R/P/I, Table 3.1 I/C/C (ESQS, O.Reg. 406/19) - coarse, AND Table 3 I/C/C (SCS, O.Reg. 153/04) - coarse				Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>													
Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO						Ice Packs <input type="checkbox"/> Ice Cubes <input checked="" type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>													
						Cooling Initiated <input checked="" type="checkbox"/>		INITIAL COOLER TEMPERATURES °C		FINAL COOLER TEMPERATURES °C									
								5.1		10.6 4.6									
SHIPMENT RELEASE (client use)				INITIAL SHIPMENT RECEPTION (lab use only)				FINAL SHIPMENT RECEPTION (lab use only)											
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:								
						AA	5/12/21	13:30											



MTE CONSULTANTS INC. (Kitchener)
ATTN: JEN LAMBKE
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9


Date Received: 04-MAY-21
Report Date: 18-MAY-21 09:53 (MT)
Version: FINAL REV. 2

Client Phone: 519-743-6500

Certificate of Analysis

Lab Work Order #: L2583163
Project P.O. #: NOT SUBMITTED
Job Reference: 46995-100
C of C Numbers:
Legal Site Desc:

Comments: ADDITIONAL 12-MAY-21 14:14



Emily Hansen
Account Manager

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ADDRESS: 60 Northland Road, Unit 1, Waterloo, ON N2V 2B8 Canada | Phone: +1 519 886 6910 | Fax: +1 519 886 9047
ALS CANADA LTD Part of the ALS Group An ALS Limited Company



ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte								
L2583163-6	BH117-21 MSPLP 5-6'6"								
Sampled By: MATT D on 30-APR-21 @ 14:20									
Matrix: SOIL									
Sample Preparation									
	Initial pH	9.24		0.10	pH units	14-MAY-21			
	Final pH	5.03		0.10	pH units	14-MAY-21			
TCLP Extractables									
	Cyanide, Weak Acid Diss	<0.10		0.10	mg/L	14-MAY-21	20		
	Fluoride (F)	<10		10	mg/L	14-MAY-21	150.0		
	Nitrate and Nitrite as N	<4.0		4.0	mg/L	14-MAY-21	1000		
	Nitrate-N	<2.0		2.0	mg/L	14-MAY-21			
	Nitrite-N	<2.0		2.0	mg/L	14-MAY-21			
TCLP Metals									
	Arsenic (As)	<0.050		0.050	mg/L	14-MAY-21	2.5		
	Barium (Ba)	1.72		0.50	mg/L	14-MAY-21	100		
	Boron (B)	<2.5		2.5	mg/L	14-MAY-21	500		
	Cadmium (Cd)	<0.0050		0.0050	mg/L	14-MAY-21	0.5		
	Chromium (Cr)	<0.050		0.050	mg/L	14-MAY-21	5.0		
	Lead (Pb)	0.224		0.025	mg/L	14-MAY-21	5.0		
	Mercury (Hg)	<0.00010		0.00010	mg/L	14-MAY-21	0.1		
	Selenium (Se)	<0.025		0.025	mg/L	14-MAY-21	1.0		
	Silver (Ag)	<0.0050		0.0050	mg/L	14-MAY-21	5.0		
	Uranium (U)	<0.25		0.25	mg/L	14-MAY-21	10		
TCLP VOCs									
	1,1-Dichloroethylene	<0.025		0.025	mg/L	18-MAY-21	1.4		
	1,2-Dichlorobenzene	<0.025		0.025	mg/L	18-MAY-21	20.0		
	1,2-Dichloroethane	<0.025		0.025	mg/L	18-MAY-21	0.5		
	1,4-Dichlorobenzene	<0.025		0.025	mg/L	18-MAY-21	0.5		
	Benzene	<0.025		0.025	mg/L	18-MAY-21	0.5		
	Carbon tetrachloride	<0.025		0.025	mg/L	18-MAY-21	0.5		
	Chlorobenzene	<0.025		0.025	mg/L	18-MAY-21	8		
	Chloroform	<0.10		0.10	mg/L	18-MAY-21	10		
	Dichloromethane	<0.50		0.50	mg/L	18-MAY-21	5.0		
	Methyl Ethyl Ketone	<1.0		1.0	mg/L	18-MAY-21	200.0		
	Tetrachloroethylene	<0.025		0.025	mg/L	18-MAY-21	3		
	Trichloroethylene	<0.025		0.025	mg/L	18-MAY-21	5		
	Vinyl chloride	<0.050		0.050	mg/L	18-MAY-21	0.2		
	Surrogate: 4-Bromofluorobenzene	99.7		70-130	%	18-MAY-21			
Volatile Organic Compounds									
	Surrogate: 1,4-Difluorobenzene	99.9		70-130	%	18-MAY-21			

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Ministry of the Environment, General Waste Control Regulation No. 347/90

#1: Ontario Ministry of the Environment, General Waste Control Regulation No. 347/90

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference***
CN-TCLP-WT	Waste	Cyanide for O. Reg 347	APHA 4500CN I

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fiber filter. The extract is then analyzed using procedures adapted from APHA Method 4500-CN I. "Weak Acid Dissociable Cyanide". Weak Acid Dissociable (WAD) cyanide is determined by in-line sample distillation with final determination by colourimetric analysis.

F-TCLP-WT	Waste	Fluoride (F) for O. Reg 347	EPA 300.1
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This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fiber filter. The extract is then analyzed using procedures adapted from EPA 300.1 and is analyzed by Ion Chromatography with conductivity and/or UV detection.

HG-TCLP-WT	Waste	Mercury (CVAA) for O.Reg 347	EPA 1631E
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This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter and analysed using atomic absorption spectrophotometry (EPA 1631E).

LEACH-TCLP-WT	Waste	Leachate Procedure for Reg 347	EPA 1311
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Inorganic and Semi-Volatile Organic contaminants are leached from waste samples in strict accordance with US EPA Method 1311, "Toxicity Characteristic Leaching Procedure" (TCLP). Test results are reported in leachate concentration units (normally mg/L).

MET-TCLP-WT	Waste	O.Reg 347 TCLP Leachable Metals	EPA 6020B
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This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter. Instrumental analysis of the digested extract is by collision cell inductively coupled plasma - mass spectrometry (modified from EPA Method 6020B).

N2N3-TCLP-WT	Waste	Nitrate/Nitrite-N for O. Reg 347	EPA 300.1
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This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fiber filter. The extract is then analyzed using procedures adapted from EPA 300.1 and is analyzed by Ion Chromatography with conductivity and/or UV detection.

VOC-TCLP-WT	Waste	VOC for O. Reg 347	SW846 8260
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A sample of waste is leached in a zero headspace extractor at 30–2 rpm for 18–2.0 hours with the appropriate leaching solution. After tumbling the leachate is analyzed directly by headspace technology, followed by GC/MS using internal standard quantitation.

*** ALS test methods may incorporate modifications from specified reference methods to improve performance.

Chain of Custody numbers:

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA		

Reference Information

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guideline limits are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.



Quality Control Report

Workorder: L2583163

Report Date: 18-MAY-21

Page 1 of 5

Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-TCLP-WT		Waste						
Batch R5458649								
WG3534764-3	DUP	L2583163-6						
Cyanide, Weak Acid Diss		<0.10	<0.10	RPD-NA	mg/L	N/A	50	17-MAY-21
WG3534764-2	LCS							
Cyanide, Weak Acid Diss			105.7		%		70-130	14-MAY-21
WG3534764-1	MB							
Cyanide, Weak Acid Diss			<0.10		mg/L		0.1	14-MAY-21
WG3534764-4	MS	L2583163-6						
Cyanide, Weak Acid Diss			104.8		%		50-140	17-MAY-21
F-TCLP-WT		Waste						
Batch R5458766								
WG3535296-3	DUP	L2583163-6						
Fluoride (F)		<10	<10	RPD-NA	mg/L	N/A	30	14-MAY-21
WG3535296-2	LCS							
Fluoride (F)			91.1		%		70-130	14-MAY-21
WG3535296-1	MB							
Fluoride (F)			<10		mg/L		10	14-MAY-21
WG3535296-4	MS	L2583163-6						
Fluoride (F)			97.8		%		50-150	14-MAY-21
HG-TCLP-WT		Waste						
Batch R5457715								
WG3534785-3	DUP	L2586929-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	14-MAY-21
WG3534785-2	LCS							
Mercury (Hg)			109.0		%		70-130	14-MAY-21
WG3534785-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	14-MAY-21
WG3534785-4	MS	L2586929-1						
Mercury (Hg)			102.6		%		50-140	14-MAY-21
MET-TCLP-WT		Waste						
Batch R5458421								
WG3534819-4	DUP	WG3534819-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	14-MAY-21
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	14-MAY-21
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	50	14-MAY-21
Barium (Ba)		0.59	0.60		mg/L	1.6	50	14-MAY-21
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	14-MAY-21
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	14-MAY-21



Quality Control Report

Workorder: L2583163

Report Date: 18-MAY-21

Page 2 of 5

Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT		Waste						
Batch	R5458421							
WG3534819-4	DUP	WG3534819-3						
Lead (Pb)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	14-MAY-21
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	14-MAY-21
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	50	14-MAY-21
WG3534819-2	LCS							
Silver (Ag)			109.2		%		70-130	14-MAY-21
Arsenic (As)			99.4		%		70-130	14-MAY-21
Boron (B)			104.2		%		70-130	14-MAY-21
Barium (Ba)			106.1		%		70-130	14-MAY-21
Cadmium (Cd)			99.1		%		70-130	14-MAY-21
Chromium (Cr)			97.1		%		70-130	14-MAY-21
Lead (Pb)			104.3		%		70-130	14-MAY-21
Selenium (Se)			94.0		%		70-130	14-MAY-21
Uranium (U)			103.7		%		70-130	14-MAY-21
WG3534819-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	14-MAY-21
Arsenic (As)			<0.050		mg/L		0.05	14-MAY-21
Boron (B)			<2.5		mg/L		2.5	14-MAY-21
Barium (Ba)			<0.50		mg/L		0.5	14-MAY-21
Cadmium (Cd)			<0.0050		mg/L		0.005	14-MAY-21
Chromium (Cr)			<0.050		mg/L		0.05	14-MAY-21
Lead (Pb)			<0.025		mg/L		0.025	14-MAY-21
Selenium (Se)			<0.025		mg/L		0.025	14-MAY-21
Uranium (U)			<0.25		mg/L		0.25	14-MAY-21
WG3534819-5	MS	WG3534819-3						
Silver (Ag)			133.3		%		50-140	14-MAY-21
Arsenic (As)			111.8		%		50-140	14-MAY-21
Boron (B)			116.6		%		50-140	14-MAY-21
Barium (Ba)			112.3		%		50-140	14-MAY-21
Cadmium (Cd)			112.2		%		50-140	14-MAY-21
Chromium (Cr)			109.5		%		50-140	14-MAY-21
Lead (Pb)			118.4		%		50-140	14-MAY-21
Selenium (Se)			106.2		%		50-140	14-MAY-21
Uranium (U)			117.1		%		50-140	14-MAY-21
N2N3-TCLP-WT	Waste							



Quality Control Report

Workorder: L2583163

Report Date: 18-MAY-21

Page 3 of 5

Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
N2N3-TCLP-WT		Waste						
Batch	R5458766							
WG3535296-3	DUP	L2583163-6						
Nitrate-N		<2.0	<2.0	RPD-NA	mg/L	N/A	25	14-MAY-21
Nitrite-N		<2.0	<2.0	RPD-NA	mg/L	N/A	25	14-MAY-21
WG3535296-2	LCS							
Nitrate-N			101.2		%		70-130	14-MAY-21
Nitrite-N			99.1		%		70-130	14-MAY-21
WG3535296-1	MB							
Nitrate-N			<2.0		mg/L		2	14-MAY-21
Nitrite-N			<2.0		mg/L		2	14-MAY-21
WG3535296-4	MS	L2583163-6						
Nitrate-N			101.2		%		50-150	14-MAY-21
Nitrite-N			105.2		%		50-150	14-MAY-21
VOC-TCLP-WT		Waste						
Batch	R5458978							
WG3536235-1	LCS							
1,1-Dichloroethylene			104.3		%		70-130	18-MAY-21
1,2-Dichlorobenzene			107.7		%		70-130	18-MAY-21
1,2-Dichloroethane			106.0		%		70-130	18-MAY-21
1,4-Dichlorobenzene			106.1		%		70-130	18-MAY-21
Benzene			103.2		%		70-130	18-MAY-21
Carbon tetrachloride			104.7		%		60-140	18-MAY-21
Chlorobenzene			105.9		%		70-130	18-MAY-21
Chloroform			107.1		%		70-130	18-MAY-21
Dichloromethane			108.6		%		70-130	18-MAY-21
Methyl Ethyl Ketone			116.7		%		50-150	18-MAY-21
Tetrachloroethylene			99.1		%		70-130	18-MAY-21
Trichloroethylene			103.4		%		70-130	18-MAY-21
Vinyl chloride			110.8		%		60-130	18-MAY-21
WG3536235-2	MB							
1,1-Dichloroethylene			<0.025		mg/L		0.025	18-MAY-21
1,2-Dichlorobenzene			<0.025		mg/L		0.025	18-MAY-21
1,2-Dichloroethane			<0.025		mg/L		0.025	18-MAY-21
1,4-Dichlorobenzene			<0.025		mg/L		0.025	18-MAY-21
Benzene			<0.025		mg/L		0.025	18-MAY-21
Carbon tetrachloride			<0.025		mg/L		0.025	18-MAY-21



Quality Control Report

Workorder: L2583163

Report Date: 18-MAY-21

Page 4 of 5

Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-TCLP-WT								
	Waste							
Batch	R5458978							
WG3536235-2	MB							
Chlorobenzene			<0.025		mg/L		0.025	18-MAY-21
Chloroform			<0.10		mg/L		0.1	18-MAY-21
Dichloromethane			<0.50		mg/L		0.5	18-MAY-21
Methyl Ethyl Ketone			<1.0		mg/L		1	18-MAY-21
Tetrachloroethylene			<0.025		mg/L		0.025	18-MAY-21
Trichloroethylene			<0.025		mg/L		0.025	18-MAY-21
Vinyl chloride			<0.050		mg/L		0.05	18-MAY-21
Surrogate: 1,4-Difluorobenzene			100.7		%		70-130	18-MAY-21
Surrogate: 4-Bromofluorobenzene			100.4		%		70-130	18-MAY-21
WG3536235-3	MS	L2587088-2						
1,1-Dichloroethylene			119.9		%		50-140	18-MAY-21
1,2-Dichlorobenzene			120.9		%		50-140	18-MAY-21
1,2-Dichloroethane			108.8		%		50-140	18-MAY-21
1,4-Dichlorobenzene			122.8		%		50-140	18-MAY-21
Benzene			116.6		%		50-140	18-MAY-21
Carbon tetrachloride			125.4		%		50-140	18-MAY-21
Chlorobenzene			119.9		%		50-140	18-MAY-21
Chloroform			120.4		%		50-140	18-MAY-21
Dichloromethane			121.6		%		50-140	18-MAY-21
Methyl Ethyl Ketone			106.3		%		50-140	18-MAY-21
Tetrachloroethylene			120.4		%		50-140	18-MAY-21
Trichloroethylene			122.5		%		50-140	18-MAY-21
Vinyl chloride			116.8		%		50-140	18-MAY-21

Quality Control Report

Workorder: L2583163

Report Date: 18-MAY-21

Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9
Contact: JEN LAMBKE

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Legend:

Limit ALS Control Limit (Data Quality Objectives)
DUP Duplicate
RPD Relative Percent Difference
N/A Not Available
LCS Laboratory Control Sample
SRM Standard Reference Material
MS Matrix Spike
MSD Matrix Spike Duplicate
ADE Average Desorption Efficiency
MB Method Blank
IRM Internal Reference Material
CRM Certified Reference Material
CCV Continuing Calibration Verification
CVS Calibration Verification Standard
LCSD Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.



Chain of Custody (COC) / Analytical Request Form



DC Number: 17 -

www.alsglobal.com

Canada Toll Free: 1 800 668 9878

L2583163-COFC

Page 3 of 3

Day 3 Site D + 148 M

Report To Contact and company name below will appear on the final report		Report Format / Dis:		<input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL) <input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX		Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply EMERGENCY 4 day [P4-20%] <input type="checkbox"/> 3 day [P3-25%] <input type="checkbox"/> 2 day [P2-50%] <input type="checkbox"/> 1 Business day [E - 100%] <input type="checkbox"/> Same Day, Weekend or Statutory holiday [E2 -200%] <input type="checkbox"/> (Laboratory opening fees may apply)	
Company: MTE Contact: Jen Lambke Phone: 519-502-3268 Company address below will appear on the final report Street: 520 Bingemans Centre Drive City/Province: Kitchener Postal Code:		Email 1 or Fax: jlambke@mte85.com Email 2: jball@mte85.com Email 3:		Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm For tests that can not be performed according to the service level selected, you will be contacted.		Analysis Request Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below	
Invoice To Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO Copy of Invoice with Report <input type="checkbox"/> YES <input type="checkbox"/> NO Company: Contact:		Invoice Distribution Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX Email 1 or Fax: jlambke@mte85.com Email 2:		NUMBER OF CONTAINERS PHC F1 to F4 and BTEX PHC F1 to F4 and VOCs Metals Scan Metals Complete PAHs SAR & EC pH PCBs PHC F2 to F4		SAMPLES ON HOLD SUSPECTED HAZARD (see Special Instructions)	
Project Information ALS Account # / Quote #: Q75730 Job #: 46995-100 PO / AFE: LSD:		Oil and Gas Required Fields (client use) AFE/Cost Center: PO# Major/Minor Code: Routing Code: Requisitioner: Location:		ALS Lab Work Order # (lab use only): L2583163 ALS Contact: Emily H Sampler: Matt D		Analysis Request (continued)	
ALS Sample # (lab use only) Sample Identification and/or Coordinates (This description will appear on the report)		Date (dd-mmm-yy)		Time (hh:mm)		Sample Type	
BH118-21 MSPLP 2.5 FT 2'8" I BH117-21 GSI 6"-2.5 FT 30-04-21 1:20 So.1 SS2 2.5-4.5 FT 30-04-21 1:45 So.1 SS3 5-7 FT 1:50 SS4 7.5-9.5 FT 2:00 MSPLP 5-6'6" 2:10 MSPLP 5-6'6" 2:20							
Drinking Water (DW) Samples¹ (client use) Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only) Table 1 Res, Table 3.1 R/P/I, Table 3.1 I/C (ESQS, O.Reg. 406/19) - coarse, AND Table 3 I/C (SCS, O.Reg. 153/04) - coarse		SAMPLE CONDITION AS RECEIVED (lab use only) Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/> Ice Packs <input checked="" type="checkbox"/> Ice Cubes <input checked="" type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/> Cooling Initiated <input type="checkbox"/>		INITIAL COOLER TEMPERATURES °C FINAL COOLER TEMPERATURES °C 1.3 1.8 2.1	
SHIPMENT RELEASE (client use) Released by: Date: Time:		INITIAL SHIPMENT RECEPTION (lab use only) Received by: Date: Time:		FINAL SHIPMENT RECEPTION (lab use only) Received by: Date: 5/4/21 Time: 9:00			



Chain of Custody (COC) / Analytical Request Form



OC Number: 17 -

L2583163-COFC

Page 2 of 3
P-3 Site D + M148

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Report To Contact and company name below will appear on the final report		Report Format / Distribution		Select Service Level Contact your AM to confirm all E&P TATs (surcharges may apply)		
Company:	MTE	Select Report Format:	<input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL)	Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply		
Contact:	Jen Lambke	Quality Control (QC) Report with Report	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Priority [P] 4 day [P4-20%] <input type="checkbox"/> 3 day [P3-25%] <input type="checkbox"/> 2 day [P2-50%] <input type="checkbox"/>		
Phone:	519-502-3268	<input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked		EMERGENCY 1 Business day [E - 100%] <input type="checkbox"/> Same Day, Weekend or Statutory holiday [E2 -200%] (Laboratory opening fees may apply) <input type="checkbox"/>		
Company address below will appear on the final report		Select Distribution:	<input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX	Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm		
Street:	520 Bingham Centre Drive	Email 1 or Fax	jlbmbke@mte85.com	For tests that can not be performed according to the service level selected, you will be contacted.		
City/Province:	Kitchener	Email 2	jball@mte85.com	Analysis Request		
Postal Code:		Email 3		Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below		
Invoice To	Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Invoice Distribution		NUMBER OF CONTAINERS	SAMPLES ON HOLD	
	Copy of Invoice with Report <input type="checkbox"/> YES <input type="checkbox"/> NO	Select Invoice Distribution:	<input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX			PHC F1 to F4 and BTEX PHC F1 to F4 and VOCs Metals Scan Metals Complete PAHs SAR & EC PH PCBs PHC F2 to F4
Company:		Email 1 or Fax	jlbmbke@mte85.com			
Contact:		Email 2				
Project Information		Oil and Gas Required Fields (client use)				
ALS Account # / Quote #:	Q75730	AFE/Cost Center:	PO#			
Job #:	46995-100	Major/Minor Code:	Routing Code:			
PO / AFE:		Requisitioner:				
LSD:		Location:				
ALS Lab Work Order # (lab use only):	12583163	ALS Contact:	Emily H			
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)		Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	
	BH120-21	SS3 5-7 FT	30-04-21	10:30	Soil	
	↓	SS4 7.5-9.5 FT	↓	10:40	↓	
	↓	MSPLP 4-6'6"	↓	10:55	↓	
	BH119-21	GSI 6"-2.5 FT	30-04-21	11:00	Soil	
	↓	SS2 2.5-4.5 FT	↓	11:10	↓	
	↓	SS3 5-7 FT	↓	11:20	↓	
	↓	SS4 7.5-9.5 FT	↓	11:30	↓	
	↓	MSPLP 2'4"-5'	↓	11:45	↓	
	BH118-21	GSI 6"-2.5 FT	30-04-21	12:50	Soil	
	↓	SS2 2.5-4.5 FT	↓	12:55	↓	
	↓	SS3 5-7 FT	↓	1:00	↓	
	↓	SS4 7.5-9.5 FT	↓	1:10	↓	
Drinking Water (DW) Samples (client use)		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)		SAMPLE CONDITION AS RECEIVED (lab use only)		
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO		Table 1 Res, Table 3.1 R/P/I, Table 3.1 I/C/C (ESQS, O.Reg. 406/19) - coarse, AND Table 3 I/C/C (SCS, O.Reg. 153/04) - coarse		Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/> Ice Packs <input checked="" type="checkbox"/> Ice Cubes <input checked="" type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/> Cooling Initiated <input type="checkbox"/>		
Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO				INITIAL COOLER TEMPERATURES °C		
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)		FINAL COOLER TEMPERATURES °C		
Released by:	Date:	Time:	Received by:	Date:	Time:	

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

JUNE 2018 FRONT

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.
1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form.



Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878



L2583163-COFC

COC Number: 17 -

Page 1 of 3
Day 3 site D + 148^M

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Report To Contact and company name below will appear on the final report		Report Format / Distribution			Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply											
Company:	MTE	Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL)			PROBITY (Business Days)		4 day [P4-20%] <input type="checkbox"/>		EMERGENCY		1 Business day [E - 100%] <input type="checkbox"/>					
Contact:	Jen Lambke	Quality Control (QC) Report with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			3 day [P3-25%] <input type="checkbox"/>		2 day [P2-50%] <input type="checkbox"/>		Same Day, Weekend or Statutory holiday [E2 -200%] (Laboratory opening fees may apply) <input type="checkbox"/>							
Phone:	519-502-3268	<input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked			Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX		Date and Time Required for all E&P TATs:		dd-mmm-yy hh:mm							
Company address below will appear on the final report		Email 1 or Fax jlambke@mte85.com			Email 2 iball@mte85.com		Email 3		For tests that can not be performed according to the service level selected, you will be contacted.							
Street:	520 Bingham Centre Drive	Invoice Distribution			Analysis Request											
City/Province:	Kitchener	Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX			Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below											
Postal Code:		Email 1 or Fax jlambke@mte85.com			NUMBER OF CONTAINERS											
Invoice To	Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Email 2			PHC F1 to F4 and BTEX											
Copy of Invoice with Report	<input type="checkbox"/> YES <input type="checkbox"/> NO	Oil and Gas Required Fields (client use)			PHC F1 to F4 and VOCs											
Company:		AFE/Cost Center: PO#			Metals Scan											
Contact:		Major/Minor Code: Routing Code:			Metals Complete											
Project Information		Requisitioner:			PAHs											
ALS Account # / Quote #:	Q75730	Location:			SAR & EC											
Job #:	46995-100	ALS Contact: Emily H			PH											
PO / AFE:		Sampler: Matt D			PCBs											
LSD:		ALS Lab Work Order # (lab use only): L2583103			PHC F2 to F4											
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)			Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	SAMPLES ON HOLD									
	BH 148-Z1 GSI	4" 2' 2"	30-04-21	8:20	Soil	SUSPECTED HAZARD (see Special Instructions)										
	SS2	2.5-4.5 FT		8:25		X										
	SS3	5-7 FT		8:35		X										
	SS4	7.5-9.5 FT		8:45		X										
	MSPLP	2.5-7.5 FT		8:53		X										
	BH 121-Z1 GSI	6" 2 FT	30-04-21	9:30	Soil	X										
	SS2	2.5-4.5 FT		9:35		X										
	SS3	5-7 FT		9:45		X										
	SS4	7.5-9.5 FT		9:50		X										
	MSPLP	2.5-8 FT		9:58		X										
	BH 120-Z1 GSI	6" 2.5 FT	30-04-21	10:15	Soil	X										
	SS2	2.5-4.5 FT		10:20		X										
Drinking Water (DW) Samples (client use)		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)			SAMPLE CONDITION AS RECEIVED (lab use only)											
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO		Table 1 Res, Table 3 1 R/P/I, Table 3 1 I/C/C (ESQS, O.Reg. 406/19) - coarse, AND Table 3 I/C/C (SCS, O.Reg. 153/04) - coarse			Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>											
Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO					Ice Packs <input checked="" type="checkbox"/> Ice Cubes <input checked="" type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>											
SHIPMENT RELEASE (client use)		INITIAL SHIPMENT RECEPTION (lab use only)			Cooling Initiated <input type="checkbox"/>											
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	INITIAL COOLER TEMPERATURES °C				FINAL COOLER TEMPERATURES °C					
							1.3				1.8 2.1					
REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION		WHITE - LABORATORY COPY			YELLOW - CLIENT COPY		5/4/21					9:00				

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy. 1. If any water samples are taken from a Regulated Drinking Water (DW) System, please submit using an Authorized DW COC form. JUNE 2018 FRONT



MTE CONSULTANTS INC. (Kitchener)
ATTN: JEN LAMBKE
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

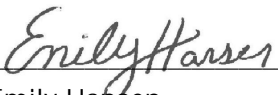
Date Received: 07-MAY-21
Report Date: 26-MAY-21 14:25 (MT)
Version: FINAL REV. 2

Client Phone: 519-743-6500

Certificate of Analysis

Lab Work Order #: L2585314
Project P.O. #: NOT SUBMITTED
Job Reference: 46995-100
C of C Numbers:
Legal Site Desc:

Comments: ADDITIONAL 18-MAY-21 12:57



Emily Hansen
Account Manager

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ADDRESS: 60 Northland Road, Unit 1, Waterloo, ON N2V 2B8 Canada | Phone: +1 519 886 6910 | Fax: +1 519 886 9047
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ANALYTICAL GUIDELINE REPORT

46995-100

Sample Details		Result	Qualifier	D.L.	Units	Analyzed	Guideline Limits		
Grouping	Analyte						#1		
L2585314-3	BH104-21 MSPLP 2'2-5 FT								
Sampled By: CLIENT									
Matrix:									
Sample Preparation									
Initial pH		10.04		0.10	pH units	20-MAY-21			
Final pH		5.53		0.10	pH units	20-MAY-21			
TCLP Extractables									
Benzo(a)pyrene		<0.0010		0.0010	mg/L	21-MAY-21	0.001		
Cyanide, Weak Acid Diss		<5.0		5.0	mg/L	20-MAY-21	20		
Fluoride (F)		<10		10	mg/L	20-MAY-21	150.0		
Nitrate and Nitrite as N		<4.0		4.0	mg/L	20-MAY-21	1000		
Nitrate-N		<2.0		2.0	mg/L	20-MAY-21			
Nitrite-N		<2.0		2.0	mg/L	20-MAY-21			
Surrogate: Chrysene d12		90.75		-	%	21-MAY-21			
TCLP Metals									
Arsenic (As)		<0.050		0.050	mg/L	21-MAY-21	2.5		
Barium (Ba)		<0.50		0.50	mg/L	21-MAY-21	100		
Boron (B)		<2.5		2.5	mg/L	21-MAY-21	500		
Cadmium (Cd)		<0.0050		0.0050	mg/L	21-MAY-21	0.5		
Chromium (Cr)		<0.050		0.050	mg/L	21-MAY-21	5.0		
Lead (Pb)		<0.025		0.025	mg/L	21-MAY-21	5.0		
Mercury (Hg)		<0.00010		0.00010	mg/L	20-MAY-21	0.1		
Selenium (Se)		<0.025		0.025	mg/L	21-MAY-21	1.0		
Silver (Ag)		<0.0050		0.0050	mg/L	21-MAY-21	5.0		
Uranium (U)		<0.25		0.25	mg/L	21-MAY-21	10		
TCLP VOCs									
1,1-Dichloroethylene		<0.025		0.025	mg/L	26-MAY-21	1.4		
1,2-Dichlorobenzene		<0.025		0.025	mg/L	26-MAY-21	20.0		
1,2-Dichloroethane		<0.025		0.025	mg/L	26-MAY-21	0.5		
1,4-Dichlorobenzene		<0.025		0.025	mg/L	26-MAY-21	0.5		
Benzene		<0.025		0.025	mg/L	26-MAY-21	0.5		
Carbon tetrachloride		<0.025		0.025	mg/L	26-MAY-21	0.5		
Chlorobenzene		<0.025		0.025	mg/L	26-MAY-21	8		
Chloroform		<0.10		0.10	mg/L	26-MAY-21	10		
Dichloromethane		<0.50		0.50	mg/L	26-MAY-21	5.0		
Methyl Ethyl Ketone		<1.0		1.0	mg/L	26-MAY-21	200.0		
Tetrachloroethylene		<0.025		0.025	mg/L	26-MAY-21	3		
Trichloroethylene		<0.025		0.025	mg/L	26-MAY-21	5		
Vinyl chloride		<0.050		0.050	mg/L	26-MAY-21	0.2		
Surrogate: 4-Bromofluorobenzene		97.5		70-130	%	26-MAY-21			
Volatile Organic Compounds									
Surrogate: 1,4-Difluorobenzene		101.1		70-130	%	26-MAY-21			

** Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made.

* Analytical result for this parameter exceeds Guideline Limit listed on this report. Guideline Limits applied:

Ontario Ministry of the Environment, General Waste Control Regulation No. 347/90

#1: Ontario Ministry of the Environment, General Waste Control Regulation No. 347/90

Reference Information

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference***
BAP-ONT-TCLP-WT	Waste	Benzo(a)pyrene for O. Reg 347	SW 846 8270-GC-MS on TCLP Leachate
CN-TCLP-WT	Waste	Cyanide for O. Reg 347	APHA 4500CN I

This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fiber filter. The extract is then analyzed using procedures adapted from APHA Method 4500-CN I. "Weak Acid Dissociable Cyanide". Weak Acid Dissociable (WAD) cyanide is determined by in-line sample distillation with final determination by colourimetric analysis.

F-TCLP-WT	Waste	Fluoride (F) for O. Reg 347	EPA 300.1
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This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fiber filter. The extract is then analyzed using procedures adapted from EPA 300.1 and is analyzed by Ion Chromatography with conductivity and/or UV detection.

HG-TCLP-WT	Waste	Mercury (CVAA) for O.Reg 347	EPA 1631E
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This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter and analysed using atomic absorption spectrophotometry (EPA 1631E).

LEACH-TCLP-WT	Waste	Leachate Procedure for Reg 347	EPA 1311
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Inorganic and Semi-Volatile Organic contaminants are leached from waste samples in strict accordance with US EPA Method 1311, "Toxicity Characteristic Leaching Procedure" (TCLP). Test results are reported in leachate concentration units (normally mg/L).

MET-TCLP-WT	Waste	O.Reg 347 TCLP Leachable Metals	EPA 6020B
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This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fibre filter. Instrumental analysis of the digested extract is by collision cell inductively coupled plasma - mass spectrometry (modified from EPA Method 6020B).

N2N3-TCLP-WT	Waste	Nitrate/Nitrite-N for O. Reg 347	EPA 300.1
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This analysis is carried out in accordance with the extraction procedure outlined in "Test Methods for Evaluating Solid Waste - Physical/Chemical Methods Volume 1C" SW-846 EPA Method 1311, published by the United States Environmental Protection Agency (EPA). In summary, the sample is extracted at a 20:1 liquid to solids ratio for 16 to 20 hours using either extraction fluid #1 (glacial acetic acid, water and sodium hydroxide) or extraction fluid #2 (glacial acetic acid), depending on the pH of the original sample. The extract is then filtered through a 0.6 to 0.8 micron glass fiber filter. The extract is then analyzed using procedures adapted from EPA 300.1 and is analyzed by Ion Chromatography with conductivity and/or UV detection.

VOC-TCLP-WT	Waste	VOC for O. Reg 347	SW846 8260
-------------	-------	--------------------	------------

A sample of waste is leached in a zero headspace extractor at 30–2 rpm for 18–2.0 hours with the appropriate leaching solution. After tumbling the leachate is analyzed directly by headspace technology, followed by GC/MS using internal standard quantitation.

*** ALS test methods may incorporate modifications from specified reference methods to improve performance.

Chain of Custody numbers:

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location	Laboratory Definition Code	Laboratory Location
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA		

Reference Information

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.

mg/kg - milligrams per kilogram based on dry weight of sample

mg/kg wwt - milligrams per kilogram based on wet weight of sample

mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight

mg/L - unit of concentration based on volume, parts per million.

< - Less than.

D.L. - The reporting limit.

N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.

UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.

Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, fitness for a particular purpose, or non-infringement. ALS assumes no responsibility for errors or omissions in the information. Guideline limits are not adjusted for the hardness, pH or temperature of the sample (the most conservative values are used). Measurement uncertainty is not applied to test results prior to comparison with specified criteria values.



Quality Control Report

Workorder: L2585314

Report Date: 26-MAY-21

Page 1 of 7

Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
BAP-ONT-TCLP-WT		Waste						
Batch	R5462199							
WG3539003-5	DUP	WG3539003-4						
Benzo(a)pyrene		<0.0010	<0.0010	RPD-NA	mg/L	N/A	50	21-MAY-21
WG3539003-2	LCS							
Benzo(a)pyrene			112.4		%		50-150	21-MAY-21
WG3539003-1	MB							
Benzo(a)pyrene			<0.0010		mg/L		0.001	21-MAY-21
Surrogate: Chrysene d12			95.34		%		-	21-MAY-21
WG3539003-3	MB							
Benzo(a)pyrene			<0.0010		mg/L		0.001	21-MAY-21
Surrogate: Chrysene d12			99.53		%		-	21-MAY-21
WG3539003-6	MS	WG3539003-4						
Benzo(a)pyrene			112.8		%		50-150	21-MAY-21
CN-TCLP-WT		Waste						
Batch	R5463038							
WG3538578-3	DUP	L2585314-3						
Cyanide, Weak Acid Diss		<5.0	<5.0	RPD-NA	mg/L	N/A	50	20-MAY-21
WG3538578-2	LCS							
Cyanide, Weak Acid Diss			106.4		%		70-130	20-MAY-21
WG3538578-1	MB							
Cyanide, Weak Acid Diss			<5.0		mg/L		5	20-MAY-21
WG3538578-4	MS	L2585314-3						
Cyanide, Weak Acid Diss			111.6		%		50-140	20-MAY-21
F-TCLP-WT		Waste						
Batch	R5462640							
WG3538943-3	DUP	L2585314-3						
Fluoride (F)		<10	<10	RPD-NA	mg/L	N/A	30	20-MAY-21
WG3538943-2	LCS							
Fluoride (F)			91.5		%		70-130	20-MAY-21
WG3538943-1	MB							
Fluoride (F)			<10		mg/L		10	20-MAY-21
WG3538943-4	MS	L2585314-3						
Fluoride (F)			91.8		%		50-150	20-MAY-21
HG-TCLP-WT		Waste						
Batch	R5460641							
WG3538332-3	DUP	L2588975-1						
Mercury (Hg)		<0.00010	<0.00010	RPD-NA	mg/L	N/A	50	20-MAY-21
WG3538332-2	LCS							



Quality Control Report

Workorder: L2585314

Report Date: 26-MAY-21

Page 2 of 7

Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-TCLP-WT		Waste						
Batch	R5460641							
WG3538332-2	LCS							
Mercury (Hg)			102.0		%		70-130	20-MAY-21
WG3538332-1	MB							
Mercury (Hg)			<0.00010		mg/L		0.0001	20-MAY-21
WG3538332-4	MS	L2588975-1						
Mercury (Hg)			101.0		%		50-140	20-MAY-21
MET-TCLP-WT		Waste						
Batch	R5462537							
WG3538295-4	DUP	WG3538295-3						
Silver (Ag)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	21-MAY-21
Arsenic (As)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	21-MAY-21
Boron (B)		<2.5	<2.5	RPD-NA	mg/L	N/A	50	21-MAY-21
Barium (Ba)		0.56	0.55		mg/L	1.3	50	21-MAY-21
Cadmium (Cd)		<0.0050	<0.0050	RPD-NA	mg/L	N/A	50	21-MAY-21
Chromium (Cr)		<0.050	<0.050	RPD-NA	mg/L	N/A	50	21-MAY-21
Lead (Pb)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	21-MAY-21
Selenium (Se)		<0.025	<0.025	RPD-NA	mg/L	N/A	50	21-MAY-21
Uranium (U)		<0.25	<0.25	RPD-NA	mg/L	N/A	50	21-MAY-21
WG3538295-2	LCS							
Silver (Ag)			108.0		%		70-130	21-MAY-21
Arsenic (As)			96.8		%		70-130	21-MAY-21
Boron (B)			105.7		%		70-130	21-MAY-21
Barium (Ba)			106.3		%		70-130	21-MAY-21
Cadmium (Cd)			98.0		%		70-130	21-MAY-21
Chromium (Cr)			102.1		%		70-130	21-MAY-21
Lead (Pb)			102.3		%		70-130	21-MAY-21
Selenium (Se)			91.3		%		70-130	21-MAY-21
Uranium (U)			104.0		%		70-130	21-MAY-21
WG3538295-1	MB							
Silver (Ag)			<0.0050		mg/L		0.005	21-MAY-21
Arsenic (As)			<0.050		mg/L		0.05	21-MAY-21
Boron (B)			<2.5		mg/L		2.5	21-MAY-21
Barium (Ba)			<0.50		mg/L		0.5	21-MAY-21
Cadmium (Cd)			<0.0050		mg/L		0.005	21-MAY-21
Chromium (Cr)			<0.050		mg/L		0.05	21-MAY-21



Quality Control Report

Workorder: L2585314

Report Date: 26-MAY-21

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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-TCLP-WT		Waste						
Batch	R5462537							
WG3538295-1	MB							
Lead (Pb)			<0.025		mg/L		0.025	21-MAY-21
Selenium (Se)			<0.025		mg/L		0.025	21-MAY-21
Uranium (U)			<0.25		mg/L		0.25	21-MAY-21
WG3538295-5	MS	WG3538295-3						
Silver (Ag)			142.4	MES	%		50-140	21-MAY-21
Arsenic (As)			115.4		%		50-140	21-MAY-21
Boron (B)			118.5		%		50-140	21-MAY-21
Barium (Ba)			109.3		%		50-140	21-MAY-21
Cadmium (Cd)			112.5		%		50-140	21-MAY-21
Chromium (Cr)			115.5		%		50-140	21-MAY-21
Lead (Pb)			116.4		%		50-140	21-MAY-21
Selenium (Se)			113.1		%		50-140	21-MAY-21
Uranium (U)			113.3		%		50-140	21-MAY-21
N2N3-TCLP-WT		Waste						
Batch	R5462640							
WG3538943-3	DUP	L2585314-3						
Nitrate-N		<2.0	<2.0	RPD-NA	mg/L	N/A	25	20-MAY-21
Nitrite-N		<2.0	<2.0	RPD-NA	mg/L	N/A	25	20-MAY-21
WG3538943-2	LCS							
Nitrate-N			99.9		%		70-130	20-MAY-21
Nitrite-N			101.0		%		70-130	20-MAY-21
WG3538943-1	MB							
Nitrate-N			<2.0		mg/L		2	20-MAY-21
Nitrite-N			<2.0		mg/L		2	20-MAY-21
WG3538943-4	MS	L2585314-3						
Nitrate-N			101.9		%		50-150	20-MAY-21
Nitrite-N			103.6		%		50-150	20-MAY-21
VOC-TCLP-WT		Waste						
Batch	R5467296							
WG3540366-1	LCS							
1,1-Dichloroethylene			90.7		%		70-130	25-MAY-21
1,2-Dichlorobenzene			97.8		%		70-130	25-MAY-21
1,2-Dichloroethane			90.7		%		70-130	25-MAY-21
1,4-Dichlorobenzene			94.3		%		70-130	25-MAY-21
Benzene			85.1				70-130	



Quality Control Report

Workorder: L2585314

Report Date: 26-MAY-21

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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-TCLP-WT		Waste						
Batch	R5467296							
WG3540366-1	LCS							
Benzene			85.1		%		70-130	25-MAY-21
Carbon tetrachloride			87.7		%		60-140	25-MAY-21
Chlorobenzene			89.9		%		70-130	25-MAY-21
Chloroform			89.8		%		70-130	25-MAY-21
Dichloromethane			90.2		%		70-130	25-MAY-21
Methyl Ethyl Ketone			102.0		%		50-150	25-MAY-21
Tetrachloroethylene			96.9		%		70-130	25-MAY-21
Trichloroethylene			86.9		%		70-130	25-MAY-21
Vinyl chloride			94.9		%		60-130	25-MAY-21
WG3540366-2	MB							
1,1-Dichloroethylene			<0.025		mg/L		0.025	25-MAY-21
1,2-Dichlorobenzene			<0.025		mg/L		0.025	25-MAY-21
1,2-Dichloroethane			<0.025		mg/L		0.025	25-MAY-21
1,4-Dichlorobenzene			<0.025		mg/L		0.025	25-MAY-21
Benzene			<0.025		mg/L		0.025	25-MAY-21
Carbon tetrachloride			<0.025		mg/L		0.025	25-MAY-21
Chlorobenzene			<0.025		mg/L		0.025	25-MAY-21
Chloroform			<0.10		mg/L		0.1	25-MAY-21
Dichloromethane			<0.50		mg/L		0.5	25-MAY-21
Methyl Ethyl Ketone			<1.0		mg/L		1	25-MAY-21
Tetrachloroethylene			<0.025		mg/L		0.025	25-MAY-21
Trichloroethylene			<0.025		mg/L		0.025	25-MAY-21
Vinyl chloride			<0.050		mg/L		0.05	25-MAY-21
Surrogate: 1,4-Difluorobenzene			101.9		%		70-130	25-MAY-21
Surrogate: 4-Bromofluorobenzene			98.9		%		70-130	25-MAY-21
WG3540366-4	MB							
1,1-Dichloroethylene			<0.025		mg/L		0.025	26-MAY-21
1,2-Dichlorobenzene			<0.025		mg/L		0.025	26-MAY-21
1,2-Dichloroethane			<0.025		mg/L		0.025	26-MAY-21
1,4-Dichlorobenzene			<0.025		mg/L		0.025	26-MAY-21
Benzene			<0.025		mg/L		0.025	26-MAY-21
Carbon tetrachloride			<0.025		mg/L		0.025	26-MAY-21
Chlorobenzene			<0.025		mg/L		0.025	26-MAY-21
Chloroform			<0.10		mg/L		0.1	26-MAY-21



Quality Control Report

Workorder: L2585314

Report Date: 26-MAY-21

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Client: MTE CONSULTANTS INC. (Kitchener)
 520 BINGEMANS CENTRE DRIVE
 KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-TCLP-WT								
	Waste							
Batch	R5467296							
WG3540366-4 MB								
Dichloromethane			<0.50		mg/L		0.5	26-MAY-21
Methyl Ethyl Ketone			<1.0		mg/L		1	26-MAY-21
Tetrachloroethylene			<0.025		mg/L		0.025	26-MAY-21
Trichloroethylene			<0.025		mg/L		0.025	26-MAY-21
Vinyl chloride			<0.050		mg/L		0.05	26-MAY-21
Surrogate: 1,4-Difluorobenzene			100.7		%		70-130	26-MAY-21
Surrogate: 4-Bromofluorobenzene			99.7		%		70-130	26-MAY-21
WG3540366-5 MB								
1,1-Dichloroethylene			<0.025		mg/L		0.025	26-MAY-21
1,2-Dichlorobenzene			<0.025		mg/L		0.025	26-MAY-21
1,2-Dichloroethane			<0.025		mg/L		0.025	26-MAY-21
1,4-Dichlorobenzene			<0.025		mg/L		0.025	26-MAY-21
Benzene			<0.025		mg/L		0.025	26-MAY-21
Carbon tetrachloride			<0.025		mg/L		0.025	26-MAY-21
Chlorobenzene			<0.025		mg/L		0.025	26-MAY-21
Chloroform			<0.10		mg/L		0.1	26-MAY-21
Dichloromethane			<0.50		mg/L		0.5	26-MAY-21
Methyl Ethyl Ketone			<1.0		mg/L		1	26-MAY-21
Tetrachloroethylene			<0.025		mg/L		0.025	26-MAY-21
Trichloroethylene			<0.025		mg/L		0.025	26-MAY-21
Vinyl chloride			<0.050		mg/L		0.05	26-MAY-21
Surrogate: 1,4-Difluorobenzene			100.4		%		70-130	26-MAY-21
Surrogate: 4-Bromofluorobenzene			95.2		%		70-130	26-MAY-21
WG3540366-3 MS		L2590014-1						
1,1-Dichloroethylene			101.2		%		50-140	26-MAY-21
1,2-Dichlorobenzene			102.9		%		50-140	26-MAY-21
1,2-Dichloroethane			90.4		%		50-140	26-MAY-21
1,4-Dichlorobenzene			107.7		%		50-140	26-MAY-21
Benzene			96.0		%		50-140	26-MAY-21
Carbon tetrachloride			101.8		%		50-140	26-MAY-21
Chlorobenzene			101.1		%		50-140	26-MAY-21
Chloroform			99.9		%		50-140	26-MAY-21
Dichloromethane			94.6		%		50-140	26-MAY-21
Methyl Ethyl Ketone			94.0		%		50-140	26-MAY-21



Quality Control Report

Workorder: L2585314

Report Date: 26-MAY-21

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Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9

Contact: JEN LAMBKE

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-TCLP-WT								
	Waste							
Batch	R5467296							
WG3540366-3 MS		L2590014-1						
Tetrachloroethylene			105.6		%		50-140	26-MAY-21
Trichloroethylene			101.1		%		50-140	26-MAY-21
Vinyl chloride			99.8		%		50-140	26-MAY-21

Quality Control Report

Workorder: L2585314

Report Date: 26-MAY-21

Client: MTE CONSULTANTS INC. (Kitchener)
520 BINGEMANS CENTRE DRIVE
KITCHENER ON N2B 3X9
Contact: JEN LAMBKE

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Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
MES	Data Quality Objective was marginally exceeded (by < 10% absolute) for < 10% of analytes in a Multi-Element Scan / Multi-Parameter Scan (considered acceptable as per OMOE & CCME).
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Hold Time Exceedances:

All test results reported with this submission were conducted within ALS recommended hold times.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.



Chain of Custody (COC) / Analytical Request Form



OC Number: 17 -

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Site A

Canada Toll Free: 1 800 668 9878

L2585314-COFC

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Report To Contact and company name below will appear on the final report		Report Format / Dis.		Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)													
Company:	MTE	Select Report Format: <input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL)		Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply													
Contact:	Jen Lambke	Quality Control (QC) Report with Report <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		PRIORITY (Business Days)	4 day [P4-20%] <input type="checkbox"/>		EMERGENCY										
Phone:	519-502-3268	<input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked			3 day [P3-25%] <input type="checkbox"/>			1 Business day [E - 100%] <input type="checkbox"/>									
Company address below will appear on the final report		Select Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX		2 day [P2-50%] <input type="checkbox"/>		Same Day, Weekend or Statutory holiday [E2 - 200% (Laboratory opening fees may apply)] <input type="checkbox"/>											
Street:	520 Bingham Centre Drive	Email 1 or Fax: jlambe@mte85.com		Date and Time Required for all E&P TATs: dd-mmm-yy hh:mm													
City/Province:	Kitchener	Email 2: jball@mte85.com		For tests that can not be performed according to the service level selected, you will be contacted.													
Postal Code:		Email 3:		Analysis Request													
Invoice To	Same as Report To <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Invoice Distribution		Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below													
	Copy of Invoice with Report <input type="checkbox"/> YES <input type="checkbox"/> NO	Select Invoice Distribution: <input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX		NUMBER OF CONTAINERS	PHC F1 to F4 and BTEX	PHC F1 to F4 and VOCs	Metals Scan	Metals Complete	PAHs	SAR & EC	pH	PCBs	PHC F2 to F4	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)		
Company:		Email 1 or Fax: jlambe@mte85.com															
Contact:		Email 2:															
Project Information		Oil and Gas Required Fields (client use)															
ALS Account # / Quote #:	Q75730	AFE/Cost Center:	PO#														
Job #:	46995-100	Major/Minor Code:	Routing Code:														
PO / AFE:		Requisitioner:															
LSD:		Location:															
ALS Lab Work Order # (lab use only):		ALS Contact:	Emily H													Sampler:	Matt D
ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)													Sample Type	
	BH102-21 554 7.5-9.5 Ft	06-05-21	2:15	S-1													
	↓ MSPLP 11"-2'8"		2:35														
	BH101-21 651 6"-2.5 Ft		3:00														
	↓ SS2 2.5-4.5 Ft		3:10														
	↓ SS3 5-7 Ft		3:20														
	↓ SS4 7.5-9.5 Ft		3:30														
	↓ MSPLP 12"-2'4"		3:40														
Drinking Water (DW) Samples¹ (client use)		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)				SAMPLE CONDITION AS RECEIVED (lab use only)											
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO		Table 1 Res, Table 3.1 R/P/I, Table 3.1 I/C/C (ESQS, O.Reg. 406/19) - coarse, AND Table 3 I/C/C (SCS, O.Reg. 153/04) - coarse				Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>											
Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO						Ice Packs <input type="checkbox"/> Ice Cubes <input checked="" type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>											
						Cooling Initiated <input type="checkbox"/>											
						INITIAL COOLER TEMPERATURES °C			FINAL COOLER TEMPERATURES °C								
						4.8											
SHIPMENT RELEASE (client use)				INITIAL SHIPMENT RECEPTION (lab use only)				FINAL SHIPMENT RECEPTION (lab use only)									
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:						
							08/07/21	1630									

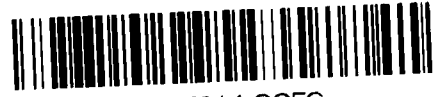
REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY. By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.



Chain of Custody (COC) / Analytical Request Form



DOC Number: 17 -

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S-1-A

Canada Toll Free: 1 800 668 9878

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Report To Contact and company name below will appear on the final report		Report Format / Distribution		Select Service Level Below - Contact your AM to confirm all E&P TATs (surcharges may apply)			
Company:	MTE	Select Report Format:	<input checked="" type="checkbox"/> PDF <input checked="" type="checkbox"/> EXCEL <input checked="" type="checkbox"/> EDD (DIGITAL)	Regular [R] <input checked="" type="checkbox"/> Standard TAT if received by 3 pm - business days - no surcharges apply			
Contact:	Jen Lambke	Quality Control (QC) Report with Report	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	PRIORITY (Business Days)	<input type="checkbox"/> 4 day [P4-20%]	EMERGENCY	<input type="checkbox"/> 1 Business day [E - 100%]
Phone:	519-502-3268	<input checked="" type="checkbox"/> Compare Results to Criteria on Report - provide details below if box checked	<input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX		<input type="checkbox"/> 3 day [P3-25%]		<input type="checkbox"/> Same Day, Weekend or Statutory holiday [E2 -200% (Laboratory opening fees may apply)]
Company address below will appear on the final report		Select Distribution:			<input type="checkbox"/> 2 day [P2-50%]		
Street:	520 Bingham Centre Drive	Email 1 or Fax	jlambke@mte85.com	Date and Time Required for all E&P TATs:		dd-mmm-yy hh:mm	
City/Province:	Kitchener	Email 2	jball@mte85.com	For tests that can not be performed according to the service level selected, you will be contacted.			
Postal Code:		Email 3		Analysis Request			

Invoice To		Invoice Distribution	
Same as Report To	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Select Invoice Distribution:	<input checked="" type="checkbox"/> EMAIL <input type="checkbox"/> MAIL <input type="checkbox"/> FAX
Copy of Invoice with Report	<input type="checkbox"/> YES <input type="checkbox"/> NO	Email 1 or Fax	jlambke@mte85.com
Company:		Email 2	
Contact:			
Project Information		Oil and Gas Required Fields (client use)	
ALS Account # / Quote #:	Q75730	AFE/Cost Center:	PO#
Job #:	46995-100	Major/Minor Code:	Routing Code:
PO / AFE:		Requisitioner:	
LSD:		Location:	

ALS Lab Work Order # (lab use only): _____ ALS Contact: Emily H Sampler: Matt D

ALS Sample # (lab use only)	Sample Identification and/or Coordinates (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	NUMBER OF CONTAINERS	PHC F1 to F4 and BTEX	PHC F1 to F4 and VOCs	Metals Scan	Metals Complete	PAHs	SAR & EC	PH	PCBs	PHC F2 to F4	SAMPLES ON HOLD	SUSPECTED HAZARD (see Special Instructions)
	BH104-21 SS3 5-7 FT	06-05-21	11:20	So.1												
	↓ SS4 7.5-9.5 FT		11:30												X	
	↓ MSPLP 2'2"-5 FT		11:45	↓											X	
	BH103-21 GS1 - 6"-2 FT		12:20	So.1											X	
	↓ SS2 2.5-4.5 FT		12:30												X	
	↓ SS3 5-7 FT		12:40												X	
	↓ SS4 7.5-9.5 FT		12:50												X	
	↓ MSPLP 2-4 FT		1:10	↓											X	
	BH102-21 GS1A 3"-11"		1:40												X	
	↓ GS1B 11"-2'6"		1:50												X	
	↓ SS2 2.5-4.5 FT		1:55												X	
	↓ SS3 5-7 FT		2:00	↓											X	

Drinking Water (DW) Samples¹ (client use)		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)		SAMPLE CONDITION AS RECEIVED (lab use only)			
Are samples taken from a Regulated DW System? <input type="checkbox"/> YES <input type="checkbox"/> NO		Table 1 Res, Table 3.1 R/P/I, Table 3.1 I/C/C (ESQS, O.Reg 406/19) - coarse, AND Table 3 I/C/C (SCS, O.Reg 153/04) - coarse		Frozen <input type="checkbox"/> SIF Observations Yes <input type="checkbox"/> No <input type="checkbox"/>			
Are samples for human consumption/ use? <input type="checkbox"/> YES <input type="checkbox"/> NO				Ice Packs <input type="checkbox"/> Ice Cubes <input checked="" type="checkbox"/> Custody seal intact Yes <input type="checkbox"/> No <input type="checkbox"/>			
				Cooling Initiated <input type="checkbox"/>		INITIAL COOLER TEMPERATURES °C	
						FINAL COOLER TEMPERATURES °C	
						4.8	

SHIPMENT RELEASE (client use)			INITIAL SHIPMENT RECEPTION (lab use only)			FINAL SHIPMENT RECEPTION (lab use only)		
Released by:	Date:	Time:	Received by:	Date:	Time:	Received by:	Date:	Time:
							05/07/20	16:30