

PHASE TWO ENVIRONMENTAL SITE ASSESSMENT 1196 - 1210 YONGE STREET & 2 - 8 BIRCH AVENUE, TORONTO, ONTARIO

Prepared for: **BIRCH EQUITIES LIMITED**

1133 Yonge Street, Suite 601,

Toronto, Ontario,

M4T 2Y7

Attention: Mr. Jeff Crossing

> File No: 1-19-0603-42 Date: April 07, 2020

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Laboratory Certificates of Analysis



Appendix L

1.0 EXECUTIVE SUMMARY

Birch Equities Limited retained Terraprobe Inc. (Terraprobe) to complete a Phase Two Environmental Site Assessment (Phase Two ESA) of the Property located at 1196 – 1210 Yonge Street and 2 – 8 Birch Avenue, Toronto, Ontario, hereafter referred to as 'the Property'.

A Phase One Environmental Site Assessment (Phase One ESA) of the Property was conducted as outlined in the draft document entitled 'Phase One Environmental Site Assessment, 1196 – 1210 Yonge Street & 2 – 8 Birch Avenue, Toronto, Ontario' dated November 7, 2019 and it was noted that the conclusions of the Phase One ESA indicated twelve (12) Areas of Potential Environmental Concern (APECs) were present on the Property. The Phase Two ESA was required to investigate the APECs for the Contaminants of Potential Concern that have been identified on the Property. The Phase Two ESA was completed in general accordance with Ontario Regulation 153/04 (O.Reg. 153/04).

The designated Phase Two Property is approximately rectangular in shape and occupies an area of approximately 1,070 m² (0.107 hectares). The Property occupies 6 parcels of land and is currently developed with one (1) four-storey commercial-residential building located at 1196 – 1204 Yonge Street attached to one (1) three-storey residential building located at 2, 4 and 6 Birch Avenue, one (1) two-storey commercial-residential building located at 1206, 1208 and 1210 Yonge Street, and one (1) two-storey residential building located at 8 Birch Avenue. The Property is zoned as commercial-residential based on the City of Toronto By-law 569-2013 which was accessed on September 24, 2019. The Property is bounded by commercial-residential buildings to the north, Birch Avenue and utility land use to south, Yonge Street and commercial-residential buildings to the east, and residential properties to the west. Terraprobe understands that the existing buildings will be demolished and the Property will be developed with one (1) fifteen-storey (15) commercial-residential building with three (3) levels of underground parking.

The existing use of the Property would be considered commercial and residential, as defined by the Ministry of the Environment, Conservation and Parks (MECP), at 1196 – 1210 Yonge Street and residential at 2-8 Birch Street. Section 14.6 of O.Reg. 153/04 states:

- "14. A person shall not change the use of property for the purposes of clause 168.3.1 (1) (b) of the Act in any of the following manners:
 - 6. If the property is used for a commercial use as well as any other type or types of property use, a change in the use of part or all of the property used for commercial use to any or all of the following types of property uses:
 - i. Agricultural or other use.
 - ii. Institutional use.
 - iii. Parkland use.
 - iv. Residential use."



Provided that both the footprint and number of storeys currently used for commercial use remain unchanged under the proposed development, a Record of Site Condition (RSC) will not be required by the MECP; however, the City of Toronto may require an RSC as part of the planning process.

The conclusions of the Phase Two ESA are:

- The applicable Site Condition Standards are the 2011 Ministry of the Environment, Conservation and Parks (MECP) Table 3 Standards for Residential/Parkland/Institutional Land Use with coarse textured soils (MECP Table 3 RPI Coarse Standards).
- An asphalt pavement structure, consisting of 50 mm thick asphaltic concrete underlain by 200 mm thick granular base course was encountered in Boreholes 1 and 3 at the ground surface. A 60 mm concrete paver underlain by 130 mm thick granular base course was encountered in Borehole 2 at the ground surface. A 600 mm thick gravel surface course was encountered in Borehole 4 at the ground surface. The earth fill layer consisted of clayey to sandy silt/ silty sand/ sand and gravel/silt, with trace amounts of organics. Silty sand till with varying amounts of clay (trace to some) and trace amounts of gravel was encountered beneath the earth fill zone. A sand and silt to silty sand unit with trace amounts of clay and gravel was encountered beneath the silty sand till in Boreholes 1, 2, 3, 4 and 6 and beneath the earth fill zone in Borehole 5 and extended to the full depth of investigation. Bedrock was not encountered.
- The MECP Table 3 RPI Coarse Standards were met in the earth fill soil located on the Property with the exception of the following:
 - Lead (Metals) in BH1-2006, BH3-2006 and BH6; Barium, Cadmium and Zinc in BH1-2006;
 - o Electrical Conductivity (ORPs) in BH2-2006, BH2, BH3-2006, and BH4 (note: relevant from an excess soil management perspective only);
 - Sodium Adsorption Ratio (ORPs) in BH2, BH2-2006 and BH3-2006 (note: relevant from an excess soil management perspective only);
 - o Mercury (ORPs) in BH1-2006 and BH3-2006;
 - o Trichloroethylene (VOCs) in BH5 and BH6; and
 - o PAHs in BH2, BH3, BH5, and BH6 for one or more of the following parameters:
 - Acenaphthylene;
 - Anthracene;
 - Benzo(a)anthracene;
 - Benzo(a)pyrene;
 - Benzo(b/j)fluoranthene;
 - Benzo(k)fluoranthene;
 - Chrysene;
 - Dibenzo(a,h)anthracene;



- Fluoranthene;
- Indeno(1,2,3-cd)pyrene;
- Naphthalene; and
- Phenanthrene.
- The MECP Table 3 RPI Coarse Standards were met in the native material on the Property with the exception of the following:
 - o Lead (Metals) in BH5;
 - o Sodium Adsorption Ratio (ORPs) in BH2 and BH4 (note: relevant from an excess soil management perspective only); and
 - o Trichloroethylene (VOCs) in BH4.
- The MECP Table 3 Standards were met for all tested parameters in all ground water samples with the exception of the following:
 - o cis-1,2-Dichloroethylene (VOCs) in BH5 and BH6;
 - o Trichloroethylene (VOCs) in BH5 and BH6; and
 - o PAHs in BH2, BH3, BH5, and BH6 for the following parameters:
 - Benzo(b)fluoranthene;
 - Benzo(g,h,i)perylene; and
 - Indeno(1,2,3-cd)pyrene.

In summary, exceedances of the applicable Site Condition Standards were noted in the earth fill and native soils on the Property. Additionally, exceedances of the applicable Site Condition Standards were noted in the ground water on the Property. As an RSC is not required by the MECP, it is Terraprobe's recommendation that additional investigations for vertical and horizontal delineation of the impacted material should be conducted in order to support a Risk Assessment on the Property and, if required by the City of Toronto, the filing of an RSC. A Risk Assessment will be required to assess the risks to human and ecological health resulting from the identified exceedances on the Property.

2.0 INTRODUCTION

Birch Equities Limited retained Terraprobe Inc. (Terraprobe) to complete a Phase Two Environmental Site Assessment (Phase One ESA) of the Property located at 1196 – 1210 Yonge Street and 2 – 8 Birch Avenue, Toronto, Ontario, hereafter referred to as 'the Property'.

A Phase One Environmental Site Assessment (Phase One ESA) of the Property was conducted as outlined in the draft document entitled *Phase One Environmental Site Assessment, 1196 – 1210 Yonge Street & 2 – 8 Birch Avenue, Toronto, Ontario*' dated November 7, 2019 and it was noted that the conclusions of the Phase One ESA indicated twelve (12) Areas of Potential Environmental Concern (APECs) were present on the Property. The Phase Two ESA was required to investigate the APECs for the Contaminants of Potential Concern that have been identified on the Property.

2.1 Site Description

The designated Phase Two Property is approximately rectangular in shape and occupies an area of approximately 1,070 m² (0.107 hectares). The Property occupies 6 parcels of land and is currently developed with one (1) four-storey commercial-residential building located at 1196 – 1204 Yonge Street attached to one (1) three-storey residential building located at 2, 4 and 6 Birch Avenue, one (1) two-storey commercial-residential building located at 1206, 1208 and 1210 Yonge Street, and one (1) two-storey residential building located at 8 Birch Avenue. The Property is zoned as commercial-residential based on the City of Toronto By-law 569-2013 which was accessed on September 24, 2019. The Property is bounded by commercial-residential buildings to the north, Birch Avenue and utility land use to south, Yonge Street and commercial-residential buildings to the east, and residential properties to the west. Terraprobe understands that the existing buildings will be demolished and the Property will be developed with one (1) fifteen-storey (15) commercial-residential building with three (3) levels of underground parking.

The general location of the Property is presented on Figure 1. The layout of the Property with respect to the Potentially Contaminating Activities (PCAs) and APECs are presented in Figures 2 & 2A. A copy of the legal survey is provided in Appendix B.

The Property information is as follows:

Legal Description	Part of Lots 1 & 2, Registered Plan 308 Yorkville, City of Toronto	
PIN(s)	PIN 21193-0524 (LT) (1210 Yonge Street); 21193-0525 (LT) (1208 Yonge Street); 21193-0526 (LT) (1206 Yonge Street); 21193-0136 (LT) (2, 4, 6 & 8 Birch Avenue and 1196, 1198, 1202 & 1204 Yonge Street)	
Assessment Roll Number	Not provided	
Municipal Address	1196, 1198, 1202, 1204, 1206, 1208 & 1210 Yonge Street and 2, 4, 6 & 8 Birch Avenue, Toronto, Ontario	



Zoning	The Property is zoned as commercial residential based on the City of Toronto By-law 569-2013 as assessed on September 24, 2019 using the Zoning By-law Interactive Map.	
Area	Approximately 1070 m ² (0.107 ha)	
Zone Northing Easting	17T 43.681627 m E, -79.391769 m N	
Persons, other than Property Owner, who engaged the Qualified Person to conduct the Phase Two ESA	Mr. Jeff Crossing, on behalf of Birch Equities Limited, engaged the Qualified Person to conduct the Phase One ESA. 1133 Yonge Street, Suite 601 Toronto, Ontario, M4T 2Y7 Tel: 416-361-5000 crossing@woodcliffe.ca	

2.2 Property Ownership

The ownership information for the Phase Two Property is as follows:

Legal Description	Part of Lots 1 & 2, Registered Plan 308 Yorkville, City of Toronto	
PIN(s)	PIN 21193-0524 (LT) (1210 Yonge Street); 21193-0525 (LT) (1208 Yonge Street); 21193-0526 (LT) (1206 Yonge Street); 21193-0136 (LT) (2, 4, 6 & 8 Birch Avenue and 1196, 1198, 1202 & 1204 Yonge Street)	
Property Owner Information	Birch Equities Limited is the current Property Owner since 2006.	

2.3 Current and Proposed Future Uses

2.3.1 Current Property Use

The Property occupies 6 parcels of land and is currently developed with one (1) four-storey commercial-residential building located at 1196 – 1204 Yonge Street attached to one (1) three-storey residential building located at 2, 4 and 6 Birch Avenue, one (1) two-storey commercial-residential building located at 1206, 1208 and 1210 Yonge Street, and one (1) two-storey residential building located at 8 Birch Avenue. The Property is zoned as commercial-residential based on the City of Toronto By-law 569-2013 which was accessed on September 24, 2019. The existing use of the Property would be considered commercial and residential, as defined by the Ministry of the Environment, Conservation and Parks (MECP), at 1196 – 1210 Yonge Street and residential at 2-8 Birch Street. Future Property Use.

Terraprobe understands that the existing buildings would be demolished and the Property will be developed with one (1) fifteen-storey (15) commercial-residential building with three (3) levels of underground parking.



Section 14.6 of O.Reg. 153/04 states:

- "14. A person shall not change the use of property for the purposes of clause 168.3.1 (1) (b) of the Act in any of the following manners:
 - 6. If the property is used for a commercial use as well as any other type or types of property use, a change in the use of part or all of the property used for commercial use to any or all of the following types of property uses:
 - i. Agricultural or other use.
 - ii. Institutional use.
 - iii. Parkland use.
 - iv. Residential use."

Provided that both the footprint and number of storeys currently used for commercial use remain unchanged under the proposed development, a Record of Site Condition (RSC) will not be required by the MECP; however, the City of Toronto may require an RSC as part of the planning process.

2.4 Applicable Site Condition Standards

The applicable soil and ground water Standards for the Property were determined to be those in Table 3 (non-potable ground water condition) of "Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act", MECP, April 15, 2011, for Residential/Parkland/ Institutional Property Use for coarse textured soil (Table 3 RPI Coarse Standards). These are considered to be the applicable Standards for the following reasons:

- The intended use for the Property is mixed commercial-residential with residential being the most sensitive use.
- Soil PH is within the ranges within which generic criteria other than the Table 1 (Background) Standards may be applied.
- Soil at the Property was found to be coarse textured based on a review of the soil samples collected from the boreholes and the results of soil grain size analyses.
- The Property is not located within 30 m of a surface water body.
- The Property is not located in, adjacent to, or within 30 m of an area of natural significance.
- Bedrock across the Property is found at depths of greater than 2 m.
- The Property is located in the City of Toronto. The Property and all properties within 250 m are serviced with municipal water drawn from surface water and there are no water supply wells at any of these properties. Terraprobe notified the City of Toronto on March 10, 2020 of the intention to use non-potable ground water standards and the City has 30 days to respond if they have an objection. A response was received from the City of Toronto on March 24, 2020 and it was indicated that the City of Toronto has no objection to the use of non-potable ground water standards



to be applied to the Property. The correspondence regarding the use of non-potable ground water standards can be found in Appendix D.

2.5 Objectives of Investigation

The general objectives of the investigation included the following:

- To determine the concentration and location of Contaminants of Potential Concern (COPCs) identified in a Phase One ESA for the Property and found through the course of conducting the Phase Two ESA, in soil, sediment, and ground water, as applicable.
- To determine if all COPCs identified in the investigation met their respective generic Site Condition Standards, as applicable.

To ensure that the general objectives of the investigation were met, the Qualified Person ensured the following:

- That the investigation provided sufficient information to provide an understanding of the geological and hydrogeological conditions at the Phase Two Property; and
- That one or more rounds of field sampling were conducted for all COPCs identified for the Property, as identified in the Sampling and Analysis Plan (Appendix E) of the Phase Two ESA and found through the course of conducting the Phase Two ESA, in soil, sediment, and ground water, as applicable.

3.0 BACKGROUND INFORMATION

3.1 Physical Setting

3.1.1 Water Bodies, Wetlands and Areas of Natural Significance

Mapping from the Ontario Ministry of Natural Resources and Forestry (MNRF) was reviewed to determine if water bodies were present on the Property and within 250 m of the Property. The MNRF National Heritage Information Centre database for listings of Areas of Natural or Scientific Interest (ANSIs) was reviewed. The information is summarized below.

Water Bodies (Property)	No water bodies were identified on the Property.
Water Bodies (Study Area)	The nearest water body is an unnamed stream approximately 600 m east of the Property which drains into the Don River which is located approximately 2 km east of the Property.
Wetland	Provincially Significant
(Property)	No Provincially Significant wetlands were present on the Property.
	Non-Provincially Significant
	No Non-Provincially Significant wetlands were present on the Property.
	<u>Unevaluated</u>
	No Unevaluated wetlands were present on the Property.
Wetland	Provincially Significant
(Study Area)	No Provincially Significant wetlands were present in the Study Area.
	Non-Provincially Significant
	No Non-Provincially Significant wetlands were present in the Study Area.
	<u>Unevaluated</u>
	No Unevaluated wetlands were present in the Study Area.
ANSIs	Provincially Significant Life Science ANSI
(Property)	No Life Science ANSIs were identified on the Property.
	Provincially Significant Earth Science ANSI
	No Earth Science ANSIs were identified on the Property.



ANSIs	Provincially Significant Life Science ANSI			
(Study Area)	No Life Science ANSIs were identified in the Study Area.			
	Provincially Significant Earth Science ANSI			
	No Earth Science ANSIs were identified in the Study Area.			

3.1.2 Topography and Surface Water Drainage

A topographic map from the MNRF and the geological mapping produced by the Ontario Ministry of Northern Development and Mines - Ontario Geological Survey was reviewed. The information gleaned from the mapping is summarized below.

Topography	The OBM, Toporama, MNR and Google Earth maps were reviewed and it was identified that the elevation of the Property was approximately 124 m above sea level (mASL).	
Hydrogeology	The nearest water body is an unnamed stream approximately 600 m east of the Property which drains into the Don River which is located approximately 2 km east of the Property. Based on the Water Well Records and Terraprobe's previous investigations in the local area, the depth to ground water is expected to be approximately 4.6 to 11.6 mbgs. Ground water and surface water are expected to flow to south towards Lake Ontario according to the MECP's Great Lakes watershed locator.	
Geology (overburden)	Based on published geology and Terraprobe's previous investigations, the overburden material is expected to consist of silt to sandy silt/silty sand with trace gravel.	
Geology (bedrock) The bedrock on the site is of the Georgian Bay Formation, which is comprised of shale, limestone, dolostone and siltstone.		
Geology (depth to Based upon published geology, historic borehole information from the MNRF and Water Records in the vicinity from the MECP, the depth to bedrock in the area of the Property is expected to be approximately 40 mbgs.		

3.2 Past Investigations

Previous environmental reports for the subject Property were searched for and reviewed as part of the investigation. Details from each of the report are summarized below. A summary of Terraprobe's Phase One ESA that was conducted for the Property concurrently with the Phase Two ESA is also summarized below:

Report Title	Phase I Environmental Site Assessment – 1196 – 1210 Yonge Street & 2 -8 Birch Avenue, Toronto, Ontario
Report Date	February 17, 2006
File/Project Number	1-06-1007
Prepared By	Terraprobe Limited
Prepared For	Woodcliffe Corporation

- Terraprobe was retained by Woodcliffe Corporation to conduct a Phase I Environmental Site Assessment (ESA) of the Property located at 1196-1210 Yonge Street and 2-8 Birch Avenue, Toronto, Ontario, to assess the environmental condition of the property prior to purchasing.
- The Phase I ESA was conducted in general accordance with the methodology described in CSA Standard Z768-01.
- The Property was occupied by two multi-use commercial-residential buildings.
- Based on the findings of the Phase I ESA and the nature of historical land use on the subject Property and surrounding properties, Terraprobe identified a number of potentially contaminating activities in the vicinity of the subject property including a former coal gasification plant, a former private incinerator, a former dry cleaner, seven (7) gasoline storage tanks, and an automobile service centre.
- Terraprobe concluded that based on the results of the Phase I ESA, the former land uses in the vicinity of the subject property may have impacted the soil and ground water at the site.
- A Phase II Environmental Site Assessment was recommended to determine if any environmental impact occurred.

Report Title	Phase II Environmental Site Assessment – 1196 – 1210 Yonge Street & 2 -8 Birch Avenue, Toronto, Ontario
Report Date	February 24, 2006
File/Project Number	1-06-1007
Prepared By	Terraprobe Limited
Prepared For	Woodcliffe Corporation

- Terraprobe was retained by Woodcliffe Corporation to conduct a Phase II Environmental Site Assessment (ESA) of the Property located at 1196-1210 Yonge Street and 2-8 Birch Avenue, Toronto, Ontario, based on the recommendations of a Phase I ESA completed on the subject property (see previous summary).
- The Phase II ESA consisted of drilling three (3) exploratory boreholes across the property to depths ranging from 2.7 m to 6.6 m below existing grades, installing and developing one (1) ground water monitoring well, analyzing three (3) soil samples for inorganic parameters (i.e. metals), three (3)

- soil samples for volatile organic compounds (VOCs), one (1) soil sample for petroleum hydrocarbons (PHCs), and one (1) ground water samples for metals and VOCs.
- The Phase II ESA was completed to meet the standard requirements under Ontario Regulation 153/04 (O.Reg.153/04). The results of laboratory analysis for the soil and ground water samples were compared to the *Soil, Ground Water, and Sediment Standards* for use under *Part XV.I of the Environmental Protection Act of Ontario* (2004).
- The results of the Phase II ESA indicated that the property was underlain by fill soils in the areas not covered by the building. The fill extended from the ground surface to approximate 1.2 1.5 m below grade and that native soil, comprising a mixture of sand and silt, was encountered beneath the sill soils. Bedrock was not encountered during drilling.
- The results of chemical analysis of selected soil samples indicated that all parameters analyzed met the Table 3 criteria of the *Soil, Ground Water, and Sediment Standards* for use under *Part XV.I of the Environmental Protection Act of Ontario*, with the exception of following exceedances encountered in the fill soils on site:

Borehole/Sample No. (Depth)	Parameter	Table 3 Standard (ug/g)	Result (ug/g)
BH 1/Sa 2 (0.3 m)	Lead	200	602
BH 2/Sa 1 (0.3	Electrical Conductivity (EC)	0.7 mS/cm	0.998
m)	Sodium Absorption Ratio (SAR)	5	8.11
BH 3/Sa 2 (0.5	Electrical Conductivity (EC)	0.7 mS/cm	1.23
m)	Sodium Absorption Ratio (SAR)	5	8.06

- Based on the results of the soil samples analyzed, it was concluded the EC and SAR exceedances
 are relevant to vegetation growth and not human health. The lead exceedance was isolated to one
 borehole location and it was concluded that the exceedance does not represent an immediate risk
 to human or ecological health.
- The results of chemical analysis of the ground water sample indicated that all parameters analyzed met the Table 3 criteria of the *Soil, Ground Water, and Sediment Standards* for use under *Part XV.I of the Environmental Protection Act of Ontario*. Based on these results it was concluded that no impact to the ground water occurred from neighbouring land uses.
- The report concluded that in the event of property redevelopment, the soils which do not meet the Table 3 Soil Standards will require removal and disposal at an appropriate facility. Confirmatory sampling and laboratory analysis should be conducted at the time of removal to ensure that no impacted soils remain on the site.

Report Title	Asbestos Management Plan – 1196 – 1210 Yonge Street & 2 -8 Birch Avenue, Toronto, Ontario
Report Date	November 23, 2007
File/Project Number	1-07-2295
Prepared By	Terraprobe Limited c/o Woodcliffe Corporation
Prepared For	Yonge & Birch Properties

- Terraprobe Limited was retained by the Woodcliffe Corporation to conduct an Asbestos Survey at the property identified as 1196-1210 Yonge Street and 2-8 Birch Avenue, Toronto, Ontario.
- The purpose of this study was to determine if any asbestos containing materials (ACM) are present at the site. In the event that any asbestos materials were encountered, an Asbestos Management Plan was to be developed in accordance with the requirements of Ontario Regulation 278/05 Asbestos on Construction Projects and in Buildings and Repair Operations.
- The results of this investigation were based on a site inspection which was conducted by Terraprobe in January 2006. No laboratory analysis was conducted to confirm the asbestos content of any materials. Any materials which were considered likely to contain asbestos (based on the visual inspection) were assumed to be ACM for the purposes of this report.
- The report concluded that materials which were assumed to contain asbestos (vinyl floor tiles, acoustic ceiling tiles, and stucco) were all in good condition at the time of inspection. Provided that regular inspections (and repairs) of the material were conducted to ensure that the material did not become friable, it would not require removal. If desired, representative samples of these materials could be obtained for laboratory analysis to confirm whether they were asbestos containing.

Report Title	Asbestos Survey – 1196 – 1210 Yonge Street & 2 -8 Birch Avenue, Toronto, Ontario
Report Date	December 22, 2014
File/Project Number	13-14-4175
Prepared By	Terraprobe Inc.
Prepared For	Birch Equities Limited c/o Woodcliffe Corporation

- The report documented the results of an asbestos survey which was conducted at 1196 1210 Yonge Street & 2 -8 Birch Avenue, Toronto, Ontario based on a previously prepared Asbestos Management Plan conducted for the property and summarized in the report entitled "Asbestos Management Plan 1196 1210 Yonge Street & 2 -8 Birch Avenue, Toronto, Ontario" prepared by Terraprobe Limited, dated November 23 2007 (Project No. 1-07-2295).
- A total of sixteen materials were identified inside the building which may be asbestos-containing. In accordance with the requirements of O.Reg. 278/05, three representative samples of each of these materials were obtained and submitted for laboratory analysis of asbestos content.
- Based on the results of laboratory analysis, and the observations made during the site inspection, it is concluded that two asbestos-containing materials were present at the subject property one variety of vinyl floor tiles and one variety of linoleum flooring. The materials were considered non-friable asbestos-containing material (ACM).
- The Asbestos Management Plan made in November 2007 was to remain in effect if the ACM was not removed from the buildings.
- The report noted that if the ACM was to be removed, protective measures would be required for worker safety in keeping with Type 1, 2 and/or 3 Removal precautions.
- The report noted that the assessment was limited in that intrusive investigations were not conducted to examine/sample all portions of the buildings and that the assessment was not to be considered definitive for all building components.

The report concluded that if future work on the buildings revealed previously hidden building
components and new information regarding the composition of the subject buildings become
available, Terraprobe Inc. should be notified to re-evaluate the findings of this assessment and
provide amendments, as required.

Report Title	Phase One Environmental Site Assessment – 1196-1210 Yonge Street & 2-8 Birch Avenue, Toronto, Ontario
Report Date	November 7, 2019
File/Project Number	1-19-0603
Prepared By	Terraprobe Inc.
Prepared For	Birch Equities Limited

- Terraprobe was retained by the Birch Equities Limited to conduct a Phase One Environmental Site Assessment (ESA) of a designated section of the property located at 1196 1210 Yonge Street and 2 8 Birch Avenue, Toronto, Ontario, to assess the environmental condition of the property prior to the construction of a new fifteen-storey (15) commercial-residential building with three (3) levels of underground parking.
- The Phase One ESA was completed to satisfy the intent of the requirements, methodology and practices for a Phase One ESA as described in O.Reg. 153/04 as amended.
- The Property occupies 6 parcels of land and is currently developed with one (1) four-storey commercial-residential building located at 1196 1204 Yonge Street attached to one (1) three-storey residential building located at 2, 4 and 6 Birch Avenue, one (1) two-storey commercial-residential building located at 1206, 1208 and 1210 Yonge Street, and one (1) two-storey residential building located at 8 Birch Avenue
- Based on the findings of the Phase One ESA Potentially Contaminating Activities (PCAs) were identified including but not limited to commercial auto body shops, fuel storage tanks, waste generators, operation of dry cleaning equipment, wood treating facility and coal storage. These activities resulted in the identification of twelve (12) Areas of Potential Environmental Concern.
- Terraprobe concluded that, based on the results of the Phase One ESA, a Phase Two Environmental Site Assessment would be required to investigate the issues of potential environmental concern which may have resulted in adverse impacts to the environmental condition of the property.

Area of Potential Environmental Concern	Location and Address of Potential Contaminating Activity	Potentially Contaminating Activity	Contaminants of Potential Concern	Media Potentially Impacted (Ground water, soil and/or sediment)
	Off-Site 1212 Yonge Street			Soil and ground water
	Off-Site 13 Alcorn Avenue			
APEC 1: North portion of the Property	Off-Site 8 Shaftesbury Avenue	Autobody Shops	Metals, Hydride Forming Metals, VOCs, PHCs (F1- F4), BTEX	
	Off-Site 1240 Yonge Street			
	Off-Site 58-60 Alcorn Avenue			
	Off-Site 1262 Yonge Street			
	Off-Site 1218 Yonge Street		VOCs	Soil and ground water
	Off-Site 1153 Yonge Street	#37 – Operation of Dry Cleaning Equipment (where chemicals are used)		
	Off-Site 4 Alcorn Avenue			



Area of Potential Environmental Concern	Location and Address of Potential Contaminating Activity	Potentially Contaminating Activity	Contaminants of Potential Concern	Media Potentially Impacted (Ground water, soil and/or sediment)
	Off-Site 1224 Yonge Street	#37 – Operation of Dry Cleaning Equipment (where	VOCs	Soil and
	Off-Site 1155 Yonge Street	chemicals are used)	VOCS	ground water
	Off-Site 1139 Yonge Street		Metals, Hydride Forming Metals, VOCs, PHCs (F1-F4), BTEX	Soil and ground water
	Off-Site 1143 Yonge Street	#28 – Gasoline and Associated Products Storage in Fixed Tanks		
APEC 1: North portion of the Property	Off-Site 14 Shaftesbury Avenue			
	Off-Site 1228 Yonge Street			
	Off-Site 1161 Yonge Street			
	Off-Site 10 Alcorn Avenue			



Area of Potential Environmental Concern	Location and Address of Potential Contaminating Activity	Potentially Contaminants of Contaminating Potential Activity Concern		Media Potentially Impacted (Ground water, soil and/or sediment)
	Off-Site 1179 Yonge Street			
	Off-Site 1240 Yonge Street	#28 – Gasoline and Associated Products Storage in Fixed Tanks	Metals, Hydride Forming Metals, VOCs, PHCs (F1- F4), BTEX	Soil and ground water
	Off-Site 1246 Yonge Street			
	Off-Site 1230 Yonge Street	#33 – Metal Treatment, Coating, Plating and Fabrication	Metals, Hydride Forming Metals, VOCs, PHCs (F1- F4), BTEX	Soil and ground water
APEC 1: North portion of	Off-Site 1234 Yonge Street			
the Property	Off-Site 10 Alcorn Avenue	#58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biooils as soil conditioners.	Metals, Hydride Forming Metals, PHCs (F1-F4), VOCs, BTEX, PAHs, PCBs	Soil and ground water
	Off-Site Opposite 30 Shaftesbury Avenue		Metals, Hydride Forming Metals, VOCs, PHCs (F1-F4), BTEX	Soil and
	Off-Site Yonge Street and Summerhill	#NA ² – Ontario Spills		ground water
	Off-Site 1268 Yonge Street	#39 – Paint Manufacturing, Processing and Bulk Storage	Metals, VOCs	



Area of Potential Environmental Concern	Location and Address of Potential Contaminating Activity	Potentially Contaminants of Contaminating Potential Activity Concern		Media Potentially Impacted (Ground water, soil and/or sediment)
	Off-Site 10 Birch Avenue	#10 – Commerciai	Metals, Hydride Forming Metals, VOCs, PHCs (F1-	Soil and
	Off-Site 24 Birch Avenue	Autobody Shops	F4), BTEX	ground water
	Off-Site 10 Birch Avenue	#59 – Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products	Metals, Hydride Forming Metals, VOCs, PHCs (F1- F4), BTEX, PAHs	Soil and ground water
APEC 2: West portion of the Property	Off-Site 10 Birch Avenue	#33 – Metal Treatment, Coating, Plating and Finishing	Metals, Hydride Forming Metals, VOCs, PHCs (F1- F4), BTEX	Soil and ground water
	Off-Site 24 Birch Avenue			
	Off-Site 22 Alcorn Avenue			
	Off-Site 32 Alcorn Avenue	#28 – Gasoline and Associated Products Storage in Fixed Tanks	Metals, Hydride Forming Metals, VOCs, PHCs (F1- F4), BTEX	Soil and ground water
	Off-Site 43 Alcorn Avenue			



Area of Potential Environmental Concern	Location and Address of Potential Contaminating Activity	Potentially Contaminating Activity	ontaminating Potential	
	Off-Site 1139 Yonge Street	#NA ³ – Coal storage	Metals, Hydride Forming Metals, VOCs, PHCs (F1- F4), BTEX, PAHs	Soil and ground water
APEC 3: East section of the Property	Off-Site 25 Shaftesbury Avenue Off-Site 35-37 Shaftesbury Avenue	#28 – Gasoline and Associated Products Storage in Fixed Tanks	Metals, Hydride Forming Metals, VOCs, PHCs (F1- F4), BTEX	Soil and ground water
	Off-Site 11 Birch Avenue	#NA ¹ – Waste Generator	Metals, Hydride Forming Metals, VOCs, PHCs (F1- F4), BTEX	Soil and ground water
	Off-Site 11 Birch Avenue	#18 – Electricity Generation, Transformation and Power Station	PCBs	Soil and ground water
APEC 4 South Portion of the Property	Off-Site 15-21 Birch Avenue			Soil and ground water
	Off-Site 1176 Yonge Street	#28 – Gasoline and	Metals, Hydride Forming Metals, VOCs, PHCs (F1- F4), BTEX	
	Off-Site 1119 Yonge Street	Associated Products Storage in Fixed Tanks		
	Off-Site 1174 Yonge Street			



Area of Potential Environmental Concern	Location and Address of Potential Contaminating Activity	Potentially Contaminants of Contaminating Potential Activity Concern		Media Potentially Impacted (Ground water, soil and/or sediment)
APEC 4 South Portion of the Property	Off-Site 1109 Yonge Street Off-Site 66 Birch Avenue	#28 – Gasoline and Associated Products Storage in Fixed Tanks	Metals, Hydride Forming Metals, VOCs, PHCs (F1- F4), BTEX	Soil and ground water
	Off-Site 1119 Yonge Street Off-Site 1121 Yonge Street Off-Site 1111 Yonge Street	#8 – Chemical Manufacturing, Processing and Bulk Storage	Metals, VOCs, PHCs (F1-F4), BTEX	Soil and ground water
	Off-Site 29 Birch Avenue Off-Site 31 Birch Avenue Off-Site 1109 Yonge Street	#10 – Commercial Autobody Shops	Metals, Hydride Forming Metals, VOCs, PHCs (F1- F4), BTEX	Soil and ground water
	Off-Site 1129 Yonge Street	#NA ³ – Coal storage	Metals, Hydride Forming Metals, VOCs, PHCs (F1- F4), BTEX, PAHs	Soil and ground water
APEC 5: North-central section of Phase One Property	On-Site 1206 Yonge Street	#28 – Gasoline and Associated Products Storage in Fixed Tanks	Metals, Hydride Forming Metals, VOCs, PHCs (F1- F4), BTEX	Soil and ground water
APEC 6: North-central section of Phase One Property	On Site 1206 Yonge Street	#NA ⁴ – Exceedance from previous investigation	Metals	Soil and ground water
APEC 7:	On Site 8 Birch Avenue	#NA ⁴ – Exceedance from previous investigation	EC, SAR	Soil



Area of Potential Environmental Concern	Location and Address of Potential Contaminating Activity	Potentially Contaminating Activity	Contaminants of Potential Concern	Media Potentially Impacted (Ground water, soil and/or sediment)
West section of Phase One Property			Na, Cl	Ground water
APEC 8: South-central	On-Site	#NA ⁴ – Exceedance from	EC, SAR	Soil
portion of Phase One Property	Phase One Property	previous investigation	Na, Cl	Ground water
APEC 9: North Section of Phase One Property	On-Site 1208 & 1210 Yonge Street	#37 – Operation of Dry Cleaning Equipment (where chemicals are used)	VOCs	Soil and ground water
APEC 10: North Section of Phase One Property	On-Site 1208 Yonge Street	#39 – Paint Manufacturing, Processing and Bulk Storage	Metals, VOCs	Soil and ground water
APEC 11: East portion of Phase One Property	On-Site 1196 Yonge Street	#NA ¹ – Waste Generator	Metals, Hydride Forming Metals, VOCs, PHCs (F1- F4), BTEX	Soil and ground water
APEC 12: East portion of Phase One Property	On-Site 1196 Yonge Street	#59 – Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products	Metals, Hydride Forming Metals, VOCs, PHCs (F1- F4), BTEX, PAHs	Soil and ground water

• A Phase Two Environmental Site Assessment is required to investigate the Areas of Potential Environmental Concern for the Contaminants of Potential Concern that have been identified on the Property.

The Phase One Conceptual Site Model is attached in Appendix A. Figure 2A indicates the borehole locations with respect to the APECs investigated for site coverage.

4.0 SCOPE OF THE INVESTIGATION

The scope of work for the Phase Two ESA was determined on the basis of the results of the previous reports and in accordance with the scope of work proposed by Terraprobe.

4.1 Overview of Site Investigation

In 2019 and 2020, Terraprobe conducted the following subsurface work at the Property for a Phase Two Environmental Site Assessment:

- Drilling of a total of seven boreholes (BH1 BH3, BH4S BH4D BH5 and BH6) to depths ranging from approximately 7.6 23 m below existing grades.
- Ground water monitoring wells were installed in all boreholes.
- Laboratory analysis of selected soil samples for parameters including:
 - Metals;
 - Hydride-Forming Metals (H-M; As, Sb, Se);
 - Other Regulated Parameters (ORPs):
 - Electrical Conductivity (EC);
 - Sodium Adsorption Ratio (SAR);
 - Boron, Hot Water Soluble (B-HWS);
 - Cyanide (CN⁻);
 - Mercury (Hg);
 - Hexavalent Chromium (Cr[VI]); and
 - pH.
 - Volatile Organic Compounds (VOCs);
 - Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX);
 - Petroleum Hydrocarbons (PHCs);
 - Polycyclic Aromatic Hydrocarbons (PAHs); and
 - Polychlorinated Biphenyls (PCBs).
- Surveying of all boreholes and monitoring wells to a geodetic benchmark.
- Measurement of ground water elevations to determine ground water elevation and flow direction.
- Development and sampling of all monitoring wells.
- Laboratory analyses of ground water samples for:
 - Metals:
 - Hydride-Forming Metals (H-M; As, Sb, Se);
 - Other Regulated Parameters (ORPs)
 - Chloride (Cl⁻)
 - Cyanide (CN⁻);
 - Mercury (Hg);
 - Hexavalent Chromium (Cr[VI]); and



- pH.
- Sodium (Na);
- Volatile Organic Compounds (VOCs);
- Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX);
- Petroleum Hydrocarbons (PHCs);
- Polycyclic Aromatic Hydrocarbons (PAHs); and
- Polychlorinated Biphenyls (PCBs).

The table below summarizes the scope of work conducted by Terraprobe. The number of samples listed includes duplicate analyses, but do not include the trip blanks and field blanks that were collected. Water level measurements are provided in Appendix I. Field protocols are provided in Appendix F.

Date	Scope of Investigation	Scope of Soil Analysis	Scope of Ground Water Analysis
October 23-28, 2019	 Drilled four (4) boreholes (BH3, BH4, BH5 & BH6) and sampled for soil Installed monitoring wells in the four (4) boreholes (BH3, BH4, BH5 & BH6) 	 10 Metals analyses 10 H-M analyses 9 PHC analyses 9 VOC analyses 9 BTEX analyses 7 PAH analyses 7 PCB analyses 	
November 19-20, 2019	 Water levels taken from monitoring wells (BH3, BH4, BH5 & BH6) Monitoring wells developed for sampling (BH3, BH4, BH5 & BH6) Sampled monitoring wells (BH3, BH4, BH5 & BH6) 		 5 Metals analyses 5 H-M analyses 5 PHC analyses 5 VOC analyses 5 BTEX analyses 5 PAH analyses 4 PCB analyses
December 16, 2019	 Water levels taken from monitoring wells (BH3, BH4, BH5 & BH6) Sampled monitoring wells (BH3, BH4, BH5 & BH6) 		 6 Metals analyses 6 H-M analyses 6 PHC analyses 6 VOC analyses 6 BTEX analyses 6 PAH analyses 4 PCB analyses
January 6-16, 2020	 Drilled one (1) borehole (BH2) and sampled for soil Installed monitoring well in the one (1) borehole (BH2) 	 3 Metals analyses 3 H-M analyses 3 PHC analyses 3 VOC analyses 3 BTEX analyses 3 PAH analyses 3 PCB analyses 	



Date	Scope of Investigation	Scope of Soil Analysis	Scope of Ground Water Analysis
January 28, 2020	 Drilled one (1) borehole (BH1) and sampled for soil Installed monitoring well in the one (1) borehole (BH1) 	 2 Metals analyses 2 H-M analyses 2 PHC analyses 2 VOC analyses 2 BTEX analyses 2 PAH analyses 7 PCB analyses 	
February 4, 2020	 Water levels taken from monitoring wells (BH1 & BH2) Monitoring wells developed for sampling (BH1 & BH2) Sampled monitoring wells (BH1 & BH2) 		 3 Metals analyses 3 H-M analyses 3 PHC analyses 3 VOC analyses 3 BTEX analyses 3 PAH analyses 3 PCB analyses
February 20, 2020	• Water levels taken from monitoring wells (BH1 & BH2)		
February 27, 2020	 Water levels taken from monitoring wells (BH1 & BH2) Sampled monitoring wells (BH1 & BH2) 		 3 Metals analyses 3 H-M analyses 3 PHC analyses 3 VOC analyses 3 BTEX analyses 3 PAH analyses 3 PCB analyses
March 4, 2020	• Water levels taken from monitoring wells (BH1 & BH2)		

Notes:

- ORPs (if any) for soil include B-HWS, CN-, EC, Cr(VI), Hg, pH, SAR
- ORPs (if any) for ground water include CN-, Cr(VI), Hg, pH, Chloride

4.2 Media Investigated

4.2.1 Rationale for Inclusion or Exclusion of Media

Media	Included or Excluded	Rationale
Soil	Included	Based upon the Phase One ESA investigation, soil sampling was required on the Property for the select contaminants of potential concern (COPCs). Sample locations were selected to investigate soil across the Property.
Sediment	Excluded	Sediment sampling was not conducted on the Phase Two Property because there are no water bodies on the Property.



Media	Included or Excluded	Rationale
Ground Water	Included	Based upon the Phase One ESA investigation, ground water sampling was required on the Property for the COPCs. Monitoring wells were installed to investigate ground water quality across the Property.
Surface Water	Excluded	Surface water sampling was not conducted on the Phase Two Property because there are no water bodies on the Property.

4.2.2 Overview of Field Investigation of Media

Soil sampling was conducted during the drilling program by use of a split spoon sampling device. Ground water sampling was conducted from monitoring wells installed within the completed boreholes.

4.3 Deviations from Sampling and Analysis Plan

The sampling and analysis plan is provided in Appendix E. There were no deviations from the sampling and analysis plan during the investigation.

4.4 Impediments

There were no impediments encountered during the investigation.

5.0 INVESTIGATION METHOD

5.1 General

Public and private utility clearances were undertaken prior to commencing the subsurface investigation.

Sampling methodology was consistent with the requirement of the MECP's "Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario", December 1996 (the "1996 Guideline"), "Guide for Completing Phase Two Environmental Site Assessments under Ontario Regulation 153/04", May 2019 (the "Phase Two Guide") and "Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act", March 09, 2004, amended July 01, 2011 (the "Analytical Protocol"), as applicable.

The methods used in the Phase Two ESA investigation did not differ from the associated standard operating procedures. The Standard Field Investigation Protocol is presented in Appendix F.

5.2 Drilling

The drilling information for the Phase Two ESA is provided below:

Borehole	BH3, BH4, BH5 & BH6	вн2	вн1
Date of Work	October 23-28, 2019	January 6-16, 2020	January 28, 2020
Name of Contractor	Profile Drilling	Landshark Drilling	Strong Soil Search Inc.
Equipment Used	Truck-mounted drill rig, hollow stem augers, 2 inch split spoon sampling device	Limited access drill rig, hollow stem augers, 2 inch split spoon sampling device	Truck-mounted drill rig, hollow stem augers, 2 inch split spoon sampling device
Decontamination Measures	The split spoon sampling device was washed between each sample to minimize the potential for crosscontamination.	The split spoon sampling device was washed between each sample to minimize the potential for crosscontamination.	The split spoon sampling device was washed between each sample to minimize the potential for crosscontamination.
Sampling Frequency	Please refer to the borehole logs in Appendix G for the sampling frequency.	Please refer to the borehole logs in Appendix G for the sampling frequency.	Please refer to the borehole logs in Appendix G for the sampling frequency.

5.3 Soil Sampling

5.3.1 Equipment Used

- Laboratory-supplied sampling containers
- Nitrile gloves
- Cooler with loose ice
- RKI Instruments EAGLE 2 Monitor

5.3.2 Geological Description of Soil

Please refer to the borehole logs in Appendix G for the geological description of each soil sample collected.

5.4 Field Screening Measurements

Soil samples were screened in the field using portable hydrocarbon vapour testing equipment and following the procedure outlined in the 1996 Guideline.

Samples were screened using an RKI Instruments EAGLE 2 Monitor. The monitor has a range of 0 parts per million (ppm) to 50,000 ppm and an accuracy of +/- 5%. The monitor was calibrated with hexane (combustible vapour mode) and isobutylene (photoionization detector [PID] mode) prior to field screening as per the calibration procedure outlined by RKI Instruments in "Instruction Manual Eagle Series Portable Multi-Gas Detector 71-0028RK" released August 8, 2010.

Field screening measurements were used to help select samples for petroleum hydrocarbon and volatile organic compounds laboratory analysis. PID field screening readings are provided on the borehole logs in Appendix G.

5.5 Ground Water Monitoring Well Installation

Monitoring wells were installed in all boreholes. The monitoring wells were drilled by drilling sub-contractors on October 23-28, 2019, January 6-16, 2020 and January 28, 2020, under the supervision of an experienced Terraprobe field technician. All monitoring wells were constructed of 50-mm (2-in) ID PVC screens and risers. Filter sand was placed around the well screen to approximately 0.6 m above the top of the screen. All monitoring wells were then backfilled with bentonite to approximately 0.3 m below ground surface. The monitoring wells were finished with flush mount casings.

As per Ontario Regulation 903, the monitoring wells were tagged. The monitoring well locations are provided on Figure 3. The monitoring well installation details are provided on the borehole logs in Appendix G.

5.6 Field Measurement of Water Quality Parameters Ground Water: Sampling

Field measurement of water quality parameters were measured using a YSI 63 Handheld System.

YSI 63 Hand-held System

Range

- pH 0.00 to 14.00 pH
- EC 0.0 to 200.0 mS/cm
- Salinity 0.0 to 80.0 ppt
- Temperature -5.0 to 75.0°C

Resolution

- pH 0.01 pH
- EC 0.1 mS/cm
- Salinity 0.1 ppt
- Temperature 0.1°C

Accuracy

- pH ±0.1 pH within 10°C of calibration, pH ±0.2 pH within 20°C
- EC ±0.5% F.S.
- Salinity $\pm 2\%$ or ± 0.1 ppt
- Temperature ±0.1°C

5.7 Ground Water Sampling

The monitoring wells were purged using a standard flow Waterra inertial lift pump system. Ground water was sampled using a dedicated bailer, or non-gas contact positive displacement pump (bladder pump) and low flow sampling techniques. Low flow sampling involves extracting ground water at rates comparable to ambient ground water flow (typically less than 300 ml/min), so that the drawdown of the water level is minimized, and the mixing of stagnant water with water from the screened intake area in a well is reduced.

Stabilization of parameters (pH, conductivity, temperature, etc.) of the purged water are monitored before a sample is taken, thus low flow methods facilitate equilibrium with the surrounding formation water and produces samples that are representative of the formation water.

Stabilization was considered to occur when consecutive readings were within the following:

- Conductivity ± 3%
- <u>Temperature</u> ± 3%
- $\underline{pH} \pm 0.1$ unit



The use of bladder pumps result in the least amount of alteration in sample integrity as compared to other sample retrieval methods. Water comes into contact with the inside of the bladder (Teflon) and the sample tubing (also Teflon), which may be dedicated to each well.

The use of dedicated bailers help prevent cross contamination and mitigate disturbances to the sample collected.

5.8 Sediment Sampling

No sediment sampling was conducted as part of this investigation because there are no water bodies onsite.

5.9 Analytical Testing

Analytical testing of all soil and ground water samples was conducted by ALS Environmental, a laboratory accredited by the Canadian Association for Laboratory Accreditation.

5.10 Residue Management Procedures

5.10.1 Soil Cuttings

Soil cuttings generated during the drilling activities were disposed of in drums that were removed from the Property after the drilling was complete.

5.10.2 Ground Water

The development and purge water generated during the ground water sampling events was drummed and removed from the Property by a licenced subcontractor.

5.10.3 Fluids from Equipment Cleaning

The fluids from cleaning were removed from the Property and disposed of by the drilling sub-contractor.

5.11 Elevation Surveying

The elevations of the boreholes on the Property were surveyed by Terraprobe using a Trimble R10 Global Navigation Satellite System (GNSS). The Trimble R10 system is a differential global positioning system (GPS) which involves the cooperation of two receivers, one that is stationary and another that is roving around making position measurements. The elevation of each borehole on the Property is presented on the borehole logs in Appendix G.



5.12 Quality Assurance and Quality Control Measures

5.12.1 Containers, Labelling, Handling and Chain of Custody

Containers

The following laboratory-supplied sample containers were used for all sampling conducted on the Property (where applicable).

Soil Parameters	Container	
PHC (F1, BTEX), VOCs, 1,4-Dioxane	2 x 40mL glass vial (methanol preservative)	
Metals, Mercury, Boron-HWS, Hexavalent Chromium, EC, SAR, pH, Chloride, Cyanide	250 mL glass jar, Teflon lined lid	
PHCs (F2-F4), VOC moisture, PAHs, OCPs, PCBs, CPs, ABNs, Methyl mercury, FOCs, Dioxins & Furans	125 mL glass jar, Teflon lined lid	
Ground Water Parameters	Container	
Chloride, electrical conductivity, pH	125 mL HDPE	
Cyanide (CN-)	60 mL HDPE (sodium hydroxide preservative)	
Hexavalent chromium	60 mL HDPE (0.45um field filter followed by ammonium buffer solution)	
Metals (includes hydride-forming metals, calcium, magnesium, sodium)	60 mL HDPE (0.45um field filter nitric acid preservative)	
Mercury	40 mL clear glass bottle (0.45um field filter hydrochloric acid preservative)	
Methyl mercury	125 mL Teflon (FLPE) (hydrochloric acid preservative)	
BTEX, PHCs (F1),THMs, VOCs;	2 x 40 mL glass VOA vials (sodium bisulfate preservative, no headspace)	
PHCs (F2–F4), PAHs	2 x 100 mL amber glass bottle, (sodium bisulfate preservative, 1 cm headspace)	
PCBs	2 x 250 mL amber glass bottle, Teflon lined lid	
Benzo(a)pyrene (Lab Filtered)	2 x 100 mL amber glass bottle, Teflon lined lid (sodium bisulfate preservative, 1 cm headspace)	
OCPs	2 x 500 mL amber glass bottle, Teflon lined lid	
CPs, ABNs,	500 mL amber glass bottle, Teflon lined lid	
Dioxins and furans	2 x 1 L amber glass bottle, Teflon lined lid	

Labelling

All sampling containers were identified with laboratory-supplied labels. The labels included the following information:

- Unique Sample ID
- Company Name
- Date and Time
- Project Number



Handling

Samples were placed in coolers with loose ice after collection for transportation to the laboratory. Sample hold times were met for all submitted soil and ground water samples.

Chain of Custody

Laboratory-supplied Chain of Custody forms were completed for all samples submitted for analysis.

5.12.2 Equipment Cleaning Procedures

All non-dedicated sampling and monitoring equipment was cleaned following each use. During soil sampling, the split spoon sampling device was washed between samples to minimize cross-contamination. During ground water sampling, any part of the interface meter which came into contact with the ground water was cleaned between monitoring wells.

Dedicated equipment (nitrile gloves, terra core samplers, bladders, tubing) were changed between each sample to avoid cross contamination.

5.12.3 Field Quality Control Measures

- All non-dedicated sampling and monitoring equipment was cleaned following each use.
- Where ground water samples were to be analyzed for volatile organic compounds one trip blank sample was submitted for laboratory analysis with each laboratory submission.
- Sufficient field duplicate samples were collected in each medium being sampled, so that at least one (1) field duplicate sample could be submitted for laboratory analysis for every ten (10) samples submitted for laboratory analysis.
- Calibration checks on field instruments occurred daily prior to the commencement of sampling.

5.12.4 Deviations in the Quality Assurance and Quality Control Measures

There were no deviations in the quality assurance and quality control measures.

6.0 REVIEW AND EVALUATION

6.1 Geology

Detailed geological information for the Property is presented on the borehole logs in Appendix G. The geology at the Property is summarized below.

6.1.1 Geological Unit Thicknesses (Estimated)

The surficial layers (Asphalt and Aggregate material) thickness was approximately 0.2 mbgs and was encountered in boreholes BH1, BH2, BH3, and BH4. The Earth Fill material thickness ranged from approximately 0.0 mbgs to 2.3 mbgs, with an average thickness of 1.5 mbgs and was encountered in all boreholes. The native soil thickness ranged from approximately 0.8 mbgs to 23.0 mbgs, with an average thickness of 13.4 mbgs in all boreholes. Bedrock was not encountered in any of the boreholes during the investigation. The geological unit thicknesses are presented in Appendix J.

6.1.2 Elevations of Geological Units

The elevation of surficial layers started at approximately 124.3 mASL (ranging from 124.3 to 123.6 mASL) and extended to an elevation depth of approximately 124.01 mASL (ranging from 123.5 to 124.4 mASL). The elevation of the earth fill material started at approximately 124.1 (ranging from 122.9 to 124.7 mASL) and extended to an elevation depth of approximately 123.1 mASL (ranging from 122.1 to 123.9 mASL). The native soil elevation started where the earth fill ended at approximately 122.7 mASL (ranging from 122.1 to 123.4 mASL) and extended to an elevation of approximately 117.8 mASL (ranging from 110.4 to 122.2 mASL). Bedrock was not encountered in any of the boreholes during the investigation. The geological unit elevations are presented in Appendix J.

6.1.3 Material in Geological Units

Surficial Layers

An asphalt pavement structure, consisting of 50 mm thick asphaltic concrete underlain by 200 mm thick granular base course was encountered in Boreholes 1 and 3 at the ground surface.

A 60 mm concrete paver underlain by 130 mm thick granular base course was encountered in Borehole 2 at the ground surface.

A 600 mm thick gravel surface course was encountered in Borehole 4 at the ground surface.

The above gravel and pavement structure thicknesses were measured from the borehole drilling and are approximate. We recommend that a shallow test pit investigation be carried out to determine a precise pavement structure thickness present across the site for quantity estimation and costing purposes.



Earth Fill

Earth fill materials, consisting of clayey to sandy silt/ silty sand/ sand and gravel/silt, with trace amounts of organics were encountered beneath the surficial layer or at the ground surface in each borehole and extended to about 0.8 to 2.3 m depth below grade.

Standard Penetration Test results (N-values) obtained from the cohesionless earth fill zone ranged from 6 to 48 blows per 300 mm of penetration to 50 blows per 125 mm of penetration, indicating a loose to very dense relative density.

Standard Penetration Test results (N-values) obtained from the cohesive earth fill zone ranged from 2 to 5 blows per 300 mm of penetration, indicating a very soft to firm consistency.

The in-situ moisture contents of the earth fill samples ranged from 3 to 19 percent by mass, indicating a moist condition

Silty Sand Till

Silty sand till deposits with varying amounts of clay (trace to some) and trace amounts of gravel were encountered beneath the earth fill zone in Boreholes 1, 3, 4 and 6 and beneath the silty sand layer in Borehole 2 and extended to 4.6 and 6.1 m depth below grade.

N-values obtained from the undisturbed silty sand till deposits ranged from 24 to 89 blows per 300 mm of penetration to 50 blows per 25 and 150 mm of penetration, indicating a compact to very dense (typically very dense) relative density.

The in-situ moisture contents of the glacial till soil samples ranged from 5 to 18 percent by mass, indicating a moist condition.

Sand and Silt to Silty Sand

Sand and silt to silty sand deposit with trace amounts of clay and gravel were encountered beneath the silty sand till deposit in Boreholes 1, 2, 3, 4 and 6 and beneath the earth fill zone in Borehole 5 and extended to the full depth of investigation.

A sandy silt layer with some clay and trace amounts of gravel was encountered beneath the earth fill zone in Borehole 2.

N-values obtained from the sand and silt to silty sand deposit ranged from 14 to 86 blows per 300 mm of penetration to 50 blows per 75 and 150 mm of penetration, indicating a compact to very dense (typically very dense) relative density.

The in-situ moisture contents of the native sand and silt to silty sand samples ranged from 5 to 32 percent by mass, indicating a moist to wet condition.

Bedrock

Bedrock was not encountered during the subsurface investigation of the Property

6.1.4 Properties of Aquifers and Aquitards

Native Soil

The native soil consisting of layers of sandy silt/silt is considered to be an unconfined aquifer, i.e. the water table aquifer.

6.1.5 Rationale for Choice of Aquifers and Aquitards Investigated

The native soil aquifer was chosen for investigation. This stratum was chosen for investigation because of:

- the possibility of free ground water present
- the native soil aquifer is the first water-bearing zone

6.2 Ground Water Elevations and Flow Direction

6.2.1 Results of Interface Probe Measurements

No light non-aqueous phase liquids (LNAPL) or dense non-aqueous phase liquids (DNAPL) were detected.

6.2.2 Thickness of Free Flowing Product

No free flowing product was encountered on the Property.

6.2.3 Ground Water Elevations

Unstabilized ground water levels were measured in each of borehole as they were drilled and after completion, as noted in the borehole logs in Appendix G. Ground water levels were measured in the installed monitoring wells using a Solinst interface probe. Ground water elevations are presented in Appendix I.

6.2.4 Interpreted Direction of Ground Water Flow

The interpreted direction of ground water flow is to the east-northeast, based on wells completed approximately 14 m below grade, as indicated on Figure 4.



6.2.5 Assessment of Temporal Variability

Water level monitoring to date (Appendix I) indicates that water levels are relatively stable with variations of 0.15 m or less.

6.2.6 Influence of Buried Utilities

As the Property has municipal services from the City of Toronto, there is a potential that buried utilities are present. However, the utilities would be above the water table which is at a depth of approximately 5.0 mbgs to 7.4 mbgs. As such, they are not considered a significant concern to influence ground water flow and transport of on-Site or off-Site contaminants. The potential effect of the Yonge Street subway nd possibly nearby construction dewatering systems are considered to be more significant.

6.3 Ground Water Hydraulic Gradients and Hydraulic Conductivity

6.3.1 Horizontal Hydraulic Gradients

The horizontal hydraulic gradient is calculated using the following equation:

 $I = \Delta h/\Delta s$

where: I = horizontal hydraulic gradient,

 Δh (m) = ground water elevation difference; and,

 Δs (m) = separation distance

The water table is within the native silt and sand to silty sand layer. Based on the current measured ground water levels, the horizontal hydraulic gradient of the ground water for the native silt and sand to silty sand layer at the Property on March 04, 2020 ranged from 0.06 east-northeast in the southwest to 0007 east-northeast in the north.

6.3.2 Vertical Hydraulic Gradient

The vertical hydraulic gradient was calculated using monitoring wells BH4-S and BH4-D using water levels from March 04, 2020 and, given that that both wells are screened in the same unit, by applying ground water elevations to the mid-points of the saturated portions of the screens. The vertical hydraulic gradient between the two nested wells was calculated to be 0.09 downwards.

6.3.3 Hydraulic Conductivity

The hydraulic conductivities from Terraprobe's monitoring wells BH1, BH2, BH3, BH4D, BH5 and BH6 were assessed through falling head ("slug") tests. Each monitoring well was equipped with a digital



transducer to record the fluctuation made to complete the SWRT. The results of the analysis are presented in Appendix C. The resulting hydraulic conductivities are as follow:

Well ID	Ground El. (mASL)	Monitoring Well Depth (mbgs)	Screen Interval	Screened Soil Strata	Hydraulic Conductivity (K)	Test Method
BH1	123.65	10.60	7.55 - 10.60	Sand and Silt to Silty Sand	8.99 x 10 ⁻⁶	Falling Head Test
BH2	124.15	13.70	10.65 – 13.70	Sand and Silt to Silty Sand	1.60 x 10 ⁻⁶	Rising Head Test
вн3	124.30	13.7	10.65 – 13.70	Sand and Silt to Silty Sand	9.77 x 10 ⁻⁶	Falling Head Test
BH4D	124.41	22.86	19.81 – 22.86	Sand and Silt to Silty Sand	1.94 x 10 ⁻⁶	Falling Head Test
ВН5	124.58	13.70	10.65 – 13.70	Sand and Silt to Silty Sand	1.20 x 10 ⁻⁵	Falling Head Test
ВН6	124.66	13.75	10.70 – 13.75	Sand and Silt to Silty Sand	9.78 x 10 ⁻⁶	Falling Head Test

Based on the soil samples submitted for grain size analysis, the hydraulic conductivities can be estimated based on the D10 values (Hazen Method). The D10 value is the soil particle diameter at which 10% of the sample's mass has a diameter less than this value. The hydraulic conductivities can be found in the table below.

Monitoring Well ID	Soil Sample Depth (mbgs)	Soil Sample Elevation (mASL)	Soil Strata	Hydraulic Conductivity (m/sec.)
ВН1	9.3 (SS9)	114.3	Sand and silt	4.0 × 10 ⁻⁶
ВН2	10.8 (SS10)	113.4	Silty sand	6.25×10^{-6}
ВН3	3.3 (SS5)	121.0	Silty Sand, some gravel	1.0 × 10 ⁻⁶
BH4	4.9 (SS7)	119.5	Silty sand	2.25×10^{-6}
ВН6	10.9 (SS10)	113.8	Silty sand	1.0 × 10 ⁻⁶

It should be noted that the above hydraulic conductivities were estimated based on grain size analysis of disturbed samples and do not consider compaction or saturation of the soils. The grain size analysis can be found in Appendix H.

According to Freeze and Cherry (1979), the typical hydraulic conductivity of the strata investigated at the Property are:

- Silty Sand 10⁻³ m/s to 10⁻⁷
- Silt 10^{-5} m/s to 10^{-9} m/s
- Clayey Silt 10⁻⁸ m/s to 10⁻¹⁰ m/s

The hydraulic conductivity field results are relatively consistent with the published values associated with the geological materials which were tested.

6.4 Soil Texture

6.4.1 Rationale for Use of Coarse Soil Texture

A total of five (5) soil samples from selected boreholes were submitted for grain size analysis. In order to determine the soil texture for the applicable standard, the Ontario Regulation 153/04 (Records of Site Condition–Part XV.1 of the Environmental Protection Act) in Section 42(1). Subsection (1) states the following:

'If the qualified person determines that at least 1/3 of the soil at the property, measured by volume, consists of coarse textured soil, the qualified person shall apply the standard for coarse textured soil.'

Coarse textured soil is defined as soil of which more than 50% by weight consists of particles larger than 50 microns in size. The results of the grain size analysis indicated that four out of five native soil samples were coarse textured soil.

6.5 Soil: Field Screening

All recovered soil samples were screened in the field using portable hydrocarbon vapour and PID testing equipment and following the procedure outlined in the 1996 Guideline.

Field screening measurements were used to help select samples for petroleum hydrocarbon and volatile organic compounds laboratory analysis. PID field screening readings are provided on the borehole logs in Appendix G.

6.6 Soil Quality

6.6.1 Location and Depth of Samples

Borehole Samples (depth measured from original ground surface):



	Don'th /			Soil							
Sample ID	Depth / Elev. (m) / (mASL)	Strata	Date Sampled	Metals	Hydride Forming Metals	PHCs (F1-F4)	BTEX	VOCs	PAHs	ORPs	PCBs
BH1-SS1	0.0-0.6 / 123.0-123.6	Fill	Jan 28, 2020	✓	✓				✓		✓
BH1-SS2	0.8-1.4 / 122.2-122.8	Native	Jan 28, 2020			✓	✓	√			
BH1-SS3	1.5-2.1 / 121.5-122.1	Native	Jan 28, 2020	✓	✓				✓		✓
BH1-SS7	6.1-6.7 / 116.9-117.5	Native	Jan 28, 2020			✓	✓	√			
BH2-SS2	0.8-1.4 / 122.8-123.4	Fill	Jan 07, 2020	✓	✓					✓	✓
BH2-SS3A	1.4-1.7/ 122.5-122.8	Native	Jan 07, 2020						✓		
BH2-SS3B	1.7-2.0 / 122.2-122.5	Native	Jan 07, 2020			✓	✓	√			
BH2-SS5	2.7-3.0 / 121.1-121.4	Native	Jan 07, 2020	✓	✓				✓	✓	✓
BH2-SS6	4.6-4.9 / 119.3-119.6	Native	Jan 07, 2020			✓	✓	√			
BH3-SS1	0.0-0.5 / 123.8-124.3	Fill	Oct 25, 2019	✓	✓				✓		✓
BH3-SS2	0.8-1.4 / 122.9-123.5	Fill	Oct 25, 2019			✓	✓	√			
BH3-SS6	4.6-5.0 / 119.3-119.7	Native	Oct 25, 2019	✓	✓				✓		√
BH3-SS8	7.6-8.1 / 116.2-116.7	Native	Oct 25, 2019			✓	✓	√			
BH4-SS1	0.0-0.6/ 123.8-124.4	Fill	Oct 23, 2019	✓	✓	✓	✓	√		✓	
BH4-SS2	0.8-1.4/ 123.0-123.6	Fill	Oct 23, 2019						✓		
BH4-SS3	1.5-2.1/ 122.3-122.9	Fill	Oct 23, 2019	✓	✓					✓	
BH4-SS5	3.0-3.4/ 121-121.4	Native	Oct 23, 2019			✓				✓	
BH4-SS7	4.6-5.2/ 119.2-119.8	Native	Oct 23, 2019				✓	√		✓	
BH4-SS8	5.3-5.9/ 118.5-119.1	Native	Nov 12, 2019					√			
BH4-SS9	6.1-6.7/ 117.7-118.3	Native	Nov 22, 2019							✓	
BH5-SS1	0.0-0.6/ 124-124.6	Fill	Oct 28, 2019	√	✓				✓		✓
BH5-SS2	0.8-1.4/ 123.2-123.8	Fill	Oct 28, 2019			√	√	√			
BH5-SS5	3.0-3.5/ 121.1-121.6	Native	Oct 28, 2019	✓	✓				✓		✓



	D dl. /						Soil				
Sample ID	Depth / Elev. (m) / (mASL)	Strata	Date Sampled	Metals	Hydride Forming Metals	PHCs (F1-F4)	BTEX	VOCs	PAHs	ORPs	PCBs
BH5-SS6	4.6-5.0/ 119.6-120.0	Native	Nov 12, 2019	✓							
BH5-SS7	6.1-6.5/ 118.1-118.5	Native	Oct 28, 2019			√	✓	√			
BH6-SS1	0.0-0.6/ 124.1-124.7	Fill	Oct 29, 2019	✓	✓				√		✓
BH6-SS2	0.8-1.4/ 123.3-123.9	Fill	Oct 29, 2019			✓	✓	✓			
BH6-SS3	1.5-2.1/ 122.6-123.2	Native	Oct 29, 2019	✓	✓				✓		√
BH6-SS7	6.1-6.5/ 118.2-118.6	Native	Oct 29, 2019			√	√	√			

6.6.2 Comparison to Applicable Standards (Soil)

Select soiled samples were analysed for the Contaminants of Potential Concern (COPCs). COPCs include:

- Metals
- Hydride-Forming Metals (H-M; As, Sb, Se)
- Other Regulated Parameters (ORPs)
 - Electrical Conductivity (EC)
 - Sodium Adsorption Ratio (SAR)
 - Boron, Hot Water Soluble (B-HWS);
 - Cyanide (CN⁻);
 - Mercury (Hg);
 - Hexavalent Chromium (Cr[VI]); and
 - pH
- Volatile Organic Compounds (VOCs)
- Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX)
- Petroleum Hydrocarbons (PHCs)
- Polycyclic Aromatic Hydrocarbons (PAHs)
- Polychlorinated Biphenyls (PCBs)

The results of the analysis were compared to the MECP Table 3 RPI Coarse Standards. The laboratory certificates of analysis are provided in Appendix L, and the results of the soil chemical analysis are provided in Tables 1 to 6.

Metals in Soil

The following exceedances for Metals of the MECP Table 3 RPI Coarse Standards were noted in the samples analyzed:

Contaminants of Concern	Units	MECP Table 3 RPI Coarse Soil Standards	BH5- SS1 Fill (0.0-0.6 mbgs)	BH5- SS5 Native (3.0-3.5 mbgs)	BH5- SS6 Native (4.6-5.0 mbgs)	BH6- SS1 Fill (0.0-0.6 mbgs)	BH6- SS3 Native (1.5-2.1 mbgs)	BH1- 2006- SS1 Fill (0.0-0.6 mbgs)	BH3- 2006- SS1 Fill (0.0-0.6 mbgs)
Lead	μg/g	120	3.3	<u>338</u>	1.9	<u>139</u>	4.1	<u>602</u>	<u>160</u>
Barium	μg/g	390	21.7	3.6	14	73.1	50.8	<u>423</u>	126
Cadmium	μg/g	1.2	<0.5	0.64	<0.5	0.5	<0.5	<u>1.7</u>	<0.5
Zinc	μg/g	340	13.8	202	9.8	107	20.5	<u>716</u>	102

Notes: RED values exceed the applicable MECP Table 3 RPI Coarse Standards
BLUE values meet the applicable MECP Table 3 RPI Coarse Standards

All other samples analyzed met the MECP Table 3 RPI Coarse Standards for Metals. The results are summarized in Table 1 and the laboratory certificates of analysis are provided in Appendix L. The sample exceeding for Metals as noted above is shown on Figure 5.

Hydride-Forming Metals in Soil

No Petroleum Hydride Forming Metals exceedances of the MECP Table 3 RPI Coarse Standards were noted in the samples analyzed. All results are summarized in Table 1 and the laboratory certificates of analysis are provided in Appendix L.

Other Regulated Parameters in Soil

The following apparent exceedances for ORPs of the MECP Table 3 RPI Coarse Standards were noted in the samples analyzed:

Contaminants of Concern	Units	MECP Table 3 RPI Coarse Soil Standards	BH2- SS2 Fill (0.8-1.4 mbgs)	DUP3 (BH2- SS2) Fill (0.8- 1.4 mbgs)	BH2- SS5 Native (2.7- 3.0 mbgs)	BH4- SS1 Fill (0.0- 0.6 mbgs)	BH4- SS3 Native (1.5- 2.1 mbgs)	BH4- SS5 Native (3.0- 3.4 mbgs)	BH4- SS7 Native (0.0- 0.6 mbgs)	BH4- SS9 Native (6.1- 6.7 mbgs)	BH1- 2006- SS1 Fill (0.0- 0.6 mbgs)	BH2- 2006- SS1 Fill (0.0- 0.6 mbgs	BH3- 2006- SS1 Fill (0.0- 0.6 mbgs)
Electrical Conductivity	μg/g	0.7	<u>1.56</u>	<u>1.16</u>	0.366	<u>0.74</u>	0.519	-	-	-	0.156	0.998	<u>1.23</u>
Sodium Adsorption Ratio	μg/g	5.0	<u>7.85</u>	<u>6.56</u>	4.64	4.1	<u>5.51</u>	32.9	12.3	1.66	0.496	<u>8.11</u>	<u>8.6</u>
Mercury	μg/g	0.27	0.0263	0.0184	<0.00 5	0.0178	<0.00 5	-	-	-	<u>2.31</u>	0.269	<u>0.875</u>

Notes: RED values exceed the applicable MECP Table 3 RPI Coarse Standards

BLUE values meet the applicable MECP Table 3 RPI Coarse Standards



All other samples analyzed met the MECP Table 3 RPI Standards for ORPs. The results are summarized in Table 1 and the laboratory certificates of analysis are provided in Appendix L. The samples apparently exceeding for ORPs as noted above are shown on Figures 6 and 7.

The term "apparent exceedances" is used because Paragraph 1 of Section 49(1) of O.Reg. 153/04 states that apparent exceedances of the Site Condition Standards are deemed not to be exceedances if the Qualified Person attributes these results to the use of de-icing salt application to surfaces for the safety of vehicular and pedestrian traffic under conditions of snow and ice or both. As the elevated EC and SAR are associated with outdoor parking areas, the Qualified Person attributes these results to the use of de-icing salt and deems the associated Standards not to be exceeded (the same rationale applies to chloride in ground water). The data are included because of their relevance from an excess soil management perspective.

Petroleum Hydrocarbons in Soil

No Petroleum Hydrocarbon exceedances of the MECP Table 3 RPI Coarse Standards were noted in the samples analyzed. All results are summarized in Table 2 and the laboratory certificates of analysis are provided in Appendix L.

Volatile Organic Compounds in Soil

The following exceedances by VOCs of the MECP Table 3 RPI Coarse Standards were noted in the samples analyzed:

Contaminants of Concern	Units	MECP Table 3 RPI Coarse Soil Standards	BH4-SS1 Fill (0.0-0.6 mbgs)	BH4-SS7 Fill (4.6-5.2 mbgs)	BH4-SS8 Fill (5.3-5.9 mbgs)	BH5-SS2 Fill (0.8-1.4 mbgs)	BH5-SS7 Native (6.1-6.5 mbgs)
Trichloroethylene	μg/g	0.061	<0.01	0.077	0.04	<u>0.17</u>	0.02

Notes: RED values exceed the applicable MECP Table 3 RPI Coarse Standards
BLUE values meet the applicable MECP Table 3 RPI Coarse Standards

All other samples analyzed met the MECP Table 3 RPI Standards for VOCs. The results are summarized in Table 3 and the laboratory certificates of analysis are provided in Appendix L. The samples exceeding for VOCs as noted above are shown on Figure 8.

Benzene, Toluene, Ethylbenzene, and Xylenes in Soil

No BTEX exceedances of the MECP Table 3 RPI Coarse Standards were noted in the samples analyzed. All results are summarized in Table 4 and the laboratory certificates of analysis are provided in Appendix L.

Polycyclic Aromatic Hydrocarbons in Soil

The following exceedances for PAHs of the MECP Table 3 RPI Coarse Standards were noted in the samples analyzed:

Contaminants of Concern	Units	MECP Table 3 RPI Coarse Soil Standards	BH2-SS3A Fill (1.4-1.7 mbgs)	DUP4 (BH2-SS3A) Fill (1.4-1.7 mbgs)	BH2-SS5 Native (2.7-3.0 mbgs)	BH3-SS1 Fill (0.0-0.5 mbgs)	BH3-SS6 Native (4.6-5.0 mbgs)	DUP1 (BH3-SS6) Native (4.6-5.0 mbgs)
Acenaphthylene	μg/g	0.15	<0.05	<u>0.3</u>	<0.05	<u>1.03</u>	<0.05	<0.05
Anthracene	μg/g	0.67	0.091	0.124	<0.05	<u>5.6</u>	<0.05	<0.05
Benzo(a)anthracene	μg/g	0.5	0.27	0.341	<0.05	<u>11.5</u>	<0.05	<0.05
Benzo(a)pyrene	μg/g	0.3	0.219	<u>0.516</u>	<0.05	<u>9.26</u>	<0.05	<0.05
Benzo(b/j)fluoranthene	μg/g	0.78	0.318	0.626	<0.05	<u>10.7</u>	<0.05	<0.05
Benzo(k)fluoranthene	μg/g	0.78	0.088	0.181	<0.05	4.63	<0.05	<0.05
Chrysene	μg/g	7	0.298	0.632	<0.05	<u>11.5</u>	<0.05	<0.05
Dibenzo(a,h)anthracene	μg/g	0.1	<0.05	0.065	<0.05	<u>1.64</u>	<0.05	<0.05
Fluoranthene	μg/g	0.69	0.677	2.08	0.05	<u>25.5</u>	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	μg/g	0.38	0.148	0.373	<0.05	<u>5.75</u>	<0.05	<0.05
Naphthalene	μg/g	0.6	0.016	0.205	<0.013	<u>0.704</u>	<0.013	<0.013
Phenanthrene	μg/g	6.2	0.441	2.9	<0.046	<u>23.5</u>	<0.046	<0.046

Contaminants of Concern	Units	MECP Table 3 RPI Coarse Soil Standards	BH5-SS1 Fill (0.0-1.6 mbgs)	BH5-SS5 Native (3.0-3.5 mbgs)	BH6-SS1 Fill (2.7-3.0 mbgs)	BH6-SS3 Native (1.5-2.1 mbgs)
Acenaphthylene	μg/g	0.15	0.094	<0.05	0.07	<0.05
Anthracene	μg/g	0.67	0.341	<0.05	0.263	<0.05
Benzo(a)anthracene	μg/g	0.5	0.959	<0.05	0.703	<0.05
Benzo(a)pyrene	μg/g	0.3	0.808	<0.05	0.583	<0.05
Benzo(b/j)fluoranthene	μg/g	0.78	<u>1.04</u>	<0.05	0.683	<0.05
Benzo(k)fluoranthene	μg/g	0.78	0.429	<0.05	0.28	<0.05
Chrysene	μg/g	7	1.14	<0.05	0.712	<0.05
Dibenzo(a,h)anthracene	μg/g	0.1	0.147	<0.05	<u>0.101</u>	<0.05
Fluoranthene	μg/g	0.69	<u>2.51</u>	<0.05	0.143	<0.05
Indeno(1,2,3-cd)pyrene	μg/g	0.38	0.5	<0.05	0.351	<0.05
Naphthalene	μg/g	0.6	0.068	<0.05	0.028	<0.015
Phenanthrene	μg/g	6.2	2.07	<0.046	<0.05	<0.046

Notes: RED values exceed the applicable MECP Table 3 RPI Coarse Standards BLUE values meet the applicable MECP Table 3 RPI Coarse Standards

All other samples analyzed met the MECP Table 3 RPI Standards for PAHs. The results are summarized in Table 5 and the laboratory certificates of analysis are provided in Appendix L. The samples exceeding for PAHs as noted above are shown on Figure 9.

Polychlorinated Biphenyls in Soil

No PCBs exceedances of the MECP Table 3 RPI Coarse Standards were noted in the samples analyzed. All results are summarized in Table 3 and the laboratory certificates of analysis are provided in Appendix L.

6.6.3 Contaminants of Concern (Soil)

The Contaminants of Concern associated with the earth fill on the Property are:

- Metals
 - o Lead
 - o Barium
 - o Cadmium
 - o Zinc
- Other Regulated Parameters (ORPs)
 - o Electrical Conductivity (relevant from an excess soil management perspective only); and
 - o Sodium Adsorption Ratio (relevant from an excess soil management perspective only).
 - o Mercury
- VOCs
 - o Trichloroethylene.
- PAHs
 - Acenaphthylene;
 - o Anthracene;
 - o Benzo(a)anthracene;
 - Benzo(a)pyrene;
 - Benzo(b/j)fluoranthene;
 - o Benzo(k)fluoranthene;
 - o Chrysene;
 - o Dibenzo(a,h)anthracene;
 - o Fluoranthene;
 - o Indeno(1,2,3-cd)pyrene;
 - Naphthalene; and
 - o Phenanthrene.

The Contaminants of Concern associated with the native soils on the Property are:

Metals



- o Lead.
- Other Regulated Parameters (ORPs)
 - o Sodium Adsorption Ratio (relevant from an excess soil management perspective only).
- VOCs
 - o Trichloroethylene.

6.6.4 Contamination Impact on Other Media

Elevated concentrations of VOCs and/or PAHs in ground water indicate that ground water quality may be impacted by soil/fill quality.

6.6.5 Presence of Light or Dense Non-Aqueous Phase Liquids (In Soil)

Light non-aqueous phase liquids (LNAPL) and dense non-aqueous phase liquids (DNAPL) were not detected in the earth fill or native soil on the Property.

6.7 Ground Water Quality

6.7.1 Location and Depth of Sample Locations

Ground water sampling was completed for the monitoring wells on the Property for a total of two (2) events. Ground water samples were analysed for parameters including Metals, Hydride-Forming Metals (H-M), ORPs, PHCs, BTEX, VOCs, PAHs and PCBs. The laboratory certificates of analysis are provided in Appendix L.

Monitorin g Well	Screen/Sample Elevation (mASL)	Metals	Н-М	ORPs	PHCs (F1-F4)	BTEX	VOCs	PAHs	PCBs
BH1	113.0-116.0	✓	✓	✓	✓	✓	✓	✓	✓
BH2	110.5-113.5	✓	✓	✓	✓	✓	✓	✓	✓
ВН3	110.6-113.6	✓	✓		✓	✓	✓	✓	✓
BH4-s	116.8-119.8	✓	✓	✓	✓	✓	✓	✓	
BH4-D	101.6-104.6	✓	✓	✓	✓	✓	✓	✓	
BH5	110.9-113.9	✓	✓		✓	✓	✓	✓	✓
ВН6	111.0-114.0	✓	✓		✓	✓	✓	✓	✓

Notes: ORPs (if any) analyzed include Chromium VI, Cyanide, Chloride, and Mercury. H-M= Hydride-Forming Metals X – Insufficient ground water present for sampling

6.7.2 Field Filtering

Field filtering occurred for all metal samples analyses that require field filtering as per the requirements of the Analytical Protocol. Field filtration utilized dedicated disposable in-line 0.45 micron filters.



6.7.3 Comparison to Applicable Standards (Ground Water)

Select ground water samples were analysed for the COPCs. COPCs include:

- Metals
- Hydride-Forming Metals (As Se and Sb)
- Select ORPs including Chloride, Cyanide, Mercury, Hexavalent Chromium, PH
- Sodium (Na)
- Volatile Organic Compounds (VOCs)
- Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX)
- Petroleum Hydrocarbons (PHCs)
- Polycyclic Aromatic Hydrocarbons (PAHs)
- Polychlorinated Biphenyls (PCBs)

The results of the analysis were compared to the applicable MECP site condition standard for the Property (MECP Table 3 Standards). The laboratory certificates of analysis are provided in Appendix L, and the results of the ground water chemical analysis are provided in Tables 7 to 12.

Metals in Ground Water

No Metals exceedances of the MECP Table 3 Standards were noted in the samples analyzed. The results are summarized in Table 7 and the laboratory certificates of analysis are provided in Appendix L.

Hydride-Forming Metals in Ground Water

No hydride-forming metal exceedances of the MECP Table 3 Standards were noted in the samples analyzed. All results are summarized in Table 7 and the laboratory certificates of analysis are provided in Appendix L.

ORPs in Ground Water

The following apparent exceedances for ORPs of the MECP Table 3 Standards were noted in the samples analyzed:

MECP Table	MECP Table 3 Standards (μg/L)							
Sample ID	Date	2300000						
BH1	4-Feb-20	2070000						
BH1	27-Feb-20	2790000						
BH2	4-Feb-20	1440000						
DUP4 (BH2)	4-Feb-20	1580000						
BH2	27-Feb-20	<u>2680000</u>						



MECP Table	MECP Table 3 Standards (μg/L)						
DUP5 (BH2)	27-Feb-20	<u>2900000</u>					
BH4-S	20-Nov-19	<u>3840000</u>					
BH4-S	16-Dec-19	3560000					

Notes: RED values exceed the applicable MECP Table 3 RPI Standards
BLUE values meet the applicable MECP Table 3 RPI Standards

All other samples analyzed met the MECP Table 3 Standards for ORPs. The results are summarized in Table 7 and the laboratory certificates of analysis are provided in Appendix L. The Qualified Person attributes the elevated chloride in ground water to the use of de-icing salt and deems the associated Standard not to be exceeded.

Petroleum Hydrocarbons in Ground Water

No PHCs exceedances of the MECP Table 3 Standards were noted in the samples analyzed. All results are summarized in Table 8 and the laboratory certificates of analysis are provided in Appendix L.

Volatile Organic Compounds in Ground Water

The following exceedances for VOCs of the MECP Table 3 Standards were noted in the samples analyzed:

Contaminants of Concern	Units	MECP Table 3 Standards	BH5 20-Nov-19 113.9-110.9 mASL	BH5 16-Dec-19 113.9-110.9 mASL	BH6 16-Dec-19 114.0-111.0 mASL	BH5 16-Dec-19 114.0-111.0 mASL
Cis-1,2 Dichloroethylene	μg/g	1.6	<u>4.89</u>	<u>2.79</u>	<u>4.61</u>	<u>4.97</u>
Trichloroethylene	μg/g	1.6	<u>5.59</u>	<u>28.8</u>	<u>23.9</u>	<u>3.81</u>

Notes: <u>RED</u> values exceed the applicable MECP Table 3 RPI Standards **BLUE** values meet the applicable MECP Table 3 RPI Standards

All other samples analyzed met the MECP Table 3 Standards for VOCs. The results are summarized in Table 9 and the laboratory certificates of analysis are provided in Appendix L. The samples exceeding for VOCs as noted above are shown on Figure 11.

Benzene, Toluene, Ethylbenzene, and Xylenes in Ground Water

No BTEX exceedances of the MECP Table 3 Standards were noted in the samples analyzed. All results are summarized in Table 10 and the laboratory certificates of analysis are provided in Appendix L.

Polycyclic Aromatic Hydrocarbons in Ground Water

The following exceedances for PAHs of the MECP Table 3 Standards were noted in the samples analyzed:

Contaminants of Concern	Units	MECP Table 3 Standards	BH5 20-Nov-19 113.9-110.9 mASL	BH5 16-Dec-19 113.9-110.9 mASL
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Benzo(b)fluoranthene	μg/g	0.75	<0.02	<u>0.87</u>
Benzo(g,h,i)perylene	μg/g	0.2	<0.02	<u>0.386</u>
Indeno(1,2,3-cd)pyrene	μg/g	0.2	<0.02	<u>0.465</u>

Notes: RED values exceed the applicable MECP Table 3 RPI Standards
BLUE values meet the applicable MECP Table 3 RPI Standards

All other samples analyzed met the MECP Table 3 Standards for PAHs. The results are summarized in Table 11 and the laboratory certificates of analysis are provided in Appendix L. The sample exceeding for PAHs as noted above is shown on Figure 12.

Polychlorinated Biphenyls in Ground Water

No PCBs exceedances of the MECP Table 3 Standards were noted in the samples analyzed. All results are summarized in Table 12 and the laboratory certificates of analysis are provided in Appendix L.

6.7.4 Contaminants of Concern (Ground Water)

The Contaminants of Concern associated with the ground water (GW Unit 1) on the Property are as follows:

- ORPs
 - Chloride
- VOCs
 - o cis-1,2-Dichloroethylene (cis-1,2-DCE); and
 - o Trichloroethylene (TCE).
- PAHs
 - o Benzo(b)fluoranthene;
 - o Benzo(g,h,i)perylene; and
 - o Indeno(1,2,3-cd)pyrene.

6.7.5 Chemical or Biological Transformations

As cis-12-DCE is normally encountered as a decay product of TCE or tetrachloroethylene (PCE) and was accompanied by TCE, its presence is taken as an indication of the transformation of TCE via reductive dechlorination.

6.7.6 Contamination Impact on Other Media

The Table 3 RPI Coarse Standards for TCE and cis-1,2-DCE in ground water were established on the basis of possible decay to vinyl chloride. As such, the recommended risk assessment should assess the potential for soil vapour intrusion.

6.7.7 Presence of Light or Dense Non-Aqueous Phase Liquids (Ground Water)

Light non-aqueous phase liquids (LNAPL) and dense non-aqueous phase liquids (DNAPL) were not detected in the ground water on the Property.

6.8 Quality Assurance and Quality Control Results

6.8.1 Types of Quality Control Samples Collected and Results

In general, samples were handled in accordance with the Analytical Protocol with respect to holding time, preservation method, storage requirement and sample container type. Laboratory results were compared to MECP standards for quality control under the Analytical Protocol which require laboratory results to meet specific performance criteria such as specified method detection limit (MDL) requirements. The sampling and analyses performed conformed with the requirements of the 1996 Guideline and the Analytical Protocol.

Duplicate samples were submitted at a rate of 10% for the ground water samples.

6.8.2 Samples Not Handled in Accordance with the Analytical Protocol

Holding Time

All samples met the holding times specified in the Analytical Protocol.

Preservation Method

All samples met the preservation methods specified in the Analytical Protocol.

Storage Requirement

All samples met the storage requirements specified in the Analytical Protocol.

Container Type

All samples used were the container type specified in the Analytical Protocol.

6.8.3 Subsection 47 (3) of the Regulation

All certificates of analysis or analytical reports received pursuant to clause 47(2)(b) of the Regulation comply with subsection 47(3). A certificate of analysis or analytical report has been received for each sample submitted for analysis. All certificates of analysis or analytical reports received have been included in full in Appendix L to this Phase Two ESA report.

6.8.4 Results Qualified by Laboratory

The Laboratory did not make any significant comments that changed the outcome of the analytical results regarding the soil and ground water samples.



6.8.5 Overall Quality of Field Data

Decision making regarding the environmental condition of the Property was not affected by the overall quality of the field data. The overall quality of the field data was considered by the Qualified Person to meet the objectives of the investigation and assessment.

7.0 CONCLUSIONS

The conclusions of the Phase Two ESA are:

- The applicable Site Condition Standards are the 2011 Ministry of the Environment, Conservation and Parks (MECP) Table 3 Standards for Residential/ Parkland/ Institutional Land Use with coarse textured soils (MECP Table 3 RPI Coarse Standards).
- An asphalt pavement structure, consisting of 50 mm thick asphaltic concrete underlain by 200 mm thick granular base course was encountered in Boreholes 1 and 3 at the ground surface. A 60 mm concrete paver underlain by 130 mm thick granular base course was encountered in Borehole 2 at the ground surface. A 600 mm thick gravel surface course was encountered in Borehole 4 at the ground surface. The earth fill layer consisted of clayey to sandy silt/silty sand/sand and gravel/silt, with trace amounts of organics. Silty sand till with varying amounts of clay (trace to some) and trace amounts of gravel was encountered beneath the earth fill zone. A sand and silt to silty sand unit with trace amounts of clay and gravel was encountered beneath the silty sand till in Boreholes 1, 2, 3, 4 and 6 and beneath the earth fill zone in Borehole 5 and extended to the full depth of investigation. Bedrock was not encountered.
- The MECP Table 3 RPI Coarse Standards were met in the earth fill soil located on the Property with the exception of the following:
 - Lead (Metals) in BH1-2006, BH3-2006 and BH6; Barium, Cadmium and Zinc in BH1-2006;
 - o Electrical Conductivity (ORPs) in BH2-2006, BH2, BH3-2006, and BH4 (note: relevant from an excess soil management perspective only);
 - o Sodium Adsorption Ratio (ORPs) in BH2, BH2-2006 and BH3-2006 (note: relevant from an excess soil management perspective only);
 - o Mercury (ORPs) in BH1-2006 and BH3-2006;
 - o Trichloroethylene (VOCs) in BH5 and BH6; and
 - o PAHs in BH2, BH3, BH5, and BH6 for one or more of the following parameters:
 - Acenaphthylene;
 - Anthracene;
 - Benzo(a)anthracene;
 - Benzo(a)pyrene;
 - Benzo(b/j)fluoranthene;
 - Benzo(k)fluoranthene;
 - Chrysene;
 - Dibenzo(a,h)anthracene;
 - Fluoranthene;
 - Indeno(1,2,3-cd)pyrene;



- Naphthalene; and
- Phenanthrene.
- The MECP Table 3 RPI Coarse Standards were met in the native material on the Property with the exception of the following:
 - o Lead (Metals) in BH5;
 - o Sodium Adsorption Ratio (ORPs) in BH2 and BH4 (note: relevant from an excess soil management perspective only); and
 - o Trichloroethylene (VOCs) in BH4.
- The MECP Table 3 Standards were met for all tested parameters in all ground water samples with the exception of the following:
 - o cis-1,2-Dichloroethylene (VOCs) in BH5 and BH6;
 - o Trichloroethylene (VOCs) in BH5 and BH6; and
 - o PAHs in BH2, BH3, BH5, and BH6 for the following parameters:
 - Benzo(b)fluoranthene;
 - Benzo(g,h,i)perylene; and
 - Indeno(1,2,3-cd)pyrene.

In summary, exceedances of the applicable Site Condition Standards were noted in the earth fill and native soils on the Property. Additionally, exceedances of the applicable Site Condition Standards were noted in the ground water on the Property. As an RSC is not required by the MECP, it is Terraprobe's recommendation that additional investigations for vertical and horizontal delineation of the impacted material should be conducted in order to support a Risk Assessment on the Property and, if required by the City of Toronto, the filing of an RSC. A Risk Assessment will be required to assess the risks to human and ecological health resulting from the identified exceedances on the Property.

7.1 Signatures

The Phase Two Environmental Site Assessment has been completed by Kossay Makhzoumi B.A.Sc., E.I.T., under the direction and supervision of R. Baker Wohayeb, M.A.Sc., P.Eng, QP_{RA}. The findings and conclusions presented in this report have been determined on the basis of the information that was obtained from review of previous investigations provided and from the current investigation of the Phase Two Property.

We trust this report meets with your requirements. Should you have any questions regarding the information presented, please do not hesitate to contact our office.

Yours truly,

Terraprobe Inc.

9

Kossay Makhzoumi B.A.Sc., E.I.T. Project Manager

R. B. WOHAYEB 100051508

R. Baker Wohayeb, M.A.Sc., P.Eng, QP_{RA} Principal

Brampton Office

8.0 REFERENCES

- 1. Armstrong, D.K. and Dodge, J.E.P. *Paleozoic Geology Map of Southern Ontario*. Ontario Geological Survey, Miscellaneous Release--Data 219.
- 2. Chapman, L.J. and Putnam, D.F. 2007. *The Physiography of Southern Ontario*. Ontario Geological Survey, Miscellaneous Release--Data 228.
- 3. Freeze, R. Allen and Cherry, John A., 1979. *Groundwater*. Page 29.
- 4. Ministry of the Environment, Conservation and Parks, December 1996. *Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario.*
- 5. Ministry of Environment, Conservation and Parks, 15 April 2011. Soil, Ground Water and Sediment Standards for use under part XV.10f the Environmental Protection Act.
- 6. Ministry of the Environment, Conservation and Parks, June 2011. *Guide for Completing Phase Two Environmental Site Assessments under Ontario regulation 153/04*.
- 7. Ministry of the Environment, Conservation and Parks, July 2011. *Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act.*
- 8. Terraprobe Inc. "Phase One Environmental Site Assessment, 1196 Yonge Street & 2-8 Birch Avenue, Toronto, Ontario" DRAFT report dated November 7, 2019.
- 9. Terraprobe, "Phase I Environmental Site Assessment, 1196-1210 Yonge Street & 2-8 Birch Avenue, Toronto, Ontario," dated February 17, 2006.
- 10. Terraprobe, "Phase II Environmental Site Assessment, 1196-1210 Yonge Street & 2-8 Birch Avenue, Toronto, Ontario," dated February 14, 2006.
- 11. Terraprobe, "Asbestos Management Plan, 1196-1210 Yonge Street & 2-8 Birch Avenue, Toronto, Ontario," dated November 23, 2007.
- 12. Terraprobe, "Asbestos Survey, 1196-1210 Yonge Street & 2-8 Birch Avenue, Toronto, Ontario," dated December 22, 2014.

9.0 LIMITATIONS AND USE OF THE REPORT

This report was prepared for the exclusive use of Birch Equities Limited (Property Owner) and is intended to provide an assessment of the environmental condition on the property located at 1196 Yonge Street and 2-8 Birch Avenue in Toronto, Ontario. The report was prepared for the purpose of identifying potential environmental concerns, including an assessment of the likelihood that the environmental quality of the soil and ground water at the Property may have been adversely affected by past and present practices at the Property, and/or those of the surrounding properties prior to development of the Property. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Terraprobe accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report, including consequential financial effects on transactions or property values, or requirements for follow-up actions and costs.

The assessment should not be considered a comprehensive audit that eliminates all risks of encountering environmental problems. The information presented in this report is based on information collected during the completion of the subsurface investigation conducted by Terraprobe Inc. It is based on conditions at the Property at the time of the site inspection. The subsurface conditions were assessed based on information collected at specific borehole and monitoring well locations. The actual subsurface conditions between the sampling points may vary.

There is no warranty expressed or implied by this report regarding the environmental status of the Property. Professional judgment was exercised in gathering and analyzing information collected by our staff, as well as that submitted by others. The conclusions presented are the product of professional care and competence, and cannot be construed as an absolute guarantee.

In the event that during future work new information regarding the environmental condition of the Property is encountered, or in the event that the outstanding responses from the regulatory agencies indicate outstanding issues on file with respect to the Property, Terraprobe should be notified in order that we may re-evaluate the findings of this assessment and provide amendments, as required.

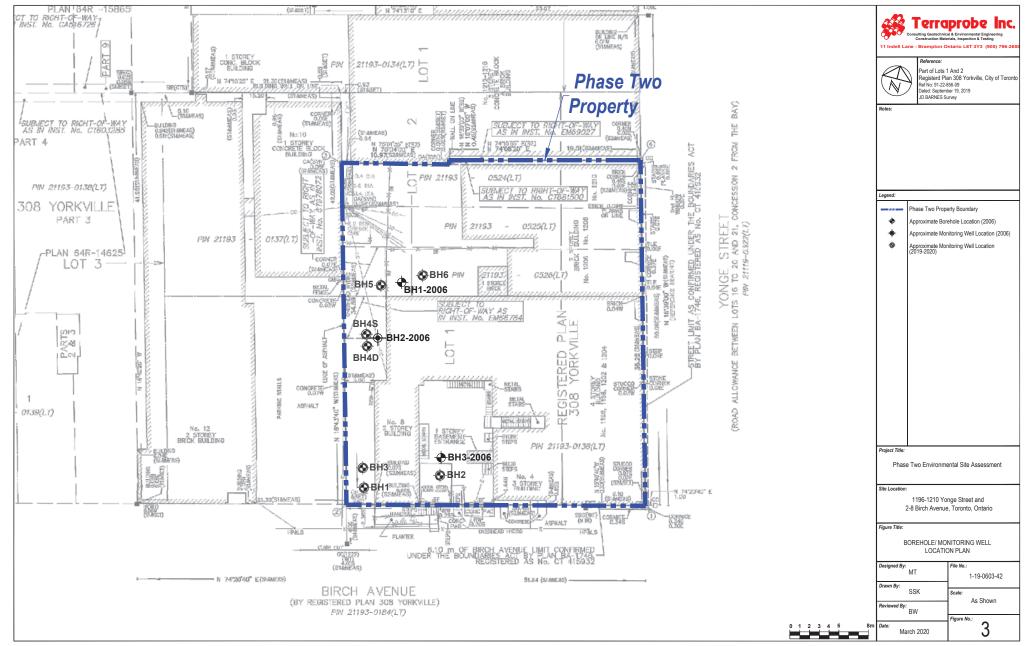
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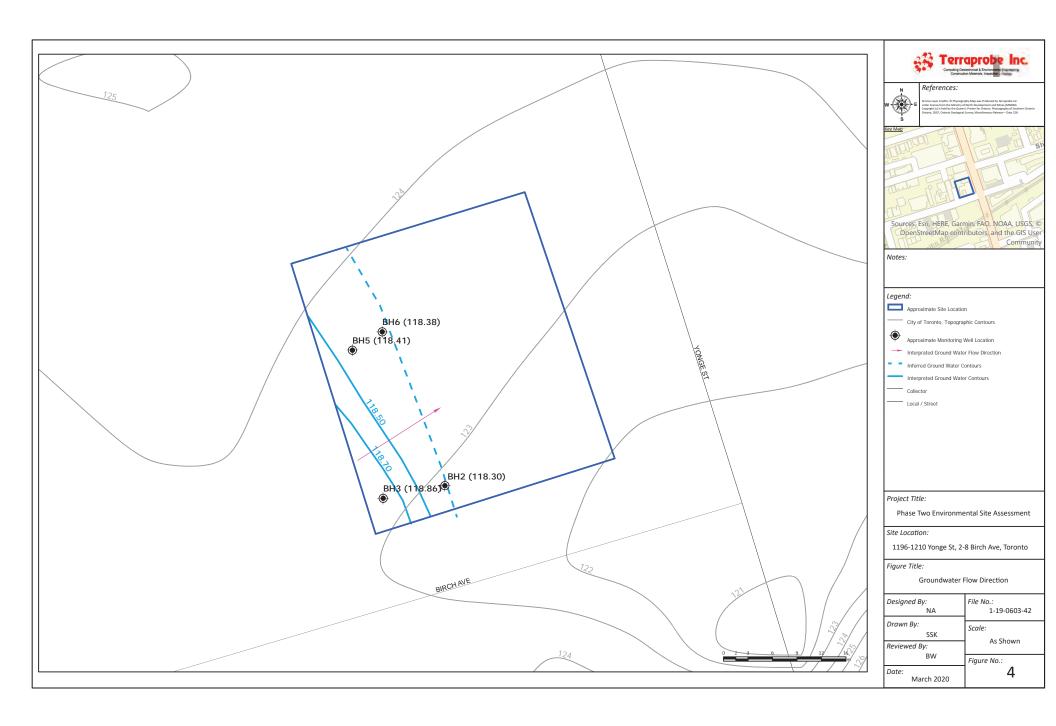
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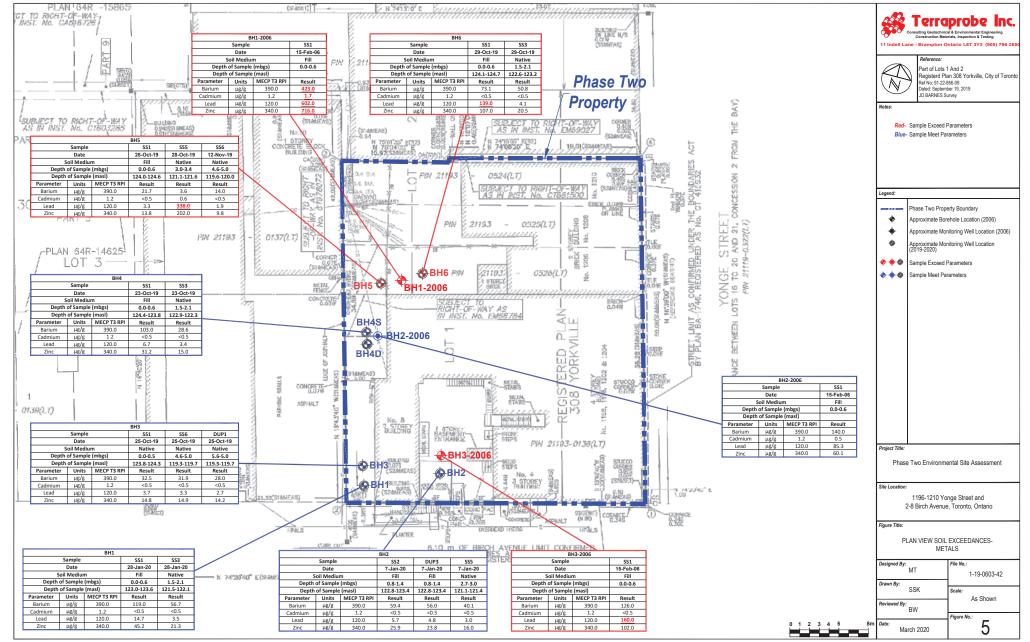
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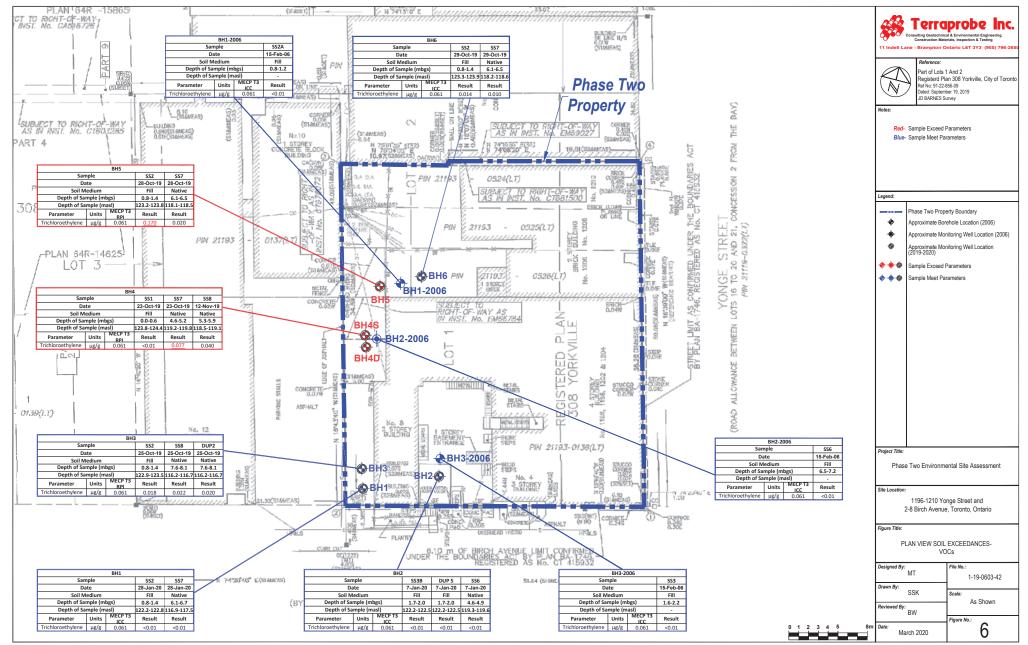


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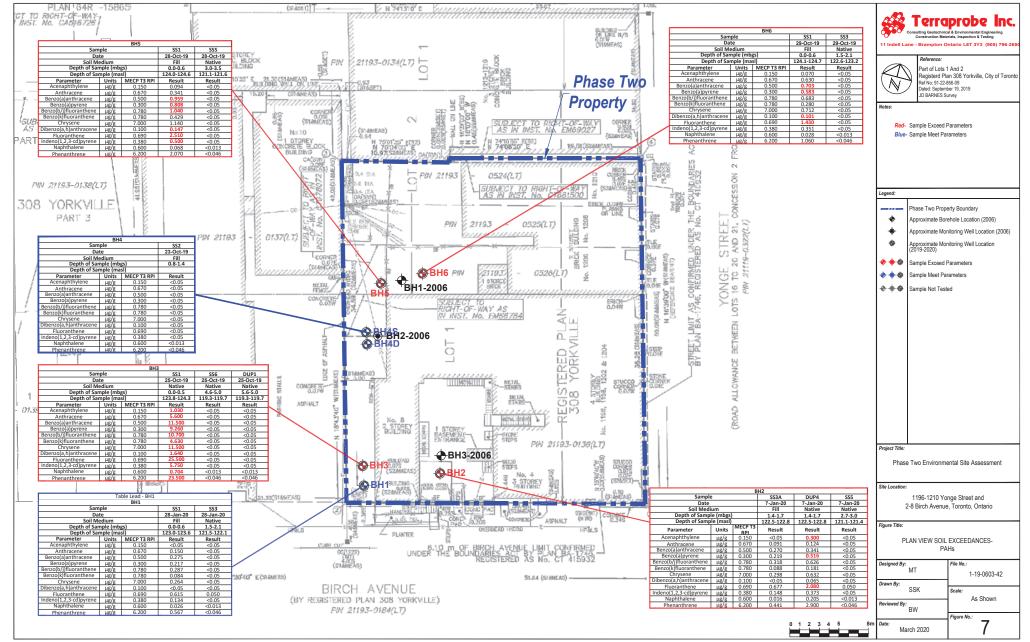




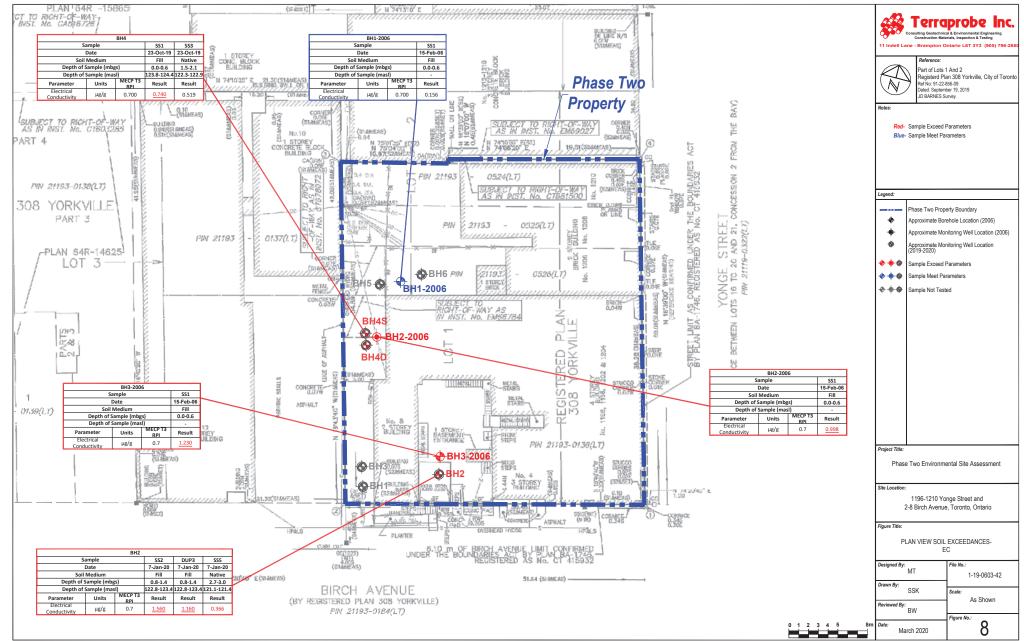
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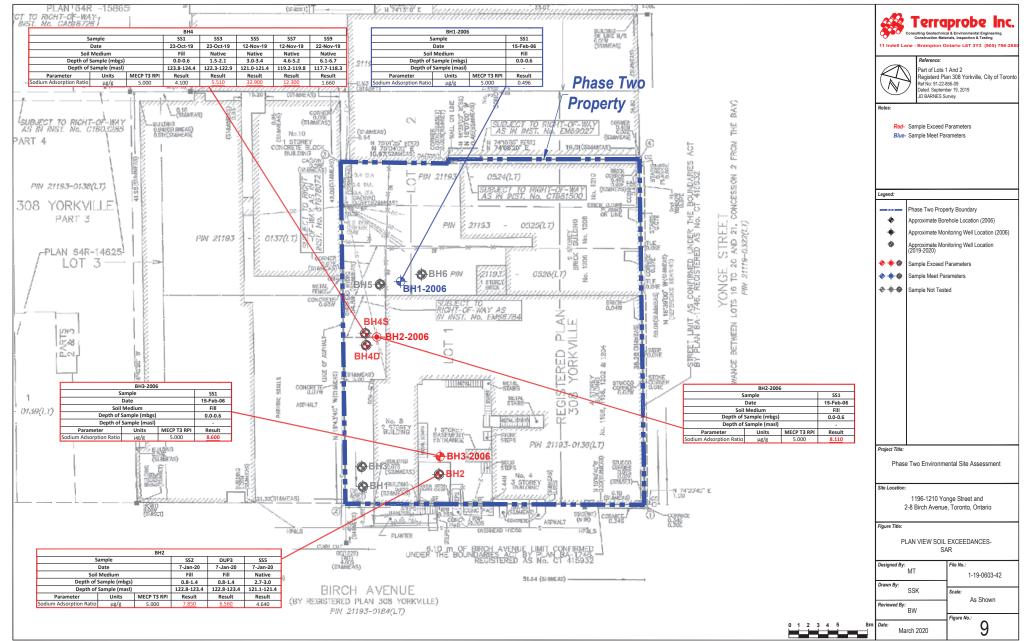
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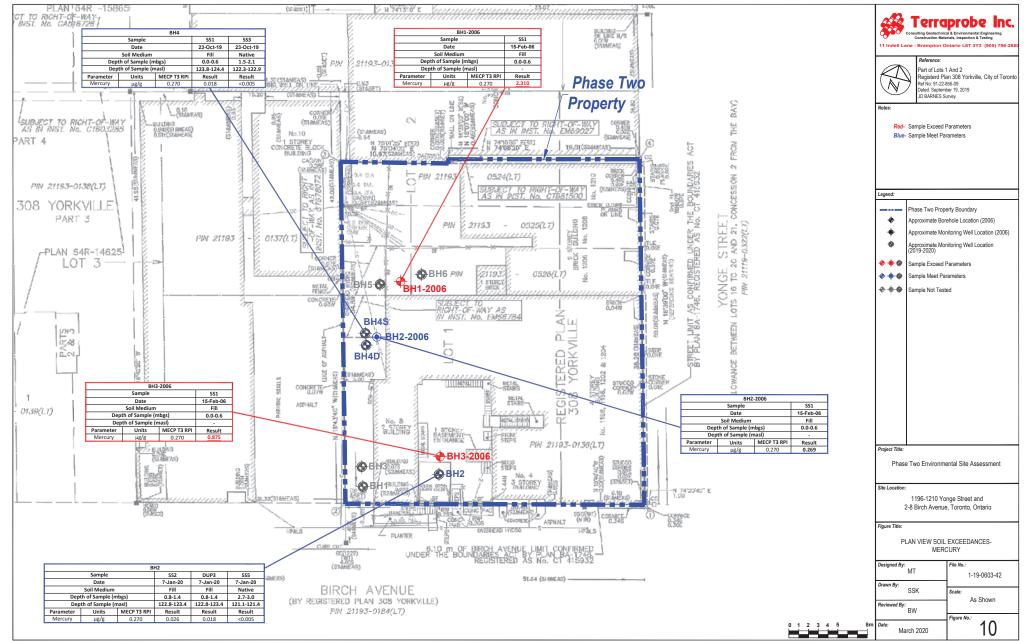
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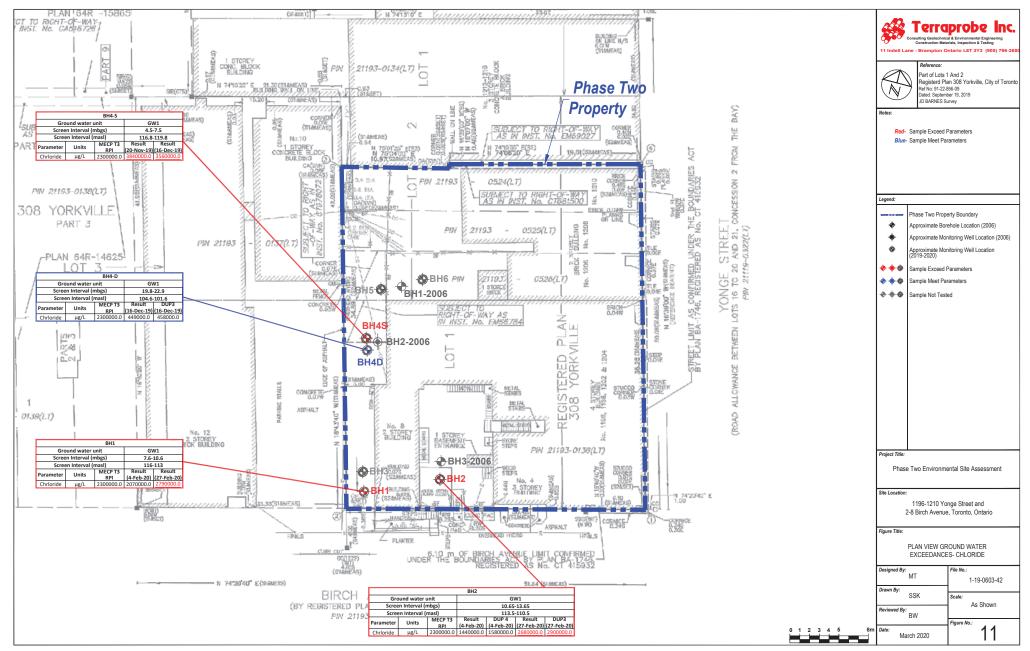
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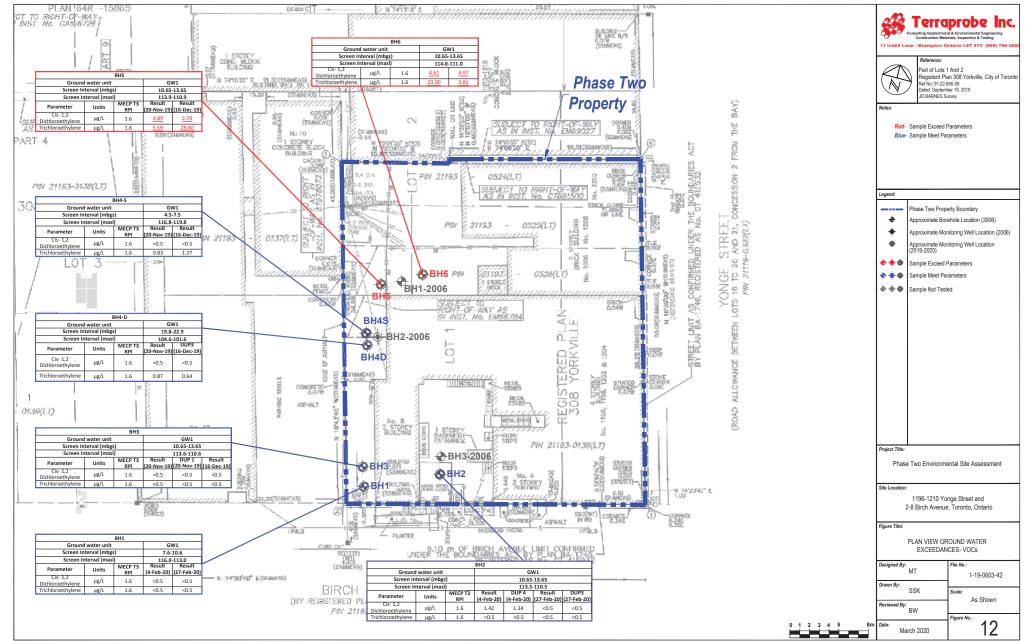
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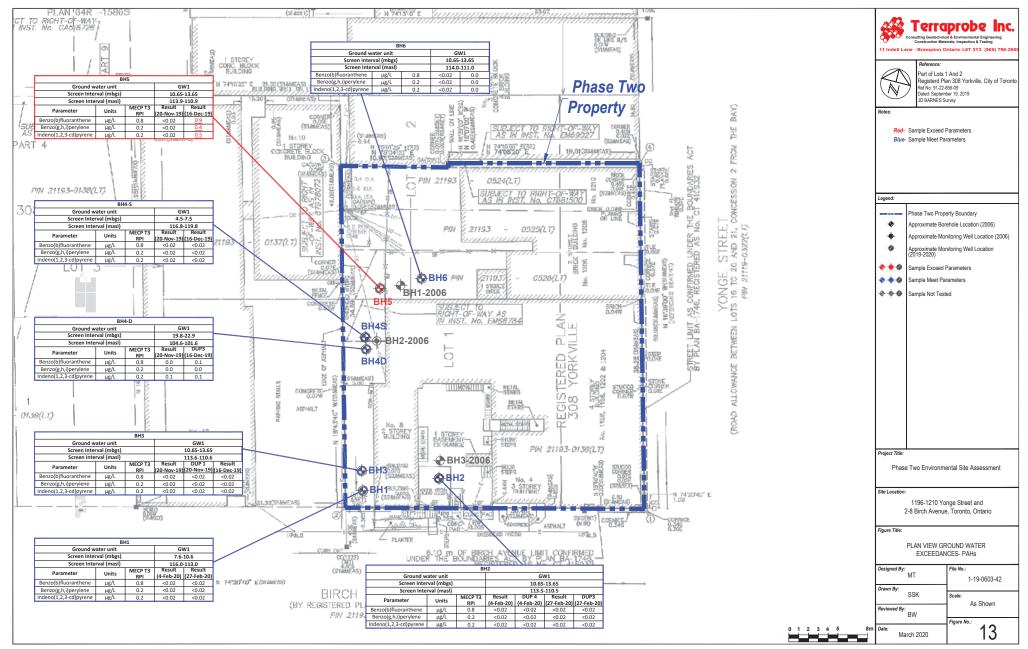
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TABLES



TERRAPROBE INC.

TABLE 1
SOIL QUALITY ANALYSIS
METALS & INORGANIC
1196-1210 Yonge & 2-8 Birch Avenue
TORONTO, ONTARIO

Sample Name	MECP			BH1-SS1	BH1-SS3	BH1-2006-SS1	BH2-SS2	DUP3	BH2-SS5	BH2-2006-SS1	BH3-SS1	BH3-SS6	DUP1	BH3-2006-SS1	BH4-SS1	BH4-SS3	BH4-SS5	BH4-SS7	BH4-SS9	BH5-SS1	BH5-SS5	BH5-SS6	BH6-SS1	BH6-SS3
ALS Lab ID#	Table 3			L2412344-1	L2412344-3	D111 2000 001	L2404777-1	L2404776-1	L2404777-4	D112 2000 001	L2375323-1	L2375323-3	L2375299-1	D110 2000 001	L2375316-1	L2375316-3	L2381674-1	L2381676-1	L2390458-1	L2375311-1	L2375311-3	L2381679-1	L2375305-1	L2375305-3
Date	Criteria			28-Jan-20	28-Jan-20	15-Feb-06	7-Jan-20	7-Jan-20	7-Jan-20	15-Feb-06	25-Oct-19	25-Oct-19	25-Oct-19	15-Feb-06	23-Oct-19	23-Oct-19	12-Nov-19	12-Nov-19	12-Nov-19	28-Oct-19	28-Oct-19	12-Nov-19	29-Oct-19	29-Oct-19
Date		Maximum	Units	0-0.6	1.5-2.1	0-0.6	0.8-1.4	0.8-1.4	2.7-3.0	0-0.6	0-0.5	4.6-5	4,6-5	0-0.6	0.0 - 0.6	1.5-2.1	3.0-3.4	4.6-5.2	6.1-6.7	0-0.6	3-3.5	4.6-5	0-0.6	1.5-2.1
Depth of Sample (mbgl) Sample Medium	Coarse			0-0.6 Fill	Native	0-0.6 Fill	0.8-1.4 Fill	0.6-1.4 Fill	Native	0-0.6 Fill	Fill	4.6-5 Native	Native	U-U.6	0.0 - 0.6 Fill	Native	Native	4.6-5.2 Native	Native	Fill	Native	4.6-5 Native	Fill	Native
	R/P/I			F.III	INGLIVE	r.iii	riii	(BH2-SS2)	ivative	riii		Native	(BH3-SS6)	riii	riii	reactive	Native	ivative	ivalive	r	Nauve	reactive		Native
Parameter Metals	R/P/I							(BH2-332)					(603-330)											
Barium	390	423		119	56.7	423	59.5	56	40.1	140	32.5	31.9	28	126	103	28.6				21.7	3.6	14	73.1	50.8
Bervlium	390	0.75	µg/g	0.75	s 0.5	s 0.5	< 0.5	< 0.5	< 0.5	< 0.5	s 0.5	< 0.5	s 0.5	< 0.5	< 0.5	≤ 0.5				s 0.5	s 0.5	< 0.5	× 0.5	s 0.5
	120	6.8	µg/g	6.8	< 0.5	< 0.5 N/A	< 0.5 5.4	< 0.5	< 0.5	< 0.5 N/A	< 0.5	< 0.5	< 0.5	< 0.5 N/A	< 0.5	< 0.5				< 0.5	< 0.5 5.8	< 0.5	< 0.5	< 0.5
Boron Cadmium	1.2	1.7	µg/g	< 0.5	< 05	1.7	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5				< 0.5	0.64	< 0.5	0.5	< 0.5
	160	26	µg/g	22.8	11.7	26	< 0.5 16.5	14.6	< 0.5	< 0.5	< 0.5 8.6	< 0.5 8.6	< 0.5 7.7	16.2	19.3	× 0.5				7.4	14	5.3	11	10.8
Chromium Cobalt	22	7.4	µg/g µg/g	5.8	3.7	20	10.5	14.6	3.1	6.6	2.9	2.8	2.4	5.6	7.4	2.6				2.3	4.2	1.5	2.8	3.5
	140	7.4		15.3	7	78.8	10.1	86	5.8	17.4	5.8	5.7	46	19.7	8.7	4.6				4.6	4.2 35.1	3.1	9.8	3.5 6.6
Copper	120	602	µg/g µg/a	14.7	3.5	602	5.7	4.8	0.0	85.3	3.7	3.3	2.7	160	6.7	3.4				3.3	338	1.9	139	4.1
Lead Molybdenum	6.9	3.7		- 1	3.5	602	s 1	4.0	3	3.7	s 1	- 1	< 1	< 0.5	6.7	- 1				3.3	330	- 1	139	4.1
	100	19.9	µg/g	12.5	7.1	19.9	10.8	< 1	< 1	15.6	5.4	5.3	48	14.6	14.9					44	< 1	2.8	6.2	< 1
Nickel Silver	20	0.5	µg/g	< 0.2	r.1	0.5	< 0.2	9.6 < 0.2	< 0.2	< 0.4	< 0.2	< 0.2	< 0.2	< 0.4	< 0.2	< 0.2				< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Thallium	20	0.5	µg/g	< 0.5	< 0.2	e 0.5	< 0.2	< 0.2	< 0.2	< 0.4	< 0.2	< 0.2	< 0.2	< 0.4	< 0.2	< 0.5				< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
	23	< 1.0	µg/g	< 0.5	< 0.5	< 0.5 N/A	< 0.5	< 0.5	< 0.5	< 0.5 N/A	< 0.5	< 0.5	< 0.5	< 0.5 N/A	< 0.5	< 0.5				< 0.5	< 0.5	< 1	< 0.5	< 0.5
Uranium	86	35.4	µg/g	35.4	20.6	17.3	30.7	27.7	20.3	28.5	18.8	18.6	16.6	23.4	34.7	18.3				184	21.3	11.1	17.5	19
Vanadium			µg/g																					
Zinc	340	716	µg/g	45.2	21.3	716	25.9	23.8	16	60.1	14.8	14.9	14.2	102	31.2	15				13.8	202	9.8	107	20.5
Hydride Metals													- 1											
Antimony	7.5	< 3.6	µg/g	< 1	< 1	2.4	< 1	< 1	< 1	1.6	< 1	< 1		1.6	< 1	< 1				< 1	3.6	< 1	1.4	< 1
Arsenic	18	11.8	µg/g	2.9	1.5	6.8	2.4	2.4	1.2	11.8	1.3	1.2	1.2	3.2	3	1.2				1.1	5.2	< 1	3.3	2.5
Selenium	2.4	< 1.4	µg/g	< 1	< 1	< 1	< 1	< 1	< 1	1.4	< 1	< 1	< 1	< 1	< 1	< 1				< 1	< 1	< 1	< 1	< 1
Other Regulated Parameters																								
Boron (Hot Water Soluble)	1.5	0.658	µg/g			0.566	0.28	0.25	< 0.1	0.509				0.658	0.24	0.1								
Chromium, Hexavalent	- 8	0.382	µg/g			< 0.382	0.33	0.24	< 0.2	< 0.382				< 0.382	0.34	< 0.2								
Cyanide, Free	0.051	< 4	ug/g			< 1.6	< 0.05	< 0.05	< 0.05	< 4				< 1.6	< 0.05	< 0.05								
Mercury	0.27	2.31	µg/g			2.31	0.0263	0.0184	< 0.005	0.269				0.875	0.0178	< 0.005								
Electrical Conductivity	0.7	1.56	mS/cm			0.156	1.56	1.16	0.366	0.998				1.23	0.74	0.519								
Sodium Adsorption Ratio	5	32.9	no units			0.496	7.85	6.56	4.64	8.11				8.6	4.1	5.51	32.9	12.3	1.66					
pH	-	8.8	pH	7.97	8.09	7.6	7.4	7.85	7.88	8.06	1			8.8	7.76	7.77								

Noise

Value highlighted in red indicate exceedances above the applicable criteria

Values highlighted in yellow indicate the parameter was not detected, but the Reporting Limit exceeded the applicable standard

ND - Not descined

NA - Not assessed

TABLE 2 SOIL QUALITY ANALYSIS PETROLEUM HYDROCARBONS 1196-1210 Yonge & 2-28 Birch Avenue TORONTO, ONTARIO

Sample Name ALS Lab ID# Date Depth of Sample (mbgl) Sample Medium Parameter	MECP Table 3 Criteria Coarse R/P/I	Maximum	Units	BH1-SS2 L2412344-2 28-Jan-20 0.8-1.4 Fill		BH1-SS7 L2412344-4 28-Jan-20 6.1-6.7 Native	BH2-SS3 L2404777 7-Jan-2 1.7-2.0 Fill	-3	DUP5 L2404774-1 7-Jan-20 1.7-2.0 Fill (BH2-SS3B)	La	3H2-SS6 2404777-5 7-Jan-20 4.6-4.9 Native			L237 25-0	3-SS2 5323-2 Oct-19 3-1.4 Fill	L23 25- 7	13-SS8 75323-4 -Oct-19 .6-8.1 lative	L2 2:	DUP2 375294-1 5-Oct-19 7.6-8.1 Native iH3-SS8)		316-1 ct-19	L2379 23-0 3.0	I-SS5 5316-4 Oct-19 I-3.4 Itive	BH5-SS2 L2375311-2 28-Oct-19 0.8-1.4 Fill	L2: 28	H5-SS7 375311-4 I-Oct-19 5.1-6.5 Native	L23 29- 0	16-SS2 75305-2 Oct-19 .8-1.4 Fill	L2 2	8H6-SS7 2375305-4 9-Oct-19 6.1-6.5 Native
F1 (C6 to C10)	NV	< 5	μg/g	< 5	<	5	< 5	<	: 5	<	5	<	5	<	5	<	5	<	5	<	5	<	5	< 5	<	5	<	5	<	5
F1 (C6 to C10) minus BTEX	55	< 5	µg/g	< 5	<	5	< 5	<	: 5	<	5	<	5	<	5	<	5	<	5	<	5	<	5	< 5	<	5	<	5	<	5
F2 (C10 to C16)	98	< 10	µg/g	< 10	<	10	< 10	4	: 10	<	10	<	10	<	10	<	10	<	10	<	10	<	10	< 10	<	10	<	10	<	10
F3 (C16 to C34)	300	< 50	µg/g	< 50	<	50	< 50	<	: 50	<	50	<	50	<	50	<	50	<	50	<	50	<	50	< 50	<	50	<	50	<	50
F4 (C34 to C50)	2800	< 50	µg/g	< 50	<	50	< 50	4	: 50	<	50	<	50	<	50	<	50	<	50	<	50	<	50	< 50	<	50	<	50	<	50
Gravimetric Heavy Hydrocarbons	-	< 72	µg/g	< 72	<	72	< 72	4	72	<	72		N/A		ND		ND	<	72	<	72	<	72	< 72	<	72	<	72	<	72
Chrom. To baseline at nC50	-	NA		YES		YES	YES		YES		YES		YES		Yes		Yes		Yes		Yes		Yes	Yes		Yes		Yes		Yes
Moisture Content	-	16.2	%	9.05		9.92	10.2	. T	12	1	7.72	1	8.1	I	13.7		9.62		10.5		14.6		7.98	8.65		16.2		12.2	1	15.4

Notes
Value highlighted in red indicate exceedances above the applicable criteria
Values highlighted in yellow indicate the parameter was not detected, but the Reporting Limit exceeded the applicable standards ND = Not detected.
NA = Not assessed

TABLE 3
SOIL QUALITY ANALYSIS
VOLATILE ORGANIC COMPOUNDS I
1196-1210 Yonge & 2-8 Birch Avenue
TORONTO, ONTARIO

Sample Name	MECP			BH1-SS2	BH1-SS7	BH1-2006-SS2A	BH2-SS3B	DUP5	BH2-SS6	BH2-2006-SS6	BH3-SS2	BH3-SS8	DUP2	BH3-2006-SS3	BH4-SS1	BH4-SS7	BH4-SS8	BH5-SS2	BH5-SS7	BH6-SS2	BH6-SS7
ALS Lab ID#	Table 3			L2412344-2	L2412344-4		L2404777-3	L2404774-1	L2404777-5		L2375323-2	L2375323-4	L2375294-1		L2375316-1	L237516-5	L237516-5	L2375311-2	L2375311-4	L2375305-2	L2375305-4
Date	Criteria	Maximum	Units	28-Jan-20	28-Jan-20	15-Feb-06	7-Jan-20	7-Jan-20	7-Jan-20	15-Feb-06	25-Oct-19	25-Oct-19	25-Oct-19	15-Feb-06	23-Oct-19	23-Oct-19	12-Nov-19	28-Oct-19	28-Oct-19	29-Oct-19	29-Oct-19
Depth of Sample (mbgl)	Coarse	maxiiiiuiii	Ullits	0.8-1.4	6.1-6.7	0.8-1.2	1.7-2.0	1.7-2.0	4.6-4.9	6.5-7.2	0.8-1.4	7.6-8.1	7.6-8.1	1.6-2.2	0-0.6	4.6-5.2	5.3-5.9	0.8-1.4	6.1-6.5	0.8-1.4	6.1-6.5
Sample Medium				Fill	Native	Fill	Fill	Fill	Native	Native	Fill	Native	Native	Native	Fill	Native	Native	Fill	Native	Fill	Native
Parameter	R/P/I							(BH2-SS3B)					(BH3-SS8)								
Acetone	16	< 0.50	иа/а	< 0.50	< 0.50	0.17	< 0.50	< 0.50	< 0.50	< 0.07	< 0.50	< 0.50	< 0.50	< 0.07	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane	13	< 0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bromoform	0.27	< 0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Bromomethane	0.05	< 0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Carbon Tetrachloride	0.05	< 0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chlorobenzene	2.4	< 0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dibromochloromethane	9.4	< 0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chloroform	0.05	< 0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Ethylene Dibromide (1,2 -Dibromethane)	0.05	< 0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichlorobenzene	3.4	< 0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichlorobenzene	4.8	< 0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,4-Dichlorobenzene	0.083	< 0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Dichlorodifluoromethane	16	< 0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,1-Dichloroethane	3.5	< 0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichloroethane	0.05	< 0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,1-Dichloroethylene	0.05	< 0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Cis- 1,2-Dichloroethylene	3.4	< 0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Trans- 1,2-Dichloroethylene	0.084	< 0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Methylene Chloride	0.1	< 0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,2-Dichloropropane	0.05	< 0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,3-Dichloropropene	0.05	< 0.042	µg/g	< 0.042	< 0.042	< 0.042	< 0.042	< 0.042	< 0.042	< 0.042	< 0.042	< 0.042	< 0.042	< 0.042	< 0.042	< 0.042	< 0.042	< 0.042	< 0.042	< 0.042	< 0.042
n-Hexane	2.8	< 0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Methyl Ethyl Ketone	16	< 0.50	µg/g	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Methyl Isobutyl Ketone	1.7	< 0.50	µg/g	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Methyl tert-butyl Ether (MTBE)	0.75	< 0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Styrene	0.7	< 0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,1,1,2-Tetrachloroethane	0.058	< 0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,1,2,2-Tetrachloroethane	0.05	< 0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Tetrachloroethylene	0.28	< 0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,1,1-Trichloroethane	0.38	< 0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
1,1,2-Trichloroethane	0.05	< 0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Trichloroethylene	0.061	0.17	µg/g	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.018	0.022	0.02	< 0.01	< 0.01	0.077	0.04	0.17	0.02	0.014	0.01
Trichlorofluoromethane	4	< 0.05	µg/g	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Vinyl Chloride	0.02	< 0.02	µg/g	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02

Notes
Value highlighted in red indicate exceedances above the applicable criteria
Values highlighted in yellow indicate the parameter was not
detected, but the Reporting Limit exceeded the applicable standard
Not Not descens
Not No to character
Not Not character

TABLE 4
SOIL QUALITY ANALYSIS
VOLATILE ORGANIC COMPOUNDS II (BTEX)
1196-1210 Yonge & 2-8 Birch Avenue
TORONTO, ONTARIO

Sample Name	MECP			BH1-SS2	BH1-SS7	BH1-2006-SS2A	BH2-SS3B	DUP5	BH2-SS6	BH2-2006-SS6	BH3-SS2	BH3-SS8	DUP2	BH3-2006-SS3	BH4-SS1	BH4-SS5	BH4-SS5	BH4-SS8	BH5-SS2	BH5-SS7	BH6-SS2	BH6-SS7
ALS Lab ID#	Table 3			L2412344-2	L2412344-4		L2404777-3	L2404774-1	L2404777-5		L2375323-2	L2375323-4	L2375294-1		L2375316-1	L2375316-4	L2375316-4	L2381634-1	L2375311-2	L2375311-4	L2375305-2	L2375305-4
Date	Criteria	Maximum	Units	28-Jan-20	28-Jan-20	15-Feb-06	7-Jan-20	7-Jan-20	7-Jan-20	15-Feb-06	25-Oct-19	25-Oct-19	25-Oct-19	15-Feb-06	23-Oct-19	23-Oct-19	23-Oct-19	12-Nov-19	28-Oct-19	28-Oct-19	29-Oct-19	29-Oct-19
Depth of Sample (mbgl)	Coarse	maximum	Ollits			0.8-1.2	1.7-2.0	1.7-2.0	4.6-4.9	6.5-7.2	0.8-1.4	7.6-8.1	7.6-8.1	1.6-2.2	0-0.6	2.3-2.8	3.0-3.4	5.3-5.9	0.8-1.4	6.1-6.5	0.8-1.4	6.1-6.5
Sample Medium						Fill	Fill	Fill	Native	Native	Fill	Native	Native	Native	Fill	Native	Native	Native	Fill	Native	Fill	Native
Parameter	I/C/C							(BH2-SS3B)					(BH3-SS8)									'
Benzene	0.32	< 0.0068	µg/g	< 0.0068	< 0.0068	< 0.004	< 0.0068	< 0.0068	< 0.0068	< 0.004	< 0.0068	< 0.0068	< 0.0068	< 0.004	< 0.0068	< 0.0068	< 0.0068	< 0.0068	< 0.0068	< 0.0068	< 0.0068	< 0.0068
Toluene	68	< 0.08	µg/g	< 0.08	< 0.08	< 0.02	< 0.08	< 0.08	< 0.08	< 0.02	< 0.08	< 0.08	< 0.08	< 0.02	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08	< 0.08
Ethylbenzene	9.5	< 0.018	µg/g	< 0.018	< 0.018	< 0.003	< 0.018	< 0.018	< 0.018	< 0.003	< 0.018	< 0.018	< 0.018	< 0.003	< 0.018	< 0.018	< 0.018	< 0.018	< 0.018	< 0.018	< 0.018	< 0.018
m & p-Xylene		< 0.03	µg/g	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03
o-Xylene		< 0.02	µg/g	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02
Xvlene Mixture	26	< 0.05	ца/а	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05

Notes
Value highlighted in red indicate exceedances above the applicable criteria
Values highlighted in yellow indicate the parameter was not detected, but the Reporting Limit exceeded the applicable standard NO - Not detected.
NO - Not detected
NO - Not seesed

TABLE 5 SOIL QUALITY ANALYSIS POLYCYCLIC AROMATIC HYDROCARBONS 1196-1210 Yonge & 2-8 Birch Avenue TORONTO, ONTARIO

Sample Name ALS Lab ID# Date Depth of Sample (mbgl) Sample Medium Parameter	MECP Table 3 Criteria Coarse R/P/I	M	laximum	Units	s	BH1-SS1 L2412344-1 28-Jan-20 0-0.6	L:	BH1-SS3 2412344-3 28-Jan-20 1.5-2.1	L2 7	12-SS3A 404777-2 -Jan-20 1.4-1.7 Fill	L240 7-J 1.	0UP4 04775-1 Jan-20 .4-1.7 Fill 2-SS3A)	L2	3H2-SS5 2404777-4 7-Jan-20 2.7-3.0 Native	L237 25-0 0	3-SS1 75323-1 Oct-19 0.5 Fill	L2:	H3-SS6 375323-3 i-Oct-19 4.6-5.0 Native	2	DUP1 2375299-1 5-Oct-19 4.6-5.0 Native 8H3-SS6)	L2:	H4-SS2 375316-2 3-Oct-19 0.8-1.4 Fill	L23 ¹ 28-	5-SS1 75311-1 Oct-19)-0.6 Fill	L23 28	H5-SS5 375311-3 -Oct-19 3.0-3.5 Native	L	BH6-SS1 2375305-1 29-Oct-19 0-0.6 Fill	L2 2	BH6-SS3 2375305-3 29-Oct-19 1.5-2.1 Native
Acenaphthene	7.9	<	2.3	μg/g		0.068	<	0.05	<	0.05		0.068	٧	0.05		2.3	<	0.05	<	0.05	<	0.05		0.146	<	0.05		0.081	<	0.05
Acenaphthylene	0.15	<	1.03	μg/g	<	0.05	٧	0.05	<	0.05		0.3	٧	0.05		1.03	٧	0.05	<	0.05	٧	0.05		0.094	<	0.05		0.07	<	0.05
Anthracene	0.67	<	5.6	μg/g		0.15	٧	0.05		0.091		0.124	٧	0.05		5.6	٧	0.05	<	0.05	٧	0.05		0.341	<	0.05		0.263	<	0.05
Benzo(a)anthracene	0.5	<	11.5	μg/g		0.275	٧	0.05		0.27		0.341	٧	0.05		11.5	٧	0.05	<	0.05	٧	0.05		0.959	<	0.05		0.703	<	0.05
Benzo(a)pyrene	0.3	<	9.26	μg/g		0.217	٧	0.05		0.219		0.516	٧	0.05		9.26	٧	0.05	<	0.05	٧	0.05		0.808	<	0.05		0.583	<	0.05
Benzo(b/j)fluoranthene	0.78	<	10.7	μg/g		0.287	٧	0.05		0.318		0.626	٧	0.05		10.7	٧	0.05	<	0.05	٧	0.05		1.04	<	0.05		0.683	<	0.05
Benzo(g,h,i)perylene	6.6	<	6.13	μg/g		0.133	٧	0.05		0.171		0.535	٧	0.05		6.13	٧	0.05	<	0.05	٧	0.05		0.524	<	0.05		0.35	<	0.05
Benzo(k)fluoranthene	0.78	<	4.63	μg/g	ш	0.084	<	0.05		0.088		0.181	<	0.05		4.63	<	0.05	<	0.05	<	0.05		0.429	<	0.05		0.28	<	0.05
Chrysene	7	<	11.5	μg/g	ш	0.264	<	0.05		0.298		0.632	<	0.05		11.5	<	0.05	<	0.05	<	0.05		1.14	<	0.05		0.712	<	0.05
Dibenzo(a,h)anthracene	0.1	<	1.64	μg/g	<	0.05	<	0.05	<	0.05		0.065	<	0.05		1.64	<	0.05	<	0.05	<	0.05		0.147	<	0.05		0.101	<	0.05
Fluoranthene	0.69	<	25.5	μg/g		0.615		0.05		0.677		2.08		0.05		25.5	٧	0.05	<	0.05	٧	0.05		2.51	<	0.05		1.43	<	0.05
Fluorene	62	<	2.41	µg/g		0.069	٧	0.05	<	0.05	<	0.252	٧	0.05		2.41	٧	0.05	<	0.05	٧	0.05		0.151	<	0.05		0.095	<	0.05
Indeno(1,2,3-cd)pyrene	0.38	<	5.75	μg/g		0.134	٧	0.05		0.148		0.373	٧	0.05		5.75	٧	0.05	<	0.05	٧	0.05		0.5	<	0.05		0.351	<	0.05
2-and 1-methyl Naphthalene	0.99	<	0.988	µg/g	<	0.042	٧	0.042	<	0.042		0.178	٧	0.042		0.988	٧	0.05	<	0.05	٧	0.05		0.133	<	0.05	<	0.042	<	0.05
Naphthalene	0.6	<	0.704	μg/g		0.026	<	0.013		0.016		0.205	<	0.013		0.704	<	0.05	<	0.05	<	0.05		0.068	<	0.05		0.028	<	0.05
Phenanthrene	6.2	<	23.5	μg/g		0.567	<	0.046		0.441		2.9	<	0.046		23.5	<	0.05	<	0.05	<	0.05		2.07	<	0.05		1.06	<	0.05
Pyrene	78	<	20.9	μg/g		0.488	<	0.05		0.628		2.21	<	0.05		20.9	<	0.05	<	0.05	<	0.05		2.05	<	0.05		1.18	<	0.05

Notes

Value highlighted in red indicate exceedances above the applicable criteria

Values highlighted in yellow indicate the parameter was not detected, but the Reporting Limit exceeded the applicable standard ND = Not detected

NA = Not detected

NA = Not assessed

TABLE 6
SOIL QUALITY ANALYSIS
POLYCHLORINATED BIPHENYLS
1196-1210 Yonge & 2-8 Birch Avenue
Toronto, ONTARIO

Sample Name ALS Lab ID# Date Depth of Sample (mbgl) Sample Medium Parameter	MECP Table 3 Criteria Coarse	Ма	nximum	Units	L241 28-、 0	1-SS1 2344-1 Jan-20 -0.6 Fill	BH1-SS3 L2412344-3 28-Jan-20 1.5-2.1 Native	L240 7-J 0.	2-SS2)4777-1 an-20 8-1.4 Fill	L2-	DUP3 404776-1 -Jan-20 0.8-1.4 Fill H2-SS2)	L2 7	8H2-SS5 :404777-4 '-Jan-20 2.7-3.0 Native	L	3H3-SS1 2375323-1 25-Oct-19 0-0.5 Fill	L2:	H3-SS6 375323-3 5-Oct-19 4.6-5.0 Native	L2 2	DUP1 375299-1 5-Oct-19 4.6-5.0 Native 8H3-SS6)	L2	H5-SS1 375311-1 3-Oct-19 0-0.6 Fill	L2	3H5-SS5 2375311-3 8-Oct-19 0.8-1.4 Native	L2	H6-SS1 375305-1 9-Oct-19 0-0.6 Fill	L2 25	8H6-SS3 :375305-3 9-Oct-19 1.5-2.1 Native
Aroclor 1016	NV		NV	μg/g		NV	NV		NV		NV		NV		NV		NV		NV		NV		NV		NV		NV
Aroclor 1242	NV	<	0.02	μg/g	<	0.01	< 0.01	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01	<	0.02	<	0.01	<	0.02	<	0.01	<	0.01
Aroclor 1248	NV	<	0.02	μg/g	<	0.01	< 0.01	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01	<	0.02	<	0.01	<	0.02	<	0.01	<	0.01
Aroclor 1254	NV	<	0.02	μg/g	<	0.01	< 0.01	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01	<	0.02	<	0.01	<	0.02	<	0.01	<	0.01
Aroclor 1260	NV	<	0.02	μg/g	<	0.01	< 0.01	<	0.01	<	0.01	<	0.01	<	0.015	<	0.01	<	0.02	<	0.01	<	0.02	<	0.01	<	0.01
Polychlorinated Biphenyls	0.35	<	0.023	μg/g	<	0.02	< 0.02	<	0.02	<	0.02	<	0.02	<	0.023	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02
Decachlorobiphenol				%		62.0	84.0		92.4		93.8		98.9		73.0		114.0		120.0		114.0		120.0		114.0		120.0

Value highlighted in red indicate exceedances above the applicable criteria

Values highlighted in yellow indicate the parameter was not detected, but the Reporting Limit exceeded the applicable standard NV = No value

TABLE 7
GROUND WATER QUALITY ANALYSIS
METALS AND INORGANICS
1196-1210 Yonge & 2-8 Birch Avenue
Toronto, ONTARIO

Sample Name ALS Lab ID# Date Screened (mbgs) Parameter	MECP Table 3 2011 Criteria All Property Use	Maximum	Units	BH1 L2413928-1 4-Feb-20 7.6-10.6	BH1 L2422407-1 27-Feb-20 7.6-10.6	BH2 L2413924-1 4-Feb-20 10.65-13.65	DUP4 L2413925-1 4-Feb-20 10.65-13.65 (BH2)	BH2 L2422401-1 27-Feb-20 10.65-13.65	DUP5 L2422396-1 27-Feb-20 10.65-13.65 (BH2)	BH3 L2386573-1 20-Nov-19 10.65-13.65	BH3 L2398104-1 16-Dec-19 10.65-13.65	DUP1 L2386616-1 20-Nov-19 10.65-13.65 (BH3)	BH4-S L2386608-1 20-Nov-19 4.5-7.5	BH4-S L2398131-1 16-Dec-19 4.5-7.5	BH4-D L2398120-1 16-Dec-19 19.8-22.9	DUP3 L2398126-1 16-Dec-19 19.8-22.9 (BH4-D)	BH5 L2386649-1 20-Nov-19 10.65-13.65	BH5 L2398134-1 16-Dec-19 10.65-13.65	BH6 L2386645-1 20-Nov-19 10.65-13.65	BH6 L2398115-1 16-Dec-19 10.65-13.65
Metals																				
Barium	29000	355	µg/L	82.4	79.7	78.7	80.7	102	102	44.9	48.4	44.9	52.6	67.4	45.4	45.2	355	50.6	44.3	58.1
Beryllium	67	< 1	µg/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Boron	45000	210	µg/L	140	140	130	130	100	100	190	210	180	140	150	< 100	< 100	140	210	190	130
Cadmium	2.7	< 0.137	µg/L	0.061	0.084	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.081	0.137	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Chromium	810	< 5	µg/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Cobalt	66	3.7	µg/L	3.4	3.5	< 1	< 1	< 1	< 1	2.9	2.9	2.9	2.9	3.7	< 1	< 1	< 1	< 1	< 1	< 1
Copper	87	< 2	µg/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Lead	25	< 0.5	µg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Molybdenum	9200	8.13	µg/L	1.45	0.64	7.74	8.13	5.91	5.76	1.96	1.11	2.1	0.99	0.64	2.34	2.51	1	0.65	2.42	0.63
Nickel	490	15.6	µg/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	15.3	< 5	12.9	15.6	< 5	< 5	< 5	8.4	< 5	5.2
Silver	1.5	< 0.5	µg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Thallium	510	< 0.27	µg/L	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.27	0.27	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
Uranium	420	13.6	µg/L	8.2	8.62	0.91	0.93	1.59	1.61	6.97	6.45	7.04	13.6	13.3	2.3	2.34	1.76	0.45	1.8	1.02
Vanadium	250	< 5	µg/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Zinc	1100	< 15	µg/L	12	15	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Metal Hydrides																				
Antimony	20000	< 1	ua/L	< 1	< 1	s 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Arsenic	1900	- 1	µg/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Selenium	63	< 6.38	ug/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	6.38	4.28	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Other Regulated Parameters																				
Sodium	2300000	1370000	ua/L	687000	946000	656000	672000	1300000	1320000	909000	992000	920000	1170000	1370000	283000	286000	460000	812000	696000	524000
Mercury	0.29	< 0.005	ug/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005				< 0.005	< 0.005	< 0.005	< 0.005			.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Chromium VI	140	< 0.5	µg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5				< 0.5	< 0.5	< 0.5	< 0.5				
Cvanide	66	< 2	ua/L	< 2	< 2	< 2	< 2	< 2	< 2		i		< 2	< 2	< 2	< 2				İ
Chloride	2300000	3840000	ug/L	2070000	2790000	1440000	1580000	2680000	2900000				3840000	3560000	449000	458000				
Electrical Conductivity	NV	10.6	mS/cm	6.53	7.64	5.46	5.45	7.83	7.85				10.1	10.6	2.32	2.31				
nH .	NV	7.88	pH Units	7.52	7.64	7.88	7.86	7.17	7.28				7.06	7.11	7.53	7.4				

Notes
Viable highlighted in red indicate occedances above the applicable criteria
Viables highlighted in yellow indicate the parameter was not detected,
Out, the Reporting Limit exceeded the applicable standard
No + box dancel
No + box dancel
No + No takes

TABLE 8
GROUND WATER QUALITY ANALYSIS
PETROLEUM HYDROCARBONS
1196-1210 Yonge & 2-8 Birch Avenue
Toronto, ONTARIO

Sample Name ALS Lab ID# Date Screened (mbgs) Parameter	MECP Table 3 2011 Criteria All Property Use	Maximum	Units	BH1 L2413928-1 4-Feb-20 7.6-10.6	BH1 L2422407-1 27-Feb-20 7.6-10.6	BH2 L2413924-1 4-Feb-20 10.65-13.65	DUP4 L2413925-1 4-Feb-20 10.65-13.65 (BH2)	BH2 L2422401-1 27-Feb-20 10.65-13.65	DUP5 L2422396-1 27-Feb-20 10.65-13.65 (BH2)	BH3 L2386573-1 20-Nov-19 10.65-13.65	BH3 L2398104-1 16-Dec-19 10.65-13.65	DUP1 L2386573-1 20-Nov-19 10.65-13.65	BH4-S L2386608-1 20-Nov-19 4.5-7.5	BH4-S L2398131-1 16-Dec-19 4.5-7.5	BH4-D L2398120-1 16-Dec-19 19.8-22.9	DUP3 L2398126-1 16-Dec-19 19.8-22.9 (BH4-D)	BH5 L2386649-1 20-Nov-19 10.65-13.65	BH5 L2398134-1 16-Dec-19 10.65-13.65	BH6 L2386645-1 20-Nov-19 10.65-13.65	BH6 L2398115-1 16-Dec-19 10.65-13.65
F1 (C6 to C10)	750	< 25	μg/L	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25
F1 (C6 to C10) minus BTEX	750	< 25	µg/L	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25	< 25
F2 (C10 to C16)	150	< 100	µg/L	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
F2 (C10 to C16) minus Naphthaler		100	µg/L	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100
F3 (C16 to C34)	500	< 250	µg/L	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250
F3 (C16 to C34) minus PAHs		250	µg/L	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250
F4 (C34 to C50)	500	< 250	µg/L	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250	< 250
Gravimetric Heavy Hydrocarbons	500	< 370	µg/L	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370	< 370

Name . While highlighted in red indicate exceedances above the applicable criteria . Wake highlighted in red indicate exceedances above the applicable criteria . Wakes signifying the indicate the parameter was not detected, but the Reporting Limit exceeded the applicable standard NV - No value. A Name of the Committee of the A Name of the Committee of the Commi

TABLE 9 GROUND WATER QUALITY ANALYSIS VOLATILE ORGANIC COMPOUNDS I 1196-1210 Yonge & 2-8 Birch Avenue Toronto, ONTARIO

Sample Name	MECP			BH1	BH1	BH2	DUP4	BH2	DUPS	BH3	DUP1	BH3	BH4-S	BH4-S	BH4-D	DUP3	BH5	BH5	BH6	BH6	TRIP BLANK	TRIP BLANK	TRIP BLANK	TRIP BLAI
ULS Lab ID#				L2413928-1	L2422407-1	L2413924-1	L2413925-1	L2422401-1	L2422396-1	L2386573-1	L2386616-1	L2398104-1	L2386608-1	L2398131-1	L2398120-1	L2398126-1	L2386649-1	L2398134-1	L2386645-1	L2398115-1	L2386581-1	L239098-1	L2413931-1	L2422343
Date	Table 3	Maximum	Units	4-Feb-20	27-Feb-20	4-Feb-20	4-Feb-20	27-Feb-20	27-Feb-20	20-Nov-19	20-Nov-19	16-Dec-19	20-Nov-19	16-Dec-19	16-Dec-19	16-Dec-19	20-Nov-19	16-Dec-19	20-Nov-19	16-Dec-19	20-Nov-19	16-Dec-19	4-Feb-20	28-Feb-2
Screened (mbgs)	2011 Criteria	Maximum	Units	7.6-10.6	7.6-10.6	10.65-13.65	10.65-13.65	10.65-13.65	10.65-13.65	10.65-13.65	10.65-13.65	10.65-13.65	4.5-7.5	4.5-7.5	19.8-22.8	19.8-22.9	10.65-13.65	10.65-13.65	10.65-13.65	10.65-13.65				1
							(BH2)		(BH2)		1					(BH4-D)								1
Parameter	All Property Use										1													1
Acetone	130000	< 30	uo/L	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30	< 30
Bromodichloromethane	85000	. 2	not	. 2	. 2	. 2	. 2	. 2	. 2	. 2	. 2	. 2	. 2	e 2	. 2	. 2	. 2	. 2	. 2	. 2	. 2	. 2	. 2	. 2
Bromoform	380	< 5	ua/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bromomethane	5.6	< 0.5	uo/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Carbon Tetrachloride	0.79	< 0.2	pg/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Chlorobenzene	630	< 0.5	µg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	82000	< 2	pg/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Chloroform	2.4	< 1	pg/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Ethylene Dibromide	0.25	< 0.2	µg/L	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2					< 0.2	< 0.2	< 0.2	< 0.2
1,2-Dichlorobenzene	4600	< 0.5	pg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,3-Dichlorobenzene	9600	< 0.5	h0/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,4-Dichlorobenzene	8	< 0.5	pg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dichlorodifluoromethane	4400	< 2	pg/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,1-Dichloroethane	320	< 6.27	pg/L	< 0.5	< 0.5	2.88	2.63	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	3.56	4.14	6.27	3.96	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichloroethane	1.6	< 1.41	µg/L	< 0.5	< 0.5	1.41	1.21	< 0.5	< 0.5	0.85	0.94	0.79	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethylene	1.6	< 0.57	pg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.57	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Cis- 1,2-Dichloroethylene	1.6	< 4.97	µg/L	< 0.5	< 0.5	1.42	1.34	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	4.89	2.79	4.61	4.97	< 0.5	< 0.5	< 0.5	< 0.5
Trans- 1,2-Dichloroethylene	1.6	< 0.5	pg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Methylene Chloride	610	< 5.0	µg/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,2-Dichloropropane	16	< 0.5	pg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,3-Dichloropropene	5.2	< 0.5	µg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
n-Hexane	51	< 0.6	pg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.55	< 0.5	< 0.5	< 0.5	< 0.5	0.6	< 0.5	< 0.5	< 0.5	< 0.5
Methyl Ethyl Ketone	470000	< 20	µg/L	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Methyl Isobutyl Ketone	140000	< 20	µg/L	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Methyl tert-butyl Ether	190	< 2	µg/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Styrene	1300	< 0.5	µg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,1,2-Tetrachioroethane	3.3	< 0.5	µg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2,2-Tetrachioroethane	3.2	< 0.5	µg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5	< 0.5	< 0.5	< 0.5	< 0.9
Tetrachloroethylene	1.6	< 0.5	µg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,1-Trichloroethane	640	< 0.5	µg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5	< 0.5	< 0.5	< 0.5	< 0.9
1,1,2-Trichloroethane	4.7	< 0.5	µg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.
Frichloroethylene	1.6	< 28.8	µg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	0.83	< 1.27	0.87	0.64	5.59	28.8	23.9	3.81	< 0.5	< 0.5	< 0.5	< 0.
Trichlorofluoromethane	2500	< 5	µg/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Vinyl Chloride	0.5	< 0.5	ua/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5

Natar highlighted in red indicate exceedances above the applicable criteria Values highlighted in yellow indicate the parameter was not detected, but the Reporting limit exceeded the applicable standard No No deuts No No deuts

TABLE 10 GROUND WATER QUALITY ANALYSIS VOLATILE ORGANIC COMPOUNDS II (BTEX) 1198-1219 YOANG & 2-8 Birch Avenue Toronto, ONTARIO

Sample Name ALS Lab ID# Date Screened (mbgs)	MECP Table 3 2011 Criteria	Maximum	Units	BH1 L2413928-1 4-Feb-20 7.6-10.6	BH1 L2422407-1 27-Feb-20 7.6-10.6	BH2 L2413924-1 4-Feb-20 10.65-13.65	DUP4 L2413925-1 4-Feb-20 10.65-13.65 (BH2)	BH2 L2422401-1 27-Feb-20 10.65-13.65	DUP5 L2422396-1 27-Feb-20 10.65-13.65 (BH2)	BH3 L2386573-1 20-Nov-19 10.65-13.65	BH3 L2398104-1 16-Dec-19 10.65-13.65	BH4-S L2386608-1 20-Nov-19 4.5-7.5	BH4-S L2398131-1 16-Dec-19 4.5-7.5	BH4-D L2398120-1 16-Dec-19 19.8-22.8	DUP3 L2398126-1 16-Dec-19 19.8-22.9 (BH4-D)	BH5 L2386649-1 20-Nov-19 10.65-13.65	BH5 L2398134-1 16-Dec-19 10.65-13.65	BH6 L2386645-1 20-Nov-19 10.65-13.65	BH6 L2398115-1 16-Dec-19 10.65-13.65	TRIP BLANK L2386581-1 20-Nov-19	TRIP BLANK L239098-1 16-Dec-19	TRIP BLANK L2413931-1 4-Feb-20	TRIP BLANK L2422343-1 28-Feb-20
Parameter	All Property Use																						
Benzene	44	< 0.5	µg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	18000	< 0.5	µg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Ethylbenzene	2300	< 0.5	µg/L	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
m & p-Xylene	NV	< 0.4	µg/L	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4	< 0.4
o-Xylene	NV	< 0.3	µg/L	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Xylene Midure	4200	< 0.5	μgL	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5

Name Value highlighted in red indicate exceedances above the applicable criteria Values highlighted in yellow indicate the parameter was not detected, but the Reporting Limit exceeded the appliquable standard No. No what NAL No was

TABLE 11 GROUND WATER QUALITY ANALYSIS POLYCYCLIC AROMATIC HYDROCARBONS 1196-1210 Yonge & 2-8 Birch Avenue Toronto, ONTARIO

Sample Name Eurofins ID# Date Screened (mbgs) Parameter	MECP Table 3 2011 Criteria Coarse	Ma	aximum	Units	BH1 L2413928-1 4-Feb-20 7.6-10.6		BH1 2422407-1 27-Feb-20 7.6-10.6		BH2 2413924-1 4-Feb-20 0.65-13.65		DUP4 2413925-1 4-Feb-20 0.65-13.65 (BH2)	2	BH2 2422401-1 27-Feb-20 0.65-13.65	2	DUP5 422396-1 7-Feb-20 .65-13.65 (BH2)	2	BH3 2386573-1 20-Nov-19 0.65-13.65	2	DUP1 :386616-1 0-Nov-19).65-13.65 (BH3)	16	BH3 398104-1 6-Dec-19 .65-13.65
Acenaphthene	600	<	0.067	μg/L	< 0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02
Acenaphthylene	1.8	<	0.037	μg/L	< 0.02	<	0.02		0.029		0.032		0.037		0.026	<	0.02	<	0.02	<	0.02
Anthracene	2.4	<	0.178	μg/L	< 0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02
Benzo(a)anthracene	4.7	<	0.802	μg/L	< 0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02
Benzo(a)pyrene	0.81		0.011	μg/L	< 0.01	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01	<	0.01		0.011
Benzo(b)fluoranthene	0.75	٧	0.87	μg/L	< 0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02
Benzo(g,h,i)perylene	0.2	<	0.386	μg/L	< 0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02
Benzo(k)fluoranthene	0.4	<	0.348	μg/L	< 0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02
Chrysene	1	<	0.831	μg/L	< 0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02
Dibenzo(a,h)anthracene	0.52	<	0.101	μg/L	< 0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02
Fluoranthene	130	<	1.38	μg/L	< 0.02	<	0.02	<	0.02	<	0.02	<	0.02		0.023	<	0.02	<	0.02		0.035
Fluorene	400	<	0.05	μg/L	< 0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02
Indeno(1,2,3-cd)pyrene	0.2	<	0.465	μg/L	< 0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02	<	0.02
2-and 1-methyl Naphthalene	1800	<	0.088	μg/L	< 0.028	<	0.028	<	0.028	<	0.028		0.088		0.082	<	0.028	<	0.028	<	0.028
Naphthalene	1400	<	0.05	μg/L	< 0.05	<	0.05	<	0.05	<	0.05	<	0.05	<	0.05	<	0.05	<	0.05	<	0.05
Phenanthrene	580	<	0.612	μg/L	< 0.02	<	0.02	<	0.02	<	0.02	<	0.02		0.028	<	0.02	<	0.02		0.033
Pyrene	68	<	1.2	μg/L	< 0.02	<	0.02	<	0.02	<	0.02	<	0.02		0.023	<	0.02	<	0.02		0.033

Notes

Value highlighted in red indicate exceedances above the applicable criteria

Values highlighted in yellow indicate the parameter was not detected, but

the Reporting Limit exceeded the applicable standard

ND = Not detected

NV = No value

NA = Not assessed

TABLE 12 GROUNDWATER QUALITY ANALYSIS POLYCHLORINATED BIPHENYLS 1196-1210 Yonge & 2-8 Birch Avenue Toronto, ONTARIO

Sample Name Eurofins ID# Date Screened (mbgs) Parameter	MECP Table 3 Criteria Coarse R/P/I/I/C/C	Maximum	Units	BH1 L2413928-1 4-Feb-20 7.6-10.6	BH1 L2422407-1 27-Feb-20 7.6-10.6	DUP4 L2413925-1 4-Feb-20 10.65-13.65 (BH2)	BH2 L2422401-1 27-Feb-20 10.65-13.65	DUP5 L2422396-1 27-Feb-20 10.65-13.65 (BH2)	BH3 L2386573-1 20-Nov-19 10.65-13.65	DUP1 L2386573-1 20-Nov-19 10.65-13.65	BH3 L2398104-1 16-Dec-19 10.65-13.65	DUP2 L2398138-1 16-Dec-19 10.65-13.65 (BH3)	BH5 L2386649-1 20-Nov-19 10.65-13.65	BH5 L2398134-1 16-Dec-19 10.65-13.65	BH6 L2386645-1 20-Nov-19 10.65-13.65	BH6 L2398115-1 16-Dec-19 10.65-13.65
Aroclor 1016	NV	NV	μg/L	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV	NV
Aroclor 1242	NV	< 0.04	μg/L	< 0.02	< 0.02	< 0.04	< 0.02	< 0.04	< 0.02	< 0.02	< 0.02	< 0.02	< 0.04	< 0.02	< 0.04	< 0.02
Aroclor 1248	NV	< 0.04	μg/L	< 0.02	< 0.02	< 0.04	< 0.02	< 0.04	< 0.02	< 0.02	< 0.02	< 0.02	< 0.04	< 0.02	< 0.04	< 0.02
Aroclor 1254	NV	< 0.04	μg/L	< 0.02	< 0.02	< 0.04	< 0.02	< 0.04	< 0.02	< 0.02	< 0.02	< 0.02	< 0.04	< 0.02	< 0.04	< 0.02
Aroclor 1260	NV	< 0.04	μg/L	< 0.02	< 0.02	< 0.04	< 0.02	< 0.04	< 0.02	< 0.02	< 0.02	< 0.02	< 0.04	< 0.02	< 0.04	< 0.02
Polychlorinated Biphenyls	7.8	< 0.08	μg/L	< 0.04	< 0.04	< 0.08	< 0.04	< 0.08	< 0.04	< 0.04	< 0.04	< 0.04	< 0.08	< 0.04	< 0.08	< 0.04
Decachlorobiphenol			%	60.3	86.1	40.8	90.4	94.0	52.3	49.1	55.9	58.8	43.9	52.5	46.5	54.3

Notes
Value highlighted in red indicate exceedances above the applicable criteria

Values highlighted in yellow indicate the parameter was not detected, but the Reporting Limit exceeded the applicable standard NV = No value

APPENDIX A

TERRAPROBE INC.



PHASE ONE CONCEPTUAL SITE MODEL

1196-1210 Yonge Street & 2-8 Birch Avenue, Toronto, Ontario

Phase O	ne CSM	Information Pertaining to Property		
Figures of the Phase One Study Area are provided that:				
i.	Show any existing buildings and structures	At the time of the site inspection, there was one (1) four-storey commercial-residential building located at 1196 – 1204 Yonge Street attached to one (1) three-storey residential building located at 2, 4 and 6 Birch Avenue, one (1) two-storey commercial-residential building located at 1206, 1208 and 1210 Yonge Street, and one (1) two-storey residential building located at 8 Birch Avenue. The subject Property consists of six (6) parcels of land with a legal description of Part of Lots 1 & 2, Registered Plan 308 Yorkville, City of Toronto identified under PIN 21193-0524 (LT) for 1210 Yonge Street, 21193-0525 (LT) for 1208 Yonge Street, 21193-0526 (LT) for 1206 Yonge Street, 21193-0136 (LT) for 1196, 1198, 1202 & 1204 Yonge Street and 2, 4, 6 & 8 Birch Avenue.		
ii.	Identify and locate water bodies located in whole or in part on the Phase One Study Area	No water bodies were identified on the Property. The nearest water body is an unnamed stream approximately 600 m east of the Property which drains into the Don River which is located approximately 2 km east of the Property.		
	Alta	All water bodies on the Phase One Property and in the Phase One Study Area are shown on Figure 1 (if any).		
iii.	Identify and locate any Areas of Natural Significance located in whole or in part on the Phase One Study Area	Terraprobe reviewed the Ontario Ministry of Natural Resources and Forestry NHIC database for natural area listings. No Areas of Natural Significance were located in the Phase One Study Area.		
iv.	Locate any drinking water wells at the Phase One Property	No drinking water wells were identified on the Property.		
V.	Show roads, including names, within the Phase One Study Area	The Property is bounded by commercial-residential buildings to the north, Birch Avenue and utility land use to south, Yonge Street and commercial-residential buildings to the east, and residential properties to the west.		
		Other roads and properties within the Study Area are presented on Figure 3.		
vi.	Show use of properties adjacent to the Phase One Property	The Land Uses of the adjacent properties are shown on Figure 4.		
vii.	Identify and locate areas where any potentially contaminating activity has occurred, and show tanks in such areas	Potentially Contaminating Activities (PCAs) located on the Property and within the Study Area are shown on Figure 5.		

Phase One CSM		Information Pertaining to Property
viii.	Identify and locate any areas of potential environmental concern	Twelve (12) Areas of Potential Environmental Concern (APECs) and associated Contaminants of Potential Concern are described on the Table of Areas of Potential Environmental Concern.
		The locations of the APECs on the Phase One Property are shown on Figure 6.
he follow	ring is a description and assessmen	nt of:
i.	Any areas where potentially 1196 Yonge Street (Phase One Property)	
	contaminating activity on or potentially affecting the Phase One Property has occurred	 #NA¹ – Waste Generator #59 – Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products
		1206 Yonge Street (Phase One Property)
		• #28 – Gasoline and Associated Products Storage in Fixed Tanks
		1208 Yonge Street (Phase One Property)
		#37 – Operation of Dry Cleaning Equipment (where chemicals are used)
		• #39 – Paint Manufacturing, Processing and Bulk Storage
		1210 Yonge Street (Phase One Property)
		 #37 – Operation of Dry Cleaning Equipment (where chemicals are used)
		1196-1210 Yonge Street & 2-8 Birch Avenue (Phase One Property)
		#NA ⁴ – Exceedance from previous investigation
		10 Birch Avenue (4 m West)
		 #10 – Commercial Autobody Shops #59 – Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products #33 – Metal Treatment, Coating, Plating and Finishing
		1212 Yonge Street (5 m North)
		• #10 – Commercial Autobody Shops
		1218 Yonge Street (14 m North)
		#37 – Operation of Dry Cleaning Equipment (where chemicals are used)
		11 Birch Avenue (19 m Southwest)

• #NA¹ – Waste Generator



Phase One CSM	Information Pertaining to Property
	#18 – Electricity Generation, Transformation and Power Stations
	South of 11 Birch Avenue (20 m South)
	• #46 – Rail Yards, Tracks and Spurs
	1139 Yonge Street (24 m Northeast)
	• #28 – Gasoline and Associated Products Storage in Fixed Tanks
	1143 Yonge Street (25 m Northeast)
	 #NA³ – Coal Storage #28 – Gasoline and Associated Products Storage in Fixed Tanks
	13 Alcorn Avenue (31 m Northwest)
	• #10 – Commercial Autobody Shops
	15-21 Birch Avenue (35 m Southwest)
	• #28 – Gasoline and Associated Products Storage in Fixed Tanks
	1153 Yonge Street (42 m Northeast)
	 #37 – Operation of Dry Cleaning Equipment (where chemicals are used)
	1139 Yonge Street (42 m East)
	• #NA ³ – Coal Storage
	4 Alcorn Avenue (48 m North)
	• #37 – Operation of Dry Cleaning Equipment (where chemicals are used)
	1129 Yonge Street (49 m Southeast)
	• #NA ³ – Coal Storage
	1224 Yonge Street (50 m North)
	 #37 – Operation of Dry Cleaning Equipment (where chemicals are used)
	24 Birch Avenue (59 m West)
	• #28 – Gasoline and Associated Products Storage in Fixed Tanks
	1155 Yonge Street (60 m Northeast)
	 #37 – Operation of Dry Cleaning Equipment (where chemicals are used)
	8 Shaftesbury Avenue (60 m Northeast)
	• #10 – Commercial Autobody Shops

Phase One CSM	Information Pertaining to Property	
	14 Shaftesbury Avenue (60 m Northeast)	
	#28 – Gasoline and Associated Products Storage in Fixed Tanks	
	24 Birch Avenue (61 m West)	
	• #10 – Commercial Autobody Shops	
	1228 Yonge Street (67 m Northwest)	
	#28 – Gasoline and Associated Products Storage in Fixed Tanks	
	1161 Yonge Street (70 m North)	
	• #28 – Gasoline and Associated Products Storage in Fixed Tanks	
	1230 Yonge Street (71 m North)	
	• #33 – Metal Treatment, Coating, Plating and Fabrication	
	10 Alcorn Avenue (71 m Northwest)	
	• #28 – Gasoline and Associated Products Storage in Fixed Tanks	
	#58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biooils as soil conditioners	
	16 Shaftesbury Avenue (88 m Northeast)	
	• #NA ¹ – Waste Generator	
	1176 Yonge Street (90 m Southeast)	
	• #28 – Gasoline and Associated Products Storage in Fixed Tanks	
	1234 Yonge Street (90 m North)	
	• #33 – Metal Treatment, Coating, Plating and Fabrication	
	22 Alcorn Avenue (96 m West)	
	#28 – Gasoline and Associated Products Storage in Fixed Tanks	
	29 Birch Avenue (97 m Southwest)	
	• #10 – Commercial Autobody Shops	
	1119 Yonge Street (99 m Southeast)	
	• #8 – Chemical Manufacturing, Processing and Bulk Storage	
	• #28 – Gasoline and Associated Products Storage in Fixed Tanks	
	31 Birch Avenue (100 m Southwest)	

Phase One CSM	Information Pertaining to Property	
	#10 – Commercial Autobody Shops	
	1174 Yonge Street (102 m South)	
	#28 – Gasoline and Associated Products Storage in Fixed Tanks	
	1179 Yonge Street (117 m Northeast)	
	#28 – Gasoline and Associated Products Storage in Fixed Tanks	
	25 Shaftesbury Avenue (118 m East)	
	#28 – Gasoline and Associated Products Storage in Fixed Tanks	
	Opposite 30 Shaftesbury Avenue (120 m Northeast)	
	• #NA ² – Ontario Spills	
	32 Alcorn Avenue (126 m West)	
	#28 – Gasoline and Associated Products Storage in Fixed Tanks	
	1240 Yonge Street (130 m North)	
	• #28 – Gasoline and Associated Products Storage in Fixed Tanks	
	• #10 – Commercial Autobody Shops	
	43 Alcorn Avenue (133 m West)	
	• #28 – Gasoline and Associated Products Storage in Fixed Tanks	
	Yonge Street and Summerhill (143 m North)	
	• #NA ² – Ontario Spill	
	1246 Yonge Street (146 m Northwest)	
	• #28 – Gasoline and Associated Products Storage in Fixed Tanks	
	35-37 Shaftesbury Avenue (150 m East)	
	• #28 – Gasoline and Associated Products Storage in Fixed Tanks	
	58-60 Alcorn Avenue (170 m Northwest)	
	• #10 – Commercial Autobody Shops	
	1262 Yonge Street (184 m North)	
	• #10 – Commercial Autobody Shops	
	47 Shaftesbury Avenue 189 m East	
	• #NA ³ – Coal Storage	
	• #28 – Gasoline and Associated Products Storage in Fixed Tanks	

Phase One CSM Information Pertaining to Property		Information Pertaining to Property
		 #28 – Gasoline and Associated Products Storage in Fixed Tanks 47 Summerhill Avenue (224 m Northeast) #28 – Gasoline and Associated Products Storage in Fixed Tanks
ii.	Any contaminants of potential concern	Contaminants of Potential Concern (CoPCs) identified the Property include: • Metals in soil and groundwater • Hydride Forming Metals in soil and groundwater • VOCs in soil and groundwater • PHCs in soil and groundwater • BTEX in soil and groundwater • PAHs in soil and groundwater • PCBs in soil and groundwater • PCBs in soil and groundwater • EC, SAR in soil • Na, Cl in groundwater
iii.	The potential for underground utilities, if any present, to affect contaminant distribution and transport	During the site inspection, connections for hydro, natural gas and communications were observed indicating underground utility connections. As such, there may be potential for underground utilities to affect the horizontal distribution or transport of contaminants.

Phase One CSM		Information Pertaining to Property	
iv.	Available regional or site	Topography	
	specific geological and hydrogeological information	 The OBM, Toporama, MNR and Google Earth maps were reviewed and it was identified that the elevation of the Property was approximately 124 m above sea level (masl). The Property flat lying with a gentle slope towards the south. 	
		Hydrogeology	
		• The nearest water body is an unnamed stream approximately 600 m east of the Property which drains into the Don River which is located approximately 2 km east of the Property. Based on the Water Well Records and Terraprobe's previous investigations in the local area, the depth to groundwater is expected to be approximately 4.6 to 11.6 mbgs. Groundwater and surface water are expected to flow to south towards Lake Ontario according to the MECP's Great Lakes watershed locator.	
		Geology (overburden)	
		Based on published geology and Terraprobe's previous investigations, the overburden material is expected to consist of silt to sandy silt/silty sand with trace gravel.	
		Geology (bedrock)	
		The bedrock on the site is of the Georgian Bay formation, which is comprised of shale, limestone, dolostone and siltstone.	
		Geology (depth to bedrock)	
		Based upon published geology, historic borehole information from the MNRF and Water Well Records in the vicinity from the MECP, the depth to bedrock in the area of the Property is approximately 40 mbgs.	
v.	How any uncertainty or absence of information obtained in each of the components of the Phase One ESA could affect the validity of the model	No uncertainty was encountered while conducting the Phase One ESA that could affect the validity of the model.	

Figures:

Figure 1 – Phase One Property Location

Figure 2 – Phase One Property

Figure 3 – Phase One Study Area

Figure 4 – Adjacent Property Land Uses

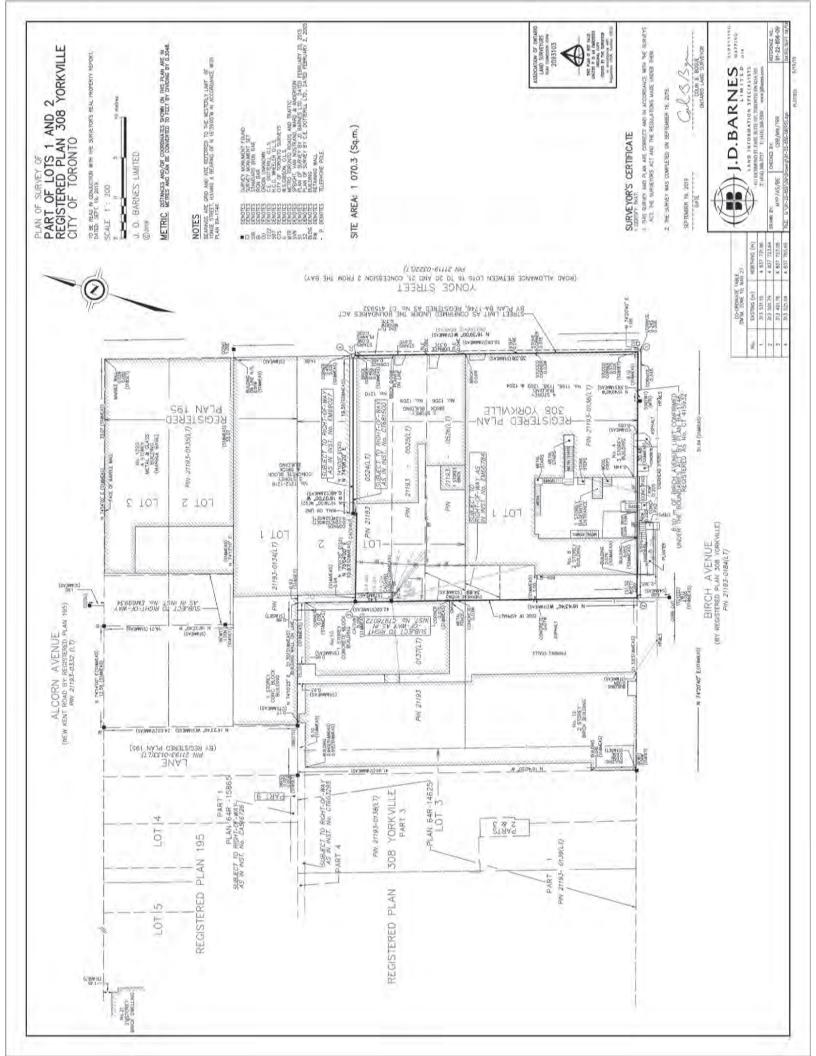
Figure 5 – PCA Locations

Figure 6 – APEC Locations

APPENDIX B

TERRAPROBE INC.





APPENDIX C

TERRAPROBE INC.





Projcet Reference No. 1-19-0603-46

Client: Birch Equities Limited

Location: 1196-1210 Yonge Street, 2-8 Birch Avenue, Toronto Monitoring Well: BH1

Test Conducted by: JB Test Date: February 7, 2020

Analysis Performed by: NA FHT

Aquifer Thickness: At least 6.3 m



Calculation using Bouwer and Rice, 1976

Observation Well	Hydraulic Conductivity (m/s)	Soil
		Silt and Sand to Silty
BH1	8.99E-06	Sand



Projcet Reference No. 1-19-0603-46

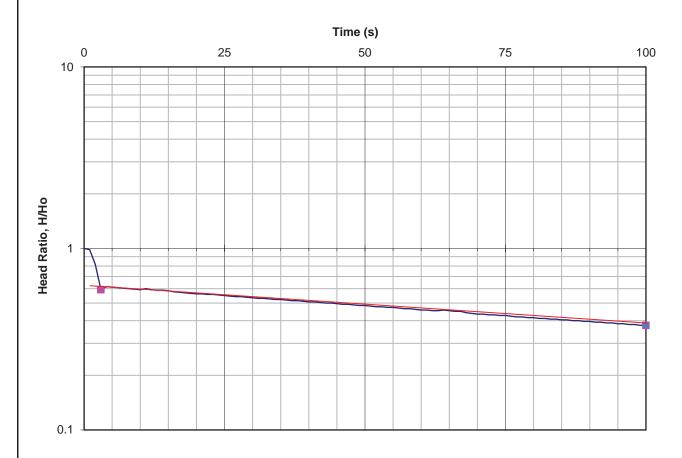
Client: Birch Equities Limited

Location: 1196-1210 Yonge Street, 2-8 Birch Avenue, Toronto Monitoring Well: BH2

Test Conducted by: JB Test Date: February 7, 2020

Analysis Performed by: NA FHT

Aquifer Thickness: At least 7.7 m



Calculation using Bouwer and Rice, 1976

Observation Well	Hydraulic Conductivity (m/s)	Soil
		Silt and Sand to Silty
BH2	1.60E-06	Sand



Projcet Reference No. 1-19-0603-46

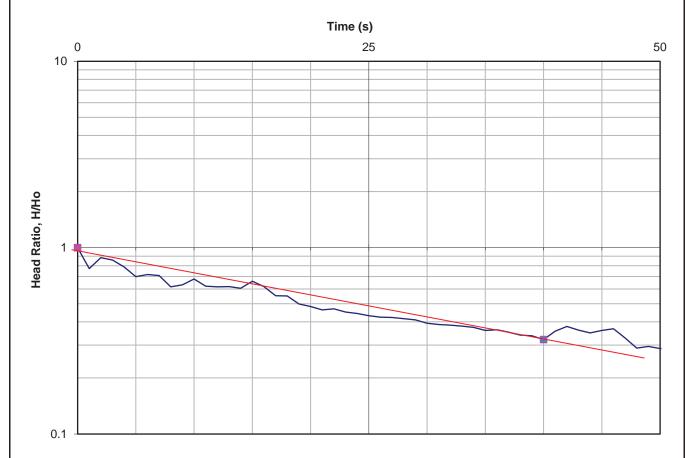
Client: Birch Equities Limited

Location: 1196-1210 Yonge Street, 2-8 Birch Avenue, Toronto Monitoring Well: BH3

Test Conducted by: H.H Test Date: November, 10, 2019

Analysis Performed by: NA FHT

Aquifer Thickness: At least 7.9 m



Calculation using Bouwer and Rice, 1976

Observation Well	Hydraulic Conductivity (m/s)	Soil
		Silt and Sand to Silty
ВН3	9.77E-06	Sand



Projcet Reference No. 1-19-0603-46

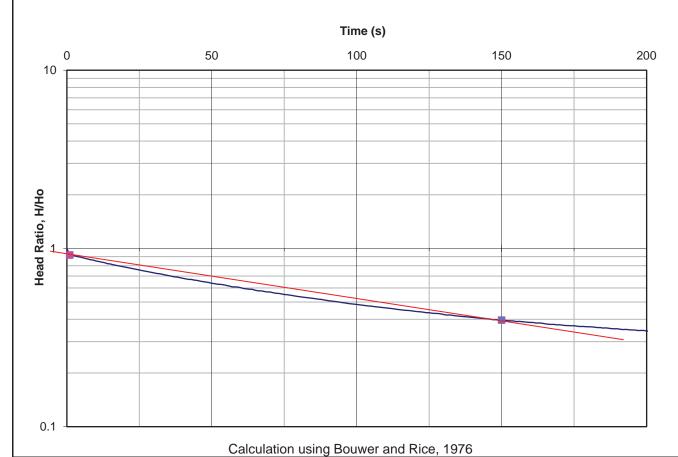
Client: Birch Equities Limited

Location: 1196-1210 Yonge Street, 2-8 Birch Avenue, Toronto Monitoring Well: BH4D

Test Conducted by: H.H Test Date: November, 10, 2019

Analysis Performed by: NA FHT

Aquifer Thickness: At least 16.9 m



Observation Well Hydraulic Conductivity (m/s) Soil
Silt and Sand to Silty
BH4D 1.94E-06 Sand



Projcet Reference No. 1-19-0603-46

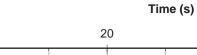
Client: Birch Equities Limited

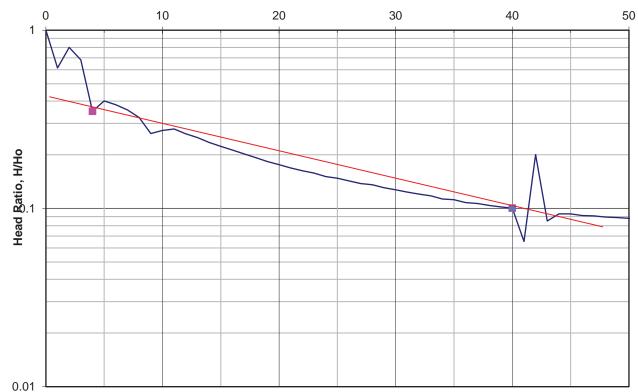
Location: 1196-1210 Yonge Street, 2-8 Birch Avenue, Toronto Monitoring Well: BH5

Test Conducted by: H.H Test Date: November, 10, 2019

Analysis Performed by: NA FHT

Aquifer Thickness: At least 11.9 m





Calculation using Bouwer and Rice, 1976

Observation Well	Hydraulic Conductivity (m/s)	Soil
		Silt and Sand to Silty
BH5	1.20E-05	Sand



Projcet Reference No. 1-19-0603-46

Client: Birch Equities Limited

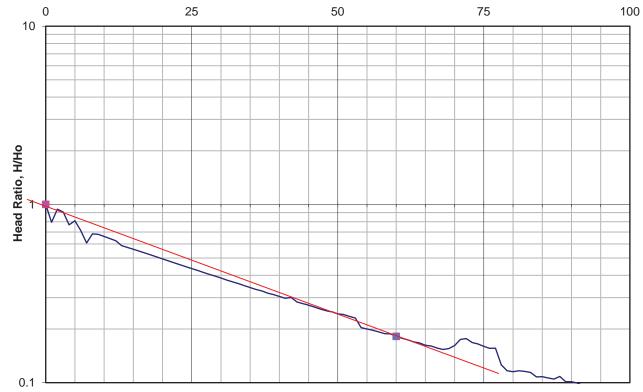
Location: 1196-1210 Yonge Street, 2-8 Birch Avenue, Toronto Monitoring Well: BH6

Test Conducted by: H.H Test Date: November, 11, 2019

Analysis Performed by: NA FHT

Aquifer Thickness: At least 8.1 m





Calculation using Bouwer and Rice, 1976

Observation Well	Hydraulic Conductivity (m/s)	soil
		Silt and Sand to Silty
BH6	9.78E-06	Sand

APPENDIX D

TERRAPROBE INC.





Avi Bachar, PMP, P.Eng. Manager, Development Engineering

Toronto & East York District

Engineering & Construction Services

Metro Hall 55 John Street 16th Floor Toronto, Ontario M5V 3C6 Tel: 416-392-8320 Fax: 416-392-4426 Avi.Bachar@toronto.ca www.toronto.ca

March 24, 2020

Terrabrobe Inc. 11 Indell Lane Brampton, Ontario L6T 3Y3

File No: 1-19-0603

Attention: Kossay Makhzoumi

Dear Sir/Madam:

Re: 1196, 1198, 1202, 1204, 1206, 1208 & 1210 Yonge Street and 2, 4, 6, 8 Birch Avenue, Toronto, Ontario

Your Notice of Intention dated March 10, 2020 pursuant to Section 35(3)(d) of Ontario Regulation 153/04 to apply non-potable ground water site condition standards.

Please be advised that we have no objection to non-potable ground water site condition standards being applied in the preparation of a Record of Site Condition for the subject property.

Yours truly,

Avi Bachar, PMP, P.Eng. Manager, Development Engineering, Toronto & East York District

AV/aw



APPENDIX E

TERRAPROBE INC.





File No. 1-19-0603-42

Brampton Office

RE: SAMPLING AND ANALYSIS PLAN (SAP) 1196-1210 YONGE STREET & 2-8 BIRCH AVENUE TORONTO, ONTARIO

1. INTRODUCTION

This appendix presents the Sampling and Analysis Plan (SAP) that was developed in support of the Phase Two Environmental Site Assessment (ESA) for the Property located at 1196-1210 Yonge Street & 2-8 Birch Avenue, in the City of Toronto, Ontario (hereinafter referred to as the 'Property'). The Phase Two ESA is conducted to provide characterization of the Property subsurface conditions, identify the extent of soil and ground water impacts, if any, and to assess remedial options such that, upon completion of remedial actions, if required, a Record of Site Condition (RSC) can be filed on the Ministry of the Environment, Conservation and Parks (MECP) Brownfields Environmental Site Registry. The SAP presents the procedures and approach to the field investigative activities to characterize the Property site conditions and meet the data quality objectives of the Phase Two ESA.

The SAP presents the sampling program for the Property, the recommended procedures and protocols for sampling and related field activities, the data quality objectives, and the quality assurance/ quality control (QA/QC) measures for the collection of accurate, reproducible and representative data. These components are described in further detail below.

2. QUALITY ASSURANCE AND QUALITY CONTROL PROGRAM

The data quality objectives of the quality assurance/quality control (QA/QC) program is to obtain soil and ground water samples and other field measurements that provide data of acceptable quality that meets the objectives of the Phase Two ESA. The objectives of the QA/QC program are achieved through the implementation of procedures for the collection of unbiased (i.e. non-contaminated) samples, sample documentation and the collection of appropriate QC samples to provide a measure of sample reproducibility and accuracy.

The field QA/QC program includes the following components:

- Decontamination Protocols;
- Equipment Calibration;
- Sample Preservation;
- Sample Documentation; and,
- Field Quality Control Samples.

Details on the field QA/QC components are provided below.

2.1 Decontamination Protocols

Decontamination protocols are followed during field sampling where non-dedicated sampling equipment is used to prevent sample cross contamination. For the borehole drilling and soil sampling, split soil sampling devices are cleaned and decontaminated between sampling intervals and auger flights between borehole locations in accordance with Standard Operating Procedure (SOP) requirements as indicated in Appendix E. For the monitoring well installation, well components are not to come into contact with the ground surface prior to insertion into boreholes. Electronic water level meters are decontaminated between monitoring well locations during well development and purging activities. All decontamination fluids are collected and stored in sealed, labelled containers.

2.2 Equipment Calibration

All equipment requiring calibration are calibrated in the field according to manufacturer's requirements using analytical grade reagents, or by the supplier prior to conducting field activities, and subsequently checked in the field. The calibration of all pre-calibrated instruments are checked in the field using analytical grade reagents and re-calibrated as required. For multiple day sampling events, equipment calibration is checked prior to the beginning of sampling activities. All calibration data are documented in a bound hard cover notebook.

2.3 Sample Preservation

Laboratory supplied sample containers are used for all sampling conducted on the Property. All samples are preserved using appropriate analytical test group specific reagents, as required and as provided by the laboratory, and upon collection placed in ice-filled insulated coolers for storage and transport.

2.4 Sample Documentation

All samples are assigned a unique identification number, which is recorded along with the date, time, project number, company name, location and requested analysis in a bound field notebook. All samples are handled and transported following Chain of Custody protocols.



2.5 Field Quality Control Samples

Field quality controls samples are collected to evaluate the accuracy and reproducibility of the field sampling procedures. For soil sampling, one (1) field duplicate sample is collected for every ten (10) samples of a specific geologic unit submitted for analysis. For ground water sampling, one (1) field duplicate is collected for every ten (10) samples submitted for chemical analysis. The field duplicate samples are assessed by calculating the relative percent difference (RPD) and comparing to the analytical test group specific acceptance criteria.

For ground water samples submitted for the analysis of VOCs, one (1) field blank prepared in the field using de-ionized water and/or one (1) trip blank prepared by the contractual laboratory are submitted for chemical analysis to evaluate the potential for sample cross-contamination during sampling and transportation. The recommended alert criterion is the detection of any test group analyte at a concentration in excess of laboratory detection limits.

3. DATA QUALITY OBJECTIVES

The data quality objectives of the quality assurance/quality control (QA/QC) program are as follows:

- To obtain soil and ground water samples and other field measurements that provide data of acceptable quality that meets the objectives of the Phase Two ESA.
- To collect samples of unbiased (i.e. non-contaminated) samples, document sampling procedures, and to collect appropriate QC samples to provide a measure of sample reproducibility and accuracy.
- To collect field quality control samples at a rate that meets or exceeds those specified in Section 2.5, and to ensure that the results of those QC samples are satisfactory.

The data quality objectives for all types of field data collected during the Phase Two ESA field investigation that set the level of uncertainty in environmental data were set such that:

- Decision-making is not affected; and,
- The general (general) objectives of the investigation are met.

The data quality objectives are met through implementation of the QA/QC program and in the use of the Standard Operating Procedures identified below.

4. STANDARD OPERATION PROCEDURES FOR FIELD INVESTIGATION METHODS

To meet the requirements of the field sampling program, the following field investigative methods are undertaken:



- Borehole Drilling;
- Field Screening Measurements, including Calibration Procedures;
- Monitoring Well Installation;
- Monitoring Well Development;
- Field Measurement of Water Quality Indicators, including Calibration Procedures;
- Residue Management Procedures;
- Ground water Level Measurements;
- Elevation Survey; and,
- Ground water Sampling.

The following procedures are not required for this investigation:

- Excavating; and,
- Sediment Sampling.

The field investigative methods required for this investigation are described in the following sections.

4.1 Borehole Drilling

Boreholes are advanced at the Property to facilitate the collection of soil samples for chemical analysis and geologic characterization; and, for the installation of ground water monitoring wells. Multiple boreholes are required at the Property and would require depths to investigate the surficial fill and native till overburden materials to provide for the collection of samples of the surficial and subsurface materials beneath the Property. Additional boreholes may be drilled for delineation of any soil and ground water impacts identified during the investigation. The borehole locations are selected to assess the soil and ground water quality in the areas of potential environmental concern (APECs) identified at the Property as below:

- 1. APEC 1 is the result of potential off-site sources which include commercial auto body shops located at multiple locations in the study area, as well as dry cleaning businesses at 1218 Yonge Street, 1153 Yonge Street. 4 Alcorn Street, and 1224 Yonge Street, multiple fuel storage tanks in the study area, metal treatment and fabrication at 1230 & 1234 Yonge Street, a paint manufacturing facility at 1268 Yonge Street, and a waste disposal facility at 10 Alcon Avenue. The APEC covers the north portion of the Property. Contaminants of Potential Concern (COPCs) are metals, hydride-forming metals, petroleum hydrocarbons [PHCs (F1-F4)], benzene, toluene, ethylbenzene, and xylene (BTEX), volatile organic compounds (VOCs), polychlorinated Biphenyls (PCBs), and polycyclic aromatic hydrocarbons (PAHs). The COPCs may have impacted the soil and ground water.
- 2. APEC 2 is the result of potential off-site sources which include multiple commercial auto body shops, a wood and metal manufacturing facility, former fuel storage tanks at 24 Birch Avenue and 24 & 43 Alcorn Avenue. The APEC includes the west portion of the Property. COPCs are metals, hydride-forming metals, petroleum hydrocarbons [PHCs (F1-F4)], benzene, toluene, ethylbenzene, and xylene (BTEX), volatile organic compounds (VOCs), and polycyclic aromatic hydrocarbons (PAHs). The COPCs may have impacted the soil and ground water.
- 3. APEC 3 is the result of potential off-site sources which include bulk storage of coal and duel storage tanks at 47 Shaftsbury Avenue and multiple fuel storage tanks at 35-37 Shaftsbury



- Avenue. The APEC includes the east portion of the Property. COPCs are metals, hydride-forming metals, petroleum hydrocarbons [PHCs (F1-F4)], benzene, toluene, ethylbenzene, and xylene (BTEX), volatile organic compounds (VOCs), and polycyclic aromatic hydrocarbons (PAHs). The COPCs may have impacted the soil and ground water.
- 4. APEC 4 is the result of potential off-site sources which include multiple fuel storage tanks, multiple commercial auto body shops, storage of chemicals at 1119 Yonge Street and bulk storage of coal at 1129 Yonge Street. The APEC includes the south portion of the Property. Contaminants of Potential Concern (COPCs) are metals, hydride-forming metals, petroleum hydrocarbons [PHCs (F1-F4)], benzene, toluene, ethylbenzene, and xylene (BTEX), volatile organic compounds (VOCs), polychlorinated Biphenyls (PCBs), and polycyclic aromatic hydrocarbons (PAHs). The COPCs may have impacted the soil and ground water.
- 5. APEC 5 is the result of a potential onsite source consisting of an above ground fuel storage tanks located at 1206 Yonge Street. The APEC includes the north-central portion of the Property. Contaminants of Potential Concern (COPCs) are metals, hydride-forming metals, petroleum hydrocarbons [PHCs (F1-F4)], benzene, toluene, ethylbenzene, and xylene (BTEX), and volatile organic compounds (VOCs). The COPCs may have impacted the soil and ground water.
- 6. APEC 6 is the result of a potential onsite source consisting of a lead exceedance identified in a previous investigation on the Property. The APEC includes the north-central portion of the Property. Contaminants of Potential Concern (COPCs) are metals. The COPCs may have impacted the soil and ground water.
- 7. APEC 7 is the result of a potential onsite source consisting of an exceedance identified in a previous investigation on the Property. The APEC includes the western portion of the Property. Contaminants of Potential Concern (COPCs) are Electric Conductivity, Sodium Adsorption Ratio, Sodium, and Chloride. The COPCs may have impacted the soil and ground water.
- 8. APEC 8 is the result of a potential onsite source consisting of an exceedance identified in a previous investigation on the Property. The APEC includes the south-central portion of the Property. Contaminants of Potential Concern (COPCs) are Electric Conductivity, Sodium Adsorption Ratio, Sodium, and Chloride. The COPCs may have impacted the soil and ground water.
- 9. APEC 9 is the result of a potential onsite source consisting of dry cleaners located at 1208 Yonge Street. The APEC includes the northern portion of the Property. Contaminants of Potential Concern (COPCs) are volatile organic compounds (VOCs). The COPCs may have impacted the soil and ground water.
- 10. APEC 10 is the result of a potential onsite source consisting of bulk storage of paints identified at 1208 Yonge Street. The APEC includes the northern portion of the Property. Contaminants of Potential Concern (COPCs) are metals and volatile organic compounds (VOCs). The COPCs may have impacted the soil and ground water.
- 11. APEC 11 is the result of a potential onsite source consisting of a former waste generator identified at 1196 Yonge Street. The APEC includes the eastern portion of the Property. Contaminants of Potential Concern (COPCs) are metals, hydride-forming metals, petroleum hydrocarbons [PHCs (F1-F4)], benzene, toluene, ethylbenzene, and xylene (BTEX), and volatile organic compounds (VOCs)). The COPCs may have impacted the soil and ground water.
- 12. APEC 12 is the result of a potential onsite source consisting of a former wood treatment facility identified at 1196 Yonge Street. The APEC includes the eastern portion of the Property. Contaminants of Potential Concern (COPCs) are metals, hydride-forming metals, petroleum hydrocarbons [PHCs (F1-F4)], benzene, toluene, ethylbenzene, and xylene (BTEX), volatile

organic compounds (VOCs) and polycyclic aromatic hydrocarbons (PAHs). The COPCs may have impacted the soil and ground water.

Prior to borehole drilling, utility clearances are obtained from public and private locators, as required. If any uncertainty regarding the location of a buried utility at a borehole location is encountered or if a borehole location is within 1 m of a buried utility, the borehole is initiated by daylighting or hand augering to a sufficient depth to be clear of any utilities. Boreholes are required to be advanced into the surficial fill and overburden soils by a drilling company under the full-time supervision of Terraprobe staff. An appropriate drill rig equipped with sampling arrangement is utilized to advance the boreholes through the overburden materials.

4.2 Soil Sampling

Soil samples for geologic characterization and chemical analysis are required to be collected on a continuous basis in the overburden materials using 5 cm diameter and 60 cm long tube samplers advanced into the subsurface using a portable direct push drill rig or a truck mounted drill rig equipped with hollow or solid stem augers and split spoon sampler. The soil cores are extruded from the plastic lined inner tubes/split spoon samplers. Geologic and sampling details of the recovered cores are logged and the samples are assessed for the potential presence of non-aqueous phase liquids.

Samples for chemical analysis are selected on the basis of visual, combustible gas and olfactory evidence of impacts and at specific intervals to define the lateral and vertical extent of known impacts.

Recommended volumes of soil samples selected for chemical analysis are collected into pre-cleaned, laboratory supplied, analytical test group specific containers. The samples are placed into clean insulated coolers chilled with ice for storage and transport. Samples intended for VOC and/or petroleum hydrocarbon (PHC) fractions F1 and F2 analysis are collected using a laboratory-supplied soil core sampler, placed into the vials containing methanol for preservation purposes and sealed using Teflon lined septa lids. The samples are assigned unique identification numbers, and the date, time, location, and requested analyses for each sample are documented in a bound field note book. The samples are submitted to the contractual laboratory within analytical test group holding times under Chain of Custody (COC) protocols. New disposable chemical resistant gloves are used during the handling and sample collection for each soil core to prevent sample cross-contamination.

4.3 Field Screening Measurements, including Calibration Procedures

A portion of each soil core is placed in a re-sealable plastic bag and allowed to reach ambient temperature prior to field screening with a combustible gas detector or photo-ionization detector (PID) that is calibrated with an appropriate reference gas prior to use. The vapour measurements are made by inserting the instrument's probe into the plastic bag while manipulating the sample to ensure volatilization of the



soil gases. These readings provide a real-time indication of the relative concentration of volatile organic vapours encountered in the subsurface during drilling.

4.4 Monitoring Well Installation

Select boreholes are required to be instrumented as ground water monitoring wells installed with 1.5 m long screens intercepting the ground water table in the overburden within the aquifers of interest. Additional monitoring wells may be installed for delineation of any ground water impacts identified during investigation, or to confirm ground water quality after remediation, if conducted. The monitoring wells are installed in general accordance with the Ontario Water Resources Act- R.R.O. 1990, Regulation 903 – Amended to O. Reg. 128/03 and are installed by a licensed well contractor.

The monitoring wells are constructed using 38 mm diameter, Schedule 40, PVC riser pipe and number 10 slot size (0.25 mm) well screens. The bases of the well screens are sealed with PVC end caps. All well pipe connections are factory machined threaded flush couplings. The pipe components are pre-wrapped in plastic, which are removed prior to insertion in the borehole to minimize the potential for contamination. No lubricants or adhesives are used in the construction of the monitoring well. The annular space around the well screens is backfilled with silica sand to an average height of 0.3 m above the top of the screen. Granular bentonite is placed in the borehole annulus from the top of the sand pack to approximately 0.3 m below grade. The monitoring wells are completed with a flush mount or stick-up protective steel casing cemented into place.

4.5 Monitoring Well Development

The monitoring wells are developed to remove fine sediment particles potentially lodged in the sand pack and well screen to enhance hydraulic communication with the surrounding formation waters. The monitoring wells will be developed using a WaterraTM sample tubing and surge block SBD-25. Monitoring well development is monitored by visual observations of turbidity, and by taking field measurements of pH, specific conductance and temperature for every standing well (i.e. wetted casing) volume removed. Standing water volumes are determined by means of an electronic water level meter. Approximately three to five (3 to 5) wetted well volumes are removed; and, well development continues until the purged water has chemically stabilized as indicated by visual observations and field parameters measurements.

Well development details are documented on a well development log sheet or in a bound hard cover notebook. All development waters are collected and stored in labelled, sealed containers.

4.6 Field Measurement of Water Quality Indicators, including Calibration Procedures

Water quality parameter measurements are recorded using a multi meter instrument. The instrument probes are calibrated prior to use, following manufacturer's procedures using analytical grade reagents, or if obtained from a field equipment supplier, the calibration checked. Approximately three to five (3 to 5) wetted well volumes are removed; and, well development continues until the purged water has chemically stabilized as indicated by visual observations and field parameters measurements.

Details of field measurement of water quality indicators are documented on a log sheet or in a bound hard cover notebook, indicating the values of the parameters, the volumes of water purged, the date of purging, and additional information. A YSI Multi-Probe System was used.

4.7 Residue Management Procedures

The residue materials produced during the borehole drilling, soil sampling programs and monitoring well sampling programs comprised of soil cuttings from drilling activities, decontamination fluids from equipment cleaning, and waters from well development and purging are placed in labeled, sealed drums for off-Site disposal, or are disposed of by the licensed well contractor.

4.8 Ground Water Level Measurements

Ground water level measurements are recorded for monitoring wells to determine ground water flow and direction in the overburden aquifers beneath the Property. Water levels are measured with respect to the top of the casing by means of a Solinst interface probe, an electronic water level meter. The water levels are recorded on water level log sheets or in a bound field notebook. The water level meter probe is decontaminated between each monitoring well location.

4.9 Elevation Survey

An elevation survey is conducted to obtain vertical control of the monitoring well locations at the Property. The elevation at the borehole locations within the underground parking garage and the finished ground surface elevation were derived from the drawings provided by Cushman and Wakefield. (*Plan Garage Level "C" and Plot Plan*, prepared by John B. Parkin Associate, dated June 25, 1985). It should be noted that the elevations provided on the Borehole Logs in Appendix G are approximate only, for the purpose of relating soil stratigraphy and should not be used or relied on for other purposes.

4.10 Ground Water Sampling

Ground water samples are collected from monitoring wells for chemical analysis. The monitoring wells are purged first of three to five wetted well volumes of water to remove standing water and draw in fresh formation water. Wells, which are purged dry, are to recover to 75% of static levels before sampling.

Recommended ground water sample volumes are collected into pre-cleaned, laboratory-supplied vials or bottles provided with analytical test group specific preservatives, as required. The samples are placed in an insulated cooler chilled with ice for storage and transport. Samples for VOC analysis are collected in triplicate vials prepared with concentrated hydrochloric acid as a preservative. Each VOC vial is inverted and inspected for gas bubbles prior to being placed in the cooler to ensure that no head-space is present.

All ground water samples are assigned unique identification numbers, and the date, time, project number, company name, location and requested analyses for each sample are documented in a bound hard cover notebook. The samples are submitted to the contractual laboratory within analytical test group holding times under COC protocols. New disposable chemical resistant gloves are used for each sampling location to prevent sample cross-contamination.

5. PHYSICAL IMPEDIMENTS

No physical impediments are expected to be encountered that interfere with or limit the ability to conduct sampling and analysis of the required parameters and media at the Phase Two Property.

6. SAMPLING AND ANALYSIS PLAN RATIONALE AND PROCEDURES

The SAP has identified rationale and procedures for the following items:

- Choice of Sampling System;
- Sampling Media;
- Number of Samples;
- Sampling Frequency;
- Sampling Points;
- Sampling Depth Intervals;
- Other Field Information; and,
- Samples to be Submitted for Laboratory Analysis.

These sampling and analysis plan rationale and procedures are listed in further details in the following sections.

6.1 Choice of Sampling System

A judgemental sampling system has been selected for the purposes of this investigation. Random sampling and grid sampling systems have not been chosen as the primary sampling system in this investigation as APECs have been identified and there is an understanding as to where potential contaminants may be found. Investigation of the APECs is considered sufficient and more effective in locating contaminants within the Property.

6.2 Sampling Media

The soil sampling media consists of the earth fill underneath the surficial materials, and the underlying native glacial till. There are no APECs identified for the sediment at the Property and thus sediment is not included in the soil sampling media. The soil sampling, in the case of VOCs, is location-specific to assess for the potential presence of these chemical constituents based on field screening observations, or the identification of areas of potential concern.

The ground water samples are collected from the aquifers of interest contained within the native soil and glacial till. The ground water sampling is location-specific to assess for the potential presence of chemical constituents based on previous observations, or the identification of potential areas of concern.

6.3 Number of Samples

At least one sample is required to be taken for each contaminant of concern in each medium for which that contaminant was identified for each APEC. Where exceedances are found, additional samples may be required to delineate the impact.

6.4 Sampling Frequency

Soil sampling is completed at the Property at 0.6 m (2 ft.) for every 0.76 m (2.5 ft.) drilled for the first 3.0 m (10 ft.), then at 0.6 m (2 ft.) for every 1.52 m (5 ft.) drilled. However, if fill material is present then soil sampling proceeds at 0.6 m (2 ft.) for every 0.76 m (2.5 ft.) drilled until the samples no longer indicate the presence of fill material or until the depth of the investigation.

Ground water sampling and analysis is completed at the Property for each monitoring well at least once after the development of the well is complete and water quality parameters indicate the formation water is stable.

6.5 Sampling Points

Soil sampling points for PAHs may be identified by the presence of cinders or apparent indication of PAHs within the soil samples. Soil sampling points for PHCs may be identified by the presence of

hydrocarbon odours, signs of obvious staining, and combustible gas readings. Soil sampling points for VOCs may be identified by the presence of solvent odour and signs of obvious staining. Details including the exact depth are marked on the borehole log prior to sampling. Sampling points do not apply to Metals, Hydride-forming metals, and Other Regulated Parameters soil sampling as a composite sample is taken over a sampling depth interval. However, for reference, the mid-depth of the interval is used as the sampling point. Further details are indicated in Section 6.6. These details identify the specific locations of potential exceedances and assist in the analysis of migration and source of the contaminant of concern.

Sampling points for ground water samples are identified at the mid-point of the well screen elevation when the low flow sampling rate is equal to or lower than the recharge rate at the monitoring well of interest. However, if the sampling rate exceeds the recharge rate or if the water table is present below the mid-point of the well screen, the sampling point does not apply to ground water sampling. Instead a sampling depth interval is recorded using the top of the water table to the bottom of the well screen in the aquifer of interest. Further details are indicated in Section 6.6.

6.6 Sampling Depth Intervals

Sampling depth intervals for soil sampling are identified as the full split spoon sampler (or equivalent) depth with respect to the geodetic elevation. The sampling depth intervals typically correspond with the sampling frequency as mentioned in Section 6.4.

Sampling depth intervals for ground water sampling when non-low flow sampling is utilized is identified as the top of the well screen to the bottom of the well screen when the water table is above the top of the well screen. In the event the water table is below the top of the well screen, the top of the water table to the bottom of the well screen will be used as the sampling depth interval for ground water sampling.

6.7 Other Field Information

Vertical control of the boreholes and monitoring wells will ultimately be obtained through the completion of an elevation survey with reference to a geodetic benchmark. Ground water flow and direction in the water table aquifer are determined through ground water level measurements and the relative ground water elevations established in the Property elevation survey.

Wells are required with screens within the native soil, which is the aquifer of interest. This provides data regarding ground water quality in the aquifer of interest. The water table aquifer is the zone that is expected to be impacted in the APECs identified in the Phase One studies.

6.8 Samples to be submitted for Laboratory Analysis

The field sampling program was developed to provide for the collection of samples of the surficial and subsurface soil materials and ground water for chemical analysis of one or more of the following parameters: metals, hydride forming metals, sodium, ORPs, PHCs, VOCs and BTEX.

7. SAMPLING AND ANALYSIS PLAN CRITERIA

The QP considered the PCAs, all COPCs, and appropriate subsets of such contaminants and any other information and matters relating to the environmental condition of the property which are relevant to an informed professional judgment.

Based on the consideration of all matters and items above, the QP determined the sampling and analysis of COPCs and appropriate sampling and analysis for any other relevant contaminants that may be of concern at the Property.

The Phase Two ESA investigations, rationale for sampling locations with respect to APECs is summarized in the following table:

Area of Potential Environmental Concern	Location and Address of Potential Contaminating Activity	Potentially Contaminating Activity	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)	Borehole / Monitoring Well for Sampling
	Off-Site 1212 Yonge Street				
APEC 1: North portion of the Property	Off-Site 13 Alcorn Avenue	#10 – Commercial Autobody Shops	Metals, Hydride Forming Metals, VOCs, PHCs (F1-F4), BTEX	Soil and groundwater	BH5 BH6
	Off-Site 8 Shaftesbury Avenue				
	Off-Site 1240 Yonge Street				

Area of Potential Environmental Concern	Location and Address of Potential Contaminating Activity	Potentially Contaminating Activity	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)	Borehole / Monitoring Well for Sampling
	Off-Site 58-60 Alcorn Avenue				
	Off-Site 1262 Yonge Street				
	Off-Site 1218 Yonge Street				
	Off-Site 1153 Yonge Street	#37 – Operation of Dry Cleaning Equipment (where chemicals are used)	VOCs	Soil and groundwater	
APEC 1: North portion of the Property	Off-Site 4 Alcorn Avenue				BH5 BH6
	Off-Site 1224 Yonge Street	#37 – Operation of Dry Cleaning Equipment (where chemicals are used)	VOCs	Soil and	
	Off-Site 1155 Yonge Street		Vocs	groundwater	
	Off-Site 1139 Yonge Street	#28 – Gasoline and Associated Products Storage in Fixed Tanks	Metals, Hydride Forming Metals, VOCs, PHCs (F1-F4), BTEX	Soil and groundwater	
	Off-Site 1143 Yonge Street	1 aliks	BIEA		



Area of Potential Environmental Concern	Location and Address of Potential Contaminating Activity	Potentially Contaminating Activity	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)	Borehole / Monitoring Well for Sampling
	Off-Site 14 Shaftesbury Avenue				
	Off-Site 1228 Yonge Street				
	Off-Site 1161 Yonge Street				
APEC 1: North portion of the	Off-Site 10 Alcorn Avenue				ВН5
Property	Off-Site 1179 Yonge Street				ВН6
	Off-Site 1240 Yonge Street	#28 – Gasoline and Associated Products Storage in Fixed Tanks	Metals, Hydride Forming Metals, VOCs, PHCs (F1-F4), BTEX	Soil and groundwater	
	Off-Site 1246 Yonge Street				
	Off-Site 1230 Yonge Street	#33 – Metal Treatment, Coating, Plating and	Metals, Hydride Forming Metals, VOCs, PHCs (F1-F4),	Soil and groundwater	
	Off-Site 1234 Yonge Street	Fabrication	BTEX	groundwater	



Area of Potential Environmental Concern	Location and Address of Potential Contaminating Activity	Potentially Contaminating Activity	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)	Borehole / Monitoring Well for Sampling
	Off-Site 10 Alcorn Avenue	#58 – Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biooils as soil conditioners.	Metals, Hydride Forming Metals, PHCs (F1-F4), VOCs, BTEX, PAHs, PCBs	Soil and groundwater	
APEC 1:	Off-Site Opposite 30 Shaftesbury Avenue	- #NA ² – Ontario Spills	Metals, Hydride Forming Metals, VOCs, PHCs (F1-F4),	Soil and	BH5
North portion of the Property	Off-Site Yonge Street and Summerhill		BTEX	groundwater	ВН6
	Off-Site 1268 Yonge Street	#39 – Paint Manufacturing, Processing and Bulk Storage	Metals, VOCs		
	Off-Site 10 Birch Avenue	#10 – Commercial Autobody Shops	Metals, Hydride Forming Metals, VOCs, PHCs (F1-F4),	Soil and groundwater	
	Off-Site 24 Birch Avenue	Shops	BTEX	groundwater	
APEC 2: West portion of the Property	Off-Site 10 Birch Avenue	#59 – Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products	Metals, Hydride Forming Metals, VOCs, PHCs (F1-F4), BTEX, PAHs	Soil and groundwater	BH1 BH3 BH4 BH5
	Off-Site 10 Birch Avenue	#33 – Metal Treatment, Coating, Plating and Finishing	Metals, Hydride Forming Metals, VOCs, PHCs (F1-F4), BTEX	Soil and groundwater	
	Off-Site 24 Birch Avenue	#28 – Gasoline and Associated Products Storage in Fixed Tanks	Metals, Hydride Forming Metals, VOCs, PHCs (F1-F4), BTEX	Soil and groundwater	



Area of Potential Environmental Concern	Location and Address of Potential Contaminating Activity	Potentially Contaminating Activity	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)	Borehole / Monitoring Well for Sampling	
	Off-Site 22 Alcorn Avenue					
APEC 2: West portion of the Property	Off-Site 32 Alcorn Avenue				BH1 BH3 BH4 BH5	
	Off-Site 43 Alcorn Avenue					
	Off-Site 1139 Yonge Street	#NA ³ – Coal storage	Metals, Hydride Forming Metals, VOCs, PHCs (F1-F4), BTEX, PAHs	Soil and groundwater		
APEC 3: East section of the Property	Off-Site 25 Shaftesbury Avenue Off-Site 35-37 Shaftesbury Avenue	#28 – Gasoline and Associated Products Storage in Fixed Tanks	Metals, Hydride Forming Metals, VOCs, PHCs (F1-F4), BTEX	Soil and groundwater	ВН2 ВН6	
APEC 4 South Portion of	Off-Site 11 Birch Avenue	#NA ¹ – Waste Generator	Metals, Hydride Forming Metals, VOCs, PHCs (F1-F4), BTEX	Soil and groundwater	BH1 BH2 BH3	
the Property	Off-Site 11 Birch Avenue	#18 – Electricity Generation, Transformation and Power Station	PCBs	Soil and groundwater		



Area of Potential Environmental Concern	Location and Address of Potential Contaminating Activity	Potentially Contaminants of Contaminating Potential Activity Concern		Media Potentially Impacted (Groundwater, soil and/or sediment)	Borehole / Monitoring Well for Sampling	
	Off-Site 15-21 Birch Avenue					
	Off-Site 1176 Yonge Street	#39 Caralina and Associated	Metala Hadrida Farmina			
	Off-Site 1119 Yonge Street	#28 – Gasoline and Associated Products Storage in Fixed Tanks	Metals, Hydride Forming Metals, VOCs, PHCs (F1-F4), BTEX	Soil and groundwater		
	Off-Site 1174 Yonge Street					
	Off-Site 1109 Yonge Street	#28 – Gasoline and Associated Products Storage in Fixed	Metals, Hydride Forming Metals, VOCs, PHCs (F1-F4),	Soil and		
APEC 4 South Portion of	Off-Site 66 Birch Avenue	Tanks	BTEX	groundwater	BH1 BH2 BH3	
the Property	Off-Site 1119 Yonge Street					- BHS
	Off-Site 1121 Yonge Street #8 – Chemical Manufacturing, Processing and Bulk Storage		Metals, VOCs, PHCs (F1-F4), BTEX	Soil and groundwater		
	Off-Site 1111 Yonge Street					
	Off-Site 29 Birch Avenue					
	Off-Site 31 Birch Avenue	#10 – Commercial Autobody Shops	Metals, Hydride Forming Metals, VOCs, PHCs (F1-F4), BTEX	Soil and groundwater		
	Off-Site 1109 Yonge Street					
	Off-Site 1129 Yonge Street	#NA ³ – Coal storage	Metals, Hydride Forming Metals, VOCs, PHCs (F1-F4), BTEX, PAHs	Soil and groundwater		



Area of Potential Environmental Concern	Location and Address of Potential Contaminating Activity	Potentially Contaminating Activity	Contaminants of Potential Concern	Media Potentially Impacted (Groundwater, soil and/or sediment)	Borehole / Monitoring Well for Sampling	
APEC 5: North-central section of Phase One Property	On-Site 1206 Yonge Street	#28 – Gasoline and Associated Products Storage in Fixed Tanks	Metals, Hydride Forming Metals, VOCs, PHCs (F1-F4), BTEX	Soil and groundwater	ВН6	
APEC 6: North-central section of Phase One Property	On Site 1206 Yonge Street	#NA ⁴ – Exceedance from previous investigation	Metals	Soil and groundwater	ВН6	
APEC 7: West section of	0.5%	(0)144 E 1 C	EC, SAR	Soil		
Phase One Property	On Site 8 Birch Avenue	#NA ⁴ – Exceedance from previous investigation			ВН4	
APEC 8: South-central	On-Site	EC, SAR Soil		Soil		
portion of Phase One Property	Phase One Property	previous investigation	Na, Cl	Groundwater	вн2	
APEC 9: North Section of Phase One Property	On-Site 1208 & 1210 Yonge Street	#37 – Operation of Dry Cleaning Equipment (where chemicals are used)	VOCs	Soil and groundwater	BH5 BH6	
APEC 10: North Section of Phase One Property	On-Site 1208 Yonge Street	#39 – Paint Manufacturing, Processing and Bulk Storage	Metals, VOCs	Soil and groundwater	BH5 BH6	
APEC 11: East portion of Phase One Property	On-Site 1196 Yonge Street	#NA ¹ – Waste Generator	Metals, Hydride Forming Metals, VOCs, PHCs (F1-F4), BTEX	Soil and groundwater	BH2 BH6	
APEC 12: East portion of Phase One Property	On-Site 1196 Yonge Street	#59 – Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products	Metals, Hydride Forming Metals, VOCs, PHCs (F1-F4), BTEX, PAHs	Soil and groundwater	ВН2 ВН6	



7.1 Plan of Implementation

D 1.1	D.C. I	ADEC	Chemica	Chemical Analyses		
Borehole	Rationale	APEC	Soil	GW		
			2 Metals	2 Metals		
			2 H-M	2 H-M		
	Borehole to determine soil stratigraphy. Sample earth fill and native soil to determine soil quality. Monitoring well placed to		2 PHCs	2 PHCs		
BH1		APEC 2	2 VOCs	2 VOCs		
	determine possible contaminants and ground	APEC 4	2 BTEX	2 BTEX		
	water elevation.		2 PAH	2 PAH		
			2 PCB	2 PCB		
			2 Metals	2 Metals		
	D 114 14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	APEC 4	2 H-M	2 H-M		
	Borehole to determine soil stratigraphy. Sample earth fill and native soil to determine	APEC 3	2 PHCs	2 PHCs		
BH2	soil quality. Monitoring well placed to	APEC 8	2 VOCs	2 VOCs		
	determine possible contaminants and ground	APEC 11	2 BTEX	2 BTEX		
	water elevation.	APEC 12	2 PAH	2 PAH		
			2 PCB	2 PCB		
			2 Metals	2 Metals		
	D 114 14 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	APEC 2 APEC 4	2 H-M	2 H-M		
	Borehole to determine soil stratigraphy. Sample earth fill and native soil to determine soil quality. Monitoring well placed to determine possible contaminants and ground water elevation.		2 PHCs	2 PHCs		
ВН3			2 VOCs	2 VOCs		
			2 BTEX	2 BTEX		
			2 PAH	2 PAH		
			2 PCB	2 PCB		
			2 Metals	2 Metals		
	Danahala ta datamaina asil atuati ananka		2 H-M	2 H-M		
	Borehole to determine soil stratigraphy. Sample earth fill and native soil to determine		2 PHCs	2 PHCs		
BH4	soil quality. Monitoring well placed to	APEC 2	3 VOCs	2 VOCs		
	determine possible contaminants and ground	APEC 7	2 BTEX	2 BTEX		
	water elevation.		1 PAH	2 PAH		
			3 Metals	2 Metals		
	Porahola to determine soil stratigranhy	1,000,1	3 H-M	2 H-M		
	Borehole to determine soil stratigraphy. Sample earth fill and native soil to determine	APEC 1	2 PHCs	2 PHCs		
BH5	soil quality. Monitoring well placed to	APEC 2	2 VOCs	2 VOCs		
	determine possible contaminants and ground water elevation.	APEC 9 APEC 10	2 BTEX	2 BTEX		
	water elevation.		2 PAH	2 PAH		
			2 PCB	2 PCB		

Borehole	le Rationale	APEC	Chemical	Analyses
Dorchoic		ALEC	Soil	GW
ВН6	Borehole to determine soil stratigraphy. Sample earth fill and native soil to determine soil quality. Monitoring well placed to determine possible contaminants and ground water elevation.	APEC 1 APEC 3 APEC 5 APEC 6 APEC 9 APEC 10 APEC 11 APEC 12	2 Metals 2 H-M 2 PHCs 2 VOCs 2 BTEX 2 PAH 2 PCB	2 Metals 2 H-M 2 PHCs 2 VOCs 2 BTEX 2 PAH 2 PCB

APPENDIX F

TERRAPROBE INC.





STANDARD OPERATING PROCEDURE - SOIL SAMPLING

General Procedures

Introduction

Subsurface investigations typically involve sampling of subsurface soils at various depths at locations of interest. Several soil sampling methods can be implemented depending on the nature of the investigations. Field screening of soil samples may be performed when potential contaminants of concern include VOC and PHC F1.

Equipment Required

- Nitrile Gloves
- Field Parameter Measurement Device (Gastech, PID)
- Laboratory Sample Bottles
- Terracores or sampling syringes (sampler)
- Field Notebook and/or Field Sheets
- Sampling Plan (from project manager)
- Access Agreements (if required)
- Ice and cooler

Procedure

- 1. Review sampling plan and sampling locations with project manager
- 2. Determine what equipment and supplies are required.
- 3. Obtain necessary sampling and monitoring equipment.
- 4. Coordinate with project manager and clients, as required, for site access.
- 5. Perform a general site survey in accordance with any applicable site-specific health and safety plans.
- 6. Identify and mark all sampling locations.
- 7. Assemble the appropriate laboratory supplied jars/vials.
- 8. Collect the samples to be analyzed
 - Borehole split spoon, sample from spoon
 - i. Split spoon sampling methods are primarily used to collect shallow and deep subsurface soils.
 - ii. Gravel, concrete, asphalt and etc. present at or near the surface of the sampling location should be removed prior to split spoon sampling.

- iii. Split spoons used for soil sampling must be constructed with stainless steel and are 2 inches in diameter and 18 to 24 inches in length.
- iv. The top several inches of the material in the spoon must be discarded before remove any portion of the spoon for sampling.
- b. Test pit (backhoe), bag from excavator bucket, then sample.
 - i. Usually used in the collection of surface and shallow soil samples. Allow soil samples to be collected from very specific intervals.
 - ii. The bucket must be decontaminated prior to sample collection.
 - iii. Ensure to scrap off any smeared material on the surface of the bucket that may cross-contaminate the sample prior to jarring the soil sample.
 - iv. Make sure to not physically enter backhoe excavations to collect a sample for safety issue.
- c. Hand-dig (hang augers), sample.
 - i. Hand augers are typically used to advanced boreholes and collect surficial soils and shallow subsurface soils. A 4 inch stainless steel auger buckets with cutting heads are usually used. The bucket is advanced by simultaneously pushing and turning using an attached handle with extension.
 - ii. The top several inches of the soil collected by the auger bucket should be discarded and not be placed in the laboratory supplied container for sample submission.
 - iii. VOC samples need to be collected directly from the auger bucket, if possible.
 - iv. The entire hand auger assembly must be decontaminated before sampling at a new location. This is to minimize cross-contamination of soil samples.
- 9. Fill the appropriate jars, making sure to label properly; include the date, company name, parameter to be analyzed, and project number.
- 10. Change Nitrile gloves between samples.
- 11. Clean off loose soil that may be on the outside of the jar.
- 12. Place in a cooler with ice.
- 13. Log samples in field book.
- 14. Complete a Chain of Custody for all samples.
- 15. Package samples and complete necessary paperwork.
- 16. Transport samples (that have been kept cool) to laboratory or transport to office and call for pick up.

References

- SESD Operating Procedure Soil Sampling U.S EPA, December 2011
- Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act, Ontario Ministry of the Environment, July 2011



STANDARD OPERATING PROCEDURE – BOREHOLE DRILLING

Solid and Hollow Stem Augers

Introduction

Soil drilling, using a drill rig or other equipment based on site accessibility is a common way to obtain soil samples on a site. Soil drilling is typically completed with a truck or bombardier-mounted drill rig, or Pionjar (or other portable drilling equipment) depending on the site accessibility. The driller operator will handle all equipment, including opening the split spoon.

Hollow stem augers are typically used when wet or loose cohesionless materials are encountered to permit sampling without removing the augers. Alternatively, solid stem augers are advanced and removed at each sampling depth. Samples and in-situ Standard Penetration Testing (STP) are conducted by driving a standard 2" diameter split spoon (hollow sampling tube) through a process of continuous or intermittent sampling. If monitoring wells are to be installed in the boreholes, hollow stem augers are to be used.

Equipment Required

- Personal Protective Equipment (PPE)
 - o Hard hat, safety vest, protective eyewear, steel toed boots
- Nitrile Gloves
- Slider Bags
- Borehole logs & Clipboard
- Portable Soil Vapour Measurement Device (Gastech/PID)
- Laboratory Sample Bottles
- Field Notebook and/or Field Sheets
- Well Keys or Tools Required
- Sampling Plan (from project manager)
- Access Agreements (if required)
- Drums for Soil Storage

Procedure

- 1. Prior to drilling, boreholes will be numbered and marked and the site cleared for utilities.
- Downhole equipment is cleaned/decontaminated by the contractor.

- 3. All drill cuttings are to be placed in labeled drums or other container and moved to a designated location.
- 4. Review sampling plan and borehole locations with project manager
- 5. Determine what equipment and supplies are required.
- 6. Obtain necessary sampling and monitoring equipment.
- 7. Coordinate with project manager and clients and drilling crew, as required, for site access.
- 8. Perform a general site survey in accordance with any applicable site-specific health and safety plans.
- 9. Perform health and safety meeting, discuss safety around rig and muster points should there be an emergency.
- 10. The technician will direct the drill crew where to set up the rig to begin drilling.
- 11. A borehole log must be prepared for every borehole drilled. Include: elevation, GPS coordinates, depth, soil classification, drilling details, sampling, water levels, free product (if any).
- 12. Record the type of equipment used (solid stem or hollow, type of rig) and the start time when drilling begins.
- 13. Sampling will be at pre-specified intervals; typically every 2 ½" to 10-15 feet then once every 5 feet from then on. Between samples, split spoons will be cleaned (if an environmental sampling is being conducted).
- 14. At each sampling interval record; interval number (or sample ID), blow counts, soil description, PPM reading
- 15. Record depth of borehole, caving (if any) and water level when borehole is complete.
- 16. Upon completion of drilling in an open borehole that will not be converted to a well the borehole is to be properly filled and abandoned. There are two methods depending on whether the static water level is above or below the bottom of the borehole.
 - a. Above and less than 20 feet deep: Abandon borehole by mixing cement or cement/bentonite grout and pouring the mixture into the borehole until it is filled to ground surface.
 - b. Below and more than 20 feet deep: Mix and pump cement/bentonite mixture to the bottom of the hole until filled to ground surface.

References

- Standard Operating Procedure No. 6. Drilling, Logging, and Sampling of Subsurface Materials.
- Geotechnical Field Investigations, Terraprobe Limited, July 1990.



STANDARD OPERATING PROCEDURE – GROUND WATER SAMPLING

Non-Gas Contact Positive Displacement Pump (Bladder Pump)

Introduction

Low flow purging and sampling involves extracting groundwater at rates comparable to ambient groundwater flow (typically less than 500 ml/min), so that the drawdown of the water level is minimized, and the mixing of stagnant water with water from the screened intake area in a well is reduced.

Stabilization of parameters (pH, D.O., conductivity, temperature, etc.) and turbidity of the purged water are monitored before a sample is taken, thus low flow methods facilitate equilibrium with the surrounding formation water and produces samples that are representative of the formation water.

Non-gas contact positive displacement pumps cause the least amount of alteration in sample integrity as compared to other sample retrieval methods. Water comes into contact with the inside of the bladder (Teflon) and the sample tubing, also Teflon which may be dedicated to each well.

Equipment Required

- Interface or Water Level Meter
- Bladder Pump (appropriate size for monitoring wells)
- Controler Unit and Batteries
- Required Replacement Bladders
- Required Teflon Tubing
- Required String/Rope
- Nitrile Gloves
- Bucket
- Graduated Cylinder
- Stop Watch
- Field Parameter Measurement Device (Horiba Flow Cell, YSI Meter, Hanna Meter, etc.)
- Laboratory Sample Bottles
- Field Notebook and/or Field Sheets
- Well Keys or Tools Required
- Sampling Plan (from project manager)
- Access Agreements (if required)
- Ice

Procedure

- 1. Review sampling plan and monitoring well locations with project manager
- 2. Review borehole logs and determine monitoring well depths and well screen locations.
- 3. Determine what equipment and supplies are required.
- 4. Obtain necessary sampling and monitoring equipment.
- 5. Decontaminate or pre-clean equipment, and ensure that it is in working order.
- 6. Coordinate with project manager and clients, as required, for site access.
- 7. Perform a general site survey in accordance with any applicable site-specific health and safety plans.
- 8. Identify and mark all sampling locations.
- 9. Start sampling at the least contaminated monitoring well.
- 10. Remove locking well cap, note location time of day, and date in your notebook
- 11. Remove well casing cap.
- 12. Lower water level measuring device or equivalent into well until water surface is encountered.
- 13. Measure distance from water surface to reference measuring point on well casing and in field notebook. Alternatively, if there is no reference point, note that water level measurement is from top of steel casing, top of PVC riser pipe, from ground surface.
- 14. Measure total depth of well. Repeat at least twice to confirm measurement and record in field notebook
- 15. Calculate the volume of water in the well and record in field notebook.
- 16. Select the appropriate purging and sampling equipment.
- 17. Assemble Teflon tubing, pump and charged control box.
- 18. Assemble pump, hoses and safety cable, and lower the pump into the well to the. Make sure the pump is deep enough so that purging does not evacuate all the water and that the pump is located at the depth of the well screen NOTE: Running the pump without water may cause damage to the bladder.
- 19. Attach power supply, and purge well until field parameters (such as temperature, pH, conductivity, etc.) have stabilized. Field parameters are measured either by a flow through cell (HORIBA) or hand held device (YSI). When field parameters are measured record the measurements, the elapsed time, the flow rate and the water level in the monitoring well. Do not allow the pump to run dry. If the pumping rate exceeds the well recharge rate, lower the pump further into the well, and continue pumping.
 - a. If the calculated purge volume is small, the measurements should be taken frequently to provide a sufficient number of measurements to evaluate stability (every 15 to 30 seconds). If the purge volume is large, measurements taken every 5 to 10 minutes may be sufficient.
 - b. Stabilization occurs when:
 - i. <u>Turbidity</u> (10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized),
 - ii. <u>Dissolved Oxygen</u> (10% for values greater than 0.5 mg/L, if three Dissolved Oxygen values are less than 0.5 mg/L, consider the values as stabilized),
 - iii. Conductivity (3%),



- iv. Temperature (3%),
- v. pH (\pm 0.1 unit),
- vi. Oxidation/Reduction Potential (± 10 millivolts).
- c. If after three well volumes have been removed, the chemical parameters have not stabilized according to the above criteria, additional well volumes should be removed.
- d. If the field parameters have not stabilized within five volumes, contact the project manager to determine whether or not to collect a sample or to continue purging.
- 20. Collect and dispose of purge waters as specified in the site-specific sampling plan.
- 21. Assemble the appropriate laboratory supplied bottles.
- 22. Turn pump on, increase the cycle time and reduce the pressure to the minimum that will allow the sample to come to the surface and not induce significant drawdown.
- 23. Collect samples in the laboratory supplied bottle
 - a. For non-filtered samples collect directly from the outlet tubing into the sample bottle.
 - b. For filtered samples, connect the pump outlet tubing directly to the filter unit. The pump pressure should remain decreased so that the pressure build-up on the filter does not blow out the pump bladder or displace the filter.
- 24. Cap the sample bottle tightly and place relabeled sample container in a carrier
- 25. Replace the well cap.
- 26. Log all samples in the site logbook and label all samples.
- 27. Package samples and complete necessary paperwork.
- 28. Transport sample to staging area for preparation for transport to analytical laboratory.
- 29. On completion, remove the tubing from the well and either replace the Teflon tubing and bladder with new dedicated tubing and bladder or rigorously decontaminate the existing materials.

NOTE: Purging should be completed immediately prior to sample collection although it is acceptable to purge and then collect samples within 24 hours. During purging, water level measurements may be taken regularly at 15- to 30-second intervals. This data may be used to compute aquifer transmissivity and other hydraulic characteristics.

References

- Low Stress (low flow) purging and Sampling Procedure for the Collecting of Groundwater Samples From Monitoring Wells, U.S.EPA, September 2010
- Field Sampling guidance Document # 1220 Groundwater Well Sampling, U.S.EPA, September 2004
- Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act, Ontario Ministry of the Environment, July 2011



STANDARD OPERATING PROCEDURE -FIELD SCREENING **AND CALIBRATION**

RKI Eagle Gastech and Mini Rae Photo-Ionization Detector

Introduction

Field screening is an important tool in that it provides data for onsite, real time total vapor measurements, evaluation of existing conditions, sample location optimization, extent of contamination, and health and safety evaluations.

RKI Eagle

Portable Multi-Gas Detector

The gastech can be used for reading headspace values in soil and water (wells). There are two types of 'Gastechs' in the Terraprobe office, the RKI Eagle 1 and Eagle 2. These portable gas detectors assist in screening field samples on many projects.

Portable VOC Monitor (Mini Rae 2000)

Portable VOC Monitors or PIDs (photo-ionization detector) monitors VOCs using the photo-ionization detector. If screening is required for VOCs, then this machine can be used. The PIDs are also used for health and safety for workers in enclosed spaces (such as trenches) in a known contaminated area.

Equipment Required

For Cailbration

- Canister of gas (Hexane at 400ppm for Eagle 1, Hexane at 1650ppm for Eagle 2, Isobutylene at 100ppm for PID)
- Regulator.
- Tubing to attach probe to canister.

Field Screening

- Eagle or Mini Rae
- Nitrile Gloves
- Slider Bags
- Sampling Plan (from project manager)

Northern Ontario

- Access Agreements (if required)
- Field Notebook and/or Field Sheets Appropriate Sampling Jars

Procedure (Calibration)

In order to ensure accuracy in the field, Terraprobe calibrates its Gastechs and PIDs each time they will be in the field.

There are three different gas canisters – one for the Eagle 1, the other for the Eagle 2 and a third for the MiniRae. The Eagle 1 is calibrated using the concentration of 400ppm while the Eagle 2 is calibrated with the concentration of 1650ppm. The PID is calibrated with Isobutylene at a concentration of 100ppm. Calibrating each machine is similar in principle but there are differences due to the different models we are using.

Eagle 1:

- 1. Take the Eagle to a fresh-air location
- 2. Turn the Eagle on and allow one minute for warm up
- 3. Hold the AIR button until a tone sounds
- 4. Press and hold SHIFT/▼ and then press the DISP/ADJ button. This will display the Calibration menu.
- 5. Select Single Calibration, press Enter
- 6. Press Enter to select HEX
- 7. The screen displays the channel selected, and the gas reading will flash
- 8. Connect the tubing from the regulator to the Eagle's probe.
- 9. If needed, use the AIR /▲ and SHIFT/▼ buttons to adjust the reading to match the concentration on the cylinder.
- 10. Press the ENTER button to set the value. Single Calibration will end and the menu will display.
- 11. Disconnect the tubing from the probe.
- 12. With the single calibration menu still displayed, use the SHIFT/▼ button until the ESC message displays, then press the ENTER button to return to the Calibration menu.
- 13. Press the SHIFT/▼ button to place the arrow next to Normal Operation and then press ENTER to return to the normal screen.

Eagle 2:

- 1. Take the Eagle to a fresh-air environment.
- 2. Turn the Eagle on and allow one minute for warm up.
- 3. Press and hold the RANGE/SHIFT button, when press the DISPLAY/ADJUST/NO button and release both buttons.
- 4. The Calibration Mode Screen displays with the cursor beside Auto Calibration.
- 5. Set the fresh air reading by: Moving the cursor to the Perform Air Adjust menu item by using the RANGE/SHIFT button. Press and release the POWER/ENTER/RESET button. The screen will say "Perform Air Adjust?" Press the AIR/YES button to continue. The Eagle 2 will indicate it is adjusting the zero reading before it returns to the Calibration Mode Screen.
- 6. Move the cursor to Single Calibration menu item by using the AIR/YES button.
- 7. Press and release the POWER/ENTER/RESET button. The "Select Sensor Screen" appears with the cursor flashing.
- 8. Move the cursor next to the sensor you want to calibrate with the AIR/YES and RANGE/SHIFT buttons.
- 9. Press and release the power enter reset button to proceed to the Single Calibration Gas Value screen. The calibration gas value is flashing
- 10. If necessary, adjust the calibration gas value to match the cylinder concentration with the air/yes and range/shift buttons.
- 11. Press and release the power/enter/reset button to proceed to the single calibration apply gas screen. Cal in Process is flashing.
- 12. Connect the tubing from the demand flow regulator to the probe. Allow the Eagle 2 to draw gas for one minute.

Mini Rae PID Calibration

- 1. Bring the Mini Rae to a fresh air environment.
- 2. Push the MODE and N/- buttons together to access a sub menu.
- 3. "Fresh Air Cal?" will appear.
- 4. Press the Y/+ key, the display shows "zero in progress" followed by "wait" and a countdown timer.
- 5. After about 15 seconds, the display shows the message "zeroed... reading = X.Xppm..." Press any key or wait, the monitor will return to "Fresh Air Calibration?" menu.
- 6. Connect the tubing to the regulator on the gas cylinder.
- 7. Press the Y/+ key at the "Span Cal?" to start calibration. The display shows the gas name and the span value of the corresponding gas.
- 8. The display shows "Apply gas now!" Turn on the valve of the span gas supply.



- 9. Display shows "wait... 30" with a countdown timer showing the number of remaining seconds while the monitor performs the calibration.
- 10. When the countdown timer reaches 0, the display gas shows the calibrated value.
- 11. After a span calibration is completed, the display will show the message "Span Cal Done! Turn Off Gas!"
- 12. Turn off the flow of gas and disconnect the calibration tubing from the Mini Rae.
- 13. Press any key to return to the sub menu. Press MENU to return to main menu and being operations.

Procedure (Field Screening)

- 1. Place soil sample in a slider bag and gently break up the pieces.
- 2. Using the Eagle, insert the probe into the bag and hold it above the soil. Do NOT put the probe in the soil. Wait 30 seconds for the probe to read the soil vapour.
- 3. Record the value and remove the probe from the slider bag.
- 4. PIDs can be used the same way HOWEVER, it must be noted that if sampling for VOCs, the sample must be preserved within 10-12 seconds of sampling. This means that any sample that is potentially going to be jarred must have a methanol vial stored immediately.
- 5. Using the probes to measure headspace readings in a well follows the same basic principles. Open the j-plug or slip cap and quickly insert the probe into the top of the well taking extreme caution not to allow the probe to touch any water, and cover the top of the well with your hand.
- 6. Wait 30 seconds for the probe to establish a reading.
- 7. Remove the probe and record the value.

References

- US EPA Field Sampling Guidance Document #1210 "Soil Sampling for Volatile Compounds"
- MiniRae 2000 Portable VOC Monitor Operation and Maintenance Manual, Rev. C
- US EPA Field Screening Methods Catalog User's Guide
- Instruction Manual Eagle Series Portable Multi Gas Detector. Rev.H.
- RKI Eagle 2 Operator's Manual. Rev. Q.



STANDARD OPERATING PROCEDURE - FIELD MEASUREMENT OF WATER QUALITY INDICATORS

YSI 63 Hand-held System

Introduction

Stabilization of parameters (pH, D.O., conductivity, temperature, etc.) and turbidity of the purged water are monitored before a sample is taken. The YSI 63 Hand-held system can be used with all ground water sampling methods (manual or low-flow).

YSI 63's micro-processor allows the system to be easily calibrated with the press of a few keys. Additionally, the micro-processor performs a self-diagnostic routine each time the instrument is turned on. The self-diagnostic routine provides useful information about the function of the instrument and probe.

Equipment Required

- Interface or Water Level Meter
- Water pump or bailer
- Nitrile Gloves
- Bucket and/or Graduated Cylinder
- Field Notebook and/or Field Sheets
- Well Keys or Tools Required
- Sampling Plan (from project manager)
- Access Agreements (if required)

Procedure

- 1. Review sampling plan and monitoring well locations with project manager
- Review borehole logs and determine monitoring well depths and well screen locations.
- 3. Determine what equipment and supplies are required.
- 4. Obtain necessary sampling and monitoring equipment.
- 5. Decontaminate or pre-clean equipment, and ensure that it is in working order.
- 6. Calibrate pH and Conductivity on the YSI 63 Hand-held System as follow:
 - a. Prior to Calibration
 - i. Ensure all sensors are immersed in calibration solutions. The top vent hole of the conductivity sensor must be immersed.

- ii. Fill a bucket with ambient temperature water to rinse the probe module between calibration solutions. Prepare clean, absorbent paper towels or cotton cloth available to dry probe module between rinses. This reduces carry-over contamination and increase accuracy of the calibration.
- b. pH Calibration (pH calibration on YSI 63 <u>MUST</u> be performed before taking pH measurements)
 - i. Accessing the calibration screen from the main menu by pressing <u>up arrow and down</u> arrow at the same time.
 - ii. Calibration may be performed at 1, 2 or 3-points (at pH 7, 4 and 10, or at pH 6.86, 4.01 and 9.18). Perform a 1-point calibration (at pH 7 or at pH 6.86) ONLY if a previous 2 or 3-point calibration has been performed recently. In most cases, a 2-point pH calibration will be sufficient for accurate pH measurements, but if the general range of pH in the sample is not known, a 3-point calibration may be necessary. Enter the calibration standard of choice.
 - iii. First calibration must be either pH 7 or pH 6.86.
 - iv. Place 30 to 35 mL of the pH buffer you have chosen to calibrate the system with (pH 7 or 6.86) in the 100 mL graduated cylinder. The graduated cylinder minimizes the amount of solution needed.
 - v. Exit the calibrate menu and rinse the probe module and sensors in tap or purified water and dry. Repeat step ii to iv for 2- and 3-point buffers using the corresponding pH buffer solutions.
- c. Conductivity Calibration (system calibration is rarely required because of the factory calibration of YSI 63)
 - i. Accessing the calibration screen from the main menu.
 - ii. It is recommended that the conductivity standard chosen should be within the same conductivity range as the samples to be measured (fresh water = 1 mS/cm; brackish water = 10 mS/cm; seawater = 50 mS/cm).
 - iii. Carefully immerse the sensor end of probe module into the solution. Do not use 100 mL graduated cylinder because the diameter of the cylinder is too small for accurate conductivity measurements.
 - iv. Move the probe vigorously from side to side to dislodge any air bubbles from the electrodes.
 - v. Be sure to enter the value in mS/cm at 25°C and allow at least one minute for temperature equilibration before proceeding.
 - vi. It is stabilized when it shows no significant change for approximately 30 seconds. You can then press enter to record the calibration.
 - vii. Press the <u>up arrow and down arrow</u> and the same time to record calibration and rinse the probe module and sensors in tap or purified water and dry.
- 7. Coordinate with project manager and clients, as required, for site access.
- 8. Perform a general site survey in accordance with any applicable site-specific health and safety plans.
- 9. Identify and mark all sampling locations.
- 10. Start sampling at the least contaminated monitoring well.
- 11. Remove locking well cap, note location time of day, and date in your notebook



- 12. Remove well casing cap.
- 13. Lower water level measuring device or equivalent into well until water surface is encountered.
- 14. Measure distance from water surface to reference measuring point on well casing and in field notebook. Alternatively, if there is no reference point, note that water level measurement is from top of steel casing, top of PVC riser pipe, from ground surface.
- 15. Measure total depth of well. Repeat at least twice to confirm measurement and record in field notebook.
- 16. Calculate the volume of water in the well and record in field notebook.
- 17. Select the appropriate purging and sampling equipment.
- 18. Lower the pump into the well. Make sure the pump is deep enough so that purging does not evacuate all the water and that the pump is located at the depth of the well screen
- 19. Attach power supply, and purge well until field parameters (such as temperature, pH, conductivity, etc.) have stabilized. Field parameters are measured by placing the YSI 63 Hand-held system in a measuring container (bucket or 100 ml cylinder). When field parameters are measured record the measurements, the elapsed time, the flow rate and the water level in the monitoring well. Do not allow the pump to run dry. If the pumping rate exceeds the well recharge rate, lower the pump further into the well, and continue pumping.
 - a. If the calculated purge volume is small, the measurements should be taken frequently to provide a sufficient number of measurements to evaluate stability (every ½ casing volume). If the purge volume is large, measurements taken every ½ to 1 casing volume may be sufficient.
 - b. Stabilization occurs when:
 - i. Conductivity (± 3%),
 - ii. Temperature (\pm 3%),
 - iii. pH (\pm 0.1 unit),
 - iv. Salinity (determined automatically from conductivity and temperature readings).
 - c. If after three well volumes have been removed, the chemical parameters have not stabilized according to the above criteria, additional well volumes should be removed.
 - d. If the field parameters have not stabilized within five volumes, contact the project manager to determine whether or not to collect a sample or to continue purging.
- **20.** Collect and dispose of purge waters as specified in the site-specific sampling plan.

References

- Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures, U.S.EPA, April 1996
- Field Sampling guidance Document # 1220 Groundwater Well Sampling, U.S.EPA, September 2004
- Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act, Ontario Ministry of the Environment, July 2011
- YSI 63 MPS Operations Manual, YSI Environmental, January 2007





STANDARD OPERATING PROCEDURE - FIELD MEASUREMENT OF WATER QUALITY INDICATORS

YSI 556 Flow-through System

Introduction

Stabilization of parameters (pH, D.O., conductivity, temperature, etc.) and turbidity of the purged water are monitored before a sample is taken. It is recommended to use the YSI 556 Flow-through system with low flow sampling methods in order to facilitate equilibrium with the surrounding formation water and produces samples that are representative of the formation water.

YSI 556 Flow-through system can simultaneously measure water quality parameters while utilizing a flow cell to give continuous data.

Equipment Required

- Interface or Water Level Meter
- Water pump (Bladder Pump or Peristaltic Pump)
- Controller Unit and Batteries
- Required Replacement Bladders (if Bladder Pump is used)
- Required Teflon Tubing
- Required String/Rope (if Bladder Pump is used)
- Nitrile Gloves
- Bucket
- Graduated Cylinder
- Stop Watch
- Field Notebook and/or Field Sheets
- Well Keys or Tools Required
- Sampling Plan (from project manager)
- Access Agreements (if required)

Procedure

- 1. Review sampling plan and monitoring well locations with project manager
- Review borehole logs and determine monitoring well depths and well screen locations.
- Determine what equipment and supplies are required.
- Obtain necessary sampling and monitoring equipment.

- 5. Decontaminate or pre-clean equipment, and ensure that it is in working order.
- 6. Calibrate all the sensors (with the exception of temperature) on the YSI 556 Flow-through System as follow:

a. Prior to Calibration

- i. The transport/calibration cup comes with the probe module serves as a calibration chamber; however, laboratory glassware may be used.
- ii. Ensure all sensors are immersed in calibration solutions. The top vent hole of the conductivity sensor must be immersed.
- iii. Fill a bucket with ambient temperature water to rinse the probe module between calibration solutions. Prepare clean, absorbent paper towels or cotton cloth available to dry probe module between rinse ands and calibration solutions. This reduces carry-over contamination and increase accuracy of the calibration.

b. Conductivity Calibration

- i. Accessing the calibration screen from the main menu.
- ii. Choose conductivity calibration, then *specific conductance*. The recommended calibration solution volume is 55 ml for both upright and upside down orientation.
- iii. It is recommended that the conductivity standard chosen should be within the same conductivity range as the samples to be measured (fresh water = 1 mS/cm; brackish water = 10 mS/cm; seawater = 50 mS/cm).
- iv. Carefully immerse the sensor end of probe module into the solution and rotate or move up and down to remove any bubbles from the conductivity cell.
- v. Secured transport/calibration cup on the threaded end of the probe module and prevent over tighten.
- vi. Enter the calibration standard of choice. Be sure to enter the value in mS/cm at 25°C and allow at least one minute for temperature equilibration before proceeding.
- vii. Observe reading under *specific conductance*. It is stabilized when it shows no significant change for approximately 30 seconds. You can then press enter to record the calibration.
- viii. Escape the calibrate menu and rinse the probe module and sensors in tap or purified water and dry.

c. Dissolved Oxygen Calibration

- i. Accessing the calibration screen from the main menu and choose DO calibration.
- ii. Calibrate either % or mg/L automatically calibrates the other.
- iii. For %: Place 3mm (1/8 inch) of water in the bottom of the transport/calibration cup and place the probe module in the transport/calibration cup (ensure DO and temperature sensors are not immersed in the water).
- iv. Engaged only 1 or 2 threads of the transport/calibration cup to ensure the DO sensor is vented to the atmosphere. Enter the current local barometric pressure (no entry is required if *optional barometer* unit is present).
- v. Allow approximately <u>ten minutes</u> for the air in the calibration cup to become water saturated and for the temperature to equilibrate before proceeding. Start calibrating.

- vi. **For mg/L:** Place the probe module in water with a known DO concentration (immerse all the sensors). Proceed to enter the known DO concentration of the water.
- vii. Stir the water with a stir bar or rapidly move the probe module to provide fresh sample to the DO sensor. Allow at least <u>one minute</u> for temperature equilibration before proceeding.
- viii. For % and mg/L: It is stabilized when it shows no significant change for approximately 30 seconds. You can then press enter to record the calibration.
- ix. Escape the calibrate menu and rinse the probe module and sensors in tap or purified water and dry.

d. pH Calibration

- i. Accessing the calibration screen from the main menu
- ii. Choose **1-point** if you are adjusting previous calibration; **2-point** if the media being monitor is known to be either basic or acidic (use two calibration standards); **3-point** assures maximum accuracy when the pH of the media cannot be anticipated. Always calibrate with buffer 7 first regardless of calibration options.
- iii. Recommended calibration solution volume is <u>30 ml</u> for upright orientation and <u>60 ml</u> for upside down orientation.
- iv. Immerse the sensor end of the probe module into the solution and gently rotate the probe to remove any bubbles from the pH sensor. Secure the calibration cup to the probe module.
- v. Enter the calibration value of the buffer for current temperature. Allow at least <u>one</u> minute for temperature equilibration before proceeding.
- vi. It is stabilized when it shows no significant change for approximately 30 seconds. You can then press enter to record the calibration.
- vii. Escape the calibrate menu and rinse the probe module and sensors in tap or purified water and dry.
- viii. Repeat step d-iii to d-vii using a second pH buffer (for 2-point/3-point options)

e. ORP Calibration

- i. Accessing the calibration screen from the main menu and choose ORP calibration.
- ii. Placed either 30 ml (upright) or 60 ml (upside down) of known ORP solution into a calibration cup.
- iii. Rotate probe module up and down to remove any bubbles from the OPR sensor.
- iv. Secured transport/calibration cup on the threaded end of the probe module and prevent over tighten.
- v. Enter correct calibration solution value at the current temperature as shown below:

Temperature °C	Zobell Solution Value, mV
-5	270.0
0	263.5
5	257.0

Temperature °C	Zobell Solution Value, mV
10	250.5
15	244.0
20	237.5
25	231.0
30	224.5
35	218.0
40	211.5
45	205.0

- vi. Allow at least <u>one minute</u> for temperature equilibration before proceeding. It is stabilized when it shows no significant change for approximately 30 seconds. You can then press enter to record the calibration.
- vii. Escape the calibrate menu and rinse the probe module and sensors in tap or purified water and dry.
- 7. Coordinate with project manager and clients, as required, for site access.
- 8. Perform a general site survey in accordance with any applicable site-specific health and safety plans.
- 9. Identify and mark all sampling locations.
- 10. Start sampling at the least contaminated monitoring well.
- 11. Remove locking well cap, note location time of day, and date in your notebook
- 12. Remove well casing cap.
- 13. Lower water level measuring device or equivalent into well until water surface is encountered.
- 14. Measure distance from water surface to reference measuring point on well casing and in field notebook. Alternatively, if there is no reference point, note that water level measurement is from top of steel casing, top of PVC riser pipe, from ground surface.
- 15. Measure total depth of well. Repeat at least twice to confirm measurement and record in field notebook
- 16. Calculate the volume of water in the well and record in field notebook.
- 17. Select the appropriate purging and sampling equipment.
- 18. Lower the pump into the well to the. Make sure the pump is deep enough so that purging does not evacuate all the water and that the pump is located at the depth of the well screen
- 19. Purge well until field parameters (such as temperature, pH, conductivity, etc.) have stabilized. Field parameters are measured by attaching the YSI 556 multi probe system to a flow through cell. When field parameters are measured record the measurements, the elapsed time, the flow rate and the water level in the monitoring well. Do not allow the pump to run dry. If the pumping rate exceeds the well recharge rate, lower the pump further into the well, and continue pumping.
 - a. If the calculated purge volume is small, the measurements should be taken frequently to provide a sufficient number of measurements to evaluate stability (every 15 to 30 seconds). If the purge volume is large, measurements taken every 5 to 10 minutes may be sufficient.
 - b. Stabilization occurs when:



- i. Turbidity (\pm 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized),
- ii. <u>Dissolved Oxygen</u> (± 10% for values greater than 0.5 mg/L, if three Dissolved Oxygen values are less than 0.5 mg/L, consider the values as stabilized),
- iii. Conductivity (± 3%),
- iv. Temperature ($\pm 3\%$),
- v. \underline{pH} (± 0.1 unit),
- vi. Oxidation/Reduction Potential (± 10 millivolts).
- c. If after three well volumes have been removed, the chemical parameters have not stabilized according to the above criteria, additional well volumes should be removed.
- d. If the field parameters have not stabilized within five volumes, contact the project manager to determine whether or not to collect a sample or to continue purging.
- 20. Collect and dispose of purge waters as specified in the site-specific sampling plan.

References

- Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures, U.S.EPA, April 1996
- Low-Flow Sampling of Water Quality Parameters Used in Determining Groundwater Stability,
 YSI Environmental, 2005
- Field Sampling guidance Document # 1220 Groundwater Well Sampling, U.S.EPA, September 2004
- Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act, Ontario Ministry of the Environment, July 2011
- YSI 556 MPS Operations Manual, YSI Environmental, August 2009



STANDARD OPERATING PROCEDURE - WELL INSTALLATION

Introduction

All wells are to be constructed with flush-thread joints and factory-slotted screen. Terraprobe monitoring wells are 2-inch (50 mm) inside diameter PVC unless otherwise stipulated or required by site specific standards or sampling requirements. Other possible well diameters and materials include:

- 1-inch (25 mm) PVC,
- 1.5 -inch (37 mm) PVC,
- 4-inch (100mm) steel,
- 6 inch (150 mm) steel,
- 10 inch (255 mm) steel and;
- 3 foot (915 mm) concrete.

Water washed silica sand is used for the filter pack, bentonite is used to create a seal above the screen to just below the surface and sand is added to ground level. Well casings are installed using cement to secure them.

Notes:

- Monitoring wells are to be installed by a licenced well driller only.
- The installation procedures outlined in this document are for reference only to insure familiarization with the process.
- The installation procedures outlined in this document are for the installation of a typical 2-inch PVC monitoring well.
- Maximum length of well screen allowed under O.Reg. 153/04 is 3 m (10 feet)
- A MOE Well Record is required under O.Reg. 903 if:
 - The monitoring well is greater than 3 m (10 feet) and/or
 - The monitoring well will be in place longer than 30 days
- Well Records can be either for a single well or a group of wells (cluster).
- A well cluster record can be written only if all the wells are within the same property, or adjacent properties owned by the same owner.

Equipment Required

- Interface or Water Level Meter
- Field Notebook and/or Field Sheets
- Well Keys/Locks or Tools Required
- PVC Pipe (risers/casing)
- PVC Screen
- J-Plugs
- Flush Mount Casing or Above Grade Casing
- Bentonite
- Silica Sand
- Sampling Plan (from project manager)
- Access Agreements (if required)

Procedure

- 1. After borehole completion, measure total depth before riser casing and screen are installed and before the augers are removed. This confirms drilling depths are accurate.
- 2. Decontaminate screen and casing (typically done off-site by water well driller), check that casing sections are straight and not cracked or damaged.
- 3. Verify and record diameter and lengths of casings and screen.
- 4. The casing/screen will be installed by:
 - a. Placing an end cap on the screen section
 - b. Attaching a section of riser to the screen and lowering into the borehole
 - c. Additional sections of riser will be added and lowered into the borehole until the desired screened interval is reached
- 5. Record the length of screen and riser pipe used for the monitoring well.
- 6. Verify and record that the proper filter (sand) pack has been selected.
- 7. The sand is poured into the space around the screen. Ensure it fills the hole to at least two feet above the screen.
 - a. In hollow stem auger wells, the sand pack must be poured down the hollow stem of the augers. Augers are then pulled out of the borehole in 2-1/2 to 5 feet increments, sand is poured and level measured with a weighted tape.
- 8. Use a weighted tape and take continuous measurements while the sand is being poured to ensure proper installation. Pack the sand down to verify.
- 9. Record how much sand is used.
- 10. A bentonite seal is placed directly above the sand pack, minimum two feet thick, and should extend into the next soil strata.
- 11. Record how much bentonite is used.
- 12. A grout seal is then placed above the bentonite and can be a mixture of cement, bentonite, sand and water.



- 13. Surface completion is to be completed one of two ways.
 - a. Above grade: Locking well cover sticking above grade, secured by lock and key.
 - b. At grade: Flush mount casing, lock with ratchet bolts or allen key.
- 14. Each casing is installed over the PVC pipe and cemented into place.
- 15. Record GPS coordinates and measure stick up (if above grade).
- 16. Confirm that a well record will be completed for the monitoring well. Confirm the information to be submitted on the well record or the cluster of wells.
- 17. Survey the completed monitoring well to a geodetic or recoverable benchmark

References

- Geotechnical Field Investigations, Terraprobe Ltd, July 26, 1990
- Ontario Water Resources Act R.R.O. 1990 Regulation 903 Wells
- Environmental Protection Act Ontario Regulation 153/04



STANDARD OPERATING PROCEDURE - SOIL SAMPLING

VOC

Introduction

To properly screen for VOC and PHC F1 that may be present in the soil, it is necessary to preserve ALL samples. Upon retrieval of soil samples from borehole and test pit investigations, soil should be placed in methanol vials as quickly as possible (within 10 to 15 seconds after retrieval). Temporary storage of soil in split spoons, jars or ziplock bags is not permitted.

Field screening may still be used to decide which samples will be submitted for analysis but all potential samples must be immediately chemically preserved. Once the VOC or PHC F1 sample has been collected the remaining portion of the sample can be placed into plastic bags and sealed tightly with a nominal head space. Upon completion of each borehole, gas tech or PID readings can be taken of each sample collected to determine which sample(s) will be submitted for chemical analysis.

In addition to samples collected in methanol vials, a separate container must be collected to determine moisture content. The same jars that are used to collect other soil samples are appropriate containers (60ml or 120ml).

Equipment Required

- Nitrile Gloves
- Field Parameter Measurement Device (Gastech, PID)
- Laboratory Sample Bottles
- Terracores or sampling syringes (sampler)
- Field Notebook and/or Field Sheets
- Sampling Plan (from project manager)
- Access Agreements (if required)
- Ice

Procedure

- 1. Review sampling plan and sampling locations with project manager
- Determine what equipment and supplies are required.

- 3. Obtain necessary sampling and monitoring equipment.
- 4. Coordinate with project manager and clients, as required, for site access.
- 5. Perform a general site survey in accordance with any applicable site-specific health and safety plans.
- 6. Identify and mark all sampling locations.
- 7. Assemble the appropriate laboratory supplied bottles.
- 8. Collect the sample to be analyzed
 - a. Borehole split spoon, sample from spoon
 - b. Test pit, collect sample in bag from excavator bucket, then sample immediately
- 9. Push the sampler into the soil to retrieve the sample.
- 10. Remove the sampler from the soil.
- 11. Clean off loose soil that may be on the outside of the sampler and remove extra soil if applicable.
- 12. Place the mouth of the sampler into the 40ml methanol vial.
- 13. Ensure vial is at an angle to reduce the chance of splashing chemical.
- 14. Collect samples in the laboratory supplied bottle
- 15. Log all samples in the site logbook and label all samples.
- 16. Package samples and complete necessary paperwork.
- 17. Transport sample to staging area for preparation for transport to analytical laboratory.

References

- Field Sampling guidance Document # 1210 Soil Sampling for Volatile Compounds, U.S.EPA,
- Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act, Ontario Ministry of the Environment, July 2011



STANDARD OPERATING PROCEDURE – WELL DEVELOPMENT

Introduction

Monitoring well development is necessary to ensure that complete hydraulic connection is made and maintained between the well and the aquifer material surrounding the well screen and filter pack. It also serves to restore the groundwater properties disturbed during drilling.

Most common techniques at Terraprobe include 'surging', and bailing, often used together. Other development methods that may be used include jetting, airlift, and submersible pump methods. Jetting is typically not used as a development method for environmental investigations, but is commonly used for water resource monitoring wells or drinking water wells. Generally a phased process is used to develop wells, starting with a gentle bailing phase to remove sand, followed by a surging phase, and finally a pumping phase after the well begins to clear up.

After a well is first installed, and in fact, often before the bentonite pellet seal is set, gentle bailing is used to remove water and sand from the well. Bailing can be accomplished through the use of dedicated bailers or Waterra inertia pumps. The purpose of this technique is used to settle the sand pack. After further well sealant materials have been added and allowed to set for approximately 48 hours, bailing is resumed as part of well development. The purpose of bailing is to remove any fine material that may have accumulated in the well, and start pulling in natural material into the sand pack. Bailing is often conducted until the sand content in the removed water begins to decrease.

After the sand content begins to decrease, surging is conducted. A surge block is used to move sediments from the filter pack into the well casing. All surge blocks will be constructed of materials that will not introduce contamination into the well. Surge blocks should have some manner of allowing pressure release to prevent casing collapse. Terraprobe uses Waterra surge blocks which fit onto Waterra inertia pumps. The surge block is moved up and down the well screen interval and then removed, followed by a return to bailing to remove any sand brought into the well by the surging action. Care should be taken to not surge too strongly with subsequent casing deformation or collapse; the well screen interval is often the weakest part of a well. Surging should be followed by additional bailing to remove fine materials that may have entered the well during the surging effort.

After surging has been completed and the sand content of the bailed water has decreased, a submersible pump or inertia pump is used to continue well development. The pump should be moved up and

down the well screen interval until the obtained water is relatively clear. Well development will continue until the water in the well clarifies and monitoring parameters such as pH, specific conductivity, and temperature stabilize as defined in the project-specific planning documents. It should be noted that where very fine-grained formations are present at the screened interval, continued well development until clear water is obtained might be impossible. Decisions regarding when to cease development where very fine-grained conditions exist should be made between the field supervisor and project manager.

During well development pH, specific conductivity, temperature, and turbidity should be monitored frequently to establish natural conditions and evaluate whether the well has been completely developed. The main criterion for well development is clear water (Nephelometric turbidity units or NTU of less than 5). As mentioned above, clear water can often be impossible to obtain with environmental monitoring wells. A further criterion for completed well development is that the other water quality parameters mentioned above stabilize to within 10 percent between readings over one well volume. The minimum volume of water purged from the well during development will be approximately a minimum of 3 borehole volumes (wells will typically not reach stabilization of water quality parameters before this condition is achieved and may not have reached stability even after this threshold has been achieved).

Equipment Required

- Interface or Water Level Meter
- Nitrile Gloves
- Water Quality Meter (EC, pH, Temperature)
- Bucket
- Field Notebook and/or Field Sheets
- Well Keys or Tools Required
- Waterra
- Waterra cutters (avoid using knives)
- Surge Blocks (if required)
- Foot valves
- Storage for contaminated (or suspected contaminated) water.
- Access Agreements (if required)

Procedure

- 1. Review monitoring well locations with project manager
- 2. Review borehole logs and determine monitoring well depths and well screen locations.
- 3. Obtain Waterra tubing, foot valves and surge blocks.
- 4. Coordinate with project manager and clients, as required, for site access.
- 5. Perform a general site survey in accordance with any applicable site-specific health and safety plans.
- 6. Identify and mark all monitoring wells.



- 7. Open the monitoring well and take initial readings (ie; head space air monitor readings, water level, well depth) and record in the field notebook.
- 8. Organize equipment.
- 9. Bailing the monitoring well:
 - a. Calculate casing volume to determine the ideal amount to be purged (three casing volumes).
 - b. Attach foot valve to that end of Waterra
 - c. Slowly lower Waterra down the well. Once it hits the bottom, leave some extra Waterra above the top of the well to easily handle pumping and cut the Waterra.
 - d. Slowly remove three casing volumes from the monitoring well.
 - e. Dispose of purged water in barrels if known or suspected contaminates are of concern, or however the project manager instructs.
- 10. Surging the monitoring well
 - a. Slip surge block onto the end of the Waterra and reattach the foot valve, securing the surge block
 - b. Place surge block and Waterra back into the monitoring well
 - c. Raise and lower the surge block along the screen. (Should be able to feel location of the well screen)
 - d. Continue surging for 5-10 minutes.
- 11. Final purge of the monitoring well
 - a. Remove surge block from Waterra
 - b. Lower the Waterra back down the well. Begin pumping water out of the well, taking care to note water quality and appearance (smell, clarity, etc.).
 - c. Continue to purge the monitoring well until the following water quality parameters have stabilized:
 - i. <u>Turbidity</u> (± 10% for values greater than 5 NTU; if three Turbidity values are less than 5 NTU, consider the values as stabilized),
 - ii. Conductivity (± 3%),
 - iii. Temperature (± 3%),
 - iv. \underline{pH} (± 0.1 unit),
 - d. Dispose of purged water in barrels if known or suspected contaminates are of concern, or however the project manager instructs.
- 12. Record final measurements in field book, record date, water level before and after development, quantity of water removed, equipment used and techniques (surge and purge, or purge only).

References

- ASTM Standard Practice and Installation of Ground Water Monitoring Wells in Aquifers
- EPA SOP#2044 Well Development March 10, 199



APPENDIX G

TERRAPROBE INC.





Project No. : 1-19-0603-01 Client : Birch Equities Limited Originated by : SM

Date started : January 28, 2020 Project : 1196 - 1210 Yonge St & 2 - 8 Birch Avenue Compiled by : AR

Sheet No. : 1 of 2 Location: Toronto, Ontario Checked by: SZ

Ť		Truck-mounted SOIL PROFILE			SAMPL			: Holl Penetratio (Blows / 0								T		Lab Data
De (r	Elev epth m)	Description GROUND SURFACE	O	Number	Type	SPT 'N' Value	Elevation Scale (m)	X Dynam 1,0 Undrained O Unco	nic Cone 20 d Shear	3,0 Streng rometer) 4 th (kPa) + Fiel ■ Lab	d Vane Vane	Mo Plastic Limit PL 10	Natura Water Co	•	Headspace Vapour (ppm)	Instrument Details	Comments GRAIN SIZE GRAIN SI
	0.2	__\S0mm ASPHALTIC CONCRETE ___\200mm AGGREGATE \	/\frac{1.55}{}	1	SS	12	- - 123 –	•					0			_PID: 0 FID: 0		SS1 Analysis: Metals, PAH, PCB, .pH
12	0.8	SILTY SAND, trace to some clay, trace gravel, dense to very dense, brown, moist (GLACIAL TILL)		2	SS	36	- - -						0			_PID: 0 FID: 0		SS2 Analysis: VOC, PHC
			9	3	SS	85	122 – - -						0			_PID: 30 FID: 1		SS3 Analysis: Metals, PAH, PCB .pH
				4	SS	89 / 275mm	- 121 – -						0			PID: 5 FID: 0		
				5	SS	63	- - 120 –						0			PID: 0 FID: 0		
11	9.0					50.1	- - - 119 –											
	+.0	SILT AND SAND to SILTY SAND, trace gravel, trace clay, very dense, grey, wet		6	SS	50 / 125mm	ı						0			PID: 0 FID: 0	¥	
		como gravel					118 - -											
		some gravel		7	SS	79	- - 117 - -								0	PID: 10 FID: 1		<u>SS7 Analysis:</u> VOC, PHC
						50.4	- - - 116 –											
				8	SS	50 / 150mm	- - -							0		PID: 0 FID: 1		
							115 — - -											
				9	SS	50 / 125mm	- - 114 —							0		_PID: 0 FID: 1		0 59 38



Project No. : 1-19-0603-01 Client : Birch Equities Limited Originated by : SM

Date started : January 28, 2020 Project : 1196 - 1210 Yonge St & 2 - 8 Birch Avenue

Checked by: SZ

Compiled by : AR

Sheet No. : 2 of 2 Location : Toronto, Ontario

Position : E: 629619, N: 4837747 (UTM 17T) Elevation Datum : Geodetic

tig type : Truck-mounted Drilling Method : Hollow stem augers

(m)		SOIL PROFILE		SAMP		ale	Penetration Test Values (Blows / 0.3m)	Moisture / Plasticity	Φ +	Lab Data
। ਠੋ Depth Scale (r	Elev Depth (m)	Description (continued)	Graphic Log Number	Туре	SPT 'N' Value	Elevation Sca (m)	X Dynamic Cone 10	Plastic Natural Liquid Limit Water Content Limit	Headspao Vapour (ppm) Instrumen Details	and Comments GRAIN SIZE DISTRIBUTION (% (MT) GR SA SI CO
-	112.7	SILT AND SAND to SILTY SAND, trace gravel, trace clay, very dense, grey, wet (continued)	10	SS	50 / 125mm	- - 113 –	-	0	PID: 0	

END OF BOREHOLE

Borehole contained drill water upon completion of drilling. Unstabilized water level and cave not measured.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

<u>Date</u>	Water Depth (m)	Elevation (m)
Feb 7, 2020	5.0	118.6
Feb 20, 2020	5.0	118.6
Mar 4, 2020	5.0	118.7

1-19-0603-01 pn logs.gp



Project No. : 1-19-0603-01 Client : Birch Equities Limited Originated by : SM

Date started : January 6, 2020 Project : 1196 - 1210 Yonge St & 2 - 8 Birch Avenue Compiled by : AR

Sheet No. : 1 of 2 Location: Toronto, Ontario Checked by: SZ

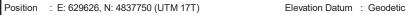
Posi	tion	: E: 629626, N: 4837750 (UTM 17T)			-	Elevation	on Datur	n : Geodet	ic								
Rig t		: LAR drill rig w/ 70lb hammer					Method			d rotary	·)						
		SOIL PROFILE			SAMPI	ES	Φ	Penetration Te (Blows / 0.3m)	st Value	s			_:_4_ '	DI#: ''		<u>.</u> .	Lab Data
Depth Scale (m)	Elev Depth (m)	Description GROUND SURFACE	Graphic Log	Number	Туре	SPT 'N' Value*	Elevation Scale (m)	X Dynamic Co	20 (ear Strend d netromete	igth (kPa + Fie r ■ Lal	ld Vane b Vane δ0	Plasti Limit	c Nat Water	Content Lim	Headspace Vapour (ppm)	Instrument Details	and Comments Signature Signature
-0		60mm CONCRETE PAVERS	/ XXX				404										
	123.4	FILL, clayey silt, trace sand, soft, dark brown, moist		1	SS	4	124 - - -						0		PID: 0 FID: 0		
- 1 -	0.0	SANDY SILT, some clay, trace gravel, compact, brown, moist		2	SS	14	- 123 –						0		PID: 0 FID: 0		SS2 Analysis: M&I, PCB
- - -	122.2 2.0	wet		3A 3B	SS	16	- - -						0		PID: 0 FID: 0 PID: 0 FID: 0		3A Analysis: PAH 3B Analysis:
-	2.0	SILTY SAND, trace to some clay, trace gravel, very dense, brown, moist (GLACIAL TILL)	(i i i i	4		52 /	122 -								PID: 20		3B Analysis: VOC, PHC
			Q	5	SS	150mm 50 / 150mm	-					0			FID: 1 PID: 20 FID: 1		SS5 Analysis:
-3 -							121 – -										SS5 Analysis: M&I, PAH, PCB
- - -4 -			Ф				- - 120 –										
- - -5 -		grey	0	6	SS	50 / 150mm	- - - 119					0			PID: 25 FID: 0		SS6 Analysis: VOC, PHC
- - -6 -	118.1 6.1	SILT AND SAND to SILTY SAND, trace gravel, trace clay, very dense, grey, wet	0	7	、SS_	50 / 75mm/	- - - 118 -					0			_PID: 5 FID: 0	Ţ	
- - -7 -							- - - 117 –										
- - -8 -				8	SS	50 / 125mm	- - - 116 –						0		PID: 75 FID: 0		
file: 1-19-0603-01 bh logs.gpj				9	SS	50 / 125mm	- - 115 – - -						0		PID: 45 FID: 0		



Project No. : 1-19-0603-01 Client : Birch Equities Limited Originated by : SM

Date started : January 6, 2020 Project : 1196 - 1210 Yonge St & 2 - 8 Birch Avenue Compiled by : AR

Sheet No. : 2 of 2 Location: Toronto, Ontario Checked by: SZ



Rig type : LAR drill rig w/ 70lb hammer Drilling Method : Tri-cone (mud rotary)

9		2 1 1 4 1 1 1 9 1 1 1 0 1 2 1 1 4 1 1 1 1 1 1				_		
Depth Scale (m)	Elev Depth (m)	SOIL PROFILE Description (continued)	Graphic Log	Number	Type Type	SPT 'N' Value*	Elevation Scale (m)	Penetration Test Values (Blows / 0.3m) X Dynamic Cone 10 20 30 40 Undrained Shear Strength (kPa) O Unconfined Pocket Penetrometer 10 80 120 160 Pocket Penetrometer 10 20 30 30 160 Pocket Pen
- 10 - - - - - 11 -		SILT AND SAND to SILTY SAND, trace gravel, trace clay, very dense, grey, wet (continued)		10	SS	50 / 150mm	114 - - - - 113	O PID: 40
- -12 - -				11	SS	50 / 125mm	- - 112 – - -	O PID: 25 FiD: 1
- 13 - - -	110.4 13.8			12	SS	50 / (125mm)	- 111 – - -	PID: 20 FID: 1

END OF BOREHOLE

Borehole contained drill water upon completion of drilling. Unstabilized water level and cave not measured.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

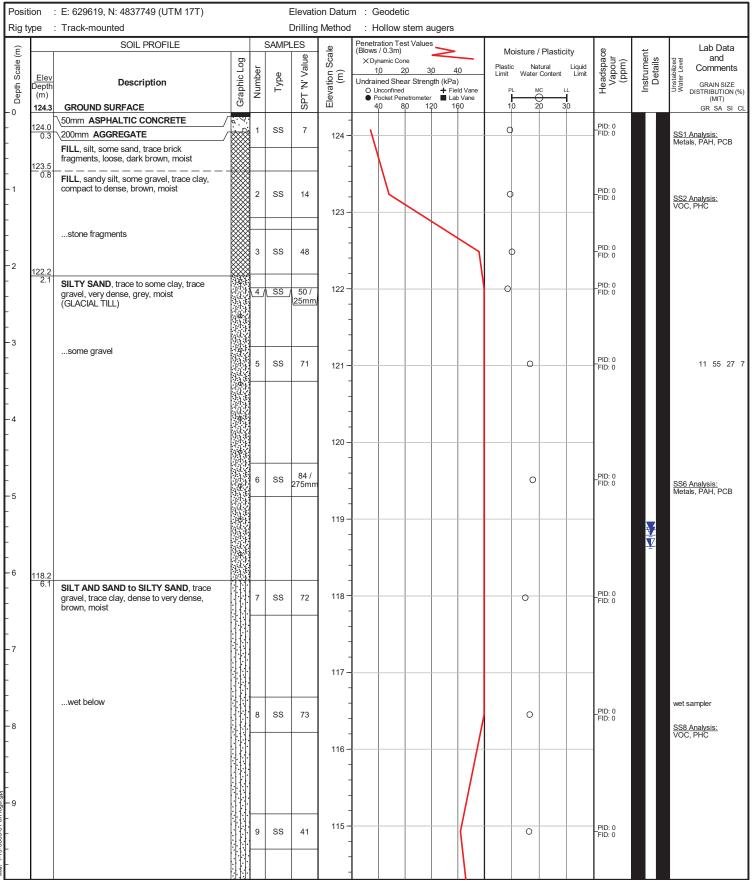
<u>Date</u>	Water Depth (m)	Elevation (m)
Feb 7, 2020	5.9	118.3
Feb 20, 2020	5.8	118.4
Mar 4, 2020	5.9	118.4



Project No. : 1-19-0603-01 Client : Birch Equities Limited Originated by : DH

Date started : October 24, 2019 Project : 1196 - 1210 Yonge St & 2 - 8 Birch Avenue Compiled by : AR

Sheet No. : 1 of 2 Location: Toronto, Ontario Checked by: SZ





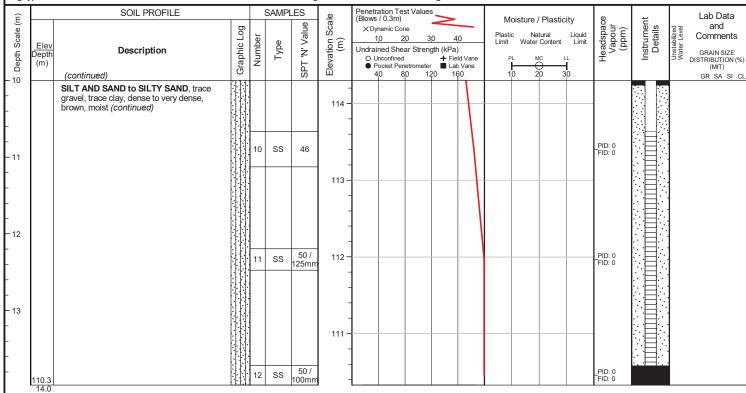
Project No. : 1-19-0603-01 Client : Birch Equities Limited Originated by : DH

Date started : October 24, 2019 Project : 1196 - 1210 Yonge St & 2 - 8 Birch Avenue Compiled by : AR

Sheet No. : 2 of 2 Location: Toronto, Ontario Checked by: SZ

Position : E: 629619, N: 4837749 (UTM 17T) Elevation Datum : Geodetic

Rig type : Track-mounted Drilling Method : Hollow stem augers



END OF BOREHOLE

Borehole contained drill water upon completion of drilling. Unstabilized water level and cave not measured.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS The Ponth (m) Elevation (m)

<u>vvater Deptn (m)</u>	Elevation (m)
5.7	118.6
5.5	118.8
5.4	118.9
5.4	118.9
	5.7 5.5 5.4



Project No. : 1-19-0603-01 Client : Birch Equities Limited Originated by : NK

Date started : October 23, 2019 Project : 1196 - 1210 Yonge St & 2 - 8 Birch Avenue Compiled by : AR

Sheet No. : 1 of 3 Location: Toronto, Ontario Checked by: SZ

type :	: Track-mounted					Method	: Hollow st				
Elev Depth (m)	SOIL PROFILE Description GROUND SURFACE	Graphic Log	Number	SAMPI Lype	SPT 'N' Value	Elevation Scale (m)	Penetration Test (Blows / 0.3m) X Dynamic Cone 1,0 2,0 Undrained Shear O Unconfined Pocket Penet 4,0 8,0	30 40 Strength (kPa) + Field Vane	Moisture / Plasticity Plastic Natural Liquid Limit Water Content Limit PL MC LL 10 20 30	Headspace Vapour (ppm) Instrument Details	Lab Data pala and Commen grave GRAIN SIZ DISTRIBUTION (MIT) GR SA S
123.8	600mm AGGREGATE	a ()	1	SS	9	- 124 –			0	_PID: 0 _FID: 0	SS1 Analysis: M&I, VOC, PHC
0.6	FILL, clayey silt, some sand, trace gravel, very soft, brown, moist		2	SS	2	-			0	PID: 0 FID: 0	SS2 Analysis: PAH
122 <u>.9</u> 1.5	FILL, silty sand, trace clay, trace gravel, compact, brown, moist		3	SS	18	123 - - -			0	_PID: 0 _FID: 0	<u>SS3 Analysis:</u> Metals
2.3	SILTY SAND, trace to some clay, trace gravel, very dense, greyish brown, moist (GLACIAL TILL)		4	SS	59	122 - -			0	PID: 0 FID: 0	
		6	5	SS	97 / 225mm	- - 121 – -			o	_PID: 5 FID: 1	SS5 Analysis: PHC, EC/SAR
		9	6	SS	81 / 275mm	- - 120 -			0	_PID: 5 FID: 0	
		9	7	SS	85	- - -			0	PID: 0 TFID: 0	7 66 SS7 Analysis: VOC, EC/SAR
		ię.	8	SS	75	119 – - -			С	PID: 5 TFID: 0	SS8 Analysis: VOC
6.1	SILT AND SAND to SILTY SAND, trace gravel, trace clay, dense to very dense, greyish brown, wet		9	SS	66	- 118 – -			0	PID: 0 FID: 0	SS9 Analysis: EC/SAR
			10	SS	52	- - 117 –			0	PID: 0 FID: 0	
			11	SS	47	- - -			0	_PID: 0 FID: 0	
			12	SS	39	116 - - -			0	_PID: 0 _FID: 0	
			13	SS	79 / 275mm	- 115 –			0	PID: 0 FID: 0	



Project No. : 1-19-0603-01 Client : Birch Equities Limited Originated by : NK

Date started : October 23, 2019 Project : 1196 - 1210 Yonge St & 2 - 8 Birch Avenue Compiled by : AR

Sheet No. : 2 of 3 Location: Toronto, Ontario Checked by: SZ

ositic lig typ		E: 629616, N: 4837760 (UTM 17T) Track-mounted						m :Geodetic :Hollow stem augers			
~ [Elev Depth (m)	SOIL PROFILE Description	Graphic Log	Number	Type Type	SPT 'N' Value	Elevation Scale (m)	Penetration Test Values (Blows / 0.3m) X Dynamic Cone 10 20 30 40 Undrained Shear Strength (kPa) O Unconfined Pocket Penetrometer Lab Vane	Moisture / Plasticity Plastic Natural Liquid Limit Water Content Limit PL MC LL	Headspace Vapour (ppm)	Lab Da and Comme GRAIN SI DISTRIBUTION (MT)
10 -		(continued) SILT AND SAND to SILTY SAND, trace gravel, trace clay, dense to very dense, greyish brown, wet (continued)	_ <u>ō</u>	. 14	SS	34	-	40 80 120 160	10 20 30	_PID: 0 -FID: 0	GR SA
		at 10.8 m, grey below					114 - - -			FID: 0	
1				15	SS	38	113 -		0	PID: 0 FID: 0	
2				16	SS	46	-		0	_PID: 0 _FID: 0	
				17	SS	45	112 - -		0	PID: 0 FID: 0	
							-				
				18	SS	50 / 125mm	111 - - -		0	PID: 0 FID: 0	
							- - 110				
:							- -				
				19	SS	50 / 125mm	109 - -		0	_PID: 0 FID: 0	
							-				
				20	SS	89 /	108 - - -		o		
						150mm	- - 107				
							- -				
				21	SS	50 / 75mm	- 106 – -		0		
							-			153.0	1
				22	SS	50 /	105 – - -				



Project No. : 1-19-0603-01 Client : Birch Equities Limited Originated by : NK

Date started : October 23, 2019 Project : 1196 - 1210 Yonge St & 2 - 8 Birch Avenue Compiled by : AR

Sheet No. : 3 of 3 Location: Toronto, Ontario Checked by: SZ

Position : E: 629616, N: 4837760 (UTM 17T) Elevation Datum : Geodetic

Rig type : Track-mounted Drilling Method : Hollow stem augers

Ê	SOIL PROFILE		S	AMPL	ES	<u>e</u>	Penetration Test Values (Blows / 0.3m)	Moisture / Plasticity	Φ	+	Lab Data
Depth Scale (m)	Elev Depth (m) (continued)	O	Number	Туре	SPT 'N' Value	Elevation Scale (m)	X Dynamic Cone	Plastic Natural Liquid Limit Water Content Limit PL MC LL 10 20 30	Headspace Vapour (ppm)	Instrument Details	and Comments GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL
- 20 - - - -	SILT AND SAND to SILTY SAND, trace gravel, trace clay, dense to very dense, greyish brown, wet (continued)				(75mm)	- 104 – - -			-		
- - - - -			23	SS	50 / (25mm	- 103 - - -			-		
- - - -	101.4 23.0		24	SS	50 / 100mm	- 102 - -			-		

END OF BOREHOLE

Borehole contained drill water upon completion of drilling. Unstabilized water level and cave not measured.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

<u>Date</u>	Water Depth (m)	Elevation (m
Dec 10, 2019	7.4	117.0
Feb 7, 2020	7.0	117.4
Feb 20, 2020	6.9	117.5
Mar 4, 2020	7.0	117.5

I-19-0603-01 pri logs.gpj



Project No. : 1-19-0603-01 Client : Birch Equities Limited Originated by: NK

Project : 1196 - 1210 Yonge St & 2 - 8 Birch Avenue Compiled by : AR Date started : October 23, 2019

Sheet No. : 1 of 1 Location: Toronto, Ontario Checked by : SZ

Rig type : Track-mounted Drilling Method : Hollow stem augers

	SOIL PROFILE			SAMPI		a <u>e</u>	Penetration Test Values (Blows / 0.3m)	>	Moisture / Plasticity	8. t	Lab Da
Elev Depth (m)		Graphic Log	Number	Type	SPT 'N' Value	Elevation Scale (m)	 Pocket Penetrometer 	+ Field Vane ■ Lab Vane	Plastic Natural Liquid Limit Water Content Limit	Headspace Vapour (ppm) Instrument Details	and Comme GRAIN S GRAIN S DISTRIBUTIO (MIT)
124.4	GROUND SURFACE	+			S		40 80 120	160	10 20 30		GR SA
	Augered to 7.6m below ground surface without sampling.					- 124 - - -				Ш	
						- 123 - -					
						- - -					
						122 - - -					
						- 121 – -					
						120 -					
						- - 119 - - -					
						- 118 - -					
116.8						- - 117 –					

Borehole contained drill water upon completion of drilling. Unstabilized water level and cave not measured.

50 mm dia. monitoring well installed.

WAT	ER LI	EVEL	REA	ADIN	GS
	18/-4-	D	41- /		

Water Depth (m)	Elevation (m)
5.9	118.5
5.7	118.7
5.7	118.7
5.6	118.8
	5.9 5.7 5.7



Project No. : 1-19-0603-01 Client : Birch Equities Limited Originated by : SD

Date started : October 25, 2019 Project : 1196 - 1210 Yonge St & 2 - 8 Birch Avenue Compiled by : AR

Sheet No. : 1 of 2 Location: Toronto, Ontario Checked by: SZ

		E: 629615, N: 4837767 (UTM 17T) Track-mounted				Elevation Datum : Geodetic Drilling Method : Hollow stem augers												
Depth	Elev epth (m)	SOIL PROFILE Description GROUND SURFACE	Graphic Log	Number	Type Type	SPT 'N' Value	Elevation Scale (m)	Undrained Sh O Unconfine Pocket Pe	one 20 3 ear Stren d enetromete	0 4(gth (kPa) ♣ Fiel	d Vane Vane	Mo Plastic Limit P	Water Conter	•	Headspace Vapour (ppm)	Instrument Details	Lab Data and comments Paragraphic Comments GRAIN SIZE DISTRIBUTION (% (MIT)) GR SA SI (1)	
		FILL, sand and gravel, some silt, trace clay, loose, brown, moist		1	SS	8	- - 124					0			_PID: 0 FID: 0		SS1 Analysis: Metals, PAH, PCB	
-1				2	SS	9	- - -					0			_PID: 0 FID: 0		SS2 Analysis: VOC, PHC	
		stone fragments		3	SS	50 / 125mm	123 - -					0			PID: 0 FID: 0			
-2 <u>12</u>	22.3	SILT AND SAND to SILTY SAND, trace gravel, trace clay, very dense, brown, moist		4	SS	76	- - 122 – -					-0-			_PID: 0 _FID: 0			
3				5	SS	87 / 275mm	- - 121 –					0			_PID: 0 FID: 0		SS5 Analysis: Metals, PAH, PCB	
4							- - - 120											
5				6	SS	84 / 275mm	-					0			_PID: 0 FID: 0		SS6 Analysis: Metals	
6							119 - -								-			
		wet below		7	ss	77 / 275mm	- - 118 – -						0		_PID: 0 _FID: 0	Ţ.	SS7 Analysis: VOC, PHC	
7							- - -											
8		grey below		8	SS	83 / 275mm	117 - - - -					С	,		_PID: 0 FID: 0			
9							- 116 - -											
9				9	SS	91 / 250mm	- - 115 –						0		PID: 0 FID: 0			
							-											



Project No. : 1-19-0603-01 Client : Birch Equities Limited Originated by : SD

Date started : October 25, 2019 Project : 1196 - 1210 Yonge St & 2 - 8 Birch Avenue Compiled by : AR

Sheet No. : 2 of 2 Location: Toronto, Ontario Checked by: SZ

Position : E: 629615, N: 4837767 (UTM 17T) Elevation Datum : Geodetic

Rig type : Track-mounted Drilling Method : Hollow stem augers

1 119 1	''	00" 000"					I	Paradorfina Tarah Values
ا ا Depth Scale (m)	Elev Depth (m)	SOIL PROFILE Description (continued)	Graphic Log	Number	Type Type	SPT 'N' Value	Elevation Scale (m)	Penetration Test Values (Blows / 0.3m) X Dynamic Cone 10 20 30 40 Undrained Shear Strength (kPa) O Unconfined Pecket Penetrometer 40 80 120 160 Moisture / Plasticity Natural Liquid Limit Natural Liquid Limit Water Content Limit Natural Liquid Limit Water Content Limit Natural Liquid Limit Natural Liquid Limit Natural Liquid Limit Republic Natural Liquid Limit Republic Natural Liquid Limit Republic Natural Liquid Limit Natural Liquid Limit Natural Liquid Limit Republic Natural Liquid Limit atural Liquid Limit Natural Liquid Limit Natural Liquid Limit Natural Liquid Natural Liqui
- - - - -		SILT AND SAND to SILTY SAND, trace gravel, trace clay, very dense, brown, moist (continued)		10	SS	64	- 114 - -	C PID: 15 FID: 0
- - - -12 -				11	SS	50 / 125mm	- 113 – - - -	O PID: 20 FID: 0
- - - 13 - -							112 - - - - 111	
- - 14	110.4 14.2			12	SS	58	-	O PID: 0 FID: 0

END OF BOREHOLE

Borehole contained drill water upon completion of drilling. Unstabilized water level and cave not measured.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Dec 10, 2019	6.4	118.2
Feb 27, 2020	6.3	118.3
Mar 4, 2020	6.2	118.4

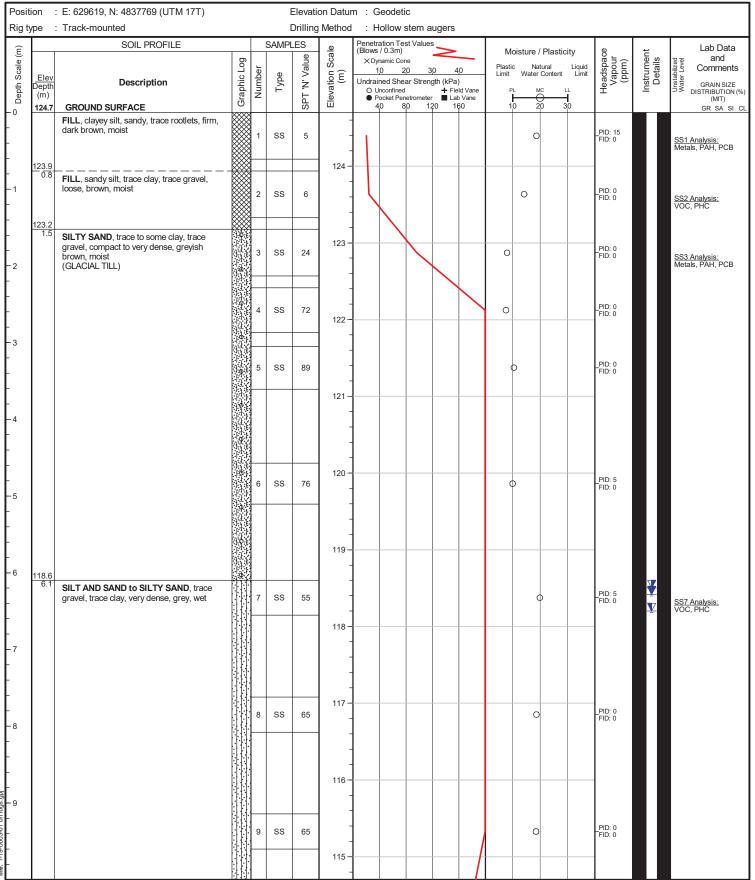
9-0003-01 DILIONS-GPJ



Project No. : 1-19-0603-01 Client : Birch Equities Limited Originated by : SD

Date started : October 28, 2019 Project : 1196 - 1210 Yonge St & 2 - 8 Birch Avenue Compiled by : AR

Sheet No. : 1 of 2 Location: Toronto, Ontario Checked by: SZ





Project No. : 1-19-0603-01 Client : Birch Equities Limited Originated by : SD

Date started : October 28, 2019 Project : 1196 - 1210 Yonge St & 2 - 8 Birch Avenue Compiled by : AR

Sheet No. : 2 of 2 Location: Toronto, Ontario Checked by: SZ

Position : E: 629619, N: 4837769 (UTM 17T) Elevation Datum : Geodetic

Rig type : Track-mounted Drilling Method : Hollow stem augers

J ,	_											
Ê		SOIL PROFILE			SAMPI		<u>e</u>	Penetration Test Values (Blows / 0.3m)	Moisture / Plasticity	g	ıt	Lab Data
Depth Scale (m)			g	je.		'N' Value	Scale	X Dynamic Cone 1,0 2,0 3,0 4,0	Plastic Natural Liquid	Headspace Vapour (ppm)	Instrument Details	And Comments GRAIN SIZE GRAIN SIZE DISTRIBUTION (%)
l Sc	Elev Depth	Description	Graphic Log	Number	Type	> z	Elevation (m)	Undrained Shear Strength (kPa)		ead Vap (pp	nstru Det	ater described d
Dept	(m)		Grap	N	-	SPT '	leva	O Unconfined + Field Vane ■ Pocket Penetrometer ■ Lab Vane	PL MC LL 1,0 20 30	エ	=	(MIT)
- 10		(continued) SILT AND SAND to SILTY SAND, trace				S	Ш.	40 80 120 160	10 20 30			GR SA SI CI
ŀ		gravel, trace clay, very dense, grey, wet		1				_				
ŀ		(continued)						_				
ŀ							114 -	 				
- - 11				10	SS	41	-	-		_PID: 0 FID: 0		2 67 28 3
				_			-	-			:: <u> </u> ::	
L							-	-				
L							-	1				
-							113 -	1				
- 12							'	1				
ŀ		silt, some sand		-] \				
ŀ				11	SS	81	l .	<u> </u>		_PID: 0 FID: 0		
ŀ							112-				:: <u> </u> ::	
 								_				
- 13				1			-	-				
Ī							-	-				
]			-	-				
L				\vdash			111-				:⊢:	
- 14				12	SS	86	-	-	0	_PID: 0 FID: 0		
	110.5 14.2] -	-				

END OF BOREHOLE

Borehole contained drill water upon completion of drilling. Unstabilized water level and cave not measured.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

<u>Date</u>	Water Depth (m)	Elevation (m)
Dec 10, 2019	6.5	118.2
Feb 27, 2020	6.2	118.5
Mar 4, 2020	6.3	118.4

Terraprobe

LOG OF BOREHOLE 1

PROJECT: 1196-1210 Yonge Street / 2-8 Birch Street

LOCATION: Toronto, Ontario

CLIENT: Woodcliffe Corporation

DATE: 15 February 2006

EQUIPMENT: Pionjar

ELEVATION DATUM: n/a

FILE: 1-06-1007

	SOIL PROFILE	1	SAMPLES		LES	ALE.	PENETRATION RESISTANCE PLOT						PLAST	IC NATI	URAL	nonin	S K	STANDPIPE
ELEV	DESCRIPTION Ground Surface	STRAT PLOT	NUMBER	TYPE	"N" VALUES	ELEVATION SCALE	SHEA O U	AR STI	ENGT	H kPa	0 1	VANE ANE	WAT	ER CO	NTEN	W.L. W.L. T (%)	d ORGANIC 3 VAPOUR	INSTALLATIO OR REMARKS
0.0	Loose Dark Brown moist FILL - Sand and Organics, trace brick fragments		1	SS	5		1										ND	
8.0	Compact Dark Brown moist FILL - Sandy Silt, some organics some coal fragments		2	ss	10												ND	
1.2						m	1											
	SILT some sand, trace clay, TO SANDY SILT (native)		3	ss	30												ND	
2.7			4	SS	30			J,									ND	

NOTES:

Borehole was open and dry upon completion of drilling.

Sheet 1 of 1

Terraprobe

LOG OF BOREHOLE 2

PROJECT: 1196-1210 Yonge Street / 2-8 Birch Street DATE: 15 February 2006 LOCATION: Toronto, Ontario EQUIPMENT: Pionjar

FILE: 1-06-1007 CLIENT: Woodcliffe Corporation ELEVATION DATUM: n/a

-	SOIL PROFILE		SAME	LES	ALE			PLOT_			PLAST	IC MOIST	TURE LIQUID	S E	STANDPIPE
ELEV EPTH	DESCRIPTION LATER STATE OF THE PROPERTY OF THE	NUMBER	TYPE	"N" VALUES	ELEVATION SCALE	SHE.	NCONF OCKET	RENGTH	+ FIE × LA	LO VANE B VANE 100	WAT		NTENT (%)	G ORGANIC G VAPOUR	INSTALLATIO OR REMARKS
0.0	Loose Black moist FILL - Silty Sand, with coal and brick fragments	1	SS	5		1								ND	333
0.8	Compact Brown moist FILL - Silty Sand, trace organics	2	SS	10										ND	
1.5	Compact Brown moist SILT AND FINE SAND some gravel	3	ss	30										ND	
	(native)	4	ss	>30										ND	
3.0	Brown moist SILTY SAND trace fine gravel														
		5	SS	>30										ND	
5.8	Dense Brown very moist FINE SAND trace slit														
6.6	End of Borehole	-		_						-	_				

Borehole was open and dry upon completion of drilling.

Sheet 1 of 1

Terraprobe

LOG OF BOREHOLE 3

PROJECT: 1196-1210 Yonge Street / 2-8 Birch Street

LOCATION: Toronto, Ontario

CLIENT: Woodcliffe Corporation

DATE: 15 February 2006

EQUIPMENT: Pionjar

ELEVATION DATUM: n/a

FILE: 1-06-1007

	SOIL PROFILE	11		SAMPLES		ALE	PENETRATION RESISTANCE PLOT						PLASTIC NATURAL LIQUIC LIMIT CONTENT LIMIT				STANDPIPE
ELEV	DESCRIPTION Ground Surface	STRAT PLOT	NUMBER	TYPE	"N" VALUES	ELEVATION SCALE	SHE/OU	AR ST	RENGTI INED PEN.	H kPa + f × t	100	E WA	TER CO	ONTEN	WL WL IT (%)	ORGANIC 3 VAPOUR	INSTALLATION OR REMARKS
0.1		0			I												
0.4		XXXXX	1	SS	5		1									ND	
0.5	Loose Dark Brown moist FILL - Silt and Organics																
0.8	Loose to Compact		2		10											ND	
1.5	Compact Brown moist		3	SS	30											ND	
	SANDY SILT TO SILT AND SAND trace to some gravel			5.												100	
			4	SS	30			ř								ND.	

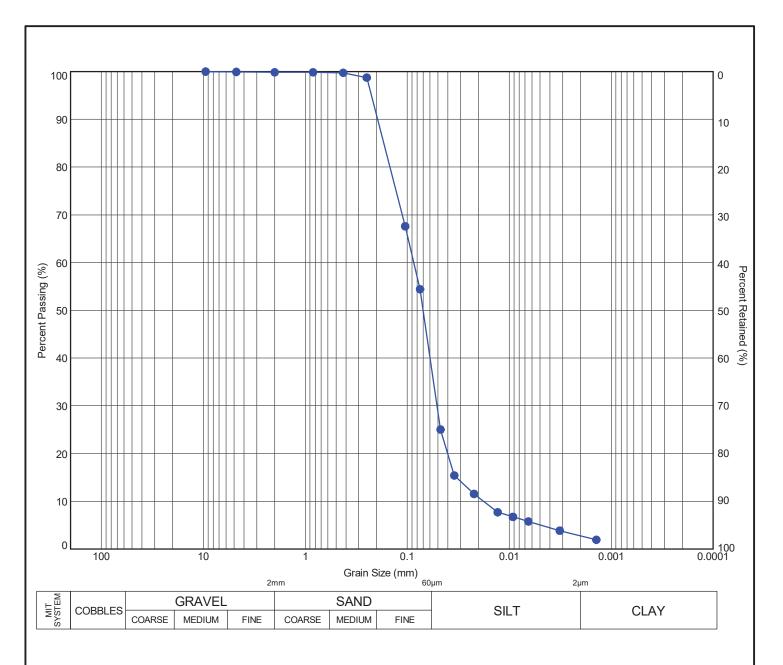
Borehole was open and dry upon completion of drilling.

Sheet 1 of 1

APPENDIX H

TERRAPROBE INC.





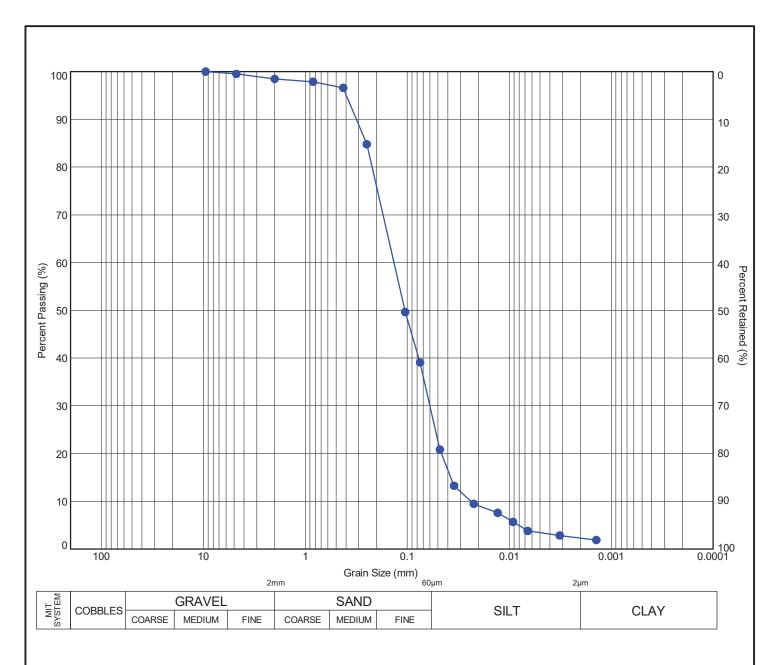
MIT SYSTEM	
------------	--

·	Hole ID	Sample	Depth (m)	Elev. (m)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	(Fines, %)
•	1	SS9	9.3	114.3	0	59	38	3	



GRAIN SIZE DISTRIBUTION SAND AND SILT, TRACE CLAY

File No.:



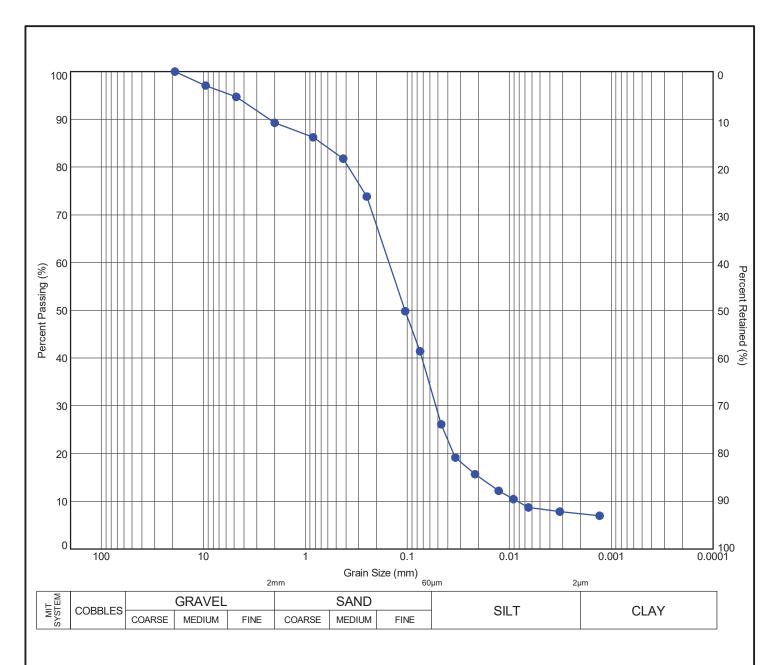
M	צ. ד	YST	٦FΝ

	Hole ID	Sample	Depth (m)	Elev. (m)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	(Fines, %)
•	2	SS10	10.8	113.4	2	68	28	2	



GRAIN SIZE DISTRIBUTION SILTY SAND, TRACE CLAY, TRACE GRAVEL

File No.:



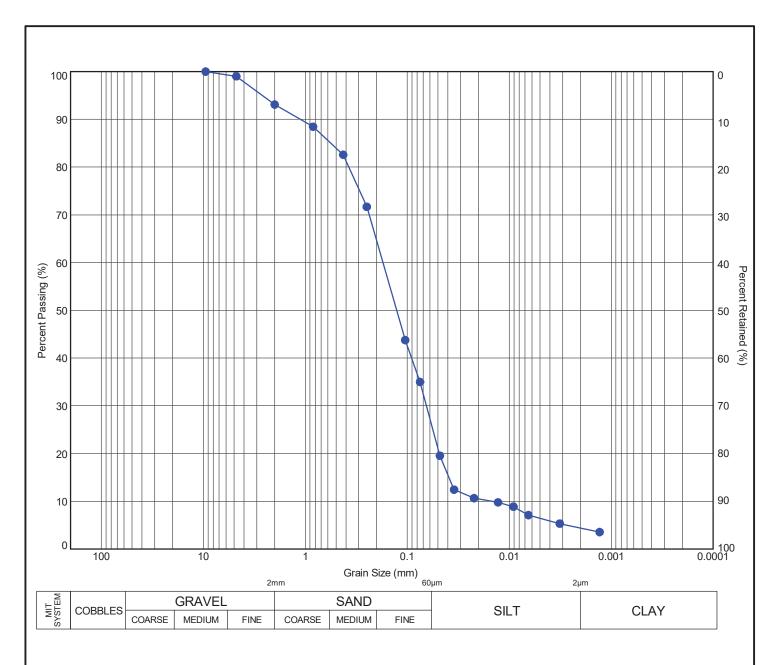
MI.	T.SY	STE	=N.

	Hole ID	Sample	Depth (m)	Elev. (m)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	(Fines, %)
•	3	SS5	3.3	121.0	11	55	27	7	



GRAIN SIZE DISTRIBUTION SILTY SAND, SOME GRAVEL, TRACE CLAY

File No.:



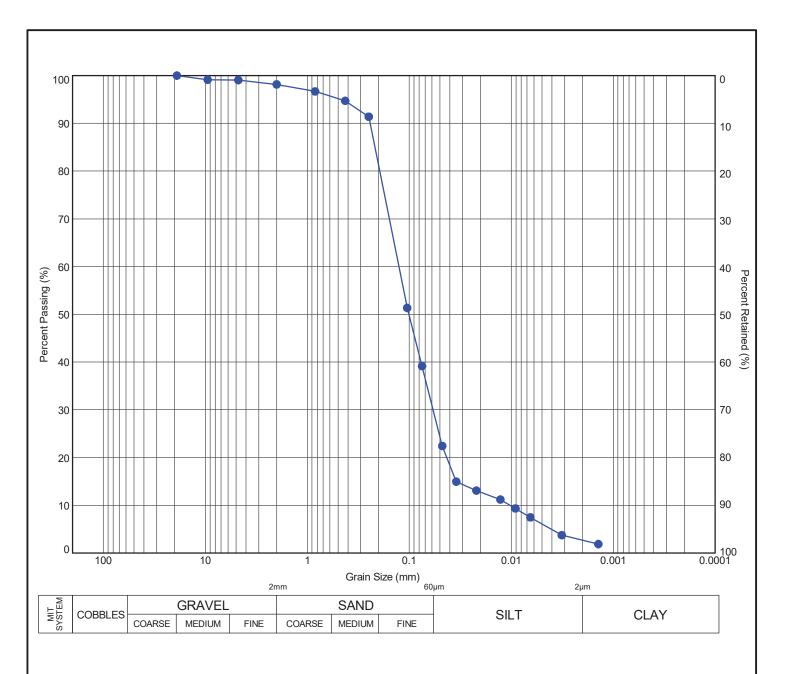
M	IT	SI	/51	ΓFΝ	Λ

	Hole ID	Sample	Depth (m)	Elev. (m)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	(Fines, %)
•	4	SS7	4.9	119.5	7	66	23	4	



GRAIN SIZE DISTRIBUTION
SILTY SAND, TRACE GRAVEL, TRACE CLAY

File No.:



MIT SYSTEM	1
------------	---

	Hole ID	Sample	Depth (m)	Elev. (m)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	(Fines, %)
•	6	SS10	10.9	113.8	2	67	28	3	



GRAIN SIZE DISTRIBUTION SILTY SAND, TRACE CLAY, TRACE GRAVEL

11 Indell Lane, Brampton Ontario L6T 3Y3 (905) 796-2650

File No.: 1-19-0603-01

APPENDIX I

TERRAPROBE INC.



1196-1210 Yonge Street and 2-8 Birch Avenue, Toronto

Ground Water Depths (meter below ground surface)

	Ground Surface			Top of the Well		1st GW Monitoring Event	2nd GW Monitoring Event	3rd GW Monitoring Event	4th GW Monitoring Event	5th GW Monitoring Event	6th GW Monitoring Event
Monitoring Well ID	Elevation (masl)	Stick up (m)	Well Depth (mbgs)	Screen Depth (mbgs)	Depth to water December 10, 2019 (mbgs)	Depth to water February7, 2020 (mbgs)	Depth to water February 20, 2020 (mbgs)	Depth to water March 4, 2020 (mbgs)	ongoing	ongoing	ongoing
BH1	123.65	0.00	10.60	7.55	WNI	4.99	4.96	4.95			
BH2	124.15	0.00	13.70	10.65	WNI	5.93	5.83	5.85			
BH3	124.30	0.00	13.70	10.65	5.66	5.51	5.44	5.44			
BH4D	124.41	0.00	22.86	19.81	7.44	6.99	6.94	6.95			
BH4S	124.40	0.00	7.60	4.55	5.87	5.66	5.67*	5.63			
BH5	124.58	0.00	13.70	10.65	6.39	NA	6.31*	6.17			
BH6	124.66	0.00	13.75	10.70	6.50	6.26	6.23*	6.28			

Ground Water Elevations (meters above sea level)

Monitoring Well ID	Ground Surface Elevation (masl)	Top of the Riser Elevation (masl)	Well Screen Bottom Elevation (masl)	Top of the Well Screen Elevation (masl)		1st GW Monitoring Event	2nd GW Monitoring Event	3rd GW Monitoring Event	4th GW Monitoring Event	5th GW Monitoring Event	6th GW Monitoring Event
					Groundwater Level Elevation Dercember 10, 2019 (masl)	Groundwater Level Elevation February 7, 2020 (masl)	Groundwater Level Elevation February 20, 2020 (masl)	Groundwater Level Elevation March 4, 2020 (masl)	ongoing	ongoing	ongoing
BH1	123.65	123.65	113.05	116.10	WNI	118.66	118.69	118.70			
BH2	124.15	124.15	110.45	113.50	WNI	118.22	118.32	118.30			
ВН3	124.30	124.30	101.44	113.65	118.64	118.79	118.86	118.86			
BH4D	124.41	124.41	101.55	104.60	124.41	117.42	117.47	117.46			
BH4S	124.40	124.40	116.80	119.85	118.53	118.74	118.73	118.77			·
BH5	124.58	124.58	110.88	113.93	118.19	NA	118.27	118.41			
BH6	124.66	124.66	110.91	113.96	118.16	118.40	118.43	118.38			

Note: mbgs - meters below ground surface

masl - meters above sea level

NA - not available (Covered by Ice and Snow)

NM - not measured

WNI - well not installed

*groundwater level was measured on February 27, 2020 due to snow cover



APPENDIX J

TERRAPROBE INC.



GEOLOGICAL UNITS 1196-1210 Yonge, 2-8 Birch Avenue TORONTO, ONTARIO PROJECT # 1-19-0603-42

	BH1		BH2			BH3			BH4		BH5			BH6				
Borehole	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)	Elev. Top (masl)	Elev. Bottom (masl)	Thickness (m)
Asphalt	123.6	123.5	0.1	124.2	124.1	0.1	124.3	124.2	0.1	N	ot Encountered	d	Not Encountered		N	ot Encountere	d	
Aggregate	123.5	123.4	0.1	N	ot Encountere	d	124.2	124	0.2	124.4	123.8	0.6	N	ot Encountere	d	N	ot Encountere	rd
Earth Fill	123.4	122.8	0.6	124.1	123.4	0.7	124	122.2	1.8	123.8	121.9	1.9	124.6	122.3	2.3	124.7	123.2	1.5
Native Soil	122.8	112.7	10.1	123.4	110.4	13.0	122.2	110.3	11.9	122.1	101.4	20.7	122.3	110.4	11.9	123.2	110.5	12.7
Bedrock	Not Encountered		Not Encountered Not Encountered		Not Encountered		Not Encountered		Not Encountered		Not Encountered							

APPENDIX K

TERRAPROBE INC.



MONITORING WELL CONSTRUCTION 1196 -1210 Yonge, 2-8 Birch Avenue TORONTO, ONTARIO PROJECT # 1-19-0603-42

Well ID	BH1 BH2		Bl	BH3 BH4-S		BH4-D		BH5		BH6				
Stick Up (m)	Flush Mount Flush Mount		Flush Mount		Flush Mount		Flush Mount		Flush Mount		Flush Mount			
Ground Elev. (masl)	123	123.60 124.20		4.20	124.30		124.40		124.40		124.60		124.70	
Well Component	Depth (m)	Elev. (masl)	Depth (m)	Elev. (masl)	Depth (m)	Elev. (masl)	Depth (m)	Elev. (masl)	Depth (m)	Elev. (masl)	Depth (m)	Elev. (masl)	Depth (m)	Elev. (masl)
Bentonite - Top	0.00	123.60	0.00	124.20	0.00	124.30	0.00	107.25	0.00	107.25	0.00	124.60	0.00	124.70
Bentonite - Bottom	7.01	116.59	10.36	113.84	10.06	114.24	3.96	120.44	19.20	105.20	10.06	114.54	10.06	114.64
Sand - Top	7.01	116.59	10.36	113.84	10.06	114.24	3.96	120.44	19.20	105.20	10.06	114.54	10.06	114.64
Screen - Top	7.62	115.98	10.63	113.57	10.67	113.63	4.57	119.83	19.81	104.59	10.67	113.93	10.67	114.03
Screen - Bottom	10.67	112.93	13.72	110.48	13.72	110.58	7.62	116.78	22.86	101.54	13.72	110.88	13.72	110.98
Sand - Bottom	10.95	112.65	13.84	110.36	13.97	110.33	7.62	116.78	22.96	101.44	14.17	110.43	14.17	110.53

APPENDIX L

TERRAPROBE INC.



CERTIFICATE OF ANALYSIS

(SOIL)

TERRAPROBE INC.





TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 03-FEB-20

Report Date: 06-FEB-20 14:28 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2412344

Project P.O. #: NOT SUBMITTED

Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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

ADDRESS: 5730 Coopers Avenue, Unit #26 , Mississauga, ON L4Z 2E9 Canada | Phone: +1 905 507 6910 | Fax: +1 905 507 6927 ALS CANADA LTD Part of the ALS Group An ALS Limited Company





L2412344 CONT'D....

Job Reference: 1-19-0603-42

PAGE 2 of 12

06-FEB-20 14:28 (MT)

Summary of Guideline Exceedances

Guideline
ALS ID Client ID Grouping Analyte Result Guideline Limit Unit

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Soil-Res/Park/Inst. Property Use (Coarse)

(No parameter exceedances)

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Soil-Res/Park/Inst. Property Use (Fine)

(No parameter exceedances)



L2412344 CONT'D....

Job Reference: 1-19-0603-42

PAGE 3 of 12

06-FEB-20 14:28 (MT)

Physical Tests - SOIL

		Lab ID	L2412344-1	L2412344-2	L2412344-3	L2412344-4
	;	Sample Date	28-JAN-20	28-JAN-20	28-JAN-20	28-JAN-20
		Sample ID	BH1-SS1	BH1-SS2	BH1-SS3	BH1-SS7
		Guide Limits				
Analyte	Unit	#1 #2				
% Moisture	%		24.7	9.05	8.89	9.92
pH	pH units		7.97		8.09	

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

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

Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.



L2412344 CONT'D....

Job Reference: 1-19-0603-42

PAGE 4 of 12

06-FEB-20 14:28 (MT)

Metals - SOIL

		Sample		L2412344-1 28-JAN-20 BH1-SS1	L2412344-3 28-JAN-20 BH1-SS3
		Sample ID Guide Limits		БП1-331	БП1-333
Analyte	Unit	#1	#2		
Antimony (Sb)	ug/g	7.5	7.5	<1.0	<1.0
Arsenic (As)	ug/g	18	18	2.9	1.5
Barium (Ba)	ug/g	390	390	119	56.7
Beryllium (Be)	ug/g	4	5	0.75	<0.50
Boron (B)	ug/g	120	120	6.8	<5.0
Cadmium (Cd)	ug/g	1.2	1.2	<0.50	<0.50
Chromium (Cr)	ug/g	160	160	22.8	11.7
Cobalt (Co)	ug/g	22	22	5.8	3.7
Copper (Cu)	ug/g	140	180	15.3	7.0
Lead (Pb)	ug/g	120	120	14.7	3.5
Molybdenum (Mo)	ug/g	6.9	6.9	<1.0	<1.0
Nickel (Ni)	ug/g	100	130	12.5	7.1
Selenium (Se)	ug/g	2.4	2.4	<1.0	<1.0
Silver (Ag)	ug/g	20	25	<0.20	<0.20
Thallium (TI)	ug/g	1	1	<0.50	<0.50
Uranium (U)	ug/g	23	23	<1.0	<1.0
Vanadium (V)	ug/g	86	86	35.4	20.6
Zinc (Zn)	ug/g	340	340	45.2	21.3

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

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

Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.



L2412344 CONT'D....

Job Reference: 1-19-0603-42

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Volatile Organic Compounds - SOIL

<u> </u>		Sample	_ab ID e Date ple ID	L2412344-2 28-JAN-20 BH1-SS2	L2412344-4 28-JAN-20 BH1-SS7
Analyte	Unit	Guide #1	Limits #2		
Acetone	ug/g	16	28	<0.50	<0.50
Benzene	ug/g	0.21	0.17	<0.0068	<0.0068
Bromodichloromethane	ug/g	13	13	<0.050	<0.050
Bromoform	ug/g	0.27	0.26	<0.050	< 0.050
Bromomethane	ug/g	0.05	0.05	<0.050	<0.050
Carbon tetrachloride	ug/g	0.05	0.12	<0.050	< 0.050
Chlorobenzene	ug/g	2.4	2.7	<0.050	<0.050
Dibromochloromethane	ug/g	9.4	9.4	< 0.050	<0.050
Chloroform	ug/g	0.05	0.18	<0.050	<0.050
1,2-Dibromoethane	ug/g	0.05	0.05	< 0.050	<0.050
1,2-Dichlorobenzene	ug/g	3.4	4.3	<0.050	<0.050
1,3-Dichlorobenzene	ug/g	4.8	6	< 0.050	<0.050
1,4-Dichlorobenzene	ug/g	0.083	0.097	<0.050	<0.050
Dichlorodifluoromethane	ug/g	16	25	<0.050	<0.050
1,1-Dichloroethane	ug/g	3.5	11	<0.050	<0.050
1,2-Dichloroethane	ug/g	0.05	0.05	< 0.050	<0.050
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.050	<0.050
cis-1,2-Dichloroethylene	ug/g	3.4	30	< 0.050	<0.050
trans-1,2-Dichloroethylene	ug/g	0.084	0.75	<0.050	<0.050
Methylene Chloride	ug/g	0.1	0.96	<0.050	< 0.050
1,2-Dichloropropane	ug/g	0.05	0.085	<0.050	<0.050
cis-1,3-Dichloropropene	ug/g	-	-	<0.030	< 0.030
trans-1,3-Dichloropropene	ug/g	-	-	<0.030	< 0.030
1,3-Dichloropropene (cis & trans)	ug/g	0.05	0.083	<0.042	<0.042
Ethylbenzene	ug/g	2	15	<0.018	<0.018
n-Hexane	ug/g	2.8	34	<0.050	<0.050
Methyl Ethyl Ketone	ug/g	16	44	<0.50	<0.50
Methyl Isobutyl Ketone	ug/g	1.7	4.3	<0.50	<0.50
MTBE	ug/g	0.75	1.4	<0.050	<0.050
Styrene	ug/g	0.7	2.2	<0.050	<0.050

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



L2412344 CONT'D....

Job Reference: 1-19-0603-42

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Volatile Organic Compounds - SOIL

		I	_ab ID	L2412344-2	L2412344-4
		Sample	e Date	28-JAN-20	28-JAN-20
		Sample ID		BH1-SS2	BH1-SS7
		Guide	Limits		
Analyte	Unit	#1	#2		
1,1,1,2-Tetrachloroethane	ug/g	0.058	0.05	<0.050	<0.050
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.050	<0.050
Tetrachloroethylene	ug/g	0.28	2.3	<0.050	<0.050
Toluene	ug/g	2.3	6	<0.080	<0.080
1,1,1-Trichloroethane	ug/g	0.38	3.4	<0.050	<0.050
1,1,2-Trichloroethane	ug/g	0.05	0.05	<0.050	<0.050
Trichloroethylene	ug/g	0.061	0.52	<0.010	<0.010
Trichlorofluoromethane	ug/g	4	5.8	<0.050	<0.050
Vinyl chloride	ug/g	0.02	0.022	<0.020	<0.020
o-Xylene	ug/g	-	-	<0.020	<0.020
m+p-Xylenes	ug/g	-	-	<0.030	<0.030
Xylenes (Total)	ug/g	3.1	25	<0.050	<0.050
Surrogate: 4-Bromofluorobenzene	%	-	-	91.5	87.5
Surrogate: 1,4-Difluorobenzene	%	-	-	106.9	102.8

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

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

Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.



L2412344 CONT'D....

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Hydrocarbons - SOIL

nyarocarbons - SOIL						
		L	Lab ID	L2412344-2	L2412344-4	
		Sample	e Date	28-JAN-20	28-JAN-20	
		Sam	ple ID	BH1-SS2	BH1-SS7	
Analyte	Unit	Guide #1	Limits #2			
F1 (C6-C10)	ug/g	55	65	<5.0	<5.0	
F1-BTEX	ug/g	55	65	<5.0	<5.0	
F2 (C10-C16)	ug/g	98	150	<10	<10	
F3 (C16-C34)	ug/g	300	1300	<50	<50	
F4 (C34-C50)	ug/g	2800	5600	<50	<50	
Total Hydrocarbons (C6-C50)	ug/g	-	-	<72	<72	
Chrom. to baseline at nC50		-	-	YES	YES	
Surrogate: 2-Bromobenzotrifluoride	%	-	-	80.9	83.3	
Surrogate: 3,4-Dichlorotoluene	%	-	-	90.6	89.5	

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

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

Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.



L2412344 CONT'D.... Job Reference: 1-19-0603-42 PAGE 8 of 12 06-FEB-20 14:28 (MT)

Polycyclic Aromatic Hydro			Lab ID	L2412344-1	L2412344-3
		Sample		28-JAN-20	28-JAN-20
		•	ple ID	BH1-SS1	BH1-SS3
Analyte	Unit	Guide Limit #1 #2			
Acenaphthene	ug/g	7.9	58	0.068	<0.050
Acenaphthylene	ug/g	0.15	0.17	<0.050	<0.050
Anthracene	ug/g	0.67	0.74	0.150	< 0.050
Benzo(a)anthracene	ug/g	0.5	0.63	0.275	<0.050
Benzo(a)pyrene	ug/g	0.3	0.3	0.217	<0.050
Benzo(b)fluoranthene	ug/g	0.78	0.78	0.287	<0.050
Benzo(g,h,i)perylene	ug/g	6.6	7.8	0.133	<0.050
Benzo(k)fluoranthene	ug/g	0.78	0.78	0.084	< 0.050
Chrysene	ug/g	7	7.8	0.264	< 0.050
Dibenzo(ah)anthracene	ug/g	0.1	0.1	< 0.050	< 0.050
Fluoranthene	ug/g	0.69	0.69	0.615	< 0.050
Fluorene	ug/g	62	69	0.069	< 0.050
Indeno(1,2,3-cd)pyrene	ug/g	0.38	0.48	0.134	< 0.050
1+2-Methylnaphthalenes	ug/g	0.99	3.4	<0.042	< 0.042
1-Methylnaphthalene	ug/g	0.99	3.4	<0.030	< 0.030
2-Methylnaphthalene	ug/g	0.99	3.4	<0.030	<0.030
Naphthalene	ug/g	0.6	0.75	0.026	<0.013
Phenanthrene	ug/g	6.2	7.8	0.567	<0.046
Pyrene	ug/g	78	78	0.488	<0.050
Surrogate: 2-Fluorobiphenyl	%	-	-	92.2	89.8
Surrogate: p-Terphenyl d14	%	-	-	95.9	91.0

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made. Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.



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Polychlorinated Biphenyls - SOIL

OOIL				
	l	_ab ID	L2412344-1	L2412344-3
	Sample	e Date	28-JAN-20	28-JAN-20
	Sam	ple ID	BH1-SS1	BH1-SS3
Unit	Guide #1	Limits #2		
ug/g	-	-	<0.010	<0.010
ug/g	-	-	<0.010	<0.010
ug/g	-	-	<0.010	<0.010
ug/g	-	-	<0.010	<0.010
ug/g	0.35	0.35	<0.020	<0.020
%	-	-	103.2	98.1
	Unit ug/g ug/g ug/g ug/g ug/g	#1 ug/g -	Lab ID Sample Date Sample ID Guide Limits Unit #1 #2	Lab ID

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

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

Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

Reference Information

L2412344 CONT'D....
Job Reference: 1-19-0603-42
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Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference**
F1-F4-511-CALC-WT	Soil	F1-F4 Hydrocarbon Calculated Parameters	CCME CWS-PHC, Pub #1310, Dec 2001-S

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

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

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-sq 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-sq: Gravimetric Heavy Hydrocarbons (F4G) after silica gel treatment.
- 6. Where both F4 (C34-C50) and F4G-sq 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 200.2/6020A (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

Reference Information

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Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

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 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).

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

WT ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

Reference Information

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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.



Workorder: L2412344 Report Date: 06-FEB-20 Page 1 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test		Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT		Soil							
Batch R4	989388								
WG3268877-4 F1 (C6-C10)	DUP		WG3268877-3 35.6	34.5		ug/g	3.0	30	05-FEB-20
WG3268877-2 F1 (C6-C10)	LCS			99.0		%		80-120	05-FEB-20
WG3268877-1 F1 (C6-C10)	МВ			<5.0		ug/g		5	05-FEB-20
Surrogate: 3,4-D	Dichloroto	oluene		102.5		%		60-140	05-FEB-20
WG3268877-6 F1 (C6-C10)	MS		L2412336-3	88.7		%		60-140	05-FEB-20
F2-F4-511-WT		Soil							
Batch R4	990954								
WG3268945-3	DUP		WG3268945-5	-10	DDD		N 1/A	00	05 FED 05
F2 (C16 C34)			<10 -E0	<10	RPD-NA	ug/g	N/A	30	05-FEB-20
F3 (C16-C34)			<50 <50	<50	RPD-NA	ug/g	N/A	30	05-FEB-20
F4 (C34-C50) WG3268945-2	LCS		<50	<50	RPD-NA	ug/g	N/A	30	05-FEB-20
F2 (C10-C16)				108.3		%		80-120	05-FEB-20
F3 (C16-C34)				109.4		%		80-120	05-FEB-20
F4 (C34-C50)				109.0		%		80-120	05-FEB-20
WG3268945-1 F2 (C10-C16)	MB			<10		ug/g		10	05-FEB-20
F3 (C16-C34)				<50		ug/g		50	05-FEB-20
F4 (C34-C50)				<50		ug/g		50	05-FEB-20
Surrogate: 2-Bro	omobenz	otrifluoride		76.2		%		60-140	05-FEB-20
WG3268945-4 F2 (C10-C16)	MS		WG3268945-5	105.5		%		60.140	05 FFD 22
F3 (C16-C34)				105.5		%		60-140 60-140	05-FEB-20 05-FEB-20
F4 (C34-C50)				106.2		%		60-140	05-FEB-20 05-FEB-20
	Α/T	Cail		100.0		, •		00-1 4 0	00-1 LD-20
MET-200.2-CCMS-\		Soil							
Batch R49 WG3269606-2	990303 CRM		WT-CANMET-1	ΓILL2					
Antimony (Sb)	J. 1.11		CAMBEL	88.0		%		70-130	05-FEB-20
Arsenic (As)				96.8		%		70-130	05-FEB-20
Barium (Ba)				100.3		%		70-130	05-FEB-20
Beryllium (Be)				91.1		%		70-130	05-FEB-20
Boron (B)				3.1		mg/kg		0-8.6	05-FEB-20



Workorder: L2412344 Report Date: 06-FEB-20 Page 2 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	Soil							
Batch R499030	3							
WG3269606-2 CRM	I	WT-CANMET						
Cadmium (Cd)			88.7		%		70-130	05-FEB-20
Chromium (Cr)			97.1		%		70-130	05-FEB-20
Cobalt (Co)			95.4		%		70-130	05-FEB-20
Copper (Cu)			98.0		%		70-130	05-FEB-20
Lead (Pb)			95.0		%		70-130	05-FEB-20
Molybdenum (Mo)			93.8		%		70-130	05-FEB-20
Nickel (Ni)			97.3		%		70-130	05-FEB-20
Selenium (Se)			0.33		mg/kg		0.15-0.55	05-FEB-20
Silver (Ag)			0.24		mg/kg		0.16-0.36	05-FEB-20
Thallium (TI)			93.9		%		70-130	05-FEB-20
Uranium (U)			92.8		%		70-130	05-FEB-20
Vanadium (V)			96.5		%		70-130	05-FEB-20
Zinc (Zn)			91.5		%		70-130	05-FEB-20
WG3269606-6 DUP		WG3269606-						
Antimony (Sb)		0.39	0.38		ug/g	3.2	30	05-FEB-20
Arsenic (As)		5.22	5.35		ug/g	2.5	30	05-FEB-20
Barium (Ba)		115	117		ug/g	1.9	40	05-FEB-20
Beryllium (Be)		0.72	0.73		ug/g	0.9	30	05-FEB-20
Boron (B)		13.1	13.9		ug/g	6.1	30	05-FEB-20
Cadmium (Cd)		0.374	0.500		ug/g	29	30	05-FEB-20
Chromium (Cr)		25.4	26.1		ug/g	2.6	30	05-FEB-20
Cobalt (Co)		9.48	9.81		ug/g	3.4	30	05-FEB-20
Copper (Cu)		28.5	29.1		ug/g	2.2	30	05-FEB-20
Lead (Pb)		45.8	48.0		ug/g	4.6	40	05-FEB-20
Molybdenum (Mo)		0.76	0.79		ug/g	3.8	40	05-FEB-20
Nickel (Ni)		21.7	22.6		ug/g	3.9	30	05-FEB-20
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	05-FEB-20
Silver (Ag)		0.12	0.13		ug/g	2.6	40	05-FEB-20
Thallium (TI)		0.135	0.135		ug/g	0.6	30	05-FEB-20
Uranium (U)		0.672	0.696		ug/g	3.5	30	05-FEB-20
Vanadium (V)		31.0	32.2		ug/g	3.5	30	05-FEB-20
Zinc (Zn)		133	168		ug/g	23	30	05-FEB-20
WG3269606-4 LCS								

WG3269606-4 LCS



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	Soil							
Batch R4990303								
WG3269606-4 LCS			400.4		0/			
Antimony (Sb)			100.1		%		80-120	05-FEB-20
Arsenic (As)			97.0		%		80-120	05-FEB-20
Barium (Ba)			101.9		%		80-120	05-FEB-20
Beryllium (Be)			94.2		%		80-120	05-FEB-20
Boron (B)			93.2		%		80-120	05-FEB-20
Cadmium (Cd)			91.7		%		80-120	05-FEB-20
Chromium (Cr)			98.8		%		80-120	05-FEB-20
Cobalt (Co)			97.2		%		80-120	05-FEB-20
Copper (Cu)			96.0		%		80-120	05-FEB-20
Lead (Pb)			95.2		%		80-120	05-FEB-20
Molybdenum (Mo)			101.4		%		80-120	05-FEB-20
Nickel (Ni)			96.8		%		80-120	05-FEB-20
Selenium (Se)			94.2		%		80-120	05-FEB-20
Silver (Ag)			95.2		%		80-120	05-FEB-20
Thallium (TI)			96.9		%		80-120	05-FEB-20
Uranium (U)			92.0		%		80-120	05-FEB-20
Vanadium (V)			100.9		%		80-120	05-FEB-20
Zinc (Zn)			93.2		%		80-120	05-FEB-20
WG3269606-1 MB			0.40				0.4	
Antimony (Sb)			<0.10		mg/kg		0.1	05-FEB-20
Arsenic (As)			<0.10		mg/kg		0.1	05-FEB-20
Barium (Ba)			<0.50		mg/kg		0.5	05-FEB-20
Beryllium (Be)			<0.10		mg/kg		0.1	05-FEB-20
Boron (B)			<5.0		mg/kg		5	05-FEB-20
Cadmium (Cd)			<0.020		mg/kg		0.02	05-FEB-20
Chromium (Cr)			<0.50		mg/kg		0.5	05-FEB-20
Cobalt (Co)			<0.10		mg/kg		0.1	05-FEB-20
Copper (Cu)			<0.50		mg/kg		0.5	05-FEB-20
Lead (Pb)			<0.50		mg/kg		0.5	05-FEB-20
Molybdenum (Mo)			<0.10		mg/kg		0.1	05-FEB-20
Nickel (Ni)			<0.50		mg/kg		0.5	05-FEB-20
Selenium (Se)			<0.20		mg/kg		0.2	05-FEB-20
Silver (Ag)			<0.10		mg/kg		0.1	05-FEB-20
Thallium (TI)			<0.050		mg/kg		0.05	05-FEB-20



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	Soil							
Batch R4990303								
WG3269606-1 MB			-0.0E0		ma/ka		0.05	05 FED 00
Uranium (U) Vanadium (V)			<0.050 <0.20		mg/kg mg/kg		0.03	05-FEB-20 05-FEB-20
Zinc (Zn)			<2.0		mg/kg		2	05-FEB-20 05-FEB-20
			\2.0		mg/kg		۷	03-FEB-20
MOISTURE-WT	Soil							
Batch R4988087 WG3268987-3 DUP		L2412347-7						
% Moisture		22.6	22.0		%	2.8	20	04-FEB-20
WG3268987-2 LCS								
% Moisture			100.6		%		90-110	04-FEB-20
WG3268987-1 MB % Moisture			<0.25		%		0.25	04-FEB-20
			<0.23		70		0.23	04-FEB-20
PAH-511-WT	Soil							
Batch R4990130 WG3268303-3 DUP		WG3268303-5						
1-Methylnaphthalene		< 0.030	<0.030	RPD-NA	ug/g	N/A	40	05-FEB-20
2-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	05-FEB-20
Acenaphthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
Acenaphthylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
Anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
Benzo(a)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
Benzo(a)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
Benzo(b)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
Benzo(g,h,i)perylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
Benzo(k)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
Chrysene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
Dibenzo(ah)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
Fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
Fluorene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
Indeno(1,2,3-cd)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
Naphthalene		<0.013	<0.013	RPD-NA	ug/g	N/A	40	05-FEB-20
Phenanthrene		<0.046	<0.046	RPD-NA	ug/g	N/A	40	05-FEB-20
Pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
WG3268303-2 LCS 1-Methylnaphthalene			89.7		%		50-140	05-FEB-20



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Soil							
Batch R4990130								
WG3268303-2 LCS			05.0		0/			
2-Methylnaphthalene			85.3		%		50-140	05-FEB-20
Acenaphthene			90.3		%		50-140	05-FEB-20
Acenaphthylene			93.6		%		50-140	05-FEB-20
Anthracene			90.7		%		50-140	05-FEB-20
Benzo(a)anthracene			95.2		%		50-140	05-FEB-20
Benzo(a)pyrene			90.9		%		50-140	05-FEB-20
Benzo(b)fluoranthene			92.9		%		50-140	05-FEB-20
Benzo(g,h,i)perylene			92.5		%		50-140	05-FEB-20
Benzo(k)fluoranthene			88.0		%		50-140	05-FEB-20
Chrysene			98.3		%		50-140	05-FEB-20
Dibenzo(ah)anthracene			94.6		%		50-140	05-FEB-20
Fluoranthene			88.2		%		50-140	05-FEB-20
Fluorene			89.5		%		50-140	05-FEB-20
Indeno(1,2,3-cd)pyrene			101.9		%		50-140	05-FEB-20
Naphthalene			87.9		%		50-140	05-FEB-20
Phenanthrene			89.8		%		50-140	05-FEB-20
Pyrene			88.2		%		50-140	05-FEB-20
WG3268303-1 MB 1-Methylnaphthalene			<0.030		ug/g		0.03	05-FEB-20
2-Methylnaphthalene			< 0.030		ug/g		0.03	05-FEB-20
Acenaphthene			< 0.050		ug/g		0.05	05-FEB-20
Acenaphthylene			<0.050		ug/g		0.05	05-FEB-20
Anthracene			<0.050		ug/g		0.05	05-FEB-20
Benzo(a)anthracene			<0.050		ug/g		0.05	05-FEB-20
Benzo(a)pyrene			<0.050		ug/g		0.05	05-FEB-20
Benzo(b)fluoranthene			<0.050		ug/g		0.05	05-FEB-20
Benzo(g,h,i)perylene			<0.050		ug/g		0.05	05-FEB-20
Benzo(k)fluoranthene			<0.050		ug/g		0.05	05-FEB-20
Chrysene			<0.050		ug/g		0.05	05-FEB-20
Dibenzo(ah)anthracene			<0.050		ug/g		0.05	05-FEB-20
Fluoranthene			<0.050		ug/g		0.05	05-FEB-20
Fluorene			<0.050		ug/g		0.05	05-FEB-20
Indeno(1,2,3-cd)pyrene			< 0.050		ug/g		0.05	05-FEB-20
Naphthalene			<0.013		ug/g		0.013	05-FEB-20



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TERRAPROBE-BRAMPTON Client:

11 Indell Lane

Brampton ON L6T 3Y3

Kossay Makhzoumi Contact:

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Soil							
Batch R4990130								
WG3268303-1 MB Phenanthrene			<0.046		ug/g		0.046	05-FEB-20
Pyrene			<0.050		ug/g		0.05	05-FEB-20
Surrogate: 2-Fluorobiph	envl		89.1		%		50-140	05-FEB-20
Surrogate: p-Terphenyl	-		90.1		%		50-140	05-FEB-20
WG3268303-4 MS		WG3268303-5						
1-Methylnaphthalene			90.8		%		50-140	05-FEB-20
2-Methylnaphthalene			86.2		%		50-140	05-FEB-20
Acenaphthene			95.3		%		50-140	05-FEB-20
Acenaphthylene			95.9		%		50-140	05-FEB-20
Anthracene			95.4		%		50-140	05-FEB-20
Benzo(a)anthracene			100.7		%		50-140	05-FEB-20
Benzo(a)pyrene			96.7		%		50-140	05-FEB-20
Benzo(b)fluoranthene			98.8		%		50-140	05-FEB-20
Benzo(g,h,i)perylene			97.2		%		50-140	05-FEB-20
Benzo(k)fluoranthene			94.8		%		50-140	05-FEB-20
Chrysene			103.8		%		50-140	05-FEB-20
Dibenzo(ah)anthracene			100.8		%		50-140	05-FEB-20
Fluoranthene			93.7		%		50-140	05-FEB-20
Fluorene			94.2		%		50-140	05-FEB-20
Indeno(1,2,3-cd)pyrene			107.8		%		50-140	05-FEB-20
Naphthalene			89.6		%		50-140	05-FEB-20
Phenanthrene			93.6		%		50-140	05-FEB-20
Pyrene			93.3		%		50-140	05-FEB-20
PCB-511-WT	Soil							
Batch R4990759								
WG3268303-3 DUP Aroclor 1242		WG3268303-5 < 0.010	<0.010		ua/a	NI/A	40	00 FFD 00
				RPD-NA	ug/g	N/A	40	06-FEB-20
Aroclor 1248 Aroclor 1254		<0.010	<0.010	RPD-NA	ug/g	N/A	40	06-FEB-20
		<0.010	<0.010	RPD-NA	ug/g	N/A	40	06-FEB-20
Aroclor 1260		<0.010	<0.010	RPD-NA	ug/g	N/A	40	06-FEB-20
WG3268303-2 LCS Aroclor 1242			93.7		%		60-140	06-FEB-20
Aroclor 1248			96.0		%		60-140	06-FEB-20
Aroclor 1254			94.5		%		60-140	06-FEB-20



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB-511-WT	Soil							
Batch R4990759								
WG3268303-2 LCS Aroclor 1260			104.2		%		60-140	06-FEB-20
WG3268303-1 MB Aroclor 1242			<0.010		ug/g		0.01	06-FEB-20
Aroclor 1248			<0.010		ug/g		0.01	06-FEB-20
Aroclor 1254			<0.010		ug/g		0.01	06-FEB-20
Aroclor 1260			<0.010		ug/g		0.01	06-FEB-20
Surrogate: d14-Terphen	yl		97.9		%		60-140	06-FEB-20
WG3268303-4 MS Aroclor 1242		WG3268303-5	99.1		%		60-140	06-FEB-20
Aroclor 1254			104.2		%		60-140	06-FEB-20
Aroclor 1260			115.2		%		60-140	06-FEB-20
PH-WT	Soil						00 1 10	00 1 25 20
Batch R4988650								
WG3268276-1 DUP pH		L2412028-1 7.83	7.81	J	pH units	0.02	0.3	04-FEB-20
WG3268751-1 LCS pH			6.99		pH units		6.9-7.1	04-FEB-20
Batch R4988652		1 0 4 4 0 0 4 7 0						
WG3268996-1 DUP pH		L2412347-2 7.95	8.01	J	pH units	0.06	0.3	04-FEB-20
WG3269371-1 LCS pH			7.00		pH units		6.9-7.1	04-FEB-20
VOC-511-HS-WT	Soil							
Batch R4989388								
WG3268877-4 DUP 1,1,1,2-Tetrachloroethar	ne	WG3268877-3 <0.050	<0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
1,1,2,2-Tetrachloroethar	ne	0.437	0.382		ug/g	14	40	05-FEB-20
1,1,1-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
1,1,2-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
1,1-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
1,1-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
1,2-Dibromoethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
1,2-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
1,2-Dichloroethane		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
1,2-Dichloropropane		<0.050	<0.050					



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R4989388								
WG3268877-4 DUP 1,2-Dichloropropane		WG3268877- <0.050	3 <0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
1,3-Dichlorobenzene		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
1,4-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
Acetone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	05-FEB-20
Benzene		0.611	0.604		ug/g	1.1	40	05-FEB-20
Bromodichloromethane		<0.10	<0.10	RPD-NA	ug/g	N/A	40	05-FEB-20
Bromoform		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
Bromomethane		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
Carbon tetrachloride		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
Chlorobenzene		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
Chloroform		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
cis-1,2-Dichloroethylene		0.061	0.058		ug/g	3.8	40	05-FEB-20
cis-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	05-FEB-20
Dibromochloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
Dichlorodifluoromethane)	<0.050	< 0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
Ethylbenzene		0.201	0.198		ug/g	1.6	40	05-FEB-20
n-Hexane		0.096	0.096		ug/g	0.5	40	05-FEB-20
Methylene Chloride		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
MTBE		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
m+p-Xylenes		0.543	0.537		ug/g	1.0	40	05-FEB-20
Methyl Ethyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	05-FEB-20
Methyl Isobutyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	05-FEB-20
o-Xylene		0.166	0.163		ug/g	1.9	40	05-FEB-20
Styrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
Tetrachloroethylene		0.053	0.052		ug/g	0.9	40	05-FEB-20
Toluene		0.258	0.256		ug/g	1.1	40	05-FEB-20
trans-1,2-Dichloroethyle	ne	<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
trans-1,3-Dichloroproper	ne	<0.030	<0.030	RPD-NA	ug/g	N/A	40	05-FEB-20
Trichloroethylene		0.056	0.057		ug/g	2.4	40	05-FEB-20
Trichlorofluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-FEB-20
Vinyl chloride		0.052	0.052		ug/g	0.9	40	06-FEB-20
WG3268877-2 LCS 1,1,1,2-Tetrachloroethar	ne		102.7		%		60-130	05-FEB-20



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R4989388	3							
WG3268877-2 LCS			404.0		0/		00.400	
1,1,2,2-Tetrachloroetha	ane		101.8		%		60-130	05-FEB-20
1,1,1-Trichloroethane			106.5		%		60-130	05-FEB-20
1,1,2-Trichloroethane			104.7		%		60-130	05-FEB-20
1,1-Dichloroethane			114.5		%		60-130	05-FEB-20
1,1-Dichloroethylene			106.8		%		60-130	05-FEB-20
1,2-Dibromoethane			102.2		%		70-130	05-FEB-20
1,2-Dichlorobenzene			103.1		%		70-130	05-FEB-20
1,2-Dichloroethane			105.7		%		60-130	05-FEB-20
1,2-Dichloropropane			111.0		%		70-130	05-FEB-20
1,3-Dichlorobenzene			105.6		%		70-130	05-FEB-20
1,4-Dichlorobenzene			105.0		%		70-130	05-FEB-20
Acetone			105.6		%		60-140	05-FEB-20
Benzene			112.6		%		70-130	05-FEB-20
Bromodichloromethane)		106.4		%		50-140	05-FEB-20
Bromoform			95.1		%		70-130	05-FEB-20
Bromomethane			103.0		%		50-140	05-FEB-20
Carbon tetrachloride			106.7		%		70-130	05-FEB-20
Chlorobenzene			104.4		%		70-130	05-FEB-20
Chloroform			109.3		%		70-130	05-FEB-20
cis-1,2-Dichloroethylen	е		106.4		%		70-130	05-FEB-20
cis-1,3-Dichloropropend	е		110.1		%		70-130	05-FEB-20
Dibromochloromethane	e		100.6		%		60-130	05-FEB-20
Dichlorodifluoromethan	ie		101.7		%		50-140	05-FEB-20
Ethylbenzene			107.9		%		70-130	05-FEB-20
n-Hexane			108.8		%		70-130	05-FEB-20
Methylene Chloride			110.5		%		70-130	05-FEB-20
MTBE			105.0		%		70-130	05-FEB-20
m+p-Xylenes			104.2		%		70-130	05-FEB-20
Methyl Ethyl Ketone			105.9		%		60-140	05-FEB-20
Methyl Isobutyl Ketone			100.7		%		60-140	05-FEB-20
o-Xylene			103.0		%		70-130	05-FEB-20
Styrene			100.4		%		70-130	05-FEB-20
Tetrachloroethylene			107.9		%		60-130	05-FEB-20
								-



Workorder: L2412344 Report Date: 06-FEB-20 Page 10 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R498938	88							
WG3268877-2 LCS	;		100 7		0/			
Toluene	4		109.7		%		70-130	05-FEB-20
trans-1,2-Dichloroethy			110.9		%		60-130	05-FEB-20
trans-1,3-Dichloroprop	oene		109.7		%		70-130	05-FEB-20
Trichloroethylene			106.4		%		60-130	05-FEB-20
Trichlorofluoromethan	ie		108.1		%		50-140	05-FEB-20
Vinyl chloride			119.3		%		60-140	05-FEB-20
WG3268877-1 MB 1,1,1,2-Tetrachloroeth	nane		<0.050		ug/g		0.05	05-FEB-20
1,1,2,2-Tetrachloroeth	nane		<0.050		ug/g		0.05	05-FEB-20
1,1,1-Trichloroethane			<0.050		ug/g		0.05	05-FEB-20
1,1,2-Trichloroethane			< 0.050		ug/g		0.05	05-FEB-20
1,1-Dichloroethane			<0.050		ug/g		0.05	05-FEB-20
1,1-Dichloroethylene			<0.050		ug/g		0.05	05-FEB-20
1,2-Dibromoethane			<0.050		ug/g		0.05	05-FEB-20
1,2-Dichlorobenzene			<0.050		ug/g		0.05	05-FEB-20
1,2-Dichloroethane			<0.050		ug/g		0.05	05-FEB-20
1,2-Dichloropropane			< 0.050		ug/g		0.05	05-FEB-20
1,3-Dichlorobenzene			<0.050		ug/g		0.05	05-FEB-20
1,4-Dichlorobenzene			<0.050		ug/g		0.05	05-FEB-20
Acetone			<0.50		ug/g		0.5	05-FEB-20
Benzene			<0.0068		ug/g		0.0068	05-FEB-20
Bromodichloromethar	ne		<0.050		ug/g		0.05	05-FEB-20
Bromoform			<0.050		ug/g		0.05	05-FEB-20
Bromomethane			<0.050		ug/g		0.05	05-FEB-20
Carbon tetrachloride			<0.050		ug/g		0.05	05-FEB-20
Chlorobenzene			<0.050		ug/g		0.05	05-FEB-20
Chloroform			<0.050		ug/g		0.05	05-FEB-20
cis-1,2-Dichloroethyle	ne		<0.050		ug/g		0.05	05-FEB-20
cis-1,3-Dichloroprope	ne		<0.030		ug/g		0.03	05-FEB-20
Dibromochloromethar	ne		<0.050		ug/g		0.05	05-FEB-20
Dichlorodifluorometha	ne		<0.050		ug/g		0.05	05-FEB-20
Ethylbenzene			<0.018		ug/g		0.018	05-FEB-20
n-Hexane			<0.050		ug/g		0.05	05-FEB-20
Methylene Chloride			<0.050		ug/g		0.05	05-FEB-20



Workorder: L2412344 Report Date: 06-FEB-20 Page 11 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R498938	38							
WG3268877-1 MB MTBE			<0.050		ug/g		0.05	05-FEB-20
m+p-Xylenes			<0.030		ug/g		0.03	05-FEB-20
Methyl Ethyl Ketone			<0.50		ug/g		0.5	05-FEB-20
Methyl Isobutyl Keton	е		<0.50		ug/g		0.5	05-FEB-20
o-Xylene			<0.020		ug/g		0.02	05-FEB-20
Styrene			<0.050		ug/g		0.05	05-FEB-20
Tetrachloroethylene			<0.050		ug/g		0.05	05-FEB-20
Toluene			<0.080		ug/g		80.0	05-FEB-20
trans-1,2-Dichloroethy	ylene		< 0.050		ug/g		0.05	05-FEB-20
trans-1,3-Dichloropro	pene		<0.030		ug/g		0.03	05-FEB-20
Trichloroethylene			<0.010		ug/g		0.01	05-FEB-20
Trichlorofluoromethar	ne		< 0.050		ug/g		0.05	05-FEB-20
Vinyl chloride			<0.020		ug/g		0.02	05-FEB-20
Surrogate: 1,4-Difluor	obenzene		114.9		%		50-140	05-FEB-20
Surrogate: 4-Bromofle	uorobenzene		96.9		%		50-140	05-FEB-20
WG3268877-5 MS		L2412336-1						
1,1,1,2-Tetrachloroetl			100.3		%		50-140	05-FEB-20
1,1,2,2-Tetrachloroetl			114.6		%		50-140	05-FEB-20
1,1,1-Trichloroethane			104.6		%		50-140	05-FEB-20
1,1,2-Trichloroethane			102.7		%		50-140	05-FEB-20
1,1-Dichloroethane			110.0		%		50-140	05-FEB-20
1,1-Dichloroethylene			105.0		%		50-140	05-FEB-20
1,2-Dibromoethane			98.4		%		50-140	05-FEB-20
1,2-Dichlorobenzene			76.4		%		50-140	06-FEB-20
1,2-Dichloroethane			101.8		%		50-140	05-FEB-20
1,2-Dichloropropane			107.7		%		50-140	05-FEB-20
1,3-Dichlorobenzene			75.3		%		50-140	06-FEB-20
1,4-Dichlorobenzene			75.6		%		50-140	06-FEB-20
Acetone			109.5		%		50-140	05-FEB-20
Benzene			117.0		%		50-140	05-FEB-20
Bromodichloromethan	ne		105.2		%		50-140	05-FEB-20
Bromoform			90.4		%		50-140	05-FEB-20
Bromomethane			99.6		%		50-140	05-FEB-20
Carbon tetrachloride			104.5		%		50-140	05-FEB-20



Workorder: L2412344 Report Date: 06-FEB-20 Page 12 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

est	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R4989388								
WG3268877-5 MS		L2412336-1						
Chlorobenzene			101.6		%		50-140	05-FEB-20
Chloroform			107.0		%		50-140	05-FEB-20
cis-1,2-Dichloroethylene			104.5		%		50-140	05-FEB-20
cis-1,3-Dichloropropene			103.6		%		50-140	05-FEB-20
Dibromochloromethane			98.3		%		50-140	05-FEB-20
Dichlorodifluoromethane)		103.9		%		50-140	05-FEB-20
Ethylbenzene			108.8		%		50-140	05-FEB-20
n-Hexane			105.3		%		50-140	05-FEB-20
Methylene Chloride			108.3		%		50-140	05-FEB-20
MTBE			103.6		%		50-140	05-FEB-20
m+p-Xylenes			106.5		%		50-140	05-FEB-20
Methyl Ethyl Ketone			107.2		%		50-140	05-FEB-20
Methyl Isobutyl Ketone			94.5		%		50-140	05-FEB-20
o-Xylene			103.0		%		50-140	05-FEB-20
Styrene			95.2		%		50-140	05-FEB-20
Tetrachloroethylene			106.4		%		50-140	05-FEB-20
Toluene			113.3		%		50-140	05-FEB-20
trans-1,2-Dichloroethyle	ne		108.2		%		50-140	05-FEB-20
trans-1,3-Dichloroproper	ne		105.5		%		50-140	05-FEB-20
Trichloroethylene			104.7		%		50-140	05-FEB-20
Trichlorofluoromethane			107.8		%		50-140	05-FEB-20
Vinyl chloride			118.9		%		50-140	05-FEB-20

Workorder: L2412344 Report Date: 06-FEB-20

Client: TERRAPROBE-BRAMPTON Page 13 of 13

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

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.

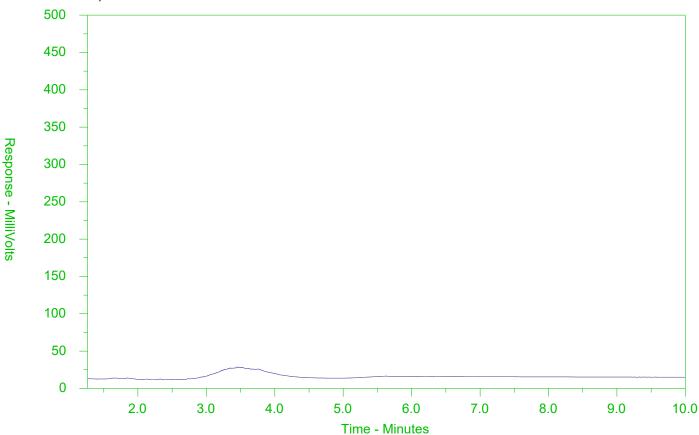
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined data quality objectives to provide 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: L2412344-2 Client Sample ID: BH1-SS2



← -F2-	→-	_F3 → F4-	→	
nC10	nC16	nC34	nC50	
174°C	287°C	481°C	575°C	
346°F	549°F	898°F	1067°F	
Gasolin	ie →	← Mo	tor 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.

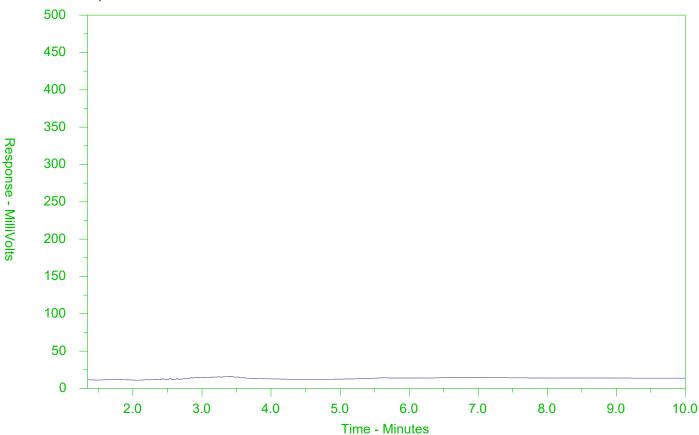
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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: L2412344-4 Client Sample ID: BH1-SS7



← -F2-	→←	_F3F4-	→							
nC10	nC16	nC34	nC50							
174°C	287°C	481°C	575°C							
346°F	549°F	898°F	1067°F							
Gasolin	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 Environmenta

Chain of Custody (COC) / Analytical Request Form

L2412344-COFC

COC Number: 15 -

1 of

Canada Toll Free: 1 800 668 9878

	www.aisglobal.com												_								
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Street: 11 Indell Lane				Email 1 or Fax kmakhzoumi@terraprobe.ca					Date and Time Required for all E&P TATs:												
City/Province: Brampton				Email 2				For tes	or tests that can not be performed according to the service level selected, you will be contacted.												
Postal Code:	L6T 3Y3			Email 3					Analysis Request												
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Company:	Terraprobe			Email 1 or Fax	lrossi@terraprobe.c	a														ı	
Contact:	Lorena Rossi			Email 2															1		δ
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	-	system?				_			acks			ubes	LAU	Custody seal intact Yes No							
YES NO		MECP T3 RPI				Cool	Cooling Initiated				EDATURES OF I				FINAL COOLER TEMPERATURE				JRES °C		
Are samples for human drinking water use?						INIITIAL COOLER TEMPERATURES 9						11 C									
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TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 13-JAN-20

Report Date: 20-JAN-20 11:05 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2404777

Project P.O. #: NOT SUBMITTED

Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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L2404777 CONT'D....

Job Reference: 1-19-0603-42

PAGE 2 of 16

20-JAN-20 11:05 (MT)

Summary of Guideline Exceedances

Guideline						
ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit
Ontario Reg	gulation 153/04 - April 1	15, 2011 Standards - T3-Soil-Res/Park/Ir	st. Property Use (Coarse)			
L2404777-1	BH2-SS2	Physical Tests	Conductivity	1.56	0.7	mS/cm
		Saturated Paste Extractables	SAR	7.85	5	SAR
Ontario Reg	gulation 153/04 - April 1	l5, 2011 Standards - T3-Soil-Res/Park/Ir	st. Property Use (Fine)			
L2404777-1	BH2-SS2	Physical Tests	Conductivity	1.56	0.7	mS/cm
		Saturated Paste Extractables	SAR	7.85	5	SAR



L2404777 CONT'D....

Job Reference: 1-19-0603-42

PAGE 3 of 16

20-JAN-20 11:05 (MT)

Physical Tests - SOIL

,								
		I	_ab ID	L2404777-1	L2404777-2	L2404777-3	L2404777-4	L2404777-5
	(Sample	e Date	07-JAN-20	07-JAN-20	07-JAN-20	07-JAN-20	07-JAN-20
		Sam	ple ID	BH2-SS2	BH2-SS3A	BH2-SS3B	BH2-SS5	BH2-SS6
	(Guide	Limits					
Analyte	Unit	#1	#2					
Conductivity	mS/cm	0.7	0.7	1.56			0.366	
% Moisture	%	-	-	14.3	13.8	10.2	7.67	7.72
рН	pH units	-	-	7.40			7.88	

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

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

Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.



L2404777 CONT'D....

Job Reference: 1-19-0603-42

PAGE 4 of 16

20-JAN-20 11:05 (MT)

Cyanides - SOIL

	L	_ab ID	L2404777-1	L2404777-4
	Sample	e Date	07-JAN-20	07-JAN-20
	Sam	ple ID	BH2-SS2	BH2-SS5
	Guida	l imite		
Unit	#1	#2		
	Unit	Sample Sam Guide	Lab ID Sample Date Sample ID Guide Limits Unit #1 #2	Sample Date 07-JAN-20 Sample ID BH2-SS2 Guide Limits

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



L2404777 CONT'D....

Job Reference: 1-19-0603-42

PAGE 5 of 16

20-JAN-20 11:05 (MT)

Saturated Paste Extractables - SOIL

					
			Lab ID	L2404777-1	L2404777-4
		Sampl	e Date	07-JAN-20	07-JAN-20
		San	nple ID	BH2-SS2	BH2-SS5
Analyte	Unit	Guide #1	Limits #2		
SAR	SAR	5	5	7.85	4.64
Calcium (Ca)	mg/L	-	-	50.7	7.95
Magnesium (Mg)	mg/L	-	-	10.5	1.95
Sodium (Na)	mg/L	_	-	235	56.3

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



L2404777 CONT'D....

Job Reference: 1-19-0603-42

PAGE 6 of 16

20-JAN-20 11:05 (MT)

Metals - SOIL

		Sample	Lab ID e Date iple ID	L2404777-1 07-JAN-20 BH2-SS2	L2404777-4 07-JAN-20 BH2-SS5	
Analyte	Unit	Guide #1	Limits #2			
Antimony (Sb)	ug/g	7.5	7.5	<1.0	<1.0	
Arsenic (As)	ug/g	18	18	2.4	1.2	
Barium (Ba)	ug/g	390	390	59.5	40.1	
Beryllium (Be)	ug/g	4	5	<0.50	<0.50	
Boron (B)	ug/g	120	120	5.4	<5.0	
Boron (B), Hot Water Ext.	ug/g	1.5	1.5	0.28	<0.10	
Cadmium (Cd)	ug/g	1.2	1.2	<0.50	<0.50	
Chromium (Cr)	ug/g	160	160	16.5	10.0	
Cobalt (Co)	ug/g	22	22	5.0	3.1	
Copper (Cu)	ug/g	140	180	10.1	5.8	
Lead (Pb)	ug/g	120	120	5.7	3.0	
Mercury (Hg)	ug/g	0.27	1.8	0.0263	<0.0050	
Molybdenum (Mo)	ug/g	6.9	6.9	<1.0	<1.0	
Nickel (Ni)	ug/g	100	130	10.8	6.0	
Selenium (Se)	ug/g	2.4	2.4	<1.0	<1.0	
Silver (Ag)	ug/g	20	25	<0.20	<0.20	
Thallium (TI)	ug/g	1	1	<0.50	<0.50	
Uranium (U)	ug/g	23	23	<1.0	<1.0	
Vanadium (V)	ug/g	86	86	30.7	20.3	
Zinc (Zn)	ug/g	340	340	25.9	16.0	

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



L2404777 CONT'D....

Job Reference: 1-19-0603-42

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Speciated Metals - SOIL

			Lab ID	L2404777-1	L2404777-4
		Sampl	e Date	07-JAN-20	07-JAN-20
		San	iple ID	BH2-SS2	BH2-SS5
Analyte	Unit	Guide #1	Limits #2		

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



L2404777 CONT'D....

Job Reference: 1-19-0603-42

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Volatile Organic Compounds - SOIL

			Lab ID	L2404777-3	L2404777-5
		Sample	e Date	07-JAN-20	07-JAN-20
		Sample ID		BH2-SS3B	BH2-SS6
		Guide	l imits		
Analyte	Unit	#1	#2		
Acetone	ug/g	16	28	<0.50	<0.50
Benzene	ug/g	0.21	0.17	<0.0068	<0.0068
Bromodichloromethane	ug/g	13	13	<0.050	<0.050
Bromoform	ug/g	0.27	0.26	<0.050	<0.050
Bromomethane	ug/g	0.05	0.05	<0.050	<0.050
Carbon tetrachloride	ug/g	0.05	0.12	<0.050	<0.050
Chlorobenzene	ug/g	2.4	2.7	<0.050	<0.050
Dibromochloromethane	ug/g	9.4	9.4	<0.050	<0.050
Chloroform	ug/g	0.05	0.18	<0.050	<0.050
1,2-Dibromoethane	ug/g	0.05	0.05	<0.050	<0.050
1,2-Dichlorobenzene	ug/g	3.4	4.3	<0.050	<0.050
1,3-Dichlorobenzene	ug/g	4.8	6	<0.050	<0.050
1,4-Dichlorobenzene	ug/g	0.083	0.097	<0.050	<0.050
Dichlorodifluoromethane	ug/g	16	25	<0.050	<0.050
1,1-Dichloroethane	ug/g	3.5	11	< 0.050	<0.050
1,2-Dichloroethane	ug/g	0.05	0.05	<0.050	<0.050
1,1-Dichloroethylene	ug/g	0.05	0.05	< 0.050	<0.050
cis-1,2-Dichloroethylene	ug/g	3.4	30	<0.050	<0.050
trans-1,2-Dichloroethylene	ug/g	0.084	0.75	< 0.050	<0.050
Methylene Chloride	ug/g	0.1	0.96	<0.050	<0.050
1,2-Dichloropropane	ug/g	0.05	0.085	<0.050	<0.050
cis-1,3-Dichloropropene	ug/g	-	-	< 0.030	<0.030
trans-1,3-Dichloropropene	ug/g	-	-	<0.030	<0.030
1,3-Dichloropropene (cis & trans)	ug/g	0.05	0.083	<0.042	<0.042
Ethylbenzene	ug/g	2	15	<0.018	<0.018
n-Hexane	ug/g	2.8	34	<0.050	<0.050
Methyl Ethyl Ketone	ug/g	16	44	<0.50	<0.50
Methyl Isobutyl Ketone	ug/g	1.7	4.3	<0.50	<0.50
MTBE	ug/g	0.75	1.4	<0.050	<0.050
Styrene	ug/g	0.7	2.2	<0.050	< 0.050

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



L2404777 CONT'D....

Job Reference: 1-19-0603-42

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Volatile Organic Compounds - SOIL

		ı	_ab ID	L2404777-3	L2404777-5
		Sample		07-JAN-20	07-JAN-20
			ple ID	BH2-SS3B	BH2-SS6
Analyte	Unit	Guide #1	Limits #2		
1,1,1,2-Tetrachloroethane	ug/g	0.058	0.05	<0.050	<0.050
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.050	< 0.050
Tetrachloroethylene	ug/g	0.28	2.3	<0.050	< 0.050
Toluene	ug/g	2.3	6	<0.080	<0.080
1,1,1-Trichloroethane	ug/g	0.38	3.4	<0.050	< 0.050
1,1,2-Trichloroethane	ug/g	0.05	0.05	<0.050	< 0.050
Trichloroethylene	ug/g	0.061	0.52	<0.010	<0.010
Trichlorofluoromethane	ug/g	4	5.8	<0.050	< 0.050
Vinyl chloride	ug/g	0.02	0.022	<0.020	<0.020
o-Xylene	ug/g	-	-	<0.020	<0.020
m+p-Xylenes	ug/g	-	-	<0.030	< 0.030
Xylenes (Total)	ug/g	3.1	25	<0.050	< 0.050
Surrogate: 4-Bromofluorobenzene	%	-	-	97.1	89.1
Surrogate: 1,4-Difluorobenzene	%	-	-	107.4	99.5

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



L2404777 CONT'D....

Job Reference: 1-19-0603-42

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Hydrocarbons - SOIL

		I	Lab ID	L2404777-3	L2404777-5
		Sample	07-JAN-20	07-JAN-20	
		Sam	ple ID	BH2-SS3B	BH2-SS6
			Limits		
Analyte	Unit	#1	#2		
F1 (C6-C10)	ug/g	55	65	<5.0	<5.0
F1-BTEX	ug/g	55	65	<5.0	<5.0
F2 (C10-C16)	ug/g	98	150	<10	<10
F3 (C16-C34)	ug/g	300	1300	<50	<50
F4 (C34-C50)	ug/g	2800	5600	<50	<50
Total Hydrocarbons (C6-C50)	ug/g	-	-	<72	<72
Chrom. to baseline at nC50		-	-	YES	YES
Surrogate: 2-Bromobenzotrifluoride	%	-	-	97.9	99.8
Surrogate: 3,4-Dichlorotoluene	%	-	-	77.9	72.2

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



L2404777 CONT'D.... Job Reference: 1-19-0603-42 PAGE 11 of 16 20-JAN-20 11:05 (MT)

Polycyclic Aromatic Hydrocarbons - SOIL								
			Lab ID	L2404777-2	L2404777-4			
		Sample	e Date	07-JAN-20	07-JAN-20			
		Sam	ple ID	BH2-SS3A	BH2-SS5			
		Guide	Limits					
Analyte	Unit	#1	#2					
Acenaphthene	ug/g	7.9	58	<0.050	<0.050			
Acenaphthylene	ug/g	0.15	0.17	<0.050	<0.050			
Anthracene	ug/g	0.67	0.74	0.091	<0.050			
Benzo(a)anthracene	ug/g	0.5	0.63	0.270	<0.050			
Benzo(a)pyrene	ug/g	0.3	0.3	0.219	<0.050			
Benzo(b)fluoranthene	ug/g	0.78	0.78	0.318	<0.050			
Benzo(g,h,i)perylene	ug/g	6.6	7.8	0.171	<0.050			
Benzo(k)fluoranthene	ug/g	0.78	0.78	0.088	<0.050			
Chrysene	ug/g	7	7.8	0.298	< 0.050			
Dibenzo(ah)anthracene	ug/g	0.1	0.1	<0.050	<0.050			
Fluoranthene	ug/g	0.69	0.69	0.677	<0.050			
Fluorene	ug/g	62	69	<0.050	<0.050			
Indeno(1,2,3-cd)pyrene	ug/g	0.38	0.48	0.148	<0.050			
1+2-Methylnaphthalenes	ug/g	0.99	3.4	<0.042	<0.042			
1-Methylnaphthalene	ug/g	0.99	3.4	<0.030	<0.030			
2-Methylnaphthalene	ug/g	0.99	3.4	<0.030	<0.030			
Naphthalene	ug/g	0.6	0.75	0.016	<0.013			
Phenanthrene	ug/g	6.2	7.8	0.441	<0.046			
Pyrene	ug/g	78	78	0.628	<0.050			
Surrogate: 2-Fluorobiphenyl	%	-	-	90.3	93.7			
Surrogate: p-Terphenyl d14	%	-	-	89.3	87.1			

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made. Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.



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Polychlorinated Biphenyls - SOIL

orycritorinated Diprierryis	00.2				
		l	_ab ID	L2404777-1	L2404777-4
		Sample	e Date	07-JAN-20	07-JAN-20
		Sam	ple ID	BH2-SS2	BH2-SS5
Analyte	Unit	Guide #1	Limits #2		
Aroclor 1242	ug/g	-		<0.010	<0.010
Aroclor 1248	ug/g	-	-	<0.010	<0.010
Aroclor 1254	ug/g	-	-	<0.010	<0.010
Aroclor 1260	ug/g	-	-	<0.010	<0.010
Total PCBs	ug/g	0.35	0.35	<0.020	<0.020
Surrogate: d14-Terphenyl	%	-	-	92.4	98.9

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

L2404777 CONT'D.... Job Reference: 1-19-0603-42 PAGE 13 of 16 20-JAN-20 11:05 (MT)

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).

CN-WAD-R511-WT Soil Cyanide (WAD)-O.Reg 153/04 (July MOE 3015/APHA 4500CN I-WAD

The sample is extracted with a strong base for 16 hours, and then filtrate is then distilled where the cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

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

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

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 CCME CWS-PHC, Pub #1310, Dec 2001-S

Parameters

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.

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Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference**
F1-HS-511-WT	Soil	F1-O Reg 153/04 (July 2011)	F3398/CCMF TIER 1-HS

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

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-sq 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-sq 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 200.2/6020A (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 AI, 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 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).

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Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

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 abou	ve test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:				
Laboratory Definition Code	Laboratory Location				
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA				

L2404777 CONT'D....
Job Reference: 1-19-0603-42
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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.



Workorder: L2404777 Report Date: 20-JAN-20 Page 1 of 15

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
B-HWS-R511-WT	Soil							
Batch R4967899 WG3257128-4 DUP Boron (B), Hot Water Ex	t.	L2404327-5 0.19	0.19		ug/g	2.3	30	14-JAN-20
WG3257128-2 IRM Boron (B), Hot Water Ex	t.	WT SAR3	88.2		%		70-130	14-JAN-20
WG3257128-3 LCS Boron (B), Hot Water Ex	t.		101.0		%		70-130	14-JAN-20
WG3257128-1 MB Boron (B), Hot Water Ex	t.		<0.10		ug/g		0.1	14-JAN-20
Batch R4972407 WG3258778-4 DUP Boron (B), Hot Water Ex	t.	L2405982-14 <0.10	0.11	RPD-NA	ug/g	N/A	30	17-JAN-20
WG3258778-2 IRM Boron (B), Hot Water Ex		WT SAR3	96.3		%		70-130	17-JAN-20
WG3258778-3 LCS Boron (B), Hot Water Ex	t.		97.5		%		70-130	17-JAN-20
WG3258778-1 MB Boron (B), Hot Water Ex	t.		<0.10		ug/g		0.1	17-JAN-20
CN-WAD-R511-WT	Soil							
Batch R4971817 WG3257747-3 DUP Cyanide, Weak Acid Dis	s	L2405419-1 <0.050	<0.050	RPD-NA	ug/g	N/A	35	15-JAN-20
WG3257747-2 LCS Cyanide, Weak Acid Dis	s		97.9		%		80-120	15-JAN-20
WG3257747-1 MB Cyanide, Weak Acid Dis	s		<0.050		ug/g		0.05	15-JAN-20
WG3257747-4 MS Cyanide, Weak Acid Dis	s	L2405419-1	101.6		%		70-130	15-JAN-20
CR-CR6-IC-WT	Soil							
Batch R4972127 WG3257862-4 CRM Chromium, Hexavalent		WT-SQC012	77.3		%		70-130	16-JAN-20
WG3257862-3 DUP Chromium, Hexavalent		L2405419-1 <0.20	<0.20	RPD-NA	ug/g	N/A	35	16-JAN-20
WG3257862-2 LCS Chromium, Hexavalent			92.3		%		80-120	16-JAN-20
WG3257862-1 MB Chromium, Hexavalent			<0.20		ug/g		0.2	16-JAN-20



Workorder: L2404777 Report Date: 20-JAN-20 Page 2 of 15

TERRAPROBE-BRAMPTON Client:

11 Indell Lane

Brampton ON L6T 3Y3

Kossay Makhzoumi Contact:

Test		Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
EC-WT		Soil							
	971994								
WG3257760-4 Conductivity	DUP		WG3257760-3 0.496	0.495		mS/cm	0.2	20	16-JAN-20
WG3257760-2 Conductivity	IRM		WT SAR3	105.8		%		70-130	16-JAN-20
WG3258040-1 Conductivity	LCS			101.5		%		90-110	16-JAN-20
WG3257760-1 Conductivity	МВ			<0.0040		mS/cm		0.004	16-JAN-20
F1-HS-511-WT		Soil							
Batch R4	967653								
WG3256989-4 F1 (C6-C10)	DUP		WG3256989-3 750	690		ug/g	8.5	30	15-JAN-20
WG3256989-2 F1 (C6-C10)	LCS			92.6		%		80-120	14-JAN-20
WG3256989-1 F1 (C6-C10)	МВ			<5.0		ug/g		5	14-JAN-20
Surrogate: 3,4-l	Dichloroto	oluene		87.0		%		60-140	14-JAN-20
WG3256989-6 F1 (C6-C10)	MS		L2404724-6	N/A	MS-B	%		-	14-JAN-20
F2-F4-511-WT		Soil							
Batch R4	968029								
WG3256710-3 F2 (C10-C16)	DUP		WG3256710-5 <10	<10	RPD-NA	ug/g	N/A	30	13-JAN-20
F3 (C16-C34)			<50	<50	RPD-NA	ug/g	N/A	30	13-JAN-20
F4 (C34-C50)			<50	<50	RPD-NA	ug/g	N/A	30	13-JAN-20
WG3256710-2 F2 (C10-C16)	LCS			92.8		%		80-120	13-JAN-20
F3 (C16-C34)				95.3		%		80-120	13-JAN-20
F4 (C34-C50)				95.1		%		80-120	13-JAN-20
WG3256710-1 F2 (C10-C16)	МВ			<10		ug/g		10	13-JAN-20
F3 (C16-C34)				<50		ug/g		50	13-JAN-20
F4 (C34-C50)				<50		ug/g		50	13-JAN-20
Surrogate: 2-Br	omobenz	otrifluoride		89.6		%		60-140	13-JAN-20
WG3256710-4 F2 (C10-C16)	MS		WG3256710-5	106.2		%			
F3 (C16-C16)				100.2		%		60-140	13-JAN-20
rs (C16-C34)				107.2		70		60-140	



Workorder: L2404777 Report Date: 20-JAN-20 Page 3 of 15

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F2-F4-511-WT	Soil							
Batch R4968029 WG3256710-4 MS F3 (C16-C34)		WG3256710-5	107.2		%		60-140	13-JAN-20
F4 (C34-C50)			106.5		%		60-140	13-JAN-20
HG-200.2-CVAA-WT	Soil							
Batch R4969586								
WG3257746-2 CRM Mercury (Hg)		WT-CANMET-	TILL2 123.1		%		70-130	15-JAN-20
WG3257746-6 DUP Mercury (Hg)		WG3257746-5 0.0804	0.0782		ug/g	2.8	40	15-JAN-20
WG3257746-3 LCS Mercury (Hg)			111.5		%		80-120	15-JAN-20
WG3257746-1 MB Mercury (Hg)			<0.0050		mg/kg		0.005	15-JAN-20
MET-200.2-CCMS-WT	Soil							
Batch R4969787								
WG3257746-2 CRM Antimony (Sb)		WT-CANMET-	TILL2 106.7		%		70-130	15-JAN-20
Arsenic (As)			94.8		%		70-130	15-JAN-20
Barium (Ba)			93.6		%		70-130	15-JAN-20
Beryllium (Be)			93.5		%		70-130	15-JAN-20
Boron (B)			3.4		mg/kg		0-8.6	15-JAN-20
Cadmium (Cd)			92.2		%		70-130	15-JAN-20
Chromium (Cr)			92.6		%		70-130	15-JAN-20
Cobalt (Co)			92.6		%		70-130	15-JAN-20
Copper (Cu)			92.3		%		70-130	15-JAN-20
Lead (Pb)			94.8		%		70-130	15-JAN-20
Molybdenum (Mo)			96.2		%		70-130	15-JAN-20
Nickel (Ni)			94.1		%		70-130	15-JAN-20
Selenium (Se)			0.38		mg/kg		0.15-0.55	15-JAN-20
Silver (Ag)			0.26		mg/kg		0.16-0.36	15-JAN-20
Thallium (TI)			92.2		%		70-130	15-JAN-20
Uranium (U)			89.6		%		70-130	15-JAN-20
Vanadium (V)			94.3		%		70-130	15-JAN-20
Zinc (Zn)			87.1		%		70-130	15-JAN-20
WG3257746-6 DUP Antimony (Sb)		WG3257746-5 0.12	0.12		ug/g			15-JAN-20



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

MET-200.2-CCMS-WT Soil	Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MG3257746-6 DUP MG3257746-5	MET-200.2-CCMS-WT	Soil							
Antimory (Sb)	Batch R4969787								
Arsenic (As) 10.9 10.7 ug/g 1.7 30 15-JAN-20 Barlum (Ba) 123 124 ug/g 0.6 30 15-JAN-20 Beryllium (Be) 1.09 1.08 ug/g 0.6 30 15-JAN-20 Boron (B) 13.9 13.1 ug/g 6.1 30 15-JAN-20 Cadmium (Cd) 2.38 2.24 ug/g 0.1 30 15-JAN-20 Chromium (Cr) 24.5 24.5 ug/g 0.7 30 15-JAN-20 Cobalt (Co) 8.52 8.58 ug/g 0.7 30 15-JAN-20 Copper (Cu) 23.8 23.5 ug/g 1.2 30 15-JAN-20 Lead (Pb) 440 446 ug/g 1.3 40 15-JAN-20 Molybdenum (Ma) 0.51 0.54 ug/g 4.9 40 15-JAN-20 Nickel (Ni) 28.9 28.4 ug/g 1.9 30 15-JAN-20 Selenium (Se)				0.40					
Barium (Ba) 123 124 ug/g 0.4 40 15-JAN-20 Beryllium (Be) 1.09 1.08 ug/g 0.6 30 15-JAN-20 Boron (B) 13.9 13.1 ug/g 6.0 30 15-JAN-20 Cadmium (Cd) 2.38 2.24 ug/g 0.1 30 15-JAN-20 Chromium (Cr) 24.5 24.5 ug/g 0.7 30 15-JAN-20 Cobalt (Co) 8.52 8.58 ug/g 0.7 30 15-JAN-20 Copper (Cu) 23.8 23.5 ug/g 1.2 30 15-JAN-20 Lead (Pb) 440 446 ug/g 1.3 40 15-JAN-20 Nickel (Ni) 28.9 28.4 ug/g 1.9 30 15-JAN-20 Selenium (Se) 0.26 0.26 ug/g 0.2 30 15-JAN-20 Silver (Ag) -0.10 <0.10									
Beryllium (Be) 1.09 1.08 ug/g 0.6 30 15-JAN-20									
Boron (B)									
Cadmium (Cd) 2.38 2.24 ug/g 6.1 30 15-JAN-20 Chromium (Cr) 24.5 24.5 ug/g 0.1 30 15-JAN-20 Cobalt (Co) 8.52 8.58 ug/g 0.7 30 15-JAN-20 Copper (Cu) 23.8 23.5 ug/g 1.2 30 15-JAN-20 Lead (Pb) 440 446 ug/g 1.3 40 15-JAN-20 Molyddenum (Mo) 0.51 0.54 ug/g 4.9 40 15-JAN-20 Nickel (Ni) 28.9 28.4 ug/g 1.9 30 15-JAN-20 Nickel (Ni) 28.9 28.4 ug/g 0.2 30 15-JAN-20 Selenium (Se) 0.26 0.26 ug/g 0.2 30 15-JAN-20 Silver (Ag) <0.10	` ` ` /								15-JAN-20
Chromium (Cr)									15-JAN-20
Cobalt (Co) 8.52 8.58 ug/g 0.7 30 15-JAN-20 Copper (Cu) 23.8 23.5 ug/g 1.2 30 15-JAN-20 Lead (Pb) 440 446 ug/g 1.3 40 15-JAN-20 Molybdenum (Mo) 0.51 0.54 ug/g 4.9 40 15-JAN-20 Nickel (Ni) 28.9 28.4 ug/g 1.9 30 15-JAN-20 Selenium (Se) 0.26 0.26 0.26 ug/g 0.2 30 15-JAN-20 Selenium (Se) 0.26 0.26 ug/g 0.2 30 15-JAN-20 Selenium (Ag) <0.10						ug/g	6.1	30	15-JAN-20
Copper (Cu) 23.8 23.5 ug/g 1.2 30 15-JAN-20 Lead (Pb) 440 446 ug/g 1.3 40 15-JAN-20 Molybdenum (Mo) 0.51 0.54 ug/g 4.9 40 15-JAN-20 Nickel (Ni) 28.9 28.4 ug/g 1.9 30 15-JAN-20 Selenium (Se) 0.26 0.26 ug/g 0.2 30 15-JAN-20 Silver (Ag) <0.10	Chromium (Cr)		24.5	24.5		ug/g	0.1	30	15-JAN-20
Lead (Pb) 440 446 ug/g 1.3 40 15-JAN-20 Molybdenum (Mo) 0.51 0.54 ug/g 4.9 40 15-JAN-20 Nickel (Ni) 28.9 28.4 ug/g 1.9 30 15-JAN-20 Selenium (Se) 0.26 0.26 ug/g 0.2 30 15-JAN-20 Silver (Ag) <0.10	Cobalt (Co)		8.52	8.58		ug/g	0.7	30	15-JAN-20
Molybdenum (Mo) 0.51 0.54 ug/g 4.9 40 15-JAN-20 Nickel (Ni) 28.9 28.4 ug/g 1.9 30 15-JAN-20 Selenium (Se) 0.26 0.26 ug/g 0.2 30 15-JAN-20 Silver (Ag) <0.10 <0.10 RPD-NA ug/g N/A 40 15-JAN-20 Thallium (TI) 0.181 0.189 ug/g 4.0 30 15-JAN-20 Uranium (U) 0.718 0.737 ug/g 2.5 30 15-JAN-20 Vanadium (V) 33.9 33.1 ug/g 2.4 30 15-JAN-20 Vanadium (V) 33.9 33.1 ug/g 2.4 30 15-JAN-20 Vanadium (V) 33.9 33.1 ug/g 4.3 30 15-JAN-20 WG3257746-4 LCS 4 4 4 80-120 15-JAN-20 Arsenic (As) 100.8 % 80-120 15-JAN-20 Beryllium (Ba)	Copper (Cu)		23.8	23.5		ug/g	1.2	30	15-JAN-20
Nickel (Ni)	Lead (Pb)		440	446		ug/g	1.3	40	15-JAN-20
Selenium (Se) 0.26 0.26 ug/g 0.2 30 15-JAN-20 Silver (Ag) <0.10	Molybdenum (Mo)		0.51	0.54		ug/g	4.9	40	15-JAN-20
Silver (Ag) <0.10 <0.10 RPD-NA ug/g N/A 40 15-JAN-20 Thallium (TI) 0.181 0.189 ug/g 4.0 30 15-JAN-20 Uranium (U) 0.718 0.737 ug/g 2.5 30 15-JAN-20 Vanadium (V) 33.9 33.1 ug/g 2.4 30 15-JAN-20 Zinc (Zn) 884 847 ug/g 4.3 30 15-JAN-20 WG3257746-4 LCS LCS LCS Sentimony (Sb) 80-120 15-JAN-20 Arsenic (As) 100.8 % 80-120 15-JAN-20 Barium (Ba) 101.7 % 80-120 15-JAN-20 Beryllium (Be) 101.5 % 80-120 15-JAN-20 Boron (B) 96.2 % 80-120 15-JAN-20 Cadmium (Cd) 98.4 % 80-120 15-JAN-20 Chromium (Cr) 100.2 % 80-120 15-JAN-20 Copper (Cu) 98.8	Nickel (Ni)		28.9	28.4		ug/g	1.9	30	15-JAN-20
Thallium (TI)	Selenium (Se)		0.26	0.26		ug/g	0.2	30	15-JAN-20
Uranium (U) 0.718 0.737 ug/g 2.5 30 15-JAN-20 Vanadium (V) 33.9 33.1 ug/g 2.4 30 15-JAN-20 Zinc (Zn) 884 847 ug/g 4.3 30 15-JAN-20 WG3257746-4 LCS Antimony (Sb) 106.7 % 80-120 15-JAN-20 Arsenic (As) 100.8 % 80-120 15-JAN-20 Barium (Ba) 101.7 % 80-120 15-JAN-20 Beryllium (Be) 101.5 % 80-120 15-JAN-20 Boron (B) 96.2 % 80-120 15-JAN-20 Cadmium (Cd) 98.4 % 80-120 15-JAN-20 Chromium (Cr) 100.2 % 80-120 15-JAN-20 Cobalt (Co) 101.6 % 80-120 15-JAN-20 Copper (Cu) 98.8 % 80-120 15-JAN-20 Molybdenum (Mo) 103.2 % 80-120 15-JAN-20	Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	15-JAN-20
Vanadium (V) 33.9 33.1 ug/g 2.4 30 15-JAN-20 Zinc (Zn) 884 847 ug/g 4.3 30 15-JAN-20 WG3257746-4 LCS Antimony (Sb) 106.7 % 80-120 15-JAN-20 Arsenic (As) 100.8 % 80-120 15-JAN-20 Barium (Ba) 101.7 % 80-120 15-JAN-20 Beryllium (Be) 101.5 % 80-120 15-JAN-20 Boron (B) 96.2 % 80-120 15-JAN-20 Cadmium (Cd) 98.4 % 80-120 15-JAN-20 Chromium (Cr) 100.2 % 80-120 15-JAN-20 Cobalt (Co) 101.6 % 80-120 15-JAN-20 Copper (Cu) 98.8 % 80-120 15-JAN-20 Molybdenum (Mo) 103.2 % 80-120 15-JAN-20 Nickel (Ni) 99.8 % 80-120 15-JAN-20 Selenium (Se) 98.9	Thallium (TI)		0.181	0.189		ug/g	4.0	30	15-JAN-20
Zinc (Zn) 884 847 ug/g 4.3 30 15-JAN-20 WG3257746-4 LCS LCS Antimony (Sb) 106.7 % 80-120 15-JAN-20 Arsenic (As) 100.8 % 80-120 15-JAN-20 Barium (Ba) 101.7 % 80-120 15-JAN-20 Beryllium (Be) 101.5 % 80-120 15-JAN-20 Boron (B) 96.2 % 80-120 15-JAN-20 Cadmium (Cd) 98.4 % 80-120 15-JAN-20 Chromium (Cr) 100.2 % 80-120 15-JAN-20 Cobalt (Co) 101.6 % 80-120 15-JAN-20 Copper (Cu) 98.8 % 80-120 15-JAN-20 Molybdenum (Mo) 103.2 % 80-120 15-JAN-20 Nickel (Ni) 99.8 % 80-120 15-JAN-20 Selenium (Se) 98.9 % 80-120 15-JAN-20 15-JAN-20 15-JAN-20 15-JAN-20 15-JAN-20 15-JAN-20 15-JAN-20 15-JAN-20 15-JAN-2	Uranium (U)		0.718	0.737		ug/g	2.5	30	15-JAN-20
WG3257746-4 LCS LCS Antimony (Sb) 106.7 % 80-120 15-JAN-20 Arsenic (As) 100.8 % 80-120 15-JAN-20 Barium (Ba) 101.7 % 80-120 15-JAN-20 Beryllium (Be) 101.5 % 80-120 15-JAN-20 Boron (B) 96.2 % 80-120 15-JAN-20 Cadmium (Cd) 98.4 % 80-120 15-JAN-20 Chromium (Cr) 100.2 % 80-120 15-JAN-20 Cobalt (Co) 101.6 % 80-120 15-JAN-20 Copper (Cu) 98.8 % 80-120 15-JAN-20 Molybdenum (Mo) 103.2 % 80-120 15-JAN-20 Nickel (Ni) 99.8 % 80-120 15-JAN-20 Selenium (Se) 98.9 % 80-120 15-JAN-20	Vanadium (V)		33.9	33.1		ug/g	2.4	30	15-JAN-20
Antimony (Sb) 106.7 % 80-120 15-JAN-20 Arsenic (As) 100.8 % 80-120 15-JAN-20 Barium (Ba) 101.7 % 80-120 15-JAN-20 Beryllium (Be) 101.5 % 80-120 15-JAN-20 Boron (B) 96.2 % 80-120 15-JAN-20 Cadmium (Cd) 98.4 % 80-120 15-JAN-20 Chromium (Cr) 100.2 % 80-120 15-JAN-20 Cobalt (Co) 101.6 % 80-120 15-JAN-20 Copper (Cu) 98.8 % 80-120 15-JAN-20 Lead (Pb) 98.9 % 80-120 15-JAN-20 Molybdenum (Mo) 103.2 % 80-120 15-JAN-20 Nickel (Ni) 99.8 % 80-120 15-JAN-20 Selenium (Se) 98.9 % 80-120 15-JAN-20	Zinc (Zn)		884	847		ug/g	4.3	30	15-JAN-20
Arsenic (As) 100.8 % 80-120 15-JAN-20 Barium (Ba) 101.7 % 80-120 15-JAN-20 Beryllium (Be) 101.5 % 80-120 15-JAN-20 Boron (B) 96.2 % 80-120 15-JAN-20 Cadmium (Cd) 98.4 % 80-120 15-JAN-20 Chromium (Cr) 100.2 % 80-120 15-JAN-20 Cobalt (Co) 101.6 % 80-120 15-JAN-20 Copper (Cu) 98.8 % 80-120 15-JAN-20 Lead (Pb) 98.9 % 80-120 15-JAN-20 Molybdenum (Mo) 103.2 % 80-120 15-JAN-20 Nickel (Ni) 99.8 % 80-120 15-JAN-20 Selenium (Se) 98.9 % 80-120 15-JAN-20	WG3257746-4 LCS								
Barium (Ba) 101.7 % 80-120 15-JAN-20 Beryllium (Be) 101.5 % 80-120 15-JAN-20 Boron (B) 96.2 % 80-120 15-JAN-20 Cadmium (Cd) 98.4 % 80-120 15-JAN-20 Chromium (Cr) 100.2 % 80-120 15-JAN-20 Cobalt (Co) 101.6 % 80-120 15-JAN-20 Copper (Cu) 98.8 % 80-120 15-JAN-20 Lead (Pb) 98.9 % 80-120 15-JAN-20 Molybdenum (Mo) 103.2 % 80-120 15-JAN-20 Nickel (Ni) 99.8 % 80-120 15-JAN-20 Selenium (Se) 98.9 % 80-120 15-JAN-20	Antimony (Sb)			106.7				80-120	15-JAN-20
Beryllium (Be) 101.5 % 80-120 15-JAN-20 Boron (B) 96.2 % 80-120 15-JAN-20 Cadmium (Cd) 98.4 % 80-120 15-JAN-20 Chromium (Cr) 100.2 % 80-120 15-JAN-20 Cobalt (Co) 101.6 % 80-120 15-JAN-20 Copper (Cu) 98.8 % 80-120 15-JAN-20 Lead (Pb) 98.9 % 80-120 15-JAN-20 Molybdenum (Mo) 103.2 % 80-120 15-JAN-20 Nickel (Ni) 99.8 % 80-120 15-JAN-20 Selenium (Se) 98.9 % 80-120 15-JAN-20	Arsenic (As)			100.8		%		80-120	15-JAN-20
Boron (B) 96.2 % 80-120 15-JAN-20 Cadmium (Cd) 98.4 % 80-120 15-JAN-20 Chromium (Cr) 100.2 % 80-120 15-JAN-20 Cobalt (Co) 101.6 % 80-120 15-JAN-20 Copper (Cu) 98.8 % 80-120 15-JAN-20 Lead (Pb) 98.9 % 80-120 15-JAN-20 Molybdenum (Mo) 103.2 % 80-120 15-JAN-20 Nickel (Ni) 99.8 % 80-120 15-JAN-20 Selenium (Se) 98.9 % 80-120 15-JAN-20	Barium (Ba)			101.7		%		80-120	15-JAN-20
Cadmium (Cd) 98.4 % 80-120 15-JAN-20 Chromium (Cr) 100.2 % 80-120 15-JAN-20 Cobalt (Co) 101.6 % 80-120 15-JAN-20 Copper (Cu) 98.8 % 80-120 15-JAN-20 Lead (Pb) 98.9 % 80-120 15-JAN-20 Molybdenum (Mo) 103.2 % 80-120 15-JAN-20 Nickel (Ni) 99.8 % 80-120 15-JAN-20 Selenium (Se) 98.9 % 80-120 15-JAN-20	Beryllium (Be)			101.5		%		80-120	15-JAN-20
Chromium (Cr) 100.2 % 80-120 15-JAN-20 Cobalt (Co) 101.6 % 80-120 15-JAN-20 Copper (Cu) 98.8 % 80-120 15-JAN-20 Lead (Pb) 98.9 % 80-120 15-JAN-20 Molybdenum (Mo) 103.2 % 80-120 15-JAN-20 Nickel (Ni) 99.8 % 80-120 15-JAN-20 Selenium (Se) 98.9 % 80-120 15-JAN-20	Boron (B)			96.2		%		80-120	15-JAN-20
Cobalt (Co) 101.6 % 80-120 15-JAN-20 Copper (Cu) 98.8 % 80-120 15-JAN-20 Lead (Pb) 98.9 % 80-120 15-JAN-20 Molybdenum (Mo) 103.2 % 80-120 15-JAN-20 Nickel (Ni) 99.8 % 80-120 15-JAN-20 Selenium (Se) 98.9 % 80-120 15-JAN-20	Cadmium (Cd)			98.4		%		80-120	15-JAN-20
Copper (Cu) 98.8 % 80-120 15-JAN-20 Lead (Pb) 98.9 % 80-120 15-JAN-20 Molybdenum (Mo) 103.2 % 80-120 15-JAN-20 Nickel (Ni) 99.8 % 80-120 15-JAN-20 Selenium (Se) 98.9 % 80-120 15-JAN-20	Chromium (Cr)			100.2				80-120	15-JAN-20
Lead (Pb) 98.9 % 80-120 15-JAN-20 Molybdenum (Mo) 103.2 % 80-120 15-JAN-20 Nickel (Ni) 99.8 % 80-120 15-JAN-20 Selenium (Se) 98.9 % 80-120 15-JAN-20	Cobalt (Co)			101.6		%		80-120	15-JAN-20
Molybdenum (Mo) 103.2 % 80-120 15-JAN-20 Nickel (Ni) 99.8 % 80-120 15-JAN-20 Selenium (Se) 98.9 % 80-120 15-JAN-20	Copper (Cu)			98.8		%		80-120	15-JAN-20
Nickel (Ni) 99.8 % 80-120 15-JAN-20 Selenium (Se) 98.9 % 80-120 15-JAN-20	Lead (Pb)			98.9		%		80-120	15-JAN-20
Selenium (Se) 98.9 % 80-120 15-JAN-20	Molybdenum (Mo)			103.2		%		80-120	15-JAN-20
	Nickel (Ni)			99.8		%		80-120	15-JAN-20
Silver (Ag) 101.9 % 80-120 15-JAN-20	Selenium (Se)			98.9		%		80-120	15-JAN-20
	Silver (Ag)			101.9		%		80-120	15-JAN-20



Workorder: L2404777 Report Date: 20-JAN-20 Page 5 of 15

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	Soil							
Batch R496978	7							
WG3257746-4 LCS								
Thallium (TI)			95.5		%		80-120	15-JAN-20
Uranium (U)			99.6		%		80-120	15-JAN-20
Vanadium (V)			104.2		%		80-120	15-JAN-20
Zinc (Zn)			92.8		%		80-120	15-JAN-20
WG3257746-1 MB Antimony (Sb)			<0.10		mg/kg		0.1	15-JAN-20
Arsenic (As)			<0.10		mg/kg		0.1	15-JAN-20
Barium (Ba)			<0.50		mg/kg		0.5	15-JAN-20
Beryllium (Be)			<0.10		mg/kg		0.1	15-JAN-20
Boron (B)			<5.0		mg/kg		5	15-JAN-20
Cadmium (Cd)			<0.020		mg/kg		0.02	15-JAN-20
Chromium (Cr)			< 0.50		mg/kg		0.5	15-JAN-20
Cobalt (Co)			<0.10		mg/kg		0.1	15-JAN-20
Copper (Cu)			< 0.50		mg/kg		0.5	15-JAN-20
Lead (Pb)			< 0.50		mg/kg		0.5	15-JAN-20
Molybdenum (Mo)			<0.10		mg/kg		0.1	15-JAN-20
Nickel (Ni)			< 0.50		mg/kg		0.5	15-JAN-20
Selenium (Se)			<0.20		mg/kg		0.2	15-JAN-20
Silver (Ag)			<0.10		mg/kg		0.1	15-JAN-20
Thallium (TI)			< 0.050		mg/kg		0.05	15-JAN-20
Uranium (U)			< 0.050		mg/kg		0.05	15-JAN-20
Vanadium (V)			<0.20		mg/kg		0.2	15-JAN-20
Zinc (Zn)			<2.0		mg/kg		2	15-JAN-20
MOISTURE-WT	Soil							
Batch R496941	3							
WG3257814-3 DUP	1	L2404718-1						
% Moisture		12.4	13.4		%	7.6	20	15-JAN-20
WG3257814-2 LCS % Moisture			101.0		%		90-110	15-JAN-20
WG3257814-1 MB % Moisture			<0.25		%		0.25	15-JAN-20
Batch R496974	6							
WG3257949-3 DUP % Moisture		L2404777-5 7.72	7.67		%	0.6	20	15-JAN-20
WG3257949-2 LCS								



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	Soil							
Batch R4969746 WG3257949-2 LCS % Moisture			100.2		%		90-110	15-JAN-20
WG3257949-1 MB % Moisture			<0.25		%		0.25	15-JAN-20
PAH-511-WT	Soil							
Batch R4968999 WG3257515-3 DUP 1-Methylnaphthalene		WG3257515-5 <0.030	<0.030	RPD-NA	ug/g	N/A	40	15-JAN-20
2-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	15-JAN-20
Acenaphthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	15-JAN-20
Acenaphthylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	15-JAN-20
Anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	15-JAN-20
Benzo(a)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	15-JAN-20
Benzo(a)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	15-JAN-20
Benzo(b)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	15-JAN-20
Benzo(g,h,i)perylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	15-JAN-20
Benzo(k)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	15-JAN-20
Chrysene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	15-JAN-20
Dibenzo(ah)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	15-JAN-20
Fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	15-JAN-20
Fluorene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	15-JAN-20
Indeno(1,2,3-cd)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	15-JAN-20
Naphthalene		<0.013	<0.013	RPD-NA	ug/g	N/A	40	15-JAN-20
Phenanthrene		<0.046	<0.046	RPD-NA	ug/g	N/A	40	15-JAN-20
Pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	15-JAN-20
WG3257515-2 LCS 1-Methylnaphthalene			89.0		%		50-140	15-JAN-20
2-Methylnaphthalene			83.6		%		50-140	15-JAN-20
Acenaphthene			89.3		%		50-140	15-JAN-20
Acenaphthylene			89.9		%		50-140	15-JAN-20
Anthracene			89.1		%		50-140	15-JAN-20
Benzo(a)anthracene			90.0		%		50-140	15-JAN-20
Benzo(a)pyrene			87.6		%		50-140	15-JAN-20
Benzo(b)fluoranthene			87.4		%		50-140	15-JAN-20
Benzo(g,h,i)perylene			86.0				50-140	



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix Referen	ce Result	Qualifier (Units R	PD Lin	nit Analyzed	
PAH-511-WT	Soil						
Batch R4968999							
WG3257515-2 LCS				0.4			
Benzo(g,h,i)perylene		86.0		%		-140 15-JAN-20	
Benzo(k)fluoranthene		91.0		%		15-JAN-20	
Chrysene		100.4		%		15-JAN-20	
Dibenzo(ah)anthracene		79.9		%		15-JAN-20	
Fluoranthene		87.1		%		-140 15-JAN-20	
Fluorene		87.2		%		15-JAN-20	
Indeno(1,2,3-cd)pyrene		79.8		%		15-JAN-20	
Naphthalene		87.6		%		15-JAN-20	
Phenanthrene		90.3		%		15-JAN-20	
Pyrene		87.3	,	%	50	-140 15-JAN-20	
WG3257515-1 MB		<0.030			0.0	22 45 1411 00	
1-Methylnaphthalene				ug/g	0.0		
2-Methylnaphthalene		<0.030		ug/g	0.0		
Acenaphtheles		<0.050		ug/g	0.0		
Acenaphthylene		<0.050		ug/g	0.0		
Anthracene		<0.050		ug/g	0.0		
Benzo(a)anthracene		<0.050		ug/g	0.0		
Benzo(a)pyrene		<0.050		ug/g	0.0		
Benzo(b)fluoranthene		<0.050		ug/g	0.0		
Benzo(g,h,i)perylene		<0.050		ug/g	0.0	.0 0, 20	
Benzo(k)fluoranthene		<0.050		ug/g ,	0.0		
Chrysene		<0.050		ug/g	0.0		
Dibenzo(ah)anthracene		<0.050		ug/g	0.0		
Fluoranthene		<0.050		ug/g	0.0		
Fluorene		<0.050		ug/g	0.0		
Indeno(1,2,3-cd)pyrene		<0.050		ug/g	0.0		
Naphthalene		<0.013		ug/g		013 15-JAN-20	
Phenanthrene		<0.046		ug/g		046 15-JAN-20	
Pyrene		<0.050		ug/g	0.0		
Surrogate: 2-Fluorobiphe	•	91.0		%		15-JAN-20	
Surrogate: p-Terphenyl o	114	84.8	,	%	50	15-JAN-20	
WG3257515-4 MS 1-Methylnaphthalene	WG325	7515-5 88.5		%	50	1440 45 1411 00	
• •				%		15-JAN-20	
2-Methylnaphthalene		84.1		/0	50	-140 15-JAN-20	



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TERRAPROBE-BRAMPTON Client:

11 Indell Lane

Brampton ON L6T 3Y3

Kossay Makhzoumi Contact:

Test		Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT		Soil							
Batch R	4968999								
WG3257515-4 Acenaphthene			WG3257515-	5 89.1		%		50-140	15-JAN-20
Acenaphthyler				88.8		%		50-140	15-JAN-20
Anthracene				88.6		%		50-140	15-JAN-20
Benzo(a)anthr	acene			88.9		%		50-140	15-JAN-20
Benzo(a)pyrer				86.8		%		50-140	15-JAN-20
Benzo(b)fluora				86.6		%		50-140	15-JAN-20
Benzo(g,h,i)pe	erylene			83.3		%		50-140	15-JAN-20
Benzo(k)fluora				90.0		%		50-140	15-JAN-20
Chrysene				99.8		%		50-140	15-JAN-20
Dibenzo(ah)ar	nthracene			76.3		%		50-140	15-JAN-20
Fluoranthene				86.3		%		50-140	15-JAN-20
Fluorene				87.0		%		50-140	15-JAN-20
Indeno(1,2,3-c	cd)pyrene			78.4		%		50-140	15-JAN-20
Naphthalene				86.8		%		50-140	15-JAN-20
Phenanthrene	:			89.7		%		50-140	15-JAN-20
Pyrene				86.4		%		50-140	15-JAN-20
PCB-511-WT		Soil							
Batch R	4969411								
WG3257515-3 Aroclor 1242	DUP		WG3257515- <0.010	5 <0.010	RPD-NA	ug/g	N/A	40	15-JAN-20
Aroclor 1248			<0.010	<0.010	RPD-NA	ug/g	N/A	40	15-JAN-20
Aroclor 1254			<0.010	<0.010	RPD-NA	ug/g	N/A	40	15-JAN-20
Aroclor 1260			<0.010	<0.010	RPD-NA	ug/g	N/A	40	15-JAN-20
WG3257515-2 Aroclor 1242	LCS			97.7		%			
Aroclor 1248				83.7		%		60-140	15-JAN-20
Aroclor 1254				98.6		%		60-140	15-JAN-20
Aroclor 1260				103.3		%		60-140	15-JAN-20
WG3257515-1	МВ							60-140	15-JAN-20
Aroclor 1242				<0.010		ug/g		0.01	15-JAN-20
Aroclor 1248				<0.010		ug/g		0.01	15-JAN-20
Aroclor 1254				<0.010		ug/g		0.01	15-JAN-20
Aroclor 1260				<0.010		ug/g		0.01	15-JAN-20
Surrogate: d14	4-Terphen	yl		96.9		%		60-140	15-JAN-20



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Test		Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB-511-WT		Soil							
Batch R49	69411								
	MS		WG3257515-5			0.4			
Aroclor 1242				94.4		%		60-140	15-JAN-20
Aroclor 1254				96.4		%		60-140	15-JAN-20
Aroclor 1260				99.5		%		60-140	15-JAN-20
	71067								
WG3257833-3 Aroclor 1242	DUP		WG3257833-5 <0.010	<0.010	RPD-NA	ug/g	N/A	40	16-JAN-20
Aroclor 1248			<0.010	<0.010	RPD-NA	ug/g	N/A	40	16-JAN-20
Aroclor 1254			<0.010	<0.010	RPD-NA	ug/g	N/A	40	16-JAN-20
Aroclor 1260			<0.010	<0.010	RPD-NA	ug/g	N/A	40	16-JAN-20
WG3257833-2 Aroclor 1242	LCS			97.7		%		60-140	16-JAN-20
Aroclor 1248				88.8		%		60-140	16-JAN-20
Aroclor 1254				100.2		%		60-140	16-JAN-20
Aroclor 1260				104.2		%		60-140	16-JAN-20
WG3257833-1 Aroclor 1242	МВ			<0.010		ug/g		0.01	16-JAN-20
Aroclor 1248				<0.010		ug/g		0.01	16-JAN-20
Aroclor 1254				<0.010		ug/g		0.01	16-JAN-20
Aroclor 1260				<0.010		ug/g		0.01	16-JAN-20
Surrogate: d14-T	erphenyl			88.4		%		60-140	16-JAN-20
WG3257833-4	MS		WG3257833-5						
Aroclor 1242				100.8		%		60-140	16-JAN-20
Aroclor 1254				108.1		%		60-140	16-JAN-20
Aroclor 1260				120.0		%		60-140	16-JAN-20
PH-WT		Soil							
Batch R49	70278								
	DUP		L2399471-16						
рН			7.60	7.59	J	pH units	0.01	0.3	15-JAN-20
WG3257214-1 pH	LCS			6.95		pH units		6.9-7.1	15-JAN-20
SAR-R511-WT		Soil							
Batch R49	69489								
	DUP		WG3257760-3	27.0		ma/l	0.0	20	45 1411 00
Calcium (Ca)			36.7	37.0		mg/L	0.8	30	15-JAN-20
Sodium (Na)			30.7	30.4		mg/L	1.0	30	15-JAN-20



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SAR-R511-WT	Soil							
Batch R4969489								
WG3257760-4 DUP Magnesium (Mg)		WG3257760-3 14.5	14.7		mg/L	1.4	30	15-JAN-20
WG3257760-2 IRM		WT SAR3			5		30	0/114 20
Calcium (Ca)		WIGARG	110.1		%		70-130	15-JAN-20
Sodium (Na)			101.7		%		70-130	15-JAN-20
Magnesium (Mg)			110.1		%		70-130	15-JAN-20
WG3257760-5 LCS Calcium (Ca)			103.0		%		80-120	15-JAN-20
Sodium (Na)			100.8		%		80-120	15-JAN-20
Magnesium (Mg)			101.6		%		80-120	15-JAN-20
WG3257760-1 MB							30 120	.5 0, 20
Calcium (Ca)			<0.50		mg/L		0.5	15-JAN-20
Sodium (Na)			<0.50		mg/L		0.5	15-JAN-20
Magnesium (Mg)			<0.50		mg/L		0.5	15-JAN-20
VOC-511-HS-WT	Soil							
Batch R4967653								
WG3256989-4 DUP 1,1,1,2-Tetrachloroethan	۵	WG3256989-3 < 0.050	<0.050		ug/g	NI/A	40	44 1411 20
1,1,1,2-Tetrachloroethan		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-JAN-20
1,1,2,2-Tetracriloroethane	IG	<2.0	<2.0	RPD-NA RPD-NA	ug/g ug/g	N/A N/A	40 40	14-JAN-20 15-JAN-20
1,1,2-Trichloroethane		<1.3	<1.3	RPD-NA RPD-NA	ug/g ug/g	N/A N/A	40	15-JAN-20 14-JAN-20
1,1-Dichloroethane		<2.0	<2.0	RPD-NA	ug/g	N/A N/A	40	14-JAN-20 15-JAN-20
1,1-Dichloroethylene		<2.0	<2.0	RPD-NA	ug/g	N/A	40	15-JAN-20
1,2-Dibromoethane		<0.30	<0.30	RPD-NA	ug/g	N/A	40	14-JAN-20
1,2-Dichlorobenzene		<20	<20	RPD-NA	ug/g	N/A	40	16-JAN-20
1,2-Dichloroethane		<2.0	<2.0	RPD-NA	ug/g	N/A	40	15-JAN-20
1,2-Dichloropropane		<2.0	<2.0	RPD-NA	ug/g	N/A	40	15-JAN-20
1,3-Dichlorobenzene		<20	<20	RPD-NA	ug/g	N/A	40	16-JAN-20
1,4-Dichlorobenzene		<20	<20	RPD-NA	ug/g	N/A	40	16-JAN-20
Acetone		<20	<20	RPD-NA	ug/g	N/A	40	15-JAN-20
Benzene		<0.27	<0.27	RPD-NA	ug/g	N/A	40	15-JAN-20
Bromodichloromethane		<5.0	<5.7	RPD-NA	ug/g	N/A	40	15-JAN-20
Bromoform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-JAN-20
Bromomethane		<2.0	<2.0	RPD-NA	ug/g	N/A	40	15-JAN-20
Carbon tetrachloride		<2.0	<2.0	RPD-NA	ug/g	N/A	40	15-JAN-20



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Test Matrix	c Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT Soil							
Batch R4967653							
WG3256989-4 DUP	WG3256989-3						
Chlorobenzene	<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-JAN-20
Chloroform	<2.0	<2.0	RPD-NA	ug/g	N/A	40	15-JAN-20
cis-1,2-Dichloroethylene	<2.0	<2.0	RPD-NA	ug/g	N/A	40	15-JAN-20
cis-1,3-Dichloropropene	<1.2	<1.2	RPD-NA	ug/g	N/A	40	15-JAN-20
Dibromochloromethane	<0.050	<0.050	RPD-NA	ug/g ,	N/A	40	14-JAN-20
Dichlorodifluoromethane	<2.0	<2.0	RPD-NA	ug/g ,	N/A	40	15-JAN-20
Ethylbenzene	2.61	2.47		ug/g	5.3	40	14-JAN-20
n-Hexane	6.7	6.8		ug/g	1.5	40	15-JAN-20
Methylene Chloride	<2.0	<2.0	RPD-NA	ug/g	N/A	40	15-JAN-20
MTBE	<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-JAN-20
m+p-Xylenes	2.80	2.66		ug/g	5.3	40	14-JAN-20
Methyl Ethyl Ketone	<20	<20	RPD-NA	ug/g	N/A	40	15-JAN-20
Methyl Isobutyl Ketone	<20	<20	RPD-NA	ug/g	N/A	40	15-JAN-20
o-Xylene	0.480	0.464		ug/g	3.4	40	14-JAN-20
Styrene	<0.050	< 0.050	RPD-NA	ug/g	N/A	40	14-JAN-20
Tetrachloroethylene	<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-JAN-20
Toluene	<0.080	<0.080	RPD-NA	ug/g	N/A	40	14-JAN-20
trans-1,2-Dichloroethylene	<2.0	<2.0	RPD-NA	ug/g	N/A	40	15-JAN-20
trans-1,3-Dichloropropene	<0.030	<0.030	RPD-NA	ug/g	N/A	40	14-JAN-20
Trichloroethylene	<0.40	<0.40	RPD-NA	ug/g	N/A	40	15-JAN-20
Trichlorofluoromethane	<2.0	<2.0	RPD-NA	ug/g	N/A	40	15-JAN-20
Vinyl chloride	<0.80	<0.80	RPD-NA	ug/g	N/A	40	15-JAN-20
WG3256989-2 LCS							
1,1,1,2-Tetrachloroethane		95.3		%		60-130	14-JAN-20
1,1,2,2-Tetrachloroethane		89.7		%		60-130	14-JAN-20
1,1,1-Trichloroethane		96.2		%		60-130	14-JAN-20
1,1,2-Trichloroethane		91.7		%		60-130	14-JAN-20
1,1-Dichloroethane		94.4		%		60-130	14-JAN-20
1,1-Dichloroethylene		91.9		%		60-130	14-JAN-20
1,2-Dibromoethane		89.8		%		70-130	14-JAN-20
1,2-Dichlorobenzene		98.3		%		70-130	14-JAN-20
1,2-Dichloroethane		90.7		%		60-130	14-JAN-20
1,2-Dichloropropane		94.2		%		70-130	14-JAN-20



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Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R4967653								
WG3256989-2 LCS					0.4			
1,3-Dichlorobenzene			100.4		%		70-130	14-JAN-20
1,4-Dichlorobenzene			99.4		%		70-130	14-JAN-20
Acetone			90.3		%		60-140	14-JAN-20
Benzene			98.5		%		70-130	14-JAN-20
Bromodichloromethane			92.9		%		50-140	14-JAN-20
Bromoform			89.0		%		70-130	14-JAN-20
Bromomethane			83.9		%		50-140	14-JAN-20
Carbon tetrachloride			96.9		%		70-130	14-JAN-20
Chlorobenzene			97.8		%		70-130	14-JAN-20
Chloroform			95.6		%		70-130	14-JAN-20
cis-1,2-Dichloroethylene			91.3		%		70-130	14-JAN-20
cis-1,3-Dichloropropene			98.0		%		70-130	14-JAN-20
Dibromochloromethane			91.2		%		60-130	14-JAN-20
Dichlorodifluoromethane)		67.6		%		50-140	14-JAN-20
Ethylbenzene			100.2		%		70-130	14-JAN-20
n-Hexane			89.8		%		70-130	14-JAN-20
Methylene Chloride			89.8		%		70-130	14-JAN-20
MTBE			96.1		%		70-130	14-JAN-20
m+p-Xylenes			100.9		%		70-130	14-JAN-20
Methyl Ethyl Ketone			82.9		%		60-140	14-JAN-20
Methyl Isobutyl Ketone			81.3		%		60-140	14-JAN-20
o-Xylene			98.3		%		70-130	14-JAN-20
Styrene			95.7		%		70-130	14-JAN-20
Tetrachloroethylene			100.3		%		60-130	14-JAN-20
Toluene			100.0		%		70-130	14-JAN-20
trans-1,2-Dichloroethyle			93.3		%		60-130	14-JAN-20
trans-1,3-Dichloroproper	ne		100.1		%		70-130	14-JAN-20
Trichloroethylene			95.8		%		60-130	14-JAN-20
Trichlorofluoromethane			92.5		%		50-140	14-JAN-20
Vinyl chloride			97.4		%		60-140	14-JAN-20
WG3256989-1 MB 1,1,1,2-Tetrachloroethar	ne		<0.050		ug/g		0.05	14-JAN-20
1,1,2,2-Tetrachloroethar	ne		<0.050		ug/g		0.05	14-JAN-20
1,1,1-Trichloroethane			<0.050		ug/g		0.05	14-JAN-20



Workorder: L2404777 Report Date: 20-JAN-20 Page 13 of 15

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R4967653								
WG3256989-1 MB			0.050		 /c-		0.05	
1,1,2-Trichloroethane			<0.050		ug/g		0.05	14-JAN-20
1,1-Dichloroethane			<0.050		ug/g		0.05	14-JAN-20
1,1-Dichloroethylene			<0.050		ug/g		0.05	14-JAN-20
1,2-Dibromoethane			<0.050		ug/g		0.05	14-JAN-20
1,2-Dichlorobenzene			<0.050		ug/g		0.05	14-JAN-20
1,2-Dichloroethane			<0.050		ug/g		0.05	14-JAN-20
1,2-Dichloropropane			<0.050		ug/g		0.05	14-JAN-20
1,3-Dichlorobenzene			<0.050		ug/g		0.05	14-JAN-20
1,4-Dichlorobenzene			<0.050		ug/g		0.05	14-JAN-20
Acetone			<0.50		ug/g		0.5	14-JAN-20
Benzene			<0.0068		ug/g		0.0068	14-JAN-20
Bromodichloromethane			<0.050		ug/g		0.05	14-JAN-20
Bromoform			<0.050		ug/g		0.05	14-JAN-20
Bromomethane			<0.050		ug/g		0.05	14-JAN-20
Carbon tetrachloride			<0.050		ug/g		0.05	14-JAN-20
Chlorobenzene			<0.050		ug/g		0.05	14-JAN-20
Chloroform			<0.050		ug/g		0.05	14-JAN-20
cis-1,2-Dichloroethylene			<0.050		ug/g		0.05	14-JAN-20
cis-1,3-Dichloropropene	!		<0.030		ug/g		0.03	14-JAN-20
Dibromochloromethane			<0.050		ug/g		0.05	14-JAN-20
Dichlorodifluoromethane	9		<0.050		ug/g		0.05	14-JAN-20
Ethylbenzene			<0.018		ug/g		0.018	14-JAN-20
n-Hexane			<0.050		ug/g		0.05	14-JAN-20
Methylene Chloride			<0.050		ug/g		0.05	14-JAN-20
MTBE			<0.050		ug/g		0.05	14-JAN-20
m+p-Xylenes			<0.030		ug/g		0.03	14-JAN-20
Methyl Ethyl Ketone			<0.50		ug/g		0.5	14-JAN-20
Methyl Isobutyl Ketone			<0.50		ug/g		0.5	14-JAN-20
o-Xylene			<0.020		ug/g		0.02	14-JAN-20
Styrene			<0.050		ug/g		0.05	14-JAN-20
Tetrachloroethylene			<0.050		ug/g		0.05	14-JAN-20
Toluene			<0.080		ug/g		80.0	14-JAN-20
trans-1,2-Dichloroethyle	ne		<0.050		ug/g		0.05	14-JAN-20



Workorder: L2404777 Report Date: 20-JAN-20 Page 14 of 15

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R4967653 WG3256989-1 MB								
trans-1,3-Dichloropropen	е		<0.030		ug/g		0.03	14-JAN-20
Trichloroethylene			<0.010		ug/g		0.01	14-JAN-20
Trichlorofluoromethane			<0.050		ug/g		0.05	14-JAN-20
Vinyl chloride			<0.020		ug/g		0.02	14-JAN-20
Surrogate: 1,4-Difluorobe	enzene		117.4		%		50-140	14-JAN-20
Surrogate: 4-Bromofluoro	benzene		103.8		%		50-140	14-JAN-20

Workorder: L2404777 Report Date: 20-JAN-20

Client: TERRAPROBE-BRAMPTON Page 15 of 15

11 Indell Lane

Brampton ON L6T 3Y3 Kossay Makhzoumi

Legend:

Contact:

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
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).
DLI	Detection Limit Raised: Dilution required to address Internal Standard response problems caused by matrix interference.
DLVH	Detection Limit raised due to interference from Volatile Hydrocarbons on VOC method. Chromatographic elution of interfering peaks in the same region as test analytes prevents a determination of whether VOC analyte is present or absent (above/below regular detection limits).
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
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.

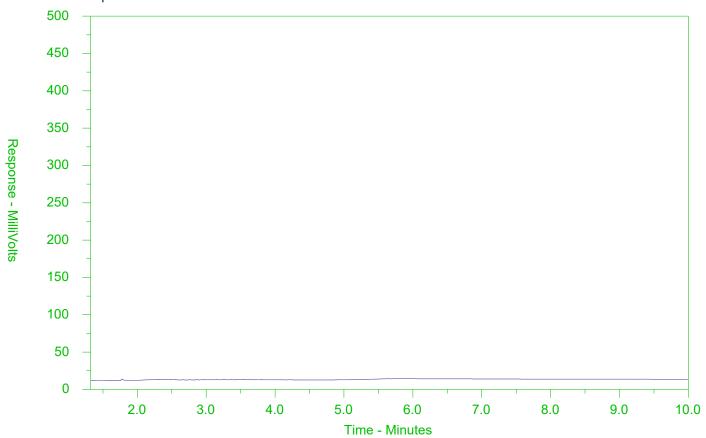
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined data quality objectives to provide 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: L2404777-3 Client Sample ID: BH2-SS3B



← -F2-	→←	_F3F4-	→					
nC10	nC16	nC34	nC50					
174°C	287°C	481°C	575°C					
346°F	549°F	898°F	1067°F					
Gasolin	Gasoline → ← Mot		tor 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.

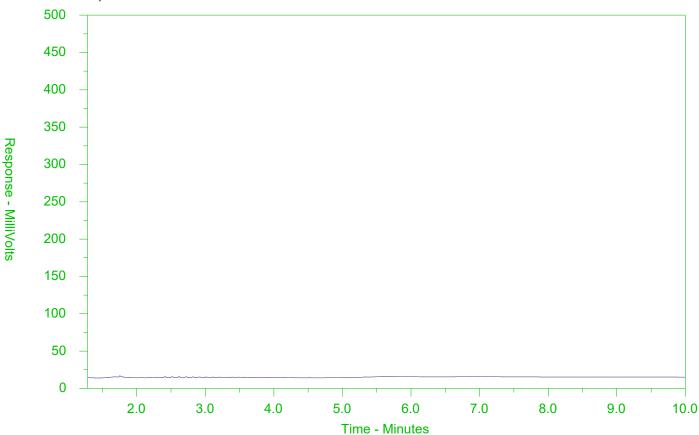
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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: L2404777-5 Client Sample ID: BH2-SS6



← -F2-	→←	_F3F4-	→					
nC10	nC16	nC34	nC50					
174°C	287°C	481°C	575°C					
346°F	549°F	898°F	1067°F					
Gasolin	Gasoline → ← Mot		tor 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.

Environmental

Chain of Custody (COC) / Analytical **Request Form**

Canada Toll Free: 1 800 668 9878

L2404777-COFC

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

COC Number: 15 -

	www.alsglobal.com									-									_
Report To									onfi	rm all E	LP TATE	with y	our AM	- surch	erges wil	apply	<u> </u>	_	
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Street:	11 Indell Lane	Email 1 o	r Fax kmakhzoumi@terr	aprobe.ca			Date a	nd Time	Require	ed for a	I E&P T	ATs:							
City/Province:	Brampton	Email 2				For tests that can not be performed according to the service level selected, you will be contacted.													
Postal Code:	L6T 3Y3	Email 3		-		Analysis Request													
Invoice To	Same as Report To ☐ YES ☑ NO		Invoice Dis	stribution		Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below													
	Copy of Invoice with Report ☐ YES ☑ NO	Report ☐ YES ☑ NO Select Invoice Distribution: ☑ EM			☐ FAX														
Company:	Terraprobe Email 1 or Fax lrossi@terraprobe.c			ca															
Contact:	Lorena Rossi	Email 2]												ρ	- 1
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TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 31-OCT-19

Report Date: 06-NOV-19 13:06 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2375323
Project P.O. #: NOT SUBMITTED
Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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ADDRESS: 5730 Coopers Avenue, Unit #26 , Mississauga, ON L4Z 2E9 Canada | Phone: +1 905 507 6910 | Fax: +1 905 507 6927 ALS CANADA LTD Part of the ALS Group An ALS Limited Company





L2375323 CONT'D....

Job Reference: 1-19-0603-42

PAGE 2 of 12

06-NOV-19 13:06 (MT)

Summary of Guideline Exceedances

Guideline ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit
		5, 2011 Standards - T3-Soil-Res/Pa				
_2375323-1	BH3-SS1	Polycyclic Aromatic				,
.2070020 1	E T BIIO COT	Hydrocarbons	Acenaphthylene	1.03	0.15	ug/g
		,	Anthracene	5.60	0.67	ug/g
			Benzo(a)anthracene	11.5	0.5	ug/g
			Benzo(a)pyrene	9.26	0.3	ug/g
			Benzo(b)fluoranthene	10.7	0.78	ug/g
			Benzo(k)fluoranthene	4.63	0.78	ug/g
			Chrysene	11.5	7	ug/g
			Dibenzo(ah)anthracene	1.64	0.1	ug/g
			Fluoranthene	25.5	0.69	ug/g
			Indeno(1,2,3-cd)pyrene	5.75	0.38	ug/g
			Naphthalene	0.704	0.6	ug/g
			Phenanthrene	23.5	6.2	ug/g
ntario Reເ	gulation 153/04 - April 15	5, 2011 Standards - T3-Soil-Res/Pa	rk/Inst. Property Use (Fine)			
2375323-1	BH3-SS1	Polycyclic Aromatic	Acenaphthylene	1.03	0.17	ug/g
		Hydrocarbons	Anthracene	5.60	0.74	ug/g
			Benzo(a)anthracene	11.5	0.63	ug/g
			Benzo(a)pyrene	9.26	0.3	ug/g
			Benzo(b)fluoranthene	10.7	0.78	
			Benzo(b)fluoranthene Benzo(k)fluoranthene	10.7 4.63	0.78 0.78	ug/g
			. ,			ug/g ug/g
			Benzo(k)fluoranthene Chrysene	4.63	0.78	ug/g ug/g ug/g
			Benzo(k)fluoranthene	4.63 11.5	0.78 7.8	ug/g ug/g ug/g ug/g
			Benzo(k)fluoranthene Chrysene Dibenzo(ah)anthracene	4.63 11.5 1.64	0.78 7.8 0.1	ug/g ug/g ug/g

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2375323 CONT'D....

Job Reference: 1-19-0603-42

PAGE 3 of 12

06-NOV-19 13:06 (MT)

Physical Tests - SOIL

,							
			Lab ID	L2375323-1	L2375323-2	L2375323-3	L2375323-4
		Sampl	le Date	25-OCT-19	25-OCT-19	25-OCT-19	25-OCT-19
		San	nple ID	BH3-SS1	BH3-SS2	BH3-SS6	BH3-SS8
		Guide	Limits				
Analyte	Unit	#1	#2				

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2375323 CONT'D.... Job Reference: 1-19-0603-42 PAGE 4 of 12 06-NOV-19 13:06 (MT)

Metals - SOIL

		Lab ID		L2375323-1	L2375323-3
		Sample		25-OCT-19	25-OCT-19
		Sam	ple ID	BH3-SS1	BH3-SS6
		Guide	Limits		
Analyte	Unit	#1	#2		
Antimony (Sb)	ug/g	7.5	7.5	<1.0	<1.0
Arsenic (As)	ug/g	18	18	1.3	1.2
Barium (Ba)	ug/g	390	390	32.5	31.9
Beryllium (Be)	ug/g	4	5	<0.50	<0.50
Boron (B)	ug/g	120	120	<5.0	<5.0
Cadmium (Cd)	ug/g	1.2	1.2	<0.50	<0.50
Chromium (Cr)	ug/g	160	160	8.6	8.6
Cobalt (Co)	ug/g	22	22	2.9	2.8
Copper (Cu)	ug/g	140	180	5.8	5.7
Lead (Pb)	ug/g	120	120	3.7	3.3
Molybdenum (Mo)	ug/g	6.9	6.9	<1.0	<1.0
Nickel (Ni)	ug/g	100	130	5.4	5.3
Selenium (Se)	ug/g	2.4	2.4	<1.0	<1.0
Silver (Ag)	ug/g	20	25	<0.20	<0.20
Thallium (TI)	ug/g	1	1	<0.50	<0.50
Uranium (U)	ug/g	23	23	<1.0	<1.0
Vanadium (V)	ug/g	86	86	18.8	18.6
Zinc (Zn)	ug/g	340	340	14.8	14.9

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2375323 CONT'D.... Job Reference: 1-19-0603-42 PAGE 5 of 12 06-NOV-19 13:06 (MT)

Volatile Organic Compounds - SOII

		Sample	Lab ID e Date	L2375323-2 25-OCT-19	L2375323-4 25-OCT-19
		•	ple ID	BH3-SS2	BH3-SS8
		Campie 15			
Analyte	Unit	Guide #1	Limits #2		
Acetone	ug/g	16	28	<0.50	<0.50
Benzene	ug/g	0.21	0.17	<0.0068	<0.0068
Bromodichloromethane	ug/g	13	13		
Bromoform	ug/g	0.27	0.26	<0.050 <0.050	<0.050 <0.050
Bromomethane	ug/g	0.05	0.05	<0.050	<0.050
Carbon tetrachloride	ug/g	0.05	0.12		
Chlorobenzene	ug/g	2.4	2.7	<0.050	<0.050
Dibromochloromethane	ug/g	9.4	9.4	<0.050	<0.050
Chloroform	ug/g	0.05	0.18	<0.050	<0.050
1,2-Dibromoethane	ug/g	0.05	0.16	<0.050	<0.050
1,2-Dichlorobenzene		3.4	4.3	<0.050	<0.050
1,3-Dichlorobenzene	ug/g ug/g	4.8	6	<0.050	<0.050
1,4-Dichlorobenzene	ug/g ug/g	0.083	0.097	<0.050	<0.050
Dichlorodifluoromethane	ug/g	16	25	<0.050	<0.050
1,1-Dichloroethane	ug/g ug/g	3.5	11	<0.050	<0.050
1,2-Dichloroethane	ug/g ug/g	0.05	0.05	<0.050	<0.050
1,1-Dichloroethylene	ug/g ug/g	0.05	0.05	<0.050	<0.050
cis-1,2-Dichloroethylene		3.4	30	<0.050	<0.050
•	ug/g	0.084	0.75	<0.050	<0.050
trans-1,2-Dichloroethylene	ug/g	0.064	0.75	<0.050	<0.050
Methylene Chloride	ug/g	0.1	0.96	<0.050	<0.050
1,2-Dichloropropane	ug/g	0.05	0.065	<0.050	<0.050
cis-1,3-Dichloropropene	ug/g		-	<0.030	<0.030
trans-1,3-Dichloropropene	ug/g	-		<0.030	<0.030
1,3-Dichloropropene (cis & trans)	ug/g	0.05	0.083 15	<0.042	<0.042
Ethylbenzene	ug/g			<0.018	<0.018
n-Hexane	ug/g	2.8	34	<0.050	<0.050
Methyl Ethyl Ketone	ug/g	16	44	<0.50	<0.50
Methyl Isobutyl Ketone	ug/g	1.7	4.3	<0.50	<0.50
MTBE	ug/g	0.75	1.4	<0.050	<0.050
Styrene	ug/g	0.7	2.2	< 0.050	< 0.050

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2375323 CONT'D.... Job Reference: 1-19-0603-42 PAGE 6 of 12 06-NOV-19 13:06 (MT)

Volatile Organic Compounds - SOIL

			_ab ID	L2375323-2	L2375323-4
		Sample	e Date	25-OCT-19	25-OCT-19
		Sam	ple ID	BH3-SS2	BH3-SS8
Analyte	Unit	Guide #1	Limits #2		
1,1,1,2-Tetrachloroethane	ug/g	0.058	0.05	<0.050	<0.050
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.050	<0.050
Tetrachloroethylene	ug/g	0.28	2.3	<0.050	<0.050
Toluene	ug/g	2.3	6	<0.080	<0.080
1,1,1-Trichloroethane	ug/g	0.38	3.4	<0.050	< 0.050
1,1,2-Trichloroethane	ug/g	0.05	0.05	<0.050	<0.050
Trichloroethylene	ug/g	0.061	0.52	0.018	0.022
Trichlorofluoromethane	ug/g	4	5.8	<0.050	<0.050
Vinyl chloride	ug/g	0.02	0.022	<0.020	<0.020
o-Xylene	ug/g	-	-	<0.020	<0.020
m+p-Xylenes	ug/g	-	-	<0.030	< 0.030
Xylenes (Total)	ug/g	3.1	25	<0.050	<0.050
Surrogate: 4-Bromofluorobenzene	%	-	-	94.7	93.1
Surrogate: 1,4-Difluorobenzene	%	-	-	95.2	94.7

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

Detection Limit for result exceeds Guideline Limit. Assessment against Guideline Limit cannot be made. Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

* Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2375323 CONT'D....

Job Reference: 1-19-0603-42

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Hydrocarbons - SOIL

nyurocarbons - SOIL					
		I	Lab ID	L2375323-2	L2375323-4
		Sample	e Date	25-OCT-19	25-OCT-19
		Sam	ple ID	BH3-SS2	BH3-SS8
		Guide	Limits		
Analyte	Unit	#1	#2		
F1 (C6-C10)	ug/g	55	65	<5.0	<5.0
F1-BTEX	ug/g	55	65	<5.0	<5.0
F2 (C10-C16)	ug/g	98	150	<10	<10
F3 (C16-C34)	ug/g	300	1300	<50	<50
F4 (C34-C50)	ug/g	2800	5600	<50	<50
Total Hydrocarbons (C6-C50)	ug/g	-	-	<72	<72
Chrom. to baseline at nC50		-	-	YES	YES
Surrogate: 2-Bromobenzotrifluoride	%	-	-	100.9	90.3
Surrogate: 3,4-Dichlorotoluene	%	-	-	74.0	73.6

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2375323 CONT'D.... Job Reference: 1-19-0603-42 PAGE 8 of 12 06-NOV-19 13:06 (MT)

Polycyclic Aromatic Hydrocarbons - SOII

			_ab ID	L2375323-1	L2375323-3
		Sample		25-OCT-19	25-OCT-19
		Sample ID		BH3-SS1	BH3-SS6
Analyte	Guide Limits Unit #1 #2				
Acenaphthene	ug/g	7.9	58	2.38	<0.050
Acenaphthylene	ug/g	0.15	0.17	1.03	<0.050
Anthracene	ug/g	0.67	0.74	5.60	<0.050
Benzo(a)anthracene	ug/g	0.5	0.63	11.5	<0.050
Benzo(a)pyrene	ug/g	0.3	0.3	9.26	<0.050
Benzo(b)fluoranthene	ug/g	0.78	0.78	10.7	<0.050
Benzo(g,h,i)perylene	ug/g	6.6	7.8	6.13	<0.050
Benzo(k)fluoranthene	ug/g	0.78	0.78	4.63	<0.050
Chrysene	ug/g	7	7.8	11.5	<0.050
Dibenzo(ah)anthracene	ug/g	0.1	0.1	1.64	<0.050
Fluoranthene	ug/g	0.69	0.69	25.5	<0.050
Fluorene	ug/g	62	69	2.41	<0.050
Indeno(1,2,3-cd)pyrene	ug/g	0.38	0.48	5.75	<0.050
1+2-Methylnaphthalenes	ug/g	0.99	3.4	0.988	<0.042
1-Methylnaphthalene	ug/g	0.99	3.4	0.508 DLM	<0.030
2-Methylnaphthalene	ug/g	0.99	3.4	0.480 DLM	< 0.030
Naphthalene	ug/g	0.6	0.75	0.704 DLM	<0.013
Phenanthrene	ug/g	6.2	7.8	23.5	<0.046
Pyrene	ug/g	78	78	20.9	<0.050
Surrogate: 2-Fluorobiphenyl	%	-	-	89.3	91.5
Surrogate: p-Terphenyl d14	%	-	-	78.7	82.1

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2375323 CONT'D....

Job Reference: 1-19-0603-42

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Polychlorinated Biphenyls - SOIL

Lab ID le Date nple ID	L2375323-1 25-OCT-19 BH3-SS1	L2375323-3 25-OCT-19
nple ID	BH3-SS1	
		BH3-SS6
Limits #2		
-	<0.010	<0.010
-	<0.010	<0.010
-	<0.010	<0.010
-	<0.0150 ^{DLM}	<0.010
0.35	<0.0230 PLM	<0.020
	108.1	87.8
		- <0.010 - <0.0150 ^{LM} 0.35 <0.0230 ^{LM}

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.

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Job Reference: 1-19-0603-42
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Qualifiers for Individual Parameters Listed:

F1-F4-511-CALC-WT

Qualifier	Description									
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).									
Methods Liste	Methods Listed (if applicable):									
ALS Test Code	e Matrix	Test Description	Method Reference**							

CCME CWS-PHC. Pub #1310. Dec 2001-S

Parameters

F1-F4 Hydrocarbon Calculated

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.

Soil

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

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

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-sq is analyzed grayimetrically.

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-sq are reported for a sample, the larger of the two values is used for comparison against the relevant CCME guideline for F4.
- 7. F4G-sq 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.

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Methods Listed (if applicable):

ALS Test Code Matrix **Test Description** Method Reference**

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 200.2/6020A (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 AI, 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 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).

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

WT

ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

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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.



Workorder: L2375323 Report Date: 06-NOV-19 Page 1 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test		Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT		Soil							
	4898484								
WG3209434-4 F1 (C6-C10)	DUP		WG3209434-3 <5.0	<5.0	RPD-NA	ug/g	N/A	30	05-NOV-19
WG3209434-2	LCS								
F1 (C6-C10)				102.2		%		80-120	05-NOV-19
WG3209434-1	MB			5.0				-	
F1 (C6-C10)	Diablanat	-1		<5.0		ug/g		5	05-NOV-19
Surrogate: 3,4-		oluene		100.0		%		60-140	05-NOV-19
WG3209434-6 F1 (C6-C10)	MS		L2373024-10	96.6		%		60-140	05-NOV-19
F2-F4-511-WT		Soil							
	4899263								
WG3209407-3 F2 (C10-C16)	DUP		WG3209407-5 <10	<10		ug/g	N/A	30	05 NOV 40
F3 (C16-C16)			51	<50	RPD-NA RPD-NA	ug/g ug/g	N/A N/A	30	05-NOV-19 05-NOV-19
F4 (C34-C50)			92	<50	RPD-NA RPD-NA	ug/g ug/g	N/A N/A	30	05-NOV-19 05-NOV-19
WG3209407-2	LCS		<i>32</i>		KFD-NA		N/A		
F2 (C10-C16)				114.3		%		80-120	05-NOV-19
F3 (C16-C34)				112.9		%		80-120	05-NOV-19
F4 (C34-C50)				114.6		%		80-120	05-NOV-19
WG3209407-1 F2 (C10-C16)	MB			<10		ug/g		10	05-NOV-19
F3 (C16-C34)				<50		ug/g		50	05-NOV-19
F4 (C34-C50)				<50		ug/g		50	05-NOV-19
Surrogate: 2-Bi	romobenz	zotrifluoride		79.6		%		60-140	05-NOV-19
WG3209407-4	MS		WG3209407-5	1015		0/			
F2 (C16-C16)				134.5 120.8		%		60-140	05-NOV-19
F3 (C16-C34) F4 (C34-C50)				120.6		%		60-140	05-NOV-19
,				109.5		70		60-140	05-NOV-19
MET-200.2-CCMS-		Soil							
Batch R4 WG3210315-2	4899932 CRM		WT-CANMET-	TII I 2					
Antimony (Sb)	CKIVI		AA 1-CHIAIAIE I-	103.6		%		70-130	05-NOV-19
Arsenic (As)				105.0		%		70-130	05-NOV-19
Barium (Ba)				102.7		%		70-130	05-NOV-19
Beryllium (Be)				93.9		%		70-130	05-NOV-19
Boron (B)				3.5		mg/kg		0-8.6	05-NOV-19



Workorder: L2375323 Report Date: 06-NOV-19 Page 2 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	Soil							
Batch R489993	32							
WG3210315-2 CR	И	WT-CANMET			0.4			
Cadmium (Cd)			100.9		%		70-130	05-NOV-19
Chromium (Cr)			104.0		%		70-130	05-NOV-19
Cobalt (Co)			102.4		%		70-130	05-NOV-19
Copper (Cu)			104.4		%		70-130	05-NOV-19
Lead (Pb)			103.4		%		70-130	05-NOV-19
Molybdenum (Mo)			102.4		%		70-130	05-NOV-19
Nickel (Ni)			103.9		%		70-130	05-NOV-19
Selenium (Se)			0.40		mg/kg		0.15-0.55	05-NOV-19
Silver (Ag)			0.28		mg/kg		0.16-0.36	05-NOV-19
Thallium (TI)			102.9		%		70-130	05-NOV-19
Uranium (U)			102.4		%		70-130	05-NOV-19
Vanadium (V)			103.9		%		70-130	05-NOV-19
Zinc (Zn)			98.3		%		70-130	05-NOV-19
WG3210315-4 DUF)	L2375323-3 <1.0	-1.0	DDD NA	110/0	N1/A	00	05 NOV 40
Antimony (Sb)		1.2	<1.0 1.2	RPD-NA	ug/g	N/A	30	05-NOV-19
Arsenic (As)					ug/g	0.2	30	05-NOV-19
Barium (Ba)		31.9	30.3		ug/g	5.4	40	05-NOV-19
Beryllium (Be)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	05-NOV-19
Boron (B)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	05-NOV-19
Cadmium (Cd)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	05-NOV-19
Chromium (Cr)		8.6	8.5		ug/g	1.4	30	05-NOV-19
Cobalt (Co)		2.8	2.6		ug/g	8.8	30	05-NOV-19
Copper (Cu)		5.7	5.3		ug/g	6.4	30	05-NOV-19
Lead (Pb)		3.3	3.3		ug/g	1.6	40	05-NOV-19
Molybdenum (Mo)		<1.0	<1.0	RPD-NA	ug/g	N/A	40	05-NOV-19
Nickel (Ni)		5.3	5.2		ug/g	1.2	30	05-NOV-19
Selenium (Se)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	05-NOV-19
Silver (Ag)		<0.20	<0.20	RPD-NA	ug/g	N/A	40	05-NOV-19
Thallium (TI)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	05-NOV-19
Uranium (U)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	05-NOV-19
Vanadium (V)		18.6	18.4		ug/g	0.9	30	05-NOV-19
Zinc (Zn)		14.9	14.3		ug/g	3.9	30	05-NOV-19
WG3210315-3 LCS	;							

WG3210315-3 LCS



Workorder: L2375323 Report Date: 06-NOV-19 Page 3 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

MET-2002-CCMS-WT R489932 R489932 R499932 R499932 R499932 R499932 R499932 R499933 R499933 R499933 R49993 R4993 R49993 R4993 R4993 R4993 R4993 R4993 R4993 R4993 R4993 R4993	Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
Artimory (Sb) 102.0 % 80-120 05-NOV-19 Arsenic (As) 96.1 % 80-120 05-NOV-19 Barlum (Ba) 94.9 % 80-120 05-NOV-19 Beryllium (Be) 87.8 % 80-120 05-NOV-19 Beryllium (Be) 88.6 % 80-120 05-NOV-19 Boron (B) 88.6 % 80-120 05-NOV-19 Cadmium (Cd) 93.8 % 80-120 05-NOV-19 Chromium (Cr) 94.6 % 80-120 05-NOV-19 Choper (Cu) 92.8 % 80-120 05-NOV-19 Lead (Pb) 96.9 % 80-120 05-NOV-19 Molybdanum (Mo) 99.9 % 80-120 05-NOV-19 Selenium (Se) 91.4 % 80-120 05-NOV-19 Silver (Ag) 93.0 % 80-120 05-NOV-19 Silver (Ag) 90.9 % 80-120 05-NOV-19 Silver (Ag) 90.0	MET-200.2-CCMS-WT	Soil							
Animony (Sb) 102.0 % 80-120 05-NOV-19 Arsenic (As) 95.1 % 80-120 05-NOV-19 Barium (Ba) 94.9 % 80-120 05-NOV-19 Beryllium (Be) 87.8 % 80-120 05-NOV-19 Boron (B) 88.6 % 80-120 05-NOV-19 Cadmium (Cd) 93.8 % 80-120 05-NOV-19 Chromium (Cr) 94.6 % 80-120 05-NOV-19 Cobalt (Co) 93.6 % 80-120 05-NOV-19 Copper (Cu) 92.8 % 80-120 05-NOV-19 Lead (Pb) 96.9 % 80-120 05-NOV-19 Molybdenum (Mol) 99.9 % 80-120 05-NOV-19 Niket (Ni) 94.0 % 80-120 05-NOV-19 Niket (Ni) 94.0 % 80-120 05-NOV-19 Selverium (Se) 91.4 % 80-120 05-NOV-19 Thallium (Ti) 95.2 <td< th=""><th>Batch R4899932</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></td<>	Batch R4899932								
Arsenic (As) 95.1 % 80-120 05-NOV-19 Barium (Ba) 94.9 % 80-120 05-NOV-19 Beryllium (Be) 87.8 % 80-120 05-NOV-19 Beryllium (Be) 88.6 % 80-120 05-NOV-19 Boron (B) 88.6 % 80-120 05-NOV-19 Cadmium (Cd) 93.8 % 80-120 05-NOV-19 Chromium (Cr) 94.6 % 80-120 05-NOV-19 Chosalt (Co) 93.6 % 80-120 05-NOV-19 Cobalt (Co) 93.6 % 80-120 05-NOV-19 Lead (Pb) 96.9 % 80-120 05-NOV-19 Lead (Pb) 96.9 % 80-120 05-NOV-19 Nickel (Ni) 94.0 % 80-120 05-NOV-19 Salenium (Sa) 91.4 % 80-120 05-NOV-19 Silver (Ag) 93.0 % 80-120 05-NOV-19 Silver (Ag) 93.0 % 80-120 05-NOV-19 Thaillum (TI) 95.2 % 80-120 05-NOV-19 Uranium (U) 97.3 % 80-120 05-NOV-19 Uranium (V) 96.4 % 80-120 05-NOV-19 Zinc (Zn) 90.9 % 80-120 05-NOV-19 WG3210315-1 MB Antimony (Sb) <0.10 mg/kg 0.1 05-NOV-19 Barium (Be) 40.10 mg/kg 0.1 05-NOV-19 Barium (Be) 40.10 mg/kg 0.1 05-NOV-19 Barium (Be) 40.10 mg/kg 0.1 05-NOV-19 Cadmium (Cd) 40.020 mg/kg 0.5 05-NOV-19 Cadmium (Cd) 40.020 mg/kg 0.5 05-NOV-19 Cobalt (Co) 40.10 mg/kg 0.1 05-NOV-19 Cobalt (Co) 40.00 mg/kg 0.5 05-NOV-19				400.0		0/			
Barium (Ba) 94.9 % 80-120 05-NOV-19 Beryllum (Be) 87.8 % 80-120 05-NOV-19 Boron (B) 88.6 % 80-120 05-NOV-19 Cadmium (Cd) 93.8 % 80-120 05-NOV-19 Chromium (Cr) 94.6 % 80-120 05-NOV-19 Cobalt (Co) 93.6 % 80-120 05-NOV-19 Coper (Cu) 92.8 % 80-120 05-NOV-19 Lead (Pb) 96.9 % 80-120 05-NOV-19 Nickel (Ni) 94.0 % 80-120 05-NOV-19 Nickel (Ni) 94.0 % 80-120 05-NOV-19 Nickel (Ni) 94.0 % 80-120 05-NOV-19 Salenium (Se) 91.4 % 80-120 05-NOV-19 Silver (Ag) 93.0 % 80-120 05-NOV-19 Uranium (U) 97.3 % 80-120 05-NOV-19 Vanadium (V) 96.4 %									
Beryllium (Be) 87.8 % 80-120 05-NOV-19									
Boron (B)									
Cadmium (Cd) 93.8 % 80-120 05-NOV-19 Chromium (Cr) 94.6 % 80-120 05-NOV-19 Cobalt (Co) 93.6 % 80-120 05-NOV-19 Copper (Cu) 92.8 % 80-120 05-NOV-19 Lead (Pb) 96.9 % 80-120 05-NOV-19 Molybdenum (Mo) 99.9 % 80-120 05-NOV-19 Nickel (Ni) 94.0 % 80-120 05-NOV-19 Selenium (Se) 91.4 % 80-120 05-NOV-19 Selenium (Se) 91.4 % 80-120 05-NOV-19 Thallium (TI) 95.2 % 80-120 05-NOV-19 Uranium (U) 97.3 % 80-120 05-NOV-19 Vanadium (V) 96.4 % 80-120 05-NOV-19 Vanadium (V) 96.4 % 80-120 05-NOV-19 WG3210315-1 MB Anterio (Zn) 05-NOV-19 Ariseria (Zn) 0.0 05-NOV-19 <td>• , ,</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	• , ,								
Chromium (Cr) 94.6 % 80-120 05-NOV-19 Cobalt (Co) 93.6 % 80-120 05-NOV-19 Copper (Cu) 92.8 % 80-120 05-NOV-19 Molybdenum (Mo) 96.9 % 80-120 05-NOV-19 Molybdenum (Mo) 99.9 % 80-120 05-NOV-19 Nickel (Ni) 94.0 % 80-120 05-NOV-19 Nickel (Ni) 94.0 % 80-120 05-NOV-19 Selenium (Se) 91.4 % 80-120 05-NOV-19 Silver (Ag) 93.0 % 80-120 05-NOV-19 Silver (Ag) 93.0 % 80-120 05-NOV-19 Janium (U) 97.3 % 80-120 05-NOV-19 Vanadium (V) 96.4 % 80-120 05-NOV-19 Zinc (Zn) 90.9 % 80-120 05-NOV-19 WG3210315-1 MB Antimony (Sb) <0.10									
Cobalt (Co) 93.6 % 80-120 05-NOV-19 Copper (Cu) 92.8 % 80-120 05-NOV-19 Lead (Pb) 96.9 % 80-120 05-NOV-19 Molybdenum (Mo) 99.9 % 80-120 05-NOV-19 Nickel (Ni) 94.0 % 80-120 05-NOV-19 Selenium (Se) 91.4 % 80-120 05-NOV-19 Silver (Ag) 93.0 % 80-120 05-NOV-19 Thallium (Tl) 95.2 % 80-120 05-NOV-19 Uranium (U) 97.3 % 80-120 05-NOV-19 Vanadium (V) 96.4 % 80-120 05-NOV-19 WG321315-1 MB	` ,								
Copper (Cu) 92.8 % 80-120 05-NOV-19 Lead (Pb) 96.9 % 80-120 05-NOV-19 Molybdenum (Mo) 99.9 % 80-120 05-NOV-19 Nickel (Ni) 94.0 % 80-120 05-NOV-19 Selenium (Se) 91.4 % 80-120 05-NOV-19 Silver (Ag) 93.0 % 80-120 05-NOV-19 Thallium (TI) 95.2 % 80-120 05-NOV-19 Uranium (U) 97.3 % 80-120 05-NOV-19 Vanadium (V) 96.4 % 80-120 05-NOV-19 Zinc (Zn) 90.9 % 80-120 05-NOV-19 WG3210315-1 MB N 80-120 05-NOV-19 Arsenic (As) <0.10									
Lead (Pb) 96.9 % 80.120 05-NOV-19 Molybdenum (Mo) 99.9 % 80.120 05-NOV-19 Nickel (Ni) 94.0 % 80-120 05-NOV-19 Selenium (Se) 91.4 % 80-120 05-NOV-19 Silver (Ag) 93.0 % 80-120 05-NOV-19 Thallium (TI) 95.2 % 80-120 05-NOV-19 Uranium (U) 96.4 % 80-120 05-NOV-19 Vanadium (V) 96.4 % 80-120 05-NOV-19 Zinc (Zn) 90.9 % 80-120 05-NOV-19 WG3210315-1 MB Naminony (Sb) 40.10 mg/kg 0.1 05-NOV-19 Arsenic (As) 40.10 mg/kg 0.1 05-NOV-19 Arsenic (As) 40.10 mg/kg 0.1 05-NOV-19 Beryllium (Be) 40.50 mg/kg 0.5 05-NOV-19 Born (B) 40.10 mg/kg 0.5 05-NOV-19									
Molybdenum (Mo) 99.9 % 80-120 05-NOV-19 Nickel (Ni) 94.0 % 80-120 05-NOV-19 Selenium (Se) 91.4 % 80-120 05-NOV-19 Silver (Ag) 93.0 % 80-120 05-NOV-19 Thallium (TI) 95.2 % 80-120 05-NOV-19 Uranium (U) 97.3 % 80-120 05-NOV-19 Vanadium (V) 96.4 % 80-120 05-NOV-19 Zinc (Zn) 90.9 % 80-120 05-NOV-19 WG3210315-1 MB NB 40.10 05-NOV-19 Artmimory (Sb) <0.10									
Nickel (Ni) 94.0 % 80-120 05-NOV-19 Selenium (Se) 91.4 % 80-120 05-NOV-19 Silver (Ag) 93.0 % 80-120 05-NOV-19 Thallium (TI) 95.2 % 80-120 05-NOV-19 Uranium (U) 97.3 % 80-120 05-NOV-19 Vanadium (V) 96.4 % 80-120 05-NOV-19 Zinc (Zn) 90.9 % 80-120 05-NOV-19 WG3210315-1 MB Name (As) 80-120 05-NOV-19 Arsenic (As) <0.10									
Selenium (Se) 91.4 % 80-120 05-NOV-19 Silver (Ag) 93.0 % 80-120 05-NOV-19 Thallium (TI) 95.2 % 80-120 05-NOV-19 Uranium (U) 97.3 % 80-120 05-NOV-19 Vanadium (V) 96.4 % 80-120 05-NOV-19 Zinc (Zn) 90.9 % 80-120 05-NOV-19 WG3210315-1 MB Vanatimony (Sb) 0.10 mg/kg 0.1 05-NOV-19 Arsenic (As) <0.10									
Silver (Ag) 93.0 % 80-120 05-NOV-19 Thallium (TI) 95.2 % 80-120 05-NOV-19 Uranium (U) 97.3 % 80-120 05-NOV-19 Vanadium (V) 96.4 % 80-120 05-NOV-19 Zinc (Zn) 90.9 % 80-120 05-NOV-19 WG3210315-1 MB Antimony (Sb) <0.10								80-120	05-NOV-19
Thallium (TI) 95.2 % 80-120 05-NOV-19 Uranium (U) 97.3 % 80-120 05-NOV-19 Vanadium (V) 96.4 % 80-120 05-NOV-19 Zinc (Zn) 90.9 % 80-120 05-NOV-19 WG3210315-1 MB NB NB NB Antimony (Sb) <0.10								80-120	05-NOV-19
Uranium (U) 97.3 % 80-120 05-NOV-19 Vanadium (V) 96.4 % 80-120 05-NOV-19 Zinc (Zn) 90.9 % 80-120 05-NOV-19 WG3210315-1 MB Secondary (As) 0.10 mg/kg 0.1 05-NOV-19 Arsenic (As) <0.10								80-120	05-NOV-19
Vanadium (V) 96.4 % 80-120 05-NOV-19 Zinc (Zn) 90.9 % 80-120 05-NOV-19 WG3210315-1 MB Antimony (Sb) < 0.10 mg/kg 0.1 05-NOV-19 Arsenic (As) < 0.10 mg/kg 0.1 05-NOV-19 Barium (Ba) < 0.50 mg/kg 0.5 05-NOV-19 Beryllium (Be) < 0.10 mg/kg 0.1 05-NOV-19 Boron (B) < 5.0 mg/kg 5 05-NOV-19 Cadmium (Cd) < 0.020 mg/kg 0.2 05-NOV-19 Chromium (Cr) < 0.50 mg/kg 0.5 05-NOV-19 Cobalt (Co) < 0.10 mg/kg 0.5 05-NOV-19 Copper (Cu) < 0.50 mg/kg 0.5 05-NOV-19 Lead (Pb) < 0.50 mg/kg 0.5 05-NOV-19 Molybdenum (Mo) < 0.10 mg/kg 0.1 05-NOV-19 Nickel (Ni) < 0.50 mg/kg 0.2 05-NOV-19								80-120	05-NOV-19
Zinc (Zn) 90.9 % 80-120 05-NOV-19 WG3210315-1 MB MB Co.10 mg/kg 0.1 05-NOV-19 Arsenic (As) <0.10				97.3				80-120	05-NOV-19
WG3210315-1 Antmony (Sb) MB Antimony (Sb) <0.10				96.4				80-120	05-NOV-19
Antimony (Sb) <0.10	Zinc (Zn)			90.9		%		80-120	05-NOV-19
Arsenic (As) <0.10				0.40				0.4	
Barium (Ba) <0.50									
Beryllium (Be) <0.10									
Boron (B) <5.0									
Cadmium (Cd) <0.020									
Chromium (Cr) <0.50 mg/kg 0.5 05-NOV-19 Cobalt (Co) <0.10									
Cobalt (Co) <0.10									
Copper (Cu) <0.50									
Lead (Pb) <0.50									
Molybdenum (Mo) <0.10									
Nickel (Ni) <0.50 mg/kg 0.5 05-NOV-19 Selenium (Se) <0.20									05-NOV-19
Selenium (Se) <0.20 mg/kg 0.2 05-NOV-19 Silver (Ag) <0.10						mg/kg			05-NOV-19
Silver (Ag) <0.10 mg/kg 0.1 05-NOV-19						mg/kg			05-NOV-19
	Selenium (Se)			<0.20		mg/kg		0.2	05-NOV-19
Thallium (TI) <0.050 mg/kg 0.05 05-NOV-19				<0.10		mg/kg		0.1	05-NOV-19
	Thallium (TI)			<0.050		mg/kg		0.05	05-NOV-19



Workorder: L2375323 Report Date: 06-NOV-19 Page 4 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	Soil							
Batch R4899932								
WG3210315-1 MB			0.050				0.05	
Uranium (U) Vanadium (V)			<0.050 <0.20		mg/kg		0.05 0.2	05-NOV-19
Zinc (Zn)			<2.0		mg/kg mg/kg		2	05-NOV-19
			\2.0		mg/kg		2	05-NOV-19
MOISTURE-WT	Soil							
Batch R4895778 WG3207864-3 DUP		L2375263-1						
% Moisture		5.86	5.70		%	2.8	20	01-NOV-19
WG3207864-2 LCS								
% Moisture			101.5		%		90-110	01-NOV-19
WG3207864-1 MB			.0.05		0/		0.05	
% Moisture			<0.25		%		0.25	01-NOV-19
PAH-511-WT	Soil							
Batch R4897642		W00007545.5						
WG3207515-3 DUP 1-Methylnaphthalene		WG3207515-5 < 0.030	<0.030	RPD-NA	ug/g	N/A	40	04-NOV-19
2-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	04-NOV-19
Acenaphthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Acenaphthylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Benzo(a)anthracene		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Benzo(a)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Benzo(b)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Benzo(g,h,i)perylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Benzo(k)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Chrysene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Dibenzo(ah)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Fluorene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Indeno(1,2,3-cd)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Naphthalene		<0.013	<0.013	RPD-NA	ug/g	N/A	40	04-NOV-19
Phenanthrene		<0.046	<0.046	RPD-NA	ug/g	N/A	40	04-NOV-19
Pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
WG3207515-2 LCS 1-Methylnaphthalene			86.6		%		50-140	04-NOV-19



Workorder: L2375323 Report Date: 06-NOV-19 Page 5 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Soil							
Batch R4897642								
WG3207515-2 LCS			00.0		0/		50.440	
2-Methylnaphthalene			82.2 88.2		%		50-140	04-NOV-19
Acenaphthene			89.7				50-140	04-NOV-19
Acenaphthylene Anthracene			87.6		%		50-140	04-NOV-19
					%		50-140	04-NOV-19
Benzo(a)anthracene			88.8		%		50-140	04-NOV-19
Benzo(a)pyrene			82.1		%		50-140	04-NOV-19
Benzo(b)fluoranthene			75.3		%		50-140	04-NOV-19
Benzo(g,h,i)perylene			84.2		%		50-140	04-NOV-19
Benzo(k)fluoranthene			89.8		%		50-140	04-NOV-19
Chrysene			95.2		%		50-140	04-NOV-19
Dibenzo(ah)anthracene			87.8		%		50-140	04-NOV-19
Fluoranthene			85.4		%		50-140	04-NOV-19
Fluorene			85.9		%		50-140	04-NOV-19
Indeno(1,2,3-cd)pyrene			89.6		%		50-140	04-NOV-19
Naphthalene			84.0		%		50-140	04-NOV-19
Phenanthrene			86.8		%		50-140	04-NOV-19
Pyrene			85.3		%		50-140	04-NOV-19
WG3207515-1 MB 1-Methylnaphthalene			<0.030		ug/g		0.03	04-NOV-19
2-Methylnaphthalene			<0.030		ug/g		0.03	04-NOV-19
Acenaphthene			< 0.050		ug/g		0.05	04-NOV-19
Acenaphthylene			<0.050		ug/g		0.05	04-NOV-19
Anthracene			<0.050		ug/g		0.05	04-NOV-19
Benzo(a)anthracene			<0.050		ug/g		0.05	04-NOV-19
Benzo(a)pyrene			<0.050		ug/g		0.05	04-NOV-19
Benzo(b)fluoranthene			< 0.050		ug/g		0.05	04-NOV-19
Benzo(g,h,i)perylene			<0.050		ug/g		0.05	04-NOV-19
Benzo(k)fluoranthene			<0.050		ug/g		0.05	04-NOV-19
Chrysene			<0.050		ug/g		0.05	04-NOV-19
Dibenzo(ah)anthracene			< 0.050		ug/g		0.05	04-NOV-19
Fluoranthene			<0.050		ug/g		0.05	04-NOV-19
Fluorene			<0.050		ug/g		0.05	04-NOV-19
Indeno(1,2,3-cd)pyrene			<0.050		ug/g		0.05	04-NOV-19
Naphthalene			<0.013		ug/g ug/g		0.013	04-NOV-19
Hapitalalollo			30.010		~∌ [,] ∌		0.010	0 4- 140 v-13



Workorder: L2375323 Report Date: 06-NOV-19 Page 6 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Soil							
Batch R489764 WG3207515-1 MB Phenanthrene	2		<0.046		ua/a		0.046	04 NOV 40
Pyrene			<0.046		ug/g ug/g		0.040	04-NOV-19 04-NOV-19
Surrogate: 2-Fluorobip	henvl		95.6		w %		50-140	04-NOV-19 04-NOV-19
Surrogate: p-Terpheny	•		86.6		%		50-140	04-NOV-19
WG3207515-4 MS	,	WG3207515-			,,		000	04110113
1-Methylnaphthalene		1100207010	89.3		%		50-140	04-NOV-19
2-Methylnaphthalene			84.7		%		50-140	04-NOV-19
Acenaphthene			91.1		%		50-140	04-NOV-19
Acenaphthylene			94.0		%		50-140	04-NOV-19
Anthracene			90.1		%		50-140	04-NOV-19
Benzo(a)anthracene			91.0		%		50-140	04-NOV-19
Benzo(a)pyrene			84.3		%		50-140	04-NOV-19
Benzo(b)fluoranthene			77.7		%		50-140	04-NOV-19
Benzo(g,h,i)perylene			84.6		%		50-140	04-NOV-19
Benzo(k)fluoranthene			90.3		%		50-140	04-NOV-19
Chrysene			96.1		%		50-140	04-NOV-19
Dibenzo(ah)anthracen	е		88.2		%		50-140	04-NOV-19
Fluoranthene			87.0		%		50-140	04-NOV-19
Fluorene			89.7		%		50-140	04-NOV-19
Indeno(1,2,3-cd)pyren	е		92.1		%		50-140	04-NOV-19
Naphthalene			85.8		%		50-140	04-NOV-19
Phenanthrene			87.0		%		50-140	04-NOV-19
Pyrene			87.0		%		50-140	04-NOV-19
PCB-511-WT	Soil							
Batch R489898	4							
WG3207515-3 DUP		WG3207515-			,			
Aroclor 1242		<0.010	<0.010	RPD-NA	ug/g	N/A	40	05-NOV-19
Aroclor 1248		<0.010	<0.010	RPD-NA	ug/g	N/A	40	05-NOV-19
Aroclor 1254		<0.010	<0.010	RPD-NA	ug/g	N/A	40	05-NOV-19
Aroclor 1260		<0.010	<0.010	RPD-NA	ug/g	N/A	40	05-NOV-19
WG3207515-2 LCS Aroclor 1242			109.3		%		60-140	05-NOV-19
Aroclor 1248			101.5		%		60-140	05-NOV-19
Aroclor 1254			105.2		%		60-140	05-NOV-19
			-					30 10



Workorder: L2375323 Report Date: 06-NOV-19 Page 7 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB-511-WT	Soil							
Batch R489898	4							
WG3207515-2 LCS Aroclor 1260			101.4		%		60-140	05-NOV-19
WG3207515-1 MB								
Aroclor 1242			<0.010		ug/g		0.01	05-NOV-19
Aroclor 1248			<0.010		ug/g		0.01	05-NOV-19
Aroclor 1254			<0.010		ug/g		0.01	05-NOV-19
Aroclor 1260			<0.010		ug/g		0.01	05-NOV-19
Surrogate: d14-Terphe	enyl		88.3		%		60-140	05-NOV-19
WG3207515-4 MS Aroclor 1242		WG3207515-5	i 91.8		%		60-140	05-NOV-19
Aroclor 1254			89.7		%		60-140	05-NOV-19
Aroclor 1260			86.6		%		60-140	05-NOV-19
			00.0		,,,		00-1-0	03-110 7-19
VOC-511-HS-WT	Soil							
Batch R489848 WG3209434-4 DUP		WG3209434-3	1					
1,1,1,2-Tetrachloroeth		< 0.050	<0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
1,1,2,2-Tetrachloroeth	ane	<0.050	< 0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
1,1,1-Trichloroethane		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
1,1,2-Trichloroethane		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
1,1-Dichloroethane		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
1,1-Dichloroethylene		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
1,2-Dibromoethane		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
1,2-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
1,2-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
1,2-Dichloropropane		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
1,3-Dichlorobenzene		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
1,4-Dichlorobenzene		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
Acetone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	05-NOV-19
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	05-NOV-19
Bromodichloromethan	е	<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
Bromoform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
Bromomethane		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
Carbon tetrachloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
Chlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-NOV-19



Workorder: L2375323 Report Date: 06-NOV-19 Page 8 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R4898484								
WG3209434-4 DUP Chloroform		WG3209434- <0.050	3 <0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
cis-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
cis-1,3-Dichloropropene		<0.030	< 0.030	RPD-NA	ug/g	N/A	40	05-NOV-19
Dibromochloromethane		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
Dichlorodifluoromethane		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	05-NOV-19
n-Hexane		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
Methylene Chloride		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
MTBE		< 0.050	< 0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
m+p-Xylenes		< 0.030	< 0.030	RPD-NA	ug/g	N/A	40	05-NOV-19
Methyl Ethyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	05-NOV-19
Methyl Isobutyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	05-NOV-19
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	05-NOV-19
Styrene		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
Tetrachloroethylene		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	05-NOV-19
trans-1,2-Dichloroethyler	ne	<0.050	< 0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
trans-1,3-Dichloroproper	ne	<0.030	<0.030	RPD-NA	ug/g	N/A	40	05-NOV-19
Trichloroethylene		<0.010	<0.010	RPD-NA	ug/g	N/A	40	05-NOV-19
Trichlorofluoromethane		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
Vinyl chloride		<0.020	<0.020	RPD-NA	ug/g	N/A	40	05-NOV-19
WG3209434-2 LCS 1,1,1,2-Tetrachloroethar	ne		105.6		%		60-130	05-NOV-19
1,1,2,2-Tetrachloroethar	ne		113.2		%		60-130	05-NOV-19
1,1,1-Trichloroethane			97.4		%		60-130	05-NOV-19
1,1,2-Trichloroethane			114.6		%		60-130	05-NOV-19
1,1-Dichloroethane			103.6		%		60-130	05-NOV-19
1,1-Dichloroethylene			91.8		%		60-130	05-NOV-19
1,2-Dibromoethane			116.3		%		70-130	05-NOV-19
1,2-Dichlorobenzene			108.5		%		70-130	05-NOV-19
1,2-Dichloroethane			102.4		%		60-130	05-NOV-19
1,2-Dichloropropane			110.8		%		70-130	05-NOV-19
1,3-Dichlorobenzene			104.9		%		70-130	05-NOV-19



Workorder: L2375323 Report Date: 06-NOV-19 Page 9 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R4898484								
WG3209434-2 LCS			404.0		0/			
1,4-Dichlorobenzene			104.8		%		70-130	05-NOV-19
Acetone			110.7		%		60-140	05-NOV-19
Benzene			109.1		%		70-130	05-NOV-19
Bromodichloromethane			106.7		%		50-140	05-NOV-19
Bromoform			111.0		%		70-130	05-NOV-19
Bromomethane			97.9		%		50-140	05-NOV-19
Carbon tetrachloride			96.7		%		70-130	05-NOV-19
Chlorobenzene			104.8		%		70-130	05-NOV-19
Chloroform			104.7		%		70-130	05-NOV-19
cis-1,2-Dichloroethylene			107.1		%		70-130	05-NOV-19
cis-1,3-Dichloropropene			113.7		%		70-130	05-NOV-19
Dibromochloromethane			108.6		%		60-130	05-NOV-19
Dichlorodifluoromethane	•		66.8		%		50-140	05-NOV-19
Ethylbenzene			101.1		%		70-130	05-NOV-19
n-Hexane			90.9		%		70-130	05-NOV-19
Methylene Chloride			110.1		%		70-130	05-NOV-19
MTBE			104.1		%		70-130	05-NOV-19
m+p-Xylenes			101.1		%		70-130	05-NOV-19
Methyl Ethyl Ketone			121.4		%		60-140	05-NOV-19
Methyl Isobutyl Ketone			110.3		%		60-140	05-NOV-19
o-Xylene			100.6		%		70-130	05-NOV-19
Styrene			103.7		%		70-130	05-NOV-19
Tetrachloroethylene			103.4		%		60-130	05-NOV-19
Toluene			104.5		%		70-130	05-NOV-19
trans-1,2-Dichloroethyle	ne		99.3		%		60-130	05-NOV-19
trans-1,3-Dichloroproper	ne		116.0		%		70-130	05-NOV-19
Trichloroethylene			105.7		%		60-130	05-NOV-19
Trichlorofluoromethane			90.9		%		50-140	05-NOV-19
Vinyl chloride			104.2		%		60-140	05-NOV-19
WG3209434-1 MB 1,1,1,2-Tetrachloroethar	ne		<0.050		ug/g		0.05	05-NOV-19
1,1,2,2-Tetrachloroethar			<0.050		ug/g		0.05	05-NOV-19
1,1,1-Trichloroethane			<0.050		ug/g		0.05	05-NOV-19
1,1,2-Trichloroethane			<0.050		ug/g		0.05	05-NOV-19
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Workorder: L2375323 Report Date: 06-NOV-19 Page 10 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R4898484								
WG3209434-1 MB 1,1-Dichloroethane			-0.0E0		ua/a		0.05	05 NOV 10
1,1-Dichloroethylene			<0.050 <0.050		ug/g		0.05	05-NOV-19
1,2-Dibromoethane			<0.050		ug/g		0.05	05-NOV-19
1,2-Dichlorobenzene			<0.050		ug/g		0.05	05-NOV-19
1,2-Dichloroethane					ug/g		0.05	05-NOV-19
•			<0.050		ug/g		0.05	05-NOV-19
1,2-Dichloropropane			<0.050		ug/g			05-NOV-19
1,3-Dichlorobenzene			<0.050		ug/g		0.05	05-NOV-19
1,4-Dichlorobenzene			<0.050		ug/g		0.05	05-NOV-19
Acetone			<0.50		ug/g		0.5	05-NOV-19
Benzene			<0.0068		ug/g		0.0068	05-NOV-19
Bromodichloromethane			<0.050		ug/g		0.05	05-NOV-19
Bromoform			<0.050		ug/g		0.05	05-NOV-19
Bromomethane			<0.050		ug/g		0.05	05-NOV-19
Carbon tetrachloride			<0.050		ug/g		0.05	05-NOV-19
Chlorobenzene			<0.050		ug/g		0.05	05-NOV-19
Chloroform			<0.050		ug/g		0.05	05-NOV-19
cis-1,2-Dichloroethylene			<0.050		ug/g		0.05	05-NOV-19
cis-1,3-Dichloropropene			<0.030		ug/g		0.03	05-NOV-19
Dibromochloromethane			<0.050		ug/g		0.05	05-NOV-19
Dichlorodifluoromethan	е		<0.050		ug/g		0.05	05-NOV-19
Ethylbenzene			<0.018		ug/g		0.018	05-NOV-19
n-Hexane			<0.050		ug/g		0.05	05-NOV-19
Methylene Chloride			<0.050		ug/g		0.05	05-NOV-19
MTBE			<0.050		ug/g		0.05	05-NOV-19
m+p-Xylenes			<0.030		ug/g		0.03	05-NOV-19
Methyl Ethyl Ketone			<0.50		ug/g		0.5	05-NOV-19
Methyl Isobutyl Ketone			<0.50		ug/g		0.5	05-NOV-19
o-Xylene			<0.020		ug/g		0.02	05-NOV-19
Styrene			<0.050		ug/g		0.05	05-NOV-19
Tetrachloroethylene			<0.050		ug/g		0.05	05-NOV-19
Toluene			<0.080		ug/g		0.08	05-NOV-19
trans-1,2-Dichloroethyle	ene		<0.050		ug/g		0.05	05-NOV-19
trans-1,3-Dichloroprope	ne		<0.030		ug/g		0.03	05-NOV-19



Workorder: L2375323 Report Date: 06-NOV-19 Page 11 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test !	Matrix Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil						
Batch R4898484							
WG3209434-1 MB		0.010		/a		0.01	
Trichloroethylene Trichlorofluoromethane		<0.010		ug/g		0.01	05-NOV-19
		<0.050		ug/g		0.05	05-NOV-19
Vinyl chloride		<0.020		ug/g		0.02	05-NOV-19
Surrogate: 1,4-Difluoroben		100.0		%		50-140	05-NOV-19
Surrogate: 4-Bromofluorok		100.0		%		50-140	05-NOV-19
WG3209434-5 MS 1,1,1,2-Tetrachloroethane	L2373024-	1 107.6		%		50-140	05-NOV-19
1,1,2,2-Tetrachloroethane		105.0		%		50-140	05-NOV-19
1,1,1-Trichloroethane		99.0		%		50-140	05-NOV-19
1,1,2-Trichloroethane		108.8		%		50-140	05-NOV-19
1,1-Dichloroethane		102.6		%		50-140	05-NOV-19
1,1-Dichloroethylene		94.2		%		50-140	05-NOV-19
1,2-Dibromoethane		109.1		%		50-140	05-NOV-19
1,2-Dichlorobenzene		104.0		%		50-140	05-NOV-19
1,2-Dichloroethane		93.9		%		50-140	05-NOV-19
1,2-Dichloropropane		105.6		%		50-140	05-NOV-19
1,3-Dichlorobenzene		103.2		%		50-140	05-NOV-19
1,4-Dichlorobenzene		103.0		%		50-140	05-NOV-19
Acetone		100.9		%		50-140	05-NOV-19
Benzene		107.6		%		50-140	05-NOV-19
Bromodichloromethane		101.0		%		50-140	05-NOV-19
Bromoform		105.4		%		50-140	05-NOV-19
Bromomethane		94.9		%		50-140	05-NOV-19
Carbon tetrachloride		99.7		%		50-140	05-NOV-19
Chlorobenzene		106.8		%		50-140	05-NOV-19
Chloroform		102.8		%		50-140	05-NOV-19
cis-1,2-Dichloroethylene		102.9		%		50-140	05-NOV-19
cis-1,3-Dichloropropene		104.9		%		50-140	05-NOV-19
Dibromochloromethane		106.2		%		50-140	05-NOV-19
Dichlorodifluoromethane		75.4		%		50-140	05-NOV-19
Ethylbenzene		106.9		%		50-140	05-NOV-19
n-Hexane		97.5		%		50-140	05-NOV-19
Methylene Chloride		104.9		%		50-140	05-NOV-19
MTBE		105.1		%		50-140	05-NOV-19



Workorder: L2375323 Report Date: 06-NOV-19 Page 12 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R4898484	4							
WG3209434-5 MS		L2373024-1						
m+p-Xylenes			106.3		%		50-140	05-NOV-19
Methyl Ethyl Ketone			104.6		%		50-140	05-NOV-19
Methyl Isobutyl Ketone)		95.8		%		50-140	05-NOV-19
o-Xylene			105.1		%		50-140	05-NOV-19
Styrene			105.7		%		50-140	05-NOV-19
Tetrachloroethylene			110.4		%		50-140	05-NOV-19
Toluene			108.9		%		50-140	05-NOV-19
trans-1,2-Dichloroethyl	lene		99.3		%		50-140	05-NOV-19
trans-1,3-Dichloroprop	ene		108.6		%		50-140	05-NOV-19
Trichloroethylene			106.5		%		50-140	05-NOV-19
Trichlorofluoromethane	е		95.7		%		50-140	05-NOV-19
Vinyl chloride			108.1		%		50-140	05-NOV-19

Workorder: L2375323 Report Date: 06-NOV-19

Client: TERRAPROBE-BRAMPTON Page 13 of 13

11 Indell Lane

Brampton ON L6T 3Y3 Kossay Makhzoumi

Legend:

Contact:

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.

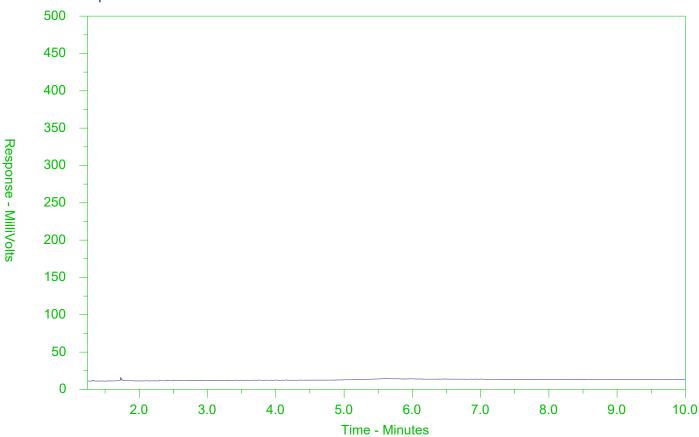
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined data quality objectives to provide 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: L2375323-2 Client Sample ID: BH3-SS2



← -F2-	→←	_F3 → F4-	→	
nC10	nC16	nC34	nC50	
174°C	287°C	481°C	575°C	
346°F	549°F	898°F	1067°F	
Gasolin	ie →	← Mo	tor 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.

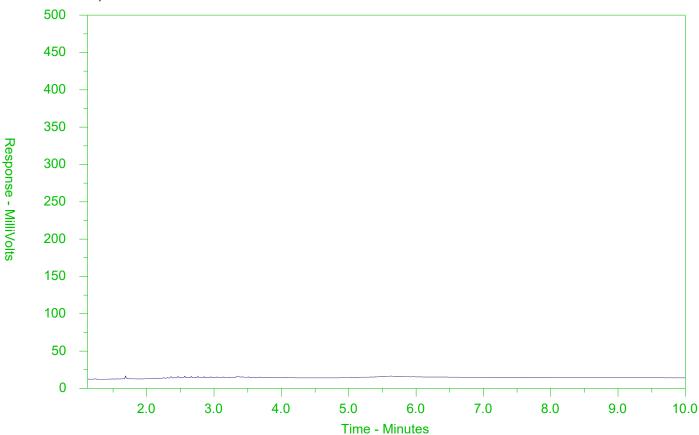
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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: L2375323-4 Client Sample ID: BH3-SS8



← -F2-	→←	_F3 → F4-	→	
nC10	nC16	nC34	nC50	
174°C	287°C	481°C	575°C	
346°F	549°F	898°F	1067°F	
Gasolin	ie →	← Mo	tor 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 Enusionme

Chain of Custody (COC) / Analytical Request Form

L2375323-COFC

COC Number: 15 -

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Contact:	Kossay Makhzoumi					Quality Control ((QC) Report with Re	port 🗹 YES	□ NO	> Salas	4	day (P	4]			ţ	1 [Busin	iess d	ay [Eʻ]		
Phone:	905-796-2650					☑ Compare Resul	lts to Criteria on Report -	provide details belo	w if box checked	PRIORITY (Business Day	3	day [P	3]			RGE			Day, W				
	Company address below	will appea	r on the final	report		Select Distribution	on: 🗹 EMAIL	MAIL [FAX	1		day [P				<u> </u>	:	Statu	tory h	oliday	[E0]		اليا
Street:	11 Indell Lane					Email 1 or Fax	kmakhzoumi@terra	aprobe.ca		<u> </u>			Require										
City/Province:	Brampton					Email 2				For tes	ts that c	n not b	e performe	d accor						will be	contacted	l.	
Postal Code:	L6T 3Y3					Email 3										nalys		<u> </u>					
Invoice To	Same as Report To		YES [☑ NO			Invoice Dis	tribution			Ind	icate Fi	tered (F),	Preserv	ved (P)	or Filter	ed and	Prese	rved (F/I	P) belo	<u>* </u>	4	
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Contact:	Lorena Rossi					Email 2				Į										ı	ĺ		શ
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Job #:	1-19-0603-42					Major/Minor Code:		Routing Code:						İ		ı				- 1		İ) jo
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ALS Sample # (lab use only)		-		and/or Coord			Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	Metals a	Metals	Hyride F	Si E	SAR	ЬАН	200	윒	OC Pesticides	PCBs				
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	SHIPMENT RE	LEASE	(client use))			INITIAL SHIPMEN	IT RECEPTION	(lab use only)	ΨŁ	46			FI	NAL S	HIPM	ENT			N (lab	use on		
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TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 31-OCT-19

Report Date: 07-NOV-19 14:40 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2375316

Project P.O. #: NOT SUBMITTED

Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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L2375316 CONT'D....

Job Reference: 1-19-0603-42

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Summary of Guideline Exceedances

Guideline ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit
		15, 2011 Standards - T3-Soil-Res/Park/In				<u> </u>
Jillano Neg	guiation 155/04 - April 1	13, 2011 Standards - 13-3011-1(es/Fark/III	ist. Property use (Coarse)			
L2375316-1	BH4-SS1	Physical Tests	Conductivity	0.740	0.7	mS/cm
_2375316-3	BH4-SS3	Saturated Paste Extractables	SAR	5.51	5	SAR
_2375316-5	BH4-SS7	Volatile Organic Compounds	Trichloroethylene	0.077	0.061	ug/g
Intario Reg	gulation 153/04 - April 1	l5, 2011 Standards - T3-Soil-Res/Park/In	st. Property Use (Fine)			
_2375316-1	BH4-SS1	Physical Tests	Conductivity	0.740	0.7	mS/cm
2375316-3	BH4-SS3	Saturated Paste Extractables	SAR	5.51	5	SAR



L2375316 CONT'D....
Job Reference: 1-19-0603-42
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Physical Tests - SOIL

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		ı	Lab ID	L2375316-1	L2375316-2	L2375316-3	L2375316-4	L2375316-5
	(Sample	e Date	23-OCT-19	23-OCT-19	23-OCT-19	23-OCT-19	23-OCT-19
		Sam	ple ID	BH4-SS1	BH4-SS2	BH4-SS3	BH4-SS5	BH4-SS7
Analyte	Unit	Guide #1	Limits #2					
Conductivity	mS/cm	0.7	0.7	0.740		0.519		
% Moisture	%	-	-	14.6	9.91	6.77	7.98	9.20
pH	pH units	-	-	7.76		7.77		

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



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Cyanides - SOIL

		L	ab ID	L2375316-1	L2375316-3
		Sample	Date	23-OCT-19	23-OCT-19
		Sam	ple ID	BH4-SS1	BH4-SS3
Analyte	Unit	Guide #1	Limits #2		
Analyte					

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



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Job Reference: 1-19-0603-42

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Saturated Paste Extractables - SOIL

Sample Date 23-OCT-19 23-OCT BH4-SS1						
Analyte Guide Limits #1 #2 SAR SAR 5 5 4.10 5.51 Calcium (Ca) mg/L 30.6 11.1 Magnesium (Mg) mg/L 82.5 10.6			1	Lab ID	L2375316-1	L2375316-3
Guide Limits Analyte Unit #1 #2 SAR SAR 5 5 4.10 5.51 Calcium (Ca) mg/L - - 30.6 11.1 Magnesium (Mg) mg/L - - 82.5 10.6			Sample	e Date	23-OCT-19	23-OCT-19
Analyte Unit #1 #2 SAR SAR 5 5 4.10 5.51 Calcium (Ca) mg/L - - 30.6 11.1 Magnesium (Mg) mg/L - - 82.5 10.6			Sam	iple ID	BH4-SS1	BH4-SS3
SAR SAR 5 5 4.10 5.51 Calcium (Ca) mg/L - - 30.6 11.1 Magnesium (Mg) mg/L - - 82.5 10.6	Analyte	Unit				
Magnesium (Mg) mg/L 82.5 10.6	<u> </u>					
	OAN	SAR	5	5	4.10	5.51
Sodium (Na) mg/L 192 107		-				5.51 11.1
	Calcium (Ca)	mg/L	-	-	30.6	

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



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Job Reference: 1-19-0603-42

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Metals - SOIL

		Lab ID Sample Date Sample ID Guide Limits t #1 #2		L2375316-1 23-OCT-19 BH4-SS1	L2375316-3 23-OCT-19 BH4-SS3
Analyte	Unit				
Antimony (Sb)	ug/g	7.5	7.5	<1.0	<1.0
Arsenic (As)	ug/g	18	18	3.0	1.2
Barium (Ba)	ug/g	390	390	103	28.6
Beryllium (Be)	ug/g	4	5	<0.50	<0.50
Boron (B)	ug/g	120	120	6.0	<5.0
Boron (B), Hot Water Ext.	ug/g	1.5	1.5	0.24	0.10
Cadmium (Cd)	ug/g	1.2	1.2	<0.50	<0.50
Chromium (Cr)	ug/g	160	160	19.3	8.5
Cobalt (Co)	ug/g	22	22	7.4	2.6
Copper (Cu)	ug/g	140	180	8.7	4.6
Lead (Pb)	ug/g	120	120	6.7	3.4
Mercury (Hg)	ug/g	0.27	1.8	0.0178	<0.0050
Molybdenum (Mo)	ug/g	6.9	6.9	<1.0	<1.0
Nickel (Ni)	ug/g	100	130	14.9	5.1
Selenium (Se)	ug/g	2.4	2.4	<1.0	<1.0
Silver (Ag)	ug/g	20	25	<0.20	<0.20
Thallium (TI)	ug/g	1	1	<0.50	<0.50
Uranium (U)	ug/g	23	23	<1.0	<1.0
Vanadium (V)	ug/g	86	86	34.7	18.3
Zinc (Zn)	ug/g	340	340	31.2	15.0

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



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Speciated Metals - SOIL

-			Lab ID	L2375316-1	L2375316-3
		Sample	e Date	23-OCT-19	23-OCT-19
		Sam	ple ID	BH4-SS1	BH4-SS3
			Limits		
Analyte	Unit	#1	#2		

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



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Volatile Organic Compounds - SOIL

		Sample	ab ID Date ple ID	L2375316-1 23-OCT-19 BH4-SS1	L2375316-4 23-OCT-19 BH4-SS5	L2375316-5 23-OCT-19 BH4-SS7
Analyte	Unit	Guide #1	Limits #2			
Acetone	ug/g	16	28	<0.50		<0.50
Benzene	ug/g	0.21	0.17	<0.0068	<0.0068	<0.0068
Bromodichloromethane	ug/g	13	13	<0.050		<0.050
Bromoform	ug/g	0.27	0.26	<0.050		<0.050
Bromomethane	ug/g	0.05	0.05	<0.050		<0.050
Carbon tetrachloride	ug/g	0.05	0.12	<0.050		<0.050
Chlorobenzene	ug/g	2.4	2.7	<0.050		<0.050
Dibromochloromethane	ug/g	9.4	9.4	<0.050		<0.050
Chloroform	ug/g	0.05	0.18	<0.050		<0.050
1,2-Dibromoethane	ug/g	0.05	0.05	<0.050		<0.050
1,2-Dichlorobenzene	ug/g	3.4	4.3	<0.050		<0.050
1,3-Dichlorobenzene	ug/g	4.8	6	<0.050		<0.050
1,4-Dichlorobenzene	ug/g	0.083	0.097	<0.050		<0.050
Dichlorodifluoromethane	ug/g	16	25	<0.050		< 0.050
1,1-Dichloroethane	ug/g	3.5	11	<0.050		< 0.050
1,2-Dichloroethane	ug/g	0.05	0.05	<0.050		< 0.050
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.050		< 0.050
cis-1,2-Dichloroethylene	ug/g	3.4	30	<0.050		< 0.050
trans-1,2-Dichloroethylene	ug/g	0.084	0.75	<0.050		< 0.050
Methylene Chloride	ug/g	0.1	0.96	<0.050		< 0.050
1,2-Dichloropropane	ug/g	0.05	0.085	<0.050		< 0.050
cis-1,3-Dichloropropene	ug/g	-	-	<0.030		< 0.030
trans-1,3-Dichloropropene	ug/g	-	-	<0.030		< 0.030
1,3-Dichloropropene (cis & trans)	ug/g	0.05	0.083	<0.042		<0.042
Ethylbenzene	ug/g	2	15	<0.018	<0.018	<0.018
n-Hexane	ug/g	2.8	34	<0.050		< 0.050
Methyl Ethyl Ketone	ug/g	16	44	<0.50		<0.50
Methyl Isobutyl Ketone	ug/g	1.7	4.3	<0.50		<0.50
MTBE	ug/g	0.75	1.4	<0.050		< 0.050
Styrene	ug/g	0.7	2.2	<0.050		< 0.050

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



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Volatile Organic Compounds - SOIL

		ı	ab ID	L2375316-1	L2375316-4	L2375316-5
		Sample		23-OCT-19	23-OCT-19	23-OCT-19
		•	ple ID	BH4-SS1	BH4-SS5	BH4-SS7
Analyte	Unit	Guide #1	Limits #2			
1,1,1,2-Tetrachloroethane	ug/g	0.058	0.05	<0.050		<0.050
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.050		<0.050
Tetrachloroethylene	ug/g	0.28	2.3	<0.050		<0.050
Toluene	ug/g	2.3	6	<0.080	<0.080	<0.080
1,1,1-Trichloroethane	ug/g	0.38	3.4	<0.050		<0.050
1,1,2-Trichloroethane	ug/g	0.05	0.05	<0.050		<0.050
Trichloroethylene	ug/g	0.061	0.52	<0.010		0.077
Trichlorofluoromethane	ug/g	4	5.8	<0.050		<0.050
Vinyl chloride	ug/g	0.02	0.022	<0.020		<0.020
o-Xylene	ug/g	-	-	<0.020	<0.020	<0.020
m+p-Xylenes	ug/g	-	-	<0.030	< 0.030	<0.030
Xylenes (Total)	ug/g	3.1	25	<0.050	<0.050	<0.050
Surrogate: 4-Bromofluorobenzene	%	-	-	87.7	97.0	90.9
Surrogate: 1,4-Difluorobenzene	%	-	-	106.0	110.2	111.9

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



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Hydrocarbons - SOIL

i iyul ocal bolis - SOIL					
		L	_ab ID	L2375316-1	L2375316-4
		Sample Date Sample ID Guide Limits Unit #1 #2		23-OCT-19	23-OCT-19
				BH4-SS1	BH4-SS5
Analyte	Unit				
F1 (C6-C10)	ug/g	55	65	<5.0	<5.0
F1-BTEX	ug/g	55	65	<5.0	<5.0
F2 (C10-C16)	ug/g	98	150	<10	<10
F3 (C16-C34)	ug/g	300	1300	<50	<50
F4 (C34-C50)	ug/g	2800	5600	<50	<50
Total Hydrocarbons (C6-C50)	ug/g	-	-	<72	<72
Chrom. to baseline at nC50		-	-	YES	YES
Surrogate: 2-Bromobenzotrifluoride	%	-	-	103.1	97.8
Surrogate: 3,4-Dichlorotoluene	%	-	-	92.0	101.2

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



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Polycyclic Aromatic Hydrocarbons - SOIL

 Lab ID
 L2375316-2

 Sample Date
 23-OCT-19

 Sample ID
 BH4-SS2

		Guide	Limits	
Analyte	Unit	#1	#2	
Acenaphthene	ug/g	7.9	58	<0.050
Acenaphthylene	ug/g	0.15	0.17	< 0.050
Anthracene	ug/g	0.67	0.74	<0.050
Benzo(a)anthracene	ug/g	0.5	0.63	<0.050
Benzo(a)pyrene	ug/g	0.3	0.3	<0.050
Benzo(b)fluoranthene	ug/g	0.78	0.78	<0.050
Benzo(g,h,i)perylene	ug/g	6.6	7.8	<0.050
Benzo(k)fluoranthene	ug/g	0.78	0.78	< 0.050
Chrysene	ug/g	7	7.8	<0.050
Dibenzo(ah)anthracene	ug/g	0.1	0.1	< 0.050
Fluoranthene	ug/g	0.69	0.69	<0.050
Fluorene	ug/g	62	69	< 0.050
Indeno(1,2,3-cd)pyrene	ug/g	0.38	0.48	<0.050
1+2-Methylnaphthalenes	ug/g	0.99	3.4	< 0.042
1-Methylnaphthalene	ug/g	0.99	3.4	< 0.030
2-Methylnaphthalene	ug/g	0.99	3.4	< 0.030
Naphthalene	ug/g	0.6	0.75	<0.013
Phenanthrene	ug/g	6.2	7.8	<0.046
Pyrene	ug/g	78	78	<0.050
Surrogate: 2-Fluorobiphenyl	%	-	-	92.5
Surrogate: p-Terphenyl d14	%	-	-	82.4

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

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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

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).

CN-WAD-R511-WT Soil Cyanide (WAD)-O.Reg 153/04 (July MOE 3015/APHA 4500CN I-WAD

2011

The sample is extracted with a strong base for 16 hours, and then filtered. The filtrate is then distilled where the cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

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

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

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 CCME CWS-PHC, Pub #1310, Dec 2001-S

Parameters

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.

L2375316 CONT'D.... Job Reference: 1-19-0603-42 PAGE 13 of 15 07-NOV-19 14:40 (MT)

Methods Listed (if applicable):

ALS Test Code Matrix **Test Description** Method Reference**

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

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

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-sq: Gravimetric Heavy Hydrocarbons (F4G) after silica gel treatment.
- 6. Where both F4 (C34-C50) and F4G-sq are reported for a sample, the larger of the two values is used for comparison against the relevant CCME guideline for F4.
- 7. F4G-sq 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 200.2/6020A (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 AI, 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)

Reference Information

L2375316 CONT'D....
Job Reference: 1-19-0603-42
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Methods Listed (if applicable):

 ALS Test Code
 Matrix
 Test Description
 Method Reference**

 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 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

 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 abou	ve test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:						
Laboratory Definition Code	Laboratory Location						
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA						

Reference Information

L2375316 CONT'D....
Job Reference: 1-19-0603-42
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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.



Workorder: L2375316 Report Date: 07-NOV-19 Page 1 of 15

TERRAPROBE-BRAMPTON Client:

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
B-HWS-R511-WT	Soil							
Batch R4898647	,							
WG3210360-4 DUP Boron (B), Hot Water E	Ext.	L2375371-13 0.69	0.69		ug/g	0.7	30	05-NOV-19
WG3210360-2 IRM Boron (B), Hot Water E	Ext.	WT SAR3	102.0		%		70-130	05-NOV-19
WG3210360-3 LCS Boron (B), Hot Water E	Ext.		101.0		%		70-130	05-NOV-19
WG3210360-1 MB Boron (B), Hot Water E	Ext.		<0.10		ug/g		0.1	05-NOV-19
BTX-511-HS-WT	Soil							
Batch R4901464	ı							
WG3212421-4 DUP Benzene		WG3212421-3 < 0.0068	<0.0068	RPD-NA	ug/g	N/A	40	07-NOV-19
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	07-NOV-19
m+p-Xylenes		<0.030	<0.030	RPD-NA	ug/g	N/A	40	07-NOV-19
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	07-NOV-19
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	07-NOV-19
WG3212421-2 LCS Benzene			101.1		%		70.400	
Ethylbenzene			97.5		%		70-130	07-NOV-19
m+p-Xylenes			95.4		%		70-130	07-NOV-19
o-Xylene			97.9		%		70-130 70-130	07-NOV-19 07-NOV-19
Toluene			97.1		%		70-130	07-NOV-19
WG3212421-1 MB			37.1		70		70-130	07-1107-19
Benzene			<0.0068		ug/g		0.0068	07-NOV-19
Ethylbenzene			<0.018		ug/g		0.018	07-NOV-19
m+p-Xylenes			<0.030		ug/g		0.03	07-NOV-19
o-Xylene			<0.020		ug/g		0.02	07-NOV-19
Toluene			<0.080		ug/g		0.08	07-NOV-19
Surrogate: 1,4-Difluoro	benzene		102.2		%		50-140	07-NOV-19
Surrogate: 4-Bromofluo	orobenzene		90.6		%		50-140	07-NOV-19
WG3212421-5 MS Benzene		L2378191-1	100.8		%		60-140	07-NOV-19
Ethylbenzene			98.0		%		60-140	07-NOV-19
m+p-Xylenes			95.5		%		60-140	07-NOV-19
o-Xylene			98.0		%		60-140	07-NOV-19
Toluene			98.2		%		60-140	07-NOV-19
								3



Workorder: L2375316 Report Date: 07-NOV-19 Page 2 of 15

TERRAPROBE-BRAMPTON Client:

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CN-WAD-R511-WT	Soil							
Batch R4897615 WG3208374-3 DUP Cyanide, Weak Acid Dis	s	L2375738-5 <0.050	<0.050	RPD-NA	ug/g	N/A	35	04-NOV-19
WG3208374-2 LCS Cyanide, Weak Acid Dis	s		99.8		%		80-120	04-NOV-19
WG3208374-1 MB Cyanide, Weak Acid Dis	s		<0.050		ug/g		0.05	04-NOV-19
WG3208374-4 MS Cyanide, Weak Acid Dis	s	L2375738-5	106.0		%		70-130	04-NOV-19
CR-CR6-IC-WT	Soil							
Batch R4898409								
WG3207904-4 CRM Chromium, Hexavalent		WT-SQC012	88.9		%		70-130	04-NOV-19
WG3207904-3 DUP Chromium, Hexavalent		L2375263-1 <0.20	<0.20	RPD-NA	ug/g	N/A	35	04-NOV-19
WG3207904-2 LCS Chromium, Hexavalent			94.6		%		80-120	04-NOV-19
WG3207904-1 MB Chromium, Hexavalent			<0.20		ug/g		0.2	04-NOV-19
EC-WT	Soil							
Batch R4898873								
WG3210366-4 DUP Conductivity		WG3210366-3 1.13	1.12		mS/cm	0.9	20	05-NOV-19
WG3210366-2 IRM Conductivity		WT SAR3	88.5		%		70-130	05-NOV-19
WG3210588-1 LCS Conductivity			98.8		%		90-110	05-NOV-19
WG3210366-1 MB Conductivity			<0.0040		mS/cm		0.004	05-NOV-19
F1-HS-511-WT	Soil							
Batch R4901464								
WG3212421-4 DUP F1 (C6-C10)		WG3212421-3 <5.0	<5.0	RPD-NA	ug/g	N/A	30	07-NOV-19
WG3212421-2 LCS F1 (C6-C10)			108.0		%		80-120	07-NOV-19
WG3212421-1 MB F1 (C6-C10)			<5.0		ug/g		5	07-NOV-19
Surrogate: 3,4-Dichlorot	oluene		92.9		%		60-140	07-NOV-19



Workorder: L2375316 Report Date: 07-NOV-19 Page 3 of 15

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test		Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT		Soil							
Batch R4	901464								
WG3212421-6 F1 (C6-C10)	MS		L2378191-2	101.9		%		60-140	07-NOV-19
Batch R4	902278								
WG3211513-4 F1 (C6-C10)	DUP		WG3211513-3 <5.0	<5.0	RPD-NA	ug/g	N/A	30	07-NOV-19
WG3211513-2 F1 (C6-C10)	LCS			108.2		%		80-120	07-NOV-19
WG3211513-1 F1 (C6-C10)	MB			<5.0		ug/g		5	07-NOV-19
Surrogate: 3,4-D	Dichloroto	luene		103.0		%		60-140	07-NOV-19
WG3211513-6 F1 (C6-C10)	MS		L2375371-2	107.4		%		60-140	07-NOV-19
F2-F4-511-WT		Soil							
Batch R4	897606								
WG3209036-3 F2 (C10-C16)	DUP		WG3209036-5 659	523		ug/g	23	30	04-NOV-19
F3 (C16-C34)			81	<50	RPD-NA	ug/g	N/A	30	04-NOV-19
F4 (C34-C50)			<50	<50	RPD-NA	ug/g	N/A	30	04-NOV-19
WG3209036-2 F2 (C10-C16)	LCS			105.5		%		80-120	04-NOV-19
F3 (C16-C34)				101.2		%		80-120	04-NOV-19
F4 (C34-C50)				107.0		%		80-120	04-NOV-19
WG3209036-1	MB								
F2 (C10-C16)				<10		ug/g		10	04-NOV-19
F3 (C16-C34)				<50		ug/g		50	04-NOV-19
F4 (C34-C50)				<50		ug/g		50	04-NOV-19
Surrogate: 2-Bro	omobenz	otrifluoride		95.7		%		60-140	04-NOV-19
WG3209036-4 F2 (C10-C16)	MS		WG3209036-5	N/A	MS-B	%		_	04-NOV-19
F3 (C16-C34)				100.1	IVIO D	%		- 60-140	04-NOV-19 04-NOV-19
F4 (C34-C50)				95.4		%		60-140	04-NOV-19
HG-200.2-CVAA-W	т	Soil						33 . 10	
	1 898467	COII							
WG3210338-2	CRM		WT-CANMET-1	ΓILL2					
Mercury (Hg)				114.4		%		70-130	05-NOV-19
WG3210338-6	DUP		WG3210338-5						



Workorder: L2375316 Report Date: 07-NOV-19 Page 4 of 15

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HG-200.2-CVAA-WT	Soil							
Batch R4898467								
WG3210338-6 DUP Mercury (Hg)		WG3210338-5 0.119	0.112		ug/g	6.1	40	05-NOV-19
WG3210338-3 LCS Mercury (Hg)			105.0		%		80-120	05-NOV-19
WG3210338-1 MB Mercury (Hg)			<0.0050		mg/kg		0.005	05-NOV-19
MET-200.2-CCMS-WT	Soil							
Batch R4899121								
WG3210338-2 CRM		WT-CANMET-1	T ILL2 100.3		%		70.400	05 NOV 40
Antimony (Sb)							70-130	05-NOV-19
Arsenic (As)			95.8 93.2		%		70-130	05-NOV-19
Barium (Ba) Beryllium (Be)			93.2 84.7		%		70-130	05-NOV-19
Boron (B)			2.7		mg/kg		70-130	05-NOV-19
Cadmium (Cd)			87.9		%		0-8.6 70-130	05-NOV-19 05-NOV-19
Chromium (Cr)			90.8		%		70-130	05-NOV-19 05-NOV-19
Cobalt (Co)			91.8		%		70-130	05-NOV-19
Copper (Cu)			91.4		%		70-130	05-NOV-19 05-NOV-19
Lead (Pb)			96.8		%		70-130	05-NOV-19
Molybdenum (Mo)			98.6		%		70-130	05-NOV-19
Nickel (Ni)			93.4		%		70-130	05-NOV-19
Selenium (Se)			0.32		mg/kg		0.15-0.55	05-NOV-19
Silver (Ag)			0.24		mg/kg		0.16-0.36	05-NOV-19
Thallium (TI)			93.6		%		70-130	05-NOV-19
Uranium (U)			91.3		%		70-130	05-NOV-19
Vanadium (V)			93.1		%		70-130	05-NOV-19
Zinc (Zn)			88.3		%		70-130	05-NOV-19
WG3210338-6 DUP		WG3210338-5						
Antimony (Sb)		0.39	0.38		ug/g	1.3	30	05-NOV-19
Arsenic (As)		11.7	10.8		ug/g	7.8	30	05-NOV-19
Barium (Ba)		50.5	45.9		ug/g	9.6	40	05-NOV-19
Beryllium (Be)		0.29	0.26		ug/g	8.4	30	05-NOV-19
Boron (B)		6.3	5.8		ug/g	8.5	30	05-NOV-19
Cadmium (Cd)		0.354	0.385		ug/g	8.6	30	05-NOV-19
Chromium (Cr)		13.5	11.7		ug/g	14	30	05-NOV-19



Workorder: L2375316 Report Date: 07-NOV-19 Page 5 of 15

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	Soil							
Batch R4899	9121							
	UP	WG3210338-5			110/0	0.0	00	05 NOV 40
Cobalt (Co)		4.71	4.35		ug/g	8.0	30	05-NOV-19
Copper (Cu)		28.7	26.1		ug/g	9.5	30	05-NOV-19
Lead (Pb)		109	98.1		ug/g	10	40	05-NOV-19
Molybdenum (Mo)		1.04	0.93		ug/g	11	40	05-NOV-19
Nickel (Ni)		10.9	10.0		ug/g	8.5	30	05-NOV-19
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	05-NOV-19
Silver (Ag)		0.42	0.40		ug/g	4.9	40	05-NOV-19
Thallium (TI)		0.079	0.068		ug/g	16	30	05-NOV-19
Uranium (U)		0.447	0.403		ug/g	10	30	05-NOV-19
Vanadium (V)		20.5	18.8		ug/g	8.4	30	05-NOV-19
Zinc (Zn)		65.8	78.2		ug/g	17	30	05-NOV-19
WG3210338-4 L Antimony (Sb)	cs		103.5		%		80-120	05-NOV-19
Arsenic (As)			96.0		%		80-120	05-NOV-19
Barium (Ba)			98.9		%		80-120	05-NOV-19
Beryllium (Be)			89.0		%		80-120	05-NOV-19
Boron (B)			88.5		%		80-120	05-NOV-19
Cadmium (Cd)			90.9		%		80-120	05-NOV-19
Chromium (Cr)			95.9		%		80-120	05-NOV-19
Cobalt (Co)			93.2		%		80-120	05-NOV-19
Copper (Cu)			90.2		%		80-120	05-NOV-19
Lead (Pb)			97.2		%		80-120	05-NOV-19
Molybdenum (Mo)			101.9		%		80-120	05-NOV-19
Nickel (Ni)			92.8		%		80-120	05-NOV-19
Selenium (Se)			87.5		%		80-120	05-NOV-19
Silver (Ag)			95.7		%		80-120	05-NOV-19
Thallium (TI)			96.2		%		80-120	05-NOV-19
Uranium (U)			95.6		%		80-120	05-NOV-19
Vanadium (V)			98.3		%		80-120	05-NOV-19
Zinc (Zn)			89.7		%		80-120	05-NOV-19
	1В						-	· -
Antimony (Sb)			<0.10		mg/kg		0.1	05-NOV-19
Arsenic (As)			<0.10		mg/kg		0.1	05-NOV-19
Barium (Ba)			<0.50		mg/kg		0.5	



Workorder: L2375316 Report Date: 07-NOV-19 Page 6 of 15

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	Soil							
Batch R4899121 WG3210338-1 MB								
Barium (Ba)			<0.50		mg/kg		0.5	05-NOV-19
Beryllium (Be)			<0.10		mg/kg		0.1	05-NOV-19
Boron (B)			<5.0		mg/kg		5	05-NOV-19
Cadmium (Cd)			<0.020		mg/kg		0.02	05-NOV-19
Chromium (Cr)			<0.50		mg/kg		0.5	05-NOV-19
Cobalt (Co)			<0.10		mg/kg		0.1	05-NOV-19
Copper (Cu)			<0.50		mg/kg		0.5	05-NOV-19
Lead (Pb)			<0.50		mg/kg		0.5	05-NOV-19
Molybdenum (Mo)			<0.10		mg/kg		0.1	05-NOV-19
Nickel (Ni)			<0.50		mg/kg		0.5	05-NOV-19
Selenium (Se)			<0.20		mg/kg		0.2	05-NOV-19
Silver (Ag)			<0.10		mg/kg		0.1	05-NOV-19
Thallium (TI)			< 0.050		mg/kg		0.05	05-NOV-19
Uranium (U)			< 0.050		mg/kg		0.05	05-NOV-19
Vanadium (V)			<0.20		mg/kg		0.2	05-NOV-19
Zinc (Zn)			<2.0		mg/kg		2	05-NOV-19
MOISTURE-WT	Soil							
Batch R4895777 WG3207805-3 DUP % Moisture		L2374962-4 21.6	21.2		%	1.8	20	01-NOV-19
WG3207805-2 LCS % Moisture			100.5		%	1.0	90-110	01-NOV-19
WG3207805-1 MB % Moisture			<0.25		%		0.25	01-NOV-19
PAH-511-WT	Soil							
Batch R4897642								
WG3207515-3 DUP 1-Methylnaphthalene		WG3207515-5 < 0.030	<0.030	RPD-NA	ug/g	N/A	40	04-NOV-19
2-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	04-NOV-19
Acenaphthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Acenaphthylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Benzo(a)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Benzo(a)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Donzo(a)pyrono		\0.000	\0.000	VL,D-INW	ч у , у	IN/A	40	04-NOV-19



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Soil							
Batch R4897642								
WG3207515-3 DUP		WG3207515-						
Benzo(b)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Benzo(g,h,i)perylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Benzo(k)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Chrysene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Dibenzo(ah)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Fluorene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Indeno(1,2,3-cd)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Naphthalene		<0.013	<0.013	RPD-NA	ug/g	N/A	40	04-NOV-19
Phenanthrene		<0.046	<0.046	RPD-NA	ug/g	N/A	40	04-NOV-19
Pyrene		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
WG3207515-2 LCS 1-Methylnaphthalene			86.6		%		50-140	04-NOV-19
2-Methylnaphthalene			82.2		%		50-140	04-NOV-19
Acenaphthene			88.2		%		50-140	04-NOV-19
Acenaphthylene			89.7		%		50-140	04-NOV-19
Anthracene			87.6		%		50-140	04-NOV-19
Benzo(a)anthracene			88.8		%		50-140	04-NOV-19
Benzo(a)pyrene			82.1		%		50-140	04-NOV-19
Benzo(b)fluoranthene			75.3		%		50-140	04-NOV-19
Benzo(g,h,i)perylene			84.2		%		50-140	04-NOV-19
Benzo(k)fluoranthene			89.8		%		50-140	04-NOV-19
Chrysene			95.2		%		50-140	04-NOV-19
Dibenzo(ah)anthracene			87.8		%		50-140	04-NOV-19
Fluoranthene			85.4		%		50-140	04-NOV-19
Fluorene			85.9		%		50-140	04-NOV-19
Indeno(1,2,3-cd)pyrene			89.6		%		50-140	04-NOV-19
Naphthalene			84.0		%		50-140	04-NOV-19
Phenanthrene			86.8		%		50-140	04-NOV-19
Pyrene			85.3		%		50-140	04-NOV-19
WG3207515-1 MB 1-Methylnaphthalene			<0.030		ug/g		0.03	04-NOV-19
2-Methylnaphthalene			<0.030		ug/g		0.03	04-NOV-19
Acenaphthene			<0.050		ug/g		0.05	07 140 V-19
					3- 3		2.30	



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Soil							
Batch R4897642								
WG3207515-1 MB Acenaphthene			<0.050		ug/g		0.05	04 NOV 40
Acenaphthylene			<0.050		ug/g		0.05	04-NOV-19
Anthracene			<0.050		ug/g			04-NOV-19
			<0.050		ug/g		0.05	04-NOV-19
Benzo(a)anthracene					ug/g		0.05	04-NOV-19
Benzo(a)pyrene			<0.050		ug/g		0.05	04-NOV-19
Benzo(b)fluoranthene			<0.050		ug/g ,		0.05	04-NOV-19
Benzo(g,h,i)perylene			<0.050		ug/g		0.05	04-NOV-19
Benzo(k)fluoranthene			<0.050		ug/g		0.05	04-NOV-19
Chrysene			<0.050		ug/g		0.05	04-NOV-19
Dibenzo(ah)anthracene			<0.050		ug/g		0.05	04-NOV-19
Fluoranthene			<0.050		ug/g		0.05	04-NOV-19
Fluorene			<0.050		ug/g		0.05	04-NOV-19
Indeno(1,2,3-cd)pyrene			<0.050		ug/g		0.05	04-NOV-19
Naphthalene			<0.013		ug/g		0.013	04-NOV-19
Phenanthrene			<0.046		ug/g		0.046	04-NOV-19
Pyrene			< 0.050		ug/g		0.05	04-NOV-19
Surrogate: 2-Fluorobiph	enyl		95.6		%		50-140	04-NOV-19
Surrogate: p-Terphenyl	d14		86.6		%		50-140	04-NOV-19
WG3207515-4 MS 1-Methylnaphthalene		WG3207515-5	89.3		%		50-140	04 NOV 40
2-Methylnaphthalene			84.7		%			04-NOV-19
Acenaphthene			91.1		%		50-140	04-NOV-19
•							50-140	04-NOV-19
Acenaphthylene			94.0		%		50-140	04-NOV-19
Anthracene			90.1		%		50-140	04-NOV-19
Benzo(a)anthracene			91.0		%		50-140	04-NOV-19
Benzo(a)pyrene			84.3		%		50-140	04-NOV-19
Benzo(b)fluoranthene			77.7		%		50-140	04-NOV-19
Benzo(g,h,i)perylene			84.6		%		50-140	04-NOV-19
Benzo(k)fluoranthene			90.3		%		50-140	04-NOV-19
Chrysene			96.1		%		50-140	04-NOV-19
Dibenzo(ah)anthracene			88.2		%		50-140	04-NOV-19
Fluoranthene			87.0		%		50-140	04-NOV-19
Fluorene			89.7		%		50-140	04-NOV-19
Indeno(1,2,3-cd)pyrene			92.1		%		50-140	04-NOV-19



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Soil							
Batch R4897642 WG3207515-4 MS Naphthalene		WG3207515-5	85.8		%		50-140	04-NOV-19
Phenanthrene			87.0		%		50-140	04-NOV-19
Pyrene			87.0		%		50-140	04-NOV-19
PH-WT	Soil							
Batch R4897790	-							
WG3207511-1 DUP pH		L2375316-1 7.76	7.84	J	pH units	0.08	0.3	04-NOV-19
WG3209569-1 LCS pH			6.93		pH units		6.9-7.1	04-NOV-19
SAR-R511-WT	Soil							
Batch R4898808	<i>y</i>							
WG3210366-4 DUP Calcium (Ca)		WG3210366-3 24.5	24.4		mg/L	0.4	30	05-NOV-19
Sodium (Na)		194	198		mg/L	2.0	30	05-NOV-19
Magnesium (Mg)		2.48	2.45		mg/L	1.2	30	05-NOV-19
WG3210366-2 IRM		WT SAR3			Ü			001101
Calcium (Ca)			76.4		%		70-130	05-NOV-19
Sodium (Na)			97.8		%		70-130	05-NOV-19
Magnesium (Mg)			87.1		%		70-130	05-NOV-19
WG3210366-5 LCS Calcium (Ca)			103.7		%		70-130	05-NOV-19
Sodium (Na)			100.6		%		70-130	05-NOV-19
Magnesium (Mg)			101.0		%		70-130	05-NOV-19
WG3210366-1 MB Calcium (Ca)			<0.50		mg/L		0.5	05-NOV-19
Sodium (Na)			<0.50		mg/L		0.5	05-NOV-19
Magnesium (Mg)			<0.50		mg/L		0.5	05-NOV-19
VOC-511-HS-WT	Soil							
Batch R4902278								
WG3211513-4 DUP 1,1,1,2-Tetrachloroetha	ne	WG3211513-3 <0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,1,2,2-Tetrachloroetha	ne	<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,1,1-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,1,2-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,1-Dichloroethane		<0.050	<0.050					



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R490227	8							
WG3211513-4 DUP	1	WG3211513-						
1,1-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,1-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,2-Dibromoethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,2-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,2-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,2-Dichloropropane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,3-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,4-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Acetone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	07-NOV-19
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	07-NOV-19
Bromodichloromethan	ie	<0.050	< 0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Bromoform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Bromomethane		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Carbon tetrachloride		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Chlorobenzene		< 0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Chloroform		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
cis-1,2-Dichloroethyle	ne	<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
cis-1,3-Dichloroproper	ne	< 0.030	<0.030	RPD-NA	ug/g	N/A	40	07-NOV-19
Dibromochloromethan	ne	< 0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Dichlorodifluorometha	ne	< 0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	07-NOV-19
n-Hexane		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Methylene Chloride		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
MTBE		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
m+p-Xylenes		<0.030	<0.030	RPD-NA	ug/g	N/A	40	07-NOV-19
Methyl Ethyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	07-NOV-19
Methyl Isobutyl Ketone	Э	<0.50	<0.50	RPD-NA	ug/g	N/A	40	07-NOV-19
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	07-NOV-19
Styrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Tetrachloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	07-NOV-19
trans-1,2-Dichloroethy	vlene	<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
trans-1,3-Dichloroprop		<0.030	<0.030		ug/g		-	07-NOV-19



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R490227	8							
WG3211513-4 DUP trans-1,3-Dichloroprop		WG3211513- <0.030	3 <0.030	RPD-NA	ug/g	N/A	40	07-NOV-19
Trichloroethylene		0.170	0.168	I D IVA	ug/g	1.2	40	07-NOV-19
Trichlorofluoromethan	e	<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Vinyl chloride	-	<0.020	<0.020	RPD-NA	ug/g	N/A	40	07-NOV-19
WG3211513-2 LCS				THE TWA	-9-9	14// (40	07 110 1 10
1,1,1,2-Tetrachloroeth	ane		103.2		%		60-130	07-NOV-19
1,1,2,2-Tetrachloroeth	ane		116.0		%		60-130	07-NOV-19
1,1,1-Trichloroethane			104.2		%		60-130	07-NOV-19
1,1,2-Trichloroethane			107.4		%		60-130	07-NOV-19
1,1-Dichloroethane			109.9		%		60-130	07-NOV-19
1,1-Dichloroethylene			100.1		%		60-130	07-NOV-19
1,2-Dibromoethane			108.4		%		70-130	07-NOV-19
1,2-Dichlorobenzene			111.6		%		70-130	07-NOV-19
1,2-Dichloroethane			108.8		%		60-130	07-NOV-19
1,2-Dichloropropane			109.5		%		70-130	07-NOV-19
1,3-Dichlorobenzene			110.8		%		70-130	07-NOV-19
1,4-Dichlorobenzene			112.3		%		70-130	07-NOV-19
Acetone			116.6		%		60-140	07-NOV-19
Benzene			110.7		%		70-130	07-NOV-19
Bromodichloromethan	е		107.3		%		50-140	07-NOV-19
Bromoform			108.7		%		70-130	07-NOV-19
Bromomethane			97.0		%		50-140	07-NOV-19
Carbon tetrachloride			104.9		%		70-130	07-NOV-19
Chlorobenzene			106.0		%		70-130	07-NOV-19
Chloroform			109.0		%		70-130	07-NOV-19
cis-1,2-Dichloroethyler	ne		106.4		%		70-130	07-NOV-19
cis-1,3-Dichloroproper	ne		114.5		%		70-130	07-NOV-19
Dibromochloromethan	е		104.2		%		60-130	07-NOV-19
Dichlorodifluorometha	ne		61.6		%		50-140	07-NOV-19
Ethylbenzene			103.9		%		70-130	07-NOV-19
n-Hexane			97.2		%		70-130	07-NOV-19
Methylene Chloride			109.7		%		70-130	07-NOV-19
MTBE			106.0		%		70-130	07-NOV-19
m+p-Xylenes			103.1				70-130	



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R4902278								
WG3211513-2 LCS					0.4			
m+p-Xylenes			103.1		%		70-130	07-NOV-19
Methyl Ethyl Ketone			116.8		%		60-140	07-NOV-19
Methyl Isobutyl Ketone			111.1		%		60-140	07-NOV-19
o-Xylene			102.5		%		70-130	07-NOV-19
Styrene			100.2		%		70-130	07-NOV-19
Tetrachloroethylene			108.3		%		60-130	07-NOV-19
Toluene			106.4		%		70-130	07-NOV-19
trans-1,2-Dichloroethyle			108.4		%		60-130	07-NOV-19
trans-1,3-Dichloroproper	ne		112.4		%		70-130	07-NOV-19
Trichloroethylene			107.4		%		60-130	07-NOV-19
Trichlorofluoromethane			98.5		%		50-140	07-NOV-19
Vinyl chloride			104.7		%		60-140	07-NOV-19
WG3211513-1 MB 1,1,1,2-Tetrachloroethar	ne		<0.050		ug/g		0.05	07-NOV-19
1,1,2,2-Tetrachloroethar	ne		<0.050		ug/g		0.05	07-NOV-19
1,1,1-Trichloroethane			< 0.050		ug/g		0.05	07-NOV-19
1,1,2-Trichloroethane			< 0.050		ug/g		0.05	07-NOV-19
1,1-Dichloroethane			< 0.050		ug/g		0.05	07-NOV-19
1,1-Dichloroethylene			< 0.050		ug/g		0.05	07-NOV-19
1,2-Dibromoethane			< 0.050		ug/g		0.05	07-NOV-19
1,2-Dichlorobenzene			< 0.050		ug/g		0.05	07-NOV-19
1,2-Dichloroethane			< 0.050		ug/g		0.05	07-NOV-19
1,2-Dichloropropane			< 0.050		ug/g		0.05	07-NOV-19
1,3-Dichlorobenzene			< 0.050		ug/g		0.05	07-NOV-19
1,4-Dichlorobenzene			< 0.050		ug/g		0.05	07-NOV-19
Acetone			<0.50		ug/g		0.5	07-NOV-19
Benzene			<0.0068		ug/g		0.0068	07-NOV-19
Bromodichloromethane			< 0.050		ug/g		0.05	07-NOV-19
Bromoform			< 0.050		ug/g		0.05	07-NOV-19
Bromomethane			<0.050		ug/g		0.05	07-NOV-19
Carbon tetrachloride			< 0.050		ug/g		0.05	07-NOV-19
Chlorobenzene			< 0.050		ug/g		0.05	07-NOV-19
Chloroform			<0.050		ug/g		0.05	07-NOV-19
cis-1,2-Dichloroethylene			<0.050		ug/g		0.05	07-NOV-19



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R4902278								
WG3211513-1 MB			0.000				0.00	
cis-1,3-Dichloropropene			<0.030		ug/g		0.03	07-NOV-19
Dibromochloromethane			<0.050		ug/g		0.05	07-NOV-19
Dichlorodifluoromethane			<0.050		ug/g		0.05	07-NOV-19
Ethylbenzene			<0.018		ug/g		0.018	07-NOV-19
n-Hexane			<0.050		ug/g		0.05	07-NOV-19
Methylene Chloride			<0.050		ug/g		0.05	07-NOV-19
MTBE			<0.050		ug/g		0.05	07-NOV-19
m+p-Xylenes			<0.030		ug/g		0.03	07-NOV-19
Methyl Ethyl Ketone			<0.50		ug/g		0.5	07-NOV-19
Methyl Isobutyl Ketone			<0.50		ug/g		0.5	07-NOV-19
o-Xylene			<0.020		ug/g		0.02	07-NOV-19
Styrene			<0.050		ug/g		0.05	07-NOV-19
Tetrachloroethylene			<0.050		ug/g		0.05	07-NOV-19
Toluene			<0.080		ug/g		0.08	07-NOV-19
trans-1,2-Dichloroethyler	ne		<0.050		ug/g		0.05	07-NOV-19
trans-1,3-Dichloropropen	ie		<0.030		ug/g		0.03	07-NOV-19
Trichloroethylene			<0.010		ug/g		0.01	07-NOV-19
Trichlorofluoromethane			< 0.050		ug/g		0.05	07-NOV-19
Vinyl chloride			<0.020		ug/g		0.02	07-NOV-19
Surrogate: 1,4-Difluorobe	enzene		113.7		%		50-140	07-NOV-19
Surrogate: 4-Bromofluoro	obenzene		94.3		%		50-140	07-NOV-19
WG3211513-5 MS		L2375311-2						
1,1,1,2-Tetrachloroethan			105.8		%		50-140	07-NOV-19
1,1,2,2-Tetrachloroethan	е		116.1		%		50-140	07-NOV-19
1,1,1-Trichloroethane			107.3		%		50-140	07-NOV-19
1,1,2-Trichloroethane			109.3		%		50-140	07-NOV-19
1,1-Dichloroethane			112.3		%		50-140	07-NOV-19
1,1-Dichloroethylene			103.7		%		50-140	07-NOV-19
1,2-Dibromoethane			109.3		%		50-140	07-NOV-19
1,2-Dichlorobenzene			113.8		%		50-140	07-NOV-19
1,2-Dichloroethane			108.5		%		50-140	07-NOV-19
1,2-Dichloropropane			111.0		%		50-140	07-NOV-19
1,3-Dichlorobenzene			112.0		%		50-140	07-NOV-19
1,4-Dichlorobenzene			114.0		%		50-140	07-NOV-19



Workorder: L2375316 Report Date: 07-NOV-19 Page 14 of 15

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R4902278								
WG3211513-5 MS		L2375311-2						
Acetone			119.8		%		50-140	07-NOV-19
Benzene			113.2		%		50-140	07-NOV-19
Bromodichloromethane			108.3		%		50-140	07-NOV-19
Bromoform			109.5		%		50-140	07-NOV-19
Bromomethane			99.5		%		50-140	07-NOV-19
Carbon tetrachloride			108.0		%		50-140	07-NOV-19
Chlorobenzene			108.3		%		50-140	07-NOV-19
Chloroform			111.0		%		50-140	07-NOV-19
cis-1,2-Dichloroethylene			108.5		%		50-140	07-NOV-19
cis-1,3-Dichloropropene			114.8		%		50-140	07-NOV-19
Dibromochloromethane			106.3		%		50-140	07-NOV-19
Dichlorodifluoromethane)		70.2		%		50-140	07-NOV-19
Ethylbenzene			106.9		%		50-140	07-NOV-19
n-Hexane			102.4		%		50-140	07-NOV-19
Methylene Chloride			111.2		%		50-140	07-NOV-19
MTBE			108.3		%		50-140	07-NOV-19
m+p-Xylenes			105.7		%		50-140	07-NOV-19
Methyl Ethyl Ketone			108.6		%		50-140	07-NOV-19
Methyl Isobutyl Ketone			110.2		%		50-140	07-NOV-19
o-Xylene			104.9		%		50-140	07-NOV-19
Styrene			101.8		%		50-140	07-NOV-19
Tetrachloroethylene			111.7		%		50-140	07-NOV-19
Toluene			110.0		%		50-140	07-NOV-19
trans-1,2-Dichloroethyle	ne		110.8		%		50-140	07-NOV-19
trans-1,3-Dichloroproper	ne		114.1		%		50-140	07-NOV-19
Trichloroethylene			104.9		%		50-140	07-NOV-19
Trichlorofluoromethane			103.7		%		50-140	07-NOV-19
Vinyl chloride			109.9		%		50-140	07-NOV-19

Workorder: L2375316 Report Date: 07-NOV-19

Client: TERRAPROBE-BRAMPTON Page 15 of 15

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

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.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
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.

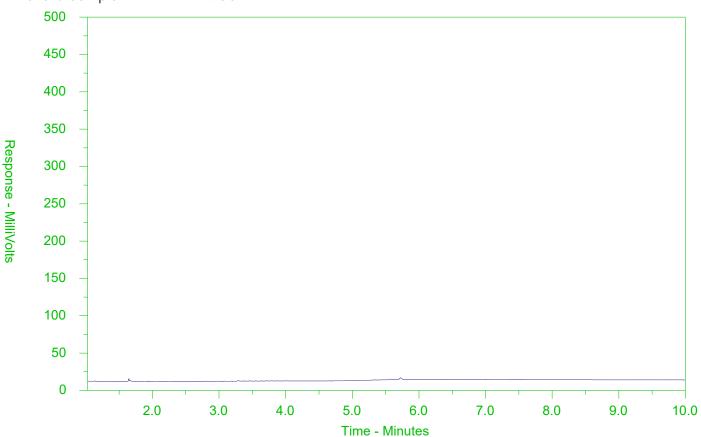
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined data quality objectives to provide 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: L2375316-1 Client Sample ID: BH4-SS1



← -F2-	→ ←	—F3—→ ← —F4—	→	
nC10	nC16	nC34	nC50	
174°C	287°C	481°C	575°C	
346°F	549°F	898°F	1067°F	
Gasolin	ie →	← Mot	or Oils/Lube Oils/Grease——	
←	-Diesel/Je	t 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.

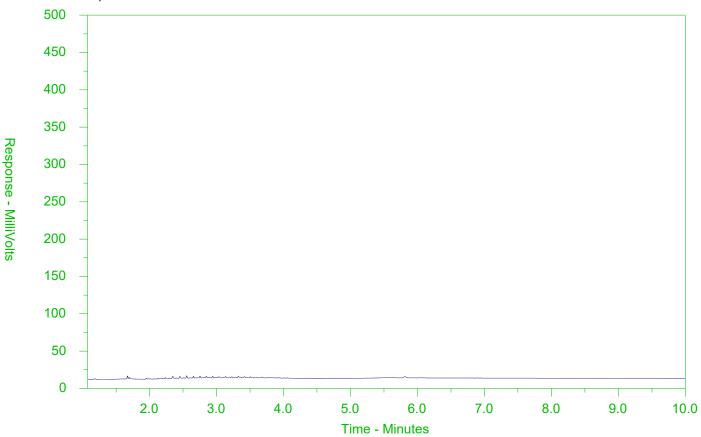
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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: L2375316-4 Client Sample ID: BH4-SS5



← -F2-	→←	—F3—→ ← —F4—	>
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067⁰F
Gasolin	e →	← Mot	or Oils/Lube Oils/Grease
←	-Diesel/Je	t 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 Environment of

Chain of Custody (COC) / Analytical Request Form



L2375316-COFC

)C Number: 15 -

84

Canada Toll Free: 1 800 668 9878

	www.alsglobal.com	<u>1</u>																				
Report To	Contact and comp	any name below will ap	pear on the final report	t		Report Format	/ Distribution		Select !	Service L	evel Bel	ow - Plea	se confi	rm all Ei	AP TAT	with y	our AM	- surcha	/ges will	apply		
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Street:	11 Indell Lane				Email 1 or Fax	kmakhzoumi@terra	aprobe.ca	_		Date ar	nd Time	Requir	ed for a	E&P T	ATs:							
City/Province:	Brampton				Email 2				For test	s that ca	n not be	perform	ned accor	rding to	the serv	ice lev	el selec	ted, you	will be c	ontacted.		
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Contact:	Lorena Rossi				Email 2					1												ဖွ
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TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 13-NOV-19

Report Date: 16-NOV-19 11:48 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2381674

Project P.O. #: NOT SUBMITTED

Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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ANALYTICAL REPORT

L2381674 CONT'D....

Job Reference: 1-19-0603-42

PAGE 2 of 4

16-NOV-19 11:48 (MT)

Summary of Guideline Exceedances

Guideline						
ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit
Ontario Reg	gulation 153/04 - Apr	ril 15, 2011 Standards - T3-Soil-Res/Park/In	st. Property Use (Coarse)			
L2381674-1	BH4-SS5	Saturated Paste Extractables	SAR	32.9	5	SAR
Ontario Reg	gulation 153/04 - Apr	ril 15, 2011 Standards - T3-Soil-Res/Park/In	st. Property Use (Fine)			
L2381674-1	BH4-SS5	Saturated Paste Extractables	SAR	32.9	5	SAR

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



ANALYTICAL REPORT

L2381674 CONT'D....

Job Reference: 1-19-0603-42

PAGE 3 of 4

16-NOV-19 11:48 (MT)

Saturated Paste Extractables - SOIL

			Lab ID	L2381674-1
		Sampl	e Date	12-NOV-19
		San	nple ID	BH4-SS5
	Unit	Guide #1	Limits #2	
Analyte	Offic	#1	#4	
SAR	SAR	5	5	32.9 SAR:M
Calcium (Ca)	mg/L	-	-	1.37
Magnesium (Mg)	mg/L	-	-	<0.50
Sodium (Na)	mg/L	-	-	140

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

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

Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.

Reference Information

L2381674 CONT'D....
Job Reference: 1-19-0603-42
PAGE 4 of 4
16-NOV-19 11:48 (MT)

Qualifiers for Individual Parameters 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**
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).

**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

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.



Workorder: L2381674 Report Date: 16-NOV-19 Page 1 of 2

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SAR-R511-WT	Soil							
Batch R490685	3							
WG3218165-4 DUP		WG3218165-	3					
Calcium (Ca)		14.0	13.6		mg/L	2.9	30	14-NOV-19
Sodium (Na)		1.15	1.12		mg/L	2.6	30	14-NOV-19
Magnesium (Mg)		1.17	1.11		mg/L	5.3	30	14-NOV-19
WG3218165-2 IRM		WT SAR3						
Calcium (Ca)			107.5		%		70-130	14-NOV-19
Sodium (Na)			104.0		%		70-130	14-NOV-19
Magnesium (Mg)			115.6		%		70-130	14-NOV-19
WG3218165-5 LCS								
Calcium (Ca)			103.0		%		70-130	14-NOV-19
Sodium (Na)			100.4		%		70-130	14-NOV-19
Magnesium (Mg)			101.2		%		70-130	14-NOV-19
WG3218165-1 MB								
Calcium (Ca)			< 0.50		mg/L		0.5	14-NOV-19
Sodium (Na)			< 0.50		mg/L		0.5	14-NOV-19
Magnesium (Mg)			< 0.50		mg/L		0.5	14-NOV-19

Workorder: L2381674 Report Date: 16-NOV-19

Client: TERRAPROBE-BRAMPTON Page 2 of 2

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

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

Hold Time Exceedances:

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

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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 predetermined 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

L2381674-COFC

COC Number: 15 -

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Canada Toll Free: 1 800 668 9878 www.alsglobal.com Report Format / Distribution Select Service Level Below - Please confirm all E&P TATs with your AM - surcharges will apply Contact and company name below will appear on the final report Report To Standard TAT if received by 3 pm - business days - no surcharges apply Regular [R] Company: Теггаргоре 4 day [P4] П 1 Business day [E1] Kossay Makhzoumi Contact: 905-796-2650 Compare Results to Criteria on Report - provide details below if box checked 3 day [P3] Phone: Same Day, Weekend or ☐ EMAIL ☐ FAX П Statutory holiday [E0] 2 day [P2] Company address below will appear on the final report Select Distribution: Date and Time Required for all E&P TATs: 11 Indell Lane Email 1 or Fax kmakhzoumi@terraprobe.ca Street: For tests that can not be performed according to the service level selected, you will be contacted. City/Province: Brampton Email 2 **Analysis Request** L6T 3Y3 Email 3 Postal Code: Invoice Distribution Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below YES INO Invoice To Same as Report To Copy of Invoice with Report ☐ YES ☑ NO Select Invoice Distribution: EMAIL MAIL FAX Terraprobe Email 1 or Fax Irossi@terraprobe.ca Company: Lorena Rossi Email 2 Contact: Number of Containers **Project Information** Oil and Gas Required Fields (client use) PO# ALS Account # / Quote #: Q64281 AFE/Cost Center: 1-19-0603-42 Major/Minor Code: Routing Code: Job #: PO / AFE: Requisitioner: Forming Metals SD: Location: ALS Contact: ALS Lab Work Order # (lab use only) Sampler: and Sample Identification and/or Coordinates Date Time ALS Sample # 00 Sample Type (lab use only) (dd-mmm-yy) (hh:mm) (This description will appear on the report) BH4 - 555 12-11-19 Soil SAMPLE CONDITION AS RECEIVED (lab use only) Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below Drinking Water (DW) Samples¹ (client use) (electronic COC only) SIF Observations No Frozen П Are samples taken from a Regulated DW System? Custody seal intact Yes Ice Cubes ice Packs MEGT3 RPI YES NO Cooling Initiated FINAL COOLER TEMPERATURES ℃ INIITIAL COOLER TEMPERATURES °C Are samples for human drinking water use? YES NO FINAL SHIPMENT RECEPTION (lab use only) INITIAL SMIPMENT RECEPTION (lab use only) SHIPMENT RELEASE (client use) Received by: Released by: Kossay Makhzoumi Time: Received by:

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION



TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 13-NOV-19

Report Date: 16-NOV-19 11:49 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2381676

Project P.O. #: NOT SUBMITTED

Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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ANALYTICAL REPORT

L2381676 CONT'D....

Job Reference: 1-19-0603-42

PAGE 2 of 4

16-NOV-19 11:49 (MT)

Summary of Guideline Exceedances

Guideline						
ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit
Ontario Reg	gulation 153/04	- April 15, 2011 Standards - T3-Soil-Res/Park/In	st. Property Use (Coarse)			
L2381676-1	BH4-SS7	Saturated Paste Extractables	SAR	12.3	5	SAR
Ontario Reg	gulation 153/04	- April 15, 2011 Standards - T3-Soil-Res/Park/In	st. Property Use (Fine)			
L2381676-1	BH4-SS7	Saturated Paste Extractables	SAR	12.3	5	SAR



ANALYTICAL REPORT

L2381676 CONT'D....

Job Reference: 1-19-0603-42

PAGE 3 of 4

16-NOV-19 11:49 (MT)

Saturated Paste Extractables - SOIL

Cararatea : acre =xiraci	UU			
			Lab ID	L2381676-1
		Sampl	e Date	12-NOV-19
		San	nple ID	BH4-SS7
			Limits	
Analyte	Unit	#1	#2	
SAR	SAR	5	5	12.3
Calcium (Ca)	mg/L	-	-	15.3
Magnesium (Mg)	mg/L	-	-	2.37
Sodium (Na)	mg/L	-	-	196

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

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

Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

Reference Information

L2381676 CONT'D....
Job Reference: 1-19-0603-42
PAGE 4 of 4
16-NOV-19 11:49 (MT)

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference**
SAR-R511-WT	Soil	SAR-O.Rea 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).

**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 analysis for that test. Refer to the list below:

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.



Workorder: L2381676 Report Date: 16-NOV-19 Page 1 of 2

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SAR-R511-WT	Soil							
Batch R490685	3							
WG3218165-4 DUP		WG3218165-						
Calcium (Ca)		14.0	13.6		mg/L	2.9	30	14-NOV-19
Sodium (Na)		1.15	1.12		mg/L	2.6	30	14-NOV-19
Magnesium (Mg)		1.17	1.11		mg/L	5.3	30	14-NOV-19
WG3218165-2 IRM		WT SAR3						
Calcium (Ca)			107.5		%		70-130	14-NOV-19
Sodium (Na)			104.0		%		70-130	14-NOV-19
Magnesium (Mg)			115.6		%		70-130	14-NOV-19
WG3218165-5 LCS								
Calcium (Ca)			103.0		%		70-130	14-NOV-19
Sodium (Na)			100.4		%		70-130	14-NOV-19
Magnesium (Mg)			101.2		%		70-130	14-NOV-19
WG3218165-1 MB								
Calcium (Ca)			< 0.50		mg/L		0.5	14-NOV-19
Sodium (Na)			<0.50		mg/L		0.5	14-NOV-19
Magnesium (Mg)			<0.50		mg/L		0.5	14-NOV-19

Workorder: L2381676 Report Date: 16-NOV-19

Client: TERRAPROBE-BRAMPTON Page 2 of 2

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

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

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 predetermined 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

L2381676-COFC

COC Number: 15 -

e 1 of

1//

富計 医多点迷常的 电光点设置器属距离器 电电流 Canada Toll Free: 1 800 668 9878 www.alsglobal.com Report To Contact and company name below will appear on the final report Report Format / Distribution Select Service Level Below - Please confirm all E&P TATs with your AM - surcharges will apply Select Report Format: PDF EXCEL EDD (DIGITAL) Terraprobe Company: Standard TAT if received by 3 pm - business days - no surcharges apply Kossav Makhzoumi 1 Business day [E1] Contact: 4 day [P4] 905-796-2650 Phone: Compare Results to Criteria on Report - provide details below if box checked 3 day [P3] Same Day, Weekend or \Box Statutory holiday [E0] Select Distribution: Company address below will appear on the final report 2 day [P2] 11 Indell Lane Date and Time Required for all E&P TATs: Street: Email 1 or Fax kmakhzoumi@terraprobe.ca Brampton City/Province: Email 2 For tests that can not be performed according to the service level selected, you will be contacted. L6T 3Y3 Postal Code: Email 3 **Analysis Request** YES I NO Invoice Distribution Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below Invoice To Same as Report To Copy of Invoice with Report ☐ YES ☑ NO Select Invoice Distribution: EMAIL MAIL FAX Email 1 or Fax | lrossi@terraprobe.ca Company: Terraprobe Contact: Lorena Rossi Email 2 Number of Containers **Project Information** Oil and Gas Required Fields (client use) ALS Account # / Quote #: Q64281 AFE/Cost Center PO# Job #: 1-19-0603-42 Major/Minor Code: Routing Code: PO / AFE: Requisitioner: SD: Location: ALS Lab Work Order # (lab use only) ALS Contact: Sampler: lyride (Sample Identification and/or Coordinates Date Time ALS Sample # Sample Type 8 (lab use only) (This description will appear on the report) (dd-mmm-yy) (hh:mm) BH4- 557 12-11-19 Soil SAMPLE CONDITION AS RECEIVED (lab use only) Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below Drinking Water (DW) Samples¹ (client use) (electronic COC only) Frozen SIF Observations No Are samples taken from a Regulated DW System? Custody seal intact Yes Ice Packs Ice Cubes Please put on ☐ YES ☐ NO Cooling Initiated FINAL COOLER TEMPERATURES °C Are samples for human drinking water use? MEUPT3 RPI INIITIAL COOLER TEMPERATURES °C ☐ YES ☐ NO

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

Released by: Kossay Makhzoumi

SHIPMENT RELEASE (client use)

WHITE - LABORATORY COPY YELLOW - CLIENT CO

Time:

Received by:

INITIAL/SHIPMENT RECEPTION (lab use only)

FINAL SHIPMENT RECEPTION (lab use only)

Received by

Time:



TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 13-NOV-19

Report Date: 20-NOV-19 12:55 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2381634

Project P.O. #: NOT SUBMITTED

Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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

ADDRESS: 5730 Coopers Avenue, Unit #26 , Mississauga, ON L4Z 2E9 Canada | Phone: +1 905 507 6910 | Fax: +1 905 507 6927 ALS CANADA LTD Part of the ALS Group An ALS Limited Company





ANALYTICAL REPORT

L2381634 CONT'D....

Job Reference: 1-19-0603-42

PAGE 2 of 6

20-NOV-19 12:55 (MT)

Summary of Guideline Exceedances

Guideline
ALS ID Client ID Grouping Analyte Result Guideline Limit Unit

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Soil-Res/Park/Inst. Property Use (Coarse)

(No parameter exceedances)

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Soil-Res/Park/Inst. Property Use (Fine)

(No parameter exceedances)



L2381634 CONT'D....

Job Reference: 1-19-0603-42

PAGE 3 of 6

20-NOV-19 12:55 (MT)

Physical Tests - SOIL

			Lab ID	L2381634-1
			e Date	12-NOV-19
			nple ID	BH4-SS8
		Guide	Limits	
Analyte	Unit	#1	#2	
% Moisture				

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



L2381634 CONT'D....

Job Reference: 1-19-0603-42

PAGE 4 of 6

20-NOV-19 12:55 (MT)

Volatile Organic Compounds - SOIL

 Lab ID
 L2381634-1

 Sample Date
 12-NOV-19

 Sample ID
 BH4-SS8

Analysis	Unit	Guide #1	Limits #2	
Analyte	Offic	#1	#4	
Acetone	ug/g	16	28	<0.50
Benzene	ug/g	0.21	0.17	<0.0068
Bromodichloromethane	ug/g	13	13	<0.050
Bromoform	ug/g	0.27	0.26	<0.050
Bromomethane	ug/g	0.05	0.05	< 0.050
Carbon tetrachloride	ug/g	0.05	0.12	<0.050
Chlorobenzene	ug/g	2.4	2.7	<0.050
Dibromochloromethane	ug/g	9.4	9.4	<0.050
Chloroform	ug/g	0.05	0.18	<0.050
1,2-Dibromoethane	ug/g	0.05	0.05	<0.050
1,2-Dichlorobenzene	ug/g	3.4	4.3	<0.050
1,3-Dichlorobenzene	ug/g	4.8	6	<0.050
1,4-Dichlorobenzene	ug/g	0.083	0.097	< 0.050
Dichlorodifluoromethane	ug/g	16	25	<0.050
1,1-Dichloroethane	ug/g	3.5	11	<0.050
1,2-Dichloroethane	ug/g	0.05	0.05	<0.050
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.050
cis-1,2-Dichloroethylene	ug/g	3.4	30	<0.050
trans-1,2-Dichloroethylene	ug/g	0.084	0.75	<0.050
Methylene Chloride	ug/g	0.1	0.96	<0.050
1,2-Dichloropropane	ug/g	0.05	0.085	< 0.050
cis-1,3-Dichloropropene	ug/g	-	-	<0.030
trans-1,3-Dichloropropene	ug/g	-	-	<0.030
1,3-Dichloropropene (cis & trans)	ug/g	0.05	0.083	<0.042
Ethylbenzene	ug/g	2	15	<0.018
n-Hexane	ug/g	2.8	34	<0.050
Methyl Ethyl Ketone	ug/g	16	44	<0.50
Methyl Isobutyl Ketone	ug/g	1.7	4.3	<0.50
MTBE	ug/g	0.75	1.4	<0.050
Styrene	ug/g	0.7	2.2	<0.050

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



L2381634 CONT'D....

Job Reference: 1-19-0603-42

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20-NOV-19 12:55 (MT)

Volatile Organic Compounds - SOIL

Volatile Organic Compounds			-h ID	1 0004004 4					
			_ab ID	L2381634-1 12-NOV-19					
		Sample Date Sample ID							
		-							
		Guide	Limits						
Analyte	Unit	#1	#2						
1,1,1,2-Tetrachloroethane	ug/g	0.058	0.05	<0.050					
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.050					
Tetrachloroethylene	ug/g	0.28	2.3	<0.050					
Toluene	ug/g	2.3	6	<0.080					
1,1,1-Trichloroethane	ug/g	0.38	3.4	<0.050					
1,1,2-Trichloroethane	ug/g	0.05	0.05	<0.050					
Trichloroethylene	ug/g	0.061	0.52	0.040					
Trichlorofluoromethane	ug/g	4	5.8	<0.050					
Vinyl chloride	ug/g	0.02	0.022	<0.020					
o-Xylene	ug/g	-	-	<0.020					
m+p-Xylenes	ug/g	-	-	<0.030					
Xylenes (Total)	ug/g	3.1	25	<0.050					
Surrogate: 4-Bromofluorobenzene	%	-	-	78.8					
Surrogate: 1,4-Difluorobenzene	%	-	-	96.6					

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

L2381634 CONT'D....
Job Reference: 1-19-0603-42
PAGE 6 of 6
20-NOV-19 12:55 (MT)

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference**
MOISTURE-WT	Soil	% Moisture	CCME PHC in Soil - Tier 1 (mod)
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

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.



Workorder: L2381634 Report Date: 20-NOV-19 Page 1 of 7

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	Soil							
Batch R4906258 WG3217868-3 DUP % Moisture		L2381720-1	40.5		%	4.0	00	
		13.0	12.5		70	4.2	20	14-NOV-19
WG3217868-2 LCS % Moisture			101.0		%		90-110	14-NOV-19
WG3217868-1 MB % Moisture			<0.25		%		0.25	14-NOV-19
VOC-511-HS-WT	Soil							
Batch R4916835								
WG3221627-4 DUP		WG3221627-3	-0.0E0		ug/g	NI/A	40	00 NOV 40
1,1,1,2-Tetrachloroethan 1,1,2,2-Tetrachloroethan		<0.050 <0.050	<0.050 <0.050	RPD-NA	ug/g	N/A	40	20-NOV-19
1,1,2,2-Tetrachioroethane	I C	<0.050	<0.050	RPD-NA RPD-NA	ug/g ug/g	N/A N/A	40 40	20-NOV-19 20-NOV-19
1,1,2-Trichloroethane		<0.050	<0.050	RPD-NA RPD-NA	ug/g ug/g	N/A N/A	40	
1,1-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g ug/g	N/A N/A	40	20-NOV-19 20-NOV-19
1,1-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	20-NOV-19 20-NOV-19
1,2-Dibromoethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	20-NOV-19
1,2-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	20-NOV-19
1,2-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	20-NOV-19
1,2-Dichloropropane		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	20-NOV-19
1,3-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	20-NOV-19
1,4-Dichlorobenzene		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	20-NOV-19
Acetone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	20-NOV-19
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	20-NOV-19
Bromodichloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	20-NOV-19
Bromoform		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	20-NOV-19
Bromomethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	20-NOV-19
Carbon tetrachloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	20-NOV-19
Chlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	20-NOV-19
Chloroform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	20-NOV-19
cis-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	20-NOV-19
cis-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	20-NOV-19
Dibromochloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	20-NOV-19
Dichlorodifluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	20-NOV-19
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	20-NOV-19



Workorder: L2381634 Report Date: 20-NOV-19 Page 2 of 7

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	eference Result Qualifier Units		RPD	Limit	Analyzed					
VOC-511-HS-WT	Soil											
Batch R491683	5											
WG3221627-4 DUP n-Hexane		WG3221627 -<0.050	< 0.050	RPD-NA	ug/g	N/A	40	20-NOV-19				
Methylene Chloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	20-NOV-19				
MTBE		<0.050	<0.050	RPD-NA	ug/g	N/A	40	20-NOV-19				
m+p-Xylenes		<0.030	< 0.030	RPD-NA	ug/g	N/A	40	20-NOV-19				
Methyl Ethyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	20-NOV-19				
Methyl Isobutyl Ketone)	<0.50	<0.50	RPD-NA	ug/g	N/A	40	20-NOV-19				
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	20-NOV-19				
Styrene		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	20-NOV-19				
Tetrachloroethylene		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	20-NOV-19				
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	20-NOV-19				
trans-1,2-Dichloroethy	lene	<0.050	< 0.050	RPD-NA	ug/g	N/A	40	20-NOV-19				
trans-1,3-Dichloroprop	ene	<0.030	< 0.030	RPD-NA	ug/g	N/A	40	20-NOV-19				
Trichloroethylene		<0.010	<0.010	RPD-NA	ug/g	N/A	40	20-NOV-19				
Trichlorofluoromethan	е	<0.050	< 0.050	RPD-NA	ug/g	N/A	40	20-NOV-19				
Vinyl chloride		<0.020	<0.020	RPD-NA	ug/g	N/A	40	20-NOV-19				
WG3221627-2 LCS												
1,1,1,2-Tetrachloroeth			97.2		%		60-130	20-NOV-19				
1,1,2,2-Tetrachloroeth	ane		113.6		%		60-130	20-NOV-19				
1,1,1-Trichloroethane			94.9		%		60-130	20-NOV-19				
1,1,2-Trichloroethane			104.4		%		60-130	20-NOV-19				
1,1-Dichloroethane			102.8		%		60-130	20-NOV-19				
1,1-Dichloroethylene			92.9		%		60-130	20-NOV-19				
1,2-Dibromoethane			103.5		%		70-130	20-NOV-19				
1,2-Dichlorobenzene			111.3		%		70-130	20-NOV-19				
1,2-Dichloroethane			101.3		%		60-130	20-NOV-19				
1,2-Dichloropropane			102.7 109.7		% %		70-130	20-NOV-19				
1,3-Dichlorobenzene 1,4-Dichlorobenzene			112.3		%		70-130	20-NOV-19				
Acetone			113.6		%		70-130	20-NOV-19				
Benzene			104.3		%		60-140 70-130	20-NOV-19 20-NOV-19				
Bromodichloromethan	e		98.8		%		70-130 50-140	20-NOV-19 20-NOV-19				
Bromoform	~		102.4		%		70-130	20-NOV-19 20-NOV-19				
Bromomethane			90.6		%		50-140	20-NOV-19 20-NOV-19				
Diomoniano			50.0		70		30-140	20-INO V- 13				



Workorder: L2381634 Report Date: 20-NOV-19 Page 3 of 7

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R4916835								
WG3221627-2 LCS			04.7		0/			
Carbon tetrachloride			94.7		%		70-130	20-NOV-19
Chlorobenzene			102.7		%		70-130	20-NOV-19
Chloroform			101.2		%		70-130	20-NOV-19
cis-1,2-Dichloroethylene			99.0		%		70-130	20-NOV-19
cis-1,3-Dichloropropene			104.9		%		70-130	20-NOV-19
Dibromochloromethane			98.5		%		60-130	20-NOV-19
Dichlorodifluoromethane	9		57.6		%		50-140	20-NOV-19
Ethylbenzene			98.7		%		70-130	20-NOV-19
n-Hexane			90.2		%		70-130	20-NOV-19
Methylene Chloride			103.1		%		70-130	20-NOV-19
MTBE			88.5		%		70-130	20-NOV-19
m+p-Xylenes			98.9		%		70-130	20-NOV-19
Methyl Ethyl Ketone			107.7		%		60-140	20-NOV-19
Methyl Isobutyl Ketone			101.9		%		60-140	20-NOV-19
o-Xylene			96.7		%		70-130	20-NOV-19
Styrene			93.3		%		70-130	20-NOV-19
Tetrachloroethylene			102.7		%		60-130	20-NOV-19
Toluene			102.3		%		70-130	20-NOV-19
trans-1,2-Dichloroethyle			100.3		%		60-130	20-NOV-19
trans-1,3-Dichloroprope	ne		106.6		%		70-130	20-NOV-19
Trichloroethylene			97.6		%		60-130	20-NOV-19
Trichlorofluoromethane			89.6		%		50-140	20-NOV-19
Vinyl chloride			97.6		%		60-140	20-NOV-19
WG3221627-1 MB			0.050				0.05	
1,1,1,2-Tetrachloroethar			<0.050		ug/g		0.05	20-NOV-19
1,1,2,2-Tetrachloroethar	ie		<0.050		ug/g		0.05	20-NOV-19
1,1,1-Trichloroethane			<0.050		ug/g		0.05	20-NOV-19
1,1,2-Trichloroethane			<0.050		ug/g		0.05	20-NOV-19
1,1-Dichloroethane			<0.050		ug/g		0.05	20-NOV-19
1,1-Dichloroethylene			<0.050		ug/g		0.05	20-NOV-19
1,2-Dibromoethane			<0.050		ug/g		0.05	20-NOV-19
1,2-Dichlorobenzene			<0.050		ug/g		0.05	20-NOV-19
1,2-Dichloroethane			<0.050		ug/g		0.05	20-NOV-19
1,2-Dichloropropane			<0.050		ug/g		0.05	20-NOV-19



Workorder: L2381634 Report Date: 20-NOV-19 Page 4 of 7

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R4916835								
WG3221627-1 MB 1,3-Dichlorobenzene			<0.050		ug/g		0.05	20-NOV-19
1,4-Dichlorobenzene			<0.050		ug/g ug/g		0.05	20-NOV-19 20-NOV-19
Acetone			<0.50		ug/g		0.5	20-NOV-19 20-NOV-19
Benzene			<0.0068		ug/g		0.0068	20-NOV-19 20-NOV-19
Bromodichloromethane			<0.050		ug/g		0.05	20-NOV-19 20-NOV-19
Bromoform			<0.050		ug/g		0.05	20-NOV-19 20-NOV-19
Bromomethane			<0.050		ug/g		0.05	20-NOV-19 20-NOV-19
Carbon tetrachloride			<0.050		ug/g		0.05	20-NOV-19 20-NOV-19
Chlorobenzene			<0.050		ug/g ug/g		0.05	20-NOV-19 20-NOV-19
Chloroform			<0.050		ug/g ug/g		0.05	20-NOV-19 20-NOV-19
cis-1,2-Dichloroethylene			<0.050		ug/g ug/g		0.05	20-NOV-19 20-NOV-19
cis-1,3-Dichloropropene			<0.030		ug/g		0.03	20-NOV-19 20-NOV-19
Dibromochloromethane			<0.050		ug/g		0.05	20-NOV-19
Dichlorodifluoromethane			< 0.050		ug/g		0.05	20-NOV-19
Ethylbenzene			<0.018		ug/g		0.018	20-NOV-19
n-Hexane			< 0.050		ug/g		0.05	20-NOV-19
Methylene Chloride			< 0.050		ug/g		0.05	20-NOV-19
MTBE			< 0.050		ug/g		0.05	20-NOV-19
m+p-Xylenes			< 0.030		ug/g		0.03	20-NOV-19
Methyl Ethyl Ketone			<0.50		ug/g		0.5	20-NOV-19
Methyl Isobutyl Ketone			<0.50		ug/g		0.5	20-NOV-19
o-Xylene			<0.020		ug/g		0.02	20-NOV-19
Styrene			<0.050		ug/g		0.05	20-NOV-19
Tetrachloroethylene			<0.050		ug/g		0.05	20-NOV-19
Toluene			<0.080		ug/g		0.08	20-NOV-19
trans-1,2-Dichloroethylen	е		< 0.050		ug/g		0.05	20-NOV-19
trans-1,3-Dichloropropen	е		< 0.030		ug/g		0.03	20-NOV-19
Trichloroethylene			<0.010		ug/g		0.01	20-NOV-19
Trichlorofluoromethane			<0.050		ug/g		0.05	20-NOV-19
Vinyl chloride			<0.020		ug/g		0.02	20-NOV-19
Surrogate: 1,4-Difluorobe	enzene		109.8		%		50-140	20-NOV-19
Surrogate: 4-Bromofluoro	benzene		90.7		%		50-140	20-NOV-19
WG3221627-5 MS 1,1,1,2-Tetrachloroethane	е	L2382750-7	106.7		%		50-140	20-NOV-19



Workorder: L2381634 Report Date: 20-NOV-19 Page 5 of 7

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

No. C-511-HS-WT	Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
Mas221627-5 MS	VOC-511-HS-WT	Soil							
1.1.2.2-Tetrachloroethane 115.5 % 50.140 20-NOV-19 1.1.1-Trichloroethane 107.4 % 50.140 20-NOV-19 1.1.2-Trichloroethane 109.6 % 50.140 20-NOV-19 1.1Dichloroethylene 105.1 % 50.140 20-NOV-19 1.2-Dibromoethane 107.1 % 50.140 20-NOV-19 1.2-Dichloroethylene 121.2 % 50.140 20-NOV-19 1.2-Dichloroethylene 105.2 % 50.140 20-NOV-19 1.2-Dichloroethane 105.2 % 50.140 20-NOV-19 1.2-Dichloropopopane 110.3 % 50.140 20-NOV-19 1.3-Dichlorobenzene 121.7 % 50.140 20-NOV-19 Acetone 119.2 % 50.140 20-NOV-19 Benzene 115.0 % 50.140 20-NOV-19 Bromodichloromethane 105.9 % 50.140 20-NOV-19 Bromodorm 106.1 % 50.140 20-NOV-19 Bromoethane 97.5 % 50.140 20-N	Batch R49168	35							
1,1,1-Trichloroethane 107.4 % 50.140 20-NOV-19 1,1,2-Trichloroethane 109.6 % 50.140 20-NOV-19 1,1,2-Trichloroethane 109.6 % 50.140 20-NOV-19 1,1-Dichloroethane 112.5 % 50.140 20-NOV-19 1,1-Dichloroethylone 105.1 % 50.140 20-NOV-19 1,2-Dibromoethane 107.1 % 50.140 20-NOV-19 1,2-Dibromoethane 107.1 % 50.140 20-NOV-19 1,2-Dichloroethylone 105.2 % 50.140 20-NOV-19 1,2-Dichloroethane 105.2 % 50.140 20-NOV-19 1,2-Dichloroethane 105.2 % 50.140 20-NOV-19 1,2-Dichloroethane 110.3 % 50.140 20-NOV-19 1,3-Dichloroethane 110.3 % 50.140 20-NOV-19 1,3-Dichloroethane 120.2 % 50.140 20-NOV-19 1,3-Dichloroethane 120.2 % 50.140 20-NOV-19 1,3-Dichloroethane 120.2 % 50.140 20-NOV-19 1,4-Dichloroethane 110.3 % 50.140 20-NOV-19 1,4-Dichloroethane 110.5 % 50.140 20-NOV-19 1,4-Dichloroethane 110.5 % 50.140 20-NOV-19 1,4-Dichloroethylone 110.5 % 50.140 20-NOV-19 1			L2382750-7	445.5		0/		50	
1.1,2-Trichloroethane 109.6 % 50-140 20-NOV-19 1.1-Dichloroethane 112.5 % 50-140 20-NOV-19 1.1-Dichloroethylene 105.1 % 50-140 20-NOV-19 1.1-Dichloroethylene 105.1 % 50-140 20-NOV-19 1.2-Dibromoethane 107.1 % 50-140 20-NOV-19 1.2-Dichlorobenzene 121.2 % 50-140 20-NOV-19 1.2-Dichloroethane 105.2 % 50-140 20-NOV-19 1.2-Dichloroethane 105.2 % 50-140 20-NOV-19 1.2-Dichloroethane 110.3 % 50-140 20-NOV-19 1.2-Dichlorobenzene 110.3 % 50-140 20-NOV-19 1.2-Dichlorobenzene 110.3 % 50-140 20-NOV-19 1.2-Dichlorobenzene 110.3 % 50-140 20-NOV-19 1.3-Dichlorobenzene 120.2 % 50-140 20-NOV-19 1.4-Dichlorobenzene 121.7 % 50-140 20-NOV-19 1.4-Dichlorobenzene 110.0 % 50-140 20-NOV-19 1.4-Dichlorobenzene 110.0 % 50-140 20-NOV-19 1.4-Dichlorobenzene 110.0 % 50-140 20-NOV-19 1.4-Dichlorobenzene 110.0 % 50-140 20-NOV-19 1.4-Dichlorobenzene 110.0 % 50-140 20-NOV-19 1.4-Dichlorobenzene 110.0 % 50-140 20-NOV-19 1.4-Dichlorobenzene 110.0 % 50-140 20-NOV-19 1.4-Dichlorobenzene 110.0 % 50-140 20-NOV-19 1.4-Dichlorobenzene 110.0 % 50-140 20-NOV-19 1.4-Dichlorobenzene 110.5 % 50-140 20-NOV-19 1.4-Dichlorobenzene 110.5 % 50-140 20-NOV-19 1.4-Dichlorobenzene 110.8 % 50-140 20-NOV-19 1.4-Dichlorobenzene 110.8 % 50-140 20-NOV-19 1.4-Dichlorobenzene 104.2 % 50-140 20-NOV-19 1.4-Dichlorobenzene 104.2 % 50-140 20-NOV-19 1.4-Dichlorobenzene 104.8 % 50-140 20-NOV-19 1.4-Dichlorobenzene 104.8 % 50-140 20-NOV-19 1.4-Dichlorobenzene 104.8 % 50-140 20-NOV-19 1.4-Dichlorobenzene 104.8 % 50-140 20-NOV-19 1.4-Dichlorobenzene 104.8 % 50-140 20-NOV-19 1.4-Dichlorobenzene 104.8 % 50-140 20-NOV-19 1.4-Dichlorobenzene 104.8 % 50-140 20-NOV-19 1.4-Dichlorobenzene 104.8 % 50-140 20-NOV-19 1.4-Dichlorobenzene 104.8 % 50-140 20-NOV-19 1.4-Dichlorobenzene 104.8 % 50-140 20-NOV-19 1.4-Dichlorobenzene 104.8 % 50-140 20-NOV-19 1.4-Dichlorobenzene 104.8 % 50-140 20-NOV-19 1.4-Dichlorobenzene 104.8 % 50-140 20-NOV-19 1.4-Dichlorobenzene 104.8 % 50-140 20-NOV-19 1.4-Dichlorobenzene 104.8 % 50-140 20-NOV-19 1.4-Dichlorobenzene 104.8 % 50-140 20-NOV-19 1.4-Dichlorobenzene 104									
1,1-Dichloroethane 112.5 % 50-140 20-NOV-19 1,1-Dichloroethylene 105.1 % 50-140 20-NOV-19 1,2-Dichloroethylene 107.1 % 50-140 20-NOV-19 1,2-Dichloroethane 107.1 % 50-140 20-NOV-19 1,2-Dichloroethane 105.2 % 50-140 20-NOV-19 1,2-Dichloroethane 105.2 % 50-140 20-NOV-19 1,2-Dichloroethane 105.2 % 50-140 20-NOV-19 1,2-Dichloroethane 110.3 % 50-140 20-NOV-19 1,2-Dichloroethane 120.2 % 50-140 20-NOV-19 1,3-Dichloroethane 120.2 % 50-140 20-NOV-19 1,3-Dichloroethane 120.2 % 50-140 20-NOV-19 1,4-Dichloroethane 120.2 % 50-140 20-NOV-19 1,4-Dichloroethane 119.2 % 50-140 20-NOV-19 Benzene 119.2 % 50-140 20-NOV-19 Benzene 119.5 % 50-140 20-NOV-19 Bromodichloromethane 105.9 % 50-140 20-NOV-19 Bromodichloromethane 105.9 % 50-140 20-NOV-19 Bromodichloromethane 106.1 % 50-140 20-NOV-19 Bromothane 106.1 % 50-140 20-NOV-19 Chloroethylene 17.8 % 50-140 20-NOV-19 Chloroform 110.8 % 50-140 20-NOV-19 Chloroform 110.8 % 50-140 20-NOV-19 Chloroform 110.8 % 50-140 20-NOV-19 Dichloroethylene 107.8 % 50-140 20-NOV-19 Dichloroethylene 107.8 % 50-140 20-NOV-19 Dichloroethylene 107.8 % 50-140 20-NOV-19 Dichloroethylene 104.8 % 50-140 2									
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	o-Xylene			107.1		%		50-140	20-NOV-19
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	Tetrachloroethylene			113.8		%		50-140	20-NOV-19



Workorder: L2381634 Report Date: 20-NOV-19 Page 6 of 7

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R4916835								
WG3221627-5 MS		L2382750-7						
Toluene			115.5		%		50-140	20-NOV-19
trans-1,2-Dichloroethylen	е		109.0		%		50-140	20-NOV-19
trans-1,3-Dichloropropen	е		103.6		%		50-140	20-NOV-19
Trichloroethylene			107.9		%		50-140	20-NOV-19
Trichlorofluoromethane			104.0		%		50-140	20-NOV-19
Vinyl chloride			111.0		%		50-140	20-NOV-19

Workorder: L2381634 Report Date: 20-NOV-19

Client: TERRAPROBE-BRAMPTON Page 7 of 7

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

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 predetermined 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

L2381634-COFC

COC Number: 15 -

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Canada Toll Free: 1 800 668 9878

	www.aisgiobai.com	<u>.</u>												_									
Report To	Contact and compa	any name below will app	ear on the final repor	rt								Select Service Level Below - Please confirm all E&P TATs with your AM - surcharges will apply											
Company:	Terraprobe	•			Select Report F	ormat:	✓ PDF [Z EXCEL 🗌 E	OD (DIGITAL)	Regular [R] Standard TAT if received by 3 pm - business days - no surcharges apply													
Contact:	Kossay Makhzoumi				Quality Control	(QC) Rep	ort with Re	port 🗹 YES	□ NO	Y Jayes)	4 (day (P	4]			łCY	1	Busir	1088 (day [E	1]		
Phone:	905-796-2650				Compare Result	ults to Criteri	ia on Report -	provide details below	w if box checked	3 day [P3]						Week	end or						
	Company address below	wwill appear on the final	report		Select Distribut	ion:	☑ EMAIL	MAIL	FAX	문항 2 day [P2] □ Statutory holiday [E0]													
Street:	11 Indell Lane				Email 1 or Fax	kmakhz	oumi@terra	aprobe.ca			Date and Time Required for all E&P TATs:												
City/Province:	Brampton				Email 2					For tests that can not be performed according to the service level selected, you will be contacted.													
Postal Code:	L6T 3Y3				Email 3							Analysis Request											
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Company:	Terraprobe				Email 1 or Fax	lrossi@t	terraprobe.c	ca											.	İ			
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TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 02-DEC-19

Report Date: 03-DEC-19 14:38 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2390458

Project P.O. #: NOT SUBMITTED

Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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ADDRESS: 5730 Coopers Avenue, Unit #26 , Mississauga, ON L4Z 2E9 Canada | Phone: +1 905 507 6910 | Fax: +1 905 507 6927 ALS CANADA LTD Part of the ALS Group An ALS Limited Company





L2390458 CONT'D....

Job Reference: 1-19-0603-42

PAGE 2 of 4

03-DEC-19 14:38 (MT)

Summary of Guideline Exceedances

Guideline
ALS ID Client ID Grouping Analyte Result Guideline Limit Unit

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Soil-Res/Park/Inst. Property Use (Coarse)

(No parameter exceedances)

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Soil-Res/Park/Inst. Property Use (Fine)

(No parameter exceedances)



L2390458 CONT'D....

Job Reference: 1-19-0603-42

PAGE 3 of 4

03-DEC-19 14:38 (MT)

Saturated Paste Extractables - SOIL

		L2390458-1 22-NOV-19 BH4-SS9		
Analyte	Unit	Guide #1	Limits #2	
SAR	SAR	5	5	1.66
Calcium (Ca)	mg/L	-	-	17.3
Magnesium (Mg)	mg/L	-	-	6.14
Sodium (Na)	mg/L	-	-	31.5

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

L2390458 CONT'D....
Job Reference: 1-19-0603-42
PAGE 4 of 4
03-DEC-19 14:38 (MT)

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference**
SAR-R511-WT	Soil	SAR-O.Rea 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).

**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 analysis for that test. Refer to the list below:

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.



Workorder: L2390458 Report Date: 03-DEC-19 Page 1 of 2

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test		Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SAR-R511-WT		Soil							
Batch R4	931390								
WG3233510-4	DUP		WG3233510-	3					
Calcium (Ca)			5.59	5.40		mg/L	3.5	30	03-DEC-19
Sodium (Na)			10.1	9.76		mg/L	3.4	30	03-DEC-19
Magnesium (Mg	g)		1.84	1.77		mg/L	3.9	30	03-DEC-19
WG3233510-2	IRM		WT SAR3						
Calcium (Ca)				109.6		%		70-130	03-DEC-19
Sodium (Na)				104.8		%		70-130	03-DEC-19
Magnesium (Mg	g)			112.3		%		70-130	03-DEC-19
WG3233510-5	LCS								
Calcium (Ca)				98.3		%		80-120	03-DEC-19
Sodium (Na)				97.2		%		80-120	03-DEC-19
Magnesium (Mg	g)			97.2		%		80-120	03-DEC-19
WG3233510-1	МВ								
Calcium (Ca)				< 0.50		mg/L		0.5	03-DEC-19
Sodium (Na)				<0.50		mg/L		0.5	03-DEC-19
Magnesium (Mg	g)			< 0.50		mg/L		0.5	03-DEC-19

Workorder: L2390458 Report Date: 03-DEC-19

Client: TERRAPROBE-BRAMPTON Page 2 of 2

11 Indell Lane

Brampton ON L6T 3Y3 Kossay Makhzoumi

Legend:

Contact:

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

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Chain of Custody (COC) / Analytical **Request Form**

Canada Toll Free: 1 800 668 9878

L2390458-COFC

COC Number: 15 -

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Contact:	Kossay Makhzoumi		Quality Control	(QC) Report with Re	eport 🗹 YES	□ NO) eye	4	day [F	4]			ζź	1	Busi	ness	day [E	[1]		
Phone:	905-796-2650		✓ Compare Resu	lts to Criteria on Report -	provide details below	v if box checked	PE SE	3	day [F	3]			EMERGENCY	;	Same	Day,	Week	end o	r	_
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Street:	11 Indell Lane		Email 1 or Fax	kmakhzoumi@terr	aprobe.ca			Date a	nd Tim	Requir	ed for a	ij E&P	TATs:							
City/Province:	Brampton		Email 2				For test	ts that co	ın not b	e perform	ed acco	ording to	the se	vice le	vel sele	cted, yo	u will b	e contac	ted.	
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Company:	Terraprobe		Email 1 or Fax	nail 1 or Fax lrossi@terraprobe.ca																
Contact:	Lorena Rossi		Email 2							1					1					γo
	Project Information	·	OI	Oil and Gas Required Fields (client use)			1													iner
ALS Account #	/ Quote #: Q62481		AFE/Cost Center:		PO#														ľ	onta
Job #:	1-19-0603-42		Major/Minor Code:		Routing Code:		1			1										õ
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ALS Lab Wo	rk Order # (lab use only)	1045801	ALS Contact:		Sampler:		and Inorganics		Forming N						OC Pesticides					Z
ALS Sample #	Sample Identification	and/or Coordinates		Date	Time		alsa	als	Ge I		~	_		,	Pes	ုန္တ			l	
(lab use only)	(This description will a	ppear on the report)		(dd-mmm-yy)	(hh:mm)	Sample Type	Metals	Metals	Hyride	EC	SAR	PAH	80	윒	8	PCBs				
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TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 31-OCT-19

Report Date: 07-NOV-19 14:35 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2375311

Project P.O. #: NOT SUBMITTED

Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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L2375311 CONT'D....

Job Reference: 1-19-0603-42

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Summary of Guideline Exceedances

Guideline						
ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit
Ontario Reg	gulation 153/04 - April 15	5, 2011 Standards - T3-Soil-Res/Park/I	nst. Property Use (Coarse)			
L2375311-1	BH5-SS1	Polycyclic Aromatic	Benzo(a)anthracene	0.959	0.5	ug/g
		Hydrocarbons	Benzo(a)pyrene	0.808	0.3	ug/g
			Benzo(b)fluoranthene	1.04	0.78	ug/g
			Dibenzo(ah)anthracene	0.147	0.1	ug/g
			Fluoranthene	2.51	0.69	ug/g
			Indeno(1,2,3-cd)pyrene	0.500	0.38	ug/g
2375311-2	BH5-SS2	Volatile Organic Compounds	Trichloroethylene	0.170	0.061	ug/g
2375311-3	BH5-SS5	Metals	Lead (Pb)	338	120	ug/g
ntario Reg	gulation 153/04 - April 15	5, 2011 Standards - T3-Soil-Res/Park/I	nst. Property Use (Fine)			
2375311-1	BH5-SS1	Polycyclic Aromatic	Benzo(a)anthracene	0.959	0.63	ug/g
		Hydrocarbons	Benzo(a)pyrene	0.808	0.3	ug/g
			Benzo(b)fluoranthene	1.04	0.78	ug/g
			Dibenzo(ah)anthracene	0.147	0.1	ug/g
			Fluoranthene	2.51	0.69	ug/g
			Indeno(1,2,3-cd)pyrene	0.500	0.48	ug/g
2375311-3	BH5-SS5	Metals	Lead (Pb)	338	120	ug/g



L2375311 CONT'D....

Job Reference: 1-19-0603-42

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Physical Tests - SOIL

,							
			Lab ID	L2375311-1	L2375311-2	L2375311-3	L2375311-4
		Samp	le Date	28-OCT-19	28-OCT-19	28-OCT-19	28-OCT-19
		San	nple ID	BH5-SS1	BH5-SS2	BH5-SS5	BH5-SS7
		Guide	Limits				
Analyte	Unit	#1	#2				
% Moisture	%	-	-	4.38	8.65	6.48	16.2

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



L2375311 CONT'D....
Job Reference: 1-19-0603-42
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Metals - SOIL

Wetais - SOIL					
			Lab ID	L2375311-1	L2375311-3
		Sample		28-OCT-19	28-OCT-19
		Sam	ple ID	BH5-SS1	BH5-SS5
		Guide Limits			
Analyte	Unit	#1	#2		
Antimony (Sb)	ug/g	7.5	7.5	<1.0	3.6
Arsenic (As)	ug/g	18	18	1.1	5.2
Barium (Ba)	ug/g	390	390	21.7	179
Beryllium (Be)	ug/g	4	5	<0.50	<0.50
Boron (B)	ug/g	120	120	<5.0	5.8
Cadmium (Cd)	ug/g	1.2	1.2	<0.50	0.64
Chromium (Cr)	ug/g	160	160	7.4	14.0
Cobalt (Co)	ug/g	22	22	2.3	4.2
Copper (Cu)	ug/g	140	180	4.6	35.1
Lead (Pb)	ug/g	120	120	3.3	338
Molybdenum (Mo)	ug/g	6.9	6.9	<1.0	<1.0
Nickel (Ni)	ug/g	100	130	4.4	11.8
Selenium (Se)	ug/g	2.4	2.4	<1.0	<1.0
Silver (Ag)	ug/g	20	25	<0.20	<0.20
Thallium (TI)	ug/g	1	1	<0.50	<0.50
Uranium (U)	ug/g	23	23	<1.0	<1.0
Vanadium (V)	ug/g	86	86	18.4	21.3
Zinc (Zn)	ug/g	340	340	13.8	202

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



L2375311 CONT'D.... Job Reference: 1-19-0603-42 PAGE 5 of 12 07-NOV-19 14:35 (MT)

Volatile Organic Compound	s - SOIL				
_		L	_ab ID	L2375311-2	L2375311-4
		Sample		28-OCT-19	28-OCT-19
		Sam	ple ID	BH5-SS2	BH5-SS7
		Guide	Limite		
Analyte	Unit	#1	#2		
Acetone	ug/g	16	28	<0.50	<0.50
Benzene	ug/g	0.21	0.17	<0.0068	<0.0068
Bromodichloromethane	ug/g	13	13	<0.050	<0.050
Bromoform	ug/g	0.27	0.26	<0.050	< 0.050
Bromomethane	ug/g	0.05	0.05	<0.050	< 0.050
Carbon tetrachloride	ug/g	0.05	0.12	<0.050	< 0.050
Chlorobenzene	ug/g	2.4	2.7	<0.050	<0.050
Dibromochloromethane	ug/g	9.4	9.4	<0.050	<0.050
Chloroform	ug/g	0.05	0.18	<0.050	<0.050
1,2-Dibromoethane	ug/g	0.05	0.05	<0.050	<0.050
1,2-Dichlorobenzene	ug/g	3.4	4.3	<0.050	<0.050
1,3-Dichlorobenzene	ug/g	4.8	6	<0.050	<0.050
1,4-Dichlorobenzene	ug/g	0.083	0.097	<0.050	< 0.050
Dichlorodifluoromethane	ug/g	16	25	<0.050	< 0.050
1,1-Dichloroethane	ug/g	3.5	11	<0.050	< 0.050
1,2-Dichloroethane	ug/g	0.05	0.05	<0.050	< 0.050
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.050	< 0.050
cis-1,2-Dichloroethylene	ug/g	3.4	30	<0.050	< 0.050
trans-1,2-Dichloroethylene	ug/g	0.084	0.75	<0.050	<0.050
Methylene Chloride	ug/g	0.1	0.96	<0.050	< 0.050
1,2-Dichloropropane	ug/g	0.05	0.085	<0.050	< 0.050
cis-1,3-Dichloropropene	ug/g	-	-	<0.030	< 0.030
trans-1,3-Dichloropropene	ug/g	-	-	<0.030	< 0.030
1,3-Dichloropropene (cis & trans)	ug/g	0.05	0.083	<0.042	<0.042
Ethylbenzene	ug/g	2	15	<0.018	<0.018
n-Hexane	ug/g	2.8	34	<0.050	<0.050
Methyl Ethyl Ketone	ug/g	16	44	<0.50	<0.50
Methyl Isobutyl Ketone	ug/g	1.7	4.3	<0.50	<0.50
MTBE	ug/g	0.75	1.4	<0.050	<0.050

ug/g

0.7

2.2

< 0.050

< 0.050

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

Styrene



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Volatile Organic Compounds - SOIL

			_ab ID	L2375311-2	L2375311-4
		Sample		28-OCT-19	28-OCT-19
		Sam	ple ID	BH5-SS2	BH5-SS7
Analyte	Unit	Guide #1	Limits #2		
1,1,1,2-Tetrachloroethane	ug/g	0.058	0.05	<0.050	<0.050
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.050	<0.050
Tetrachloroethylene	ug/g	0.28	2.3	<0.050	<0.050
Toluene	ug/g	2.3	6	<0.080	<0.080
1,1,1-Trichloroethane	ug/g	0.38	3.4	<0.050	<0.050
1,1,2-Trichloroethane	ug/g	0.05	0.05	<0.050	<0.050
Trichloroethylene	ug/g	0.061	0.52	0.170	0.020
Trichlorofluoromethane	ug/g	4	5.8	<0.050	<0.050
Vinyl chloride	ug/g	0.02	0.022	<0.020	<0.020
o-Xylene	ug/g	-	-	<0.020	<0.020
m+p-Xylenes	ug/g	-	-	<0.030	<0.030
Xylenes (Total)	ug/g	3.1	25	<0.050	<0.050
Surrogate: 4-Bromofluorobenzene	%	-	-	86.5	89.4
Surrogate: 1,4-Difluorobenzene	%	-	-	104.0	107.9

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



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Hydrocarbons - SOIL

,					
		I	Lab ID	L2375311-2	L2375311-4
		Sample	e Date	28-OCT-19	28-OCT-19
		Sam	ple ID	BH5-SS2	BH5-SS7
Analyte	Unit	Guide #1	Limits #2		
F1 (C6-C10)	ug/g	55	65	<5.0	<5.0
F1-BTEX	ug/g	55	65	<5.0	<5.0
F2 (C10-C16)	ug/g	98	150	<10	<10
F3 (C16-C34)	ug/g	300	1300	<50	<50
F4 (C34-C50)	ug/g	2800	5600	<50	<50
Total Hydrocarbons (C6-C50)	ug/g	-	-	<72	<72
Chrom. to baseline at nC50		-	-	YES	YES
Surrogate: 2-Bromobenzotrifluoride	%	-	-	113.0	94.7
Surrogate: 3,4-Dichlorotoluene	%	-	-	94.9	97.4

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



L2375311 CONT'D....

Job Reference: 1-19-0603-42

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Polycyclic Aromatic Hydrocarbons - SOIL

			Lab ID	L2375311-1	L2375311-3
		Sample		28-OCT-19	28-OCT-19
		Sam	ple ID	BH5-SS1	BH5-SS5
	Unit	Guide #1	Limits #2		
Analyte	Offic	#1	#2		
Acenaphthene	ug/g	7.9	58	0.146	<0.050
Acenaphthylene	ug/g	0.15	0.17	0.094	< 0.050
Anthracene	ug/g	0.67	0.74	0.341	<0.050
Benzo(a)anthracene	ug/g	0.5	0.63	0.959	<0.050
Benzo(a)pyrene	ug/g	0.3	0.3	0.808	<0.050
Benzo(b)fluoranthene	ug/g	0.78	0.78	1.04	<0.050
Benzo(g,h,i)perylene	ug/g	6.6	7.8	0.524	<0.050
Benzo(k)fluoranthene	ug/g	0.78	0.78	0.429	<0.050
Chrysene	ug/g	7	7.8	1.14	<0.050
Dibenzo(ah)anthracene	ug/g	0.1	0.1	0.147	<0.050
Fluoranthene	ug/g	0.69	0.69	2.51	<0.050
Fluorene	ug/g	62	69	0.151	<0.050
Indeno(1,2,3-cd)pyrene	ug/g	0.38	0.48	0.500	<0.050
1+2-Methylnaphthalenes	ug/g	0.99	3.4	0.133	<0.042
1-Methylnaphthalene	ug/g	0.99	3.4	0.070	<0.030
2-Methylnaphthalene	ug/g	0.99	3.4	0.063	<0.030
Naphthalene	ug/g	0.6	0.75	0.068	<0.013
Phenanthrene	ug/g	6.2	7.8	2.07	<0.046
Pyrene	ug/g	78	78	2.05	<0.050
Surrogate: 2-Fluorobiphenyl	%	-	-	87.7	85.6
Surrogate: p-Terphenyl d14	%	-	-	73.9	75.2

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



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Polychlorinated Biphenyls - SOIL

JOIL				
		_ab ID	L2375311-1	L2375311-3
	Sample	e Date	28-OCT-19	28-OCT-19
	Sam	ple ID	BH5-SS1	BH5-SS5
Unit	Guide #1	Limits #2		
ug/g	-		<0.010	<0.010
ug/g	-	-	<0.010	<0.010
ug/g	-	-	<0.010	<0.010
ug/g	-	-	<0.010	<0.010
ug/g	0.35	0.35	<0.020	<0.020
%	-	-	86.9	85.6
	Unit ug/g ug/g ug/g ug/g ug/g	#1 ug/g - ug/g - ug/g - ug/g - ug/g - ug/g - ug/g - ug/g - ug/g - ug/g - ug/g - ug/g - ug/g -	Lab ID Sample Date Sample ID	Lab ID L2375311-1 Sample Date Sample ID BH5-SS1

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

L2375311 CONT'D.... Job Reference: 1-19-0603-42 PAGE 10 of 12 07-NOV-19 14:35 (MT)

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference**
F1-F4-511-CALC-WT	Soil	F1-F4 Hydrocarbon Calculated Parameters	CCME CWS-PHC, Pub #1310, Dec 2001-S

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

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

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-sq is analyzed gravimetrically.

- 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-sq: Gravimetric Heavy Hydrocarbons (F4G) after silica gel treatment.
- 6. Where both F4 (C34-C50) and F4G-sq are reported for a sample, the larger of the two values is used for comparison against the relevant CCME guideline for F4.
- 7. F4G-sq 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 200.2/6020A (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

L2375311 CONT'D.... Job Reference: 1-19-0603-42 PAGE 11 of 12 07-NOV-19 14:35 (MT)

Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

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 AI, Ba, Be, Cr, S, Sr, Ti, 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 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).

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 i	mprove 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

WT ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

L2375311 CONT'D....
Job Reference: 1-19-0603-42
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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.



Workorder: L2375311 Report Date: 07-NOV-19 Page 1 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test		Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT		Soil							
Batch R4	902278								
WG3211513-4 F1 (C6-C10)	DUP		WG3211513-3 <5.0	<5.0	RPD-NA	ug/g	N/A	30	07-NOV-19
WG3211513-2 F1 (C6-C10)	LCS			108.2		%		80-120	07-NOV-19
WG3211513-1 F1 (C6-C10)	MB			<5.0		ug/g		5	07-NOV-19
Surrogate: 3,4-D	Dichloroto	oluene		103.0		%		60-140	07-NOV-19
WG3211513-6 F1 (C6-C10)	MS		L2375371-2	107.4		%		60-140	07-NOV-19
F2-F4-511-WT		Soil							
Batch R4	899263								
WG3209407-3	DUP		WG3209407-5	-10	DDD ***		N 1/A	00	05 NOV (5
F2 (C16-C16)			<10	<10 -E0	RPD-NA	ug/g	N/A	30	05-NOV-19
F3 (C16-C34)			51 92	<50	RPD-NA	ug/g	N/A	30	05-NOV-19
F4 (C34-C50) WG3209407-2	LCS		92	<50	RPD-NA	ug/g	N/A	30	05-NOV-19
F2 (C10-C16)				114.3		%		80-120	05-NOV-19
F3 (C16-C34)				112.9		%		80-120	05-NOV-19
F4 (C34-C50)				114.6		%		80-120	05-NOV-19
WG3209407-1 F2 (C10-C16)	MB			<10		ug/g		10	05-NOV-19
F3 (C16-C34)				<50		ug/g		50	05-NOV-19
F4 (C34-C50)				<50		ug/g		50	05-NOV-19
Surrogate: 2-Bro	omobenz	zotrifluoride		79.6		%		60-140	05-NOV-19
WG3209407-4 F2 (C10-C16)	MS		WG3209407-5	134.5		%		60 140	05 NOV 10
F3 (C16-C34)				120.8		%		60-140 60-140	05-NOV-19 05-NOV-19
F4 (C34-C50)				109.5		%		60-140	05-NOV-19 05-NOV-19
,	MT	Soil		-				33 140	331.37 10
MET-200.2-CCMS-1	899932	Juli							
WG3210315-2 Antimony (Sb)	CRM		WT-CANMET-	ΓΙLL2 103.6		%		70 120	05 NOV 40
Arsenic (As)				105.0		%		70-130	05-NOV-19 05-NOV-19
Barium (Ba)				103.0		%		70-130 70-130	05-NOV-19 05-NOV-19
Beryllium (Be)				93.9		%		70-130 70-130	05-NOV-19 05-NOV-19
Boron (B)				3.5		mg/kg		0-8.6	05-NOV-19 05-NOV-19
20.011 (2)				5.0		9' 1'9		0-0.0	03-140 4-18



Workorder: L2375311 Report Date: 07-NOV-19 Page 2 of 13

TERRAPROBE-BRAMPTON Client:

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	Soil							
Batch R4899932								
WG3210315-2 CRM		WT-CANMET			0/			
Cadmium (Cd)			100.9		%		70-130	05-NOV-19
Chromium (Cr)			104.0		%		70-130	05-NOV-19
Cobalt (Co)			102.4		%		70-130	05-NOV-19
Copper (Cu)			104.4		%		70-130	05-NOV-19
Lead (Pb)			103.4		%		70-130	05-NOV-19
Molybdenum (Mo)			102.4		%		70-130	05-NOV-19
Nickel (Ni)			103.9		%		70-130	05-NOV-19
Selenium (Se)			0.40		mg/kg		0.15-0.55	05-NOV-19
Silver (Ag)			0.28		mg/kg		0.16-0.36	05-NOV-19
Thallium (TI)			102.9		%		70-130	05-NOV-19
Uranium (U)			102.4		%		70-130	05-NOV-19
Vanadium (V)			103.9		%		70-130	05-NOV-19
Zinc (Zn)			98.3		%		70-130	05-NOV-19
WG3210315-4 DUP Antimony (Sb)		L2375323-3 <1.0	<1.0	RPD-NA	ug/g	N/A	30	05-NOV-19
Arsenic (As)		1.2	1.2		ug/g	0.2	30	05-NOV-19
Barium (Ba)		31.9	30.3		ug/g	5.4	40	05-NOV-19
Beryllium (Be)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	05-NOV-19
Boron (B)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	05-NOV-19
Cadmium (Cd)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	05-NOV-19
Chromium (Cr)		8.6	8.5		ug/g	1.4	30	05-NOV-19
Cobalt (Co)		2.8	2.6		ug/g	8.8	30	05-NOV-19
Copper (Cu)		5.7	5.3		ug/g	6.4	30	05-NOV-19
Lead (Pb)		3.3	3.3		ug/g	1.6	40	05-NOV-19
Molybdenum (Mo)		<1.0	<1.0	RPD-NA	ug/g	N/A	40	05-NOV-19
Nickel (Ni)		5.3	5.2	=	ug/g	1.2	30	05-NOV-19
Selenium (Se)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	05-NOV-19
Silver (Ag)		<0.20	<0.20	RPD-NA	ug/g	N/A	40	05-NOV-19
Thallium (TI)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	05-NOV-19
Uranium (U)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	05-NOV-19
Vanadium (V)		18.6	18.4	NI D NA	ug/g	0.9	30	05-NOV-19
Zinc (Zn)		14.9	14.3		ug/g	3.9	30	05-NOV-19
WG3210315-3 LCS		17.0	14.0		~ 9′9	5.5	30	03-140 4-19



Workorder: L2375311 Report Date: 07-NOV-19 Page 3 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	Soil							
Batch R4899932								
WG3210315-3 LCS			102.0		%		00.400	05 1101/ 40
Antimony (Sb) Arsenic (As)			95.1		%		80-120	05-NOV-19
			95.1				80-120	05-NOV-19
Barium (Ba)					%		80-120	05-NOV-19
Beryllium (Be) Boron (B)			87.8		%		80-120	05-NOV-19
` ,			88.6				80-120	05-NOV-19
Cadmium (Cd)			93.8		%		80-120	05-NOV-19
Chromium (Cr)			94.6		%		80-120	05-NOV-19
Cobalt (Co)			93.6		%		80-120	05-NOV-19
Copper (Cu)			92.8		%		80-120	05-NOV-19
Lead (Pb)			96.9		%		80-120	05-NOV-19
Molybdenum (Mo)			99.9		%		80-120	05-NOV-19
Nickel (Ni)			94.0		%		80-120	05-NOV-19
Selenium (Se)			91.4		%		80-120	05-NOV-19
Silver (Ag)			93.0		%		80-120	05-NOV-19
Thallium (TI)			95.2		%		80-120	05-NOV-19
Uranium (U)			97.3		%		80-120	05-NOV-19
Vanadium (V)			96.4		%		80-120	05-NOV-19
Zinc (Zn)			90.9		%		80-120	05-NOV-19
WG3210315-1 MB Antimony (Sb)			<0.10		mg/kg		0.1	05-NOV-19
Arsenic (As)			<0.10		mg/kg		0.1	05-NOV-19
Barium (Ba)			<0.50		mg/kg		0.5	05-NOV-19
Beryllium (Be)			<0.10		mg/kg		0.1	05-NOV-19
Boron (B)			<5.0		mg/kg		5	
Cadmium (Cd)			<0.020		mg/kg		0.02	05-NOV-19
Chromium (Cr)			<0.50		mg/kg		0.5	05-NOV-19 05-NOV-19
Cobalt (Co)			<0.10		mg/kg		0.1	05-NOV-19 05-NOV-19
Copper (Cu)			<0.10		mg/kg		0.1	05-NOV-19 05-NOV-19
Lead (Pb)			<0.50		mg/kg		0.5	
Molybdenum (Mo)			<0.30		mg/kg		0.5	05-NOV-19
Nickel (Ni)			<0.10		mg/kg		0.1	05-NOV-19
Selenium (Se)								05-NOV-19
			<0.20		mg/kg		0.2	05-NOV-19
Silver (Ag)			<0.10		mg/kg		0.1	05-NOV-19
Thallium (TI)			<0.050		mg/kg		0.05	05-NOV-19



Workorder: L2375311 Report Date: 07-NOV-19 Page 4 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	Soil							
Batch R4899932								
WG3210315-1 MB								
Uranium (U)			<0.050		mg/kg		0.05	05-NOV-19
Vanadium (V)			<0.20		mg/kg		0.2	05-NOV-19
Zinc (Zn)			<2.0		mg/kg		2	05-NOV-19
MOISTURE-WT	Soil							
Batch R4895778								
WG3207864-3 DUP % Moisture		L2375263-1 5.86	5.70		%	2.8	20	01-NOV-19
WG3207864-2 LCS		0.00	0.70		,,	2.0	20	01-1101-19
% Moisture			101.5		%		90-110	01-NOV-19
WG3207864-1 MB								
% Moisture			<0.25		%		0.25	01-NOV-19
PAH-511-WT	Soil							
Batch R4899156								
WG3207464-3 DUP		WG3207464-5			,			
1-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	05-NOV-19
2-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	05-NOV-19
Acenaphthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
Acenaphthylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
Anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
Benzo(a)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
Benzo(a)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
Benzo(b)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
Benzo(g,h,i)perylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
Benzo(k)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
Chrysene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
Dibenzo(ah)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
Fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
Fluorene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
Indeno(1,2,3-cd)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
Naphthalene		<0.013	<0.013	RPD-NA	ug/g	N/A	40	05-NOV-19
Phenanthrene		<0.046	<0.046	RPD-NA	ug/g	N/A	40	05-NOV-19
Pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	05-NOV-19
WG3207464-2 LCS 1-Methylnaphthalene			90.2		%		50-140	05-NOV-19



Workorder: L2375311 Report Date: 07-NOV-19 Page 5 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Soil							
Batch R4899156								
WG3207464-2 LCS			05.4		0/			
2-Methylnaphthalene			85.1		%		50-140	05-NOV-19
Acenaphthene			91.4		%		50-140	05-NOV-19
Acenaphthylene			92.2		%		50-140	05-NOV-19
Anthracene			90.7		%		50-140	05-NOV-19
Benzo(a)anthracene			89.8		%		50-140	05-NOV-19
Benzo(a)pyrene			84.4		%		50-140	05-NOV-19
Benzo(b)fluoranthene			78.2		%		50-140	05-NOV-19
Benzo(g,h,i)perylene			85.1		%		50-140	05-NOV-19
Benzo(k)fluoranthene			93.4		%		50-140	05-NOV-19
Chrysene			99.9		%		50-140	05-NOV-19
Dibenzo(ah)anthracene			87.1		%		50-140	05-NOV-19
Fluoranthene			88.6		%		50-140	05-NOV-19
Fluorene			89.5		%		50-140	05-NOV-19
Indeno(1,2,3-cd)pyrene			90.1		%		50-140	05-NOV-19
Naphthalene			87.2		%		50-140	05-NOV-19
Phenanthrene			89.8		%		50-140	05-NOV-19
Pyrene			88.7		%		50-140	05-NOV-19
WG3207464-1 MB 1-Methylnaphthalene			<0.030		ug/g		0.03	05-NOV-19
2-Methylnaphthalene			< 0.030		ug/g		0.03	05-NOV-19
Acenaphthene			< 0.050		ug/g		0.05	05-NOV-19
Acenaphthylene			< 0.050		ug/g		0.05	05-NOV-19
Anthracene			<0.050		ug/g		0.05	05-NOV-19
Benzo(a)anthracene			<0.050		ug/g		0.05	05-NOV-19
Benzo(a)pyrene			<0.050		ug/g		0.05	05-NOV-19
Benzo(b)fluoranthene			<0.050		ug/g		0.05	05-NOV-19
Benzo(g,h,i)perylene			<0.050		ug/g		0.05	05-NOV-19
Benzo(k)fluoranthene			<0.050		ug/g		0.05	05-NOV-19
Chrysene			<0.050		ug/g		0.05	05-NOV-19
Dibenzo(ah)anthracene			<0.050		ug/g		0.05	05-NOV-19
Fluoranthene			<0.050		ug/g		0.05	05-NOV-19
Fluorene			<0.050		ug/g		0.05	05-NOV-19
Indeno(1,2,3-cd)pyrene			<0.050		ug/g		0.05	05-NOV-19
Naphthalene			<0.013		ug/g		0.013	05-NOV-19



Workorder: L2375311 Report Date: 07-NOV-19 Page 6 of 13

TERRAPROBE-BRAMPTON Client:

11 Indell Lane

Brampton ON L6T 3Y3

Kossay Makhzoumi Contact:

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Soil							
Batch R4899156 WG3207464-1 MB Phenanthrene			<0.046		ug/g		0.046	05-NOV-19
Pyrene			<0.050		ug/g		0.05	05-NOV-19
Surrogate: 2-Fluorobiph	enyl		94.9		%		50-140	05-NOV-19
Surrogate: p-Terphenyl	d14		82.0		%		50-140	05-NOV-19
WG3207464-4 MS 1-Methylnaphthalene		WG3207464-5	86.0		%		50-140	05-NOV-19
2-Methylnaphthalene			80.9		%		50-140	05-NOV-19
Acenaphthene			86.7		%		50-140	05-NOV-19
Acenaphthylene			87.8		%		50-140	05-NOV-19
Anthracene			85.9		%		50-140	05-NOV-19
Benzo(a)anthracene			86.4		%		50-140	05-NOV-19
Benzo(a)pyrene			81.2		%		50-140	05-NOV-19
Benzo(b)fluoranthene			75.8		%		50-140	05-NOV-19
Benzo(g,h,i)perylene			81.6		%		50-140	05-NOV-19
Benzo(k)fluoranthene			89.6		%		50-140	05-NOV-19
Chrysene			95.5		%		50-140	05-NOV-19
Dibenzo(ah)anthracene			83.7		%		50-140	05-NOV-19
Fluoranthene			84.4		%		50-140	05-NOV-19
Fluorene			84.9		%		50-140	05-NOV-19
Indeno(1,2,3-cd)pyrene			81.5		%		50-140	05-NOV-19
Naphthalene			82.7		%		50-140	05-NOV-19
Phenanthrene			85.8		%		50-140	05-NOV-19
Pyrene			84.4		%		50-140	05-NOV-19
PCB-511-WT	Soil							
Batch R4900247								
WG3207464-3 DUP Aroclor 1242		WG3207464-5	<0.010		ug/g	NI/A	40	00 NOV 40
Aroclor 1248		<0.010 <0.010	<0.010	RPD-NA	ug/g	N/A	40	06-NOV-19
Aroclor 1254				RPD-NA	ug/g	N/A	40	06-NOV-19
Aroclor 1254 Aroclor 1260		<0.010	<0.010	RPD-NA	ug/g	N/A	40	06-NOV-19
		<0.010	<0.010	RPD-NA	ug/g	N/A	40	06-NOV-19
WG3207464-2 LCS Aroclor 1242			99.1		%		60-140	06-NOV-19
Aroclor 1248			99.3		%		60-140	06-NOV-19
Aroclor 1254			100.4		%		60-140	06-NOV-19



Workorder: L2375311 Report Date: 07-NOV-19 Page 7 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB-511-WT	Soil							
Batch R4900247								
WG3207464-2 LCS Aroclor 1260			106.5		%		60-140	06-NOV-19
WG3207464-1 MB					,			
Aroclor 1242			<0.010		ug/g		0.01	06-NOV-19
Aroclor 1248			<0.010		ug/g		0.01	06-NOV-19
Aroclor 1254			<0.010		ug/g		0.01	06-NOV-19
Aroclor 1260	. d		<0.010		ug/g		0.01	06-NOV-19
Surrogate: d14-Terphen	yı	W00007404.F	88.5		%		60-140	06-NOV-19
WG3207464-4 MS Aroclor 1242		WG3207464-5	94.5		%		60-140	06-NOV-19
Aroclor 1254			95.8		%		60-140	06-NOV-19
Aroclor 1260			100.8		%		60-140	06-NOV-19
VOC-511-HS-WT	Soil							
Batch R4902278								
WG3211513-4 DUP		WG3211513-3						
1,1,1,2-Tetrachloroethan	ne	<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,1,2,2-Tetrachloroethan	ne	<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,1,1-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,1,2-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,1-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,1-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,2-Dibromoethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,2-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,2-Dichloroethane		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,2-Dichloropropane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,3-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,4-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Acetone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	07-NOV-19
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	07-NOV-19
Bromodichloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Bromoform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Bromomethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Carbon tetrachloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Chlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19



Workorder: L2375311 Report Date: 07-NOV-19 Page 8 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R4902278								
WG3211513-4 DUP Chloroform		WG3211513- <0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
cis-1,2-Dichloroethylene		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
cis-1,3-Dichloropropene		<0.030	< 0.030	RPD-NA	ug/g	N/A	40	07-NOV-19
Dibromochloromethane		< 0.050	< 0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Dichlorodifluoromethane		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	07-NOV-19
n-Hexane		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Methylene Chloride		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
MTBE		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
m+p-Xylenes		<0.030	< 0.030	RPD-NA	ug/g	N/A	40	07-NOV-19
Methyl Ethyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	07-NOV-19
Methyl Isobutyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	07-NOV-19
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	07-NOV-19
Styrene		< 0.050	< 0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Tetrachloroethylene		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	07-NOV-19
trans-1,2-Dichloroethyler	ne	<0.050	< 0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
trans-1,3-Dichloroproper	ne	<0.030	< 0.030	RPD-NA	ug/g	N/A	40	07-NOV-19
Trichloroethylene		0.170	0.168		ug/g	1.2	40	07-NOV-19
Trichlorofluoromethane		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Vinyl chloride		<0.020	<0.020	RPD-NA	ug/g	N/A	40	07-NOV-19
WG3211513-2 LCS 1,1,1,2-Tetrachloroethan	e		103.2		%		60-130	07-NOV-19
1,1,2,2-Tetrachloroethan	е		116.0		%		60-130	07-NOV-19
1,1,1-Trichloroethane			104.2		%		60-130	07-NOV-19
1,1,2-Trichloroethane			107.4		%		60-130	07-NOV-19
1,1-Dichloroethane			109.9		%		60-130	07-NOV-19
1,1-Dichloroethylene			100.1		%		60-130	07-NOV-19
1,2-Dibromoethane			108.4		%		70-130	07-NOV-19
1,2-Dichlorobenzene			111.6		%		70-130	07-NOV-19
1,2-Dichloroethane			108.8		%		60-130	07-NOV-19
1,2-Dichloropropane			109.5		%		70-130	07-NOV-19
1,3-Dichlorobenzene			110.8		%		70-130	07-NOV-19



Workorder: L2375311 Report Date: 07-NOV-19 Page 9 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R4902278								
WG3211513-2 LCS			440.0		0/		70.400	
1,4-Dichlorobenzene Acetone			112.3 116.6		%		70-130	07-NOV-19
Benzene							60-140	07-NOV-19
			110.7		%		70-130	07-NOV-19
Bromodichloromethane			107.3		%		50-140	07-NOV-19
Bromoform			108.7		%		70-130	07-NOV-19
Bromomethane			97.0		%		50-140	07-NOV-19
Carbon tetrachloride			104.9		%		70-130	07-NOV-19
Chlorobenzene			106.0		%		70-130	07-NOV-19
Chloroform			109.0		%		70-130	07-NOV-19
cis-1,2-Dichloroethylene			106.4		%		70-130	07-NOV-19
cis-1,3-Dichloropropene			114.5		%		70-130	07-NOV-19
Dibromochloromethane			104.2		%		60-130	07-NOV-19
Dichlorodifluoromethane			61.6		%		50-140	07-NOV-19
Ethylbenzene			103.9		%		70-130	07-NOV-19
n-Hexane			97.2		%		70-130	07-NOV-19
Methylene Chloride			109.7		%		70-130	07-NOV-19
MTBE			106.0		%		70-130	07-NOV-19
m+p-Xylenes			103.1		%		70-130	07-NOV-19
Methyl Ethyl Ketone			116.8		%		60-140	07-NOV-19
Methyl Isobutyl Ketone			111.1		%		60-140	07-NOV-19
o-Xylene			102.5		%		70-130	07-NOV-19
Styrene			100.2		%		70-130	07-NOV-19
Tetrachloroethylene			108.3		%		60-130	07-NOV-19
Toluene			106.4		%		70-130	07-NOV-19
trans-1,2-Dichloroethylen	ie		108.4		%		60-130	07-NOV-19
trans-1,3-Dichloropropen	е		112.4		%		70-130	07-NOV-19
Trichloroethylene			107.4		%		60-130	07-NOV-19
Trichlorofluoromethane			98.5		%		50-140	07-NOV-19
Vinyl chloride			104.7		%		60-140	07-NOV-19
WG3211513-1 MB 1,1,1,2-Tetrachloroethan	e		<0.050		ug/g		0.05	07-NOV-19
1,1,2,2-Tetrachloroethan			<0.050		ug/g		0.05	07-NOV-19
1,1,1-Trichloroethane			<0.050		ug/g		0.05	07-NOV-19
1,1,2-Trichloroethane			<0.050		ug/g		0.05	07-NOV-19



Workorder: L2375311 Report Date: 07-NOV-19 Page 10 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R4902278								
WG3211513-1 MB 1,1-Dichloroethane			-0.0E0		ua/a		0.05	07.1101/ 40
1,1-Dichloroethylene			<0.050 <0.050		ug/g		0.05	07-NOV-19
1,2-Dibromoethane			<0.050		ug/g		0.05	07-NOV-19
1,2-Dichlorobenzene			<0.050		ug/g		0.05	07-NOV-19
1,2-Dichloroethane					ug/g		0.05	07-NOV-19
•			<0.050		ug/g		0.05	07-NOV-19
1,2-Dichloropropane			<0.050		ug/g			07-NOV-19
1,3-Dichlorobenzene			<0.050		ug/g		0.05	07-NOV-19
1,4-Dichlorobenzene			<0.050		ug/g		0.05	07-NOV-19
Acetone			<0.50		ug/g		0.5	07-NOV-19
Benzene			<0.0068		ug/g		0.0068	07-NOV-19
Bromodichloromethane			<0.050		ug/g		0.05	07-NOV-19
Bromoform			<0.050		ug/g		0.05	07-NOV-19
Bromomethane			<0.050		ug/g		0.05	07-NOV-19
Carbon tetrachloride			<0.050		ug/g		0.05	07-NOV-19
Chlorobenzene			<0.050		ug/g		0.05	07-NOV-19
Chloroform			<0.050		ug/g		0.05	07-NOV-19
cis-1,2-Dichloroethylene			<0.050		ug/g		0.05	07-NOV-19
cis-1,3-Dichloropropene			<0.030		ug/g		0.03	07-NOV-19
Dibromochloromethane			<0.050		ug/g		0.05	07-NOV-19
Dichlorodifluoromethan	е		<0.050		ug/g		0.05	07-NOV-19
Ethylbenzene			<0.018		ug/g		0.018	07-NOV-19
n-Hexane			<0.050		ug/g		0.05	07-NOV-19
Methylene Chloride			<0.050		ug/g		0.05	07-NOV-19
MTBE			<0.050		ug/g		0.05	07-NOV-19
m+p-Xylenes			<0.030		ug/g		0.03	07-NOV-19
Methyl Ethyl Ketone			<0.50		ug/g		0.5	07-NOV-19
Methyl Isobutyl Ketone			<0.50		ug/g		0.5	07-NOV-19
o-Xylene			<0.020		ug/g		0.02	07-NOV-19
Styrene			<0.050		ug/g		0.05	07-NOV-19
Tetrachloroethylene			<0.050		ug/g		0.05	07-NOV-19
Toluene			<0.080		ug/g		0.08	07-NOV-19
trans-1,2-Dichloroethyle	ene		<0.050		ug/g		0.05	07-NOV-19
trans-1,3-Dichloroprope	ne		<0.030		ug/g		0.03	07-NOV-19



Workorder: L2375311 Report Date: 07-NOV-19 Page 11 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT Soil							
Batch R4902278 WG3211513-1 MB							
Trichloroethylene		<0.010		ug/g		0.01	07-NOV-19
Trichlorofluoromethane		< 0.050		ug/g		0.05	07-NOV-19
Vinyl chloride		<0.020		ug/g		0.02	07-NOV-19
Surrogate: 1,4-Difluorobenzene		113.7		%		50-140	07-NOV-19
Surrogate: 4-Bromofluorobenzene		94.3		%		50-140	07-NOV-19
WG3211513-5 MS 1,1,1,2-Tetrachloroethane	L2375311-2	105.8		%		50-140	07-NOV-19
1,1,2,2-Tetrachloroethane		116.1		%		50-140	07-NOV-19
1,1,1-Trichloroethane		107.3		%		50-140	07-NOV-19
1,1,2-Trichloroethane		109.3		%		50-140	07-NOV-19
1,1-Dichloroethane		112.3		%		50-140	07-NOV-19
1,1-Dichloroethylene		103.7		%		50-140	07-NOV-19
1,2-Dibromoethane		109.3		%		50-140	07-NOV-19
1,2-Dichlorobenzene		113.8		%		50-140	07-NOV-19
1,2-Dichloroethane		108.5		%		50-140	07-NOV-19
1,2-Dichloropropane		111.0		%		50-140	07-NOV-19
1,3-Dichlorobenzene		112.0		%		50-140	07-NOV-19
1,4-Dichlorobenzene		114.0		%		50-140	07-NOV-19
Acetone		119.8		%		50-140	07-NOV-19
Benzene		113.2		%		50-140	07-NOV-19
Bromodichloromethane		108.3		%		50-140	07-NOV-19
Bromoform		109.5		%		50-140	07-NOV-19
Bromomethane		99.5		%		50-140	07-NOV-19
Carbon tetrachloride		108.0		%		50-140	07-NOV-19
Chlorobenzene		108.3		%		50-140	07-NOV-19
Chloroform		111.0		%		50-140	07-NOV-19
cis-1,2-Dichloroethylene		108.5		%		50-140	07-NOV-19
cis-1,3-Dichloropropene		114.8		%		50-140	07-NOV-19
Dibromochloromethane		106.3		%		50-140	07-NOV-19
Dichlorodifluoromethane		70.2		%		50-140	07-NOV-19
Ethylbenzene		106.9		%		50-140	07-NOV-19
n-Hexane		102.4		%		50-140	07-NOV-19
Methylene Chloride		111.2		%		50-140	07-NOV-19
MTBE		108.3		%		50-140	07-NOV-19



Workorder: L2375311 Report Date: 07-NOV-19 Page 12 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R490227	8							
WG3211513-5 MS		L2375311-2						
m+p-Xylenes			105.7		%		50-140	07-NOV-19
Methyl Ethyl Ketone			108.6		%		50-140	07-NOV-19
Methyl Isobutyl Ketone	•		110.2		%		50-140	07-NOV-19
o-Xylene			104.9		%		50-140	07-NOV-19
Styrene			101.8		%		50-140	07-NOV-19
Tetrachloroethylene			111.7		%		50-140	07-NOV-19
Toluene			110.0		%		50-140	07-NOV-19
trans-1,2-Dichloroethy	lene		110.8		%		50-140	07-NOV-19
trans-1,3-Dichloroprop	ene		114.1		%		50-140	07-NOV-19
Trichloroethylene			104.9		%		50-140	07-NOV-19
Trichlorofluoromethan	е		103.7		%		50-140	07-NOV-19
Vinyl chloride			109.9		%		50-140	07-NOV-19

Workorder: L2375311 Report Date: 07-NOV-19

Client: TERRAPROBE-BRAMPTON Page 13 of 13

11 Indell Lane

Brampton ON L6T 3Y3 Kossay Makhzoumi

Legend:

Contact:

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.

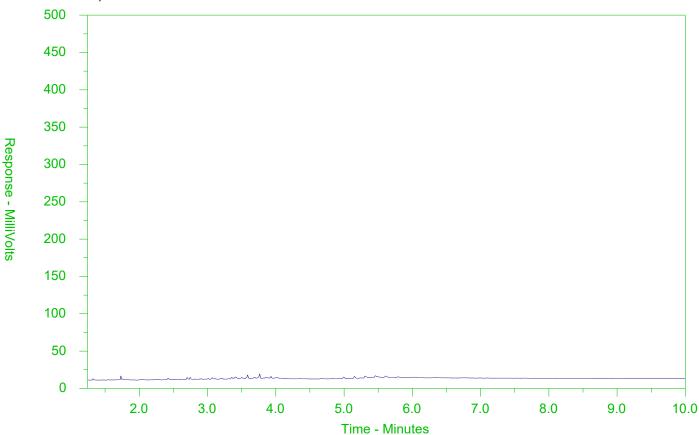
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined data quality objectives to provide 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: L2375311-2 Client Sample ID: BH5-SS2



← -F2-	→-	_F3 → F4-	→	
nC10	nC16	nC34	nC50	
174°C	287°C	481°C	575°C	
346°F	549°F	898°F	1067°F	
Gasolin	ie →	← Mo	tor 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.

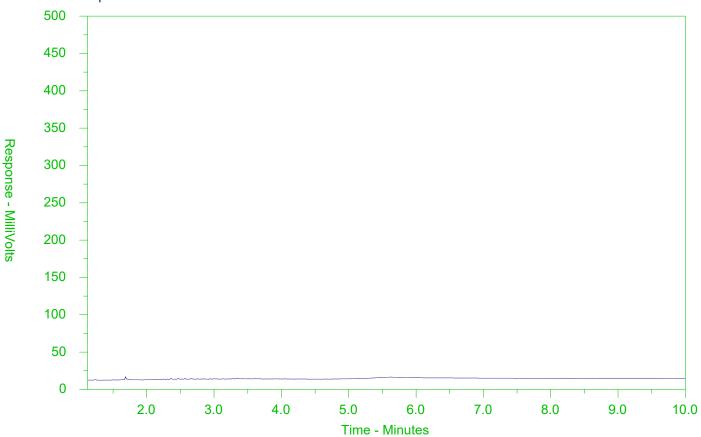
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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: L2375311-4 Client Sample ID: BH5-SS7



← -F2-	→-	_F3 → F4-	→	
nC10	nC16	nC34	nC50	
174°C	287°C	481°C	575°C	
346°F	549°F	898°F	1067°F	
Gasolin	ie →	← Mo	tor 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 CIRCIONALENDER

Chain of Custody (COC) / Analytical Request Form



L2375311-COFC

COC Number: 15 -

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Company:	Contact and company name below will appe				/ Distribution		1					irm all E							
	Terraprobe		Select Report F	<u></u>	☑ EXCEL □ E				gular										charges apply
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none.	Company address below will appear on the final re	eport	Select Distributi		MAIL		E 2	2	day [P	2]						-	noliday		
treet:	11 Indell Lane			kmakhzoumi@terr			<u>ب</u>	Date as	nd Time	Require	d for a	# E&P 1	ATs:						
ity/Province:	Brampton		Email 2				For tes	ts that ca	ın not be	e perform	ed acco	rding to	the ser	rice lev	el selec	cted, yo	u will be	contacted.	
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	Copy of Invoice with Report YES Terraprobe			lrossi@terraprobe			┢										\neg		7
ompany:	Lorena Rossi		Email 2				1										ļ	Į	ي ا
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	rk Order # (lab use only)	75311	ALS Contact:	ES	Sampler:		and Inorganics		Forming Metals						ticides				
ALS Sample #	Sample Identification (This description will a			Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	Metals a	Metals	Hyride F	ည္	SAR	PAH	voc	PHC	OC Pesticides	PCBs			
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Drinkin	g Water (DW) Samples ¹ (client use)	Special Instructions / Sp			cking on the drop	-down list below	<u></u>			SAMI	PLE C	ONDI			vation			e only)	lo 🔲
re samples tak	ken from a Regulated DW System?	1100		ctronic COC only)				en 'acks ing Initi	ialed	المديهها	ubes	À					Yes	_	_
_	r human drinking water use?	MECA	73	P101			<u> </u>	-		OLER TI	EMPER	ATURE	s℃		L	FINA	T COOI	ER TEMPI	ERATURES ℃
· ·	_	, , -1		' (6	$\overline{}$							3	.7			
LJ	YES NO SHIPMENT RELEASE (client use)		T	INITIAL SHIPME	NT DECEDION	(lab was sabs)	LV/	<u> </u>	τ —	<u> </u>		INIAL S	LUIDA	AENIT	PEC	FPTI()N (lat	use only	,
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TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 13-NOV-19

Report Date: 20-NOV-19 07:23 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2381679

Project P.O. #: NOT SUBMITTED

Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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L2381679 CONT'D....

Job Reference: 1-19-0603-42

PAGE 2 of 4

20-NOV-19 07:23 (MT)

Summary of Guideline Exceedances

Guideline
ALS ID Client ID Grouping Analyte Result Guideline Limit Unit

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Soil-Res/Park/Inst. Property Use (Coarse)

(No parameter exceedances)

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Soil-Res/Park/Inst. Property Use (Fine)

(No parameter exceedances)



L2381679 CONT'D....

Job Reference: 1-19-0603-42

PAGE 3 of 4

20-NOV-19 07:23 (MT)

Metals - SOIL

inietais - GOIL		Sample	Lab ID e Date iple ID	L2381679-1 12-NOV-19 BH5-SS6
Analyte	Unit	Guide #1	Limits #2	
Antimony (Sb)	ug/g	7.5	7.5	<1.0
Arsenic (As)	ug/g	18	18	<1.0
Barium (Ba)	ug/g	390	390	14.0
Beryllium (Be)	ug/g	4	5	<0.50
Boron (B)	ug/g	120	120	<5.0
Cadmium (Cd)	ug/g	1.2	1.2	<0.50
Chromium (Cr)	ug/g	160	160	5.3
Cobalt (Co)	ug/g	22	22	1.5
Copper (Cu)	ug/g	140	180	3.1
Lead (Pb)	ug/g	120	120	1.9
Molybdenum (Mo)	ug/g	6.9	6.9	<1.0
Nickel (Ni)	ug/g	100	130	2.8
Selenium (Se)	ug/g	2.4	2.4	<1.0
Silver (Ag)	ug/g	20	25	<0.20
Thallium (TI)	ug/g	1	1	<0.50
Uranium (U)	ug/g	23	23	<1.0
Vanadium (V)	ug/g	86	86	11.1
Zinc (Zn)	ug/g	340	340	9.8

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

L2381679 CONT'D....
Job Reference: 1-19-0603-42
PAGE 4 of 4
20-NOV-19 07:23 (MT)

Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

MET-200.2-CCMS-WT Soil Metals in Soil by CRC ICPMS EPA 200.2/6020A (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 AI, Ba, Be, Cr, S, Sr, Ti, 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).

**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

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.



Workorder: L2381679 Report Date: 20-NOV-19 Page 1 of 4

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	Soil							
Batch R4914307								
WG3219263-2 CRM		WT-CANMET						
Antimony (Sb)			103.3		%		70-130	18-NOV-19
Arsenic (As)			97.3		%		70-130	18-NOV-19
Barium (Ba)			96.5		%		70-130	18-NOV-19
Beryllium (Be)			89.7		%		70-130	18-NOV-19
Boron (B)			3.2		mg/kg		0-8.6	18-NOV-19
Cadmium (Cd)			92.0		%		70-130	18-NOV-19
Chromium (Cr)			97.3		%		70-130	18-NOV-19
Cobalt (Co)			96.0		%		70-130	18-NOV-19
Copper (Cu)			96.7		%		70-130	18-NOV-19
Lead (Pb)			98.5		%		70-130	18-NOV-19
Molybdenum (Mo)			95.2		%		70-130	18-NOV-19
Nickel (Ni)			98.1		%		70-130	18-NOV-19
Selenium (Se)			0.34		mg/kg		0.15-0.55	18-NOV-19
Silver (Ag)			0.26		mg/kg		0.16-0.36	18-NOV-19
Thallium (TI)			98.6		%		70-130	18-NOV-19
Uranium (U)			97.9		%		70-130	18-NOV-19
Vanadium (V)			97.4		%		70-130	18-NOV-19
Zinc (Zn)			91.2		%		70-130	18-NOV-19
WG3219263-6 DUP		WG3219263-		000 114		N 1/A	22	
Antimony (Sb)		<0.10	<0.10	RPD-NA	ug/g	N/A	30	18-NOV-19
Arsenic (As)		2.14	2.08		ug/g	2.7	30	18-NOV-19
Barium (Ba)		67.2	64.4		ug/g	4.3	40	18-NOV-19
Beryllium (Be)		0.36	0.35		ug/g	2.0	30	18-NOV-19
Boron (B)		5.9	5.8		ug/g	3.1	30	18-NOV-19
Cadmium (Cd)		0.065	0.055		ug/g	17	30	18-NOV-19
Chromium (Cr)		14.6	13.8		ug/g	6.2	30	18-NOV-19
Cobalt (Co)		5.23	5.08		ug/g	2.8	30	18-NOV-19
Copper (Cu)		9.82	9.58		ug/g	2.5	30	18-NOV-19
Lead (Pb)		4.55	4.44		ug/g	2.5	40	18-NOV-19
Molybdenum (Mo)		0.19	0.19		ug/g	0.9	40	18-NOV-19
Nickel (Ni)		10.2	10.1		ug/g	1.8	30	18-NOV-19
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	18-NOV-19
Silver (Ag)		<0.10	< 0.10	RPD-NA	ug/g	N/A	40	18-NOV-19



Workorder: L2381679 Report Date: 20-NOV-19 Page 2 of 4

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test		Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-	WT	Soil							
Batch R4	914307								
WG3219263-6 Thallium (TI)	DUP		WG3219263-5 0.077	0.075		ug/g	2.7	30	18-NOV-19
Uranium (U)			0.435	0.408		ug/g	6.5	30	18-NOV-19
Vanadium (V)			25.9	25.3		ug/g	2.4	30	18-NOV-19
Zinc (Zn)			21.9	21.5		ug/g	1.6	30	18-NOV-19
WG3219263-4	LCS								
Antimony (Sb)				105.9		%		80-120	18-NOV-19
Arsenic (As)				96.1		%		80-120	18-NOV-19
Barium (Ba)				98.5		%		80-120	18-NOV-19
Beryllium (Be)				93.1		%		80-120	18-NOV-19
Boron (B)				89.8		%		80-120	18-NOV-19
Cadmium (Cd)				94.1		%		80-120	18-NOV-19
Chromium (Cr)				96.0		%		80-120	18-NOV-19
Cobalt (Co)				95.3		%		80-120	18-NOV-19
Copper (Cu)				93.9		%		80-120	18-NOV-19
Lead (Pb)				99.0		%		80-120	18-NOV-19
Molybdenum (M	lo)			100.6		%		80-120	18-NOV-19
Nickel (Ni)				95.0		%		80-120	18-NOV-19
Selenium (Se)				98.8		%		80-120	18-NOV-19
Silver (Ag)				101.4		%		80-120	18-NOV-19
Thallium (TI)				98.5		%		80-120	18-NOV-19
Uranium (U)				100.0		%		80-120	18-NOV-19
Vanadium (V)				98.3		%		80-120	18-NOV-19
Zinc (Zn)				90.1		%		80-120	18-NOV-19
WG3219263-1 Antimony (Sb)	MB			<0.10		mg/kg		0.1	18-NOV-19
Arsenic (As)				<0.10		mg/kg		0.1	18-NOV-19
Barium (Ba)				<0.50		mg/kg		0.5	18-NOV-19
Beryllium (Be)				<0.10		mg/kg		0.1	18-NOV-19
Boron (B)				<5.0		mg/kg		5	18-NOV-19
Cadmium (Cd)				<0.020		mg/kg		0.02	18-NOV-19
Chromium (Cr)				<0.50		mg/kg		0.5	18-NOV-19
Cobalt (Co)				<0.10		mg/kg		0.1	18-NOV-19
Copper (Cu)				<0.50		mg/kg		0.5	18-NOV-19
Lead (Pb)				<0.50		mg/kg		0.5	18-NOV-19



Workorder: L2381679 Report Date: 20-NOV-19 Page 3 of 4

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	Soil							
Batch R4914307 WG3219263-1 MB								
Molybdenum (Mo)			<0.10		mg/kg		0.1	18-NOV-19
Nickel (Ni)			<0.50		mg/kg		0.5	18-NOV-19
Selenium (Se)			<0.20		mg/kg		0.2	18-NOV-19
Silver (Ag)			<0.10		mg/kg		0.1	18-NOV-19
Thallium (TI)			< 0.050		mg/kg		0.05	18-NOV-19
Uranium (U)			< 0.050		mg/kg		0.05	18-NOV-19
Vanadium (V)			<0.20		mg/kg		0.2	18-NOV-19
Zinc (Zn)			<2.0		mg/kg		2	18-NOV-19

Workorder: L2381679 Report Date: 20-NOV-19

Client: TERRAPROBE-BRAMPTON Page 4 of 4

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

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 predetermined 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

L2381679-COFC

COC Number: 15 -

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Canada Toll Free: 1 800 668 9878

	www.aisglobal.com						_															
Report To	Contact and compa	any name below will a	ppear on the final repo	rt		Report Format	/ Distribution		Select	Service l	evel Be	low - Plea	ase conf	irm all E	&P TAT	s with y	our AN	l - surci	harges v	vill apply		
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Contact:	Kossay Makhzoumi				Quality Control	(QC) Report with Re	eport 🗹 YES	□ NO	> ê	4	day [F	4]			Ş	1	Busi	ness	day [E	[1]		
Phone:	905-796-2650				☑ Compare Resu	lts to Criteria on Report	provide details belo	w if box checked	S 8	3	day [F	2]			EMERGENC	8	same	Day,	Week	end o	r	
	Company address below	will appear on the fir	al report		Select Distributi	on: 🗹 EMAIL	MAIL [FAX	(B)	2	day [F	2]			BNB		Statu	itory t	holida	y [E0]		
Street:	11 Indell Lane				Email 1 or Fax	kmakhzoumi@tem	aprobe.ca			Date a	nd Time	Requir	ed for a	II E&P .	TATs:							
City/Province:	Brampton				Email 2				For tes	ts that c	n not b	в репоп	ned acco	rding to	the ser	vice lev	rei sele	cted, yo	u will b	e contac	ted.	
Postal Code:	L6T 3Y3				Email 3										\naly:	sis R	eques	st				
Invoice To	Same as Report To	☐ YES	IJ NO			Invoice Di	stribution			Ind	icate Fi	tered (F), Prese	rved (P)	or Filte	red an	d Prese	erved (F	P) bel	ow		
	Copy of Invoice with Re	eport 🗌 YES	✓ NO		Select Invoice I	Distribution: 🕡 EM	MAIL MAIL	FAX									Ш					
Company:	Terraprobe				Email 1 or Fax	lrossi@terraprobe.	ca										\Box					
Contact:	Lorena Rossi				Email 2]	ļ											- 1	φ
	Project	Information			Oi	l and Gas Require	d Fields (client	use)	1													i.
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Job #:	1-19-0603-42				Major/Minor Code:		Routing Code:		1	İ												Č
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LSD:					Location:				Janic		Meta									ĺ		Number of Containers
ALS Lab Wor	rk Order# (lab use on	m (1)	1679 /		ALS Contact:		Sampler:		and Inorganics		Forming Metals						OC Pesticides					-
ALS Sample #	Sai	mple Identificati	on and/or Coordi	nates	•	Date	Time	T	detals a	35	de F			_	ا ا		Pest	မ္တ				
(lab use only)	(Т	his description w	il appear on the re	port)		(dd-mmm-yy)	(hh:mm)	Sample Type	Met.	Metals	Hyride	EC	SAR	PAH	Voc	PHC	8	PCBs				
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			Special Instruc	tions / Sr	acify Criteria to	add on report by clic	king on the drop	down list below		<u>. </u>		SAM	PLE C	ONDE	TION A	AS R	ECET	VED (lab us	e only	$\overline{}$	
Drinking	Water (DW) Samples ¹	(client use)	opeciai ilistruc	uona, op		etronic COC only)	king on the drop	down nat below	Froze	en							vatior		Yes	_	No	
·-	en from a Regulated DW	System?		_	11.				Ice P	acks	ated		Cubes	K,	Cust	ody s	eal int	tact	Yes		No	
Are samples for I	human drinking water us	e?	1		MECP	T3 24	21			-		OLER T	EMPER	ATURE	s °C			FINA	r coo	LER TE	MPERA"	TURES ℃
	ES NO				•		•		5	\mathfrak{Q}							6	· C)			
	SHIPMENT RE	LEASE (client us	e)			INITIAL SHIPMEN	IT RECEPTION	(lab use only)					FI	NAL S	HIPM	ENT	RECI	EPTIC	ON (lai	use o	nly)	
Released by: Ko	ossay Makhzoumi	Date:		Time:	Received by:		Date:	13/19	(M	Rece	ived b	Y L F	4			Date /	<u>"</u> //-	13	>- JC	7	1409



TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 31-OCT-19

Report Date: 07-NOV-19 14:33 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2375305
Project P.O. #: NOT SUBMITTED
Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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L2375305 CONT'D....

Job Reference: 1-19-0603-42

PAGE 2 of 12

07-NOV-19 14:33 (MT)

Summary of Guideline Exceedances

uideline						
ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit
ntario Reg	julation 153/04 - April 15	, 2011 Standards - T3-Soil-Res/Pa	rk/Inst. Property Use (Coarse)			
.2375305-1	BH6-SS1	Metals	Lead (Pb)	139	120	ug/g
		Polycyclic Aromatic	Benzo(a)anthracene	0.703	0.5	ug/g
		Hydrocarbons	Benzo(a)pyrene	0.583	0.3	ug/g
			Dibenzo(ah)anthracene	0.101	0.1	ug/g
			Fluoranthene	1.43	0.69	ug/g
ntario Reg	julation 153/04 - April 15	, 2011 Standards - T3-Soil-Res/Pa	rk/Inst. Property Use (Fine)			
.2375305-1	BH6-SS1	Metals	Lead (Pb)	139	120	ug/g
		Polycyclic Aromatic	Benzo(a)anthracene	0.703	0.63	ug/g
		Hydrocarbons	Benzo(a)pyrene	0.583	0.3	ug/g
			Dibenzo(ah)anthracene	0.101	0.1	ug/g
			Fluoranthene	1.43	0.69	ug/g



L2375305 CONT'D....

Job Reference: 1-19-0603-42

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Physical Tests - SOIL

,							
			Lab ID	L2375305-1	L2375305-2	L2375305-3	L2375305-4
		Sampl	le Date	29-OCT-19	29-OCT-19	29-OCT-19	29-OCT-19
		San	nple ID	BH6-SS1	BH6-SS2	BH6-SS3	BH6-SS7
		Guide	Limits				
Analyte	Unit	#1	#2				
% Moisture	%	_		9.49	12.2	7.63	15.4

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



L2375305 CONT'D....

Job Reference: 1-19-0603-42

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Metals - SOIL

		Sample	Lab ID e Date ple ID	L2375305-1 29-OCT-19 BH6-SS1	L2375305-3 29-OCT-19 BH6-SS3
Analyte	Unit	Guide #1	Limits #2		
Antimony (Sb)	ug/g	7.5	7.5	1.4	<1.0
Arsenic (As)	ug/g	18	18	3.3	2.5
Barium (Ba)	ug/g	390	390	73.1	50.8
Beryllium (Be)	ug/g	4	5	<0.50	<0.50
Boron (B)	ug/g	120	120	<5.0	<5.0
Cadmium (Cd)	ug/g	1.2	1.2	0.50	<0.50
Chromium (Cr)	ug/g	160	160	11.0	10.8
Cobalt (Co)	ug/g	22	22	2.8	3.5
Copper (Cu)	ug/g	140	180	9.8	6.6
Lead (Pb)	ug/g	120	120	139	4.1
Molybdenum (Mo)	ug/g	6.9	6.9	<1.0	<1.0
Nickel (Ni)	ug/g	100	130	6.2	7.0
Selenium (Se)	ug/g	2.4	2.4	<1.0	<1.0
Silver (Ag)	ug/g	20	25	<0.20	<0.20
Thallium (TI)	ug/g	1	1	<0.50	<0.50
Uranium (U)	ug/g	23	23	<1.0	<1.0
Vanadium (V)	ug/g	86	86	17.5	19.0
Zinc (Zn)	ug/g	340	340	107	20.5

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



L2375305 CONT'D....

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Volatile Organic Compounds - SOIL

Voiatile Organic Compound	15 - 301L				
			₋ab ID	L2375305-2	L2375305-4
		Sample		29-OCT-19	29-OCT-19
		Sam	ple ID	BH6-SS2	BH6-SS7
		0			
Analyta	Unit	Guide #1	#2		
Analyte	Onit	<i>#</i> ·			
Acetone	ug/g	16	28	<0.50	<0.50
Benzene	ug/g	0.21	0.17	<0.0068	<0.0068
Bromodichloromethane	ug/g	13	13	<0.050	< 0.050
Bromoform	ug/g	0.27	0.26	<0.050	< 0.050
Bromomethane	ug/g	0.05	0.05	<0.050	< 0.050
Carbon tetrachloride	ug/g	0.05	0.12	<0.050	< 0.050
Chlorobenzene	ug/g	2.4	2.7	<0.050	< 0.050
Dibromochloromethane	ug/g	9.4	9.4	<0.050	< 0.050
Chloroform	ug/g	0.05	0.18	<0.050	< 0.050
1,2-Dibromoethane	ug/g	0.05	0.05	<0.050	< 0.050
1,2-Dichlorobenzene	ug/g	3.4	4.3	<0.050	< 0.050
1,3-Dichlorobenzene	ug/g	4.8	6	<0.050	<0.050
1,4-Dichlorobenzene	ug/g	0.083	0.097	<0.050	< 0.050
Dichlorodifluoromethane	ug/g	16	25	<0.050	< 0.050
1,1-Dichloroethane	ug/g	3.5	11	<0.050	< 0.050
1,2-Dichloroethane	ug/g	0.05	0.05	<0.050	< 0.050
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.050	< 0.050
cis-1,2-Dichloroethylene	ug/g	3.4	30	<0.050	< 0.050
trans-1,2-Dichloroethylene	ug/g	0.084	0.75	<0.050	< 0.050
Methylene Chloride	ug/g	0.1	0.96	<0.050	< 0.050
1,2-Dichloropropane	ug/g	0.05	0.085	< 0.050	< 0.050
cis-1,3-Dichloropropene	ug/g	-	-	<0.030	<0.030
trans-1,3-Dichloropropene	ug/g	-	-	<0.030	< 0.030
1,3-Dichloropropene (cis & trans)	ug/g	0.05	0.083	<0.042	<0.042
Ethylbenzene	ug/g	2	15	<0.018	<0.018
n-Hexane	ug/g	2.8	34	<0.050	<0.050

ug/g

ug/g

ug/g

ug/g

44

4.3

1.4

2.2

< 0.50

< 0.50

< 0.050

< 0.050

< 0.50

< 0.50

< 0.050

< 0.050

16

1.7

0.75

0.7

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

Methyl Ethyl Ketone

MTBE

Styrene

Methyl Isobutyl Ketone



L2375305 CONT'D....

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Volatile Organic Compounds - SOIL

		I	Lab ID	L2375305-2	L2375305-4
		Sample	e Date	29-OCT-19	29-OCT-19
		Sam	ple ID	BH6-SS2	BH6-SS7
		Guide	l imits		
Analyte	Unit	#1	#2		
1,1,1,2-Tetrachloroethane	ug/g	0.058	0.05	<0.050	<0.050
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.050	<0.050
Tetrachloroethylene	ug/g	0.28	2.3	<0.050	<0.050
Toluene	ug/g	2.3	6	<0.080	<0.080
1,1,1-Trichloroethane	ug/g	0.38	3.4	<0.050	<0.050
1,1,2-Trichloroethane	ug/g	0.05	0.05	<0.050	<0.050
Trichloroethylene	ug/g	0.061	0.52	0.014	0.010
Trichlorofluoromethane	ug/g	4	5.8	<0.050	<0.050
Vinyl chloride	ug/g	0.02	0.022	<0.020	<0.020
o-Xylene	ug/g	-	-	<0.020	<0.020
m+p-Xylenes	ug/g	-	-	<0.030	<0.030
Xylenes (Total)	ug/g	3.1	25	<0.050	<0.050
Surrogate: 4-Bromofluorobenzene	%	-	-	88.8	88.3
Surrogate: 1,4-Difluorobenzene	%	-	-	108.4	109.3

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



L2375305 CONT'D....

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Hydrocarbons - SOIL

i iyai ocai bolis - ool					
		L	_ab ID	L2375305-2	L2375305-4
		Sample	e Date	29-OCT-19	29-OCT-19
		Sam	ple ID	BH6-SS2	BH6-SS7
Analyte	Unit	Guide #1	Limits #2		
F1 (C6-C10)	ug/g	55	65	<5.0	<5.0
F1-BTEX	ug/g	55	65	<5.0	<5.0
F2 (C10-C16)	ug/g	98	150	<10	<10
F3 (C16-C34)	ug/g	300	1300	<50	<50
F4 (C34-C50)	ug/g	2800	5600	<50	<50
Total Hydrocarbons (C6-C50)	ug/g	-	-	<72	<72
Chrom. to baseline at nC50		-	-	YES	YES
Surrogate: 2-Bromobenzotrifluoride	%	-	-	102.6	83.6
Surrogate: 3,4-Dichlorotoluene	%	-	-	91.0	84.9

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



L2375305 CONT'D....

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Polycyclic Aromatic Hydrocarbons - SOIL

			_ab ID	L2375305-1	L2375305-3
		Sample		29-OCT-19	29-OCT-19
		Sam	ple ID	BH6-SS1	BH6-SS3
Analyte	Unit	Guide #1	Limits #2		
Acenaphthene	ug/g	7.9	58	0.081	<0.050
Acenaphthylene	ug/g	0.15	0.17	0.070	<0.050
Anthracene	ug/g	0.67	0.74	0.263	<0.050
Benzo(a)anthracene	ug/g	0.5	0.63	0.703	<0.050
Benzo(a)pyrene	ug/g	0.3	0.3	0.583	<0.050
Benzo(b)fluoranthene	ug/g	0.78	0.78	0.683	<0.050
Benzo(g,h,i)perylene	ug/g	6.6	7.8	0.350	<0.050
Benzo(k)fluoranthene	ug/g	0.78	0.78	0.280	<0.050
Chrysene	ug/g	7	7.8	0.712	<0.050
Dibenzo(ah)anthracene	ug/g	0.1	0.1	0.101	<0.050
Fluoranthene	ug/g	0.69	0.69	1.43	<0.050
Fluorene	ug/g	62	69	0.095	<0.050
Indeno(1,2,3-cd)pyrene	ug/g	0.38	0.48	0.351	<0.050
1+2-Methylnaphthalenes	ug/g	0.99	3.4	<0.042	<0.042
1-Methylnaphthalene	ug/g	0.99	3.4	<0.030	<0.030
2-Methylnaphthalene	ug/g	0.99	3.4	<0.030	<0.030
Naphthalene	ug/g	0.6	0.75	0.028	<0.013
Phenanthrene	ug/g	6.2	7.8	1.06	<0.046
Pyrene	ug/g	78	78	1.18	<0.050
Surrogate: 2-Fluorobiphenyl	%	-	-	88.1	89.7
Surrogate: p-Terphenyl d14	%	-	-	77.2	80.0

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



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Polychlorinated Biphenyls - SOIL

	Sample	ab ID Date ple ID	L2375305-1 29-OCT-19 BH6-SS1	L2375305-3 29-OCT-19 BH6-SS3
	•			
	Sam	ple ID	BH6-SS1	BH6-SS3
				2
Unit	Guide #1	Limits #2		
ug/g	-	-	<0.010	<0.010
ug/g	-	-	<0.010	<0.010
ug/g	-	-	<0.010	<0.010
ug/g	-	-	<0.010	<0.010
ug/g	0.35	0.35	<0.020	<0.020
	ug/g ug/g ug/g ug/g	Unit #1 ug/g - ug/g - ug/g - ug/g - ug/g -	ug/g ug/g ug/g	Unit #1 #2 ug/g - - <0.010

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

L2375305 CONT'D Job Reference: 1-19-0603-42 PAGE 10 of 12 07-NOV-19 14:33 (MT)

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference**
F1-F4-511-CALC-WT	Soil	F1-F4 Hydrocarbon Calculated Parameters	CCME CWS-PHC, Pub #1310, Dec 2001-S

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

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

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-sq is analyzed gravimetrically.

- 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-sq: Gravimetric Heavy Hydrocarbons (F4G) after silica gel treatment.
- 6. Where both F4 (C34-C50) and F4G-sq are reported for a sample, the larger of the two values is used for comparison against the relevant CCME guideline for F4.
- 7. F4G-sq 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 200.2/6020A (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

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Job Reference: 1-19-0603-42
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Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

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 AI, Ba, Be, Cr, S, Sr, Ti, 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 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).

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

WT ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

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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.



Workorder: L2375305 Report Date: 07-NOV-19 Page 1 of 15

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test		Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT		Soil							
	901631								
WG3212302-4 F1 (C6-C10)	DUP		WG3212302-3 <5.0	<5.0	RPD-NA	ug/g	N/A	30	07-NOV-19
WG3212302-2 F1 (C6-C10)	LCS			110.3		%		80-120	07-NOV-19
WG3212302-1 F1 (C6-C10)	MB			<5.0		ug/g		5	07-NOV-19
Surrogate: 3,4-D	Dichloroto	oluene		86.3		%		60-140	07-NOV-19
WG3212302-6 F1 (C6-C10)	MS		L2375703-10	96.2		%		60-140	07-NOV-19
F2-F4-511-WT		Soil							
Batch R4	899263								
WG3209407-3	DUP		WG3209407-5 <10	<10		ug/g	NI/A	20	OF NOV 40
F2 (C10-C16) F3 (C16-C34)			<10 51	<10 <50	RPD-NA RPD-NA	ug/g ug/g	N/A N/A	30 30	05-NOV-19 05-NOV-19
F4 (C34-C50)			92	<50 <50	RPD-NA RPD-NA	ug/g ug/g	N/A N/A	30	05-NOV-19 05-NOV-19
WG3209407-2	LCS		J <u>2</u>		KFD-INA		IN/A		
F2 (C10-C16)				114.3		%		80-120	05-NOV-19
F3 (C16-C34)				112.9		%		80-120	05-NOV-19
F4 (C34-C50)				114.6		%		80-120	05-NOV-19
WG3209407-1 F2 (C10-C16)	MB			<10		ug/g		10	05-NOV-19
F3 (C16-C34)				<50		ug/g		50	05-NOV-19
F4 (C34-C50)				<50		ug/g		50	05-NOV-19
Surrogate: 2-Bro	omobenz	otrifluoride		79.6		%		60-140	05-NOV-19
WG3209407-4	MS		WG3209407-5						
F2 (C10-C16)				134.5		%		60-140	05-NOV-19
F3 (C16-C34)				120.8		%		60-140	05-NOV-19
F4 (C34-C50)				109.5		%		60-140	05-NOV-19
MET-200.2-CCMS-\	WT	Soil							
	898914		WT 04	.					
WG3210336-2 Antimony (Sb)	CRM		WT-CANMET-	TILL2 101.6		%		70-130	05-NOV-19
Arsenic (As)				97.5		%		70-130	05-NOV-19
Barium (Ba)				94.8		%		70-130	05-NOV-19
Beryllium (Be)				87.3		%		70-130	05-NOV-19
Boron (B)				3.0		mg/kg		0-8.6	05-NOV-19



Workorder: L2375305 Report Date: 07-NOV-19 Page 2 of 15

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	Soil							
Batch R489891	4							
WG3210336-2 CRN]	WT-CANMET			0/			
Cadmium (Cd)			90.9		%		70-130	05-NOV-19
Chromium (Cr)			95.2		%		70-130	05-NOV-19
Cobalt (Co)			94.4		%		70-130	05-NOV-19
Copper (Cu)			94.1		%		70-130	05-NOV-19
Lead (Pb)			99.3		%		70-130	05-NOV-19
Molybdenum (Mo)			102.2		%		70-130	05-NOV-19
Nickel (Ni)			95.9		%		70-130	05-NOV-19
Selenium (Se)			0.32		mg/kg		0.15-0.55	05-NOV-19
Silver (Ag)			0.25		mg/kg		0.16-0.36	05-NOV-19
Thallium (TI)			96.3		%		70-130	05-NOV-19
Uranium (U)			97.1		%		70-130	05-NOV-19
Vanadium (V)			94.7		%		70-130	05-NOV-19
Zinc (Zn)			90.1		%		70-130	05-NOV-19
WG3210336-4 DUP Antimony (Sb)		L2375305-1 1.4	1.3		ug/g	4.2	30	05-NOV-19
Arsenic (As)		3.3	3.2		ug/g	3.3	30	05-NOV-19
Barium (Ba)		73.1	73.6		ug/g	0.6	40	05-NOV-19
Beryllium (Be)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	05-NOV-19
Boron (B)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	05-NOV-19
Cadmium (Cd)		0.50	<0.50	RPD-NA	ug/g	N/A	30	05-NOV-19
Chromium (Cr)		11.0	11.1	2	ug/g	0.6	30	05-NOV-19
Cobalt (Co)		2.8	2.7		ug/g	4.7	30	05-NOV-19
Copper (Cu)		9.8	9.4		ug/g	3.8	30	05-NOV-19
Lead (Pb)		139	138		ug/g	0.5	40	05-NOV-19
Molybdenum (Mo)		<1.0	<1.0	RPD-NA	ug/g	N/A	40	05-NOV-19
Nickel (Ni)		6.2	6.3	2	ug/g	1.3	30	05-NOV-19
Selenium (Se)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	05-NOV-19
Silver (Ag)		<0.20	<0.20	RPD-NA	ug/g	N/A	40	05-NOV-19
Thallium (TI)		<0.50	<0.50	RPD-NA	ug/g	N/A	30	05-NOV-19
Uranium (U)		<1.0	<1.0	RPD-NA	ug/g	N/A	30	05-NOV-19 05-NOV-19
Vanadium (V)		17.5	16.5	IXI D-IVA	ug/g	5.5	30	
Zinc (Zn)		107	10.5		ug/g	1.3		05-NOV-19
WG3210336-3 LCS		107	100		ag/g	1.3	30	05-NOV-19

WG3210336-3 LCS



Workorder: L2375305 Report Date: 07-NOV-19 Page 3 of 15

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Mart	Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
WG210338-3 LCS Antmony (Sb) 98.8 % 80.120 05-NOV-19 Arsenic (As) 91.2 % 80.120 05-NOV-19 Barlium (Ba) 92.7 % 80.120 05-NOV-19 Beryllium (Be) 84.2 % 80.120 05-NOV-19 Boron (B) 82.0 % 80.120 05-NOV-19 Cadmium (Cd) 88.5 % 80.120 05-NOV-19 Cadmium (Cf) 90.6 % 80.120 05-NOV-19 Crobalt (Co) 89.6 % 80.120 05-NOV-19 Copper (Cu) 87.8 % 80.120 05-NOV-19 Lead (Pb) 93.1 % 80.120 05-NOV-19 Molybdenum (Mo) 97.6 % 80.120 05-NOV-19 Nickel (N) 89.6 % 80.120 05-NOV-19 Salenium (Se) 84.3 % 80.120 05-NOV-19 Salenium (T) 92.7 % 80.120 05-NOV-19 <	MET-200.2-CCMS-WT	Soil							
Antmony (Sb) 98.8 % 80-120 05-NOV-19 Arsenic (As) 91.2 % 80-120 05-NOV-19 Barlum (Ba) 92.7 % 80-120 05-NOV-19 Beryllium (Be) 84.2 % 80-120 05-NOV-19 Boron (B) 82.0 % 80-120 05-NOV-19 Cadmium (Cd) 88.5 % 80-120 05-NOV-19 Chromium (Cr) 90.6 % 80-120 05-NOV-19 Cobalt (Co) 89.6 % 80-120 05-NOV-19 Cobalt (Co) 87.8 % 80-120 05-NOV-19 Copper (Cu) 87.8 % 80-120 05-NOV-19 Molydednum (Mo) 97.6 % 80-120 05-NOV-19 Nickel (Ni) 80.6 % 80-120 05-NOV-19 Nickel (Ni) 80.6 % 80-120 05-NOV-19 Seliver (Ag) 91.6 % 80-120 05-NOV-19 Thallium (TT) 92.7 <td< th=""><th>Batch R4898914</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></td<>	Batch R4898914								
Arsenic (As) 91.2 % 80.120 05.NOV-19 Barlum (Ba) 92.7 % 80.120 05.NOV-19 Beryllium (Be) 84.2 % 80.120 05.NOV-19 Beryllium (Be) 82.0 % 80.120 05.NOV-19 Boron (B) 82.0 % 80.120 05.NOV-19 Cadmium (Cd) 88.5 % 80.120 05.NOV-19 Chromium (Cr) 90.6 % 80.120 05.NOV-19 Choshi (Co) 89.6 % 80.120 05.NOV-19 Cobalt (Co) 87.8 % 80.120 05.NOV-19 Lead (Pb) 93.1 % 80.120 05.NOV-19 Molybdenum (Mo) 97.6 % 80.120 05.NOV-19 Nickel (Ni) 89.6 % 80.120 05.NOV-19 Salenium (Se) 84.3 % 80.120 05.NOV-19 Silver (Ag) 91.6 % 80.120 05.NOV-19 Utranium (U) 92.7 % 80.120 05.NOV-19 Utranium (V) 94.5 % 80.120 05.NOV-19 Zinc (Zn) 86.2 % 80.120 05.NOV-19 WG3210336-1 MB Antimony (Sb) <0.10 mg/kg 0.1 05.NOV-19 Barlum (Be) 9.0.10 mg/kg 0.1 05.NOV-19 Barlum (Be) 9.0.10 mg/kg 0.1 05.NOV-19 Barlum (Be) 9.0.10 mg/kg 0.1 05.NOV-19 Barlum (Be) 9.0.10 mg/kg 0.1 05.NOV-19 Codmium (Cd) 0.000 mg/kg 0.5 05.NOV-19 Codmium (Cd) 0.000 mg/kg 0.5 05.NOV-19 Codmium (Cd) 0.000 mg/kg 0.5 05.NOV-19 Codmium (Cd) 0.000 mg/kg 0.5 05.NOV-19 Codmium (Cd) 0.000 mg/kg 0.5 05.NOV-19 Lead (Pb) 0.050 mg/kg 0.5 05.NOV-19 Lead (Pb) 0.050 mg/kg 0.5 05.NOV-19 Lead (Pb) 0.050 mg/kg 0.5 05.NOV-19 Molybdenum (Mol) 0.050 mg/kg 0.5 05.NOV-19						0.4			
Barium (Ba) 92.7 % 80-120 05-NOV-19 Beryllium (Be) 84.2 % 80-120 05-NOV-19 Boron (B) 82.0 % 80-120 05-NOV-19 Cadmium (Cd) 88.5 % 80-120 05-NOV-19 Chromium (Cr) 90.6 % 80-120 05-NOV-19 Coball (Co) 89.6 % 80-120 05-NOV-19 Copper (Cu) 87.8 % 80-120 05-NOV-19 Lead (Pb) 33.1 % 80-120 05-NOV-19 Nickel (Ni) 89.6 % 80-120 05-NOV-19 Nickel (Ni) 89.6 % 80-120 05-NOV-19 Selenium (Se) 84.3 % 80-120 05-NOV-19 Silver (Ag) 91.6 % 80-120 05-NOV-19 Uranium (U) 92.7 % 80-120 05-NOV-19 Vanadium (V) 94.5 % 80-120 05-NOV-19 Viranium (V) 94.5 %									
Beryllium (Be) 84.2 % 80.120 05-NOV.19 Boron (B) 62.0 % 80.120 05-NOV.19 Cadmium (Cd) 88.5 % 80.120 05-NOV.19 Chromium (Cr) 90.6 % 80.120 05-NOV.19 Cobalt (Co) 89.6 % 80.120 05-NOV.19 Copper (Cu) 87.8 % 80.120 05-NOV.19 Lead (Pb) 93.1 % 80.120 05-NOV.19 Molybdenum (Mo) 97.6 % 80.120 05-NOV.19 Nickel (Ni) 89.6 % 80.120 05-NOV.19 Selenium (Se) 84.3 % 80.120 05-NOV.19 Selenium (Se) 84.3 % 80.120 05-NOV.19 Thallium (Tl) 92.7 % 80.120 05-NOV.19 Vanadium (U) 92.1 % 80.120 05-NOV.19 Vanadium (V) 94.5 % 80.120 05-NOV.19 Vascita (Zn) 80.1 <									
Boron (B) 82.0 % 80-120 05-NOV-19 Cadmium (Cd) 88.5 % 80-120 05-NOV-19 Chromium (Cr) 90.6 % 80-120 05-NOV-19 Cobalt (Co) 89.6 % 80-120 05-NOV-19 Copper (Cu) 87.8 % 80-120 05-NOV-19 Lead (Pb) 93.1 % 80-120 05-NOV-19 Molybdenum (Mo) 97.6 % 80-120 05-NOV-19 Nickel (Ni) 89.6 % 80-120 05-NOV-19 Nickel (Ni) 89.6 % 80-120 05-NOV-19 Silver (Ag) 91.6 % 80-120 05-NOV-19 Thallium (Tl) 92.7 % 80-120 05-NOV-19 Thallium (Tl) 92.1 % 80-120 05-NOV-19 Vanadium (V) 94.5 % 80-120 05-NOV-19 Vanadium (V) 94.5 % 80-120 05-NOV-19 Arisenic (As) <0.10									
Cadmium (Cd) 88.5 % 80-120 05-NOV-19 Chromium (Cr) 90.6 % 80-120 05-NOV-19 Cobalt (Co) 89.6 % 80-120 05-NOV-19 Copper (Cu) 87.8 % 80-120 05-NOV-19 Lead (Pb) 93.1 % 80-120 05-NOV-19 Molybdenum (Mo) 97.6 % 80-120 05-NOV-19 Nickel (Ni) 89.6 % 80-120 05-NOV-19 Selenium (Se) 84.3 % 80-120 05-NOV-19 Selenium (Se) 84.3 % 80-120 05-NOV-19 Thallium (Tl) 92.7 % 80-120 05-NOV-19 Thallium (Tl) 92.1 % 80-120 05-NOV-19 Vanadium (V) 94.5 % 80-120 05-NOV-19 Vanadium (V) 94.5 % 80-120 05-NOV-19 Arearic (Zn) 80.1 80.2 80-120 05-NOV-19 Animony (Sb) <0.1									
Chromium (Cr) 90.6 % 80-120 05-NOV-19 Cobalt (Co) 89.6 % 80-120 05-NOV-19 Copper (Cu) 87.8 % 80-120 05-NOV-19 Lead (Pb) 93.1 % 80-120 05-NOV-19 Molybdenum (Mo) 97.6 % 80-120 05-NOV-19 Nickel (Ni) 89.6 % 80-120 05-NOV-19 Selenium (Se) 84.3 % 80-120 05-NOV-19 Silver (Ag) 91.6 % 80-120 05-NOV-19 Silver (Ag) 91.6 % 80-120 05-NOV-19 Thallium (Tl) 92.7 % 80-120 05-NOV-19 Vanadium (V) 94.5 % 80-120 05-NOV-19 Zinc (Zn) 86.2 % 80-120 05-NOV-19 WG3210336-1 MB Antimony (Sb) 05-NOV-19 05-NOV-19 Arsenic (As) <0.10	, ,								
Cobalt (Co) 89.6 % 80-120 05-NOV-19 Copper (Cu) 87.8 % 80-120 05-NOV-19 Lead (Pb) 93.1 % 80-120 05-NOV-19 Molybdenum (Mo) 97.6 % 80-120 05-NOV-19 Nickel (Ni) 89.6 % 80-120 05-NOV-19 Selenium (Se) 84.3 % 80-120 05-NOV-19 Silver (Ag) 91.6 % 80-120 05-NOV-19 Thallium (TI) 92.7 % 80-120 05-NOV-19 Uranium (U) 92.1 % 80-120 05-NOV-19 Vanadium (V) 94.5 % 80-120 05-NOV-19 Zinc (Zn) 86.2 % 80-120 05-NOV-19 WG3210336-1 MB MB MB MB Antimony (Sb) <0.10 mg/kg 0.1 05-NOV-19 Arsenic (As) <0.10 mg/kg 0.1 05-NOV-19 Barrium (Ba) <0.50 mg/kg									
Copper (Cu) 87.8 % 80-120 05-NOV-19 Lead (Pb) 93.1 % 80-120 05-NOV-19 Molybdenum (Mo) 97.6 % 80-120 05-NOV-19 Nickel (Ni) 89.6 % 80-120 05-NOV-19 Selenium (Se) 84.3 % 80-120 05-NOV-19 Silver (Ag) 91.6 % 80-120 05-NOV-19 Thallium (TI) 92.7 % 80-120 05-NOV-19 Uranium (U) 92.1 % 80-120 05-NOV-19 Vanadium (V) 94.5 % 80-120 05-NOV-19 Zinc (Zn) 86.2 % 80-120 05-NOV-19 WG3210336-1 MB N 0.10 mg/kg 0.1 05-NOV-19 Arsenic (As) <0.10									
Lead (Pb) 93.1 % 80-120 05-NOV-19 Molybdenum (Mo) 97.6 % 80-120 05-NOV-19 Nickel (Ni) 89.6 % 80-120 05-NOV-19 Selenium (Se) 84.3 % 80-120 05-NOV-19 Silver (Ag) 91.6 % 80-120 05-NOV-19 Thallium (Tl) 92.7 % 80-120 05-NOV-19 Uranium (U) 94.5 % 80-120 05-NOV-19 Vanadium (V) 94.5 % 80-120 05-NOV-19 Zinc (Zn) 86.2 % 80-120 05-NOV-19 WG3210336-1 MB N 80-120 05-NOV-19 WG3210336-1 MB Antimony (Sb) <0.10								80-120	05-NOV-19
Molybdenum (Mo) 97.6 % 80-120 05-NOV-19 Nickel (Ni) 89.6 % 80-120 05-NOV-19 Selenium (Se) 84.3 % 80-120 05-NOV-19 Silver (Ag) 91.6 % 80-120 05-NOV-19 Thallium (TI) 92.7 % 80-120 05-NOV-19 Uranium (U) 92.1 % 80-120 05-NOV-19 Vanadium (V) 94.5 % 80-120 05-NOV-19 Zinc (Zn) 86.2 % 80-120 05-NOV-19 WG3210336-1 MB N 80-120 05-NOV-19 Arsenic (As) <0.10								80-120	
Nickel (Ni)								80-120	05-NOV-19
Selenium (Se) 84.3 % 80-120 05-NOV-19 Silver (Ag) 91.6 % 80-120 05-NOV-19 Thallium (TI) 92.7 % 80-120 05-NOV-19 Uranium (U) 92.1 % 80-120 05-NOV-19 Vanadium (V) 94.5 % 80-120 05-NOV-19 Zinc (Zn) 86.2 % 80-120 05-NOV-19 WG3210336-1 MB Antimony (Sb) 0.10 mg/kg 0.1 05-NOV-19 Arsenic (As) <0.10	Molybdenum (Mo)			97.6				80-120	05-NOV-19
Silver (Ag) 91.6 % 80-120 05-NOV-19 Thallium (TI) 92.7 % 80-120 05-NOV-19 Uranium (U) 92.1 % 80-120 05-NOV-19 Vanadium (V) 94.5 % 80-120 05-NOV-19 Zinc (Zn) 86.2 % 80-120 05-NOV-19 WG3210336-1 MB Antimony (Sb) <0.10				89.6				80-120	05-NOV-19
Thallium (TI) 92.7 % 80-120 05-NOV-19 Uranium (U) 92.1 % 80-120 05-NOV-19 Vanadium (V) 94.5 % 80-120 05-NOV-19 Zinc (Zn) 86.2 % 80-120 05-NOV-19 WG3210336-1 MB Section (As) 0.1 05-NOV-19 Arsenic (As) <0.10	Selenium (Se)			84.3		%		80-120	05-NOV-19
Uranium (U) 92.1 % 80-120 05-NOV-19 Vanadium (V) 94.5 % 80-120 05-NOV-19 Zinc (Zn) 86.2 % 80-120 05-NOV-19 WG3210336-1 MB MB Value of the company o	Silver (Ag)			91.6		%		80-120	05-NOV-19
Vanadium (V) 94.5 % 80-120 05-NOV-19 Zinc (Zn) 86.2 % 80-120 05-NOV-19 WG3210336-1 MB MB Antimony (Sb) <0.10 mg/kg 0.1 05-NOV-19 Arsenic (As) <0.10 mg/kg 0.1 05-NOV-19 Barium (Ba) <0.50 mg/kg 0.1 05-NOV-19 Beryllium (Be) <0.10 mg/kg 0.1 05-NOV-19 Boron (B) <5.0 mg/kg 0.1 05-NOV-19 Cadmium (Cd) <0.020 mg/kg 0.02 05-NOV-19 Chromium (Cr) <0.50 mg/kg 0.5 05-NOV-19 Cobalt (Co) <0.10 mg/kg 0.5 05-NOV-19 Copper (Cu) <0.50 mg/kg 0.5 05-NOV-19 Lead (Pb) <0.50 mg/kg 0.5 05-NOV-19 Molybdenum (Mo) <0.10 mg/kg 0.1 05-NOV-19 Nickel (Ni) <0.50 mg/kg 0.5 05-NOV-	Thallium (TI)			92.7		%		80-120	05-NOV-19
Zinc (Zn) 86.2 % 80-120 05-NOV-19 WG3210336-1 MB MB Contain MB AB MB AB	Uranium (U)			92.1		%		80-120	05-NOV-19
WG3210336-1 Antimony (Sb) MB Antimony (Sb) <0.10	Vanadium (V)			94.5		%		80-120	05-NOV-19
Antimony (Sb) <0.10	Zinc (Zn)			86.2		%		80-120	05-NOV-19
Arsenic (As) <0.10								0.4	
Barium (Ba) <0.50									
Beryllium (Be) <0.10									
Boron (B) <5.0									
Cadmium (Cd) <0.020									
Chromium (Cr) <0.50 mg/kg 0.5 05-NOV-19 Cobalt (Co) <0.10									
Cobalt (Co) <0.10	` ,								
Copper (Cu) <0.50									
Lead (Pb) <0.50									
Molybdenum (Mo) <0.10									
Nickel (Ni) <0.50 mg/kg 0.5 05-NOV-19 Selenium (Se) <0.20									05-NOV-19
Selenium (Se) <0.20 mg/kg 0.2 05-NOV-19 Silver (Ag) <0.10									05-NOV-19
Silver (Ag) <0.10 mg/kg 0.1 05-NOV-19									05-NOV-19
									05-NOV-19
Thallium (TI) <0.050 mg/kg 0.05 05-NOV-19						mg/kg			
	Thallium (TI)			<0.050		mg/kg		0.05	05-NOV-19



Workorder: L2375305 Report Date: 07-NOV-19 Page 4 of 15

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	Soil							
Batch R4898914								
WG3210336-1 MB Uranium (U)			<0.050		mg/kg		0.05	05-NOV-19
Vanadium (V)			<0.20		mg/kg		0.2	05-NOV-19
Zinc (Zn)			<2.0		mg/kg		2	05-NOV-19
Batch R4900589								
WG3211479-2 CRM		WT-CANMET-1						
Antimony (Sb)			97.2		%		70-130	06-NOV-19
Arsenic (As)			99.3		%		70-130	06-NOV-19
Barium (Ba)			99.9		%		70-130	06-NOV-19
Beryllium (Be)			93.4		%		70-130	06-NOV-19
Boron (B)			3.5		mg/kg		0-8.6	06-NOV-19
Cadmium (Cd)			94.8		%		70-130	06-NOV-19
Chromium (Cr)			100.3		%		70-130	06-NOV-19
Cobalt (Co)			98.9		%		70-130	06-NOV-19
Copper (Cu)			98.1		%		70-130	06-NOV-19
Lead (Pb)			96.6		%		70-130	06-NOV-19
Molybdenum (Mo)			99.8		%		70-130	06-NOV-19
Nickel (Ni)			99.4		%		70-130	06-NOV-19
Selenium (Se)			0.32		mg/kg		0.15-0.55	06-NOV-19
Silver (Ag)			0.25		mg/kg		0.16-0.36	06-NOV-19
Thallium (TI)			95.3		%		70-130	06-NOV-19
Uranium (U)			94.7		%		70-130	06-NOV-19
Vanadium (V)			99.8		%		70-130	06-NOV-19
Zinc (Zn)			94.3		%		70-130	06-NOV-19
WG3211479-6 DUP Antimony (Sb)		WG3211479-5 <0.10	<0.10	RPD-NA	ug/g	N/A	30	06-NOV-19
Arsenic (As)		1.51	1.62	11. 5 10.	ug/g	7.2	30	06-NOV-19
Barium (Ba)		42.3	39.6		ug/g	6.6	40	06-NOV-19
Beryllium (Be)		0.18	0.18		ug/g	4.0	30	06-NOV-19
Boron (B)		<5.0	<5.0	RPD-NA	ug/g	N/A	30	06-NOV-19
Cadmium (Cd)		0.082	0.075	2	ug/g	8.2	30	06-NOV-19
Chromium (Cr)		10.1	9.64		ug/g	4.8	30	06-NOV-19
Cobalt (Co)		3.69	3.62		ug/g	2.1	30	06-NOV-19
Copper (Cu)		8.57	8.47		ug/g	1.2	30	06-NOV-19
Lead (Pb)		3.62	3.74		ug/g	3.4	40	06-NOV-19
2000 (1.0)		5.02	J. 7 T		∽∌' ਝ	J. 4	1 0	00-140-19



Workorder: L2375305 Report Date: 07-NOV-19 Page 5 of 15

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	Soil							
Batch R4900589								
WG3211479-6 DUP Molybdenum (Mo)		WG3211479-5 0.38	0.37		ug/g	2.3	40	06-NOV-19
Nickel (Ni)		7.00	6.75		ug/g	3.7	30	06-NOV-19
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	06-NOV-19
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	06-NOV-19
Thallium (TI)		0.105	0.098	IN DIVA	ug/g	7.4	30	06-NOV-19
Uranium (U)		0.463	0.472		ug/g	1.9	30	06-NOV-19
Vanadium (V)		22.6	22.0		ug/g	2.6	30	06-NOV-19
Zinc (Zn)		38.5	38.1		ug/g	0.9	30	06-NOV-19
WG3211479-4 LCS		30.5	30.1		ug/g	0.9	30	00-110 V-19
Antimony (Sb)			103.9		%		80-120	06-NOV-19
Arsenic (As)			97.3		%		80-120	06-NOV-19
Barium (Ba)			98.5		%		80-120	06-NOV-19
Beryllium (Be)			98.6		%		80-120	06-NOV-19
Boron (B)			93.0		%		80-120	06-NOV-19
Cadmium (Cd)			96.0		%		80-120	06-NOV-19
Chromium (Cr)			96.3		%		80-120	06-NOV-19
Cobalt (Co)			95.1		%		80-120	06-NOV-19
Copper (Cu)			93.5		%		80-120	06-NOV-19
Lead (Pb)			97.6		%		80-120	06-NOV-19
Molybdenum (Mo)			101.5		%		80-120	06-NOV-19
Nickel (Ni)			94.0		%		80-120	06-NOV-19
Selenium (Se)			97.3		%		80-120	06-NOV-19
Silver (Ag)			17.6	RRQC	%		80-120	06-NOV-19
Thallium (TI)			97.5		%		80-120	06-NOV-19
Uranium (U)			95.9		%		80-120	06-NOV-19
Vanadium (V)			98.5		%		80-120	06-NOV-19
Zinc (Zn)			93.6		%		80-120	06-NOV-19
COMMENTS: RRQC Silver data is not effe	: Silver in LCS	s outside of ALS D	QOs due to	o issue with stand	ard. CRM values	were within acc	eptable DQO	. Reported
WG3211479-1 MB	ected.							
Antimony (Sb)	ected.		<0.10		mg/kg		0.1	06-NOV-19
, ,	ected.		<0.10 <0.10		mg/kg mg/kg		0.1 0.1	06-NOV-19 06-NOV-19
Antimony (Sb) Arsenic (As) Barium (Ba)	ected.							06-NOV-19 06-NOV-19 06-NOV-19



Qualifier

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RPD

Limit

Analyzed

Units

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Matrix

Reference

Result

Contact: Kossay Makhzoumi

Test

	IVIALITX	Reference	Result	Qualifier	Ullits	KPD	LIIIII	Analyzeu
MET-200.2-CCMS-WT	Soil							
Batch R4900589								
WG3211479-1 MB			.5.0		m a/l.a		E	
Boron (B)			<5.0		mg/kg		5	06-NOV-19
Cadmium (Cd)			<0.020 <0.50		mg/kg		0.02	06-NOV-19
Chromium (Cr)					mg/kg		0.5	06-NOV-19
Cobalt (Co)			<0.10		mg/kg		0.1	06-NOV-19
Copper (Cu)			<0.50		mg/kg		0.5	06-NOV-19
Lead (Pb)			<0.50		mg/kg		0.5	06-NOV-19
Molybdenum (Mo)			<0.10		mg/kg		0.1	06-NOV-19
Nickel (Ni)			<0.50		mg/kg		0.5	06-NOV-19
Selenium (Se)			<0.20		mg/kg		0.2	06-NOV-19
Silver (Ag)			<0.10		mg/kg		0.1	06-NOV-19
Thallium (TI)			<0.050		mg/kg		0.05	06-NOV-19
Uranium (U)			<0.050		mg/kg		0.05	06-NOV-19
Vanadium (V)			<0.20		mg/kg		0.2	06-NOV-19
Zinc (Zn)			<2.0		mg/kg		2	06-NOV-19
MOISTURE-WT	Soil							
Batch R4895778								
WG3207864-3 DUP % Moisture		L2375263-1 5.86	5.70		%	2.8	20	01-NOV-19
WG3207864-2 LCS		3.00	5.70		70	2.0	20	01-1100-19
% Moisture			101.5		%		90-110	01-NOV-19
WG3207864-1 MB								
% Moisture			<0.25		%		0.25	01-NOV-19
PAH-511-WT	Soil							
Batch R4897642								
WG3207515-3 DUP		WG3207515-5						
1-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	04-NOV-19
2-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	04-NOV-19
Acenaphthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Acenaphthylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Anthracene		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Benzo(a)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Benzo(a)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Benzo(b)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Benzo(g,h,i)perylene		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	04-NOV-19



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Soil							
Batch R4897642 WG3207515-3 DUP Benzo(k)fluoranthene		WG3207515-		DDD NA	ug/g	N1/A	40	04 NOV 40
Chrysene		<0.050 <0.050	<0.050 <0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
-		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Dibenzo(ah)anthracene		<0.050		RPD-NA	ug/g	N/A	40	04-NOV-19
Fluoranthene			<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Fluorene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Indeno(1,2,3-cd)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
Naphthalene		<0.013	<0.013	RPD-NA	ug/g	N/A	40	04-NOV-19
Phenanthrene		<0.046	<0.046	RPD-NA	ug/g	N/A	40	04-NOV-19
Pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
WG3207515-2 LCS 1-Methylnaphthalene			86.6		%		50-140	04-NOV-19
2-Methylnaphthalene			82.2		%		50-140	04-NOV-19
Acenaphthene			88.2		%		50-140	04-NOV-19
Acenaphthylene			89.7		%		50-140	04-NOV-19
Anthracene			87.6		%		50-140	04-NOV-19
Benzo(a)anthracene			88.8		%		50-140	04-NOV-19
Benzo(a)pyrene			82.1		%		50-140	04-NOV-19
Benzo(b)fluoranthene			75.3		%		50-140	04-NOV-19
Benzo(g,h,i)perylene			84.2		%		50-140	04-NOV-19
Benzo(k)fluoranthene			89.8		%		50-140	04-NOV-19
Chrysene			95.2		%		50-140	04-NOV-19
Dibenzo(ah)anthracene			87.8		%		50-140	04-NOV-19
Fluoranthene			85.4		%		50-140	04-NOV-19
Fluorene			85.9		%		50-140	04-NOV-19
Indeno(1,2,3-cd)pyrene			89.6		%		50-140	04-NOV-19
Naphthalene			84.0		%		50-140	04-NOV-19
Phenanthrene			86.8		%		50-140	04-NOV-19
Pyrene			85.3		%		50-140	04-NOV-19
WG3207515-1 MB 1-Methylnaphthalene			<0.030		ug/g		0.03	04-NOV-19
2-Methylnaphthalene			<0.030		ug/g		0.03	04-NOV-19
Acenaphthene			< 0.050		ug/g		0.05	04-NOV-19
Acenaphthylene			< 0.050		ug/g		0.05	04-NOV-19
Anthracene			<0.050		ug/g		0.05	04-NOV-19
-					0.0		-	311101 10



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Soil							
Batch R4897								
WG3207515-1 MI Benzo(a)anthracene			<0.050		ug/g		0.05	04-NOV-19
Benzo(a)pyrene			<0.050		ug/g		0.05	04-NOV-19
Benzo(b)fluoranther	ne		<0.050		ug/g		0.05	04-NOV-19
Benzo(g,h,i)perylene			<0.050		ug/g		0.05	04-NOV-19
Benzo(k)fluoranther			<0.050		ug/g		0.05	04-NOV-19
Chrysene	.0		<0.050		ug/g		0.05	04-NOV-19
Dibenzo(ah)anthrac	ene		<0.050		ug/g		0.05	04-NOV-19
Fluoranthene			<0.050		ug/g		0.05	04-NOV-19
Fluorene			<0.050		ug/g ug/g		0.05	04-NOV-19
Indeno(1,2,3-cd)pyr	ene		<0.050		ug/g ug/g		0.05	04-NOV-19
Naphthalene	0110		<0.013		ug/g		0.013	04-NOV-19
Phenanthrene			<0.046		ug/g		0.046	04-NOV-19
Pyrene			<0.050		ug/g		0.05	04-NOV-19
Surrogate: 2-Fluoro	biphenyl		95.6		~g/g %		50-140	04-NOV-19
Surrogate: p-Terphe			86.6		%		50-140	04-NOV-19
WG3207515-4 MS	•	WG3207515-5			,,		000	04-110-13
1-Methylnaphthalen			89.3		%		50-140	04-NOV-19
2-Methylnaphthalen	е		84.7		%		50-140	04-NOV-19
Acenaphthene			91.1		%		50-140	04-NOV-19
Acenaphthylene			94.0		%		50-140	04-NOV-19
Anthracene			90.1		%		50-140	04-NOV-19
Benzo(a)anthracene	e		91.0		%		50-140	04-NOV-19
Benzo(a)pyrene			84.3		%		50-140	04-NOV-19
Benzo(b)fluoranther	ne		77.7		%		50-140	04-NOV-19
Benzo(g,h,i)perylene	е		84.6		%		50-140	04-NOV-19
Benzo(k)fluoranther	ne		90.3		%		50-140	04-NOV-19
Chrysene			96.1		%		50-140	04-NOV-19
Dibenzo(ah)anthrac	ene		88.2		%		50-140	04-NOV-19
Fluoranthene			87.0		%		50-140	04-NOV-19
Fluorene			89.7		%		50-140	04-NOV-19
Indeno(1,2,3-cd)pyr	ene		92.1		%		50-140	04-NOV-19
Naphthalene			85.8		%		50-140	04-NOV-19
Phenanthrene			87.0		%		50-140	04-NOV-19
Pyrene			87.0		%		50-140	04-NOV-19



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Client: TERRAPROBE-BRAMPTON

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Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB-511-WT	Soil							
Batch R48	98984							
	DUP	WG3207515-5						
Aroclor 1242		<0.010	<0.010	RPD-NA	ug/g	N/A	40	05-NOV-19
Aroclor 1248		<0.010	<0.010	RPD-NA	ug/g	N/A	40	05-NOV-19
Aroclor 1254		<0.010	<0.010	RPD-NA	ug/g	N/A	40	05-NOV-19
Aroclor 1260		<0.010	<0.010	RPD-NA	ug/g	N/A	40	05-NOV-19
WG3207515-2 Aroclor 1242	LCS		109.3		%		60-140	05-NOV-19
Aroclor 1248			101.5		%		60-140	05-NOV-19
Aroclor 1254			105.2		%		60-140	05-NOV-19
Aroclor 1260			101.4		%		60-140	05-NOV-19
WG3207515-1	МВ							
Aroclor 1242			<0.010		ug/g		0.01	05-NOV-19
Aroclor 1248			<0.010		ug/g		0.01	05-NOV-19
Aroclor 1254			<0.010		ug/g		0.01	05-NOV-19
Aroclor 1260			<0.010		ug/g		0.01	05-NOV-19
Surrogate: d14-T	erphenyl		88.3		%		60-140	05-NOV-19
	MS	WG3207515-5	04.0		0/			
Aroclor 1242			91.8		%		60-140	05-NOV-19
Aroclor 1254			89.7		%		60-140	05-NOV-19
Aroclor 1260			86.6		%		60-140	05-NOV-19
VOC-511-HS-WT	Soil							
	01631							
WG3212302-4 1,1,1,2-Tetrachlo	DUP proethane	WG3212302-3 < 0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,1,2,2-Tetrachlo		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,1,1-Trichloroetl		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,1,2-Trichloroetl		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,1-Dichloroetha		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,1-Dichloroethyl		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,2-Dibromoetha		<0.050	<0.050	RPD-NA	ug/g ug/g	N/A	40	07-NOV-19
1,2-Dichlorobenz		<0.050	<0.050	RPD-NA	ug/g ug/g	N/A	40	07-NOV-19
1,2-Dichloroetha		<0.050	<0.050	RPD-NA	ug/g ug/g	N/A	40	07-NOV-19
1,2-Dichloroprop		<0.050	<0.050	RPD-NA	ug/g ug/g	N/A	40	
1,3-Dichlorobenz		<0.050	<0.050					07-NOV-19
				RPD-NA	ug/g	N/A	40	07-NOV-19
1,4-Dichlorobenz	ene	<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19



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Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							-
Batch R4901631	3011							
WG3212302-4 DUP		WG3212302-3						
Acetone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	07-NOV-19
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	07-NOV-19
Bromodichloromethane		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Bromoform		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Bromomethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Carbon tetrachloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Chlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Chloroform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
cis-1,2-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
cis-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	07-NOV-19
Dibromochloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Dichlorodifluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	07-NOV-19
n-Hexane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Methylene Chloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
MTBE		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
m+p-Xylenes		<0.030	<0.030	RPD-NA	ug/g	N/A	40	07-NOV-19
Methyl Ethyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	07-NOV-19
Methyl Isobutyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	07-NOV-19
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	07-NOV-19
Styrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Tetrachloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	07-NOV-19
trans-1,2-Dichloroethyler	ne	<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
trans-1,3-Dichloropropen	e	<0.030	<0.030	RPD-NA	ug/g	N/A	40	07-NOV-19
Trichloroethylene		<0.010	<0.010	RPD-NA	ug/g	N/A	40	07-NOV-19
Trichlorofluoromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Vinyl chloride		<0.020	<0.020	RPD-NA	ug/g	N/A	40	07-NOV-19
WG3212302-2 LCS	0		106.6		0/		00.400	07 NOV 10
			106.6		%		60-130	07-NOV-19
1,1,2,2-Tetrachloroethan	e		128.3		%		60-130	07-NOV-19
1,1,1-Trichloroethane			103.8		%		60-130	07-NOV-19
1,1,2-Trichloroethane			115.6		%		60-130	07-NOV-19



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11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R4901631								
WG3212302-2 LCS 1,1-Dichloroethane			113.3		%		00.400	07.1101/ 15
1,1-Dichloroethylene			97.1		%		60-130	07-NOV-19
1,2-Dibromoethane			113.8		%		60-130	07-NOV-19
1,2-Dichlorobenzene			103.8		%		70-130	07-NOV-19
1,2-Dichloroethane			121.8		%		70-130	07-NOV-19
					%		60-130	07-NOV-19
1,2-Dichloropropane			119.8				70-130	07-NOV-19
1,3-Dichlorobenzene			99.3		%		70-130	07-NOV-19
1,4-Dichlorobenzene			100.8		%		70-130	07-NOV-19
Acetone			132.5		%		60-140	07-NOV-19
Benzene			113.9		%		70-130	07-NOV-19
Bromodichloromethane			110.7		%		50-140	07-NOV-19
Bromoform			112.4		%		70-130	07-NOV-19
Bromomethane			97.3		%		50-140	07-NOV-19
Carbon tetrachloride			104.2		%		70-130	07-NOV-19
Chlorobenzene			109.4		%		70-130	07-NOV-19
Chloroform			113.3		%		70-130	07-NOV-19
cis-1,2-Dichloroethylene			110.0		%		70-130	07-NOV-19
cis-1,3-Dichloropropene			112.6		%		70-130	07-NOV-19
Dibromochloromethane			106.4		%		60-130	07-NOV-19
Dichlorodifluoromethane	Э		65.1		%		50-140	07-NOV-19
Ethylbenzene			97.6		%		70-130	07-NOV-19
n-Hexane			94.6		%		70-130	07-NOV-19
Methylene Chloride			110.0		%		70-130	07-NOV-19
MTBE			106.1		%		70-130	07-NOV-19
m+p-Xylenes			98.4		%		70-130	07-NOV-19
Methyl Ethyl Ketone			122.6		%		60-140	07-NOV-19
Methyl Isobutyl Ketone			115.4		%		60-140	07-NOV-19
o-Xylene			97.2		%		70-130	07-NOV-19
Styrene			95.8		%		70-130	07-NOV-19
Tetrachloroethylene			101.7		%		60-130	07-NOV-19
Toluene			102.4		%		70-130	07-NOV-19
trans-1,2-Dichloroethyle			107.3		%		60-130	07-NOV-19
trans-1,3-Dichloroprope	ne		110.3		%		70-130	07-NOV-19



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Soli Batch R490163	Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
W63213202-2 LCS Trichioroethylene 108.6 % 60-130 07-NoV-19 Trichiorofluoromethane 93.7 % 50-140 07-NoV-19 Vinyl chloride 102.4 % 60-140 07-NoV-19 WG3212302-1 MB 1.1.1.2-Etachloroethane <0.050	VOC-511-HS-WT	Soil							
Trichloroethylene 108.6 % 60-130 07-NOV-19 Trichlorofluoromethane 93.7 % 50-140 07-NOV-19 Vinyl chloride 102.4 % 60-140 07-NOV-19 WG3212302-1 MB The comment of the	Batch R4901631								
Trichlorofluoromethane 93.7 % 50.140 07-NOV-19 Vinyl chloride 102.4 % 60.140 07-NOV-19 WG3212302-1 MB				400.0		0/		00.400	1101/ 10
Vinyl chloride 102.4 % 60.140 07-NOV-19 WG3212302-1 MB 1.1.2Tetrachloroethane <0.050 ug/g 0.05 07-NOV-19 1.1.1.2Tetrachloroethane <0.050	-								
WG3212302-1 MB 1,1,2-Tetrachloroethane <0.050 ug/g 0.05 07-NOV-19 1,1,2-Tetrachloroethane <0.050		;							
1.1,1,2-Tetrachloroethane <0.050	•			102.4		70		60-140	07-NOV-19
1,1,2,2-Tetrachloroethane <0.050		ane		<0.050		ug/g		0.05	07-NOV-19
1,1,1-Trichloroethane <0.050									
1,1,2-Trichloroethane <0.050									
1,1-Dichloroethane <0.050				<0.050				0.05	
1,1-Dichloroethylene <0.050	1,1-Dichloroethane							0.05	
1,2-Dibromoethane <0.050	1,1-Dichloroethylene			<0.050				0.05	
1,2-Dichlorobenzene <0.050	1,2-Dibromoethane			<0.050		ug/g		0.05	07-NOV-19
1,2-Dichloropropane <0.050	1,2-Dichlorobenzene			<0.050				0.05	07-NOV-19
1,3-Dichlorobenzene <0.050	1,2-Dichloroethane			<0.050		ug/g		0.05	07-NOV-19
1,4-Dichlorobenzene <0.050	1,2-Dichloropropane			<0.050		ug/g		0.05	07-NOV-19
Acetone <0.50 ug/g 0.5 07-NOV-19 Benzene <0.0068	1,3-Dichlorobenzene			<0.050		ug/g		0.05	07-NOV-19
Benzene <0.0068 ug/g 0.0068 07-NOV-19 Bromodichloromethane <0.050	1,4-Dichlorobenzene			< 0.050		ug/g		0.05	07-NOV-19
Bromodichloromethane <0.050 ug/g 0.05 07-NOV-19 Bromoform <0.050	Acetone			<0.50		ug/g		0.5	07-NOV-19
Bromoform <0.050 ug/g 0.05 07-NOV-19 Bromomethane <0.050	Benzene			<0.0068		ug/g		0.0068	07-NOV-19
Bromomethane <0.050 ug/g 0.05 07-NOV-19 Carbon tetrachloride <0.050	Bromodichloromethane)		< 0.050		ug/g		0.05	07-NOV-19
Carbon tetrachloride <0.050	Bromoform			<0.050		ug/g		0.05	07-NOV-19
Chlorobenzene <0.050	Bromomethane			< 0.050		ug/g		0.05	07-NOV-19
Chloroform <0.050 ug/g 0.05 07-NOV-19 cis-1,2-Dichloroethylene <0.050	Carbon tetrachloride			< 0.050		ug/g		0.05	07-NOV-19
cis-1,2-Dichloroethylene <0.050	Chlorobenzene			< 0.050		ug/g		0.05	07-NOV-19
cis-1,3-Dichloropropene <0.030	Chloroform			< 0.050		ug/g		0.05	07-NOV-19
Dibromochloromethane <0.050 ug/g 0.05 07-NOV-19 Dichlorodifluoromethane <0.050	cis-1,2-Dichloroethylen	е		<0.050		ug/g		0.05	07-NOV-19
Dichlorodifluoromethane <0.050	cis-1,3-Dichloropropend	е		<0.030		ug/g		0.03	07-NOV-19
Ethylbenzene <0.018	Dibromochloromethane)		<0.050		ug/g		0.05	07-NOV-19
n-Hexane <0.050	Dichlorodifluoromethan	е		<0.050		ug/g		0.05	07-NOV-19
Methylene Chloride <0.050 ug/g 0.05 07-NOV-19 MTBE <0.050	Ethylbenzene			<0.018		ug/g		0.018	07-NOV-19
MTBE <0.050	n-Hexane			<0.050		ug/g		0.05	07-NOV-19
m+p-Xylenes <0.030 ug/g 0.03 07-NOV-19	Methylene Chloride			<0.050		ug/g		0.05	07-NOV-19
	MTBE			<0.050		ug/g		0.05	07-NOV-19
Methyl Ethyl Ketone <0.50 ug/g 0.5 07-NOV-19	m+p-Xylenes			<0.030		ug/g		0.03	07-NOV-19
	Methyl Ethyl Ketone			<0.50		ug/g		0.5	07-NOV-19



Workorder: L2375305 Report Date: 07-NOV-19 Page 13 of 15

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Soli Batch R400163	Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
Matyl Isobuty Katone 40,50 ug/g 0.5 07-NOV-19 o-Xylene <0,020	VOC-511-HS-WT	Soil							
Methyl Isobutyl Ketone <0.50	Batch R4901631								
o-Xylene				- 0.50		ua/a		0.5	07 NOV 40
Styrene <0.050 ug/g 0.05 07-NOV-19 Tetachloroethylene <0.050									
Tetrachloroethylene	•								
Toluene <0.080 ug/g 0.08 07-NOV-19 trans-1,2-Dichloropropene <0.050	-								
trans-1,2-Dichloroethylene	•								
trans-1,3-Dichloropropene <0.030									
Trichloroethylene < 0.010 ug/g 0.01 07-NOV-19 Trichlorofluoromethane < 0.050	•								
Trichlorofluoromethane <0.050 ug/g 0.05 07-NOV-19 Vinyl chloride <0.020		е							
Vinyl chloride <0.020 ug/g 0.02 07-NOV-19 Surrogate: 1,4-Difluorobenzene 118.3 % 50-140 07-NOV-19 Surrogate: 4-Bromofluorobenzene 96.1 % 50-140 07-NOV-19 WG3212302-5 MS L2375212-4 *** *** 50-140 07-NOV-19 1,1,2-Tertachloroethane 103.1 % 50-140 07-NOV-19 1,1,1-Trichloroethane 105.5 % 50-140 07-NOV-19 1,1,1-Trichloroethane 107.5 % 50-140 07-NOV-19 1,1,1-Dichloroethane 107.5 % 50-140 07-NOV-19 1,1-Dichloroethane 100.6 % 50-140 07-NOV-19 1,1-Dichloroethane 107.5 % 50-140 07-NOV-19 1,2-Dichloroethane 107.5 % 50-140 07-NOV-19 1,2-Dichlorobenzene 112.3 % 50-140 07-NOV-19 1,2-Dichlorobenzene 109.0 % 50-140 07-NOV-19 1,3-Dichlorobenzene </td <td>•</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	•								
Surrogate: 1,4-Difluorobenzene 118.3 % 50-140 07-NOV-19 Surrogate: 4-Bromofluorobenzene 96.1 % 50-140 07-NOV-19 WG3212302-5 MS L2375212-4 Variable of the properties of the properti									
Surrogate: 4-Bromofluorobenzene 96.1 % 50-140 07-NOV-19 WG3212302-5 MS L2375212-4 1.1.1,2-Tetrachloroethane 103.1 % 50-140 07-NOV-19 1.1,2,2-Tetrachloroethane 113.6 % 50-140 07-NOV-19 1.1,1-Trichloroethane 105.5 % 50-140 07-NOV-19 1.1,2-Trichloroethane 107.5 % 50-140 07-NOV-19 1,1-Dichloroethane 110.6 % 50-140 07-NOV-19 1,1-Dichloroethylene 102.9 % 50-140 07-NOV-19 1,2-Dichlorobenzene 112.3 % 50-140 07-NOV-19 1,2-Dichlorobenzene 112.3 % 50-140 07-NOV-19 1,2-Dichloropenzene 107.5 % 50-140 07-NOV-19 1,2-Dichloropenzene 111.7 % 50-140 07-NOV-19 1,3-Dichlorobenzene 111.7 % 50-140 07-NOV-19 1,4-Dichlorobenzene 114.0 % 50-140 07-NOV-19	•								
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1,1,1,2-Tetrachloroethane 103.1 % 50-140 07-NOV-19 1,1,2,2-Tetrachloroethane 113.6 % 50-140 07-NOV-19 1,1,1-Trichloroethane 105.5 % 50-140 07-NOV-19 1,1,2-Trichloroethane 107.5 % 50-140 07-NOV-19 1,1-Dichloroethane 110.6 % 50-140 07-NOV-19 1,1-Dichloroethylene 102.9 % 50-140 07-NOV-19 1,2-Diblorobenzene 107.5 % 50-140 07-NOV-19 1,2-Dichlorobenzene 112.3 % 50-140 07-NOV-19 1,2-Dichloroethane 107.5 % 50-140 07-NOV-19 1,2-Dichloropropane 109.0 % 50-140 07-NOV-19 1,2-Dichlorobenzene 111.7 % 50-140 07-NOV-19 1,3-Dichlorobenzene 111.7 % 50-140 07-NOV-19 Acetone 119.0 % 50-140 07-NOV-19 Benzene 111.8 % 50-140 07-NOV-19 Bromodichloromethane 106.5 % 50-14	-	obenzene		96.1		%		50-140	07-NOV-19
1.1,1-Trichloroethane 105.5 % 50-140 07-NOV-19 1.1,2-Trichloroethane 107.5 % 50-140 07-NOV-19 1,1-Dichloroethane 110.6 % 50-140 07-NOV-19 1,1-Dichloroethylene 102.9 % 50-140 07-NOV-19 1,2-Dichloroethane 107.5 % 50-140 07-NOV-19 1,2-Dichloroethane 107.5 % 50-140 07-NOV-19 1,2-Dichloroethane 107.5 % 50-140 07-NOV-19 1,2-Dichloropropane 109.0 % 50-140 07-NOV-19 1,3-Dichlorobenzene 111.7 % 50-140 07-NOV-19 1,4-Dichlorobenzene 114.0 % 50-140 07-NOV-19 Acetone 119.0 % 50-140 07-NOV-19 Benzene 111.8 % 50-140 07-NOV-19 Bromodichloromethane 106.5 % 50-140 07-NOV-19 Bromoform 106.8 % 50-140 07-NOV-19 Carbon tetrachloride 106.0 % 50-140 07-NO		e	L2375212-4	103.1		%		50-140	07-NOV-19
1,1,2-Trichloroethane 107.5 % 50-140 07-NOV-19 1,1-Dichloroethane 110.6 % 50-140 07-NOV-19 1,1-Dichloroethylene 102.9 % 50-140 07-NOV-19 1,2-Dichloroethane 107.5 % 50-140 07-NOV-19 1,2-Dichloroethane 107.5 % 50-140 07-NOV-19 1,2-Dichloroptropane 109.0 % 50-140 07-NOV-19 1,3-Dichlorobenzene 111.7 % 50-140 07-NOV-19 1,4-Dichlorobenzene 114.0 % 50-140 07-NOV-19 Acetone 119.0 % 50-140 07-NOV-19 Benzene 111.8 % 50-140 07-NOV-19 Bromodichloromethane 106.5 % 50-140 07-NOV-19 Bromoform 106.8 % 50-140 07-NOV-19 Carbon tetrachloride 106.0 % 50-140 07-NOV-19 Chlorobenzene 107.1 % 50-140 07-NOV-19 Chloroform 109.1 % 50-140 07-NOV-19 <	1,1,2,2-Tetrachloroethane	е		113.6		%		50-140	07-NOV-19
1,1-Dichloroethane 110.6 % 50-140 07-NOV-19 1,1-Dichloroethylene 102.9 % 50-140 07-NOV-19 1,2-Dichromoethane 107.5 % 50-140 07-NOV-19 1,2-Dichlorobenzene 112.3 % 50-140 07-NOV-19 1,2-Dichloroethane 107.5 % 50-140 07-NOV-19 1,2-Dichloropropane 109.0 % 50-140 07-NOV-19 1,3-Dichlorobenzene 111.7 % 50-140 07-NOV-19 1,4-Dichlorobenzene 114.0 % 50-140 07-NOV-19 Acetone 119.0 % 50-140 07-NOV-19 Benzene 111.8 % 50-140 07-NOV-19 Bromodichloromethane 106.5 % 50-140 07-NOV-19 Bromoform 106.8 % 50-140 07-NOV-19 Carbon tetrachloride 106.0 % 50-140 07-NOV-19 Chlorobenzene 107.1 % 50-140 07-NOV-19 Chloroform 109.1 % 50-140 07-NOV-19 <td>1,1,1-Trichloroethane</td> <td></td> <td></td> <td>105.5</td> <td></td> <td>%</td> <td></td> <td>50-140</td> <td>07-NOV-19</td>	1,1,1-Trichloroethane			105.5		%		50-140	07-NOV-19
1,1-Dichloroethylene 102.9 % 50-140 07-NOV-19 1,2-Dibromoethane 107.5 % 50-140 07-NOV-19 1,2-Dichlorobenzene 112.3 % 50-140 07-NOV-19 1,2-Dichloroethane 107.5 % 50-140 07-NOV-19 1,2-Dichloropropane 109.0 % 50-140 07-NOV-19 1,3-Dichlorobenzene 111.7 % 50-140 07-NOV-19 1,4-Dichlorobenzene 114.0 % 50-140 07-NOV-19 Acetone 119.0 % 50-140 07-NOV-19 Benzene 111.8 % 50-140 07-NOV-19 Bromodichloromethane 106.5 % 50-140 07-NOV-19 Bromoform 106.8 % 50-140 07-NOV-19 Carbon tetrachloride 106.0 % 50-140 07-NOV-19 Chlorobenzene 107.1 % 50-140 07-NOV-19 Chloroform 109.1 % 50-140 07-NOV-19	1,1,2-Trichloroethane			107.5		%		50-140	07-NOV-19
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1,2-Dichlorobenzene 112.3 % 50-140 07-NOV-19 1,2-Dichloroethane 107.5 % 50-140 07-NOV-19 1,2-Dichloropropane 109.0 % 50-140 07-NOV-19 1,3-Dichlorobenzene 111.7 % 50-140 07-NOV-19 1,4-Dichlorobenzene 114.0 % 50-140 07-NOV-19 Acetone 119.0 % 50-140 07-NOV-19 Benzene 111.8 % 50-140 07-NOV-19 Bromodichloromethane 106.5 % 50-140 07-NOV-19 Bromoform 106.8 % 50-140 07-NOV-19 Bromomethane 99.6 % 50-140 07-NOV-19 Carbon tetrachloride 106.0 % 50-140 07-NOV-19 Chlorobenzene 107.1 % 50-140 07-NOV-19 Chloroform 109.1 % 50-140 07-NOV-19	1,1-Dichloroethylene			102.9		%		50-140	07-NOV-19
1,2-Dichloroethane 107.5 % 50-140 07-NOV-19 1,2-Dichloropropane 109.0 % 50-140 07-NOV-19 1,3-Dichlorobenzene 111.7 % 50-140 07-NOV-19 1,4-Dichlorobenzene 114.0 % 50-140 07-NOV-19 Acetone 119.0 % 50-140 07-NOV-19 Benzene 111.8 % 50-140 07-NOV-19 Bromodichloromethane 106.5 % 50-140 07-NOV-19 Bromoform 106.8 % 50-140 07-NOV-19 Bromomethane 99.6 % 50-140 07-NOV-19 Carbon tetrachloride 106.0 % 50-140 07-NOV-19 Chlorobenzene 107.1 % 50-140 07-NOV-19 Chloroform 109.1 % 50-140 07-NOV-19	1,2-Dibromoethane			107.5		%		50-140	07-NOV-19
1,2-Dichloropropane 109.0 % 50-140 07-NOV-19 1,3-Dichlorobenzene 111.7 % 50-140 07-NOV-19 1,4-Dichlorobenzene 114.0 % 50-140 07-NOV-19 Acetone 119.0 % 50-140 07-NOV-19 Benzene 111.8 % 50-140 07-NOV-19 Bromodichloromethane 106.5 % 50-140 07-NOV-19 Bromoform 106.8 % 50-140 07-NOV-19 Bromomethane 99.6 % 50-140 07-NOV-19 Carbon tetrachloride 106.0 % 50-140 07-NOV-19 Chlorobenzene 107.1 % 50-140 07-NOV-19 Chloroform 109.1 % 50-140 07-NOV-19	1,2-Dichlorobenzene			112.3		%		50-140	07-NOV-19
1,3-Dichlorobenzene 111.7 % 50-140 07-NOV-19 1,4-Dichlorobenzene 114.0 % 50-140 07-NOV-19 Acetone 119.0 % 50-140 07-NOV-19 Benzene 111.8 % 50-140 07-NOV-19 Bromodichloromethane 106.5 % 50-140 07-NOV-19 Bromoform 106.8 % 50-140 07-NOV-19 Bromomethane 99.6 % 50-140 07-NOV-19 Carbon tetrachloride 106.0 % 50-140 07-NOV-19 Chlorobenzene 107.1 % 50-140 07-NOV-19 Chloroform 109.1 % 50-140 07-NOV-19	1,2-Dichloroethane			107.5		%		50-140	07-NOV-19
1,4-Dichlorobenzene 114.0 % 50-140 07-NOV-19 Acetone 119.0 % 50-140 07-NOV-19 Benzene 111.8 % 50-140 07-NOV-19 Bromodichloromethane 106.5 % 50-140 07-NOV-19 Bromoform 106.8 % 50-140 07-NOV-19 Bromomethane 99.6 % 50-140 07-NOV-19 Carbon tetrachloride 106.0 % 50-140 07-NOV-19 Chlorobenzene 107.1 % 50-140 07-NOV-19 Chloroform 109.1 % 50-140 07-NOV-19	1,2-Dichloropropane			109.0		%		50-140	07-NOV-19
Acetone 119.0 % 50-140 07-NOV-19 Benzene 111.8 % 50-140 07-NOV-19 Bromodichloromethane 106.5 % 50-140 07-NOV-19 Bromoform 106.8 % 50-140 07-NOV-19 Bromomethane 99.6 % 50-140 07-NOV-19 Carbon tetrachloride 106.0 % 50-140 07-NOV-19 Chlorobenzene 107.1 % 50-140 07-NOV-19 Chloroform 109.1 % 50-140 07-NOV-19	1,3-Dichlorobenzene			111.7		%		50-140	07-NOV-19
Benzene 111.8 % 50-140 07-NOV-19 Bromodichloromethane 106.5 % 50-140 07-NOV-19 Bromoform 106.8 % 50-140 07-NOV-19 Bromomethane 99.6 % 50-140 07-NOV-19 Carbon tetrachloride 106.0 % 50-140 07-NOV-19 Chlorobenzene 107.1 % 50-140 07-NOV-19 Chloroform 109.1 % 50-140 07-NOV-19	1,4-Dichlorobenzene			114.0		%		50-140	07-NOV-19
Bromodichloromethane 106.5 % 50-140 07-NOV-19 Bromoform 106.8 % 50-140 07-NOV-19 Bromomethane 99.6 % 50-140 07-NOV-19 Carbon tetrachloride 106.0 % 50-140 07-NOV-19 Chlorobenzene 107.1 % 50-140 07-NOV-19 Chloroform 109.1 % 50-140 07-NOV-19	Acetone			119.0		%		50-140	07-NOV-19
Bromoform 106.8 % 50-140 07-NOV-19 Bromomethane 99.6 % 50-140 07-NOV-19 Carbon tetrachloride 106.0 % 50-140 07-NOV-19 Chlorobenzene 107.1 % 50-140 07-NOV-19 Chloroform 109.1 % 50-140 07-NOV-19	Benzene			111.8		%		50-140	07-NOV-19
Bromomethane 99.6 % 50-140 07-NOV-19 Carbon tetrachloride 106.0 % 50-140 07-NOV-19 Chlorobenzene 107.1 % 50-140 07-NOV-19 Chloroform 109.1 % 50-140 07-NOV-19	Bromodichloromethane			106.5		%		50-140	07-NOV-19
Carbon tetrachloride 106.0 % 50-140 07-NOV-19 Chlorobenzene 107.1 % 50-140 07-NOV-19 Chloroform 109.1 % 50-140 07-NOV-19	Bromoform			106.8		%		50-140	07-NOV-19
Chlorobenzene 107.1 % 50-140 07-NOV-19 Chloroform 109.1 % 50-140 07-NOV-19	Bromomethane			99.6		%		50-140	07-NOV-19
Chlorobenzene 107.1 % 50-140 07-NOV-19 Chloroform 109.1 % 50-140 07-NOV-19	Carbon tetrachloride			106.0		%		50-140	07-NOV-19
	Chlorobenzene			107.1		%		50-140	07-NOV-19
cis-1,2-Dichloroethylene 107.1 % 50-140 07-NOV-19	Chloroform			109.1		%		50-140	07-NOV-19
	cis-1,2-Dichloroethylene			107.1		%		50-140	07-NOV-19



Workorder: L2375305 Report Date: 07-NOV-19 Page 14 of 15

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

est	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R490163	1							
WG3212302-5 MS		L2375212-4						
cis-1,3-Dichloroprope			112.4		%		50-140	07-NOV-19
Dibromochloromethar	ne		103.7		%		50-140	07-NOV-19
Dichlorodifluorometha	ine		77.2		%		50-140	07-NOV-19
Ethylbenzene			105.3		%		50-140	07-NOV-19
n-Hexane			102.0		%		50-140	07-NOV-19
Methylene Chloride			110.5		%		50-140	07-NOV-19
MTBE			107.2		%		50-140	07-NOV-19
m+p-Xylenes			104.7		%		50-140	07-NOV-19
Methyl Ethyl Ketone			108.9		%		50-140	07-NOV-19
Methyl Isobutyl Keton	е		107.0		%		50-140	07-NOV-19
o-Xylene			103.2		%		50-140	07-NOV-19
Styrene			100.2		%		50-140	07-NOV-19
Tetrachloroethylene			109.8		%		50-140	07-NOV-19
Toluene			108.7		%		50-140	07-NOV-19
trans-1,2-Dichloroethy	/lene		110.0		%		50-140	07-NOV-19
trans-1,3-Dichloroprop	pene		110.1		%		50-140	07-NOV-19
Trichloroethylene			107.8		%		50-140	07-NOV-19
Trichlorofluoromethan	ie		102.6		%		50-140	07-NOV-19
Vinyl chloride			111.5		%		50-140	07-NOV-19

Workorder: L2375305 Report Date: 07-NOV-19

Client: TERRAPROBE-BRAMPTON Page 15 of 15

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

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.
RRQC	Refer to report remarks for information regarding this QC result.

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.

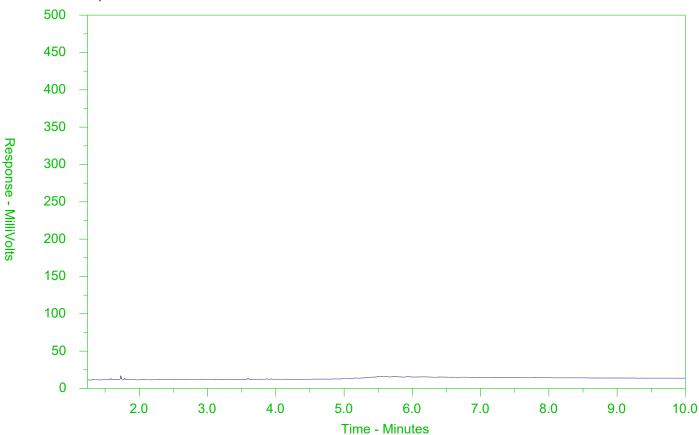
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined data quality objectives to provide 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: L2375305-2 Client Sample ID: BH6-SS2



← -F2-	→←	_F3 → F4-	→	
nC10	nC16	nC34	nC50	
174°C	287°C	481°C	575°C	
346°F	549°F	898°F	1067°F	
Gasolin	ie →	← Mo	tor 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.

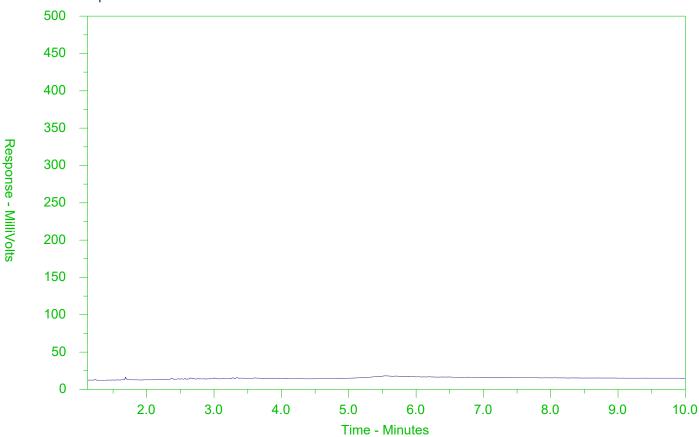
Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor and the scale at the left.

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: L2375305-4 Client Sample ID: BH6-SS7



← -F2-	→←	_F3 → F4-	→							
nC10	nC16	nC34	nC50							
174°C	287°C	481°C	575°C							
346°F	549°F	898°F	1067°F							
Gasolin	ie →	← Mo	tor 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

Chain of Custody (COC) / Analytical Request Form



COC Number: 15 -

1 of

X

Canada Toll Free: 1 800 668 9878

	www.alsglobal.com																				
Report To	Contact and company name below will appear	on the final report			Report Format	Distribution		Select Service Level Below - Please confirm all E&P TATs with your AM - surcharges will apply Regular [R] Standard TAT if received by 3 pm - business days - no surcharges apply													
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Contact:	Kossay Makhzoumi		Qua	ality Control (0	QC) Report with Re	port 🗹 YES	□ NO) 0 1 2	4 (day [P	4]			ķ	1	Busir	1055 (lay [E	1]		
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City/Province:	Brampton		Ema	nail 2				For test	s that ca	nat can not be performed according to the service level selected, you will be contacted.											
Postal Code:	L6T 3Y3		Ema	nail 3									_	Analys	_						
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Company:	Terraprobe		Email 1 or Fax lrossi@terraprobe.ca																- 1	ı	
Contact:	Lorena Rossi		Ema	nail 2										ΙI							ers S
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Are samples for human drinking water use?		ME	-CP -	T3 PH	21		<u> </u>	•			EMPER	ATURE	s°C_			FINA	r coor	ER TE	MPERA	TURES °C	
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SHIPMENT RELEASE (client use)					INITIAL SHIPMEN	IT RECEPTION	(lab use only)	Щ.	44	Η-		F	INAL :	SHIPN	IENT	REC	EPTIC	N (lat	use c	only)	
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TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 13-JAN-20

Report Date: 20-JAN-20 08:19 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2404776

Project P.O. #: NOT SUBMITTED

Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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L2404776 CONT'D....

Job Reference: 1-19-0603-42

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20-JAN-20 08:19 (MT)

Summary of Guideline Exceedances

Guideline						
ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit
Ontario Reg	gulation 153/04 - April 1	5, 2011 Standards - T3-Soil-Res/Park/Ir	st. Property Use (Coarse)			
L2404776-1	DUP 3	Physical Tests	Conductivity	1.16	0.7	mS/cm
		Saturated Paste Extractables	SAR	6.56	5	SAR
Ontario Reg	gulation 153/04 - April 1	5, 2011 Standards - T3-Soil-Res/Park/Ir	nst. Property Use (Fine)			
L2404776-1	DUP 3	Physical Tests	Conductivity	1.16	0.7	mS/cm
		Saturated Paste Extractables	SAR	6.56	5	SAR



L2404776 CONT'D....

Job Reference: 1-19-0603-42

PAGE 3 of 10

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Physical Tests - SOIL

i ilysicai resis - soil				
		I	Lab ID	L2404776-1
	5	Sampl	e Date	07-JAN-20
	DUP 3			
			Limits	
Analyte	Unit	#1	#2	
Conductivity	mS/cm	0.7	0.7	1.16
% Moisture	%	-	-	15.8

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



L2404776 CONT'D....

Job Reference: 1-19-0603-42

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20-JAN-20 08:19 (MT)

Cyanides - SOIL

-,				
			Lab ID	L2404776-1
		Sample	e Date	07-JAN-20
		Sam	ple ID	DUP 3
Analyte	Unit	Guide #1	Limits #2	
Cyanide, Weak Acid Diss	ug/g	0.051	0.051	<0.050

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



L2404776 CONT'D....

Job Reference: 1-19-0603-42

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20-JAN-20 08:19 (MT)

Saturated Paste Extractables - SOIL

		Lab ID	L2404776-1
	Sampl	e Date	07-JAN-20
	San	ple ID	DUP 3
	Guide	Limits	
Unit	#1	#2	
SAR	5	5	6.56
SAR mg/L	5 -	5 -	6.56
		-	
	Unit	Sampl Sam Guide	Lab ID Sample Date Sample ID Guide Limits Unit #1 #2

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



Metals - SOIL

		Sample	Lab ID e Date iple ID	L2404776-1 07-JAN-20 DUP 3
Analyte	Unit	Guide #1	Limits #2	
Antimony (Sb)	ug/g	7.5	7.5	<1.0
Arsenic (As)	ug/g	18	18	2.4
Barium (Ba)	ug/g	390	390	56.0
Beryllium (Be)	ug/g	4	5	<0.50
Boron (B)	ug/g	120	120	5.5
Boron (B), Hot Water Ext.	ug/g	1.5	1.5	0.25
Cadmium (Cd)	ug/g	1.2	1.2	<0.50
Chromium (Cr)	ug/g	160	160	14.6
Cobalt (Co)	ug/g	22	22	5.0
Copper (Cu)	ug/g	140	180	8.6
Lead (Pb)	ug/g	120	120	4.8
Mercury (Hg)	ug/g	0.27	1.8	0.0184
Molybdenum (Mo)	ug/g	6.9	6.9	<1.0
Nickel (Ni)	ug/g	100	130	9.6
Selenium (Se)	ug/g	2.4	2.4	<1.0
Silver (Ag)	ug/g	20	25	<0.20
Thallium (TI)	ug/g	1	1	<0.50
Uranium (U)	ug/g	23	23	<1.0
Vanadium (V)	ug/g	86	86	27.7
Zinc (Zn)	ug/g	340	340	23.8

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



L2404776 CONT'D....

Job Reference: 1-19-0603-42

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20-JAN-20 08:19 (MT)

Speciated Metals - SOIL

opoolatoa motalo oole		
	Lab ID L240	04776-1
	Sample Date 07-	JAN-20
	Sample ID D	UP 3
Analyte	Guide Limits Unit #1 #2	
7		
Chromium, Hexavalent	ug/g 8 10 ().24

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



L2404776 CONT'D....

Job Reference: 1-19-0603-42

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20-JAN-20 08:19 (MT)

Polychlorinated Biphenyls - SOIL

i orycrnormated Dipricityis	OOIL				
			L	ab ID	L2404776-1
			Sample	Date	07-JAN-20
			Sam	ple ID	DUP 3
			Guide l	Limits	
Analyte		Unit	#1	#2	
Aroclor 1242		ug/g	-	-	<0.010
Aroclor 1248		ug/g	-	-	<0.010
Aroclor 1254		ug/g	-	-	<0.010
Aroclor 1260		ug/g	-	-	<0.010
Total PCBs		ug/g	0.35	0.35	<0.020
Surrogate: d14-Terphenyl		%	-	-	93.8

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

Reference Information

L2404776 CONT'D....
Job Reference: 1-19-0603-42
PAGE 9 of 10
20-JAN-20 08:19 (MT)

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).

CN-WAD-R511-WT Soil Cyanide (WAD)-O.Reg 153/04 (July MOE 3015/APHA 4500CN I-WAD

2011)

The sample is extracted with a strong base for 16 hours, and then filtered. The filtrate is then distilled where the cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

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

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

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).

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 200.2/6020A (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 AI, Ba, Be, Cr, S, Sr, Ti, 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).

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).

Reference Information

L2404776 CONT'D....
Job Reference: 1-19-0603-42
PAGE 10 of 10
20-JAN-20 08:19 (MT)

Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

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).

**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

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.



Workorder: L2404776 Report Date: 20-JAN-20 Page 1 of 7

TERRAPROBE-BRAMPTON Client:

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
B-HWS-R511-WT	Soil							
Batch R4972407								
WG3258778-4 DUP Boron (B), Hot Water Ex	t.	L2405982-14 <0.10	0.11	RPD-NA	ug/g	N/A	30	17-JAN-20
WG3258778-2 IRM Boron (B), Hot Water Ex	t.	WT SAR3	96.3		%		70-130	17-JAN-20
WG3258778-3 LCS Boron (B), Hot Water Ex	t.		97.5		%		70-130	17-JAN-20
WG3258778-1 MB Boron (B), Hot Water Ex	t.		<0.10		ug/g		0.1	17-JAN-20
CN-WAD-R511-WT	Soil							
Batch R4971817								
WG3257747-3 DUP Cyanide, Weak Acid Dis	s	L2405419-1 <0.050	<0.050	RPD-NA	ug/g	N/A	35	15-JAN-20
WG3257747-2 LCS Cyanide, Weak Acid Disa	s		97.9		%		80-120	15-JAN-20
WG3257747-1 MB Cyanide, Weak Acid Disa	s		<0.050		ug/g		0.05	15-JAN-20
WG3257747-4 MS Cyanide, Weak Acid Disa	s	L2405419-1	101.6		%		70-130	15-JAN-20
CR-CR6-IC-WT	Soil							
Batch R4972127								
WG3257862-4 CRM Chromium, Hexavalent		WT-SQC012	77.3		%		70-130	16-JAN-20
WG3257862-3 DUP Chromium, Hexavalent		L2405419-1 <0.20	<0.20	RPD-NA	ug/g	N/A	35	16-JAN-20
WG3257862-2 LCS Chromium, Hexavalent			92.3		%		80-120	16-JAN-20
WG3257862-1 MB Chromium, Hexavalent			<0.20		ug/g		0.2	16-JAN-20
EC-WT	Soil				3.0			
Batch R4971994								
WG3257760-4 DUP Conductivity		WG3257760-3 0.496	0.495		mS/cm	0.2	20	16-JAN-20
WG3257760-2 IRM Conductivity		WT SAR3	105.8		%		70-130	16-JAN-20
WG3258040-1 LCS Conductivity			101.5		%		90-110	16-JAN-20
WG3257760-1 MB							30 . 10	.5 5, 11 20



Workorder: L2404776 Report Date: 20-JAN-20 Page 2 of 7

TERRAPROBE-BRAMPTON Client:

11 Indell Lane

Brampton ON L6T 3Y3

Kossay Makhzoumi Contact:

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
EC-WT	Soil							
Batch R4971994 WG3257760-1 MB Conductivity			<0.0040		mS/cm		0.004	16-JAN-20
HG-200.2-CVAA-WT	Soil							
Batch R4969586								
WG3257746-2 CRM		WT-CANMET-	TILL2 123.1		%		70.400	45 1401 00
Mercury (Hg) WG3257746-6 DUP		WG3257746-5	123.1		70		70-130	15-JAN-20
Mercury (Hg)		0.0804	0.0782		ug/g	2.8	40	15-JAN-20
WG3257746-3 LCS								
Mercury (Hg)			111.5		%		80-120	15-JAN-20
WG3257746-1 MB								
Mercury (Hg)			<0.0050		mg/kg		0.005	15-JAN-20
MET-200.2-CCMS-WT	Soil							
Batch R4969787								
WG3257746-2 CRM Antimony (Sb)		WT-CANMET-	TILL2 106.7		%		70-130	15-JAN-20
Arsenic (As)			94.8		%		70-130	15-JAN-20
Barium (Ba)			93.6		%		70-130	15-JAN-20
Beryllium (Be)			93.5		%		70-130	15-JAN-20
Boron (B)			3.4		mg/kg		0-8.6	15-JAN-20
Cadmium (Cd)			92.2		%		70-130	15-JAN-20
Chromium (Cr)			92.6		%		70-130	15-JAN-20
Cobalt (Co)			92.6		%		70-130	15-JAN-20
Copper (Cu)			92.3		%		70-130	15-JAN-20
Lead (Pb)			94.8		%		70-130	15-JAN-20
Molybdenum (Mo)			96.2		%		70-130	15-JAN-20
Nickel (Ni)			94.1		%		70-130	15-JAN-20
Selenium (Se)			0.38		mg/kg		0.15-0.55	15-JAN-20
Silver (Ag)			0.26		mg/kg		0.16-0.36	15-JAN-20
Thallium (TI)			92.2		%		70-130	15-JAN-20
Uranium (U)			89.6		%		70-130	15-JAN-20
Vanadium (V)			94.3		%		70-130	15-JAN-20
Zinc (Zn)			87.1		%		70-130	15-JAN-20
WG3257746-6 DUP Antimony (Sb)		WG3257746-5 0.12	0.12		ug/g	0.5	30	15-JAN-20



Workorder: L2404776 Report Date: 20-JAN-20 Page 3 of 7

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Metr-2002-CCMS-WT R4999787 Soli	Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
Mos287746-6 DUP DU	MET-200.2-CCMS-WT	Soil							
Arsenic (As)	Batch R4969787								
Barium (Ba) 123 124 ug/g 0.4 40 15-JAN-20 Beryllium (Be) 1.09 1.08 ug/g 0.6 30 15-JAN-20 Boron (B) 13.9 13.1 ug/g 6.0 30 15-JAN-20 Cadmium (Cd) 2.38 2.24 ug/g 6.1 30 15-JAN-20 Coball (Co) 8.52 8.58 ug/g 0.7 30 15-JAN-20 Copper (Cu) 23.8 23.5 ug/g 1.2 30 15-JAN-20 Lead (Pb) 440 446 ug/g 1.3 40 15-JAN-20 Nickel (Ni) 28.9 28.4 ug/g 1.9 30 15-JAN-20 Nickel (Ni) 28.9 28.4 ug/g 1.9 30 15-JAN-20 Selenium (Se) 0.26 0.26 ug/g 0.2 30 15-JAN-20 Silver (Ag) 0.10 RPD-NA ug/g 1.0 15-JAN-20 Uranium (U) 0.718									
Beryllium (Be) 1.09 1.08 ug/g 0.6 30 15-JAN-20	` ,								
Boron (B) 13.9 13.1 ug/g 6.0 30 15-JAN-20 Cadmium (Cd) 2.38 2.24 ug/g 6.1 30 15-JAN-20 Chromium (Cr) 24.5 24.5 ug/g 0.1 30 15-JAN-20 Cobalt (Co) 8.52 8.58 ug/g 0.7 30 15-JAN-20 Copper (Cu) 23.8 23.5 ug/g 1.2 30 15-JAN-20 Lead (Pb) 440 446 ug/g 1.3 40 15-JAN-20 Molybdenum (Mo) 0.51 0.54 ug/g 1.9 30 15-JAN-20 Mickel (NI) 28.9 28.4 ug/g 1.9 40 15-JAN-20 Selenium (Se) 0.26 0.26 ug/g 0.2 30 15-JAN-20 Thallium (TI) 0.181 0.189 ug/g 4.0 30 15-JAN-20 Thallium (TI) 0.181 0.189 ug/g 2.5 30 15-JAN-20 Uranium (U						ug/g	0.4	40	15-JAN-20
Cadmium (Cd) 2.38 2.24 ug/g 6.1 30 15-JAN-20 Chromium (Cr) 24.5 24.5 ug/g 0.1 30 15-JAN-20 Cobalt (Co) 8.52 8.58 ug/g 0.7 30 15-JAN-20 Copper (Cu) 23.8 23.5 ug/g 1.2 30 15-JAN-20 Lead (Pb) 440 446 ug/g 1.3 40 15-JAN-20 Molydoenum (Mo) 0.51 0.54 ug/g 1.9 30 15-JAN-20 Nickel (Ni) 28.9 28.4 ug/g 1.9 30 15-JAN-20 Nickel (Ni) 28.9 28.4 ug/g 0.2 30 15-JAN-20 Silver (Ag) 0.26 0.26 ug/g 0.2 30 15-JAN-20 Silver (Ag) <0.10						ug/g	0.6	30	15-JAN-20
Chromium (Cr) 24.5 24.5 ug/g 0.1 30 15-JAN-20 Cobalt (Co) 8.52 8.58 ug/g 0.7 30 15-JAN-20 Copper (Cu) 23.8 23.5 ug/g 1.2 30 15-JAN-20 Lead (Pb) 440 446 ug/g 1.3 40 15-JAN-20 Molybdenum (Mo) 0.51 0.54 ug/g 4.9 40 15-JAN-20 Nickel (Ni) 28.9 28.4 ug/g 1.9 30 15-JAN-20 Selenium (Se) 0.26 0.26 0.26 ug/g 0.2 30 15-JAN-20 Silver (Ag) 0.181 0.189 ug/g 0.2 30 15-JAN-20 Thallium (TI) 0.181 0.189 ug/g 4.0 30 15-JAN-20 Uranium (U) 0.718 0.737 ug/g 2.5 30 15-JAN-20 Vanidium (Y) 33.9 33.1 ug/g 2.4 30 15-JAN-20				13.1		ug/g	6.0	30	15-JAN-20
Cobalt (Co) 8.52 8.58 ug/g 0.7 30 15-JAN-20 Copper (Cu) 23.8 23.5 ug/g 1.2 30 15-JAN-20 Lead (Pb) 440 446 ug/g 1.3 40 15-JAN-20 Molybdenum (Mo) 0.51 0.54 ug/g 4.9 40 15-JAN-20 Nickel (Ni) 28.9 28.4 ug/g 1.9 30 15-JAN-20 Selenium (Se) 0.26 0.26 0.26 ug/g 0.2 30 15-JAN-20 Selenium (Se) 0.26 0.26 0.26 ug/g 0.2 30 15-JAN-20 Selenium (Se) 0.26 0.26 0.26 ug/g 0.2 30 15-JAN-20 Silver (Ag) <0.10 RPD-NA ug/g 4.0 30 15-JAN-20 Thallium (Tl) 0.181 0.189 ug/g 2.5 30 15-JAN-20 Uranium (U) 0.718 0.737 ug/g 2.3 30 <td></td> <td></td> <td>2.38</td> <td>2.24</td> <td></td> <td>ug/g</td> <td>6.1</td> <td>30</td> <td>15-JAN-20</td>			2.38	2.24		ug/g	6.1	30	15-JAN-20
Copper (Cu) 23.8 23.5 ug/g 1.2 30 15-JAN-20 Lead (Pb) 440 446 ug/g 1.3 40 15-JAN-20 Molybdenum (Mo) 0.51 0.54 ug/g 4.9 40 15-JAN-20 Nickel (N) 28.9 28.4 ug/g 1.9 30 15-JAN-20 Selenium (Se) 0.26 0.26 ug/g 0.2 30 15-JAN-20 Selver (Ag) <0.10 <0.10 RPD-NA ug/g NA 40 15-JAN-20 Thallum (TI) 0.181 0.189 ug/g 4.0 30 15-JAN-20 Uranium (U) 0.718 0.737 ug/g 2.5 30 15-JAN-20 Vanadium (V) 33.9 33.1 ug/g 4.3 30 15-JAN-20 Vanadium (V) 33.9 33.1 ug/g 4.3 30 15-JAN-20 WG3257746- LCS LCS 4 80-120 15-JAN-20 Arsenic (As) <t< td=""><td>Chromium (Cr)</td><td></td><td>24.5</td><td>24.5</td><td></td><td>ug/g</td><td>0.1</td><td>30</td><td>15-JAN-20</td></t<>	Chromium (Cr)		24.5	24.5		ug/g	0.1	30	15-JAN-20
Lead (Pb) 440 446 ug/g 1.3 40 15-JAN-20 Molybdenum (Mo) 0.51 0.54 ug/g 4.9 40 15-JAN-20 Nickel (Ni) 28.9 28.4 ug/g 1.9 30 15-JAN-20 Selenium (Se) 0.26 0.26 ug/g 0.2 30 15-JAN-20 Silver (Ag) <0.10	Cobalt (Co)		8.52	8.58		ug/g	0.7	30	15-JAN-20
Molybdenum (Mo) 0.51 0.54 ug/g 4.9 40 15-JAN-20 Nickel (Ni) 28.9 28.4 ug/g 1.9 30 15-JAN-20 Selenium (Se) 0.26 0.26 ug/g 0.2 30 15-JAN-20 Silver (Ag) <0.10 <0.10 RPD-NA ug/g N/A 40 15-JAN-20 Thallium (TI) 0.181 0.189 ug/g 4.0 30 15-JAN-20 Uranium (U) 0.718 0.737 ug/g 2.5 30 15-JAN-20 Vanadium (V) 33.9 33.1 ug/g 2.4 30 15-JAN-20 Zinc (Zn) 884 847 ug/g 4.3 30 15-JAN-20 WG3257746-4 LCS LCS Antimony (Sb) 106.7 % 80-120 15-JAN-20 Arsenic (As) 100.8 % 80-120 15-JAN-20 Beryllium (Be) 101.5 % 80-120 15-JAN-20 Boron (B) 96.2<	Copper (Cu)		23.8	23.5		ug/g	1.2	30	15-JAN-20
Nickel (Ni)	Lead (Pb)		440	446		ug/g	1.3	40	15-JAN-20
Selenium (Se) 0.26 0.26 ug/g 0.2 30 15-JAN-20 Silver (Ag) <0.10 <0.10 RPD-NA ug/g N/A 40 15-JAN-20 Thallium (TI) 0.181 0.189 ug/g 4.0 30 15-JAN-20 Uranium (U) 0.718 0.737 ug/g 2.5 30 15-JAN-20 Vanadium (V) 33.9 33.1 ug/g 2.4 30 15-JAN-20 Zinc (Zn) 884 847 ug/g 4.3 30 15-JAN-20 WG3257746-4 LCS LCS 4 80-120 15-JAN-20 Arsenic (As) 106.7 % 80-120 15-JAN-20 Barium (Ba) 101.7 % 80-120 15-JAN-20 Beryllium (Be) 101.5 % 80-120 15-JAN-20 Borno (B) 96.2 % 80-120 15-JAN-20 Cadmium (Cd) 98.4 % 80-120 15-JAN-20 Cobalt (Co) 101.6	Molybdenum (Mo)		0.51	0.54		ug/g	4.9	40	15-JAN-20
Silver (Ag) <0.10 <0.10 RPD-NA ug/g N/A 40 15-JAN-20 Thallium (TI) 0.181 0.189 ug/g 4.0 30 15-JAN-20 Uranium (U) 0.718 0.737 ug/g 2.5 30 15-JAN-20 Vanadium (V) 33.9 33.1 ug/g 2.4 30 15-JAN-20 Zinc (Zn) 884 847 ug/g 4.3 30 15-JAN-20 WG3257746-4 LCS LCS Antimony (Sb) 80-120 15-JAN-20 Arsenic (As) 100.8 % 80-120 15-JAN-20 Baryllium (Ba) 101.7 % 80-120 15-JAN-20 Beryllium (Be) 101.5 % 80-120 15-JAN-20 Boron (B) 96.2 % 80-120 15-JAN-20 Cadmium (Cd) 98.4 % 80-120 15-JAN-20 Chromium (Cr) 100.2 % 80-120 15-JAN-20 Copper (Cu) 98.8 %	Nickel (Ni)		28.9	28.4		ug/g	1.9	30	15-JAN-20
Thallium (TI) 0.181 0.189 ug/g 4.0 30 15-JAN-20 Uranium (U) 0.718 0.737 ug/g 2.5 30 15-JAN-20 Vanadium (V) 33.9 33.1 ug/g 2.4 30 15-JAN-20 Zinc (Zn) 884 847 ug/g 4.3 30 15-JAN-20 WG3257746-4 LCS LCS Ug/g 4.3 30 15-JAN-20 Arsenic (As) 106.7 % 80-120 15-JAN-20 Arsenic (As) 100.8 % 80-120 15-JAN-20 Barium (Ba) 101.7 % 80-120 15-JAN-20 Beryllium (Be) 101.5 % 80-120 15-JAN-20 Boron (B) 96.2 % 80-120 15-JAN-20 Cadmium (Cd) 98.4 % 80-120 15-JAN-20 Chromium (Cr) 100.2 % 80-120 15-JAN-20 Copper (Cu) 98.8 % 80-120 15-JAN-20	Selenium (Se)		0.26	0.26		ug/g	0.2	30	15-JAN-20
Uranium (U) 0.718 0.737 ug/g 2.5 30 15-JAN-20 Vanadium (V) 33.9 33.1 ug/g 2.4 30 15-JAN-20 Zinc (Zn) 884 847 ug/g 4.3 30 15-JAN-20 WG3257746-4 LCS LCS 106.7 % 80-120 15-JAN-20 Arsenic (As) 100.8 % 80-120 15-JAN-20 Barium (Ba) 101.7 % 80-120 15-JAN-20 Beryllium (Be) 101.5 % 80-120 15-JAN-20 Boron (B) 96.2 % 80-120 15-JAN-20 Cadmium (Cd) 98.4 % 80-120 15-JAN-20 Chromium (Cr) 100.2 % 80-120 15-JAN-20 Cobalt (Co) 101.6 % 80-120 15-JAN-20 Copper (Cu) 98.8 % 80-120 15-JAN-20 Molybdenum (Mo) 103.2 % 80-120 15-JAN-20 Nickel (Ni)	Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	15-JAN-20
Vanadium (V) 33.9 33.1 ug/g 2.4 30 15-JAN-20 Zinc (Zn) 884 847 ug/g 4.3 30 15-JAN-20 WG3257746-4 LCS Antimony (Sb) 106.7 % 80-120 15-JAN-20 Arsenic (As) 100.8 % 80-120 15-JAN-20 Barium (Ba) 101.7 % 80-120 15-JAN-20 Beryllium (Be) 101.5 % 80-120 15-JAN-20 Boron (B) 96.2 % 80-120 15-JAN-20 Cadmium (Cd) 98.4 % 80-120 15-JAN-20 Chromium (Cr) 100.2 % 80-120 15-JAN-20 Cobalt (Co) 101.6 % 80-120 15-JAN-20 Copper (Cu) 98.8 % 80-120 15-JAN-20 Molybdenum (Mo) 103.2 % 80-120 15-JAN-20 Mickel (Ni) 99.8 % 80-120 15-JAN-20 Selenium (Se) 98.9	Thallium (TI)		0.181	0.189		ug/g	4.0	30	15-JAN-20
Zinc (Zn) 884 847 ug/g 4.3 30 15-JAN-20 WG3257746-4 LCS LCS LCS Sentimony (Sb) 106.7 % 80-120 15-JAN-20 Arsenic (As) 100.8 % 80-120 15-JAN-20 Barium (Ba) 101.7 % 80-120 15-JAN-20 Beryllium (Be) 101.5 % 80-120 15-JAN-20 Boron (B) 96.2 % 80-120 15-JAN-20 Cadmium (Cd) 98.4 % 80-120 15-JAN-20 Chromium (Cr) 100.2 % 80-120 15-JAN-20 Cobalt (Co) 101.6 % 80-120 15-JAN-20 Copper (Cu) 98.8 % 80-120 15-JAN-20 Molybdenum (Mo) 103.2 % 80-120 15-JAN-20 Mickel (Ni) 99.8 % 80-120 15-JAN-20 Selenium (Se) 98.9 % 80-120 15-JAN-20 Silver (Ag) 101.9 % <t< td=""><td>Uranium (U)</td><td></td><td>0.718</td><td>0.737</td><td></td><td>ug/g</td><td>2.5</td><td>30</td><td>15-JAN-20</td></t<>	Uranium (U)		0.718	0.737		ug/g	2.5	30	15-JAN-20
WG3257746-4 Antimony (Sb) LCS Antimony (Sb) 106.7 % 80-120 15-JAN-20 Arsenic (As) 100.8 % 80-120 15-JAN-20 Barium (Ba) 101.7 % 80-120 15-JAN-20 Beryllium (Be) 101.5 % 80-120 15-JAN-20 Boron (B) 96.2 % 80-120 15-JAN-20 Cadmium (Cd) 98.4 % 80-120 15-JAN-20 Chromium (Cr) 100.2 % 80-120 15-JAN-20 Cobalt (Co) 101.6 % 80-120 15-JAN-20 Copper (Cu) 98.8 % 80-120 15-JAN-20 Molybdenum (Mo) 103.2 % 80-120 15-JAN-20 Mickel (Ni) 99.8 % 80-120 15-JAN-20 Selenium (Se) 98.9 % 80-120 15-JAN-20 Silver (Ag) 101.9 % 80-120 15-JAN-20	Vanadium (V)		33.9	33.1		ug/g	2.4	30	15-JAN-20
Antimony (Sb) 106.7 % 80-120 15-JAN-20 Arsenic (As) 100.8 % 80-120 15-JAN-20 Barium (Ba) 101.7 % 80-120 15-JAN-20 Beryllium (Be) 101.5 % 80-120 15-JAN-20 Boron (B) 96.2 % 80-120 15-JAN-20 Cadmium (Cd) 98.4 % 80-120 15-JAN-20 Chromium (Cr) 100.2 % 80-120 15-JAN-20 Cobalt (Co) 101.6 % 80-120 15-JAN-20 Copper (Cu) 98.8 % 80-120 15-JAN-20 Lead (Pb) 98.9 % 80-120 15-JAN-20 Molybdenum (Mo) 103.2 % 80-120 15-JAN-20 Nickel (Ni) 99.8 % 80-120 15-JAN-20 Selenium (Se) 98.9 % 80-120 15-JAN-20 Silver (Ag) 101.9 % 80-120 15-JAN-20	Zinc (Zn)		884	847		ug/g	4.3	30	15-JAN-20
Arsenic (As) 100.8 % 80-120 15-JAN-20 Barium (Ba) 101.7 % 80-120 15-JAN-20 Beryllium (Be) 101.5 % 80-120 15-JAN-20 Boron (B) 96.2 % 80-120 15-JAN-20 Cadmium (Cd) 98.4 % 80-120 15-JAN-20 Chromium (Cr) 100.2 % 80-120 15-JAN-20 Cobalt (Co) 101.6 % 80-120 15-JAN-20 Copper (Cu) 98.8 % 80-120 15-JAN-20 Lead (Pb) 98.9 % 80-120 15-JAN-20 Molybdenum (Mo) 103.2 % 80-120 15-JAN-20 Nickel (Ni) 99.8 % 80-120 15-JAN-20 Selenium (Se) 98.9 % 80-120 15-JAN-20 Silver (Ag) 101.9 % 80-120 15-JAN-20									
Barium (Ba) 101.7 % 80-120 15-JAN-20 Beryllium (Be) 101.5 % 80-120 15-JAN-20 Boron (B) 96.2 % 80-120 15-JAN-20 Cadmium (Cd) 98.4 % 80-120 15-JAN-20 Chromium (Cr) 100.2 % 80-120 15-JAN-20 Cobalt (Co) 101.6 % 80-120 15-JAN-20 Copper (Cu) 98.8 % 80-120 15-JAN-20 Lead (Pb) 98.9 % 80-120 15-JAN-20 Molybdenum (Mo) 103.2 % 80-120 15-JAN-20 Nickel (Ni) 99.8 % 80-120 15-JAN-20 Selenium (Se) 98.9 % 80-120 15-JAN-20 Silver (Ag) 101.9 % 80-120 15-JAN-20	Antimony (Sb)			106.7				80-120	15-JAN-20
Beryllium (Be) 101.5 % 80-120 15-JAN-20 Boron (B) 96.2 % 80-120 15-JAN-20 Cadmium (Cd) 98.4 % 80-120 15-JAN-20 Chromium (Cr) 100.2 % 80-120 15-JAN-20 Cobalt (Co) 101.6 % 80-120 15-JAN-20 Copper (Cu) 98.8 % 80-120 15-JAN-20 Lead (Pb) 98.9 % 80-120 15-JAN-20 Molybdenum (Mo) 103.2 % 80-120 15-JAN-20 Nickel (Ni) 99.8 % 80-120 15-JAN-20 Selenium (Se) 98.9 % 80-120 15-JAN-20 Silver (Ag) 101.9 % 80-120 15-JAN-20								80-120	15-JAN-20
Boron (B) 96.2 % 80-120 15-JAN-20 Cadmium (Cd) 98.4 % 80-120 15-JAN-20 Chromium (Cr) 100.2 % 80-120 15-JAN-20 Cobalt (Co) 101.6 % 80-120 15-JAN-20 Copper (Cu) 98.8 % 80-120 15-JAN-20 Lead (Pb) 98.9 % 80-120 15-JAN-20 Molybdenum (Mo) 103.2 % 80-120 15-JAN-20 Nickel (Ni) 99.8 % 80-120 15-JAN-20 Selenium (Se) 98.9 % 80-120 15-JAN-20 Silver (Ag) 101.9 % 80-120 15-JAN-20								80-120	15-JAN-20
Cadmium (Cd) 98.4 % 80-120 15-JAN-20 Chromium (Cr) 100.2 % 80-120 15-JAN-20 Cobalt (Co) 101.6 % 80-120 15-JAN-20 Copper (Cu) 98.8 % 80-120 15-JAN-20 Lead (Pb) 98.9 % 80-120 15-JAN-20 Molybdenum (Mo) 103.2 % 80-120 15-JAN-20 Nickel (Ni) 99.8 % 80-120 15-JAN-20 Selenium (Se) 98.9 % 80-120 15-JAN-20 Silver (Ag) 101.9 % 80-120 15-JAN-20	Beryllium (Be)							80-120	15-JAN-20
Chromium (Cr) 100.2 % 80-120 15-JAN-20 Cobalt (Co) 101.6 % 80-120 15-JAN-20 Copper (Cu) 98.8 % 80-120 15-JAN-20 Lead (Pb) 98.9 % 80-120 15-JAN-20 Molybdenum (Mo) 103.2 % 80-120 15-JAN-20 Nickel (Ni) 99.8 % 80-120 15-JAN-20 Selenium (Se) 98.9 % 80-120 15-JAN-20 Silver (Ag) 101.9 % 80-120 15-JAN-20								80-120	15-JAN-20
Cobalt (Co) 101.6 % 80-120 15-JAN-20 Copper (Cu) 98.8 % 80-120 15-JAN-20 Lead (Pb) 98.9 % 80-120 15-JAN-20 Molybdenum (Mo) 103.2 % 80-120 15-JAN-20 Nickel (Ni) 99.8 % 80-120 15-JAN-20 Selenium (Se) 98.9 % 80-120 15-JAN-20 Silver (Ag) 101.9 % 80-120 15-JAN-20				98.4				80-120	15-JAN-20
Copper (Cu) 98.8 % 80-120 15-JAN-20 Lead (Pb) 98.9 % 80-120 15-JAN-20 Molybdenum (Mo) 103.2 % 80-120 15-JAN-20 Nickel (Ni) 99.8 % 80-120 15-JAN-20 Selenium (Se) 98.9 % 80-120 15-JAN-20 Silver (Ag) 101.9 % 80-120 15-JAN-20				100.2		%		80-120	15-JAN-20
Lead (Pb) 98.9 % 80-120 15-JAN-20 Molybdenum (Mo) 103.2 % 80-120 15-JAN-20 Nickel (Ni) 99.8 % 80-120 15-JAN-20 Selenium (Se) 98.9 % 80-120 15-JAN-20 Silver (Ag) 101.9 % 80-120 15-JAN-20	Cobalt (Co)							80-120	15-JAN-20
Molybdenum (Mo) 103.2 % 80-120 15-JAN-20 Nickel (Ni) 99.8 % 80-120 15-JAN-20 Selenium (Se) 98.9 % 80-120 15-JAN-20 Silver (Ag) 101.9 % 80-120 15-JAN-20								80-120	15-JAN-20
Nickel (Ni) 99.8 % 80-120 15-JAN-20 Selenium (Se) 98.9 % 80-120 15-JAN-20 Silver (Ag) 101.9 % 80-120 15-JAN-20								80-120	15-JAN-20
Selenium (Se) 98.9 % 80-120 15-JAN-20 Silver (Ag) 101.9 % 80-120 15-JAN-20	Molybdenum (Mo)			103.2				80-120	15-JAN-20
Silver (Ag) 101.9 % 80-120 15-JAN-20	Nickel (Ni)			99.8				80-120	15-JAN-20
	Selenium (Se)			98.9		%		80-120	15-JAN-20
Thallium (TI) 95.5 % 80-120 15-JAN-20	Silver (Ag)			101.9		%		80-120	15-JAN-20
	Thallium (TI)			95.5		%		80-120	15-JAN-20



Workorder: L2404776 Report Date: 20-JAN-20 Page 4 of 7

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	Soil							
Batch R4969787								
WG3257746-4 LCS								
Uranium (U)			99.6		%		80-120	15-JAN-20
Vanadium (V)			104.2		%		80-120	15-JAN-20
Zinc (Zn)			92.8		%		80-120	15-JAN-20
WG3257746-1 MB Antimony (Sb)			<0.10		mg/kg		0.1	15-JAN-20
Arsenic (As)			<0.10		mg/kg		0.1	15-JAN-20
Barium (Ba)			<0.50		mg/kg		0.5	15-JAN-20
Beryllium (Be)			<0.10		mg/kg		0.1	15-JAN-20
Boron (B)			<5.0		mg/kg		5	15-JAN-20
Cadmium (Cd)			<0.020		mg/kg		0.02	15-JAN-20
Chromium (Cr)			<0.50		mg/kg		0.5	15-JAN-20
Cobalt (Co)			<0.10		mg/kg		0.1	15-JAN-20
Copper (Cu)			<0.50		mg/kg		0.5	15-JAN-20
Lead (Pb)			<0.50		mg/kg		0.5	15-JAN-20
Molybdenum (Mo)			<0.10		mg/kg		0.1	15-JAN-20
Nickel (Ni)			<0.50		mg/kg		0.5	15-JAN-20
Selenium (Se)			<0.20		mg/kg		0.2	15-JAN-20
Silver (Ag)			<0.10		mg/kg		0.1	15-JAN-20
Thallium (TI)			< 0.050		mg/kg		0.05	15-JAN-20
Uranium (U)			< 0.050		mg/kg		0.05	15-JAN-20
Vanadium (V)			<0.20		mg/kg		0.2	15-JAN-20
Zinc (Zn)			<2.0		mg/kg		2	15-JAN-20
MOISTURE-WT	Soil							
Batch R4969413								
WG3257814-3 DUP		L2404718-1						
% Moisture		12.4	13.4		%	7.6	20	15-JAN-20
WG3257814-2 LCS % Moisture			101.0		%		90-110	15-JAN-20
WG3257814-1 MB % Moisture			<0.25		%		0.25	15-JAN-20
PCB-511-WT	Soil							
Batch R4971067	-	WOODEZOOO E						
WG3257833-3 DUP Aroclor 1242		WG3257833-5 <0.010	<0.010	RPD-NA	ug/g	N/A	40	16-JAN-20



Workorder: L2404776 Report Date: 20-JAN-20 Page 5 of 7

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test		Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB-511-WT		Soil							
Batch R4	971067								
WG3257833-3 Aroclor 1248	DUP		WG3257833-5 < 0.010	<0.010	RPD-NA	ug/g	N/A	40	16-JAN-20
Aroclor 1254			<0.010	<0.010	RPD-NA	ug/g	N/A	40	16-JAN-20
Aroclor 1260			<0.010	<0.010	RPD-NA	ug/g	N/A	40	16-JAN-20
WG3257833-2 Aroclor 1242	LCS			97.7		%		60-140	16-JAN-20
Aroclor 1248				88.8		%		60-140	16-JAN-20
Aroclor 1254				100.2		%		60-140	16-JAN-20
Aroclor 1260				104.2		%		60-140	16-JAN-20
WG3257833-1 Aroclor 1242	MB			<0.010		ug/g		0.01	16-JAN-20
Aroclor 1248				<0.010		ug/g		0.01	16-JAN-20
Aroclor 1254				<0.010		ug/g		0.01	16-JAN-20
Aroclor 1260				<0.010		ug/g		0.01	16-JAN-20
Surrogate: d14-	Terpheny	yl		88.4		%		60-140	16-JAN-20
WG3257833-4	MS		WG3257833-5						
Aroclor 1242				100.8		%		60-140	16-JAN-20
Aroclor 1254				108.1		%		60-140	16-JAN-20
Aroclor 1260				120.0		%		60-140	16-JAN-20
PH-WT		Soil							
Batch R4	970278								
WG3256754-1	DUP		L2399471-16	7.50		-11			
рН			7.60	7.59	J	pH units	0.01	0.3	15-JAN-20
WG3257214-1 pH	LCS			6.95		pH units		6.9-7.1	15-JAN-20
SAR-R511-WT		Soil							
Batch R4	969489								
WG3257760-4	DUP		WG3257760-3						
Calcium (Ca)			36.7	37.0		mg/L	0.8	30	15-JAN-20
Sodium (Na)	`		30.7	30.4		mg/L	1.0	30	15-JAN-20
Magnesium (Mg			14.5	14.7		mg/L	1.4	30	15-JAN-20
WG3257760-2 Calcium (Ca)	IRM		WT SAR3	110.1		%		70-130	15-JAN-20
Sodium (Na)				101.7		%		70-130	15-JAN-20
Magnesium (Mg	1)			110.1		%		70-130	15-JAN-20
WG3257760-5	LCS								



Workorder: L2404776 Report Date: 20-JAN-20 Page 6 of 7

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SAR-R511-WT	Soil							
Batch R4969489 WG3257760-5 LCS								
Calcium (Ca)			103.0		%		80-120	15-JAN-20
Sodium (Na)			100.8		%		80-120	15-JAN-20
Magnesium (Mg)			101.6		%		80-120	15-JAN-20
WG3257760-1 MB								
Calcium (Ca)			<0.50		mg/L		0.5	15-JAN-20
Sodium (Na)			<0.50		mg/L		0.5	15-JAN-20
Magnesium (Mg)			<0.50		mg/L		0.5	15-JAN-20

Workorder: L2404776 Report Date: 20-JAN-20

Client: TERRAPROBE-BRAMPTON Page 7 of 7

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

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 predetermined 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.

Environmental

Chain of Custody (COC) / Analytical **Request Form**

Canada Toll Free: 1 800 668 9878

COC Number: 15 -

	www.alsglobal.com)								
Report To	Contact and company nam	ne below will app	ear on the final repor	t		Report Forma					raval Re	low - Ple	ase conf	irm all E	&P TAT	s with y	your Alt	l - surch	erges w	ill apply		
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Contact:	Kossay Makhzoumi	****			Quality Control	(QC) Report with Re	port 🗹 YES	S NO	> ê	4	day [F	P4]			ţċ	1	Busi	ness c	ay (E	.1]]
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Street:	11 Indeli Lane				Email 1 or Fax	kmakhzoumi@terra	aprobe.ca			Date a	nd Tim	e Requi	red for a	H E&P 1	TATs:							
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TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 13-JAN-20

Report Date: 15-JAN-20 13:26 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2404775

Project P.O. #: NOT SUBMITTED

Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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ADDRESS: 5730 Coopers Avenue, Unit #26 , Mississauga, ON L4Z 2E9 Canada | Phone: +1 905 507 6910 | Fax: +1 905 507 6927 ALS CANADA LTD Part of the ALS Group An ALS Limited Company





L2404775 CONT'D....

Job Reference: 1-19-0603-42

PAGE 2 of 5

15-JAN-20 13:26 (MT)

Summary of Guideline Exceedances

Guideline						
ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit
Ontario Reg	gulation 153/04 - April 1	5, 2011 Standards - T3-Soil-Res/Pa	rk/Inst. Property Use (Coarse)			
L2404775-1 DUP 4	DUP 4	Polycyclic Aromatic	Acenaphthylene	0.300	0.15	ug/g
		Hydrocarbons	Benzo(a)pyrene	0.516	0.3	ug/g
			Fluoranthene	2.08	0.69	ug/g
Ontario Reg	gulation 153/04 - April 1	5, 2011 Standards - T3-Soil-Res/Pa	rk/Inst. Property Use (Fine)			
L2404775-1	DUP 4	Polycyclic Aromatic	Acenaphthylene	0.300	0.17	ug/g
	Hydrocarbons	Benzo(a)pyrene	0.516	0.3	ug/g	
			Fluoranthene	2.08	0.69	ug/g

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2404775 CONT'D....

Job Reference: 1-19-0603-42

PAGE 3 of 5

15-JAN-20 13:26 (MT)

Physical Tests - SOIL

,		
	Lab ID	L2404775-1
	Sample Date	07-JAN-20
	Sample ID	DUP 4
Analyte	Guide Limits Unit #1 #2	
% Moisture	%	13.9

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2404775 CONT'D.... Job Reference: 1-19-0603-42 PAGE 4 of 5 15-JAN-20 13:26 (MT)

Polycyclic Aromatic Hydrocarbons - SOIL									
		Sample	Lab ID e Date ple ID	L2404775-1 07-JAN-20 DUP 4					
Analyte	Unit	Guide #1	Limits #2						
Acenaphthene	ug/g	7.9	58	0.068					
Acenaphthylene	ug/g	0.15	0.17	0.300					
Anthracene	ug/g	0.67	0.74	0.124					
Benzo(a)anthracene	ug/g	0.5	0.63	0.341 ^R					
Benzo(a)pyrene	ug/g	0.3	0.3	0.516					
Benzo(b)fluoranthene	ug/g	0.78	0.78	0.626					
Benzo(g,h,i)perylene	ug/g	6.6	7.8	0.535					
Benzo(k)fluoranthene	ug/g	0.78	0.78	0.181					
Chrysene	ug/g	7	7.8	0.632					
Dibenzo(ah)anthracene	ug/g	0.1	0.1	0.065					
Fluoranthene	ug/g	0.69	0.69	2.08					
Fluorene	ug/g	62	69	0.252					
Indeno(1,2,3-cd)pyrene	ug/g	0.38	0.48	0.373					
1+2-Methylnaphthalenes	ug/g	0.99	3.4	0.178					
1-Methylnaphthalene	ug/g	0.99	3.4	0.091					
2-Methylnaphthalene	ug/g	0.99	3.4	0.087					
Naphthalene	ug/g	0.6	0.75	0.205					
Phenanthrene	ug/g	6.2	7.8	2.90					
Pyrene	ug/g	78	78	2.21					
Surrogate: 2-Fluorobiphenyl	%	-	-	90.7					
Surrogate: p-Terphenyl d14	%	-	-	86.0					

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.

Reference Information

L2404775 CONT'D....
Job Reference: 1-19-0603-42
PAGE 5 of 5
15-JAN-20 13:26 (MT)

Qualifiers for Individual Parameters Listed:

Qualifier Description

R The ion abundance ratio(s) did not meet the acceptance criteria. Value is an estimated maximum.

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference**
METHYLNAPS-CALC-W	T 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 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).

**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

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.



Workorder: L2404775 Report Date: 15-JAN-20 Page 1 of 4

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MOISTURE-WT	Soil							
Batch R4969413								
WG3257814-3 DUP % Moisture		L2404718-1 12.4	13.4		%	7.6	20	15-JAN-20
WG3257814-2 LCS								
% Moisture			101.0		%		90-110	15-JAN-20
WG3257814-1 MB % Moisture			<0.25		%		0.25	15-JAN-20
PAH-511-WT	Soil							
Batch R4968999								
WG3257515-3 DUP		WG3257515-5	-0.020	DDD NA	/a	N1/A	40	45 1411 00
1-Methylnaphthalene		<0.030 <0.030	<0.030	RPD-NA	ug/g	N/A	40	15-JAN-20
2-Methylnaphthalene			<0.030	RPD-NA	ug/g	N/A	40	15-JAN-20
Acenaphthelene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	15-JAN-20
Acenaphthylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	15-JAN-20
Anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	15-JAN-20
Benzo(a)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	15-JAN-20
Benzo(a)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	15-JAN-20
Benzo(b)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	15-JAN-20
Benzo(g,h,i)perylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	15-JAN-20
Benzo(k)fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	15-JAN-20
Chrysene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	15-JAN-20
Dibenzo(ah)anthracene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	15-JAN-20
Fluoranthene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	15-JAN-20
Fluorene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	15-JAN-20
Indeno(1,2,3-cd)pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	15-JAN-20
Naphthalene		<0.013	<0.013	RPD-NA	ug/g	N/A	40	15-JAN-20
Phenanthrene		<0.046	<0.046	RPD-NA	ug/g	N/A	40	15-JAN-20
Pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	15-JAN-20
WG3257515-2 LCS 1-Methylnaphthalene			89.0		%		50-140	15-JAN-20
2-Methylnaphthalene			83.6		%		50-140	15-JAN-20
Acenaphthene			89.3		%		50-140	15-JAN-20
Acenaphthylene			89.9		%		50-140	15-JAN-20
Anthracene			89.1		%		50-140	15-JAN-20
Benzo(a)anthracene			90.0		%		50-140	15-JAN-20
Benzo(a)pyrene			87.6		%		50-140	15-JAN-20
2020(0/0)10110			50				JU-1 -1 U	IO OMIN ZU



Workorder: L2404775 Report Date: 15-JAN-20 Page 2 of 4

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Soil						
Batch R4968999							
WG3257515-2 LCS		07.4		0/			.=
Benzo(b)fluoranthene		87.4 86.0		%		50-140	15-JAN-20
Benzo(g,h,i)perylene						50-140	15-JAN-20
Benzo(k)fluoranthene		91.0		%		50-140	15-JAN-20
Chrysene		100.4		%		50-140	15-JAN-20
Dibenzo(ah)anthracene		79.9		%		50-140	15-JAN-20
Fluoranthene		87.1		%		50-140	15-JAN-20
Fluorene		87.2		%		50-140	15-JAN-20
Indeno(1,2,3-cd)pyrene		79.8		%		50-140	15-JAN-20
Naphthalene		87.6		%		50-140	15-JAN-20
Phenanthrene		90.3		%		50-140	15-JAN-20
Pyrene		87.3		%		50-140	15-JAN-20
WG3257515-1 MB 1-Methylnaphthalene		<0.030		ug/g		0.03	15-JAN-20
2-Methylnaphthalene		<0.030		ug/g		0.03	15-JAN-20
Acenaphthene		<0.050		ug/g		0.05	15-JAN-20
Acenaphthylene		<0.050		ug/g		0.05	15-JAN-20
Anthracene		<0.050		ug/g		0.05	15-JAN-20
Benzo(a)anthracene		<0.050		ug/g		0.05	15-JAN-20
Benzo(a)pyrene		<0.050		ug/g		0.05	15-JAN-20
Benzo(b)fluoranthene		<0.050		ug/g		0.05	15-JAN-20
Benzo(g,h,i)perylene		<0.050		ug/g		0.05	15-JAN-20
Benzo(k)fluoranthene		<0.050		ug/g		0.05	15-JAN-20
Chrysene		<0.050		ug/g		0.05	15-JAN-20
Dibenzo(ah)anthracene		<0.050		ug/g		0.05	15-JAN-20
Fluoranthene		<0.050		ug/g		0.05	15-JAN-20
Fluorene		<0.050		ug/g		0.05	15-JAN-20
Indeno(1,2,3-cd)pyrene		<0.050		ug/g		0.05	15-JAN-20
Naphthalene		<0.013		ug/g		0.013	15-JAN-20
Phenanthrene		<0.046		ug/g		0.046	15-JAN-20
Pyrene		<0.050		ug/g		0.05	15-JAN-20
Surrogate: 2-Fluorobiphe	enyl	91.0		%		50-140	15-JAN-20
Surrogate: p-Terphenyl o		84.8		%		50-140	15-JAN-20
WG3257515-4 MS	WG325751					-	10 0/11 20
1-Methylnaphthalene	110023731	88.5		%		50-140	15-JAN-20



Workorder: L2404775 Report Date: 15-JAN-20 Page 3 of 4

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Soil							
Batch R4968999								
WG3257515-4 MS		WG3257515-5			0.4			
2-Methylnaphthalene			84.1		%		50-140	15-JAN-20
Acenaphthene			89.1		%		50-140	15-JAN-20
Acenaphthylene			88.8		%		50-140	15-JAN-20
Anthracene			88.6		%		50-140	15-JAN-20
Benzo(a)anthracene			88.9		%		50-140	15-JAN-20
Benzo(a)pyrene			86.8		%		50-140	15-JAN-20
Benzo(b)fluoranthene			86.6		%		50-140	15-JAN-20
Benzo(g,h,i)perylene			83.3		%		50-140	15-JAN-20
Benzo(k)fluoranthene			90.0		%		50-140	15-JAN-20
Chrysene			99.8		%		50-140	15-JAN-20
Dibenzo(ah)anthracene			76.3		%		50-140	15-JAN-20
Fluoranthene			86.3		%		50-140	15-JAN-20
Fluorene			87.0		%		50-140	15-JAN-20
Indeno(1,2,3-cd)pyrene			78.4		%		50-140	15-JAN-20
Naphthalene			86.8		%		50-140	15-JAN-20
Phenanthrene			89.7		%		50-140	15-JAN-20
Pyrene			86.4		%		50-140	15-JAN-20

Workorder: L2404775 Report Date: 15-JAN-20

Client: TERRAPROBE-BRAMPTON Page 4 of 4

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

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 predetermined 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.

manomental

Chain of Custody (COC) / Analytical **Request Form**

COC Number: 15 -

Canada Toll Free: 1 800 668 9878

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	Company address below	w will appear on the fina	al report		Select Distribut	elect Distribution:			Statutory holiday [E0]													
Street:	11 Indell Lane				Email 1 or Fax	kmakhzoumi@terra	aprobe.ca			Date and Time Required for all E&P TATs:							\Box					
City/Province:	Brampton				Email 2	mail 2			For tes	ests that can not be performed according to the service level selected, you will be contacted.												
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Contact:	Lorena Rossi				Email 2														ļ		و	١
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TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 13-JAN-20

Report Date: 15-JAN-20 13:23 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2404774

Project P.O. #: NOT SUBMITTED

Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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ADDRESS: 5730 Coopers Avenue, Unit #26 , Mississauga, ON L4Z 2E9 Canada | Phone: +1 905 507 6910 | Fax: +1 905 507 6927 ALS CANADA LTD Part of the ALS Group An ALS Limited Company





L2404774 CONT'D....

Job Reference: 1-19-0603-42

PAGE 2 of 8

15-JAN-20 13:23 (MT)

Summary of Guideline Exceedances

Guideline
ALS ID Client ID Grouping Analyte Result Guideline Limit Unit

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Soil-Res/Park/Inst. Property Use (Coarse)

(No parameter exceedances)

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Soil-Res/Park/Inst. Property Use (Fine)

(No parameter exceedances)



L2404774 CONT'D....

Job Reference: 1-19-0603-42

PAGE 3 of 8

15-JAN-20 13:23 (MT)

Physical Tests - SOIL

i ilyolodi rooto ooil		
	Lab ID	L2404774-1
	Sample Date	07-JAN-20
	Sample ID	DUP 5
	Guide Limits	
Analyte	Unit #1 #2	
% Moisture	%	12.0

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



L2404774 CONT'D....

Job Reference: 1-19-0603-42

PAGE 4 of 8

15-JAN-20 13:23 (MT)

Volatile Organic Compounds - SOIL

Lab ID	L2404774-1
Sample Date	07-JAN-20
Sample ID	DUP 5

	Unit	Guide		
Analyte	Unit	#1	#2	
Acetone	ug/g	16	28	<0.50
Benzene	ug/g	0.21	0.17	<0.0068
Bromodichloromethane	ug/g	13	13	<0.050
Bromoform	ug/g	0.27	0.26	<0.050
Bromomethane	ug/g	0.05	0.05	<0.050
Carbon tetrachloride	ug/g	0.05	0.12	<0.050
Chlorobenzene	ug/g	2.4	2.7	<0.050
Dibromochloromethane	ug/g	9.4	9.4	<0.050
Chloroform	ug/g	0.05	0.18	<0.050
1,2-Dibromoethane	ug/g	0.05	0.05	<0.050
1,2-Dichlorobenzene	ug/g	3.4	4.3	<0.050
1,3-Dichlorobenzene	ug/g	4.8	6	<0.050
1,4-Dichlorobenzene	ug/g	0.083	0.097	<0.050
Dichlorodifluoromethane	ug/g	16	25	<0.050
1,1-Dichloroethane	ug/g	3.5	11	<0.050
1,2-Dichloroethane	ug/g	0.05	0.05	<0.050
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.050
cis-1,2-Dichloroethylene	ug/g	3.4	30	<0.050
trans-1,2-Dichloroethylene	ug/g	0.084	0.75	<0.050
Methylene Chloride	ug/g	0.1	0.96	<0.050
1,2-Dichloropropane	ug/g	0.05	0.085	<0.050
cis-1,3-Dichloropropene	ug/g	-	-	<0.030
trans-1,3-Dichloropropene	ug/g	-	-	<0.030
1,3-Dichloropropene (cis & trans)	ug/g	0.05	0.083	<0.042
Ethylbenzene	ug/g	2	15	<0.018
n-Hexane	ug/g	2.8	34	<0.050
Methyl Ethyl Ketone	ug/g	16	44	<0.50
Methyl Isobutyl Ketone	ug/g	1.7	4.3	<0.50
MTBE	ug/g	0.75	1.4	<0.050
Styrene	ug/g	0.7	2.2	<0.050

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



L2404774 CONT'D....

Job Reference: 1-19-0603-42

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15-JAN-20 13:23 (MT)

Volatile Organic Compounds - SOIL

		Sample Sam	L2404774-1 07-JAN-20 DUP 5	
Analyte	Unit	Guide #1	Limits #2	
1,1,1,2-Tetrachloroethane	ug/g	0.058	0.05	<0.050
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.050
Tetrachloroethylene	ug/g	0.28	2.3	<0.050
Toluene	ug/g	2.3	6	<0.080
1,1,1-Trichloroethane	ug/g	0.38	3.4	<0.050
1,1,2-Trichloroethane	ug/g	0.05	0.05	<0.050
Trichloroethylene	ug/g	0.061	0.52	<0.010
Trichlorofluoromethane	ug/g	4	5.8	<0.050
Vinyl chloride	ug/g	0.02	0.022	<0.020
o-Xylene	ug/g	-	-	<0.020
m+p-Xylenes	ug/g	-	-	<0.030
Xylenes (Total)	ug/g	3.1	25	<0.050
Surrogate: 4-Bromofluorobenzene	%	-	-	106.4
Surrogate: 1,4-Difluorobenzene	%	-	-	119.2

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



L2404774 CONT'D....

Job Reference: 1-19-0603-42

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15-JAN-20 13:23 (MT)

Hydrocarbons - SOIL

		Sample Sam	L2404774-1 07-JAN-20 DUP 5	
Analyte	Unit	Guide #1	Limits #2	
F1 (C6-C10)	ug/g	55	65	<5.0
F1-BTEX	ug/g	55	65	<5.0
F2 (C10-C16)	ug/g	98	150	<10
F3 (C16-C34)	ug/g	300	1300	<50
F4 (C34-C50)	ug/g	2800	5600	<50
Total Hydrocarbons (C6-C50)	ug/g	-	-	<72
Chrom. to baseline at nC50		-	-	YES
Surrogate: 2-Bromobenzotrifluoride	%	-	-	102.5
Surrogate: 3,4-Dichlorotoluene	%	-	-	85.1

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

Reference Information

L2404774 CONT'D.... Job Reference: 1-19-0603-42 PAGE 7 of 8 15-JAN-20 13:23 (MT)

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference**
F1-F4-511-CALC-WT	Soil	F1-F4 Hydrocarbon Calculated Parameters	CCME CWS-PHC, Pub #1310, Dec 2001-S

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

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

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-sq 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-sq 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).

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

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

Reference Information

L2404774 CONT'D.... Job Reference: 1-19-0603-42 PAGE 8 of 8 15-JAN-20 13:23 (MT)

Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

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

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.



Report Date: 15-JAN-20 Workorder: L2404774 Page 1 of 6

TERRAPROBE-BRAMPTON Client:

11 Indell Lane

Brampton ON L6T 3Y3

Kossay Makhzoumi Contact:

Test		Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT		Soil							
	1967653								
WG3256989-4 F1 (C6-C10)	DUP		WG3256989-3 750	690		ug/g	8.5	30	15-JAN-20
WG3256989-2 F1 (C6-C10)	LCS			92.6		%		80-120	14-JAN-20
WG3256989-1 F1 (C6-C10)	MB			<5.0		ug/g		5	14-JAN-20
Surrogate: 3,4-	Dichloroto	oluene		87.0		%		60-140	14-JAN-20
WG3256989-6 F1 (C6-C10)	MS		L2404724-6	N/A	MS-B	%		-	14-JAN-20
F2-F4-511-WT		Soil							
Batch R4	1968029								
WG3256710-3 F2 (C10-C16)	DUP		WG3256710-5 <10	<10		ua/a	N1/A	20	40 14N 00
F2 (C10-C16) F3 (C16-C34)			<10 <50	<10 <50	RPD-NA RPD-NA	ug/g ug/g	N/A N/A	30 30	13-JAN-20 13-JAN-20
F4 (C34-C50)			<50 <50	<50 <50	RPD-NA RPD-NA	ug/g ug/g	N/A N/A	30	13-JAN-20 13-JAN-20
WG3256710-2	LCS				IXI D-IVA		IV/A		
F2 (C10-C16)				92.8		%		80-120	13-JAN-20
F3 (C16-C34) F4 (C34-C50)				95.3		%		80-120	13-JAN-20
,	MD			95.1		70		80-120	13-JAN-20
WG3256710-1 F2 (C10-C16)	MB			<10		ug/g		10	13-JAN-20
F3 (C16-C34)				<50		ug/g		50	13-JAN-20
F4 (C34-C50)				<50		ug/g		50	13-JAN-20
Surrogate: 2-Br	romobenz	otrifluoride		89.6		%		60-140	13-JAN-20
WG3256710-4	MS		WG3256710-5						
F2 (C10-C16)				106.2		%		60-140	13-JAN-20
F3 (C16-C34)				107.2		%		60-140	13-JAN-20
F4 (C34-C50)				106.5		%		60-140	13-JAN-20
MOISTURE-WT		Soil							
Batch R4 WG3257814-3 % Moisture	1969413 DUP		L2404718-1 12.4	13.4		%	7.6	20	15-JAN-20
WG3257814-2 % Moisture	LCS			101.0		%		90-110	15-JAN-20
WG3257814-1 % Moisture	MB			<0.25		%		0.25	15-JAN-20



Workorder: L2404774 Report Date: 15-JAN-20 Page 2 of 6

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R49676	53							
WG3256989-4 DUI 1,1,1,2-Tetrachloroet		WG3256989-		000 114	/~	11/0	40	
		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-JAN-20
1,1,2,2-Tetrachloroet		<2.0	<2.0	RPD-NA	ug/g	N/A	40	14-JAN-20
1,1,1-Trichloroethane		<2.0	<2.0	RPD-NA	ug/g	N/A	40	15-JAN-20
1,1,2-Trichloroethane	•	<1.3	<1.3	RPD-NA	ug/g	N/A	40	14-JAN-20
1,1-Dichloroethane		<2.0	<2.0	RPD-NA	ug/g	N/A	40	15-JAN-20
1,1-Dichloroethylene		<2.0	<2.0	RPD-NA	ug/g	N/A	40	15-JAN-20
1,2-Dibromoethane		<0.30	<0.30	RPD-NA	ug/g	N/A	40	14-JAN-20
1,2-Dichloroethane		<2.0	<2.0	RPD-NA	ug/g	N/A	40	15-JAN-20
1,2-Dichloropropane		<2.0	<2.0	RPD-NA	ug/g	N/A	40	15-JAN-20
Acetone		<20	<20	RPD-NA	ug/g	N/A	40	15-JAN-20
Benzene		<0.27	<0.27	RPD-NA	ug/g	N/A	40	15-JAN-20
Bromodichlorometha	ne	<5.0	<5.7	RPD-NA	ug/g	N/A	40	15-JAN-20
Bromoform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-JAN-20
Bromomethane		<2.0	<2.0	RPD-NA	ug/g	N/A	40	15-JAN-20
Carbon tetrachloride		<2.0	<2.0	RPD-NA	ug/g	N/A	40	15-JAN-20
Chlorobenzene		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	14-JAN-20
Chloroform		<2.0	<2.0	RPD-NA	ug/g	N/A	40	15-JAN-20
cis-1,2-Dichloroethyle	ene	<2.0	<2.0	RPD-NA	ug/g	N/A	40	15-JAN-20
cis-1,3-Dichloroprope	ene	<1.2	<1.2	RPD-NA	ug/g	N/A	40	15-JAN-20
Dibromochlorometha	ne	<0.050	< 0.050	RPD-NA	ug/g	N/A	40	14-JAN-20
Dichlorodifluorometh	ane	<2.0	<2.0	RPD-NA	ug/g	N/A	40	15-JAN-20
Ethylbenzene		2.61	2.47		ug/g	5.3	40	14-JAN-20
n-Hexane		6.7	6.8		ug/g	1.5	40	15-JAN-20
Methylene Chloride		<2.0	<2.0	RPD-NA	ug/g	N/A	40	15-JAN-20
MTBE		<0.050	< 0.050	RPD-NA	ug/g	N/A	40	14-JAN-20
m+p-Xylenes		2.80	2.66		ug/g	5.3	40	14-JAN-20
Methyl Ethyl Ketone		<20	<20	RPD-NA	ug/g	N/A	40	15-JAN-20
Methyl Isobutyl Ketor	ne	<20	<20	RPD-NA	ug/g	N/A	40	15-JAN-20
o-Xylene		0.480	0.464		ug/g	3.4	40	14-JAN-20
Styrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-JAN-20
Tetrachloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	14-JAN-20
Toluene		<0.080	<0.080	RPD-NA	ug/g	N/A	40	14-JAN-20
trans-1,2-Dichloroeth	ylene	<2.0	<2.0		ug/g			15-JAN-20
					•			-



Workorder: L2404774 Report Date: 15-JAN-20 Page 3 of 6

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R49676	53							
WG3256989-4 DUI		WG3256989-						
trans-1,2-Dichloroeth		<2.0	<2.0	RPD-NA	ug/g	N/A	40	15-JAN-20
trans-1,3-Dichloropro	pene	<0.030	<0.030	RPD-NA	ug/g	N/A	40	14-JAN-20
Trichloroethylene		<0.40	<0.40	RPD-NA	ug/g	N/A	40	15-JAN-20
Trichlorofluorometha	ne	<2.0	<2.0	RPD-NA	ug/g	N/A	40	15-JAN-20
Vinyl chloride		<0.80	<0.80	RPD-NA	ug/g	N/A	40	15-JAN-20
WG3256989-2 LCS 1,1,1,2-Tetrachloroet			95.3		%		60-130	14-JAN-20
1,1,2,2-Tetrachloroet	hane		89.7		%		60-130	14-JAN-20
1,1,1-Trichloroethane)		96.2		%		60-130	14-JAN-20
1,1,2-Trichloroethane)		91.7		%		60-130	14-JAN-20
1,1-Dichloroethane			94.4		%		60-130	14-JAN-20
1,1-Dichloroethylene			91.9		%		60-130	14-JAN-20
1,2-Dibromoethane			89.8		%		70-130	14-JAN-20
1,2-Dichlorobenzene			98.3		%		70-130	14-JAN-20
1,2-Dichloroethane			90.7		%		60-130	14-JAN-20
1,2-Dichloropropane			94.2		%		70-130	14-JAN-20
1,3-Dichlorobenzene			100.4		%		70-130	14-JAN-20
1,4-Dichlorobenzene			99.4		%		70-130	14-JAN-20
Acetone			90.3		%		60-140	14-JAN-20
Benzene			98.5		%		70-130	14-JAN-20
Bromodichlorometha	ne		92.9		%		50-140	14-JAN-20
Bromoform			89.0		%		70-130	14-JAN-20
Bromomethane			83.9		%		50-140	14-JAN-20
Carbon tetrachloride			96.9		%		70-130	14-JAN-20
Chlorobenzene			97.8		%		70-130	14-JAN-20
Chloroform			95.6		%		70-130	14-JAN-20
cis-1,2-Dichloroethyle	ene		91.3		%		70-130	14-JAN-20
cis-1,3-Dichloroprope	ene		98.0		%		70-130	14-JAN-20
Dibromochlorometha	ne		91.2		%		60-130	14-JAN-20
Dichlorodifluorometha	ane		67.6		%		50-140	14-JAN-20
Ethylbenzene			100.2		%		70-130	14-JAN-20
n-Hexane			89.8		%		70-130	14-JAN-20
Methylene Chloride			89.8		%		70-130	14-JAN-20



Workorder: L2404774 Report Date: 15-JAN-20 Page 4 of 6

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R4967653	3							
WG3256989-2 LCS			00.4		0/			
MTBE			96.1		%		70-130	14-JAN-20
m+p-Xylenes			100.9		%		70-130	14-JAN-20
Methyl Isabutul Ketone			82.9 81.3		%		60-140	14-JAN-20
Methyl Isobutyl Ketone)				%		60-140	14-JAN-20
o-Xylene			98.3		%		70-130	14-JAN-20
Styrene Tetrachloroethylene			95.7 100.3		%		70-130	14-JAN-20
-							60-130	14-JAN-20
Toluene	lana		100.0		%		70-130	14-JAN-20
trans-1,2-Dichloroethyl			93.3 100.1		%		60-130	14-JAN-20
trans-1,3-Dichloroprop	ene				%		70-130	14-JAN-20
Trichloroethylene Trichlorofluoromethane	•		95.8		%		60-130	14-JAN-20
	U		92.5 97.4		%		50-140	14-JAN-20
Vinyl chloride			97.4		70		60-140	14-JAN-20
WG3256989-1 MB 1,1,1,2-Tetrachloroeth	ane		<0.050		ug/g		0.05	14-JAN-20
1,1,2,2-Tetrachloroeth	ane		<0.050		ug/g		0.05	14-JAN-20
1,1,1-Trichloroethane			< 0.050		ug/g		0.05	14-JAN-20
1,1,2-Trichloroethane			< 0.050		ug/g		0.05	14-JAN-20
1,1-Dichloroethane			< 0.050		ug/g		0.05	14-JAN-20
1,1-Dichloroethylene			< 0.050		ug/g		0.05	14-JAN-20
1,2-Dibromoethane			<0.050		ug/g		0.05	14-JAN-20
1,2-Dichlorobenzene			<0.050		ug/g		0.05	14-JAN-20
1,2-Dichloroethane			<0.050		ug/g		0.05	14-JAN-20
1,2-Dichloropropane			<0.050		ug/g		0.05	14-JAN-20
1,3-Dichlorobenzene			< 0.050		ug/g		0.05	14-JAN-20
1,4-Dichlorobenzene			< 0.050		ug/g		0.05	14-JAN-20
Acetone			<0.50		ug/g		0.5	14-JAN-20
Benzene			<0.0068		ug/g		0.0068	14-JAN-20
Bromodichloromethan	е		<0.050		ug/g		0.05	14-JAN-20
Bromoform			< 0.050		ug/g		0.05	14-JAN-20
Bromomethane			<0.050		ug/g		0.05	14-JAN-20
Carbon tetrachloride			<0.050		ug/g		0.05	14-JAN-20
Chlorobenzene			<0.050		ug/g		0.05	14-JAN-20
Chloroform			<0.050		ug/g		0.05	14-JAN-20



Workorder: L2404774 Report Date: 15-JAN-20 Page 5 of 6

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R4967653 WG3256989-1 MB								
cis-1,2-Dichloroethylene			<0.050		ug/g		0.05	14-JAN-20
cis-1,3-Dichloropropene			<0.030		ug/g		0.03	14-JAN-20
Dibromochloromethane			<0.050		ug/g		0.05	14-JAN-20
Dichlorodifluoromethane			< 0.050		ug/g		0.05	14-JAN-20
Ethylbenzene			<0.018		ug/g		0.018	14-JAN-20
n-Hexane			< 0.050		ug/g		0.05	14-JAN-20
Methylene Chloride			< 0.050		ug/g		0.05	14-JAN-20
MTBE			< 0.050		ug/g		0.05	14-JAN-20
m+p-Xylenes			< 0.030		ug/g		0.03	14-JAN-20
Methyl Ethyl Ketone			<0.50		ug/g		0.5	14-JAN-20
Methyl Isobutyl Ketone			<0.50		ug/g		0.5	14-JAN-20
o-Xylene			<0.020		ug/g		0.02	14-JAN-20
Styrene			< 0.050		ug/g		0.05	14-JAN-20
Tetrachloroethylene			< 0.050		ug/g		0.05	14-JAN-20
Toluene			<0.080		ug/g		0.08	14-JAN-20
trans-1,2-Dichloroethyler	ne		<0.050		ug/g		0.05	14-JAN-20
trans-1,3-Dichloropropen	ne		<0.030		ug/g		0.03	14-JAN-20
Trichloroethylene			<0.010		ug/g		0.01	14-JAN-20
Trichlorofluoromethane			<0.050		ug/g		0.05	14-JAN-20
Vinyl chloride			<0.020		ug/g		0.02	14-JAN-20
Surrogate: 1,4-Difluorobe	enzene		117.4		%		50-140	14-JAN-20
Surrogate: 4-Bromofluoro	obenzene		103.8		%		50-140	14-JAN-20

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Workorder: L2404774 Report Date: 15-JAN-20

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

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
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).
DLI	Detection Limit Raised: Dilution required to address Internal Standard response problems caused by matrix interference.
DLVH	Detection Limit raised due to interference from Volatile Hydrocarbons on VOC method. Chromatographic elution of interfering peaks in the same region as test analytes prevents a determination of whether VOC analyte is present or absent (above/below regular detection limits).
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
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.

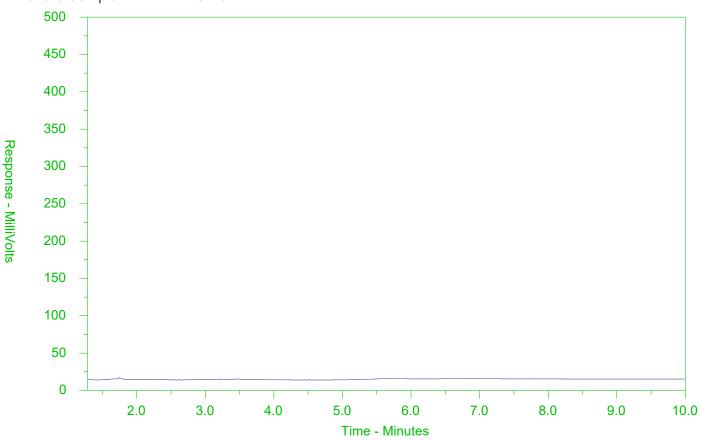
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined data quality objectives to provide 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: L2404774-1 Client Sample ID: DUP 5



← -F2-	→←	_F3 → F4-	→	
nC10	nC16	nC34	nC50	
174°C	287°C	481°C	575°C	
346°F	549°F	898°F	1067°F	
Gasolin	ie →	← Mo	tor 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.

Environmental

Chain of Custody (COC) / Analytical **Request Form**

COC Number: 15 -

Canada Toll Free: 1 800 668 9878

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TERRAPROBE-BRAMPTON ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 31-OCT-19

Report Date: 06-NOV-19 13:00 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2375299

Project P.O. #: NOT SUBMITTED

Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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L2375299 CONT'D....

Job Reference: 1-19-0603-42

PAGE 2 of 8

06-NOV-19 13:00 (MT)

Summary of Guideline Exceedances

Guideline
ALS ID Client ID Grouping Analyte Result Guideline Limit Unit

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Soil-Res/Park/Inst. Property Use (Coarse)

(No parameter exceedances)

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Soil-Res/Park/Inst. Property Use (Fine)

(No parameter exceedances)



L2375299 CONT'D....

Job Reference: 1-19-0603-42

PAGE 3 of 8

06-NOV-19 13:00 (MT)

Physical Tests - SOIL

i ilyaicai i cata - aoil				
			Lab ID	L2375299-1
		Sampl	e Date	25-OCT-19
		Sam	ple ID	DUP1
Analyte	Unit	Guide #1	Limits #2	
% Moisture	%	-	-	6.83

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



L2375299 CONT'D....
Job Reference: 1-19-0603-42
PAGE 4 of 8
06-NOV-19 13:00 (MT)

Metals - SOIL

		Sample Sam	L2375299-1 25-OCT-19 DUP1	
Analyte	Unit	Guide #1	Limits #2	
Antimony (Sb)	ug/g	7.5	7.5	<1.0
Arsenic (As)	ug/g	18	18	1.2
Barium (Ba)	ug/g	390	390	28.0
Beryllium (Be)	ug/g	4	5	<0.50
Boron (B)	ug/g	120	120	<5.0
Cadmium (Cd)	ug/g	1.2	1.2	<0.50
Chromium (Cr)	ug/g	160	160	7.7
Cobalt (Co)	ug/g	22	22	2.4
Copper (Cu)	ug/g	140	180	4.6
Lead (Pb)	ug/g	120	120	2.7
Molybdenum (Mo)	ug/g	6.9	6.9	<1.0
Nickel (Ni)	ug/g	100	130	4.8
Selenium (Se)	ug/g	2.4	2.4	<1.0
Silver (Ag)	ug/g	20	25	<0.20
Thallium (TI)	ug/g	1	1	<0.50
Uranium (U)	ug/g	23	23	<1.0
Vanadium (V)	ug/g	86	86	16.6
Zinc (Zn)	ug/g	340	340	14.2

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



L2375299 CONT'D....

Job Reference: 1-19-0603-42

PAGE 5 of 8

06-NOV-19 13:00 (MT)

Polycyclic Aromatic Hydrocarbons - SOIL

 Lab ID
 L2375299-1

 Sample Date
 25-OCT-19

 Sample ID
 DUP1

		Guide	Limits	
Analyte	Unit	#1	#2	
Acenaphthene	ug/g	7.9	58	<0.050
Acenaphthylene	ug/g	0.15	0.17	<0.050
Anthracene	ug/g	0.67	0.74	<0.050
Benzo(a)anthracene	ug/g	0.5	0.63	<0.050
Benzo(a)pyrene	ug/g	0.3	0.3	<0.050
Benzo(b)fluoranthene	ug/g	0.78	0.78	<0.050
Benzo(g,h,i)perylene	ug/g	6.6	7.8	<0.050
Benzo(k)fluoranthene	ug/g	0.78	0.78	<0.050
Chrysene	ug/g	7	7.8	<0.050
Dibenzo(ah)anthracene	ug/g	0.1	0.1	<0.050
Fluoranthene	ug/g	0.69	0.69	<0.050
Fluorene	ug/g	62	69	<0.050
Indeno(1,2,3-cd)pyrene	ug/g	0.38	0.48	<0.050
1+2-Methylnaphthalenes	ug/g	0.99	3.4	<0.042
1-Methylnaphthalene	ug/g	0.99	3.4	<0.030
2-Methylnaphthalene	ug/g	0.99	3.4	<0.030
Naphthalene	ug/g	0.6	0.75	<0.013
Phenanthrene	ug/g	6.2	7.8	<0.046
Pyrene	ug/g	78	78	<0.050
Surrogate: 2-Fluorobiphenyl	%	-	-	84.5
Surrogate: p-Terphenyl d14	%	-	-	76.4

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



L2375299 CONT'D....

Job Reference: 1-19-0603-42

PAGE 6 of 8

06-NOV-19 13:00 (MT)

Polychlorinated Biphenyls - SOIL

00.				
		L	ab ID	L2375299-1
		Sample	Date	25-OCT-19
		Sam	ple ID	DUP1
ı	Unit	Guide I #1	Limits #2	
	ug/g	-	-	<0.010
	ug/g	-	-	<0.010
	ug/g	-	-	<0.010
	ug/g	-	-	<0.010
	ug/g	0.35	0.35	<0.020
	%	-	-	83.5
		Unit ug/g ug/g ug/g ug/g ug/g	Unit #1 ug/g - ug/g - ug/g - ug/g - ug/g - ug/g - ug/g - ug/g - ug/g - ug/g - ug/g -	Lab ID Sample Date Sample ID Guide Limits Unit #1 #2 ug/g

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

Reference Information

L2375299 CONT'D.... Job Reference: 1-19-0603-42 PAGE 7 of 8 06-NOV-19 13:00 (MT)

Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

MET-200.2-CCMS-WT Soil Metals in Soil by CRC ICPMS EPA 200.2/6020A (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 AI, 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 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).

**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

WT ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

Reference Information

L2375299 CONT'D.... Job Reference: 1-19-0603-42 PAGE 8 of 8 06-NOV-19 13:00 (MT)

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.



Workorder: L2375299 Report Date: 06-NOV-19 Page 1 of 7

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	Soil							
Batch R489722	6							
WG3209410-2 CRM		WT-CANMET						
Antimony (Sb)			104.8		%		70-130	04-NOV-19
Arsenic (As)			97.5		%		70-130	04-NOV-19
Barium (Ba)			98.1		%		70-130	04-NOV-19
Beryllium (Be)			85.1		%		70-130	04-NOV-19
Boron (B)			3.0		mg/kg		0-8.6	04-NOV-19
Cadmium (Cd)			92.9		%		70-130	04-NOV-19
Chromium (Cr)			96.7		%		70-130	04-NOV-19
Cobalt (Co)			94.9		%		70-130	04-NOV-19
Copper (Cu)			94.5		%		70-130	04-NOV-19
Lead (Pb)			97.2		%		70-130	04-NOV-19
Molybdenum (Mo)			97.3		%		70-130	04-NOV-19
Nickel (Ni)			94.8		%		70-130	04-NOV-19
Selenium (Se)			0.35		mg/kg		0.15-0.55	04-NOV-19
Silver (Ag)			0.25		mg/kg		0.16-0.36	04-NOV-19
Thallium (TI)			95.0		%		70-130	04-NOV-19
Uranium (U)			93.8		%		70-130	04-NOV-19
Vanadium (V)			96.5		%		70-130	04-NOV-19
Zinc (Zn)			91.4		%		70-130	04-NOV-19
WG3209410-6 DUP		WG3209410-	5					
Antimony (Sb)		0.17	0.13		ug/g	29	30	04-NOV-19
Arsenic (As)		2.11	2.25		ug/g	6.2	30	04-NOV-19
Barium (Ba)		55.8	54.2		ug/g	3.0	40	04-NOV-19
Beryllium (Be)		0.27	0.28		ug/g	0.7	30	04-NOV-19
Boron (B)		5.9	6.2		ug/g	4.7	30	04-NOV-19
Cadmium (Cd)		0.046	0.054		ug/g	17	30	04-NOV-19
Chromium (Cr)		13.1	13.0		ug/g	0.7	30	04-NOV-19
Cobalt (Co)		4.57	4.52		ug/g	1.1	30	04-NOV-19
Copper (Cu)		9.45	9.26		ug/g	2.1	30	04-NOV-19
Lead (Pb)		5.34	5.12		ug/g	4.2	40	04-NOV-19
Molybdenum (Mo)		0.32	0.31		ug/g	3.4	40	04-NOV-19
Nickel (Ni)		9.69	10.2		ug/g	5.6	30	04-NOV-19
Selenium (Se)		<0.20	<0.20	RPD-NA	ug/g	N/A	30	04-NOV-19
Silver (Ag)		<0.10	<0.10	RPD-NA	ug/g	N/A	40	04-NOV-19
(9)		-55	-0	IN D-INA	~ <i>a</i> ′ <i>a</i>	13//1	40	0-110 V-10



Workorder: L2375299 Report Date: 06-NOV-19 Page 2 of 7

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test		Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-200.2-CCMS-WT	г	Soil							
Batch R489	7226								
	DUP		WG3209410-5			,			
Thallium (TI)			0.077	0.075		ug/g	3.2	30	04-NOV-19
Uranium (U)			0.548	0.547		ug/g	0.2	30	04-NOV-19
Vanadium (V)			23.8	23.8		ug/g	0.1	30	04-NOV-19
Zinc (Zn)			23.1	24.1		ug/g	4.5	30	04-NOV-19
WG3209410-4 L Antimony (Sb)	.cs			103.8		%		80-120	04-NOV-19
Arsenic (As)				97.2		%		80-120	04-NOV-19
Barium (Ba)				103.9		%		80-120	04-NOV-19
Beryllium (Be)				85.2		%		80-120	04-NOV-19
Boron (B)				84.6		%		80-120	04-NOV-19
Cadmium (Cd)				95.5		%		80-120	04-NOV-19
Chromium (Cr)				97.5		%		80-120	04-NOV-19
Cobalt (Co)				95.1		%		80-120	04-NOV-19
Copper (Cu)				93.2		%		80-120	04-NOV-19
Lead (Pb)				97.6		%		80-120	04-NOV-19
Molybdenum (Mo)				100.7		%		80-120	04-NOV-19
Nickel (Ni)				94.5		%		80-120	04-NOV-19
Selenium (Se)				95.6		%		80-120	04-NOV-19
Silver (Ag)				98.5		%		80-120	04-NOV-19
Thallium (TI)				96.6		%		80-120	04-NOV-19
Uranium (U)				95.7		%		80-120	04-NOV-19
Vanadium (V)				99.5		%		80-120	04-NOV-19
Zinc (Zn)				91.5		%		80-120	04-NOV-19
	/IB								
Antimony (Sb)				<0.10		mg/kg		0.1	04-NOV-19
Arsenic (As)				<0.10		mg/kg		0.1	04-NOV-19
Barium (Ba)				<0.50		mg/kg		0.5	04-NOV-19
Beryllium (Be)				<0.10		mg/kg		0.1	04-NOV-19
Boron (B)				<5.0		mg/kg		5	04-NOV-19
Cadmium (Cd)				<0.020		mg/kg		0.02	04-NOV-19
Chromium (Cr)				<0.50		mg/kg		0.5	04-NOV-19
Cobalt (Co)				<0.10		mg/kg		0.1	04-NOV-19
Copper (Cu)				<0.50		mg/kg		0.5	04-NOV-19
Lead (Pb)				<0.50		mg/kg		0.5	04-NOV-19



Qualifier

Workorder: L2375299 Report Date: 06-NOV-19 Page 3 of 7

RPD

Limit

Analyzed

Units

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Matrix

Reference

Result

Contact: Kossay Makhzoumi

Test

	Wallix	Reference	Result	Qualifier	Units	KPD	LIIIII	Analyzeu
MET-200.2-CCMS-WT	Soil							
Batch R4897226								
WG3209410-1 MB Molybdenum (Mo)			<0.10		ma/ka		0.1	04 NOV 40
Nickel (Ni)			<0.10		mg/kg		0.1	04-NOV-19
Selenium (Se)			<0.20		mg/kg		0.3	04-NOV-19
` '			<0.20		mg/kg		0.2	04-NOV-19
Silver (Ag) Thallium (TI)			<0.10		mg/kg		0.1	04-NOV-19
Uranium (U)			<0.050		mg/kg mg/kg		0.05	04-NOV-19
Vanadium (V)			<0.20		mg/kg		0.03	04-NOV-19 04-NOV-19
Zinc (Zn)			<2.0		mg/kg		2	04-NOV-19
	_		\2.0		mg/kg		_	04-1107-19
MOISTURE-WT	Soil							
Batch R4895777 WG3207805-3 DUP		L2374962-4						
% Moisture		21.6	21.2		%	1.8	20	01-NOV-19
WG3207805-2 LCS								
% Moisture			100.5		%		90-110	01-NOV-19
WG3207805-1 MB								
% Moisture			<0.25		%		0.25	01-NOV-19
PAH-511-WT	Soil							
Batch R4897642								
WG3207515-3 DUP		WG3207515-5		PPD NA	ug/g	N/A	40	04 NOV 10
WG3207515-3 DUP 1-Methylnaphthalene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	04-NOV-19
WG3207515-3 DUP 1-Methylnaphthalene 2-Methylnaphthalene		<0.030 <0.030	<0.030 <0.030	RPD-NA	ug/g	N/A	40	04-NOV-19
WG3207515-3 DUP 1-Methylnaphthalene 2-Methylnaphthalene Acenaphthene		<0.030 <0.030 <0.050	<0.030 <0.030 <0.050	RPD-NA RPD-NA	ug/g ug/g	N/A N/A	40 40	04-NOV-19 04-NOV-19
WG3207515-3 DUP 1-Methylnaphthalene 2-Methylnaphthalene Acenaphthene Acenaphthylene		<0.030 <0.030 <0.050 <0.050	<0.030 <0.030 <0.050 <0.050	RPD-NA RPD-NA RPD-NA	ug/g ug/g ug/g	N/A N/A N/A	40 40 40	04-NOV-19 04-NOV-19 04-NOV-19
WG3207515-3 DUP 1-Methylnaphthalene 2-Methylnaphthalene Acenaphthene Acenaphthylene Anthracene		<0.030 <0.030 <0.050 <0.050 <0.050	<0.030 <0.030 <0.050 <0.050 <0.050	RPD-NA RPD-NA RPD-NA RPD-NA	ug/g ug/g ug/g ug/g	N/A N/A N/A	40 40 40 40	04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19
WG3207515-3 DUP 1-Methylnaphthalene 2-Methylnaphthalene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene		<0.030 <0.030 <0.050 <0.050 <0.050 <0.050	<0.030 <0.030 <0.050 <0.050 <0.050 <0.050	RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA	ug/g ug/g ug/g ug/g ug/g	N/A N/A N/A N/A	40 40 40 40 40	04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19
WG3207515-3 DUP 1-Methylnaphthalene 2-Methylnaphthalene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene		<0.030 <0.030 <0.050 <0.050 <0.050 <0.050 <0.050	<0.030 <0.030 <0.050 <0.050 <0.050 <0.050 <0.050	RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA	ug/g ug/g ug/g ug/g ug/g	N/A N/A N/A N/A N/A	40 40 40 40 40 40	04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19
WG3207515-3 DUP 1-Methylnaphthalene 2-Methylnaphthalene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene		<0.030 <0.030 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050	<0.030 <0.030 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050	RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA	ug/g ug/g ug/g ug/g ug/g ug/g	N/A N/A N/A N/A N/A N/A	40 40 40 40 40 40 40	04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19
WG3207515-3 DUP 1-Methylnaphthalene 2-Methylnaphthalene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene		<0.030 <0.030 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050	<0.030 <0.030 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050	RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA	ug/g ug/g ug/g ug/g ug/g ug/g ug/g	N/A N/A N/A N/A N/A N/A	40 40 40 40 40 40 40	04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19
WG3207515-3 DUP 1-Methylnaphthalene 2-Methylnaphthalene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene		<0.030 <0.030 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050	<0.030 <0.030 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050	RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA	ug/g ug/g ug/g ug/g ug/g ug/g ug/g ug/g	N/A N/A N/A N/A N/A N/A N/A	40 40 40 40 40 40 40 40	04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19
WG3207515-3 DUP 1-Methylnaphthalene 2-Methylnaphthalene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene		<0.030 <0.030 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050	<0.030 <0.030 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050	RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA	ug/g ug/g ug/g ug/g ug/g ug/g ug/g ug/g	N/A N/A N/A N/A N/A N/A N/A N/A	40 40 40 40 40 40 40 40 40	04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19
WG3207515-3 DUP 1-Methylnaphthalene 2-Methylnaphthalene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(ah)anthracene		<0.030 <0.030 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050	<0.030 <0.030 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050	RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA	ug/g ug/g ug/g ug/g ug/g ug/g ug/g ug/g	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	40 40 40 40 40 40 40 40 40 40	04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19
WG3207515-3 DUP 1-Methylnaphthalene 2-Methylnaphthalene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(ah)anthracene Fluoranthene		<0.030 <0.030 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050	<0.030 <0.030 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050	RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA	ug/g ug/g ug/g ug/g ug/g ug/g ug/g ug/g	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	40 40 40 40 40 40 40 40 40 40 40	04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19
WG3207515-3 DUP 1-Methylnaphthalene 2-Methylnaphthalene Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(ah)anthracene		<0.030 <0.030 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050	<0.030 <0.030 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050 <0.050	RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA RPD-NA	ug/g ug/g ug/g ug/g ug/g ug/g ug/g ug/g	N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	40 40 40 40 40 40 40 40 40 40	04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19 04-NOV-19



Workorder: L2375299 Report Date: 06-NOV-19 Page 4 of 7

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Soil							
Batch R4897642								
WG3207515-3 DUP Naphthalene		WG3207515-5 <0.013	<0.013	RPD-NA	ug/g	N/A	40	04-NOV-19
Phenanthrene		<0.046	<0.046	RPD-NA	ug/g	N/A	40	04-NOV-19
Pyrene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	04-NOV-19
WG3207515-2 LCS 1-Methylnaphthalene			86.6		%		50-140	04-NOV-19
2-Methylnaphthalene			82.2		%		50-140	04-NOV-19
Acenaphthene			88.2		%		50-140	04-NOV-19
Acenaphthylene			89.7		%		50-140	04-NOV-19
Anthracene			87.6		%		50-140	04-NOV-19
Benzo(a)anthracene			88.8		%		50-140	04-NOV-19
Benzo(a)pyrene			82.1		%		50-140	04-NOV-19
Benzo(b)fluoranthene			75.3		%		50-140	04-NOV-19
Benzo(g,h,i)perylene			84.2		%		50-140	04-NOV-19
Benzo(k)fluoranthene			89.8		%		50-140	04-NOV-19
Chrysene			95.2		%		50-140	04-NOV-19
Dibenzo(ah)anthracene			87.8		%		50-140	04-NOV-19
Fluoranthene			85.4		%		50-140	04-NOV-19
Fluorene			85.9		%		50-140	04-NOV-19
Indeno(1,2,3-cd)pyrene			89.6		%		50-140	04-NOV-19
Naphthalene			84.0		%		50-140	04-NOV-19
Phenanthrene			86.8		%		50-140	04-NOV-19
Pyrene			85.3		%		50-140	04-NOV-19
WG3207515-1 MB 1-Methylnaphthalene			<0.030		ug/g		0.03	04-NOV-19
2-Methylnaphthalene			< 0.030		ug/g		0.03	04-NOV-19
Acenaphthene			<0.050		ug/g		0.05	04-NOV-19
Acenaphthylene			< 0.050		ug/g		0.05	04-NOV-19
Anthracene			< 0.050		ug/g		0.05	04-NOV-19
Benzo(a)anthracene			< 0.050		ug/g		0.05	04-NOV-19
Benzo(a)pyrene			<0.050		ug/g		0.05	04-NOV-19
Benzo(b)fluoranthene			<0.050		ug/g		0.05	04-NOV-19
Benzo(g,h,i)perylene			<0.050		ug/g		0.05	04-NOV-19
Benzo(k)fluoranthene			<0.050		ug/g		0.05	04-NOV-19
Chrysene			<0.050		ug/g		0.05	04-NOV-19



Workorder: L2375299 Report Date: 06-NOV-19 Page 5 of 7

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Soil							
Batch R489 WG3207515-1 N	7642 1B							
Dibenzo(ah)anthra	cene		< 0.050		ug/g		0.05	04-NOV-19
Fluoranthene			< 0.050		ug/g		0.05	04-NOV-19
Fluorene			< 0.050		ug/g		0.05	04-NOV-19
Indeno(1,2,3-cd)py	rene		< 0.050		ug/g		0.05	04-NOV-19
Naphthalene			<0.013		ug/g		0.013	04-NOV-19
Phenanthrene			<0.046		ug/g		0.046	04-NOV-19
Pyrene			< 0.050		ug/g		0.05	04-NOV-19
Surrogate: 2-Fluore	obiphenyl		95.6		%		50-140	04-NOV-19
Surrogate: p-Terph	nenyl d14		86.6		%		50-140	04-NOV-19
WG3207515-4 N 1-Methylnaphthale	IS ne	WG3207515-5	89.3		%		50-140	04-NOV-19
2-Methylnaphthale			84.7		%		50-140	04-NOV-19
Acenaphthene			91.1		%		50-140	04-NOV-19
Acenaphthylene			94.0		%		50-140	04-NOV-19
Anthracene			90.1		%		50-140	04-NOV-19
Benzo(a)anthracer	ne		91.0		%		50-140	04-NOV-19
Benzo(a)pyrene			84.3		%		50-140	04-NOV-19
Benzo(b)fluoranthe	ene		77.7		%		50-140	04-NOV-19
Benzo(g,h,i)peryler	ne		84.6		%		50-140	04-NOV-19
Benzo(k)fluoranthe	ene		90.3		%		50-140	04-NOV-19
Chrysene			96.1		%		50-140	04-NOV-19
Dibenzo(ah)anthra	cene		88.2		%		50-140	04-NOV-19
Fluoranthene			87.0		%		50-140	04-NOV-19
Fluorene			89.7		%		50-140	04-NOV-19
Indeno(1,2,3-cd)py	rene		92.1		%		50-140	04-NOV-19
Naphthalene			85.8		%		50-140	04-NOV-19
Phenanthrene			87.0		%		50-140	04-NOV-19
Pyrene			87.0		%		50-140	04-NOV-19
PCB-511-WT	Soil							
Batch R489	8984							
WG3207515-3 D Aroclor 1242	OUP	WG3207515-5 <0.010	<0.010	RPD-NA	ug/g	N/A	40	05-NOV-19
Aroclor 1248		<0.010	<0.010	RPD-NA	ug/g	N/A	40	05-NOV-19
Aroclor 1254		<0.010	<0.010	RPD-NA	ug/g	N/A	40	05-NOV-19



Workorder: L2375299 Report Date: 06-NOV-19 Page 6 of 7

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB-511-WT	Soil							
Batch R4	898984							
WG3207515-3	DUP	WG3207515	-					
Aroclor 1260		<0.010	<0.010	RPD-NA	ug/g	N/A	40	05-NOV-19
WG3207515-2	LCS							
Aroclor 1242			109.3		%		60-140	05-NOV-19
Aroclor 1248			101.5		%		60-140	05-NOV-19
Aroclor 1254			105.2		%		60-140	05-NOV-19
Aroclor 1260			101.4		%		60-140	05-NOV-19
WG3207515-1	МВ							
Aroclor 1242			<0.010		ug/g		0.01	05-NOV-19
Aroclor 1248			<0.010		ug/g		0.01	05-NOV-19
Aroclor 1254			<0.010		ug/g		0.01	05-NOV-19
Aroclor 1260			<0.010		ug/g		0.01	05-NOV-19
Surrogate: d14-	Terphenyl		88.3		%		60-140	05-NOV-19
WG3207515-4	MS	WG3207515-	5					
Aroclor 1242			91.8		%		60-140	05-NOV-19
Aroclor 1254			89.7		%		60-140	05-NOV-19
Aroclor 1260			86.6		%		60-140	05-NOV-19

Workorder: L2375299 Report Date: 06-NOV-19

Client: TERRAPROBE-BRAMPTON Page 7 of 7

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

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 predetermined 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



L2375299-COFC

COC Number: 15 -

ge 1 of

81

Canada Toll Free: 1 800 668 9878

Report To	www.alsglobal.com Contact and company na	me below will ann	ear on the final report		Report Format	/ Distribution		Select :	Service L	evel Bel	ow - Plea	ase confi	rm all E	P TATE	with y	our AN	l - surch	arges w	ill apply	_	
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Company.	Kossay Makhzoumi			-	(QC) Report with Re			Ê		day [P				ΣĪ			ness (
Phone:	905-796-2650			-	lts to Criteria on Report			PE DE		day [P	-			EMERGENC					end or		_
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Contact:	Lorena Rossi			Email 2																- 1	ε
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TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 31-OCT-19

Report Date: 07-NOV-19 14:28 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2375294

Project P.O. #: NOT SUBMITTED

Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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ADDRESS: 5730 Coopers Avenue, Unit #26, Mississauga, ON L4Z 2E9 Canada | Phone: +1 905 507 6910 | Fax: +1 905 507 6927

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L2375294 CONT'D....

Job Reference: 1-19-0603-42

PAGE 2 of 8

07-NOV-19 14:28 (MT)

Summary of Guideline Exceedances

Guideline
ALS ID Client ID Grouping Analyte Result Guideline Limit Unit

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Soil-Res/Park/Inst. Property Use (Coarse)

(No parameter exceedances)

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Soil-Res/Park/Inst. Property Use (Fine)

(No parameter exceedances)



L2375294 CONT'D....

Job Reference: 1-19-0603-42

PAGE 3 of 8

07-NOV-19 14:28 (MT)

Physical Tests - SOIL

Sample Date 25-0	CT-19
Sample ID DU	JP 2
Guide Limits Unit #1 #2	
	oumpio Dato

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



L2375294 CONT'D....

Job Reference: 1-19-0603-42

PAGE 4 of 8

07-NOV-19 14:28 (MT)

Volatile Organic Compounds - SOIL

 Lab ID
 L2375294-1

 Sample Date
 25-OCT-19

 Sample ID
 DUP 2

	Unit	Guide		
Analyte	Unit	#1	#2	
Acetone	ug/g	16	28	<0.50
Benzene	ug/g	0.21	0.17	<0.0068
Bromodichloromethane	ug/g	13	13	<0.050
Bromoform	ug/g	0.27	0.26	<0.050
Bromomethane	ug/g	0.05	0.05	<0.050
Carbon tetrachloride	ug/g	0.05	0.12	<0.050
Chlorobenzene	ug/g	2.4	2.7	<0.050
Dibromochloromethane	ug/g	9.4	9.4	<0.050
Chloroform	ug/g	0.05	0.18	<0.050
1,2-Dibromoethane	ug/g	0.05	0.05	<0.050
1,2-Dichlorobenzene	ug/g	3.4	4.3	<0.050
1,3-Dichlorobenzene	ug/g	4.8	6	<0.050
1,4-Dichlorobenzene	ug/g	0.083	0.097	<0.050
Dichlorodifluoromethane	ug/g	16	25	<0.050
1,1-Dichloroethane	ug/g	3.5	11	<0.050
1,2-Dichloroethane	ug/g	0.05	0.05	<0.050
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.050
cis-1,2-Dichloroethylene	ug/g	3.4	30	<0.050
trans-1,2-Dichloroethylene	ug/g	0.084	0.75	<0.050
Methylene Chloride	ug/g	0.1	0.96	<0.050
1,2-Dichloropropane	ug/g	0.05	0.085	<0.050
cis-1,3-Dichloropropene	ug/g	-	-	<0.030
trans-1,3-Dichloropropene	ug/g	-	-	< 0.030
1,3-Dichloropropene (cis & trans)	ug/g	0.05	0.083	<0.042
Ethylbenzene	ug/g	2	15	<0.018
n-Hexane	ug/g	2.8	34	<0.050
Methyl Ethyl Ketone	ug/g	16	44	<0.50
Methyl Isobutyl Ketone	ug/g	1.7	4.3	<0.50
МТВЕ	ug/g	0.75	1.4	<0.050
Styrene	ug/g	0.7	2.2	<0.050

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



L2375294 CONT'D....
Job Reference: 1-19-0603-42
PAGE 5 of 8
07-NOV-19 14:28 (MT)

Volatile Organic Compounds - SOIL

		Sample	ab ID Date ple ID	L2375294-1 25-OCT-19 DUP 2
Analyte	Unit	Guide #1	Limits #2	
1,1,1,2-Tetrachloroethane	ug/g	0.058	0.05	<0.050
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.050
Tetrachloroethylene	ug/g	0.28	2.3	<0.050
Toluene	ug/g	2.3	6	<0.080
1,1,1-Trichloroethane	ug/g	0.38	3.4	<0.050
1,1,2-Trichloroethane	ug/g	0.05	0.05	<0.050
Trichloroethylene	ug/g	0.061	0.52	0.020
Trichlorofluoromethane	ug/g	4	5.8	<0.050
Vinyl chloride	ug/g	0.02	0.022	<0.020
o-Xylene	ug/g	-	-	<0.020
m+p-Xylenes	ug/g	-	-	<0.030
Xylenes (Total)	ug/g	3.1	25	<0.050
Surrogate: 4-Bromofluorobenzene	%	-	-	93.2
Surrogate: 1,4-Difluorobenzene	%	-	-	107.2

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)



L2375294 CONT'D....
Job Reference: 1-19-0603-42
PAGE 6 of 8
07-NOV-19 14:28 (MT)

Hydrocarbons - SOIL

nyarodarbone conz	L2375294-1 25-OCT-19 DUP 2			
Analyte	Unit	Guide #1	Limits #2	
F1 (C6-C10)	ug/g	55	65	<5.0
F1-BTEX	ug/g	55	65	<5.0
F2 (C10-C16)	ug/g	98	150	<10
F3 (C16-C34)	ug/g	300	1300	<50
F4 (C34-C50)	ug/g	2800	5600	<50
Total Hydrocarbons (C6-C50)	ug/g	-	-	<72
Chrom. to baseline at nC50		-	-	YES
Surrogate: 2-Bromobenzotrifluoride	%	-	-	94.4
Surrogate: 3,4-Dichlorotoluene	%	-	-	96.7

Guide Limit #1: T3-Soil-Res/Park/Inst. Property Use (Coarse) Guide Limit #2: T3-Soil-Res/Park/Inst. Property Use (Fine)

Reference Information

L2375294 CONT'D.... Job Reference: 1-19-0603-42 PAGE 7 of 8 07-NOV-19 14:28 (MT)

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference**
F1-F4-511-CALC-WT	Soil	F1-F4 Hydrocarbon Calculated Parameters	CCME CWS-PHC, Pub #1310, Dec 2001-S

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

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

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-sq 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-sq: Gravimetric Heavy Hydrocarbons (F4G) after silica gel treatment.
- 6. Where both F4 (C34-C50) and F4G-sq 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).

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

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

Reference Information

L2375294 CONT'D....
Job Reference: 1-19-0603-42
PAGE 8 of 8
07-NOV-19 14:28 (MT)

Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

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

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.



Workorder: L2375294 Report Date: 07-NOV-19 Page 1 of 7

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT	Soil							
	902189							
WG3212071-4 F1 (C6-C10)	DUP	WG3212071-3 <5.0	<5.0	RPD-NA	ug/g	N/A	30	07-NOV-19
WG3212071-2 F1 (C6-C10)	LCS		113.5		%		80-120	07-NOV-19
WG3212071-1 F1 (C6-C10)	МВ		<5.0		ug/g		5	07-NOV-19
Surrogate: 3,4-D	Dichlorotoluene		108.0		%		60-140	07-NOV-19
WG3212071-6 F1 (C6-C10)	MS	L2375107-3	110.0		%		60-140	07-NOV-19
F2-F4-511-WT	Soil							
Batch R4	897606							
WG3209036-3 F2 (C10-C16)	DUP	WG3209036-5 659	523		ug/g	23	30	04-NOV-19
F3 (C16-C34)		81	<50	RPD-NA	ug/g	N/A	30	04-NOV-19
F4 (C34-C50)		<50	<50	RPD-NA	ug/g	N/A	30	04-NOV-19
WG3209036-2 F2 (C10-C16)	LCS		105.5		%		80-120	04-NOV-19
F3 (C16-C34)			101.2		%		80-120	04-NOV-19
F4 (C34-C50)			107.0		%		80-120	04-NOV-19
WG3209036-1 F2 (C10-C16)	МВ		<10		ug/g		10	04-NOV-19
F3 (C16-C34)			<50		ug/g		50	04-NOV-19
F4 (C34-C50)			<50		ug/g		50	04-NOV-19
Surrogate: 2-Bro	omobenzotrifluoride		95.7		%		60-140	04-NOV-19
WG3209036-4 F2 (C10-C16)	MS	WG3209036-5	N/A	MS-B	%		-	04-NOV-19
F3 (C16-C34)			100.1	iiio B	%		60-140	04-NOV-19
F4 (C34-C50)			95.4		%		60-140	04-NOV-19
MOISTURE-WT	Soil							
Batch R4	895777							
WG3207805-3 % Moisture	DUP	L2374962-4 21.6	21.2		%	1.8	20	01-NOV-19
WG3207805-2 % Moisture	LCS		100.5		%		90-110	01-NOV-19
WG3207805-1 % Moisture	МВ		<0.25		%		0.25	01-NOV-19



Workorder: L2375294 Report Date: 07-NOV-19 Page 2 of 7

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R4902189 WG3212071-4 DUP 1,1,1,2-Tetrachloroethar	ne	WG3212071- <0.050	3 <0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,1,2,2-Tetrachloroethar		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,1,1-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,1,2-Trichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1.1-Dichloroethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,1-Dichloroethylene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,2-Dibromoethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,2-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,2-Dichloroethane		0.059	0.054	RPD-NA	ug/g	N/A	40	07-NOV-19
1,2-Dichloropropane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,3-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
1,4-Dichlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Acetone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	07-NOV-19
Benzene		<0.0068	<0.0068	RPD-NA	ug/g	N/A	40	07-NOV-19
Bromodichloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Bromoform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Bromomethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Carbon tetrachloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Chlorobenzene		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Chloroform		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
cis-1,2-Dichloroethylene	•	<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
cis-1,3-Dichloropropene		<0.030	<0.030	RPD-NA	ug/g	N/A	40	07-NOV-19
Dibromochloromethane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Dichlorodifluoromethane	e	<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Ethylbenzene		<0.018	<0.018	RPD-NA	ug/g	N/A	40	07-NOV-19
n-Hexane		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Methylene Chloride		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
MTBE		<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
m+p-Xylenes		<0.030	< 0.030	RPD-NA	ug/g	N/A	40	07-NOV-19
Methyl Ethyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	07-NOV-19
Methyl Isobutyl Ketone		<0.50	<0.50	RPD-NA	ug/g	N/A	40	07-NOV-19
o-Xylene		<0.020	<0.020	RPD-NA	ug/g	N/A	40	07-NOV-19
Styrene		<0.050	<0.050		ug/g			07-NOV-19



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test Mar	trix Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT So	il						
Batch R4902189							
WG3212071-4 DUP	WG3212071						
Styrene	<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Tetrachloroethylene	<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Toluene	<0.080	<0.080	RPD-NA	ug/g	N/A	40	07-NOV-19
trans-1,2-Dichloroethylene	<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
trans-1,3-Dichloropropene	<0.030	< 0.030	RPD-NA	ug/g	N/A	40	07-NOV-19
Trichloroethylene	<0.010	<0.010	RPD-NA	ug/g	N/A	40	07-NOV-19
Trichlorofluoromethane	<0.050	<0.050	RPD-NA	ug/g	N/A	40	07-NOV-19
Vinyl chloride	<0.020	<0.020	RPD-NA	ug/g	N/A	40	07-NOV-19
WG3212071-2 LCS 1,1,1,2-Tetrachloroethane		104.1		%		60-130	07-NOV-19
1,1,2,2-Tetrachloroethane		118.8		%		60-130	07-NOV-19
1,1,1-Trichloroethane		97.7		%		60-130	07-NOV-19
1,1,2-Trichloroethane		110.3		%		60-130	07-NOV-19
1,1-Dichloroethane		102.3		%		60-130	07-NOV-19
1,1-Dichloroethylene		91.9		%		60-130	07-NOV-19
1,2-Dibromoethane		114.4		%		70-130	07-NOV-19
1,2-Dichlorobenzene		106.5		%		70-130	07-NOV-19
1,2-Dichloroethane		111.1		%		60-130	07-NOV-19
1,2-Dichloropropane		107.7		%		70-130	07-NOV-19
1,3-Dichlorobenzene		104.2		%		70-130	07-NOV-19
1,4-Dichlorobenzene		104.7		%		70-130	07-NOV-19
Acetone		129.2		%		60-140	07-NOV-19
Benzene		105.5		%		70-130	07-NOV-19
Bromodichloromethane		107.1		%		50-140	07-NOV-19
Bromoform		116.8		%		70-130	07-NOV-19
Bromomethane		91.1		%		50-140	07-NOV-19
Carbon tetrachloride		96.5		%		70-130	07-NOV-19
Chlorobenzene		104.2		%		70-130	07-NOV-19
Chloroform		104.1		%		70-130	07-NOV-19
cis-1,2-Dichloroethylene		101.2		%		70-130	07-NOV-19
cis-1,3-Dichloropropene		111.1		%		70-130	07-NOV-19
Dibromochloromethane		110.4		%		60-130	07-NOV-19
Dichlorodifluoromethane		73.7		%		50-140	07-NOV-19



Workorder: L2375294 Report Date: 07-NOV-19 Page 4 of 7

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R4902189)							
WG3212071-2 LCS			00.0		0/			
Ethylbenzene			98.9		%		70-130	07-NOV-19
n-Hexane			88.2		%		70-130	07-NOV-19
Methylene Chloride MTBE			103.5		%		70-130	07-NOV-19
			100.6		%		70-130	07-NOV-19
m+p-Xylenes Methyl Ethyl Ketone			99.5		%		70-130	07-NOV-19
• •			124.8 125.1		%		60-140	07-NOV-19
Methyl Isobutyl Ketone							60-140	07-NOV-19
o-Xylene			100.3 103.1		%		70-130	07-NOV-19
Styrene Tetrachloroethylene			99.3		%		70-130	07-NOV-19
Toluene			101.3		%		60-130	07-NOV-19
	222				%		70-130	07-NOV-19
trans-1,2-Dichloroethyle trans-1,3-Dichloroprope			97.8 112.3		%		60-130	07-NOV-19
Trichloroethylene	SI IC		100.8		%		70-130	07-NOV-19
Trichlorofluoromethane			91.6		%		60-130	07-NOV-19
Vinyl chloride	,		102.7		%		50-140	07-NOV-19
			102.7		70		60-140	07-NOV-19
WG3212071-1 MB 1,1,1,2-Tetrachloroetha	ane		<0.050		ug/g		0.05	07-NOV-19
1,1,2,2-Tetrachloroetha	ane		<0.050		ug/g		0.05	07-NOV-19
1,1,1-Trichloroethane			<0.050		ug/g		0.05	07-NOV-19
1,1,2-Trichloroethane			<0.050		ug/g		0.05	07-NOV-19
1,1-Dichloroethane			<0.050		ug/g		0.05	07-NOV-19
1,1-Dichloroethylene			<0.050		ug/g		0.05	07-NOV-19
1,2-Dibromoethane			<0.050		ug/g		0.05	07-NOV-19
1,2-Dichlorobenzene			< 0.050		ug/g		0.05	07-NOV-19
1,2-Dichloroethane			< 0.050		ug/g		0.05	07-NOV-19
1,2-Dichloropropane			< 0.050		ug/g		0.05	07-NOV-19
1,3-Dichlorobenzene			< 0.050		ug/g		0.05	07-NOV-19
1,4-Dichlorobenzene			< 0.050		ug/g		0.05	07-NOV-19
Acetone			<0.50		ug/g		0.5	07-NOV-19
Benzene			<0.0068		ug/g		0.0068	07-NOV-19
Bromodichloromethane)		<0.050		ug/g		0.05	07-NOV-19
Bromoform			<0.050		ug/g		0.05	07-NOV-19
Bromomethane			<0.050		ug/g		0.05	07-NOV-19



Workorder: L2375294 Report Date: 07-NOV-19 Page 5 of 7

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Soli	Test N	/latrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
Carbon tetrachloride	VOC-511-HS-WT	Soil							
Carbon tetrachloride <0.050 ug/g 0.05 07-NOV-19 Chlorobenzene <0.050	Batch R4902189								
Chlorobenzene								0.05	
Chloroform									
cis-1,2-Dichloroethylene <0.050									
Cis-1,3-Dichloropropene <0.030									
Dibromochloromethane <0.050 ug/g 0.05 07-NOV-19 Dichlorodifluoromethane <0.050	•								
Dichlorodiffluoromethane <0.050									
Ethylbenzene									07-NOV-19
n-Hexane <0.050									07-NOV-19
Methylene Chloride <0.050 ug/g 0.05 07-NOV-19 MTBE <0.060	Ethylbenzene			<0.018		ug/g			07-NOV-19
MTBE <0.050 ug/g 0.05 07-NoV-19 m+p-Xylenes <0.030				<0.050		ug/g		0.05	07-NOV-19
m+p-Xylenes <0.030 ug/g 0.03 07-NOV-19 Methyl Ethyl Ketone <0.50	Methylene Chloride			<0.050		ug/g		0.05	07-NOV-19
Methyl Ethyl Ketone <0.50 ug/g 0.5 07-NOV-19 Methyl Isobutyl Ketone <0.50	MTBE			< 0.050		ug/g		0.05	07-NOV-19
Methyl Isobutyl Ketone <0.50	m+p-Xylenes			< 0.030		ug/g		0.03	07-NOV-19
o-Xylene <0.020	Methyl Ethyl Ketone			< 0.50		ug/g		0.5	07-NOV-19
Styrene <0.050 ug/g 0.05 07-NOV-19 Tetrachloroethylene <0.050	Methyl Isobutyl Ketone			< 0.50		ug/g		0.5	07-NOV-19
Tetrachloroethylene <0.050 ug/g 0.05 07-NOV-19 Toluene <0.080	o-Xylene			<0.020		ug/g		0.02	07-NOV-19
Toluene <0.080 ug/g 0.08 07-NOV-19 trans-1,2-Dichloroethylene <0.050	Styrene			<0.050		ug/g		0.05	07-NOV-19
trans-1,2-Dichloroethylene <0.050 ug/g 0.05 07-NOV-19 trans-1,3-Dichloropropene <0.030 ug/g 0.03 07-NOV-19 Trichloroethylene <0.010 ug/g 0.01 07-NOV-19 Trichloroethylene <0.050 ug/g 0.01 07-NOV-19 Trichlorofluoromethane <0.050 ug/g 0.05 07-NOV-19 Vinyl chloride <0.020 ug/g 0.02 07-NOV-19 Surrogate: 1,4-Difluorobenzene 117.2 % 50-140 07-NOV-19 Surrogate: 4-Bromofluorobenzene 101.0 % 50-140 07-NOV-19 WG3212071-5 MS WG3212071-3	Tetrachloroethylene			<0.050		ug/g		0.05	07-NOV-19
trans-1,3-Dichloropropene <0.030	Toluene			<0.080		ug/g		0.08	07-NOV-19
Trichloroethylene <0.010 ug/g 0.01 07-NOV-19 Trichlorofluoromethane <0.050	trans-1,2-Dichloroethylene			< 0.050		ug/g		0.05	07-NOV-19
Trichlorofluoromethane <0.050 ug/g 0.05 07-NOV-19 Vinyl chloride <0.020	trans-1,3-Dichloropropene			< 0.030		ug/g		0.03	07-NOV-19
Vinyl chloride <0.020 ug/g 0.02 07-NOV-19 Surrogate: 1,4-Difluorobenzene 117.2 % 50-140 07-NOV-19 Surrogate: 4-Bromofluorobenzene 101.0 % 50-140 07-NOV-19 WG3212071-5 MS WG3212071-3 WG3212071-3 V 50-140 07-NOV-19 1,1,1,2-Tetrachloroethane 107.3 % 50-140 07-NOV-19 1,1,1-Trichloroethane 102.3 % 50-140 07-NOV-19 1,1,2-Trichloroethane 106 % 50-140 07-NOV-19 1,1-Dichloroethane 105.7 % 50-140 07-NOV-19 1,1-Dichloroethylene 98.2 % 50-140 07-NOV-19 1,2-Dibromoethane 109.4 % 50-140 07-NOV-19	Trichloroethylene			<0.010		ug/g		0.01	07-NOV-19
Surrogate: 1,4-Difluorobenzene 117.2 % 50-140 07-NOV-19 Surrogate: 4-Bromofluorobenzene 101.0 % 50-140 07-NOV-19 WG3212071-5 MS WG3212071-3 1,1,1,2-Tetrachloroethane 107.3 % 50-140 07-NOV-19 1,1,2-Tetrachloroethane 111.9 % 50-140 07-NOV-19 1,1,1-Trichloroethane 102.3 % 50-140 07-NOV-19 1,1,2-Trichloroethane 110.6 % 50-140 07-NOV-19 1,1-Dichloroethane 105.7 % 50-140 07-NOV-19 1,1-Dichloroethylene 98.2 % 50-140 07-NOV-19 1,2-Dibromoethane 109.4 % 50-140 07-NOV-19	Trichlorofluoromethane			<0.050		ug/g		0.05	07-NOV-19
Surrogate: 4-Bromofluorobenzene 101.0 % 50-140 07-NOV-19 WG3212071-5 MS WG3212071-3 WG3212071-3 Solid (Control of the con	Vinyl chloride			<0.020		ug/g		0.02	07-NOV-19
WG3212071-5 MS WG3212071-3 1,1,1,2-Tetrachloroethane 107.3 % 50-140 07-NOV-19 1,1,2,2-Tetrachloroethane 111.9 % 50-140 07-NOV-19 1,1,1-Trichloroethane 102.3 % 50-140 07-NOV-19 1,1,2-Trichloroethane 110.6 % 50-140 07-NOV-19 1,1-Dichloroethane 105.7 % 50-140 07-NOV-19 1,1-Dichloroethylene 98.2 % 50-140 07-NOV-19 1,2-Dibromoethane 109.4 % 50-140 07-NOV-19	Surrogate: 1,4-Difluoroben	zene		117.2		%		50-140	07-NOV-19
1,1,1,2-Tetrachloroethane 107.3 % 50-140 07-NOV-19 1,1,2,2-Tetrachloroethane 111.9 % 50-140 07-NOV-19 1,1,1-Trichloroethane 102.3 % 50-140 07-NOV-19 1,1,2-Trichloroethane 110.6 % 50-140 07-NOV-19 1,1-Dichloroethane 105.7 % 50-140 07-NOV-19 1,1-Dichloroethylene 98.2 % 50-140 07-NOV-19 1,2-Dibromoethane 109.4 % 50-140 07-NOV-19	Surrogate: 4-Bromofluorob	enzene		101.0		%		50-140	07-NOV-19
1,1,2,2-Tetrachloroethane 111.9 % 50-140 07-NOV-19 1,1,1-Trichloroethane 102.3 % 50-140 07-NOV-19 1,1,2-Trichloroethane 110.6 % 50-140 07-NOV-19 1,1-Dichloroethane 105.7 % 50-140 07-NOV-19 1,1-Dichloroethylene 98.2 % 50-140 07-NOV-19 1,2-Dibromoethane 109.4 % 50-140 07-NOV-19	WG3212071-5 MS		WG3212071-3						
1,1,1-Trichloroethane 102.3 % 50-140 07-NOV-19 1,1,2-Trichloroethane 110.6 % 50-140 07-NOV-19 1,1-Dichloroethane 105.7 % 50-140 07-NOV-19 1,1-Dichloroethylene 98.2 % 50-140 07-NOV-19 1,2-Dibromoethane 109.4 % 50-140 07-NOV-19	1,1,1,2-Tetrachloroethane					%		50-140	07-NOV-19
1,1,2-Trichloroethane 110.6 % 50-140 07-NOV-19 1,1-Dichloroethane 105.7 % 50-140 07-NOV-19 1,1-Dichloroethylene 98.2 % 50-140 07-NOV-19 1,2-Dibromoethane 109.4 % 50-140 07-NOV-19	1,1,2,2-Tetrachloroethane			111.9		%		50-140	07-NOV-19
1,1-Dichloroethane 105.7 % 50-140 07-NOV-19 1,1-Dichloroethylene 98.2 % 50-140 07-NOV-19 1,2-Dibromoethane 109.4 % 50-140 07-NOV-19	1,1,1-Trichloroethane			102.3		%		50-140	07-NOV-19
1,1-Dichloroethylene 98.2 % 50-140 07-NOV-19 1,2-Dibromoethane 109.4 % 50-140 07-NOV-19	1,1,2-Trichloroethane			110.6		%		50-140	07-NOV-19
1,2-Dibromoethane 109.4 % 50-140 07-NOV-19	1,1-Dichloroethane			105.7		%		50-140	07-NOV-19
	1,1-Dichloroethylene			98.2		%		50-140	07-NOV-19
1,2-Dichlorobenzene 108.0 % 50-140 07-NOV-19	1,2-Dibromoethane			109.4		%		50-140	07-NOV-19
	1,2-Dichlorobenzene			108.0		%		50-140	07-NOV-19



Workorder: L2375294 Report Date: 07-NOV-19 Page 6 of 7

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Soil							
Batch R4902189								
WG3212071-5 MS		WG3212071-3						
1,2-Dichloroethane			101.6		%		50-140	07-NOV-19
1,2-Dichloropropane			105.7		%		50-140	07-NOV-19
1,3-Dichlorobenzene			107.0		%		50-140	07-NOV-19
1,4-Dichlorobenzene			106.7		%		50-140	07-NOV-19
Acetone			109.6		%		50-140	07-NOV-19
Benzene			107.9		%		50-140	07-NOV-19
Bromodichloromethane			105.8		%		50-140	07-NOV-19
Bromoform			108.9		%		50-140	07-NOV-19
Bromomethane			91.6		%		50-140	07-NOV-19
Carbon tetrachloride			103.2		%		50-140	07-NOV-19
Chlorobenzene			107.3		%		50-140	07-NOV-19
Chloroform			105.4		%		50-140	07-NOV-19
cis-1,2-Dichloroethylene			102.5		%		50-140	07-NOV-19
cis-1,3-Dichloropropene			105.3		%		50-140	07-NOV-19
Dibromochloromethane			108.9		%		50-140	07-NOV-19
Dichlorodifluoromethane			83.4		%		50-140	07-NOV-19
Ethylbenzene			105.7		%		50-140	07-NOV-19
n-Hexane			95.7		%		50-140	07-NOV-19
Methylene Chloride			102.3		%		50-140	07-NOV-19
MTBE			101.2		%		50-140	07-NOV-19
m+p-Xylenes			106.3		%		50-140	07-NOV-19
Methyl Ethyl Ketone			102.7		%		50-140	07-NOV-19
Methyl Isobutyl Ketone			105.8		%		50-140	07-NOV-19
o-Xylene			106.2		%		50-140	07-NOV-19
Styrene			107.1		%		50-140	07-NOV-19
Tetrachloroethylene			108.3		%		50-140	07-NOV-19
Toluene			108.2		%		50-140	07-NOV-19
trans-1,2-Dichloroethyler	ne		100.5		%		50-140	07-NOV-19
trans-1,3-Dichloropropen	ne		106.2		%		50-140	07-NOV-19
Trichloroethylene			104.5		%		50-140	07-NOV-19
Trichlorofluoromethane			99.3		%		50-140	07-NOV-19
Vinyl chloride			108.2		%		50-140	07-NOV-19
1								

Workorder: L2375294 Report Date: 07-NOV-19

Client: TERRAPROBE-BRAMPTON Page 7 of 7

11 Indell Lane

Brampton ON L6T 3Y3 Kossay Makhzoumi

Legend:

Contact:

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
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
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.

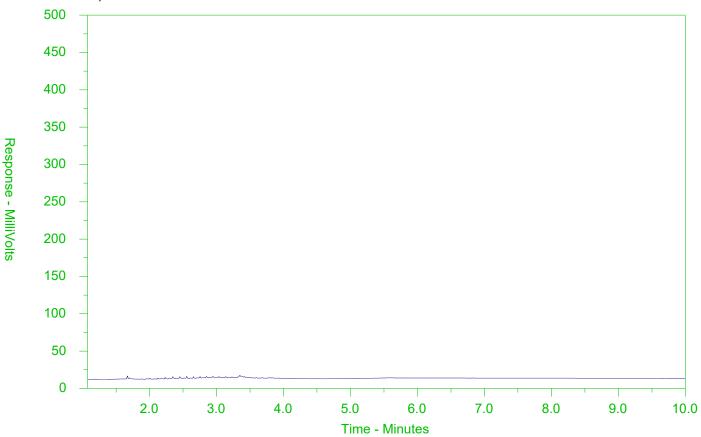
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined data quality objectives to provide 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: L2375294-1 Client Sample ID: DUP 2



← -F2-	→ ←	—F3—→ ← —F4—	→	
nC10	nC16	nC34	nC50	
174°C	287°C	481°C	575°C	
346°F	549°F	898°F	1067°F	
Gasolin	ie →	← Mot	or Oils/Lube Oils/Grease——	
←	-Diesel/Je	t 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 Enumerous

Chain of Custody (COC) / Analytical Request Form



L2375294-COFC

COC Number: 15 -

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Canada Toll Free: 1 800 668 9878

	www.alsglobal.com																				
Report To	Contact and company nam	ne below will app	ear on the final report		Report Forma	t / Distribution		Select	Service	Level Bo	low - Ple	ase con	firm all l	&P TAT	s with	your Al	4 - surc	harges v	rill apply		
Company:	Terraprobe			Select Report	Format: 🔽 PDF	☑ EXCEL □ E	DD (DIGITAL)		Re	gular	[R]	☑ Sta	andard 1	TAT if re	eceived	by 3 p	m - bu	iness da	ays - no si	urcharg	es apply
Contact:	Kossay Makhzoumi			Quality Contro	l (QC) Report with R	eport 🗹 YES	□ NO	Î	4	day [l	P4]			ò	1	Busi	ness	day [E	1]		
Phone:	905-796-2650			☑ Compare Res	sults to Criteria on Report	- provide details belo	w if box checked	PE SE	3	day [l	P3]			MERGENCY	,	Same	Day,	Week	end or		_
	Company address below will app	pear on the final	report	Select Distribu	ition: 🗹 EMAIL	MAIL	FAX	(F)	2	day [P2]			ENE		State	ıtory	holida	y [E0]		
Street:	11 Indeli Lane			Email 1 or Fax	kmakhzoumi@ter	raprobe.ca			Date a	nd Tim	e Requi	red for a	M E&P	TATs:							
City/Province:	Brampton			Email 2				For tes	its that c	an not b	e perfor	ned acco	ording to	the se	vice le	vel sele	cted, y	u will be	contacte	d.	
Postal Code:	L6T 3Y3			Email 3										Analy	sis R	eque	st				
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Company:	Terraprobe			Email 1 or Fax	lrossi@terraprobe	.ca															
Contact:	Lorena Rossi			Email 2]													ور
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ALS Lab Wo	rk Order # (lab use only)	123	75292	ALS Contact:	F5	Sampler:		Metals and Inorganics		Forming Metals						OC Pesticides					Z
ALS Sample #	Sample k	dentification	and/or Coordinate	3	Date	Time		als a	इ	흥			_	١,,	۱,,	Pes	<u>s</u>				
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Released by: Ko	ossay Makhzoumi Date:	, <u>, i</u> .	Time	e: Received by:	NL	Date: Of	31/19	Time	137	Rece	eived b	y: [_	u	1		Date	31	-10	7-19	٦ ^۲	ime: 30
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Certificate of Analysis

AGAT WORK ORDER: 06T157160 PROJECT NO: 1-06-1007

ATTENTION TO: Serena Oyama

CLIENT NAME: TERRAPROBE LIMITED

				J. Reg. 153	Metals	O. Reg. 153 Metals & Inorganics in Soil	Soil			
DATE SAMPLED: February 15 2006	90	DATE RECEIVED:	Į.	February 16 2006		DATE REPORTED: February 20 2006	February 2	0 2006	SAMPLE TYPE: Soil	
	Unit	8/9	M.D.L.	BH 1:Sa 1 497628	M.D.L	BH 2:Sa 1 497629	M.D.L	BH 3:Sa 1B 497630		
Antimony	6/6ri	13	1.6	2.4	1.6	×1.6	1.6	×1.6		
Arsenic	6/6rl	20	9.0	6.8	9.0	11.8	9.0	3.2		,
Barium	6/6rl	750	0.3	423	0.3	140	0.3	126		
Beryllium	6/6rl	1.2	0.4	<0.4	9.0	0.5	0.4	0.5		,
Boron (Hot Water Extractable)	6/6rl	1.5	0.032	0.566	0.032	0.509	0.032	0.658		
Cadmium	6/61	12	0.4	1.7	0.4	<0.4	0.4	<0.4		
Chromium	6/6rl	750	9.0	26.0	9.0	14.0	9.0	16.2		
Cobalt	6/6rl	40	0.3	5.0	0.3	9.9	0.3	5.6		-
Copper	6/61	225	0.3	78.8	0.3	17.4	0.3	19.7		
Lead	6/6rl	200	0.5	602	9.0	85.3	0.5	160		
Mołybdenum	6/6rl	40	0.5	2.0	0.5	3.7	0.5	<0.5		
Nickel	6/6rl	150	9.0	19.9	9.0	15.6	9.0	14.6		
Selenium	6/6rl	10	8.0	<0.8	9.0	1.4	9.0	<0.8		
Silver	6/6rt	20	0.4	9.0	0.4	<0.4	0.4	<0.4		
Thallium	6/6rl	4.1	9.4	<0.4	9.4	<0.4	9.4	<0.4		
Vanadium	6/6rl	200	9.4	17.3	0.4	28.5	0.4	23.4		
Zinc	6/61	009	9.4	716	9.0	60.1	0.4	102		
Chromium, Hexavalent	6/6rl	80	0.382	<0.382	0.382	<0.382	0.382	<0.382		*****
Cyanide, Free	6/6rl	100	1.6	<1.6	4.0	<4.0	1.6	<1.6		
Mercury	6/6rl	5	0.011	2.31	0.011	0.269	0.011	0.875		
Electrical Conductivity (2:1)	mS/cm	0.7	0.002	0.156	0.002	0.998	0.002	1.23		
Sodium Adsorption Ratio	Ν	2	A/N	0.496	N/A	8.11	A/A	8.06		
pH 2:1 Water:Soil Extraction	N/A		N/A	7.60	A/A	8.06	N/A	8.80		***************************************

M.D.L. - Method Detection Limit; G / S - Guideline / Standard: Refers to T3(RPI) Comments:

Note: Sample extract was dark. Dilution 2.5x for Free Cyanide analysis was necessary to see the end point of the reaction. Reported Detection Limit has been raised to reflect the dilution. 497629

Certified By:

Eligabeth Robowstea



CLIENT NAME: TERRAPROBE LIMITED

Certificate of Analysis

AGAT WORK ORDER: 06T157160 PROJECT NO: 1-06-1007

ATTENTION TO: Serena Oyama

						20 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -	
DATE SAMPLED: February 15 2006	မွ	DATE RE	DATE RECEIVED:	February 16 2006		DATE REPORTED: February 20 2006	SAMPLE TYPE: Soil
	Unit	8/9	M.D.L.	BH 2:Sa 6 497631	BH 1:Sa 2A 497632	BH 3:Sa 3 497633	
Chloromethane	6/6rl		0.010	<0.010	<0.010	<0.010	
Vinyl Chloride	6/6rl	0.003	0.003	<0.003	<0.003	<0.003	
Bromomethane	6/6rl	0.061	600.0	<0.009	<0.009	<0.009	
Chloroethane	6/6rl		0.010	<0.010	<0.010	<0.010	
Trichlorofluoromethane	6/6rl		0.003	<0.003	<0.003	<0.003	
Acetone	6/61	3.8	0.074	<0.074	0.17	<0.074	
1,1-Dichloroethylene	6/6rl	0.0024	0.002	<0.002	<0.002	<0.002	
Methylene Chloride	6/6rl	120	0.007	<0.007	<0.007	<0.007	
TRANS-1,2-Dichloroethylene	6/6п	4.1	0.005	<0.005	<0.005	<0.005	
Methyl tert-butyl Ether	6/6rl	100	0.005	<0.005	<0.005	<0.005	
1,1-Dichloroethane	6/6rl	22	9000	<0.006	<0.006	<0.006	
Methyl Ethyl Ketone	6/61	38	0.044	<0.044	<0.044	<0.044	
CIS 1,2-Dichloroethylene	6/6rl	2.3	9000	>0.006	<0.006	<0.006	
Chloroform	6/61	0.79	0.009	<0.009	<0.009	<0.009	
1,2- Dichloroethane	6/6rl	0.022	0.003	<0.003	<0.003	<0.003	
1,1,1-Trichloroethane	6/6rl	56	0.003	<0.003	<0.003	<0.003	
Carbon Tetrachloride	6/6rl	0.1	0.004	<0.004	<0.004	<0.004	
Benzene	6/6rl	5.3	0.004	<0.004	<0.004	<0.004	
1,2-Dichloropropane	6/6rl	0.019	0.004	<0.004	<0.004	<0.004	
Trichloroethylene	6/6rl	7	0.005	<0.005	<0.005	<0.005	
Bromodichloromethane	6/6rt	14	0.004	<0.004	<0.004	<0.004	
CIS-1,3-Dichloropropene	6/6rl	0.0066	0.004	<0.004	<0.004	<0.004	
Methyl Isobutyl Ketone	6/6rt	28	0.018	<0.018	<0.018	<0.018	
TRANS-1,3-Dichloropropene	6/6rt	0.0066	0.002	<0.002	<0.002	<0.002	
1,1,2-Trichloroethane	6/6rl	2.3	0.005	<0.005	<0.005	<0.005	
Toluene	6/61	8	0.002	0.005	<0.002	0.003	
2-Hexanone	6/61		0.021	<0.021	<0.021	<0.021	
Dibromochloromethane	6/6п	10	0.004	<0.004	<0.004	<0.004	
Ethylene Dibromide	6/6rl	0.0056	0.004	<0.004	<0.004	<0.004	
Tetrachloroethylene	6/6rl	0.45	0.004	<0.004	<0.004	<0.004	
1,1,1,2-Tetrachloroethane	6/6rl	0.019	0.004	<0.004	<0.004	<0.004	

Mosel-

CLIENT NAME: TERRAPROBE LIMITED

Certificate of Analysis

AGAT WORK ORDER: 06T157160 PROJECT NO: 1-06-1007

ATTENTION TO: Serena Oyama

	SAMPLE TYPE: Soil														
	SAMPI														
. Reg 153 - Volatile Organic Compounds in Soil	DATE REPORTED: February 20 2006	BH 3:Sa 3 497633	<0.004	<0.003	<0.002	<0.004	<0.002	<0.002	<0.002	<0.004	<0.005	<0.004	<0.007	<0.004	<0.002
latile Organ		BH 1:Sa 2A 497632	<0.004	<0.003	<0.002	<0.004	<0.002	<0.002	<0.002	<0.004	<0.005	<0.004	<0.007	<0.004	<0.002
eg 153 - Vo	ED: February 16 2006	BH 2:Sa 6 497631	<0.004	<0.003	0.002	<0.004	<0.002	<0.002	<0.002	<0.004	<0.005	<0.004	<0.007	<0.004	0.002
O. Re	CEIVED:	M.D.L.	0.004	0.003	0.002	0.004	0.002	0.002	0.002	0.004	0.005	0.004	0.007	0.004	0.002
	DATE RECEIV	8/9	8	290		2.3	1.2	0.037		30	30	30	30	0.0066	8
	900	Unit	6/6rl	6/6rl	5/6rl	6/6rl	6/6rl	6/6ri	6/6rl	6/6rl	6/6rl	6/6rl	6/6rl	6/6rt	6/6rl
	DATE SAMPLED: February 15 2006		Chlorobenzene	Ethylbenzene	m & p-Xylene	Bromoform	Styrene	1,1,2,2- Tetrachloroethane	o-Xylene	1,3-Dichlorobenzene	1,4-Dichlorobenzene	1,2-Dichlorobenzene	1,2,4-Trichlorobenzene	1,3-Dichloropropene (Cis + Trans)	Xylenes (Total)

M.D.L. - Method Detection Limit; G / S - Guideline / Standard: Refers to T3(RPI) Comments:

Toluene-d8 Surrogate Recovery: 90% 4-Bromofluorobenzene Surrogate Recovery: 86% Results are based on the dry weight of the soil. Percent Moisture = 8.1 %. 497631

Results relate only to the items tested.

4-Bromofluorobenzene Surrogate Recovery: 87% Results are based on the dry weight of the soil. Percent Moisture = 15.4 %. Toluene-d8 Surrogate Recovery: 78%

497632

Results relate only to the items tested. Toluene-d8 Surrogate Recovery: 84%

497633

4-Bromofluorobenzene Surrogate Recovery: 91% Results are based on the dry weight of the soil. Percent Moisture = 7.7 %.

Results relate only to the items tested.



Certificate of Analysis

AGAT WORK ORDER: 06T157160 PROJECT NO: 1-06-1007 **ATTENTION TO: Serena Oyama**

CLIENT NAME: TERRAPROBE LIMITED

Soil SAMPLE TYPE: O. Reg. 153 - Petroleum Hydrocarbons F1 - F4 (C6 - C50) in Soil DATE REPORTED: February 20 2006 DATE RECEIVED: February 16 2006 BH 2:Sa 6 5 **20** \$ ŝ \$ ₹ ₩.D. 10 20 20 S 2800 8/9 400 30 6/6rl 6/6rl 6/6rl 6/6rl % 6/6rl 6/6rl DATE SAMPLED: February 15 2006 Gravimetric Heavy Hydrocarbons C6 - C10 (F1 minus BTEX) Moisture Content C>10 - C16 (F2) C>16 - C34 (F3) C>34 - C50 (F4) C6 - C10 (F1)

G / S - Guideline / Standard: Refers to T3(RPI) M.D.L. - Method Detection Limit; Comments:

Results are based on sample dry weight. 497631

The C6-C10 fraction is calculated using toluene response factor.

The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons > C50 are present. Total C6 - C50 results are corrected for BTEX and PAH contributions.

This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.

nC6 and nC10 response factors are within 30% of Toluene response factor. nC10, nC16 and nC34 response factors are within 10% of their average. C50 response factor is within 70% of nC10 + nC16 + nC34 average.

Linearity is within 15%.

Extraction and holding times were met for this sample. Fractions of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

Certificate of Analysis

AGAT WORK ORDER: 06T157777 PROJECT NO: 1-06-1007 **ATTENTION TO: Serena Oyama**

CLIENT NAME: TERRAPROBE LIMITED

SAMPLE TYPE: Water DATE REPORTED: February 23 2006 O. Regulation 153 - Volatile Organic Compounds in Water DATE RECEIVED: February 22 2006 <0.2 , MW2 498500 <0.17 <0.3 0.58 ٥.2° <0.2 ٥. 4. <0.5 <0.2 <0.3 **c**0.2 <0.9 **c**0.2 <0.2 **60.2** <0.3 <0.2 **40.**7 <0.2 **6**0.2 **60.2** ٥.3 م <0.3 **0.2** <0.2 <0.3 60.1 **0.**2 6. 0.1 0.17 0.2 0.5 0.3 6.0 0.3 0.2 0.2 0.3 0.2 0.2 0.2 0.2 0.3 0.2 0.2 0.2 0.2 0.2 0.2 0.2 0.3 0.2 0.2 0.3 0.2 20000 50000 100 50000 0006 1900 30000 20000 00091 50000 S/5 99.0 5900 3300 70 430 17 200 9.3 3.3 5.0 3.7 µg/L µg/L µg/L µg/L hg/L μg/L µg/L µg/L µg/L µg/L hg∕L µg/L hg/L hg/L hg/L hg/L hg/L µg/L µg/L µg/L µg/L µg/L hg/L hg/L ug/L rg/L ng/L µg/L DATE SAMPLED: February 21 2006 rans- 1,2-dichloroethylene rans-1,3-Dichloropropene 1,1,1,2-Tetrachloroethane cis- 1,2-Dichloroethylene cis-1,3-Dichloropropene **Dibromochloromethane** Bromodichloromethane richlorofluoromethane **Methyl Isobutyl Ketone** Methyl tert-butyl ether ,1,2-Trichloroethane 1,1,1-Trichloroethane Carbon Tetrachloride Methyl Ethyl Ketone 1,2-Dichloropropane I,2 - Dichloroethane Ethylene Dibromide Methylene Chloride 1,1 Dichloroethene 1,1-Dichloroethane **Tetrachloroethene Frichloroethylene** Bromomethane Chloromethane Vinyl Chloride Chloroethane 2-Hexanone Chloroform Acetone oluene

AGAT WORK ORDER: 06T157777

FGGT® Laboratories

CLIENT NAME: TERRAPROBE LIMITED

PROJECT NO: 1-06-1007

ATTENTION TO: Serena Oyama

		0	O. Regula	ation 153 - Volatile	Regulation 153 - Volatile Organic Compounds in Water	
DATE SAMPLED: February 21 2006	900	DATE RECI	CEIVED:	EIVED: February 22 2006	DATE REPORTED: February 23 2006	SAMPLE TYPE: Water
	Unit	8/9	M.D.L.	MW2 498500		
Chlorobenzene	hg/L	200	0.1	40.1		
Ethylbenzene	µg/L	28000	0.1	<0.1		
m & p-Xylene	µg/L		0.2	<0.2		
Bromoform	µg/L	840	0.1	-0.1		
Styrene	µg/L	940	0.1	<0.1		
1,1,2,2-Tetrachloroethane	µg/L	22	0.1	<0.1		
o-Xylene	µg/L		0.1	<0.1		
1,3-Dichlorobenzene	µg/L	2000	0.1	<0.1		
1,4-Dichlorobenzene	hg/L	7600	0.1	<0.1		
1,2-Dichlorobenzene	hg/L	7600	0.1	1.0>		
1,2,4-Trichlorobenzene	µg/L	200	0.3	<0.3		
Xylenes (Total)	hg/L	2600	0.2	<0.2		

M.D.L. - Method Detection Limit; G / S - Guideline / Standard: Refers to T3(NPGW) Comments: 498500

Results relate only to the items tested.
Surrogate Recovery for Toluene-d8: 105%
Surrogate Recovery for 4-Bromofluorobenzene: 92
%

Certified By:

Page

CLIENT NAME: TERRAPROBE LIMITED

Certificate of Analysis

AGAT WORK ORDER: 06T157777 PROJECT NO: 1-06-1007

ATTENTION TO: Serena Oyama

				O. Reg 153	O. Reg 153 Metals in Water	
DATE SAMPLED: February 21 2006	906	DATE RE	CEIVED:	DATE RECEIVED: February 22 2006	DATE REPORTED: February 23 2006	SAMPLE TYPE: Water
	1111	9,0		MW2		
Antimony		16000	1.00	<1.00		
Arsenic	ug/L	480	09:0	3.11		
Barium	ng/L	23000	0.50	46.5		
Beryllium	ng/L	53	1.00	<1.00		
Boron	ng/L	20000	10.0	75.1		
Cadmium	ng/L	Ξ	0.50	0.93		
Chromium	ng/L	2000	09:0	44.6		
Cobalt	ng/L	100	0.50	6.23		
Copper	ng/L	23	08.0	18.3		
Lead	ug/L	32	0.50	126		
Molybdenum	ng/L	7300	0.50	3.92		
Nickel	ng/L	1600	09:0	11.8		
Selenium	ng/L	20	08.0	1.58		
Silver	ng/L	1.2	0:20	<0.50		
Thallium	ng/L	400	0.50	<0.50		
Vanadium	ng/L	200	0.40	10.1		
Zinc	ug/L	1100	1.00	303		

Comments: M.D.L. - Method Detection Limit; G / S - Guideline / Standard: Refers to T3(NPGW)

Certified By:

Elisabeth Robenstea

CLIENT NAME: TERRAPROBE LIMITED

Certificate of Analysis

AGAT WORK ORDER: 06T158158 PROJECT NO: 1-06-1007

ATTENTION TO: Serena Oyama

				O. Reg 153	O. Reg 153 Metals in water	
DATE SAMPLED: February 24 2006	900	DATE RECEIVED		February 24 2006	DATE REPORTED: February 24 2006	SAMPLE TYPE: Water
	Unit	8/9	M.D.L.	MW2 498834		
Antimony	ug/L	16000	1.00	<1.00		
Arsenic	ng/L	480	09:0	1.33		
Barium	ng/L	23000	0.50	39.3		
Beryllium	ng/L	53	1.00	<1.00		
Boron	ng/L	20000	10.0	99.2		
Cadmium	ng/L	11.0	0.50	<0.50		
Chromium	ng/L	2000	09.0	7.20		
Cobalt	ug/L	100	0.50	2.92		
Copper	ug/L	23	0.80	18.4		
Lead	ng/L	32	0.50	4.17		
Molybdenum	ng/L	7300	0.50	29.67		
Nickel	ug/L	1600	09:0	14.4		
Selenium	ng/L	20	0.80	2.99		
Silver	ng/L	1.2	0.50	<0.50		
Thatlium	ng/L	400	0.50	<0.50		
Vanadium	ug/L	200	0.40	2.90		
Zinc	ng/L	1100	1.00	34.8		

Comments: M.D.L. - Method Detection Limit; G / S - Guideline / Standard: Refers to T3(NPGW,MFT)

Certified By:

Joshy Tokemski

CERTIFICATES OF ANALYSIS

(GROUNDWATER)

TERRAPROBE INC.





TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 06-FEB-20

Report Date: 13-FEB-20 15:01 (MT)

Version: FINAL REV. 3

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2413928
Project P.O. #: NOT SUBMITTED
Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Comments: ES/WT - Cyanide result updated to reflect correct dilution factor

Emily Smith Account Manager

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

ADDRESS: 5730 Coopers Avenue, Unit #26 , Mississauga, ON L4Z 2E9 Canada | Phone: +1 905 507 6910 | Fax: +1 905 507 6927 ALS CANADA LTD Part of the ALS Group An ALS Limited Company





L2413928 CONT'D....

Job Reference: 1-19-0603-42

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Summary of Guideline Exceedances

Guideline						
ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

(No parameter exceedances)

(No parameter exceedances)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Job Reference: 1-19-0603-42

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Physical Tests - WATER

i ilyolodi 100to 117ti Ett				
			Lab ID	L2413928-1
	5	Sampl	e Date	04-FEB-20
		Sam	ple ID	BH1
		Guide	Limits	
Analyte	Unit	#1	#2	
Conductivity	mS/cm	-	-	6.53
рН	pH units	-	-	7.52

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Job Reference: 1-19-0603-42

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Anions and Nutrients - WATER

, o a				
		L	ab ID	L2413928-1
		Sample	Date	04-FEB-20
		Sam	ple ID	BH1
Analyte	Unit	Guide #1	Limits #2	
Allalyte				
Chloride (CI)	mg/L	2300	2300	2070 DLHC

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Job Reference: 1-19-0603-42

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13-FEB-20 15:01 (MT)

Cyanides - WATER

-				
			Lab ID	L2413928-1
		Sampl	e Date	04-FEB-20
		Sam	ple ID	BH1
	Guide Limits			
		Guide	Limits	
Analyte	Unit	Guide #1	Limits #2	

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Job Reference: 1-19-0603-42

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Dissolved Metals - WATER

		Lab ID Sample Date Sample ID		L2413928-1 04-FEB-20 BH1
Analyte	Unit	Guide #1	Limits #2	
Dissolved Mercury Filtration Location		-	-	FIELD
Dissolved Metals Filtration Location		-	-	FIELD
Antimony (Sb)-Dissolved	ug/L	20000	20000	<1.0 DLHC
Arsenic (As)-Dissolved	ug/L	1900	1900	<1.0 DLHC
Barium (Ba)-Dissolved	ug/L	29000	29000	82.4 DLHC
Beryllium (Be)-Dissolved	ug/L	67	67	<1.0 DLHC
Boron (B)-Dissolved	ug/L	45000	45000	140 DLHC
Cadmium (Cd)-Dissolved	ug/L	2.7	2.7	0.061 DLHC
Chromium (Cr)-Dissolved	ug/L	810	810	<5.0 DLHC
Cobalt (Co)-Dissolved	ug/L	66	66	3.4 DLHC
Copper (Cu)-Dissolved	ug/L	87	87	<2.0 DLHC
Lead (Pb)-Dissolved	ug/L	25	25	<0.50 DLHC
Mercury (Hg)-Dissolved	ug/L	0.29	2.8	<0.0050
Molybdenum (Mo)-Dissolved	ug/L	9200	9200	1.45 DLHC
Nickel (Ni)-Dissolved	ug/L	490	490	<5.0 DLHC
Selenium (Se)-Dissolved	ug/L	63	63	<0.50 DLHC
Silver (Ag)-Dissolved	ug/L	1.5	1.5	<0.50 DLHC
Sodium (Na)-Dissolved	ug/L	2300000	2300000	687000 ^{DLHC}
Thallium (TI)-Dissolved	ug/L	510	510	<0.10 DLHC
Uranium (U)-Dissolved	ug/L	420	420	8.20 DLHC
Vanadium (V)-Dissolved	ug/L	250	250	<5.0 DLHC
Zinc (Zn)-Dissolved	ug/L	1100	1100	12 DLHC

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Speciated Metals - WATER

openiated metale 11711 E11					
			Lab ID	L2413928-1	
		Sample	e Date	04-FEB-20	
		Sam	ple ID	BH1	
		Guide Limits			
Analyte	Unit	#1	#2		
Chromium, Hexavalent	ug/L	140	140	<0.50	

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Volatile Organic Compounds - WATER

Volatile Organic Compounds - WATER					
			.ab ID	L2413928-1	
		Sample		04-FEB-20	
		Sam	ple ID	BH1	
		Cuida I	l !!4.a		
Amalusta	Unit	Guide I	#2		
Analyte	Onit	π.	π L		
Acetone	ug/L	130000	130000	<30	
Benzene	ug/L	44	430	<0.50	
Bromodichloromethane	ug/L	85000	85000	<2.0	
Bromoform	ug/L	380	770	<5.0	
Bromomethane	ug/L	5.6	56	<0.50	
Carbon tetrachloride	ug/L	0.79	8.4	<0.20	
Chlorobenzene	ug/L	630	630	<0.50	
Dibromochloromethane	ug/L	82000	82000	<2.0	
Chloroform	ug/L	2.4	22	<1.0	
1,2-Dibromoethane	ug/L	0.25	0.83	<0.20	
1,2-Dichlorobenzene	ug/L	4600	9600	<0.50	
1,3-Dichlorobenzene	ug/L	9600	9600	<0.50	
1,4-Dichlorobenzene	ug/L	8	67	<0.50	
Dichlorodifluoromethane	ug/L	4400	4400	<2.0	
1,1-Dichloroethane	ug/L	320	3100	<0.50	
1,2-Dichloroethane	ug/L	1.6	12	<0.50	
1,1-Dichloroethylene	ug/L	1.6	17	<0.50	
cis-1,2-Dichloroethylene	ug/L	1.6	17	<0.50	
trans-1,2-Dichloroethylene	ug/L	1.6	17	<0.50	
Methylene Chloride	ug/L	610	5500	<5.0	
1,2-Dichloropropane	ug/L	16	140	< 0.50	
cis-1,3-Dichloropropene	ug/L	-	-	<0.30	
trans-1,3-Dichloropropene	ug/L	-	-	<0.30	
1,3-Dichloropropene (cis & trans)	ug/L	5.2	45	<0.50	
Ethylbenzene	ug/L	2300	2300	<0.50	
n-Hexane	ug/L	51	520	<0.50	
Methyl Ethyl Ketone	ug/L	470000	1500000	<20	
Methyl Isobutyl Ketone	ug/L	140000	580000	<20	
MTBE	ug/L	190	1400	<2.0	
Styrene	ug/L	1300	9100	<0.50	

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Volatile Organic Compounds - WATER

		L	_ab ID	L2413928-1
		Sample	e Date	04-FEB-20
		•	ple ID	BH1
		0		
	11.14	Guide		
Analyte	Unit	#1	#2	
1,1,1,2-Tetrachloroethane	ug/L	3.3	28	<0.50
1,1,2,2-Tetrachloroethane	ug/L	3.2	15	<0.50
Tetrachloroethylene	ug/L	1.6	17	<0.50
Toluene	ug/L	18000	18000	<0.50
1,1,1-Trichloroethane	ug/L	640	6700	<0.50
1,1,2-Trichloroethane	ug/L	4.7	30	<0.50
Trichloroethylene	ug/L	1.6	17	<0.50
Trichlorofluoromethane	ug/L	2500	2500	<5.0
Vinyl chloride	ug/L	0.5	1.7	<0.50
o-Xylene	ug/L	-	-	<0.30
m+p-Xylenes	ug/L	-	-	<0.40
Xylenes (Total)	ug/L	4200	4200	<0.50
Surrogate: 4-Bromofluorobenzene	%	-	-	98.6
Surrogate: 1,4-Difluorobenzene	%	-	-	101.6

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Hydrocarbons - WATER

Lab III ple Date ample II de Limit #2 750 750	04-FEB-20 BH1
de Limit #2	S 8 <25
de Limit #2	<25
#2 0 750	<25
#2 0 750	<25
0 750	
750	<25
0 150	<100 OWP
-	<100
500	<250 OWP
-	<250
500	<250 OWP
-	<370
-	YES
-	92.6
	62.9
	0 500 - -

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Polycyclic Aromatic Hydrocarbons - WATER

 Lab ID
 L2413928-1

 Sample Date
 04-FEB-20

 Sample ID
 BH1

		Guide	Limits	
Analyte	Unit	#1	#2	
Acenaphthene	ug/L	600	1700	<0.020
Acenaphthylene	ug/L	1.8	1.8	<0.020
Anthracene	ug/L	2.4	2.4	<0.020
Benzo(a)anthracene	ug/L	4.7	4.7	<0.020
Benzo(a)pyrene	ug/L	0.81	0.81	<0.010
Benzo(b)fluoranthene	ug/L	0.75	0.75	<0.020
Benzo(g,h,i)perylene	ug/L	0.2	0.2	<0.020
Benzo(k)fluoranthene	ug/L	0.4	0.4	<0.020
Chrysene	ug/L	1	1	<0.020
Dibenzo(ah)anthracene	ug/L	0.52	0.52	<0.020
Fluoranthene	ug/L	130	130	<0.020
Fluorene	ug/L	400	400	<0.020
Indeno(1,2,3-cd)pyrene	ug/L	0.2	0.2	<0.020
1+2-Methylnaphthalenes	ug/L	1800	1800	<0.028
1-Methylnaphthalene	ug/L	1800	1800	<0.020
2-Methylnaphthalene	ug/L	1800	1800	<0.020
Naphthalene	ug/L	1400	6400	<0.050
Phenanthrene	ug/L	580	580	<0.020
Pyrene	ug/L	68	68	<0.020
Surrogate: d10-Acenaphthene	%	-	-	102.7
Surrogate: d12-Chrysene	%	-	-	101.5
Surrogate: d8-Naphthalene	%	-	-	98.3
Surrogate: d10-Phenanthrene	%	-	-	111.0

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Polychlorinated Biphenyls - WATER

	I	Lab ID	L2413928-1
	Sample	e Date	04-FEB-20
	Sam	ple ID	BH1
Unit	Guide #1	Limits #2	
ug/L	-	-	<0.020
ug/L	-	-	<0.020
ug/L	-	-	<0.020
ug/L	-	-	<0.020
%	-	-	60.3
ug/L	7.8	15	<0.040
%	-	-	68.0
	ug/L ug/L ug/L ug/L % ug/L	Sample Sam Guide Unit #1 ug/L - ug/L - ug/L - ug/L - ug/L - ug/L - ug/L - ug/L -	ug/L ug/L ug/L ug/L ug/L ug/L wg/L 7.8 15

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.

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Qualifiers for Individual Parameters Listed:

Qualifier	Description
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
OWP	Organic water sample contained visible sediment (must be included as part of analysis). Measured concentrations of organic substances in water can be biased high due to presence of

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Job Reference: 1-19-0603-42
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sediment.

Water

DLHC

CL-IC-N-WT

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**

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

Chloride by IC

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).

EPA 300.1 (mod)

CN-WAD-R511-WT Water Cyanide (WAD)-O.Reg 153/04 APHA 4500CN I-Weak acid Dist Colorimet

Weak acid dissociable cyanide (WAD) is determined by undergoing a distillation procedure. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

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-R511-WT Water Hex Chrom-O.Reg 153/04 (July 2011) EPA 7199

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. Chromium (III) is calculated as the difference between the total chromium and the chromium (VI) results.

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-R511-WT Water Conductivity-O.Reg 153/04 (July 2011) APHA 2510 B

Water samples can be measured directly by immersing the conductivity cell into 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).

EC-SCREEN-WT Water Conductivity Screen (Internal Use APHA 2510

Only)

Qualitative analysis of conductivity where required during preparation of other tests - e.g. TDS, metals, etc.

F1-F4-511-CALC-WT Water F1-F4 Hydrocarbon Calculated CCME CWS-PHC, Pub #1310, Dec 2001-L

Parameters

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

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.

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Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

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 Water F1-O.Reg 153/04 (July 2011) E3398/CCME TIER 1-HS

Fraction F1 is determined by 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 Water F2-F4-O.Reg 153/04 (July 2011) EPA 3511/CCME Tier 1

Petroleum Hydrocarbons (F2-F4 fractions) are extracted from water using a hexane micro-extraction technique. Instrumental analysis is by GC-FID, as per the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Tier 1 Method, CCME, 2001.

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-D-UG/L-CVAA-WT Water Diss. Mercury in Water by CVAAS EPA 1631E (mod)

(ug/L)

Water samples are filtered (0.45 um), preserved with hydrochloric acid, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed 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-D-UG/L-MS-WT Water Diss. Metals in Water by ICPMS (ug/L) EPA 200.8

The metal constituents of a non-acidified sample that pass through a membrane filter prior to ICP/MS analysis.

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 Water PAH-Calculated Parameters SW846 8270

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

Aqueous samples, fortified with surrogates, are extracted using liquid/liquid extraction technique. The sample extracts are concentrated and then analyzed using 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 Water PCB-O. Reg 153/04 (July 2011) SW846 3510/8082

Aqueous samples are extracted, then concentrated, reconstituted, and analyzed by 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 Water pH APHA 4500 H-Electrode

Water samples are analyzed directly by a calibrated pH 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). Holdtime for samples under this regulation is 28 days

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Methods Listed (if applicable):

 ALS Test Code
 Matrix
 Test Description
 Method Reference**

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

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

Liquid samples are analyzed by headspace GC/MSD.

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 Water 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

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.



Workorder: L2413928 Report Date: 13-FEB-20 Page 1 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CL-IC-N-WT	Water							
Batch R4992573								
WG3271551-4 DUP Chloride (CI)		WG3271551-3 29.5	29.5		mg/L	0.1	20	07-FEB-20
WG3271551-2 LCS Chloride (CI)			101.6		%		90-110	07-FEB-20
WG3271551-1 MB Chloride (Cl)			<0.50		mg/L		0.5	07-FEB-20
WG3271551-5 MS Chloride (Cl)		WG3271551-3	101.2		%		75-125	07-FEB-20
CN-WAD-R511-WT	Water							
Batch R4993874								
WG3273181-3 DUP Cyanide, Weak Acid Dis	s	L2414685-7 <2.0	<2.0	RPD-NA	ug/L	N/A	20	10-FEB-20
WG3273181-2 LCS Cyanide, Weak Acid Dis	S		98.6		%		80-120	10-FEB-20
WG3273181-1 MB Cyanide, Weak Acid Dis	s		<2.0		ug/L		2	10-FEB-20
WG3273181-4 MS Cyanide, Weak Acid Dis	s	L2414685-7	100.1		%		75-125	10-FEB-20
CR-CR6-IC-R511-WT	Water							
Batch R4992361								
WG3271691-4 DUP Chromium, Hexavalent		WG3271691-3 8.96	9.07		ug/L	1.2	20	07-FEB-20
WG3271691-2 LCS Chromium, Hexavalent			101.8		%		80-120	07-FEB-20
WG3271691-1 MB Chromium, Hexavalent			<0.50		ug/L		0.5	07-FEB-20
WG3271691-5 MS Chromium, Hexavalent		WG3271691-3	99.1		%		70-130	07-FEB-20
EC-R511-WT	Water							
Batch R4991439								
WG3271394-4 DUP Conductivity		WG3271394-3 2.29	2.24		mS/cm	2.2	10	07-FEB-20
WG3271394-2 LCS Conductivity			103.7		%		90-110	07-FEB-20
WG3271394-1 MB Conductivity			<0.0030		mS/cm		0.003	07-FEB-20
F1-HS-511-WT	Water							



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test		Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT		Water							
Batch R4 WG3269741-4 F1 (C6-C10)	991356 DUP		WG3269741-3 <25	<25	RPD-NA	ug/L	N/A	30	07-FEB-20
WG3269741-1 F1 (C6-C10)	LCS			91.9		%		80-120	07-FEB-20
WG3269741-2 F1 (C6-C10)	MB			<25		ug/L		25	07-FEB-20
Surrogate: 3,4-D	Dichloroto	oluene		77.1		%		60-140	07-FEB-20
WG3269741-5 F1 (C6-C10)	MS		WG3269741-3	69.7		%		60-140	07-FEB-20
F2-F4-511-WT		Water							
Batch R4 WG3270985-2	991613 LCS								
F2 (C10-C16)	LUS			105.6		%		70-130	07-FEB-20
F3 (C16-C34)				107.2		%		70-130	07-FEB-20
F4 (C34-C50)				107.4		%		70-130	07-FEB-20
WG3270985-1 F2 (C10-C16)	MB			<100		ug/L		100	07-FEB-20
F3 (C16-C34)				<250		ug/L		250	07-FEB-20
F4 (C34-C50)				<250		ug/L		250	07-FEB-20
Surrogate: 2-Bro	omobenz	otrifluoride		139.5		%		60-140	07-FEB-20
HG-D-UG/L-CVAA-	WT	Water							
Batch R4	991543								
WG3271392-3 Mercury (Hg)-Di	DUP issolved		L2414257-6 <0.0050	<0.0050	RPD-NA	ug/L	N/A	20	07-FEB-20
WG3271392-2 Mercury (Hg)-Di	LCS issolved			107.0		%		80-120	07-FEB-20
WG3271392-1 Mercury (Hg)-Di	MB issolved			<0.0050		ug/L		0.005	07-FEB-20
WG3271392-4 Mercury (Hg)-Di	_		L2413924-1	101.3		%		70-130	07-FEB-20
MET-D-UG/L-MS-W	/ T	Water							
Batch R4	991876								
WG3271317-4 Antimony (Sb)-[DUP Dissolved	I	WG3271317-3 <1.0	<1.0	RPD-NA	ug/L	N/A	20	07-FEB-20
Arsenic (As)-Dis	ssolved		<1.0	<1.0	RPD-NA	ug/L	N/A	20	07-FEB-20
Barium (Ba)-Dis	ssolved		337	343		ug/L	1.9	20	07-FEB-20



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R49918	76							
WG3271317-4 DUI		WG3271317			//			
Beryllium (Be)-Dissol	vea	<1.0	<1.0	RPD-NA	ug/L	N/A	20	07-FEB-20
Boron (B)-Dissolved	L d	<100	<100	RPD-NA	ug/L	N/A	20	07-FEB-20
Cadmium (Cd)-Disso		0.071	0.081		ug/L	14	20	07-FEB-20
Chromium (Cr)-Disso		<5.0	<5.0	RPD-NA	ug/L	N/A	20	07-FEB-20
Cobalt (Co)-Dissolve		<1.0	<1.0	RPD-NA	ug/L	N/A	20	07-FEB-20
Copper (Cu)-Dissolve	ed	<2.0	<2.0	RPD-NA	ug/L	N/A	20	07-FEB-20
Lead (Pb)-Dissolved		<0.50	<0.50	RPD-NA	ug/L	N/A	20	07-FEB-20
Molybdenum (Mo)-Di		3.24	3.32		ug/L	2.4	20	07-FEB-20
Nickel (Ni)-Dissolved		<5.0	<5.0	RPD-NA	ug/L	N/A	20	07-FEB-20
Selenium (Se)-Disso	ved	1.00	0.93		ug/L	7.9	20	07-FEB-20
Silver (Ag)-Dissolved		<0.50	<0.50	RPD-NA	ug/L	N/A	20	07-FEB-20
Sodium (Na)-Dissolve	ed	1200000	1220000		ug/L	1.9	20	07-FEB-20
Thallium (TI)-Dissolve	ed	<0.10	<0.10	RPD-NA	ug/L	N/A	20	07-FEB-20
Uranium (U)-Dissolve	ed	2.89	2.86		ug/L	1.0	20	07-FEB-20
Vanadium (V)-Dissol	ved	<5.0	<5.0	RPD-NA	ug/L	N/A	20	07-FEB-20
Zinc (Zn)-Dissolved		<10	<10	RPD-NA	ug/L	N/A	20	07-FEB-20
WG3271317-2 LCS Antimony (Sb)-Dissol			99.1		%		80-120	07-FEB-20
Arsenic (As)-Dissolve	ed		93.9		%		80-120	07-FEB-20
Barium (Ba)-Dissolve	d		100.1		%		80-120	07-FEB-20
Beryllium (Be)-Dissol	ved		92.3		%		80-120	07-FEB-20
Boron (B)-Dissolved			90.3		%		80-120	07-FEB-20
Cadmium (Cd)-Disso	lved		92.7		%		80-120	07-FEB-20
Chromium (Cr)-Disso	lved		93.4		%		80-120	07-FEB-20
Cobalt (Co)-Dissolve	b		91.8		%		80-120	07-FEB-20
Copper (Cu)-Dissolve	ed		89.5		%		80-120	07-FEB-20
Lead (Pb)-Dissolved			97.1		%		80-120	07-FEB-20
Molybdenum (Mo)-Di	ssolved		95.5		%		80-120	07-FEB-20
Nickel (Ni)-Dissolved			90.7		%		80-120	07-FEB-20
Selenium (Se)-Disso	ved		93.3		%		80-120	07-FEB-20
Silver (Ag)-Dissolved			98.7		%		80-120	07-FEB-20
Sodium (Na)-Dissolv	ed		95.3		%		80-120	07-FEB-20
Thallium (TI)-Dissolve	ed		95.3		%		80-120	07-FEB-20
1								



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R499187	76							
WG3271317-2 LCS			00.0		0/			
Uranium (U)-Dissolve			93.0		%		80-120	07-FEB-20
Vanadium (V)-Dissolv	/ea		95.9		%		80-120	07-FEB-20
Zinc (Zn)-Dissolved			92.7		%		80-120	07-FEB-20
WG3271317-1 MB Antimony (Sb)-Dissol	ved		<0.10		ug/L		0.1	07-FEB-20
Arsenic (As)-Dissolve			<0.10		ug/L		0.1	07-FEB-20
Barium (Ba)-Dissolve			<0.10		ug/L		0.1	07-FEB-20
Beryllium (Be)-Dissol			<0.10		ug/L		0.1	07-FEB-20
Boron (B)-Dissolved			<10		ug/L		10	07-FEB-20
Cadmium (Cd)-Disso	lved		<0.0050		ug/L		0.005	07-FEB-20
Chromium (Cr)-Disso			<0.50		ug/L		0.5	07-FEB-20
Cobalt (Co)-Dissolved			<0.10		ug/L		0.1	07-FEB-20
Copper (Cu)-Dissolve			<0.20		ug/L		0.2	07-FEB-20
Lead (Pb)-Dissolved			<0.050		ug/L		0.05	07-FEB-20
Molybdenum (Mo)-Dis	ssolved		<0.050		ug/L		0.05	07-FEB-20
Nickel (Ni)-Dissolved			<0.50		ug/L		0.5	07-FEB-20
Selenium (Se)-Dissol	ved		<0.050		ug/L		0.05	07-FEB-20
Silver (Ag)-Dissolved			< 0.050		ug/L		0.05	07-FEB-20
Sodium (Na)-Dissolve	ed		<50		ug/L		50	07-FEB-20
Thallium (TI)-Dissolve	ed		<0.010		ug/L		0.01	07-FEB-20
Uranium (U)-Dissolve	ed		<0.010		ug/L		0.01	07-FEB-20
Vanadium (V)-Dissolv	ved .		<0.50		ug/L		0.5	07-FEB-20
Zinc (Zn)-Dissolved			<1.0		ug/L		1	07-FEB-20
WG3271317-5 MS		WG3271317-6						
Antimony (Sb)-Dissol	ved		101.4		%		70-130	07-FEB-20
Arsenic (As)-Dissolve	d		96.3		%		70-130	07-FEB-20
Barium (Ba)-Dissolve	d		N/A	MS-B	%		-	07-FEB-20
Beryllium (Be)-Dissol	ved		94.5		%		70-130	07-FEB-20
Boron (B)-Dissolved			N/A	MS-B	%		-	07-FEB-20
Cadmium (Cd)-Disso	lved		92.4		%		70-130	07-FEB-20
Chromium (Cr)-Disso	lved		73.6		%		70-130	07-FEB-20
Cobalt (Co)-Dissolved	t		88.6		%		70-130	07-FEB-20
Copper (Cu)-Dissolve	ed		70.9		%		70-130	07-FEB-20
Lead (Pb)-Dissolved			93.8		%		70-130	07-FEB-20



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R4991876								
WG3271317-5 MS Molybdenum (Mo)-Disso	alva d	WG3271317-6			%		70.400	
Nickel (Ni)-Dissolved	Diveu		91.4 83.9		%		70-130	07-FEB-20
	٨						70-130	07-FEB-20
Selenium (Se)-Dissolved	u		90.5		%		70-130	07-FEB-20
Silver (Ag)-Dissolved			96.7	MOD	%		70-130	07-FEB-20
Sodium (Na)-Dissolved			N/A	MS-B	%		-	07-FEB-20
Thallium (TI)-Dissolved			92.7	MOD	%		70-130	07-FEB-20
Uranium (U)-Dissolved	J		N/A	MS-B	%		-	07-FEB-20
Vanadium (V)-Dissolved	ı		99.5		%		70-130	07-FEB-20
PAH-511-WT	Water							
Batch R4991387								
WG3270985-2 LCS 1-Methylnaphthalene			108.6		%		50-140	07-FEB-20
2-Methylnaphthalene			106.9		%		50-140	07-FEB-20
Acenaphthene			118.6		%		50-140	07-FEB-20
Acenaphthylene			107.6		%		50-140	07-FEB-20
Anthracene			103.8		%		50-140	07-FEB-20
Benzo(a)anthracene			115.4		%		50-140	07-FEB-20
Benzo(a)pyrene			114.7		%		50-140	07-FEB-20
Benzo(b)fluoranthene			103.6		%		50-140	07-FEB-20
Benzo(g,h,i)perylene			115.0		%		50-140	07-FEB-20
Benzo(k)fluoranthene			102.4		%		50-140	07-FEB-20
Chrysene			108.9		%		50-140	07-FEB-20
Dibenzo(ah)anthracene			115.4		%		50-140	07-FEB-20
Fluoranthene			116.6		%		50-140	07-FEB-20
Fluorene			112.7		%		50-140	07-FEB-20
Indeno(1,2,3-cd)pyrene			129.4		%		50-140	07-FEB-20
Naphthalene			111.3		%		50-140	07-FEB-20
Phenanthrene			118.0		%		50-140	07-FEB-20
Pyrene			116.6		%		50-140	07-FEB-20
WG3270985-1 MB								
1-Methylnaphthalene			<0.020		ug/L		0.02	07-FEB-20
2-Methylnaphthalene			<0.020		ug/L		0.02	07-FEB-20
Acenaphthene			<0.020		ug/L		0.02	07-FEB-20
Acenaphthylene			<0.020		ug/L		0.02	07-FEB-20
1								



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TERRAPROBE-BRAMPTON Client:

11 Indell Lane

Brampton ON L6T 3Y3

Kossay Makhzoumi Contact:

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Water							
Batch R499138 WG3270985-1 MB	7							
Anthracene			<0.020		ug/L		0.02	07-FEB-20
Benzo(a)anthracene			<0.020		ug/L		0.02	07-FEB-20
Benzo(a)pyrene			<0.010		ug/L		0.01	07-FEB-20
Benzo(b)fluoranthene			<0.020		ug/L		0.02	07-FEB-20
Benzo(g,h,i)perylene			<0.020		ug/L		0.02	07-FEB-20
Benzo(k)fluoranthene			<0.020		ug/L		0.02	07-FEB-20
Chrysene			<0.020		ug/L		0.02	07-FEB-20
Dibenzo(ah)anthracen	е		<0.020		ug/L		0.02	07-FEB-20
Fluoranthene			<0.020		ug/L		0.02	07-FEB-20
Fluorene			<0.020		ug/L		0.02	07-FEB-20
Indeno(1,2,3-cd)pyrene	е		<0.020		ug/L		0.02	07-FEB-20
Naphthalene			< 0.050		ug/L		0.05	07-FEB-20
Phenanthrene			<0.020		ug/L		0.02	07-FEB-20
Pyrene			<0.020		ug/L		0.02	07-FEB-20
Surrogate: d8-Naphtha	alene		98.1		%		60-140	07-FEB-20
Surrogate: d10-Phena	nthrene		97.1		%		60-140	07-FEB-20
Surrogate: d12-Chryse	ene		92.1		%		60-140	07-FEB-20
Surrogate: d10-Acena	ohthene		98.7		%		60-140	07-FEB-20
PCB-511-WT	Water							
Batch R4995272	2							
WG3271397-2 LCS Aroclor 1242			06.6		%		00.440	40 555 00
			96.6				60-140	12-FEB-20
Aroclor 1248			106.0		%		60-140	12-FEB-20
Aroclor 1254			107.1		%		60-140	12-FEB-20
Aroclor 1260			118.0		%		60-140	12-FEB-20
WG3271397-1 MB Aroclor 1242			<0.020		ug/L		0.02	12-FEB-20
Aroclor 1248			<0.020		ug/L		0.02	12-FEB-20
Aroclor 1254			<0.020		ug/L		0.02	12-FEB-20
Aroclor 1260			<0.020		ug/L		0.02	12-FEB-20
Surrogate: Decachloro	biphenyl		83.0		%		50-150	12-FEB-20
Surrogate: Tetrachloro	-m-xylene		68.3		%		50-150	12-FEB-20
PH-WT	Water							



Workorder: L2413928 Report Date: 13-FEB-20 Page 7 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PH-WT	Water							
Batch R4991439 WG3271394-4 DUP pH		WG3271394-3 8.11	8.11	J	pH units	0.00	0.2	07-FEB-20
WG3271394-2 LCS pH			7.04		pH units		6.9-7.1	07-FEB-20
VOC-511-HS-WT	Water							
Batch R4991356 WG3269741-4 DUP		WG3269741-3						
1,1,1,2-Tetrachloroethan		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
1,1,2,2-Tetrachloroethan	ne	<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
1,1,1-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
1,1,2-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
1,1-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
1,1-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
1,2-Dibromoethane		<0.20	<0.20	RPD-NA	ug/L	N/A	30	07-FEB-20
1,2-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
1,2-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
1,2-Dichloropropane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
1,3-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
1,4-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
Acetone		<30	<30	RPD-NA	ug/L	N/A	30	07-FEB-20
Benzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
Bromodichloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	07-FEB-20
Bromoform		<5.0	<5.0	RPD-NA	ug/L	N/A	30	07-FEB-20
Bromomethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
Carbon tetrachloride		<0.20	<0.20	RPD-NA	ug/L	N/A	30	07-FEB-20
Chlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
Chloroform		<1.0	<1.0	RPD-NA	ug/L	N/A	30	07-FEB-20
cis-1,2-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
cis-1,3-Dichloropropene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	07-FEB-20
Dibromochloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	07-FEB-20
Dichlorodifluoromethane)	<2.0	<2.0	RPD-NA	ug/L	N/A	30	07-FEB-20
Ethylbenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
n-Hexane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
m+p-Xylenes		<0.40	<0.40	RPD-NA	ug/L	N/A	30	07-FEB-20



Workorder: L2413928 Report Date: 13-FEB-20 Page 8 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

No. Section	Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
Wasses/Ser/14-14 DUP WG3269741-3 VAC 20 RPD-NA Ug/L N/A 30 07-FEB-20 Methyl Ethyl Ketone <20 <20 RPD-NA Ug/L N/A 30 07-FEB-20 Methylene Chloride <5.0 <5.0 RPD-NA Ug/L N/A 30 07-FEB-20 MTBE <2.0 <2.0 RPD-NA Ug/L N/A 30 07-FEB-20 o'Xylene <0.50 <0.50 RPD-NA Ug/L N/A 30 07-FEB-20 Styrene <0.50 <0.50 RPD-NA Ug/L N/A 30 07-FEB-20 Tetrachloroethylene <0.50 <0.50 RPD-NA Ug/L N/A 30 07-FEB-20 trans-1,2-Dichloroethylene <0.50 <0.50 RPD-NA Ug/L N/A 30 07-FEB-20 trans-1,2-Dichloroethylene <0.50 <0.50 RPD-NA Ug/L N/A 30 07-FEB-20 Trichloroethylene <0.50 RPD-NA Ug/L<	VOC-511-HS-WT	Water							
Methyl Ethyl Ketone <20	Batch R4991356								
Methyl Isoburyl Ketone <20 <20 RPD-NA Ug/L N/A 30 07-FEB-20 Methylene Chloride <5.0 <5.0 RPD-NA Ug/L N/A 30 07-FEB-20 MTBE <2.0 <2.0 RPD-NA Ug/L N/A 30 07-FEB-20 Styrene <0.50 <0.50 RPD-NA Ug/L N/A 30 07-FEB-20 Tetrachloroethylene <0.50 <0.50 RPD-NA Ug/L N/A 30 07-FEB-20 Toluene <0.50 <0.50 RPD-NA Ug/L N/A 30 07-FEB-20 trans-1,2-Dichloroethylene <0.50 <0.50 RPD-NA Ug/L N/A 30 07-FEB-20 trans-1,2-Dichloropropene <0.50 <0.50 RPD-NA Ug/L N/A 30 07-FEB-20 Trichloroethylene <0.50 <0.50 RPD-NA Ug/L N/A 30 07-FEB-20 Trichloroethylene <0.50 <0.50 RPD-NA Ug/L <td></td> <td></td> <td></td> <td></td> <td>DDD NA</td> <td>ua/l</td> <td>NI/A</td> <td>20</td> <td>07 FFD 00</td>					DDD NA	ua/l	NI/A	20	07 FFD 00
Methylene Chloride <5.0 <5.0 RPD-NA ug/L N/A 30 07-FEB-20 MTBE <2.0									
MTBE <2.0 <2.0 RPD-NA ug/L N/A 30 07-FEB-20 o-Xylene <0.30									
o-Xylene <0.30 <0.30 RPD-NA ug/L N/A 30 07-FEB-20 Styrene <0.50 <0.50 RPD-NA ug/L N/A 30 07-FEB-20 Tetrachloroethylene <0.50 <0.50 RPD-NA ug/L N/A 30 07-FEB-20 Toluene <0.50 <0.50 RPD-NA ug/L N/A 30 07-FEB-20 trans-1,2-Dichloroethylene <0.50 <0.50 RPD-NA ug/L N/A 30 07-FEB-20 trans-1,2-Dichloropropene <0.50 <0.50 RPD-NA ug/L N/A 30 07-FEB-20 Trichloroethylene <0.50 <0.50 RPD-NA ug/L N/A 30 07-FEB-20 Trichloroethylene <0.50 <0.50 RPD-NA ug/L N/A 30 07-FEB-20 Trichloroethane <0.50 <0.50 RPD-NA ug/L N/A 30 07-FEB-20 T.1,1-2-Tirchloroethane <0.50 RPD-NA ug/L <th< td=""><td>•</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>	•								
Styrene <0.50 <0.50 RPD-NA ug/L N/A 30 07-FEB-20 Tetrachloroethylene <0.50									
Tetrachloroethylene									
Toluene <0.50 <0.50 RPD-NA ug/L N/A 30 07-FEB-20 trans-1,2-Dichloroethylene <0.50	-								
trans-1,2-Dichloroethylene <0.50 <0.50 RPD-NA ug/L N/A 30 07-FEB-20 trans-1,3-Dichloropropene <0.30 <0.30 RPD-NA ug/L N/A 30 07-FEB-20 Trichloroethylene <0.50 <0.50 RPD-NA ug/L N/A 30 07-FEB-20 Trichlorofluoromethane <5.0 <5.0 RPD-NA ug/L N/A 30 07-FEB-20 Viryl chloride <0.50 <0.50 RPD-NA ug/L N/A 30 07-FEB-20 Wind chloride <0.50 <0.50 RPD-NA ug/L N/A 30 07-FEB-20 Wind chloride <0.50 <0.50 RPD-NA ug/L N/A 30 07-FEB-20 Wind chloride <0.50 <0.50 RPD-NA ug/L N/A 30 07-FEB-20 1,1,1-Trichloroethane <0.60 % 70-130 07-FEB-20 1,1,1-Trichloroethane 110.5 % 70-130 07-FEB-20 1,1-Dichloroethylene <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	-								
trans-1,3-Dichloropropene <0.30									
Trichloroethylene <0.50 <0.50 RPD-NA ug/L N/A 30 07-FEB-20 Trichlorofluoromethane <5.0	•								
Trichlorofluoromethane <5.0 <5.0 RPD-NA ug/L N/A 30 07-FEB-20 Vinyl chloride <0.50 <0.50 RPD-NA ug/L N/A 30 07-FEB-20 WG3269741-1 LCS LCS 1,1,1,2-Tetrachloroethane 106.0 % 70-130 07-FEB-20 1,1,1,2-Tetrachloroethane 99.4 % 70-130 07-FEB-20 1,1,1-Trichloroethane 113.4 % 70-130 07-FEB-20 1,1,2-Trichloroethane 102.7 % 70-130 07-FEB-20 1,1-Dichloroethane 110.5 % 70-130 07-FEB-20 1,1-Dichloroethane 110.1 % 70-130 07-FEB-20 1,2-Dibromoethane 101.2 % 70-130 07-FEB-20 1,2-Dichlorobenzene 106.7 % 70-130 07-FEB-20 1,2-Dichlorobenzene 108.7 % 70-130 07-FEB-20 1,3-Dichlorobenzene 108.7 % 70-130 07-FEB-20 1,4-Dichlorobenzene <td></td> <td>ne</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>		ne							
Vinyl chloride <0.50 RPD-NA ug/L N/A 30 07-FEB-20 WG3269741-1 LCS LCS V 70-130 07-FEB-20 1,1,1,2-Tetrachloroethane 106.0 % 70-130 07-FEB-20 1,1,1-Trichloroethane 99.4 % 70-130 07-FEB-20 1,1,1-Trichloroethane 113.4 % 70-130 07-FEB-20 1,1-Dichloroethane 110.5 % 70-130 07-FEB-20 1,1-Dichloroethane 110.1 % 70-130 07-FEB-20 1,1-Dichloroethane 110.1 % 70-130 07-FEB-20 1,2-Dichloroethane 101.2 % 70-130 07-FEB-20 1,2-Dichlorobenzene 106.7 % 70-130 07-FEB-20 1,2-Dichloropropane 108.7 % 70-130 07-FEB-20 1,3-Dichlorobenzene 109.9 % 70-130 07-FEB-20 1,4-Dichlorobenzene 109.4 % 70-130 07-FEB-20 Acetone 93.1 </td <td>•</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	•								
WG3269741-1 LCS 1,1,1,2-Tetrachloroethane 106.0 % 70-130 07-FEB-20 1,1,2,2-Tetrachloroethane 99.4 % 70-130 07-FEB-20 1,1,1-Trichloroethane 113.4 % 70-130 07-FEB-20 1,1,2-Trichloroethane 102.7 % 70-130 07-FEB-20 1,1-Dichloroethane 110.5 % 70-130 07-FEB-20 1,1-Dichloroethane 110.1 % 70-130 07-FEB-20 1,2-Dibloromoethane 101.2 % 70-130 07-FEB-20 1,2-Dichlorobenzene 106.7 % 70-130 07-FEB-20 1,2-Dichloroethane 101.1 % 70-130 07-FEB-20 1,2-Dichloroptopane 108.7 % 70-130 07-FEB-20 1,3-Dichlorobenzene 109.9 % 70-130 07-FEB-20 1,4-Dichlorobenzene 109.4 % 70-130 07-FEB-20 Acetone 93.1 % 60-140 07-FEB-20 Bromodichlorometha									07-FEB-20
1,1,1,2-Tetrachloroethane 106.0 % 70-130 07-FEB-20 1,1,2,2-Tetrachloroethane 99.4 % 70-130 07-FEB-20 1,1,1-Trichloroethane 113.4 % 70-130 07-FEB-20 1,1,2-Trichloroethane 102.7 % 70-130 07-FEB-20 1,1-Dichloroethane 110.5 % 70-130 07-FEB-20 1,1-Dichloroethylene 110.1 % 70-130 07-FEB-20 1,2-Dichloroethane 101.2 % 70-130 07-FEB-20 1,2-Dichlorobenzene 106.7 % 70-130 07-FEB-20 1,2-Dichloroethane 101.1 % 70-130 07-FEB-20 1,2-Dichloropropane 108.7 % 70-130 07-FEB-20 1,3-Dichlorobenzene 109.9 % 70-130 07-FEB-20 1,4-Dichlorobenzene 109.4 % 70-130 07-FEB-20 Acetone 93.1 % 60-140 07-FEB-20 Benzene 112.2 % 70-130 07-FEB-20 Bromodichloromethane 10.6 % 70-130 </td <td></td> <td></td> <td><0.50</td> <td><0.50</td> <td>RPD-NA</td> <td>ug/L</td> <td>N/A</td> <td>30</td> <td>07-FEB-20</td>			<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
1,1,1-Trichloroethane 113.4 % 70-130 07-FEB-20 1,1,2-Trichloroethane 102.7 % 70-130 07-FEB-20 1,1-Dichloroethane 110.5 % 70-130 07-FEB-20 1,1-Dichloroethylene 110.1 % 70-130 07-FEB-20 1,2-Dichloroethane 101.2 % 70-130 07-FEB-20 1,2-Dichlorobenzene 106.7 % 70-130 07-FEB-20 1,2-Dichloropthane 101.1 % 70-130 07-FEB-20 1,2-Dichloroptopane 108.7 % 70-130 07-FEB-20 1,3-Dichlorobenzene 109.9 % 70-130 07-FEB-20 1,4-Dichlorobenzene 109.4 % 70-130 07-FEB-20 Acetone 93.1 % 60-140 07-FEB-20 Benzene 112.2 % 70-130 07-FEB-20 Bromodichloromethane 105.3 % 70-130 07-FEB-20 Bromoform 100.6 % 70-130 07-FEB-20 Carbon tetrachloride 117.2 % 70-130 07-FE		ne		106.0		%		70-130	07-FEB-20
1,1,2-Trichloroethane 102.7 % 70-130 07-FEB-20 1,1-Dichloroethane 110.5 % 70-130 07-FEB-20 1,1-Dichloroethylene 110.1 % 70-130 07-FEB-20 1,2-Dibromoethane 101.2 % 70-130 07-FEB-20 1,2-Dichlorobenzene 106.7 % 70-130 07-FEB-20 1,2-Dichloroethane 101.1 % 70-130 07-FEB-20 1,2-Dichloropropane 108.7 % 70-130 07-FEB-20 1,3-Dichlorobenzene 109.9 % 70-130 07-FEB-20 1,4-Dichlorobenzene 109.4 % 70-130 07-FEB-20 Acetone 93.1 % 60-140 07-FEB-20 Benzene 112.2 % 70-130 07-FEB-20 Bromodichloromethane 105.3 % 70-130 07-FEB-20 Bromomethane 110.9 % 60-140 07-FEB-20 Carbon tetrachloride 117.2 % 70-130 07-FEB-20	1,1,2,2-Tetrachloroetha	ne		99.4		%		70-130	07-FEB-20
1,1-Dichloroethane 110.5 % 70-130 07-FEB-20 1,1-Dichloroethylene 110.1 % 70-130 07-FEB-20 1,2-Dibromoethane 101.2 % 70-130 07-FEB-20 1,2-Dichlorobenzene 106.7 % 70-130 07-FEB-20 1,2-Dichloroethane 101.1 % 70-130 07-FEB-20 1,2-Dichloropropane 108.7 % 70-130 07-FEB-20 1,3-Dichlorobenzene 109.9 % 70-130 07-FEB-20 1,4-Dichlorobenzene 109.4 % 70-130 07-FEB-20 Acetone 93.1 % 60-140 07-FEB-20 Benzene 112.2 % 70-130 07-FEB-20 Bromodichloromethane 105.3 % 70-130 07-FEB-20 Bromoform 100.6 % 70-130 07-FEB-20 Bromomethane 110.9 % 60-140 07-FEB-20 Carbon tetrachloride 117.2 % 70-130 07-FEB-20	1,1,1-Trichloroethane			113.4		%		70-130	07-FEB-20
1,1-Dichloroethylene 110.1 % 70-130 07-FEB-20 1,2-Dibromoethane 101.2 % 70-130 07-FEB-20 1,2-Dichlorobenzene 106.7 % 70-130 07-FEB-20 1,2-Dichloroethane 101.1 % 70-130 07-FEB-20 1,2-Dichloropropane 108.7 % 70-130 07-FEB-20 1,3-Dichlorobenzene 109.9 % 70-130 07-FEB-20 1,4-Dichlorobenzene 109.4 % 70-130 07-FEB-20 Acetone 93.1 % 60-140 07-FEB-20 Benzene 112.2 % 70-130 07-FEB-20 Bromodichloromethane 105.3 % 70-130 07-FEB-20 Bromoform 100.6 % 70-130 07-FEB-20 Bromomethane 110.9 % 60-140 07-FEB-20 Carbon tetrachloride 117.2 % 70-130 07-FEB-20	1,1,2-Trichloroethane			102.7		%		70-130	07-FEB-20
1,2-Dibromoethane 101.2 % 70-130 07-FEB-20 1,2-Dichlorobenzene 106.7 % 70-130 07-FEB-20 1,2-Dichloroethane 101.1 % 70-130 07-FEB-20 1,2-Dichloropropane 108.7 % 70-130 07-FEB-20 1,3-Dichlorobenzene 109.9 % 70-130 07-FEB-20 1,4-Dichlorobenzene 109.4 % 70-130 07-FEB-20 Acetone 93.1 % 60-140 07-FEB-20 Benzene 112.2 % 70-130 07-FEB-20 Bromodichloromethane 105.3 % 70-130 07-FEB-20 Bromoform 100.6 % 70-130 07-FEB-20 Bromomethane 110.9 % 60-140 07-FEB-20 Carbon tetrachloride 117.2 % 70-130 07-FEB-20	1,1-Dichloroethane			110.5		%		70-130	07-FEB-20
1,2-Dichlorobenzene 106.7 % 70-130 07-FEB-20 1,2-Dichloroethane 101.1 % 70-130 07-FEB-20 1,2-Dichloropropane 108.7 % 70-130 07-FEB-20 1,3-Dichlorobenzene 109.9 % 70-130 07-FEB-20 1,4-Dichlorobenzene 109.4 % 70-130 07-FEB-20 Acetone 93.1 % 60-140 07-FEB-20 Benzene 112.2 % 70-130 07-FEB-20 Bromodichloromethane 105.3 % 70-130 07-FEB-20 Bromoform 100.6 % 70-130 07-FEB-20 Bromomethane 110.9 % 60-140 07-FEB-20 Carbon tetrachloride 117.2 % 70-130 07-FEB-20	1,1-Dichloroethylene			110.1		%		70-130	07-FEB-20
1,2-Dichloroethane 101.1 % 70-130 07-FEB-20 1,2-Dichloropropane 108.7 % 70-130 07-FEB-20 1,3-Dichlorobenzene 109.9 % 70-130 07-FEB-20 1,4-Dichlorobenzene 109.4 % 70-130 07-FEB-20 Acetone 93.1 % 60-140 07-FEB-20 Benzene 112.2 % 70-130 07-FEB-20 Bromodichloromethane 105.3 % 70-130 07-FEB-20 Bromoform 100.6 % 70-130 07-FEB-20 Bromomethane 110.9 % 60-140 07-FEB-20 Carbon tetrachloride 117.2 % 70-130 07-FEB-20	1,2-Dibromoethane			101.2		%		70-130	07-FEB-20
1,2-Dichloropropane 108.7 % 70-130 07-FEB-20 1,3-Dichlorobenzene 109.9 % 70-130 07-FEB-20 1,4-Dichlorobenzene 109.4 % 70-130 07-FEB-20 Acetone 93.1 % 60-140 07-FEB-20 Benzene 112.2 % 70-130 07-FEB-20 Bromodichloromethane 105.3 % 70-130 07-FEB-20 Bromoform 100.6 % 70-130 07-FEB-20 Bromomethane 110.9 % 60-140 07-FEB-20 Carbon tetrachloride 117.2 % 70-130 07-FEB-20	1,2-Dichlorobenzene			106.7		%		70-130	07-FEB-20
1,3-Dichlorobenzene 109.9 % 70-130 07-FEB-20 1,4-Dichlorobenzene 109.4 % 70-130 07-FEB-20 Acetone 93.1 % 60-140 07-FEB-20 Benzene 112.2 % 70-130 07-FEB-20 Bromodichloromethane 105.3 % 70-130 07-FEB-20 Bromoform 100.6 % 70-130 07-FEB-20 Bromomethane 110.9 % 60-140 07-FEB-20 Carbon tetrachloride 117.2 % 70-130 07-FEB-20	1,2-Dichloroethane			101.1		%		70-130	07-FEB-20
1,4-Dichlorobenzene 109.4 % 70-130 07-FEB-20 Acetone 93.1 % 60-140 07-FEB-20 Benzene 112.2 % 70-130 07-FEB-20 Bromodichloromethane 105.3 % 70-130 07-FEB-20 Bromoform 100.6 % 70-130 07-FEB-20 Bromomethane 110.9 % 60-140 07-FEB-20 Carbon tetrachloride 117.2 % 70-130 07-FEB-20	1,2-Dichloropropane			108.7		%		70-130	07-FEB-20
Acetone 93.1 % 60-140 07-FEB-20 Benzene 112.2 % 70-130 07-FEB-20 Bromodichloromethane 105.3 % 70-130 07-FEB-20 Bromoform 100.6 % 70-130 07-FEB-20 Bromomethane 110.9 % 60-140 07-FEB-20 Carbon tetrachloride 117.2 % 70-130 07-FEB-20	1,3-Dichlorobenzene			109.9		%		70-130	07-FEB-20
Benzene 112.2 % 70-130 07-FEB-20 Bromodichloromethane 105.3 % 70-130 07-FEB-20 Bromoform 100.6 % 70-130 07-FEB-20 Bromomethane 110.9 % 60-140 07-FEB-20 Carbon tetrachloride 117.2 % 70-130 07-FEB-20	1,4-Dichlorobenzene			109.4		%		70-130	07-FEB-20
Bromodichloromethane 105.3 % 70-130 07-FEB-20 Bromoform 100.6 % 70-130 07-FEB-20 Bromomethane 110.9 % 60-140 07-FEB-20 Carbon tetrachloride 117.2 % 70-130 07-FEB-20	Acetone			93.1		%		60-140	07-FEB-20
Bromoform 100.6 % 70-130 07-FEB-20 Bromomethane 110.9 % 60-140 07-FEB-20 Carbon tetrachloride 117.2 % 70-130 07-FEB-20	Benzene			112.2		%		70-130	07-FEB-20
Bromomethane 110.9 % 60-140 07-FEB-20 Carbon tetrachloride 117.2 % 70-130 07-FEB-20	Bromodichloromethane			105.3		%		70-130	07-FEB-20
Carbon tetrachloride 117.2 % 70-130 07-FEB-20	Bromoform			100.6		%		70-130	07-FEB-20
	Bromomethane			110.9		%		60-140	07-FEB-20
Chlorobenzene 109.0 % 70-130 07-FEB-20	Carbon tetrachloride			117.2		%		70-130	07-FEB-20
	Chlorobenzene			109.0		%		70-130	07-FEB-20



Workorder: L2413928 Report Date: 13-FEB-20 Page 9 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4991356								
WG3269741-1 LCS			440.0		0/			
Chloroform			112.0		%		70-130	07-FEB-20
cis-1,2-Dichloroethylene			110.8		%		70-130	07-FEB-20
cis-1,3-Dichloropropene			111.9		%		70-130	07-FEB-20
Dibromochloromethane			100.9		%		70-130	07-FEB-20
Dichlorodifluoromethane			139.1		%		50-140	07-FEB-20
Ethylbenzene			108.8		%		70-130	07-FEB-20
n-Hexane			111.3		%		70-130	07-FEB-20
m+p-Xylenes			108.7		%		70-130	07-FEB-20
Methyl Ethyl Ketone			90.9		%		60-140	07-FEB-20
Methyl Isobutyl Ketone			78.1		%		60-140	07-FEB-20
Methylene Chloride			109.9		%		70-130	07-FEB-20
MTBE			111.4		%		70-130	07-FEB-20
o-Xylene			105.6		%		70-130	07-FEB-20
Styrene			106.1		%		70-130	07-FEB-20
Tetrachloroethylene			113.6		%		70-130	07-FEB-20
Toluene			108.9		%		70-130	07-FEB-20
trans-1,2-Dichloroethyler	ne		110.6		%		70-130	07-FEB-20
trans-1,3-Dichloropropen	ne		113.0		%		70-130	07-FEB-20
Trichloroethylene			111.7		%		70-130	07-FEB-20
Trichlorofluoromethane			117.7		%		60-140	07-FEB-20
Vinyl chloride			137.3		%		60-140	07-FEB-20
WG3269741-2 MB					_			
1,1,1,2-Tetrachloroethan			<0.50		ug/L		0.5	07-FEB-20
1,1,2,2-Tetrachloroethan	е		<0.50		ug/L		0.5	07-FEB-20
1,1,1-Trichloroethane			<0.50		ug/L		0.5	07-FEB-20
1,1,2-Trichloroethane			<0.50		ug/L		0.5	07-FEB-20
1,1-Dichloroethane			<0.50		ug/L		0.5	07-FEB-20
1,1-Dichloroethylene			<0.50		ug/L		0.5	07-FEB-20
1,2-Dibromoethane			<0.20		ug/L		0.2	07-FEB-20
1,2-Dichlorobenzene			< 0.50		ug/L		0.5	07-FEB-20
1,2-Dichloroethane			<0.50		ug/L		0.5	07-FEB-20
1,2-Dichloropropane			<0.50		ug/L		0.5	07-FEB-20
1,3-Dichlorobenzene			<0.50		ug/L		0.5	07-FEB-20
1,4-Dichlorobenzene			<0.50		ug/L		0.5	07-FEB-20



Workorder: L2413928 Report Date: 13-FEB-20 Page 10 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

VOC-511-HS-WT Water Batch R4991356 WG3269741-2 MB 430 ug/L 30 07-FEB-20 Benzene <0.50 ug/L 0.5 07-FEB-20 Bromodichloromethane <2.0 ug/L 2 07-FEB-20 Bromoform <5.0 ug/L 5 07-FEB-20 Bromomethane <0.50 ug/L 0.5 07-FEB-20 Carbon tetrachloride <0.20 ug/L 0.2 07-FEB-20 Chlorobenzene <0.50 ug/L 0.5 07-FEB-20 Chloroform <1.0 ug/L 0.5 07-FEB-20 cis-1,2-Dichloroethylene <0.50 ug/L 0.5 07-FEB-20 cis-1,3-Dichloropropene <0.30 ug/L 0.3 07-FEB-20
WG3269741-2 MB Acetone <30
Acetone <30
Benzene <0.50
Bromodichloromethane <2.0
Bromoform <5.0 ug/L 5 07-FEB-20 Bromomethane <0.50
Bromomethane <0.50 ug/L 0.5 07-FEB-20 Carbon tetrachloride <0.20
Carbon tetrachloride <0.20
Chlorobenzene <0.50 ug/L 0.5 07-FEB-20 Chloroform <1.0
Chloroform <1.0 ug/L 1 07-FEB-20 cis-1,2-Dichloroethylene <0.50
cis-1,2-Dichloroethylene <0.50 ug/L 0.5 07-FEB-20
, , , , , , , , , , , , , , , , , , , ,
cis-1,3-Dicnioropropene <0.30 ug/L 0.3 07-FEB-20
Dib years a blave as athere
Dibromochloromethane <2.0 ug/L 2 07-FEB-20
Dichlorodifluoromethane <2.0 ug/L 2 07-FEB-20
Ethylbenzene <0.50 ug/L 0.5 07-FEB-20
n-Hexane <0.50 ug/L 0.5 07-FEB-20
m+p-Xylenes <0.40 ug/L 0.4 07-FEB-20
Methyl Ethyl Ketone <20 ug/L 20 07-FEB-20
Methyl Isobutyl Ketone <20 ug/L 20 07-FEB-20
Methylene Chloride <5.0 ug/L 5 07-FEB-20
MTBE <2.0 ug/L 2 07-FEB-20
o-Xylene <0.30 ug/L 0.3 07-FEB-20
Styrene <0.50 ug/L 0.5 07-FEB-20
Tetrachloroethylene <0.50 ug/L 0.5 07-FEB-20
Toluene <0.50 ug/L 0.5 07-FEB-20
trans-1,2-Dichloroethylene <0.50 ug/L 0.5 07-FEB-20
trans-1,3-Dichloropropene <0.30 ug/L 0.3 07-FEB-20
Trichloroethylene <0.50 ug/L 0.5 07-FEB-20
Trichlorofluoromethane <5.0 ug/L 5 07-FEB-20
Vinyl chloride <0.50 ug/L 0.5 07-FEB-20
Surrogate: 1,4-Difluorobenzene 101.5 % 70-130 07-FEB-20
Surrogate: 4-Bromofluorobenzene 98.4 % 70-130 07-FEB-20
WG3269741-5 MS WG3269741-3
1,1,1,2-Tetrachloroethane 109.5 % 50-140 07-FEB-20
1,1,2,2-Tetrachloroethane 108.1 % 50-140 07-FEB-20
1,1,1-Trichloroethane 112.2 % 50-140 07-FEB-20



Workorder: L2413928 Report Date: 13-FEB-20 Page 11 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4991356								
WG3269741-5 MS 1,1,2-Trichloroethane		WG3269741-			0/		50.440	
			108.2		%		50-140	07-FEB-20
1,1-Dichloroethane			110.6		%		50-140	07-FEB-20
1,1-Dichloroethylene			107.9		%		50-140	07-FEB-20
1,2-Dibromoethane			107.6		%		50-140	07-FEB-20
1,2-Dichlorobenzene			106.8		%		50-140	07-FEB-20
1,2-Dichloroethane			108.9		%		50-140	07-FEB-20
1,2-Dichloropropane			117.1		%		50-140	07-FEB-20
1,3-Dichlorobenzene			105.8		%		50-140	07-FEB-20
1,4-Dichlorobenzene			105.7		%		50-140	07-FEB-20
Acetone			108.2		%		50-140	07-FEB-20
Benzene			112.7		%		50-140	07-FEB-20
Bromodichloromethane			112.6		%		50-140	07-FEB-20
Bromoform			107.2		%		50-140	07-FEB-20
Bromomethane			103.6		%		50-140	07-FEB-20
Carbon tetrachloride			113.9		%		50-140	07-FEB-20
Chlorobenzene			108.4		%		50-140	07-FEB-20
Chloroform			113.8		%		50-140	07-FEB-20
cis-1,2-Dichloroethylene)		110.9		%		50-140	07-FEB-20
cis-1,3-Dichloropropene)		111.6		%		50-140	07-FEB-20
Dibromochloromethane			106.1		%		50-140	07-FEB-20
Dichlorodifluoromethane	е		128.2		%		50-140	07-FEB-20
Ethylbenzene			106.8		%		50-140	07-FEB-20
n-Hexane			105.3		%		50-140	07-FEB-20
m+p-Xylenes			107.2		%		50-140	07-FEB-20
Methyl Ethyl Ketone			93.7		%		50-140	07-FEB-20
Methyl Isobutyl Ketone			94.6		%		50-140	07-FEB-20
Methylene Chloride			110.7		%		50-140	07-FEB-20
MTBE			112.2		%		50-140	07-FEB-20
o-Xylene			107.3		%		50-140	07-FEB-20
Styrene			107.7		%		50-140	07-FEB-20
Tetrachloroethylene			107.2		%		50-140	07-FEB-20
Toluene			107.6		%		50-140	07-FEB-20
trans-1,2-Dichloroethyle	no.		106.4		%		50-140	07-FEB-20 07-FEB-20



Workorder: L2413928 Report Date: 13-FEB-20 Page 12 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test Matrix	Reference R	esult	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT Water							
Batch R4991356							
WG3269741-5 MS	WG3269741-3						
trans-1,3-Dichloropropene	1	8.80		%		50-140	07-FEB-20
Trichloroethylene	1	09.8		%		50-140	07-FEB-20
Trichlorofluoromethane	1	13.2		%		50-140	07-FEB-20
Vinyl chloride	1	30.4		%		50-140	07-FEB-20

Workorder: L2413928 Report Date: 13-FEB-20

Client: TERRAPROBE-BRAMPTON Page 13 of 13

11 Indell Lane

Brampton ON L6T 3Y3 Kossay Makhzoumi

Legend:

Contact:

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.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
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.

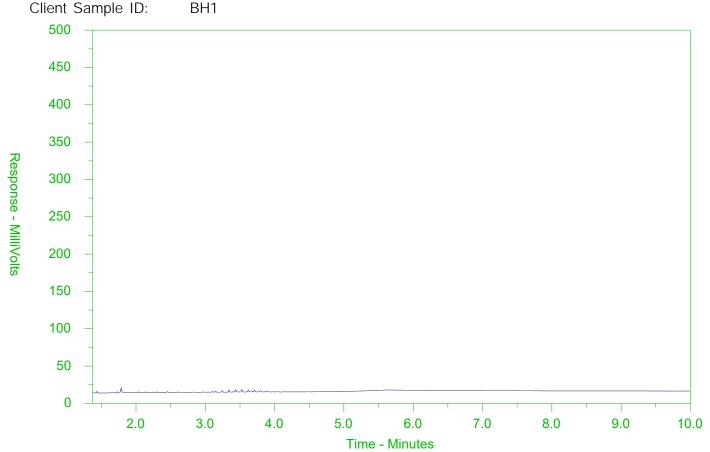
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined data quality objectives to provide 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: L2413928-1



← -F2-	→-	_F3 → F4-	→	
nC10	nC16	nC34	nC50	
174°C	287°C	481°C	575°C	
346°F	549°F	898°F	1067°F	
Gasolin	ie →	← Mo	tor 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

L2413928-COFC

COC Number: 15 -

Page

Canada Toll Free: 1 800 668 9878

Kepon Io	Contact and company name below will appear on the final report	ear on the final report		Report Formation	I Willer manner.						nfin	n all E&I	PTATe	vith you	IF AM - E	urcharg	nfirm all E&P TATs with your AM - surcharges will apply	pply	
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Contact:	Kossay Makhzoumi		Quality Control (Quality Control (QC) Report with Report	<u>د</u>	No No		4	4 day [P4]	- 1		4			usine	Business day [E1]			
Phone:	905-796-2650		Compare Resul	 Compare Results to Criteria on Report - provide details below if box checked 	- provide details below	If box checked	ORITY Mas D	မ	3 day [P3]			_	(GEN	2	7	¥.	ia band	2	ı
	Company address below will appear on the final report		Select Distribution:	on: 🖸 EMAIL	☐ MAIL ☐ FAX	AX	PRII (Bueln	2 d	2 day [P2]	Γ.			EMER	St	atuto	ry hol	Statutory holiday [E0]	<u></u>	
Street:	11 Indell Lane		Email 1 or Fax	Email 1 or Fax kmakhzoumi@terraprobe.ca	aprobe.ca			Date and Time Required for all E&P TATs:	Time R	equired	for all	E&P TA	Ts:	_					
City/Province:	Brampton		Email 2				For tests	that car	not be p	erformed	accord	ing to th	e servic	e level a	selected	l, you w	For tests that can not be performed according to the service level selected, you will be contacted.	tacted.	
Postal Code:	L6T 3Y3		Email 3									۶	nalysia	Analysis Request	rest				
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Contact:	Lorena Rossi																		3
	Project Information			Oil and Gas Required Fields (client use)	d Fields (client u	se)									_	_			ners
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ALS Sample #	20	and/or Coordinates		Date	Time	Sample Type	tals a	tals						Pest					
(lab use only)	(This d	ppear on the report)		(dd-mmm-yy)	(hh:mm)		Ме	Ме	H	EC	SA	PA	VO	PH	PC	f	T	r	
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Drinking	Drinking Water (DW) Samples¹ (client use)	Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below	cify Criteria to ac	d on report by click	ding on the drop-di	own list below			s	SAMPLE	E CO	рпю	N AS	RECE	EIVED	(lab i	CONDITION AS RECEIVED (lab use only)	Š	
Are samples tak	Are samples taken from a Regulated DW System?		(elect	(electronic COC only)			Frozen	-			_	500	. Og.	SIF Observations	ions] [N N	
	☐ YES ☐ NO	_		7			Cooling Initiated	l Initiat				2	ustou)	Seal	Intact	Yes		N	
Are samples for	Are samples for human drinking water use?		7	てんと 人と んんし	1			AITIINI	INITIAL COOLER TEMPERATURES °C	RIEM	PERATI	JRES °C		+		AL CO		EMPER	FINAL COOLER TEMPERATURES °C
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Released by: K	Released by: Kossav Makhzoum	Time:	Received by:		Date:		Times:	0	2000/0	by.	>			2	•				Timod

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 admowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy. REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION WHITE - LABORATORY COPY

YELLOW - CLIENT COPY

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



TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 06-FEB-20

Report Date: 11-FEB-20 13:15 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2413924

Project P.O. #: NOT SUBMITTED

Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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

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L2413924 CONT'D....

Job Reference: 1-19-0603-42

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11-FEB-20 13:15 (MT)

Summary of Guideline Exceedances

Guideline						
ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

(No parameter exceedances)

(No parameter exceedances)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2413924 CONT'D....

Job Reference: 1-19-0603-42

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11-FEB-20 13:15 (MT)

Physical Tests - WATER

4
Lab ID L2413924-1
Sample Date 04-FEB-20
Sample ID BH2
Guide Limits
Unit #1 #2
mS/cm 5.46

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2413924 CONT'D....

Job Reference: 1-19-0603-42

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Anions and Nutrients - WATER

			L	_ab ID	L2413924-1
			Sample	e Date	04-FEB-20
			Sam	ple ID	BH2
Analyte	l	Jnit	Guide #1	Limits #2	
Chloride (CI)					

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2413924 CONT'D....

Job Reference: 1-19-0603-42

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11-FEB-20 13:15 (MT)

Cyanides - WATER

Oyamacs - WATER			1 - L ID	104400044
			Lab ID	L2413924-1
		Sampl	e Date	04-FEB-20
		San	iple ID	BH2
			Limits	
Analyte	Unit	#1	#2	
Cyanide, Weak Acid Diss	ug/L	66	66	<2.0

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2413924 CONT'D....

Job Reference: 1-19-0603-42

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11-FEB-20 13:15 (MT)

Dissolved Metals - WATER

		Lab ID Sample Date Sample ID		L2413924-1 04-FEB-20 BH2
Analyte	Unit	Guide #1	Limits #2	
Dissolved Mercury Filtration Location		-	-	FIELD
Dissolved Metals Filtration Location		-	-	FIELD
Antimony (Sb)-Dissolved	ug/L	20000	20000	<1.0 DLHC
Arsenic (As)-Dissolved	ug/L	1900	1900	<1.0 DLHC
Barium (Ba)-Dissolved	ug/L	29000	29000	78.7 DLHC
Beryllium (Be)-Dissolved	ug/L	67	67	<1.0 DLHC
Boron (B)-Dissolved	ug/L	45000	45000	130 DLHC
Cadmium (Cd)-Dissolved	ug/L	2.7	2.7	<0.050 ^{DLHC}
Chromium (Cr)-Dissolved	ug/L	810	810	<5.0 DLHC
Cobalt (Co)-Dissolved	ug/L	66	66	<1.0 DLHC
Copper (Cu)-Dissolved	ug/L	87	87	<2.0 DLHC
Lead (Pb)-Dissolved	ug/L	25	25	<0.50 DLHC
Mercury (Hg)-Dissolved	ug/L	0.29	2.8	<0.0050
Molybdenum (Mo)-Dissolved	ug/L	9200	9200	7.74 DLHC
Nickel (Ni)-Dissolved	ug/L	490	490	<5.0 DLHC
Selenium (Se)-Dissolved	ug/L	63	63	<0.50 DLHC
Silver (Ag)-Dissolved	ug/L	1.5	1.5	<0.50 DLHC
Sodium (Na)-Dissolved	ug/L	2300000	2300000	656000 ^{DLHC}
Thallium (TI)-Dissolved	ug/L	510	510	<0.10 DLHC
Uranium (U)-Dissolved	ug/L	420	420	0.91 DLHC
Vanadium (V)-Dissolved	ug/L	250	250	<5.0 DLHC
Zinc (Zn)-Dissolved	ug/L	1100	1100	<10 DLHC

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2413924 CONT'D....

Job Reference: 1-19-0603-42

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11-FEB-20 13:15 (MT)

Speciated Metals - WATER

		Lab ID	L2413924-1
	Sampl	e Date	04-FEB-20
	San	nple ID	BH2
	Outda	1	
Uni		Limits #2	
		Sampl San	Lab ID Sample Date Sample ID

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2413924 CONT'D....

Job Reference: 1-19-0603-42

PAGE 8 of 15

11-FEB-20 13:15 (MT)

Volatile Organic Compounds - WATER

	npounds - WATER Lab ID Sample Date Sample ID		L2413924-1 04-FEB-20 BH2	
Analyte	Unit	Guide #1	Limits #2	
Acetone	ug/L	130000	130000	<30
Benzene	ug/L	44	430	<0.50
Bromodichloromethane	ug/L	85000	85000	<2.0
Bromoform	ug/L	380	770	<5.0
Bromomethane	ug/L	5.6	56	<0.50
Carbon tetrachloride	ug/L	0.79	8.4	<0.20
Chlorobenzene	ug/L	630	630	<0.50
Dibromochloromethane	ug/L	82000	82000	<2.0
Chloroform	ug/L	2.4	22	<1.0
1,2-Dibromoethane	ug/L	0.25	0.83	<0.20
1,2-Dichlorobenzene	ug/L	4600	9600	<0.50
1,3-Dichlorobenzene	ug/L	9600	9600	<0.50
1,4-Dichlorobenzene	ug/L	8	67	<0.50
Dichlorodifluoromethane	ug/L	4400	4400	<2.0
1,1-Dichloroethane	ug/L	320	3100	2.88
1,2-Dichloroethane	ug/L	1.6	12	1.41
1,1-Dichloroethylene	ug/L	1.6	17	<0.50
cis-1,2-Dichloroethylene	ug/L	1.6	17	1.42
trans-1,2-Dichloroethylene	ug/L	1.6	17	<0.50
Methylene Chloride	ug/L	610	5500	<5.0
1,2-Dichloropropane	ug/L	16	140	<0.50
cis-1,3-Dichloropropene	ug/L	-	-	< 0.30
trans-1,3-Dichloropropene	ug/L	-	-	< 0.30
1,3-Dichloropropene (cis & trans)	ug/L	5.2	45	<0.50
Ethylbenzene	ug/L	2300	2300	<0.50
n-Hexane	ug/L	51	520	<0.50
Methyl Ethyl Ketone	ug/L	470000	1500000	<20
Methyl Isobutyl Ketone	ug/L	140000	580000	<20
MTBE	ug/L	190	1400	<2.0
Styrene	ug/L	1300	9100	<0.50

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Volatile Organic Compounds - WATER

Volatile Organic Compound	S - WAIER			
		L	₋ab ID	L2413924-1
		Sample Date Sample ID		04-FEB-20 BH2
		Guide	Limits	
Analyte	Unit	#1	#2	
1,1,1,2-Tetrachloroethane	ug/L	3.3	28	<0.50
1,1,2,2-Tetrachloroethane	ug/L	3.2	15	<0.50
Tetrachloroethylene	ug/L	1.6	17	<0.50
Toluene	ug/L	18000	18000	<0.50
1,1,1-Trichloroethane	ug/L	640	6700	<0.50
1,1,2-Trichloroethane	ug/L	4.7	30	<0.50
Trichloroethylene	ug/L	1.6	17	<0.50
Trichlorofluoromethane	ug/L	2500	2500	<5.0
Vinyl chloride	ug/L	0.5	1.7	<0.50
o-Xylene	ug/L	-	-	<0.30
m+p-Xylenes	ug/L	-	-	<0.40
Xylenes (Total)	ug/L	4200	4200	<0.50
Surrogate: 4-Bromofluorobenzene	%	-	-	97.4
Surrogate: 1,4-Difluorobenzene	%	-	-	100.6

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2413924 CONT'D....

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Hydrocarbons - WATER

nyurocarbons - WATER				
			Lab ID	L2413924-1
		Sample	e Date	04-FEB-20
		Sam	ple ID	BH2
		Guide	Limits	
Analyte	Unit	#1	#2	
F1 (C6-C10)	ug/L	750	750	<25
F1-BTEX	ug/L	750	750	<25
F2 (C10-C16)	ug/L	150	150	<100 OWP
F2-Naphth	ug/L	-	-	<100
F3 (C16-C34)	ug/L	500	500	<250 OWP
F3-PAH	ug/L	-	-	<250
F4 (C34-C50)	ug/L	500	500	<250 OWP
Total Hydrocarbons (C6-C50)	ug/L	-	-	<370
Chrom. to baseline at nC50		-	-	YES
Surrogate: 2-Bromobenzotrifluoride	%	-	-	103.6
Surrogate: 3,4-Dichlorotoluene	%	-	-	62.3

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Polycyclic Aromatic Hydrocarbons - WATER

 Lab ID
 L2413924-1

 Sample Date
 04-FEB-20

 Sample ID
 BH2

		Guide	Limits	
Analyte	Unit	#1	#2	
Acenaphthene	ug/L	600	1700	<0.020
Acenaphthylene	ug/L	1.8	1.8	0.029 R
Anthracene	ug/L	2.4	2.4	<0.020
Benzo(a)anthracene	ug/L	4.7	4.7	<0.020
Benzo(a)pyrene	ug/L	0.81	0.81	<0.010
Benzo(b)fluoranthene	ug/L	0.75	0.75	<0.020
Benzo(g,h,i)perylene	ug/L	0.2	0.2	<0.020
Benzo(k)fluoranthene	ug/L	0.4	0.4	<0.020
Chrysene	ug/L	1	1	<0.020
Dibenzo(ah)anthracene	ug/L	0.52	0.52	<0.020
Fluoranthene	ug/L	130	130	<0.020
Fluorene	ug/L	400	400	<0.020
Indeno(1,2,3-cd)pyrene	ug/L	0.2	0.2	<0.020
1+2-Methylnaphthalenes	ug/L	1800	1800	<0.028
1-Methylnaphthalene	ug/L	1800	1800	<0.020
2-Methylnaphthalene	ug/L	1800	1800	0.023
Naphthalene	ug/L	1400	6400	<0.050
Phenanthrene	ug/L	580	580	<0.020
Pyrene	ug/L	68	68	<0.020
Surrogate: d10-Acenaphthene	%	-	-	110.7
Surrogate: d12-Chrysene	%	-	-	99.0
Surrogate: d8-Naphthalene	%	-	-	113.1
Surrogate: d10-Phenanthrene	%	-	-	116.6

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.

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Qualifiers for Individual Parameters Listed:

Qualifier	Description
R	The ion abundance ratio(s) did not meet the acceptance criteria. Value is an estimated maximum.
OWP	Organic water sample contained visible sediment (must be included as part of analysis). Measured concentrations of organic substances in water can be biased high due to presence of

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sediment.

Water

DLHC

CL-IC-N-WT

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**

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

Chloride by IC

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).

EPA 300.1 (mod)

CN-WAD-R511-WT Water Cyanide (WAD)-O.Reg 153/04 APHA 4500CN I-Weak acid Dist Colorimet

Weak acid dissociable cyanide (WAD) is determined by undergoing a distillation procedure. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

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-R511-WT Water Hex Chrom-O.Reg 153/04 (July 2011) EPA 7199

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. Chromium (III) is calculated as the difference between the total chromium and the chromium (VI) results.

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-R511-WT Water Conductivity-O.Reg 153/04 (July 2011) APHA 2510 B

Water samples can be measured directly by immersing the conductivity cell into 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).

EC-SCREEN-WT Water Conductivity Screen (Internal Use APHA 2510 Only)

U

Qualitative analysis of conductivity where required during preparation of other tests - e.g. TDS, metals, etc.

F1-F4-511-CALC-WT Water F1-F4 Hydrocarbon Calculated CCME CWS-PHC, Pub #1310, Dec 2001-L Parameters

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

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.

Reference Information

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Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

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 Water F1-O.Reg 153/04 (July 2011) E3398/CCME TIER 1-HS

Fraction F1 is determined by 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 Water F2-F4-O.Reg 153/04 (July 2011) EPA 3511/CCME Tier 1

Petroleum Hydrocarbons (F2-F4 fractions) are extracted from water using a hexane micro-extraction technique. Instrumental analysis is by GC-FID, as per the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Tier 1 Method, CCME, 2001.

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-D-UG/L-CVAA-WT Water Diss. Mercury in Water by CVAAS EPA 1631E (mod)

(ug/L)

Water samples are filtered (0.45 um), preserved with hydrochloric acid, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed 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-D-UG/L-MS-WT Water Diss. Metals in Water by ICPMS (ug/L) EPA 200.8

The metal constituents of a non-acidified sample that pass through a membrane filter prior to ICP/MS analysis.

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 Water PAH-Calculated Parameters SW846 8270

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

Aqueous samples, fortified with surrogates, are extracted using liquid/liquid extraction technique. The sample extracts are concentrated and then analyzed using 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 Water pH APHA 4500 H-Electrode

Water samples are analyzed directly by a calibrated pH 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). Holdtime for samples under this regulation is 28 days

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

VOC-511-HS-WT Water VOC by GCMS HS O.Reg 153/04 (July SW846 8260

2011)

Reference Information

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Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

Liquid samples are analyzed by headspace GC/MSD.

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 Water

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

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: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test		Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CL-IC-N-WT		Water							
Batch R49	992573								
WG3271551-4 Chloride (CI)	DUP		WG3271551-3 29.5	29.5		mg/L	0.1	20	07-FEB-20
WG3271551-2 Chloride (CI)	LCS			101.6		%		90-110	07-FEB-20
WG3271551-1 Chloride (CI)	МВ			<0.50		mg/L		0.5	07-FEB-20
WG3271551-5 Chloride (CI)	MS		WG3271551-3	101.2		%		75-125	07-FEB-20
CR-CR6-IC-R511-W	т	Water							
Batch R49	992361								
WG3271691-4 Chromium, Hexa	DUP avalent		WG3271691-3 8.96	9.07		ug/L	1.2	20	07-FEB-20
WG3271691-2 Chromium, Hexa				101.8		%		80-120	07-FEB-20
WG3271691-1 Chromium, Hexa	MB avalent			<0.50		ug/L		0.5	07-FEB-20
WG3271691-5 Chromium, Hexa	MS avalent		WG3271691-3	99.1		%		70-130	07-FEB-20
EC-R511-WT		Water							
Batch R49	991439								
WG3271394-4 Conductivity	DUP		WG3271394-3 2.29	2.24		mS/cm	2.2	10	07-FEB-20
WG3271394-2 Conductivity	LCS			103.7		%		90-110	07-FEB-20
WG3271394-1 Conductivity	MB			<0.0030		mS/cm		0.003	07-FEB-20
F1-HS-511-WT		Water							
Batch R49	991356								
WG3269741-4 F1 (C6-C10)	DUP		WG3269741-3 <25	<25	RPD-NA	ug/L	N/A	30	07-FEB-20
WG3269741-1 F1 (C6-C10)	LCS			91.9		%		80-120	07-FEB-20
WG3269741-2 F1 (C6-C10)	MB			<25		ug/L		25	07-FEB-20
Surrogate: 3,4-D	ichloroto	oluene		77.1		%		60-140	07-FEB-20
WG3269741-5 F1 (C6-C10)	MS		WG3269741-3	69.7		%		60-140	07-FEB-20



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TERRAPROBE-BRAMPTON Client:

11 Indell Lane

Brampton ON L6T 3Y3

Kossay Makhzoumi Contact:

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F2-F4-511-WT	Water							
Batch R4991613								
WG3270985-2 LCS F2 (C10-C16)			105.6		%		70-130	07-FEB-20
F3 (C16-C34)			107.2		%		70-130	07-FEB-20
F4 (C34-C50)			107.4		%		70-130	07-FEB-20
WG3270985-1 MB F2 (C10-C16)			<100		ug/L		100	07-FEB-20
F3 (C16-C34)			<250		ug/L		250	07-FEB-20
F4 (C34-C50)			<250		ug/L		250	07-FEB-20
Surrogate: 2-Bromobenzo	otrifluoride		139.5		%		60-140	07-FEB-20
HG-D-UG/L-CVAA-WT	Water							
Batch R4991543								
WG3271392-3 DUP Mercury (Hg)-Dissolved		L2414257-6 < 0.0050	<0.0050	RPD-NA	ug/L	N/A	20	07-FEB-20
WG3271392-2 LCS Mercury (Hg)-Dissolved			107.0		%		80-120	07-FEB-20
WG3271392-1 MB Mercury (Hg)-Dissolved			<0.0050		ug/L		0.005	07-FEB-20
WG3271392-4 MS		L2413924-1	\0.0000		ug, L		0.000	U/-FED-ZU
Mercury (Hg)-Dissolved		L271JJ24-1	101.3		%		70-130	07-FEB-20
MET-D-UG/L-MS-WT	Water							
Batch R4991876								
WG3271317-4 DUP Antimony (Sb)-Dissolved		WG3271317-3 <1.0	<1.0	RPD-NA	ug/L	N/A	20	07 EED 20
Arsenic (As)-Dissolved		<1.0	<1.0	RPD-NA RPD-NA	ug/L ug/L	N/A N/A	20	07-FEB-20 07-FEB-20
Barium (Ba)-Dissolved		337	343	NED-INA	ug/L	1.9	20	07-FEB-20 07-FEB-20
Beryllium (Be)-Dissolved		<1.0	<1.0	RPD-NA	ug/L	N/A	20	07-FEB-20
Boron (B)-Dissolved		<100	<100	RPD-NA	ug/L	N/A	20	07-FEB-20
Cadmium (Cd)-Dissolved	I	0.071	0.081		ug/L	14	20	07-FEB-20
Chromium (Cr)-Dissolved		<5.0	<5.0	RPD-NA	ug/L	N/A	20	07-FEB-20
Cobalt (Co)-Dissolved		<1.0	<1.0	RPD-NA	ug/L	N/A	20	07-FEB-20
Copper (Cu)-Dissolved		<2.0	<2.0	RPD-NA	ug/L	N/A	20	07-FEB-20
Lead (Pb)-Dissolved		<0.50	<0.50	RPD-NA	ug/L	N/A	20	07-FEB-20
Molybdenum (Mo)-Dissol	ved	3.24	3.32		ug/L	2.4	20	07-FEB-20
Nickel (Ni)-Dissolved		<5.0	<5.0	RPD-NA	ug/L	N/A	20	07-FEB-20
Selenium (Se)-Dissolved		1.00	0.93		ug/L	7.9	20	07-FEB-20



Workorder: L2413924 Report Date: 11-FEB-20 Page 3 of 12

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R499187	76							
WG3271317-4 DUF	•	WG3271317-3	0.50					
Silver (Ag)-Dissolved	1	<0.50	<0.50	RPD-NA	ug/L	N/A	20	07-FEB-20
Sodium (Na)-Dissolve		1200000	1220000		ug/L	1.9	20	07-FEB-20
Thallium (TI)-Dissolve		<0.10	<0.10	RPD-NA	ug/L	N/A	20	07-FEB-20
Uranium (U)-Dissolve		2.89	2.86		ug/L	1.0	20	07-FEB-20
Vanadium (V)-Dissolv	/ed	<5.0	<5.0	RPD-NA	ug/L	N/A	20	07-FEB-20
Zinc (Zn)-Dissolved		<10	<10	RPD-NA	ug/L	N/A	20	07-FEB-20
WG3271317-2 LCS Antimony (Sb)-Dissol			99.1		%		80-120	07-FEB-20
Arsenic (As)-Dissolve	d		93.9		%		80-120	07-FEB-20
Barium (Ba)-Dissolve	d		100.1		%		80-120	07-FEB-20
Beryllium (Be)-Dissol	ved		92.3		%		80-120	07-FEB-20
Boron (B)-Dissolved			90.3		%		80-120	07-FEB-20
Cadmium (Cd)-Disso	lved		92.7		%		80-120	07-FEB-20
Chromium (Cr)-Disso	lved		93.4		%		80-120	07-FEB-20
Cobalt (Co)-Dissolved	d		91.8		%		80-120	07-FEB-20
Copper (Cu)-Dissolve	ed		89.5		%		80-120	07-FEB-20
Lead (Pb)-Dissolved			97.1		%		80-120	07-FEB-20
Molybdenum (Mo)-Dis	ssolved		95.5		%		80-120	07-FEB-20
Nickel (Ni)-Dissolved			90.7		%		80-120	07-FEB-20
Selenium (Se)-Dissol	ved		93.3		%		80-120	07-FEB-20
Silver (Ag)-Dissolved			98.7		%		80-120	07-FEB-20
Sodium (Na)-Dissolve	ed		95.3		%		80-120	07-FEB-20
Thallium (TI)-Dissolve	ed		95.3		%		80-120	07-FEB-20
Uranium (U)-Dissolve	ed		93.0		%		80-120	07-FEB-20
Vanadium (V)-Dissolv	ved .		95.9		%		80-120	07-FEB-20
Zinc (Zn)-Dissolved			92.7		%		80-120	07-FEB-20
WG3271317-1 MB Antimony (Sb)-Dissol	ved		<0.10		ug/L		0.1	07-FEB-20
Arsenic (As)-Dissolve			<0.10		ug/L		0.1	07-FEB-20
Barium (Ba)-Dissolve			<0.10		ug/L		0.1	07-FEB-20
Beryllium (Be)-Dissol			<0.10		ug/L		0.1	07-FEB-20
Boron (B)-Dissolved			<10		ug/L		10	07-FEB-20
Cadmium (Cd)-Disso	lved		<0.0050		ug/L		0.005	07-FEB-20
Chromium (Cr)-Disso			<0.50		ug/L		0.5	07-FEB-20
2 2 2 (2.) 3.000	-				- 3 . ·		= ='	37 1 LD 20



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R4991876								
WG3271317-1 MB			-0.40		ug/l		0.1	07.550.00
Cobalt (Co)-Dissolved			<0.10		ug/L		0.1	07-FEB-20
Copper (Cu)-Dissolved			<0.20		ug/L		0.2	07-FEB-20
Lead (Pb)-Dissolved	الد مد دام		<0.050		ug/L		0.05	07-FEB-20
Molybdenum (Mo)-Diss	oivea		<0.050		ug/L		0.05	07-FEB-20
Nickel (Ni)-Dissolved	_		<0.50		ug/L		0.5	07-FEB-20
Selenium (Se)-Dissolve	a		<0.050		ug/L		0.05	07-FEB-20
Silver (Ag)-Dissolved			<0.050		ug/L		0.05	07-FEB-20
Sodium (Na)-Dissolved			<50		ug/L		50	07-FEB-20
Thallium (TI)-Dissolved			<0.010		ug/L		0.01	07-FEB-20
Uranium (U)-Dissolved	.1		<0.010		ug/L		0.01	07-FEB-20
Vanadium (V)-Dissolve	d		<0.50		ug/L		0.5	07-FEB-20
Zinc (Zn)-Dissolved			<1.0		ug/L		1	07-FEB-20
WG3271317-5 MS Antimony (Sb)-Dissolve	d	WG3271317-6	101.4		%		70-130	07-FEB-20
Arsenic (As)-Dissolved			96.3		%		70-130	07-FEB-20
Barium (Ba)-Dissolved			N/A	MS-B	%		-	07-FEB-20
Beryllium (Be)-Dissolve	d		94.5		%		70-130	07-FEB-20
Boron (B)-Dissolved			N/A	MS-B	%		-	07-FEB-20
Cadmium (Cd)-Dissolve	ed		92.4		%		70-130	07-FEB-20
Chromium (Cr)-Dissolve	ed		73.6		%		70-130	07-FEB-20
Cobalt (Co)-Dissolved			88.6		%		70-130	07-FEB-20
Copper (Cu)-Dissolved			70.9		%		70-130	07-FEB-20
Lead (Pb)-Dissolved			93.8		%		70-130	07-FEB-20
Molybdenum (Mo)-Diss	olved		91.4		%		70-130	07-FEB-20
Nickel (Ni)-Dissolved			83.9		%		70-130	07-FEB-20
Selenium (Se)-Dissolve	d		90.5		%		70-130	07-FEB-20
Silver (Ag)-Dissolved			96.7		%		70-130	07-FEB-20
Sodium (Na)-Dissolved			N/A	MS-B	%		-	07-FEB-20
Thallium (TI)-Dissolved			92.7		%		70-130	07-FEB-20
Uranium (U)-Dissolved			N/A	MS-B	%		-	07-FEB-20
Vanadium (V)-Dissolve	d		99.5		%		70-130	07-FEB-20

PAH-511-WT Water



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Water							
Batch R4991387								
WG3270985-2 LCS			400.0		0/			
1-Methylnaphthalene			108.6		%		50-140	07-FEB-20
2-Methylnaphthalene			106.9		%		50-140	07-FEB-20
Acenaphthene			118.6		%		50-140	07-FEB-20
Acenaphthylene			107.6		%		50-140	07-FEB-20
Anthracene			103.8		%		50-140	07-FEB-20
Benzo(a)anthracene			115.4		%		50-140	07-FEB-20
Benzo(a)pyrene			114.7		%		50-140	07-FEB-20
Benzo(b)fluoranthene			103.6		%		50-140	07-FEB-20
Benzo(g,h,i)perylene			115.0		%		50-140	07-FEB-20
Benzo(k)fluoranthene			102.4		%		50-140	07-FEB-20
Chrysene			108.9		%		50-140	07-FEB-20
Dibenzo(ah)anthracene			115.4		%		50-140	07-FEB-20
Fluoranthene			116.6		%		50-140	07-FEB-20
Fluorene			112.7		%		50-140	07-FEB-20
Indeno(1,2,3-cd)pyrene			129.4		%		50-140	07-FEB-20
Naphthalene			111.3		%		50-140	07-FEB-20
Phenanthrene			118.0		%		50-140	07-FEB-20
Pyrene			116.6		%		50-140	07-FEB-20
WG3270985-1 MB			<0.020		ug/l		0.02	07 FED 00
1-Methylnaphthalene					ug/L			07-FEB-20
2-Methylnaphthalene			<0.020		ug/L		0.02	07-FEB-20
Acenaphthene			<0.020		ug/L		0.02	07-FEB-20
Acenaphthylene			<0.020		ug/L		0.02	07-FEB-20
Anthracene			<0.020		ug/L		0.02	07-FEB-20
Benzo(a)anthracene			<0.020		ug/L		0.02	07-FEB-20
Benzo(a)pyrene			<0.010		ug/L		0.01	07-FEB-20
Benzo(b)fluoranthene			<0.020		ug/L		0.02	07-FEB-20
Benzo(g,h,i)perylene			<0.020		ug/L		0.02	07-FEB-20
Benzo(k)fluoranthene			<0.020		ug/L		0.02	07-FEB-20
Chrysene			<0.020		ug/L		0.02	07-FEB-20
Dibenzo(ah)anthracene			<0.020		ug/L		0.02	07-FEB-20
Fluoranthene			<0.020		ug/L		0.02	07-FEB-20
Fluorene			<0.020		ug/L		0.02	07-FEB-20
Indeno(1,2,3-cd)pyrene			<0.020		ug/L		0.02	07-FEB-20



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Water							
Batch R4991387	•							
WG3270985-1 MB			<0.050		ug/l		0.05	07 FFD 00
Naphthalene Phenanthrene			<0.050		ug/L ug/L		0.05	07-FEB-20
			<0.020				0.02	07-FEB-20
Pyrene Surrogate: d8-Naphtha	lono		98.1		ug/L %		60-140	07-FEB-20
Surrogate: d10-Phenar			97.1		%		60-140	07-FEB-20
Surrogate: d12-Chryse			97.1		%		60-140	07-FEB-20
Surrogate: d10-Acenap			98.7		%		60-140	07-FEB-20
			90.7		70		00-140	07-FEB-20
PH-WT	Water							
Batch R4991439 WG3271394-4 DUP	•	WG3271394-3						
pH		8.11	8.11	J	pH units	0.00	0.2	07-FEB-20
WG3271394-2 LCS								
рН			7.04		pH units		6.9-7.1	07-FEB-20
VOC-511-HS-WT	Water							
Batch R4991356	;							
WG3269741-4 DUP		WG3269741-3						
1,1,1,2-Tetrachloroetha		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
1,1,2,2-Tetrachloroetha	ane	<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
1,1,1-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
1,1,2-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
1,1-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
1,1-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
1,2-Dibromoethane		<0.20	<0.20	RPD-NA	ug/L	N/A	30	07-FEB-20
1,2-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
1,2-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
1,2-Dichloropropane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
1,3-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
1,4-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
Acetone		<30	<30	RPD-NA	ug/L	N/A	30	07-FEB-20
Benzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
Bromodichloromethane)	<2.0	<2.0	RPD-NA	ug/L	N/A	30	07-FEB-20
Bromoform		<5.0	<5.0	RPD-NA	ug/L	N/A	30	07-FEB-20
Bromomethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4991356								
WG3269741-4 DUP Carbon tetrachloride		WG3269741-		000 114	/1	. 1/A	00	
Chlorobenzene		<0.20	<0.20	RPD-NA	ug/L	N/A	30	07-FEB-20
		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
Chloroform		<1.0	<1.0	RPD-NA	ug/L	N/A	30	07-FEB-20
cis-1,2-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
cis-1,3-Dichloropropene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	07-FEB-20
Dibromochloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	07-FEB-20
Dichlorodifluoromethan	е	<2.0	<2.0	RPD-NA	ug/L	N/A	30	07-FEB-20
Ethylbenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
n-Hexane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
m+p-Xylenes		<0.40	<0.40	RPD-NA	ug/L	N/A	30	07-FEB-20
Methyl Ethyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	07-FEB-20
Methyl Isobutyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	07-FEB-20
Methylene Chloride		<5.0	<5.0	RPD-NA	ug/L	N/A	30	07-FEB-20
MTBE		<2.0	<2.0	RPD-NA	ug/L	N/A	30	07-FEB-20
o-Xylene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	07-FEB-20
Styrene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
Tetrachloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
Toluene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
trans-1,2-Dichloroethyle	ene	<0.50	< 0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
trans-1,3-Dichloroprope	ne	<0.30	< 0.30	RPD-NA	ug/L	N/A	30	07-FEB-20
Trichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
Trichlorofluoromethane		<5.0	<5.0	RPD-NA	ug/L	N/A	30	07-FEB-20
Vinyl chloride		<0.50	<0.50	RPD-NA	ug/L	N/A	30	07-FEB-20
WG3269741-1 LCS								
1,1,1,2-Tetrachloroetha			106.0		%		70-130	07-FEB-20
1,1,2,2-Tetrachloroetha	ne		99.4		%		70-130	07-FEB-20
1,1,1-Trichloroethane			113.4		%		70-130	07-FEB-20
1,1,2-Trichloroethane			102.7		%		70-130	07-FEB-20
1,1-Dichloroethane			110.5		%		70-130	07-FEB-20
1,1-Dichloroethylene			110.1		%		70-130	07-FEB-20
1,2-Dibromoethane			101.2		%		70-130	07-FEB-20
1,2-Dichlorobenzene			106.7		%		70-130	07-FEB-20
1,2-Dichloroethane			101.1		%		70-130	07-FEB-20



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4991356								
WG3269741-1 LCS			400 7		0/			
1,2-Dichloropropane			108.7		%		70-130	07-FEB-20
1,3-Dichlorobenzene			109.9		%		70-130	07-FEB-20
1,4-Dichlorobenzene			109.4		%		70-130	07-FEB-20
Acetone			93.1		%		60-140	07-FEB-20
Benzene			112.2		%		70-130	07-FEB-20
Bromodichloromethane			105.3		%		70-130	07-FEB-20
Bromoform			100.6		%		70-130	07-FEB-20
Bromomethane			110.9		%		60-140	07-FEB-20
Carbon tetrachloride			117.2		%		70-130	07-FEB-20
Chlorobenzene			109.0		%		70-130	07-FEB-20
Chloroform			112.0		%		70-130	07-FEB-20
cis-1,2-Dichloroethylene			110.8		%		70-130	07-FEB-20
cis-1,3-Dichloropropene			111.9		%		70-130	07-FEB-20
Dibromochloromethane			100.9		%		70-130	07-FEB-20
Dichlorodifluoromethane			139.1		%		50-140	07-FEB-20
Ethylbenzene			108.8		%		70-130	07-FEB-20
n-Hexane			111.3		%		70-130	07-FEB-20
m+p-Xylenes			108.7		%		70-130	07-FEB-20
Methyl Ethyl Ketone			90.9		%		60-140	07-FEB-20
Methyl Isobutyl Ketone			78.1		%		60-140	07-FEB-20
Methylene Chloride			109.9		%		70-130	07-FEB-20
MTBE			111.4		%		70-130	07-FEB-20
o-Xylene			105.6		%		70-130	07-FEB-20
Styrene			106.1		%		70-130	07-FEB-20
Tetrachloroethylene			113.6		%		70-130	07-FEB-20
Toluene			108.9		%		70-130	07-FEB-20
trans-1,2-Dichloroethyler	ne		110.6		%		70-130	07-FEB-20
trans-1,3-Dichloroproper	ne		113.0		%		70-130	07-FEB-20
Trichloroethylene			111.7		%		70-130	07-FEB-20
Trichlorofluoromethane			117.7		%		60-140	07-FEB-20
Vinyl chloride			137.3		%		60-140	07-FEB-20
WG3269741-2 MB								
1,1,1,2-Tetrachloroethan	е		<0.50		ug/L		0.5	07-FEB-20
1,1,2,2-Tetrachloroethan	e		<0.50		ug/L		0.5	07-FEB-20



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4991356								
WG3269741-2 MB			0.50				0.5	
1,1,1-Trichloroethane			<0.50		ug/L		0.5	07-FEB-20
1,1,2-Trichloroethane			<0.50		ug/L		0.5	07-FEB-20
1,1-Dichloroethane			<0.50		ug/L		0.5	07-FEB-20
1,1-Dichloroethylene			<0.50		ug/L		0.5	07-FEB-20
1,2-Dibromoethane			<0.20		ug/L		0.2	07-FEB-20
1,2-Dichlorobenzene			<0.50		ug/L		0.5	07-FEB-20
1,2-Dichloroethane			<0.50		ug/L		0.5	07-FEB-20
1,2-Dichloropropane			<0.50		ug/L		0.5	07-FEB-20
1,3-Dichlorobenzene			<0.50		ug/L		0.5	07-FEB-20
1,4-Dichlorobenzene			<0.50		ug/L		0.5	07-FEB-20
Acetone			<30		ug/L		30	07-FEB-20
Benzene			<0.50		ug/L		0.5	07-FEB-20
Bromodichloromethane			<2.0		ug/L		2	07-FEB-20
Bromoform			<5.0		ug/L		5	07-FEB-20
Bromomethane			<0.50		ug/L		0.5	07-FEB-20
Carbon tetrachloride			<0.20		ug/L		0.2	07-FEB-20
Chlorobenzene			<0.50		ug/L		0.5	07-FEB-20
Chloroform			<1.0		ug/L		1	07-FEB-20
cis-1,2-Dichloroethylene	9		< 0.50		ug/L		0.5	07-FEB-20
cis-1,3-Dichloropropene)		< 0.30		ug/L		0.3	07-FEB-20
Dibromochloromethane			<2.0		ug/L		2	07-FEB-20
Dichlorodifluoromethan	е		<2.0		ug/L		2	07-FEB-20
Ethylbenzene			<0.50		ug/L		0.5	07-FEB-20
n-Hexane			<0.50		ug/L		0.5	07-FEB-20
m+p-Xylenes			< 0.40		ug/L		0.4	07-FEB-20
Methyl Ethyl Ketone			<20		ug/L		20	07-FEB-20
Methyl Isobutyl Ketone			<20		ug/L		20	07-FEB-20
Methylene Chloride			<5.0		ug/L		5	07-FEB-20
MTBE			<2.0		ug/L		2	07-FEB-20
o-Xylene			<0.30		ug/L		0.3	07-FEB-20
Styrene			<0.50		ug/L		0.5	07-FEB-20
Tetrachloroethylene			<0.50		ug/L		0.5	07-FEB-20
Toluene			<0.50		ug/L		0.5	07-FEB-20



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R499135	56							
WG3269741-2 MB								
trans-1,2-Dichloroethy			<0.50		ug/L		0.5	07-FEB-20
trans-1,3-Dichloropro	pene		<0.30		ug/L		0.3	07-FEB-20
Trichloroethylene			<0.50		ug/L		0.5	07-FEB-20
Trichlorofluoromethar	ne		<5.0		ug/L		5	07-FEB-20
Vinyl chloride			<0.50		ug/L		0.5	07-FEB-20
Surrogate: 1,4-Difluor	obenzene		101.5		%		70-130	07-FEB-20
Surrogate: 4-Bromoflu	uorobenzene		98.4		%		70-130	07-FEB-20
WG3269741-5 MS		WG3269741-						
1,1,1,2-Tetrachloroeth			109.5		%		50-140	07-FEB-20
1,1,2,2-Tetrachloroeth			108.1		%		50-140	07-FEB-20
1,1,1-Trichloroethane			112.2		%		50-140	07-FEB-20
1,1,2-Trichloroethane			108.2		%		50-140	07-FEB-20
1,1-Dichloroethane			110.6		%		50-140	07-FEB-20
1,1-Dichloroethylene			107.9		%		50-140	07-FEB-20
1,2-Dibromoethane			107.6		%		50-140	07-FEB-20
1,2-Dichlorobenzene			106.8		%		50-140	07-FEB-20
1,2-Dichloroethane			108.9		%		50-140	07-FEB-20
1,2-Dichloropropane			117.1		%		50-140	07-FEB-20
1,3-Dichlorobenzene			105.8		%		50-140	07-FEB-20
1,4-Dichlorobenzene			105.7		%		50-140	07-FEB-20
Acetone			108.2		%		50-140	07-FEB-20
Benzene			112.7		%		50-140	07-FEB-20
Bromodichloromethar	ne		112.6		%		50-140	07-FEB-20
Bromoform			107.2		%		50-140	07-FEB-20
Bromomethane			103.6		%		50-140	07-FEB-20
Carbon tetrachloride			113.9		%		50-140	07-FEB-20
Chlorobenzene			108.4		%		50-140	07-FEB-20
Chloroform			113.8		%		50-140	07-FEB-20
cis-1,2-Dichloroethyle	ene		110.9		%		50-140	07-FEB-20
cis-1,3-Dichloroprope	ne		111.6		%		50-140	07-FEB-20
Dibromochloromethan	ne		106.1		%		50-140	07-FEB-20
Dichlorodifluorometha	ane		128.2		%		50-140	07-FEB-20
Ethylbenzene			106.8		%		50-140	07-FEB-20
n-Hexane			105.3		%		50-140	07-FEB-20



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4991356								
WG3269741-5 MS		WG3269741-						
m+p-Xylenes			107.2		%		50-140	07-FEB-20
Methyl Ethyl Ketone			93.7		%		50-140	07-FEB-20
Methyl Isobutyl Ketone			94.6		%		50-140	07-FEB-20
Methylene Chloride			110.7		%		50-140	07-FEB-20
MTBE			112.2		%		50-140	07-FEB-20
o-Xylene			107.3		%		50-140	07-FEB-20
Styrene			107.7		%		50-140	07-FEB-20
Tetrachloroethylene			107.2		%		50-140	07-FEB-20
Toluene			107.6		%		50-140	07-FEB-20
trans-1,2-Dichloroethyle	ene		106.4		%		50-140	07-FEB-20
trans-1,3-Dichloroprope	ne		108.8		%		50-140	07-FEB-20
Trichloroethylene			109.8		%		50-140	07-FEB-20
Trichlorofluoromethane			113.2		%		50-140	07-FEB-20
Vinyl chloride			130.4		%		50-140	07-FEB-20

Workorder: L2413924 Report Date: 11-FEB-20

Client: TERRAPROBE-BRAMPTON Page 12 of 12

11 Indell Lane

Brampton ON L6T 3Y3 Kossay Makhzoumi

Legend:

Contact:

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.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
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.

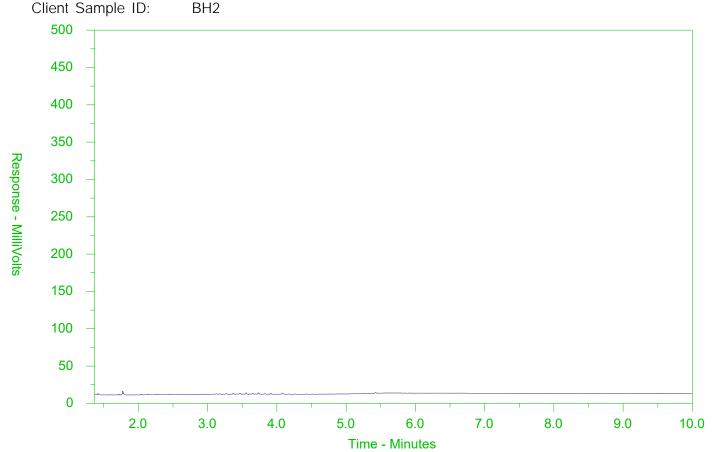
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined data quality objectives to provide 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: L2413924-1



← -F2-	→←	_F3 → F4-	→	
nC10	nC16	nC34	nC50	
174°C	287°C	481°C	575°C	
346°F	549°F	898°F	1067°F	
Gasolin	ie →	← Mo	tor 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

Chain of Custody (COC) / Analytical Request Form

Canada Toll Free: 1 800 668 9878

Page 1 of

COC Number: 15 -

L2413924-COFC

Released by: Ko		☐ YES	Vre samples for h	☐ YES	ve samples taker	Drinking \														(lab use only)	ALS Sample #	ALS Lab Wor	LSD:	PO/AFE:	Job #	ALS Account # / Quote #:		Contact:	Company:		Invoice To	Postal Code:	City/Province:	Street:		Phone:	Contact:	Company:	Report To
Released by: Kossay Makhzoumi Date:	SHIPMENT RELEASE (client use)	0	are samples for human drinking water use?	S II NO	We samples taken from a Regulated DW System?	Drinking Water (DW) Samples¹ (client use)													(Tu	(This description will appear on the report)	Sample Identification and/or Coordinates	ALS Lab Work Order # (lab use only)			1-19-0603-42	/ Quote #: Q64281	Project Information	Lorena Rossi	Terraprobe	Copy of Invoice with Report	Same as Report To	L6T 3Y3	Brampton	11 Indell Lane	Company address below will appear on the final report	905-796-2650	Kossay Makhzoumi	Terraprobe	Contact and company name below will appear on the final report
Time:				×-		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)							-						BHZ	appear on the report)	and/or Coordinates	MARRE								No	YES I NO				report				pear on the final report
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1. If any water samples are taken from a Regulated Drinking Water (DW) System, plasse submit using an Authorized DW COC form. 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.



TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 22-NOV-19

Report Date: 29-NOV-19 12:07 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2386573

Project P.O. #: NOT SUBMITTED

Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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

ADDRESS: 5730 Coopers Avenue, Unit #26 , Mississauga, ON L4Z 2E9 Canada | Phone: +1 905 507 6910 | Fax: +1 905 507 6927 ALS CANADA LTD Part of the ALS Group An ALS Limited Company





L2386573 CONT'D....

Job Reference: 1-19-0603-42

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29-NOV-19 12:07 (MT)

Summary of Guideline Exceedances

Guideline						
ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

(No parameter exceedances)

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

(No parameter exceedances)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2386573 CONT'D....

Job Reference: 1-19-0603-42

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29-NOV-19 12:07 (MT)

Dissolved Metals - WATER

		Sample	ab ID Date ple ID	L2386573-1 20-NOV-19 BH3		
Analyte	Unit	Guide #1	Limits #2			
Dissolved Metals Filtration Location		-	-	FIELD		
Antimony (Sb)-Dissolved	ug/L	20000	20000	<1.0 DLHC		
Arsenic (As)-Dissolved	ug/L	1900	1900	<1.0 DLHC		
Barium (Ba)-Dissolved	ug/L	29000	29000	44.9 DLHC		
Beryllium (Be)-Dissolved	ug/L	67	67	<1.0 DLHC		
Boron (B)-Dissolved	ug/L	45000	45000	190 DLHC		
Cadmium (Cd)-Dissolved	ug/L	2.7	2.7	<0.050 ^{DLHC}		
Chromium (Cr)-Dissolved	ug/L	810	810	<5.0 DLHC		
Cobalt (Co)-Dissolved	ug/L	66	66	2.9 DLHC		
Copper (Cu)-Dissolved	ug/L	87	87	<2.0 DLHC		
Lead (Pb)-Dissolved	ug/L	25	25	<0.50 DLHC		
Molybdenum (Mo)-Dissolved	ug/L	9200	9200	1.96 DLHC		
Nickel (Ni)-Dissolved	ug/L	490	490	<5.0 DLHC		
Selenium (Se)-Dissolved	ug/L	63	63	<0.50 DLHC		
Silver (Ag)-Dissolved	ug/L	1.5	1.5	<0.50 DLHC		
Sodium (Na)-Dissolved	ug/L	2300000	2300000	909000 ^{DLHC}		
Thallium (TI)-Dissolved	ug/L	510	510	<0.10 DLHC		
Uranium (U)-Dissolved	ug/L	420	420	6.97 DLHC		
Vanadium (V)-Dissolved	ug/L	250	250	<5.0 DLHC		
Zinc (Zn)-Dissolved	ug/L	1100	1100	<10 DLHC		

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2386573 CONT'D....

Job Reference: 1-19-0603-42

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29-NOV-19 12:07 (MT)

Volatile Organic Compounds - WATER

	Lab ID Sample Date					
		Sam	ple ID	ВН3		
		Guide				
Analyte	Unit	#1	#2			
Acetone	ug/L	130000	130000	<30		
Benzene	ug/L	44	430	<0.50		
Bromodichloromethane	ug/L	85000	85000	<2.0		
Bromoform	ug/L	380	770	<5.0		
Bromomethane	ug/L	5.6	56	<0.50		
Carbon tetrachloride	ug/L	0.79	8.4	<0.20		
Chlorobenzene	ug/L	630	630	<0.50		
Dibromochloromethane	ug/L	82000	82000	<2.0		
Chloroform	ug/L	2.4	22	<1.0		
1,2-Dibromoethane	ug/L	0.25	0.83	<0.20		
1,2-Dichlorobenzene	ug/L	4600	9600	<0.50		
1,3-Dichlorobenzene	ug/L	9600	9600	<0.50		
1,4-Dichlorobenzene	ug/L	8	67	<0.50		
Dichlorodifluoromethane	ug/L	4400	4400	<2.0		
1,1-Dichloroethane	ug/L	320	3100	<0.50		
1,2-Dichloroethane	ug/L	1.6	12	0.85		
1,1-Dichloroethylene	ug/L	1.6	17	<0.50		
cis-1,2-Dichloroethylene	ug/L	1.6	17	<0.50		
trans-1,2-Dichloroethylene	ug/L	1.6	17	<0.50		
Methylene Chloride	ug/L	610	5500	<5.0		
1,2-Dichloropropane	ug/L	16	140	<0.50		
cis-1,3-Dichloropropene	ug/L	-	-	<0.30		
trans-1,3-Dichloropropene	ug/L	-	-	< 0.30		
1,3-Dichloropropene (cis & trans)	ug/L	5.2	45	<0.50		
Ethylbenzene	ug/L	2300	2300	<0.50		
n-Hexane	ug/L	51	520	<0.50		
Methyl Ethyl Ketone	ug/L	470000	1500000	<20		
Methyl Isobutyl Ketone	ug/L	140000	580000	<20		
MTBE	ug/L	190	1400	<2.0		
Styrene	ug/L	1300	9100	<0.50		

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

 $^{^{\}star}$ Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2386573 CONT'D....

Job Reference: 1-19-0603-42

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29-NOV-19 12:07 (MT)

Volatile Organic Compounds - WATER

			ab ID	L2386573-1
		Sample		20-NOV-19
		Sam	ple ID	BH3
		Guide	Limits	
Analyte	Unit	#1	#2	
1,1,1,2-Tetrachloroethane	ug/L	3.3	28	<0.50
1,1,2,2-Tetrachloroethane	ug/L	3.2	15	<0.50
Tetrachloroethylene	ug/L	1.6	17	<0.50
Toluene	ug/L	18000	18000	<0.50
1,1,1-Trichloroethane	ug/L	640	6700	<0.50
1,1,2-Trichloroethane	ug/L	4.7	30	<0.50
Trichloroethylene	ug/L	1.6	17	<0.50
Trichlorofluoromethane	ug/L	2500	2500	<5.0
Vinyl chloride	ug/L	0.5	1.7	<0.50
o-Xylene	ug/L	-	-	<0.30
m+p-Xylenes	ug/L	-	-	<0.40
Xylenes (Total)	ug/L	4200	4200	<0.50
Surrogate: 4-Bromofluorobenzene	%	-	-	86.4
Surrogate: 1,4-Difluorobenzene	%	-	-	95.0

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2386573 CONT'D....

Job Reference: 1-19-0603-42

PAGE 6 of 10

29-NOV-19 12:07 (MT)

Hydrocarbons - WATER

			Lab ID	L2386573-1
		Sample		20-NOV-19
		Sam	ple ID	BH3
		Guide	Limits	
Analyte	Unit	#1	#2	
F1 (C6-C10)	ug/L	750	750	<25
F1-BTEX	ug/L	750	750	<25
F2 (C10-C16)	ug/L	150	150	<100
F2-Naphth	ug/L	-	-	<100
F3 (C16-C34)	ug/L	500	500	<250
F3-PAH	ug/L	-	-	<250
F4 (C34-C50)	ug/L	500	500	<250
Total Hydrocarbons (C6-C50)	ug/L	-	-	<370
Chrom. to baseline at nC50		-	-	YES
Surrogate: 2-Bromobenzotrifluoride	%	-	-	84.8
Surrogate: 3,4-Dichlorotoluene	%	-	-	69.4

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2386573 CONT'D....

Job Reference: 1-19-0603-42

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29-NOV-19 12:07 (MT)

Polycyclic Aromatic Hydrocarbons - WATER

 Lab ID
 L2386573-1

 Sample Date
 20-NOV-19

 Sample ID
 BH3

Analysis	Unit	Guide #1	Limits #2	
Analyte	Oilit	π.	π L	
Acenaphthene	ug/L	600	1700	<0.020
Acenaphthylene	ug/L	1.8	1.8	<0.020
Anthracene	ug/L	2.4	2.4	<0.020
Benzo(a)anthracene	ug/L	4.7	4.7	<0.020
Benzo(a)pyrene	ug/L	0.81	0.81	<0.010
Benzo(b)fluoranthene	ug/L	0.75	0.75	<0.020
Benzo(g,h,i)perylene	ug/L	0.2	0.2	<0.020
Benzo(k)fluoranthene	ug/L	0.4	0.4	<0.020
Chrysene	ug/L	1	1	<0.020
Dibenzo(ah)anthracene	ug/L	0.52	0.52	<0.020
Fluoranthene	ug/L	130	130	<0.020
Fluorene	ug/L	400	400	<0.020
Indeno(1,2,3-cd)pyrene	ug/L	0.2	0.2	<0.020
1+2-Methylnaphthalenes	ug/L	1800	1800	<0.028
1-Methylnaphthalene	ug/L	1800	1800	<0.020
2-Methylnaphthalene	ug/L	1800	1800	<0.020
Naphthalene	ug/L	1400	6400	< 0.050
Phenanthrene	ug/L	580	580	<0.020
Pyrene	ug/L	68	68	<0.020
Surrogate: d10-Acenaphthene	%	-	-	95.3
Surrogate: d12-Chrysene	%	-	-	95.3
Surrogate: d8-Naphthalene	%	-	-	93.7
Surrogate: d10-Phenanthrene	%	-	-	98.6

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2386573 CONT'D....

Job Reference: 1-19-0603-42

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29-NOV-19 12:07 (MT)

Polychlorinated Biphenyls - WATER

		Sampl Sam	L2386573-1 20-NOV-19 BH3	
Analyte	Unit	Guide #1	Limits #2	
Aroclor 1242	ug/L	-	-	<0.020
Aroclor 1248	ug/L	-	-	<0.020
Aroclor 1254	ug/L	-	-	<0.020
Aroclor 1260	ug/L	-	-	<0.020
Surrogate: Decachlorobiphenyl	%	-	-	52.3
Total PCBs	ug/L	7.8	15	<0.040
Surrogate: Tetrachloro-m-xylene	%	-	-	79.1

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.

Reference Information

L2386573 CONT'D....
Job Reference: 1-19-0603-42
PAGE 9 of 10
29-NOV-19 12:07 (MT)

Qualifiers for Individual Parameters Listed:

Qualifier Description

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**

 F1-F4-511-CALC-WT
 Water
 F1-F4 Hydrocarbon Calculated Parameters
 CCME CWS-PHC, Pub #1310, Dec 2001-L

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

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 Water F1-O.Reg 153/04 (July 2011) E3398/CCME TIER 1-HS

Fraction F1 is determined by 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 Water F2-F4-O.Reg 153/04 (July 2011) EPA 3511/CCME Tier 1

Petroleum Hydrocarbons (F2-F4 fractions) are extracted from water using a hexane micro-extraction technique. Instrumental analysis is by GC-FID, as per the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Tier 1 Method, CCME, 2001.

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-D-UG/L-MS-WT Water Diss. Metals in Water by ICPMS (ug/L) EPA 200.8

The metal constituents of a non-acidified sample that pass through a membrane filter prior to ICP/MS analysis.

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 Water PAH-Calculated Parameters SW846 8270

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

Aqueous samples, fortified with surrogates, are extracted using liquid/liquid extraction technique. The sample extracts are concentrated and then analyzed using GC/MS. Results for benzo(b)

Reference Information

L2386573 CONT'D.... Job Reference: 1-19-0603-42 PAGE 10 of 10 29-NOV-19 12:07 (MT)

Methods Listed (if applicable):

ALS Test Code Matrix **Test Description** Method Reference**

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

Water

PCB-O. Reg 153/04 (July 2011)

SW846 3510/8082

Aqueous samples are extracted, then concentrated, reconstituted, and analyzed by 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).

VOC-1.3-DCP-CALC-WT

Water

Regulation 153 VOCs

SW8260B/SW8270C

VOC-511-HS-WT

Water

VOC by GCMS HS O.Reg 153/04 (July SW846 8260

2011)

Liquid samples are analyzed by headspace GC/MSD.

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 Water

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

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.



Workorder: L2386573 Report Date: 29-NOV-19 Page 1 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test		Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT		Water							
Batch R4	927488								
WG3225887-4 F1 (C6-C10)	DUP		WG3225887-3 <25	<25	RPD-NA	ug/L	N/A	30	28-NOV-19
WG3225887-1 F1 (C6-C10)	LCS			83.9		%		80-120	28-NOV-19
WG3225887-2 F1 (C6-C10)	MB			<25		ug/L		25	28-NOV-19
Surrogate: 3,4-D	Dichloroto	oluene		86.4		%		60-140	28-NOV-19
WG3225887-5 F1 (C6-C10)	MS		WG3225887-3	82.7		%		60-140	28-NOV-19
F2-F4-511-WT		Water							
Batch R4	926959								
WG3227562-2 F2 (C10-C16)	LCS			84.9		%		70.400	00 NOV 40
F3 (C16-C34)				86.9		%		70-130 70-130	26-NOV-19
F4 (C34-C50)				88.3		%		70-130 70-130	26-NOV-19 26-NOV-19
WG3227562-1	МВ			00.0		70		70-130	20-110 7-19
F2 (C10-C16)				<100		ug/L		100	26-NOV-19
F3 (C16-C34)				<250		ug/L		250	26-NOV-19
F4 (C34-C50)				<250		ug/L		250	26-NOV-19
Surrogate: 2-Bro	omobenz	zotrifluoride		79.8		%		60-140	26-NOV-19
MET-D-UG/L-MS-W	т	Water							
Batch R4	923048								
WG3227021-4	DUP	ı	WG3227021-3	-0.10	555 114		. 1/4		05 1101/ 40
Antimony (Sb)-E Arsenic (As)-Dis		1	<0.10 0.10	<0.10 0.11	RPD-NA	ug/L	N/A	20	25-NOV-19
Barium (Ba)-Dis			59.5	59.5		ug/L ug/L	2.9	20	25-NOV-19
Beryllium (Be)-D		I	<0.10	<0.10	RPD-NA	ug/L	0.1 N/A	20	25-NOV-19
Boron (B)-Disso		•	<10	<10	RPD-NA RPD-NA	ug/L ug/L	N/A N/A	20 20	25-NOV-19 25-NOV-19
Cadmium (Cd)-I		d	<0.0050	<0.0050	RPD-NA RPD-NA	ug/L ug/L	N/A N/A	20	25-NOV-19 25-NOV-19
Chromium (Cr)-			1.28	1.25	IVL D-INW	ug/L	2.9	20	25-NOV-19 25-NOV-19
Cobalt (Co)-Diss		~	<0.10	<0.10	RPD-NA	ug/L	N/A	20	25-NOV-19 25-NOV-19
Copper (Cu)-Dis			1.03	1.02	IN D-INA	ug/L	0.4	20	25-NOV-19 25-NOV-19
Lead (Pb)-Disso			<0.050	<0.050	RPD-NA	ug/L	N/A	20	25-NOV-19 25-NOV-19
Molybdenum (M		lved	0.172	0.163	NI DINA	ug/L	5.3	20	25-NOV-19 25-NOV-19
Nickel (Ni)-Disse		··· • • • •	<0.50	<0.50	RPD-NA	ug/L	0.5 N/A	20	25-NOV-19 25-NOV-19
(۱۱۱) 51000			10.00	10.00	IXI D-IVA	-	IN/A	20	20 NOV-19



Workorder: L2386573 Report Date: 29-NOV-19 Page 2 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R492304	8							
WG3227021-4 DUP		WG3227021-3			,			
Selenium (Se)-Dissolv	ed	0.104	0.101		ug/L	3.0	20	25-NOV-19
Silver (Ag)-Dissolved		<0.050	<0.050	RPD-NA	ug/L	N/A	20	25-NOV-19
Sodium (Na)-Dissolved		2030	2020		ug/L	0.6	20	25-NOV-19
Thallium (TI)-Dissolved	d	<0.010	<0.010	RPD-NA	ug/L	N/A	20	25-NOV-19
Uranium (U)-Dissolved	d	0.356	0.353		ug/L	0.9	20	25-NOV-19
Vanadium (V)-Dissolve	ed	1.00	1.01		ug/L	1.3	20	25-NOV-19
Zinc (Zn)-Dissolved		2.4	2.2		ug/L	5.5	20	25-NOV-19
WG3227021-2 LCS Antimony (Sb)-Dissolv	ad		99.6		%		00.400	05 NOV 40
					%		80-120	25-NOV-19
Arsenic (As)-Dissolved			99.4				80-120	25-NOV-19
Barium (Ba)-Dissolved Beryllium (Be)-Dissolve			102.2 101.2		%		80-120	25-NOV-19
Boron (B)-Dissolved	eu		99.3		%		80-120	25-NOV-19
Cadmium (Cd)-Dissolved	vod.				%		80-120	25-NOV-19
Chromium (Cr)-Dissolv			100.3		%		80-120	25-NOV-19
Cobalt (Co)-Dissolved	veu		100.4 99.9		%		80-120	25-NOV-19
` ,	ı		100.8		% %		80-120	25-NOV-19
Copper (Cu)-Dissolved Lead (Pb)-Dissolved	ı		99.9		%		80-120	25-NOV-19
, ,	aalvad				%		80-120	25-NOV-19
Molybdenum (Mo)-Dis Nickel (Ni)-Dissolved	soiveu		104.0 99.6		%		80-120	25-NOV-19
Selenium (Se)-Dissolv	od		98.1		%		80-120	25-NOV-19
	eu		100.4		%		80-120	25-NOV-19
Silver (Ag)-Dissolved Sodium (Na)-Dissolved	4		100.4		%		80-120	25-NOV-19
Thallium (TI)-Dissolved			99.95		%		80-120	25-NOV-19
Uranium (U)-Dissolved			99.95		%		80-120	25-NOV-19
Vanadium (V)-Dissolve			100.8		%		80-120	25-NOV-19
Zinc (Zn)-Dissolved	Ju		100.8		%		80-120	25-NOV-19
			101.2		/0		80-120	25-NOV-19
WG3227021-1 MB Antimony (Sb)-Dissolv	ed		<0.10		ug/L		0.1	25-NOV-19
Arsenic (As)-Dissolved			<0.10		ug/L		0.1	25-NOV-19
Barium (Ba)-Dissolved			<0.10		ug/L		0.1	25-NOV-19
Beryllium (Be)-Dissolv	ed		<0.10		ug/L		0.1	25-NOV-19
Boron (B)-Dissolved			<10		ug/L		10	25-NOV-19
Cadmium (Cd)-Dissolv	/ed		<0.0050		ug/L		0.005	25-NOV-19
1								-



Workorder: L2386573 Report Date: 29-NOV-19 Page 3 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R4923048								
WG3227021-1 MB					4		0.5	
Chromium (Cr)-Dissolve	ed		<0.50		ug/L		0.5	25-NOV-19
Cobalt (Co)-Dissolved			<0.10		ug/L		0.1	25-NOV-19
Copper (Cu)-Dissolved			<0.20		ug/L		0.2	25-NOV-19
Lead (Pb)-Dissolved			<0.050		ug/L		0.05	25-NOV-19
Molybdenum (Mo)-Disso	olved		<0.050		ug/L		0.05	25-NOV-19
Nickel (Ni)-Dissolved			<0.50		ug/L		0.5	25-NOV-19
Selenium (Se)-Dissolved	d		<0.050		ug/L		0.05	25-NOV-19
Silver (Ag)-Dissolved			<0.050		ug/L		0.05	25-NOV-19
Sodium (Na)-Dissolved			<50		ug/L		50	25-NOV-19
Thallium (TI)-Dissolved			<0.010		ug/L		0.01	25-NOV-19
Uranium (U)-Dissolved			<0.010		ug/L		0.01	25-NOV-19
Vanadium (V)-Dissolved	I		<0.50		ug/L		0.5	25-NOV-19
Zinc (Zn)-Dissolved			<1.0		ug/L		1	25-NOV-19
WG3227021-5 MS		WG3227021-6						
Antimony (Sb)-Dissolved	b		102.4		%		70-130	25-NOV-19
Arsenic (As)-Dissolved			108.8		%		70-130	25-NOV-19
Barium (Ba)-Dissolved			N/A	MS-B	%		-	25-NOV-19
Beryllium (Be)-Dissolved	t		107.9		%		70-130	25-NOV-19
Boron (B)-Dissolved			99.2		%		70-130	25-NOV-19
Cadmium (Cd)-Dissolve	d		104.8		%		70-130	25-NOV-19
Chromium (Cr)-Dissolve	ed		99.0		%		70-130	25-NOV-19
Cobalt (Co)-Dissolved			98.0		%		70-130	25-NOV-19
Copper (Cu)-Dissolved			96.1		%		70-130	25-NOV-19
Lead (Pb)-Dissolved			97.5		%		70-130	25-NOV-19
Molybdenum (Mo)-Disso	olved		105.5		%		70-130	25-NOV-19
Nickel (Ni)-Dissolved			95.6		%		70-130	25-NOV-19
Selenium (Se)-Dissolve	d		117.8		%		70-130	25-NOV-19
Silver (Ag)-Dissolved			98.1		%		70-130	25-NOV-19
Sodium (Na)-Dissolved			97.0		%		70-130	25-NOV-19
Thallium (TI)-Dissolved			98.1		%		70-130	25-NOV-19
Uranium (U)-Dissolved			N/A	MS-B	%		-	25-NOV-19
Vanadium (V)-Dissolved	l		102.7		%		70-130	25-NOV-19
Zinc (Zn)-Dissolved			105.4		%		70-130	25-NOV-19
. ()							10 100	23 110 1 10

PAH-511-WT Water



Workorder: L2386573 Report Date: 29-NOV-19 Page 4 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

PAH-S11-WT Water Satch R492841 W63227522 CS Satural W6322752 CS Satural W6322752 CS Satural W632275	Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
### Survey	PAH-511-WT	Water							
1-Methy/naphthalene 84.9 % 50.140 27-NOV-19 2-Methy/naphthalene 78.0 % 50.140 27-NOV-19 Acenaphthene 92.7 % 50.140 27-NOV-19 Acenaphthylene 93.6 % 50.140 27-NOV-19 Anthracene 97.3 % 50.140 27-NOV-19 Benzo(a)anthracene 99.0 % 50.140 27-NOV-19 Benzo(a)apyrene 90.8 % 50.140 27-NOV-19 Benzo(b)fluoranthene 88.2 % 50.140 27-NOV-19 Benzo(k)fluoranthene 94.8 % 50.140 27-NOV-19 Benzo(k)fluoranthene 91.8 % 50.140 27-NOV-19 Benzo(k)fluoranthene 91.8 % 50.140 27-NOV-19 Chrysene 95.3 % 50.140 27-NOV-19 Dibenzo(a)fluoranthene 97.0 % 50.140 27-NOV-19 Fluoranthene 97.0 % 50.140 27-NOV-19	Batch R4928414								
2-Methyfnaphthalene 78.0 % \$0.140 27-NOV-19 Acenaphthene 92.77 % \$0.140 27-NOV-19 Acenaphthylene 93.6 % \$0.140 27-NOV-19 Anthracene 97.3 % \$0.140 27-NOV-19 Benzo(a)anthracene 99.0 % \$0.140 27-NOV-19 Benzo(a)pyrene 90.8 % \$0.140 27-NOV-19 Benzo(b)fluoranthene 88.2 % \$0.140 27-NOV-19 Benzo(k)fluoranthene 91.8 % \$0.140 27-NOV-19 Benzo(k)fluoranthene 91.8 % \$0.140 27-NOV-19 Benzo(k)fluoranthene 91.8 % \$0.140 27-NOV-19 Chrysene 98.3 % \$0.140 27-NOV-19 Benzo(k)fluoranthene 99.3 % \$0.140 27-NOV-19 Chrysene 98.3 % \$0.140 27-NOV-19 Piluoranthene 99.6 % \$0.140 27-NOV-19				940		0/.		50.440	07.1101/ 40
Acenaphthene 92.7 % \$0.140 27-NOV-19 Acanaphthylene 93.6 % \$0.140 27-NOV-19 Anthracene 97.3 % \$0.140 27-NOV-19 Benzo(a)anthracene 99.0 % \$0.140 27-NOV-19 Benzo(b)fluoranthene 88.2 % \$0.140 27-NOV-19 Benzo(gh)fiperylene 94.8 % \$0.140 27-NOV-19 Benzo(gh)fluoranthene 91.8 % \$0.140 27-NOV-19 Benzo(k)fluoranthene 91.8 % \$0.140 27-NOV-19 Benzo(k)fluoranthene 91.8 % \$0.140 27-NOV-19 Benzo(a)hjanthracene 99.3 % \$0.140 27-NOV-19 Dibenzo(ah)anthracene 99.0 % \$0.140 27-NOV-19 Fluoranthene 97.0 % \$0.140 27-NOV-19 Fluoranthene 99.8 % \$0.140 27-NOV-19 Naphthalene 99.8 % \$0.140 27-NOV-19									
Acenaphthylene 93.6 % 50-140 27-NOV-19 Anthracene 97.3 % 50-140 27-NOV-19 Benzo(a)anthracene 99.0 % 50-140 27-NOV-19 Benzo(a)pyrene 90.8 % 50-140 27-NOV-19 Benzo(a)pyrene 90.8 % 50-140 27-NOV-19 Benzo(g,h)perylene 94.8 % 50-140 27-NOV-19 Benzo(g,h,j)perylene 94.8 % 50-140 27-NOV-19 Benzo(g,h,j)perylene 94.8 % 50-140 27-NOV-19 Benzo(k)fluoranthene 91.8 % 50-140 27-NOV-19 Benzo(k)fluoranthene 99.3 % 50-140 27-NOV-19 Benzo(a)mithracene 98.9 % 50-140 27-NOV-19 Fluoranthene 97.0 % 50-140 27-NOV-19 Fluoranthene 97.0 % 50-140 27-NOV-19 Fluorene 94.2 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 98.6 % 50-140 27-NOV-19 Phenanthrene 98.6 % 50-140 27-NOV-19 Phenanthrene 98.6 % 50-140 27-NOV-19 Phenanthrene 98.6 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 P-WG327562-1 MB 1-Methylnaphthalene 0.0.20 ug/L 0.02 27-NOV-19 Acenaphthylene 0.0.20 ug/L 0.02 27-NOV-19 Acenaphthylene 0.0.20 ug/L 0.02 27-NOV-19 Acenaphthylene 0.0.20 ug/L 0.02 27-NOV-19 Benzo(a)anthracene 0.0.20 ug/L 0.02 27-NOV-19 Benzo(a)anthracene 0.0.20 ug/L 0.02 27-NOV-19 Benzo(a)anthracene 0.0.20 ug/L 0.02 27-NOV-19 Benzo(a)phryene 0.0.20 ug/L 0.02 27-NOV-19 Benzo(a)phryene 0.0.20 ug/L 0.02 27-NOV-19 Benzo(a)hilperylene 0.0.20 ug/L 0.02 27-NOV-19 Benzo(b)fluoranthene 0.0.20 ug/L 0.02 27-NOV-19 Benzo(k)fluoranthene 0.0.20 ug/L 0.02 27-NOV-19									
Anthracene 97.3 % 50-140 27-NOV-19 Benzo(a)anthracene 99.0 % 50-140 27-NOV-19 Benzo(a)pyrene 90.8 % 50-140 27-NOV-19 Benzo(b)fluoranthene 88.2 % 50-140 27-NOV-19 Benzo(b)fluoranthene 88.2 % 50-140 27-NOV-19 Benzo(k)fluoranthene 94.8 % 50-140 27-NOV-19 Benzo(k)fluoranthene 91.8 % 50-140 27-NOV-19 Chrysene 96.3 % 50-140 27-NOV-19 Chrysene 98.9 % 50-140 27-NOV-19 Dibenzo(ah)anthracene 97.0 % 50-140 27-NOV-19 Fluoranthene 97.0 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 90.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 90.6 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 90.6 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 90.6 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 90.6 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 90.0	·								
Benzo(a)anthracene 99.0									
Benzo(a)pyrene 90.8 % 50-140 27-NOV-19 Benzo(b)fluoranthene 88.2 % 50-140 27-NOV-19 Benzo(s,h)perylene 94.8 % 50-140 27-NOV-19 Benzo(k)fluoranthene 91.8 % 50-140 27-NOV-19 Chrysene 96.3 % 50-140 27-NOV-19 Dibenzo(ah)anthracene 89.9 % 50-140 27-NOV-19 Fluoranthene 97.0 % 50-140 27-NOV-19 Fluoranthene 94.2 % 50-140 27-NOV-19 Indenot(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indenot(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Naphthalene 83.0 % 50-140 27-NOV-19 Phenanthrene 98.6 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 WG3227562-1 MB 1-Methylnaphthalene <0.020									
Benzo(b)fluoranthene 88.2 % 50-140 27-NOV-19 Benzo(g,h,i)perylene 94.8 % 50-140 27-NOV-19 Benzo(k)fluoranthene 91.8 % 50-140 27-NOV-19 Chrysene 96.3 % 50-140 27-NOV-19 Dibenzo(ah)anthracene 89.9 % 50-140 27-NOV-19 Fluoranthene 97.0 % 50-140 27-NOV-19 Fluorene 94.2 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Naphthalene 83.0 % 50-140 27-NOV-19 Naphthalene 98.6 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 WG3227562-1 MB 1 1 4 27-NOV-19 Yes 2-Methylnaphthalene <0.020	` ,								
Benzo(g,h,i)perylene 94.8 % \$0.140 27-NOV-19 Benzo(k)fluoranthene 91.8 % \$0.140 27-NOV-19 Chrysene 96.3 % \$0.140 27-NOV-19 Dibenzo(ah)anthracene 89.9 % \$0.140 27-NOV-19 Fluoranthene 97.0 % \$0.140 27-NOV-19 Fluorene 94.2 % \$0.140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % \$0.140 27-NOV-19 Naphthalene 83.0 % \$0.140 27-NOV-19 Phenanthrene 98.6 % \$0.140 27-NOV-19 Pyrene 97.8 % \$0.140 27-NOV-19 WG3227562-1 MB 1 1.02 27-NOV-19 1-Methylnaphthalene <0.020									
Benzo(k)fluoranthene 91.8 % 50.140 27-NOV-19 Chrysene 96.3 % 50.140 27-NOV-19 Dibenzo(ah)anthracene 89.9 % 50.140 27-NOV-19 Fluoranthene 97.0 % 50.140 27-NOV-19 Fluorene 94.2 % 50.140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50.140 27-NOV-19 Naphthalene 83.0 % 50.140 27-NOV-19 Phenanthrene 98.6 % 50.140 27-NOV-19 Pyrene 97.8 % 50.140 27-NOV-19 Pyrene 97.8 % 50.140 27-NOV-19 WG3227562-1 MB 1-Methylnaphthalene <0.020									
Chrysene 96.3 % 50.140 27-NOV-19 Dibenzo(ah)anthracene 89.9 % 50.140 27-NOV-19 Fluoranthene 97.0 % 50.140 27-NOV-19 Fluorene 94.2 % 50.140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50.140 27-NOV-19 Naphthalene 83.0 % 50.140 27-NOV-19 Phenanthrene 98.6 % 50.140 27-NOV-19 Pyrene 97.8 % 50.140 27-NOV-19 WG3227562-1 MB 1 0.02 27-NOV-19 1-Methylnaphthalene <0.020									
Dibenzo(ah)anthracene 89.9	, ,								
Fluoranthene 97.0 % 50-140 27-NOV-19 Fluorene 94.2 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Naphthalene 83.0 % 50-140 27-NOV-19 Phenanthrene 98.6 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 WG3227562-1 MB ** 50-140 27-NOV-19 **** Hothylnaphthalene <0.020	•								
Fluorene 94.2 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Naphthalene 83.0 % 50-140 27-NOV-19 Naphthalene 83.0 % 50-140 27-NOV-19 Phenanthrene 98.6 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 Py	, ,								
Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Naphthalene 83.0 % 50-140 27-NOV-19 Phenanthrene 98.6 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 WG3227562-1 MB 1-Methylnaphthalene <0.020									
Naphthalene 83.0 % 50-140 27-NOV-19 Phenanthrene 98.6 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 WG3227562-1 MB MB 1-Methylnaphthalene 0.020 ug/L 0.02 27-NOV-19 2-Methylnaphthalene <0.020									
Phenanthrene 98.6 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 WG3227562-1 MB 1-Methylnaphthalene <0.020									
Pyrene 97.8 % 50-140 27-NOV-19 WG3227562-1 MB 1-Methylnaphthalene <0.020	•								
WG3227562-1 MB 1-Methylnaphthalene <0.020									
1-Methylnaphthalene <0.020	-			97.6		70		50-140	27-NOV-19
2-Methylnaphthalene <0.020				<0.020		ug/L		0.02	27-NOV-19
Acenaphthene <0.020	2-Methylnaphthalene			<0.020				0.02	
Acenaphthylene <0.020	Acenaphthene			<0.020		ug/L		0.02	27-NOV-19
Anthracene <0.020	Acenaphthylene			<0.020				0.02	27-NOV-19
Benzo(a)pyrene <0.010	Anthracene			<0.020				0.02	27-NOV-19
Benzo(a)pyrene <0.010	Benzo(a)anthracene			<0.020		ug/L		0.02	27-NOV-19
Benzo(g,h,i)perylene <0.020	Benzo(a)pyrene			<0.010		ug/L		0.01	
Benzo(g,h,i)perylene <0.020	Benzo(b)fluoranthene			<0.020		ug/L		0.02	27-NOV-19
Benzo(k)fluoranthene <0.020	Benzo(g,h,i)perylene			<0.020				0.02	
Chrysene <0.020 ug/L 0.02 27-NOV-19 Dibenzo(ah)anthracene <0.020				<0.020				0.02	
Dibenzo(ah)anthracene <0.020 ug/L 0.02 27-NOV-19 Fluoranthene <0.020	Chrysene			<0.020				0.02	
Fluoranthene <0.020 ug/L 0.02 27-NOV-19 Fluorene <0.020	Dibenzo(ah)anthracene			<0.020				0.02	
Fluorene <0.020 ug/L 0.02 27-NOV-19	Fluoranthene			<0.020				0.02	
	Fluorene			<0.020				0.02	
	Indeno(1,2,3-cd)pyrene							0.02	



Workorder: L2386573 Report Date: 29-NOV-19 Page 5 of 11

TERRAPROBE-BRAMPTON Client:

11 Indell Lane

Brampton ON L6T 3Y3

Kossay Makhzoumi Contact:

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Water							
Batch R492841 WG3227562-1 MB Naphthalene	4		.0.050		ua/l		0.05	27 1101/ 52
•			<0.050		ug/L		0.05	27-NOV-19
Phenanthrene			<0.020		ug/L		0.02	27-NOV-19
Pyrene	-1		<0.020		ug/L		0.02	27-NOV-19
Surrogate: d8-Naphth			90.1		%		60-140	27-NOV-19
Surrogate: d10-Phena			97.9		%		60-140	27-NOV-19
Surrogate: d12-Chrys			93.2		%		60-140	27-NOV-19
Surrogate: d10-Acena	aphthene		95.3		%		60-140	27-NOV-19
PCB-511-WT	Water							
Batch R492524								
WG3227114-2 LCS Aroclor 1242	i		99.3		%		60-140	26-NOV-19
Aroclor 1248			98.3		%		60-140	26-NOV-19
Aroclor 1254			111.0		%		60-140	26-NOV-19
Aroclor 1260			110.6		%		60-140	26-NOV-19
WG3227114-1 MB							00 140	201101 10
Aroclor 1242			<0.020		ug/L		0.02	26-NOV-19
Aroclor 1248			<0.020		ug/L		0.02	26-NOV-19
Aroclor 1254			<0.020		ug/L		0.02	26-NOV-19
Aroclor 1260			<0.020		ug/L		0.02	26-NOV-19
Surrogate: Decachloro	obiphenyl		80.1		%		50-150	26-NOV-19
Surrogate: Tetrachloro	o-m-xylene		78.9		%		50-150	26-NOV-19
VOC-511-HS-WT	Water							
Batch R492748	88							
WG3225887-4 DUP		WG3225887						
1,1,1,2-Tetrachloroeth		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,1,2,2-Tetrachloroeth	nane	<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,1,1-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,1,2-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,1-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,1-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,2-Dibromoethane		<0.20	<0.20	RPD-NA	ug/L	N/A	30	28-NOV-19
1,2-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,2-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,2-Dichloropropane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19



Workorder: L2386573 Report Date: 29-NOV-19 Page 6 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4927488	3							
WG3225887-4 DUP		WG3225887-						
1,3-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,4-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Acetone		<30	<30	RPD-NA	ug/L	N/A	30	28-NOV-19
Benzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Bromodichloromethane	9	<2.0	<2.0	RPD-NA	ug/L	N/A	30	28-NOV-19
Bromoform		<5.0	<5.0	RPD-NA	ug/L	N/A	30	28-NOV-19
Bromomethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Carbon tetrachloride		<0.20	<0.20	RPD-NA	ug/L	N/A	30	28-NOV-19
Chlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Chloroform		<1.0	<1.0	RPD-NA	ug/L	N/A	30	28-NOV-19
cis-1,2-Dichloroethylen	ie	<0.50	< 0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
cis-1,3-Dichloropropen	е	<0.30	< 0.30	RPD-NA	ug/L	N/A	30	28-NOV-19
Dibromochloromethane	е	<2.0	<2.0	RPD-NA	ug/L	N/A	30	28-NOV-19
Dichlorodifluoromethar	ne	<2.0	<2.0	RPD-NA	ug/L	N/A	30	28-NOV-19
Ethylbenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
n-Hexane		<0.50	< 0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
m+p-Xylenes		<0.40	< 0.40	RPD-NA	ug/L	N/A	30	28-NOV-19
Methyl Ethyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	28-NOV-19
Methyl Isobutyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	28-NOV-19
Methylene Chloride		<5.0	<5.0	RPD-NA	ug/L	N/A	30	28-NOV-19
MTBE		<2.0	<2.0	RPD-NA	ug/L	N/A	30	28-NOV-19
o-Xylene		<0.30	< 0.30	RPD-NA	ug/L	N/A	30	28-NOV-19
Styrene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Tetrachloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Toluene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
trans-1,2-Dichloroethyl	ene	<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
trans-1,3-Dichloroprop	ene	<0.30	< 0.30	RPD-NA	ug/L	N/A	30	28-NOV-19
Trichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Trichlorofluoromethane	e	<5.0	<5.0	RPD-NA	ug/L	N/A	30	28-NOV-19
Vinyl chloride		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
WG3225887-1 LCS					-			-
1,1,1,2-Tetrachloroetha	ane		90.9		%		70-130	28-NOV-19
1,1,2,2-Tetrachloroetha	ane		89.0		%		70-130	28-NOV-19



Workorder: L2386573 Report Date: 29-NOV-19 Page 7 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4927488	;							
WG3225887-1 LCS			00.0		0/		70.406	
1,1,1-Trichloroethane			96.9		%		70-130	28-NOV-19
1,1,2-Trichloroethane			89.3		%		70-130	28-NOV-19
1,1-Dichloroethane			94.8		%		70-130	28-NOV-19
1,1-Dichloroethylene			94.9		%		70-130	28-NOV-19
1,2-Dibromoethane			88.1		%		70-130	28-NOV-19
1,2-Dichlorobenzene			87.4		%		70-130	28-NOV-19
1,2-Dichloroethane			96.2		%		70-130	28-NOV-19
1,2-Dichloropropane			99.3		%		70-130	28-NOV-19
1,3-Dichlorobenzene			90.2		%		70-130	28-NOV-19
1,4-Dichlorobenzene			90.8		%		70-130	28-NOV-19
Acetone			99.5		%		60-140	28-NOV-19
Benzene			98.6		%		70-130	28-NOV-19
Bromodichloromethane	:		98.0		%		70-130	28-NOV-19
Bromoform			89.3		%		70-130	28-NOV-19
Bromomethane			89.9		%		60-140	28-NOV-19
Carbon tetrachloride			97.3		%		70-130	28-NOV-19
Chlorobenzene			88.7		%		70-130	28-NOV-19
Chloroform			95.7		%		70-130	28-NOV-19
cis-1,2-Dichloroethylen	е		93.3		%		70-130	28-NOV-19
cis-1,3-Dichloropropend	Э		101.1		%		70-130	28-NOV-19
Dibromochloromethane)		88.7		%		70-130	28-NOV-19
Dichlorodifluoromethan	е		87.8		%		50-140	28-NOV-19
Ethylbenzene			90.7		%		70-130	28-NOV-19
n-Hexane			92.4		%		70-130	28-NOV-19
m+p-Xylenes			92.1		%		70-130	28-NOV-19
Methyl Ethyl Ketone			94.3		%		60-140	28-NOV-19
Methyl Isobutyl Ketone			90.7		%		60-140	28-NOV-19
Methylene Chloride			94.0		%		70-130	28-NOV-19
MTBE			112.4		%		70-130	28-NOV-19
o-Xylene			90.4		%		70-130	28-NOV-19
Styrene			95.6		%		70-130	28-NOV-19
Tetrachloroethylene			91.3		%		70-130	28-NOV-19
Toluene			89.0		%		70-130	28-NOV-19



Workorder: L2386573 Report Date: 29-NOV-19 Page 8 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4927488								
WG3225887-1 LCS			00.0		0/			
trans-1,2-Dichloroethyle			96.2		%		70-130	28-NOV-19
trans-1,3-Dichloroprope	ene		92.4		%		70-130	28-NOV-19
Trichloroethylene			96.4		%		70-130	28-NOV-19
Trichlorofluoromethane			97.5		%		60-140	28-NOV-19
Vinyl chloride			107.4		%		60-140	28-NOV-19
WG3225887-2 MB 1,1,1,2-Tetrachloroetha	ine		<0.50		ug/L		0.5	28-NOV-19
1,1,2,2-Tetrachloroetha			<0.50		ug/L		0.5	28-NOV-19
1,1,1-Trichloroethane			<0.50		ug/L		0.5	28-NOV-19
1,1,2-Trichloroethane			<0.50		ug/L		0.5	28-NOV-19
1,1-Dichloroethane			<0.50		ug/L		0.5	28-NOV-19
1,1-Dichloroethylene			<0.50		ug/L		0.5	28-NOV-19
1,2-Dibromoethane			<0.20		ug/L		0.2	28-NOV-19
1,2-Dichlorobenzene			<0.50		ug/L		0.5	28-NOV-19
1,2-Dichloroethane			<0.50		ug/L		0.5	28-NOV-19
1,2-Dichloropropane			<0.50		ug/L		0.5	28-NOV-19
1,3-Dichlorobenzene			<0.50		ug/L		0.5	28-NOV-19
1,4-Dichlorobenzene			<0.50		ug/L		0.5	28-NOV-19
Acetone			<30		ug/L		30	28-NOV-19
Benzene			<0.50		ug/L		0.5	28-NOV-19
Bromodichloromethane	:		<2.0		ug/L		2	28-NOV-19
Bromoform			<5.0		ug/L		5	28-NOV-19
Bromomethane			<0.50		ug/L		0.5	28-NOV-19
Carbon tetrachloride			<0.20		ug/L		0.2	28-NOV-19
Chlorobenzene			<0.50		ug/L		0.5	28-NOV-19
Chloroform			<1.0		ug/L		1	28-NOV-19
cis-1,2-Dichloroethylene	е		<0.50		ug/L		0.5	28-NOV-19
cis-1,3-Dichloropropene	Э		< 0.30		ug/L		0.3	28-NOV-19
Dibromochloromethane	;		<2.0		ug/L		2	28-NOV-19
Dichlorodifluoromethan	е		<2.0		ug/L		2	28-NOV-19
Ethylbenzene			<0.50		ug/L		0.5	28-NOV-19
n-Hexane			<0.50		ug/L		0.5	28-NOV-19
m+p-Xylenes			<0.40		ug/L		0.4	28-NOV-19
Methyl Ethyl Ketone			<20		ug/L		20	28-NOV-19



Workorder: L2386573 Report Date: 29-NOV-19 Page 9 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R492748	8							
WG3225887-2 MB			00		//		20	
Methylana Chlorida)		<20		ug/L		20	28-NOV-19
Methylene Chloride MTBE			<5.0 <2.0		ug/L		5	28-NOV-19
					ug/L		2	28-NOV-19
o-Xylene			<0.30		ug/L		0.3	28-NOV-19
Styrene			<0.50		ug/L		0.5	28-NOV-19
Tetrachloroethylene			<0.50		ug/L		0.5	28-NOV-19
Toluene			<0.50		ug/L		0.5	28-NOV-19
trans-1,2-Dichloroethy			<0.50		ug/L		0.5	28-NOV-19
trans-1,3-Dichloroprop	ene		<0.30		ug/L		0.3	28-NOV-19
Trichloroethylene			<0.50		ug/L		0.5	28-NOV-19
Trichlorofluoromethan	е		<5.0		ug/L		5	28-NOV-19
Vinyl chloride			<0.50		ug/L		0.5	28-NOV-19
Surrogate: 1,4-Difluoro			96.7		%		70-130	28-NOV-19
Surrogate: 4-Bromoflu	orobenzene		91.3		%		70-130	28-NOV-19
WG3225887-5 MS 1,1,1,2-Tetrachloroeth	ane	WG3225887-	3 91.4		%		50-140	28-NOV-19
1,1,2,2-Tetrachloroeth			92.7		%		50-140	28-NOV-19
1,1,1-Trichloroethane			96.8		%		50-140	28-NOV-19
1,1,2-Trichloroethane			91.4		%		50-140	28-NOV-19
1,1-Dichloroethane			96.8		%		50-140	28-NOV-19
1,1-Dichloroethylene			94.2		%		50-140	28-NOV-19
1,2-Dibromoethane			90.5		%		50-140	28-NOV-19
1,2-Dichlorobenzene			87.7		%		50-140	28-NOV-19
1,2-Dichloroethane			100.5		%		50-140	28-NOV-19
1,2-Dichloropropane			101.6		%		50-140	28-NOV-19
1,3-Dichlorobenzene			88.2		%		50-140	28-NOV-19
1,4-Dichlorobenzene			89.5		%		50-140	28-NOV-19
Acetone			109.0		%		50-140	28-NOV-19
Benzene			99.6		%		50-140	28-NOV-19
Bromodichloromethan	е		101.1		%		50-140	28-NOV-19
Bromoform			92.4		%		50-140	28-NOV-19
Bromomethane			88.7		%		50-140	28-NOV-19
Carbon tetrachloride			96.8		%		50-140	28-NOV-19
Chlorobenzene			88.5		%		50-140	28-NOV-19



Workorder: L2386573 Report Date: 29-NOV-19 Page 10 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

est	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4927488	3							
WG3225887-5 MS		WG3225887-3						
Chloroform			97.6		%		50-140	28-NOV-19
cis-1,2-Dichloroethylen			95.0		%		50-140	28-NOV-19
cis-1,3-Dichloropropen			99.6		%		50-140	28-NOV-19
Dibromochloromethan	Э		90.7		%		50-140	28-NOV-19
Dichlorodifluoromethar	ne		84.2		%		50-140	28-NOV-19
Ethylbenzene			88.2		%		50-140	28-NOV-19
n-Hexane			90.5		%		50-140	28-NOV-19
m+p-Xylenes			90.1		%		50-140	28-NOV-19
Methyl Ethyl Ketone			93.9		%		50-140	28-NOV-19
Methyl Isobutyl Ketone			96.2		%		50-140	28-NOV-19
Methylene Chloride			96.3		%		50-140	28-NOV-19
MTBE			112.2		%		50-140	28-NOV-19
o-Xylene			88.4		%		50-140	28-NOV-19
Styrene			93.8		%		50-140	28-NOV-19
Tetrachloroethylene			88.5		%		50-140	28-NOV-19
Toluene			87.3		%		50-140	28-NOV-19
trans-1,2-Dichloroethyl	ene		96.0		%		50-140	28-NOV-19
trans-1,3-Dichloroprop	ene		89.9		%		50-140	28-NOV-19
Trichloroethylene			95.5		%		50-140	28-NOV-19
Trichlorofluoromethane)		96.2		%		50-140	28-NOV-19
Vinyl chloride			105.0		%		50-140	28-NOV-19

Workorder: L2386573 Report Date: 29-NOV-19

Client: TERRAPROBE-BRAMPTON Page 11 of 11

11 Indell Lane

Brampton ON L6T 3Y3 Kossay Makhzoumi

Legend:

Contact:

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
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
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.

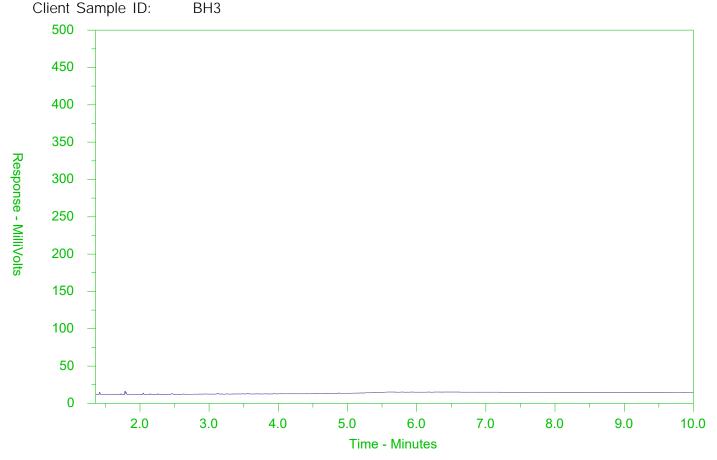
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined data quality objectives to provide 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: L2386573-1



← -F2-	→←	_F3 → F4-	→	
nC10	nC16	nC34	nC50	
174°C	287°C	481°C	575°C	
346°F	549°F	898°F	1067°F	
Gasolin	ie →	← Mo	tor 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

1 2386573-COFC

COC Number: 15 -

age 1

K

Canada Toll Free: 1 800 668 9878

	www.alsglobal.com	<u> </u>																				
Report To	Contact and compa	any name below will a	appear on the final repo	ort		Report Format	/ Distribution		Select	Service I	Level Be	low - Ple	ase con	irm all E	&P TAT	s with y	your Al	f - surci	harges v	will apply	y	
Company:	Terraprobe				Select Report I	Format: 🖸 PDF	✓ EXCEL ☐ E	DD (DIGITAL)		Re	gular	[R]	☑ Sta	ndard T	AT if re	ceived	by 3 p	m - bus	siness d	ays - no	surchar	ges apply
Contact:	Kossay Makhzoumi				Quality Control	(QC) Report with Re	eport 🗹 YES	□ NO	_	4	day [F	24]			lC.Y	1	Busi	ness	day [E	E1]		
Phone:	905-796-2650				✓ Compare Resident	ults to Criteria on Report	provide details belo	w if box checked	100	3	day (F	23]			MERGENC		Same	Day,	Week	end o	r	
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Street:	11 Indell Lane				Email 1 or Fax	kmakhzoumi@terr	aprobe.ca			Date a	nd Time	e Requi	red for a	II E&P	FATs:		<u> </u>					
City/Province:	Brampton				Email 2				For tes	ts that c	n not b	e perform	ned acco	rding to	the ser	vice lev	/el sele	cted, yo	u will be	e contac	ted.	
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Company:	Terraprobe				Email 1 or Fax	lrossi@terraprobe.	ca													Ĭ		
Contact:	Lorena Rossi				Email 2													1]	ıl			γo
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LSD:					Location:				anics		Aetal											Number of Containers
ALS Lab Wor	'k Order# (lab use on	1) [33	s657 3 P	_	ALS Contact:		Sampler:		and Inorganics		Forming Metals						OC Pesticides					z
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(lab use only)	(Т	his description w	ill appear on the re	eport)		(dd-mmm-yy)	(hh:mm)	Sample Type	Metals	Metals	Hyride	ပ္မ	SAR	PAH	8	문	8	PCBs	ıl	ŀ		
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TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 22-NOV-19

Report Date: 29-NOV-19 12:42 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2386608
Project P.O. #: NOT SUBMITTED
Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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ADDRESS: 5730 Coopers Avenue, Unit #26 , Mississauga, ON L4Z 2E9 Canada | Phone: +1 905 507 6910 | Fax: +1 905 507 6927 ALS CANADA LTD Part of the ALS Group An ALS Limited Company





L2386608 CONT'D....

Job Reference: 1-19-0603-42

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Summary of Guideline Exceedances

Guideline						
ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit
Ontario Reg	gulation 153/04	- April 15, 2011 Standards - T3-Non-Potable Gi	ound Water-All Types	of Property Uses (Coarse)		
L2386608-1	BH4-S	Anions and Nutrients	Chloride (CI)	3840	2300	mg/L
Ontario Reg	gulation 153/04	- April 15, 2011 Standards - T3-Non-Potable G	ound Water-All Types	of Property Uses (Fine)		
L2386608-1	BH4-S	Anions and Nutrients	Chloride (CI)	3840	2300	mg/L

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2386608 CONT'D....

Job Reference: 1-19-0603-42

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29-NOV-19 12:42 (MT)

Physical Tests - WATER

		Lab ID	L2386608-1
S	ampl	e Date	20-NOV-19
	San	ple ID	BH4-S
G	uide	Limits	
Unit	#1	#2	
mS/cm	-	-	10.1
	G Unit	Sampl Sam Guide Unit #1	Lab ID Sample Date Sample ID Guide Limits Unit #1 #2

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Anions and Nutrients - WATER

minorio aria riatriorito	***				
			L	_ab ID	L2386608-1
			Sample	e Date	20-NOV-19
			Sam	ple ID	BH4-S
			Guide	Limits	
Analyte		Unit	#1	#2	
Chloride (CI)		mg/L	2300	2300	3840 DLHC

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Cyanides - WATER

Oyumuco WATEN				
			Lab ID	L2386608-1
		Sampl	e Date	20-NOV-19
		San	nple ID	BH4-S
		Guide	Limits	
Analyte	Unit	#1	#2	
Cyanide, Weak Acid Diss	ug/L	66	66	<2.0

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Dissolved Metals - WATER

		Sample Sam	L2386608-1 20-NOV-19 BH4-S	
Analyte	Unit	Guide #1	Limits #2	
Dissolved Mercury Filtration Location		-	-	FIELD
Dissolved Metals Filtration Location		-	-	FIELD
Antimony (Sb)-Dissolved	ug/L	20000	20000	<1.0 DLHC
Arsenic (As)-Dissolved	ug/L	1900	1900	<1.0 DLHC
Barium (Ba)-Dissolved	ug/L	29000	29000	52.6 DLHC
Beryllium (Be)-Dissolved	ug/L	67	67	<1.0 DLHC
Boron (B)-Dissolved	ug/L	45000	45000	140 DLHC
Cadmium (Cd)-Dissolved	ug/L	2.7	2.7	0.081 DLHC
Chromium (Cr)-Dissolved	ug/L	810	810	<5.0 DLHC
Cobalt (Co)-Dissolved	ug/L	66	66	2.9 DLHC
Copper (Cu)-Dissolved	ug/L	87	87	<2.0 DLHC
Lead (Pb)-Dissolved	ug/L	25	25	<0.50 DLHC
Mercury (Hg)-Dissolved	ug/L	0.29	2.8	<0.0050
Molybdenum (Mo)-Dissolved	ug/L	9200	9200	0.99 DLHC
Nickel (Ni)-Dissolved	ug/L	490	490	12.9 DLHC
Selenium (Se)-Dissolved	ug/L	63	63	6.38 DLHC
Silver (Ag)-Dissolved	ug/L	1.5	1.5	<0.50 DLHC
Sodium (Na)-Dissolved	ug/L	2300000	2300000	1170000 BLHC
Thallium (TI)-Dissolved	ug/L	510	510	0.27 DLHC
Uranium (U)-Dissolved	ug/L	420	420	13.6 DLHC
Vanadium (V)-Dissolved	ug/L	250	250	<5.0 DLHC
Zinc (Zn)-Dissolved	ug/L	1100	1100	<10 DLHC

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Job Reference: 1-19-0603-42

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29-NOV-19 12:42 (MT)

Speciated Metals - WATER

opoolatoa motalo	**/				
				Lab ID	L2386608-1
			Sample	e Date	20-NOV-19
			Sam	ple ID	BH4-S
Analyte		Unit	Guide #1	Limits #2	
Chromium, Hexavalent		ug/L	140	140	<0.50

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2386608 CONT'D....

Job Reference: 1-19-0603-42

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Volatile Organic Compounds - WATER

		Sample Sam	L2386608-1 20-NOV-19 BH4-S	
Analyte	Unit	Guide #1	Limits #2	
Acetone	ug/L	130000	130000	<30
Benzene	ug/L	44	430	<0.50
Bromodichloromethane	ug/L	85000	85000	<2.0
Bromoform	ug/L	380	770	<5.0
Bromomethane	ug/L	5.6	56	<0.50
Carbon tetrachloride	ug/L	0.79	8.4	<0.20
Chlorobenzene	ug/L	630	630	<0.50
Dibromochloromethane	ug/L	82000	82000	<2.0
Chloroform	ug/L	2.4	22	<1.0
1,2-Dibromoethane	ug/L	0.25	0.83	<0.20
1,2-Dichlorobenzene	ug/L	4600	9600	<0.50
1,3-Dichlorobenzene	ug/L	9600	9600	<0.50
1,4-Dichlorobenzene	ug/L	8	67	<0.50
Dichlorodifluoromethane	ug/L	4400	4400	<2.0
1,1-Dichloroethane	ug/L	320	3100	<0.50
1,2-Dichloroethane	ug/L	1.6	12	<0.50
1,1-Dichloroethylene	ug/L	1.6	17	<0.50
cis-1,2-Dichloroethylene	ug/L	1.6	17	<0.50
trans-1,2-Dichloroethylene	ug/L	1.6	17	<0.50
Methylene Chloride	ug/L	610	5500	<5.0
1,2-Dichloropropane	ug/L	16	140	<0.50
cis-1,3-Dichloropropene	ug/L	-	-	<0.30
trans-1,3-Dichloropropene	ug/L	-	-	<0.30
1,3-Dichloropropene (cis & trans)	ug/L	5.2	45	<0.50
Ethylbenzene	ug/L	2300	2300	<0.50
n-Hexane	ug/L	51	520	<0.50
Methyl Ethyl Ketone	ug/L	470000	1500000	<20
Methyl Isobutyl Ketone	ug/L	140000	580000	<20
MTBE	ug/L	190	1400	<2.0
Styrene	ug/L	1300	9100	<0.50

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Job Reference: 1-19-0603-42

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Volatile Organic Compounds - WATER

Volatile Organic Compound		ı	ab ID	L2386608-1
		Sample		20-NOV-19
		•	ple ID	BH4-S
			•	
		Guide	Limits	
Analyte	Unit	#1	#2	
1,1,1,2-Tetrachloroethane	ug/L	3.3	28	<0.50
1,1,2,2-Tetrachloroethane	ug/L	3.2	15	<0.50
Tetrachloroethylene	ug/L	1.6	17	<0.50
Toluene	ug/L	18000	18000	<0.50
1,1,1-Trichloroethane	ug/L	640	6700	<0.50
1,1,2-Trichloroethane	ug/L	4.7	30	<0.50
Trichloroethylene	ug/L	1.6	17	0.83
Trichlorofluoromethane	ug/L	2500	2500	<5.0
Vinyl chloride	ug/L	0.5	1.7	<0.50
o-Xylene	ug/L	-	-	<0.30
m+p-Xylenes	ug/L	-	-	<0.40
Xylenes (Total)	ug/L	4200	4200	<0.50
Surrogate: 4-Bromofluorobenzene	%	-	-	94.9
Surrogate: 1,4-Difluorobenzene	%	-	-	96.3

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Job Reference: 1-19-0603-42

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Hydrocarbons - WATER

		Sampl Sam	L2386608-1 20-NOV-19 BH4-S	
Analyte	Unit	Guide #1	Limits #2	
F1 (C6-C10)	ug/L	750	750	<25
F1-BTEX	ug/L	750	750	<25
F2 (C10-C16)	ug/L	150	150	<100
F2-Naphth	ug/L	-	-	<100
F3 (C16-C34)	ug/L	500	500	<250
F3-PAH	ug/L	-	-	<250
F4 (C34-C50)	ug/L	500	500	<250
Total Hydrocarbons (C6-C50)	ug/L	-	-	<370
Chrom. to baseline at nC50		-	-	YES
Surrogate: 2-Bromobenzotrifluoride	%	-	-	74.4
Surrogate: 3,4-Dichlorotoluene	%	-	-	82.1

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Polycyclic Aromatic Hydrocarbons - WATER

 Lab ID
 L2386608-1

 Sample Date
 20-NOV-19

 Sample ID
 BH4-S

		Guide	Limits	
Analyte	Unit	#1	#2	
Acenaphthene	ug/L	600	1700	<0.020
Acenaphthylene	ug/L	1.8	1.8	<0.020
Anthracene	ug/L	2.4	2.4	<0.020
Benzo(a)anthracene	ug/L	4.7	4.7	<0.020
Benzo(a)pyrene	ug/L	0.81	0.81	<0.010
Benzo(b)fluoranthene	ug/L	0.75	0.75	<0.020
Benzo(g,h,i)perylene	ug/L	0.2	0.2	<0.020
Benzo(k)fluoranthene	ug/L	0.4	0.4	<0.020
Chrysene	ug/L	1	1	<0.020
Dibenzo(ah)anthracene	ug/L	0.52	0.52	<0.020
Fluoranthene	ug/L	130	130	<0.020
Fluorene	ug/L	400	400	<0.020
Indeno(1,2,3-cd)pyrene	ug/L	0.2	0.2	<0.020
1+2-Methylnaphthalenes	ug/L	1800	1800	<0.028
1-Methylnaphthalene	ug/L	1800	1800	<0.020
2-Methylnaphthalene	ug/L	1800	1800	<0.020
Naphthalene	ug/L	1400	6400	<0.050
Phenanthrene	ug/L	580	580	<0.020
Pyrene	ug/L	68	68	<0.020
Surrogate: d10-Acenaphthene	%	-	-	95.3
Surrogate: d12-Chrysene	%	-	-	97.7
Surrogate: d8-Naphthalene	%	-	-	94.0
Surrogate: d10-Phenanthrene	%	-	-	100.6

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.

Reference Information

L2386608 CONT'D....
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Qualifiers for Individual Parameters Listed:

Qualifier Description

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**

CL-IC-N-WT Water Chloride by IC EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

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).

CN-WAD-R511-WT Water Cyanide (WAD)-O.Reg 153/04 APHA 4500CN I-Weak acid Dist Colorimet

Weak acid dissociable cyanide (WAD) is determined by undergoing a distillation procedure. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

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-R511-WT Water Hex Chrom-O.Reg 153/04 (July 2011) EPA 7199

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. Chromium (III) is calculated as the difference between the total chromium and the chromium (VI) results.

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-R511-WT Water Conductivity-O.Reg 153/04 (July 2011) APHA 2510 B

Water samples can be measured directly by immersing the conductivity cell into 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).

EC-SCREEN-WT Water Conductivity Screen (Internal Use APHA 2510

Only)

Qualitative analysis of conductivity where required during preparation of other tests - e.g. TDS, metals, etc.

F1-F4-511-CALC-WT Water F1-F4 Hydrocarbon Calculated CCME CWS-PHC, Pub #1310, Dec 2001-L

Parameters

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

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.

Reference Information

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Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

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 Water F1-O.Reg 153/04 (July 2011) E3398/CCME TIER 1-HS

Fraction F1 is determined by 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 Water F2-F4-O.Reg 153/04 (July 2011) EPA 3511/CCME Tier 1

Petroleum Hydrocarbons (F2-F4 fractions) are extracted from water using a hexane micro-extraction technique. Instrumental analysis is by GC-FID, as per the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Tier 1 Method, CCME, 2001.

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-D-UG/L-CVAA-WT Water Diss. Mercury in Water by CVAAS EPA 1631E (mod)

(ug/L)

Water samples are filtered (0.45 um), preserved with hydrochloric acid, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed 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-D-UG/L-MS-WT Water Diss. Metals in Water by ICPMS (ug/L) EPA 200.8

The metal constituents of a non-acidified sample that pass through a membrane filter prior to ICP/MS analysis.

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 Water PAH-Calculated Parameters SW846 8270

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

Aqueous samples, fortified with surrogates, are extracted using liquid/liquid extraction technique. The sample extracts are concentrated and then analyzed using 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 Water pH APHA 4500 H-Electrode

Water samples are analyzed directly by a calibrated pH 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). Holdtime for samples under this regulation is 28 days

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

VOC-511-HS-WT Water VOC by GCMS HS O.Reg 153/04 (July SW846 8260

2011)

Liquid samples are analyzed by headspace GC/MSD.

Reference Information

L2386608 CONT'D....
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Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

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 Water

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

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.



Workorder: L2386608 Report Date: 29-NOV-19 Page 1 of 12

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CL-IC-N-WT	Water							
Batch R4922781 WG3227376-15 DUP Chloride (CI)		WG3227376-1 : 37.3	3 37.3		mg/L	0.1	20	25-NOV-19
WG3227376-12 LCS Chloride (CI)			103.7		%		90-110	25-NOV-19
WG3227376-11 MB Chloride (CI)			<0.50		mg/L		0.5	25-NOV-19
WG3227376-14 MS Chloride (CI)		WG3227376-1	3 101.8		%		75-125	25-NOV-19
CN-WAD-R511-WT	Water							
Batch R4923160								
WG3227493-3 DUP Cyanide, Weak Acid Dis	ss	L2386608-1 <2.0	<2.0	RPD-NA	ug/L	N/A	20	25-NOV-19
WG3227493-2 LCS Cyanide, Weak Acid Dis	ss		104.5		%		80-120	25-NOV-19
WG3227493-1 MB Cyanide, Weak Acid Dis	ss		<2.0		ug/L		2	25-NOV-19
WG3227493-4 MS Cyanide, Weak Acid Dis	SS	L2386608-1	104.2		%		75-125	25-NOV-19
CR-CR6-IC-R511-WT	Water							
Batch R4923058 WG3227681-4 DUP Chromium, Hexavalent		WG3227681-3 <0.50	<0.50	RPD-NA	ug/L	N/A	20	25-NOV-19
WG3227681-2 LCS Chromium, Hexavalent			104.6		%		80-120	25-NOV-19
WG3227681-1 MB Chromium, Hexavalent			<0.50		ug/L		0.5	25-NOV-19
WG3227681-5 MS Chromium, Hexavalent		WG3227681-3	103.2		%		70-130	25-NOV-19
EC-R511-WT	Water							
Batch R4921925								
WG3226527-4 DUP Conductivity		WG3226527-3 0.610	0.609		mS/cm	0.2	10	23-NOV-19
WG3226527-2 LCS Conductivity			100.3		%		90-110	23-NOV-19
WG3226527-1 MB Conductivity			<0.0030		mS/cm		0.003	23-NOV-19
F1-HS-511-WT	Water							



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test		Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT		Water							
	27602 DUP		WG3229973-3						
F1 (C6-C10)	-0.		<25	<25	RPD-NA	ug/L	N/A	30	28-NOV-19
WG3229973-1 L F1 (C6-C10)	LCS			107.4		%		80-120	28-NOV-19
WG3229973-2 N F1 (C6-C10)	MB			<25		ug/L		25	28-NOV-19
Surrogate: 3,4-Dic	chloroto	luene		97.6		%		60-140	28-NOV-19
WG3229973-5 N F1 (C6-C10)	MS		WG3229973-3	76.5		%		60-140	28-NOV-19
F2-F4-511-WT		Water							
	26959								
WG3227562-2 L F2 (C10-C16)	LCS			84.9		%		70-130	26-NOV-19
F3 (C16-C34)				86.9		%		70-130	26-NOV-19
F4 (C34-C50)				88.3		%		70-130	26-NOV-19
WG3227562-1 N F2 (C10-C16)	МВ			<100		ug/L		100	26-NOV-19
F3 (C16-C34)				<250		ug/L		250	26-NOV-19
F4 (C34-C50)				<250		ug/L		250	26-NOV-19
Surrogate: 2-Brom	nobenzo	otrifluoride		79.8		%		60-140	26-NOV-19
HG-D-UG/L-CVAA-W	т	Water							
Batch R492	22562								
WG3227388-4 D Mercury (Hg)-Diss	DUP solved		WG3227388-3 <0.0050	<0.0050	RPD-NA	ug/L	N/A	20	25-NOV-19
WG3227388-2 L Mercury (Hg)-Diss				94.0		%		80-120	25-NOV-19
WG3227388-1 Mercury (Hg)-Diss	MB solved			<0.0050		ug/L		0.005	25-NOV-19
WG3227388-6 Mercury (Hg)-Diss	MS solved		WG3227388-5	91.5		%		70-130	25-NOV-19
MET-D-UG/L-MS-WT		Water							
Batch R492	23048								
WG3227021-4 D Antimony (Sb)-Dis	DUP ssolved		WG3227021-3 <0.10	<0.10	RPD-NA	ug/L	N/A	20	25-NOV-19
Arsenic (As)-Disso	olved		0.10	0.11		ug/L	2.9	20	25-NOV-19
Barium (Ba)-Disso	olved		59.5	59.5		ug/L	0.1	20	25-NOV-19



Workorder: L2386608 Report Date: 29-NOV-19 Page 3 of 12

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test Ma	atrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT W	ater							
Batch R4923048								
WG3227021-4 DUP Beryllium (Be)-Dissolved		WG3227021- <0.10	3 <0.10	RPD-NA	ug/L	N/A	20	25-NOV-19
Boron (B)-Dissolved		<10	<10	RPD-NA	ug/L	N/A	20	25-NOV-19
Cadmium (Cd)-Dissolved		<0.0050	<0.0050	RPD-NA	ug/L	N/A	20	25-NOV-19
Chromium (Cr)-Dissolved		1.28	1.25		ug/L	2.9	20	25-NOV-19
Cobalt (Co)-Dissolved		<0.10	<0.10	RPD-NA	ug/L	N/A	20	25-NOV-19
Copper (Cu)-Dissolved		1.03	1.02		ug/L	0.4	20	25-NOV-19
Lead (Pb)-Dissolved		< 0.050	< 0.050	RPD-NA	ug/L	N/A	20	25-NOV-19
Molybdenum (Mo)-Dissolved	t	0.172	0.163		ug/L	5.3	20	25-NOV-19
Nickel (Ni)-Dissolved		<0.50	<0.50	RPD-NA	ug/L	N/A	20	25-NOV-19
Selenium (Se)-Dissolved		0.104	0.101		ug/L	3.0	20	25-NOV-19
Silver (Ag)-Dissolved		< 0.050	<0.050	RPD-NA	ug/L	N/A	20	25-NOV-19
Sodium (Na)-Dissolved		2030	2020		ug/L	0.6	20	25-NOV-19
Thallium (TI)-Dissolved		<0.010	<0.010	RPD-NA	ug/L	N/A	20	25-NOV-19
Uranium (U)-Dissolved		0.356	0.353		ug/L	0.9	20	25-NOV-19
Vanadium (V)-Dissolved		1.00	1.01		ug/L	1.3	20	25-NOV-19
Zinc (Zn)-Dissolved		2.4	2.2		ug/L	5.5	20	25-NOV-19
WG3227021-2 LCS Antimony (Sb)-Dissolved			99.6		%		80-120	25-NOV-19
Arsenic (As)-Dissolved			99.4		%		80-120	25-NOV-19
Barium (Ba)-Dissolved			102.2		%		80-120	25-NOV-19
Beryllium (Be)-Dissolved			101.2		%		80-120	25-NOV-19
Boron (B)-Dissolved			99.3		%		80-120	25-NOV-19
Cadmium (Cd)-Dissolved			100.3		%		80-120	25-NOV-19
Chromium (Cr)-Dissolved			100.4		%		80-120	25-NOV-19
Cobalt (Co)-Dissolved			99.9		%		80-120	25-NOV-19
Copper (Cu)-Dissolved			100.8		%		80-120	25-NOV-19
Lead (Pb)-Dissolved			99.9		%		80-120	25-NOV-19
Molybdenum (Mo)-Dissolved	d		104.0		%		80-120	25-NOV-19
Nickel (Ni)-Dissolved			99.6		%		80-120	25-NOV-19
Selenium (Se)-Dissolved			98.1		%		80-120	25-NOV-19
Silver (Ag)-Dissolved			100.4		%		80-120	25-NOV-19
Sodium (Na)-Dissolved			101.3		%		80-120	25-NOV-19
Thallium (TI)-Dissolved			99.95		%		80-120	25-NOV-19



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R49230	148							
WG3227021-2 LC			00.4		0/		00.400	
Uranium (U)-Dissolv			99.1		%		80-120	25-NOV-19
Vanadium (V)-Disso	ivea		100.8				80-120	25-NOV-19
Zinc (Zn)-Dissolved			101.2		%		80-120	25-NOV-19
WG3227021-1 ME Antimony (Sb)-Disso			<0.10		ug/L		0.1	25-NOV-19
Arsenic (As)-Dissolv			<0.10		ug/L		0.1	25-NOV-19
Barium (Ba)-Dissolve			<0.10		ug/L		0.1	25-NOV-19
Beryllium (Be)-Disso			<0.10		ug/L		0.1	25-NOV-19
Boron (B)-Dissolved			<10		ug/L		10	25-NOV-19
Cadmium (Cd)-Disso	olved		<0.0050		ug/L		0.005	25-NOV-19
Chromium (Cr)-Diss			<0.50		ug/L		0.5	25-NOV-19
Cobalt (Co)-Dissolve	ed		<0.10		ug/L		0.1	25-NOV-19
Copper (Cu)-Dissolv	ed		<0.20		ug/L		0.2	25-NOV-19
Lead (Pb)-Dissolved			<0.050		ug/L		0.05	25-NOV-19
Molybdenum (Mo)-D	issolved		< 0.050		ug/L		0.05	25-NOV-19
Nickel (Ni)-Dissolved	d		<0.50		ug/L		0.5	25-NOV-19
Selenium (Se)-Disso	lved		<0.050		ug/L		0.05	25-NOV-19
Silver (Ag)-Dissolved	d		<0.050		ug/L		0.05	25-NOV-19
Sodium (Na)-Dissolv	red		<50		ug/L		50	25-NOV-19
Thallium (TI)-Dissolv	red		<0.010		ug/L		0.01	25-NOV-19
Uranium (U)-Dissolv	ed		<0.010		ug/L		0.01	25-NOV-19
Vanadium (V)-Disso	lved		<0.50		ug/L		0.5	25-NOV-19
Zinc (Zn)-Dissolved			<1.0		ug/L		1	25-NOV-19
WG3227021-5 MS	;	WG3227021-6						
Antimony (Sb)-Disso	lved		102.4		%		70-130	25-NOV-19
Arsenic (As)-Dissolv	ed		108.8		%		70-130	25-NOV-19
Barium (Ba)-Dissolve	ed		N/A	MS-B	%		-	25-NOV-19
Beryllium (Be)-Disso	lved		107.9		%		70-130	25-NOV-19
Boron (B)-Dissolved			99.2		%		70-130	25-NOV-19
Cadmium (Cd)-Disso			104.8		%		70-130	25-NOV-19
Chromium (Cr)-Diss	olved		99.0		%		70-130	25-NOV-19
Cobalt (Co)-Dissolve			98.0		%		70-130	25-NOV-19
Copper (Cu)-Dissolv			96.1		%		70-130	25-NOV-19
Lead (Pb)-Dissolved			97.5		%		70-130	25-NOV-19



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R4923048								
WG3227021-5 MS Molybdenum (Mo)-Disso	olved	WG3227021-6	105.5		%		70-130	25 NOV 10
Nickel (Ni)-Dissolved	0.10u		95.6		%		70-130 70-130	25-NOV-19 25-NOV-19
Selenium (Se)-Dissolve	d		117.8		%		70-130	25-NOV-19
Silver (Ag)-Dissolved	_		98.1		%		70-130	25-NOV-19
Sodium (Na)-Dissolved			97.0		%		70-130	25-NOV-19
Thallium (TI)-Dissolved			98.1		%		70-130	25-NOV-19
Uranium (U)-Dissolved			N/A	MS-B	%		-	25-NOV-19
Vanadium (V)-Dissolved	d		102.7		%		70-130	25-NOV-19
Zinc (Zn)-Dissolved			105.4		%		70-130	25-NOV-19
PAH-511-WT	Water							-
Batch R4928414								
WG3227562-2 LCS								
1-Methylnaphthalene			84.9		%		50-140	27-NOV-19
2-Methylnaphthalene			78.0		%		50-140	27-NOV-19
Acenaphthene			92.7		%		50-140	27-NOV-19
Acenaphthylene			93.6		%		50-140	27-NOV-19
Anthracene			97.3		%		50-140	27-NOV-19
Benzo(a)anthracene			99.0		%		50-140	27-NOV-19
Benzo(a)pyrene			90.8		%		50-140	27-NOV-19
Benzo(b)fluoranthene			88.2		%		50-140	27-NOV-19
Benzo(g,h,i)perylene			94.8		%		50-140	27-NOV-19
Benzo(k)fluoranthene			91.8		%		50-140	27-NOV-19
Chrysene			96.3		%		50-140	27-NOV-19
Dibenzo(ah)anthracene			89.9		%		50-140	27-NOV-19
Fluoranthene			97.0		%		50-140	27-NOV-19
Fluorene			94.2		%		50-140	27-NOV-19
Indeno(1,2,3-cd)pyrene			99.8		%		50-140	27-NOV-19
Naphthalene			83.0		%		50-140	27-NOV-19
Phenanthrene			98.6		%		50-140	27-NOV-19
Pyrene			97.8		%		50-140	27-NOV-19
WG3227562-1 MB 1-Methylnaphthalene			<0.020		ug/L		0.02	27-NOV-19
2-Methylnaphthalene			<0.020		ug/L		0.02	27-NOV-19
Acenaphthene			<0.020		ug/L		0.02	27-NOV-19



Workorder: L2386608 Report Date: 29-NOV-19 Page 6 of 12

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Water							
Batch R49284	14							
WG3227562-1 MB			0.000		/1		0.02	
Acenaphthylene Anthracene			<0.020		ug/L			27-NOV-19
			<0.020		ug/L		0.02	27-NOV-19
Benzo(a)anthracene			<0.020		ug/L		0.02	27-NOV-19
Benzo(a)pyrene			<0.010		ug/L		0.01	27-NOV-19
Benzo(b)fluoranthene	9		<0.020		ug/L		0.02	27-NOV-19
Benzo(g,h,i)perylene			<0.020		ug/L		0.02	27-NOV-19
Benzo(k)fluoranthene)		<0.020		ug/L		0.02	27-NOV-19
Chrysene			<0.020		ug/L		0.02	27-NOV-19
Dibenzo(ah)anthrace	ne		<0.020		ug/L		0.02	27-NOV-19
Fluoranthene			<0.020		ug/L		0.02	27-NOV-19
Fluorene			<0.020		ug/L		0.02	27-NOV-19
Indeno(1,2,3-cd)pyre	ne		<0.020		ug/L		0.02	27-NOV-19
Naphthalene			<0.050		ug/L		0.05	27-NOV-19
Phenanthrene			<0.020		ug/L		0.02	27-NOV-19
Pyrene			<0.020		ug/L		0.02	27-NOV-19
Surrogate: d8-Naphtl	nalene		90.1		%		60-140	27-NOV-19
Surrogate: d10-Phen	anthrene		97.9		%		60-140	27-NOV-19
Surrogate: d12-Chrys	sene		93.2		%		60-140	27-NOV-19
Surrogate: d10-Acen	aphthene		95.3		%		60-140	27-NOV-19
PH-WT	Water							
Batch R49219								
WG3226527-4 DU I	P	WG3226527-3 7.30	7.18		pH units	0.12	0.0	02 NOV 40
·		7.30	7.10	J	pri units	0.12	0.2	23-NOV-19
WG3226527-2 LC 3 pH	5		7.05		pH units		6.9-7.1	23-NOV-19
VOC-511-HS-WT	Water							
Batch R49276	02							
WG3229973-4 DU		WG3229973-3						
1,1,1,2-Tetrachloroet		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,1,2,2-Tetrachloroet	hane	<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,1,1-Trichloroethane	•	<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,1,2-Trichloroethane	;	<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,1-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,1-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19



Workorder: L2386608 Report Date: 29-NOV-19 Page 7 of 12

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4927602								
WG3229973-4 DUP 1,2-Dibromoethane		WG3229973-3		555 114	/1	N1/A	00	
•		<0.20	<0.20	RPD-NA	ug/L	N/A	30	28-NOV-19
1,2-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,2-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,2-Dichloropropane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,3-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,4-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Acetone		<30	<30	RPD-NA	ug/L	N/A	30	28-NOV-19
Benzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Bromodichloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	28-NOV-19
Bromoform		<5.0	<5.0	RPD-NA	ug/L	N/A	30	28-NOV-19
Bromomethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Carbon tetrachloride		<0.20	<0.20	RPD-NA	ug/L	N/A	30	28-NOV-19
Chlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Chloroform		<1.0	<1.0	RPD-NA	ug/L	N/A	30	28-NOV-19
cis-1,2-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
cis-1,3-Dichloropropene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	28-NOV-19
Dibromochloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	28-NOV-19
Dichlorodifluoromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	28-NOV-19
Ethylbenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
n-Hexane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
m+p-Xylenes		<0.40	<0.40	RPD-NA	ug/L	N/A	30	28-NOV-19
Methyl Ethyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	28-NOV-19
Methyl Isobutyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	28-NOV-19
Methylene Chloride		<5.0	<5.0	RPD-NA	ug/L	N/A	30	28-NOV-19
MTBE		<2.0	<2.0	RPD-NA	ug/L	N/A	30	28-NOV-19
o-Xylene		<0.30	< 0.30	RPD-NA	ug/L	N/A	30	28-NOV-19
Styrene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Tetrachloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Toluene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
trans-1,2-Dichloroethyler	ne	<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
trans-1,3-Dichloroproper	ne	< 0.30	<0.30	RPD-NA	ug/L	N/A	30	28-NOV-19
Trichloroethylene		0.83	0.82		ug/L	1.2	30	28-NOV-19
Trichlorofluoromethane		<5.0	<5.0		ug/L			28-NOV-19



Workorder: L2386608 Report Date: 29-NOV-19 Page 8 of 12

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

VOC-511-HS-WT Batch R4927602 WG3229973-4 DUP	Water	WG3229973-3						
WG3229973-4 DUP		WG3229973-3						
		WG3229973-3						
				222	//			
Trichlorofluoromethane		<5.0	<5.0	RPD-NA	ug/L	N/A	30	28-NOV-19
Vinyl chloride		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
WG3229973-1 LCS 1,1,1,2-Tetrachloroethane	Э		91.9		%		70-130	28-NOV-19
1,1,2,2-Tetrachloroethane			91.6		%		70-130	28-NOV-19
1,1,1-Trichloroethane			95.8		%		70-130	28-NOV-19
1,1,2-Trichloroethane			92.6		%		70-130	28-NOV-19
1,1-Dichloroethane			95.9		%		70-130	28-NOV-19
1,1-Dichloroethylene			92.5		%		70-130	28-NOV-19
1,2-Dibromoethane			92.5		%		70-130	28-NOV-19
1,2-Dichlorobenzene			87.7		%		70-130	28-NOV-19
1,2-Dichloroethane			97.2		%		70-130	28-NOV-19
1,2-Dichloropropane			100.4		%		70-130	28-NOV-19
1,3-Dichlorobenzene			87.2		%		70-130	28-NOV-19
1,4-Dichlorobenzene			86.5		%		70-130	28-NOV-19
Acetone			99.1		%		60-140	28-NOV-19
Benzene			100.4		%		70-130	28-NOV-19
Bromodichloromethane			97.9		%		70-130	28-NOV-19
Bromoform			91.9		%		70-130	28-NOV-19
Bromomethane			85.9		%		60-140	28-NOV-19
Carbon tetrachloride			94.9		%		70-130	28-NOV-19
Chlorobenzene			90.8		%		70-130	28-NOV-19
Chloroform			98.1		%		70-130	28-NOV-19
cis-1,2-Dichloroethylene			95.3		%		70-130	28-NOV-19
cis-1,3-Dichloropropene			98.1		%		70-130	28-NOV-19
Dibromochloromethane			90.8		%		70-130	28-NOV-19
Dichlorodifluoromethane			80.2		%		50-140	28-NOV-19
Ethylbenzene			90.3		%		70-130	28-NOV-19
n-Hexane			89.6		%		70-130	28-NOV-19
m+p-Xylenes			89.8		%		70-130	28-NOV-19
Methyl Ethyl Ketone			94.2		%		60-140	28-NOV-19
Methyl Isobutyl Ketone			89.5		%		60-140	28-NOV-19
Methylene Chloride			96.6		%		70-130	28-NOV-19
MTBE			109.2		%		70-130	28-NOV-19



Workorder: L2386608 Report Date: 29-NOV-19 Page 9 of 12

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4927602	2							
WG3229973-1 LCS o-Xylene			90.4		%		70 120	00 NOV 40
Styrene			90.4		%		70-130 70-130	28-NOV-19 28-NOV-19
Tetrachloroethylene			90.5 88.6		%			
Toluene			92.0		%		70-130	28-NOV-19
trans-1,2-Dichloroethyle	ono		93.2		%		70-130	28-NOV-19
trans-1,3-Dichloroprope			93.2		%		70-130	28-NOV-19
•	ene				%		70-130	28-NOV-19
Trichloroethylene			95.6				70-130	28-NOV-19
Trichlorofluoromethane)		92.4		%		60-140	28-NOV-19
Vinyl chloride			102.8		%		60-140	28-NOV-19
WG3229973-2 MB 1,1,1,2-Tetrachloroetha	ane		<0.50		ug/L		0.5	28-NOV-19
1,1,2,2-Tetrachloroetha			<0.50		ug/L		0.5	28-NOV-19
1,1,1-Trichloroethane			<0.50		ug/L		0.5	28-NOV-19
1,1,2-Trichloroethane			<0.50		ug/L		0.5	28-NOV-19
1,1-Dichloroethane			<0.50		ug/L		0.5	28-NOV-19
1,1-Dichloroethylene			<0.50		ug/L		0.5	28-NOV-19
1,2-Dibromoethane			<0.20		ug/L		0.2	28-NOV-19
1,2-Dichlorobenzene			<0.50		ug/L		0.5	28-NOV-19
1,2-Dichloroethane			<0.50		ug/L		0.5	28-NOV-19
1,2-Dichloropropane			<0.50		ug/L		0.5	28-NOV-19
1,3-Dichlorobenzene			<0.50		ug/L		0.5	28-NOV-19
1,4-Dichlorobenzene			<0.50		ug/L		0.5	28-NOV-19
Acetone			<30		ug/L		30	28-NOV-19
Benzene			<0.50		ug/L		0.5	28-NOV-19
Bromodichloromethane)		<2.0		ug/L		2	28-NOV-19
Bromoform			<5.0		ug/L		5	28-NOV-19
Bromomethane			<0.50		ug/L		0.5	28-NOV-19
Carbon tetrachloride			<0.20		ug/L		0.2	28-NOV-19
Chlorobenzene			<0.50		ug/L		0.5	28-NOV-19
Chloroform			<1.0		ug/L		1	28-NOV-19
cis-1,2-Dichloroethylen	е		<0.50		ug/L		0.5	28-NOV-19
cis-1,3-Dichloropropen	е		<0.30		ug/L		0.3	28-NOV-19
Dibromochloromethane	e		<2.0		ug/L		2	28-NOV-19
Dichlorodifluoromethan	ie		<2.0		ug/L		2	28-NOV-19



Workorder: L2386608 Report Date: 29-NOV-19 Page 10 of 12

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4927602	2							
WG3229973-2 MB			0.50		//		0.5	
Ethylbenzene			<0.50		ug/L		0.5	28-NOV-19
n-Hexane			<0.50		ug/L		0.5	28-NOV-19
m+p-Xylenes			<0.40		ug/L		0.4	28-NOV-19
Methyl Ethyl Ketone			<20		ug/L		20	28-NOV-19
Methyl Isobutyl Ketone			<20		ug/L		20	28-NOV-19
Methylene Chloride			<5.0		ug/L		5	28-NOV-19
MTBE			<2.0		ug/L		2	28-NOV-19
o-Xylene			<0.30		ug/L		0.3	28-NOV-19
Styrene			<0.50		ug/L		0.5	28-NOV-19
Tetrachloroethylene			<0.50		ug/L		0.5	28-NOV-19
Toluene			<0.50		ug/L		0.5	28-NOV-19
trans-1,2-Dichloroethyl			<0.50		ug/L		0.5	28-NOV-19
trans-1,3-Dichloroprop	ene		<0.30		ug/L		0.3	28-NOV-19
Trichloroethylene			<0.50		ug/L		0.5	28-NOV-19
Trichlorofluoromethane	e		<5.0		ug/L		5	28-NOV-19
Vinyl chloride			<0.50		ug/L		0.5	28-NOV-19
Surrogate: 1,4-Difluoro	benzene		96.6		%		70-130	28-NOV-19
Surrogate: 4-Bromofluc	orobenzene		93.1		%		70-130	28-NOV-19
WG3229973-5 MS		WG3229973-3						
1,1,1,2-Tetrachloroetha			91.8		%		50-140	28-NOV-19
1,1,2,2-Tetrachloroetha	ane		82.3		%		50-140	28-NOV-19
1,1,1-Trichloroethane			99.0		%		50-140	28-NOV-19
1,1,2-Trichloroethane			88.0		%		50-140	28-NOV-19
1,1-Dichloroethane			100.5		%		50-140	28-NOV-19
1,1-Dichloroethylene			94.4		%		50-140	28-NOV-19
1,2-Dibromoethane			85.8		%		50-140	28-NOV-19
1,2-Dichlorobenzene			88.0		%		50-140	28-NOV-19
1,2-Dichloroethane			92.3		%		50-140	28-NOV-19
1,2-Dichloropropane			98.1		%		50-140	28-NOV-19
1,3-Dichlorobenzene			90.0		%		50-140	28-NOV-19
1,4-Dichlorobenzene			88.3		%		50-140	28-NOV-19
Acetone			92.8		%		50-140	28-NOV-19
Benzene			99.98		%		50-140	28-NOV-19
Bromodichloromethane	Э		95.7		%		50-140	28-NOV-19



Workorder: L2386608 Report Date: 29-NOV-19 Page 11 of 12

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4927602								
WG3229973-5 MS		WG3229973-3						
Bromoform			85.1		%		50-140	28-NOV-19
Bromomethane			80.1		%		50-140	28-NOV-19
Carbon tetrachloride			99.9		%		50-140	28-NOV-19
Chlorobenzene			90.7		%		50-140	28-NOV-19
Chloroform			98.3		%		50-140	28-NOV-19
cis-1,2-Dichloroethylene	!		94.5		%		50-140	28-NOV-19
cis-1,3-Dichloropropene			90.6		%		50-140	28-NOV-19
Dibromochloromethane			87.1		%		50-140	28-NOV-19
Dichlorodifluoromethane)		79.2		%		50-140	28-NOV-19
Ethylbenzene			93.6		%		50-140	28-NOV-19
n-Hexane			91.9		%		50-140	28-NOV-19
m+p-Xylenes			92.6		%		50-140	28-NOV-19
Methyl Ethyl Ketone			75.0		%		50-140	28-NOV-19
Methyl Isobutyl Ketone			76.4		%		50-140	28-NOV-19
Methylene Chloride			94.0		%		50-140	28-NOV-19
MTBE			109.1		%		50-140	28-NOV-19
o-Xylene			92.2		%		50-140	28-NOV-19
Styrene			88.7		%		50-140	28-NOV-19
Tetrachloroethylene			92.9		%		50-140	28-NOV-19
Toluene			94.2		%		50-140	28-NOV-19
trans-1,2-Dichloroethyle	ne		93.6		%		50-140	28-NOV-19
trans-1,3-Dichloroprope	ne		83.4		%		50-140	28-NOV-19
Trichloroethylene			98.1		%		50-140	28-NOV-19
Trichlorofluoromethane			95.2		%		50-140	28-NOV-19
Vinyl chloride			101.7		%		50-140	28-NOV-19

Workorder: L2386608 Report Date: 29-NOV-19

Client: TERRAPROBE-BRAMPTON Page 12 of 12

11 Indell Lane

Brampton ON L6T 3Y3 Kossay Makhzoumi

Legend:

Contact:

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.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
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.

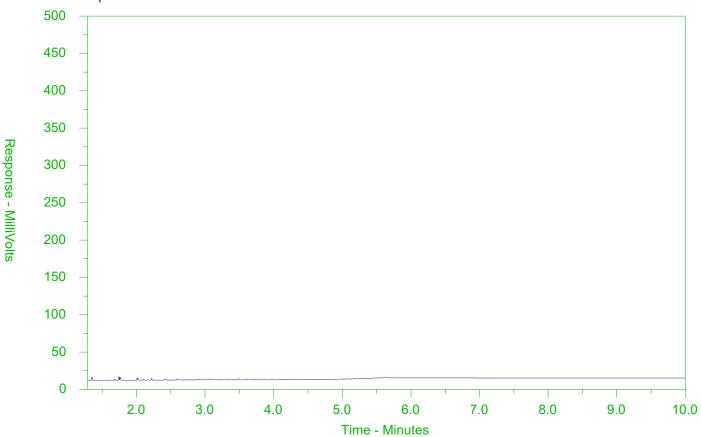
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined data quality objectives to provide 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: L2386608-1 Client Sample ID: BH4-S



← -F2-	→←	—F3 → ←—F4—	→	
nC10	nC16	nC34	nC50	
174°C	287°C	481°C	575°C	
346°F	549°F	898°F	1067°F	
Gasolin	ie →	← Mot	tor Oils/Lube Oils/Grease———	-
←	-Diesel/Jet	t 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.

Elfication and system and and

Chain of Custody (COC) / Analytical Request Form

L2386608-COFC

COC Number: 15 -

Canada Toll Free: 1 800 668 9878

	www.alsglobal.com	! <u></u>																				
Report To	Contact and compa	any name below will app	ear on the final repor	rt		Report Format	/ Distribution		Select :	Service L	.evel Be	low - Pte	ase conf	irm all E	&P TAT	with y	our AM	- surch	arges wi	ill apply		
Company:	Terraprobe				Select Report Format: ☑ PDF ☑ EXCEL ☐ EDD (DIGITAL)				Regular [R] Standard TAT if received by 3 pm - business days - no surcharges apply							pply						
Contact:	Kossay Makhzoumi				Quality Control (QC) Report with Report				- Î	4	day (F	P4]			ţ	1	Busir	iess (iay [E	1]		
Phone:	905-796-2650				✓ Compare Resul	ts to Criteria on Report -	•		3 day [P3]			ERGEI	Same Day, Weekend or									
	Company address below	will appear on the final	report	į	Select Distribution	on: 🗹 EMAIL	MAIL [FAX	(Bush	2	day [F	2]			Ē		Statu	tory h	oliday	/ [E0]		
Street:	11 Indell Lane				Email 1 or Fax	kmakhzoumi@terra	aprobe.ca		i	Date a	nd Time	e Requir	red for a	II E&P 1	ATs:		Ĺ_					
City/Province:	Brampton				Email 2				For test	s that c	an not b	e perforn	ned acco	rding to	the ser	rice lev	evel selected, you will be contacted.					
Postal Code:	L6T 3Y3				Email 3 Analysis Rec					Request												
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Company:	Terraprobe			Email 1 or Fax Irossi@terraprobe.ca				-													7	
Contact:	Lorena Rossi				Email 2												i I					စ
	Project	Information			Oi	and Gas Required	Fields (client	use)						İ	.		ıl	. 1	ı			aine
ALS Account #	/ Quote #:	Q62481			AFE/Cost Center:		PO#							į	l		ıl					Şout
Job #:	1-19-0603-42				Major/Minor Code:		Routing Code:														1	ofC
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ALS Sample #	Sai	mple identification	and/or Coordi	nates		Date	Time	Sample Type	Metals	Metals	Hyride	l	œ	Į	၁၀	ပ္	OC Pesticides	PCBs	- [-	
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Are samples take	en from a Regulated DW	System?			-				-	acks	図	_	Cubes	Д	Cust	ody s	eal in	tact	Yes		No	
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Released by: K	ossay Makhzoumi	Date:		Time:	Received by:	11/	Date: •	1.0	Time	~ ^^	Rec	eived t	Ł				Date	a:		/10	Tim	
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TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 22-NOV-19

Report Date: 29-NOV-19 14:38 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2386649
Project P.O. #: NOT SUBMITTED
Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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

ADDRESS: 5730 Coopers Avenue, Unit #26 , Mississauga, ON L4Z 2E9 Canada | Phone: +1 905 507 6910 | Fax: +1 905 507 6927 ALS CANADA LTD Part of the ALS Group An ALS Limited Company





L2386649 CONT'D....

Job Reference: 1-19-0603-42

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Summary of Guideline Exceedances

Guideline ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit
Ontario Reເ	gulation 153/04 - April 15	, 2011 Standards - T3-Non-Potable Gr	ound Water-All Types of Property Us	ses (Coarse)		
L2386649-1 BI	BH5	Volatile Organic Compounds	cis-1,2-Dichloroethylene	4.89	1.6	ug/L
			Trichloroethylene	5.59	1.6	ug/L

(No parameter exceedances)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2386649 CONT'D....

Job Reference: 1-19-0603-42

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Dissolved Metals - WATER

	Lab ID Sample Date Sample ID			L2386649-1 20-NOV-19 BH5		
Analyte	Unit	Guide #1	Limits #2			
Dissolved Metals Filtration Location		-	-	FIELD		
Antimony (Sb)-Dissolved	ug/L	20000	20000	<1.0 DLHC		
Arsenic (As)-Dissolved	ug/L	1900	1900	<1.0 DLHC		
Barium (Ba)-Dissolved	ug/L	29000	29000	355 DLHC		
Beryllium (Be)-Dissolved	ug/L	67	67	<1.0 DLHC		
Boron (B)-Dissolved	ug/L	45000	45000	140 DLHC		
Cadmium (Cd)-Dissolved	ug/L	2.7	2.7	<0.050 ^{DLHC}		
Chromium (Cr)-Dissolved	ug/L	810	810	<5.0 DLHC		
Cobalt (Co)-Dissolved	ug/L	66	66	<1.0 DLHC		
Copper (Cu)-Dissolved	ug/L	87	87	<2.0 DLHC		
Lead (Pb)-Dissolved	ug/L	25	25	<0.50 DLHC		
Molybdenum (Mo)-Dissolved	ug/L	9200	9200	1.00 DLHC		
Nickel (Ni)-Dissolved	ug/L	490	490	<5.0 DLHC		
Selenium (Se)-Dissolved	ug/L	63	63	<0.50 DLHC		
Silver (Ag)-Dissolved	ug/L	1.5	1.5	<0.50 DLHC		
Sodium (Na)-Dissolved	ug/L	2300000	2300000	460000 ^{DLHC}		
Thallium (TI)-Dissolved	ug/L	510	510	<0.10 DLHC		
Uranium (U)-Dissolved	ug/L	420	420	1.76 DLHC		
Vanadium (V)-Dissolved	ug/L	250	250	<5.0 DLHC		
Zinc (Zn)-Dissolved	ug/L	1100	1100	<10 DLHC		

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Job Reference: 1-19-0603-42

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Volatile Organic Compounds - WATER

	ile Organic Compounds - WATER Lab ID Sample Date Sample ID			
Analyte	Unit	Guide #1	Limits #2	
Acetone	ug/L	130000	130000	<30
Benzene	ug/L	44	430	<0.50
Bromodichloromethane	ug/L	85000	85000	<2.0
Bromoform	ug/L	380	770	<5.0
Bromomethane	ug/L	5.6	56	<0.50
Carbon tetrachloride	ug/L	0.79	8.4	<0.20
Chlorobenzene	ug/L	630	630	<0.50
Dibromochloromethane	ug/L	82000	82000	<2.0
Chloroform	ug/L	2.4	22	<1.0
1,2-Dibromoethane	ug/L	0.25	0.83	<0.20
1,2-Dichlorobenzene	ug/L	4600	9600	<0.50
1,3-Dichlorobenzene	ug/L	9600	9600	<0.50
1,4-Dichlorobenzene	ug/L	8	67	<0.50
Dichlorodifluoromethane	ug/L	4400	4400	<2.0
1,1-Dichloroethane	ug/L	320	3100	3.56
1,2-Dichloroethane	ug/L	1.6	12	<0.50
1,1-Dichloroethylene	ug/L	1.6	17	<0.50
cis-1,2-Dichloroethylene	ug/L	1.6	17	4.89
trans-1,2-Dichloroethylene	ug/L	1.6	17	<0.50
Methylene Chloride	ug/L	610	5500	<5.0
1,2-Dichloropropane	ug/L	16	140	<0.50
cis-1,3-Dichloropropene	ug/L	-	-	< 0.30
trans-1,3-Dichloropropene	ug/L	-	-	< 0.30
1,3-Dichloropropene (cis & trans)	ug/L	5.2	45	< 0.50
Ethylbenzene	ug/L	2300	2300	<0.50
n-Hexane	ug/L	51	520	<0.50
Methyl Ethyl Ketone	ug/L	470000	1500000	<20
Methyl Isobutyl Ketone	ug/L	140000	580000	<20
MTBE	ug/L	190	1400	<2.0
Styrene	ug/L	1300	9100	<0.50

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

 $^{^{\}star}$ Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Volatile Organic Compounds - WATER

		Sample Sam	L2386649-1 20-NOV-19 BH5	
Analyte	Unit	Guide #1	Limits #2	
1,1,1,2-Tetrachloroethane	ug/L	3.3	28	<0.50
1,1,2,2-Tetrachloroethane	ug/L	3.2	15	<0.50
Tetrachloroethylene	ug/L	1.6	17	<0.50
Toluene	ug/L	18000	18000	<0.50
1,1,1-Trichloroethane	ug/L	640	6700	<0.50
1,1,2-Trichloroethane	ug/L	4.7	30	<0.50
Trichloroethylene	ug/L	1.6	17	5.59
Trichlorofluoromethane	ug/L	2500	2500	<5.0
Vinyl chloride	ug/L	0.5	1.7	<0.50
o-Xylene	ug/L	-	-	<0.30
m+p-Xylenes	ug/L	-	-	<0.40
Xylenes (Total)	ug/L	4200	4200	<0.50
Surrogate: 4-Bromofluorobenzene	%	-	-	94.8
Surrogate: 1,4-Difluorobenzene	%	-	-	97.1

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Hydrocarbons - WATER

		ah ID	L2386649-1
			20-NOV-19
	Sam	ipie iD	BH5
	Guide	Limits	
Unit	#1	#2	
ug/L	750	750	<25
ug/L	750	750	<25
ug/L	150	150	<100
ug/L	-	-	<100
ug/L	500	500	<250
ug/L	-	-	<250
ug/L	500	500	<250
ug/L	-	-	<370
	-	-	YES
%	-	-	83.0
%	-	-	62.2
	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	Sample Sam Guide Unit #1 ug/L 750 ug/L 750 ug/L 150 ug/L - ug/L 500 ug/L - ug/L 500 ug/L - ug/L 500 ug/L - ug/L 500	ug/L 750 750 ug/L 750 750 ug/L 150 150 ug/L ug/L 500 500 ug/L ug/L 500 500 ug/L ug/L 500 500 ug/L

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Polycyclic Aromatic Hydrocarbons - WATER

 Lab ID
 L2386649-1

 Sample Date
 20-NOV-19

 Sample ID
 BH5

		Guide	Limits	
Analyte	Unit	#1	#2	
Acenaphthene	ug/L	600	1700	<0.020
Acenaphthylene	ug/L	1.8	1.8	<0.020
Anthracene	ug/L	2.4	2.4	<0.020
Benzo(a)anthracene	ug/L	4.7	4.7	<0.020
Benzo(a)pyrene	ug/L	0.81	0.81	<0.010
Benzo(b)fluoranthene	ug/L	0.75	0.75	<0.020
Benzo(g,h,i)perylene	ug/L	0.2	0.2	<0.020
Benzo(k)fluoranthene	ug/L	0.4	0.4	<0.020
Chrysene	ug/L	1	1	<0.020
Dibenzo(ah)anthracene	ug/L	0.52	0.52	<0.020
Fluoranthene	ug/L	130	130	<0.020
Fluorene	ug/L	400	400	<0.020
Indeno(1,2,3-cd)pyrene	ug/L	0.2	0.2	<0.020
1+2-Methylnaphthalenes	ug/L	1800	1800	<0.028
1-Methylnaphthalene	ug/L	1800	1800	<0.020
2-Methylnaphthalene	ug/L	1800	1800	<0.020
Naphthalene	ug/L	1400	6400	<0.050
Phenanthrene	ug/L	580	580	<0.020
Pyrene	ug/L	68	68	0.023
Surrogate: d10-Acenaphthene	%	-	-	93.9
Surrogate: d12-Chrysene	%	-	-	94.5
Surrogate: d8-Naphthalene	%	-	-	92.1
Surrogate: d10-Phenanthrene	%	-	-	99.6

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Polychlorinated Biphenyls - WATER

,				
			Lab ID	L2386649-1
		Sampl		20-NOV-19
		Sam	iple ID	BH5
Analyte	Unit	Guide #1	Limits #2	
Aroclor 1242	ug/L	-	-	<0.040 ^{DLM}
Aroclor 1248	ug/L	-	-	<0.040 ^{DLM}
Aroclor 1254	ug/L	-	-	<0.040 ^{DLM}
Aroclor 1260	ug/L	-	-	<0.040 ^{DLM}
Surrogate: Decachlorobiphenyl	%	-	-	43.9 RRR
Total PCBs	ug/L	7.8	15	<0.080 ^{DLM}
Surrogate: Tetrachloro-m-xylene	%	-	-	81.8

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.

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Additional Comments for Sample Listed:

Samplenum	Matrix	Report Remarks	Sample Comments
L2386649-1	Water	Note: RRR: Surrogate recovery marginally below ALS DOO. DI's raised 2x	

Qualifiers for Individual Parameters Listed:

Qualifier	Description
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).
RRR	Refer to Report Remarks for issues regarding this analysis

Methods Listed (if applicable):									
ALS Test Code	Matrix	Test Description	Method Reference**						
F1-F4-511-CALC-WT	Water	F1-F4 Hydrocarbon Calculated Parameters	CCME CWS-PHC, Pub #1310, Dec 2001-L						

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

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 Water F1-O.Reg 153/04 (July 2011) E3398/CCME TIER 1-HS

Fraction F1 is determined by 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 Water F2-F4-O.Reg 153/04 (July 2011) EPA 3511/CCME Tier 1

Petroleum Hydrocarbons (F2-F4 fractions) are extracted from water using a hexane micro-extraction technique. Instrumental analysis is by GC-FID, as per the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Tier 1 Method, CCME, 2001.

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-D-UG/L-MS-WT Water Diss. Metals in Water by ICPMS (ug/L) EPA 200.8

The metal constituents of a non-acidified sample that pass through a membrane filter prior to ICP/MS analysis.

L2386649 CONT'D.... Job Reference: 1-19-0603-42 PAGE 10 of 11 29-NOV-19 14:38 (MT)

Methods Listed (if applicable):

ALS Test Code Matrix **Test Description** Method Reference**

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 Water

PAH-Calculated Parameters

SW846 8270

PAH-511-WT

Water

PAH-O. Reg 153/04 (July 2011)

SW846 3510/8270

Aqueous samples, fortified with surrogates, are extracted using liquid/liquid extraction technique. The sample extracts are concentrated and then analyzed using GC/MS. Results for benzo(b) fluoranthene may include contributions from benzo(i)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

Water

PCB-O. Reg 153/04 (July 2011)

SW846 3510/8082

Aqueous samples are extracted, then concentrated, reconstituted, and analyzed by 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).

VOC-1,3-DCP-CALC-WT

Water

Regulation 153 VOCs

SW8260B/SW8270C

VOC-511-HS-WT

Water

VOC by GCMS HS O.Reg 153/04 (July SW846 8260

2011)

Liquid samples are analyzed by headspace GC/MSD.

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 Water

Sum of Xylene Isomer Concentrations CALCULATION

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

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

WT

ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

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Job Reference: 1-19-0603-42
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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.



Workorder: L2386649 Report Date: 29-NOV-19 Page 1 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test		Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT		Water							
Batch R49 WG3229973-4 F1 (C6-C10)	927602 DUP		WG3229973-3 <25	<25	RPD-NA	ug/L	N/A	30	28-NOV-19
WG3229973-1 F1 (C6-C10)	LCS			107.4		%		80-120	28-NOV-19
WG3229973-2 F1 (C6-C10)	MB			<25		ug/L		25	28-NOV-19
Surrogate: 3,4-D	Dichloroto	oluene		97.6		%		60-140	28-NOV-19
WG3229973-5 F1 (C6-C10)	MS		WG3229973-3	76.5		%		60-140	28-NOV-19
F2-F4-511-WT		Water							
Batch R49 WG3227562-2	926959 LCS								
F2 (C10-C16)				84.9		%		70-130	26-NOV-19
F3 (C16-C34)				86.9		%		70-130	26-NOV-19
F4 (C34-C50)				88.3		%		70-130	26-NOV-19
WG3227562-1 F2 (C10-C16)	MB			<100		ug/L		100	26-NOV-19
F3 (C16-C34)				<250		ug/L		250	26-NOV-19
F4 (C34-C50)				<250		ug/L		250	26-NOV-19
Surrogate: 2-Bro	omobenz	cotrifluoride		79.8		%		60-140	26-NOV-19
MET-D-UG/L-MS-W	т	Water							
Batch R49	923048								
WG3227021-4 Antimony (Sb)-D	DUP Dissolved	I	WG3227021-3 <0.10	<0.10	RPD-NA	ug/L	N/A	20	25-NOV-19
Arsenic (As)-Dis		•	0.10	0.11	RPD-NA	ug/L	2.9	20	25-NOV-19 25-NOV-19
Barium (Ba)-Dis			59.5	59.5		ug/L	0.1	20	25-NOV-19 25-NOV-19
Beryllium (Be)-D		l	<0.10	<0.10	RPD-NA	ug/L	N/A	20	25-NOV-19 25-NOV-19
Boron (B)-Disso			<10	<10	RPD-NA	ug/L	N/A	20	25-NOV-19
Cadmium (Cd)-I		d	<0.0050	<0.0050	RPD-NA	ug/L	N/A	20	25-NOV-19
Chromium (Cr)-I			1.28	1.25		ug/L	2.9	20	25-NOV-19
Cobalt (Co)-Diss			<0.10	<0.10	RPD-NA	ug/L	N/A	20	25-NOV-19
Copper (Cu)-Dis	solved		1.03	1.02		ug/L	0.4	20	25-NOV-19
Lead (Pb)-Disso	lved		<0.050	<0.050	RPD-NA	ug/L	N/A	20	25-NOV-19
Molybdenum (M	o)-Disso	lved	0.172	0.163		ug/L	5.3	20	25-NOV-19
Nickel (Ni)-Disso	olved		<0.50	<0.50	RPD-NA	ug/L	N/A	20	25-NOV-19



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R492304	48							
WG3227021-4 DUI		WG3227021						
Selenium (Se)-Dissol		0.104	0.101		ug/L	3.0	20	25-NOV-19
Silver (Ag)-Dissolved		<0.050	<0.050	RPD-NA	ug/L	N/A	20	25-NOV-19
Sodium (Na)-Dissolve		2030	2020		ug/L	0.6	20	25-NOV-19
Thallium (TI)-Dissolve		<0.010	<0.010	RPD-NA	ug/L	N/A	20	25-NOV-19
Uranium (U)-Dissolve		0.356	0.353		ug/L	0.9	20	25-NOV-19
Vanadium (V)-Dissolv	ved	1.00	1.01		ug/L	1.3	20	25-NOV-19
Zinc (Zn)-Dissolved		2.4	2.2		ug/L	5.5	20	25-NOV-19
WG3227021-2 LCS Antimony (Sb)-Dissol			99.6		%		80-120	25-NOV-19
Arsenic (As)-Dissolve	ed		99.4		%		80-120	25-NOV-19
Barium (Ba)-Dissolve	d		102.2		%		80-120	25-NOV-19
Beryllium (Be)-Dissol	ved		101.2		%		80-120	25-NOV-19
Boron (B)-Dissolved			99.3		%		80-120	25-NOV-19
Cadmium (Cd)-Disso	lved		100.3		%		80-120	25-NOV-19
Chromium (Cr)-Disso	lved		100.4		%		80-120	25-NOV-19
Cobalt (Co)-Dissolved	d		99.9		%		80-120	25-NOV-19
Copper (Cu)-Dissolve	ed		100.8		%		80-120	25-NOV-19
Lead (Pb)-Dissolved			99.9		%		80-120	25-NOV-19
Molybdenum (Mo)-Di	ssolved		104.0		%		80-120	25-NOV-19
Nickel (Ni)-Dissolved			99.6		%		80-120	25-NOV-19
Selenium (Se)-Dissol	ved		98.1		%		80-120	25-NOV-19
Silver (Ag)-Dissolved			100.4		%		80-120	25-NOV-19
Sodium (Na)-Dissolve	ed		101.3		%		80-120	25-NOV-19
Thallium (TI)-Dissolve	ed		99.95		%		80-120	25-NOV-19
Uranium (U)-Dissolve	ed		99.1		%		80-120	25-NOV-19
Vanadium (V)-Dissolv	ved		100.8		%		80-120	25-NOV-19
Zinc (Zn)-Dissolved			101.2		%		80-120	25-NOV-19
WG3227021-1 MB								
Antimony (Sb)-Dissol			<0.10		ug/L		0.1	25-NOV-19
Arsenic (As)-Dissolve			<0.10		ug/L		0.1	25-NOV-19
Barium (Ba)-Dissolve			<0.10		ug/L		0.1	25-NOV-19
Beryllium (Be)-Dissol	ved		<0.10		ug/L		0.1	25-NOV-19
Boron (B)-Dissolved			<10		ug/L		10	25-NOV-19
Cadmium (Cd)-Disso	lved		< 0.0050		ug/L		0.005	25-NOV-19



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R4923048								
WG3227021-1 MB								
Chromium (Cr)-Dissolv	ed		<0.50		ug/L		0.5	25-NOV-19
Cobalt (Co)-Dissolved			<0.10		ug/L		0.1	25-NOV-19
Copper (Cu)-Dissolved			<0.20		ug/L		0.2	25-NOV-19
Lead (Pb)-Dissolved			<0.050		ug/L		0.05	25-NOV-19
Molybdenum (Mo)-Diss	olved		<0.050		ug/L		0.05	25-NOV-19
Nickel (Ni)-Dissolved			<0.50		ug/L		0.5	25-NOV-19
Selenium (Se)-Dissolve	ed		<0.050		ug/L		0.05	25-NOV-19
Silver (Ag)-Dissolved			< 0.050		ug/L		0.05	25-NOV-19
Sodium (Na)-Dissolved			<50		ug/L		50	25-NOV-19
Thallium (TI)-Dissolved			<0.010		ug/L		0.01	25-NOV-19
Uranium (U)-Dissolved			<0.010		ug/L		0.01	25-NOV-19
Vanadium (V)-Dissolve	d		<0.50		ug/L		0.5	25-NOV-19
Zinc (Zn)-Dissolved			<1.0		ug/L		1	25-NOV-19
WG3227021-5 MS		WG3227021-6						
Antimony (Sb)-Dissolve	ed		102.4		%		70-130	25-NOV-19
Arsenic (As)-Dissolved			108.8		%		70-130	25-NOV-19
Barium (Ba)-Dissolved			N/A	MS-B	%		-	25-NOV-19
Beryllium (Be)-Dissolve	d		107.9		%		70-130	25-NOV-19
Boron (B)-Dissolved			99.2		%		70-130	25-NOV-19
Cadmium (Cd)-Dissolve	ed		104.8		%		70-130	25-NOV-19
Chromium (Cr)-Dissolv	ed		99.0		%		70-130	25-NOV-19
Cobalt (Co)-Dissolved			98.0		%		70-130	25-NOV-19
Copper (Cu)-Dissolved			96.1		%		70-130	25-NOV-19
Lead (Pb)-Dissolved			97.5		%		70-130	25-NOV-19
Molybdenum (Mo)-Diss	olved		105.5		%		70-130	25-NOV-19
Nickel (Ni)-Dissolved			95.6		%		70-130	25-NOV-19
Selenium (Se)-Dissolve	ed		117.8		%		70-130	25-NOV-19
Silver (Ag)-Dissolved			98.1		%		70-130	25-NOV-19
Sodium (Na)-Dissolved			97.0		%		70-130	25-NOV-19
Thallium (TI)-Dissolved			98.1		%		70-130	25-NOV-19
Uranium (U)-Dissolved			N/A	MS-B	%		-	25-NOV-19
Vanadium (V)-Dissolve	d		102.7		%		70-130	25-NOV-19
Zinc (Zn)-Dissolved			105.4		%		70-130	25-NOV-19
	187 .							

PAH-511-WT Water



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Water							
Batch R4928414								
WG3227562-2 LCS			04.0		%		50.440	
1-Methylnaphthalene 2-Methylnaphthalene			84.9 78.0		%		50-140	27-NOV-19
			78.0 92.7				50-140	27-NOV-19
Acenaphthene					%		50-140	27-NOV-19
Acenaphthylene			93.6		%		50-140	27-NOV-19
Anthracene			97.3		%		50-140	27-NOV-19
Benzo(a)anthracene			99.0		%		50-140	27-NOV-19
Benzo(a)pyrene			90.8		%		50-140	27-NOV-19
Benzo(b)fluoranthene			88.2		%		50-140	27-NOV-19
Benzo(g,h,i)perylene			94.8		%		50-140	27-NOV-19
Benzo(k)fluoranthene			91.8		%		50-140	27-NOV-19
Chrysene			96.3		%		50-140	27-NOV-19
Dibenzo(ah)anthracene			89.9		%		50-140	27-NOV-19
Fluoranthene			97.0		%		50-140	27-NOV-19
Fluorene			94.2		%		50-140	27-NOV-19
Indeno(1,2,3-cd)pyrene			99.8		%		50-140	27-NOV-19
Naphthalene			83.0		%		50-140	27-NOV-19
Phenanthrene			98.6		%		50-140	27-NOV-19
Pyrene			97.8		%		50-140	27-NOV-19
WG3227562-1 MB 1-Methylnaphthalene			<0.020		ug/L		0.02	27-NOV-19
2-Methylnaphthalene			<0.020		ug/L		0.02	27-NOV-19
Acenaphthene			<0.020		ug/L		0.02	27-NOV-19
Acenaphthylene			<0.020		ug/L		0.02	27-NOV-19
Anthracene			<0.020		ug/L		0.02	27-NOV-19
Benzo(a)anthracene			<0.020		ug/L		0.02	27-NOV-19
Benzo(a)pyrene			<0.010		ug/L		0.01	27-NOV-19
Benzo(b)fluoranthene			<0.020		ug/L		0.02	27-NOV-19
Benzo(g,h,i)perylene			<0.020		ug/L		0.02	27-NOV-19
Benzo(k)fluoranthene			<0.020		ug/L		0.02	27-NOV-19
Chrysene			<0.020		ug/L		0.02	27-NOV-19
Dibenzo(ah)anthracene			<0.020		ug/L		0.02	27-NOV-19
Fluoranthene			<0.020		ug/L		0.02	27-NOV-19
Fluorene			<0.020		ug/L		0.02	27-NOV-19
Indeno(1,2,3-cd)pyrene			<0.020		ug/L		0.02	27-NOV-19
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TERRAPROBE-BRAMPTON Client:

11 Indell Lane

Brampton ON L6T 3Y3

Kossay Makhzoumi Contact:

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Water							
Batch R492841 WG3227562-1 MB Naphthalene	4		.0.050		ua/l		0.05	27 1101/ 52
•			<0.050		ug/L		0.05	27-NOV-19
Phenanthrene			<0.020		ug/L		0.02	27-NOV-19
Pyrene			<0.020		ug/L		0.02	27-NOV-19
Surrogate: d8-Naphth			90.1		%		60-140	27-NOV-19
Surrogate: d10-Phena			97.9		%		60-140	27-NOV-19
Surrogate: d12-Chryse			93.2		%		60-140	27-NOV-19
Surrogate: d10-Acena	phthene		95.3		%		60-140	27-NOV-19
PCB-511-WT	Water							
Batch R492524								
WG3227114-2 LCS Aroclor 1242			99.3		%		60-140	26-NOV-19
Aroclor 1248			98.3		%		60-140	26-NOV-19
Aroclor 1254			111.0		%		60-140	26-NOV-19
Aroclor 1260			110.6		%		60-140	26-NOV-19
WG3227114-1 MB							00 140	201101 10
Aroclor 1242			<0.020		ug/L		0.02	26-NOV-19
Aroclor 1248			<0.020		ug/L		0.02	26-NOV-19
Aroclor 1254			<0.020		ug/L		0.02	26-NOV-19
Aroclor 1260			<0.020		ug/L		0.02	26-NOV-19
Surrogate: Decachloro	obiphenyl		80.1		%		50-150	26-NOV-19
Surrogate: Tetrachloro	o-m-xylene		78.9		%		50-150	26-NOV-19
VOC-511-HS-WT	Water							
Batch R492760	2							
WG3229973-4 DUP		WG3229973						
1,1,1,2-Tetrachloroeth		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,1,2,2-Tetrachloroeth	ane	<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,1,1-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,1,2-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,1-Dichloroethane		<0.50	< 0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,1-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,2-Dibromoethane		<0.20	<0.20	RPD-NA	ug/L	N/A	30	28-NOV-19
1,2-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,2-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,2-Dichloropropane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4927602								
WG3229973-4 DUP		WG3229973		555 14	/1	. 1/0	00	
1,3-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,4-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Acetone		<30	<30	RPD-NA	ug/L	N/A	30	28-NOV-19
Benzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Bromodichloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	28-NOV-19
Bromoform		<5.0	<5.0	RPD-NA	ug/L	N/A	30	28-NOV-19
Bromomethane		<0.50	< 0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Carbon tetrachloride		<0.20	<0.20	RPD-NA	ug/L	N/A	30	28-NOV-19
Chlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Chloroform		<1.0	<1.0	RPD-NA	ug/L	N/A	30	28-NOV-19
cis-1,2-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
cis-1,3-Dichloropropene		<0.30	< 0.30	RPD-NA	ug/L	N/A	30	28-NOV-19
Dibromochloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	28-NOV-19
Dichlorodifluoromethane)	<2.0	<2.0	RPD-NA	ug/L	N/A	30	28-NOV-19
Ethylbenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
n-Hexane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
m+p-Xylenes		<0.40	<0.40	RPD-NA	ug/L	N/A	30	28-NOV-19
Methyl Ethyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	28-NOV-19
Methyl Isobutyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	28-NOV-19
Methylene Chloride		<5.0	<5.0	RPD-NA	ug/L	N/A	30	28-NOV-19
MTBE		<2.0	<2.0	RPD-NA	ug/L	N/A	30	28-NOV-19
o-Xylene		<0.30	< 0.30	RPD-NA	ug/L	N/A	30	28-NOV-19
Styrene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Tetrachloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Toluene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
trans-1,2-Dichloroethylei	ne	<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
trans-1,3-Dichloroproper	ne	<0.30	< 0.30	RPD-NA	ug/L	N/A	30	28-NOV-19
Trichloroethylene		0.83	0.82		ug/L	1.2	30	28-NOV-19
Trichlorofluoromethane		<5.0	<5.0	RPD-NA	ug/L	N/A	30	28-NOV-19
Vinyl chloride		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
WG3229973-1 LCS								
1,1,1,2-Tetrachloroethar	ne		91.9		%		70-130	28-NOV-19
1,1,2,2-Tetrachloroethar	ne		91.6		%		70-130	28-NOV-19



Workorder: L2386649 Report Date: 29-NOV-19 Page 7 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4927602								
WG3229973-1 LCS			05.0		0/		70 / 60	aa 11014 : -
1,1,1-Trichloroethane			95.8		%		70-130	28-NOV-19
1,1,2-Trichloroethane			92.6		%		70-130	28-NOV-19
1,1-Dichloroethane			95.9		%		70-130	28-NOV-19
1,1-Dichloroethylene			92.5		%		70-130	28-NOV-19
1,2-Dibromoethane			92.5		%		70-130	28-NOV-19
1,2-Dichlorobenzene			87.7		%		70-130	28-NOV-19
1,2-Dichloroethane			97.2		%		70-130	28-NOV-19
1,2-Dichloropropane			100.4		%		70-130	28-NOV-19
1,3-Dichlorobenzene			87.2		%		70-130	28-NOV-19
1,4-Dichlorobenzene			86.5		%		70-130	28-NOV-19
Acetone			99.1		%		60-140	28-NOV-19
Benzene			100.4		%		70-130	28-NOV-19
Bromodichloromethane			97.9		%		70-130	28-NOV-19
Bromoform			91.9		%		70-130	28-NOV-19
Bromomethane			85.9		%		60-140	28-NOV-19
Carbon tetrachloride			94.9		%		70-130	28-NOV-19
Chlorobenzene			90.8		%		70-130	28-NOV-19
Chloroform			98.1		%		70-130	28-NOV-19
cis-1,2-Dichloroethylene	e		95.3		%		70-130	28-NOV-19
cis-1,3-Dichloropropene	9		98.1		%		70-130	28-NOV-19
Dibromochloromethane			90.8		%		70-130	28-NOV-19
Dichlorodifluoromethan	е		80.2		%		50-140	28-NOV-19
Ethylbenzene			90.3		%		70-130	28-NOV-19
n-Hexane			89.6		%		70-130	28-NOV-19
m+p-Xylenes			89.8		%		70-130	28-NOV-19
Methyl Ethyl Ketone			94.2		%		60-140	28-NOV-19
Methyl Isobutyl Ketone			89.5		%		60-140	28-NOV-19
Methylene Chloride			96.6		%		70-130	28-NOV-19
MTBE			109.2		%		70-130	28-NOV-19
o-Xylene			90.4		%		70-130	28-NOV-19
Styrene			90.3		%		70-130	28-NOV-19
Tetrachloroethylene			88.6		%		70-130	28-NOV-19
Toluene			92.0		%		70-130	28-NOV-19
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Workorder: L2386649 Report Date: 29-NOV-19 Page 8 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4927602	!							
WG3229973-1 LCS trans-1,2-Dichloroethyle			00.0		0/		70.400	
•			93.2		%		70-130	28-NOV-19
trans-1,3-Dichloroprope	ene		92.2		%		70-130	28-NOV-19
Trichloroethylene			95.6		%		70-130	28-NOV-19
Trichlorofluoromethane	•		92.4		%		60-140	28-NOV-19
Vinyl chloride			102.8		%		60-140	28-NOV-19
WG3229973-2 MB 1,1,1,2-Tetrachloroetha	ine		<0.50		ug/L		0.5	28-NOV-19
1,1,2,2-Tetrachloroetha			<0.50		ug/L		0.5	28-NOV-19
1,1,1-Trichloroethane			<0.50		ug/L		0.5	28-NOV-19
1,1,2-Trichloroethane			<0.50		ug/L		0.5	28-NOV-19
1,1-Dichloroethane			<0.50		ug/L		0.5	28-NOV-19
1,1-Dichloroethylene			<0.50		ug/L		0.5	28-NOV-19
1,2-Dibromoethane			<0.20		ug/L		0.2	28-NOV-19
1,2-Dichlorobenzene			<0.50		ug/L		0.5	28-NOV-19
1,2-Dichloroethane			<0.50		ug/L		0.5	28-NOV-19
1,2-Dichloropropane			<0.50		ug/L		0.5	28-NOV-19
1,3-Dichlorobenzene			<0.50		ug/L		0.5	28-NOV-19
1,4-Dichlorobenzene			<0.50		ug/L		0.5	28-NOV-19
Acetone			<30		ug/L		30	28-NOV-19
Benzene			<0.50		ug/L		0.5	28-NOV-19
Bromodichloromethane	•		<2.0		ug/L		2	28-NOV-19
Bromoform			<5.0		ug/L		5	28-NOV-19
Bromomethane			<0.50		ug/L		0.5	28-NOV-19
Carbon tetrachloride			<0.20		ug/L		0.2	28-NOV-19
Chlorobenzene			<0.50		ug/L		0.5	28-NOV-19
Chloroform			<1.0		ug/L		1	28-NOV-19
cis-1,2-Dichloroethylen	е		<0.50		ug/L		0.5	28-NOV-19
cis-1,3-Dichloropropend	Э		< 0.30		ug/L		0.3	28-NOV-19
Dibromochloromethane)		<2.0		ug/L		2	28-NOV-19
Dichlorodifluoromethan	е		<2.0		ug/L		2	28-NOV-19
Ethylbenzene			<0.50		ug/L		0.5	28-NOV-19
n-Hexane			<0.50		ug/L		0.5	28-NOV-19
m+p-Xylenes			<0.40		ug/L		0.4	28-NOV-19
Methyl Ethyl Ketone			<20		ug/L		20	28-NOV-19



Workorder: L2386649 Report Date: 29-NOV-19 Page 9 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4927602	2							
WG3229973-2 MB Methyl Isobutyl Ketone			<20		ug/L		20	20 NOV 40
Methylene Chloride			<5.0		ug/L		5	28-NOV-19 28-NOV-19
MTBE			<2.0		ug/L		2	28-NOV-19 28-NOV-19
o-Xylene			<0.30		ug/L		0.3	28-NOV-19 28-NOV-19
Styrene			<0.50		ug/L		0.5	28-NOV-19 28-NOV-19
Tetrachloroethylene			<0.50		ug/L		0.5	
Toluene			<0.50		ug/L		0.5	28-NOV-19
trans-1,2-Dichloroethyl	ono		<0.50		ug/L		0.5	28-NOV-19
trans-1,3-Dichloroprop			<0.30		ug/L		0.3	28-NOV-19 28-NOV-19
Trichloroethylene	CITC		<0.50		ug/L		0.5	
Trichlorofluoromethane	2		<5.0		ug/L		5	28-NOV-19
Vinyl chloride	-		<0.50		ug/L		0.5	28-NOV-19
Surrogate: 1,4-Difluoro	henzene		96.6		%		70-130	28-NOV-19 28-NOV-19
Surrogate: 4-Bromoflu			93.1		%		70-130	
WG3229973-5 MS	Olobelizelie	WG3229973-3			76		70-130	28-NOV-19
1,1,1,2-Tetrachloroeth	ane	WG3229973-3	91.8		%		50-140	28-NOV-19
1,1,2,2-Tetrachloroetha			82.3		%		50-140	28-NOV-19
1,1,1-Trichloroethane			99.0		%		50-140	28-NOV-19
1,1,2-Trichloroethane			88.0		%		50-140	28-NOV-19
1,1-Dichloroethane			100.5		%		50-140	28-NOV-19
1,1-Dichloroethylene			94.4		%		50-140	28-NOV-19
1,2-Dibromoethane			85.8		%		50-140	28-NOV-19
1,2-Dichlorobenzene			88.0		%		50-140	28-NOV-19
1,2-Dichloroethane			92.3		%		50-140	28-NOV-19
1,2-Dichloropropane			98.1		%		50-140	28-NOV-19
1,3-Dichlorobenzene			90.0		%		50-140	28-NOV-19
1,4-Dichlorobenzene			88.3		%		50-140	28-NOV-19
Acetone			92.8		%		50-140	28-NOV-19
Benzene			99.98		%		50-140	28-NOV-19
Bromodichloromethane	е		95.7		%		50-140	28-NOV-19
Bromoform			85.1		%		50-140	28-NOV-19
Bromomethane			80.1		%		50-140	28-NOV-19
Carbon tetrachloride			99.9		%		50-140	28-NOV-19
Chlorobenzene			90.7		%		50-140	28-NOV-19



Workorder: L2386649 Report Date: 29-NOV-19 Page 10 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4927602								
WG3229973-5 MS		WG3229973-3			0.4			
Chloroform			98.3		%		50-140	28-NOV-19
cis-1,2-Dichloroethylene			94.5		%		50-140	28-NOV-19
cis-1,3-Dichloropropene			90.6		%		50-140	28-NOV-19
Dibromochloromethane			87.1		%		50-140	28-NOV-19
Dichlorodifluoromethane)		79.2		%		50-140	28-NOV-19
Ethylbenzene			93.6		%		50-140	28-NOV-19
n-Hexane			91.9		%		50-140	28-NOV-19
m+p-Xylenes			92.6		%		50-140	28-NOV-19
Methyl Ethyl Ketone			75.0		%		50-140	28-NOV-19
Methyl Isobutyl Ketone			76.4		%		50-140	28-NOV-19
Methylene Chloride			94.0		%		50-140	28-NOV-19
MTBE			109.1		%		50-140	28-NOV-19
o-Xylene			92.2		%		50-140	28-NOV-19
Styrene			88.7		%		50-140	28-NOV-19
Tetrachloroethylene			92.9		%		50-140	28-NOV-19
Toluene			94.2		%		50-140	28-NOV-19
trans-1,2-Dichloroethyle	ne		93.6		%		50-140	28-NOV-19
trans-1,3-Dichloroprope	ne		83.4		%		50-140	28-NOV-19
Trichloroethylene			98.1		%		50-140	28-NOV-19
Trichlorofluoromethane			95.2		%		50-140	28-NOV-19
Vinyl chloride			101.7		%		50-140	28-NOV-19

Workorder: L2386649 Report Date: 29-NOV-19

Client: TERRAPROBE-BRAMPTON Page 11 of 11

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

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
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
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.

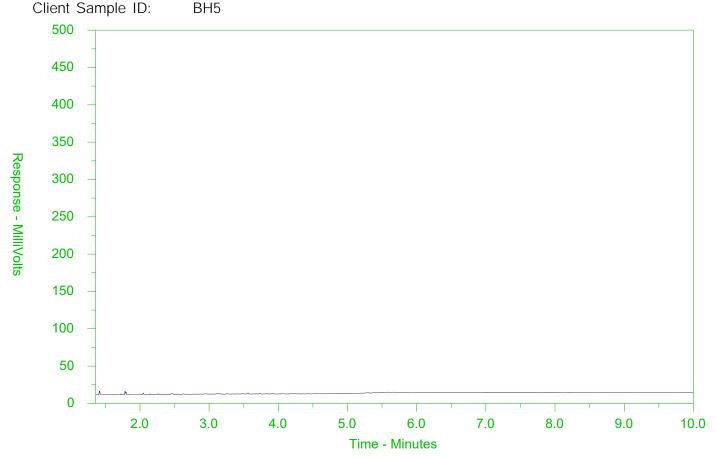
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined data quality objectives to provide 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: L2386649-1



← -F2-	→←	_F3 → F4-	→	
nC10	nC16	nC34	nC50	
174°C	287°C	481°C	575°C	
346°F	549°F	898°F	1067°F	
Gasolin	ie →	← Mo	tor 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.

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Chain of Custody (COC) / Analytical **Request Form**

Canada Toll Free: 1 800 668 9878

L2386649-COFC

COC Number: 15 -

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www.alsglobal.com Contact and company name below will appear on the final report Report Format / Distribution Select Service Level Below - Please confirm all E&P TATs with your AM - surcharges will apply Report To Terraprobe Select Report Format: PDF EXCEL EDD (DIGITAL) Standard TAT if received by 3 pm - business days - no surcharges apply Company: Regular [R] Kossav Makhzoumi Contact: 4 day [P4] 1 Business day [E1] Phone: 905-796-2650 ✓ Compare Results to Criteria on Report - provide details below if box checked. 3 day [P3] Same Day, Weekend or ✓ EMAIL ☐ MAIL ☐ FAX Select Distribution: П Company address below will appear on the final report 2 day [P2] Statutory holiday [E0] Email 1 or Fax kmakhzoumi@terraprobe.ca Date and Time Required for all E&P TATs: 11 Indell Lane Street: Email 2 For tests that can not be performed according to the service level selected, you will be contacted. City/Province: Brampton L6T 3Y3 Email 3 **Analysis Request** Postal Code: ☐ YES ☑ NO Invoice Distribution Same as Report To Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below Invoice To ☐ YES ☑ NO Copy of Invoice with Report Email 1 or Fax Irossi@terraprobe.ca Company: Terraprobe Email 2 Contact: Lorena Rossi **Number of Containers** Project Information Oil and Gas Required Fields (client use) AFE/Cost Center ALS Account # / Quote #: Q62481 Job #: 1-19-0603-42 Maior/Minor Code: Routing Code: PO / AFE: Requisitioner: yride Forming Metals SD Location: ALS Contact: ALS Lab Work Order # (lab use only) Sampler: Date Sample Identification and/or Coordinates Time ALS Sample # Sample Type (lab use only) (This description will appear on the report) (dd-mmm-yy) (hh:mm) X BHS GW 11 711-19 SAMPLE CONDITION AS RECEIVED (lab use only) Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below Drinking Water (DW) Samples¹ (client use) (electronic COC only) Frozen SIF Observations No Are samples taken from a Regulated DW System? Ice Packs Ice Cubes Custody seal intact Yes П YES NO Cooling Initiated MECP TO PPI Are samples for human drinking water use? INIITIAL COOLER TEMPERATURES °C FINAL COOLER TEMPERATURES °C ☐ YES ☐ NO FINAL SHIPMENT RECEPTION (lab use only) SHIPMENT RELEASE (client use) INITIAL SHIPMENT RECEPTION (lab use only) Received by Released by: Kossay Makhzoumi Time: Received by:/ NON 32/10

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION



TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 22-NOV-19

Report Date: 29-NOV-19 13:38 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2386645
Project P.O. #: NOT SUBMITTED
Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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ADDRESS: 5730 Coopers Avenue, Unit #26 , Mississauga, ON L4Z 2E9 Canada | Phone: +1 905 507 6910 | Fax: +1 905 507 6927 ALS CANADA LTD Part of the ALS Group An ALS Limited Company





L2386645 CONT'D....

Job Reference: 1-19-0603-42

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29-NOV-19 13:38 (MT)

Summary of Guideline Exceedances

Guideline						
ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit
Ontario Reg	gulation 153/0	04 - April 15, 2011 Standards - T3-Non-Potable Gr	ound Water-All Types of Prope	erty Uses (Coarse)		
L2386645-1	BH6	Volatile Organic Compounds	cis-1,2-Dichloroethylene	4.61	1.6	ug/L
			Trichloroethylene	23.9	1.6	ug/L
Ontario Reg	gulation 153/0	04 - April 15, 2011 Standards - T3-Non-Potable Gr	ound Water-All Types of Prope	erty Uses (Fine)		
L2386645-1	BH6	Volatile Organic Compounds	Trichloroethylene	23.9	17	ug/L

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2386645 CONT'D....

Job Reference: 1-19-0603-42

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Dissolved Metals - WATER

		Lab ID Sample Date Sample ID		
Analyte	Unit	Guide #1	Limits #2	
Dissolved Metals Filtration Location		-	-	FIELD
Antimony (Sb)-Dissolved	ug/L	20000	20000	<1.0 DLHC
Arsenic (As)-Dissolved	ug/L	1900	1900	<1.0 DLHC
Barium (Ba)-Dissolved	ug/L	29000	29000	44.3 DLHC
Beryllium (Be)-Dissolved	ug/L	67	67	<1.0 DLHC
Boron (B)-Dissolved	ug/L	45000	45000	190 DLHC
Cadmium (Cd)-Dissolved	ug/L	2.7	2.7	<0.050 ^{DLHC}
Chromium (Cr)-Dissolved	ug/L	810	810	<5.0 DLHC
Cobalt (Co)-Dissolved	ug/L	66	66	<1.0 DLHC
Copper (Cu)-Dissolved	ug/L	87	87	<2.0 DLHC
Lead (Pb)-Dissolved	ug/L	25	25	<0.50 DLHC
Molybdenum (Mo)-Dissolved	ug/L	9200	9200	2.42 DLHC
Nickel (Ni)-Dissolved	ug/L	490	490	<5.0 DLHC
Selenium (Se)-Dissolved	ug/L	63	63	<0.50 DLHC
Silver (Ag)-Dissolved	ug/L	1.5	1.5	<0.50 DLHC
Sodium (Na)-Dissolved	ug/L	2300000	2300000	696000 ^{DLHC}
Thallium (TI)-Dissolved	ug/L	510	510	<0.10 DLHC
Uranium (U)-Dissolved	ug/L	420	420	1.80 DLHC
Vanadium (V)-Dissolved	ug/L	250	250	<5.0 DLHC
Zinc (Zn)-Dissolved	ug/L	1100	1100	<10 DLHC

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2386645 CONT'D....

Job Reference: 1-19-0603-42

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Volatile Organic Compounds - WATER

volatile Organic Compound	IS - WAIER			
			.ab ID	L2386645-1
		Sample		20-NOV-19
		Sam	ple ID	BH6
		Guide	Limits	
Analyte	Unit	#1	#2	
Acetone	ug/L	130000	130000	<30
Benzene	ug/L	44	430	<0.50
Bromodichloromethane	ug/L	85000	85000	<2.0
Bromoform	ug/L	380	770	<5.0
Bromomethane	ug/L	5.6	56	<0.50
Carbon tetrachloride	ug/L	0.79	8.4	<0.20
Chlorobenzene	ug/L	630	630	<0.50
Dibromochloromethane	ug/L	82000	82000	<2.0
Chloroform	ug/L	2.4	22	<1.0
1,2-Dibromoethane	ug/L	0.25	0.83	<0.20
1,2-Dichlorobenzene	ug/L	4600	9600	<0.50
1,3-Dichlorobenzene	ug/L	9600	9600	<0.50
1,4-Dichlorobenzene	ug/L	8	67	<0.50
Dichlorodifluoromethane	ug/L	4400	4400	<2.0
1,1-Dichloroethane	ug/L	320	3100	6.27
1,2-Dichloroethane	ug/L	1.6	12	<0.50
1,1-Dichloroethylene	ug/L	1.6	17	0.57
cis-1,2-Dichloroethylene	ug/L	1.6	17	4.61
trans-1,2-Dichloroethylene	ug/L	1.6	17	<0.50
Methylene Chloride	ug/L	610	5500	<5.0
1,2-Dichloropropane	ug/L	16	140	<0.50
cis-1,3-Dichloropropene	ug/L	-	-	< 0.30
trans-1,3-Dichloropropene	ug/L	-	-	<0.30
1,3-Dichloropropene (cis & trans)	ug/L	5.2	45	<0.50
Ethylbenzene	ug/L	2300	2300	<0.50
n-Hexane	ug/L	51	520	<0.50
Methyl Ethyl Ketone	ug/L	470000	1500000	<20
Methyl Isobutyl Ketone	ug/L	140000	580000	<20
MTBE	ug/L	190	1400	<2.0
Styrene	ug/L	1300	9100	<0.50

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2386645 CONT'D....

Job Reference: 1-19-0603-42

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Volatile Organic Compounds - WATER

voiatile Organic Compound	S WAILK	-	_ab ID	L2386645-1
				20-NOV-19
		Sample	ple ID	20-NOV-19 BH6
		Saiii	pie ib	БПО
		Guide	Limits	
Analyte	Unit	#1	#2	
1,1,1,2-Tetrachloroethane	ug/L	3.3	28	<0.50
1,1,2,2-Tetrachloroethane	ug/L	3.2	15	<0.50
Tetrachloroethylene	ug/L	1.6	17	<0.50
Toluene	ug/L	18000	18000	<0.50
1,1,1-Trichloroethane	ug/L	640	6700	<0.50
1,1,2-Trichloroethane	ug/L	4.7	30	<0.50
Trichloroethylene	ug/L	1.6	17	23.9
Trichlorofluoromethane	ug/L	2500	2500	<5.0
Vinyl chloride	ug/L	0.5	1.7	<0.50
o-Xylene	ug/L	-	-	<0.30
m+p-Xylenes	ug/L	-	-	<0.40
Xylenes (Total)	ug/L	4200	4200	<0.50
Surrogate: 4-Bromofluorobenzene	%	-	-	94.2
Surrogate: 1,4-Difluorobenzene	%	-	-	95.5

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2386645 CONT'D....

Job Reference: 1-19-0603-42

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Hydrocarbons - WATER

		ı	Lab ID	L2386645-1
				20-NOV-19
		Sample		
		Sam	ple ID	BH6
		Guide	Limits	
Analyte	Unit	#1	#2	
F1 (C6-C10)	ug/L	750	750	<25
F1-BTEX	ug/L	750	750	<25
F2 (C10-C16)	ug/L	150	150	<100
F2-Naphth	ug/L	-	-	<100
F3 (C16-C34)	ug/L	500	500	<250
F3-PAH	ug/L	-	-	<250
F4 (C34-C50)	ug/L	500	500	<250
Total Hydrocarbons (C6-C50)	ug/L	-	-	<370
Chrom. to baseline at nC50		-	-	YES
Surrogate: 2-Bromobenzotrifluoride	%	-	-	75.5
Surrogate: 3,4-Dichlorotoluene	%	-	-	74.6

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2386645 CONT'D....

Job Reference: 1-19-0603-42

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Polycyclic Aromatic Hydrocarbons - WATER

 Lab ID
 L2386645-1

 Sample Date
 20-NOV-19

 Sample ID
 BH6

		Guide	Limits	
Analyte	Unit	#1	#2	
Acenaphthene	ug/L	600	1700	<0.020
Acenaphthylene	ug/L	1.8	1.8	<0.020
Anthracene	ug/L	2.4	2.4	<0.020
Benzo(a)anthracene	ug/L	4.7	4.7	<0.020
Benzo(a)pyrene	ug/L	0.81	0.81	<0.010
Benzo(b)fluoranthene	ug/L	0.75	0.75	<0.020
Benzo(g,h,i)perylene	ug/L	0.2	0.2	<0.020
Benzo(k)fluoranthene	ug/L	0.4	0.4	<0.020
Chrysene	ug/L	1	1	<0.020
Dibenzo(ah)anthracene	ug/L	0.52	0.52	<0.020
Fluoranthene	ug/L	130	130	<0.020
Fluorene	ug/L	400	400	<0.020
Indeno(1,2,3-cd)pyrene	ug/L	0.2	0.2	<0.020
1+2-Methylnaphthalenes	ug/L	1800	1800	<0.028
1-Methylnaphthalene	ug/L	1800	1800	<0.020
2-Methylnaphthalene	ug/L	1800	1800	<0.020
Naphthalene	ug/L	1400	6400	< 0.050
Phenanthrene	ug/L	580	580	<0.020
Pyrene	ug/L	68	68	<0.020
Surrogate: d10-Acenaphthene	%	-	-	92.2
Surrogate: d12-Chrysene	%	-	-	94.6
Surrogate: d8-Naphthalene	%	-	-	90.1
Surrogate: d10-Phenanthrene	%	-	-	97.3

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2386645 CONT'D....

Job Reference: 1-19-0603-42

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Polychlorinated Biphenyls - WATER

· oryonioninated Expirellyie	***			
		ı	Lab ID	L2386645-1
		Sample	e Date	20-NOV-19
		Sam	ple ID	BH6
Analyte	Unit	Guide #1	Limits #2	
Aroclor 1242	ug/L	-	-	<0.040 ^{DLM}
Aroclor 1248	ug/L	-	-	<0.040 ^{DLM}
Aroclor 1254	ug/L	-	-	<0.040 ^{DLM}
Aroclor 1260	ug/L	-	-	<0.040 ^{DLM}
Surrogate: Decachlorobiphenyl	%	-	-	46.5 RRR
Total PCBs	ug/L	7.8	15	< 0.080 DLM
Surrogate: Tetrachloro-m-xylene	%	-	-	67.9

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.

L2386645 CONT'D....
Job Reference: 1-19-0603-42
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Additional Comments for Sample Listed:

Samplenum	Matrix	Report Remarks	Sample Comments
L2386645-1	Water	Note: RRR: Surrogate recovery marginally below ALS DOO. DI 's raised 2x.	

Qualifiers for Individual Parameters Listed:

Qualifier	Description
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).
RRR	Refer to Report Remarks for issues regarding this analysis

Methods Listed (if applicable):								
ALS Test Code	Matrix	Test Description	Method Reference**					
F1-F4-511-CALC-WT	Water	F1-F4 Hydrocarbon Calculated Parameters	CCME CWS-PHC, Pub #1310, Dec 2001-L					

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

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 Water F1-O.Reg 153/04 (July 2011) E3398/CCME TIER 1-HS

Fraction F1 is determined by 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 Water F2-F4-O.Reg 153/04 (July 2011) EPA 3511/CCME Tier 1

Petroleum Hydrocarbons (F2-F4 fractions) are extracted from water using a hexane micro-extraction technique. Instrumental analysis is by GC-FID, as per the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Tier 1 Method, CCME, 2001.

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-D-UG/L-MS-WT Water Diss. Metals in Water by ICPMS (ug/L) EPA 200.8

The metal constituents of a non-acidified sample that pass through a membrane filter prior to ICP/MS analysis.

L2386645 CONT'D.... Job Reference: 1-19-0603-42 PAGE 10 of 11 29-NOV-19 13:38 (MT)

Methods Listed (if applicable):

ALS Test Code Matrix **Test Description** Method Reference**

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 Water

PAH-Calculated Parameters

SW846 8270

PAH-511-WT

Water

PAH-O. Reg 153/04 (July 2011)

SW846 3510/8270

Aqueous samples, fortified with surrogates, are extracted using liquid/liquid extraction technique. The sample extracts are concentrated and then analyzed using GC/MS. Results for benzo(b) fluoranthene may include contributions from benzo(i)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

Water

PCB-O. Reg 153/04 (July 2011)

SW846 3510/8082

Aqueous samples are extracted, then concentrated, reconstituted, and analyzed by 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).

VOC-1,3-DCP-CALC-WT

Water

Regulation 153 VOCs

SW8260B/SW8270C

VOC-511-HS-WT

Water

VOC by GCMS HS O.Reg 153/04 (July SW846 8260

2011)

Liquid samples are analyzed by headspace GC/MSD.

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 Water

Sum of Xylene Isomer Concentrations CALCULATION

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

**ALS test methods may incorporate modification:	s from spe	ecified reference	methods to im	prove performance.
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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

WT

ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

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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.



Workorder: L2386645 Report Date: 29-NOV-19 Page 1 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	N	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT	,	Water							
	27602 DUP		WG3229973-3 <25	<25	RPD-NA	ug/L	N/A	30	28-NOV-19
WG3229973-1 F1 (C6-C10)	LCS			107.4		%		80-120	28-NOV-19
WG3229973-2 F1 (C6-C10)	MB			<25		ug/L		25	28-NOV-19
Surrogate: 3,4-Did	chlorotolu	uene		97.6		%		60-140	28-NOV-19
WG3229973-5 F1 (C6-C10)	MS		WG3229973-3	76.5		%		60-140	28-NOV-19
F2-F4-511-WT	1	Water							
-	26959								
WG3227562-2 F2 (C10-C16)	LCS			84.9		%		70-130	26-NOV-19
F3 (C16-C34)				86.9		%		70-130	26-NOV-19
F4 (C34-C50)				88.3		%		70-130	26-NOV-19
WG3227562-1 F2 (C10-C16)	МВ			<100		ug/L		100	26-NOV-19
F3 (C16-C34)				<250		ug/L		250	26-NOV-19 26-NOV-19
F4 (C34-C50)				<250		ug/L		250	26-NOV-19 26-NOV-19
Surrogate: 2-Bron	nobenzot	trifluoride		79.8		%		60-140	26-NOV-19 26-NOV-19
MET-D-UG/L-MS-WT		Water							
	23048								
	DUP		WG3227021-3						
Antimony (Sb)-Dis	ssolved		<0.10	<0.10	RPD-NA	ug/L	N/A	20	25-NOV-19
Arsenic (As)-Disse	olved		0.10	0.11		ug/L	2.9	20	25-NOV-19
Barium (Ba)-Disso	olved		59.5	59.5		ug/L	0.1	20	25-NOV-19
Beryllium (Be)-Dis	ssolved		<0.10	<0.10	RPD-NA	ug/L	N/A	20	25-NOV-19
Boron (B)-Dissolv	/ed		<10	<10	RPD-NA	ug/L	N/A	20	25-NOV-19
Cadmium (Cd)-Di	issolved		<0.0050	<0.0050	RPD-NA	ug/L	N/A	20	25-NOV-19
Chromium (Cr)-Di	issolved		1.28	1.25		ug/L	2.9	20	25-NOV-19
Cobalt (Co)-Disso	olved		<0.10	<0.10	RPD-NA	ug/L	N/A	20	25-NOV-19
Copper (Cu)-Diss	solved		1.03	1.02		ug/L	0.4	20	25-NOV-19
Lead (Pb)-Dissolv	ved		<0.050	<0.050	RPD-NA	ug/L	N/A	20	25-NOV-19
Molybdenum (Mo))-Dissolv	ed	0.172	0.163		ug/L	5.3	20	25-NOV-19
Nickel (Ni)-Dissol	ved		<0.50	<0.50	RPD-NA	ug/L	N/A	20	25-NOV-19



Workorder: L2386645 Report Date: 29-NOV-19 Page 2 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R4923048	3							
WG3227021-4 DUP		WG3227021-3						
Selenium (Se)-Dissolve	ed	0.104	0.101		ug/L	3.0	20	25-NOV-19
Silver (Ag)-Dissolved		<0.050	<0.050	RPD-NA	ug/L	N/A	20	25-NOV-19
Sodium (Na)-Dissolved	i	2030	2020		ug/L	0.6	20	25-NOV-19
Thallium (TI)-Dissolved	I	<0.010	<0.010	RPD-NA	ug/L	N/A	20	25-NOV-19
Uranium (U)-Dissolved		0.356	0.353		ug/L	0.9	20	25-NOV-19
Vanadium (V)-Dissolve	ed	1.00	1.01		ug/L	1.3	20	25-NOV-19
Zinc (Zn)-Dissolved		2.4	2.2		ug/L	5.5	20	25-NOV-19
WG3227021-2 LCS Antimony (Sb)-Dissolve	ed		99.6		%		80-120	25-NOV-19
Arsenic (As)-Dissolved			99.4		%		80-120	25-NOV-19
Barium (Ba)-Dissolved			102.2		%		80-120	25-NOV-19
Beryllium (Be)-Dissolve	ed		101.2		%		80-120	25-NOV-19
Boron (B)-Dissolved			99.3		%		80-120	25-NOV-19
Cadmium (Cd)-Dissolv	ed		100.3		%		80-120	25-NOV-19
Chromium (Cr)-Dissolv	red		100.4		%		80-120	25-NOV-19
Cobalt (Co)-Dissolved			99.9		%		80-120	25-NOV-19
Copper (Cu)-Dissolved			100.8		%		80-120	25-NOV-19
Lead (Pb)-Dissolved			99.9		%		80-120	25-NOV-19
Molybdenum (Mo)-Diss	solved		104.0		%		80-120	25-NOV-19
Nickel (Ni)-Dissolved			99.6		%		80-120	25-NOV-19
Selenium (Se)-Dissolve	ed		98.1		%		80-120	25-NOV-19
Silver (Ag)-Dissolved			100.4		%		80-120	25-NOV-19
Sodium (Na)-Dissolved	i		101.3		%		80-120	25-NOV-19
Thallium (TI)-Dissolved	I		99.95		%		80-120	25-NOV-19
Uranium (U)-Dissolved			99.1		%		80-120	25-NOV-19
Vanadium (V)-Dissolve	ed		100.8		%		80-120	25-NOV-19
Zinc (Zn)-Dissolved			101.2		%		80-120	25-NOV-19
WG3227021-1 MB Antimony (Sb)-Dissolve	ed		<0.10		ug/L		0.1	25-NOV-19
Arsenic (As)-Dissolved			<0.10		ug/L		0.1	25-NOV-19
Barium (Ba)-Dissolved			<0.10		ug/L		0.1	25-NOV-19
Beryllium (Be)-Dissolve	ed		<0.10		ug/L		0.1	25-NOV-19
Boron (B)-Dissolved			<10		ug/L		10	25-NOV-19
Cadmium (Cd)-Dissolv	ed		<0.0050		ug/L		0.005	25-NOV-19
` '					-			· ·



Workorder: L2386645 Report Date: 29-NOV-19 Page 3 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R4923048								
WG3227021-1 MB	1		0.50				0.5	
Chromium (Cr)-Dissolv	ea		<0.50		ug/L		0.5	25-NOV-19
Cobalt (Co)-Dissolved			<0.10		ug/L		0.1	25-NOV-19
Copper (Cu)-Dissolved			<0.20		ug/L		0.2	25-NOV-19
Lead (Pb)-Dissolved	al cond		<0.050		ug/L		0.05	25-NOV-19
Molybdenum (Mo)-Diss	oivea		<0.050		ug/L		0.05	25-NOV-19
Nickel (Ni)-Dissolved			<0.50		ug/L		0.5	25-NOV-19
Selenium (Se)-Dissolve	₽ d		<0.050		ug/L		0.05	25-NOV-19
Silver (Ag)-Dissolved			<0.050		ug/L		0.05	25-NOV-19
Sodium (Na)-Dissolved			<50		ug/L		50	25-NOV-19
Thallium (TI)-Dissolved			<0.010		ug/L		0.01	25-NOV-19
Uranium (U)-Dissolved			<0.010		ug/L		0.01	25-NOV-19
Vanadium (V)-Dissolve	d		<0.50		ug/L		0.5	25-NOV-19
Zinc (Zn)-Dissolved			<1.0		ug/L		1	25-NOV-19
WG3227021-5 MS Antimony (Sb)-Dissolve	ed	WG3227021-6	102.4		%		70-130	25-NOV-19
Arsenic (As)-Dissolved			108.8		%		70-130	25-NOV-19
Barium (Ba)-Dissolved			N/A	MS-B	%		-	25-NOV-19
Beryllium (Be)-Dissolve	ed		107.9	0 2	%		70-130	25-NOV-19
Boron (B)-Dissolved			99.2		%		70-130	25-NOV-19
Cadmium (Cd)-Dissolve	ed		104.8		%		70-130	25-NOV-19
Chromium (Cr)-Dissolv			99.0		%		70-130	25-NOV-19
Cobalt (Co)-Dissolved			98.0		%		70-130	25-NOV-19
Copper (Cu)-Dissolved			96.1		%		70-130	25-NOV-19
Lead (Pb)-Dissolved			97.5		%		70-130	25-NOV-19
Molybdenum (Mo)-Diss	olved		105.5		%		70-130	25-NOV-19
Nickel (Ni)-Dissolved			95.6		%		70-130	25-NOV-19
Selenium (Se)-Dissolve	ed		117.8		%		70-130	25-NOV-19
Silver (Ag)-Dissolved			98.1		%		70-130	25-NOV-19
Sodium (Na)-Dissolved			97.0		%		70-130	25-NOV-19
Thallium (TI)-Dissolved			98.1		%		70-130	25-NOV-19
Uranium (U)-Dissolved			N/A	MS-B	%		-	25-NOV-19 25-NOV-19
Vanadium (V)-Dissolve	d		102.7	5 5	%		70-130	25-NOV-19 25-NOV-19
Zinc (Zn)-Dissolved			105.4		%		70-130	25-NOV-19 25-NOV-19
() 510001100					,,		70-100	20-140 V-13

PAH-511-WT Water



Workorder: L2386645 Report Date: 29-NOV-19 Page 4 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

PAH-S11-WT Water Satch R492841 W63227522 CS Satural W6322752 CS Satural W63227	Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
### Survey	PAH-511-WT	Water							
1-Methy/naphthalene 84.9 % 50.140 27-NOV-19 2-Methy/naphthalene 78.0 % 50.140 27-NOV-19 Acenaphthene 92.7 % 50.140 27-NOV-19 Acenaphthylene 93.6 % 50.140 27-NOV-19 Anthracene 97.3 % 50.140 27-NOV-19 Benzo(a)anthracene 99.0 % 50.140 27-NOV-19 Benzo(a)apyrene 90.8 % 50.140 27-NOV-19 Benzo(b)fluoranthene 88.2 % 50.140 27-NOV-19 Benzo(k)fluoranthene 94.8 % 50.140 27-NOV-19 Benzo(k)fluoranthene 91.8 % 50.140 27-NOV-19 Benzo(k)fluoranthene 91.8 % 50.140 27-NOV-19 Chrysene 95.3 % 50.140 27-NOV-19 Dibenzo(a)fluoranthene 97.0 % 50.140 27-NOV-19 Fluoranthene 97.0 % 50.140 27-NOV-19	Batch R4928414								
2-Methyfnaphthalene 78.0 % \$0.140 27-NOV-19 Acenaphthene 92.77 % \$0.140 27-NOV-19 Acenaphthylene 93.6 % \$0.140 27-NOV-19 Anthracene 97.3 % \$0.140 27-NOV-19 Benzo(a)anthracene 99.0 % \$0.140 27-NOV-19 Benzo(a)pyrene 90.8 % \$0.140 27-NOV-19 Benzo(b)fluoranthene 88.2 % \$0.140 27-NOV-19 Benzo(k)fluoranthene 91.8 % \$0.140 27-NOV-19 Benzo(k)fluoranthene 91.8 % \$0.140 27-NOV-19 Benzo(k)fluoranthene 91.8 % \$0.140 27-NOV-19 Chrysene 98.3 % \$0.140 27-NOV-19 Benzo(k)fluoranthene 99.3 % \$0.140 27-NOV-19 Chrysene 98.3 % \$0.140 27-NOV-19 Piluoranthene 99.6 % \$0.140 27-NOV-19				940		0/.		50.440	07.1101/ 40
Acenaphthene 92.7 % \$0.140 27-NOV-19 Acanaphthylene 93.6 % \$0.140 27-NOV-19 Anthracene 97.3 % \$0.140 27-NOV-19 Benzo(a)anthracene 99.0 % \$0.140 27-NOV-19 Benzo(b)fluoranthene 88.2 % \$0.140 27-NOV-19 Benzo(gh)fiperylene 94.8 % \$0.140 27-NOV-19 Benzo(gh)fluoranthene 91.8 % \$0.140 27-NOV-19 Benzo(k)fluoranthene 91.8 % \$0.140 27-NOV-19 Benzo(k)fluoranthene 91.8 % \$0.140 27-NOV-19 Benzo(a)manthracene 99.3 % \$0.140 27-NOV-19 Dibenzo(ah)anthracene 99.0 % \$0.140 27-NOV-19 Fluoranthene 97.0 % \$0.140 27-NOV-19 Fluoranthene 99.8 % \$0.140 27-NOV-19 Naphthalene 99.8 % \$0.140 27-NOV-19									
Acenaphthylene 93.6 % 50-140 27-NOV-19 Anthracene 97.3 % 50-140 27-NOV-19 Benzo(a)anthracene 99.0 % 50-140 27-NOV-19 Benzo(a)pyrene 90.8 % 50-140 27-NOV-19 Benzo(a)pyrene 90.8 % 50-140 27-NOV-19 Benzo(g,h)perylene 94.8 % 50-140 27-NOV-19 Benzo(g,h,j)perylene 94.8 % 50-140 27-NOV-19 Benzo(g,h,j)perylene 94.8 % 50-140 27-NOV-19 Benzo(k)fluoranthene 91.8 % 50-140 27-NOV-19 Benzo(k)fluoranthene 99.3 % 50-140 27-NOV-19 Benzo(a)mithracene 98.9 % 50-140 27-NOV-19 Fluoranthene 97.0 % 50-140 27-NOV-19 Fluoranthene 97.0 % 50-140 27-NOV-19 Fluorene 94.2 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 98.6 % 50-140 27-NOV-19 Phenanthrene 98.6 % 50-140 27-NOV-19 Phenanthrene 98.6 % 50-140 27-NOV-19 Phenanthrene 98.6 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Acenaphthylaneh 0.020 ug/L 0.02 27-NOV-19 Acenaphthylene 0.020 ug/L 0.02 27-NOV-19 Acenaphthylene 0.020 ug/L 0.02 27-NOV-19 Acenaphthylene 0.020 ug/L 0.02 27-NOV-19 Benzo(a)anthracene 0.020 ug/L 0.02 27-NOV-19 Benzo(a)anthracene 0.020 ug/L 0.02 27-NOV-19 Benzo(a)phryene 0.0010 ug/L 0.02 27-NOV-19 Benzo(a)phryene 0.0020 ug/L 0.02 27-NOV-19 Benzo(a)phryene 0.0020 ug/L 0.02 27-NOV-19 Benzo(b)fluoranthene 0.0020 ug/L 0.02 27-NOV-19 Benzo(a)phryene 0.0020 ug/L 0.02 27-NOV-19 Benzo(b)fluoranthene 0.0020 ug/L 0.02 27-NOV-19 Benzo(k)fluoranthene 0.0020 ug/L 0.02 27-NOV-19									
Anthracene 97.3 % 50-140 27-NOV-19 Benzo(a)anthracene 99.0 % 50-140 27-NOV-19 Benzo(a)pyrene 90.8 % 50-140 27-NOV-19 Benzo(b)fluoranthene 88.2 % 50-140 27-NOV-19 Benzo(b)fluoranthene 88.2 % 50-140 27-NOV-19 Benzo(k)fluoranthene 94.8 % 50-140 27-NOV-19 Benzo(k)fluoranthene 91.8 % 50-140 27-NOV-19 Chrysene 96.3 % 50-140 27-NOV-19 Chrysene 98.9 % 50-140 27-NOV-19 Dibenzo(ah)anthracene 97.0 % 50-140 27-NOV-19 Fluoranthene 97.0 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 90.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 90.6 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 90.6 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 90.6 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 90.0 % 50-140 27-NOV-19 In	·								
Benzo(a)anthracene 99.0									
Benzo(a)pyrene 90.8 % 50-140 27-NOV-19 Benzo(b)fluoranthene 88.2 % 50-140 27-NOV-19 Benzo(s,h)perylene 94.8 % 50-140 27-NOV-19 Benzo(k)fluoranthene 91.8 % 50-140 27-NOV-19 Chrysene 96.3 % 50-140 27-NOV-19 Dibenzo(ah)anthracene 89.9 % 50-140 27-NOV-19 Fluoranthene 97.0 % 50-140 27-NOV-19 Fluoranthene 94.2 % 50-140 27-NOV-19 Indenot(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indenot(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Naphthalene 83.0 % 50-140 27-NOV-19 Phenanthrene 98.6 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 WG3227562-1 MB 1-Methylnaphthalene <0.020									
Benzo(b)fluoranthene 88.2 % 50-140 27-NOV-19 Benzo(g,h,i)perylene 94.8 % 50-140 27-NOV-19 Benzo(k)fluoranthene 91.8 % 50-140 27-NOV-19 Chrysene 96.3 % 50-140 27-NOV-19 Dibenzo(ah)anthracene 89.9 % 50-140 27-NOV-19 Fluoranthene 97.0 % 50-140 27-NOV-19 Fluorene 94.2 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Naphthalene 83.0 % 50-140 27-NOV-19 Naphthalene 98.6 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 WG3227562-1 MB 1 1 4 27-NOV-19 Yes 2-Methylnaphthalene <0.020	` ,								
Benzo(g,h,i)perylene 94.8 % \$0.140 27-NOV-19 Benzo(k)fluoranthene 91.8 % \$0.140 27-NOV-19 Chrysene 96.3 % \$0.140 27-NOV-19 Dibenzo(ah)anthracene 89.9 % \$0.140 27-NOV-19 Fluoranthene 97.0 % \$0.140 27-NOV-19 Fluoranthene 94.2 % \$0.140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % \$0.140 27-NOV-19 Naphthalene 83.0 % \$0.140 27-NOV-19 Phenanthrene 98.6 % \$0.140 27-NOV-19 Pyrene 97.8 % \$0.140 27-NOV-19 WG3227562-1 MB 1 1.02 27-NOV-19 YG3227562-1 MB 1 0.02 27-NOV-19 2-Methylnaphthalene <0.020									
Benzo(k)fluoranthene 91.8 % 50.140 27-NOV-19 Chrysene 96.3 % 50.140 27-NOV-19 Dibenzo(ah)anthracene 89.9 % 50.140 27-NOV-19 Fluoranthene 97.0 % 50.140 27-NOV-19 Fluorene 94.2 % 50.140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50.140 27-NOV-19 Naphthalene 83.0 % 50.140 27-NOV-19 Phenanthrene 98.6 % 50.140 27-NOV-19 Pyrene 97.8 % 50.140 27-NOV-19 Pyrene 97.8 % 50.140 27-NOV-19 WG3227562-1 MB 1-Methylnaphthalene <0.020									
Chrysene 96.3 % 50.140 27-NOV-19 Dibenzo(ah)anthracene 89.9 % 50.140 27-NOV-19 Fluoranthene 97.0 % 50.140 27-NOV-19 Fluorene 94.2 % 50.140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50.140 27-NOV-19 Naphthalene 83.0 % 50.140 27-NOV-19 Phenanthrene 98.6 % 50.140 27-NOV-19 Pyrene 97.8 % 50.140 27-NOV-19 WG3227562-1 MB 1 0.02 27-NOV-19 1-Methylnaphthalene <0.020									
Dibenzo(ah)anthracene 89.9	` ,								
Fluoranthene 97.0 % 50-140 27-NOV-19 Fluorene 94.2 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Naphthalene 83.0 % 50-140 27-NOV-19 Phenanthrene 98.6 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 WG3227562-1 MB * 50-140 27-NOV-19 L-Methylnaphthalene <0.020	•								
Fluorene 94.2 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Naphthalene 83.0 % 50-140 27-NOV-19 Naphthalene 83.0 % 50-140 27-NOV-19 Phenanthrene 98.6 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 Py	, ,								
Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Naphthalene 83.0 % 50-140 27-NOV-19 Phenanthrene 98.6 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 WG3227562-1 MB 1-Methylnaphthalene <0.020									
Naphthalene 83.0 % 50-140 27-NOV-19 Phenanthrene 98.6 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 WG3227562-1 MB MB 1-Methylnaphthalene 0.020 ug/L 0.02 27-NOV-19 2-Methylnaphthalene <0.020									
Phenanthrene 98.6 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 WG3227562-1 MB 1-Methylnaphthalene <0.020									
Pyrene 97.8 % 50-140 27-NOV-19 WG3227562-1 MB 1-Methylnaphthalene <0.020	•								
WG3227562-1 MB 1-Methylnaphthalene <0.020									
1-Methylnaphthalene <0.020	-			97.6		70		50-140	27-NOV-19
2-Methylnaphthalene <0.020				<0.020		ug/L		0.02	27-NOV-19
Acenaphthene <0.020	2-Methylnaphthalene			<0.020				0.02	
Acenaphthylene <0.020	Acenaphthene			<0.020		ug/L		0.02	27-NOV-19
Anthracene <0.020	Acenaphthylene			<0.020				0.02	27-NOV-19
Benzo(a)pyrene <0.010	Anthracene			<0.020				0.02	27-NOV-19
Benzo(a)pyrene <0.010	Benzo(a)anthracene			<0.020		ug/L		0.02	27-NOV-19
Benzo(g,h,i)perylene <0.020	Benzo(a)pyrene			<0.010		ug/L		0.01	
Benzo(g,h,i)perylene <0.020	Benzo(b)fluoranthene			<0.020		ug/L		0.02	27-NOV-19
Benzo(k)fluoranthene <0.020	Benzo(g,h,i)perylene			<0.020				0.02	
Chrysene <0.020 ug/L 0.02 27-NOV-19 Dibenzo(ah)anthracene <0.020				<0.020				0.02	
Dibenzo(ah)anthracene <0.020 ug/L 0.02 27-NOV-19 Fluoranthene <0.020	Chrysene			<0.020				0.02	
Fluoranthene <0.020 ug/L 0.02 27-NOV-19 Fluorene <0.020	Dibenzo(ah)anthracene			<0.020				0.02	
Fluorene <0.020 ug/L 0.02 27-NOV-19	Fluoranthene			<0.020				0.02	
	Fluorene			<0.020				0.02	
	Indeno(1,2,3-cd)pyrene							0.02	



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TERRAPROBE-BRAMPTON Client:

11 Indell Lane

Brampton ON L6T 3Y3

Kossay Makhzoumi Contact:

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Water							
Batch R492841 WG3227562-1 MB Naphthalene	4		.0.050		ua/l		0.05	27 1101/ 52
•			<0.050		ug/L		0.05	27-NOV-19
Phenanthrene			<0.020		ug/L		0.02	27-NOV-19
Pyrene			<0.020		ug/L		0.02	27-NOV-19
Surrogate: d8-Naphth			90.1		%		60-140	27-NOV-19
Surrogate: d10-Phena			97.9		%		60-140	27-NOV-19
Surrogate: d12-Chryse			93.2		%		60-140	27-NOV-19
Surrogate: d10-Acena	phthene		95.3		%		60-140	27-NOV-19
PCB-511-WT	Water							
Batch R492524								
WG3227114-2 LCS Aroclor 1242			99.3		%		60-140	26-NOV-19
Aroclor 1248			98.3		%		60-140	26-NOV-19
Aroclor 1254			111.0		%		60-140	26-NOV-19
Aroclor 1260			110.6		%		60-140	26-NOV-19
WG3227114-1 MB							00 140	201101 10
Aroclor 1242			<0.020		ug/L		0.02	26-NOV-19
Aroclor 1248			<0.020		ug/L		0.02	26-NOV-19
Aroclor 1254			<0.020		ug/L		0.02	26-NOV-19
Aroclor 1260			<0.020		ug/L		0.02	26-NOV-19
Surrogate: Decachloro	obiphenyl		80.1		%		50-150	26-NOV-19
Surrogate: Tetrachloro	o-m-xylene		78.9		%		50-150	26-NOV-19
VOC-511-HS-WT	Water							
Batch R492760	2							
WG3229973-4 DUP		WG3229973						
1,1,1,2-Tetrachloroeth		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,1,2,2-Tetrachloroeth	ane	<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,1,1-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,1,2-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,1-Dichloroethane		<0.50	< 0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,1-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,2-Dibromoethane		<0.20	<0.20	RPD-NA	ug/L	N/A	30	28-NOV-19
1,2-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,2-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,2-Dichloropropane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19



Workorder: L2386645 Report Date: 29-NOV-19 Page 6 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4927602								
WG3229973-4 DUP 1,3-Dichlorobenzene		WG3229973 -<0.50	3 <0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,4-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Acetone		<30	<30	RPD-NA	ug/L	N/A	30	28-NOV-19
Benzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Bromodichloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	28-NOV-19
Bromoform		<5.0	<5.0	RPD-NA	ug/L	N/A	30	28-NOV-19
Bromomethane		<0.50	< 0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Carbon tetrachloride		<0.20	<0.20	RPD-NA	ug/L	N/A	30	28-NOV-19
Chlorobenzene		<0.50	< 0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Chloroform		<1.0	<1.0	RPD-NA	ug/L	N/A	30	28-NOV-19
cis-1,2-Dichloroethylene)	<0.50	< 0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
cis-1,3-Dichloropropene)	<0.30	< 0.30	RPD-NA	ug/L	N/A	30	28-NOV-19
Dibromochloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	28-NOV-19
Dichlorodifluoromethane	Э	<2.0	<2.0	RPD-NA	ug/L	N/A	30	28-NOV-19
Ethylbenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
n-Hexane		<0.50	< 0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
m+p-Xylenes		<0.40	<0.40	RPD-NA	ug/L	N/A	30	28-NOV-19
Methyl Ethyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	28-NOV-19
Methyl Isobutyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	28-NOV-19
Methylene Chloride		<5.0	<5.0	RPD-NA	ug/L	N/A	30	28-NOV-19
MTBE		<2.0	<2.0	RPD-NA	ug/L	N/A	30	28-NOV-19
o-Xylene		<0.30	< 0.30	RPD-NA	ug/L	N/A	30	28-NOV-19
Styrene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Tetrachloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Toluene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
trans-1,2-Dichloroethyle	ene	<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
trans-1,3-Dichloroprope	ne	<0.30	< 0.30	RPD-NA	ug/L	N/A	30	28-NOV-19
Trichloroethylene		0.83	0.82		ug/L	1.2	30	28-NOV-19
Trichlorofluoromethane		<5.0	<5.0	RPD-NA	ug/L	N/A	30	28-NOV-19
Vinyl chloride		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
WG3229973-1 LCS								
1,1,1,2-Tetrachloroetha			91.9		%		70-130	28-NOV-19
1,1,2,2-Tetrachloroetha	ne		91.6		%		70-130	28-NOV-19



Workorder: L2386645 Report Date: 29-NOV-19 Page 7 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4927602								
WG3229973-1 LCS			05.0		0/		70 / 60	aa 11014 : -
1,1,1-Trichloroethane			95.8		%		70-130	28-NOV-19
1,1,2-Trichloroethane			92.6		%		70-130	28-NOV-19
1,1-Dichloroethane			95.9		%		70-130	28-NOV-19
1,1-Dichloroethylene			92.5		%		70-130	28-NOV-19
1,2-Dibromoethane			92.5		%		70-130	28-NOV-19
1,2-Dichlorobenzene			87.7		%		70-130	28-NOV-19
1,2-Dichloroethane			97.2		%		70-130	28-NOV-19
1,2-Dichloropropane			100.4		%		70-130	28-NOV-19
1,3-Dichlorobenzene			87.2		%		70-130	28-NOV-19
1,4-Dichlorobenzene			86.5		%		70-130	28-NOV-19
Acetone			99.1		%		60-140	28-NOV-19
Benzene			100.4		%		70-130	28-NOV-19
Bromodichloromethane			97.9		%		70-130	28-NOV-19
Bromoform			91.9		%		70-130	28-NOV-19
Bromomethane			85.9		%		60-140	28-NOV-19
Carbon tetrachloride			94.9		%		70-130	28-NOV-19
Chlorobenzene			90.8		%		70-130	28-NOV-19
Chloroform			98.1		%		70-130	28-NOV-19
cis-1,2-Dichloroethylene	e		95.3		%		70-130	28-NOV-19
cis-1,3-Dichloropropene	9		98.1		%		70-130	28-NOV-19
Dibromochloromethane			90.8		%		70-130	28-NOV-19
Dichlorodifluoromethan	е		80.2		%		50-140	28-NOV-19
Ethylbenzene			90.3		%		70-130	28-NOV-19
n-Hexane			89.6		%		70-130	28-NOV-19
m+p-Xylenes			89.8		%		70-130	28-NOV-19
Methyl Ethyl Ketone			94.2		%		60-140	28-NOV-19
Methyl Isobutyl Ketone			89.5		%		60-140	28-NOV-19
Methylene Chloride			96.6		%		70-130	28-NOV-19
MTBE			109.2		%		70-130	28-NOV-19
o-Xylene			90.4		%		70-130	28-NOV-19
Styrene			90.3		%		70-130	28-NOV-19
Tetrachloroethylene			88.6		%		70-130	28-NOV-19
Toluene			92.0		%		70-130	28-NOV-19
								-



Workorder: L2386645 Report Date: 29-NOV-19 Page 8 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R492760	2							
WG3229973-1 LCS	lana		00.0		0/		70.400	
trans-1,2-Dichloroethy			93.2		%		70-130	28-NOV-19
trans-1,3-Dichloroprop	ene		92.2		%		70-130	28-NOV-19
Trichloroethylene			95.6		%		70-130	28-NOV-19
Trichlorofluoromethan	е		92.4		%		60-140	28-NOV-19
Vinyl chloride			102.8		%		60-140	28-NOV-19
WG3229973-2 MB 1,1,1,2-Tetrachloroeth	ane		<0.50		ug/L		0.5	28-NOV-19
1,1,2,2-Tetrachloroeth			<0.50		ug/L		0.5	28-NOV-19
1,1,1-Trichloroethane	ano		<0.50		ug/L		0.5	28-NOV-19
1,1,2-Trichloroethane			<0.50		ug/L		0.5	28-NOV-19
1,1-Dichloroethane			<0.50		ug/L		0.5	28-NOV-19
1,1-Dichloroethylene			<0.50		ug/L		0.5	28-NOV-19
1,2-Dibromoethane			<0.20		ug/L		0.2	28-NOV-19
1,2-Dichlorobenzene			<0.50		ug/L		0.5	28-NOV-19
1,2-Dichloroethane			<0.50		ug/L		0.5	28-NOV-19 28-NOV-19
1,2-Dichloropropane			<0.50		ug/L		0.5	28-NOV-19
1,3-Dichlorobenzene			<0.50		ug/L		0.5	28-NOV-19
1,4-Dichlorobenzene			<0.50		ug/L		0.5	28-NOV-19
Acetone			<30		ug/L		30	28-NOV-19
Benzene			<0.50		ug/L		0.5	28-NOV-19 28-NOV-19
Bromodichloromethan	Δ		<2.0		ug/L		2	28-NOV-19
Bromoform	C		<5.0		ug/L		5	28-NOV-19
Bromomethane			<0.50		ug/L		0.5	28-NOV-19
Carbon tetrachloride			<0.20		ug/L		0.3	
Chlorobenzene			<0.50		ug/L		0.5	28-NOV-19 28-NOV-19
Chloroform			<1.0		ug/L		1	28-NOV-19
cis-1,2-Dichloroethyler	10		<0.50		ug/L		0.5	28-NOV-19
cis-1,3-Dichloroproper			<0.30		ug/L		0.3	28-NOV-19
Dibromochloromethan			<2.0		ug/L		2	
Dichlorodifluoromethai			<2.0		ug/L		2	28-NOV-19 28-NOV-19
Ethylbenzene			<0.50		ug/L		0.5	
n-Hexane			<0.50		ug/L		0.5	28-NOV-19
m+p-Xylenes			<0.40				0.3	28-NOV-19
					ug/L			28-NOV-19
Methyl Ethyl Ketone			<20		ug/L		20	28-NOV-19



Workorder: L2386645 Report Date: 29-NOV-19 Page 9 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4927602								
WG3229973-2 MB Methyl Isobutyl Ketone			<20		a/l		20	00 NOV 40
			<20 <5.0		ug/L		20 5	28-NOV-19
Methylene Chloride MTBE					ug/L			28-NOV-19
			<2.0		ug/L		2	28-NOV-19
o-Xylene			<0.30		ug/L		0.3	28-NOV-19
Styrene			<0.50		ug/L		0.5	28-NOV-19
Tetrachloroethylene			<0.50		ug/L		0.5	28-NOV-19
Toluene			<0.50		ug/L		0.5	28-NOV-19
trans-1,2-Dichloroethyle			<0.50		ug/L		0.5	28-NOV-19
trans-1,3-Dichloroprope	ne		<0.30		ug/L		0.3	28-NOV-19
Trichloroethylene			<0.50		ug/L		0.5	28-NOV-19
Trichlorofluoromethane			<5.0		ug/L		5	28-NOV-19
Vinyl chloride			<0.50		ug/L		0.5	28-NOV-19
Surrogate: 1,4-Difluorob			96.6		%		70-130	28-NOV-19
Surrogate: 4-Bromofluo	robenzene		93.1		%		70-130	28-NOV-19
WG3229973-5 MS 1,1,1,2-Tetrachloroetha	ne	WG3229973-	3 91.8		%		50-140	28-NOV-19
1,1,2,2-Tetrachloroetha			82.3		%		50-140	28-NOV-19
1,1,1-Trichloroethane			99.0		%		50-140	28-NOV-19
1,1,2-Trichloroethane			88.0		%		50-140	28-NOV-19
1,1-Dichloroethane			100.5		%		50-140	28-NOV-19
1,1-Dichloroethylene			94.4		%		50-140	28-NOV-19
1,2-Dibromoethane			85.8		%		50-140	28-NOV-19
1,2-Dichlorobenzene			88.0		%		50-140	28-NOV-19
1,2-Dichloroethane			92.3		%		50-140	28-NOV-19
1,2-Dichloropropane			98.1		%		50-140	28-NOV-19
1,3-Dichlorobenzene			90.0		%		50-140	28-NOV-19
1,4-Dichlorobenzene			88.3		%		50-140	28-NOV-19
Acetone			92.8		%		50-140	28-NOV-19
Benzene			99.98		%		50-140	28-NOV-19
Bromodichloromethane			95.7		%		50-140	28-NOV-19
Bromoform			85.1		%		50-140	28-NOV-19
Bromomethane			80.1		%		50-140	28-NOV-19
Carbon tetrachloride			99.9		%		50-140	28-NOV-19
Chlorobenzene			90.7		%		50-140	28-NOV-19



Workorder: L2386645 Report Date: 29-NOV-19 Page 10 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Гest	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4927602								
WG3229973-5 MS		WG3229973-3			0/			
Chloroform			98.3		%		50-140	28-NOV-19
cis-1,2-Dichloroethylene			94.5		%		50-140	28-NOV-19
cis-1,3-Dichloropropene			90.6		%		50-140	28-NOV-19
Dibromochloromethane)		87.1		%		50-140	28-NOV-19
Dichlorodifluoromethan	е		79.2		%		50-140	28-NOV-19
Ethylbenzene			93.6		%		50-140	28-NOV-19
n-Hexane			91.9		%		50-140	28-NOV-19
m+p-Xylenes			92.6		%		50-140	28-NOV-19
Methyl Ethyl Ketone			75.0		%		50-140	28-NOV-19
Methyl Isobutyl Ketone			76.4		%		50-140	28-NOV-19
Methylene Chloride			94.0		%		50-140	28-NOV-19
MTBE			109.1		%		50-140	28-NOV-19
o-Xylene			92.2		%		50-140	28-NOV-19
Styrene			88.7		%		50-140	28-NOV-19
Tetrachloroethylene			92.9		%		50-140	28-NOV-19
Toluene			94.2		%		50-140	28-NOV-19
trans-1,2-Dichloroethyle	ene		93.6		%		50-140	28-NOV-19
trans-1,3-Dichloroprope	ene		83.4		%		50-140	28-NOV-19
Trichloroethylene			98.1		%		50-140	28-NOV-19
Trichlorofluoromethane			95.2		%		50-140	28-NOV-19
Vinyl chloride			101.7		%		50-140	28-NOV-19

Workorder: L2386645 Report Date: 29-NOV-19

Client: TERRAPROBE-BRAMPTON Page 11 of 11

11 Indell Lane

Brampton ON L6T 3Y3 Kossay Makhzoumi

Legend:

Contact:

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
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
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.

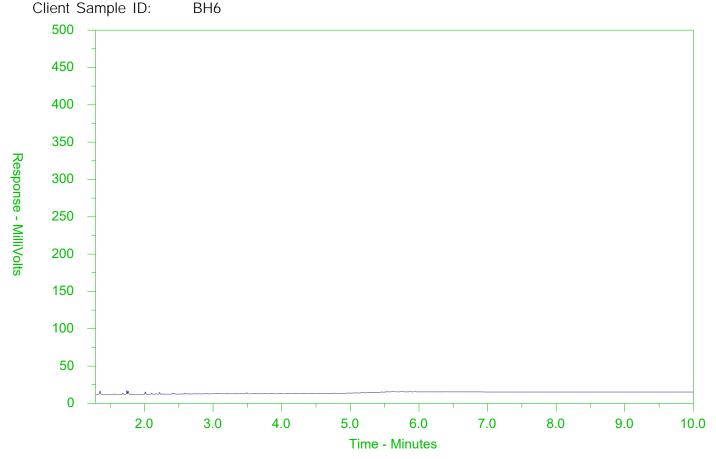
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined data quality objectives to provide 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: L2386645-1



← -F2-	→←	_F3 F4_	→	
nC10	nC16	nC34	nC50	
174°C	287°C	481°C	575°C	
346°F	549°F	898°F	1067°F	
Gasolin	ie →	← Mo	otor 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)

Chain of Custody (COC) / Analytical Request Form

L2386645-COFC

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COC Number: 15 -

1.01

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图 医自己性病 自身不及 \$P\$ 电对象 \$P\$ \$P\$ Canada Toll Free: 1 800 668 9878 www.alsglobal.com Contact and company name below will appear on the final report Report Format / Distribution Select Service Level Below - Please confirm all E&P TATs with your AM - surcharges will apply Report To Select Report Format: PDF EXCEL EDD (DIGITAL) Standard TAT if received by 3 pm - business days - no surcharges apply Terraprobe Company: 4 day [P4] 1 Business day [E1] Kossav Makhzoumi Contact: 905-796-2650 Compare Results to Criteria on Report - provide details below if box checked 3 day [P3] Phone: Same Day, Weekend or ☑ EMAIL ☐ FAX \Box Statutory holiday [E0] Select Distribution: 2 day [P2] Company address below will appear on the final report Date and Time Required for all E&P TATs: 11 Indell Lane Email 1 or Fax kmakhzoumi@terraprobe.ca Street Email 2 For tests that can not be performed according to the service level selected, you will be contacted. City/Province: Brampton Email 3 **Analysis Request** L6T 3Y3 Postal Code: ☐ YES ☑ NO Invoice Distribution Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below Invoice To Same as Report To Select Invoice Distribution: EMAIL MAIL FAX Copy of Invoice with Report ☐ YES ☑ NO Email 1 or Fax lrossi@terraprobe.ca Terraprobe Company Lorena Rossi Email 2 Contact: Number of Containers Oil and Gas Required Fields (client use) Project Information AFE/Cost Center: PO# ALS Account # / Quote #: Q62481 Job #: 1-19-0603-42 Major/Minor Code: Routing Code: PO / AFE Requisitioner: lyride Forming Metals and Inorganics LSD: Location: ALS Contact: Sampler: ALS Lab Work Order # (lab use only) Date Time Sample Identification and/or Coordinates ALS Sample # Sample Type ò Α̈́H (lab use only) (This description will appear on the report) (dd-mmm-yy) (hh:mm) 1 GW 20-11-19 B46 SAMPLE CONDITION AS RECEIVED (lab use only) Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below Drinking Water (DW) Samples¹ (client use) (electronic COC only) Frozen SIF Observations П Ice Cubes Custody seal intact Yes No Are samples taken from a Regulated DW System? Ice Packs ☐ YES ☐ NO Cooling Initiated MEUP TZ RYI INITIAL COOLER TEMPERATURES °C FINAL COOLER TEMPERATURES °C Are samples for human drinking water use? YES NO FINAL SHIPMENT RECEPTION (lab use only) INITIAL SPIPMENT RECEPTION (lab use only) SHIPMENT RELEASE (client use)

Released by: Kossay Makhzoumi

Received by:

Received by:

Time:



TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 06-FEB-20

Report Date: 13-FEB-20 09:02 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2413925

Project P.O. #: NOT SUBMITTED

Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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L2413925 CONT'D....

Job Reference: 1-19-0603-42

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13-FEB-20 09:02 (MT)

Summary of Guideline Exceedances

Guideline						
ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

(No parameter exceedances)

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Non-Potable Ground Water-All Types of Property Uses (Fine) (No parameter exceedances)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2413925 CONT'D....

Job Reference: 1-19-0603-42

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13-FEB-20 09:02 (MT)

Physical Tests - WATER

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			Lab ID	L2413925-1
	S	Sampl	e Date	04-FEB-20
		San	ple ID	DUP 4
	Ć	Guide	Limits	
Analyte	Unit	#1	#2	
Conductivity	mS/cm	-	-	5.45
рН	pH units	-	-	7.86

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2413925 CONT'D....

Job Reference: 1-19-0603-42

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Anions and Nutrients - WATER

			I	_ab ID	L2413925-1
			Sample	e Date	04-FEB-20
			Sam	ple ID	DUP 4
Analyte	U	nit	Guide #1	Limits #2	
I .					

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2413925 CONT'D....

Job Reference: 1-19-0603-42

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13-FEB-20 09:02 (MT)

Cyanides - WATER

Oyannaco	***				
				Lab ID	L2413925-1
			Sampl	e Date	04-FEB-20
			San	iple ID	DUP 4
			Guide	Limits	
Analyte		Unit	#1	#2	
Cyanide, Weak	Acid Diss	ug/L	66	66	<2.0

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2413925 CONT'D....

Job Reference: 1-19-0603-42

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Dissolved Metals - WATER

		Lab ID Sample Date Sample ID		L2413925-1 04-FEB-20 DUP 4
Analyte	Unit	Guide #1	Limits #2	
Dissolved Mercury Filtration Location		-	-	FIELD
Dissolved Metals Filtration Location		-	-	FIELD
Antimony (Sb)-Dissolved	ug/L	20000	20000	<1.0 DLHC
Arsenic (As)-Dissolved	ug/L	1900	1900	<1.0 DLHC
Barium (Ba)-Dissolved	ug/L	29000	29000	80.7 DLHC
Beryllium (Be)-Dissolved	ug/L	67	67	<1.0 DLHC
Boron (B)-Dissolved	ug/L	45000	45000	130 DLHC
Cadmium (Cd)-Dissolved	ug/L	2.7	2.7	<0.050 ^{DLHC}
Chromium (Cr)-Dissolved	ug/L	810	810	<5.0 DLHC
Cobalt (Co)-Dissolved	ug/L	66	66	<1.0 DLHC
Copper (Cu)-Dissolved	ug/L	87	87	<2.0 DLHC
Lead (Pb)-Dissolved	ug/L	25	25	<0.50 DLHC
Mercury (Hg)-Dissolved	ug/L	0.29	2.8	<0.0050
Molybdenum (Mo)-Dissolved	ug/L	9200	9200	8.13 DLHC
Nickel (Ni)-Dissolved	ug/L	490	490	<5.0 DLHC
Selenium (Se)-Dissolved	ug/L	63	63	<0.50 DLHC
Silver (Ag)-Dissolved	ug/L	1.5	1.5	<0.50 DLHC
Sodium (Na)-Dissolved	ug/L	2300000	2300000	672000 ^{DLHC}
Thallium (TI)-Dissolved	ug/L	510	510	<0.10 DLHC
Uranium (U)-Dissolved	ug/L	420	420	0.93 DLHC
Vanadium (V)-Dissolved	ug/L	250	250	<5.0 DLHC
Zinc (Zn)-Dissolved	ug/L	1100	1100	<10 DLHC

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2413925 CONT'D....

Job Reference: 1-19-0603-42

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13-FEB-20 09:02 (MT)

Speciated Metals - WATER

₹! ►! \			
		Lab ID	L2413925-1
	Sampl	e Date	04-FEB-20
	San	nple ID	DUP 4
Uni			
Oili		#2	
ug/l	140	140	<0.50
		Sampl San Guide Unit #1	Lab ID Sample Date Sample ID Guide Limits Unit #1 #2

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



Styrene

ANALYTICAL REPORT

L2413925 CONT'D.... Job Reference: 1-19-0603-42 PAGE 8 of 15 13-FEB-20 09:02 (MT)

Volatile Organic Compounds - WATER									
		Sample Sam	L2413925-1 04-FEB-20 DUP 4						
Analyte	Unit	Guide #1	Limits #2						
Acetone	ug/L	130000	130000	<30					
Benzene	ug/L	44	430	<0.50					
Bromodichloromethane	ug/L	85000	85000	<2.0					
Bromoform	ug/L	380	770	<5.0					
Bromomethane	ug/L	5.6	56	<0.50					
Carbon tetrachloride	ug/L	0.79	8.4	<0.20					
Chlorobenzene	ug/L	630	630	<0.50					
Dibromochloromethane	ug/L	82000	82000	<2.0					
Chloroform	ug/L	2.4	22	<1.0					
1,2-Dibromoethane	ug/L	0.25	0.83	<0.20					
1,2-Dichlorobenzene	ug/L	4600	9600	<0.50					
1,3-Dichlorobenzene	ug/L	9600	9600	<0.50					
1,4-Dichlorobenzene	ug/L	8	67	<0.50					
Dichlorodifluoromethane	ug/L	4400	4400	<2.0					
1,1-Dichloroethane	ug/L	320	3100	2.63					
1,2-Dichloroethane	ug/L	1.6	12	1.21					
1,1-Dichloroethylene	ug/L	1.6	17	<0.50					
cis-1,2-Dichloroethylene	ug/L	1.6	17	1.34					
trans-1,2-Dichloroethylene	ug/L	1.6	17	<0.50					
Methylene Chloride	ug/L	610	5500	<5.0					
1,2-Dichloropropane	ug/L	16	140	<0.50					
cis-1,3-Dichloropropene	ug/L	-	-	<0.30					
trans-1,3-Dichloropropene	ug/L	-	-	< 0.30					
1,3-Dichloropropene (cis & trans)	ug/L	5.2	45	<0.50					
Ethylbenzene	ug/L	2300	2300	<0.50					
n-Hexane	ug/L	51	520	<0.50					
Methyl Ethyl Ketone	ug/L	470000	1500000	<20					
Methyl Isobutyl Ketone	ug/L	140000	580000	<20					
MTBE	ug/L	190	1400	<2.0					

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

ug/L

1300 9100

< 0.50

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2413925 CONT'D....

Job Reference: 1-19-0603-42

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Volatile Organic Compounds - WATER

		L Sample	ab ID Date	L2413925-1 04-FEB-20
		Sam	ple ID	DUP 4
Analyte	Unit	Guide #1	Limits #2	
1,1,1,2-Tetrachloroethane	ug/L	3.3	28	<0.50
1,1,2,2-Tetrachloroethane	ug/L	3.2	15	<0.50
Tetrachloroethylene	ug/L	1.6	17	<0.50
Toluene	ug/L	18000	18000	<0.50
1,1,1-Trichloroethane	ug/L	640	6700	<0.50
1,1,2-Trichloroethane	ug/L	4.7	30	<0.50
Trichloroethylene	ug/L	1.6	17	<0.50
Trichlorofluoromethane	ug/L	2500	2500	<5.0
Vinyl chloride	ug/L	0.5	1.7	<0.50
o-Xylene	ug/L	-	-	<0.30
m+p-Xylenes	ug/L	-	-	<0.40
Xylenes (Total)	ug/L	4200	4200	<0.50
Surrogate: 4-Bromofluorobenzene	%	-	-	98.4
Surrogate: 1,4-Difluorobenzene	%	-	-	101.3

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2413925 CONT'D....

Job Reference: 1-19-0603-42

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Hydrocarbons - WATER

	l	Lab ID	L2413925-1		
	Sample Date				
	Sam	ple ID	DUP 4		
	Guide	Limits			
Unit	#1	#2			
ug/L	750	750	<25		
ug/L	750	750	<25		
ug/L	150	150	<100		
ug/L	-	-	<100		
ug/L	500	500	<250		
ug/L	-	-	<250		
ug/L	500	500	<250		
ug/L	-	-	<370		
	-	-	YES		
%	-	-	99.8		
%	-	-	73.1		
	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	#1 Unit #1 Ug/L 750 Ug/L 750 Ug/L 750 Ug/L 500 Ug/L - Ug/L 500 Ug/L - Ug/L 500 Ug/L - Ug/L 500 Ug/L - Ug/L 500	Sample ID Sample ID		

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Job Reference: 1-19-0603-42

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Polycyclic Aromatic Hydrocarbons - WATER

 Lab ID
 L2413925-1

 Sample Date
 04-FEB-20

 Sample ID
 DUP 4

		Guide I	Limits	
Analyte	Unit	#1	#2	
Acenaphthene	ug/L	600	1700	<0.020
Acenaphthylene	ug/L	1.8	1.8	0.032
Anthracene	ug/L	2.4	2.4	<0.020
Benzo(a)anthracene	ug/L	4.7	4.7	<0.020
Benzo(a)pyrene	ug/L	0.81	0.81	<0.010
Benzo(b)fluoranthene	ug/L	0.75	0.75	<0.020
Benzo(g,h,i)perylene	ug/L	0.2	0.2	<0.020
Benzo(k)fluoranthene	ug/L	0.4	0.4	<0.020
Chrysene	ug/L	1	1	<0.020
Dibenzo(ah)anthracene	ug/L	0.52	0.52	<0.020
Fluoranthene	ug/L	130	130	<0.020
Fluorene	ug/L	400	400	<0.020
Indeno(1,2,3-cd)pyrene	ug/L	0.2	0.2	<0.020
1+2-Methylnaphthalenes	ug/L	1800	1800	<0.028
1-Methylnaphthalene	ug/L	1800	1800	<0.020
2-Methylnaphthalene	ug/L	1800	1800	0.024
Naphthalene	ug/L	1400	6400	<0.050
Phenanthrene	ug/L	580	580	<0.020
Pyrene	ug/L	68	68	<0.020
Surrogate: d10-Acenaphthene	%	-	-	97.7
Surrogate: d12-Chrysene	%	-	-	90.6
Surrogate: d8-Naphthalene	%	-	-	97.0
Surrogate: d10-Phenanthrene	%	-	-	105.1

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2413925 CONT'D....

Job Reference: 1-19-0603-42

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Polychlorinated Biphenyls - WATER

		Sample Sam	L2413925-1 04-FEB-20 DUP 4	
Analyte	Unit	Guide #1	Limits #2	
Aroclor 1242	ug/L	-	-	<0.040 ^{RRR}
Aroclor 1248	ug/L	-	-	<0.040 ^{RRR}
Aroclor 1254	ug/L	-	-	<0.040 ^{RRR}
Aroclor 1260	ug/L	-	-	<0.040 ^{RRR}
Surrogate: Decachlorobiphenyl	%	-	-	40.8 RRR
Total PCBs	ug/L	7.8	15	<0.080 ^{RRR}
Surrogate: Tetrachloro-m-xylene	%	-	-	83.8

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.

Reference Information

L2413925 CONT'D....
Job Reference: 1-19-0603-42
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Additional Comments for Sample Listed:

Samplenum	Matrix	Report Remarks	Sample Comments
L2413925-1	Water	Note: RRR: Surrogate recovery is outside ALS DQO limits. Detection limits for affected compounds have been raised accordingly.	

Qualifiers for Individual Parameters Listed:

Qualifier Description

RRR

DLHC Detection Limit Raised: Dilution required due to high concentration of test analyte(s).

Refer to Report Remarks for issues regarding this analysis

Water

Methods Listed (if applicable):

CL-IC-N-WT

ALS Test Code Matrix Test Description Method Reference**

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

Chloride by IC

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).

EPA 300.1 (mod)

CN-WAD-R511-WT Water Cyanide (WAD)-O.Reg 153/04 APHA 4500CN I-Weak acid Dist Colorimet

Weak acid dissociable cyanide (WAD) is determined by undergoing a distillation procedure. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

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-R511-WT Water Hex Chrom-O.Reg 153/04 (July 2011) EPA 7199

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. Chromium (III) is calculated as the difference between the total chromium and the chromium (VI) results.

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-R511-WT Water Conductivity-O.Reg 153/04 (July 2011) APHA 2510 B

Water samples can be measured directly by immersing the conductivity cell into 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).

EC-SCREEN-WT Water Conductivity Screen (Internal Use APHA 2510 Only)

Qualitative analysis of conductivity where required during preparation of other tests - e.g. TDS, metals, etc.

F1-F4-511-CALC-WT Water F1-F4 Hydrocarbon Calculated CCME CWS-PHC, Pub #1310, Dec 2001-L

Parameters

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

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

Reference Information

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Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

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 Water F1-O.Reg 153/04 (July 2011) E3398/CCME TIER 1-HS

Fraction F1 is determined by 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 Water F2-F4-O.Reg 153/04 (July 2011) EPA 3511/CCME Tier 1

Petroleum Hydrocarbons (F2-F4 fractions) are extracted from water using a hexane micro-extraction technique. Instrumental analysis is by GC-FID, as per the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Tier 1 Method, CCME, 2001.

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-D-UG/L-CVAA-WT Water Diss. Mercury in Water by CVAAS EPA 1631E (mod)

(ug/L)

Water samples are filtered (0.45 um), preserved with hydrochloric acid, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed 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-D-UG/L-MS-WT Water Diss. Metals in Water by ICPMS (ug/L) EPA 200.8

The metal constituents of a non-acidified sample that pass through a membrane filter prior to ICP/MS analysis.

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 Water PAH-Calculated Parameters SW846 8270

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

Aqueous samples, fortified with surrogates, are extracted using liquid/liquid extraction technique. The sample extracts are concentrated and then analyzed using 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 Water PCB-O. Reg 153/04 (July 2011) SW846 3510/8082

Aqueous samples are extracted, then concentrated, reconstituted, and analyzed by 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).

Reference Information

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Job Reference: 1-19-0603-42
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Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

PH-WT Water pH APHA 4500 H-Electrode

Water samples are analyzed directly by a calibrated pH 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). Holdtime for samples under this regulation is 38 days.

samples under this regulation is 28 days

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

VOC-511-HS-WT Water VOC by GCMS HS O.Reg 153/04 (July SW846 8260

2011)

Liquid samples are analyzed by headspace GC/MSD.

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 Water 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

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: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CL-IC-N-WT	Water							
Batch R4992573 WG3271551-4 DUP Chloride (CI)		WG3271551-3 29.5	29.5		mg/L	0.1	20	07-FEB-20
WG3271551-2 LCS Chloride (CI)			101.6		%		90-110	07-FEB-20
WG3271551-1 MB Chloride (Cl)			<0.50		mg/L		0.5	07-FEB-20
WG3271551-5 MS Chloride (Cl)		WG3271551-3	101.2		%		75-125	07-FEB-20
CR-CR6-IC-R511-WT	Water							
Batch R4992361								
WG3271691-4 DUP Chromium, Hexavalent		WG3271691-3 8.96	9.07		ug/L	1.2	20	07-FEB-20
WG3271691-2 LCS Chromium, Hexavalent			101.8		%		80-120	07-FEB-20
WG3271691-1 MB Chromium, Hexavalent			<0.50		ug/L		0.5	07-FEB-20
WG3271691-5 MS Chromium, Hexavalent		WG3271691-3	99.1		%		70-130	07-FEB-20
EC-R511-WT	Water							
Batch R4991439 WG3271394-4 DUP Conductivity		WG3271394-3 2.29	2.24		mS/cm	2.2	10	07-FEB-20
WG3271394-2 LCS Conductivity			103.7		%		90-110	07-FEB-20
WG3271394-1 MB Conductivity			<0.0030		mS/cm		0.003	07-FEB-20
F1-HS-511-WT	Water							
Batch R4991436 WG3269763-1 LCS F1 (C6-C10)			92.3		%		80-120	07-FEB-20
WG3269763-2 MB F1 (C6-C10)			<25		ug/L		25	07-FEB-20
Surrogate: 3,4-Dichlorot	oluene		77.1		%		60-140	07-FEB-20
WG3269763-5 MS F1 (C6-C10)		WG3269763-3	83.1		%		60-140	07-FEB-20
F2-F4-511-WT	Water							-



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TERRAPROBE-BRAMPTON Client:

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F2-F4-511-WT	Water							
Batch R4991613								
WG3270985-2 LCS F2 (C10-C16)			105.6		%		70 120	07 FFB 20
F3 (C16-C34)			105.6		%		70-130 70-130	07-FEB-20 07-FEB-20
F4 (C34-C50)			107.4		%		70-130	07-FEB-20
WG3270985-1 MB					,-		70 100	07 1 2 2 2 0
F2 (C10-C16)			<100		ug/L		100	07-FEB-20
F3 (C16-C34)			<250		ug/L		250	07-FEB-20
F4 (C34-C50)			<250		ug/L		250	07-FEB-20
Surrogate: 2-Bromobenz	zotrifluoride		139.5		%		60-140	07-FEB-20
HG-D-UG/L-CVAA-WT	Water							
Batch R4991543								
WG3271392-3 DUP		L2414257-6	-0.0050	000	/	N 1/A	00	07 FFD 05
Mercury (Hg)-Dissolved		<0.0050	<0.0050	RPD-NA	ug/L	N/A	20	07-FEB-20
WG3271392-2 LCS Mercury (Hg)-Dissolved			107.0		%		80-120	07-FEB-20
WG3271392-1 MB			-				33 .20	
Mercury (Hg)-Dissolved			<0.0050		ug/L		0.005	07-FEB-20
WG3271392-4 MS		L2413924-1						
Mercury (Hg)-Dissolved			101.3		%		70-130	07-FEB-20
MET-D-UG/L-MS-WT	Water							
Batch R4991876		W000=101= -						
WG3271317-4 DUP Antimony (Sb)-Dissolved	i	WG3271317-3 <1.0	<1.0	RPD-NA	ug/L	N/A	20	07-FEB-20
Arsenic (As)-Dissolved		<1.0	<1.0	RPD-NA	ug/L	N/A	20	07-FEB-20
Barium (Ba)-Dissolved		337	343	=	ug/L	1.9	20	07-FEB-20
Beryllium (Be)-Dissolved	I	<1.0	<1.0	RPD-NA	ug/L	N/A	20	07-FEB-20
Boron (B)-Dissolved		<100	<100	RPD-NA	ug/L	N/A	20	07-FEB-20
Cadmium (Cd)-Dissolve	d	0.071	0.081		ug/L	14	20	07-FEB-20
Chromium (Cr)-Dissolve	d	<5.0	<5.0	RPD-NA	ug/L	N/A	20	07-FEB-20
Cobalt (Co)-Dissolved		<1.0	<1.0	RPD-NA	ug/L	N/A	20	07-FEB-20
Copper (Cu)-Dissolved		<2.0	<2.0	RPD-NA	ug/L	N/A	20	07-FEB-20
Lead (Pb)-Dissolved		<0.50	<0.50	RPD-NA	ug/L	N/A	20	07-FEB-20
Molybdenum (Mo)-Disso	lved	3.24	3.32		ug/L	2.4	20	07-FEB-20
Nickel (Ni)-Dissolved		<5.0	<5.0	RPD-NA	ug/L	N/A	20	07-FEB-20
Selenium (Se)-Dissolved	d	1.00	0.93		ug/L	7.9	20	07-FEB-20



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R499187								
WG3271317-4 DUP		WG3271317-3						
Silver (Ag)-Dissolved		<0.50	<0.50	RPD-NA	ug/L	N/A	20	07-FEB-20
Sodium (Na)-Dissolve	ed	1200000	1220000		ug/L	1.9	20	07-FEB-20
Thallium (TI)-Dissolve	ed	<0.10	<0.10	RPD-NA	ug/L	N/A	20	07-FEB-20
Uranium (U)-Dissolve	d	2.89	2.86		ug/L	1.0	20	07-FEB-20
Vanadium (V)-Dissolv	red	<5.0	<5.0	RPD-NA	ug/L	N/A	20	07-FEB-20
Zinc (Zn)-Dissolved		<10	<10	RPD-NA	ug/L	N/A	20	07-FEB-20
WG3271317-2 LCS								
Antimony (Sb)-Dissolv			99.1		%		80-120	07-FEB-20
Arsenic (As)-Dissolve			93.9		%		80-120	07-FEB-20
Barium (Ba)-Dissolved			100.1		%		80-120	07-FEB-20
Beryllium (Be)-Dissolv	ved		92.3		%		80-120	07-FEB-20
Boron (B)-Dissolved			90.3		%		80-120	07-FEB-20
Cadmium (Cd)-Dissol			92.7		%		80-120	07-FEB-20
Chromium (Cr)-Dissol			93.4		%		80-120	07-FEB-20
Cobalt (Co)-Dissolved			91.8		%		80-120	07-FEB-20
Copper (Cu)-Dissolve	d		89.5		%		80-120	07-FEB-20
Lead (Pb)-Dissolved			97.1		%		80-120	07-FEB-20
Molybdenum (Mo)-Dis	ssolved		95.5		%		80-120	07-FEB-20
Nickel (Ni)-Dissolved			90.7		%		80-120	07-FEB-20
Selenium (Se)-Dissolv	ved .		93.3		%		80-120	07-FEB-20
Silver (Ag)-Dissolved			98.7		%		80-120	07-FEB-20
Sodium (Na)-Dissolve			95.3		%		80-120	07-FEB-20
Thallium (TI)-Dissolve	ed		95.3		%		80-120	07-FEB-20
Uranium (U)-Dissolve	d		93.0		%		80-120	07-FEB-20
Vanadium (V)-Dissolv	red		95.9		%		80-120	07-FEB-20
Zinc (Zn)-Dissolved			92.7		%		80-120	07-FEB-20
WG3271317-1 MB Antimony (Sb)-Dissolv	ved.		<0.10		ug/L		0.1	07 EED 20
Arsenic (As)-Dissolve			<0.10		ug/L		0.1	07-FEB-20
Barium (Ba)-Dissolved			<0.10		ug/L		0.1	07-FEB-20
Beryllium (Be)-Dissolved			<0.10		ug/L		0.1	07-FEB-20
Boron (B)-Dissolved	reu		<0.10				10	07-FEB-20
Cadmium (Cd)-Dissol	ved				ug/L		0.005	07-FEB-20
Chromium (Cr)-Dissol			<0.0050		ug/L			07-FEB-20
Cilionilatti (Ci)-DISSOI	iveu		<0.50		ug/L		0.5	07-FEB-20



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R4991876								
WG3271317-1 MB			-0.40		ug/l		0.1	07.550.00
Cobalt (Co)-Dissolved			<0.10		ug/L		0.1	07-FEB-20
Copper (Cu)-Dissolved			<0.20		ug/L		0.2	07-FEB-20
Lead (Pb)-Dissolved	الد مد دام		<0.050		ug/L		0.05	07-FEB-20
Molybdenum (Mo)-Diss	oivea		<0.050		ug/L		0.05	07-FEB-20
Nickel (Ni)-Dissolved	_		<0.50		ug/L		0.5	07-FEB-20
Selenium (Se)-Dissolve	a		<0.050		ug/L		0.05	07-FEB-20
Silver (Ag)-Dissolved			<0.050		ug/L		0.05	07-FEB-20
Sodium (Na)-Dissolved			<50		ug/L		50	07-FEB-20
Thallium (TI)-Dissolved			<0.010		ug/L		0.01	07-FEB-20
Uranium (U)-Dissolved	.1		<0.010		ug/L		0.01	07-FEB-20
Vanadium (V)-Dissolve	d		<0.50		ug/L		0.5	07-FEB-20
Zinc (Zn)-Dissolved			<1.0		ug/L		1	07-FEB-20
WG3271317-5 MS Antimony (Sb)-Dissolve	d	WG3271317-6	101.4		%		70-130	07-FEB-20
Arsenic (As)-Dissolved			96.3		%		70-130	07-FEB-20
Barium (Ba)-Dissolved			N/A	MS-B	%		-	07-FEB-20
Beryllium (Be)-Dissolve	d		94.5		%		70-130	07-FEB-20
Boron (B)-Dissolved			N/A	MS-B	%		-	07-FEB-20
Cadmium (Cd)-Dissolve	ed		92.4		%		70-130	07-FEB-20
Chromium (Cr)-Dissolve	ed		73.6		%		70-130	07-FEB-20
Cobalt (Co)-Dissolved			88.6		%		70-130	07-FEB-20
Copper (Cu)-Dissolved			70.9		%		70-130	07-FEB-20
Lead (Pb)-Dissolved			93.8		%		70-130	07-FEB-20
Molybdenum (Mo)-Diss	olved		91.4		%		70-130	07-FEB-20
Nickel (Ni)-Dissolved			83.9		%		70-130	07-FEB-20
Selenium (Se)-Dissolve	d		90.5		%		70-130	07-FEB-20
Silver (Ag)-Dissolved			96.7		%		70-130	07-FEB-20
Sodium (Na)-Dissolved			N/A	MS-B	%		-	07-FEB-20
Thallium (TI)-Dissolved			92.7		%		70-130	07-FEB-20
Uranium (U)-Dissolved			N/A	MS-B	%		-	07-FEB-20
Vanadium (V)-Dissolve	d		99.5		%		70-130	07-FEB-20

PAH-511-WT Water



Workorder: L2413925 Report Date: 13-FEB-20 Page 5 of 12

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Water							
Batch R4991387								
WG3270985-2 LCS			100.6		0/		50.440	07.550.00
1-Methylnaphthalene			108.6		%		50-140	07-FEB-20
2-Methylnaphthalene			106.9 118.6				50-140	07-FEB-20
Acenaphthene			107.6		%		50-140	07-FEB-20
Acenaphthylene					%		50-140	07-FEB-20
Anthracene			103.8		%		50-140	07-FEB-20
Benzo(a)anthracene			115.4		%		50-140	07-FEB-20
Benzo(a)pyrene			114.7		%		50-140	07-FEB-20
Benzo(b)fluoranthene			103.6		%		50-140	07-FEB-20
Benzo(g,h,i)perylene			115.0		%		50-140	07-FEB-20
Benzo(k)fluoranthene			102.4		%		50-140	07-FEB-20
Chrysene			108.9		%		50-140	07-FEB-20
Dibenzo(ah)anthracene			115.4		%		50-140	07-FEB-20
Fluoranthene			116.6		%		50-140	07-FEB-20
Fluorene			112.7		%		50-140	07-FEB-20
Indeno(1,2,3-cd)pyrene			129.4		%		50-140	07-FEB-20
Naphthalene			111.3		%		50-140	07-FEB-20
Phenanthrene			118.0		%		50-140	07-FEB-20
Pyrene			116.6		%		50-140	07-FEB-20
WG3270985-1 MB 1-Methylnaphthalene			<0.020		ug/L		0.02	07-FEB-20
2-Methylnaphthalene			<0.020		ug/L		0.02	07-FEB-20
Acenaphthene			<0.020		ug/L		0.02	07-FEB-20
Acenaphthylene			<0.020		ug/L		0.02	07-FEB-20
Anthracene			<0.020		ug/L		0.02	07-FEB-20
Benzo(a)anthracene			<0.020		ug/L		0.02	07-FEB-20
Benzo(a)pyrene			<0.010		ug/L		0.01	07-FEB-20
Benzo(b)fluoranthene			<0.020		ug/L		0.02	07-FEB-20
Benzo(g,h,i)perylene			<0.020		ug/L		0.02	07-FEB-20
Benzo(k)fluoranthene			<0.020		ug/L		0.02	07-FEB-20
Chrysene			<0.020		ug/L		0.02	07-FEB-20 07-FEB-20
Dibenzo(ah)anthracene			<0.020		ug/L		0.02	
Fluoranthene			<0.020		ug/L		0.02	07-FEB-20
Fluorene			<0.020				0.02	07-FEB-20
Indeno(1,2,3-cd)pyrene			<0.020		ug/L		0.02	07-FEB-20
indeno(1,2,3-cd)pyrene			<0.020		ug/L		0.02	07-FEB-20



Qualifier

Workorder: L2413925 Report Date: 13-FEB-20 Page 6 of 12

RPD

Limit

Analyzed

Units

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Matrix

Reference

Result

Contact: Kossay Makhzoumi

Test

Test Matrix	Reference	Nesuit	Qualifier	Units	KFD	Lillit	Allalyzeu
PAH-511-WT Water							
Batch R4991387							
WG3270985-1 MB				,		0.0-	
Naphthalene		<0.050		ug/L		0.05	07-FEB-20
Phenanthrene		<0.020		ug/L		0.02	07-FEB-20
Pyrene		<0.020		ug/L		0.02	07-FEB-20
Surrogate: d8-Naphthalene		98.1		%		60-140	07-FEB-20
Surrogate: d10-Phenanthrene		97.1		%		60-140	07-FEB-20
Surrogate: d12-Chrysene		92.1		%		60-140	07-FEB-20
Surrogate: d10-Acenaphthene		98.7		%		60-140	07-FEB-20
PCB-511-WT Water							
Batch R4995272							
WG3271397-2 LCS				0.4			
Aroclor 1242		96.6		%		60-140	12-FEB-20
Aroclor 1248		106.0		%		60-140	12-FEB-20
Aroclor 1254		107.1		%		60-140	12-FEB-20
Aroclor 1260		118.0		%		60-140	12-FEB-20
WG3271397-1 MB Aroclor 1242		<0.020		ug/L		0.02	12-FEB-20
Aroclor 1248		<0.020		ug/L		0.02	12-FEB-20
Aroclor 1254		<0.020		ug/L		0.02	12-FEB-20
Aroclor 1260		<0.020		ug/L		0.02	12-FEB-20
Surrogate: Decachlorobiphenyl		83.0		%		50-150	12-FEB-20
Surrogate: Tetrachloro-m-xylene		68.3		%		50-150	12-FEB-20
PH-WT Water							
Batch R4991439							
WG3271394-4 DUP	WG3271394-	3					
рН	8.11	8.11	J	pH units	0.00	0.2	07-FEB-20
WG3271394-2 LCS							
рН		7.04		pH units		6.9-7.1	07-FEB-20
VOC-511-HS-WT Water							
Batch R4992360							
WG3264747-4 DUP	WG3264747-3			/1			
1,1,1,2-Tetrachloroethane	<0.50	<0.50	RPD-NA	ug/L	N/A	30	10-FEB-20
1,1,2,2-Tetrachloroethane	<0.50	<0.50	RPD-NA	ug/L	N/A	30	10-FEB-20
1,1,1-Trichloroethane	<0.50	<0.50	RPD-NA	ug/L	N/A	30	10-FEB-20
1,1,2-Trichloroethane	<0.50	<0.50	RPD-NA	ug/L	N/A	30	10-FEB-20



Workorder: L2413925 Report Date: 13-FEB-20 Page 7 of 12

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Woter Batch R4992360 WG3264747-4 DUP WG3264747-3 1,1-Dichloroethane 10.8 10.7 ug/L 1,1-Dichloroethylene <0.50 <0.50 RPD-NA ug/L 1,2-Dibloroethane <0.20 <0.20 RPD-NA ug/L 1,2-Dichloroethane <0.50 <0.50 RPD-NA ug/L 1,2-Dichloropropane <0.50 <0.50 RPD-NA ug/L 1,3-Dichlorobenzene <0.50 <0.50 RPD-NA ug/L 1,4-Dichlorobenzene <0.50 <0.50 RPD-NA ug/L Acetone <30 <30 RPD-NA ug/L Benzene 1.74 1.73 ug/L Bromoform <5.0 <5.0 RPD-NA ug/L Bromomethane <0.50 <0.50 RPD-NA ug/L Carbon tetrachloride <0.20 <0.20 RPD-NA ug/L Chlorobenzene <0.50 <0.50 RPD-NA ug/L <th>1.7 N/A N/A N/A N/A</th> <th>30 30 30 30</th> <th>10-FEB-20 10-FEB-20</th>	1.7 N/A N/A N/A N/A	30 30 30 30	10-FEB-20 10-FEB-20			
WG3264747-4 DUP WG3264747-3 1,1-Dichloroethane 10.8 10.7 ug/L 1,1-Dichloroethylene <0.50	N/A N/A N/A N/A	30 30	10-FEB-20			
1,1-Dichloroethane 10.8 10.7 ug/L 1,1-Dichloroethylene <0.50 <0.50 RPD-NA ug/L 1,2-Dibromoethane <0.20 <0.20 RPD-NA ug/L 1,2-Dichlorobenzene <0.50 <0.50 RPD-NA ug/L 1,2-Dichloroethane <0.50 <0.50 RPD-NA ug/L 1,2-Dichloropropane <0.50 <0.50 RPD-NA ug/L 1,3-Dichlorobenzene <0.50 <0.50 RPD-NA ug/L 1,4-Dichlorobenzene <0.50 <0.50 RPD-NA ug/L Acetone <30 <30 RPD-NA ug/L Benzene 1.74 1.73 ug/L Bromodichloromethane <2.0 <2.0 RPD-NA ug/L Bromomethane <0.50 <0.50 RPD-NA ug/L Carbon tetrachloride <0.20 <0.20 RPD-NA ug/L	N/A N/A N/A N/A	30 30	10-FEB-20			
1,1-Dichloroethylene <0.50	N/A N/A N/A N/A	30 30	10-FEB-20			
1,2-Dibromoethane <0.20	N/A N/A N/A	30				
1,2-Dichlorobenzene <0.50	N/A N/A					
1,2-Dichloroethane <0.50	N/A	30	10-FEB-20			
1,2-Dichloropropane <0.50			10-FEB-20			
1,3-Dichlorobenzene <0.50	N/A	30	10-FEB-20			
1,4-Dichlorobenzene <0.50		30	10-FEB-20			
Acetone <30 <30 RPD-NA ug/L Benzene 1.74 1.73 ug/L Bromodichloromethane <2.0	N/A	30	10-FEB-20			
Benzene 1.74 1.73 ug/L Bromodichloromethane <2.0	N/A	30	10-FEB-20			
Bromodichloromethane <2.0 <2.0 RPD-NA ug/L Bromoform <5.0	N/A	30	10-FEB-20			
Bromoform <5.0 <5.0 RPD-NA ug/L Bromomethane <0.50	0.6	30	10-FEB-20			
Bromomethane <0.50 <0.50 RPD-NA ug/L Carbon tetrachloride <0.20 <0.20 RPD-NA ug/L	N/A	30	10-FEB-20			
Carbon tetrachloride <0.20 <0.20 RPD-NA ug/L	N/A	30	10-FEB-20			
•	N/A	30	10-FEB-20			
Chlorobenzene <0.50 <0.50 PPD_NA ug/l	N/A	30	10-FEB-20			
C CO CO (C 171 D-171 Gg/L	N/A	30	10-FEB-20			
Chloroform <1.0 <1.0 RPD-NA ug/L	N/A	30	10-FEB-20			
cis-1,2-Dichloroethylene 366 364 ug/L	0.5	30	10-FEB-20			
cis-1,3-Dichloropropene <0.30 <0.30 RPD-NA ug/L	N/A	30	10-FEB-20			
Dibromochloromethane <2.0 <2.0 RPD-NA ug/L	N/A	30	10-FEB-20			
Dichlorodifluoromethane <2.0 <2.0 RPD-NA ug/L	N/A	30	10-FEB-20			
Ethylbenzene <0.50 <0.50 RPD-NA ug/L	N/A	30	10-FEB-20			
n-Hexane <0.50 <0.50 RPD-NA ug/L	N/A	30	10-FEB-20			
m+p-Xylenes <0.40 <0.40 RPD-NA ug/L	N/A	30	10-FEB-20			
Methyl Ethyl Ketone <20 <20 RPD-NA ug/L	N/A	30	10-FEB-20			
Methyl Isobutyl Ketone <20 <20 RPD-NA ug/L	N/A	30	10-FEB-20			
Methylene Chloride <5.0 <5.0 RPD-NA ug/L	N/A	30	10-FEB-20			
MTBE <2.0 <2.0 RPD-NA ug/L	N/A	30	10-FEB-20			
o-Xylene <0.30 <0.30 RPD-NA ug/L	N/A	30	10-FEB-20			
Styrene <0.50 <0.50 RPD-NA ug/L	N/A	30	10-FEB-20			
Tetrachloroethylene 106 111 ug/L	4.7	30	10-FEB-20			
Toluene <0.50 <0.50 RPD-NA ug/L		30	10-FEB-20			
trans-1,2-Dichloroethylene 3.24 3.32 ug/L	N/A		10-FEB-20			
trans-1,3-Dichloropropene <0.30 <0.30 ug/L	N/A 2.4	30				



Workorder: L2413925 Report Date: 13-FEB-20 Page 8 of 12

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4992360								
WG3264747-4 DUP	_	WG3264747-			/1			
trans-1,3-Dichloropropen	ie	<0.30	<0.30	RPD-NA	ug/L	N/A	30	10-FEB-20
Trichloroethylene		34.0	34.7		ug/L	2.1	30	10-FEB-20
Trichlorofluoromethane		<5.0	<5.0	RPD-NA	ug/L	N/A	30	10-FEB-20
Vinyl chloride		6.24	6.46		ug/L	3.5	30	10-FEB-20
WG3264747-1 LCS 1,1,1,2-Tetrachloroethan	e		96.1		%		70-130	07-FEB-20
1,1,2,2-Tetrachloroethan	е		96.7		%		70-130	07-FEB-20
1,1,1-Trichloroethane			100.5		%		70-130	07-FEB-20
1,1,2-Trichloroethane			99.8		%		70-130	07-FEB-20
1,1-Dichloroethane			104.5		%		70-130	07-FEB-20
1,1-Dichloroethylene			99.2		%		70-130	07-FEB-20
1,2-Dibromoethane			99.9		%		70-130	07-FEB-20
1,2-Dichlorobenzene			99.2		%		70-130	07-FEB-20
1,2-Dichloroethane			104.9		%		70-130	07-FEB-20
1,2-Dichloropropane			102.4		%		70-130	07-FEB-20
1,3-Dichlorobenzene			98.5		%		70-130	07-FEB-20
1,4-Dichlorobenzene			99.2		%		70-130	07-FEB-20
Acetone			104.6		%		60-140	07-FEB-20
Benzene			105.7		%		70-130	07-FEB-20
Bromodichloromethane			100.9		%		70-130	07-FEB-20
Bromoform			91.9		%		70-130	07-FEB-20
Bromomethane			98.0		%		60-140	07-FEB-20
Carbon tetrachloride			101.8		%		70-130	07-FEB-20
Chlorobenzene			98.7		%		70-130	07-FEB-20
Chloroform			104.5		%		70-130	07-FEB-20
cis-1,2-Dichloroethylene			93.2		%		70-130	07-FEB-20
cis-1,3-Dichloropropene			101.1		%		70-130	07-FEB-20
Dibromochloromethane			94.8		%		70-130	07-FEB-20
Dichlorodifluoromethane			118.6		%		50-140	07-FEB-20
Ethylbenzene			96.6		%		70-130	07-FEB-20
n-Hexane			96.2		%		70-130	07-FEB-20
m+p-Xylenes			96.8		%		70-130	07-FEB-20
Methyl Ethyl Ketone			103.9		%		60-140	07-FEB-20
Methyl Isobutyl Ketone			91.3				60-140	



Workorder: L2413925 Report Date: 13-FEB-20 Page 9 of 12

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4992360								
WG3264747-1 LCS Methyl Isobutyl Ketone			91.3		%		60 140	07 FED 00
Methylene Chloride			104.9		%		60-140	07-FEB-20
MTBE			104.9		%		70-130 70-130	07-FEB-20
o-Xylene			95.6		%		70-130 70-130	07-FEB-20
Styrene			95.7		%		70-130 70-130	07-FEB-20
Tetrachloroethylene			100.7		%		70-130 70-130	07-FEB-20
Toluene			98.9		%			07-FEB-20
	ano.		100.1		%		70-130	07-FEB-20
trans-1,2-Dichloroethyle trans-1,3-Dichloroprope			96.7		%		70-130	07-FEB-20
Trichloroethylene	110		103.6		%		70-130 70-130	07-FEB-20 07-FEB-20
Trichlorofluoromethane			103.8		%			
Vinyl chloride			116.5		%		60-140 60-140	07-FEB-20
			110.5		76		60-140	07-FEB-20
WG3264747-2 MB 1,1,1,2-Tetrachloroetha	ne		<0.50		ug/L		0.5	10-FEB-20
1,1,2,2-Tetrachloroetha	ne		<0.50		ug/L		0.5	10-FEB-20
1,1,1-Trichloroethane			<0.50		ug/L		0.5	10-FEB-20
1,1,2-Trichloroethane			<0.50		ug/L		0.5	10-FEB-20
1,1-Dichloroethane			<0.50		ug/L		0.5	10-FEB-20
1,1-Dichloroethylene			<0.50		ug/L		0.5	10-FEB-20
1,2-Dibromoethane			<0.20		ug/L		0.2	10-FEB-20
1,2-Dichlorobenzene			<0.50		ug/L		0.5	10-FEB-20
1,2-Dichloroethane			<0.50		ug/L		0.5	10-FEB-20
1,2-Dichloropropane			<0.50		ug/L		0.5	10-FEB-20
1,3-Dichlorobenzene			<0.50		ug/L		0.5	10-FEB-20
1,4-Dichlorobenzene			<0.50		ug/L		0.5	10-FEB-20
Acetone			<30		ug/L		30	10-FEB-20
Benzene			<0.50		ug/L		0.5	10-FEB-20
Bromodichloromethane			<2.0		ug/L		2	10-FEB-20
Bromoform			<5.0		ug/L		5	10-FEB-20
Bromomethane			<0.50		ug/L		0.5	10-FEB-20
Carbon tetrachloride			<0.20		ug/L		0.2	10-FEB-20
Chlorobenzene			<0.50		ug/L		0.5	10-FEB-20
Chloroform			<1.0		ug/L		1	10-FEB-20
cis-1,2-Dichloroethylene)		<0.50		ug/L		0.5	10-FEB-20



Workorder: L2413925 Report Date: 13-FEB-20 Page 10 of 12

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4992360								
WG3264747-2 MB								
cis-1,3-Dichloropropene			<0.30		ug/L		0.3	10-FEB-20
Dibromochloromethane			<2.0		ug/L		2	10-FEB-20
Dichlorodifluoromethane	9		<2.0		ug/L		2	10-FEB-20
Ethylbenzene			<0.50		ug/L		0.5	10-FEB-20
n-Hexane			<0.50		ug/L		0.5	10-FEB-20
m+p-Xylenes			<0.40		ug/L		0.4	10-FEB-20
Methyl Ethyl Ketone			<20		ug/L		20	10-FEB-20
Methyl Isobutyl Ketone			<20		ug/L		20	10-FEB-20
Methylene Chloride			<5.0		ug/L		5	10-FEB-20
MTBE			<2.0		ug/L		2	10-FEB-20
o-Xylene			<0.30		ug/L		0.3	10-FEB-20
Styrene			<0.50		ug/L		0.5	10-FEB-20
Tetrachloroethylene			<0.50		ug/L		0.5	10-FEB-20
Toluene			<0.50		ug/L		0.5	10-FEB-20
trans-1,2-Dichloroethyle	ne		<0.50		ug/L		0.5	10-FEB-20
trans-1,3-Dichloroprope	ne		<0.30		ug/L		0.3	10-FEB-20
Trichloroethylene			<0.50		ug/L		0.5	10-FEB-20
Trichlorofluoromethane			<5.0		ug/L		5	10-FEB-20
Vinyl chloride			<0.50		ug/L		0.5	10-FEB-20
Surrogate: 1,4-Difluorob	enzene		100.6		%		70-130	10-FEB-20
Surrogate: 4-Bromofluor	robenzene		98.8		%		70-130	10-FEB-20
WG3264747-5 MS		WG3264747-3						
1,1,1,2-Tetrachloroethar			92.9		%		50-140	10-FEB-20
1,1,2,2-Tetrachloroethar	ne		76.7		%		50-140	10-FEB-20
1,1,1-Trichloroethane			104.6		%		50-140	10-FEB-20
1,1,2-Trichloroethane			84.5		%		50-140	10-FEB-20
1,1-Dichloroethane			100.2		%		50-140	10-FEB-20
1,1-Dichloroethylene			102.0		%		50-140	10-FEB-20
1,2-Dibromoethane			80.8		%		50-140	10-FEB-20
1,2-Dichlorobenzene			99.3		%		50-140	10-FEB-20
1,2-Dichloroethane			87.7		%		50-140	10-FEB-20
1,2-Dichloropropane			93.5		%		50-140	10-FEB-20
1,3-Dichlorobenzene			106.1		%		50-140	10-FEB-20
1,4-Dichlorobenzene			105.4		%		50-140	10-FEB-20



Workorder: L2413925 Report Date: 13-FEB-20 Page 11 of 12

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

VOC-511-HS-WT Water	Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
WG3264747-5 MS WG3264747-3 Acetone 76.0 % 50.140 10-FEB-20 Benzene 103.5 % 50.140 10-FEB-20 Bromodichloromethane 92.3 % 50.140 10-FEB-20 Bromoform 75.6 % 50.140 10-FEB-20 Bromomethane 89.3 % 50.140 10-FEB-20 Carbon tetrachloride 109.4 % 50.140 10-FEB-20 Chlorobenzene 98.6 % 50.140 10-FEB-20 Chloroform 101.2 % 50.140 10-FEB-20 Cis-1,2-Dichloroethylene N/A MS-B % - 10-FEB-20 cis-1,3-Dichloropropene 91.4 % 50.140 10-FEB-20 Dibromochloromethane 83.0 % 50.140 10-FEB-20 Dichlorodiffuoromethane 110.2 % 50.140 10-FEB-20 Ethylbenzene 104.2 % 50.140 10-FEB-20 m+p-Xylenes 104.7 %	VOC-511-HS-WT	Water							
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Workorder: L2413925 Report Date: 13-FEB-20

Client: TERRAPROBE-BRAMPTON Page 12 of 12

11 Indell Lane

Brampton ON L6T 3Y3 Kossay Makhzoumi

Legend:

Contact:

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.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
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.

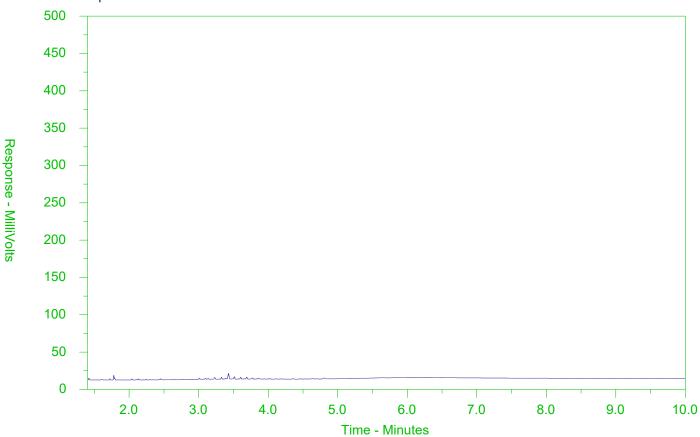
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined data quality objectives to provide 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: L2413925-1 Client Sample ID: DUP 4



← -F2-	→←	_F3F4-	→	
nC10	nC16	nC34	nC50	
174°C	287°C	481°C	575°C	
346°F	549°F	898°F	1067°F	
Gasolin	ie →	← Mo	tor 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

COC Number: 15 -

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L2413925-COFC

Are samples taken from a R YES No Are samples for human drin	Are samples taken from a Regulated DW Sy YES NO Are samples for human drinking water use?	Are samples taken from	Are samples taken from		Drinking Water												(Communication)	ALS Sample #	ALS Lab Work Ord	LSD:	PO / AFE:	Job #: 1-19-	ALS Account # / Quote #:		Contact: Lorer	Company: Terra	Сору	Invoice To Same	"		_		Phone: 905-	Contact: Koss	Company: Tem	Report To
drinking water use?	drinking water use?		NO	Are samples taken from a Regulated DW System?	Drinking Water (DW) Samples¹ (client use)											Dwp 4	(Inis description will appear on the report)	Sample Identification and/or Coordinates	ALS Lab Work Order # (lab use only)	 1 1 1 1 1 1 1 1 1 		1-19-0603-42	vte #: Q64281	Project Information	Lorena Rossi	Тептарторе	Copy of Invoice with Report	Same as Report To		Brampton	11 Indell Lane	Company address below will appear on the final report	905-796-2650	Kossay Makhzoumi	Terraprobe	Contact and company name below will appear on the final report
			_		nstructions / Spec												the report)	coordinates	が、		2	7	>				en.									final report
		7001	ハイで		Ify Criteria to ad: electr														ALS Contact:	Location:	Requisitioner	Major/Minor Code:	AFE/Cost Center:		Email 2	mail 1 or Fax	Select Invoice Distribution:		Email 3	Email 2	Email 1 or Fax	Select Distribution:	Compare Resul	Quality Control (Select Report Format:	
>		くって	TITIS HISM		Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below (electronic COC only)											e4-02-20	(dd-mmm-yy)	Date						Oil and Gas Required Fields (client use)		Email 1 or Fax lrossi@terraprobe.ca	istribution: 2 EMAIL	Invoice Distribution			kmakhzoumi@terraprobe.ca	on: 🖸 EMAIL	 Compare Results to Criteria on Report - provide details below if box checked 	륁		Report Forma.
		71	3		ding on the drop-de												(hh:mm)	Time	Sampler:			Routing Code:	PO#	d Fields (client u			WATE MATE	tribution			raprobe.ca	☐ MAIL ☐ FAX	- provide details below	ব		7
	× -			_												9W		Sample Type						se)		- 1	FAX					FAX	v if box checked	□ , ĕ	EDD (DIGITAL)	
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		LER TEM][SAMPLE CONDITION AS RECEIVED (lab use only)																				_	1		below		For tests that can not be performed according to the service level selected, you will be contacted.		Statutory holiday [E0]		Duays - III	Tandard TAT if received by 2 pm - histogram will apply	
_	-	FINAL COOLER TEMPERATURES °C	NO	N O		H	-					\dashv					L			_	_	_	_	_	_			\dashv		ted.				A Business day [54]		
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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. REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION WHITE - LABORATORY COPY YELLOW - CLIENT COPY

SIF



TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 22-NOV-19

Report Date: 29-NOV-19 13:00 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2386616
Project P.O. #: NOT SUBMITTED
Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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

ADDRESS: 5730 Coopers Avenue, Unit #26 , Mississauga, ON L4Z 2E9 Canada | Phone: +1 905 507 6910 | Fax: +1 905 507 6927 ALS CANADA LTD Part of the ALS Group An ALS Limited Company





L2386616 CONT'D....

Job Reference: 1-19-0603-42

PAGE 2 of 11

29-NOV-19 13:00 (MT)

Summary of Guideline Exceedances

Guideline						
ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

(No parameter exceedances)

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

(No parameter exceedances)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2386616 CONT'D....

Job Reference: 1-19-0603-42

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Dissolved Metals - WATER

		Lab ID Sample Date Sample ID			
Analyte	Unit	Guide #1	Limits #2		
Dissolved Metals Filtration Location		-	-	FIELD	
Antimony (Sb)-Dissolved	ug/L	20000	20000	<1.0 DLHC	
Arsenic (As)-Dissolved	ug/L	1900	1900	<1.0 DLHC	
Barium (Ba)-Dissolved	ug/L	29000	29000	44.9 DLHC	
Beryllium (Be)-Dissolved	ug/L	67	67	<1.0 DLHC	
Boron (B)-Dissolved	ug/L	45000	45000	180 DLHC	
Cadmium (Cd)-Dissolved	ug/L	2.7	2.7	< 0.050 DLHC	
Chromium (Cr)-Dissolved	ug/L	810	810	<5.0 DLHC	
Cobalt (Co)-Dissolved	ug/L	66	66	2.9 DLHC	
Copper (Cu)-Dissolved	ug/L	87	87	<2.0 DLHC	
Lead (Pb)-Dissolved	ug/L	25	25	<0.50 DLHC	
Molybdenum (Mo)-Dissolved	ug/L	9200	9200	2.10 DLHC	
Nickel (Ni)-Dissolved	ug/L	490	490	<5.0 DLHC	
Selenium (Se)-Dissolved	ug/L	63	63	<0.50 DLHC	
Silver (Ag)-Dissolved	ug/L	1.5	1.5	<0.50 DLHC	
Sodium (Na)-Dissolved	ug/L	2300000	2300000	920000 ^{DLHC}	
Thallium (TI)-Dissolved	ug/L	510	510	<0.10 DLHC	
Uranium (U)-Dissolved	ug/L	420	420	7.04 DLHC	
Vanadium (V)-Dissolved	ug/L	250	250	<5.0 DLHC	
Zinc (Zn)-Dissolved	ug/L	1100	1100	<10 DLHC	

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2386616 CONT'D....

Job Reference: 1-19-0603-42

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29-NOV-19 13:00 (MT)

Volatile Organic Compounds - WATER

Volatile Organic Compounds - WATER								
	Lab ID							
		Sample		20-NOV-19				
		Sam	ple ID	DUP1				
		0						
Amolysto	Unit	Guide #1	#2					
Analyte	Onit	<i>π</i> ι	π ∠					
Acetone	ug/L	130000	130000	<30				
Benzene	ug/L	44	430	<0.50				
Bromodichloromethane	ug/L	85000	85000	<2.0				
Bromoform	ug/L	380	770	<5.0				
Bromomethane	ug/L	5.6	56	< 0.50				
Carbon tetrachloride	ug/L	0.79	8.4	<0.20				
Chlorobenzene	ug/L	630	630	<0.50				
Dibromochloromethane	ug/L	82000	82000	<2.0				
Chloroform	ug/L	2.4	22	<1.0				
1,2-Dibromoethane	ug/L	0.25	0.83	<0.20				
1,2-Dichlorobenzene	ug/L	4600	9600	<0.50				
1,3-Dichlorobenzene	ug/L	9600	9600	<0.50				
1,4-Dichlorobenzene	ug/L	8	67	<0.50				
Dichlorodifluoromethane	ug/L	4400	4400	<2.0				
1,1-Dichloroethane	ug/L	320	3100	<0.50				
1,2-Dichloroethane	ug/L	1.6	12	0.94				
1,1-Dichloroethylene	ug/L	1.6	17	<0.50				
cis-1,2-Dichloroethylene	ug/L	1.6	17	<0.50				
trans-1,2-Dichloroethylene	ug/L	1.6	17	<0.50				
Methylene Chloride	ug/L	610	5500	<5.0				
1,2-Dichloropropane	ug/L	16	140	<0.50				
cis-1,3-Dichloropropene	ug/L	-	-	<0.30				
trans-1,3-Dichloropropene	ug/L	-	-	<0.30				
1,3-Dichloropropene (cis & trans)	ug/L	5.2	45	<0.50				
Ethylbenzene	ug/L	2300	2300	<0.50				
n-Hexane	ug/L	51	520	<0.50				
Methyl Ethyl Ketone	ug/L	470000	1500000	<20				
Methyl Isobutyl Ketone	ug/L	140000	580000	<20				
MTBE	ug/L	190	1400	<2.0				
Styrene	ug/L	1300	9100	<0.50				

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

 $^{^{\}star}$ Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2386616 CONT'D.... Job Reference: 1-19-0603-42 PAGE 5 of 11 29-NOV-19 13:00 (MT)

		L	ab ID	L2386616-1
		Sample	20-NOV-19	
		•	ple ID	DUP1
		Guide	Limits	
Analyte	Unit	#1	#2	
1,1,1,2-Tetrachloroethane	ug/L	3.3	28	<0.50
1,1,2,2-Tetrachloroethane	ug/L	3.2	15	<0.50
Tetrachloroethylene	ug/L	1.6	17	<0.50
Toluene	ug/L	18000	18000	<0.50
1,1,1-Trichloroethane	ug/L	640	6700	<0.50
1,1,2-Trichloroethane	ug/L	4.7	30	<0.50
Trichloroethylene	ug/L	1.6	17	<0.50
Trichlorofluoromethane	ug/L	2500	2500	<5.0
Vinyl chloride	ug/L	0.5	1.7	<0.50
o-Xylene	ug/L	-	-	<0.30
m+p-Xylenes	ug/L	-	-	<0.40
Xylenes (Total)	ug/L	4200	4200	<0.50
Surrogate: 4-Bromofluorobenzene	%	-	-	93.6
Surrogate: 1,4-Difluorobenzene	%	-	-	96.0

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2386616 CONT'D....

Job Reference: 1-19-0603-42

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Hydrocarbons - WATER

nyurocarbons - WATER				
			Lab ID	L2386616-1
		Sample	20-NOV-19	
		Sam	ple ID	DUP1
		Guido	Limits	
Analyta	Unit	#1	#2	
Analyte		<i>m</i> 1	π -	
F1 (C6-C10)	ug/L	750	750	<25
F1-BTEX	ug/L	750	750	<25
F2 (C10-C16)	ug/L	150	150	<100
F2-Naphth	ug/L	-	-	<100
F3 (C16-C34)	ug/L	500	500	<250
F3-PAH	ug/L	-	-	<250
F4 (C34-C50)	ug/L	500	500	<250
Total Hydrocarbons (C6-C50)	ug/L	-	-	<370
Chrom. to baseline at nC50		-	-	YES
Surrogate: 2-Bromobenzotrifluoride	%	-	-	84.3
Surrogate: 3,4-Dichlorotoluene	%	-	-	80.1

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Job Reference: 1-19-0603-42

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Polycyclic Aromatic Hydrocarbons - WATER

 Lab ID
 L2386616-1

 Sample Date
 20-NOV-19

 Sample ID
 DUP1

		Guide	Limits	
Analyte	Unit	#1	#2	
Acenaphthene	ug/L	600	1700	<0.020
Acenaphthylene	ug/L	1.8	1.8	<0.020
Anthracene	ug/L	2.4	2.4	<0.020
Benzo(a)anthracene	ug/L	4.7	4.7	<0.020
Benzo(a)pyrene	ug/L	0.81	0.81	<0.010
Benzo(b)fluoranthene	ug/L	0.75	0.75	<0.020
Benzo(g,h,i)perylene	ug/L	0.2	0.2	<0.020
Benzo(k)fluoranthene	ug/L	0.4	0.4	<0.020
Chrysene	ug/L	1	1	<0.020
Dibenzo(ah)anthracene	ug/L	0.52	0.52	<0.020
Fluoranthene	ug/L	130	130	<0.020
Fluorene	ug/L	400	400	<0.020
Indeno(1,2,3-cd)pyrene	ug/L	0.2	0.2	<0.020
1+2-Methylnaphthalenes	ug/L	1800	1800	<0.028
1-Methylnaphthalene	ug/L	1800	1800	<0.020
2-Methylnaphthalene	ug/L	1800	1800	<0.020
Naphthalene	ug/L	1400	6400	< 0.050
Phenanthrene	ug/L	580	580	<0.020
Pyrene	ug/L	68	68	<0.020
Surrogate: d10-Acenaphthene	%	-	-	93.9
Surrogate: d12-Chrysene	%	-	-	95.4
Surrogate: d8-Naphthalene	%	-	-	93.7
Surrogate: d10-Phenanthrene	%	-	-	99.7

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Job Reference: 1-19-0603-42

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Polychlorinated Biphenyls - WATER

		Sampl	Lab ID e Date iple ID	L2386616-1 20-NOV-19 DUP1	
Analyte	Unit	Guide #1	Limits #2		
Aroclor 1242	ug/L	-	-	<0.040 ^{DLM}	
Aroclor 1248	ug/L	-	-	<0.040 ^{DLM}	
Aroclor 1254	ug/L	-	-	<0.040 ^{DLM}	
Aroclor 1260	ug/L	-	-	<0.040 ^{DLM}	
Surrogate: Decachlorobiphenyl	%	-	-	49.1 RRR	
Total PCBs	ug/L	7.8	15	<0.080 ^{DLM}	
Surrogate: Tetrachloro-m-xylene	%	-	-	82.0	

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.

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Job Reference: 1-19-0603-42
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29-NOV-19 13:00 (MT)

Additional Comments for Sample Listed:

Samplenum	Matrix	Report Remarks	Sample Comments
L2386616-1	Water	Note: RRR: Surrogate recovery marginally below ALS DOO. DI's raised 2x	

Qualifiers for Individual Parameters Listed:

Qualifier	Description
DLM	Detection Limit Adjusted due to sample matrix effects (e.g. chemical interference, colour, turbidity).
DLHC	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).
RRR	Refer to Report Remarks for issues regarding this analysis

Methods Listed (if applicable):							
ALS Test Code	Matrix	Test Description	Method Reference**				
F1-F4-511-CALC-WT	Water	F1-F4 Hydrocarbon Calculated Parameters	CCME CWS-PHC, Pub #1310, Dec 2001-L				

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

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 Water F1-O.Reg 153/04 (July 2011) E3398/CCME TIER 1-HS

Fraction F1 is determined by 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 Water F2-F4-O.Reg 153/04 (July 2011) EPA 3511/CCME Tier 1

Petroleum Hydrocarbons (F2-F4 fractions) are extracted from water using a hexane micro-extraction technique. Instrumental analysis is by GC-FID, as per the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Tier 1 Method, CCME, 2001.

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-D-UG/L-MS-WT Water Diss. Metals in Water by ICPMS (ug/L) EPA 200.8

The metal constituents of a non-acidified sample that pass through a membrane filter prior to ICP/MS analysis.

L2386616 CONT'D.... Job Reference: 1-19-0603-42 PAGE 10 of 11 29-NOV-19 13:00 (MT)

Methods Listed (if applicable):

ALS Test Code Matrix **Test Description** Method Reference**

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 Water

PAH-Calculated Parameters

SW846 8270

PAH-511-WT

Water

PAH-O. Reg 153/04 (July 2011)

SW846 3510/8270

Aqueous samples, fortified with surrogates, are extracted using liquid/liquid extraction technique. The sample extracts are concentrated and then analyzed using GC/MS. Results for benzo(b) fluoranthene may include contributions from benzo(i)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

Water

PCB-O. Reg 153/04 (July 2011)

SW846 3510/8082

Aqueous samples are extracted, then concentrated, reconstituted, and analyzed by 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).

VOC-1,3-DCP-CALC-WT

Water

Regulation 153 VOCs

SW8260B/SW8270C

VOC-511-HS-WT

Water

VOC by GCMS HS O.Reg 153/04 (July SW846 8260

2011)

Liquid samples are analyzed by headspace GC/MSD.

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 Water

Sum of Xylene Isomer Concentrations CALCULATION

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

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

WT

ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

L2386616 CONT'D....
Job Reference: 1-19-0603-42
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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.



Workorder: L2386616 Report Date: 29-NOV-19 Page 1 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT	Water							
Batch R492760)2							
WG3229973-4 DUF	•	WG3229973-3			_			
F1 (C6-C10)		<25	<25	RPD-NA	ug/L	N/A	30	28-NOV-19
WG3229973-1 LCS F1 (C6-C10)	•		107.4		%		80-120	20 NOV 40
WG3229973-2 MB			107.4		70		00-120	28-NOV-19
F1 (C6-C10)			<25		ug/L		25	28-NOV-19
Surrogate: 3,4-Dichlo	rotoluene		97.6		%		60-140	28-NOV-19
WG3229973-5 MS		WG3229973-3						
F1 (C6-C10)			76.5		%		60-140	28-NOV-19
F2-F4-511-WT	Water							
Batch R492695	i 9							
WG3227562-2 LCS	i		84.9		%		70.400	00 NOV 40
F2 (C10-C16)			86.9		%		70-130	26-NOV-19
F3 (C16-C34) F4 (C34-C50)			88.3		%		70-130	26-NOV-19
WG3227562-1 MB			00.3		76		70-130	26-NOV-19
F2 (C10-C16)			<100		ug/L		100	26-NOV-19
F3 (C16-C34)			<250		ug/L		250	26-NOV-19
F4 (C34-C50)			<250		ug/L		250	26-NOV-19
Surrogate: 2-Bromobe	enzotrifluoride		79.8		%		60-140	26-NOV-19
MET-D-UG/L-MS-WT	Water							
Batch R492304	18							
WG3227021-4 DUF		WG3227021-3						
Antimony (Sb)-Dissol		<0.10	<0.10	RPD-NA	ug/L	N/A	20	25-NOV-19
Arsenic (As)-Dissolve		0.10	0.11		ug/L	2.9	20	25-NOV-19
Barium (Ba)-Dissolve		59.5	59.5		ug/L	0.1	20	25-NOV-19
Beryllium (Be)-Dissolv	/ed	<0.10	<0.10	RPD-NA	ug/L	N/A	20	25-NOV-19
Boron (B)-Dissolved		<10	<10	RPD-NA	ug/L	N/A	20	25-NOV-19
Cadmium (Cd)-Dissol		<0.0050	<0.0050	RPD-NA	ug/L	N/A	20	25-NOV-19
Chromium (Cr)-Disso		1.28	1.25		ug/L	2.9	20	25-NOV-19
Cobalt (Co)-Dissolved		<0.10	<0.10	RPD-NA	ug/L	N/A	20	25-NOV-19
Copper (Cu)-Dissolve	a	1.03	1.02		ug/L	0.4	20	25-NOV-19
Lead (Pb)-Dissolved		<0.050	<0.050	RPD-NA	ug/L	N/A	20	25-NOV-19
Molybdenum (Mo)-Dis	ssolved	0.172	0.163		ug/L	5.3	20	25-NOV-19
Nickel (Ni)-Dissolved		<0.50	<0.50	RPD-NA	ug/L	N/A	20	25-NOV-19



Workorder: L2386616 Report Date: 29-NOV-19 Page 2 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R4923048								
WG3227021-4 DUP		WG3227021-3						
Selenium (Se)-Dissolve	ed	0.104	0.101		ug/L	3.0	20	25-NOV-19
Silver (Ag)-Dissolved		<0.050	<0.050	RPD-NA	ug/L	N/A	20	25-NOV-19
Sodium (Na)-Dissolved		2030	2020		ug/L	0.6	20	25-NOV-19
Thallium (TI)-Dissolved		<0.010	<0.010	RPD-NA	ug/L	N/A	20	25-NOV-19
Uranium (U)-Dissolved		0.356	0.353		ug/L	0.9	20	25-NOV-19
Vanadium (V)-Dissolve	d	1.00	1.01		ug/L	1.3	20	25-NOV-19
Zinc (Zn)-Dissolved		2.4	2.2		ug/L	5.5	20	25-NOV-19
WG3227021-2 LCS Antimony (Sb)-Dissolve	ed		99.6		%		80-120	25-NOV-19
Arsenic (As)-Dissolved			99.4		%		80-120	25-NOV-19
Barium (Ba)-Dissolved			102.2		%		80-120	25-NOV-19
Beryllium (Be)-Dissolve	ed		101.2		%		80-120	25-NOV-19
Boron (B)-Dissolved			99.3		%		80-120	25-NOV-19
Cadmium (Cd)-Dissolve	ed		100.3		%		80-120	25-NOV-19
Chromium (Cr)-Dissolve	ed		100.4		%		80-120	25-NOV-19
Cobalt (Co)-Dissolved			99.9		%		80-120	25-NOV-19
Copper (Cu)-Dissolved			100.8		%		80-120	25-NOV-19
Lead (Pb)-Dissolved			99.9		%		80-120	25-NOV-19
Molybdenum (Mo)-Diss	olved		104.0		%		80-120	25-NOV-19
Nickel (Ni)-Dissolved			99.6		%		80-120	25-NOV-19
Selenium (Se)-Dissolve	ed		98.1		%		80-120	25-NOV-19
Silver (Ag)-Dissolved			100.4		%		80-120	25-NOV-19
Sodium (Na)-Dissolved			101.3		%		80-120	25-NOV-19
Thallium (TI)-Dissolved			99.95		%		80-120	25-NOV-19
Uranium (U)-Dissolved			99.1		%		80-120	25-NOV-19
Vanadium (V)-Dissolve	d		100.8		%		80-120	25-NOV-19
Zinc (Zn)-Dissolved			101.2		%		80-120	25-NOV-19
WG3227021-1 MB Antimony (Sb)-Dissolve	ed		<0.10		ug/L		0.1	25-NOV-19
Arsenic (As)-Dissolved			<0.10		ug/L		0.1	25-NOV-19
Barium (Ba)-Dissolved			<0.10		ug/L		0.1	25-NOV-19
Beryllium (Be)-Dissolve	d		<0.10		ug/L		0.1	25-NOV-19
Boron (B)-Dissolved			<10		ug/L		10	25-NOV-19
Cadmium (Cd)-Dissolve	ed		<0.0050		ug/L		0.005	25-NOV-19



Workorder: L2386616 Report Date: 29-NOV-19 Page 3 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R4923048								
WG3227021-1 MB								
Chromium (Cr)-Dissolv	ed		<0.50		ug/L		0.5	25-NOV-19
Cobalt (Co)-Dissolved			<0.10		ug/L		0.1	25-NOV-19
Copper (Cu)-Dissolved			<0.20		ug/L		0.2	25-NOV-19
Lead (Pb)-Dissolved			<0.050		ug/L		0.05	25-NOV-19
Molybdenum (Mo)-Diss	olved		<0.050		ug/L		0.05	25-NOV-19
Nickel (Ni)-Dissolved			<0.50		ug/L		0.5	25-NOV-19
Selenium (Se)-Dissolve	ed		<0.050		ug/L		0.05	25-NOV-19
Silver (Ag)-Dissolved			< 0.050		ug/L		0.05	25-NOV-19
Sodium (Na)-Dissolved			<50		ug/L		50	25-NOV-19
Thallium (TI)-Dissolved			<0.010		ug/L		0.01	25-NOV-19
Uranium (U)-Dissolved			<0.010		ug/L		0.01	25-NOV-19
Vanadium (V)-Dissolve	d		<0.50		ug/L		0.5	25-NOV-19
Zinc (Zn)-Dissolved			<1.0		ug/L		1	25-NOV-19
WG3227021-5 MS		WG3227021-6						
Antimony (Sb)-Dissolve	ed		102.4		%		70-130	25-NOV-19
Arsenic (As)-Dissolved			108.8		%		70-130	25-NOV-19
Barium (Ba)-Dissolved			N/A	MS-B	%		-	25-NOV-19
Beryllium (Be)-Dissolve	d		107.9		%		70-130	25-NOV-19
Boron (B)-Dissolved			99.2		%		70-130	25-NOV-19
Cadmium (Cd)-Dissolve	ed		104.8		%		70-130	25-NOV-19
Chromium (Cr)-Dissolv	ed		99.0		%		70-130	25-NOV-19
Cobalt (Co)-Dissolved			98.0		%		70-130	25-NOV-19
Copper (Cu)-Dissolved			96.1		%		70-130	25-NOV-19
Lead (Pb)-Dissolved			97.5		%		70-130	25-NOV-19
Molybdenum (Mo)-Diss	olved		105.5		%		70-130	25-NOV-19
Nickel (Ni)-Dissolved			95.6		%		70-130	25-NOV-19
Selenium (Se)-Dissolve	ed		117.8		%		70-130	25-NOV-19
Silver (Ag)-Dissolved			98.1		%		70-130	25-NOV-19
Sodium (Na)-Dissolved			97.0		%		70-130	25-NOV-19
Thallium (TI)-Dissolved			98.1		%		70-130	25-NOV-19
Uranium (U)-Dissolved			N/A	MS-B	%		-	25-NOV-19
Vanadium (V)-Dissolve	d		102.7		%		70-130	25-NOV-19
Zinc (Zn)-Dissolved			105.4		%		70-130	25-NOV-19
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PAH-511-WT Water



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

PAH-S11-WT Water Satch R492841 W63227522 CS Satural W6322752 CS Satural W6322752 CS Satural W632275	Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
### Survey	PAH-511-WT	Water							
1-Methy/naphthalene 84.9 % 50.140 27-NOV-19 2-Methy/naphthalene 78.0 % 50.140 27-NOV-19 Acenaphthene 92.7 % 50.140 27-NOV-19 Acenaphthylene 93.6 % 50.140 27-NOV-19 Anthracene 97.3 % 50.140 27-NOV-19 Benzo(a)anthracene 99.0 % 50.140 27-NOV-19 Benzo(a)apyrene 90.8 % 50.140 27-NOV-19 Benzo(b)fluoranthene 88.2 % 50.140 27-NOV-19 Benzo(k)fluoranthene 94.8 % 50.140 27-NOV-19 Benzo(k)fluoranthene 91.8 % 50.140 27-NOV-19 Benzo(k)fluoranthene 91.8 % 50.140 27-NOV-19 Chrysene 95.3 % 50.140 27-NOV-19 Dibenzo(a)fluoranthene 97.0 % 50.140 27-NOV-19 Fluoranthene 97.0 % 50.140 27-NOV-19	Batch R4928414								
2-Methyfnaphthalene 78.0 % \$0.140 27-NOV-19 Acenaphthene 92.77 % \$0.140 27-NOV-19 Acenaphthylene 93.6 % \$0.140 27-NOV-19 Anthracene 97.3 % \$0.140 27-NOV-19 Benzo(a)anthracene 99.0 % \$0.140 27-NOV-19 Benzo(a)pyrene 90.8 % \$0.140 27-NOV-19 Benzo(b)fluoranthene 88.2 % \$0.140 27-NOV-19 Benzo(k)fluoranthene 91.8 % \$0.140 27-NOV-19 Benzo(k)fluoranthene 91.8 % \$0.140 27-NOV-19 Benzo(k)fluoranthene 91.8 % \$0.140 27-NOV-19 Chrysene 98.3 % \$0.140 27-NOV-19 Benzo(k)fluoranthene 99.3 % \$0.140 27-NOV-19 Chrysene 98.3 % \$0.140 27-NOV-19 Piluoranthene 99.6 % \$0.140 27-NOV-19				940		0/.		50.440	07.1101/ 40
Acenaphthene 92.7 % \$0.140 27-NOV-19 Acanaphthylene 93.6 % \$0.140 27-NOV-19 Anthracene 97.3 % \$0.140 27-NOV-19 Benzo(a)anthracene 99.0 % \$0.140 27-NOV-19 Benzo(b)fluoranthene 88.2 % \$0.140 27-NOV-19 Benzo(gh)fiperylene 94.8 % \$0.140 27-NOV-19 Benzo(gh)fluoranthene 91.8 % \$0.140 27-NOV-19 Benzo(k)fluoranthene 91.8 % \$0.140 27-NOV-19 Benzo(k)fluoranthene 91.8 % \$0.140 27-NOV-19 Benzo(a)manthracene 99.3 % \$0.140 27-NOV-19 Dibenzo(ah)anthracene 99.0 % \$0.140 27-NOV-19 Fluoranthene 97.0 % \$0.140 27-NOV-19 Fluoranthene 99.8 % \$0.140 27-NOV-19 Naphthalene 99.8 % \$0.140 27-NOV-19									
Acenaphthylene 93.6 % 50-140 27-NOV-19 Anthracene 97.3 % 50-140 27-NOV-19 Benzo(a)anthracene 99.0 % 50-140 27-NOV-19 Benzo(a)pyrene 90.8 % 50-140 27-NOV-19 Benzo(a)pyrene 90.8 % 50-140 27-NOV-19 Benzo(g,h)perylene 94.8 % 50-140 27-NOV-19 Benzo(g,h,j)perylene 94.8 % 50-140 27-NOV-19 Benzo(g,h,j)perylene 94.8 % 50-140 27-NOV-19 Benzo(k)fluoranthene 91.8 % 50-140 27-NOV-19 Benzo(k)fluoranthene 99.3 % 50-140 27-NOV-19 Benzo(a)mithracene 98.9 % 50-140 27-NOV-19 Fluoranthene 97.0 % 50-140 27-NOV-19 Fluoranthene 97.0 % 50-140 27-NOV-19 Fluorene 94.2 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 98.6 % 50-140 27-NOV-19 Phenanthrene 98.6 % 50-140 27-NOV-19 Phenanthrene 98.6 % 50-140 27-NOV-19 Phenanthrene 98.6 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Acenaphthylaneh 0.020 ug/L 0.02 27-NOV-19 Acenaphthylene 0.020 ug/L 0.02 27-NOV-19 Acenaphthylene 0.020 ug/L 0.02 27-NOV-19 Acenaphthylene 0.020 ug/L 0.02 27-NOV-19 Benzo(a)anthracene 0.020 ug/L 0.02 27-NOV-19 Benzo(a)anthracene 0.020 ug/L 0.02 27-NOV-19 Benzo(a)phryene 0.001 ug/L 0.02 27-NOV-19 Benzo(a)phryene 0.002 ug/L 0.02 27-NOV-19 Benzo(a)phryene 0.002 ug/L 0.02 27-NOV-19 Benzo(b)fluoranthene 0.0020 ug/L 0.02 27-NOV-19 Benzo(a)phryene 0.0020 ug/L 0.02 27-NOV-19 Benzo(b)fluoranthene 0.0020 ug/L 0.02 27-NOV-19 Benzo(k)fluoranthene 0.0020 ug/L 0.02 27-NOV-19									
Anthracene 97.3 % 50-140 27-NOV-19 Benzo(a)anthracene 99.0 % 50-140 27-NOV-19 Benzo(a)pyrene 90.8 % 50-140 27-NOV-19 Benzo(b)fluoranthene 88.2 % 50-140 27-NOV-19 Benzo(b)fluoranthene 88.2 % 50-140 27-NOV-19 Benzo(k)fluoranthene 94.8 % 50-140 27-NOV-19 Benzo(k)fluoranthene 91.8 % 50-140 27-NOV-19 Chrysene 96.3 % 50-140 27-NOV-19 Chrysene 98.9 % 50-140 27-NOV-19 Dibenzo(ah)anthracene 97.0 % 50-140 27-NOV-19 Fluoranthene 97.0 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 90.8 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 90.6 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 90.6 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 90.6 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 90.0 % 50-140 27-NOV-19 In	·								
Benzo(a)anthracene 99.0									
Benzo(a)pyrene 90.8 % 50-140 27-NOV-19 Benzo(b)fluoranthene 88.2 % 50-140 27-NOV-19 Benzo(s,h)perylene 94.8 % 50-140 27-NOV-19 Benzo(k)fluoranthene 91.8 % 50-140 27-NOV-19 Chrysene 96.3 % 50-140 27-NOV-19 Dibenzo(ah)anthracene 89.9 % 50-140 27-NOV-19 Fluoranthene 97.0 % 50-140 27-NOV-19 Fluoranthene 94.2 % 50-140 27-NOV-19 Indenot(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Indenot(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Naphthalene 83.0 % 50-140 27-NOV-19 Phenanthrene 98.6 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 WG3227562-1 MB 1-Methylnaphthalene <0.020									
Benzo(b)fluoranthene 88.2 % 50-140 27-NOV-19 Benzo(g,h,i)perylene 94.8 % 50-140 27-NOV-19 Benzo(k)fluoranthene 91.8 % 50-140 27-NOV-19 Chrysene 96.3 % 50-140 27-NOV-19 Dibenzo(ah)anthracene 89.9 % 50-140 27-NOV-19 Fluoranthene 97.0 % 50-140 27-NOV-19 Fluorene 94.2 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Naphthalene 83.0 % 50-140 27-NOV-19 Naphthalene 98.6 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 WG3227562-1 MB 1 1 4 27-NOV-19 Yes 2-Methylnaphthalene <0.020	` ,								
Benzo(g,h,i)perylene 94.8 % \$0.140 27-NOV-19 Benzo(k)fluoranthene 91.8 % \$0.140 27-NOV-19 Chrysene 96.3 % \$0.140 27-NOV-19 Dibenzo(ah)anthracene 89.9 % \$0.140 27-NOV-19 Fluoranthene 97.0 % \$0.140 27-NOV-19 Fluoranthene 94.2 % \$0.140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % \$0.140 27-NOV-19 Naphthalene 83.0 % \$0.140 27-NOV-19 Phenanthrene 98.6 % \$0.140 27-NOV-19 Pyrene 97.8 % \$0.140 27-NOV-19 WG3227562-1 MB 1 1.02 27-NOV-19 YG3227562-1 MB 1 0.02 27-NOV-19 2-Methylnaphthalene <0.020									
Benzo(k)fluoranthene 91.8 % 50.140 27-NOV-19 Chrysene 96.3 % 50.140 27-NOV-19 Dibenzo(ah)anthracene 89.9 % 50.140 27-NOV-19 Fluoranthene 97.0 % 50.140 27-NOV-19 Fluorene 94.2 % 50.140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50.140 27-NOV-19 Naphthalene 83.0 % 50.140 27-NOV-19 Phenanthrene 98.6 % 50.140 27-NOV-19 Pyrene 97.8 % 50.140 27-NOV-19 Pyrene 97.8 % 50.140 27-NOV-19 WG3227562-1 MB 1-Methylnaphthalene <0.020									
Chrysene 96.3 % 50.140 27-NOV-19 Dibenzo(ah)anthracene 89.9 % 50.140 27-NOV-19 Fluoranthene 97.0 % 50.140 27-NOV-19 Fluorene 94.2 % 50.140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50.140 27-NOV-19 Naphthalene 83.0 % 50.140 27-NOV-19 Phenanthrene 98.6 % 50.140 27-NOV-19 Pyrene 97.8 % 50.140 27-NOV-19 WG3227562-1 MB 1 0.02 27-NOV-19 1-Methylnaphthalene <0.020									
Dibenzo(ah)anthracene 89.9	` ,								
Fluoranthene 97.0 % 50-140 27-NOV-19 Fluorene 94.2 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Naphthalene 83.0 % 50-140 27-NOV-19 Phenanthrene 98.6 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 WG3227562-1 MB ** 50-140 27-NOV-19 **** Hothylnaphthalene <0.020	•								
Fluorene 94.2 % 50-140 27-NOV-19 Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Naphthalene 83.0 % 50-140 27-NOV-19 Naphthalene 83.0 % 50-140 27-NOV-19 Phenanthrene 98.6 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 Pyrene 97.8 Py	, ,								
Indeno(1,2,3-cd)pyrene 99.8 % 50-140 27-NOV-19 Naphthalene 83.0 % 50-140 27-NOV-19 Phenanthrene 98.6 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 WG3227562-1 MB 1-Methylnaphthalene <0.020									
Naphthalene 83.0 % 50-140 27-NOV-19 Phenanthrene 98.6 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 WG3227562-1 MB MB 1-Methylnaphthalene 0.020 ug/L 0.02 27-NOV-19 2-Methylnaphthalene <0.020									
Phenanthrene 98.6 % 50-140 27-NOV-19 Pyrene 97.8 % 50-140 27-NOV-19 WG3227562-1 MB 1-Methylnaphthalene <0.020									
Pyrene 97.8 % 50-140 27-NOV-19 WG3227562-1 MB 1-Methylnaphthalene <0.020	•								
WG3227562-1 MB 1-Methylnaphthalene <0.020									
1-Methylnaphthalene <0.020	-			97.6		70		50-140	27-NOV-19
2-Methylnaphthalene <0.020				<0.020		ug/L		0.02	27-NOV-19
Acenaphthene <0.020	2-Methylnaphthalene			<0.020				0.02	
Acenaphthylene <0.020	Acenaphthene			<0.020		ug/L		0.02	27-NOV-19
Anthracene <0.020	Acenaphthylene			<0.020				0.02	27-NOV-19
Benzo(a)pyrene <0.010	Anthracene			<0.020				0.02	27-NOV-19
Benzo(a)pyrene <0.010	Benzo(a)anthracene			<0.020		ug/L		0.02	27-NOV-19
Benzo(g,h,i)perylene <0.020	Benzo(a)pyrene			<0.010		ug/L		0.01	
Benzo(g,h,i)perylene <0.020	Benzo(b)fluoranthene			<0.020		ug/L		0.02	27-NOV-19
Benzo(k)fluoranthene <0.020	Benzo(g,h,i)perylene			<0.020				0.02	
Chrysene <0.020 ug/L 0.02 27-NOV-19 Dibenzo(ah)anthracene <0.020				<0.020				0.02	
Dibenzo(ah)anthracene <0.020 ug/L 0.02 27-NOV-19 Fluoranthene <0.020	Chrysene			<0.020				0.02	
Fluoranthene <0.020 ug/L 0.02 27-NOV-19 Fluorene <0.020	Dibenzo(ah)anthracene			<0.020				0.02	
Fluorene <0.020 ug/L 0.02 27-NOV-19	Fluoranthene			<0.020				0.02	
	Fluorene			<0.020				0.02	
	Indeno(1,2,3-cd)pyrene							0.02	



Workorder: L2386616 Report Date: 29-NOV-19 Page 5 of 11

TERRAPROBE-BRAMPTON Client:

11 Indell Lane

Brampton ON L6T 3Y3

Kossay Makhzoumi Contact:

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Water							
Batch R492841 WG3227562-1 MB Naphthalene	4		.0.050		ua/l		0.05	27 1101/ 52
•			<0.050		ug/L		0.05	27-NOV-19
Phenanthrene			<0.020		ug/L		0.02	27-NOV-19
Pyrene			<0.020		ug/L		0.02	27-NOV-19
Surrogate: d8-Naphth			90.1		%		60-140	27-NOV-19
Surrogate: d10-Phena			97.9		%		60-140	27-NOV-19
Surrogate: d12-Chryse			93.2		%		60-140	27-NOV-19
Surrogate: d10-Acena	phthene		95.3		%		60-140	27-NOV-19
PCB-511-WT	Water							
Batch R492524								
WG3227114-2 LCS Aroclor 1242			99.3		%		60-140	26-NOV-19
Aroclor 1248			98.3		%		60-140	26-NOV-19
Aroclor 1254			111.0		%		60-140	26-NOV-19
Aroclor 1260			110.6		%		60-140	26-NOV-19
WG3227114-1 MB							00 140	201101 10
Aroclor 1242			<0.020		ug/L		0.02	26-NOV-19
Aroclor 1248			<0.020		ug/L		0.02	26-NOV-19
Aroclor 1254			<0.020		ug/L		0.02	26-NOV-19
Aroclor 1260			<0.020		ug/L		0.02	26-NOV-19
Surrogate: Decachloro	obiphenyl		80.1		%		50-150	26-NOV-19
Surrogate: Tetrachloro	o-m-xylene		78.9		%		50-150	26-NOV-19
VOC-511-HS-WT	Water							
Batch R492760	2							
WG3229973-4 DUP		WG3229973						
1,1,1,2-Tetrachloroeth		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,1,2,2-Tetrachloroeth	ane	<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,1,1-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,1,2-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,1-Dichloroethane		<0.50	< 0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,1-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,2-Dibromoethane		<0.20	<0.20	RPD-NA	ug/L	N/A	30	28-NOV-19
1,2-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,2-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,2-Dichloropropane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19



Workorder: L2386616 Report Date: 29-NOV-19 Page 6 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix Reference R		Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4927602								
WG3229973-4 DUP		WG3229973-3						
1,3-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,4-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Acetone		<30	<30	RPD-NA	ug/L	N/A	30	28-NOV-19
Benzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Bromodichloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	28-NOV-19
Bromoform		<5.0	<5.0	RPD-NA	ug/L	N/A	30	28-NOV-19
Bromomethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Carbon tetrachloride		<0.20	<0.20	RPD-NA	ug/L	N/A	30	28-NOV-19
Chlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Chloroform		<1.0	<1.0	RPD-NA	ug/L	N/A	30	28-NOV-19
cis-1,2-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
cis-1,3-Dichloropropene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	28-NOV-19
Dibromochloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	28-NOV-19
Dichlorodifluoromethane	!	<2.0	<2.0	RPD-NA	ug/L	N/A	30	28-NOV-19
Ethylbenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
n-Hexane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
m+p-Xylenes		<0.40	< 0.40	RPD-NA	ug/L	N/A	30	28-NOV-19
Methyl Ethyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	28-NOV-19
Methyl Isobutyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	28-NOV-19
Methylene Chloride		<5.0	<5.0	RPD-NA	ug/L	N/A	30	28-NOV-19
MTBE		<2.0	<2.0	RPD-NA	ug/L	N/A	30	28-NOV-19
o-Xylene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	28-NOV-19
Styrene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Tetrachloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Toluene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
trans-1,2-Dichloroethyler	ne	<0.50	< 0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
trans-1,3-Dichloroproper	ne	<0.30	< 0.30	RPD-NA	ug/L	N/A	30	28-NOV-19
Trichloroethylene		0.83	0.82		ug/L	1.2	30	28-NOV-19
Trichlorofluoromethane		<5.0	<5.0	RPD-NA	ug/L	N/A	30	28-NOV-19
Vinyl chloride		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
WG3229973-1 LCS								
1,1,1,2-Tetrachloroethan			91.9		%		70-130	28-NOV-19
1,1,2,2-Tetrachloroethan	ie		91.6		%		70-130	28-NOV-19



Workorder: L2386616 Report Date: 29-NOV-19 Page 7 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4927602								
WG3229973-1 LCS			05.0		0/		70.400	00 NOV 40
1,1,1-Trichloroethane			95.8		%		70-130	28-NOV-19
1,1,2-Trichloroethane			92.6		%		70-130	28-NOV-19
1,1-Dichloroethane			95.9		%		70-130	28-NOV-19
1,1-Dichloroethylene			92.5		%		70-130	28-NOV-19
1,2-Dibromoethane			92.5		%		70-130	28-NOV-19
1,2-Dichlorobenzene			87.7		%		70-130	28-NOV-19
1,2-Dichloroethane			97.2		%		70-130	28-NOV-19
1,2-Dichloropropane			100.4		%		70-130	28-NOV-19
1,3-Dichlorobenzene			87.2		%		70-130	28-NOV-19
1,4-Dichlorobenzene			86.5		%		70-130	28-NOV-19
Acetone			99.1		%		60-140	28-NOV-19
Benzene			100.4		%		70-130	28-NOV-19
Bromodichloromethane			97.9		%		70-130	28-NOV-19
Bromoform			91.9		%		70-130	28-NOV-19
Bromomethane			85.9		%		60-140	28-NOV-19
Carbon tetrachloride			94.9		%		70-130	28-NOV-19
Chlorobenzene			90.8		%		70-130	28-NOV-19
Chloroform			98.1		%		70-130	28-NOV-19
cis-1,2-Dichloroethylene	;		95.3		%		70-130	28-NOV-19
cis-1,3-Dichloropropene			98.1		%		70-130	28-NOV-19
Dibromochloromethane			90.8		%		70-130	28-NOV-19
Dichlorodifluoromethane	Э		80.2		%		50-140	28-NOV-19
Ethylbenzene			90.3		%		70-130	28-NOV-19
n-Hexane			89.6		%		70-130	28-NOV-19
m+p-Xylenes			89.8		%		70-130	28-NOV-19
Methyl Ethyl Ketone			94.2		%		60-140	28-NOV-19
Methyl Isobutyl Ketone			89.5		%		60-140	28-NOV-19
Methylene Chloride			96.6		%		70-130	28-NOV-19
MTBE			109.2		%		70-130	28-NOV-19
o-Xylene			90.4		%		70-130	28-NOV-19
Styrene			90.3		%		70-130	28-NOV-19
Tetrachloroethylene			88.6		%		70-130	28-NOV-19
Toluene			92.0		%		70-130	28-NOV-19



Workorder: L2386616 Report Date: 29-NOV-19 Page 8 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4927602								
WG3229973-1 LCS trans-1,2-Dichloroethyler	20		93.2		%		70.400	00 NOV 40
trans-1,3-Dichloroproper			93.2		%		70-130	28-NOV-19
	ie.						70-130	28-NOV-19
Trichloroethylene			95.6		%		70-130	28-NOV-19
Trichlorofluoromethane			92.4		%		60-140	28-NOV-19
Vinyl chloride			102.8		%		60-140	28-NOV-19
WG3229973-2 MB 1,1,1,2-Tetrachloroethan	ne		<0.50		ug/L		0.5	28-NOV-19
1,1,2,2-Tetrachloroethan			<0.50		ug/L		0.5	28-NOV-19
1,1,1-Trichloroethane			<0.50		ug/L		0.5	28-NOV-19 28-NOV-19
1,1,2-Trichloroethane			<0.50		ug/L		0.5	28-NOV-19 28-NOV-19
1,1-Dichloroethane			<0.50		ug/L		0.5	28-NOV-19
1,1-Dichloroethylene			<0.50		ug/L		0.5	28-NOV-19
1,2-Dibromoethane			<0.20		ug/L		0.2	28-NOV-19
1,2-Dichlorobenzene			<0.50		ug/L		0.5	28-NOV-19
1,2-Dichloroethane			<0.50		ug/L		0.5	28-NOV-19 28-NOV-19
1,2-Dichloropropane			<0.50		ug/L		0.5	28-NOV-19 28-NOV-19
1,3-Dichlorobenzene			<0.50		ug/L		0.5	28-NOV-19 28-NOV-19
1,4-Dichlorobenzene			<0.50		ug/L		0.5	28-NOV-19
Acetone			<30		ug/L		30	28-NOV-19
Benzene			<0.50		ug/L		0.5	28-NOV-19 28-NOV-19
Bromodichloromethane			<2.0		ug/L		2	28-NOV-19 28-NOV-19
Bromoform			<5.0		ug/L		5	28-NOV-19 28-NOV-19
Bromomethane			<0.50		ug/L		0.5	
Carbon tetrachloride			<0.20		ug/L		0.3	28-NOV-19
Chlorobenzene			<0.20		•		0.2	28-NOV-19
Chloroform			<0.50		ug/L ug/L		1	28-NOV-19
								28-NOV-19
cis-1,2-Dichloroethylene			<0.50		ug/L		0.5	28-NOV-19
cis-1,3-Dichloropropene Dibromochloromethane			<0.30 <2.0		ug/L		0.3	28-NOV-19
Dibromocnioromethane Dichlorodifluoromethane					ug/L		2	28-NOV-19
	•		<2.0		ug/L		2	28-NOV-19
Ethylbenzene			<0.50		ug/L		0.5	28-NOV-19
n-Hexane			<0.50		ug/L		0.5	28-NOV-19
m+p-Xylenes			<0.40		ug/L		0.4	28-NOV-19
Methyl Ethyl Ketone			<20		ug/L		20	28-NOV-19



Workorder: L2386616 Report Date: 29-NOV-19 Page 9 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4927602								
WG3229973-2 MB			00				00	
Methyl Isobutyl Ketone			<20		ug/L		20	28-NOV-19
Methylene Chloride			<5.0		ug/L		5	28-NOV-19
MTBE			<2.0		ug/L		2	28-NOV-19
o-Xylene			<0.30		ug/L		0.3	28-NOV-19
Styrene			<0.50		ug/L		0.5	28-NOV-19
Tetrachloroethylene			<0.50		ug/L		0.5	28-NOV-19
Toluene			<0.50		ug/L		0.5	28-NOV-19
trans-1,2-Dichloroethyle			<0.50		ug/L		0.5	28-NOV-19
trans-1,3-Dichloroprope	ene		<0.30		ug/L		0.3	28-NOV-19
Trichloroethylene			<0.50		ug/L		0.5	28-NOV-19
Trichlorofluoromethane			<5.0		ug/L		5	28-NOV-19
Vinyl chloride			<0.50		ug/L		0.5	28-NOV-19
Surrogate: 1,4-Difluorol			96.6		%		70-130	28-NOV-19
Surrogate: 4-Bromofluo	robenzene		93.1		%		70-130	28-NOV-19
WG3229973-5 MS 1,1,1,2-Tetrachloroetha	ine	WG3229973-3	91.8		%		50-140	28-NOV-19
1,1,2,2-Tetrachloroetha			82.3		%		50-140	28-NOV-19
1,1,1-Trichloroethane			99.0		%		50-140	28-NOV-19
1,1,2-Trichloroethane			88.0		%		50-140	28-NOV-19
1,1-Dichloroethane			100.5		%		50-140	28-NOV-19
1,1-Dichloroethylene			94.4		%		50-140	28-NOV-19
1,2-Dibromoethane			85.8		%		50-140	28-NOV-19
1,2-Dichlorobenzene			88.0		%		50-140	28-NOV-19
1,2-Dichloroethane			92.3		%		50-140	28-NOV-19
1,2-Dichloropropane			98.1		%		50-140	28-NOV-19
1,3-Dichlorobenzene			90.0		%		50-140	28-NOV-19
1,4-Dichlorobenzene			88.3		%		50-140	28-NOV-19
Acetone			92.8		%		50-140	28-NOV-19
Benzene			99.98		%		50-140	28-NOV-19
Bromodichloromethane	:		95.7		%		50-140	28-NOV-19
Bromoform			85.1		%		50-140	28-NOV-19
Bromomethane			80.1		%		50-140	28-NOV-19
Carbon tetrachloride			99.9		%		50-140	28-NOV-19
Chlorobenzene			90.7		%		50-140	28-NOV-19
							00 140	20 140 V 10



Workorder: L2386616 Report Date: 29-NOV-19 Page 10 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R492760)2							
WG3229973-5 MS		WG3229973						
Chloroform			98.3		%		50-140	28-NOV-19
cis-1,2-Dichloroethyle	ne		94.5		%		50-140	28-NOV-19
cis-1,3-Dichloroprope	ne		90.6		%		50-140	28-NOV-19
Dibromochlorometha	ne		87.1		%		50-140	28-NOV-19
Dichlorodifluorometha	ine		79.2		%		50-140	28-NOV-19
Ethylbenzene			93.6		%		50-140	28-NOV-19
n-Hexane			91.9		%		50-140	28-NOV-19
m+p-Xylenes			92.6		%		50-140	28-NOV-19
Methyl Ethyl Ketone			75.0		%		50-140	28-NOV-19
Methyl Isobutyl Keton	е		76.4		%		50-140	28-NOV-19
Methylene Chloride			94.0		%		50-140	28-NOV-19
MTBE			109.1		%		50-140	28-NOV-19
o-Xylene			92.2		%		50-140	28-NOV-19
Styrene			88.7		%		50-140	28-NOV-19
Tetrachloroethylene			92.9		%		50-140	28-NOV-19
Toluene			94.2		%		50-140	28-NOV-19
trans-1,2-Dichloroeth	/lene		93.6		%		50-140	28-NOV-19
trans-1,3-Dichloropro	pene		83.4		%		50-140	28-NOV-19
Trichloroethylene			98.1		%		50-140	28-NOV-19
Trichlorofluoromethar	ne		95.2		%		50-140	28-NOV-19
Vinyl chloride			101.7		%		50-140	28-NOV-19

Workorder: L2386616 Report Date: 29-NOV-19

Client: TERRAPROBE-BRAMPTON Page 11 of 11

11 Indell Lane

Brampton ON L6T 3Y3 Kossay Makhzoumi

Legend:

Contact:

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
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
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.

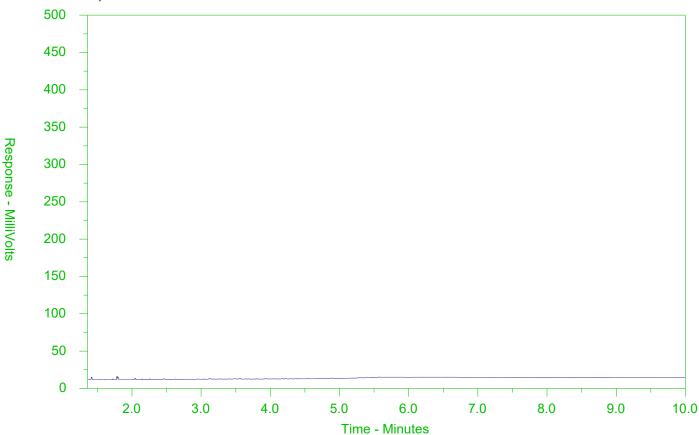
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined data quality objectives to provide 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: L2386616-1 Client Sample ID: DUP1



← -F2-	→←	_F3 → F4-	→	
nC10	nC16	nC34	nC50	
174°C	287°C	481°C	575°C	
346°F	549°F	898°F	1067°F	
Gasolin	ie →	← Mo	tor 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**



L2386616-COFC

COC Number: 15 -

Canada Toll Free: 1 800 668 9878

	www.alsglobal.com	<u>!</u>								Select Service Level Below - Please confirm all E&P TATs with your AM - surcharges will apply												
Report To	Contact and compa	any name below will ap	pear on the final repo	rt		Report Format	/ Distribution		Select	Service L	evel Bel						_					
Company:	Terraprobe				Select Report Fo	ormat: 🗸 PDF	☑ EXCEL ☐ E	DD (DIGITAL)	L	Re	gular	[R] [√ Star	ndard T/	AT if re	_	_			ys - no s		
Contact:	Kossay Makhzoumi				Quality Control (QC) Report with Re	eport 🗹 YES	□ NO	, (2)	4	day [P	4]			¥C	1	Busir	ness (lay [E	1]		
Phone:	905-796-2650				Compare Resul	ts to Criteria on Report			NO ST	3	day [P	3]			EMERGENC					nd or		o 1
	Company address below	will appear on the fina	l report		Select Distribution	on: 🗸 EMAIL	MAIL 🗌	FAX	2 day [P2]													
Street:	11 Indell Lane				Email 1 or Fax	kmakhzoumi@terr	aprobe.ca		Date and Time Required for all E&P TATs: For tests that can not be performed according to the service level selected, you will be contacted.													
City/Province:	Brampton				Email 2				For tes	ts that ca	n not be	perform	ned acco	rding to	the ser	vice lev	el selec	ted, yo	will be	contacte	d.	
Postal Code:	L6T 3Y3				Email 3				Analysis Request													
Invoice To	Same as Report To	☐ YES	☑ NO			Invoice Di	stribution		Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below													
	Copy of Invoice with Re	th Report YES V NO Select Invoice Distribution: V EMAIL						FAX														
Company:	Теггаргове				Email 1 or Fax	Irossi@terraprobe.	ca															
Contact:	Lorena Rossi				Email 2				1										ļ	Ì		ε
	Project	Information			Oil	and Gas Require	d Fields (client u	ıse)	1												- 1	ine.
ALS Account #	/ Quote #:	Q62481			AFE/Cost Center:	-	PO#]									1				ont
Job #:	1-19-0603-42				Major/Minor Code:		Routing Code:														- 1	of C
PO / AFE:					Requisitioner:				_ ا		<u>s</u>											ber
LSD:			Location:				and Inorganics		Metals			İ								Number of Containers		
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ALS Lab Woi	ALS Lab Work Order # (lab use only) \[\] 386616 \[\]				ALS Contact: Sampler:				D E		Forming						OC Pesticides		ľ			
ALS Sample #	Sa	mple Identificatio		nates		Date	Time	Sample Type	/etals	Metals	Hyride F		ا ہر ا	_	ا ن ا	ပ	Pes	PCBs				
(lab use only)	(Т	his description will	appear on the re	port)		(dd-mmm-yy)	(hh:mm)	Sample Type	ξ	Σ	Ţ	<u>П</u>	SAR	PAH	voc	PHC	8	8	_			
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Drinking	Water (DW) Samples ¹	(client use)	Special Instruc	tions / Sp		idd on report by clic tronic COC only)	king on the drop-	down list below	Froze			SAM	PLE C	UNDI			vation		an us Yes	e only)	No	
Ara samples take					(8180)	tionic coc only)		_	4	acks	风		Cubes	А	• -			act		_	No	ä
Are samples taken from a Regulated DW System?					110-		0.01			acks ing Initi			,upe3	4	Just	ouy S	car III	aut	169		140	ш
Are samples for human drinking water use?				MEC	P T3	KPI			•		OLER T	EMPER	ATURES	s °C		1	FINA	L COOL	ER TEM	PERAT	URES °C	
i i								7	3			_,,	<u> </u>	-		u >						
YES NO				INITIAL CHIRMENT DECEDTION (lab use only)				10X	<u>. U</u>	1	1	FI	NAL S	HIPM	ENT	_ '	PTIO	N (lah	use or	nlv)		
SHIPMENT RELEASE (client use) Released by: Kossay Makhzoumi Date: Time:			INITIAL SHIPMENT RECEPTION (lab use only) Date: Date:			y) FINAL SHIPMENT RECEPTION (lab use						Гime:										
	eleased by: Kossay Makhzoumi Date: Time				Necesived by 92/19			1Mam /-						Date: Time: 14,30			14,30					

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY YELLOW - CLIENT COPY

OCTOBER 2015 FRONT



TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 22-NOV-19

Report Date: 28-NOV-19 10:04 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2386581

Project P.O. #: NOT SUBMITTED

Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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

ADDRESS: 5730 Coopers Avenue, Unit #26 , Mississauga, ON L4Z 2E9 Canada | Phone: +1 905 507 6910 | Fax: +1 905 507 6927 ALS CANADA LTD Part of the ALS Group An ALS Limited Company





L2386581 CONT'D....

Job Reference: 1-19-0603-42

PAGE 2 of 5

28-NOV-19 10:04 (MT)

Summary of Guideline Exceedances

Guideline						
ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

(No parameter exceedances)

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

(No parameter exceedances)



L2386581 CONT'D....

Job Reference: 1-19-0603-42

PAGE 3 of 5

28-NOV-19 10:04 (MT)

Volatile Organic Compounds - WATER

Lab ID	L2386581-1
Sample Date	20-NOV-19
Sample ID	TRIP BLANK

	Unit	Guide	Limits #2	
Analyte	Offic	#1	#2	
Acetone	ug/L	130000	130000	<30
Benzene	ug/L	44	430	<0.50
Bromodichloromethane	ug/L	85000	85000	<2.0
Bromoform	ug/L	380	770	<5.0
Bromomethane	ug/L	5.6	56	<0.50
Carbon tetrachloride	ug/L	0.79	8.4	<0.20
Chlorobenzene	ug/L	630	630	< 0.50
Dibromochloromethane	ug/L	82000	82000	<2.0
Chloroform	ug/L	2.4	22	<1.0
1,2-Dibromoethane	ug/L	0.25	0.83	<0.20
1,2-Dichlorobenzene	ug/L	4600	9600	<0.50
1,3-Dichlorobenzene	ug/L	9600	9600	<0.50
1,4-Dichlorobenzene	ug/L	8	67	<0.50
Dichlorodifluoromethane	ug/L	4400	4400	<2.0
1,1-Dichloroethane	ug/L	320	3100	<0.50
1,2-Dichloroethane	ug/L	1.6	12	<0.50
1,1-Dichloroethylene	ug/L	1.6	17	<0.50
cis-1,2-Dichloroethylene	ug/L	1.6	17	<0.50
trans-1,2-Dichloroethylene	ug/L	1.6	17	<0.50
Methylene Chloride	ug/L	610	5500	<5.0
1,2-Dichloropropane	ug/L	16	140	< 0.50
cis-1,3-Dichloropropene	ug/L	-	-	< 0.30
trans-1,3-Dichloropropene	ug/L	-	-	< 0.30
1,3-Dichloropropene (cis & trans)	ug/L	5.2	45	< 0.50
Ethylbenzene	ug/L	2300	2300	<0.50
n-Hexane	ug/L	51	520	<0.50
Methyl Ethyl Ketone	ug/L	470000	1500000	<20
Methyl Isobutyl Ketone	ug/L	140000	580000	<20
MTBE	ug/L	190	1400	<2.0
Styrene	ug/L	1300	9100	<0.50

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)



Analyte

Toluene

1,1,1,2-Tetrachloroethane1,1,2,2-TetrachloroethaneTetrachloroethylene

1,1,1-Trichloroethane 1,1,2-Trichloroethane Trichloroethylene

Trichlorofluoromethane

Surrogate: 4-Bromofluorobenzene

Surrogate: 1,4-Difluorobenzene

Vinyl chloride

m+p-Xylenes

Xylenes (Total)

o-Xylene

ANALYTICAL REPORT

L2386581 CONT'D....

Job Reference: 1-19-0603-42

PAGE 4 of 5

28-NOV-19 10:04 (MT)

Volatile Organic Compounds - WATER

	L	ab ID	L2386581-1
	Sample	Date	20-NOV-19
	Sam	ple ID	TRIP BLANK
	Guide		
Unit	#1	#2	
ug/L	3.3	28	<0.50
ug/L	3.2	15	<0.50
ug/L	1.6	17	<0.50
ug/L	18000	18000	<0.50
ug/L	640	6700	<0.50
ug/L	4.7	30	< 0.50

17

2500

1.7

4200

< 0.50

<5.0

< 0.50

< 0.30

< 0.40

< 0.50

89.3

95.6

1.6

2500

0.5

4200

ug/L

ug/L

ug/L

ug/L

ug/L

ug/L

%

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

L2386581 CONT'D....
Job Reference: 1-19-0603-42
PAGE 5 of 5
28-NOV-19 10:04 (MT)

Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

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

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

Liquid samples are analyzed by headspace GC/MSD.

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 Water 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

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.



Workorder: L2386581 Report Date: 28-NOV-19 Page 1 of 6

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4927	488							
	UP	WG3225887			//			
1,1,1,2-Tetrachloro		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,1,2,2-Tetrachloro		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,1,1-Trichloroetha		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,1,2-Trichloroetha	ne	<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,1-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,1-Dichloroethylen		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,2-Dibromoethane		<0.20	<0.20	RPD-NA	ug/L	N/A	30	28-NOV-19
1,2-Dichlorobenzen		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,2-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,2-Dichloropropan		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,3-Dichlorobenzen		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
1,4-Dichlorobenzen	e	<0.50	< 0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Acetone		<30	<30	RPD-NA	ug/L	N/A	30	28-NOV-19
Benzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Bromodichlorometh	nane	<2.0	<2.0	RPD-NA	ug/L	N/A	30	28-NOV-19
Bromoform		<5.0	<5.0	RPD-NA	ug/L	N/A	30	28-NOV-19
Bromomethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Carbon tetrachloride	e	<0.20	<0.20	RPD-NA	ug/L	N/A	30	28-NOV-19
Chlorobenzene		<0.50	< 0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Chloroform		<1.0	<1.0	RPD-NA	ug/L	N/A	30	28-NOV-19
cis-1,2-Dichloroethy	/lene	<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
cis-1,3-Dichloroprop	pene	<0.30	<0.30	RPD-NA	ug/L	N/A	30	28-NOV-19
Dibromochlorometh	nane	<2.0	<2.0	RPD-NA	ug/L	N/A	30	28-NOV-19
Dichlorodifluoromet	hane	<2.0	<2.0	RPD-NA	ug/L	N/A	30	28-NOV-19
Ethylbenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
n-Hexane		<0.50	< 0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
m+p-Xylenes		<0.40	<0.40	RPD-NA	ug/L	N/A	30	28-NOV-19
Methyl Ethyl Ketone)	<20	<20	RPD-NA	ug/L	N/A	30	28-NOV-19
Methyl Isobutyl Keto	one	<20	<20	RPD-NA	ug/L	N/A	30	28-NOV-19
Methylene Chloride		<5.0	<5.0	RPD-NA	ug/L	N/A	30	28-NOV-19
MTBE		<2.0	<2.0	RPD-NA	ug/L	N/A	30	28-NOV-19
o-Xylene		<0.30	< 0.30	RPD-NA	ug/L	N/A	30	28-NOV-19
Styrene		<0.50	<0.50		ug/L			28-NOV-19
İ								



Workorder: L2386581 Report Date: 28-NOV-19 Page 2 of 6

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R492748	8							
WG3225887-4 DUP	1	WG3225887-		DD2 ***	/!		00	aa 11017 : -
Styrene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Tetrachloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Toluene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
trans-1,2-Dichloroethy		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
trans-1,3-Dichloroprop	pene	<0.30	<0.30	RPD-NA	ug/L	N/A	30	28-NOV-19
Trichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
Trichlorofluoromethan	е	<5.0	<5.0	RPD-NA	ug/L	N/A	30	28-NOV-19
Vinyl chloride		<0.50	<0.50	RPD-NA	ug/L	N/A	30	28-NOV-19
WG3225887-1 LCS 1,1,1,2-Tetrachloroeth			90.9		%		70-130	28-NOV-19
1,1,2,2-Tetrachloroeth	ane		89.0		%		70-130	28-NOV-19
1,1,1-Trichloroethane			96.9		%		70-130	28-NOV-19
1,1,2-Trichloroethane			89.3		%		70-130	28-NOV-19
1,1-Dichloroethane			94.8		%		70-130	28-NOV-19
1,1-Dichloroethylene			94.9		%		70-130	28-NOV-19
1,2-Dibromoethane			88.1		%		70-130	28-NOV-19
1,2-Dichlorobenzene			87.4		%		70-130	28-NOV-19
1,2-Dichloroethane			96.2		%		70-130	28-NOV-19
1,2-Dichloropropane			99.3		%		70-130	28-NOV-19
1,3-Dichlorobenzene			90.2		%		70-130	28-NOV-19
1,4-Dichlorobenzene			90.8		%		70-130	28-NOV-19
Acetone			99.5		%		60-140	28-NOV-19
Benzene			98.6		%		70-130	28-NOV-19
Bromodichloromethan	е		98.0		%		70-130	28-NOV-19
Bromoform			89.3		%		70-130	28-NOV-19
Bromomethane			89.9		%		60-140	28-NOV-19
Carbon tetrachloride			97.3		%		70-130	28-NOV-19
Chlorobenzene			88.7		%		70-130	28-NOV-19
Chloroform			95.7		%		70-130	28-NOV-19
cis-1,2-Dichloroethyler	ne		93.3		%		70-130	28-NOV-19
cis-1,3-Dichloroproper	ne		101.1		%		70-130	28-NOV-19
Dibromochloromethan	ie		88.7		%		70-130	28-NOV-19
Dichlorodifluorometha	ne		87.8		%		50-140	28-NOV-19



Workorder: L2386581 Report Date: 28-NOV-19 Page 3 of 6

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Satch R492748 Waster Satch R492748 W63225837-2 LCS Ethythenzene 90.7 % 70-130 28-NOV.19 1-Hexane 92.4 % 70-130 28-NOV.19 1-Hexane 92.4 % 70-130 28-NOV.19 1-Hexane 92.1 % 70-130 28-NOV.19 1-Hexane 94.3 % 60-140 28-NOV.19 1-Hexane 94.3 % 60-140 28-NOV.19 1-Hexane 94.0 % 70-130 28-NOV.19 1-Hexane 94.0 % 70-130 28-NOV.19 1-Hexane 94.0 % 70-130 28-NOV.19 1-Hexane 94.0 % 70-130 28-NOV.19 1-Hexane 94.0 % 70-130 28-NOV.19 1-Hexane 95.6 % 70-130 28-NOV.19 1-Hexane 95.6 % 70-130 28-NOV.19 1-Hexane 96.6 % 70-130 28-NOV.19 1-Hexane 96.6 % 70-130 28-NOV.19 1-Hexane 96.2 % 70-130 28-NOV.19 1-Hexane 96.2 % 70-130 28-NOV.19 1-Hexane 96.2 % 70-130 28-NOV.19 1-Hexane 96.2 % 70-130 28-NOV.19 1-Hexane 96.2 % 70-130 28-NOV.19 1-Hexane 96.2 % 70-130 28-NOV.19 1-Hexane 96.4 % 70-130 28-NOV.19 1-Hexane 97.5 % 60-140 28-NOV.19 1-Hexane 97.5 % 97.5 % 97.5 % 97.5 % 97.5 % 97.5 % 97.5	Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
Big Stands (Section of Ethylbenzane) 90.7 % 70-130 28-NOV-19 n-Hexane 92.4 % 70-130 28-NOV-19 m+p-Xylenes 92.1 % 70-130 28-NOV-19 Methyl Ethyl Ketone 94.3 % 60-140 28-NOV-19 Methyl Ethyl Ketone 94.0 % 60-140 28-NOV-19 Methyl Isobutyl Ketone 94.0 % 70-130 28-NOV-19 Methylene Chloride 94.0 % 70-130 28-NOV-19 MTDE 112.4 % 70-130 28-NOV-19 o-Xylene 90.4 % 70-130 28-NOV-19 Styrene 95.6 % 70-130 28-NOV-19 Tetrachloroethylene 91.3 % 70-130 28-NOV-19 Toluene 89.0 % 70-130 28-NOV-19 trans-1,2-Dichloroethylene 92.4 % 70-130 28-NOV-19 Trichloroethylene 92.4 % 70-130 28-NOV-19	VOC-511-HS-WT	Water							
Ethybenzene 90.7 % 70-130 28-NOV-19 n-Hexane 92.4 % 70-130 28-NOV-19 m+p-Xylenes 92.1 % 70-130 28-NOV-19 Methyl Ethyl Ketone 94.3 % 60-140 28-NOV-19 Methyl Ethyl Ketone 90.7 % 60-140 28-NOV-19 Methyl Recommend 94.0 % 70-130 28-NOV-19 Methylene Chloride 94.0 % 70-130 28-NOV-19 MTBE 112.4 % 70-130 28-NOV-19 O-Xylene 90.4 % 70-130 28-NOV-19 Styrene 95.6 % 70-130 28-NOV-19 Tetrachloroethylene 91.3 % 70-130 28-NOV-19 trans-1,2-Dichlororethylene 96.2 % 70-130 28-NOV-19 trans-1,2-Dichlororethylene 96.2 % 70-130 28-NOV-19 Trichloroethylene 96.2 % 70-130 28-NOV-19 Tric	Batch R4927488								
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Vinyl chloride 107.4 % 60-140 28-NOV-19 WG3225887-2 MB MB MG3225887-2 MB 1,1,1,2-Tetrachloroethane <0.50	•								
WG3225887-2 MB 1,1,1,2-Tetrachloroethane <0.50									
1,1,1,2-Tetrachloroethane <0.50	-			107.4		70		00-140	26-NOV-19
1,1,2,2-Tetrachloroethane <0.50		e		<0.50		ug/L		0.5	28-NOV-19
1,1,2-Trichloroethane <0.50				<0.50				0.5	
1,1,2-Trichloroethane <0.50	1,1,1-Trichloroethane			<0.50		ug/L		0.5	28-NOV-19
1,1-Dichloroethylene <0.50	1,1,2-Trichloroethane			<0.50		ug/L		0.5	
1,2-Dibromoethane <0.20	1,1-Dichloroethane			<0.50		ug/L		0.5	28-NOV-19
1,2-Dichlorobenzene <0.50	1,1-Dichloroethylene			<0.50		ug/L		0.5	28-NOV-19
1,2-Dichlorobenzene <0.50	1,2-Dibromoethane			<0.20		ug/L		0.2	28-NOV-19
1,2-Dichloroethane <0.50	1,2-Dichlorobenzene			<0.50		ug/L		0.5	
1,3-Dichlorobenzene <0.50	1,2-Dichloroethane			<0.50		ug/L		0.5	
1,4-Dichlorobenzene <0.50	1,2-Dichloropropane			<0.50		ug/L		0.5	28-NOV-19
Acetone <30	1,3-Dichlorobenzene			<0.50		ug/L		0.5	28-NOV-19
Benzene <0.50 ug/L 0.5 28-NOV-19 Bromodichloromethane <2.0	1,4-Dichlorobenzene			<0.50		ug/L		0.5	28-NOV-19
Benzene <0.50 ug/L 0.5 28-NOV-19 Bromodichloromethane <2.0	Acetone			<30		ug/L		30	
Bromodichloromethane <2.0 ug/L 2 28-NOV-19 Bromoform <5.0	Benzene			<0.50		ug/L		0.5	28-NOV-19
Bromoform <5.0 ug/L 5 28-NOV-19	Bromodichloromethane			<2.0		ug/L		2	
	Bromoform			<5.0		ug/L		5	
	Bromomethane			<0.50				0.5	



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R492748	88							
WG3225887-2 MB			.0.00		//		0.2	
Carbon tetrachloride			<0.20		ug/L		0.2	28-NOV-19
Chlorobenzene			<0.50		ug/L		0.5	28-NOV-19
Chloroform			<1.0		ug/L		1	28-NOV-19
cis-1,2-Dichloroethyle			<0.50		ug/L		0.5	28-NOV-19
cis-1,3-Dichloroprope			<0.30		ug/L		0.3	28-NOV-19
Dibromochloromethar			<2.0		ug/L		2	28-NOV-19
Dichlorodifluorometha	ine		<2.0		ug/L		2	28-NOV-19
Ethylbenzene			<0.50		ug/L		0.5	28-NOV-19
n-Hexane			<0.50		ug/L		0.5	28-NOV-19
m+p-Xylenes			<0.40		ug/L		0.4	28-NOV-19
Methyl Ethyl Ketone			<20		ug/L		20	28-NOV-19
Methyl Isobutyl Keton	е		<20		ug/L		20	28-NOV-19
Methylene Chloride			<5.0		ug/L		5	28-NOV-19
MTBE			<2.0		ug/L		2	28-NOV-19
o-Xylene			<0.30		ug/L		0.3	28-NOV-19
Styrene			<0.50		ug/L		0.5	28-NOV-19
Tetrachloroethylene			<0.50		ug/L		0.5	28-NOV-19
Toluene			<0.50		ug/L		0.5	28-NOV-19
trans-1,2-Dichloroethy			<0.50		ug/L		0.5	28-NOV-19
trans-1,3-Dichloroprop	pene		<0.30		ug/L		0.3	28-NOV-19
Trichloroethylene			<0.50		ug/L		0.5	28-NOV-19
Trichlorofluoromethan	ne		<5.0		ug/L		5	28-NOV-19
Vinyl chloride			<0.50		ug/L		0.5	28-NOV-19
Surrogate: 1,4-Difluor	obenzene		96.7		%		70-130	28-NOV-19
Surrogate: 4-Bromoflu	uorobenzene		91.3		%		70-130	28-NOV-19
WG3225887-5 MS		WG3225887-3			0/			
1,1,1,2-Tetrachloroeth			91.4		%		50-140	28-NOV-19
1,1,2,2-Tetrachloroeth			92.7		%		50-140	28-NOV-19
1,1,1-Trichloroethane			96.8		%		50-140	28-NOV-19
1,1,2-Trichloroethane			91.4		%		50-140	28-NOV-19
1,1-Dichloroethane			96.8		%		50-140	28-NOV-19
1,1-Dichloroethylene			94.2		%		50-140	28-NOV-19
1,2-Dibromoethane			90.5		%		50-140	28-NOV-19
1,2-Dichlorobenzene			87.7		%		50-140	28-NOV-19



Workorder: L2386581 Report Date: 28-NOV-19 Page 5 of 6

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4927488								
WG3225887-5 MS		WG3225887-						
1,2-Dichloroethane			100.5		%		50-140	28-NOV-19
1,2-Dichloropropane			101.6		%		50-140	28-NOV-19
1,3-Dichlorobenzene			88.2		%		50-140	28-NOV-19
1,4-Dichlorobenzene			89.5		%		50-140	28-NOV-19
Acetone			109.0		%		50-140	28-NOV-19
Benzene			99.6		%		50-140	28-NOV-19
Bromodichloromethane			101.1		%		50-140	28-NOV-19
Bromoform			92.4		%		50-140	28-NOV-19
Bromomethane			88.7		%		50-140	28-NOV-19
Carbon tetrachloride			96.8		%		50-140	28-NOV-19
Chlorobenzene			88.5		%		50-140	28-NOV-19
Chloroform			97.6		%		50-140	28-NOV-19
cis-1,2-Dichloroethylene			95.0		%		50-140	28-NOV-19
cis-1,3-Dichloropropene			99.6		%		50-140	28-NOV-19
Dibromochloromethane			90.7		%		50-140	28-NOV-19
Dichlorodifluoromethane)		84.2		%		50-140	28-NOV-19
Ethylbenzene			88.2		%		50-140	28-NOV-19
n-Hexane			90.5		%		50-140	28-NOV-19
m+p-Xylenes			90.1		%		50-140	28-NOV-19
Methyl Ethyl Ketone			93.9		%		50-140	28-NOV-19
Methyl Isobutyl Ketone			96.2		%		50-140	28-NOV-19
Methylene Chloride			96.3		%		50-140	28-NOV-19
MTBE			112.2		%		50-140	28-NOV-19
o-Xylene			88.4		%		50-140	28-NOV-19
Styrene			93.8		%		50-140	28-NOV-19
Tetrachloroethylene			88.5		%		50-140	28-NOV-19
Toluene			87.3		%		50-140	28-NOV-19
trans-1,2-Dichloroethyle	ne		96.0		%		50-140	28-NOV-19
trans-1,3-Dichloroproper	ne		89.9		%		50-140	28-NOV-19
Trichloroethylene			95.5		%		50-140	28-NOV-19
Trichlorofluoromethane			96.2		%		50-140	28-NOV-19
Vinyl chloride			105.0		%		50-140	28-NOV-19
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Workorder: L2386581 Report Date: 28-NOV-19

Client: TERRAPROBE-BRAMPTON Page 6 of 6

11 Indell Lane

Brampton ON L6T 3Y3 Kossay Makhzoumi

Contact: Kossay Makhzoum

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 predetermined 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.

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Chain of Custody (COC) / Analytical Request Form

L2386581-COFC

COC Number: 15 -

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Canada Toll Free: 1 800 668 9878 www.alsglobal.com Contact and company name below will appear on the final report Report Format / Distribution Report To Company: Terraprobe Select Report Format: PDF EXCEL EDD (DIGITAL) Regular [R] ☑ Standard TAT if received by 3 pm - business days - no surcharges apply Contact: Kossay Makhzoumi 4 day [P4] 1 Business day (E1) 905-796-2650 Phone: Compare Results to Criteria on Report - provide details below if box checked 3 day [P3] Same Day, Weekend or Select Distribution:

EMAIL

MAIL

FAX П Statutory holiday [E0] Company address below will appear on the final report 2 day [P2] Street: 11 Indell Lane Date and Time Required for all E&P TATs: Email 1 or Fax kmakhzoumi@terraprobe.ca City/Province: Brampton Email 2 For tests that can not be performed according to the service level selected, you will be contacted. Postal Code: L6T 3Y3 Email 3 **Analysis Request** Invoice To Same as Report To ☐ YES ☑ NO Invoice Distribution Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below Copy of Invoice with Report ☐ YES ☐ NO Select Invoice Distribution: 🖸 EMAIL. 🗌 MAIL 🔲 FAX Company: Terraprobe Email 1 or Fax lrossi@terraprobe.ca Lorena Rossi Contact: Email 2 Number of Containers **Project Information** Oil and Gas Required Fields (client use) ALS Account # / Quote #: Q62481 AFE/Cost Center PO# Job #: 1-19-0603-42 Maior/Minor Code: Routing Code: PO / AFE: Requisitioner: SD: Location: ALS Lab Work Order # (lab use only) ALS Contact: Sampler: and Sample Identification and/or Coordinates ALS Sample # Date Sample Type (lab use only) (This description will appear on the report) (dd-mmm-yy) (hh:mm) BIGANIZ CW 2 20-11-14 SAMPLE CONDITION AS RECEIVED (lab use only) Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below Drinking Water (DW) Samples¹ (client use) (electronic COC only) SIF Observations No rozen Are samples taken from a Regulated DW System? XI/ П Ice Packs Ice Cubes Custody seal intact Yes ☐ YES ☐ NO Cooling Initiated П MECP T3 PPI Are samples for human drinking water use? INITIAL COOLER TEMPERATURES °C FINAL COOLER TEMPERATURES °C

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

SHIPMENT RELEASE (client use)

☐ YES ☐ NO

Released by: Kossay Makhzoumi

WHITE - LABORATORY COPY YELLOW - CLIENT COP

Received by:

INITIAL SHIPMENT RECEPTION (lab use only)

CTOBER 2015 FRONT

FINAL SHIPMENT RECEPTION (lab use only)

NOV 351/4

Received by:

Time:



TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 06-FEB-20

Report Date: 13-FEB-20 12:45 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2413931

Project P.O. #: NOT SUBMITTED

Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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

ADDRESS: 5730 Coopers Avenue, Unit #26 , Mississauga, ON L4Z 2E9 Canada | Phone: +1 905 507 6910 | Fax: +1 905 507 6927 ALS CANADA LTD Part of the ALS Group An ALS Limited Company





L2413931 CONT'D....

Job Reference: 1-19-0603-42

PAGE 2 of 5

13-FEB-20 12:45 (MT)

Summary of Guideline Exceedances

Guideline						
ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) (No parameter exceedances)

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

(No parameter exceedances)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2413931 CONT'D....

Job Reference: 1-19-0603-42

PAGE 3 of 5

13-FEB-20 12:45 (MT)

Volatile Organic Compounds - WATER

Lab ID L2413931-1
Sample Date 04-FEB-20
Sample ID TRIP BLANKS

			•	
Analyte	Unit	Guide #1	Limits #2	
Acetone	ug/L	130000	130000	<30 VOCH S
Benzene	ug/L	44	430	<0.50 ^{VOCH} s
Bromodichloromethane	ug/L	85000	85000	<2.0 VOCH s
Bromoform	ug/L	380	770	<5.0 VOCH s
Bromomethane	ug/L	5.6	56	<0.50 ^{VOCH} s
Carbon tetrachloride	ug/L	0.79	8.4	<0.20 °CH s
Chlorobenzene	ug/L	630	630	<0.50 ^{VOCH} s
Dibromochloromethane	ug/L	82000	82000	<2.0 VOCH s
Chloroform	ug/L	2.4	22	<1.0 VOCH s
1,2-Dibromoethane	ug/L	0.25	0.83	<0.20 °CH s
1,2-Dichlorobenzene	ug/L	4600	9600	<0.50 ^{VOCH} s
1,3-Dichlorobenzene	ug/L	9600	9600	<0.50 ^{VOCH} s
1,4-Dichlorobenzene	ug/L	8	67	<0.50 ^{VOCH} s
Dichlorodifluoromethane	ug/L	4400	4400	<2.0 VOCH s
1,1-Dichloroethane	ug/L	320	3100	<0.50 ^{VOCH} s
1,2-Dichloroethane	ug/L	1.6	12	<0.50 °CH s
1,1-Dichloroethylene	ug/L	1.6	17	<0.50 ^{VOCH} s
cis-1,2-Dichloroethylene	ug/L	1.6	17	<0.50 °CH s
trans-1,2-Dichloroethylene	ug/L	1.6	17	<0.50 ^{VOCH} s
Methylene Chloride	ug/L	610	5500	<5.0 VOCH s
1,2-Dichloropropane	ug/L	16	140	<0.50 ^{VOCH} s
cis-1,3-Dichloropropene	ug/L	-	-	<0.30 °CH s
trans-1,3-Dichloropropene	ug/L	-	-	<0.30 °CH s
1,3-Dichloropropene (cis & trans)	ug/L	5.2	45	<0.50
Ethylbenzene	ug/L	2300	2300	<0.50 ^{VOCH} s
n-Hexane	ug/L	51	520	<0.50 ^{VOCH} s
Methyl Ethyl Ketone	ug/L	470000	1500000	<20 VOCH
Methyl Isobutyl Ketone	ug/L	140000	580000	<20 VOCH S
MTBE	ug/L	190	1400	<2.0 VOCH S
Styrene	ug/L	1300	9100	<0.50 ^{VOCH} s

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



Analyte

Toluene

1,1,1,2-Tetrachloroethane

1,1,2,2-Tetrachloroethane

Tetrachloroethylene

1,1,1-Trichloroethane

1,1,2-Trichloroethane

Trichlorofluoromethane

Surrogate: 4-Bromofluorobenzene

Surrogate: 1,4-Difluorobenzene

Trichloroethylene

Vinyl chloride

m+p-Xylenes

Xylenes (Total)

o-Xylene

ANALYTICAL REPORT

L2413931 CONT'D....

Job Reference: 1-19-0603-42

PAGE 4 of 5

13-FEB-20 12:45 (MT)

Volatile Organic Compounds - WATER

(IEK			
	I	Lab ID	L2413931-1
	Sample	e Date	04-FEB-20
	Sam	ple ID	TRIP BLANKS
	Guide	Limite	
Unit	#1	#2	
ug/L	3.3	28	<0.50 VOCH
ug/L	3.2	15	<0.50 ^{VOCH} s
ug/L	1.6	17	<0.50 ^{VOCH} s

18000

6700

30

17

2500

1.7

4200

18000

640

4.7

1.6

2500

0.5

4200

<0.50 VOCH

<0.50 VOCH

<0.50 VOCH

<0.50 VOCH

<5.0 VOCH

<0.50 VOCH

<0.30 VOCH

<0.40 VOCH

< 0.50

91.0

99.6

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)
Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

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

Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

ug/L

ug/L

ug/L

ug/L

ug/L

ug/L

ug/L

ug/L

ug/L

%

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.

L2413931 CONT'D....
Job Reference: 1-19-0603-42
PAGE 5 of 5
13-FEB-20 12:45 (MT)

Qualifiers for Individual Parameters Listed:

Qualifier Description

VOCHS VOC analysis was conducted for a water sample that contained > 5% headspace. Results may be biased low.

Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

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

VOC-511-HS-WT Water VOC by GCMS HS O.Reg 153/04 (July SW846 8260

2011)

Liquid samples are analyzed by headspace GC/MSD.

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 Water 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

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.



Workorder: L2413931 Report Date: 13-FEB-20 Page 1 of 6

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4994	408							
	UP	WG3267588		555 MA	/1	11/0	00	
1,1,1,2-Tetrachloro		<0.50	<0.50	RPD-NA	ug/L	N/A	30	11-FEB-20
1,1,2,2-Tetrachloro		<0.50	<0.50	RPD-NA	ug/L	N/A	30	11-FEB-20
1,1,1-Trichloroethar		<0.50	<0.50	RPD-NA	ug/L	N/A	30	11-FEB-20
1,1,2-Trichloroethar	ne	<0.50	<0.50	RPD-NA	ug/L	N/A	30	11-FEB-20
1,1-Dichloroethane	_	<0.50	<0.50	RPD-NA	ug/L	N/A	30	11-FEB-20
1,1-Dichloroethylen		<0.50	<0.50	RPD-NA	ug/L	N/A	30	11-FEB-20
1,2-Dibromoethane		<0.20	<0.20	RPD-NA	ug/L	N/A	30	11-FEB-20
1,2-Dichlorobenzen	e	<0.50	<0.50	RPD-NA	ug/L	N/A	30	11-FEB-20
1,2-Dichloroethane	_	<0.50	<0.50	RPD-NA	ug/L	N/A	30	11-FEB-20
1,2-Dichloropropand		<0.50	<0.50	RPD-NA	ug/L	N/A	30	11-FEB-20
1,3-Dichlorobenzen		<0.50	<0.50	RPD-NA	ug/L	N/A	30	11-FEB-20
1,4-Dichlorobenzen	е	<0.50	<0.50	RPD-NA	ug/L	N/A	30	11-FEB-20
Acetone		<30	<30	RPD-NA	ug/L	N/A	30	11-FEB-20
Benzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	11-FEB-20
Bromodichlorometh	ane	<2.0	<2.0	RPD-NA	ug/L	N/A	30	11-FEB-20
Bromoform		<5.0	<5.0	RPD-NA	ug/L	N/A	30	11-FEB-20
Bromomethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	11-FEB-20
Carbon tetrachloride	е	<0.20	<0.20	RPD-NA	ug/L	N/A	30	11-FEB-20
Chlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	11-FEB-20
Chloroform		<1.0	<1.0	RPD-NA	ug/L	N/A	30	11-FEB-20
cis-1,2-Dichloroethy	/lene	34.1	33.1		ug/L	3.1	30	11-FEB-20
cis-1,3-Dichloroprop	pene	<0.30	< 0.30	RPD-NA	ug/L	N/A	30	11-FEB-20
Dibromochlorometh	nane	<2.0	<2.0	RPD-NA	ug/L	N/A	30	11-FEB-20
Dichlorodifluoromet	hane	<2.0	<2.0	RPD-NA	ug/L	N/A	30	11-FEB-20
Ethylbenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	11-FEB-20
n-Hexane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	11-FEB-20
m+p-Xylenes		<0.40	<0.40	RPD-NA	ug/L	N/A	30	11-FEB-20
Methyl Ethyl Ketone)	<20	<20	RPD-NA	ug/L	N/A	30	11-FEB-20
Methyl Isobutyl Keto	one	<20	<20	RPD-NA	ug/L	N/A	30	11-FEB-20
Methylene Chloride		<5.0	<5.0	RPD-NA	ug/L	N/A	30	11-FEB-20
MTBE		<2.0	<2.0	RPD-NA	ug/L	N/A	30	11-FEB-20
o-Xylene		<0.30	< 0.30	RPD-NA	ug/L	N/A	30	11-FEB-20
Styrene		<0.50	<0.50		ug/L			11-FEB-20



Workorder: L2413931 Report Date: 13-FEB-20 Page 2 of 6

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4994408	3							
WG3267588-4 DUP		WG3267588-			/1			
Styrene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	11-FEB-20
Tetrachloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	11-FEB-20
Toluene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	11-FEB-20
trans-1,2-Dichloroethyl		<0.50	<0.50	RPD-NA	ug/L	N/A	30	11-FEB-20
trans-1,3-Dichloroprop	ene	<0.30	<0.30	RPD-NA	ug/L	N/A	30	11-FEB-20
Trichloroethylene		30.9	30.3		ug/L	2.0	30	11-FEB-20
Trichlorofluoromethane	9	<5.0	<5.0	RPD-NA	ug/L	N/A	30	11-FEB-20
Vinyl chloride		7.87	7.61		ug/L	3.4	30	12-FEB-20
WG3267588-1 LCS 1,1,1,2-Tetrachloroetha	ane		109.0		%		70-130	11-FEB-20
1,1,2,2-Tetrachloroetha			100.2		%		70-130	11-FEB-20
1,1,1-Trichloroethane	uno		111.6		%		70-130	11-FEB-20
1,1,2-Trichloroethane			106.9		%		70-130	11-FEB-20
1,1-Dichloroethane			108.6		%		70-130	11-FEB-20
1,1-Dichloroethylene			110.3		%		70-130	11-FEB-20
1,2-Dibromoethane			101.3		%		70-130	11-FEB-20
1,2-Dichlorobenzene			107.7		%		70-130	11-FEB-20
1,2-Dichloroethane			102.8		%		70-130	11-FEB-20
1,2-Dichloropropane			112.2		%		70-130	11-FEB-20
1,3-Dichlorobenzene			110.6		%		70-130	11-FEB-20
1,4-Dichlorobenzene			109.3		%		70-130	11-FEB-20
Acetone			101.0		%		60-140	11-FEB-20
Benzene			113.9		%		70-130	11-FEB-20
Bromodichloromethane	е		109.4		%		70-130	11-FEB-20
Bromoform			102.2		%		70-130	11-FEB-20
Bromomethane			108.3		%		60-140	11-FEB-20
Carbon tetrachloride			112.7		%		70-130	11-FEB-20
Chlorobenzene			108.8		%		70-130	11-FEB-20
Chloroform			112.3		%		70-130	11-FEB-20
cis-1,2-Dichloroethylen	ne		110.5		%		70-130	11-FEB-20
cis-1,3-Dichloropropen	ie		117.6		%		70-130	11-FEB-20
Dibromochloromethan	е		105.9		%		70-130	11-FEB-20
Dichlorodifluoromethar	ne		134.6		%		50-140	11-FEB-20



Workorder: L2413931 Report Date: 13-FEB-20 Page 3 of 6

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4994408	3							
WG3267588-1 LCS			100.0		0/			
Ethylbenzene n-Hexane			109.8 110.4		%		70-130	11-FEB-20
m+p-Xylenes			100.4		%		70-130	11-FEB-20
Methyl Ethyl Ketone			95.5		%		70-130	11-FEB-20
Methyl Isobutyl Ketone			88.5		%		60-140 60-140	11-FEB-20
Methylene Chloride			112.9		%		70-130	11-FEB-20
MTBE			113.4		%			11-FEB-20
o-Xylene			107.8		%		70-130 70-130	11-FEB-20
Styrene			107.0		%		70-130 70-130	11-FEB-20 11-FEB-20
Tetrachloroethylene			112.9		%		70-130	11-FEB-20
Toluene			111.1		%		70-130	11-FEB-20
trans-1,2-Dichloroethyle	ene		110.8		%		70-130	11-FEB-20
trans-1,3-Dichloroprope			116.3		%		70-130	11-FEB-20
Trichloroethylene			114.6		%		70-130	11-FEB-20
Trichlorofluoromethane)		115.5		%		60-140	11-FEB-20
Vinyl chloride			135.2		%		60-140	11-FEB-20
WG3267588-2 MB							000	1112525
1,1,1,2-Tetrachloroetha	ane		< 0.50		ug/L		0.5	11-FEB-20
1,1,2,2-Tetrachloroetha	ane		< 0.50		ug/L		0.5	11-FEB-20
1,1,1-Trichloroethane			<0.50		ug/L		0.5	11-FEB-20
1,1,2-Trichloroethane			<0.50		ug/L		0.5	11-FEB-20
1,1-Dichloroethane			<0.50		ug/L		0.5	11-FEB-20
1,1-Dichloroethylene			< 0.50		ug/L		0.5	11-FEB-20
1,2-Dibromoethane			<0.20		ug/L		0.2	11-FEB-20
1,2-Dichlorobenzene			<0.50		ug/L		0.5	11-FEB-20
1,2-Dichloroethane			< 0.50		ug/L		0.5	11-FEB-20
1,2-Dichloropropane			< 0.50		ug/L		0.5	11-FEB-20
1,3-Dichlorobenzene			< 0.50		ug/L		0.5	11-FEB-20
1,4-Dichlorobenzene			< 0.50		ug/L		0.5	11-FEB-20
Acetone			<30		ug/L		30	11-FEB-20
Benzene			< 0.50		ug/L		0.5	11-FEB-20
Bromodichloromethane)		<2.0		ug/L		2	11-FEB-20
Bromoform			<5.0		ug/L		5	11-FEB-20
Bromomethane			< 0.50		ug/L		0.5	11-FEB-20



Workorder: L2413931 Report Date: 13-FEB-20 Page 4 of 6

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Note	Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
Carbon tetrachloride	VOC-511-HS-WT	Water							
Carbon tetrachloride	Batch R4994408								
Chlorobenzene				-0.20		ug/l		0.2	44 FED 00
Chloroform									_
Cis-1,2-Dichloroethylene <0.50									
Cis-1,3-Dichloropropene <0.30									
Dibromochloromethane <2.0 ug/L 2 11-FEB-20	•								
Dichlorodifluoromethane <2.0 ug/L 2 11-FEB-20 Ethybenzene <0.50									_
Ethylbenzene									
n-Hexane <0.50									
m+p-Xylenes <0.40	•								
Methyl Ethyl Ketone <20									
Methyl Isobutyl Ketone <20									
Methylene Chloride <5.0 ug/L 5 11-FEB-20 MTBE <2.0									
MTBE <2.0 ug/L 2 11-FEB-20 o-Xylene <0.30	•								_
o-Xylene <0.30	-								
Styrene <0.50 ug/L 0.5 11-FEB-20 Tetrachloroethylene <0.50									_
Tetrachloroethylene <0.50 ug/L 0.5 11-FEB-20 Toluene <0.50	•								
Toluene <0.50 ug/L 0.5 11-FEB-20 trans-1,2-Dichloroethylene <0.50	•								
trans-1,2-Dichloroethylene <0.50	•								
trans-1,3-Dichloropropene <0.30		20							
Trichloroethylene <0.50 ug/L 0.5 11-FEB-20 Trichlorofluoromethane <5.0	-								
Trichlorofluoromethane <5.0									
Vinyl chloride <0.50 ug/L 0.5 11-FEB-20 Surrogate: 1,4-Difluorobenzene 98.7 % 70-130 11-FEB-20 Surrogate: 4-Bromofluorobenzene 90.5 % 70-130 11-FEB-20 WG3267588-5 MS WG3267588-3 WG3267588-3 VG3267588-3 =""><td>-</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	-								
Surrogate: 1,4-Difluorobenzene 98.7 % 70-130 11-FEB-20 Surrogate: 4-Bromofluorobenzene 90.5 % 70-130 11-FEB-20 WG3267588-5 MS WG3267588-3 WG3267588-3 WG3267588-3 WG3267588-3 VG3267588-3 <									
Surrogate: 4-Bromofluorobenzene 90.5 % 70-130 11-FEB-20 WG3267588-5 MS WG3267588-3 WG326758-3 WG326758	-	enzene							
WG3267588-5 MS WG3267588-3 1,1,1,2-Tetrachloroethane 110.6 % 50-140 11-FEB-20 1,1,2,2-Tetrachloroethane 106.8 % 50-140 11-FEB-20 1,1,1-Trichloroethane 109.8 % 50-140 11-FEB-20 1,1,2-Trichloroethane 111.4 % 50-140 11-FEB-20 1,1-Dichloroethane 110.3 % 50-140 11-FEB-20 1,1-Dichloroethylene 104.0 % 50-140 11-FEB-20 1,2-Dibromoethane 106.5 % 50-140 11-FEB-20	<u>-</u>								
1,1,1,2-Tetrachloroethane 110.6 % 50-140 11-FEB-20 1,1,2,2-Tetrachloroethane 106.8 % 50-140 11-FEB-20 1,1,1-Trichloroethane 109.8 % 50-140 11-FEB-20 1,1,2-Trichloroethane 111.4 % 50-140 11-FEB-20 1,1-Dichloroethane 110.3 % 50-140 11-FEB-20 1,1-Dichloroethylene 104.0 % 50-140 11-FEB-20 1,2-Dibromoethane 106.5 % 50-140 11-FEB-20		ODCHZONO	WG3267599-3	00.0		70		70 100	11-1 LB-20
1,1,2,2-Tetrachloroethane 106.8 % 50-140 11-FEB-20 1,1,1-Trichloroethane 109.8 % 50-140 11-FEB-20 1,1,2-Trichloroethane 111.4 % 50-140 11-FEB-20 1,1-Dichloroethane 110.3 % 50-140 11-FEB-20 1,1-Dichloroethylene 104.0 % 50-140 11-FEB-20 1,2-Dibromoethane 106.5 % 50-140 11-FEB-20		ie	WG3207300-3	110.6		%		50-140	11-FEB-20
1,1,2-Trichloroethane 111.4 % 50-140 11-FEB-20 1,1-Dichloroethane 110.3 % 50-140 11-FEB-20 1,1-Dichloroethylene 104.0 % 50-140 11-FEB-20 1,2-Dibromoethane 106.5 % 50-140 11-FEB-20	1,1,2,2-Tetrachloroethan	ie		106.8		%			
1,1,2-Trichloroethane 111.4 % 50-140 11-FEB-20 1,1-Dichloroethane 110.3 % 50-140 11-FEB-20 1,1-Dichloroethylene 104.0 % 50-140 11-FEB-20 1,2-Dibromoethane 106.5 % 50-140 11-FEB-20	1,1,1-Trichloroethane			109.8		%			
1,1-Dichloroethane 110.3 % 50-140 11-FEB-20 1,1-Dichloroethylene 104.0 % 50-140 11-FEB-20 1,2-Dibromoethane 106.5 % 50-140 11-FEB-20	1,1,2-Trichloroethane			111.4		%			
1,1-Dichloroethylene 104.0 % 50-140 11-FEB-20 1,2-Dibromoethane 106.5 % 50-140 11-FEB-20	1,1-Dichloroethane			110.3		%			
1,2-Dibromoethane 106.5 % 50-140 11-FEB-20	1,1-Dichloroethylene			104.0		%			
	1,2-Dibromoethane			106.5		%			
	1,2-Dichlorobenzene			108.4		%		50-140	



Workorder: L2413931 Report Date: 13-FEB-20 Page 5 of 6

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4994408								
WG3267588-5 MS		WG3267588-3			0/			
1,2-Dichloroethane			107.4		%		50-140	11-FEB-20
1,2-Dichloropropane			114.9		%		50-140	11-FEB-20
1,3-Dichlorobenzene			107.9		%		50-140	11-FEB-20
1,4-Dichlorobenzene			107.1		%		50-140	11-FEB-20
Acetone			106.1		%		50-140	11-FEB-20
Benzene			114.0		%		50-140	11-FEB-20
Bromodichloromethane			113.1		%		50-140	11-FEB-20
Bromoform			107.7		%		50-140	11-FEB-20
Bromomethane			100.9		%		50-140	11-FEB-20
Carbon tetrachloride			109.2		%		50-140	11-FEB-20
Chlorobenzene			108.5		%		50-140	11-FEB-20
Chloroform			113.1		%		50-140	11-FEB-20
cis-1,2-Dichloroethylene			109.6		%		50-140	11-FEB-20
cis-1,3-Dichloropropene			117.7		%		50-140	11-FEB-20
Dibromochloromethane			110.0		%		50-140	11-FEB-20
Dichlorodifluoromethane			114.7		%		50-140	11-FEB-20
Ethylbenzene			106.9		%		50-140	11-FEB-20
n-Hexane			101.5		%		50-140	11-FEB-20
m+p-Xylenes			106.5		%		50-140	11-FEB-20
Methyl Ethyl Ketone			97.0		%		50-140	11-FEB-20
Methyl Isobutyl Ketone			97.2		%		50-140	11-FEB-20
Methylene Chloride			114.2		%		50-140	11-FEB-20
MTBE			113.1		%		50-140	11-FEB-20
o-Xylene			106.6		%		50-140	11-FEB-20
Styrene			108.1		%		50-140	11-FEB-20
Tetrachloroethylene			107.7		%		50-140	11-FEB-20
Toluene			108.7		%		50-140	11-FEB-20
trans-1,2-Dichloroethyler	ne		106.7		%		50-140	11-FEB-20
trans-1,3-Dichloropropen	ne		114.5		%		50-140	11-FEB-20
Trichloroethylene			110.9		%		50-140	11-FEB-20
Trichlorofluoromethane			107.2		%		50-140	11-FEB-20
Vinyl chloride			120.7		%		50-140	11-FEB-20
÷							-	

Workorder: L2413931 Report Date: 13-FEB-20

Client: TERRAPROBE-BRAMPTON Page 6 of 6

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

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 predetermined 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) / Analytic

Request Form

Canada Toll Free: 1 800 668 9878

L2413931-COFC

Page

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Released by: Ko		□ YES	Are samples for h		Are samples take	Dunidud															(lab use only)	ALS Sample #	ALS Lab Wor	LSD:	PO / AFE:	Job #:	ALS Account # / Quote #:		Contact:	Company:		Invoice To	Postal Code:	City/Province:	Street		Phone:	Contact:	Company:	
Released by: Kossay Makhzoumi Date:	T RE		Are samples for human drinking water use?	☐ YES ☐ NO	egulated DW System?	186)														diat	(This description will appear on the report)	Sample identification and/or Coordinates	ALS Lab Work Order # (lab use only)			1-19-0603-42	/ Quote #: Q64281	Project Information	Lorena Rossi	Terraprobe	Copy of Invoice with Report	Same as Report To	L6T 3Y3	Brampton	11 indell Lane	Company address below will appear on the final report	905-796-2650	Kossay Makhzoumi	Тептаргове	consecutor company name ones will appear
Time:	_		7			(electronic COC only)	pecial Instructions / Spe													BLANKS	pear on the report)	nd/or Coordinates	124 B93 WL									NO								appear on the nnat report
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REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION
Fallure 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. WHITE - LABORATORY COPY YELLOW - CLIENT COPY

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



TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 28-FEB-20

Report Date: 05-MAR-20 08:15 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2422407

Project P.O. #: NOT SUBMITTED

Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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

ADDRESS: 5730 Coopers Avenue, Unit #26 , Mississauga, ON L4Z 2E9 Canada | Phone: +1 905 507 6910 | Fax: +1 905 507 6927 ALS CANADA LTD Part of the ALS Group An ALS Limited Company





L2422407 CONT'D....

Job Reference: 1-19-0603-42

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Summary of Guideline Exceedances

Guideline						
ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit
Ontario Reg	gulation 153/04	- April 15, 2011 Standards - T3-Non-Potable Gr	ound Water-All Types o	f Property Uses (Coarse)		
L2422407-1	BH1	Anions and Nutrients	Chloride (CI)	2790	2300	mg/L
Ontario Reg	gulation 153/04	- April 15, 2011 Standards - T3-Non-Potable Gr	ound Water-All Types o	f Property Uses (Fine)		
L2422407-1	BH1	Anions and Nutrients	Chloride (CI)	2790	2300	mg/L

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2422407 CONT'D....

Job Reference: 1-19-0603-42

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Physical Tests - WATER

yo.ou oo.o				
			Lab ID	L2422407-1
	9	Sampl	e Date	27-FEB-20
		Sam	ple ID	BH1
		Cuido	Limits	
	'	Guide	Limits	
Analyte	Unit	#1	#2	
Conductivity	mS/cm	-	-	7.64
рН	pH units	-	-	7.05

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Anions and Nutrients - WATER

/ unionio una matrionito	**/ \ : - : \				
			L	ab ID	L2422407-1
			Sample	Date	27-FEB-20
			Sam	ple ID	BH1
Analyte		Unit	Guide #1	Limits #2	
Chloride (CI)		mg/L	2300	2300	2790 DLHC

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2422407 CONT'D....

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Cyanides - WATER

		Lab ID	L2422407-1
	Sample	e Date	27-FEB-20
	Sam	ple ID	BH1
Unit	Guide #1	Limits #2	
		Sample	Lab ID Sample Date Sample ID

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2422407 CONT'D....

Job Reference: 1-19-0603-42

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Dissolved Metals - WATER

		Sample	ab ID Date ple ID	L2422407-1 27-FEB-20 BH1
Analyte	Unit	Guide #1	Limits #2	
Dissolved Mercury Filtration Location		-	-	FIELD
Dissolved Metals Filtration Location		-	-	FIELD
Antimony (Sb)-Dissolved	ug/L	20000	20000	<1.0 DLHC
Arsenic (As)-Dissolved	ug/L	1900	1900	<1.0 DLHC
Barium (Ba)-Dissolved	ug/L	29000	29000	79.7 DLHC
Beryllium (Be)-Dissolved	ug/L	67	67	<1.0 DLHC
Boron (B)-Dissolved	ug/L	45000	45000	140 DLHC
Cadmium (Cd)-Dissolved	ug/L	2.7	2.7	0.084 DLHC
Chromium (Cr)-Dissolved	ug/L	810	810	<5.0 DLHC
Cobalt (Co)-Dissolved	ug/L	66	66	3.5 DLHC
Copper (Cu)-Dissolved	ug/L	87	87	<2.0 DLHC
Lead (Pb)-Dissolved	ug/L	25	25	<0.50 DLHC
Mercury (Hg)-Dissolved	ug/L	0.29	2.8	<0.0050
Molybdenum (Mo)-Dissolved	ug/L	9200	9200	0.64 DLHC
Nickel (Ni)-Dissolved	ug/L	490	490	<5.0 DLHC
Selenium (Se)-Dissolved	ug/L	63	63	<0.50 DLHC
Silver (Ag)-Dissolved	ug/L	1.5	1.5	<0.50 DLHC
Sodium (Na)-Dissolved	ug/L	2300000	2300000	946000 ^{DLHC}
Thallium (TI)-Dissolved	ug/L	510	510	<0.10 DLHC
Uranium (U)-Dissolved	ug/L	420	420	8.62 DLHC
Vanadium (V)-Dissolved	ug/L	250	250	<5.0 DLHC
Zinc (Zn)-Dissolved	ug/L	1100	1100	15 DLHC

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Job Reference: 1-19-0603-42
PAGE 7 of 15
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Speciated Metals - WATER

opoolatoa motalo 11711 Eli				
			Lab ID	L2422407-1
		Sample	e Date	27-FEB-20
		Sam	ple ID	BH1
		Guide	Limits	
Analyte	Unit	#1	#2	
Chromium, Hexavalent	ug/L	140	140	<0.50

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2422407 CONT'D....
Job Reference: 1-19-0603-42
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Volatile Organic Compounds - WATER

		Sample Sam	L2422407-1 27-FEB-20 BH1	
Analyte	Unit	Guide #1	Limits #2	
Acetone	ug/L	130000	130000	<30
Benzene	ug/L	44	430	<0.50
Bromodichloromethane	ug/L	85000	85000	<2.0
Bromoform	ug/L	380	770	<5.0
Bromomethane	ug/L	5.6	56	<0.50
Carbon tetrachloride	ug/L	0.79	8.4	<0.20
Chlorobenzene	ug/L	630	630	<0.50
Dibromochloromethane	ug/L	82000	82000	<2.0
Chloroform	ug/L	2.4	22	<1.0
1,2-Dibromoethane	ug/L	0.25	0.83	<0.20
1,2-Dichlorobenzene	ug/L	4600	9600	<0.50
1,3-Dichlorobenzene	ug/L	9600	9600	<0.50
1,4-Dichlorobenzene	ug/L	8	67	<0.50
Dichlorodifluoromethane	ug/L	4400	4400	<2.0
1,1-Dichloroethane	ug/L	320	3100	<0.50
1,2-Dichloroethane	ug/L	1.6	12	<0.50
1,1-Dichloroethylene	ug/L	1.6	17	<0.50
cis-1,2-Dichloroethylene	ug/L	1.6	17	<0.50
trans-1,2-Dichloroethylene	ug/L	1.6	17	<0.50
Methylene Chloride	ug/L	610	5500	<5.0
1,2-Dichloropropane	ug/L	16	140	<0.50
cis-1,3-Dichloropropene	ug/L	-	-	<0.30
trans-1,3-Dichloropropene	ug/L	-	-	<0.30
1,3-Dichloropropene (cis & trans)	ug/L	5.2	45	<0.50
Ethylbenzene	ug/L	2300	2300	<0.50
n-Hexane	ug/L	51	520	<0.50
Methyl Ethyl Ketone	ug/L	470000	1500000	<20
Methyl Isobutyl Ketone	ug/L	140000	580000	<20
MTBE	ug/L	190	1400	<2.0
Styrene	ug/L	1300	9100	<0.50

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2422407 CONT'D....

Job Reference: 1-19-0603-42

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Volatile Organic Compounds - WATER

		Sample	ab ID Date ple ID	L2422407-1 27-FEB-20 BH1
		Guide		
Analyte	Unit	#1	#2	
1,1,1,2-Tetrachloroethane	ug/L	3.3	28	<0.50
1,1,2,2-Tetrachloroethane	ug/L	3.2	15	<0.50
Tetrachloroethylene	ug/L	1.6	17	<0.50
Toluene	ug/L	18000	18000	<0.50
1,1,1-Trichloroethane	ug/L	640	6700	<0.50
1,1,2-Trichloroethane	ug/L	4.7	30	<0.50
Trichloroethylene	ug/L	1.6	17	<0.50
Trichlorofluoromethane	ug/L	2500	2500	<5.0
Vinyl chloride	ug/L	0.5	1.7	<0.50
o-Xylene	ug/L	-	-	<0.30
m+p-Xylenes	ug/L	-	-	<0.40
Xylenes (Total)	ug/L	4200	4200	<0.50
Surrogate: 4-Bromofluorobenzene	%	-	-	96.1
Surrogate: 1,4-Difluorobenzene	%	-	-	101.8

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2422407 CONT'D....

Job Reference: 1-19-0603-42

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Hydrocarbons - WATER

Hydrocarbons - WATEN				
			Lab ID	L2422407-1
		Sampl	27-FEB-20	
		Sam	BH1	
		Guide	Limits	
Analyte	Unit	#1	#2	
F1 (C6-C10)	ug/L	750	750	<25
F1-BTEX	ug/L	750	750	<25
F2 (C10-C16)	ug/L	150	150	<100
F2-Naphth	ug/L	-	-	<100
F3 (C16-C34)	ug/L	500	500	<250
F3-PAH	ug/L	-	-	<250
F4 (C34-C50)	ug/L	500	500	<250
Total Hydrocarbons (C6-C50)	ug/L	-	-	<370
Chrom. to baseline at nC50		-	-	YES
Surrogate: 2-Bromobenzotrifluoride	%	-	-	85.5
Surrogate: 3,4-Dichlorotoluene	%	-	-	76.3

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2422407 CONT'D....

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Polycyclic Aromatic Hydrocarbons - WATER

Lab ID	L2422407-1
Sample Date	27-FEB-20
Sample ID	BH1

		Guide	Limits	
Analyte	Unit	#1	#2	
Acenaphthene	ug/L	600	1700	<0.020
Acenaphthylene	ug/L	1.8	1.8	<0.020
Anthracene	ug/L	2.4	2.4	<0.020
Benzo(a)anthracene	ug/L	4.7	4.7	<0.020
Benzo(a)pyrene	ug/L	0.81	0.81	<0.010
Benzo(b)fluoranthene	ug/L	0.75	0.75	<0.020
Benzo(g,h,i)perylene	ug/L	0.2	0.2	<0.020
Benzo(k)fluoranthene	ug/L	0.4	0.4	<0.020
Chrysene	ug/L	1	1	<0.020
Dibenzo(ah)anthracene	ug/L	0.52	0.52	<0.020
Fluoranthene	ug/L	130	130	<0.020
Fluorene	ug/L	400	400	<0.020
Indeno(1,2,3-cd)pyrene	ug/L	0.2	0.2	<0.020
1+2-Methylnaphthalenes	ug/L	1800	1800	<0.028
1-Methylnaphthalene	ug/L	1800	1800	<0.020
2-Methylnaphthalene	ug/L	1800	1800	<0.020
Naphthalene	ug/L	1400	6400	<0.050
Phenanthrene	ug/L	580	580	<0.020
Pyrene	ug/L	68	68	<0.020
Surrogate: d10-Acenaphthene	%	-	-	96.4
Surrogate: d12-Chrysene	%	-	-	96.4
Surrogate: d8-Naphthalene	%	-	-	95.5
Surrogate: d10-Phenanthrene	%	-	-	100.7

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2422407 CONT'D....

Job Reference: 1-19-0603-42

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Polychlorinated Biphenyls - WATER

- 3				
		L	_ab ID	L2422407-1
		Sample	e Date	27-FEB-20
		Sam	BH1	
Analyte	Unit	Guide #1	Limits #2	
Aroclor 1242	ug/L	-	-	<0.020
Aroclor 1248	ug/L	-	-	<0.020
Aroclor 1254	ug/L	-	-	<0.020
Aroclor 1260	ug/L	-	-	<0.020
Surrogate: Decachlorobiphenyl	%	-	-	98.1
Total PCBs	ug/L	7.8	15	<0.040
Surrogate: Tetrachloro-m-xylene	%	-	-	86.1

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.

L2422407 CONT'D....
Job Reference: 1-19-0603-42
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Qualifiers for Individual Parameters Listed:

Qualifier Description

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**

CL-IC-N-WT Water Chloride by IC EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

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).

CN-WAD-R511-WT Water Cyanide (WAD)-O.Reg 153/04 APHA 4500CN I-Weak acid Dist Colorimet

Weak acid dissociable cyanide (WAD) is determined by undergoing a distillation procedure. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

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-R511-WT Water Hex Chrom-O.Reg 153/04 (July 2011) EPA 7199

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. Chromium (III) is calculated as the difference between the total chromium and the chromium (VI) results.

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-R511-WT Water Conductivity-O.Reg 153/04 (July 2011) APHA 2510 B

Water samples can be measured directly by immersing the conductivity cell into 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).

EC-SCREEN-WT Water Conductivity Screen (Internal Use APHA 2510

Qualitative analysis of conductivity where required during preparation of other tests - e.g. TDS, metals, etc.

F1-F4-511-CALC-WT Water F1-F4 Hydrocarbon Calculated CCME CWS-PHC, Pub #1310, Dec 2001-L Parameters

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

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.

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Job Reference: 1-19-0603-42
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Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

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 Water F1-O.Reg 153/04 (July 2011) E3398/CCME TIER 1-HS

Fraction F1 is determined by 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 Water F2-F4-O.Reg 153/04 (July 2011) EPA 3511/CCME Tier 1

Petroleum Hydrocarbons (F2-F4 fractions) are extracted from water using a hexane micro-extraction technique. Instrumental analysis is by GC-FID, as per the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Tier 1 Method, CCME, 2001.

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-D-UG/L-CVAA-WT Water Diss. Mercury in Water by CVAAS EPA 1631E (mod)

(ug/L)

Water samples are filtered (0.45 um), preserved with hydrochloric acid, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed 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-D-UG/L-MS-WT Water Diss. Metals in Water by ICPMS (ug/L) EPA 200.8

The metal constituents of a non-acidified sample that pass through a membrane filter prior to ICP/MS analysis.

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 Water PAH-Calculated Parameters SW846 8270

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

Aqueous samples, fortified with surrogates, are extracted using liquid/liquid extraction technique. The sample extracts are concentrated and then analyzed using 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 Water PCB-O. Reg 153/04 (July 2011) SW846 3510/8082

Aqueous samples are extracted, then concentrated, reconstituted, and analyzed by 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 Water pH APHA 4500 H-Electrode

Water samples are analyzed directly by a calibrated pH 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). Holdtime for samples under this regulation is 28 days

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

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Job Reference: 1-19-0603-42
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Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

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

Liquid samples are analyzed by headspace GC/MSD.

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 Water 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

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: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CL-IC-N-WT Batch R5013226	Water							
WG3284708-13 DUP Chloride (CI)		WG3284708-1 5.54	5 5.54		mg/L	0.0	20	02-MAR-20
WG3284708-12 LCS Chloride (Cl)			103.9		%		90-110	02-MAR-20
WG3284708-11 MB Chloride (Cl)			<0.50		mg/L		0.5	02-MAR-20
WG3284708-14 MS Chloride (Cl)		WG3284708-1	5 99.1		%		75-125	02-MAR-20
CN-WAD-R511-WT	Water							
Batch R5013229								
WG3284843-3 DUP Cyanide, Weak Acid Dis	s	L2422396-1 <2.0	<2.0	RPD-NA	ug/L	N/A	20	02-MAR-20
WG3284843-2 LCS Cyanide, Weak Acid Dis	s		100.0		%		80-120	02-MAR-20
WG3284843-1 MB Cyanide, Weak Acid Dis	s		<2.0		ug/L		2	02-MAR-20
CR-CR6-IC-R511-WT	Water							
Batch R5012632								
WG3284757-4 DUP Chromium, Hexavalent		WG3284757-3 <0.50	<0.50	RPD-NA	ug/L	N/A	20	02-MAR-20
WG3284757-2 LCS Chromium, Hexavalent			99.4		%		80-120	02-MAR-20
WG3284757-1 MB Chromium, Hexavalent			<0.50		ug/L		0.5	02-MAR-20
WG3284757-5 MS Chromium, Hexavalent		WG3284757-3	96.0		%		70-130	02-MAR-20
EC-R511-WT	Water							
Batch R5012946								
WG3284273-4 DUP Conductivity		WG3284273-3 0.622	0.625		mS/cm	0.5	10	29-FEB-20
WG3284273-2 LCS Conductivity			100.5		%		90-110	29-FEB-20
WG3284273-1 MB Conductivity			<0.0030		mS/cm		0.003	29-FEB-20
F1-HS-511-WT	Water							



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TERRAPROBE-BRAMPTON Client:

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT	Water							
	2001 DUP	WG3282676-3						
F1 (C6-C10)		<25	<25	RPD-NA	ug/L	N/A	30	02-MAR-20
WG3282676-1 L F1 (C6-C10)	.cs		91.3		%		80-120	02-MAR-20
WG3282676-2 N F1 (C6-C10)	ЛВ		<25		ug/L		25	02-MAR-20
Surrogate: 3,4-Dic	hlorotoluene		101.5		%		60-140	02-MAR-20
WG3282676-5 N F1 (C6-C10)	MS	WG3282676-3	81.5		%		60-140	02-MAR-20
F2-F4-511-WT	Water							
Batch R501								
WG3284613-2 L F2 (C10-C16)	.cs		106.8		%		70-130	02-MAR-20
F3 (C16-C34)			107.1		%		70-130	02-MAR-20
F4 (C34-C50)			106.1		%		70-130	02-MAR-20
WG3284613-1 N F2 (C10-C16)	ЛВ		<100		ug/L		100	02-MAR-20
F3 (C16-C34)			<250		ug/L		250	02-MAR-20
F4 (C34-C50)			<250		ug/L		250	02-MAR-20
Surrogate: 2-Brom	obenzotrifluoride		84.4		%		60-140	02-MAR-20
HG-D-UG/L-CVAA-W	Γ Water							
Batch R501	2117							
WG3284635-3 D Mercury (Hg)-Diss	DUP olved	L2422396-1 <0.0050	<0.0050	RPD-NA	ug/L	N/A	20	02-MAR-20
WG3284635-2 L Mercury (Hg)-Diss	.CS olved		108.0		%		80-120	02-MAR-20
WG3284635-1 M Mercury (Hg)-Diss	//B olved		<0.0050		ug/L		0.005	02-MAR-20
WG3284635-4 Mercury (Hg)-Diss	/IS olved	L2422401-1	102.5		%		70-130	02-MAR-20
MET-D-UG/L-MS-WT	Water							
Batch R501								
WG3284562-4 D Antimony (Sb)-Dis	DUP solved	WG3284562-3 <1.0	<1.0	RPD-NA	ug/L	N/A	20	02-MAR-20
Arsenic (As)-Disso	olved	2.5	2.5		ug/L	1.5	20	02-MAR-20
Barium (Ba)-Disso	lved	30.0	30.2		ug/L	0.7	20	02-MAR-20



Workorder: L2422407 Report Date: 05-MAR-20 Page 3 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT Water	,						
Batch R5012163							
WG3284562-4 DUP Beryllium (Be)-Dissolved	WG3284562-3 <1.0	3 <1.0	RPD-NA	ug/L	N/A	20	02 MAD 20
Boron (B)-Dissolved	550	550	RPD-NA	ug/L	0.8	20	02-MAR-20 02-MAR-20
Cadmium (Cd)-Dissolved	0.608	0.723		ug/L	0.6 17	20	
Chromium (Cr)-Dissolved	<5.0	<5.0	RPD-NA	ug/L			02-MAR-20 02-MAR-20
Cobalt (Co)-Dissolved	6.9	7.1	RPD-NA	ug/L	N/A	20 20	
Copper (Cu)-Dissolved	4.0	4.0		ug/L	2.8		02-MAR-20
Lead (Pb)-Dissolved			DDD NA	•	0.5	20	02-MAR-20
,	<0.50	<0.50	RPD-NA	ug/L	N/A	20	02-MAR-20
Molybdenum (Mo)-Dissolved	49.8	51.9		ug/L	4.3	20	02-MAR-20
Nickel (Ni)-Dissolved	7.4	7.3		ug/L	1.4	20	02-MAR-20
Selenium (Se)-Dissolved	0.83	0.90		ug/L	8.1	20	02-MAR-20
Silver (Ag)-Dissolved	<0.50	<0.50	RPD-NA	ug/L	N/A	20	02-MAR-20
Sodium (Na)-Dissolved	117000	117000		ug/L	0.3	20	02-MAR-20
Thallium (TI)-Dissolved	0.13	0.13		ug/L	4.2	20	02-MAR-20
Uranium (U)-Dissolved	13.9	14.1		ug/L	1.1	20	02-MAR-20
Vanadium (V)-Dissolved	<5.0	<5.0	RPD-NA	ug/L	N/A	20	02-MAR-20
Zinc (Zn)-Dissolved	14	14	J	ug/L	11	20	02-MAR-20
WG3284562-2 LCS Antimony (Sb)-Dissolved		93.7		%		80-120	02-MAR-20
Arsenic (As)-Dissolved		95.3		%		80-120	02-MAR-20
Barium (Ba)-Dissolved		100.3		%		80-120	02-MAR-20
Beryllium (Be)-Dissolved		91.9		%		80-120	02-MAR-20
Boron (B)-Dissolved		92.0		%		80-120	02-MAR-20
Cadmium (Cd)-Dissolved		94.8		%		80-120	02-MAR-20
Chromium (Cr)-Dissolved		91.3		%		80-120	02-MAR-20
Cobalt (Co)-Dissolved		88.8		%		80-120	02-MAR-20
Copper (Cu)-Dissolved		85.9		%		80-120	02-MAR-20
Lead (Pb)-Dissolved		97.7		%		80-120	02-MAR-20
Molybdenum (Mo)-Dissolved		95.1		%		80-120	02-MAR-20
Nickel (Ni)-Dissolved		90.1		%		80-120	02-MAR-20
Selenium (Se)-Dissolved		91.7		%		80-120	02-MAR-20
Silver (Ag)-Dissolved		95.7		%		80-120	02-MAR-20
Sodium (Na)-Dissolved		92.6		%		80-120	02-MAR-20
Thallium (TI)-Dissolved		96.8		%		80-120	02-MAR-20



Workorder: L2422407 Report Date: 05-MAR-20 Page 4 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT Water							
Batch R5012163							
WG3284562-2 LCS		05.4		0/			
Uranium (U)-Dissolved		95.1		%		80-120	02-MAR-20
Vanadium (V)-Dissolved		94.7		%		80-120	02-MAR-20
Zinc (Zn)-Dissolved		92.4		%		80-120	02-MAR-20
WG3284562-1 MB Antimony (Sb)-Dissolved		<0.10		ug/L		0.1	02-MAR-20
Arsenic (As)-Dissolved		<0.10		ug/L		0.1	02-MAR-20
Barium (Ba)-Dissolved		<0.10		ug/L		0.1	02-MAR-20
Beryllium (Be)-Dissolved		<0.10		ug/L		0.1	02-MAR-20
Boron (B)-Dissolved		<10		ug/L		10	02-MAR-20
Cadmium (Cd)-Dissolved		<0.0050		ug/L		0.005	02-MAR-20
Chromium (Cr)-Dissolved		<0.50		ug/L		0.5	02-MAR-20
Cobalt (Co)-Dissolved		<0.10		ug/L		0.1	02-MAR-20
Copper (Cu)-Dissolved		<0.20		ug/L		0.2	02-MAR-20
Lead (Pb)-Dissolved		<0.050		ug/L		0.05	02-MAR-20
Molybdenum (Mo)-Dissolved		<0.050		ug/L		0.05	02-MAR-20
Nickel (Ni)-Dissolved		<0.50		ug/L		0.5	02-MAR-20
Selenium (Se)-Dissolved		<0.050		ug/L		0.05	02-MAR-20
Silver (Ag)-Dissolved		<0.050		ug/L		0.05	02-MAR-20
Sodium (Na)-Dissolved		<50		ug/L		50	02-MAR-20
Thallium (TI)-Dissolved		<0.010		ug/L		0.01	02-MAR-20
Uranium (U)-Dissolved		<0.010		ug/L		0.01	02-MAR-20
Vanadium (V)-Dissolved		<0.50		ug/L		0.5	02-MAR-20
Zinc (Zn)-Dissolved		<1.0		ug/L		1	02-MAR-20
WG3284562-5 MS	WG3284562-3						
Antimony (Sb)-Dissolved		91.5		%		70-130	02-MAR-20
Arsenic (As)-Dissolved		90.5		%		70-130	02-MAR-20
Barium (Ba)-Dissolved		N/A	MS-B	%		-	02-MAR-20
Beryllium (Be)-Dissolved		88.4		%		70-130	02-MAR-20
Boron (B)-Dissolved		N/A	MS-B	%		-	02-MAR-20
Cadmium (Cd)-Dissolved		79.1		%		70-130	02-MAR-20
Chromium (Cr)-Dissolved		87.0		%		70-130	02-MAR-20
Lead (Pb)-Dissolved		89.7		%		70-130	02-MAR-20
Molybdenum (Mo)-Dissolved		N/A	MS-B	%		-	02-MAR-20
Selenium (Se)-Dissolved		90.1		%		70-130	02-MAR-20



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R5012163								
WG3284562-5 MS		WG3284562-3			0/		70.400	
Silver (Ag)-Dissolved			92.7	MC D	%		70-130	02-MAR-20
Sodium (Na)-Dissolved			N/A	MS-B	%		-	02-MAR-20
Thallium (TI)-Dissolved			91.5 N/A	NO 5	%		70-130	02-MAR-20
Uranium (U)-Dissolved			N/A	MS-B	%		-	02-MAR-20
Vanadium (V)-Dissolved			91.3		%		70-130	02-MAR-20
PAH-511-WT	Water							
Batch R5013271								
WG3284613-2 LCS 1-Methylnaphthalene			87.8		%		50-140	03-MAR-20
2-Methylnaphthalene			84.7		%		50-140	03-MAR-20
Acenaphthene			94.2		%		50-140	03-MAR-20
Acenaphthylene			97.7		%		50-140	03-MAR-20
Anthracene			99.8		%		50-140	03-MAR-20
Benzo(a)anthracene			117.1		%		50-140	03-MAR-20
Benzo(a)pyrene			91.5		%		50-140	03-MAR-20
Benzo(b)fluoranthene			79.8		%		50-140	03-MAR-20
Benzo(g,h,i)perylene			94.9		%		50-140	03-MAR-20
Benzo(k)fluoranthene			86.8		%		50-140	03-MAR-20
Chrysene			103.2		%		50-140	03-MAR-20
Dibenzo(ah)anthracene			97.0		%		50-140	03-MAR-20
Fluoranthene			99.6		%		50-140	03-MAR-20
Fluorene			96.3		%		50-140	03-MAR-20
Indeno(1,2,3-cd)pyrene			114.7		%		50-140	03-MAR-20
Naphthalene			91.0		%		50-140	03-MAR-20
Phenanthrene			99.6		%		50-140	03-MAR-20
Pyrene			99.2		%		50-140	03-MAR-20
WG3284613-1 MB 1-Methylnaphthalene			<0.020		ug/L		0.02	03-MAR-20
2-Methylnaphthalene			<0.020		ug/L		0.02	03-MAR-20
Acenaphthene			<0.020		ug/L		0.02	03-MAR-20
Acenaphthylene			<0.020		ug/L		0.02	03-MAR-20
Anthracene			<0.020		ug/L		0.02	03-MAR-20
Benzo(a)anthracene			<0.020		ug/L		0.02	03-MAR-20
Benzo(a)pyrene			<0.020		ug/L		0.02	03-MAR-20
Donzo(a)pyrono			\0.010		ug/L		0.01	03-1VIAR-20



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Water							
Batch R501327 WG3284613-1 MB	1						0.00	
Benzo(b)fluoranthene			<0.020		ug/L		0.02	03-MAR-20
Benzo(g,h,i)perylene			<0.020		ug/L		0.02	03-MAR-20
Benzo(k)fluoranthene			<0.020		ug/L		0.02	03-MAR-20
Chrysene			<0.020		ug/L		0.02	03-MAR-20
Dibenzo(ah)anthracer	ne		<0.020		ug/L		0.02	03-MAR-20
Fluoranthene			<0.020		ug/L		0.02	03-MAR-20
Fluorene			<0.020		ug/L		0.02	03-MAR-20
Indeno(1,2,3-cd)pyrer	ie		<0.020		ug/L		0.02	03-MAR-20
Naphthalene			<0.050		ug/L		0.05	03-MAR-20
Phenanthrene			<0.020		ug/L		0.02	03-MAR-20
Pyrene			<0.020		ug/L		0.02	03-MAR-20
Surrogate: d8-Naphth	alene		96.1		%		60-140	03-MAR-20
Surrogate: d10-Phena	inthrene		100.6		%		60-140	03-MAR-20
Surrogate: d12-Chrys	ene		100.1		%		60-140	03-MAR-20
Surrogate: d10-Acena	phthene		97.5		%		60-140	03-MAR-20
PCB-511-WT	Water							
Batch R501416	6							
WG3284619-2 LCS			95.7		0/		00.440	0.4 MAD 00
Aroclor 1242			95.7 110.9		%		60-140	04-MAR-20
Aroclor 1248					%		60-140	04-MAR-20
Aroclor 1254			95.8		%		60-140	04-MAR-20
Aroclor 1260			115.6		%		60-140	04-MAR-20
WG3284619-1 MB Aroclor 1242			<0.020		ug/L		0.02	04-MAR-20
Aroclor 1248			<0.020		ug/L		0.02	04-MAR-20
Aroclor 1254			<0.020		ug/L		0.02	04-MAR-20
Aroclor 1260			<0.020		ug/L		0.02	04-MAR-20
Surrogate: Decachloro	obiphenyl		120.1		%		50-150	04-MAR-20
Surrogate: Tetrachloro	o-m-xylene		74.1		%		50-150	04-MAR-20
PH-WT	Water							
Batch R501294	.6							
WG3284273-4 DUP pH		WG3284273-3 8.09	8.10	J	pH units	0.01	0.2	29-FEB-20
WG3284273-2 LCS								



Qualifier

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RPD

Limit

Analyzed

Units

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

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Matrix

Reference

Result

Contact: Kossay Makhzoumi

Test

1631	Watiix	Reference	Result	Qualifier	Units	KFD	Liiiit	Allalyzeu
PH-WT	Water							
Batch R501	2946							
WG3284273-2 L pH	_CS		7.04		pH units		6.9-7.1	29-FEB-20
VOC-511-HS-WT	Water							
Batch R501	2001							
WG3282676-4 D	OUP	WG3282676-		555 MA	/	N1/A	22	00.144.D.00
1,1,2-Tetrachion		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,1,1-Trichloroetha		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,1,2-Trichloroetha		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,1-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,1-Dichloroethyle		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,2-Dibromoethan		<0.20	<0.20	RPD-NA	ug/L	N/A	30	02-MAR-20
1,2-Dichlorobenze		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,2-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,2-Dichloropropa		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,3-Dichlorobenze	ene	<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,4-Dichlorobenze	ene	<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
Acetone		<30	<30	RPD-NA	ug/L	N/A	30	02-MAR-20
Benzene		<0.50	< 0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
Bromodichloromet	thane	<2.0	<2.0	RPD-NA	ug/L	N/A	30	02-MAR-20
Bromoform		<5.0	<5.0	RPD-NA	ug/L	N/A	30	02-MAR-20
Bromomethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
Carbon tetrachlori	de	<0.20	<0.20	RPD-NA	ug/L	N/A	30	02-MAR-20
Chlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
Chloroform		<1.0	<1.0	RPD-NA	ug/L	N/A	30	02-MAR-20
cis-1,2-Dichloroeth	nylene	<0.50	< 0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
cis-1,3-Dichloropro	opene	<0.30	< 0.30	RPD-NA	ug/L	N/A	30	02-MAR-20
Dibromochlorome	thane	<2.0	<2.0	RPD-NA	ug/L	N/A	30	02-MAR-20
Dichlorodifluorome	ethane	<2.0	<2.0	RPD-NA	ug/L	N/A	30	02-MAR-20
Ethylbenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
n-Hexane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
m+p-Xylenes		<0.40	< 0.40	RPD-NA	ug/L	N/A	30	02-MAR-20
Methyl Ethyl Ketor	ne	<20	<20	RPD-NA	ug/L	N/A	30	02-MAR-20



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11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R501200	1							
WG3282676-4 DUP		WG3282676-			/1			
Methyl Isobutyl Ketone	•	<20	<20	RPD-NA	ug/L	N/A	30	02-MAR-20
Methylene Chloride		<5.0	<5.0	RPD-NA	ug/L	N/A	30	02-MAR-20
MTBE		<2.0	<2.0	RPD-NA	ug/L	N/A	30	02-MAR-20
o-Xylene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	02-MAR-20
Styrene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
Tetrachloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
Toluene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
trans-1,2-Dichloroethy	lene	<0.50	< 0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
trans-1,3-Dichloroprop	ene	<0.30	< 0.30	RPD-NA	ug/L	N/A	30	02-MAR-20
Trichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
Trichlorofluoromethan	е	<5.0	<5.0	RPD-NA	ug/L	N/A	30	02-MAR-20
Vinyl chloride		<0.50	< 0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
WG3282676-1 LCS								
1,1,1,2-Tetrachloroeth	ane		91.8		%		70-130	02-MAR-20
1,1,2,2-Tetrachloroeth	ane		88.6		%		70-130	02-MAR-20
1,1,1-Trichloroethane			94.2		%		70-130	02-MAR-20
1,1,2-Trichloroethane			101.4		%		70-130	02-MAR-20
1,1-Dichloroethane			87.7		%		70-130	02-MAR-20
1,1-Dichloroethylene			86.8		%		70-130	02-MAR-20
1,2-Dibromoethane			101.2		%		70-130	02-MAR-20
1,2-Dichlorobenzene			95.0		%		70-130	02-MAR-20
1,2-Dichloroethane			85.8		%		70-130	02-MAR-20
1,2-Dichloropropane			88.4		%		70-130	02-MAR-20
1,3-Dichlorobenzene			94.0		%		70-130	02-MAR-20
1,4-Dichlorobenzene			93.2		%		70-130	02-MAR-20
Acetone			92.6		%		60-140	02-MAR-20
Benzene			93.0		%		70-130	02-MAR-20
Bromodichloromethan	е		90.5		%		70-130	02-MAR-20
Bromoform			91.5		%		70-130	02-MAR-20
Bromomethane			91.7		%		60-140	02-MAR-20
Carbon tetrachloride			91.1		%		70-130	02-MAR-20
Chlorobenzene			93.0		%		70-130	02-MAR-20
Chloroform			92.7		%		70-130	02-MAR-20



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R5012001								
WG3282676-1 LCS					0/			
cis-1,2-Dichloroethylene			93.7		%		70-130	02-MAR-20
cis-1,3-Dichloropropene			80.8		%		70-130	02-MAR-20
Dibromochloromethane			97.4		%		70-130	02-MAR-20
Dichlorodifluoromethane	9		116.3		%		50-140	02-MAR-20
Ethylbenzene			86.6		%		70-130	02-MAR-20
n-Hexane			84.9		%		70-130	02-MAR-20
m+p-Xylenes			86.5		%		70-130	02-MAR-20
Methyl Ethyl Ketone			108.6		%		60-140	02-MAR-20
Methyl Isobutyl Ketone			79.3		%		60-140	02-MAR-20
Methylene Chloride			102.6		%		70-130	02-MAR-20
MTBE			94.9		%		70-130	02-MAR-20
o-Xylene			94.1		%		70-130	02-MAR-20
Styrene			85.1		%		70-130	02-MAR-20
Tetrachloroethylene			93.8		%		70-130	02-MAR-20
Toluene			92.6		%		70-130	02-MAR-20
trans-1,2-Dichloroethyle			85.7		%		70-130	02-MAR-20
trans-1,3-Dichloroprope	ne		87.4		%		70-130	02-MAR-20
Trichloroethylene			100.3		%		70-130	02-MAR-20
Trichlorofluoromethane			98.1		%		60-140	02-MAR-20
Vinyl chloride			116.9		%		60-140	02-MAR-20
WG3282676-2 MB 1,1,1,2-Tetrachloroetha	ne		<0.50		ug/L		0.5	02-MAR-20
1,1,2,2-Tetrachloroetha			<0.50		ug/L		0.5	02-MAR-20
1,1,1-Trichloroethane			<0.50		ug/L		0.5	02-MAR-20
1,1,2-Trichloroethane			<0.50		ug/L		0.5	02-MAR-20
1,1-Dichloroethane			<0.50		ug/L		0.5	02-MAR-20
1,1-Dichloroethylene			<0.50		ug/L		0.5	02-MAR-20
1,2-Dibromoethane			<0.20		ug/L		0.2	02-MAR-20
1,2-Dichlorobenzene			<0.50		ug/L		0.5	02-MAR-20
1,2-Dichloroethane			<0.50		ug/L		0.5	02-MAR-20
1,2-Dichloropropane			<0.50		ug/L		0.5	02-MAR-20
1,3-Dichlorobenzene			<0.50		ug/L		0.5	02-MAR-20
1,4-Dichlorobenzene			<0.50		ug/L		0.5	02-MAR-20
Acetone			<30		ug/L		30	02-MAR-20



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test I	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R5012001								
WG3282676-2 MB			0.50				0.5	
Benzene Bromodichloromethane			<0.50		ug/L		0.5	02-MAR-20
			<2.0		ug/L		2	02-MAR-20
Bromoform			<5.0		ug/L		5	02-MAR-20
Bromomethane			<0.50		ug/L		0.5	02-MAR-20
Carbon tetrachloride			<0.20		ug/L		0.2	02-MAR-20
Chlorobenzene			<0.50		ug/L		0.5	02-MAR-20
Chloroform			<1.0		ug/L		1	02-MAR-20
cis-1,2-Dichloroethylene			<0.50		ug/L		0.5	02-MAR-20
cis-1,3-Dichloropropene			<0.30		ug/L		0.3	02-MAR-20
Dibromochloromethane			<2.0		ug/L		2	02-MAR-20
Dichlorodifluoromethane			<2.0		ug/L		2	02-MAR-20
Ethylbenzene			<0.50		ug/L		0.5	02-MAR-20
n-Hexane			<0.50		ug/L		0.5	02-MAR-20
m+p-Xylenes			<0.40		ug/L		0.4	02-MAR-20
Methyl Ethyl Ketone			<20		ug/L		20	02-MAR-20
Methyl Isobutyl Ketone			<20		ug/L		20	02-MAR-20
Methylene Chloride			<5.0		ug/L		5	02-MAR-20
MTBE			<2.0		ug/L		2	02-MAR-20
o-Xylene			<0.30		ug/L		0.3	02-MAR-20
Styrene			<0.50		ug/L		0.5	02-MAR-20
Tetrachloroethylene			<0.50		ug/L		0.5	02-MAR-20
Toluene			<0.50		ug/L		0.5	02-MAR-20
trans-1,2-Dichloroethylene)		<0.50		ug/L		0.5	02-MAR-20
trans-1,3-Dichloropropene)		<0.30		ug/L		0.3	02-MAR-20
Trichloroethylene			<0.50		ug/L		0.5	02-MAR-20
Trichlorofluoromethane			<5.0		ug/L		5	02-MAR-20
Vinyl chloride			<0.50		ug/L		0.5	02-MAR-20
Surrogate: 1,4-Difluorober	nzene		101.4		%		70-130	02-MAR-20
Surrogate: 4-Bromofluorok	benzene		96.9		%		70-130	02-MAR-20
WG3282676-5 MS 1,1,1,2-Tetrachloroethane		WG3282676-3	91.9		%		50-140	02-MAR-20
1,1,2,2-Tetrachloroethane			81.5		%		50-140	02-MAR-20
1,1,1-Trichloroethane			96.6		%		50-140	02-MAR-20
1,1,2-Trichloroethane			93.7		%		50-140	02-MAR-20
1, 1,2-1 Honoroculand			55.1		70		30-140	UZ-IVIAR-ZU



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R5012001								
WG3282676-5 MS		WG3282676-3						
1,1-Dichloroethane			94.6		%		50-140	02-MAR-20
1,1-Dichloroethylene			86.5		%		50-140	02-MAR-20
1,2-Dibromoethane			90.5		%		50-140	02-MAR-20
1,2-Dichlorobenzene			95.4		%		50-140	02-MAR-20
1,2-Dichloroethane			77.8		%		50-140	02-MAR-20
1,2-Dichloropropane			85.1		%		50-140	02-MAR-20
1,3-Dichlorobenzene			96.9		%		50-140	02-MAR-20
1,4-Dichlorobenzene			95.6		%		50-140	02-MAR-20
Acetone			76.5		%		50-140	02-MAR-20
Benzene			92.2		%		50-140	02-MAR-20
Bromodichloromethane			87.3		%		50-140	02-MAR-20
Bromoform			83.8		%		50-140	02-MAR-20
Bromomethane			84.5		%		50-140	02-MAR-20
Carbon tetrachloride			94.4		%		50-140	02-MAR-20
Chlorobenzene			93.4		%		50-140	02-MAR-20
Chloroform			91.3		%		50-140	02-MAR-20
cis-1,2-Dichloroethylene			91.9		%		50-140	02-MAR-20
cis-1,3-Dichloropropene			78.1		%		50-140	02-MAR-20
Dibromochloromethane			91.6		%		50-140	02-MAR-20
Dichlorodifluoromethane			102.0		%		50-140	02-MAR-20
Ethylbenzene			90.6		%		50-140	02-MAR-20
n-Hexane			84.8		%		50-140	02-MAR-20
m+p-Xylenes			90.5		%		50-140	02-MAR-20
Methyl Ethyl Ketone			75.9		%		50-140	02-MAR-20
Methyl Isobutyl Ketone			66.1		%		50-140	02-MAR-20
Methylene Chloride			96.4		%		50-140	02-MAR-20
MTBE			95.3		%		50-140	02-MAR-20
o-Xylene			97.0		%		50-140	02-MAR-20
Styrene			84.6		%		50-140	02-MAR-20
Tetrachloroethylene			100.2		%		50-140	02-MAR-20
Toluene			94.5		%		50-140	02-MAR-20
trans-1,2-Dichloroethyler	ne		86.2		%		50-140	02-MAR-20
trans-1,3-Dichloropropen			83.4		%		50-140	02-MAR-20
							-	



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R5012001								
WG3282676-5 MS		WG3282676-3						
Trichloroethylene			103.9		%		50-140	02-MAR-20
Trichlorofluoromethane			97.0		%		50-140	02-MAR-20
Vinyl chloride			109.7		%		50-140	02-MAR-20

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11 Indell Lane

Brampton ON L6T 3Y3 Kossay Makhzoumi

Legend:

Contact:

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.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
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.

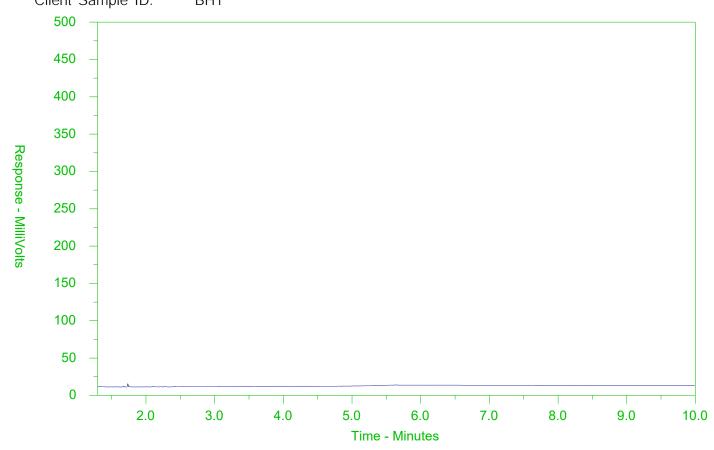
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined data quality objectives to provide 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: L2422407-1 Client Sample ID: BH1



← -F2-	→-	_F3 → F4-	→	
nC10	nC16	nC34	nC50	
174°C	287°C	481°C	575°C	
346°F	549°F	898°F	1067°F	
Gasolin	ie →	← Mo	tor 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) Fourconnental

Chain of Custody (COC) / Analytic Request Form

Canada Toll Free: 1 800 668 9878



L2422407-COFC

COC Number: 15 -

	www.alsglobal.com																	<u>. </u>	
Report To	Contact and company name below w	vill appear on the final report		Report Formas	/ Diguise				_		se confi	rm all E8	LP TATE	with yo	ur AM -	· surcha	rges will	apply	
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Contact:	Kossay Makhzoumi		Quality Control (QC) Report with Re	port 🗹 YES	□ NO	≱ ŝ	4 (day [P	4]			È	1 8	Busin	ess da	ay [E1]	i	
Phone:	905-796-2650		Compare Result	ts to Criteria on Report -	provide details belo	ow if box checked	20 S	3 (day [P	3]		- 1	EE			•	/eeken		
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Street:	11 Indell Lane		Email 1 or Fax	kmakhzoumi@terr	aprobe.ca			Date as	nd Time	Requir	ed for a	I E&P T	ATs:						
City/Province:	Brampton		Email 2				For test	s that ca	en not be	perform	ed acco	ding to t	the serv	ice leve	l select	ed, you	will be co	ontacted.	
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Contact:	Lorena Rossi		Email 2				1 1	İ	1						-		1		و
	Project Information		Oil	l and Gas Require	d Fields (client	use)]					l			1				ige
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ALS Sample #	Sample Identific	ation and/or Coordinates		Date	Time	Committee Towns	etals a	als	ge G		~	_		.	Pes	g			
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TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 28-FEB-20

Report Date: 05-MAR-20 11:09 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2422401

Project P.O. #: NOT SUBMITTED

Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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ADDRESS: 5730 Coopers Avenue, Unit #26 , Mississauga, ON L4Z 2E9 Canada | Phone: +1 905 507 6910 | Fax: +1 905 507 6927 ALS CANADA LTD Part of the ALS Group An ALS Limited Company





L2422401 CONT'D....

Job Reference: 1-19-0603-42

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05-MAR-20 11:09 (MT)

Summary of Guideline Exceedances

Guideline						
ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit
Ontario Reg	gulation 153/04	- April 15, 2011 Standards - T3-Non-Potable Gi	ound Water-All Types	of Property Uses (Coarse)		
L2422401-1	BH2	Anions and Nutrients	Chloride (CI)	2680	2300	mg/L
Ontario Reg	gulation 153/04	- April 15, 2011 Standards - T3-Non-Potable G	ound Water-All Types	of Property Uses (Fine)		
L2422401-1	BH2	Anions and Nutrients	Chloride (CI)	2680	2300	mg/L

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2422401 CONT'D....

Job Reference: 1-19-0603-42

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05-MAR-20 11:09 (MT)

Physical Tests - WATER

i ilyolodi i coto	***				
				Lab ID	L2422401-1
		5	Sampl	e Date	27-FEB-20
			Sam	ple ID	BH2
		(Guide	Limits	
Analyte		Unit	#1	#2	
Conductivity		mS/cm	-	-	7.83
Conductivity pH		mS/cm pH units	-	-	7.83 7.17

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Job Reference: 1-19-0603-42

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Anions and Nutrients - WATER

-11			
		_ab ID	L2422401-1
	Sample	e Date	27-FEB-20
	Sam	ple ID	BH2
Unit	Guide #1	Limits #2	
		l Sample Sam Guide	Lab ID Sample Date Sample ID Guide Limits

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Cyanides - WATER

January Willer			
		Lab ID	L2422401-1
	Samp	le Date	27-FEB-20
	San	nple ID	BH2
Analyte	Guide Unit #1	Limits #2	
Cyanide, Weak Acid Diss	ug/L 66	66	<2.0

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Job Reference: 1-19-0603-42

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Dissolved Metals - WATER

Dissolved Mercury Filtration Location - - FIELD Dissolved Metals Filtration Location - - FIELD Antimony (Sb)-Dissolved ug/L 20000 20000 <1.0 DLHC Arsenic (As)-Dissolved ug/L 1900 1900 <1.0 DLHC Barium (Ba)-Dissolved ug/L 29000 29000 102 DLHC Beryllium (Be)-Dissolved ug/L 67 67 <1.0 DLHC Boron (B)-Dissolved ug/L 45000 45000 100 DLHC Cadmium (Cd)-Dissolved ug/L 2.7 2.7 <0.050 DLHC Chromium (Cr)-Dissolved ug/L 810 810 <5.0 DLHC Copper (Cu)-Dissolved ug/L 87 87 <2.0 DLHC Lead (Pb)-Dissolved ug/L 25 25 <0.50 DLHC			Sample	ab ID Date ple ID	L2422401-1 27-FEB-20 BH2
Dissolved Metals Filtration Location	Analyte	Unit			
Antimony (Sb)-Dissolved	Dissolved Mercury Filtration Location		-	-	FIELD
Antimony (Sb)-Dissolved ug/L 20000 20000 <1.0 DIHC 20000 20000	Dissolved Metals Filtration Location		-	-	FIELD
Arsenic (AS)-Dissolved	Antimony (Sb)-Dissolved	ug/L	20000	20000	<1.0 DLHC
Barium (Ba)-Dissolved ug/L 29000 29000 102 Beryllium (Be)-Dissolved ug/L 67 67 <1.0	Arsenic (As)-Dissolved	ug/L	1900	1900	<1.0 DLHC
Beryllium (Be)-Dissolved Ug/L 45000 45000 100 DIHC	Barium (Ba)-Dissolved	ug/L	29000	29000	102 DLHC
Boron (B)-Dissolved Ug/L 2.7 2.7 <0.050 Olhot	Beryllium (Be)-Dissolved	ug/L	67	67	<1.0 DLHC
Chromium (Cr)-Dissolved ug/L 810 810 <5.0 DLHC Cobalt (Co)-Dissolved ug/L 66 66 <1.0	Boron (B)-Dissolved	ug/L	45000	45000	100
Chromium (Cr)-Dissolved ug/L 810 810 <5.0 DLHC Cobalt (Co)-Dissolved ug/L 66 66 <1.0	Cadmium (Cd)-Dissolved	ug/L	2.7	2.7	< 0.050 DLHC
Cobalit (Co)-Dissolved ug/L 66 66 <1.0 Copper (Cu)-Dissolved ug/L 87 87 <2.0	Chromium (Cr)-Dissolved	ug/L	810	810	DILLIC
Copper (Cu)-Dissolved ug/L 87 87 <2.0	Cobalt (Co)-Dissolved	ug/L	66	66	<1.0 DLHC
Mercury (Hg)-Dissolved ug/L 25 25 <0.50	Copper (Cu)-Dissolved	ug/L	87	87	<2.0 DLHC
Molybdenum (Mo)-Dissolved ug/L 9200 9200 5.91 DLHC Nickel (Ni)-Dissolved ug/L 490 490 <5.0	Lead (Pb)-Dissolved	ug/L	25	25	<0.50 DLHC
Molybaenum (Mo)-Dissolved ug/L 9200 9200 5.91 Nickel (Ni)-Dissolved ug/L 490 490 <5.0	Mercury (Hg)-Dissolved	ug/L	0.29	2.8	<0.0050
Nicker (NI)-Dissolved ug/L 490 490 <5.0 Selenium (Se)-Dissolved ug/L 63 63 <0.50 DLHC	Molybdenum (Mo)-Dissolved	ug/L	9200	9200	5.91 DLHC
Seterium (Se)-Dissolved ug/L 63 63 <0.50 Silver (Ag)-Dissolved ug/L 1.5 1.5 <0.50	Nickel (Ni)-Dissolved	ug/L	490	490	<5.0 DLHC
Soliver (Agy-bissolved ug/L 1.5 1.5 <0.50	Selenium (Se)-Dissolved	ug/L	63	63	<0.50 DLHC
Thallium (TI)-Dissolved $\qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad \qquad$	Silver (Ag)-Dissolved	ug/L	1.5	1.5	<0.50 DLHC
Uranium (U)-Dissolved ug/L 420 420 1.59 DIHC	Sodium (Na)-Dissolved	ug/L	2300000	2300000	1300000 BLHC
Oranium (0)-Dissolved 420 1.59	Thallium (TI)-Dissolved	ug/L	510	510	<0.10 DLHC
Vanadium (V)-Dissolved ug/L 250 250 <5.0 DLHC	Uranium (U)-Dissolved	ug/L	420	420	1.59 DLHC
	Vanadium (V)-Dissolved	ug/L	250	250	<5.0 DLHC
Zinc (Zn)-Dissolved ug/L 1100 1100 <10 DLHC	Zinc (Zn)-Dissolved	ug/L	1100	1100	<10 DLHC

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2422401 CONT'D....

Job Reference: 1-19-0603-42

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Speciated Metals - WATER

**/ \ : = : \			
		Lab ID	L2422401-1
	Samp	le Date	27-FEB-20
	Sar	nple ID	BH2
Uni		e Limits #2	
		Sar Guide	Lab ID Sample Date Sample ID Guide Limits

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Job Reference: 1-19-0603-42

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Volatile Organic Compounds - WATER

Volatile Organic Compound		L	ab ID	L2422401-1
		Sample	Date	27-FEB-20
		Sam	ple ID	BH2
		0		
Analysis	Unit	Guide #1	Limits #2	
Analyte				
Acetone	ug/L	130000	130000	<30
Benzene	ug/L	44	430	<0.50
Bromodichloromethane	ug/L	85000	85000	<2.0
Bromoform	ug/L	380	770	<5.0
Bromomethane	ug/L	5.6	56	<0.50
Carbon tetrachloride	ug/L	0.79	8.4	<0.20
Chlorobenzene	ug/L	630	630	<0.50
Dibromochloromethane	ug/L	82000	82000	<2.0
Chloroform	ug/L	2.4	22	<1.0
1,2-Dibromoethane	ug/L	0.25	0.83	<0.20
1,2-Dichlorobenzene	ug/L	4600	9600	<0.50
1,3-Dichlorobenzene	ug/L	9600	9600	<0.50
1,4-Dichlorobenzene	ug/L	8	67	<0.50
Dichlorodifluoromethane	ug/L	4400	4400	<2.0
1,1-Dichloroethane	ug/L	320	3100	<0.50
1,2-Dichloroethane	ug/L	1.6	12	<0.50
1,1-Dichloroethylene	ug/L	1.6	17	<0.50
cis-1,2-Dichloroethylene	ug/L	1.6	17	<0.50
trans-1,2-Dichloroethylene	ug/L	1.6	17	<0.50
Methylene Chloride	ug/L	610	5500	<5.0
1,2-Dichloropropane	ug/L	16	140	<0.50
cis-1,3-Dichloropropene	ug/L	-	-	<0.30
trans-1,3-Dichloropropene	ug/L	-	-	< 0.30
1,3-Dichloropropene (cis & trans)	ug/L	5.2	45	<0.50
Ethylbenzene	ug/L	2300	2300	<0.50
n-Hexane	ug/L	51	520	<0.50
Methyl Ethyl Ketone	ug/L	470000	1500000	<20
Methyl Isobutyl Ketone	ug/L	140000	580000	<20
MTBE	ug/L	190	1400	<2.0
Styrene	ug/L	1300	9100	<0.50

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

 $^{^{\}star}$ Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2422401 CONT'D....

Job Reference: 1-19-0603-42

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Volatile Organic Compounds - WATER

		L	ab ID	L2422401-1
		Sample	e Date	27-FEB-20
		Sam	ple ID	BH2
	11.24	Guide		
Analyte	Unit	#1	#2	
1,1,1,2-Tetrachloroethane	ug/L	3.3	28	<0.50
1,1,2,2-Tetrachloroethane	ug/L	3.2	15	<0.50
Tetrachloroethylene	ug/L	1.6	17	<0.50
Toluene	ug/L	18000	18000	<0.50
1,1,1-Trichloroethane	ug/L	640	6700	<0.50
1,1,2-Trichloroethane	ug/L	4.7	30	<0.50
Trichloroethylene	ug/L	1.6	17	<0.50
Trichlorofluoromethane	ug/L	2500	2500	<5.0
Vinyl chloride	ug/L	0.5	1.7	<0.50
o-Xylene	ug/L	-	-	< 0.30
m+p-Xylenes	ug/L	-	-	<0.40
Xylenes (Total)	ug/L	4200	4200	<0.50
Surrogate: 4-Bromofluorobenzene	%	-	-	95.1
Surrogate: 1,4-Difluorobenzene	%	-	-	102.0

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Job Reference: 1-19-0603-42

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Hydrocarbons - WATER

nyarocarbons - WATER							
			Lab ID	L2422401-1			
		Sample	e Date	27-FEB-20			
		Sam	ple ID	BH2			
		Guide Limits					
Analyte	Unit	#1	#2				
F1 (C6-C10)	ug/L	750	750	<25			
F1-BTEX	ug/L	750	750	<25			
F2 (C10-C16)	ug/L	150	150	<100			
F2-Naphth	ug/L	-	-	<100			
F3 (C16-C34)	ug/L	500	500	<250			
F3-PAH	ug/L	-	-	<250			
F4 (C34-C50)	ug/L	500	500	<250			
Total Hydrocarbons (C6-C50)	ug/L	-	-	<370			
Chrom. to baseline at nC50		-	-	YES			
Surrogate: 2-Bromobenzotrifluoride	%	-	-	101.6			
Surrogate: 3,4-Dichlorotoluene	%	-	-	72.1			

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Job Reference: 1-19-0603-42

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Polycyclic Aromatic Hydrocarbons - WATER

Lab ID	L2422401-1
Sample Date	27-FEB-20
Sample ID	BH2

		Guide I	Limits	
Analyte	Unit	#1	#2	
Acenaphthene	ug/L	600	1700	<0.020
Acenaphthylene	ug/L	1.8	1.8	0.037 R
Anthracene	ug/L	2.4	2.4	<0.020
Benzo(a)anthracene	ug/L	4.7	4.7	<0.020
Benzo(a)pyrene	ug/L	0.81	0.81	<0.010
Benzo(b)fluoranthene	ug/L	0.75	0.75	<0.020
Benzo(g,h,i)perylene	ug/L	0.2	0.2	<0.020
Benzo(k)fluoranthene	ug/L	0.4	0.4	<0.020
Chrysene	ug/L	1	1	<0.020
Dibenzo(ah)anthracene	ug/L	0.52	0.52	<0.020
Fluoranthene	ug/L	130	130	<0.020
Fluorene	ug/L	400	400	<0.020
Indeno(1,2,3-cd)pyrene	ug/L	0.2	0.2	<0.020
1+2-Methylnaphthalenes	ug/L	1800	1800	0.088
1-Methylnaphthalene	ug/L	1800	1800	0.039
2-Methylnaphthalene	ug/L	1800	1800	0.049
Naphthalene	ug/L	1400	6400	<0.050
Phenanthrene	ug/L	580	580	<0.020
Pyrene	ug/L	68	68	<0.020
Surrogate: d10-Acenaphthene	%	-	-	97.1
Surrogate: d12-Chrysene	%	-	-	87.3
Surrogate: d8-Naphthalene	%	-	-	100.4
Surrogate: d10-Phenanthrene	%	-	-	105.5

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Job Reference: 1-19-0603-42

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05-MAR-20 11:09 (MT)

Polychlorinated Biphenyls - WATER

		Sample Sam	L2422401-1 27-FEB-20 BH2	
Analyte	Unit	Guide #1	Limits #2	
Aroclor 1242	ug/L	-	-	<0.020
Aroclor 1248	ug/L	-	-	<0.020
Aroclor 1254	ug/L	-	-	<0.020
Aroclor 1260	ug/L	-	-	<0.020
Surrogate: Decachlorobiphenyl	%	-	-	83.4
Total PCBs	ug/L	7.8	15	<0.040
Surrogate: Tetrachloro-m-xylene	%	-	-	90.4

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.

Reference Information

L2422401 CONT'D.... Job Reference: 1-19-0603-42 PAGE 13 of 15 05-MAR-20 11:09 (MT)

Qualifiers for Individual Parameters Listed:

Water

Qualifier Description R The ion abundance ratio(s) did not meet the acceptance criteria. Value is an estimated maximum.

Detection Limit Raised: Dilution required due to high concentration of test analyte(s).

Methods Listed (if applicable):

DLHC

CL-IC-N-WT

ALS Test Code **Test Description** Method Reference** Matrix

Chloride by IC Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

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).

EPA 300.1 (mod)

CN-WAD-R511-WT Water Cyanide (WAD)-O.Reg 153/04 APHA 4500CN I-Weak acid Dist Colorimet

Weak acid dissociable cyanide (WAD) is determined by undergoing a distillation procedure. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

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-R511-WT Water Hex Chrom-O.Reg 153/04 (July 2011) EPA 7199

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. Chromium (III) is calculated as the difference between the total chromium and the chromium (VI) results.

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-R511-WT Water Conductivity-O.Reg 153/04 (July 2011) APHA 2510 B

Water samples can be measured directly by immersing the conductivity cell into 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).

EC-SCREEN-WT Water Conductivity Screen (Internal Use APHA 2510

Only)

Qualitative analysis of conductivity where required during preparation of other tests - e.g. TDS, metals, etc.

F1-F4-511-CALC-WT Water F1-F4 Hydrocarbon Calculated CCME CWS-PHC. Pub #1310. Dec 2001-L

Parameters

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

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.

Reference Information

L2422401 CONT'D.... Job Reference: 1-19-0603-42 PAGE 14 of 15 05-MAR-20 11:09 (MT)

Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

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 Water F1-O.Reg 153/04 (July 2011) E3398/CCME TIER 1-HS

Fraction F1 is determined by 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 Water F2-F4-O.Reg 153/04 (July 2011) EPA 3511/CCME Tier 1

Petroleum Hydrocarbons (F2-F4 fractions) are extracted from water using a hexane micro-extraction technique. Instrumental analysis is by GC-FID, as per the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Tier 1 Method, CCME, 2001.

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-D-UG/L-CVAA-WT Water Diss. Mercury in Water by CVAAS EPA 1631E (mod)

(ug/L)

Water samples are filtered (0.45 um), preserved with hydrochloric acid, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed 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-D-UG/L-MS-WT Water Diss. Metals in Water by ICPMS (ug/L) EPA 200.8

The metal constituents of a non-acidified sample that pass through a membrane filter prior to ICP/MS analysis.

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 Water PAH-Calculated Parameters SW846 8270

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

Aqueous samples, fortified with surrogates, are extracted using liquid/liquid extraction technique. The sample extracts are concentrated and then analyzed using 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 Water PCB-O. Reg 153/04 (July 2011) SW846 3510/8082

Aqueous samples are extracted, then concentrated, reconstituted, and analyzed by 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 Water pH APHA 4500 H-Electrode

Water samples are analyzed directly by a calibrated pH 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). Holdtime for samples under this regulation is 28 days

Reference Information

L2422401 CONT'D....
Job Reference: 1-19-0603-42
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Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

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

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

Liquid samples are analyzed by headspace GC/MSD.

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 Water 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

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.



Workorder: L2422401 Report Date: 05-MAR-20 Page 1 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CL-IC-N-WT	Water							
Batch R5013226								
WG3284708-13 DUP Chloride (CI)		WG3284708-1 5.54	5 5.54		mg/L	0.0	20	02-MAR-20
WG3284708-12 LCS Chloride (Cl)			103.9		%		90-110	02-MAR-20
WG3284708-11 MB Chloride (Cl)			<0.50		mg/L		0.5	02-MAR-20
WG3284708-14 MS Chloride (CI)		WG3284708-1	5 99.1		%		75-125	02-MAR-20
CN-WAD-R511-WT	Water							
Batch R5013229								
WG3284843-3 DUP Cyanide, Weak Acid Dis	S	L2422396-1 <2.0	<2.0	RPD-NA	ug/L	N/A	20	02-MAR-20
WG3284843-2 LCS Cyanide, Weak Acid Dis	s		100.0		%		80-120	02-MAR-20
WG3284843-1 MB Cyanide, Weak Acid Dis	s		<2.0		ug/L		2	02-MAR-20
CR-CR6-IC-R511-WT	Water							
Batch R5012632								
WG3284757-4 DUP Chromium, Hexavalent		WG3284757-3 <0.50	<0.50	RPD-NA	ug/L	N/A	20	02-MAR-20
WG3284757-2 LCS Chromium, Hexavalent			99.4		%		80-120	02-MAR-20
WG3284757-1 MB Chromium, Hexavalent			<0.50		ug/L		0.5	02-MAR-20
WG3284757-5 MS Chromium, Hexavalent		WG3284757-3	96.0		%		70-130	02-MAR-20
EC-R511-WT	Water							
Batch R5012946								
WG3284273-4 DUP Conductivity		WG3284273-3 0.622	0.625		mS/cm	0.5	10	29-FEB-20
WG3284273-2 LCS Conductivity			100.5		%		90-110	29-FEB-20
WG3284273-1 MB Conductivity			<0.0030		mS/cm		0.003	29-FEB-20
F1-HS-511-WT	Water							



Workorder: L2422401 Report Date: 05-MAR-20 Page 2 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test		Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT		Water							
	12001								
WG3282676-4 F1 (C6-C10)	DUP		WG3282676-3 <25	<25	RPD-NA	ug/L	N/A	30	02-MAR-20
WG3282676-1 F1 (C6-C10)	LCS			91.3		%		80-120	02-MAR-20
WG3282676-2 F1 (C6-C10)	MB			<25		ug/L		25	02-MAR-20
Surrogate: 3,4-Di	chloroto	luene		101.5		%		60-140	02-MAR-20
WG3282676-5 F1 (C6-C10)	MS		WG3282676-3	81.5		%		60-140	02-MAR-20
F2-F4-511-WT		Water							
Batch R50°	12153								
WG3284543-2 F2 (C10-C16)	LCS			104.8		%		70-130	02-MAR-20
F3 (C16-C34)				104.1		%		70-130	02-MAR-20
F4 (C34-C50)				110.9		%		70-130	02-MAR-20
WG3284543-1 F2 (C10-C16)	МВ			<100		ug/L		100	02-MAR-20
F3 (C16-C34)				<250		ug/L		250	02-MAR-20
F4 (C34-C50)				<250		ug/L		250	02-MAR-20
Surrogate: 2-Bror	mobenz	otrifluoride		102.4		%		60-140	02-MAR-20
HG-D-UG/L-CVAA-W	/ T	Water							
Batch R50 ⁻	12117								
WG3284635-3 Mercury (Hg)-Diss	DUP solved		L2422396-1 < 0.0050	<0.0050	RPD-NA	ug/L	N/A	20	02-MAR-20
WG3284635-2 Mercury (Hg)-Dis				108.0		%		80-120	02-MAR-20
WG3284635-1 Mercury (Hg)-Disa	MB solved			<0.0050		ug/L		0.005	02-MAR-20
WG3284635-4 Mercury (Hg)-Dis	MS solved		L2422401-1	102.5		%		70-130	02-MAR-20
MET-D-UG/L-MS-WT	г	Water							
Batch R50°	12163								
WG3284562-4 Antimony (Sb)-Dis	DUP ssolved		WG3284562-3 <1.0	<1.0	RPD-NA	ug/L	N/A	20	02-MAR-20
Arsenic (As)-Diss	solved		2.5	2.5		ug/L	1.5	20	02-MAR-20
Barium (Ba)-Diss	olved		30.0	30.2		ug/L	0.7	20	02-MAR-20



Workorder: L2422401 Report Date: 05-MAR-20 Page 3 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

MET-D-UG/L-MS-WT	Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
Beryllium (Be)-Dissolved	MET-D-UG/L-MS-WT	Water							
Beryllium (Be)-Dissolved	Batch R50121	163							
Boron (B)-Dissolved					DDD MA	ua/l	NI/A	20	00 MAD 00
Cadmium (Cd)-Dissolved 0.608 0.723 ug/L 17 20 02-MAR-20 Chromium (Cr)-Dissolved <5.0 <5.0 RPD-NA ug/L N/A 20 02-MAR-20 Cobalt (Co)-Dissolved 6.9 7.1 ug/L 2.8 20 02-MAR-20 Copper (Cu)-Dissolved 4.0 4.0 ug/L 0.5 20 02-MAR-20 Lead (Pb)-Dissolved 4.0 4.0 ug/L N/A 20 02-MAR-20 Molybdenum (Mo)-Dissolved 49.8 51.9 ug/L 4.3 20 02-MAR-20 Nickel (Ni)-Dissolved 7.4 7.3 ug/L 1.4 20 02-MAR-20 Selenium (Se)-Dissolved 0.83 0.90 ug/L N/A 20 02-MAR-20 Silver (Ag)-Dissolved 117000 117000 117000 ug/L N/A 20 02-MAR-20 Thallium (Ti)-Dissolved 113.9 14.1 ug/L N/A 20 02-MAR-20 Uranium (U)-Dissolved 13.9					RPD-NA				
Chromium (Cr)-Dissolved									
Cobalt (Co)-Dissolved 6.9 7.1 ug/L 2.8 20 02-MAR-20 Copper (Cu)-Dissolved 4.0 4.0 ug/L 0.5 20 02-MAR-20 Lead (Pb)-Dissolved 4.0 4.0 ug/L N/A 20 02-MAR-20 Molybdenum (Mo)-Dissolved 49.8 51.9 ug/L 4.3 20 02-MAR-20 Nickel (Ni)-Dissolved 49.8 51.9 ug/L 4.3 20 02-MAR-20 Selenium (Se)-Dissolved 0.83 0.90 ug/L 8.1 20 02-MAR-20 Silver (Ag)-Dissolved 0.83 0.90 ug/L N/A 20 02-MAR-20 Sodium (Na)-Dissolved 0.13 0.13 ug/L N/A 20 02-MAR-20 Sodium (Na)-Dissolved 13.9 14.1 ug/L 1.1 20 02-MAR-20 Uranium (U)-Dissolved 13.9 14.1 ug/L N/A 20 02-MAR-20 Vanadium (V)-Dissolved 5.0 RPD-NA ug/L <t< td=""><td>` ,</td><td></td><td></td><td></td><td>DDD MA</td><td><u> </u></td><td></td><td></td><td></td></t<>	` ,				DDD MA	<u> </u>			
Copper (Cu)-Dissolved 4.0 4.0 ug/L 0.5 20 02-MAR-20 Lead (Pb)-Dissolved 4.0 4.0 ug/L N/A 20 02-MAR-20 Molybdenum (Mo)-Dissolved 4.8 51.9 ug/L 4.3 20 02-MAR-20 Nickel (Ni)-Dissolved 7.4 7.3 ug/L 1.4 20 02-MAR-20 Selenium (Se)-Dissolved 0.83 0.90 ug/L 8.1 20 02-MAR-20 Silver (Ag)-Dissolved <0.50 <0.50 RPD-NA ug/L N/A 20 02-MAR-20 Sodium (Na)-Dissolved <0.53 <0.90 RPD-NA ug/L N/A 20 02-MAR-20 Thallium (TI)-Dissolved <0.13 <0.13 <0.13 ug/L 4.2 20 02-MAR-20 Thallium (TI)-Dissolved <0.13 <0.13 <0.13 ug/L N/A 20 02-MAR-20 Uranium (U)-Dissolved <0.13 <0.13 <0.13 <0.14 <0.20 <0.20 <0.20	,				RPD-NA				
Lead (Pb)-Dissolved	` '								
Molybdenum (Mo)-Dissolved 49.8 51.9 ug/L 4.3 20 02-MAR-20 Nickel (Ni)-Dissolved 7.4 7.3 ug/L 1.4 20 02-MAR-20 Selenium (Se)-Dissolved 0.83 0.90 ug/L 8.1 20 02-MAR-20 Silver (Ag)-Dissolved <0.50					DDD MA				
Nickel (Ni)-Dissolved 7.4 7.3 ug/L 1.4 20 02-MAR-20 Selenium (Se)-Dissolved 0.83 0.90 ug/L 8.1 20 02-MAR-20 Silver (Ag)-Dissolved < 0.50 < 0.50 RPD-NA ug/L N/A 20 02-MAR-20 Sodium (Na)-Dissolved 117000 117000 ug/L 0.3 20 02-MAR-20 Thallium (TI)-Dissolved 0.13 0.13 ug/L 4.2 20 02-MAR-20 Uranium (U)-Dissolved 13.9 14.1 ug/L 1.1 20 02-MAR-20 Vanadium (V)-Dissolved 5.0 < 5.0 RPD-NA ug/L N/A 20 02-MAR-20 Uranium (V)-Dissolved 5.0 < 5.0 RPD-NA ug/L N/A 20 02-MAR-20 Uranium (V)-Dissolved 5.0 < 5.0 RPD-NA ug/L N/A 20 02-MAR-20 Vanadium (V)-Dissolved 5.0 < 5.0 RPD-NA ug/L N/A 20 02-MAR-20 Uranium (V)-Dissolved 5.0 < 5.0 RPD-NA ug/L N/A 20 02-MAR-20 Uranium (V)-Dissolved 5.0 Sodium (Na)-Dissolve	,				RPD-NA				
Selenium (Se)-Dissolved 0.83 0.90 ug/L 8.1 20 02-MAR-20 Silver (Ag)-Dissolved <0.50 <0.50 RPD-NA ug/L N/A 20 02-MAR-20 Sodium (Na)-Dissolved 117000 117000 ug/L 0.3 20 02-MAR-20 Thallium (TI)-Dissolved 0.13 0.13 ug/L 4.2 20 02-MAR-20 Uranium (U)-Dissolved 13.9 14.1 ug/L 1.1 20 02-MAR-20 Vanadium (V)-Dissolved 45.0 <5.0 RPD-NA ug/L N/A 20 02-MAR-20 Zinc (Zn)-Dissolved 14 14 J ug/L N/A 20 02-MAR-20 WG3284562-2 LCS LCS SAD-120 02-MAR-20 02-MAR-20 02-MAR-20 02-MAR-20 02-MAR-20 02-MAR-20 02-MAR-20 02-MAR-20 02-MAR-20 02-MAR-20 02-MAR-20 02-MAR-20 02-MAR-20 02-MAR-20 02-MAR-20 02-MAR-20 02-MAR-20 02-MAR-20 02-MAR-20 <t< td=""><td>, , ,</td><td></td><td></td><td></td><td></td><td>•</td><td></td><td></td><td></td></t<>	, , ,					•			
Silver (Ag)-Dissolved <0.50 <0.50 RPD-NA Ug/L N/A 20 02-MAR-20 Sodium (Na)-Dissolved 117000 117000 ug/L 0.3 20 02-MAR-20 Thallium (TI)-Dissolved 0.13 0.13 ug/L 4.2 20 02-MAR-20 Uranium (U)-Dissolved 13.9 14.1 ug/L 1.1 20 02-MAR-20 Vanadium (V)-Dissolved <5.0	` ,								
Sodium (Na)-Dissolved 117000 117000 ug/L 0.3 20 02-MAR-20 Thallium (TI)-Dissolved 0.13 0.13 ug/L 4.2 20 02-MAR-20 Uranium (U)-Dissolved 13.9 14.1 ug/L 1.1 20 02-MAR-20 Vanadium (V)-Dissolved <5.0	` ,				000 114				
Thallium (TI)-Dissolved 0.13 0.13 ug/L 4.2 20 02-MAR-20 Uranium (U)-Dissolved 13.9 14.1 ug/L 1.1 20 02-MAR-20 Vanadium (V)-Dissolved <5.0					RPD-NA				
Uranium (U)-Dissolved 13.9 14.1 ug/L 1.1 20 02-MAR-20 Vanadium (V)-Dissolved <5.0	` '								
Vanadium (V)-Dissolved <5.0 <5.0 RPD-NA ug/L N/A 20 02-MAR-20 Zinc (Zn)-Dissolved 14 14 J ug/L 11 20 02-MAR-20 WG3284562-2 LCS Antimony (Sb)-Dissolved 93.7 % 80-120 02-MAR-20 Arsenic (As)-Dissolved 95.3 % 80-120 02-MAR-20 Barium (Ba)-Dissolved 95.3 % 80-120 02-MAR-20 Barium (Ba)-Dissolved 91.03 % 80-120 02-MAR-20 Beryllium (Be)-Dissolved 91.9 % 80-120 02-MAR-20 Boron (B)-Dissolved 92.0 % 80-120 02-MAR-20 Cadmium (Cd)-Dissolved 94.8 % 80-120 02-MAR-20 Chromium (Cr)-Dissolved 91.3 % 80-120 02-MAR-20 Cobalt (Co)-Dissolved 88.8 % 80-120 02-MAR-20 Copper (Cu)-Dissolved 85.9 % 80-120 02-MAR-20 Molybdenum (Mo)-Dissolved	` ,					<u> </u>			
Zinc (Zn)-Dissolved 14 14 J ug/L 11 20 02-MAR-20 WG3284562-2 LCS Antimony (Sb)-Dissolved 93.7 % 80-120 02-MAR-20 Arsenic (As)-Dissolved 95.3 % 80-120 02-MAR-20 Barium (Ba)-Dissolved 91.9 % 80-120 02-MAR-20 Beryllium (Be)-Dissolved 91.9 % 80-120 02-MAR-20 Boron (B)-Dissolved 92.0 % 80-120 02-MAR-20 Cadmium (Cd)-Dissolved 94.8 % 80-120 02-MAR-20 Chromium (Cr)-Dissolved 91.3 % 80-120 02-MAR-20 Choalt (Co)-Dissolved 88.8 % 80-120 02-MAR-20 Copper (Cu)-Dissolved 85.9 % 80-120 02-MAR-20 Lead (Pb)-Dissolved 97.7 % 80-120 02-MAR-20 Molybdenum (Mo)-Dissolved 95.1 % 80-120 02-MAR-20 Selenium (Se)-Dissolved 91.7 % 80-120 02-MAR-20 Silver (Ag)-Dissolved 95.7 % 80-120 02-MAR-20	` ,					<u> </u>			
WG3284562-2 LCS Antimony (Sb)-Dissolved 93.7 % 80-120 02-MAR-20 Arsenic (As)-Dissolved 95.3 % 80-120 02-MAR-20 Barium (Ba)-Dissolved 100.3 % 80-120 02-MAR-20 Beryllium (Be)-Dissolved 91.9 % 80-120 02-MAR-20 Boron (B)-Dissolved 92.0 % 80-120 02-MAR-20 Cadmium (Cd)-Dissolved 94.8 % 80-120 02-MAR-20 Chromium (Cr)-Dissolved 91.3 % 80-120 02-MAR-20 Cobalt (Co)-Dissolved 88.8 % 80-120 02-MAR-20 Copper (Cu)-Dissolved 85.9 % 80-120 02-MAR-20 Lead (Pb)-Dissolved 97.7 % 80-120 02-MAR-20 Molybdenum (Mo)-Dissolved 95.1 % 80-120 02-MAR-20 Nickel (Ni)-Dissolved 90.1 % 80-120 02-MAR-20 Selenium (Se)-Dissolved 91.7 % 80-120 02-MAR-20	` '	lved				<u> </u>			
Antimony (Sb)-Dissolved 93.7 % 80-120 02-MAR-20 Arsenic (As)-Dissolved 95.3 % 80-120 02-MAR-20 Barium (Ba)-Dissolved 100.3 % 80-120 02-MAR-20 Beryllium (Be)-Dissolved 91.9 % 80-120 02-MAR-20 Boron (B)-Dissolved 92.0 % 80-120 02-MAR-20 Cadmium (Cd)-Dissolved 94.8 % 80-120 02-MAR-20 Chromium (Cr)-Dissolved 91.3 % 80-120 02-MAR-20 Cobalt (Co)-Dissolved 88.8 % 80-120 02-MAR-20 Copper (Cu)-Dissolved 85.9 % 80-120 02-MAR-20 Lead (Pb)-Dissolved 97.7 % 80-120 02-MAR-20 Molybdenum (Mo)-Dissolved 95.1 % 80-120 02-MAR-20 Nickel (Ni)-Dissolved 90.1 % 80-120 02-MAR-20 Selenium (Se)-Dissolved 91.7 % 80-120 02-MAR-20 Silver (Ag)-Dissolved 95.7 % 80-120 02-MAR-20 Silver (Ag)-Dissolved 95.7 % 80-120 02-MAR-20 Sodium (Na)-Dissolved 92.6 % 80-120 02-MAR-20			14	14	J	ug/L	11	20	02-MAR-20
Barium (Ba)-Dissolved 100.3 % 80-120 02-MAR-20 Beryllium (Be)-Dissolved 91.9 % 80-120 02-MAR-20 Boron (B)-Dissolved 92.0 % 80-120 02-MAR-20 Cadmium (Cd)-Dissolved 94.8 % 80-120 02-MAR-20 Chromium (Cr)-Dissolved 91.3 % 80-120 02-MAR-20 Cobalt (Co)-Dissolved 88.8 % 80-120 02-MAR-20 Copper (Cu)-Dissolved 85.9 % 80-120 02-MAR-20 Lead (Pb)-Dissolved 97.7 % 80-120 02-MAR-20 Molybdenum (Mo)-Dissolved 95.1 % 80-120 02-MAR-20 Nickel (Ni)-Dissolved 90.1 % 80-120 02-MAR-20 Selenium (Se)-Dissolved 91.7 % 80-120 02-MAR-20 Silver (Ag)-Dissolved 95.7 % 80-120 02-MAR-20 Sodium (Na)-Dissolved 92.6 % 80-120 02-MAR-20		_		93.7		%		80-120	02-MAR-20
Beryllium (Be)-Dissolved 91.9 % 80-120 02-MAR-20 Boron (B)-Dissolved 92.0 % 80-120 02-MAR-20 Cadmium (Cd)-Dissolved 94.8 % 80-120 02-MAR-20 Chromium (Cr)-Dissolved 91.3 % 80-120 02-MAR-20 Cobalt (Co)-Dissolved 88.8 % 80-120 02-MAR-20 Copper (Cu)-Dissolved 85.9 % 80-120 02-MAR-20 Lead (Pb)-Dissolved 97.7 % 80-120 02-MAR-20 Molybdenum (Mo)-Dissolved 95.1 % 80-120 02-MAR-20 Nickel (Ni)-Dissolved 90.1 % 80-120 02-MAR-20 Selenium (Se)-Dissolved 91.7 % 80-120 02-MAR-20 Silver (Ag)-Dissolved 95.7 % 80-120 02-MAR-20 Sodium (Na)-Dissolved 92.6 % 80-120 02-MAR-20	Arsenic (As)-Dissolv	red		95.3		%		80-120	02-MAR-20
Boron (B)-Dissolved 92.0 % 80-120 02-MAR-20 Cadmium (Cd)-Dissolved 94.8 % 80-120 02-MAR-20 Chromium (Cr)-Dissolved 91.3 % 80-120 02-MAR-20 Cobalt (Co)-Dissolved 88.8 % 80-120 02-MAR-20 Copper (Cu)-Dissolved 85.9 % 80-120 02-MAR-20 Lead (Pb)-Dissolved 97.7 % 80-120 02-MAR-20 Molybdenum (Mo)-Dissolved 95.1 % 80-120 02-MAR-20 Nickel (Ni)-Dissolved 90.1 % 80-120 02-MAR-20 Selenium (Se)-Dissolved 91.7 % 80-120 02-MAR-20 Silver (Ag)-Dissolved 95.7 % 80-120 02-MAR-20 Sodium (Na)-Dissolved 92.6 % 80-120 02-MAR-20	Barium (Ba)-Dissolv	ed		100.3		%		80-120	02-MAR-20
Cadmium (Cd)-Dissolved 94.8 % 80-120 02-MAR-20 Chromium (Cr)-Dissolved 91.3 % 80-120 02-MAR-20 Cobalt (Co)-Dissolved 88.8 % 80-120 02-MAR-20 Copper (Cu)-Dissolved 85.9 % 80-120 02-MAR-20 Lead (Pb)-Dissolved 97.7 % 80-120 02-MAR-20 Molybdenum (Mo)-Dissolved 95.1 % 80-120 02-MAR-20 Nickel (Ni)-Dissolved 90.1 % 80-120 02-MAR-20 Selenium (Se)-Dissolved 91.7 % 80-120 02-MAR-20 Silver (Ag)-Dissolved 95.7 % 80-120 02-MAR-20 Sodium (Na)-Dissolved 92.6 % 80-120 02-MAR-20	Beryllium (Be)-Disso	lved		91.9		%		80-120	02-MAR-20
Chromium (Cr)-Dissolved 91.3 % 80-120 02-MAR-20 Cobalt (Co)-Dissolved 88.8 % 80-120 02-MAR-20 Copper (Cu)-Dissolved 85.9 % 80-120 02-MAR-20 Lead (Pb)-Dissolved 97.7 % 80-120 02-MAR-20 Molybdenum (Mo)-Dissolved 95.1 % 80-120 02-MAR-20 Nickel (Ni)-Dissolved 90.1 % 80-120 02-MAR-20 Selenium (Se)-Dissolved 91.7 % 80-120 02-MAR-20 Silver (Ag)-Dissolved 95.7 % 80-120 02-MAR-20 Sodium (Na)-Dissolved 92.6 % 80-120 02-MAR-20	Boron (B)-Dissolved			92.0		%		80-120	02-MAR-20
Cobalt (Co)-Dissolved 88.8 % 80-120 02-MAR-20 Copper (Cu)-Dissolved 85.9 % 80-120 02-MAR-20 Lead (Pb)-Dissolved 97.7 % 80-120 02-MAR-20 Molybdenum (Mo)-Dissolved 95.1 % 80-120 02-MAR-20 Nickel (Ni)-Dissolved 90.1 % 80-120 02-MAR-20 Selenium (Se)-Dissolved 91.7 % 80-120 02-MAR-20 Silver (Ag)-Dissolved 95.7 % 80-120 02-MAR-20 Sodium (Na)-Dissolved 92.6 % 80-120 02-MAR-20	Cadmium (Cd)-Disse	olved		94.8		%		80-120	02-MAR-20
Copper (Cu)-Dissolved 85.9 % 80-120 02-MAR-20 Lead (Pb)-Dissolved 97.7 % 80-120 02-MAR-20 Molybdenum (Mo)-Dissolved 95.1 % 80-120 02-MAR-20 Nickel (Ni)-Dissolved 90.1 % 80-120 02-MAR-20 Selenium (Se)-Dissolved 91.7 % 80-120 02-MAR-20 Silver (Ag)-Dissolved 95.7 % 80-120 02-MAR-20 Sodium (Na)-Dissolved 92.6 % 80-120 02-MAR-20	Chromium (Cr)-Diss	olved		91.3		%		80-120	02-MAR-20
Lead (Pb)-Dissolved 97.7 % 80-120 02-MAR-20 Molybdenum (Mo)-Dissolved 95.1 % 80-120 02-MAR-20 Nickel (Ni)-Dissolved 90.1 % 80-120 02-MAR-20 Selenium (Se)-Dissolved 91.7 % 80-120 02-MAR-20 Silver (Ag)-Dissolved 95.7 % 80-120 02-MAR-20 Sodium (Na)-Dissolved 92.6 % 80-120 02-MAR-20	Cobalt (Co)-Dissolve	ed		88.8		%		80-120	02-MAR-20
Molybdenum (Mo)-Dissolved 95.1 % 80-120 02-MAR-20 Nickel (Ni)-Dissolved 90.1 % 80-120 02-MAR-20 Selenium (Se)-Dissolved 91.7 % 80-120 02-MAR-20 Silver (Ag)-Dissolved 95.7 % 80-120 02-MAR-20 Sodium (Na)-Dissolved 92.6 % 80-120 02-MAR-20	Copper (Cu)-Dissolv	red		85.9		%		80-120	02-MAR-20
Nickel (Ni)-Dissolved 90.1 % 80-120 02-MAR-20 Selenium (Se)-Dissolved 91.7 % 80-120 02-MAR-20 Silver (Ag)-Dissolved 95.7 % 80-120 02-MAR-20 Sodium (Na)-Dissolved 92.6 % 80-120 02-MAR-20	Lead (Pb)-Dissolved	l		97.7		%		80-120	02-MAR-20
Selenium (Se)-Dissolved 91.7 % 80-120 02-MAR-20 Silver (Ag)-Dissolved 95.7 % 80-120 02-MAR-20 Sodium (Na)-Dissolved 92.6 % 80-120 02-MAR-20	Molybdenum (Mo)-D	issolved		95.1		%		80-120	02-MAR-20
Silver (Ag)-Dissolved 95.7 % 80-120 02-MAR-20 Sodium (Na)-Dissolved 92.6 % 80-120 02-MAR-20	Nickel (Ni)-Dissolved	d		90.1		%		80-120	02-MAR-20
Sodium (Na)-Dissolved 92.6 % 80-120 02-MAR-20	Selenium (Se)-Disso	olved		91.7		%		80-120	02-MAR-20
	Silver (Ag)-Dissolved	d		95.7		%		80-120	02-MAR-20
Thallium (TI)-Dissolved 96.8 % 80-120 02-MAR-20	Sodium (Na)-Dissolv	/ed		92.6		%		80-120	02-MAR-20
	Thallium (TI)-Dissolv	ved .		96.8		%		80-120	02-MAR-20



Workorder: L2422401 Report Date: 05-MAR-20 Page 4 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R5012163								
WG3284562-2 LCS			05.4		0/			
Uranium (U)-Dissolved	_1		95.1		%		80-120	02-MAR-20
Vanadium (V)-Dissolve	u		94.7		%		80-120	02-MAR-20
Zinc (Zn)-Dissolved			92.4		%		80-120	02-MAR-20
WG3284562-1 MB Antimony (Sb)-Dissolve	d		<0.10		ug/L		0.1	02-MAR-20
Arsenic (As)-Dissolved			<0.10		ug/L		0.1	02-MAR-20
Barium (Ba)-Dissolved			<0.10		ug/L		0.1	02-MAR-20
Beryllium (Be)-Dissolve	d		<0.10		ug/L		0.1	02-MAR-20
Boron (B)-Dissolved			<10		ug/L		10	02-MAR-20
Cadmium (Cd)-Dissolve	ed		<0.0050		ug/L		0.005	02-MAR-20
Chromium (Cr)-Dissolv			<0.50		ug/L		0.5	02-MAR-20
Cobalt (Co)-Dissolved			<0.10		ug/L		0.1	02-MAR-20
Copper (Cu)-Dissolved			<0.20		ug/L		0.2	02-MAR-20
Lead (Pb)-Dissolved			<0.050		ug/L		0.05	02-MAR-20
Molybdenum (Mo)-Diss	olved		<0.050		ug/L		0.05	02-MAR-20
Nickel (Ni)-Dissolved			<0.50		ug/L		0.5	02-MAR-20
Selenium (Se)-Dissolve	d		<0.050		ug/L		0.05	02-MAR-20
Silver (Ag)-Dissolved			<0.050		ug/L		0.05	02-MAR-20
Sodium (Na)-Dissolved			<50		ug/L		50	02-MAR-20
Thallium (TI)-Dissolved			<0.010		ug/L		0.01	02-MAR-20
Uranium (U)-Dissolved			<0.010		ug/L		0.01	02-MAR-20
Vanadium (V)-Dissolve	d		<0.50		ug/L		0.5	02-MAR-20
Zinc (Zn)-Dissolved			<1.0		ug/L		1	02-MAR-20
WG3284562-5 MS		WG3284562-3						
Antimony (Sb)-Dissolve	d		91.5		%		70-130	02-MAR-20
Arsenic (As)-Dissolved			90.5		%		70-130	02-MAR-20
Barium (Ba)-Dissolved			N/A	MS-B	%		-	02-MAR-20
Beryllium (Be)-Dissolve	d		88.4		%		70-130	02-MAR-20
Boron (B)-Dissolved			N/A	MS-B	%		-	02-MAR-20
Cadmium (Cd)-Dissolve			79.1		%		70-130	02-MAR-20
Chromium (Cr)-Dissolve	ed		87.0		%		70-130	02-MAR-20
Lead (Pb)-Dissolved			89.7		%		70-130	02-MAR-20
Molybdenum (Mo)-Diss			N/A	MS-B	%		-	02-MAR-20
Selenium (Se)-Dissolve	d		90.1		%		70-130	02-MAR-20



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R5012163								
WG3284562-5 MS		WG3284562-3			0/			
Silver (Ag)-Dissolved			92.7	NO 5	%		70-130	02-MAR-20
Sodium (Na)-Dissolved			N/A	MS-B	%		-	02-MAR-20
Thallium (TI)-Dissolved			91.5		%		70-130	02-MAR-20
Uranium (U)-Dissolved			N/A	MS-B	%		-	02-MAR-20
Vanadium (V)-Dissolved			91.3		%		70-130	02-MAR-20
PAH-511-WT	Water							
Batch R5013129								
WG3284543-2 LCS 1-Methylnaphthalene			90.8		%		50-140	03-MAR-20
2-Methylnaphthalene			87.7		%		50-140	03-MAR-20
Acenaphthene			98.0		%		50-140	03-MAR-20
Acenaphthylene			101.4		%		50-140	03-MAR-20
Anthracene			100.6		%		50-140	03-MAR-20
Benzo(a)anthracene			113.5		%		50-140	03-MAR-20
Benzo(a)pyrene			89.1		%		50-140	03-MAR-20
Benzo(b)fluoranthene			80.8		%		50-140	03-MAR-20
Benzo(g,h,i)perylene			100.4		%		50-140	03-MAR-20
Benzo(k)fluoranthene			92.6		%		50-140	03-MAR-20
Chrysene			106.2		%		50-140	03-MAR-20
Dibenzo(ah)anthracene			104.7		%		50-140	03-MAR-20
Fluoranthene			104.3		%		50-140	03-MAR-20
Fluorene			99.8		%		50-140	03-MAR-20
Indeno(1,2,3-cd)pyrene			114.0		%		50-140	03-MAR-20
Naphthalene			95.0		%		50-140	03-MAR-20
Phenanthrene			104.3		%		50-140	03-MAR-20
Pyrene			103.4		%		50-140	03-MAR-20
WG3284543-1 MB								
1-Methylnaphthalene			<0.020		ug/L		0.02	03-MAR-20
2-Methylnaphthalene			<0.020		ug/L		0.02	03-MAR-20
Acenaphthene			<0.020		ug/L		0.02	03-MAR-20
Acenaphthylene			<0.020		ug/L		0.02	03-MAR-20
Anthracene			<0.020		ug/L		0.02	03-MAR-20
Benzo(a)anthracene			<0.020		ug/L		0.02	03-MAR-20
Benzo(a)pyrene			<0.010		ug/L		0.01	03-MAR-20



Workorder: L2422401 Report Date: 05-MAR-20 Page 6 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Water							
	5013129							
WG3284543-1 Benzo(b)fluora	MB		<0.020		ug/l		0.02	00 MAD 00
Benzo(g,h,i)pe			<0.020		ug/L ug/L		0.02	03-MAR-20
			<0.020		•		0.02	03-MAR-20
Benzo(k)fluora	antinene		<0.020		ug/L		0.02	03-MAR-20
Chrysene Dibonzo(oh)or	athragana				ug/L		0.02	03-MAR-20
Dibenzo(ah)ar	imacene		<0.020		ug/L			03-MAR-20
Fluoranthene			<0.020		ug/L		0.02	03-MAR-20
Fluorene			<0.020		ug/L		0.02	03-MAR-20
Indeno(1,2,3-c	cd)pyrene		<0.020		ug/L		0.02	03-MAR-20
Naphthalene			<0.050		ug/L		0.05	03-MAR-20
Phenanthrene			<0.020		ug/L		0.02	03-MAR-20
Pyrene			<0.020		ug/L		0.02	03-MAR-20
Surrogate: d8-			107.4		%		60-140	03-MAR-20
Surrogate: d10	0-Phenanthrene		104.5		%		60-140	03-MAR-20
Surrogate: d12	2-Chrysene		98.3		%		60-140	03-MAR-20
Surrogate: d10	0-Acenaphthene		103.6		%		60-140	03-MAR-20
PCB-511-WT	Water							
Batch R	5014166							
WG3284619-2	LCS		95.7		0/		00.440	04.144.D.00
Aroclor 1242					%		60-140	04-MAR-20
Aroclor 1248 Aroclor 1254			110.9 95.8		%		60-140	04-MAR-20
					%		60-140	04-MAR-20
Aroclor 1260			115.6		70		60-140	04-MAR-20
WG3284619-1 Aroclor 1242	МВ		<0.020		ug/L		0.02	04-MAR-20
Aroclor 1248			<0.020		ug/L		0.02	04-MAR-20
Aroclor 1254			<0.020		ug/L		0.02	04-MAR-20
Aroclor 1260			<0.020		ug/L		0.02	04-MAR-20
Surrogate: De	cachlorobiphenyl		120.1		%		50-150	04-MAR-20
_	trachloro-m-xylene		74.1		%		50-150	04-MAR-20
PH-WT	Water							5 · · · · · · · · · · · · · · · · · · ·
	VV ater 25012946							
WG3284273-4		WG3284273	-3					
pH		8.09	8.10	J	pH units	0.01	0.2	29-FEB-20
WG3284273-2	LCS							



Qualifier

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RPD

Limit

Analyzed

Units

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Matrix

Reference

Result

Contact: Kossay Makhzoumi

Test

1631	Watiix	Reference	Result	Qualifier	Units	KFD	Liiiit	Allalyzeu
PH-WT	Water							
Batch R501	2946							
WG3284273-2 L pH	_CS		7.04		pH units		6.9-7.1	29-FEB-20
VOC-511-HS-WT	Water							
Batch R501	2001							
WG3282676-4 D	OUP	WG3282676-		555 MA	/!	N1/A	22	00.144.D.00
1,1,2-Tetrachion		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,1,1-Trichloroetha		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,1,2-Trichloroetha		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,1-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,1-Dichloroethyle		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,2-Dibromoethan		<0.20	<0.20	RPD-NA	ug/L	N/A	30	02-MAR-20
1,2-Dichlorobenze		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,2-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,2-Dichloropropa		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,3-Dichlorobenze	ene	<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,4-Dichlorobenze	ene	<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
Acetone		<30	<30	RPD-NA	ug/L	N/A	30	02-MAR-20
Benzene		<0.50	< 0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
Bromodichloromet	thane	<2.0	<2.0	RPD-NA	ug/L	N/A	30	02-MAR-20
Bromoform		<5.0	<5.0	RPD-NA	ug/L	N/A	30	02-MAR-20
Bromomethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
Carbon tetrachlori	de	<0.20	<0.20	RPD-NA	ug/L	N/A	30	02-MAR-20
Chlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
Chloroform		<1.0	<1.0	RPD-NA	ug/L	N/A	30	02-MAR-20
cis-1,2-Dichloroeth	nylene	<0.50	< 0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
cis-1,3-Dichloropro	opene	<0.30	< 0.30	RPD-NA	ug/L	N/A	30	02-MAR-20
Dibromochlorome	thane	<2.0	<2.0	RPD-NA	ug/L	N/A	30	02-MAR-20
Dichlorodifluorome	ethane	<2.0	<2.0	RPD-NA	ug/L	N/A	30	02-MAR-20
Ethylbenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
n-Hexane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
m+p-Xylenes		<0.40	< 0.40	RPD-NA	ug/L	N/A	30	02-MAR-20
Methyl Ethyl Ketor	ne	<20	<20	RPD-NA	ug/L	N/A	30	02-MAR-20



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11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R501200	1							
WG3282676-4 DUP		WG3282676-			/1			
Methyl Isobutyl Ketone	•	<20	<20	RPD-NA	ug/L	N/A	30	02-MAR-20
Methylene Chloride		<5.0	<5.0	RPD-NA	ug/L	N/A	30	02-MAR-20
MTBE		<2.0	<2.0	RPD-NA	ug/L	N/A	30	02-MAR-20
o-Xylene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	02-MAR-20
Styrene		<0.50	< 0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
Tetrachloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
Toluene		<0.50	< 0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
trans-1,2-Dichloroethy	lene	<0.50	< 0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
trans-1,3-Dichloroprop	ene	<0.30	< 0.30	RPD-NA	ug/L	N/A	30	02-MAR-20
Trichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
Trichlorofluoromethan	е	<5.0	<5.0	RPD-NA	ug/L	N/A	30	02-MAR-20
Vinyl chloride		<0.50	< 0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
WG3282676-1 LCS								
1,1,1,2-Tetrachloroeth	ane		91.8		%		70-130	02-MAR-20
1,1,2,2-Tetrachloroeth	ane		88.6		%		70-130	02-MAR-20
1,1,1-Trichloroethane			94.2		%		70-130	02-MAR-20
1,1,2-Trichloroethane			101.4		%		70-130	02-MAR-20
1,1-Dichloroethane			87.7		%		70-130	02-MAR-20
1,1-Dichloroethylene			86.8		%		70-130	02-MAR-20
1,2-Dibromoethane			101.2		%		70-130	02-MAR-20
1,2-Dichlorobenzene			95.0		%		70-130	02-MAR-20
1,2-Dichloroethane			85.8		%		70-130	02-MAR-20
1,2-Dichloropropane			88.4		%		70-130	02-MAR-20
1,3-Dichlorobenzene			94.0		%		70-130	02-MAR-20
1,4-Dichlorobenzene			93.2		%		70-130	02-MAR-20
Acetone			92.6		%		60-140	02-MAR-20
Benzene			93.0		%		70-130	02-MAR-20
Bromodichloromethan	е		90.5		%		70-130	02-MAR-20
Bromoform			91.5		%		70-130	02-MAR-20
Bromomethane			91.7		%		60-140	02-MAR-20
Carbon tetrachloride			91.1		%		70-130	02-MAR-20
Chlorobenzene			93.0		%		70-130	02-MAR-20
Chloroform			92.7		%		70-130	02-MAR-20



Workorder: L2422401 Report Date: 05-MAR-20 Page 9 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R501200	1							
WG3282676-1 LCS			00.7		0/		70.400	
cis-1,2-Dichloroethyler			93.7		%		70-130	02-MAR-20
cis-1,3-Dichloroproper			80.8		%		70-130	02-MAR-20
Dibromochloromethan			97.4		%		70-130	02-MAR-20
Dichlorodifluorometha	ne		116.3		%		50-140	02-MAR-20
Ethylbenzene			86.6		%		70-130	02-MAR-20
n-Hexane			84.9		%		70-130	02-MAR-20
m+p-Xylenes			86.5		%		70-130	02-MAR-20
Methyl Ethyl Ketone			108.6		%		60-140	02-MAR-20
Methyl Isobutyl Ketone)		79.3		%		60-140	02-MAR-20
Methylene Chloride			102.6		%		70-130	02-MAR-20
MTBE			94.9		%		70-130	02-MAR-20
o-Xylene			94.1		%		70-130	02-MAR-20
Styrene			85.1		%		70-130	02-MAR-20
Tetrachloroethylene			93.8		%		70-130	02-MAR-20
Toluene			92.6		%		70-130	02-MAR-20
trans-1,2-Dichloroethy	lene		85.7		%		70-130	02-MAR-20
trans-1,3-Dichloroprop	ene		87.4		%		70-130	02-MAR-20
Trichloroethylene			100.3		%		70-130	02-MAR-20
Trichlorofluoromethan	е		98.1		%		60-140	02-MAR-20
Vinyl chloride			116.9		%		60-140	02-MAR-20
WG3282676-2 MB								
1,1,1,2-Tetrachloroeth	ane		<0.50		ug/L		0.5	02-MAR-20
1,1,2,2-Tetrachloroeth	ane		<0.50		ug/L		0.5	02-MAR-20
1,1,1-Trichloroethane			<0.50		ug/L		0.5	02-MAR-20
1,1,2-Trichloroethane			<0.50		ug/L		0.5	02-MAR-20
1,1-Dichloroethane			<0.50		ug/L		0.5	02-MAR-20
1,1-Dichloroethylene			<0.50		ug/L		0.5	02-MAR-20
1,2-Dibromoethane			<0.20		ug/L		0.2	02-MAR-20
1,2-Dichlorobenzene			<0.50		ug/L		0.5	02-MAR-20
1,2-Dichloroethane			<0.50		ug/L		0.5	02-MAR-20
1,2-Dichloropropane			<0.50		ug/L		0.5	02-MAR-20
1,3-Dichlorobenzene			<0.50		ug/L		0.5	02-MAR-20
1,4-Dichlorobenzene			<0.50		ug/L		0.5	02-MAR-20
Acetone			<30		ug/L		30	02-MAR-20



Workorder: L2422401 Report Date: 05-MAR-20 Page 10 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R5012001								
WG3282676-2 MB								
Benzene			<0.50		ug/L		0.5	02-MAR-20
Bromodichloromethane			<2.0		ug/L		2	02-MAR-20
Bromoform			<5.0		ug/L		5	02-MAR-20
Bromomethane			<0.50		ug/L		0.5	02-MAR-20
Carbon tetrachloride			<0.20		ug/L		0.2	02-MAR-20
Chlorobenzene			<0.50		ug/L		0.5	02-MAR-20
Chloroform			<1.0		ug/L		1	02-MAR-20
cis-1,2-Dichloroethylene			<0.50		ug/L		0.5	02-MAR-20
cis-1,3-Dichloropropene			<0.30		ug/L		0.3	02-MAR-20
Dibromochloromethane			<2.0		ug/L		2	02-MAR-20
Dichlorodifluoromethane)		<2.0		ug/L		2	02-MAR-20
Ethylbenzene			<0.50		ug/L		0.5	02-MAR-20
n-Hexane			<0.50		ug/L		0.5	02-MAR-20
m+p-Xylenes			<0.40		ug/L		0.4	02-MAR-20
Methyl Ethyl Ketone			<20		ug/L		20	02-MAR-20
Methyl Isobutyl Ketone			<20		ug/L		20	02-MAR-20
Methylene Chloride			<5.0		ug/L		5	02-MAR-20
MTBE			<2.0		ug/L		2	02-MAR-20
o-Xylene			< 0.30		ug/L		0.3	02-MAR-20
Styrene			<0.50		ug/L		0.5	02-MAR-20
Tetrachloroethylene			<0.50		ug/L		0.5	02-MAR-20
Toluene			<0.50		ug/L		0.5	02-MAR-20
trans-1,2-Dichloroethyler	ne		<0.50		ug/L		0.5	02-MAR-20
trans-1,3-Dichloroproper	ne		<0.30		ug/L		0.3	02-MAR-20
Trichloroethylene			<0.50		ug/L		0.5	02-MAR-20
Trichlorofluoromethane			<5.0		ug/L		5	02-MAR-20
Vinyl chloride			< 0.50		ug/L		0.5	02-MAR-20
Surrogate: 1,4-Difluorobe	enzene		101.4		%		70-130	02-MAR-20
Surrogate: 4-Bromofluor	obenzene		96.9		%		70-130	02-MAR-20
WG3282676-5 MS 1,1,1,2-Tetrachloroethan	ne	WG3282676-3	91.9		%		50-140	02-MAR-20
1,1,2,2-Tetrachloroethan			81.5		%		50-140	02-MAR-20
1,1,1-Trichloroethane			96.6		%		50-140	02-MAR-20
1,1,2-Trichloroethane			93.7		%		50-140	02-MAR-20
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Workorder: L2422401 Report Date: 05-MAR-20 Page 11 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R5012001								
WG3282676-5 MS		WG3282676-3						
1,1-Dichloroethane			94.6		%		50-140	02-MAR-20
1,1-Dichloroethylene			86.5		%		50-140	02-MAR-20
1,2-Dibromoethane			90.5		%		50-140	02-MAR-20
1,2-Dichlorobenzene			95.4		%		50-140	02-MAR-20
1,2-Dichloroethane			77.8		%		50-140	02-MAR-20
1,2-Dichloropropane			85.1		%		50-140	02-MAR-20
1,3-Dichlorobenzene			96.9		%		50-140	02-MAR-20
1,4-Dichlorobenzene			95.6		%		50-140	02-MAR-20
Acetone			76.5		%		50-140	02-MAR-20
Benzene			92.2		%		50-140	02-MAR-20
Bromodichloromethane			87.3		%		50-140	02-MAR-20
Bromoform			83.8		%		50-140	02-MAR-20
Bromomethane			84.5		%		50-140	02-MAR-20
Carbon tetrachloride			94.4		%		50-140	02-MAR-20
Chlorobenzene			93.4		%		50-140	02-MAR-20
Chloroform			91.3		%		50-140	02-MAR-20
cis-1,2-Dichloroethylene			91.9		%		50-140	02-MAR-20
cis-1,3-Dichloropropene			78.1		%		50-140	02-MAR-20
Dibromochloromethane			91.6		%		50-140	02-MAR-20
Dichlorodifluoromethane			102.0		%		50-140	02-MAR-20
Ethylbenzene			90.6		%		50-140	02-MAR-20
n-Hexane			84.8		%		50-140	02-MAR-20
m+p-Xylenes			90.5		%		50-140	02-MAR-20
Methyl Ethyl Ketone			75.9		%		50-140	02-MAR-20
Methyl Isobutyl Ketone			66.1		%		50-140	02-MAR-20
Methylene Chloride			96.4		%		50-140	02-MAR-20
MTBE			95.3		%		50-140	02-MAR-20
o-Xylene			97.0		%		50-140	02-MAR-20
Styrene			84.6		%		50-140	02-MAR-20
Tetrachloroethylene			100.2		%		50-140	02-MAR-20
Toluene			94.5		%		50-140	02-MAR-20
trans-1,2-Dichloroethyler	ne		86.2		%		50-140	02-MAR-20
trans-1,3-Dichloroproper	ne		83.4		%		50-140	02-MAR-20



Workorder: L2422401 Report Date: 05-MAR-20 Page 12 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R5012001								
WG3282676-5 MS		WG3282676-3						
Trichloroethylene			103.9		%		50-140	02-MAR-20
Trichlorofluoromethane			97.0		%		50-140	02-MAR-20
Vinyl chloride			109.7		%		50-140	02-MAR-20

Workorder: L2422401 Report Date: 05-MAR-20

Client: TERRAPROBE-BRAMPTON Page 13 of 13

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

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.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
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.

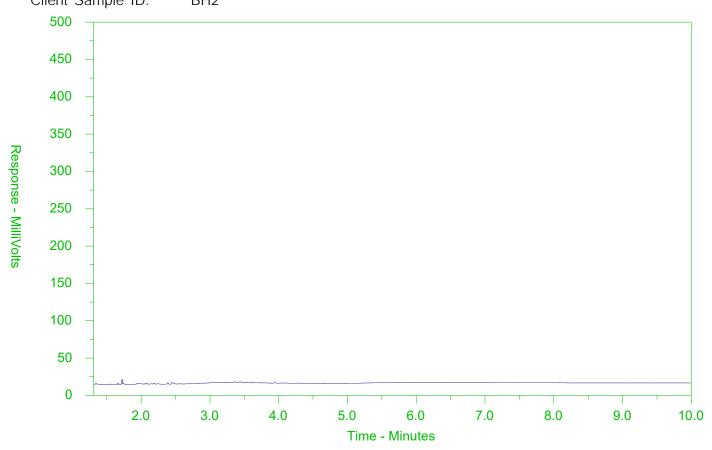
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined data quality objectives to provide 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: L2422401-1 Client Sample ID: BH2



← -F2-	→ ←	_F3 F4_	→	
nC10	nC16	nC34	nC50	
174°C	287°C	481°C	575°C	
346°F	549°F	898°F	1067°F	
Gasoline → ← Mot		← Mo	otor 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.

THE DESCRIPTION OF SECOND

Chain of Custody (COC) / Analytic **Request Form**

Canada Toll Free: 1 800 668 9878

COC Number: 15 -

	www.alsglobal.com	<u> </u>							_																	
Report To	Contact and compa	any name below w	rill appear on the final re	port	Report :									rill apply												
Company:	Terraprobe				Select Report F	ormat: 🕡 PDF [Z EXCEL [] E	DD (DIGITAL)		Re	gular	[R] [√ Sta	ndard T	AT if rec	eived t	by 3 pr	n - busi	ness da	ys - no	surcharge	s apply				
Contact:	Kossay Makhzoumi				Quality Control (QC) Report with Re	port 🗹 YES	□ NO						ţ	1 Business day [E1]											
Phone:	905-796-2650				☑ Compare Results to Criteria on Report - provide details below if box checked					3]			RGE	S	ame	Day, \	Neeko	end or		_						
	Company address below	will appear on th	e final report		Select Distribution: EMAIL						2]															
Street:	11 Indell Lane				Email 1 or Fax	kmakhzoumi@terra	aprobe.ca			Date a	nd Time	Requir	equired for all E&P TATs:													
City/Province:	Brampton				Email 2				For tes	ts that co	n not be	perform	ed acco	rding to	the serv	rice leve	evel selected, you will be contacted.									
Postal Code:	L6T 3Y3				Email 3									- 1	nalys	is Re	equest									
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Contact:	Lorena Rossi				Email 2]								- 1					و				
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TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 18-DEC-19

Report Date: 27-DEC-19 09:07 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2398104

Project P.O. #: NOT SUBMITTED

Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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ADDRESS: 5730 Coopers Avenue, Unit #26 , Mississauga, ON L4Z 2E9 Canada | Phone: +1 905 507 6910 | Fax: +1 905 507 6927 ALS CANADA LTD Part of the ALS Group An ALS Limited Company





L2398104 CONT'D....

Job Reference: 1-19-0603-42

PAGE 2 of 10

27-DEC-19 09:07 (MT)

Summary of Guideline Exceedances

Guideline						
ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

(No parameter exceedances)

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

(No parameter exceedances)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2398104 CONT'D....

Job Reference: 1-19-0603-42

PAGE 3 of 10

27-DEC-19 09:07 (MT)

Dissolved Metals - WATER

	Lab ID Sample Date Sample ID			
Analyte	Unit	Guide #1	Limits #2	
Dissolved Metals Filtration Location		-	-	FIELD
Antimony (Sb)-Dissolved	ug/L	20000	20000	<1.0 DLHC
Arsenic (As)-Dissolved	ug/L	1900	1900	<1.0 DLHC
Barium (Ba)-Dissolved	ug/L	29000	29000	48.4 DLHC
Beryllium (Be)-Dissolved	ug/L	67	67	<1.0 DLHC
Boron (B)-Dissolved	ug/L	45000	45000	210 DLHC
Cadmium (Cd)-Dissolved	ug/L	2.7	2.7	<0.050 ^{DLHC}
Chromium (Cr)-Dissolved	ug/L	810	810	<5.0 DLHC
Cobalt (Co)-Dissolved	ug/L	66	66	2.9 DLHC
Copper (Cu)-Dissolved	ug/L	87	87	<2.0 DLHC
Lead (Pb)-Dissolved	ug/L	25	25	<0.50 DLHC
Molybdenum (Mo)-Dissolved	ug/L	9200	9200	1.11 DLHC
Nickel (Ni)-Dissolved	ug/L	490	490	15.3 DLHC
Selenium (Se)-Dissolved	ug/L	63	63	<0.50 DLHC
Silver (Ag)-Dissolved	ug/L	1.5	1.5	<0.50 DLHC
Sodium (Na)-Dissolved	ug/L	2300000	2300000	992000 ^{DLHC}
Thallium (TI)-Dissolved	ug/L	510	510	<0.10 DLHC
Uranium (U)-Dissolved	ug/L	420	420	6.45 DLHC
Vanadium (V)-Dissolved	ug/L	250	250	<5.0 DLHC
Zinc (Zn)-Dissolved	ug/L	1100	1100	<10 DLHC

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2398104 CONT'D....

Job Reference: 1-19-0603-42

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Volatile Organic Compounds - WATER

		Lab ID Sample Date Sample ID				
Analyte	Unit	Guide #1	Limits #2			
Acetone	ug/L	130000	130000	<30		
Benzene	ug/L	44	430	<0.50		
Bromodichloromethane	ug/L	85000	85000	<2.0		
Bromoform	ug/L	380	770	<5.0		
Bromomethane	ug/L	5.6	56	<0.50		
Carbon tetrachloride	ug/L	0.79	8.4	<0.20		
Chlorobenzene	ug/L	630	630	<0.50		
Dibromochloromethane	ug/L	82000	82000	<2.0		
Chloroform	ug/L	2.4	22	<1.0		
1,2-Dibromoethane	ug/L	0.25	0.83	<0.20		
1,2-Dichlorobenzene	ug/L	4600	9600	<0.50		
1,3-Dichlorobenzene	ug/L	9600	9600	<0.50		
1,4-Dichlorobenzene	ug/L	8	67	<0.50		
Dichlorodifluoromethane	ug/L	4400	4400	<2.0		
1,1-Dichloroethane	ug/L	320	3100	<0.50		
1,2-Dichloroethane	ug/L	1.6	12	0.79		
1,1-Dichloroethylene	ug/L	1.6	17	<0.50		
cis-1,2-Dichloroethylene	ug/L	1.6	17	<0.50		
trans-1,2-Dichloroethylene	ug/L	1.6	17	<0.50		
Methylene Chloride	ug/L	610	5500	<5.0		
1,2-Dichloropropane	ug/L	16	140	<0.50		
cis-1,3-Dichloropropene	ug/L	-	-	< 0.30		
trans-1,3-Dichloropropene	ug/L	-	-	< 0.30		
1,3-Dichloropropene (cis & trans)	ug/L	5.2	45	<0.50		
Ethylbenzene	ug/L	2300	2300	<0.50		
n-Hexane	ug/L	51	520	<0.50		
Methyl Ethyl Ketone	ug/L	470000	1500000	<20		
Methyl Isobutyl Ketone	ug/L	140000	580000	<20		
MTBE	ug/L	190	1400	<2.0		
Styrene	ug/L	1300	9100	<0.50		

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

 $^{^{\}star}$ Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2398104 CONT'D....

Job Reference: 1-19-0603-42

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Volatile Organic Compounds - WATER

		Sample Sam	L2398104-1 16-DEC-19 BH3	
		Guide		
Analyte	Unit	#1	#2	
1,1,1,2-Tetrachloroethane	ug/L	3.3	28	<0.50
1,1,2,2-Tetrachloroethane	ug/L	3.2	15	<0.50
Tetrachloroethylene	ug/L	1.6	17	<0.50
Toluene	ug/L	18000	18000	<0.50
1,1,1-Trichloroethane	ug/L	640	6700	<0.50
1,1,2-Trichloroethane	ug/L	4.7	30	<0.50
Trichloroethylene	ug/L	1.6	17	<0.50
Trichlorofluoromethane	ug/L	2500	2500	<5.0
Vinyl chloride	ug/L	0.5	1.7	<0.50
o-Xylene	ug/L	-	-	< 0.30
m+p-Xylenes	ug/L	-	-	<0.40
Xylenes (Total)	ug/L	4200	4200	<0.50
Surrogate: 4-Bromofluorobenzene	%	-	-	92.4
Surrogate: 1,4-Difluorobenzene	%	-	-	94.6

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2398104 CONT'D....

Job Reference: 1-19-0603-42

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Hydrocarbons - WATER

nyurocarbons - WATER				
		ı	Lab ID	L2398104-1
		Sample	16-DEC-19	
		Sam	ple ID	BH3
		Guide	Limits	
Analyte	Unit	#1	#2	
F1 (C6-C10)	ug/L	750	750	<25
F1-BTEX	ug/L	750	750	<25
F2 (C10-C16)	ug/L	150	150	<100
F2-Naphth	ug/L	-	-	<100
F3 (C16-C34)	ug/L	500	500	<250
F3-PAH	ug/L	-	-	<250
F4 (C34-C50)	ug/L	500	500	<250
Total Hydrocarbons (C6-C50)	ug/L	-	-	<370
Chrom. to baseline at nC50		-	-	YES
Surrogate: 2-Bromobenzotrifluoride	%	-	-	95.4
Surrogate: 3,4-Dichlorotoluene	%	-	-	81.6

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2398104 CONT'D....

Job Reference: 1-19-0603-42

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Polycyclic Aromatic Hydrocarbons - WATER

Lab ID	L2398104-1
Sample Date	16-DEC-19
Sample ID	BH3

		Guide I	Limits	
Analyte	Unit	#1	#2	
Acenaphthene	ug/L	600	1700	<0.020
Acenaphthylene	ug/L	1.8	1.8	<0.020
Anthracene	ug/L	2.4	2.4	<0.020
Benzo(a)anthracene	ug/L	4.7	4.7	<0.020
Benzo(a)pyrene	ug/L	0.81	0.81	0.011
Benzo(b)fluoranthene	ug/L	0.75	0.75	<0.020
Benzo(g,h,i)perylene	ug/L	0.2	0.2	<0.020
Benzo(k)fluoranthene	ug/L	0.4	0.4	<0.020
Chrysene	ug/L	1	1	<0.020
Dibenzo(ah)anthracene	ug/L	0.52	0.52	<0.020
Fluoranthene	ug/L	130	130	0.035
Fluorene	ug/L	400	400	<0.020
Indeno(1,2,3-cd)pyrene	ug/L	0.2	0.2	<0.020
1+2-Methylnaphthalenes	ug/L	1800	1800	<0.028
1-Methylnaphthalene	ug/L	1800	1800	<0.020
2-Methylnaphthalene	ug/L	1800	1800	<0.020
Naphthalene	ug/L	1400	6400	< 0.050
Phenanthrene	ug/L	580	580	0.033
Pyrene	ug/L	68	68	0.033
Surrogate: d10-Acenaphthene	%	-	-	101.3
Surrogate: d12-Chrysene	%	-	-	92.3
Surrogate: d8-Naphthalene	%	-	-	91.1
Surrogate: d10-Phenanthrene	%	-	-	100.1

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2398104 CONT'D....

Job Reference: 1-19-0603-42

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Polychlorinated Biphenyls - WATER

· c.ycca.ca z.pcy.c				
			Lab ID	L2398104-1
		Sampl	e Date	16-DEC-19
		Sam	iple ID	BH3
			Limits	
Analyte	Unit	#1	#2	
Aroclor 1242	ug/L	-	-	<0.020
Aroclor 1248	ug/L	-	-	<0.020
Aroclor 1254	ug/L	-	-	<0.020
Aroclor 1260	ug/L	-	-	<0.020
Surrogate: Decachlorobiphenyl	%	-	-	55.9
Total PCBs	ug/L	7.8	15	<0.040
Surrogate: Tetrachloro-m-xylene	%	-	-	77.1

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.

Reference Information

L2398104 CONT'D....
Job Reference: 1-19-0603-42
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Qualifiers for Individual Parameters Listed:

Qualifier Description

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**

F1-F4-511-CALC-WT Water F1-F4 Hydrocarbon Calculated CCME CWS-PHC, Pub #1310, Dec 2001-L

Parameters

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

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 Water F1-O.Reg 153/04 (July 2011) E3398/CCME TIER 1-HS

Fraction F1 is determined by 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 Water F2-F4-O.Reg 153/04 (July 2011) EPA 3511/CCME Tier 1

Petroleum Hydrocarbons (F2-F4 fractions) are extracted from water using a hexane micro-extraction technique. Instrumental analysis is by GC-FID, as per the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Tier 1 Method, CCME, 2001.

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-D-UG/L-MS-WT Water Diss. Metals in Water by ICPMS (ug/L) EPA 200.8

The metal constituents of a non-acidified sample that pass through a membrane filter prior to ICP/MS analysis.

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 Water PAH-Calculated Parameters SW846 8270

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

Aqueous samples, fortified with surrogates, are extracted using liquid/liquid extraction technique. The sample extracts are concentrated and then analyzed using GC/MS. Results for benzo(b)

Reference Information

L2398104 CONT'D....
Job Reference: 1-19-0603-42
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Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

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 Water PCB-O. Reg 153/04 (July 2011) SW846 3510/8082

Aqueous samples are extracted, then concentrated, reconstituted, and analyzed by 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).

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

VOC-511-HS-WT Water VOC by GCMS HS O.Reg 153/04 (July SW846 8260

2011)

Liquid samples are analyzed by headspace GC/MSD.

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 Water 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

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.



Qualifier

Workorder: L2398104 Report Date: 27-DEC-19 Page 1 of 11

RPD

Limit

Analyzed

Units

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Matrix

Reference

Result

Contact: Kossay Makhzoumi

Test

lest	Wallix	Reference	Result	Qualifier	Ullits	KFD	LIIIII	Allalyzeu
F1-HS-511-WT	Water							_
Batch R4951330								
WG3247542-1 LCS F1 (C6-C10)			96.3		%		80-120	21-DEC-19
WG3247542-2 MB F1 (C6-C10)			<25		ug/L		25	21-DEC-19
Surrogate: 3,4-Dichlorote	oluene		91.7		%		60-140	21-DEC-19
F2-F4-511-WT	Water							
Batch R4948447								
WG3245881-2 LCS F2 (C10-C16)			92.9		%		70-130	19-DEC-19
F3 (C16-C34)			98.2		%		70-130	19-DEC-19
F4 (C34-C50)			96.4		%		70-130	19-DEC-19
WG3245881-1 MB								
F2 (C10-C16)			<100		ug/L		100	19-DEC-19
F3 (C16-C34)			<250		ug/L		250	19-DEC-19
F4 (C34-C50)			<250		ug/L		250	19-DEC-19
Surrogate: 2-Bromobenz	zotrifluoride		89.6		%		60-140	19-DEC-19
MET-D-UG/L-MS-WT	Water							
Batch R4946430								
WG3245950-4 DUP Antimony (Sb)-Dissolved	t	WG3245950-3 <0.10	<0.10	RPD-NA	ug/L	N/A	20	19-DEC-19
Arsenic (As)-Dissolved		0.13	0.16		ug/L	15	20	19-DEC-19
Barium (Ba)-Dissolved		104	104		ug/L	0.1	20	19-DEC-19
Beryllium (Be)-Dissolved	i	<0.10	<0.10	RPD-NA	ug/L	N/A	20	19-DEC-19
Boron (B)-Dissolved		36	36		ug/L	0.5	20	19-DEC-19
Cadmium (Cd)-Dissolve	d	0.0130	0.0124		ug/L	4.7	20	19-DEC-19
Chromium (Cr)-Dissolve	d	<0.50	<0.50	RPD-NA	ug/L	N/A	20	19-DEC-19
Cobalt (Co)-Dissolved		<0.10	<0.10	RPD-NA	ug/L	N/A	20	19-DEC-19
Copper (Cu)-Dissolved		0.90	0.87		ug/L	3.4	20	19-DEC-19
Lead (Pb)-Dissolved		<0.050	< 0.050	RPD-NA	ug/L	N/A	20	19-DEC-19
Molybdenum (Mo)-Disso	olved	3.79	3.81		ug/L	0.7	20	19-DEC-19
Nickel (Ni)-Dissolved		0.65	0.64		ug/L	1.3	20	19-DEC-19
Selenium (Se)-Dissolved	d	0.844	0.860		ug/L	1.9	20	19-DEC-19
Silver (Ag)-Dissolved		<0.050	< 0.050	RPD-NA	ug/L	N/A	20	19-DEC-19
Sodium (Na)-Dissolved		202000	204000		ug/L	0.8	20	19-DEC-19
Thallium (TI)-Dissolved		<0.010	<0.010	RPD-NA	ug/L	N/A	20	19-DEC-19



Workorder: L2398104 Report Date: 27-DEC-19 Page 2 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R49464	30							
WG3245950-4 DUI		WG3245950-3						
Uranium (U)-Dissolve		0.897	0.893		ug/L	0.4	20	19-DEC-19
Vanadium (V)-Dissol	ved	<0.50	<0.50	RPD-NA	ug/L	N/A	20	19-DEC-19
Zinc (Zn)-Dissolved		<1.0	<1.0	RPD-NA	ug/L	N/A	20	19-DEC-19
WG3245950-2 LCS Antimony (Sb)-Dissol			103.7		%		80-120	19-DEC-19
Arsenic (As)-Dissolve			105.5		%		80-120	19-DEC-19
Barium (Ba)-Dissolve			108.5		%		80-120	19-DEC-19
Beryllium (Be)-Dissol			102.8		%		80-120	19-DEC-19
Boron (B)-Dissolved			102.4		%		80-120	19-DEC-19
Cadmium (Cd)-Disso	lved		106.4		%		80-120	19-DEC-19
Chromium (Cr)-Disso			108.6		%		80-120	19-DEC-19
Cobalt (Co)-Dissolve			107.7		%		80-120	19-DEC-19
Copper (Cu)-Dissolve	ed		107.3		%		80-120	19-DEC-19
Lead (Pb)-Dissolved			106.1		%		80-120	19-DEC-19
Molybdenum (Mo)-Di	ssolved		107.2		%		80-120	19-DEC-19
Nickel (Ni)-Dissolved			108.3		%		80-120	19-DEC-19
Selenium (Se)-Dissol	ved		101.9		%		80-120	19-DEC-19
Silver (Ag)-Dissolved			105.8		%		80-120	19-DEC-19
Sodium (Na)-Dissolve	ed		109.0		%		80-120	19-DEC-19
Thallium (TI)-Dissolve	ed		104.8		%		80-120	19-DEC-19
Uranium (U)-Dissolve	ed		106.9		%		80-120	19-DEC-19
Vanadium (V)-Dissol	ved		108.5		%		80-120	19-DEC-19
Zinc (Zn)-Dissolved			107.4		%		80-120	19-DEC-19
WG3245950-1 MB								
Antimony (Sb)-Dissol			<0.10		ug/L		0.1	19-DEC-19
Arsenic (As)-Dissolve			<0.10		ug/L		0.1	19-DEC-19
Barium (Ba)-Dissolve			<0.10		ug/L		0.1	19-DEC-19
Beryllium (Be)-Dissol	ved		<0.10		ug/L		0.1	19-DEC-19
Boron (B)-Dissolved			<10		ug/L		10	19-DEC-19
Cadmium (Cd)-Disso			<0.0050		ug/L		0.005	19-DEC-19
Chromium (Cr)-Disso			<0.50		ug/L		0.5	19-DEC-19
Cobalt (Co)-Dissolve			<0.10		ug/L		0.1	19-DEC-19
Copper (Cu)-Dissolve	ed		<0.20		ug/L		0.2	19-DEC-19
Lead (Pb)-Dissolved			<0.050		ug/L		0.05	19-DEC-19



Workorder: L2398104 Report Date: 27-DEC-19 Page 3 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R4946430 WG3245950-1 MB								
Molybdenum (Mo)-Diss	olved		<0.050		ug/L		0.05	19-DEC-19
Nickel (Ni)-Dissolved			<0.50		ug/L		0.5	19-DEC-19
Selenium (Se)-Dissolve	d		<0.050		ug/L		0.05	19-DEC-19
Silver (Ag)-Dissolved			<0.050		ug/L		0.05	19-DEC-19
Sodium (Na)-Dissolved			<50		ug/L		50	19-DEC-19
Thallium (TI)-Dissolved			<0.010		ug/L		0.01	19-DEC-19
Uranium (U)-Dissolved			<0.010		ug/L		0.01	19-DEC-19
Vanadium (V)-Dissolved	t		< 0.50		ug/L		0.5	19-DEC-19
Zinc (Zn)-Dissolved			<1.0		ug/L		1	19-DEC-19
WG3245950-5 MS Antimony (Sb)-Dissolve	d	WG3245950-6	100.9		%		70-130	19-DEC-19
Arsenic (As)-Dissolved			114.9		%		70-130	19-DEC-19
Barium (Ba)-Dissolved			N/A	MS-B	%		-	19-DEC-19
Beryllium (Be)-Dissolve	d		109.4		%		70-130	19-DEC-19
Boron (B)-Dissolved			100.3		%		70-130	19-DEC-19
Cadmium (Cd)-Dissolve	ed		98.7		%		70-130	19-DEC-19
Chromium (Cr)-Dissolve	ed		109.3		%		70-130	19-DEC-19
Cobalt (Co)-Dissolved			101.4		%		70-130	19-DEC-19
Copper (Cu)-Dissolved			93.5		%		70-130	19-DEC-19
Lead (Pb)-Dissolved			93.5		%		70-130	19-DEC-19
Molybdenum (Mo)-Diss	olved		106.1		%		70-130	19-DEC-19
Nickel (Ni)-Dissolved			95.7		%		70-130	19-DEC-19
Selenium (Se)-Dissolve	d		117.1		%		70-130	19-DEC-19
Silver (Ag)-Dissolved			92.2		%		70-130	19-DEC-19
Sodium (Na)-Dissolved			N/A	MS-B	%		-	19-DEC-19
Thallium (TI)-Dissolved			94.4		%		70-130	19-DEC-19
Uranium (U)-Dissolved			N/A	MS-B	%		-	19-DEC-19
Vanadium (V)-Dissolved	d		112.2		%		70-130	19-DEC-19
Zinc (Zn)-Dissolved			97.9		%		70-130	19-DEC-19
PAH-511-WT	Water							
Batch R4949666								
WG3245881-2 LCS 1-Methylnaphthalene			94.6		%		EO 140	20 DEC 40
2-Methylnaphthalene			84.5		%		50-140	20-DEC-19
z-ivietriyiriapritrialeNe			04.0		/0		50-140	20-DEC-19



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Water							
Batch R4949666								
WG3245881-2 LCS			400.4		0/			
Acenaphthene			100.4		%		50-140	20-DEC-19
Acenaphthylene			99.8		%		50-140	20-DEC-19
Anthracene			98.4		%		50-140	20-DEC-19
Benzo(a)anthracene			102.2		%		50-140	20-DEC-19
Benzo(a)pyrene			95.3		% %		50-140	20-DEC-19
Benzo(b)fluoranthene			95.0 101.3		%		50-140	20-DEC-19
Benzo(g,h,i)perylene			101.3				50-140	20-DEC-19
Benzo(k)fluoranthene					%		50-140	20-DEC-19
Chrysene			100.5 100.1		%		50-140	20-DEC-19
Dibenzo(ah)anthracene Fluoranthene			100.1		%		50-140	20-DEC-19
Fluoranmene					%		50-140	20-DEC-19
Indeno(1,2,3-cd)pyrene			98.6 104.9		%		50-140	20-DEC-19
Naphthalene			90.7		%		50-140	20-DEC-19
Phenanthrene			101.9		%		50-140	20-DEC-19
Pyrene			101.9		%		50-140	20-DEC-19
WG3245881-1 MB			101.2		70		50-140	20-DEC-19
1-Methylnaphthalene			<0.020		ug/L		0.02	20-DEC-19
2-Methylnaphthalene			<0.020		ug/L		0.02	20-DEC-19
Acenaphthene			<0.020		ug/L		0.02	20-DEC-19
Acenaphthylene			<0.020		ug/L		0.02	20-DEC-19
Anthracene			<0.020		ug/L		0.02	20-DEC-19
Benzo(a)anthracene			<0.020		ug/L		0.02	20-DEC-19
Benzo(a)pyrene			<0.010		ug/L		0.01	20-DEC-19
Benzo(b)fluoranthene			<0.020		ug/L		0.02	20-DEC-19
Benzo(g,h,i)perylene			<0.020		ug/L		0.02	20-DEC-19
Benzo(k)fluoranthene			<0.020		ug/L		0.02	20-DEC-19
Chrysene			<0.020		ug/L		0.02	20-DEC-19
Dibenzo(ah)anthracene			<0.020		ug/L		0.02	20-DEC-19
Fluoranthene			<0.020		ug/L		0.02	20-DEC-19
Fluorene			<0.020		ug/L		0.02	20-DEC-19
Indeno(1,2,3-cd)pyrene			<0.020		ug/L		0.02	20-DEC-19
Naphthalene			<0.050		ug/L		0.05	20-DEC-19
Phenanthrene			<0.020		ug/L		0.02	20-DEC-19



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Water							
Batch R4949666								
WG3245881-1 MB Pyrene			<0.020		ug/L		0.02	00 PEO 40
Surrogate: d8-Naphthale	ene		85.7		%		60-140	20-DEC-19 20-DEC-19
Surrogate: d10-Phenant			91.4		%		60-140	20-DEC-19 20-DEC-19
Surrogate: d12-Chrysen			86.1		%		60-140	
Surrogate: d10-Acenaph			92.4		%		60-140	20-DEC-19
			92.4		76		00-140	20-DEC-19
PCB-511-WT	Water							
Batch R4949187								
WG3246028-2 LCS Aroclor 1242			104.7		%		60-140	19-DEC-19
Aroclor 1248			92.4		%		60-140	19-DEC-19
Aroclor 1254			109.4		%		60-140	19-DEC-19
Aroclor 1260			116.0		%		60-140	19-DEC-19
WG3246028-1 MB								
Aroclor 1242			<0.020		ug/L		0.02	19-DEC-19
Aroclor 1248			<0.020		ug/L		0.02	19-DEC-19
Aroclor 1254			<0.020		ug/L		0.02	19-DEC-19
Aroclor 1260			<0.020		ug/L		0.02	19-DEC-19
Surrogate: Decachlorob	iphenyl		89.6		%		50-150	19-DEC-19
Surrogate: Tetrachloro-r	m-xylene		76.5		%		50-150	19-DEC-19
VOC-511-HS-WT	Water							
Batch R4949168								
WG3243074-4 DUP 1,1,1,2-Tetrachloroethar	00	WG3243074-3 <0.50	<0.50	DDD NA	ug/l	NI/A	20	00 DEC 40
1,1,1,2-Tetrachloroethar		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
, , ,	ne	<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,1,1-Trichloroethane 1,1,2-Trichloroethane		<0.50		RPD-NA	ug/L	N/A	30	20-DEC-19
1,1,2-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L ug/L	N/A	30	20-DEC-19
•			<0.50	RPD-NA	J	N/A	30	20-DEC-19
1,1-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,2-Dibromoethane		<0.20	<0.20	RPD-NA	ug/L	N/A	30	20-DEC-19
1,2-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,2-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,2-Dichloropropane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,3-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,4-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4949168								
WG3243074-4 DUP		WG3243074-			4			
Acetone		<30	<30	RPD-NA	ug/L	N/A	30	20-DEC-19
Benzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Bromodichloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Bromoform		<5.0	<5.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Bromomethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Carbon tetrachloride		<0.20	<0.20	RPD-NA	ug/L	N/A	30	20-DEC-19
Chlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Chloroform		<1.0	<1.0	RPD-NA	ug/L	N/A	30	20-DEC-19
cis-1,2-Dichloroethylene		<0.50	< 0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
cis-1,3-Dichloropropene		<0.30	< 0.30	RPD-NA	ug/L	N/A	30	20-DEC-19
Dibromochloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Dichlorodifluoromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Ethylbenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
n-Hexane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
m+p-Xylenes		<0.40	<0.40	RPD-NA	ug/L	N/A	30	20-DEC-19
Methyl Ethyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	20-DEC-19
Methyl Isobutyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	20-DEC-19
Methylene Chloride		<5.0	<5.0	RPD-NA	ug/L	N/A	30	20-DEC-19
MTBE		<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-DEC-19
o-Xylene		<0.30	< 0.30	RPD-NA	ug/L	N/A	30	20-DEC-19
Styrene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Tetrachloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Toluene		<0.50	< 0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
trans-1,2-Dichloroethyler	ne	<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
trans-1,3-Dichloropropen	ne	<0.30	< 0.30	RPD-NA	ug/L	N/A	30	20-DEC-19
Trichloroethylene		1.27	1.25		ug/L	1.6	30	20-DEC-19
Trichlorofluoromethane		<5.0	<5.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Vinyl chloride		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
WG3243074-1 LCS	e		90.4		%		70-130	20-DEC-19
1,1,2,2-Tetrachloroethan			91.8		%		70-130	20-DEC-19 20-DEC-19
1,1,1-Trichloroethane			91.6		%			
1,1,2-Trichloroethane			91.0		%		70-130	20-DEC-19
1,1,2-THORIDIOEURANE			91.0		70		70-130	20-DEC-19



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4949168								
WG3243074-1 LCS			00.4		0/			
1,1-Dichloroethane			92.1		%		70-130	20-DEC-19
1,1-Dichloroethylene			88.2		%		70-130	20-DEC-19
1,2-Dibromoethane			93.1		%		70-130	20-DEC-19
1,2-Dichlorobenzene			85.9		%		70-130	20-DEC-19
1,2-Dichloroethane			91.5		%		70-130	20-DEC-19
1,2-Dichloropropane			100.5		%		70-130	20-DEC-19
1,3-Dichlorobenzene			84.8		%		70-130	20-DEC-19
1,4-Dichlorobenzene			84.8		%		70-130	20-DEC-19
Acetone			96.5		%		60-140	20-DEC-19
Benzene			95.2		%		70-130	20-DEC-19
Bromodichloromethane			88.8		%		70-130	20-DEC-19
Bromoform			93.9		%		70-130	20-DEC-19
Bromomethane			83.1		%		60-140	20-DEC-19
Carbon tetrachloride			91.6		%		70-130	20-DEC-19
Chlorobenzene			89.1		%		70-130	20-DEC-19
Chloroform			93.5		%		70-130	20-DEC-19
cis-1,2-Dichloroethylene)		90.3		%		70-130	20-DEC-19
cis-1,3-Dichloropropene			91.3		%		70-130	20-DEC-19
Dibromochloromethane			88.4		%		70-130	20-DEC-19
Dichlorodifluoromethane	e		94.0		%		50-140	20-DEC-19
Ethylbenzene			88.3		%		70-130	20-DEC-19
n-Hexane			87.2		%		70-130	20-DEC-19
m+p-Xylenes			87.9		%		70-130	20-DEC-19
Methyl Ethyl Ketone			90.7		%		60-140	20-DEC-19
Methyl Isobutyl Ketone			92.9		%		60-140	20-DEC-19
Methylene Chloride			90.7		%		70-130	20-DEC-19
MTBE			94.0		%		70-130	20-DEC-19
o-Xylene			88.4		%		70-130	20-DEC-19
Styrene			90.8		%		70-130	20-DEC-19
Tetrachloroethylene			87.6		%		70-130	20-DEC-19
Toluene			89.7		%		70-130	20-DEC-19
trans-1,2-Dichloroethyle	ne		89.5		%		70-130	20-DEC-19
trans-1,3-Dichloroprope			90.6		%		70-130	20-DEC-19



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4949168	3							
WG3243074-1 LCS			04.7		0/			
Trichloroethylene Trichlorofluoromethane			91.7		%		70-130	20-DEC-19
	;		90.9 104.1		%		60-140	20-DEC-19
Vinyl chloride			104.1		%		60-140	20-DEC-19
WG3243074-2 MB 1,1,1,2-Tetrachloroetha	ane		<0.50		ug/L		0.5	20-DEC-19
1,1,2,2-Tetrachloroetha	ane		<0.50		ug/L		0.5	20-DEC-19
1,1,1-Trichloroethane			<0.50		ug/L		0.5	20-DEC-19
1,1,2-Trichloroethane			<0.50		ug/L		0.5	20-DEC-19
1,1-Dichloroethane			<0.50		ug/L		0.5	20-DEC-19
1,1-Dichloroethylene			<0.50		ug/L		0.5	20-DEC-19
1,2-Dibromoethane			<0.20		ug/L		0.2	20-DEC-19
1,2-Dichlorobenzene			<0.50		ug/L		0.5	20-DEC-19
1,2-Dichloroethane			<0.50		ug/L		0.5	20-DEC-19
1,2-Dichloropropane			<0.50		ug/L		0.5	20-DEC-19
1,3-Dichlorobenzene			<0.50		ug/L		0.5	20-DEC-19
1,4-Dichlorobenzene			<0.50		ug/L		0.5	20-DEC-19
Acetone			<30		ug/L		30	20-DEC-19
Benzene			<0.50		ug/L		0.5	20-DEC-19
Bromodichloromethane	9		<2.0		ug/L		2	20-DEC-19
Bromoform			<5.0		ug/L		5	20-DEC-19
Bromomethane			<0.50		ug/L		0.5	20-DEC-19
Carbon tetrachloride			<0.20		ug/L		0.2	20-DEC-19
Chlorobenzene			< 0.50		ug/L		0.5	20-DEC-19
Chloroform			<1.0		ug/L		1	20-DEC-19
cis-1,2-Dichloroethylen	е		< 0.50		ug/L		0.5	20-DEC-19
cis-1,3-Dichloropropen	е		< 0.30		ug/L		0.3	20-DEC-19
Dibromochloromethane	Э		<2.0		ug/L		2	20-DEC-19
Dichlorodifluoromethar	ne		<2.0		ug/L		2	20-DEC-19
Ethylbenzene			<0.50		ug/L		0.5	20-DEC-19
n-Hexane			<0.50		ug/L		0.5	20-DEC-19
m+p-Xylenes			<0.40		ug/L		0.4	20-DEC-19
Methyl Ethyl Ketone			<20		ug/L		20	20-DEC-19
Methyl Isobutyl Ketone			<20		ug/L		20	20-DEC-19
Methylene Chloride			<5.0		ug/L		5	20-DEC-19



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test N	latrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Nater							
Batch R4949168								
WG3243074-2 MB MTBE			-2.0		ug/l		2	00 PEO 10
o-Xylene			<2.0 <0.30		ug/L ug/L		0.3	20-DEC-19
					-			20-DEC-19
Styrene			<0.50		ug/L		0.5	20-DEC-19
Tetrachloroethylene			<0.50		ug/L		0.5	20-DEC-19
Toluene			<0.50		ug/L		0.5	20-DEC-19
trans-1,2-Dichloroethylene			<0.50		ug/L		0.5	20-DEC-19
trans-1,3-Dichloropropene			<0.30		ug/L		0.3	20-DEC-19
Trichloroethylene			<0.50		ug/L		0.5	20-DEC-19
Trichlorofluoromethane			<5.0		ug/L		5	20-DEC-19
Vinyl chloride			<0.50		ug/L		0.5	20-DEC-19
Surrogate: 1,4-Difluoroben			93.6		%		70-130	20-DEC-19
Surrogate: 4-Bromofluorob	enzene		92.4		%		70-130	20-DEC-19
WG3243074-5 MS 1,1,1,2-Tetrachloroethane		WG3243074-3	91.5		%		50-140	23-DEC-19
1,1,2,2-Tetrachloroethane			91.3		%		50-140	23-DEC-19
1,1,1-Trichloroethane			92.7		%		50-140	23-DEC-19
1,1,2-Trichloroethane			95.7		%		50-140	23-DEC-19
1,1-Dichloroethane			87.1		%		50-140	23-DEC-19
1,1-Dichloroethylene			84.8		%		50-140	23-DEC-19
1,2-Dibromoethane			96.8		%		50-140	23-DEC-19
1,2-Dichlorobenzene			82.4		%		50-140	23-DEC-19
1,2-Dichloroethane			97.3		%		50-140	23-DEC-19
1,2-Dichloropropane			95.5		%		50-140	23-DEC-19
1,3-Dichlorobenzene			82.3		%		50-140	23-DEC-19
1,4-Dichlorobenzene			78.8		%		50-140	23-DEC-19
Acetone			106.3		%		50-140	23-DEC-19
Benzene			94.5		%		50-140	23-DEC-19
Bromodichloromethane			94.0		%		50-140	23-DEC-19
Bromoform			95.2		%		50-140	23-DEC-19
Bromomethane			81.7		%		50-140	23-DEC-19
Carbon tetrachloride			89.9		%		50-140	23-DEC-19
Chlorobenzene			88.5		%		50-140	23-DEC-19
Chloroform			93.9		%		50-140	23-DEC-19
cis-1,2-Dichloroethylene			88.6		%		50-140	23-DEC-19



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4949168								
WG3243074-5 MS		WG3243074-3						
cis-1,3-Dichloropropene			86.4		%		50-140	23-DEC-19
Dibromochloromethane			93.4		%		50-140	23-DEC-19
Dichlorodifluoromethane			71.7		%		50-140	23-DEC-19
Ethylbenzene			85.7		%		50-140	23-DEC-19
n-Hexane			81.7		%		50-140	23-DEC-19
m+p-Xylenes			84.8		%		50-140	23-DEC-19
Methyl Ethyl Ketone			93.6		%		50-140	23-DEC-19
Methyl Isobutyl Ketone			96.9		%		50-140	23-DEC-19
Methylene Chloride			93.7		%		50-140	23-DEC-19
MTBE			90.2		%		50-140	23-DEC-19
o-Xylene			87.0		%		50-140	23-DEC-19
Styrene			88.4		%		50-140	23-DEC-19
Tetrachloroethylene			83.4		%		50-140	23-DEC-19
Toluene			89.0		%		50-140	23-DEC-19
trans-1,2-Dichloroethylen	ne		77.8		%		50-140	23-DEC-19
trans-1,3-Dichloropropen	ne		85.4		%		50-140	23-DEC-19
Trichloroethylene			87.3		%		50-140	23-DEC-19
Trichlorofluoromethane			87.8		%		50-140	23-DEC-19
Vinyl chloride			100.1		%		50-140	23-DEC-19

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Client: TERRAPROBE-BRAMPTON Page 11 of 11

11 Indell Lane

Brampton ON L6T 3Y3 Kossay Makhzoumi

Legend:

Contact:

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
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
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 predetermined data quality objectives to provide confidence in the accuracy of associated test results.

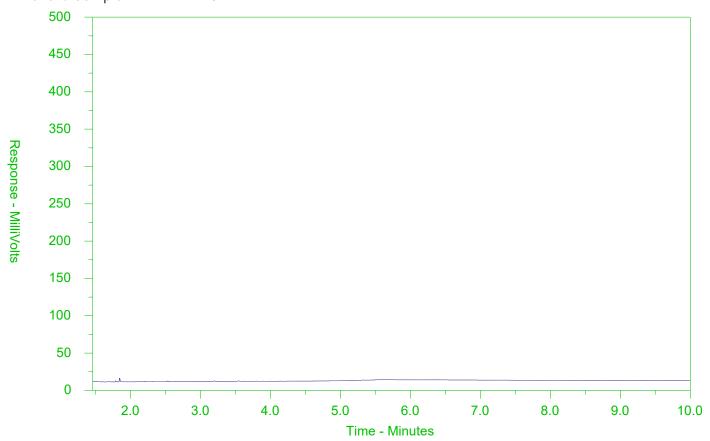
Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2398104-1

Client Sample ID: BH3



← -F2-	→ ←	—F3—→ ← F4—	>
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067⁰F
Gasolin	e →	← Mot	or Oils/Lube Oils/Grease
•	-Diesel/J	et 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) / Analytic Request Form

Canada Toll Free: 1 800 668 9878



L2398104-COFC

COC Number: 15 -

	www.aisglobal.com																				
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Street:	11 Indeli Lane			Email 1 or Fax	kmakhzoumi@terr	aprobe.ca			Date a	nd Tim	e Requi	red for a	II E&P	TATs:							
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Company:	Terraprobe			Email 1 or Fax	lrossi@terraprobe.	са															
Contact:	Lorena Rossi			Email 2				1		l								- 1	1		"
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ALS Sample #	Sample	Identification and/or Cod			Date	Time		is a	ङ्	δ. Γ.						esti					
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TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 18-DEC-19

Report Date: 27-DEC-19 13:23 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2398120
Project P.O. #: NOT SUBMITTED
Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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

ADDRESS: 5730 Coopers Avenue, Unit #26 , Mississauga, ON L4Z 2E9 Canada | Phone: +1 905 507 6910 | Fax: +1 905 507 6927 ALS CANADA LTD Part of the ALS Group An ALS Limited Company





L2398120 CONT'D....

Job Reference: 1-19-0603-42

PAGE 2 of 14

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Summary of Guideline Exceedances

Guideline						
ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

(No parameter exceedances)

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

(No parameter exceedances)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2398120 CONT'D....

Job Reference: 1-19-0603-42

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Physical Tests - WATER

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			Lab ID	L2398120-1
	5	Sampl	e Date	16-DEC-19
		Sam	ple ID	BH4-D
	(Guide	Limits	
Analyte	Unit	#1	#2	
Conductivity	mS/cm	-	-	2.32
рН	pH units	-	-	7.53

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2398120 CONT'D....

Job Reference: 1-19-0603-42

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Anions and Nutrients - WATER

	L	ab ID	L2398120-1
	Sample	Date	16-DEC-19
	Sam	ple ID	BH4-D
Unit	Guide #1	Limits #2	
		Sample Sam	Lab ID Sample Date Sample ID

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2398120 CONT'D....

Job Reference: 1-19-0603-42

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Cyanides - WATER

January Willer	
	Lab ID L2398120-1
	Sample Date 16-DEC-19
	Sample ID BH4-D
Analyte	Guide Limits Unit #1 #2
Cyanide, Weak Acid Diss	ug/L 66 66 <2.0

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2398120 CONT'D....

Job Reference: 1-19-0603-42

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Dissolved Metals - WATER

		Lab ID Sample Date Sample ID		
Analyte	Unit	Guide #1	Limits #2	
Dissolved Mercury Filtration Location		-	-	FIELD
Dissolved Metals Filtration Location		-	-	FIELD
Antimony (Sb)-Dissolved	ug/L	20000	20000	<1.0 DLHC
Arsenic (As)-Dissolved	ug/L	1900	1900	<1.0 DLHC
Barium (Ba)-Dissolved	ug/L	29000	29000	45.4 DLHC
Beryllium (Be)-Dissolved	ug/L	67	67	<1.0 DLHC
Boron (B)-Dissolved	ug/L	45000	45000	<100 DLHC
Cadmium (Cd)-Dissolved	ug/L	2.7	2.7	<0.050 ^{DLHC}
Chromium (Cr)-Dissolved	ug/L	810	810	<5.0 DLHC
Cobalt (Co)-Dissolved	ug/L	66	66	<1.0 DLHC
Copper (Cu)-Dissolved	ug/L	87	87	<2.0 DLHC
Lead (Pb)-Dissolved	ug/L	25	25	<0.50 DLHC
Mercury (Hg)-Dissolved	ug/L	0.29	2.8	<0.0050
Molybdenum (Mo)-Dissolved	ug/L	9200	9200	2.34 DLHC
Nickel (Ni)-Dissolved	ug/L	490	490	<5.0 DLHC
Selenium (Se)-Dissolved	ug/L	63	63	<0.50 DLHC
Silver (Ag)-Dissolved	ug/L	1.5	1.5	<0.50 DLHC
Sodium (Na)-Dissolved	ug/L	2300000	2300000	283000 ^{DLHC}
Thallium (TI)-Dissolved	ug/L	510	510	<0.10 DLHC
Uranium (U)-Dissolved	ug/L	420	420	2.30 DLHC
Vanadium (V)-Dissolved	ug/L	250	250	<5.0 DLHC
Zinc (Zn)-Dissolved	ug/L	1100	1100	<10 DLHC

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2398120 CONT'D....

Job Reference: 1-19-0603-42

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Speciated Metals - WATER

opeciated inclaid WATER				
			Lab ID	L2398120-1
		Sample	e Date	16-DEC-19
		Sam	ple ID	BH4-D
		Guide	Limits	
Analyte	Unit	#1	#2	
Chromium, Hexavalent	ug/L	140	140	<0.50

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



Styrene

ANALYTICAL REPORT

L2398120 CONT'D.... Job Reference: 1-19-0603-42 PAGE 8 of 14 27-DEC-19 13:23 (MT)

Volatile Organic Compounds - WATER						
		Lab ID Sample Date Sample ID		L2398120-1 16-DEC-19 BH4-D		
Analyte	Unit	Guide #1	Limits #2			
Acetone	ug/L	130000	130000	<30		
Benzene	ug/L	44	430	<0.50		
Bromodichloromethane	ug/L	85000	85000	<2.0		
Bromoform	ug/L	380	770	<5.0		
Bromomethane	ug/L	5.6	56	<0.50		
Carbon tetrachloride	ug/L	0.79	8.4	<0.20		
Chlorobenzene	ug/L	630	630	<0.50		
Dibromochloromethane	ug/L	82000	82000	<2.0		
Chloroform	ug/L	2.4	22	<1.0		
1,2-Dibromoethane	ug/L	0.25	0.83	<0.20		
1,2-Dichlorobenzene	ug/L	4600	9600	<0.50		
1,3-Dichlorobenzene	ug/L	9600	9600	<0.50		
1,4-Dichlorobenzene	ug/L	8	67	<0.50		
Dichlorodifluoromethane	ug/L	4400	4400	<2.0		
1,1-Dichloroethane	ug/L	320	3100	<0.50		
1,2-Dichloroethane	ug/L	1.6	12	<0.50		
1,1-Dichloroethylene	ug/L	1.6	17	<0.50		
cis-1,2-Dichloroethylene	ug/L	1.6	17	<0.50		
trans-1,2-Dichloroethylene	ug/L	1.6	17	<0.50		
Methylene Chloride	ug/L	610	5500	<5.0		
1,2-Dichloropropane	ug/L	16	140	<0.50		
cis-1,3-Dichloropropene	ug/L	-	-	<0.30		
trans-1,3-Dichloropropene	ug/L	-	-	<0.30		
1,3-Dichloropropene (cis & trans)	ug/L	5.2	45	<0.50		
Ethylbenzene	ug/L	2300	2300	<0.50		
n-Hexane	ug/L	51	520	0.55		
Methyl Ethyl Ketone	ug/L	470000	1500000	<20		
Methyl Isobutyl Ketone	ug/L	140000	580000	<20		
MTBE	ug/L	190	1400	<2.0		

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

ug/L

1300 9100

< 0.50

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2398120 CONT'D....

Job Reference: 1-19-0603-42

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Volatile Organic Compounds - WATER

voiatile Organic Compound	3 - WAILN		_ab ID	
			L2398120-1 16-DEC-19 BH4-D	
		Sample Date		
		Sam		
		Guide	l imite	
A 1 4 .	Unit	#1	#2	
Analyte	Offic	#1	#2	
1,1,1,2-Tetrachloroethane	ug/L	3.3	28	<0.50
1,1,2,2-Tetrachloroethane	ug/L	3.2	15	<0.50
Tetrachloroethylene	ug/L	1.6	17	<0.50
Toluene	ug/L	18000	18000	<0.50
1,1,1-Trichloroethane	ug/L	640	6700	<0.50
1,1,2-Trichloroethane	ug/L	4.7	30	<0.50
Trichloroethylene	ug/L	1.6	17	0.87
Trichlorofluoromethane	ug/L	2500	2500	<5.0
Vinyl chloride	ug/L	0.5	1.7	<0.50
o-Xylene	ug/L	-	-	< 0.30
m+p-Xylenes	ug/L	-	-	<0.40
Xylenes (Total)	ug/L	4200	4200	<0.50
Surrogate: 4-Bromofluorobenzene	%	-	-	90.0
Surrogate: 1,4-Difluorobenzene	%	-	-	95.5

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2398120 CONT'D....
Job Reference: 1-19-0603-42
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Hydrocarbons - WATER

	ı	Lab ID	L2398120-1
	Sample Date		16-DEC-19
	Sam	BH4-D	
	Guide Limits		
Unit	#1	#2	
ug/L	750	750	<25
ug/L	750	750	<25
ug/L	150	150	<100
ug/L	-	-	<100
ug/L	500	500	<250
ug/L	-	-	<250
ug/L	500	500	<250
ug/L	-	-	<370
	-	-	YES
%	-	-	95.3
%	-	-	70.5
	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	#1 Unit #1 Ug/L 750 Ug/L 750 Ug/L 150 Ug/L - Ug/L 500 Ug/L - Ug/L 500 Ug/L - Ug/L 500 Ug/L - Ug/L 500 Ug/L -	Sample ID Sample ID

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Job Reference: 1-19-0603-42
PAGE 11 of 14
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Polycyclic Aromatic Hydrocarbons - WATER

 Lab ID
 L2398120-1

 Sample Date
 16-DEC-19

 Sample ID
 BH4-D

		Guide Limits		
Analyte	Unit	#1	#2	
Acenaphthene	ug/L	600	1700	<0.020
Acenaphthylene	ug/L	1.8	1.8	<0.020
Anthracene	ug/L	2.4	2.4	0.027
Benzo(a)anthracene	ug/L	4.7	4.7	0.101
Benzo(a)pyrene	ug/L	0.81	0.81	0.073
Benzo(b)fluoranthene	ug/L	0.75	0.75	0.107
Benzo(g,h,i)perylene	ug/L	0.2	0.2	0.043
Benzo(k)fluoranthene	ug/L	0.4	0.4	0.046
Chrysene	ug/L	1	1	0.097
Dibenzo(ah)anthracene	ug/L	0.52	0.52	<0.020
Fluoranthene	ug/L	130	130	0.204
Fluorene	ug/L	400	400	<0.020
Indeno(1,2,3-cd)pyrene	ug/L	0.2	0.2	0.053
1+2-Methylnaphthalenes	ug/L	1800	1800	<0.028
1-Methylnaphthalene	ug/L	1800	1800	<0.020
2-Methylnaphthalene	ug/L	1800	1800	<0.020
Naphthalene	ug/L	1400	6400	<0.050
Phenanthrene	ug/L	580	580	0.122
Pyrene	ug/L	68	68	0.181
Surrogate: d10-Acenaphthene	%	-	-	95.0
Surrogate: d12-Chrysene	%	-	-	70.3
Surrogate: d8-Naphthalene	%	-	-	90.5
Surrogate: d10-Phenanthrene	%	-	-	95.1

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.

Reference Information

L2398120 CONT'D....
Job Reference: 1-19-0603-42
PAGE 12 of 14
27-DEC-19 13:23 (MT)

Qualifiers for Individual Parameters Listed:

 Qualifier
 Description

 DLDS
 Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity.

 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**

CL-IC-N-WT Water Chloride by IC EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

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).

CN-WAD-R511-WT Water Cyanide (WAD)-O.Reg 153/04 APHA 4500CN I-Weak acid Dist Colorimet

Weak acid dissociable cyanide (WAD) is determined by undergoing a distillation procedure. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

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-R511-WT Water Hex Chrom-O.Reg 153/04 (July 2011) EPA 7199

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. Chromium (III) is calculated as the difference between the total chromium and the chromium (VI) results.

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-R511-WT Water Conductivity-O.Reg 153/04 (July 2011) APHA 2510 B

Water samples can be measured directly by immersing the conductivity cell into 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).

EC-SCREEN-WT Water Conductivity Screen (Internal Use APHA 2510

Only)

Qualitative analysis of conductivity where required during preparation of other tests - e.g. TDS, metals, etc.

F1-F4-511-CALC-WT Water F1-F4 Hydrocarbon Calculated CCME CWS-PHC, Pub #1310, Dec 2001-L

Parameters

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

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.

Reference Information

L2398120 CONT'D....
Job Reference: 1-19-0603-42
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Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

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 Water F1-O.Reg 153/04 (July 2011) E3398/CCME TIER 1-HS

Fraction F1 is determined by 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 Water F2-F4-O.Reg 153/04 (July 2011) EPA 3511/CCME Tier 1

Petroleum Hydrocarbons (F2-F4 fractions) are extracted from water using a hexane micro-extraction technique. Instrumental analysis is by GC-FID, as per the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Tier 1 Method, CCME, 2001.

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-D-UG/L-CVAA-WT Water Diss. Mercury in Water by CVAAS EPA 1631E (mod)

(ug/L)

Water samples are filtered (0.45 um), preserved with hydrochloric acid, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed 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-D-UG/L-MS-WT Water Diss. Metals in Water by ICPMS (ug/L) EPA 200.8

The metal constituents of a non-acidified sample that pass through a membrane filter prior to ICP/MS analysis.

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 Water PAH-Calculated Parameters SW846 8270

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

Aqueous samples, fortified with surrogates, are extracted using liquid/liquid extraction technique. The sample extracts are concentrated and then analyzed using 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 Water pH APHA 4500 H-Electrode

Water samples are analyzed directly by a calibrated pH 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). Holdtime for samples under this regulation is 28 days

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

VOC-511-HS-WT Water VOC by GCMS HS O.Reg 153/04 (July SW846 8260

2011)

L2398120 CONT'D....
Job Reference: 1-19-0603-42
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Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

Liquid samples are analyzed by headspace GC/MSD.

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 Water

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

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: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CL-IC-N-WT	Water							
Batch R4948668 WG3246535-4 DUP Chloride (CI)		WG3246535-3 6.98	6.99		mg/L	0.2	20	19-DEC-19
WG3246535-2 LCS Chloride (Cl)			104.2		%		90-110	19-DEC-19
WG3246535-1 MB Chloride (Cl)			<0.50		mg/L		0.5	19-DEC-19
WG3246535-5 MS Chloride (CI)		WG3246535-3	103.4		%		75-125	19-DEC-19
CN-WAD-R511-WT	Water							
Batch R4948388								
WG3246441-3 DUP Cyanide, Weak Acid Dis	s	L2398120-1 <2.0	<2.0	RPD-NA	ug/L	N/A	20	19-DEC-19
WG3246441-2 LCS Cyanide, Weak Acid Dis	s		100.7		%		80-120	19-DEC-19
WG3246441-1 MB Cyanide, Weak Acid Dis	s		<2.0		ug/L		2	19-DEC-19
WG3246441-4 MS Cyanide, Weak Acid Dis	s	L2398120-1	104.1		%		75-125	19-DEC-19
CR-CR6-IC-R511-WT	Water							
Batch R4948092								
WG3246367-4 DUP Chromium, Hexavalent		WG3246367-3 <0.50	<0.50	RPD-NA	ug/L	N/A	20	19-DEC-19
WG3246367-2 LCS Chromium, Hexavalent			101.1		%		80-120	19-DEC-19
WG3246367-1 MB Chromium, Hexavalent			<0.50		ug/L		0.5	19-DEC-19
WG3246367-5 MS Chromium, Hexavalent		WG3246367-3	96.2		%		70-130	19-DEC-19
EC-R511-WT	Water							
Batch R4948309 WG3246108-4 DUP Conductivity		WG3246108-3 0.297	0.296		mS/cm	0.3	10	19-DEC-19
WG3246108-2 LCS Conductivity			102.3		%		90-110	19-DEC-19
WG3246108-1 MB Conductivity			<0.0030		mS/cm		0.003	19-DEC-19
F1-HS-511-WT	Water							



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	ı	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT	,	Water							
	18179								
WG3246300-4 F1 (C6-C10)	DUP		WG3246300-3 <25	<25	RPD-NA	ug/L	N/A	30	20-DEC-19
WG3246300-1 L F1 (C6-C10)	LCS			94.5		%		80-120	20-DEC-19
WG3246300-2 M F1 (C6-C10)	МВ			<25		ug/L		25	20-DEC-19
Surrogate: 3,4-Dic	chlorotol	uene		89.9		%		60-140	20-DEC-19
WG3246300-5 N F1 (C6-C10)	MS		WG3246300-3	100.7		%		60-140	20-DEC-19
F2-F4-511-WT	,	Water							
Batch R494	18447								
WG3245881-2 L F2 (C10-C16)	LCS			92.9		%		70-130	19-DEC-19
F3 (C16-C34)				98.2		%		70-130	19-DEC-19
F4 (C34-C50)				96.4		%		70-130	19-DEC-19
WG3245881-1 M F2 (C10-C16)	МВ			<100		ug/L		100	19-DEC-19
F3 (C16-C34)				<250		ug/L		250	19-DEC-19
F4 (C34-C50)				<250		ug/L		250	19-DEC-19
Surrogate: 2-Brom	nobenzo	trifluoride		89.6		%		60-140	19-DEC-19
HG-D-UG/L-CVAA-W	Т	Water							
Batch R494	16371								
WG3246069-4 D Mercury (Hg)-Diss	DUP solved		WG3246069-3 < 0.0050	0.0064	RPD-NA	ug/L	N/A	20	19-DEC-19
WG3246069-2 L Mercury (Hg)-Diss				94.4		%		80-120	19-DEC-19
WG3246069-1 Mercury (Hg)-Diss	MB solved			<0.0050		ug/L		0.005	19-DEC-19
WG3246069-6 Mercury (Hg)-Diss	MS solved		WG3246069-5	93.3		%		70-130	19-DEC-19
MET-D-UG/L-MS-WT		Water							
Batch R494	16430								
WG3245950-4 D Antimony (Sb)-Dis	DUP ssolved		WG3245950-3 <0.10	<0.10	RPD-NA	ug/L	N/A	20	19-DEC-19
Arsenic (As)-Disso	olved		0.13	0.16		ug/L	15	20	19-DEC-19
Barium (Ba)-Disso	olved		104	104		ug/L	0.1	20	19-DEC-19



Workorder: L2398120 Report Date: 27-DEC-19 Page 3 of 12

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R49464								
WG3245950-4 DU		WG3245950-						
Beryllium (Be)-Disso		<0.10	<0.10	RPD-NA	ug/L	N/A	20	19-DEC-19
Boron (B)-Dissolved		36	36		ug/L	0.5	20	19-DEC-19
Cadmium (Cd)-Disso	olved	0.0130	0.0124		ug/L	4.7	20	19-DEC-19
Chromium (Cr)-Disse	olved	<0.50	<0.50	RPD-NA	ug/L	N/A	20	19-DEC-19
Cobalt (Co)-Dissolve	ed	<0.10	<0.10	RPD-NA	ug/L	N/A	20	19-DEC-19
Copper (Cu)-Dissolv	ed	0.90	0.87		ug/L	3.4	20	19-DEC-19
Lead (Pb)-Dissolved		<0.050	< 0.050	RPD-NA	ug/L	N/A	20	19-DEC-19
Molybdenum (Mo)-D	issolved	3.79	3.81		ug/L	0.7	20	19-DEC-19
Nickel (Ni)-Dissolved	d	0.65	0.64		ug/L	1.3	20	19-DEC-19
Selenium (Se)-Disso	lved	0.844	0.860		ug/L	1.9	20	19-DEC-19
Silver (Ag)-Dissolved	d	<0.050	<0.050	RPD-NA	ug/L	N/A	20	19-DEC-19
Sodium (Na)-Dissolv	red	202000	204000		ug/L	0.8	20	19-DEC-19
Thallium (TI)-Dissolv	red	<0.010	<0.010	RPD-NA	ug/L	N/A	20	19-DEC-19
Uranium (U)-Dissolv	ed	0.897	0.893		ug/L	0.4	20	19-DEC-19
Vanadium (V)-Disso	lved	<0.50	<0.50	RPD-NA	ug/L	N/A	20	19-DEC-19
Zinc (Zn)-Dissolved		<1.0	<1.0	RPD-NA	ug/L	N/A	20	19-DEC-19
WG3245950-2 LC Antimony (Sb)-Disso	-		103.7		%		80-120	19-DEC-19
Arsenic (As)-Dissolv			105.5		%		80-120	19-DEC-19
Barium (Ba)-Dissolve			108.5		%		80-120	19-DEC-19
Beryllium (Be)-Disso			102.8		%		80-120	19-DEC-19
Boron (B)-Dissolved			102.4		%		80-120	19-DEC-19
Cadmium (Cd)-Disso			106.4		%		80-120	19-DEC-19
Chromium (Cr)-Diss			108.6		%		80-120	19-DEC-19
Cobalt (Co)-Dissolve	ed		107.7		%		80-120	19-DEC-19
Copper (Cu)-Dissolv	ed		107.3		%		80-120	19-DEC-19
Lead (Pb)-Dissolved			106.1		%		80-120	19-DEC-19
Molybdenum (Mo)-D			107.2		%		80-120	19-DEC-19
Nickel (Ni)-Dissolved	d		108.3		%		80-120	19-DEC-19
Selenium (Se)-Disso	lved		101.9		%		80-120	19-DEC-19
Silver (Ag)-Dissolved			105.8		%		80-120	19-DEC-19
Sodium (Na)-Dissolv	red		109.0		%		80-120	19-DEC-19
Thallium (TI)-Dissolv	red		104.8		%		80-120	19-DEC-19
1								



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R494643	0							
WG3245950-2 LCS			100.0		0/		00.400	
Uranium (U)-Dissolve			106.9 108.5		%		80-120	19-DEC-19
Vanadium (V)-Dissolv	eu		106.5				80-120	19-DEC-19
Zinc (Zn)-Dissolved			107.4		%		80-120	19-DEC-19
WG3245950-1 MB Antimony (Sb)-Dissolv	/ed		<0.10		ug/L		0.1	19-DEC-19
Arsenic (As)-Dissolve			<0.10		ug/L		0.1	19-DEC-19
Barium (Ba)-Dissolved			<0.10		ug/L		0.1	19-DEC-19
Beryllium (Be)-Dissolv	ved .		<0.10		ug/L		0.1	19-DEC-19
Boron (B)-Dissolved			<10		ug/L		10	19-DEC-19
Cadmium (Cd)-Dissol	ved		<0.0050		ug/L		0.005	19-DEC-19
Chromium (Cr)-Dissol	lved		<0.50		ug/L		0.5	19-DEC-19
Cobalt (Co)-Dissolved	I		<0.10		ug/L		0.1	19-DEC-19
Copper (Cu)-Dissolve	d		<0.20		ug/L		0.2	19-DEC-19
Lead (Pb)-Dissolved			< 0.050		ug/L		0.05	19-DEC-19
Molybdenum (Mo)-Dis	ssolved		<0.050		ug/L		0.05	19-DEC-19
Nickel (Ni)-Dissolved			<0.50		ug/L		0.5	19-DEC-19
Selenium (Se)-Dissolv	ved		< 0.050		ug/L		0.05	19-DEC-19
Silver (Ag)-Dissolved			< 0.050		ug/L		0.05	19-DEC-19
Sodium (Na)-Dissolve	ed		<50		ug/L		50	19-DEC-19
Thallium (TI)-Dissolve	ed		<0.010		ug/L		0.01	19-DEC-19
Uranium (U)-Dissolve	d		<0.010		ug/L		0.01	19-DEC-19
Vanadium (V)-Dissolv	red		<0.50		ug/L		0.5	19-DEC-19
Zinc (Zn)-Dissolved			<1.0		ug/L		1	19-DEC-19
WG3245950-5 MS		WG3245950-6						
Antimony (Sb)-Dissolv			100.9		%		70-130	19-DEC-19
Arsenic (As)-Dissolve			114.9		%		70-130	19-DEC-19
Barium (Ba)-Dissolved			N/A	MS-B	%		-	19-DEC-19
Beryllium (Be)-Dissolv	/ed		109.4		%		70-130	19-DEC-19
Boron (B)-Dissolved			100.3		%		70-130	19-DEC-19
Cadmium (Cd)-Dissol			98.7		%		70-130	19-DEC-19
Chromium (Cr)-Dissol			109.3		%		70-130	19-DEC-19
Cobalt (Co)-Dissolved			101.4		%		70-130	19-DEC-19
Copper (Cu)-Dissolve	a		93.5		%		70-130	19-DEC-19
Lead (Pb)-Dissolved			93.5		%		70-130	19-DEC-19



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TERRAPROBE-BRAMPTON Client:

11 Indell Lane

Brampton ON L6T 3Y3

Kossay Makhzoumi Contact:

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R4946	430							
WG3245950-5 M 9 Molybdenum (Mo)-E		WG3245950-	6 106.1		%		70-130	19-DEC-19
Nickel (Ni)-Dissolve			95.7		%		70-130	19-DEC-19
Selenium (Se)-Diss	olved		117.1		%		70-130	19-DEC-19
Silver (Ag)-Dissolve	ed		92.2		%		70-130	19-DEC-19
Sodium (Na)-Dissol	ved		N/A	MS-B	%		-	19-DEC-19
Thallium (TI)-Dissol	ved		94.4		%		70-130	19-DEC-19
Uranium (U)-Dissolv	ved		N/A	MS-B	%		-	19-DEC-19
Vanadium (V)-Disso	olved		112.2		%		70-130	19-DEC-19
Zinc (Zn)-Dissolved			97.9		%		70-130	19-DEC-19
PAH-511-WT	Water							
Batch R4949	666							
WG3245881-2 LC								
1-Methylnaphthalen			94.6		%		50-140	20-DEC-19
2-Methylnaphthalen	е		84.5		%		50-140	20-DEC-19
Acenaphthene			100.4		%		50-140	20-DEC-19
Acenaphthylene			99.8		%		50-140	20-DEC-19
Anthracene	_		98.4		%		50-140	20-DEC-19
Benzo(a)anthracene	9		102.2		%		50-140	20-DEC-19
Benzo(a)pyrene			95.3		%		50-140	20-DEC-19
Benzo(b)fluoranther			95.0		%		50-140	20-DEC-19
Benzo(g,h,i)perylen			101.3		%		50-140	20-DEC-19
Benzo(k)fluoranther	ne		101.2		%		50-140	20-DEC-19
Chrysene			100.5		%		50-140	20-DEC-19
Dibenzo(ah)anthrac	ene		100.1		%		50-140	20-DEC-19
Fluoranthene			101.8		%		50-140	20-DEC-19
Fluorene			98.6		%		50-140	20-DEC-19
Indeno(1,2,3-cd)pyr	ene		104.9		%		50-140	20-DEC-19
Naphthalene			90.7		%		50-140	20-DEC-19
Phenanthrene			101.9		%		50-140	20-DEC-19
Pyrene	_		101.2		%		50-140	20-DEC-19
WG3245881-1 MI 1-Methylnaphthalen			<0.020		ug/L		0.02	20-DEC-19
2-Methylnaphthalen			<0.020		ug/L		0.02	20-DEC-19
Acenaphthene			<0.020		ug/L		0.02	20-DEC-19
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Workorder: L2398120 Report Date: 27-DEC-19 Page 6 of 12

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Water							
Batch R49496	66							
WG3245881-1 MB			-0.020		.ua/l		0.02	00 PFO 40
Acenaphthylene Anthracene			<0.020 <0.020		ug/L		0.02	20-DEC-19
					ug/L		0.02	20-DEC-19
Benzo(a)anthracene			<0.020 <0.010		ug/L			20-DEC-19
Benzo(a)pyrene					ug/L		0.01	20-DEC-19
Benzo(b)fluoranthene	;		<0.020		ug/L		0.02	20-DEC-19
Benzo(g,h,i)perylene			<0.020		ug/L		0.02	20-DEC-19
Benzo(k)fluoranthene)		<0.020		ug/L		0.02	20-DEC-19
Chrysene			<0.020		ug/L		0.02	20-DEC-19
Dibenzo(ah)anthrace	ne		<0.020		ug/L		0.02	20-DEC-19
Fluoranthene			<0.020		ug/L		0.02	20-DEC-19
Fluorene			<0.020		ug/L		0.02	20-DEC-19
Indeno(1,2,3-cd)pyre	ne		<0.020		ug/L		0.02	20-DEC-19
Naphthalene			<0.050		ug/L		0.05	20-DEC-19
Phenanthrene			<0.020		ug/L		0.02	20-DEC-19
Pyrene			<0.020		ug/L		0.02	20-DEC-19
Surrogate: d8-Naphth			85.7		%		60-140	20-DEC-19
Surrogate: d10-Phena			91.4		%		60-140	20-DEC-19
Surrogate: d12-Chrys			86.1		%		60-140	20-DEC-19
Surrogate: d10-Acena	aphthene		92.4		%		60-140	20-DEC-19
PH-WT	Water							
Batch R494830								
WG3246108-4 DUI pH	•	WG3246108- 3 8.21	8.20	J	pH units	0.01	0.2	19-DEC-19
WG3246108-2 LCS	2	0.2.	0.20	Ü	p	0.01	0.2	13 DEO 13
pH	•		7.00		pH units		6.9-7.1	19-DEC-19
VOC-511-HS-WT	Water							
Batch R49481	79							
WG3246300-4 DUI		WG3246300-3	;					
1,1,1,2-Tetrachloroet	hane	<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,1,2,2-Tetrachloroet	hane	<0.50	< 0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,1,1-Trichloroethane)	<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,1,2-Trichloroethane)	<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,1-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,1-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4948179)							
WG3246300-4 DUP		WG3246300						
1,2-Dibromoethane		<0.20	<0.20	RPD-NA	ug/L	N/A	30	20-DEC-19
1,2-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,2-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,2-Dichloropropane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,3-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,4-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Acetone		<30	<30	RPD-NA	ug/L	N/A	30	20-DEC-19
Benzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Bromodichloromethane	e	<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Bromoform		<5.0	<5.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Bromomethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Carbon tetrachloride		<0.20	<0.20	RPD-NA	ug/L	N/A	30	20-DEC-19
Chlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Chloroform		<1.0	<1.0	RPD-NA	ug/L	N/A	30	20-DEC-19
cis-1,2-Dichloroethylen	е	<0.50	< 0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
cis-1,3-Dichloropropen	е	<0.30	< 0.30	RPD-NA	ug/L	N/A	30	20-DEC-19
Dibromochloromethane	Э	<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Dichlorodifluoromethar	ne	<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Ethylbenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
n-Hexane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
m+p-Xylenes		<0.40	<0.40	RPD-NA	ug/L	N/A	30	20-DEC-19
Methyl Ethyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	20-DEC-19
Methyl Isobutyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	20-DEC-19
Methylene Chloride		<5.0	<5.0	RPD-NA	ug/L	N/A	30	20-DEC-19
MTBE		<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-DEC-19
o-Xylene		<0.30	< 0.30	RPD-NA	ug/L	N/A	30	20-DEC-19
Styrene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Tetrachloroethylene		43.3	41.8		ug/L	3.6	30	20-DEC-19
Toluene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
trans-1,2-Dichloroethyl	ene	<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
trans-1,3-Dichloroprop	ene	<0.30	< 0.30	RPD-NA	ug/L	N/A	30	20-DEC-19
Trichloroethylene		0.55	0.53		ug/L	3.7	30	20-DEC-19
Trichlorofluoromethane		<5.0	<5.0		ug/L			20-DEC-19



Workorder: L2398120 Report Date: 27-DEC-19 Page 8 of 12

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Mar	Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
WG3246300-4 UIP WG3246300-5 RPD-NA Ug/L N/A 30 20-DEC-19 Vinyl chloride <0.50	VOC-511-HS-WT	Water							
Viny Interview 4.5.0 4.	Batch R4948179	9							
Vinyl chloride <0.50 <0.50 RPD-NA ug/L N/A 30 20-DEC-19 WG3243300-1 LCS 1.1.2Tetrachloroethane 84.6 % 70-130 20-DEC-19 1.1.1.2Tetrachloroethane 80.7 % 70-130 20-DEC-19 1.1.1Trichloroethane 87.1 % 70-130 20-DEC-19 1.1Dichloroethane 83.1 % 70-130 20-DEC-19 1.1Dichloroethylene 92.0 % 70-130 20-DEC-19 1.2-Dichloroethylene 92.0 % 70-130 20-DEC-19 1.2-Dichloroethane 80.9 % 70-130 20-DEC-19 1.2-Dichloroethane 83.2 % 70-130 20-DEC-19 1.2-Dichloropenpane 83.1 % 70-130 20-DEC-19 1.3-Dichlorobenzene 89.3 % 70-130 20-DEC-19 1.4-Dichlorobenzene 87.9 % 70-130 20-DEC-19 Acetone 80.3 % 70-130 20-DEC-19		_				/1			
WG3246300-1 LCS 1.1.1.2-Tetrachloroethane 84.6 % 70.130 20-DEC-19 1.1.1.2-Tetrachloroethane 80.7 % 70.130 20-DEC-19 1.1.1-Trichloroethane 87.1 % 70.130 20-DEC-19 1.1.1-Dichloroethane 83.1 % 70.130 20-DEC-19 1.1-Dichloroethane 87.1 % 70.130 20-DEC-19 1.1-Dichloroethane 87.1 % 70.130 20-DEC-19 1.2-Dichloroethane 80.9 % 70.130 20-DEC-19 1.2-Dichlorobenzene 85.7 % 70.130 20-DEC-19 1.2-Dichloroethane 83.2 % 70.130 20-DEC-19 1.2-Dichloropenzene 89.1 % 70.130 20-DEC-19 1.2-Dichloroethane 89.3 % 70.130 20-DEC-19 1.4-Dichlorobenzene 89.3 % 70.130 20-DEC-19 1.4-Dichlorobenzene 87.9 % 70.130 20-DEC-19 Benzene 90.2 %		2				-			
1,1,1,2-Tetrachloroethane 84.6 % 70-130 20-DEC-19 1,1,2-Tichloroethane 80.7 % 70-130 20-DEC-19 1,1,1-Trichloroethane 87.1 % 70-130 20-DEC-19 1,1-Dichloroethane 87.1 % 70-130 20-DEC-19 1,1-Dichloroethane 87.1 % 70-130 20-DEC-19 1,1-Dichloroethane 92.0 % 70-130 20-DEC-19 1,2-Dichloroethane 80.9 % 70-130 20-DEC-19 1,2-Dichloroethane 85.7 % 70-130 20-DEC-19 1,2-Dichloropropane 83.2 % 70-130 20-DEC-19 1,2-Dichloropropane 89.1 % 70-130 20-DEC-19 1,3-Dichlorobenzene 87.9 % 70-130 20-DEC-19 1,4-Dichloroperopane 87.9 % 70-130 20-DEC-19 Acetone 80.3 % 70-130 20-DEC-19 Benzene 90.2 % 70-130 20-DEC-19 Bromodichloromethane 83.2 % 70-130 20-DEC-	•		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1.1.2,2-Tetrachloroethane 80.7 % 70-130 20-DEC-19 1.1,1-Trichloroethane 87.1 % 70-130 20-DEC-19 1.1,2-Trichloroethane 83.1 % 70-130 20-DEC-19 1.1-Dichloroethane 87.1 % 70-130 20-DEC-19 1.1-Dichloroethylene 92.0 % 70-130 20-DEC-19 1.2-Dichloroethane 80.9 % 70-130 20-DEC-19 1.2-Dichlorobenzene 85.7 % 70-130 20-DEC-19 1.2-Dichloroperpane 89.1 % 70-130 20-DEC-19 1.2-Dichloroperpane 89.3 % 70-130 20-DEC-19 1.3-Dichlorobenzene 89.3 % 70-130 20-DEC-19 1.4-Dichlorobenzene 87.9 % 70-130 20-DEC-19 1.4-Dichlorobenzene 87.9 % 70-130 20-DEC-19 1.4-Dichlorobenzene 87.9 % 70-130 20-DEC-19 Benzene 90.2 % 70-130		ane		84.6		%		70-130	20-DEC-19
1,1,2-Trichloroethane 83.1 % 70-130 20-DEC-19 1,1-Dichloroethane 87.1 % 70-130 20-DEC-19 1,1-Dichloroethylene 92.0 % 70-130 20-DEC-19 1,2-Dibromoethane 80.9 % 70-130 20-DEC-19 1,2-Dibromoethane 85.7 % 70-130 20-DEC-19 1,2-Dichloroethane 83.2 % 70-130 20-DEC-19 1,2-Dichloroethane 83.2 % 70-130 20-DEC-19 1,2-Dichloroptane 89.1 % 70-130 20-DEC-19 1,2-Dichlorobenzene 89.3 % 70-130 20-DEC-19 1,3-Dichlorobenzene 89.3 % 70-130 20-DEC-19 1,3-Dichlorobenzene 87.9 % 70-130 20-DEC-19 1,4-Dichlorobenzene 87.9 % 70-130 20-DEC-19 1,4-Dichlorobenzene 80.3 % 60-140 20-DEC-19 Benzene 90.2 % 70-130 20-DEC-19 Bromodichloromethane 83.2 % 70-130 20-DEC-19 Bromodichloromethane 83.2 % 70-130 20-DEC-19 Bromodichloromethane 82.1 % 60-140 20-DEC-19 Bromotorm 81.2 % 70-130 20-DEC-19 Carbon tetrachloride 95.7 % 70-130 20-DEC-19 Chlorobenzene 85.2 % 70-130 20-DEC-19 Chlorobenzene 85.6 % 70-130 20-DEC-19 Chloroform 85.6 % 70-130 20-DEC-19 Chloroform 85.6 % 70-130 20-DEC-19 Cis-1,2-Dichloroptiylene 85.4 % 70-130 20-DEC-19 Dichlorodifluoromethane 83.4 % 70-130 20-DEC-19 Dichlorodifluoromethane 83.4 % 70-130 20-DEC-19 Dichlorodifluoromethane 83.4 % 70-130 20-DEC-19 Dichlorodifluoromethane 83.4 % 70-130 20-DEC-19 Ethylbenzene 88.7 % 70-130 20-DEC-19 Ethylbenzene 88.7 % 70-130 20-DEC-19 Ethylbenzene 88.7 % 70-130 20-DEC-19 Ethylbenzene 91.3 % 70-130 20-DEC-19 Ethylbenzene 70.9 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 70.9 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 70.9 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 70.9 % 60-140 20-DEC-19	1,1,2,2-Tetrachloroeth	ane		80.7		%		70-130	
1,1-Dichloroethane 87.1 % 70-130 20-DEC-19 1,1-Dichloroethylene 92.0 % 70-130 20-DEC-19 1,2-Dibromoethane 80.9 % 70-130 20-DEC-19 1,2-Dichlorobenzene 85.7 % 70-130 20-DEC-19 1,2-Dichlorobenzene 83.2 % 70-130 20-DEC-19 1,2-Dichloropropane 89.1 % 70-130 20-DEC-19 1,2-Dichloropropane 89.1 % 70-130 20-DEC-19 1,3-Dichlorobenzene 89.3 % 70-130 20-DEC-19 1,3-Dichlorobenzene 89.3 % 70-130 20-DEC-19 1,4-Dichlorobenzene 89.3 % 70-130 20-DEC-19 1,4-Dichlorobenzene 80.3 % 60-140 20-DEC-19 Benzene 90.2 % 70-130 20-DEC-19 Bromodichloromethane 83.2 % 70-130 20-DEC-19 Bromoform 81.2 % 70-130 20-DEC-19 Bromomethane 82.1 % 60-140 20-DEC-19 Carbon tetrachloride 95.7 % 70-130 20-DEC-19 Carbon tetrachloride 95.7 % 70-130 20-DEC-19 Chlorobenzene 85.6 % 70-130 20-DEC-19 Chloroform 85.6 % 70-130 20-DEC-19 Cis-1,2-Dichloroptylene 85.4 % 70-130 20-DEC-19 Dibromochloromethane 83.4 % 70-130 20-DEC-19 Dibromochloromethane 83.4 % 70-130 20-DEC-19 Dibromochloromethane 83.4 % 70-130 20-DEC-19 Dibromochloromethane 83.4 % 70-130 20-DEC-19 Dibromochloromethane 83.4 % 70-130 20-DEC-19 Dibromochloromethane 83.4 % 70-130 20-DEC-19 Dibromochloromethane 83.4 % 70-130 20-DEC-19 Dibromochloromethane 83.4 % 70-130 20-DEC-19 Dibromochloromethane 91.3 % 70-130 20-DEC-19 Dibromochloromethane 91.3 % 70-130 20-DEC-19 Dibromochloromethane 91.3 % 70-130 20-DEC-19 Dibromochloromethane 91.3 % 70-130 20-DEC-19 Dibromochloromethane 91.3 % 70-130 20-DEC-19 Methyl Ethyl Ketone 70.9 % 60-140 20-DEC-19 Methyl Isbutyl Ketone 70.9 % 60-140 20-DEC-19 Methyl Isbutyl Ketone 70.9 % 60-140 20-DEC-19 Methyl Isbutyl Ketone 70.9 % 60-140 20-DEC-19 Methyl Isbutyl Ketone 70.9 % 60-140 20-DEC-19 Methyl Isbutyl Ketone 70.9 % 60-140 20-DEC-19	1,1,1-Trichloroethane			87.1		%		70-130	20-DEC-19
1,1-Dichloroethylene 92.0 % 70-130 20-DEC-19 1,2-Dibromoethane 80.9 % 70-130 20-DEC-19 1,2-Dichlorobenzene 85.7 % 70-130 20-DEC-19 1,2-Dichlorobenzene 83.2 % 70-130 20-DEC-19 1,2-Dichloropenzene 89.1 % 70-130 20-DEC-19 1,2-Dichloropenzene 89.1 % 70-130 20-DEC-19 1,3-Dichlorobenzene 89.3 % 70-130 20-DEC-19 1,4-Dichlorobenzene 87.9 % 70-130 20-DEC-19 1,4-Dichlorobenzene 80.3 % 60-140 20-DEC-19 Acetone 80.3 % 60-140 20-DEC-19 Benzene 90.2 % 70-130 20-DEC-19 Bromodichloromethane 83.2 % 70-130 20-DEC-19 Bromoform 81.2 % 70-130 20-DEC-19 Bromomethane 82.1 % 60-140 20-DEC-19 Carbon tetrachloride 95.7 % 70-130 20-DEC-19 Chlorobenzene 85.2 % 70-130 20-DEC-19 Chlorobenzene 85.6 % 70-130 20-DEC-19 Chloroform 85.6 % 70-130 20-DEC-19 cis-1,2-Dichloroethylene 85.4 % 70-130 20-DEC-19 cis-1,2-Dichloroptropene 84.2 % 70-130 20-DEC-19 Dibromochloromethane 83.4 % 70-130 20-DEC-19 Dibromochloromethane 83.4 % 70-130 20-DEC-19 Dibromochloromethane 83.4 % 70-130 20-DEC-19 Dibromochloromethane 83.4 % 70-130 20-DEC-19 Dibromochloromethane 83.4 % 70-130 20-DEC-19 Dibromochloromethane 83.7 % 70-130 20-DEC-19 Ethylbenzene 88.7 % 70-130 20-DEC-19 Dibromochloromethane 91.3 % 70-130 20-DEC-19 Ethylbenzene 92.0 % 70-130 20-DEC-19 Methyl Isbyl Ketone 70.9 % 60-140 20-DEC-19 Methyl Isbyl Ketone 70.9 % 60-140 20-DEC-19 Methyl Isbyl Ketone 72.7 % 60-140 20-DEC-19 Methyl Isbyl Ketone 70.9 % 60-140 20-DEC-19 Methyl Isbyl Ketone 70.9 % 60-140 20-DEC-19 Methyl Isbyl Ketone 70.9 % 60-140 20-DEC-19 Methyl Isbyl Ketone 70.9 % 60-140 20-DEC-19 Methyl Isbyl Ketone 70.9 % 60-140 20-DEC-19 Methyl Isbyl Ketone 70.9 % 60-140 20-DEC-19 Methyl Isbyl Ketone 70.9 % 60-140 20-DEC-19	1,1,2-Trichloroethane			83.1		%		70-130	20-DEC-19
1,2-Dibromoethane 80.9 % 70-130 20-DEC-19 1,2-Dichlorobenzene 85.7 % 70-130 20-DEC-19 1,2-Dichloroethane 83.2 % 70-130 20-DEC-19 1,2-Dichloropenzene 89.1 % 70-130 20-DEC-19 1,3-Dichlorobenzene 89.3 % 70-130 20-DEC-19 1,4-Dichlorobenzene 87.9 % 70-130 20-DEC-19 Acetone 80.3 % 60-140 20-DEC-19 Benzene 90.2 % 70-130 20-DEC-19 Bromodichloromethane 83.2 % 70-130 20-DEC-19 Bromoform 81.2 % 70-130 20-DEC-19 Bromomethane 82.1 % 70-130 20-DEC-19 Chlorobenzene 85.2 % 70-130 20-DEC-19 Chloroform 85.6 % 70-130 20-DEC-19 cis-1,3-Dichloroethylene 84.2 % 70-130 20-DEC-19 cis-1,3-Dichloroethylene 84.2 % 70-130 20-DEC-19	1,1-Dichloroethane			87.1		%		70-130	20-DEC-19
1,2-Dichlorobenzene 85.7 % 70-130 20-DEC-19 1,2-Dichloroethane 83.2 % 70-130 20-DEC-19 1,2-Dichloropropane 89.1 % 70-130 20-DEC-19 1,3-Dichlorobenzene 89.3 % 70-130 20-DEC-19 1,4-Dichlorobenzene 87.9 % 70-130 20-DEC-19 Acetone 80.3 % 60-140 20-DEC-19 Benzene 90.2 % 70-130 20-DEC-19 Bromodichloromethane 83.2 % 70-130 20-DEC-19 Bromoderm 81.2 % 70-130 20-DEC-19 Bromomethane 82.1 % 70-130 20-DEC-19 Carbon tetrachloride 95.7 % 70-130 20-DEC-19 Chlorobenzene 85.2 % 70-130 20-DEC-19 Chloroform 85.6 % 70-130 20-DEC-19 cis-1,2-Dichloroethylene 85.4 % 70-130 20-DEC-19 cis-1,3-Dichloropropene 84.2 % 70-130 20-DEC-19	1,1-Dichloroethylene			92.0		%		70-130	
1,2-Dichloroethane 83.2 % 70.130 20-DEC-19 1,2-Dichloropropane 89.1 % 70.130 20-DEC-19 1,3-Dichlorobenzene 89.3 % 70.130 20-DEC-19 1,4-Dichlorobenzene 87.9 % 70.130 20-DEC-19 Acetone 80.3 % 60.140 20-DEC-19 Benzene 90.2 % 70.130 20-DEC-19 Bromodichloromethane 83.2 % 70.130 20-DEC-19 Bromoferm 81.2 % 70.130 20-DEC-19 Bromomethane 82.1 % 60.140 20-DEC-19 Carbon tetrachloride 95.7 % 70.130 20-DEC-19 Chlorobenzene 85.2 % 70.130 20-DEC-19 Chloroform 85.6 % 70.130 20-DEC-19 cis-1,2-Dichloroethylene 85.4 % 70.130 20-DEC-19 cis-1,3-Dichloropropene 84.2 % 70.130 20-DEC-19 Dibromochloromethane 83.4 % 70.130 20-DEC-19	1,2-Dibromoethane			80.9		%		70-130	20-DEC-19
1,2-Dichloropropane 89.1 % 70-130 20-DEC-19 1,3-Dichlorobenzene 89.3 % 70-130 20-DEC-19 1,4-Dichlorobenzene 87.9 % 70-130 20-DEC-19 Acetone 80.3 % 60-140 20-DEC-19 Benzene 90.2 % 70-130 20-DEC-19 Bromodichloromethane 83.2 % 70-130 20-DEC-19 Bromoferm 81.2 % 70-130 20-DEC-19 Bromomethane 82.1 % 60-140 20-DEC-19 Carbon tetrachloride 95.7 % 70-130 20-DEC-19 Chlorobenzene 85.2 % 70-130 20-DEC-19 Chloroform 85.6 % 70-130 20-DEC-19 cis-1,2-Dichloroethylene 85.4 % 70-130 20-DEC-19 cis-1,3-Dichloropropene 84.2 % 70-130 20-DEC-19 Dibromochloromethane 83.4 % 70-130 20-DEC-19 Dichlorodifluoromethane 101.3 % 50-140 20-DEC-19	1,2-Dichlorobenzene			85.7		%		70-130	20-DEC-19
1,3-Dichlorobenzene 89.3 % 70-130 20-DEC-19 1,4-Dichlorobenzene 87.9 % 70-130 20-DEC-19 Acetone 80.3 % 60-140 20-DEC-19 Benzene 90.2 % 70-130 20-DEC-19 Bromodichloromethane 83.2 % 70-130 20-DEC-19 Bromoform 81.2 % 70-130 20-DEC-19 Bromomethane 82.1 % 60-140 20-DEC-19 Carbon tetrachloride 95.7 % 70-130 20-DEC-19 Chlorobenzene 85.2 % 70-130 20-DEC-19 Chloroform 85.6 % 70-130 20-DEC-19 Cis-1,2-Dichloroethylene 85.4 % 70-130 20-DEC-19 cis-1,2-Dichloropropene 84.2 % 70-130 20-DEC-19 Dibromochloromethane 83.4 % 70-130 20-DEC-19 Dichlorodifluoromethane 101.3 % 70-130 20-DEC-19 Ethylbenzene 88.7 % 70-130 20-DEC-19	1,2-Dichloroethane			83.2		%		70-130	20-DEC-19
1,4-Dichlorobenzene 87.9 % 70-130 20-DEC-19 Acetone 80.3 % 60-140 20-DEC-19 Benzene 90.2 % 70-130 20-DEC-19 Bromodichloromethane 83.2 % 70-130 20-DEC-19 Bromoform 81.2 % 70-130 20-DEC-19 Bromomethane 82.1 % 60-140 20-DEC-19 Carbon tetrachloride 95.7 % 70-130 20-DEC-19 Chlorobenzene 85.2 % 70-130 20-DEC-19 Chloroform 85.6 % 70-130 20-DEC-19 cis-1,2-Dichloroethylene 85.4 % 70-130 20-DEC-19 cis-1,3-Dichloropropene 84.2 % 70-130 20-DEC-19 Dibromochloromethane 83.4 % 70-130 20-DEC-19 Dichlorodifluoromethane 101.3 % 50-140 20-DEC-19 Ethylbenzene 88.7 % 70-130 20-DEC-19 m+p-Xylenes 92.0 % 70-130 20-DEC-19 <td< td=""><td>1,2-Dichloropropane</td><td></td><td></td><td>89.1</td><td></td><td>%</td><td></td><td>70-130</td><td>20-DEC-19</td></td<>	1,2-Dichloropropane			89.1		%		70-130	20-DEC-19
Acetone 80.3 % 60-140 20-DEC-19 Benzene 90.2 % 70-130 20-DEC-19 Bromodichloromethane 83.2 % 70-130 20-DEC-19 Bromoform 81.2 % 70-130 20-DEC-19 Bromomethane 82.1 % 60-140 20-DEC-19 Carbon tetrachloride 95.7 % 70-130 20-DEC-19 Chlorobenzene 85.2 % 70-130 20-DEC-19 Chloroform 85.6 % 70-130 20-DEC-19 cis-1,2-Dichloroethylene 85.4 % 70-130 20-DEC-19 cis-1,3-Dichloropropene 84.2 % 70-130 20-DEC-19 Dibromochloromethane 83.4 % 70-130 20-DEC-19 Dichlorodifluoromethane 101.3 % 50-140 20-DEC-19 Ethylbenzene 88.7 % 70-130 20-DEC-19 n-Hexane 91.3 % 70-130 20-DEC-19 m+p-Xylenes 92.0 % 70-130 20-DEC-19 Methyl Ethyl Ketone 70.9 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 72.7 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 72.7 % 60-140 20-DEC-19 Methylene Chloride 86.4 % 70-130 20-DEC-19	1,3-Dichlorobenzene			89.3		%		70-130	20-DEC-19
Benzene 90.2 % 70-130 20-DEC-19 Bromodichloromethane 83.2 % 70-130 20-DEC-19 Bromoform 81.2 % 70-130 20-DEC-19 Bromomethane 82.1 % 60-140 20-DEC-19 Carbon tetrachloride 95.7 % 70-130 20-DEC-19 Chlorobenzene 85.2 % 70-130 20-DEC-19 Chloroform 85.6 % 70-130 20-DEC-19 cis-1,2-Dichloroethylene 85.4 % 70-130 20-DEC-19 cis-1,3-Dichloropropene 84.2 % 70-130 20-DEC-19 Dibromochloromethane 83.4 % 70-130 20-DEC-19 Dichlorodifluoromethane 101.3 % 50-140 20-DEC-19 Ethylbenzene 88.7 % 70-130 20-DEC-19 n-Hexane 91.3 % 70-130 20-DEC-19 Methyl Ethyl Ketone 70.9 % 60-140 20-DEC-19	1,4-Dichlorobenzene			87.9		%		70-130	20-DEC-19
Bromodichloromethane 83.2 % 70-130 20-DEC-19 Bromoform 81.2 % 70-130 20-DEC-19 Bromomethane 82.1 % 60-140 20-DEC-19 Carbon tetrachloride 95.7 % 70-130 20-DEC-19 Chlorobenzene 85.2 % 70-130 20-DEC-19 Chloroform 85.6 % 70-130 20-DEC-19 cis-1,2-Dichloroethylene 85.4 % 70-130 20-DEC-19 cis-1,3-Dichloropropene 84.2 % 70-130 20-DEC-19 Dibromochloromethane 83.4 % 70-130 20-DEC-19 Dichlorodifluoromethane 101.3 % 50-140 20-DEC-19 Ethylbenzene 88.7 % 70-130 20-DEC-19 n-Hexane 91.3 % 70-130 20-DEC-19 Methyl Ethyl Ketone 70.9 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 72.7 % 60-140 20-DEC-19	Acetone			80.3		%		60-140	20-DEC-19
Bromoform 81.2 % 70-130 20-DEC-19 Bromomethane 82.1 % 60-140 20-DEC-19 Carbon tetrachloride 95.7 % 70-130 20-DEC-19 Chlorobenzene 85.2 % 70-130 20-DEC-19 Chloroform 85.6 % 70-130 20-DEC-19 cis-1,2-Dichloroethylene 85.4 % 70-130 20-DEC-19 cis-1,3-Dichloropropene 84.2 % 70-130 20-DEC-19 Dibromochloromethane 83.4 % 70-130 20-DEC-19 Dichlorodifluoromethane 101.3 % 50-140 20-DEC-19 Ethylbenzene 88.7 % 70-130 20-DEC-19 n-Hexane 91.3 % 70-130 20-DEC-19 Methyl Ethyl Ketone 70.9 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 72.7 % 60-140 20-DEC-19 Methylene Chloride 86.4 % 70-130 20-DEC-19 <td>Benzene</td> <td></td> <td></td> <td>90.2</td> <td></td> <td>%</td> <td></td> <td>70-130</td> <td>20-DEC-19</td>	Benzene			90.2		%		70-130	20-DEC-19
Bromomethane 82.1 % 60-140 20-DEC-19 Carbon tetrachloride 95.7 % 70-130 20-DEC-19 Chlorobenzene 85.2 % 70-130 20-DEC-19 Chloroform 85.6 % 70-130 20-DEC-19 cis-1,2-Dichloroethylene 85.4 % 70-130 20-DEC-19 cis-1,3-Dichloropropene 84.2 % 70-130 20-DEC-19 Dibromochloromethane 83.4 % 70-130 20-DEC-19 Dichlorodifluoromethane 101.3 % 50-140 20-DEC-19 Ethylbenzene 88.7 % 70-130 20-DEC-19 n-Hexane 91.3 % 70-130 20-DEC-19 m+p-Xylenes 92.0 % 70-130 20-DEC-19 Methyl Ethyl Ketone 70.9 % 60-140 20-DEC-19 Methylene Chloride 86.4 % 70-130 20-DEC-19	Bromodichloromethan	е		83.2		%		70-130	20-DEC-19
Carbon tetrachloride 95.7 % 70-130 20-DEC-19 Chlorobenzene 85.2 % 70-130 20-DEC-19 Chloroform 85.6 % 70-130 20-DEC-19 cis-1,2-Dichloroethylene 85.4 % 70-130 20-DEC-19 cis-1,3-Dichloropropene 84.2 % 70-130 20-DEC-19 Dibromochloromethane 83.4 % 70-130 20-DEC-19 Dichlorodifluoromethane 101.3 % 50-140 20-DEC-19 Ethylbenzene 88.7 % 70-130 20-DEC-19 n-Hexane 91.3 % 70-130 20-DEC-19 m+p-Xylenes 92.0 % 70-130 20-DEC-19 Methyl Ethyl Ketone 70.9 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 72.7 % 60-140 20-DEC-19 Methylene Chloride 86.4 % 70-130 20-DEC-19	Bromoform			81.2		%		70-130	20-DEC-19
Chlorobenzene 85.2 % 70-130 20-DEC-19 Chloroform 85.6 % 70-130 20-DEC-19 cis-1,2-Dichloroethylene 85.4 % 70-130 20-DEC-19 cis-1,3-Dichloropropene 84.2 % 70-130 20-DEC-19 Dibromochloromethane 83.4 % 70-130 20-DEC-19 Dichlorodifluoromethane 101.3 % 50-140 20-DEC-19 Ethylbenzene 88.7 % 70-130 20-DEC-19 n-Hexane 91.3 % 70-130 20-DEC-19 m+p-Xylenes 92.0 % 70-130 20-DEC-19 Methyl Ethyl Ketone 70.9 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 72.7 % 60-140 20-DEC-19 Methylene Chloride 86.4 % 70-130 20-DEC-19	Bromomethane			82.1		%		60-140	20-DEC-19
Chloroform 85.6 % 70-130 20-DEC-19 cis-1,2-Dichloroethylene 85.4 % 70-130 20-DEC-19 cis-1,3-Dichloropropene 84.2 % 70-130 20-DEC-19 Dibromochloromethane 83.4 % 70-130 20-DEC-19 Dichlorodifluoromethane 101.3 % 50-140 20-DEC-19 Ethylbenzene 88.7 % 70-130 20-DEC-19 n-Hexane 91.3 % 70-130 20-DEC-19 m+p-Xylenes 92.0 % 70-130 20-DEC-19 Methyl Ethyl Ketone 70.9 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 72.7 % 60-140 20-DEC-19 Methylene Chloride 86.4 % 70-130 20-DEC-19	Carbon tetrachloride			95.7		%		70-130	20-DEC-19
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cis-1,3-Dichloropropene 84.2 % 70-130 20-DEC-19 Dibromochloromethane 83.4 % 70-130 20-DEC-19 Dichlorodifluoromethane 101.3 % 50-140 20-DEC-19 Ethylbenzene 88.7 % 70-130 20-DEC-19 n-Hexane 91.3 % 70-130 20-DEC-19 m+p-Xylenes 92.0 % 70-130 20-DEC-19 Methyl Ethyl Ketone 70.9 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 72.7 % 60-140 20-DEC-19 Methylene Chloride 86.4 % 70-130 20-DEC-19	Chloroform			85.6		%		70-130	20-DEC-19
Dibromochloromethane 83.4 % 70-130 20-DEC-19 Dichlorodiffluoromethane 101.3 % 50-140 20-DEC-19 Ethylbenzene 88.7 % 70-130 20-DEC-19 n-Hexane 91.3 % 70-130 20-DEC-19 m+p-Xylenes 92.0 % 70-130 20-DEC-19 Methyl Ethyl Ketone 70.9 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 72.7 % 60-140 20-DEC-19 Methylene Chloride 86.4 % 70-130 20-DEC-19	cis-1,2-Dichloroethyler	ne		85.4		%		70-130	20-DEC-19
Dichlorodifluoromethane 101.3 % 50-140 20-DEC-19 Ethylbenzene 88.7 % 70-130 20-DEC-19 n-Hexane 91.3 % 70-130 20-DEC-19 m+p-Xylenes 92.0 % 70-130 20-DEC-19 Methyl Ethyl Ketone 70.9 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 72.7 % 60-140 20-DEC-19 Methylene Chloride 86.4 % 70-130 20-DEC-19	cis-1,3-Dichloropropen	е		84.2		%		70-130	20-DEC-19
Ethylbenzene 88.7 % 70-130 20-DEC-19 n-Hexane 91.3 % 70-130 20-DEC-19 m+p-Xylenes 92.0 % 70-130 20-DEC-19 Methyl Ethyl Ketone 70.9 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 72.7 % 60-140 20-DEC-19 Methylene Chloride 86.4 % 70-130 20-DEC-19	Dibromochloromethan	е		83.4		%		70-130	20-DEC-19
n-Hexane 91.3 % 70-130 20-DEC-19 m+p-Xylenes 92.0 % 70-130 20-DEC-19 Methyl Ethyl Ketone 70.9 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 72.7 % 60-140 20-DEC-19 Methylene Chloride 86.4 % 70-130 20-DEC-19	Dichlorodifluoromethar	ne		101.3		%		50-140	20-DEC-19
m+p-Xylenes 92.0 % 70-130 20-DEC-19 Methyl Ethyl Ketone 70.9 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 72.7 % 60-140 20-DEC-19 Methylene Chloride 86.4 % 70-130 20-DEC-19	Ethylbenzene			88.7		%		70-130	20-DEC-19
Methyl Ethyl Ketone 70.9 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 72.7 % 60-140 20-DEC-19 Methylene Chloride 86.4 % 70-130 20-DEC-19	n-Hexane			91.3		%		70-130	20-DEC-19
Methyl Isobutyl Ketone 72.7 % 60-140 20-DEC-19 Methylene Chloride 86.4 % 70-130 20-DEC-19	m+p-Xylenes			92.0		%		70-130	20-DEC-19
Methylene Chloride 86.4 % 70-130 20-DEC-19	Methyl Ethyl Ketone			70.9		%		60-140	20-DEC-19
	Methyl Isobutyl Ketone			72.7		%		60-140	20-DEC-19
MTBE 87.6 % 70-130 20-DEC-19	Methylene Chloride			86.4		%		70-130	20-DEC-19
	MTBE			87.6		%		70-130	20-DEC-19



Workorder: L2398120 Report Date: 27-DEC-19 Page 9 of 12

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test M	latrix Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT V	Vater						
Batch R4948179							
WG3246300-1 LCS		07.5		0/		70.400	
o-Xylene		87.5 85.5		%		70-130	20-DEC-19
Styrene						70-130	20-DEC-19
Tetrachloroethylene Toluene		95.5 92.5		%		70-130	20-DEC-19
				%		70-130	20-DEC-19
trans-1,2-Dichloroethylene		91.3				70-130	20-DEC-19
trans-1,3-Dichloropropene		81.2		%		70-130	20-DEC-19
Trichloroethylene		85.3		%		70-130	20-DEC-19
Trichlorofluoromethane		96.5		%		60-140	20-DEC-19
Vinyl chloride		105.8		%		60-140	20-DEC-19
WG3246300-2 MB 1,1,1,2-Tetrachloroethane		<0.50		ug/L		0.5	20-DEC-19
1,1,2,2-Tetrachloroethane		<0.50		ug/L		0.5	20-DEC-19
1,1,1-Trichloroethane		<0.50		ug/L		0.5	20-DEC-19
1,1,2-Trichloroethane		<0.50		ug/L		0.5	20-DEC-19
1,1-Dichloroethane		<0.50		ug/L		0.5	20-DEC-19
1,1-Dichloroethylene		<0.50		ug/L		0.5	20-DEC-19
1,2-Dibromoethane		<0.20		ug/L		0.2	20-DEC-19
1,2-Dichlorobenzene		<0.50		ug/L		0.5	20-DEC-19
1,2-Dichloroethane		<0.50		ug/L		0.5	20-DEC-19
1,2-Dichloropropane		<0.50		ug/L		0.5	20-DEC-19
1,3-Dichlorobenzene		<0.50		ug/L		0.5	20-DEC-19
1,4-Dichlorobenzene		<0.50		ug/L		0.5	20-DEC-19
Acetone		<30		ug/L		30	20-DEC-19
Benzene		<0.50		ug/L		0.5	20-DEC-19
Bromodichloromethane		<2.0		ug/L		2	20-DEC-19
Bromoform		<5.0		ug/L		5	20-DEC-19
Bromomethane		<0.50		ug/L		0.5	20-DEC-19
Carbon tetrachloride		<0.20		ug/L		0.2	20-DEC-19
Chlorobenzene		<0.50		ug/L		0.5	20-DEC-19
Chloroform		<1.0		ug/L		1	20-DEC-19
cis-1,2-Dichloroethylene		<0.50		ug/L		0.5	20-DEC-19
cis-1,3-Dichloropropene		< 0.30		ug/L		0.3	20-DEC-19
Dibromochloromethane		<2.0		ug/L		2	20-DEC-19
Dichlorodifluoromethane		<2.0		ug/L		2	20-DEC-19



Workorder: L2398120 Report Date: 27-DEC-19 Page 10 of 12

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4948179)							
WG3246300-2 MB			0.50				0.5	
Ethylbenzene			<0.50		ug/L		0.5	20-DEC-19
n-Hexane			<0.50		ug/L		0.5	20-DEC-19
m+p-Xylenes			<0.40		ug/L		0.4	20-DEC-19
Methyl Ethyl Ketone			<20		ug/L		20	20-DEC-19
Methyl Isobutyl Ketone			<20		ug/L		20	20-DEC-19
Methylene Chloride			<5.0		ug/L		5	20-DEC-19
MTBE			<2.0		ug/L		2	20-DEC-19
o-Xylene			<0.30		ug/L		0.3	20-DEC-19
Styrene			<0.50		ug/L		0.5	20-DEC-19
Tetrachloroethylene			<0.50		ug/L		0.5	20-DEC-19
Toluene			<0.50		ug/L		0.5	20-DEC-19
trans-1,2-Dichloroethyle			<0.50		ug/L		0.5	20-DEC-19
trans-1,3-Dichloroprope	ene		<0.30		ug/L		0.3	20-DEC-19
Trichloroethylene			<0.50		ug/L		0.5	20-DEC-19
Trichlorofluoromethane	•		<5.0		ug/L		5	20-DEC-19
Vinyl chloride			<0.50		ug/L		0.5	20-DEC-19
Surrogate: 1,4-Difluorol	benzene		94.8		%		70-130	20-DEC-19
Surrogate: 4-Bromofluc	probenzene		92.2		%		70-130	20-DEC-19
WG3246300-5 MS		WG3246300-3	04.7		0/			
1,1,1,2-Tetrachloroetha			84.7		%		50-140	20-DEC-19
1,1,2,2-Tetrachloroetha	ane		81.3		%		50-140	20-DEC-19
1,1,1-Trichloroethane			86.0		%		50-140	20-DEC-19
1,1,2-Trichloroethane			85.8		%		50-140	20-DEC-19
1,1-Dichloroethane			86.3		%		50-140	20-DEC-19
1,1-Dichloroethylene			89.7		%		50-140	20-DEC-19
1,2-Dibromoethane			85.1		%		50-140	20-DEC-19
1,2-Dichlorobenzene			85.3		%		50-140	20-DEC-19
1,2-Dichloroethane			88.0		%		50-140	20-DEC-19
1,2-Dichloropropane			91.9		%		50-140	20-DEC-19
1,3-Dichlorobenzene			89.3		%		50-140	20-DEC-19
1,4-Dichlorobenzene			88.4		%		50-140	20-DEC-19
Acetone			86.7		%		50-140	20-DEC-19
Benzene			90.3		%		50-140	20-DEC-19
Bromodichloromethane)		86.0		%		50-140	20-DEC-19



Workorder: L2398120 Report Date: 27-DEC-19 Page 11 of 12

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

est	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4948179								
WG3246300-5 MS		WG3246300-3						
Bromoform			82.8		%		50-140	20-DEC-19
Bromomethane			81.3		%		50-140	20-DEC-19
Carbon tetrachloride			94.4		%		50-140	20-DEC-19
Chlorobenzene			85.2		%		50-140	20-DEC-19
Chloroform			86.8		%		50-140	20-DEC-19
cis-1,2-Dichloroethylene			84.8		%		50-140	20-DEC-19
cis-1,3-Dichloropropene			89.1		%		50-140	20-DEC-19
Dibromochloromethane			85.1		%		50-140	20-DEC-19
Dichlorodifluoromethane)		92.1		%		50-140	20-DEC-19
Ethylbenzene			85.9		%		50-140	20-DEC-19
n-Hexane			87.0		%		50-140	20-DEC-19
m+p-Xylenes			89.7		%		50-140	20-DEC-19
Methyl Ethyl Ketone			81.0		%		50-140	20-DEC-19
Methyl Isobutyl Ketone			80.1		%		50-140	20-DEC-19
Methylene Chloride			88.2		%		50-140	20-DEC-19
MTBE			86.7		%		50-140	20-DEC-19
o-Xylene			85.5		%		50-140	20-DEC-19
Styrene			84.4		%		50-140	20-DEC-19
Tetrachloroethylene			88.7		%		50-140	20-DEC-19
Toluene			90.4		%		50-140	20-DEC-19
trans-1,2-Dichloroethyle	ne		90.9		%		50-140	20-DEC-19
trans-1,3-Dichloroproper	ne		85.4		%		50-140	20-DEC-19
Trichloroethylene			85.6		%		50-140	20-DEC-19
Trichlorofluoromethane			93.9		%		50-140	20-DEC-19
Vinyl chloride			101.3		%		50-140	20-DEC-19

Workorder: L2398120 Report Date: 27-DEC-19

Client: TERRAPROBE-BRAMPTON Page 12 of 12

11 Indell Lane

Brampton ON L6T 3Y3 Kossay Makhzoumi

Legend:

Contact:

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.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
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.

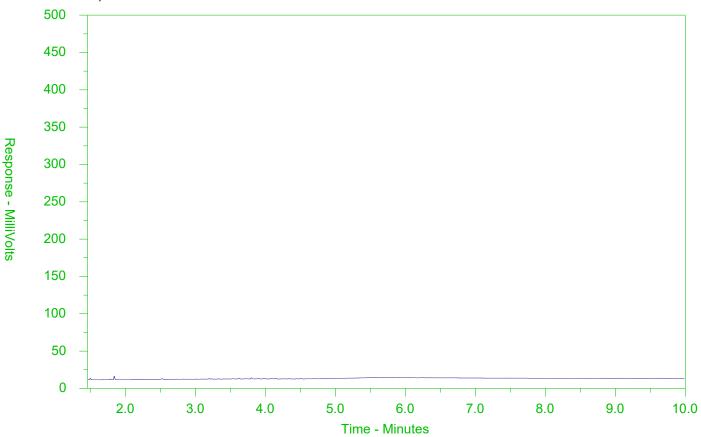
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined data quality objectives to provide 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: L2398120-1 Client Sample ID: BH4-D



← -F2-	→←	—F3—→ ← —F4—	>
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067⁰F
Gasolin	e →	← Mot	or Oils/Lube Oils/Grease
←	-Diesel/Je	t 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.

) Environmental

Chain of Custody (COC) / Analytical **Request Form**



COC Number: 15 -

Canada Toll Free: 1 800 668 9878

	www.alsglobal.com																				
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Street:	11 Indell Lane			Email 1 or Fax kmakhzoumi@terraprobe.ca				Date a	nd Time	e Requir	red for a	ii E&P	TATs:								
City/Province:	Brampton			Email 2				For tes	ts that c	ın not b	e perforn	ned acco	rding to	the ser	rice le	e level selected, you will be contacted.					
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Contact:	Lorena Rossi			Email 2]										1			φ
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DEEED TO BACK	PAGE FOR ALS LOCATIONS			<u> </u>	V	TE - LABORATOR		$\overline{\Pi}$	<u> </u>			<u> </u>	_			47	RL	10	\mathcal{L}^{9}		425



TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 18-DEC-19

Report Date: 27-DEC-19 10:43 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2398131

Project P.O. #: NOT SUBMITTED

Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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L2398131 CONT'D....

Job Reference: 1-19-0603-42

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Summary of Guideline Exceedances

Guideline						
ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit
Ontario Reg	gulation 153/04	- April 15, 2011 Standards - T3-Non-Potable G	round Water-All Types of	Property Uses (Coarse)		
L2398131-1	BH4-5	Anions and Nutrients	Chloride (CI)	3560	2300	mg/L
Ontario Reg	gulation 153/04	- April 15, 2011 Standards - T3-Non-Potable G	Fround Water-All Types of	Property Uses (Fine)		
L2398131-1	BH4-5	Anions and Nutrients	Chloride (CI)	3560	2300	mg/L

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2398131 CONT'D....

Job Reference: 1-19-0603-42

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Physical Tests - WATER

i ilyoloai i ooto iii/ti =it	
	Lab ID L2398131
	Sample Date 16-DEC-
	Sample ID BH4-5
	Guide Limits
Analyte	Unit #1 #2
Conductivity	mS/cm 10.6
рН	pH units 7.11

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2398131 CONT'D....

Job Reference: 1-19-0603-42

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Anions and Nutrients - WATER

Alliono ana Hatricitto	**/				
			L	_ab ID	L2398131-1
			Sample	e Date	16-DEC-19
			Sam	ple ID	BH4-5
Analyte		Unit	Guide #1	Limits #2	
Analyte		Oilit	π ι	π ∠	
Chloride (CI)		mg/L	2300	2300	3560 DLDS

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Job Reference: 1-19-0603-42

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Cyanides - WATER

January Willer				
			Lab ID	L2398131-1
		Sampl	e Date	16-DEC-19
		Sam	nple ID	BH4-5
Analyte	Unit	Guide #1	Limits #2	
Cyanide, Weak Acid Diss	ug/L	66	66	<2.0

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2398131 CONT'D....

Job Reference: 1-19-0603-42

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Dissolved Metals - WATER

		Sample	ab ID Date ple ID	L2398131-1 16-DEC-19 BH4-5
Analyte	Unit	Guide #1	Limits #2	
Dissolved Mercury Filtration Location		-	-	FIELD
Dissolved Metals Filtration Location		-	-	FIELD
Antimony (Sb)-Dissolved	ug/L	20000	20000	<1.0 DLHC
Arsenic (As)-Dissolved	ug/L	1900	1900	<1.0 DLHC
Barium (Ba)-Dissolved	ug/L	29000	29000	67.4 DLHC
Beryllium (Be)-Dissolved	ug/L	67	67	<1.0 DLHC
Boron (B)-Dissolved	ug/L	45000	45000	150 DLHC
Cadmium (Cd)-Dissolved	ug/L	2.7	2.7	0.137 DLHC
Chromium (Cr)-Dissolved	ug/L	810	810	<5.0 DLHC
Cobalt (Co)-Dissolved	ug/L	66	66	3.7 DLHC
Copper (Cu)-Dissolved	ug/L	87	87	<2.0 DLHC
Lead (Pb)-Dissolved	ug/L	25	25	<0.50 DLHC
Mercury (Hg)-Dissolved	ug/L	0.29	2.8	<0.0050
Molybdenum (Mo)-Dissolved	ug/L	9200	9200	0.64 DLHC
Nickel (Ni)-Dissolved	ug/L	490	490	15.6 DLHC
Selenium (Se)-Dissolved	ug/L	63	63	4.28 DLHC
Silver (Ag)-Dissolved	ug/L	1.5	1.5	<0.50 DLHC
Sodium (Na)-Dissolved	ug/L	2300000	2300000	1370000 BLHC
Thallium (TI)-Dissolved	ug/L	510	510	0.27 DLHC
Uranium (U)-Dissolved	ug/L	420	420	13.3 DLHC
Vanadium (V)-Dissolved	ug/L	250	250	<5.0 DLHC
Zinc (Zn)-Dissolved	ug/L	1100	1100	<10 DLHC

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Speciated Metals - WATER

		Lab ID	L2398131-1
	Sample	e Date	16-DEC-19
	Sam	ple ID	BH4-5
llo:4			
Unit	#1	#2	
		Sampl Sam Guide	Lab ID Sample Date Sample ID Guide Limits

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2398131 CONT'D....

Job Reference: 1-19-0603-42

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Volatile Organic Compounds - WATER

		L Sample Sam	L2398131-1 16-DEC-19 BH4-5	
Analyte	Unit	Guide #1	Limits #2	
Acetone	ug/L	130000	130000	<30
Benzene	ug/L	44	430	<0.50
Bromodichloromethane	ug/L	85000	85000	<2.0
Bromoform	ug/L	380	770	<5.0
Bromomethane	ug/L	5.6	56	<0.50
Carbon tetrachloride	ug/L	0.79	8.4	<0.20
Chlorobenzene	ug/L	630	630	<0.50
Dibromochloromethane	ug/L	82000	82000	<2.0
Chloroform	ug/L	2.4	22	<1.0
1,2-Dibromoethane	ug/L	0.25	0.83	<0.20
1,2-Dichlorobenzene	ug/L	4600	9600	<0.50
1,3-Dichlorobenzene	ug/L	9600	9600	<0.50
1,4-Dichlorobenzene	ug/L	8	67	<0.50
Dichlorodifluoromethane	ug/L	4400	4400	<2.0
1,1-Dichloroethane	ug/L	320	3100	<0.50
1,2-Dichloroethane	ug/L	1.6	12	<0.50
1,1-Dichloroethylene	ug/L	1.6	17	<0.50
cis-1,2-Dichloroethylene	ug/L	1.6	17	<0.50
trans-1,2-Dichloroethylene	ug/L	1.6	17	<0.50
Methylene Chloride	ug/L	610	5500	<5.0
1,2-Dichloropropane	ug/L	16	140	<0.50
cis-1,3-Dichloropropene	ug/L	-	-	<0.30
trans-1,3-Dichloropropene	ug/L	-	-	<0.30
1,3-Dichloropropene (cis & trans)	ug/L	5.2	45	<0.50
Ethylbenzene	ug/L	2300	2300	<0.50
n-Hexane	ug/L	51	520	<0.50
Methyl Ethyl Ketone	ug/L	470000	1500000	<20
Methyl Isobutyl Ketone	ug/L	140000	580000	<20
MTBE	ug/L	190	1400	<2.0
Styrene	ug/L	1300	9100	<0.50

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Volatile Organic Compounds - WATER

Voiatile Organic Compound	3 - WAILK				
			_ab ID	L2398131-1	
		Sample	16-DEC-19		
		Sam	BH4-5		
		Guide	Limite		
Ameliate	Unit	#1	#2		
Analyte	Offic	#1	#4		
1,1,1,2-Tetrachloroethane	ug/L	3.3	28	<0.50	
1,1,2,2-Tetrachloroethane	ug/L	3.2	15	<0.50	
Tetrachloroethylene	ug/L	1.6	17	<0.50	
Toluene	ug/L	18000	18000	<0.50	
1,1,1-Trichloroethane	ug/L	640	6700	<0.50	
1,1,2-Trichloroethane	ug/L	4.7	30	<0.50	
Trichloroethylene	ug/L	1.6	17	1.27	
Trichlorofluoromethane	ug/L	2500	2500	<5.0	
Vinyl chloride	ug/L	0.5	1.7	<0.50	
o-Xylene	ug/L	-	-	<0.30	
m+p-Xylenes	ug/L	-	-	< 0.40	
Xylenes (Total)	ug/L	4200	4200	<0.50	
Surrogate: 4-Bromofluorobenzene	%	-	-	93.5	
Surrogate: 1,4-Difluorobenzene	%	-	-	94.9	

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Job Reference: 1-19-0603-42
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Hydrocarbons - WATER

Hydrocarbons - WAIER					
			Lab ID	L2398131-1	
		Sampl	e Date	16-DEC-19	
		Sam	ple ID	BH4-5	
		Guide	Limits		
Analyte	Unit	#1	#2		
F1 (C6-C10)	ug/L	750	750	<25	
F1-BTEX	ug/L	750	750	<25	
F2 (C10-C16)	ug/L	150	150	<100	
F2-Naphth	ug/L	-	-	<100	
F3 (C16-C34)	ug/L	500	500	<250	
F3-PAH	ug/L	-	-	<250	
F4 (C34-C50)	ug/L	500	500	<250	
Total Hydrocarbons (C6-C50)	ug/L	-	-	<370	
Chrom. to baseline at nC50		-	-	YES	
Surrogate: 2-Bromobenzotrifluoride	%	-	-	80.3	
Surrogate: 3,4-Dichlorotoluene	%	-	-	91.9	

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Job Reference: 1-19-0603-42
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Polycyclic Aromatic Hydrocarbons - WATER

 Lab ID
 L2398131-1

 Sample Date
 16-DEC-19

 Sample ID
 BH4-5

		Guide	Limits	
Analyte	Unit	#1	#2	
Acenaphthene	ug/L	600	1700	<0.020
Acenaphthylene	ug/L	1.8	1.8	<0.020
Anthracene	ug/L	2.4	2.4	<0.020
Benzo(a)anthracene	ug/L	4.7	4.7	<0.020
Benzo(a)pyrene	ug/L	0.81	0.81	<0.010
Benzo(b)fluoranthene	ug/L	0.75	0.75	<0.020
Benzo(g,h,i)perylene	ug/L	0.2	0.2	<0.020
Benzo(k)fluoranthene	ug/L	0.4	0.4	<0.020
Chrysene	ug/L	1	1	<0.020
Dibenzo(ah)anthracene	ug/L	0.52	0.52	<0.020
Fluoranthene	ug/L	130	130	<0.020
Fluorene	ug/L	400	400	<0.020
Indeno(1,2,3-cd)pyrene	ug/L	0.2	0.2	<0.020
1+2-Methylnaphthalenes	ug/L	1800	1800	<0.028
1-Methylnaphthalene	ug/L	1800	1800	<0.020
2-Methylnaphthalene	ug/L	1800	1800	<0.020
Naphthalene	ug/L	1400	6400	<0.050
Phenanthrene	ug/L	580	580	<0.020
Pyrene	ug/L	68	68	<0.020
Surrogate: d10-Acenaphthene	%	-	-	78.1
Surrogate: d12-Chrysene	%	-	-	73.0
Surrogate: d8-Naphthalene	%	-	-	70.7
Surrogate: d10-Phenanthrene	%	-	-	74.1

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.

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Qualifiers for Individual Parameters Listed:

Qualifier Description

DLDS Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity.

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**

CL-IC-N-WT Water Chloride by IC EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

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).

CN-WAD-R511-WT Water Cyanide (WAD)-O.Reg 153/04 APHA 4500CN I-Weak acid Dist Colorimet

Weak acid dissociable cyanide (WAD) is determined by undergoing a distillation procedure. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

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-R511-WT Water Hex Chrom-O.Reg 153/04 (July 2011) EPA 7199

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. Chromium (III) is calculated as the difference between the total chromium and the chromium (VI) results.

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-R511-WT Water Conductivity-O.Reg 153/04 (July 2011) APHA 2510 B

Water samples can be measured directly by immersing the conductivity cell into 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).

EC-SCREEN-WT Water Conductivity Screen (Internal Use APHA 2510 Only)

- ..., /

Qualitative analysis of conductivity where required during preparation of other tests - e.g. TDS, metals, etc.

F1-F4-511-CALC-WT Water F1-F4 Hydrocarbon Calculated CCME CWS-PHC, Pub #1310, Dec 2001-L

Parameters

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

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.

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Job Reference: 1-19-0603-42
PAGE 13 of 14
27-DEC-19 10:43 (MT)

Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

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 Water F1-O.Reg 153/04 (July 2011) E3398/CCME TIER 1-HS

Fraction F1 is determined by 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 Water F2-F4-O.Reg 153/04 (July 2011) EPA 3511/CCME Tier 1

Petroleum Hydrocarbons (F2-F4 fractions) are extracted from water using a hexane micro-extraction technique. Instrumental analysis is by GC-FID, as per the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Tier 1 Method, CCME, 2001.

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-D-UG/L-CVAA-WT Water Diss. Mercury in Water by CVAAS EPA 1631E (mod)

(ug/L)

Water samples are filtered (0.45 um), preserved with hydrochloric acid, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed 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-D-UG/L-MS-WT Water Diss. Metals in Water by ICPMS (ug/L) EPA 200.8

The metal constituents of a non-acidified sample that pass through a membrane filter prior to ICP/MS analysis.

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 Water PAH-Calculated Parameters SW846 8270

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

Aqueous samples, fortified with surrogates, are extracted using liquid/liquid extraction technique. The sample extracts are concentrated and then analyzed using 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 Water pH APHA 4500 H-Electrode

Water samples are analyzed directly by a calibrated pH 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). Holdtime for samples under this regulation is 28 days

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

VOC-511-HS-WT Water VOC by GCMS HS O.Reg 153/04 (July SW846 8260

2011)

L2398131 CONT'D.... Job Reference: 1-19-0603-42 PAGE 14 of 14 27-DEC-19 10:43 (MT)

Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

Liquid samples are analyzed by headspace GC/MSD.

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 Water

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

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.



Workorder: L2398131 Report Date: 27-DEC-19 Page 1 of 12

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CL-IC-N-WT	Water							
Batch R4948668 WG3246535-4 DUP Chloride (CI)		WG3246535-3 6.98	6.99		mg/L	0.2	20	19-DEC-19
WG3246535-2 LCS Chloride (Cl)			104.2		%		90-110	19-DEC-19
WG3246535-1 MB Chloride (Cl)			<0.50		mg/L		0.5	19-DEC-19
WG3246535-5 MS Chloride (CI)		WG3246535-3	103.4		%		75-125	19-DEC-19
CN-WAD-R511-WT	Water							
Batch R4948388								
WG3246441-3 DUP Cyanide, Weak Acid Dis	s	L2398120-1 <2.0	<2.0	RPD-NA	ug/L	N/A	20	19-DEC-19
WG3246441-2 LCS Cyanide, Weak Acid Dis	s		100.7		%		80-120	19-DEC-19
WG3246441-1 MB Cyanide, Weak Acid Dis	s		<2.0		ug/L		2	19-DEC-19
WG3246441-4 MS Cyanide, Weak Acid Dis	s	L2398120-1	104.1		%		75-125	19-DEC-19
CR-CR6-IC-R511-WT	Water							
Batch R4948092								
WG3246367-4 DUP Chromium, Hexavalent		WG3246367-3 <0.50	<0.50	RPD-NA	ug/L	N/A	20	19-DEC-19
WG3246367-2 LCS Chromium, Hexavalent			101.1		%		80-120	19-DEC-19
WG3246367-1 MB Chromium, Hexavalent			<0.50		ug/L		0.5	19-DEC-19
WG3246367-5 MS Chromium, Hexavalent		WG3246367-3	96.2		%		70-130	19-DEC-19
EC-R511-WT	Water							
Batch R4948309 WG3246108-4 DUP Conductivity		WG3246108-3 0.297	0.296		mS/cm	0.3	10	19-DEC-19
WG3246108-2 LCS Conductivity			102.3		%		90-110	19-DEC-19
WG3246108-1 MB Conductivity			<0.0030		mS/cm		0.003	19-DEC-19
F1-HS-511-WT	Water							



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Ma	trix Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT	Wa	ater						
Batch R4952 WG3247743-4 D F1 (C6-C10)	2529 OUP	WG3247743- <25	3 <25	RPD-NA	ug/L	N/A	30	23-DEC-19
WG3247743-1 L F1 (C6-C10)	.cs		93.3		%		80-120	23-DEC-19
WG3247743-2 N F1 (C6-C10)	ИΒ		<25		ug/L		25	23-DEC-19
Surrogate: 3,4-Dicl	hlorotoluer	ne	96.0		%		60-140	23-DEC-19
WG3247743-5 N F1 (C6-C10)	I S	WG3247743-	3 60.3		%		60-140	23-DEC-19
F2-F4-511-WT	Wa	ater						
Batch R4948 WG3245885-2 L	8429 .CS							
F2 (C10-C16)			99.6		%		70-130	19-DEC-19
F3 (C16-C34)			105.1		%		70-130	19-DEC-19
F4 (C34-C50)			106.1		%		70-130	19-DEC-19
WG3245885-1 N F2 (C10-C16)	ИB		<100		ug/L		100	19-DEC-19
F3 (C16-C34)			<250		ug/L		250	19-DEC-19
F4 (C34-C50)			<250		ug/L		250	19-DEC-19
Surrogate: 2-Brom	obenzotrifl	luoride	90.7		%		60-140	19-DEC-19
HG-D-UG/L-CVAA-WT	Γ Wa	ater						
Batch R4946	6371							
WG3246069-4 D Mercury (Hg)-Disso	OUP olved	WG3246069- <0.0050	3 0.0064	RPD-NA	ug/L	N/A	20	19-DEC-19
WG3246069-2 L Mercury (Hg)-Disso			94.4		%		80-120	19-DEC-19
WG3246069-1 N Mercury (Hg)-Disso	/IB olved		<0.0050		ug/L		0.005	19-DEC-19
WG3246069-6 N Mercury (Hg)-Disso	IS olved	WG3246069-	5 93.3		%		70-130	19-DEC-19
MET-D-UG/L-MS-WT	Wa	ater						
Batch R4946	6430							
WG3245950-4 D Antimony (Sb)-Diss	OUP solved	WG3245950- <0.10	3 <0.10	RPD-NA	ug/L	N/A	20	19-DEC-19
Arsenic (As)-Disso	lved	0.13	0.16		ug/L	15	20	19-DEC-19
Barium (Ba)-Disso	lved	104	104		ug/L	0.1	20	19-DEC-19



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R4946	6430							
	UP	WG3245950			//			
Beryllium (Be)-Diss		<0.10	<0.10	RPD-NA	ug/L	N/A	20	19-DEC-19
Boron (B)-Dissolve		36	36		ug/L	0.5	20	19-DEC-19
Cadmium (Cd)-Diss		0.0130	0.0124		ug/L	4.7	20	19-DEC-19
Chromium (Cr)-Dis		<0.50	<0.50	RPD-NA	ug/L	N/A	20	19-DEC-19
Cobalt (Co)-Dissolv		<0.10	<0.10	RPD-NA	ug/L	N/A	20	19-DEC-19
Copper (Cu)-Dissol		0.90	0.87		ug/L	3.4	20	19-DEC-19
Lead (Pb)-Dissolve		<0.050	<0.050	RPD-NA	ug/L	N/A	20	19-DEC-19
Molybdenum (Mo)-		3.79	3.81		ug/L	0.7	20	19-DEC-19
Nickel (Ni)-Dissolve		0.65	0.64		ug/L	1.3	20	19-DEC-19
Selenium (Se)-Diss		0.844	0.860		ug/L	1.9	20	19-DEC-19
Silver (Ag)-Dissolve	ed	<0.050	< 0.050	RPD-NA	ug/L	N/A	20	19-DEC-19
Sodium (Na)-Disso	lved	202000	204000		ug/L	0.8	20	19-DEC-19
Thallium (TI)-Disso	lved	<0.010	<0.010	RPD-NA	ug/L	N/A	20	19-DEC-19
Uranium (U)-Dissol	ved	0.897	0.893		ug/L	0.4	20	19-DEC-19
Vanadium (V)-Diss	olved	<0.50	< 0.50	RPD-NA	ug/L	N/A	20	19-DEC-19
Zinc (Zn)-Dissolved	I	<1.0	<1.0	RPD-NA	ug/L	N/A	20	19-DEC-19
WG3245950-2 LG Antimony (Sb)-Diss	CS solved		103.7		%		80-120	19-DEC-19
Arsenic (As)-Dissol	ved		105.5		%		80-120	19-DEC-19
Barium (Ba)-Dissol	ved		108.5		%		80-120	19-DEC-19
Beryllium (Be)-Diss	olved		102.8		%		80-120	19-DEC-19
Boron (B)-Dissolve	d		102.4		%		80-120	19-DEC-19
Cadmium (Cd)-Diss	solved		106.4		%		80-120	19-DEC-19
Chromium (Cr)-Dis	solved		108.6		%		80-120	19-DEC-19
Cobalt (Co)-Dissolv	ved .		107.7		%		80-120	19-DEC-19
Copper (Cu)-Dissol	ved		107.3		%		80-120	19-DEC-19
Lead (Pb)-Dissolve	d		106.1		%		80-120	19-DEC-19
Molybdenum (Mo)-	Dissolved		107.2		%		80-120	19-DEC-19
Nickel (Ni)-Dissolve	ed		108.3		%		80-120	19-DEC-19
Selenium (Se)-Diss	solved		101.9		%		80-120	19-DEC-19
Silver (Ag)-Dissolve	ed		105.8		%		80-120	19-DEC-19
Sodium (Na)-Disso	lved		109.0		%		80-120	19-DEC-19
Thallium (TI)-Disso	lved		104.8		%		80-120	19-DEC-19
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MET-D-UG/L-MS-WT	Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
WG3245950-2 LCS	MET-D-UG/L-MS-WT	Water							
Uranium (U)-Dissolved 106.9 % 80.120 19-DEC-19	Batch R49464	30							
Vanadium (V)-Dissolved 108.5 % 80.120 19-DEC-19									
Zinc (Zn)-Dissolved 107.4 % 80-120 19-DEC-19 WG3245950-1 MB Antimony (Sb)-Dissolved 0.10 ug/L 0.1 19-DEC-19 Arsenic (As)-Dissolved <0.10 ug/L 0.1 19-DEC-19 Barium (Ba)-Dissolved <0.10 ug/L 0.1 19-DEC-19 Beryllium (Be)-Dissolved <0.10 ug/L 0.1 19-DEC-19 Boron (B)-Dissolved <0.0050 ug/L 0.05 19-DEC-19 Cadmium (Cd)-Dissolved <0.0050 ug/L 0.5 19-DEC-19 Chromium (Cr)-Dissolved <0.50 ug/L 0.5 19-DEC-19 Chromium (Cr)-Dissolved <0.50 ug/L 0.5 19-DEC-19 Chromium (Cr)-Dissolved <0.05 ug/L 0.5 19-DEC-19 Chromium (Cr)-Dissolved <0.050 ug/L 0.0 19-DEC-19 Chromium (Ch)-Dissolved <0.050 ug/L 0.0 19-DEC-19 Molybdenum (Mo)-Dissolved <0.050 ug/L 0.5 19-DEC-19	Uranium (U)-Dissolv	ed		106.9		%		80-120	19-DEC-19
WG3245950-1 MB Antimory (Sb)-Dissolved <0.10 ug/L 0.1 19-DEC-19 Arsenic (As)-Dissolved <0.10	Vanadium (V)-Dissol	ved		108.5		%		80-120	19-DEC-19
Antimony (Sb)-Dissolved	Zinc (Zn)-Dissolved			107.4		%		80-120	19-DEC-19
Arsenic (As)-Dissolved				0.40				0.4	
Barium (Ba)-Dissolved									
Beryllium (Be)-Dissolved	` '								
Boron (B)-Dissolved									
Cadmium (Cd)-Dissolved <0.0050		ived				-			
Chromium (Cr)-Dissolved 0.5 19-DEC-19 Cobalt (Co)-Dissolved <0.10	,								
Cobalt (Co)-Dissolved <0.10	` ,					•			
Copper (Cu)-Dissolved <0.20									
Lead (Pb)-Dissolved <0.050						-			
Molybdenum (Mo)-Dissolved <0.050									
Nickel (Ni)-Dissolved	` '								
Selenium (Se)-Dissolved <0.050	, , ,								
Silver (Ag)-Dissolved <0.050									19-DEC-19
Sodium (Na)-Dissolved <50						•			19-DEC-19
Thallium (TI)-Dissolved						_			19-DEC-19
Uranium (U)-Dissolved <0.010	` ,					•			19-DEC-19
Vanadium (V)-Dissolved <0.50									19-DEC-19
Zinc (Zn)-Dissolved <1.0 ug/L 1 19-DEC-19 WG3245950-5 MS WG3245950-6 WG3245950-6 V 70-130 19-DEC-19 Arsenic (As)-Dissolved 100.9 % 70-130 19-DEC-19 Arsenic (As)-Dissolved N/A MS-B % 70-130 19-DEC-19 Barium (Ba)-Dissolved 109.4 % 70-130 19-DEC-19 Boron (B)-Dissolved 100.3 % 70-130 19-DEC-19 Cadmium (Cd)-Dissolved 98.7 % 70-130 19-DEC-19 Chromium (Cr)-Dissolved 109.3 % 70-130 19-DEC-19 Cobalt (Co)-Dissolved 101.4 % 70-130 19-DEC-19	Uranium (U)-Dissolv	ed				ug/L			19-DEC-19
WG3245950-5 MS WG3245950-6 Antimony (Sb)-Dissolved 100.9 % 70-130 19-DEC-19 Arsenic (As)-Dissolved 114.9 % 70-130 19-DEC-19 Barium (Ba)-Dissolved N/A MS-B % - 19-DEC-19 Beryllium (Be)-Dissolved 109.4 % 70-130 19-DEC-19 Boron (B)-Dissolved 100.3 % 70-130 19-DEC-19 Cadmium (Cd)-Dissolved 98.7 % 70-130 19-DEC-19 Chromium (Cr)-Dissolved 109.3 % 70-130 19-DEC-19 Cobalt (Co)-Dissolved 101.4 % 70-130 19-DEC-19	` ,	ved				_		0.5	19-DEC-19
Antimony (Sb)-Dissolved 100.9 % 70-130 19-DEC-19 Arsenic (As)-Dissolved 114.9 % 70-130 19-DEC-19 Barium (Ba)-Dissolved N/A MS-B % - 19-DEC-19 Beryllium (Be)-Dissolved 109.4 % 70-130 19-DEC-19 Boron (B)-Dissolved 100.3 % 70-130 19-DEC-19 Cadmium (Cd)-Dissolved 98.7 % 70-130 19-DEC-19 Chromium (Cr)-Dissolved 109.3 % 70-130 19-DEC-19 Cobalt (Co)-Dissolved 101.4 % 70-130 19-DEC-19	Zinc (Zn)-Dissolved			<1.0		ug/L		1	19-DEC-19
Arsenic (As)-Dissolved 114.9 % 70-130 19-DEC-19 Barium (Ba)-Dissolved N/A MS-B % - 19-DEC-19 Beryllium (Be)-Dissolved 109.4 % 70-130 19-DEC-19 Boron (B)-Dissolved 100.3 % 70-130 19-DEC-19 Cadmium (Cd)-Dissolved 98.7 % 70-130 19-DEC-19 Chromium (Cr)-Dissolved 109.3 % 70-130 19-DEC-19 Cobalt (Co)-Dissolved 101.4 % 70-130 19-DEC-19			WG3245950-6			04			
Barium (Ba)-Dissolved N/A MS-B % - 19-DEC-19 Beryllium (Be)-Dissolved 109.4 % 70-130 19-DEC-19 Boron (B)-Dissolved 100.3 % 70-130 19-DEC-19 Cadmium (Cd)-Dissolved 98.7 % 70-130 19-DEC-19 Chromium (Cr)-Dissolved 109.3 % 70-130 19-DEC-19 Cobalt (Co)-Dissolved 101.4 % 70-130 19-DEC-19	, ,								
Beryllium (Be)-Dissolved 109.4 % 70-130 19-DEC-19 Boron (B)-Dissolved 100.3 % 70-130 19-DEC-19 Cadmium (Cd)-Dissolved 98.7 % 70-130 19-DEC-19 Chromium (Cr)-Dissolved 109.3 % 70-130 19-DEC-19 Cobalt (Co)-Dissolved 101.4 % 70-130 19-DEC-19								70-130	
Boron (B)-Dissolved 100.3 % 70-130 19-DEC-19 Cadmium (Cd)-Dissolved 98.7 % 70-130 19-DEC-19 Chromium (Cr)-Dissolved 109.3 % 70-130 19-DEC-19 Cobalt (Co)-Dissolved 101.4 % 70-130 19-DEC-19					MS-B			-	
Cadmium (Cd)-Dissolved 98.7 % 70-130 19-DEC-19 Chromium (Cr)-Dissolved 109.3 % 70-130 19-DEC-19 Cobalt (Co)-Dissolved 101.4 % 70-130 19-DEC-19		ivea							
Chromium (Cr)-Dissolved 109.3 % 70-130 19-DEC-19 Cobalt (Co)-Dissolved 101.4 % 70-130 19-DEC-19									
Cobalt (Co)-Dissolved 101.4 % 70-130 19-DEC-19	` ,								
Copper (Cu)-Dissolved 93.5 % 70-130 19-DEC-19									
									19-DEC-19
Lead (Pb)-Dissolved 93.5 % 70-130 19-DEC-19	Lead (Pb)-Dissolved			93.5		%		70-130	19-DEC-19



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TERRAPROBE-BRAMPTON Client:

11 Indell Lane

Brampton ON L6T 3Y3

Kossay Makhzoumi Contact:

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R4946	430							
WG3245950-5 M: Molybdenum (Mo)-I	-	WG3245950-	6 106.1		%		70-130	19-DEC-19
Nickel (Ni)-Dissolve	ed		95.7		%		70-130	19-DEC-19
Selenium (Se)-Diss	solved		117.1		%		70-130	19-DEC-19
Silver (Ag)-Dissolve	ed		92.2		%		70-130	19-DEC-19
Sodium (Na)-Dissol	lved		N/A	MS-B	%		-	19-DEC-19
Thallium (TI)-Dissol	lved		94.4		%		70-130	19-DEC-19
Uranium (U)-Dissol	ved		N/A	MS-B	%		-	19-DEC-19
Vanadium (V)-Disso	olved		112.2		%		70-130	19-DEC-19
Zinc (Zn)-Dissolved	I		97.9		%		70-130	19-DEC-19
PAH-511-WT	Water							
Batch R4949	716							
	cs		00.0		0/			
1-Methylnaphthalen			92.8		%		50-140	20-DEC-19
2-Methylnaphthalen	ie		82.1		%		50-140	20-DEC-19
Acenaphthylana			94.6		%		50-140	20-DEC-19
Acenaphthylene			96.6		%		50-140	20-DEC-19
Anthracene			91.5		%		50-140	20-DEC-19
Benzo(a)anthraceno	е		97.7		%		50-140	20-DEC-19
Benzo(a)pyrene	20		91.9		%		50-140	20-DEC-19
Benzo(b)fluoranthe			90.5		%		50-140	20-DEC-19
Benzo(g,h,i)perylen			94.6 97.7		%		50-140	20-DEC-19
Benzo(k)fluoranthei	I I C				%		50-140	20-DEC-19
Chrysene Dibenzo(ah)anthrac	rana		96.2 93.9		%		50-140	20-DEC-19
Fluoranthene	JOHE .		93.9 96.5		%		50-140	20-DEC-19
Fluoranmene			93.0		%		50-140	20-DEC-19
Indeno(1,2,3-cd)pyr	rene		98.0		% %		50-140 50-140	20-DEC-19
Naphthalene	IOII O		96.0 86.9		%			20-DEC-19
Phenanthrene			95.8		%		50-140	20-DEC-19
Pyrene			96.0		%		50-140 50-140	20-DEC-19
WG3245885-1 M	D		30.0		/0		50-140	20-DEC-19
1-Methylnaphthalen			<0.020		ug/L		0.02	20-DEC-19
2-Methylnaphthalen			<0.020		ug/L		0.02	20-DEC-19
Acenaphthene			<0.020		ug/L		0.02	20-DEC-19
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11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Water							
Batch R4949710	6							
WG3245885-1 MB			0.000		/1		0.00	
Acenaphthylene			<0.020		ug/L		0.02	20-DEC-19
Anthracene			<0.020		ug/L		0.02	20-DEC-19
Benzo(a)anthracene			<0.020		ug/L		0.02	20-DEC-19
Benzo(a)pyrene			<0.010		ug/L		0.01	20-DEC-19
Benzo(b)fluoranthene			<0.020		ug/L		0.02	20-DEC-19
Benzo(g,h,i)perylene			<0.020		ug/L		0.02	20-DEC-19
Benzo(k)fluoranthene			<0.020		ug/L		0.02	20-DEC-19
Chrysene			<0.020		ug/L		0.02	20-DEC-19
Dibenzo(ah)anthracen	e		<0.020		ug/L		0.02	20-DEC-19
Fluoranthene			<0.020		ug/L		0.02	20-DEC-19
Fluorene			<0.020		ug/L		0.02	20-DEC-19
Indeno(1,2,3-cd)pyren	е		<0.020		ug/L		0.02	20-DEC-19
Naphthalene			<0.050		ug/L		0.05	20-DEC-19
Phenanthrene			<0.020		ug/L		0.02	20-DEC-19
Pyrene			<0.020		ug/L		0.02	20-DEC-19
Surrogate: d8-Naphtha	alene		89.9		%		60-140	20-DEC-19
Surrogate: d10-Phena	nthrene		95.9		%		60-140	20-DEC-19
Surrogate: d12-Chryse	ene		93.4		%		60-140	20-DEC-19
Surrogate: d10-Acena	phthene		97.2		%		60-140	20-DEC-19
PH-WT	Water							
Batch R4948309	9							
WG3246108-4 DUP		WG3246108-3	0.00		all costs			
рН		8.21	8.20	J	pH units	0.01	0.2	19-DEC-19
WG3246108-2 LCS pH			7.00		pH units		6.9-7.1	19-DEC-19
VOC-511-HS-WT	Water							
Batch R494916								
WG3243074-4 DUP		WG3243074-3						
1,1,1,2-Tetrachloroeth	ane	<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,1,2,2-Tetrachloroeth	ane	<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,1,1-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,1,2-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,1-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,1-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4949168								
WG3243074-4 DUP		WG3243074-		000 114	/1	11/4	00	
1,2-Dibromoethane		<0.20	<0.20	RPD-NA	ug/L	N/A	30	20-DEC-19
1,2-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,2-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,2-Dichloropropane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,3-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,4-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Acetone		<30	<30	RPD-NA	ug/L	N/A	30	20-DEC-19
Benzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Bromodichloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Bromoform		<5.0	<5.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Bromomethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Carbon tetrachloride		<0.20	<0.20	RPD-NA	ug/L	N/A	30	20-DEC-19
Chlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Chloroform		<1.0	<1.0	RPD-NA	ug/L	N/A	30	20-DEC-19
cis-1,2-Dichloroethylene		<0.50	< 0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
cis-1,3-Dichloropropene		<0.30	< 0.30	RPD-NA	ug/L	N/A	30	20-DEC-19
Dibromochloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Dichlorodifluoromethane)	<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Ethylbenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
n-Hexane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
m+p-Xylenes		<0.40	< 0.40	RPD-NA	ug/L	N/A	30	20-DEC-19
Methyl Ethyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	20-DEC-19
Methyl Isobutyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	20-DEC-19
Methylene Chloride		<5.0	<5.0	RPD-NA	ug/L	N/A	30	20-DEC-19
MTBE		<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-DEC-19
o-Xylene		<0.30	< 0.30	RPD-NA	ug/L	N/A	30	20-DEC-19
Styrene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Tetrachloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Toluene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
trans-1,2-Dichloroethyle	ne	<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
trans-1,3-Dichloroproper	ne	<0.30	<0.30	RPD-NA	ug/L	N/A	30	20-DEC-19
Trichloroethylene		1.27	1.25		ug/L	1.6	30	20-DEC-19
Trichlorofluoromethane		<5.0	<5.0		ug/L			20-DEC-19
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Workorder: L2398131 Report Date: 27-DEC-19 Page 8 of 12

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Mark	Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
WG3243074-4 DUP WG3243074-5 S.O C.F.O	VOC-511-HS-WT	Water							
Trichitoriluoromethane <5.0 <5.0 RPD-NA ug/L N/A 30 20-DEC-19 Viny Ichioride <0.50	Batch R4949168	3							
Vinyl chloride <0.50 <0.50 RPD-NA ug/L N/A 30 20-DEC-19 WG3243074-1 LCS 1.1.1.2-Tetrachloroethane 90.4 % 70.130 20-DEC-19 1.1.1.2-Tetrachloroethane 91.8 % 70.130 20-DEC-19 1.1.1-Trichloroethane 91.6 % 70.130 20-DEC-19 1.1.1-Dichloroethane 91.0 % 70.130 20-DEC-19 1.1-Dichloroethane 92.1 % 70.130 20-DEC-19 1.2-Dichloroethane 93.1 % 70.130 20-DEC-19 1.2-Dichloroethane 93.1 % 70.130 20-DEC-19 1.2-Dichloroptopane 91.5 % 70.130 20-DEC-19 1.3-Dichlorobenzene 94.8 % 70.130 20-DEC-19 1.3-Dichlorobenzene 94.8 % 70.130 20-DEC-19 1.3-Dichlorobenzene 94.8 % 70.130 20-DEC-19 1.3-Dichlorobenzene 98.8 % 70.130 20-DEC-19 <						/1			
WG3243074-1 LCS 1.1.1.2-Tetrachloroethane 90.4 % 70-130 20-DEC-19 1.1.1.2-Tetrachloroethane 91.8 % 70-130 20-DEC-19 1.1.1-Trichloroethane 91.6 % 70-130 20-DEC-19 1.1.1-Dichloroethane 91.0 % 70-130 20-DEC-19 1.1-Dichloroethane 92.1 % 70-130 20-DEC-19 1.1-Dichloroethylene 88.2 % 70-130 20-DEC-19 1.2-Dichlorobenane 93.1 % 70-130 20-DEC-19 1.2-Dichlorobenzene 85.9 % 70-130 20-DEC-19 1.2-Dichlorobenzene 91.5 % 70-130 20-DEC-19 1.2-Dichloropenzene 10.5 % 70-130 20-DEC-19 1.2-Dichloropenzene 84.8 % 70-130 20-DEC-19 1.4-Dichlorobenzene 84.8 % 70-130 20-DEC-19 Acetone 96.5 % 60-140 20-DEC-19 Bromodichloromethane 88.8 % <td></td> <td>;</td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td>		;				-			
1,1,1,2-Tetrachloroethane 90.4 % 70-130 20-DEC-19 1,1,2,2-Tetrachloroethane 91.8 % 70-130 20-DEC-19 1,1,1-Trichloroethane 91.6 % 70-130 20-DEC-19 1,1-Dichloroethane 91.0 % 70-130 20-DEC-19 1,1-Dichloroethane 92.1 % 70-130 20-DEC-19 1,1-Dichloroethane 88.2 % 70-130 20-DEC-19 1,2-Dichloroethane 93.1 % 70-130 20-DEC-19 1,2-Dichloroethane 91.5 % 70-130 20-DEC-19 1,2-Dichloroperpane 100.5 % 70-130 20-DEC-19 1,2-Dichloroperpane 100.5 % 70-130 20-DEC-19 1,3-Dichlorobenzene 84.8 % 70-130 20-DEC-19 1,4-Dichloroperpane 84.8 % 70-130 20-DEC-19 Acetone 96.5 % 60-140 20-DEC-19 Bernzene 95.2 % 70-130 20-DEC-19	-		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1.1.2.2-Tetrachloroethane 91.8 % 70-130 20-DEC-19 1.1,1-Trichloroethane 91.6 % 70-130 20-DEC-19 1.1,2-Trichloroethane 91.0 % 70-130 20-DEC-19 1.1-Dichloroethane 92.1 % 70-130 20-DEC-19 1.1-Dichloroethylene 88.2 % 70-130 20-DEC-19 1.2-Dichlorobenzene 85.9 % 70-130 20-DEC-19 1.2-Dichlorobenzene 85.9 % 70-130 20-DEC-19 1.2-Dichloroperpane 100.5 % 70-130 20-DEC-19 1.2-Dichloroperpane 100.5 % 70-130 20-DEC-19 1.3-Dichlorobenzene 84.8 % 70-130 20-DEC-19 1.4-Dichlorobenzene 84.8 % 70-130 20-DEC-19 1.4-Dichlorobenzene 84.8 % 70-130 20-DEC-19 1.4-Dichlorobenzene 96.5 % 60-140 20-DEC-19 Benzene 96.2 % 70-130 <		ane		90.4		%		70-130	20-DEC-19
1,1,1-Trichloroethane 91.6 % 70-130 20-DEC-19 1,1,2-Trichloroethane 91.0 % 70-130 20-DEC-19 1,1-Dichloroethane 92.1 % 70-130 20-DEC-19 1,1-Dichloroethylene 88.2 % 70-130 20-DEC-19 1,2-Dichlorobenzene 93.1 % 70-130 20-DEC-19 1,2-Dichloroethane 91.5 % 70-130 20-DEC-19 1,2-Dichloropropane 100.5 % 70-130 20-DEC-19 1,2-Dichlorobenzene 84.8 % 70-130 20-DEC-19 1,3-Dichlorobenzene 84.8 % 70-130 20-DEC-19 1,4-Dichlorobenzene 84.8 % 70-130 20-DEC-19 Acetone 96.5 % 60-140 20-DEC-19 Benzene 95.2 % 70-130 20-DEC-19 Bromodichloromethane 88.8 % 70-130 20-DEC-19 Bromoferm 93.9 % 70-130 20-DEC-19 Chlorobenzene 89.1 % 70-130 20-DEC-19	1,1,2,2-Tetrachloroetha	ane		91.8					
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1,1-Dichloroethane 92.1 % 70-130 20-DEC-19 1,1-Dichloroethylene 88.2 % 70-130 20-DEC-19 1,2-Dibromoethane 93.1 % 70-130 20-DEC-19 1,2-Dichloroethane 85.9 % 70-130 20-DEC-19 1,2-Dichloroethane 91.5 % 70-130 20-DEC-19 1,2-Dichloropepane 100.5 % 70-130 20-DEC-19 1,3-Dichlorobenzene 84.8 % 70-130 20-DEC-19 1,4-Dichlorobenzene 84.8 % 70-130 20-DEC-19 1,4-Dichlorobenzene 84.8 % 70-130 20-DEC-19 Acetone 96.5 % 60-140 20-DEC-19 Benzene 95.2 % 70-130 20-DEC-19 Bromodichloromethane 88.8 % 70-130 20-DEC-19 Bromomethane 83.1 % 70-130 20-DEC-19 Chlorobenzene 89.1 % 70-130 20-DEC-19 Chloroform 93.5 % 70-130 20-DEC-19	1,1,2-Trichloroethane			91.0		%		70-130	20-DEC-19
1,1-Dichloroethylene 88.2 % 70-130 20-DEC-19 1,2-Dichloroethane 93.1 % 70-130 20-DEC-19 1,2-Dichlorobenzene 85.9 % 70-130 20-DEC-19 1,2-Dichloroethane 91.5 % 70-130 20-DEC-19 1,2-Dichloropropane 100,5 % 70-130 20-DEC-19 1,3-Dichlorobenzene 84.8 % 70-130 20-DEC-19 1,4-Dichlorobenzene 84.8 % 70-130 20-DEC-19 Acetone 96.5 % 60-140 20-DEC-19 Benzene 95.2 % 70-130 20-DEC-19 Bromodichloromethane 88.8 % 70-130 20-DEC-19 Bromomethane 83.1 % 70-130 20-DEC-19 Carbon tetrachloride 91.6 % 70-130 20-DEC-19 Chlorobenzene 89.1 % 70-130 20-DEC-19 Chloroform 93.5 % 70-130 20-DEC-19 Chloroformethane 90.3 % 70-130 20-DEC-19	1,1-Dichloroethane			92.1		%		70-130	
1,2-Dichlorobenzene 86.9 % 70-130 20-DEC-19 1,2-Dichloroethane 91.5 % 70-130 20-DEC-19 1,2-Dichloropropane 100.5 % 70-130 20-DEC-19 1,3-Dichlorobenzene 84.8 % 70-130 20-DEC-19 1,4-Dichlorobenzene 84.8 % 70-130 20-DEC-19 Acetone 96.5 % 60-140 20-DEC-19 Benzene 95.2 % 70-130 20-DEC-19 Bromodichloromethane 88.8 % 70-130 20-DEC-19 Bromoform 93.9 % 70-130 20-DEC-19 Bromomethane 83.1 % 60-140 20-DEC-19 Carbon tetrachloride 91.6 % 70-130 20-DEC-19 Chlorobenzene 89.1 % 70-130 20-DEC-19 Chloroform 93.5 % 70-130 20-DEC-19 cis-1,2-Dichloroethylene 90.3 % 70-130 20-DEC-19 cis-1,3-Dichloropropene 91.3 % 70-130 20-DEC-19	1,1-Dichloroethylene			88.2		%		70-130	
1,2-Dichloroethane 91.5 % 70-130 20-DEC-19 1,2-Dichloropropane 100.5 % 70-130 20-DEC-19 1,3-Dichlorobenzene 84.8 % 70-130 20-DEC-19 1,4-Dichlorobenzene 84.8 % 70-130 20-DEC-19 Acetone 96.5 % 60-140 20-DEC-19 Benzene 95.2 % 70-130 20-DEC-19 Bromodichloromethane 88.8 % 70-130 20-DEC-19 Bromoferm 93.9 % 70-130 20-DEC-19 Bromomethane 83.1 % 60-140 20-DEC-19 Carbon tetrachloride 91.6 % 70-130 20-DEC-19 Chlorobenzene 89.1 % 70-130 20-DEC-19 Chloroform 93.5 % 70-130 20-DEC-19 cis-1,2-Dichloroethylene 90.3 % 70-130 20-DEC-19 cis-1,3-Dichloropropene 91.3 % 70-130 20-DEC-19 Dibromochloromethane 88.4 % 70-130 20-DEC-19	1,2-Dibromoethane			93.1		%		70-130	20-DEC-19
1,2-Dichloropropane 100.5 % 70-130 20-DEC-19 1,3-Dichlorobenzene 84.8 % 70-130 20-DEC-19 1,4-Dichlorobenzene 84.8 % 70-130 20-DEC-19 Acetone 96.5 % 60-140 20-DEC-19 Benzene 95.2 % 70-130 20-DEC-19 Bromodichloromethane 88.8 % 70-130 20-DEC-19 Bromomethane 83.1 % 60-140 20-DEC-19 Bromomethane 83.1 % 60-140 20-DEC-19 Carbon tetrachloride 91.6 % 70-130 20-DEC-19 Chlorobenzene 89.1 % 70-130 20-DEC-19 Chloroform 93.5 % 70-130 20-DEC-19 cis-1,2-Dichloroethylene 90.3 % 70-130 20-DEC-19 cis-1,3-Dichloropropene 91.3 % 70-130 20-DEC-19 Dibromochloromethane 88.4 % 70-130 20-DEC-19 Dichlorodifluoromethane 94.0 % 50-140 20-DEC-19	1,2-Dichlorobenzene			85.9		%		70-130	20-DEC-19
1,3-Dichlorobenzene 84.8 % 70-130 20-DEC-19 1,4-Dichlorobenzene 84.8 % 70-130 20-DEC-19 Acetone 96.5 % 60-140 20-DEC-19 Benzene 95.2 % 70-130 20-DEC-19 Bromodichloromethane 88.8 % 70-130 20-DEC-19 Bromoform 93.9 % 70-130 20-DEC-19 Bromomethane 83.1 % 60-140 20-DEC-19 Carbon tetrachloride 91.6 % 70-130 20-DEC-19 Chlorobenzene 89.1 % 70-130 20-DEC-19 Chloroform 93.5 % 70-130 20-DEC-19 cis-1,2-Dichloroethylene 90.3 % 70-130 20-DEC-19 cis-1,3-Dichloropropene 91.3 % 70-130 20-DEC-19 Dibromochloromethane 88.4 % 70-130 20-DEC-19 Ethylbenzene 88.3 % 70-130 20-DEC-19 Ethylbenzene 87.2 % 70-130 20-DEC-19 Met	1,2-Dichloroethane			91.5		%		70-130	20-DEC-19
1,4-Dichlorobenzene 84.8 % 70-130 20-DEC-19 Acetone 96.5 % 60-140 20-DEC-19 Benzene 95.2 % 70-130 20-DEC-19 Bromodichloromethane 88.8 % 70-130 20-DEC-19 Bromoform 93.9 % 70-130 20-DEC-19 Bromomethane 83.1 % 60-140 20-DEC-19 Carbon tetrachloride 91.6 % 70-130 20-DEC-19 Chlorobenzene 89.1 % 70-130 20-DEC-19 Chloroform 93.5 % 70-130 20-DEC-19 cis-1,2-Dichloroethylene 90.3 % 70-130 20-DEC-19 cis-1,3-Dichloropropene 91.3 % 70-130 20-DEC-19 Dibromochloromethane 88.4 % 70-130 20-DEC-19 Ethylbenzene 88.3 % 70-130 20-DEC-19 n-Hexane 87.2 % 70-130 20-DEC-19 Methyl Ethyl Ketone 90.7 % 60-140 20-DEC-19 Methyle	1,2-Dichloropropane			100.5		%		70-130	20-DEC-19
Acetone 96.5 % 60-140 20-DEC-19 Benzene 95.2 % 70-130 20-DEC-19 Bromodichloromethane 88.8 % 70-130 20-DEC-19 Bromoform 93.9 % 70-130 20-DEC-19 Bromomethane 83.1 % 60-140 20-DEC-19 Carbon tetrachloride 91.6 % 70-130 20-DEC-19 Chlorobenzene 89.1 % 70-130 20-DEC-19 Chloroform 93.5 % 70-130 20-DEC-19 Cis-1,2-Dichloroethylene 90.3 % 70-130 20-DEC-19 cis-1,3-Dichloropropene 91.3 % 70-130 20-DEC-19 Dibromochloromethane 88.4 % 70-130 20-DEC-19 Dichlorodifluoromethane 94.0 % 70-130 20-DEC-19 Ethylbenzene 88.3 % 70-130 20-DEC-19 Thexane 87.2 % 70-130 20-DEC-19 m+p-Xylenes 87.9 % 70-130 20-DEC-19 Methyl Ethyl Ketone 90.7 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 92.9 % 60-140 20-DEC-19 Methylene Chloride 90.7 % 70-130 20-DEC-19	1,3-Dichlorobenzene			84.8		%		70-130	20-DEC-19
Benzene 95.2 % 70-130 20-DEC-19 Bromodichloromethane 88.8 % 70-130 20-DEC-19 Bromoform 93.9 % 70-130 20-DEC-19 Bromomethane 83.1 % 60-140 20-DEC-19 Carbon tetrachloride 91.6 % 70-130 20-DEC-19 Chlorobenzene 89.1 % 70-130 20-DEC-19 Chloroform 93.5 % 70-130 20-DEC-19 cis-1,2-Dichloroethylene 90.3 % 70-130 20-DEC-19 cis-1,3-Dichloropropene 91.3 % 70-130 20-DEC-19 Dibromochloromethane 88.4 % 70-130 20-DEC-19 Dichlorodifluoromethane 94.0 % 50-140 20-DEC-19 Ethylbenzene 88.3 % 70-130 20-DEC-19 n-Hexane 87.2 % 70-130 20-DEC-19 Methyl Ethyl Ketone 90.7 % 60-140 20-DEC-19 <	1,4-Dichlorobenzene			84.8		%		70-130	20-DEC-19
Bromodichloromethane 88.8 % 70-130 20-DEC-19 Bromoform 93.9 % 70-130 20-DEC-19 Bromomethane 83.1 % 60-140 20-DEC-19 Carbon tetrachloride 91.6 % 70-130 20-DEC-19 Chlorobenzene 89.1 % 70-130 20-DEC-19 Chloroform 93.5 % 70-130 20-DEC-19 cis-1,2-Dichloroethylene 90.3 % 70-130 20-DEC-19 cis-1,3-Dichloropropene 91.3 % 70-130 20-DEC-19 Dibromochloromethane 88.4 % 70-130 20-DEC-19 Dichlorodifluoromethane 94.0 % 50-140 20-DEC-19 Ethylbenzene 88.3 % 70-130 20-DEC-19 n-Hexane 87.2 % 70-130 20-DEC-19 Methyl Ethyl Ketone 90.7 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 90.7 % 60-140 20-DEC-19	Acetone			96.5		%		60-140	20-DEC-19
Bromoform 93.9 % 70-130 20-DEC-19 Bromomethane 83.1 % 60-140 20-DEC-19 Carbon tetrachloride 91.6 % 70-130 20-DEC-19 Chlorobenzene 89.1 % 70-130 20-DEC-19 Chloroform 93.5 % 70-130 20-DEC-19 cis-1,2-Dichloroethylene 90.3 % 70-130 20-DEC-19 cis-1,3-Dichloropropene 91.3 % 70-130 20-DEC-19 Dibromochloromethane 88.4 % 70-130 20-DEC-19 Dichlorodifluoromethane 94.0 % 50-140 20-DEC-19 Ethylbenzene 88.3 % 70-130 20-DEC-19 n-Hexane 87.2 % 70-130 20-DEC-19 Methyl Ethyl Ketone 90.7 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 90.7 % 60-140 20-DEC-19 Methylene Chloride 90.7 % 60-140 20-DEC-19 <td>Benzene</td> <td></td> <td></td> <td>95.2</td> <td></td> <td>%</td> <td></td> <td>70-130</td> <td>20-DEC-19</td>	Benzene			95.2		%		70-130	20-DEC-19
Bromomethane 83.1 % 60-140 20-DEC-19 Carbon tetrachloride 91.6 % 70-130 20-DEC-19 Chlorobenzene 89.1 % 70-130 20-DEC-19 Chloroform 93.5 % 70-130 20-DEC-19 cis-1,2-Dichloroethylene 90.3 % 70-130 20-DEC-19 cis-1,3-Dichloropropene 91.3 % 70-130 20-DEC-19 Dibromochloromethane 88.4 % 70-130 20-DEC-19 Dichlorodifluoromethane 94.0 % 50-140 20-DEC-19 Ethylbenzene 88.3 % 70-130 20-DEC-19 n-Hexane 87.2 % 70-130 20-DEC-19 m+p-Xylenes 87.9 % 70-130 20-DEC-19 Methyl Ethyl Ketone 90.7 % 60-140 20-DEC-19 Methylene Chloride 90.7 % 60-140 20-DEC-19	Bromodichloromethane	Э		88.8		%		70-130	20-DEC-19
Carbon tetrachloride 91.6 % 70-130 20-DEC-19 Chlorobenzene 89.1 % 70-130 20-DEC-19 Chloroform 93.5 % 70-130 20-DEC-19 cis-1,2-Dichloroethylene 90.3 % 70-130 20-DEC-19 cis-1,3-Dichloropropene 91.3 % 70-130 20-DEC-19 Dibromochloromethane 88.4 % 70-130 20-DEC-19 Dichlorodiffluoromethane 94.0 % 50-140 20-DEC-19 Ethylbenzene 88.3 % 70-130 20-DEC-19 n-Hexane 87.2 % 70-130 20-DEC-19 m+p-Xylenes 87.9 % 70-130 20-DEC-19 Methyl Ethyl Ketone 90.7 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 92.9 % 60-140 20-DEC-19 Methylene Chloride 90.7 % 70-130 20-DEC-19	Bromoform			93.9		%		70-130	20-DEC-19
Chlorobenzene 89.1 % 70-130 20-DEC-19 Chloroform 93.5 % 70-130 20-DEC-19 cis-1,2-Dichloroethylene 90.3 % 70-130 20-DEC-19 cis-1,3-Dichloropropene 91.3 % 70-130 20-DEC-19 Dibromochloromethane 88.4 % 70-130 20-DEC-19 Dichlorodifluoromethane 94.0 % 50-140 20-DEC-19 Ethylbenzene 88.3 % 70-130 20-DEC-19 n-Hexane 87.2 % 70-130 20-DEC-19 m+p-Xylenes 87.9 % 70-130 20-DEC-19 Methyl Ethyl Ketone 90.7 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 92.9 % 60-140 20-DEC-19 Methylene Chloride 90.7 % 70-130 20-DEC-19	Bromomethane			83.1		%		60-140	20-DEC-19
Chloroform 93.5 % 70-130 20-DEC-19 cis-1,2-Dichloroethylene 90.3 % 70-130 20-DEC-19 cis-1,3-Dichloropropene 91.3 % 70-130 20-DEC-19 Dibromochloromethane 88.4 % 70-130 20-DEC-19 Dichlorodifluoromethane 94.0 % 50-140 20-DEC-19 Ethylbenzene 88.3 % 70-130 20-DEC-19 n-Hexane 87.2 % 70-130 20-DEC-19 m+p-Xylenes 87.9 % 70-130 20-DEC-19 Methyl Ethyl Ketone 90.7 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 92.9 % 60-140 20-DEC-19 Methylene Chloride 90.7 % 70-130 20-DEC-19	Carbon tetrachloride			91.6		%		70-130	20-DEC-19
cis-1,2-Dichloroethylene 90.3 % 70-130 20-DEC-19 cis-1,3-Dichloropropene 91.3 % 70-130 20-DEC-19 Dibromochloromethane 88.4 % 70-130 20-DEC-19 Dichlorodifluoromethane 94.0 % 50-140 20-DEC-19 Ethylbenzene 88.3 % 70-130 20-DEC-19 n-Hexane 87.2 % 70-130 20-DEC-19 m+p-Xylenes 87.9 % 70-130 20-DEC-19 Methyl Ethyl Ketone 90.7 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 92.9 % 60-140 20-DEC-19 Methylene Chloride 90.7 % 70-130 20-DEC-19	Chlorobenzene			89.1		%		70-130	20-DEC-19
cis-1,3-Dichloropropene 91.3 % 70-130 20-DEC-19 Dibromochloromethane 88.4 % 70-130 20-DEC-19 Dichlorodifluoromethane 94.0 % 50-140 20-DEC-19 Ethylbenzene 88.3 % 70-130 20-DEC-19 n-Hexane 87.2 % 70-130 20-DEC-19 m+p-Xylenes 87.9 % 70-130 20-DEC-19 Methyl Ethyl Ketone 90.7 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 92.9 % 60-140 20-DEC-19 Methylene Chloride 90.7 % 70-130 20-DEC-19	Chloroform			93.5		%		70-130	20-DEC-19
Dibromochloromethane 88.4 % 70-130 20-DEC-19 Dichlorodiffluoromethane 94.0 % 50-140 20-DEC-19 Ethylbenzene 88.3 % 70-130 20-DEC-19 n-Hexane 87.2 % 70-130 20-DEC-19 m+p-Xylenes 87.9 % 70-130 20-DEC-19 Methyl Ethyl Ketone 90.7 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 92.9 % 60-140 20-DEC-19 Methylene Chloride 90.7 % 70-130 20-DEC-19	cis-1,2-Dichloroethylen	е		90.3		%		70-130	20-DEC-19
Dichlorodifluoromethane 94.0 % 50-140 20-DEC-19 Ethylbenzene 88.3 % 70-130 20-DEC-19 n-Hexane 87.2 % 70-130 20-DEC-19 m+p-Xylenes 87.9 % 70-130 20-DEC-19 Methyl Ethyl Ketone 90.7 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 92.9 % 60-140 20-DEC-19 Methylene Chloride 90.7 % 70-130 20-DEC-19	cis-1,3-Dichloropropen	е		91.3		%		70-130	20-DEC-19
Ethylbenzene 88.3 % 70-130 20-DEC-19 n-Hexane 87.2 % 70-130 20-DEC-19 m+p-Xylenes 87.9 % 70-130 20-DEC-19 Methyl Ethyl Ketone 90.7 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 92.9 % 60-140 20-DEC-19 Methylene Chloride 90.7 % 70-130 20-DEC-19	Dibromochloromethane	Э		88.4		%		70-130	20-DEC-19
n-Hexane 87.2 % 70-130 20-DEC-19 m+p-Xylenes 87.9 % 70-130 20-DEC-19 Methyl Ethyl Ketone 90.7 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 92.9 % 60-140 20-DEC-19 Methylene Chloride 90.7 % 70-130 20-DEC-19	Dichlorodifluoromethar	ne		94.0		%		50-140	20-DEC-19
m+p-Xylenes 87.9 % 70-130 20-DEC-19 Methyl Ethyl Ketone 90.7 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 92.9 % 60-140 20-DEC-19 Methylene Chloride 90.7 % 70-130 20-DEC-19	Ethylbenzene			88.3		%		70-130	20-DEC-19
Methyl Ethyl Ketone 90.7 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 92.9 % 60-140 20-DEC-19 Methylene Chloride 90.7 % 70-130 20-DEC-19						%		70-130	20-DEC-19
Methyl Isobutyl Ketone 92.9 % 60-140 20-DEC-19 Methylene Chloride 90.7 % 70-130 20-DEC-19	m+p-Xylenes			87.9		%		70-130	20-DEC-19
Methylene Chloride 90.7 % 70-130 20-DEC-19	Methyl Ethyl Ketone			90.7		%		60-140	20-DEC-19
	Methyl Isobutyl Ketone			92.9		%		60-140	20-DEC-19
MTBE 94.0 % 70-130 20-DEC-19	Methylene Chloride							70-130	20-DEC-19
	MTBE			94.0		%		70-130	20-DEC-19



Workorder: L2398131 Report Date: 27-DEC-19 Page 9 of 12

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4949168	;							
WG3243074-1 LCS			00.4		0/			
o-Xylene			88.4		%		70-130	20-DEC-19
Styrene			90.8		%		70-130	20-DEC-19
Tetrachloroethylene			87.6		%		70-130	20-DEC-19
Toluene			89.7		%		70-130	20-DEC-19
trans-1,2-Dichloroethyle			89.5		%		70-130	20-DEC-19
trans-1,3-Dichloroprope	ene		90.6		%		70-130	20-DEC-19
Trichloroethylene			91.7		%		70-130	20-DEC-19
Trichlorofluoromethane	•		90.9		%		60-140	20-DEC-19
Vinyl chloride			104.1		%		60-140	20-DEC-19
WG3243074-2 MB 1,1,1,2-Tetrachloroetha	ine		<0.50		ug/L		0.5	20-DEC-19
1,1,2,2-Tetrachloroetha			<0.50		ug/L		0.5	20-DEC-19
1,1,1-Trichloroethane			<0.50		ug/L		0.5	20-DEC-19
1,1,2-Trichloroethane			<0.50		ug/L		0.5	20-DEC-19
1,1-Dichloroethane			<0.50		ug/L		0.5	20-DEC-19
1,1-Dichloroethylene			<0.50		ug/L		0.5	20-DEC-19
1,2-Dibromoethane			<0.20		ug/L		0.2	20-DEC-19
1,2-Dichlorobenzene			<0.50		ug/L		0.5	20-DEC-19
1,2-Dichloroethane			<0.50		ug/L		0.5	20-DEC-19
1,2-Dichloropropane			<0.50		ug/L		0.5	20-DEC-19
1,3-Dichlorobenzene			<0.50		ug/L		0.5	20-DEC-19
1,4-Dichlorobenzene			<0.50		ug/L		0.5	20-DEC-19
Acetone			<30		ug/L		30	20-DEC-19
Benzene			<0.50		ug/L		0.5	20-DEC-19
Bromodichloromethane	;		<2.0		ug/L		2	20-DEC-19
Bromoform			<5.0		ug/L		5	20-DEC-19
Bromomethane			<0.50		ug/L		0.5	20-DEC-19
Carbon tetrachloride			<0.20		ug/L		0.2	20-DEC-19
Chlorobenzene			<0.50		ug/L		0.5	20-DEC-19
Chloroform			<1.0		ug/L		1	20-DEC-19
cis-1,2-Dichloroethylen	е		<0.50		ug/L		0.5	20-DEC-19
cis-1,3-Dichloropropene			<0.30		ug/L		0.3	20-DEC-19
Dibromochloromethane			<2.0		ug/L		2	20-DEC-19
Dichlorodifluoromethan			<2.0		ug/L		2	20-DEC-19



Workorder: L2398131 Report Date: 27-DEC-19 Page 10 of 12

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4949168								
WG3243074-2 MB			-0 F0		ua/l		0.5	00 PEO 40
Ethylbenzene n-Hexane			<0.50		ug/L		0.5	20-DEC-19
			<0.50		ug/L			20-DEC-19
m+p-Xylenes Methyl Ethyl Ketone			<0.40 <20		ug/L		0.4	20-DEC-19
					ug/L		20	20-DEC-19
Methyl Isobutyl Ketone			<20		ug/L		20	20-DEC-19
Methylene Chloride			<5.0		ug/L		5	20-DEC-19
MTBE			<2.0		ug/L		2	20-DEC-19
o-Xylene			<0.30		ug/L		0.3	20-DEC-19
Styrene			<0.50		ug/L		0.5	20-DEC-19
Tetrachloroethylene			<0.50		ug/L		0.5	20-DEC-19
Toluene			<0.50		ug/L		0.5	20-DEC-19
trans-1,2-Dichloroethyle			<0.50		ug/L		0.5	20-DEC-19
trans-1,3-Dichloroprope	ene		<0.30		ug/L		0.3	20-DEC-19
Trichloroethylene			<0.50		ug/L		0.5	20-DEC-19
Trichlorofluoromethane			<5.0		ug/L		5	20-DEC-19
Vinyl chloride			<0.50		ug/L		0.5	20-DEC-19
Surrogate: 1,4-Difluorob			93.6		%		70-130	20-DEC-19
Surrogate: 4-Bromofluo	robenzene		92.4		%		70-130	20-DEC-19
WG3243074-5 MS 1,1,1,2-Tetrachloroetha	no	WG3243074-3	91.5		%		50.440	00 DEC 40
1,1,2,2-Tetrachloroetha			91.3		%		50-140 50-140	23-DEC-19
1,1,1-Trichloroethane	TIC .		92.7		%			23-DEC-19
1,1,2-Trichloroethane			95.7		%		50-140	23-DEC-19
1,1-Dichloroethane			87.1		%		50-140 50-140	23-DEC-19
1,1-Dichloroethylene			84.8		%			23-DEC-19
1,2-Dibromoethane			96.8		%		50-140	23-DEC-19 23-DEC-19
1,2-Dichlorobenzene			82.4		%		50-140	
1,2-Dichloroethane			97.3		%		50-140	23-DEC-19
·			95.5		%		50-140	23-DEC-19
1,2-Dichloropropane 1,3-Dichlorobenzene					%		50-140	23-DEC-19
1,4-Dichlorobenzene			82.3		%		50-140	23-DEC-19
Acetone			78.8		%		50-140	23-DEC-19
			106.3				50-140	23-DEC-19
Benzene			94.5		%		50-140	23-DEC-19
Bromodichloromethane			94.0		%		50-140	23-DEC-19



Workorder: L2398131 Report Date: 27-DEC-19 Page 11 of 12

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4949168								
WG3243074-5 MS		WG3243074-3						
Bromoform			95.2		%		50-140	23-DEC-19
Bromomethane			81.7		%		50-140	23-DEC-19
Carbon tetrachloride			89.9		%		50-140	23-DEC-19
Chlorobenzene			88.5		%		50-140	23-DEC-19
Chloroform			93.9		%		50-140	23-DEC-19
cis-1,2-Dichloroethylene			88.6		%		50-140	23-DEC-19
cis-1,3-Dichloropropene			86.4		%		50-140	23-DEC-19
Dibromochloromethane			93.4		%		50-140	23-DEC-19
Dichlorodifluoromethane			71.7		%		50-140	23-DEC-19
Ethylbenzene			85.7		%		50-140	23-DEC-19
n-Hexane			81.7		%		50-140	23-DEC-19
m+p-Xylenes			84.8		%		50-140	23-DEC-19
Methyl Ethyl Ketone			93.6		%		50-140	23-DEC-19
Methyl Isobutyl Ketone			96.9		%		50-140	23-DEC-19
Methylene Chloride			93.7		%		50-140	23-DEC-19
MTBE			90.2		%		50-140	23-DEC-19
o-Xylene			87.0		%		50-140	23-DEC-19
Styrene			88.4		%		50-140	23-DEC-19
Tetrachloroethylene			83.4		%		50-140	23-DEC-19
Toluene			89.0		%		50-140	23-DEC-19
trans-1,2-Dichloroethylen	е		77.8		%		50-140	23-DEC-19
trans-1,3-Dichloropropen	е		85.4		%		50-140	23-DEC-19
Trichloroethylene			87.3		%		50-140	23-DEC-19
Trichlorofluoromethane			87.8		%		50-140	23-DEC-19
Vinyl chloride			100.1		%		50-140	23-DEC-19

Workorder: L2398131 Report Date: 27-DEC-19

Client: TERRAPROBE-BRAMPTON Page 12 of 12

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

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.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
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.

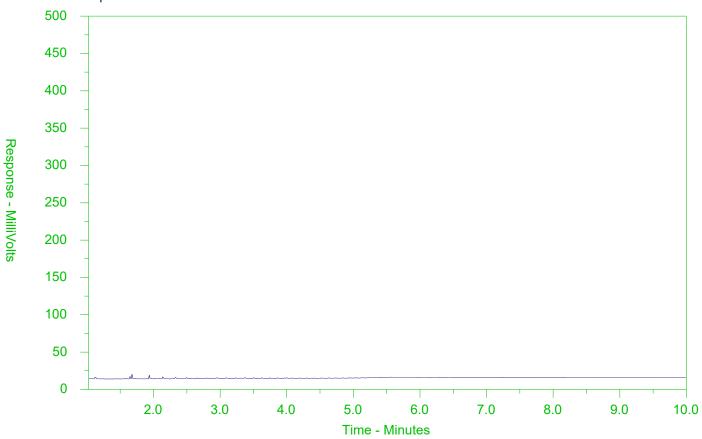
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined data quality objectives to provide 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: L2398131-1 Client Sample ID: BH4-5



← -F2-	→←	—F3—→ ← —F4—	>
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067⁰F
Gasolin	e →	← Mot	or Oils/Lube Oils/Grease
←	-Diesel/Je	t 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) / Analytica Request Form

COC Number: 15 -

W

Canada Toll Free: 1 800 668 9878

L2398131-COFC

	www.alsglobal.com																			
Report To	Contact and company na	arne below will ap	pear on the final report		Report Fo	-		_				ø confi	irm all E	&P TAT	s with :	your Ali	l - surch	arges wi	li apply	
Company:	Terraprobe			Select Report F	ormat: 🔽 PDF	☑ EXCEL ☐ EC	DD (DIGITAL)		Re	gular	[R]	☑ Sta	ndard T	AT if re	ceived	by 3 p	m - busi	ness da	rs - no surc	harges apply
Contact:	Kossay Makhzoumi			Quality Control	(QC) Report with Re	port 🗹 YES	□ NO	, Î	4	day [F	24]			ઇ	1	Busi	ness (lay [E	ı]	
Phone:	905-796-2650			Compare Resu	lts to Criteria on Report	provide details below	if box checked	E SE	3	day [F	23]			SE SE	•	Same	Dav. \	Veeke	nd or	
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Street:	11 Indell Lane			Email 1 or Fax	kmakhzoumi@terr	aprobe.ca			Date a	nd Time	Requir	ed for a	II E&P	TATs:						
City/Province:	Brampton			Email 2	····		-	For tes	ts that c	ın not b	e perform	ned acco	rding to	the ser	vice lev	rei sele	cted, you	will be	contacted.	
Postal Code:	L6T 3Y3			Email 3										Analy	sis R	eques	st			
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ALS Lab Wor	k Order# (lab use only)	L230	18131RD	ALS Contact:		Sampler:		and Inorganics		Hyride Forming M						OC Pesticides				ž
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REFER TO BACK I	PAGE FOR ALS LOCATIONS A	17 - (2 -	[M]	Ч		TE - LABORATOR	10/19/	\square	LIENT	000		,,,,				<u>L</u>	ec_	12	<u>/ ५</u>	14,25



TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 18-DEC-19

Report Date: 27-DEC-19 10:52 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2398134

Project P.O. #: NOT SUBMITTED

Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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L2398134 CONT'D....

Job Reference: 1-19-0603-42

PAGE 2 of 11

27-DEC-19 10:52 (MT)

Summary of Guideline Exceedances

Buideline ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit
ntario Reg	ulation 153/04 - April 15	i, 2011 Standards - T3-Non-Potable Gr	ound Water-All Types of Property Us	ses (Coarse)		
2398134-1	BH5	Volatile Organic Compounds	cis-1,2-Dichloroethylene	2.79	1.6	ug/L
			Trichloroethylene	28.8	1.6	ug/L
		Polycyclic Aromatic	Benzo(b)fluoranthene	0.870	0.75	ug/L
		Hydrocarbons	Benzo(g,h,i)perylene	0.386	0.2	ug/L
			Indeno(1,2,3-cd)pyrene	0.465	0.2	ug/L
ntario Reg	ulation 153/04 - April 15	, 2011 Standards - T3-Non-Potable Gr	ound Water-All Types of Property Us	ses (Fine)		
2398134-1	BH5	Volatile Organic Compounds	Trichloroethylene	28.8	17	ug/L
		Polycyclic Aromatic	Benzo(b)fluoranthene	0.870	0.75	ug/L
		Hydrocarbons	Benzo(g,h,i)perylene	0.386	0.2	ug/L
			Indeno(1,2,3-cd)pyrene	0.465	0.2	ug/L

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2398134 CONT'D....

Job Reference: 1-19-0603-42

PAGE 3 of 11

27-DEC-19 10:52 (MT)

Dissolved Metals - WATER

		Sample	ab ID Date ple ID	L2398134-1 16-DEC-19 BH5
Analyte	Unit	Guide #1	Limits #2	
Dissolved Metals Filtration Location		-	-	FIELD
Antimony (Sb)-Dissolved	ug/L	20000	20000	<1.0 DLHC
Arsenic (As)-Dissolved	ug/L	1900	1900	<1.0 DLHC
Barium (Ba)-Dissolved	ug/L	29000	29000	50.6 DLHC
Beryllium (Be)-Dissolved	ug/L	67	67	<1.0 DLHC
Boron (B)-Dissolved	ug/L	45000	45000	210 DLHC
Cadmium (Cd)-Dissolved	ug/L	2.7	2.7	<0.050 ^{DLHC}
Chromium (Cr)-Dissolved	ug/L	810	810	<5.0 DLHC
Cobalt (Co)-Dissolved	ug/L	66	66	<1.0 DLHC
Copper (Cu)-Dissolved	ug/L	87	87	<2.0 DLHC
Lead (Pb)-Dissolved	ug/L	25	25	<0.50 DLHC
Molybdenum (Mo)-Dissolved	ug/L	9200	9200	0.65 DLHC
Nickel (Ni)-Dissolved	ug/L	490	490	8.4 DLHC
Selenium (Se)-Dissolved	ug/L	63	63	<0.50 DLHC
Silver (Ag)-Dissolved	ug/L	1.5	1.5	<0.50 DLHC
Sodium (Na)-Dissolved	ug/L	2300000	2300000	812000 ^{PLHC}
Thallium (TI)-Dissolved	ug/L	510	510	<0.10 DLHC
Uranium (U)-Dissolved	ug/L	420	420	0.45 DLHC
Vanadium (V)-Dissolved	ug/L	250	250	<5.0 DLHC
Zinc (Zn)-Dissolved	ug/L	1100	1100	<10 DLHC

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2398134 CONT'D....

Job Reference: 1-19-0603-42

PAGE 4 of 11

27-DEC-19 10:52 (MT)

Volatile Organic Compounds - WATER

		Lab ID Sample Date Sample ID		
Analyte	Unit	Guide #1	Limits #2	
Acetone	ug/L	130000	130000	<30
Benzene	ug/L	44	430	<0.50
Bromodichloromethane	ug/L	85000	85000	<2.0
Bromoform	ug/L	380	770	<5.0
Bromomethane	ug/L	5.6	56	<0.50
Carbon tetrachloride	ug/L	0.79	8.4	<0.20
Chlorobenzene	ug/L	630	630	<0.50
Dibromochloromethane	ug/L	82000	82000	<2.0
Chloroform	ug/L	2.4	22	<1.0
1,2-Dibromoethane	ug/L	0.25	0.83	<0.20
1,2-Dichlorobenzene	ug/L	4600	9600	<0.50
1,3-Dichlorobenzene	ug/L	9600	9600	<0.50
1,4-Dichlorobenzene	ug/L	8	67	<0.50
Dichlorodifluoromethane	ug/L	4400	4400	<2.0
1,1-Dichloroethane	ug/L	320	3100	4.14
1,2-Dichloroethane	ug/L	1.6	12	<0.50
1,1-Dichloroethylene	ug/L	1.6	17	<0.50
cis-1,2-Dichloroethylene	ug/L	1.6	17	2.79
trans-1,2-Dichloroethylene	ug/L	1.6	17	<0.50
Methylene Chloride	ug/L	610	5500	<5.0
1,2-Dichloropropane	ug/L	16	140	<0.50
cis-1,3-Dichloropropene	ug/L	-	-	< 0.30
trans-1,3-Dichloropropene	ug/L	-	-	< 0.30
1,3-Dichloropropene (cis & trans)	ug/L	5.2	45	<0.50
Ethylbenzene	ug/L	2300	2300	<0.50
n-Hexane	ug/L	51	520	<0.50
Methyl Ethyl Ketone	ug/L	470000	1500000	<20
Methyl Isobutyl Ketone	ug/L	140000	580000	<20
MTBE	ug/L	190	1400	<2.0
Styrene	ug/L	1300	9100	<0.50

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

 $^{^{\}star}$ Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2398134 CONT'D....

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Volatile Organic Compounds - WATER

		Sample	ab ID Date ple ID	L2398134-1 16-DEC-19 BH5
Analyte	Unit	Guide #1	Limits #2	
1,1,1,2-Tetrachloroethane	ug/L	3.3	28	<0.50
1,1,2,2-Tetrachloroethane	ug/L	3.2	15	<0.50
Tetrachloroethylene	ug/L	1.6	17	<0.50
Toluene	ug/L	18000	18000	<0.50
1,1,1-Trichloroethane	ug/L	640	6700	<0.50
1,1,2-Trichloroethane	ug/L	4.7	30	<0.50
Trichloroethylene	ug/L	1.6	17	28.8
Trichlorofluoromethane	ug/L	2500	2500	<5.0
Vinyl chloride	ug/L	0.5	1.7	<0.50
o-Xylene	ug/L	-	-	<0.30
m+p-Xylenes	ug/L	-	-	<0.40
Xylenes (Total)	ug/L	4200	4200	<0.50
Surrogate: 4-Bromofluorobenzene	%	-	-	93.8
Surrogate: 1,4-Difluorobenzene	%	-	-	94.5

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2398134 CONT'D....

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Hydrocarbons - WATER

Trydrocarbons - WATER			Lab ID	L2398134-1
		Sample		16-DEC-19
		Sam	ple ID	BH5
		Guide	Limits	
Analyte	Unit	#1	#2	
F1 (C6-C10)	ug/L	750	750	<25
F1-BTEX	ug/L	750	750	<25
F2 (C10-C16)	ug/L	150	150	<100
F2-Naphth	ug/L	-	-	<100
F3 (C16-C34)	ug/L	500	500	260
F3-PAH	ug/L	-	-	250
F4 (C34-C50)	ug/L	500	500	<250
Total Hydrocarbons (C6-C50)	ug/L	-	-	<370
Chrom. to baseline at nC50		-	-	YES
Surrogate: 2-Bromobenzotrifluoride	%	-	-	65.0
Surrogate: 3,4-Dichlorotoluene	%	-	-	83.8

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2398134 CONT'D....

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Polycyclic Aromatic Hydrocarbons - WATER

Lab ID	L2398134-1
Sample Date	16-DEC-19
Sample ID	BH5

	Unit	Guide	Limits #2	
Analyte	Unit	#1	#2	
Acenaphthene	ug/L	600	1700	0.067
Acenaphthylene	ug/L	1.8	1.8	0.025 R
Anthracene	ug/L	2.4	2.4	0.178
Benzo(a)anthracene	ug/L	4.7	4.7	0.802
Benzo(a)pyrene	ug/L	0.81	0.81	0.619
Benzo(b)fluoranthene	ug/L	0.75	0.75	0.870
Benzo(g,h,i)perylene	ug/L	0.2	0.2	0.386
Benzo(k)fluoranthene	ug/L	0.4	0.4	0.348
Chrysene	ug/L	1	1	0.831
Dibenzo(ah)anthracene	ug/L	0.52	0.52	0.101
Fluoranthene	ug/L	130	130	1.38
Fluorene	ug/L	400	400	0.050
Indeno(1,2,3-cd)pyrene	ug/L	0.2	0.2	0.465
1+2-Methylnaphthalenes	ug/L	1800	1800	<0.028
1-Methylnaphthalene	ug/L	1800	1800	<0.020
2-Methylnaphthalene	ug/L	1800	1800	<0.020
Naphthalene	ug/L	1400	6400	<0.050
Phenanthrene	ug/L	580	580	0.612
Pyrene	ug/L	68	68	1.20
Surrogate: d10-Acenaphthene	%	-	-	68.9
Surrogate: d12-Chrysene	%	-	-	71.2
Surrogate: d8-Naphthalene	%	-	-	63.7
Surrogate: d10-Phenanthrene	%	-	-	68.9

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Polychlorinated Biphenyls - WATER

			Lab ID	L2398134-1
		Sampl	e Date	16-DEC-19
		Sam	ple ID	BH5
Analyte	Unit	Guide #1	Limits #2	
Aroclor 1242	ug/L	-	-	<0.020
Aroclor 1248	ug/L	-	-	<0.020
Aroclor 1254	ug/L	-	-	<0.020
Aroclor 1260	ug/L	-	-	<0.020
Surrogate: Decachlorobiphenyl	%	-	-	52.5
Total PCBs	ug/L	7.8	15	<0.040
Surrogate: Tetrachloro-m-xylene	%	-	-	78.7

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.

Reference Information

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Qualifiers for Individual Parameters Listed:

Qualifier	Description	Description								
R	The ion abundance ration	The ion abundance ratio(s) did not meet the acceptance criteria. Value is an estimated maximum.								
DLHC	Detection Limit Raised:	Detection Limit Raised: Dilution required due to high concentration of test analyte(s).								
Methods List	Methods Listed (if applicable):									
ALS Test Co	de Matrix	Test Description	Method Reference**							

ALS Test Code Matrix Test Description Method Reference**

F1-F4-511-CALC-WT Water F1-F4 Hydrocarbon Calculated Parameters CCME CWS-PHC, Pub #1310, Dec 2001-L

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

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 Water F1-O.Reg 153/04 (July 2011) E3398/CCME TIER 1-HS

Fraction F1 is determined by 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 Water F2-F4-O.Reg 153/04 (July 2011) EPA 3511/CCME Tier 1

Petroleum Hydrocarbons (F2-F4 fractions) are extracted from water using a hexane micro-extraction technique. Instrumental analysis is by GC-FID, as per the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Tier 1 Method, CCME, 2001.

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-D-UG/L-MS-WT Water Diss. Metals in Water by ICPMS (ug/L) EPA 200.8

The metal constituents of a non-acidified sample that pass through a membrane filter prior to ICP/MS analysis.

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	Water	PAH-Calculated Parameters	SW846 8270
PAH-511-WT	Water	PAH-O Reg 153/04 (July 2011)	SW/846 3510/8270

Reference Information

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Methods Listed (if applicable):

ALS Test Code Matrix **Test Description** Method Reference**

Aqueous samples, fortified with surrogates, are extracted using liquid/liquid extraction technique. The sample extracts are concentrated and then analyzed using GC/MS. Results for benzo(b) fluoranthene may include contributions from benzo(i)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

Water

PCB-O. Reg 153/04 (July 2011)

SW846 3510/8082

Aqueous samples are extracted, then concentrated, reconstituted, and analyzed by 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).

VOC-1,3-DCP-CALC-WT

Water

Regulation 153 VOCs

SW8260B/SW8270C

VOC-511-HS-WT

Water

VOC by GCMS HS O.Reg 153/04 (July SW846 8260

Liquid samples are analyzed by headspace GC/MSD.

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 Water

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

WT

ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

Reference Information

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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.



Workorder: L2398134 Report Date: 27-DEC-19 Page 1 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT	Water							
Batch R4951330 WG3247542-1 LCS								
F1 (C6-C10)			96.3		%		80-120	21-DEC-19
WG3247542-2 MB F1 (C6-C10)			<25		ug/L		25	21-DEC-19
Surrogate: 3,4-Dichloro	toluene		91.7		%		60-140	21-DEC-19
F2-F4-511-WT	Water							
Batch R4948429								
WG3245885-2 LCS F2 (C10-C16)			99.6		%		70-130	19-DEC-19
F3 (C16-C34)			105.1		%		70-130	19-DEC-19
F4 (C34-C50)			106.1		%		70-130	19-DEC-19
WG3245885-1 MB								
F2 (C10-C16)			<100		ug/L		100	19-DEC-19
F3 (C16-C34)			<250		ug/L		250	19-DEC-19
F4 (C34-C50)			<250		ug/L		250	19-DEC-19
Surrogate: 2-Bromoben	zotrifluoride		90.7		%		60-140	19-DEC-19
MET-D-UG/L-MS-WT	Water							
Batch R4946430								
WG3245950-4 DUP Antimony (Sb)-Dissolve	d	WG3245950-3 <0.10	<0.10	RPD-NA	ug/L	N/A	20	19-DEC-19
Arsenic (As)-Dissolved		0.13	0.16		ug/L	15	20	19-DEC-19
Barium (Ba)-Dissolved		104	104		ug/L	0.1	20	19-DEC-19
Beryllium (Be)-Dissolve	d	<0.10	<0.10	RPD-NA	ug/L	N/A	20	19-DEC-19
Boron (B)-Dissolved		36	36		ug/L	0.5	20	19-DEC-19
Cadmium (Cd)-Dissolve	ed	0.0130	0.0124		ug/L	4.7	20	19-DEC-19
Chromium (Cr)-Dissolve	ed	<0.50	<0.50	RPD-NA	ug/L	N/A	20	19-DEC-19
Cobalt (Co)-Dissolved		<0.10	<0.10	RPD-NA	ug/L	N/A	20	19-DEC-19
Copper (Cu)-Dissolved		0.90	0.87		ug/L	3.4	20	19-DEC-19
Lead (Pb)-Dissolved		<0.050	<0.050	RPD-NA	ug/L	N/A	20	19-DEC-19
Molybdenum (Mo)-Diss	olved	3.79	3.81		ug/L	0.7	20	19-DEC-19
Nickel (Ni)-Dissolved		0.65	0.64		ug/L	1.3	20	19-DEC-19
Selenium (Se)-Dissolve	d	0.844	0.860		ug/L	1.9	20	19-DEC-19
Silver (Ag)-Dissolved		<0.050	<0.050	RPD-NA	ug/L	N/A	20	19-DEC-19
Sodium (Na)-Dissolved		202000	204000		ug/L	0.8	20	19-DEC-19
Thallium (TI)-Dissolved		<0.010	<0.010	RPD-NA	ug/L	N/A	20	19-DEC-19



Workorder: L2398134 Report Date: 27-DEC-19 Page 2 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R49464	30							
WG3245950-4 DU		WG3245950-						
Uranium (U)-Dissolv		0.897	0.893		ug/L	0.4	20	19-DEC-19
Vanadium (V)-Dissol	ived	<0.50	<0.50	RPD-NA	ug/L	N/A	20	19-DEC-19
Zinc (Zn)-Dissolved		<1.0	<1.0	RPD-NA	ug/L	N/A	20	19-DEC-19
WG3245950-2 LC3 Antimony (Sb)-Disso			103.7		%		80-120	19-DEC-19
Arsenic (As)-Dissolve	ed		105.5		%		80-120	19-DEC-19
Barium (Ba)-Dissolve	ed		108.5		%		80-120	19-DEC-19
Beryllium (Be)-Disso	lved		102.8		%		80-120	19-DEC-19
Boron (B)-Dissolved			102.4		%		80-120	19-DEC-19
Cadmium (Cd)-Disso	olved		106.4		%		80-120	19-DEC-19
Chromium (Cr)-Disso	olved		108.6		%		80-120	19-DEC-19
Cobalt (Co)-Dissolve	ed		107.7		%		80-120	19-DEC-19
Copper (Cu)-Dissolv	ed		107.3		%		80-120	19-DEC-19
Lead (Pb)-Dissolved			106.1		%		80-120	19-DEC-19
Molybdenum (Mo)-D	issolved		107.2		%		80-120	19-DEC-19
Nickel (Ni)-Dissolved	i		108.3		%		80-120	19-DEC-19
Selenium (Se)-Disso	lved		101.9		%		80-120	19-DEC-19
Silver (Ag)-Dissolved	t		105.8		%		80-120	19-DEC-19
Sodium (Na)-Dissolv	red		109.0		%		80-120	19-DEC-19
Thallium (TI)-Dissolv	red		104.8		%		80-120	19-DEC-19
Uranium (U)-Dissolve	ed		106.9		%		80-120	19-DEC-19
Vanadium (V)-Dissol	lved		108.5		%		80-120	19-DEC-19
Zinc (Zn)-Dissolved			107.4		%		80-120	19-DEC-19
WG3245950-1 MB	}							
Antimony (Sb)-Disso			<0.10		ug/L		0.1	19-DEC-19
Arsenic (As)-Dissolve			<0.10		ug/L		0.1	19-DEC-19
Barium (Ba)-Dissolve	ed		<0.10		ug/L		0.1	19-DEC-19
Beryllium (Be)-Disso	lved		<0.10		ug/L		0.1	19-DEC-19
Boron (B)-Dissolved			<10		ug/L		10	19-DEC-19
Cadmium (Cd)-Disso			<0.0050		ug/L		0.005	19-DEC-19
Chromium (Cr)-Disso	olved		<0.50		ug/L		0.5	19-DEC-19
Cobalt (Co)-Dissolve			<0.10		ug/L		0.1	19-DEC-19
Copper (Cu)-Dissolv			<0.20		ug/L		0.2	19-DEC-19
Lead (Pb)-Dissolved			<0.050		ug/L		0.05	19-DEC-19



Workorder: L2398134 Report Date: 27-DEC-19 Page 3 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R4946430 WG3245950-1 MB								
Molybdenum (Mo)-Diss	solved		< 0.050		ug/L		0.05	19-DEC-19
Nickel (Ni)-Dissolved			<0.50		ug/L		0.5	19-DEC-19
Selenium (Se)-Dissolve	ed		< 0.050		ug/L		0.05	19-DEC-19
Silver (Ag)-Dissolved			< 0.050		ug/L		0.05	19-DEC-19
Sodium (Na)-Dissolved			<50		ug/L		50	19-DEC-19
Thallium (TI)-Dissolved			<0.010		ug/L		0.01	19-DEC-19
Uranium (U)-Dissolved			<0.010		ug/L		0.01	19-DEC-19
Vanadium (V)-Dissolve	d		< 0.50		ug/L		0.5	19-DEC-19
Zinc (Zn)-Dissolved			<1.0		ug/L		1	19-DEC-19
WG3245950-5 MS Antimony (Sb)-Dissolve	ed	WG3245950-6	100.9		%		70-130	19-DEC-19
Arsenic (As)-Dissolved			114.9		%		70-130	19-DEC-19
Barium (Ba)-Dissolved			N/A	MS-B	%		-	19-DEC-19
Beryllium (Be)-Dissolve	ed		109.4		%		70-130	19-DEC-19
Boron (B)-Dissolved			100.3		%		70-130	19-DEC-19
Cadmium (Cd)-Dissolve	ed		98.7		%		70-130	19-DEC-19
Chromium (Cr)-Dissolv	ed		109.3		%		70-130	19-DEC-19
Cobalt (Co)-Dissolved			101.4		%		70-130	19-DEC-19
Copper (Cu)-Dissolved			93.5		%		70-130	19-DEC-19
Lead (Pb)-Dissolved			93.5		%		70-130	19-DEC-19
Molybdenum (Mo)-Diss	solved		106.1		%		70-130	19-DEC-19
Nickel (Ni)-Dissolved			95.7		%		70-130	19-DEC-19
Selenium (Se)-Dissolve	ed		117.1		%		70-130	19-DEC-19
Silver (Ag)-Dissolved			92.2		%		70-130	19-DEC-19
Sodium (Na)-Dissolved			N/A	MS-B	%		-	19-DEC-19
Thallium (TI)-Dissolved			94.4		%		70-130	19-DEC-19
Uranium (U)-Dissolved			N/A	MS-B	%		-	19-DEC-19
Vanadium (V)-Dissolve	d		112.2		%		70-130	19-DEC-19
Zinc (Zn)-Dissolved			97.9		%		70-130	19-DEC-19
PAH-511-WT	Water							
Batch R4949716	;							
WG3245885-2 LCS			20.5		0.4			
1-Methylnaphthalene			92.8		%		50-140	20-DEC-19
2-Methylnaphthalene			82.1		%		50-140	20-DEC-19



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Water							
Batch R4949716								
WG3245885-2 LCS			0.4.0		0/			
Accepanhille			94.6		%		50-140	20-DEC-19
Acenaphthylene			96.6		%		50-140	20-DEC-19
Anthracene			91.5		%		50-140	20-DEC-19
Benzo(a)anthracene			97.7		%		50-140	20-DEC-19
Benzo(a)pyrene			91.9		%		50-140	20-DEC-19
Benzo(b)fluoranthene			90.5		%		50-140	20-DEC-19
Benzo(g,h,i)perylene			94.6		%		50-140	20-DEC-19
Benzo(k)fluoranthene			97.7		%		50-140	20-DEC-19
Chrysene			96.2		%		50-140	20-DEC-19
Dibenzo(ah)anthracene			93.9		%		50-140	20-DEC-19
Fluoranthene			96.5		%		50-140	20-DEC-19
Fluorene			93.0		%		50-140	20-DEC-19
Indeno(1,2,3-cd)pyrene			98.0		%		50-140	20-DEC-19
Naphthalene			86.9		%		50-140	20-DEC-19
Phenanthrene			95.8		%		50-140	20-DEC-19
Pyrene			96.0		%		50-140	20-DEC-19
WG3245885-1 MB			<0.020				0.02	00 DEO 40
1-Methylnaphthalene					ug/L			20-DEC-19
2-Methylnaphthalene			<0.020		ug/L		0.02	20-DEC-19
Acenaphthene			<0.020		ug/L		0.02	20-DEC-19
Acenaphthylene			<0.020		ug/L		0.02	20-DEC-19
Anthracene			<0.020		ug/L		0.02	20-DEC-19
Benzo(a)anthracene			<0.020		ug/L		0.02	20-DEC-19
Benzo(a)pyrene			<0.010		ug/L		0.01	20-DEC-19
Benzo(b)fluoranthene			<0.020		ug/L		0.02	20-DEC-19
Benzo(g,h,i)perylene			<0.020		ug/L		0.02	20-DEC-19
Benzo(k)fluoranthene			<0.020		ug/L		0.02	20-DEC-19
Chrysene			<0.020		ug/L		0.02	20-DEC-19
Dibenzo(ah)anthracene			<0.020		ug/L		0.02	20-DEC-19
Fluoranthene			<0.020		ug/L		0.02	20-DEC-19
Fluorene			<0.020		ug/L		0.02	20-DEC-19
Indeno(1,2,3-cd)pyrene			<0.020		ug/L		0.02	20-DEC-19
Naphthalene			<0.050		ug/L		0.05	20-DEC-19
Phenanthrene			<0.020		ug/L		0.02	20-DEC-19



Qualifier

Workorder: L2398134 Report Date: 27-DEC-19 Page 5 of 11

RPD

Limit

Analyzed

Units

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Matrix

Reference

Result

Contact: Kossay Makhzoumi

Test

1621	IVIALITX	Reference	Resuit	Qualifier	Units	KPD	LIIIII	Analyzeu
PAH-511-WT	Water							
Batch R49497	716							
WG3245885-1 ME Pyrene	3		<0.020		ug/L		0.02	20-DEC-19
Surrogate: d8-Naphi	thalene		89.9		%		60-140	20-DEC-19 20-DEC-19
Surrogate: d10-Pher			95.9		%		60-140	20-DEC-19 20-DEC-19
Surrogate: d12-Chry			93.4		%		60-140	20-DEC-19 20-DEC-19
Surrogate: d10-Acer			97.2		%		60-140	20-DEC-19 20-DEC-19
-			57.2		70		00 140	20-DEC-19
PCB-511-WT	Water							
Batch R49491 WG3246028-2 LC								
Aroclor 1242	.5		104.7		%		60-140	19-DEC-19
Aroclor 1248			92.4		%		60-140	19-DEC-19
Aroclor 1254			109.4		%		60-140	19-DEC-19
Aroclor 1260			116.0		%		60-140	19-DEC-19
WG3246028-1 ME	3							
Aroclor 1242			<0.020		ug/L		0.02	19-DEC-19
Aroclor 1248			<0.020		ug/L		0.02	19-DEC-19
Aroclor 1254			<0.020		ug/L		0.02	19-DEC-19
Aroclor 1260			<0.020		ug/L		0.02	19-DEC-19
Surrogate: Decachlo	orobiphenyl		89.6		%		50-150	19-DEC-19
Surrogate: Tetrachlo	oro-m-xylene		76.5		%		50-150	19-DEC-19
VOC-511-HS-WT	Water							
Batch R49491	168							
WG3243074-4 DU		WG3243074						
1,1,1,2-Tetrachloroe		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,1,2,2-Tetrachloroe		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,1,1-Trichloroethan		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,1,2-Trichloroethan	e	<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,1-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,1-Dichloroethylene	9	<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,2-Dibromoethane		<0.20	<0.20	RPD-NA	ug/L	N/A	30	20-DEC-19
1,2-Dichlorobenzene	9	<0.50	< 0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,2-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,2-Dichloropropane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,3-Dichlorobenzene	e	<0.50	< 0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,4-Dichlorobenzene	e	<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19



Workorder: L2398134 Report Date: 27-DEC-19 Page 6 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4949168								
WG3243074-4 DUP		WG3243074-			4			
Acetone		<30	<30	RPD-NA	ug/L	N/A	30	20-DEC-19
Benzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Bromodichloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Bromoform		<5.0	<5.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Bromomethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Carbon tetrachloride		<0.20	<0.20	RPD-NA	ug/L	N/A	30	20-DEC-19
Chlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Chloroform		<1.0	<1.0	RPD-NA	ug/L	N/A	30	20-DEC-19
cis-1,2-Dichloroethylene		<0.50	< 0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
cis-1,3-Dichloropropene		<0.30	< 0.30	RPD-NA	ug/L	N/A	30	20-DEC-19
Dibromochloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Dichlorodifluoromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Ethylbenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
n-Hexane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
m+p-Xylenes		<0.40	<0.40	RPD-NA	ug/L	N/A	30	20-DEC-19
Methyl Ethyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	20-DEC-19
Methyl Isobutyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	20-DEC-19
Methylene Chloride		<5.0	<5.0	RPD-NA	ug/L	N/A	30	20-DEC-19
MTBE		<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-DEC-19
o-Xylene		<0.30	< 0.30	RPD-NA	ug/L	N/A	30	20-DEC-19
Styrene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Tetrachloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Toluene		<0.50	< 0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
trans-1,2-Dichloroethyler	ne	<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
trans-1,3-Dichloropropen	ne	<0.30	< 0.30	RPD-NA	ug/L	N/A	30	20-DEC-19
Trichloroethylene		1.27	1.25		ug/L	1.6	30	20-DEC-19
Trichlorofluoromethane		<5.0	<5.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Vinyl chloride		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
WG3243074-1 LCS	e		90.4		%		70-130	20-DEC-19
1,1,2,2-Tetrachloroethan			91.8		%		70-130	20-DEC-19 20-DEC-19
1,1,1-Trichloroethane			91.6		%			
1,1,2-Trichloroethane			91.0		%		70-130	20-DEC-19
1,1,2-THORIDIOEURANE			91.0		70		70-130	20-DEC-19



Workorder: L2398134 Report Date: 27-DEC-19 Page 7 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4949168								
WG3243074-1 LCS								
1,1-Dichloroethane			92.1		%		70-130	20-DEC-19
1,1-Dichloroethylene			88.2		%		70-130	20-DEC-19
1,2-Dibromoethane			93.1		%		70-130	20-DEC-19
1,2-Dichlorobenzene			85.9		%		70-130	20-DEC-19
1,2-Dichloroethane			91.5		%		70-130	20-DEC-19
1,2-Dichloropropane			100.5		%		70-130	20-DEC-19
1,3-Dichlorobenzene			84.8		%		70-130	20-DEC-19
1,4-Dichlorobenzene			84.8		%		70-130	20-DEC-19
Acetone			96.5		%		60-140	20-DEC-19
Benzene			95.2		%		70-130	20-DEC-19
Bromodichloromethane			88.8		%		70-130	20-DEC-19
Bromoform			93.9		%		70-130	20-DEC-19
Bromomethane			83.1		%		60-140	20-DEC-19
Carbon tetrachloride			91.6		%		70-130	20-DEC-19
Chlorobenzene			89.1		%		70-130	20-DEC-19
Chloroform			93.5		%		70-130	20-DEC-19
cis-1,2-Dichloroethylene			90.3		%		70-130	20-DEC-19
cis-1,3-Dichloropropene			91.3		%		70-130	20-DEC-19
Dibromochloromethane			88.4		%		70-130	20-DEC-19
Dichlorodifluoromethane	;		94.0		%		50-140	20-DEC-19
Ethylbenzene			88.3		%		70-130	20-DEC-19
n-Hexane			87.2		%		70-130	20-DEC-19
m+p-Xylenes			87.9		%		70-130	20-DEC-19
Methyl Ethyl Ketone			90.7		%		60-140	20-DEC-19
Methyl Isobutyl Ketone			92.9		%		60-140	20-DEC-19
Methylene Chloride			90.7		%		70-130	20-DEC-19
MTBE			94.0		%		70-130	20-DEC-19
o-Xylene			88.4		%		70-130	20-DEC-19
Styrene			90.8		%		70-130	20-DEC-19
Tetrachloroethylene			87.6		%		70-130	20-DEC-19
Toluene			89.7		%		70-130	20-DEC-19
trans-1,2-Dichloroethyler	ne		89.5		%		70-130	20-DEC-19
trans-1,3-Dichloroproper	ne		90.6		%		70-130	20-DEC-19
								-



Workorder: L2398134 Report Date: 27-DEC-19 Page 8 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4949168	3							
WG3243074-1 LCS			04.7		0/		70.400	
Trichloroethylene Trichlorofluoromethane			91.7 90.9		%		70-130	20-DEC-19
	,		90.9 104.1		%		60-140	20-DEC-19
Vinyl chloride			104.1		70		60-140	20-DEC-19
WG3243074-2 MB 1,1,1,2-Tetrachloroetha	ane		<0.50		ug/L		0.5	20-DEC-19
1,1,2,2-Tetrachloroetha	ane		<0.50		ug/L		0.5	20-DEC-19
1,1,1-Trichloroethane			<0.50		ug/L		0.5	20-DEC-19
1,1,2-Trichloroethane			<0.50		ug/L		0.5	20-DEC-19
1,1-Dichloroethane			<0.50		ug/L		0.5	20-DEC-19
1,1-Dichloroethylene			<0.50		ug/L		0.5	20-DEC-19
1,2-Dibromoethane			<0.20		ug/L		0.2	20-DEC-19
1,2-Dichlorobenzene			<0.50		ug/L		0.5	20-DEC-19
1,2-Dichloroethane			<0.50		ug/L		0.5	20-DEC-19
1,2-Dichloropropane			<0.50		ug/L		0.5	20-DEC-19
1,3-Dichlorobenzene			<0.50		ug/L		0.5	20-DEC-19
1,4-Dichlorobenzene			<0.50		ug/L		0.5	20-DEC-19
Acetone			<30		ug/L		30	20-DEC-19
Benzene			<0.50		ug/L		0.5	20-DEC-19
Bromodichloromethane	Э		<2.0		ug/L		2	20-DEC-19
Bromoform			<5.0		ug/L		5	20-DEC-19
Bromomethane			<0.50		ug/L		0.5	20-DEC-19
Carbon tetrachloride			<0.20		ug/L		0.2	20-DEC-19
Chlorobenzene			<0.50		ug/L		0.5	20-DEC-19
Chloroform			<1.0		ug/L		1	20-DEC-19
cis-1,2-Dichloroethylen	е		<0.50		ug/L		0.5	20-DEC-19
cis-1,3-Dichloropropen	е		<0.30		ug/L		0.3	20-DEC-19
Dibromochloromethane	Э		<2.0		ug/L		2	20-DEC-19
Dichlorodifluoromethar	ne		<2.0		ug/L		2	20-DEC-19
Ethylbenzene			<0.50		ug/L		0.5	20-DEC-19
n-Hexane			<0.50		ug/L		0.5	20-DEC-19
m+p-Xylenes			<0.40		ug/L		0.4	20-DEC-19
Methyl Ethyl Ketone			<20		ug/L		20	20-DEC-19
Methyl Isobutyl Ketone			<20		ug/L		20	20-DEC-19
Methylene Chloride			<5.0		ug/L		5	20-DEC-19



Workorder: L2398134 Report Date: 27-DEC-19 Page 9 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4949168								
WG3243074-2 MB			0.0		/1		0	
MTBE			<2.0		ug/L		2	20-DEC-19
o-Xylene			<0.30		ug/L		0.3	20-DEC-19
Styrene			<0.50		ug/L		0.5	20-DEC-19
Tetrachloroethylene			<0.50		ug/L		0.5	20-DEC-19
Toluene			<0.50		ug/L		0.5	20-DEC-19
trans-1,2-Dichloroethylen			<0.50		ug/L		0.5	20-DEC-19
trans-1,3-Dichloropropen	ie		<0.30		ug/L		0.3	20-DEC-19
Trichloroethylene			<0.50		ug/L		0.5	20-DEC-19
Trichlorofluoromethane			<5.0		ug/L		5	20-DEC-19
Vinyl chloride			<0.50		ug/L		0.5	20-DEC-19
Surrogate: 1,4-Difluorobe			93.6		%		70-130	20-DEC-19
Surrogate: 4-Bromofluoro	obenzene		92.4		%		70-130	20-DEC-19
WG3243074-5 MS 1,1,1,2-Tetrachloroethand	e	WG3243074-3	91.5		%		50-140	23-DEC-19
1,1,2,2-Tetrachloroethan	е		91.3		%		50-140	23-DEC-19
1,1,1-Trichloroethane			92.7		%		50-140	23-DEC-19
1,1,2-Trichloroethane			95.7		%		50-140	23-DEC-19
1,1-Dichloroethane			87.1		%		50-140	23-DEC-19
1,1-Dichloroethylene			84.8		%		50-140	23-DEC-19
1,2-Dibromoethane			96.8		%		50-140	23-DEC-19
1,2-Dichlorobenzene			82.4		%		50-140	23-DEC-19
1,2-Dichloroethane			97.3		%		50-140	23-DEC-19
1,2-Dichloropropane			95.5		%		50-140	23-DEC-19
1,3-Dichlorobenzene			82.3		%		50-140	23-DEC-19
1,4-Dichlorobenzene			78.8		%		50-140	23-DEC-19
Acetone			106.3		%		50-140	23-DEC-19
Benzene			94.5		%		50-140	23-DEC-19
Bromodichloromethane			94.0		%		50-140	23-DEC-19
Bromoform			95.2		%		50-140	23-DEC-19
Bromomethane			81.7		%		50-140	23-DEC-19
Carbon tetrachloride			89.9		%		50-140	23-DEC-19
Chlorobenzene			88.5		%		50-140	23-DEC-19
Chloroform			93.9		%		50-140	23-DEC-19
cis-1,2-Dichloroethylene			88.6		%		50-140	23-DEC-19
•								-



Workorder: L2398134 Report Date: 27-DEC-19 Page 10 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R49491	168							
WG3243074-5 MS		WG3243074-3						
cis-1,3-Dichloroprop			86.4		%		50-140	23-DEC-19
Dibromochlorometha	ane		93.4		%		50-140	23-DEC-19
Dichlorodifluorometh	nane		71.7		%		50-140	23-DEC-19
Ethylbenzene			85.7		%		50-140	23-DEC-19
n-Hexane			81.7		%		50-140	23-DEC-19
m+p-Xylenes			84.8		%		50-140	23-DEC-19
Methyl Ethyl Ketone			93.6		%		50-140	23-DEC-19
Methyl Isobutyl Keto	ne		96.9		%		50-140	23-DEC-19
Methylene Chloride			93.7		%		50-140	23-DEC-19
MTBE			90.2		%		50-140	23-DEC-19
o-Xylene			87.0		%		50-140	23-DEC-19
Styrene			88.4		%		50-140	23-DEC-19
Tetrachloroethylene			83.4		%		50-140	23-DEC-19
Toluene			89.0		%		50-140	23-DEC-19
trans-1,2-Dichloroetl	hylene		77.8		%		50-140	23-DEC-19
trans-1,3-Dichloropre	•		85.4		%		50-140	23-DEC-19
Trichloroethylene	•		87.3		%		50-140	23-DEC-19
Trichlorofluorometha	ane		87.8		%		50-140	
	al IC							23-DEC-19
Vinyl chloride			100.1		%		50-140	23-DEC-19

Workorder: L2398134 Report Date: 27-DEC-19

Client: TERRAPROBE-BRAMPTON Page 11 of 11

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

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
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
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 predetermined data quality objectives to provide confidence in the accuracy of associated test results.

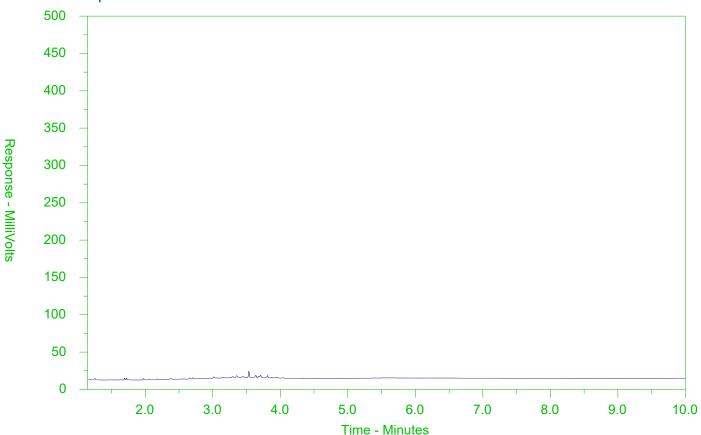
Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

CCME F2-F4 HYDROCARBON DISTRIBUTION REPORT



ALS Sample ID: L2398134-1

Client Sample ID: BH5



← -F2-	→ ←	—F3—→ ← —F4—	→	
nC10	nC16	nC34	nC50	
174°C	287°C	481°C	575°C	
346°F	549°F	898°F	1067°F	
Gasolin	ıe →	← Mot	or Oils/Lube Oils/Grease——	
←	-Diesel/Je	t 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 Environment at

Chain of Custody (COC) / Analytical Request Form



-2398134-COFC

COC Number: 15 -

e 1 of

No

Canada Toll Free: 1 800 668 9878 www.alsglobal.com Contact and company name below will appear on the final report Report Format / Distribution ,rm all E&P TATs with your AM - surcharges will apply Report To Select Service Luca. Standard TAT if received by 3 pm - business days - no surcharges apply Select Report Format: PDF EXCEL EDD (DIGITAL) Regular [R] Company: Terraprobe 1 Business day [E1] Kossay Makhzoumi 4 day [P4] Contact: П Phone: 905-796-2650 Compare Results to Criteria on Report - provide details below if box checked 3 day [P3] Same Day, Weekend or ☑ EMAIL ☐ MAIL ☐ FAX \Box Statutory holiday [E0] 2 day [P2] Select Distribution: Company address below will appear on the final report Date and Time Required for all E&P TATs: 11 Indell Lane Email 1 or Fax kmakhzoumi@terraprobe.ca Street: For tests that can not be performed according to the service level selected, you will be contacted. City/Province: Brampton Email 2 Analysis Request Postal Code: L6T 3Y3 Email 3 Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below ☐ YES ☑ NO Invoice Distribution Invoice To Same as Report To ☐ YES ☑ NO Select Invoice Distribution:

EMAIL

MAIL

FAX Copy of Invoice with Report Email 1 or Fax Irossi@terraprobe.ca Company: Теггаргоре Contact: Lorena Rossi Email 2 of Containers **Project Information** Oil and Gas Required Fields (client use) ALS Account # / Quote #: Q62481 AFE/Cost Center: PO# Job #: 1-19-0603-42 Maior/Minor Code: Routing Code: PO / AFE: Requisitioner: SD: Location: ALS Lab Work Order # (lab use only) ALS Contact: Sampler: Date Time ALS Sample # Sample Identification and/or Coordinates Sample Type ¥ õ (lab use only) (dd-mmm-yy) (This description will appear on the report) (hh:mm) CW u 16-12-19 SAMPLE CONDITION AS RECEIVED (lab use only) Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below Drinking Water (DW) Samples¹ (client use) No (electronic COC only) SIF Observations Frozen Are samples taken from a Regulated DW System? **XI** Custody seal intact Yes Ice Cubes Ice Packs MECP T3 Cooling Initiated ☐ YES ☐ NO FINAL COOLER TEMPERATURES ℃ INIITIAL COOLER TEMPERATURES °C Are samples for human drinking water use? 3. Ċ) YES NO FINAL SHIPMENT RECEPTION (lab use only) INITIAL SHIPMENT RECEPTION (lab use only) SHIPMENT RELEASE (client use) Received by: Released by: Kossay Makhzoumi Time: Received by:



TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 18-DEC-19

Report Date: 27-DEC-19 09:16 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2398115

Project P.O. #: NOT SUBMITTED

Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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

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L2398115 CONT'D....

Job Reference: 1-19-0603-42

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Summary of Guideline Exceedances

Guideline						
ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit
Ontario Reg	gulation 153/04 - April 1	15, 2011 Standards - T3-Non-Potable Gr	round Water-All Types of Property Us	ses (Coarse)		
L2398115-1	BH6	Volatile Organic Compounds	cis-1,2-Dichloroethylene	4.97	1.6	ug/L
			Trichloroethylene	3.81	1.6	ug/L
Ontario Reg	gulation 153/04 - April 1	l5, 2011 Standards - T3-Non-Potable Gr	round Water-All Types of Property Us	ses (Fine)		

(No parameter exceedances)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Job Reference: 1-19-0603-42

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Dissolved Metals - WATER

		Lab ID Sample Date Sample ID		
Analyte	Unit	Guide #1	Limits #2	
Dissolved Metals Filtration Location		-	-	FIELD
Antimony (Sb)-Dissolved	ug/L	20000	20000	<1.0 DLHC
Arsenic (As)-Dissolved	ug/L	1900	1900	<1.0 DLHC
Barium (Ba)-Dissolved	ug/L	29000	29000	58.1 DLHC
Beryllium (Be)-Dissolved	ug/L	67	67	<1.0 DLHC
Boron (B)-Dissolved	ug/L	45000	45000	130 DLHC
Cadmium (Cd)-Dissolved	ug/L	2.7	2.7	<0.050 ^{DLHC}
Chromium (Cr)-Dissolved	ug/L	810	810	<5.0 DLHC
Cobalt (Co)-Dissolved	ug/L	66	66	<1.0 DLHC
Copper (Cu)-Dissolved	ug/L	87	87	<2.0 DLHC
Lead (Pb)-Dissolved	ug/L	25	25	<0.50 DLHC
Molybdenum (Mo)-Dissolved	ug/L	9200	9200	0.63 DLHC
Nickel (Ni)-Dissolved	ug/L	490	490	5.2 DLHC
Selenium (Se)-Dissolved	ug/L	63	63	<0.50 DLHC
Silver (Ag)-Dissolved	ug/L	1.5	1.5	<0.50 DLHC
Sodium (Na)-Dissolved	ug/L	2300000	2300000	524000 ^{DLHC}
Thallium (TI)-Dissolved	ug/L	510	510	<0.10 DLHC
Uranium (U)-Dissolved	ug/L	420	420	1.02 DLHC
Vanadium (V)-Dissolved	ug/L	250	250	<5.0 DLHC
Zinc (Zn)-Dissolved	ug/L	1100	1100	<10 DLHC

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Volatile Organic Compounds - WATER

volatile Organic Compounds - 1	VAIER				
			ab ID	L2398115-1	
		Sample		16-DEC-19 BH6	
		Sample ID		DITO	
		Guide	Limits		
Analyte	Unit	#1	#2		
Acetone	ug/L	130000	130000	<30	
Benzene	ug/L	44	430	<0.50	
Bromodichloromethane	ug/L	85000	85000	<2.0	
Bromoform	ug/L	380	770	<5.0	
Bromomethane	ug/L	5.6	56	<0.50	
Carbon tetrachloride	ug/L	0.79	8.4	<0.20	
Chlorobenzene	ug/L	630	630	<0.50	
Dibromochloromethane	ug/L	82000	82000	<2.0	
Chloroform	ug/L	2.4	22	<1.0	
1,2-Dibromoethane	ug/L	0.25	0.83	<0.20	
1,2-Dichlorobenzene	ug/L	4600	9600	<0.50	
1,3-Dichlorobenzene	ug/L	9600	9600	<0.50	
1,4-Dichlorobenzene	ug/L	8	67	<0.50	
Dichlorodifluoromethane	ug/L	4400	4400	<2.0	
1,1-Dichloroethane	ug/L	320	3100	3.96	
1,2-Dichloroethane	ug/L	1.6	12	<0.50	
1,1-Dichloroethylene	ug/L	1.6	17	<0.50	
cis-1,2-Dichloroethylene	ug/L	1.6	17	4.97	
trans-1,2-Dichloroethylene	ug/L	1.6	17	<0.50	
Methylene Chloride	ug/L	610	5500	<5.0	
1,2-Dichloropropane	ug/L	16	140	<0.50	
cis-1,3-Dichloropropene	ug/L	-	-	< 0.30	
trans-1,3-Dichloropropene	ug/L	-	-	<0.30	
1,3-Dichloropropene (cis & trans)	ug/L	5.2	45	<0.50	
Ethylbenzene	ug/L	2300	2300	<0.50	
n-Hexane	ug/L	51	520	0.60	
Methyl Ethyl Ketone	ug/L	470000	1500000	<20	
Methyl Isobutyl Ketone	ug/L	140000	580000	<20	
MTBE	ug/L	190	1400	<2.0	
Styrene	ug/L	1300	9100	<0.50	

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

 $^{^{\}star}$ Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Volatile Organic Compounds - WATER

		L	₋ab ID	L2398115-1
		Sample Date		16-DEC-19
		Sam	BH6	
		Guide	l imits	
Analyte	Unit	#1	#2	
1,1,1,2-Tetrachloroethane	ug/L	3.3	28	<0.50
1,1,2,2-Tetrachloroethane	ug/L	3.2	15	<0.50
Tetrachloroethylene	ug/L	1.6	17	<0.50
Toluene	ug/L	18000	18000	<0.50
1,1,1-Trichloroethane	ug/L	640	6700	<0.50
1,1,2-Trichloroethane	ug/L	4.7	30	<0.50
Trichloroethylene	ug/L	1.6	17	3.81
Trichlorofluoromethane	ug/L	2500	2500	<5.0
Vinyl chloride	ug/L	0.5	1.7	<0.50
o-Xylene	ug/L	-	-	<0.30
m+p-Xylenes	ug/L	-	-	<0.40
Xylenes (Total)	ug/L	4200	4200	<0.50
Surrogate: 4-Bromofluorobenzene	%	-	-	94.2
Surrogate: 1,4-Difluorobenzene	%	-	-	95.0

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Hydrocarbons - WATER

riyarooarbono mixirari				
			Lab ID	L2398115-1
		Sampl		16-DEC-19
		Sam	ple ID	BH6
		Guide	Limits	
Analyte	Unit	#1	#2	
F1 (C6-C10)	ug/L	750	750	<25
F1-BTEX	ug/L	750	750	<25
F2 (C10-C16)	ug/L	150	150	<100
F2-Naphth	ug/L	-	-	<100
F3 (C16-C34)	ug/L	500	500	<250
F3-PAH	ug/L	-	-	<250
F4 (C34-C50)	ug/L	500	500	<250
Total Hydrocarbons (C6-C50)	ug/L	-	-	<370
Chrom. to baseline at nC50		-	-	YES
Surrogate: 2-Bromobenzotrifluoride	%	-	-	100.5
Surrogate: 3,4-Dichlorotoluene	%	-	-	74.2

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Polycyclic Aromatic Hydrocarbons - WATER

 Lab ID
 L2398115-1

 Sample Date
 16-DEC-19

 Sample ID
 BH6

		Guide	Limits	
Analyte	Unit	#1	#2	
Acenaphthene	ug/L	600	1700	<0.020
Acenaphthylene	ug/L	1.8	1.8	<0.020
Anthracene	ug/L	2.4	2.4	<0.020
Benzo(a)anthracene	ug/L	4.7	4.7	0.036
Benzo(a)pyrene	ug/L	0.81	0.81	0.029
Benzo(b)fluoranthene	ug/L	0.75	0.75	0.045
Benzo(g,h,i)perylene	ug/L	0.2	0.2	0.021
Benzo(k)fluoranthene	ug/L	0.4	0.4	<0.020
Chrysene	ug/L	1	1	0.039
Dibenzo(ah)anthracene	ug/L	0.52	0.52	<0.020
Fluoranthene	ug/L	130	130	0.099
Fluorene	ug/L	400	400	<0.020
Indeno(1,2,3-cd)pyrene	ug/L	0.2	0.2	0.024
1+2-Methylnaphthalenes	ug/L	1800	1800	<0.028
1-Methylnaphthalene	ug/L	1800	1800	<0.020
2-Methylnaphthalene	ug/L	1800	1800	<0.020
Naphthalene	ug/L	1400	6400	<0.050
Phenanthrene	ug/L	580	580	0.086
Pyrene	ug/L	68	68	0.087
Surrogate: d10-Acenaphthene	%	-	-	100.6
Surrogate: d12-Chrysene	%	-	-	91.7
Surrogate: d8-Naphthalene	%	-	-	93.8
Surrogate: d10-Phenanthrene	%	-	-	100.4

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Polychlorinated Biphenyls - WATER

		Sampl	Lab ID e Date iple ID	L2398115-1 16-DEC-19 BH6
Analyte	Unit	Guide #1	Limits #2	
Aroclor 1242	ug/L	-	-	<0.020
Aroclor 1248	ug/L	-	-	<0.020
Aroclor 1254	ug/L	-	-	<0.020
Aroclor 1260	ug/L	-	-	<0.020
Surrogate: Decachlorobiphenyl	%	-	-	54.3
Total PCBs	ug/L	7.8	15	<0.040
Surrogate: Tetrachloro-m-xylene	%	-	-	86.3

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.

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Qualifiers for Individual Parameters Listed:

Qualifier Description DLHC Detection Limit Raised: Dilution required due to high concentration of test analyte(s).

Methods Listed (if applicable):

F1-F4-511-CALC-WT

ALS Test Code Matrix **Test Description** Method Reference**

Parameters

Water

F1-F4 Hydrocarbon Calculated CCME CWS-PHC, Pub #1310, Dec 2001-L

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

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 Water F1-O.Reg 153/04 (July 2011) E3398/CCME TIER 1-HS

Fraction F1 is determined by 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 Water F2-F4-O.Reg 153/04 (July 2011) EPA 3511/CCME Tier 1

Petroleum Hydrocarbons (F2-F4 fractions) are extracted from water using a hexane micro-extraction technique. Instrumental analysis is by GC-FID, as per the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Tier 1 Method, CCME, 2001.

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-D-UG/L-MS-WT Water Diss. Metals in Water by ICPMS (ug/L) EPA 200.8

The metal constituents of a non-acidified sample that pass through a membrane filter prior to ICP/MS analysis.

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 Water **PAH-Calculated Parameters** SW846 8270

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

Aqueous samples, fortified with surrogates, are extracted using liquid/liquid extraction technique. The sample extracts are concentrated and then analyzed using GC/MS. Results for benzo(b)

L2398115 CONT'D....
Job Reference: 1-19-0603-42
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Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

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 Water PCB-O. Reg 153/04 (July 2011) SW846 3510/8082

Aqueous samples are extracted, then concentrated, reconstituted, and analyzed by 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).

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

VOC-511-HS-WT Water VOC by GCMS HS O.Reg 153/04 (July SW846 8260

2011)

Liquid samples are analyzed by headspace GC/MSD.

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 Water 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

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.



Workorder: L2398115 Report Date: 27-DEC-19 Page 1 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT	Water							
Batch R4951330								
WG3247542-1 LCS F1 (C6-C10)			96.3		%		80-120	21-DEC-19
WG3247542-2 MB F1 (C6-C10)			<25		ug/L		25	21-DEC-19
Surrogate: 3,4-Dichlorot	oluene		91.7		%		60-140	21-DEC-19
F2-F4-511-WT	Water							
Batch R4948447								
WG3245881-2 LCS			92.9		%		70.400	40 DEO 40
F2 (C10-C16) F3 (C16-C34)			98.2		%		70-130	19-DEC-19
F4 (C34-C50)			96.4		%		70-130 70-130	19-DEC-19 19-DEC-19
WG3245881-1 MB			30.1				70-100	13-000-13
F2 (C10-C16)			<100		ug/L		100	19-DEC-19
F3 (C16-C34)			<250		ug/L		250	19-DEC-19
F4 (C34-C50)			<250		ug/L		250	19-DEC-19
Surrogate: 2-Bromoben:	zotrifluoride		89.6		%		60-140	19-DEC-19
MET-D-UG/L-MS-WT	Water							
Batch R4946430								
WG3245950-4 DUP	٨.	WG3245950-3		555 MA	~/\	N 1/ A	00	
Antimony (Sb)-Dissolved Arsenic (As)-Dissolved	u	<0.10 0.13	<0.10 0.16	RPD-NA	ug/L ug/L	N/A	20	19-DEC-19
		104	104		-	15	20	19-DEC-19
Barium (Ba)-Dissolved Beryllium (Be)-Dissolved	4	<0.10	<0.10	DDD NA	ug/L	0.1	20	19-DEC-19
Boron (B)-Dissolved	J	36	36	RPD-NA	ug/L ug/L	N/A	20	19-DEC-19
Cadmium (Cd)-Dissolve	d	0.0130	0.0124		ug/L	0.5	20	19-DEC-19
Chromium (Cr)-Dissolve		<0.50	< 0.50	RPD-NA	ug/L ug/L	4.7 N/A	20 20	19-DEC-19 19-DEC-19
Cobalt (Co)-Dissolved	· ~	<0.10	<0.10	RPD-NA	ug/L	N/A N/A	20	19-DEC-19 19-DEC-19
Copper (Cu)-Dissolved		0.90	0.87	VLD-INW	ug/L	3.4	20	19-DEC-19 19-DEC-19
Lead (Pb)-Dissolved		<0.050	<0.050	RPD-NA	ug/L	3.4 N/A	20	19-DEC-19
Molybdenum (Mo)-Disso	olved	3.79	3.81	IXI D-IVA	ug/L	0.7	20	19-DEC-19
Nickel (Ni)-Dissolved	- 	0.65	0.64		ug/L	1.3	20	19-DEC-19
Selenium (Se)-Dissolve	d	0.844	0.860		ug/L	1.9	20	19-DEC-19
Silver (Ag)-Dissolved		<0.050	<0.050	RPD-NA	ug/L	N/A	20	19-DEC-19
Sodium (Na)-Dissolved		202000	204000		ug/L	0.8	20	19-DEC-19
Thallium (TI)-Dissolved		<0.010	<0.010	RPD-NA	ug/L	N/A	20	19-DEC-19
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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R4946430								
WG3245950-4 DUP		WG3245950-3						
Uranium (U)-Dissolved		0.897	0.893		ug/L	0.4	20	19-DEC-19
Vanadium (V)-Dissolved	i	<0.50	<0.50	RPD-NA	ug/L	N/A	20	19-DEC-19
Zinc (Zn)-Dissolved		<1.0	<1.0	RPD-NA	ug/L	N/A	20	19-DEC-19
WG3245950-2 LCS Antimony (Sb)-Dissolved	d		103.7		%		80-120	19-DEC-19
Arsenic (As)-Dissolved			105.5		%		80-120	19-DEC-19
Barium (Ba)-Dissolved			108.5		%		80-120	19-DEC-19
Beryllium (Be)-Dissolved	d		102.8		%		80-120	19-DEC-19
Boron (B)-Dissolved			102.4		%		80-120	19-DEC-19
Cadmium (Cd)-Dissolve	ed		106.4		%		80-120	19-DEC-19
Chromium (Cr)-Dissolve	ed		108.6		%		80-120	19-DEC-19
Cobalt (Co)-Dissolved			107.7		%		80-120	19-DEC-19
Copper (Cu)-Dissolved			107.3		%		80-120	19-DEC-19
Lead (Pb)-Dissolved			106.1		%		80-120	19-DEC-19
Molybdenum (Mo)-Disso	olved		107.2		%		80-120	19-DEC-19
Nickel (Ni)-Dissolved			108.3		%		80-120	19-DEC-19
Selenium (Se)-Dissolve	d		101.9		%		80-120	19-DEC-19
Silver (Ag)-Dissolved			105.8		%		80-120	19-DEC-19
Sodium (Na)-Dissolved			109.0		%		80-120	19-DEC-19
Thallium (TI)-Dissolved			104.8		%		80-120	19-DEC-19
Uranium (U)-Dissolved			106.9		%		80-120	19-DEC-19
Vanadium (V)-Dissolved	d		108.5		%		80-120	19-DEC-19
Zinc (Zn)-Dissolved			107.4		%		80-120	19-DEC-19
WG3245950-1 MB								
Antimony (Sb)-Dissolve	d		<0.10		ug/L		0.1	19-DEC-19
Arsenic (As)-Dissolved			<0.10		ug/L		0.1	19-DEC-19
Barium (Ba)-Dissolved			<0.10		ug/L		0.1	19-DEC-19
Beryllium (Be)-Dissolved	d		<0.10		ug/L		0.1	19-DEC-19
Boron (B)-Dissolved			<10		ug/L		10	19-DEC-19
Cadmium (Cd)-Dissolve			<0.0050		ug/L		0.005	19-DEC-19
Chromium (Cr)-Dissolve	ed		<0.50		ug/L		0.5	19-DEC-19
Cobalt (Co)-Dissolved			<0.10		ug/L		0.1	19-DEC-19
Copper (Cu)-Dissolved			<0.20		ug/L		0.2	19-DEC-19
Lead (Pb)-Dissolved			<0.050		ug/L		0.05	19-DEC-19



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R4946430 WG3245950-1 MB								
Molybdenum (Mo)-Diss	solved		<0.050		ug/L		0.05	19-DEC-19
Nickel (Ni)-Dissolved			<0.50		ug/L		0.5	19-DEC-19
Selenium (Se)-Dissolv	ed		<0.050		ug/L		0.05	19-DEC-19
Silver (Ag)-Dissolved			<0.050		ug/L		0.05	19-DEC-19
Sodium (Na)-Dissolved	d		<50		ug/L		50	19-DEC-19
Thallium (TI)-Dissolved	d		<0.010		ug/L		0.01	19-DEC-19
Uranium (U)-Dissolved	I		<0.010		ug/L		0.01	19-DEC-19
Vanadium (V)-Dissolve	ed		< 0.50		ug/L		0.5	19-DEC-19
Zinc (Zn)-Dissolved			<1.0		ug/L		1	19-DEC-19
WG3245950-5 MS Antimony (Sb)-Dissolve	ed	WG3245950-6	100.9		%		70-130	19-DEC-19
Arsenic (As)-Dissolved	I		114.9		%		70-130	19-DEC-19
Barium (Ba)-Dissolved			N/A	MS-B	%		-	19-DEC-19
Beryllium (Be)-Dissolve	ed		109.4		%		70-130	19-DEC-19
Boron (B)-Dissolved			100.3		%		70-130	19-DEC-19
Cadmium (Cd)-Dissolv	red .		98.7		%		70-130	19-DEC-19
Chromium (Cr)-Dissolv	/ed		109.3		%		70-130	19-DEC-19
Cobalt (Co)-Dissolved			101.4		%		70-130	19-DEC-19
Copper (Cu)-Dissolved	I		93.5		%		70-130	19-DEC-19
Lead (Pb)-Dissolved			93.5		%		70-130	19-DEC-19
Molybdenum (Mo)-Diss	solved		106.1		%		70-130	19-DEC-19
Nickel (Ni)-Dissolved			95.7		%		70-130	19-DEC-19
Selenium (Se)-Dissolv	ed		117.1		%		70-130	19-DEC-19
Silver (Ag)-Dissolved			92.2		%		70-130	19-DEC-19
Sodium (Na)-Dissolved	t		N/A	MS-B	%		-	19-DEC-19
Thallium (TI)-Dissolved	t		94.4		%		70-130	19-DEC-19
Uranium (U)-Dissolved	I		N/A	MS-B	%		-	19-DEC-19
Vanadium (V)-Dissolve	ed		112.2		%		70-130	19-DEC-19
Zinc (Zn)-Dissolved			97.9		%		70-130	19-DEC-19
PAH-511-WT	Water							
Batch R4949666	6							
WG3245881-2 LCS			04.6		0/			
1-Methylnaphthalene			94.6		%		50-140	20-DEC-19
2-Methylnaphthalene			84.5		%		50-140	20-DEC-19



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Water							
Batch R4949666								
WG3245881-2 LCS			100.1		0/			
Acenaphthene			100.4		%		50-140	20-DEC-19
Acenaphthylene			99.8		%		50-140	20-DEC-19
Anthracene			98.4		%		50-140	20-DEC-19
Benzo(a)anthracene			102.2		%		50-140	20-DEC-19
Benzo(a)pyrene			95.3		%		50-140	20-DEC-19
Benzo(b)fluoranthene			95.0		%		50-140	20-DEC-19
Benzo(g,h,i)perylene			101.3		%		50-140	20-DEC-19
Benzo(k)fluoranthene			101.2		%		50-140	20-DEC-19
Chrysene			100.5		%		50-140	20-DEC-19
Dibenzo(ah)anthracene			100.1		%		50-140	20-DEC-19
Fluoranthene			101.8		%		50-140	20-DEC-19
Fluorene			98.6		%		50-140	20-DEC-19
Indeno(1,2,3-cd)pyrene			104.9		%		50-140	20-DEC-19
Naphthalene			90.7		%		50-140	20-DEC-19
Phenanthrene			101.9		%		50-140	20-DEC-19
Pyrene			101.2		%		50-140	20-DEC-19
WG3245881-1 MB 1-Methylnaphthalene			<0.020		ug/L		0.02	20-DEC-19
2-Methylnaphthalene			<0.020		ug/L		0.02	20-DEC-19 20-DEC-19
Acenaphthene			<0.020		ug/L		0.02	20-DEC-19 20-DEC-19
Acenaphthylene			<0.020		ug/L		0.02	20-DEC-19 20-DEC-19
Anthracene			<0.020		ug/L		0.02	20-DEC-19 20-DEC-19
Benzo(a)anthracene			<0.020		ug/L		0.02	20-DEC-19 20-DEC-19
Benzo(a)pyrene			<0.010		ug/L		0.01	20-DEC-19 20-DEC-19
Benzo(b)fluoranthene			<0.020		ug/L		0.02	20-DEC-19 20-DEC-19
Benzo(g,h,i)perylene			<0.020		ug/L		0.02	20-DEC-19 20-DEC-19
Benzo(k)fluoranthene			<0.020		ug/L		0.02	
Chrysene			<0.020		ug/L		0.02	20-DEC-19
Dibenzo(ah)anthracene			<0.020		ug/L		0.02	20-DEC-19
Fluoranthene			<0.020		ug/L		0.02	20-DEC-19
Fluorene							0.02	20-DEC-19
			<0.020		ug/L			20-DEC-19
Indeno(1,2,3-cd)pyrene			<0.020		ug/L		0.02	20-DEC-19
Naphthalene			<0.050		ug/L		0.05	20-DEC-19
Phenanthrene			<0.020		ug/L		0.02	20-DEC-19



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Water							
Batch R4949666								
WG3245881-1 MB			.0.000		//		0.00	
Pyrene	lono		<0.020 85.7		ug/L %		0.02 60-140	20-DEC-19
Surrogate: d8-Naphthal								20-DEC-19
Surrogate: d10-Phenan			91.4		%		60-140	20-DEC-19
Surrogate: d12-Chryser			86.1		%		60-140	20-DEC-19
Surrogate: d10-Acenap	ntnene		92.4		%		60-140	20-DEC-19
PCB-511-WT	Water							
Batch R4949187								
WG3246028-2 LCS Aroclor 1242			104.7		%		60-140	19-DEC-19
Aroclor 1248			92.4		%		60-140	19-DEC-19
Aroclor 1254			109.4		%		60-140	19-DEC-19
Aroclor 1260			116.0		%		60-140	19-DEC-19
WG3246028-1 MB					, ,		00 140	13 DEO 13
Aroclor 1242			<0.020		ug/L		0.02	19-DEC-19
Aroclor 1248			<0.020		ug/L		0.02	19-DEC-19
Aroclor 1254			<0.020		ug/L		0.02	19-DEC-19
Aroclor 1260			<0.020		ug/L		0.02	19-DEC-19
Surrogate: Decachlorob	piphenyl		89.6		%		50-150	19-DEC-19
Surrogate: Tetrachloro-	m-xylene		76.5		%		50-150	19-DEC-19
VOC-511-HS-WT	Water							
Batch R4949168								
WG3243074-4 DUP		WG3243074-3						
1,1,1,2-Tetrachloroetha		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,1,2,2-Tetrachloroetha	ine	<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,1,1-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,1,2-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,1-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,1-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,2-Dibromoethane		<0.20	<0.20	RPD-NA	ug/L	N/A	30	20-DEC-19
1,2-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,2-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,2-Dichloropropane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,3-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,4-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4949168								
WG3243074-4 DUP		WG3243074-			4			
Acetone		<30	<30	RPD-NA	ug/L	N/A	30	20-DEC-19
Benzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Bromodichloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Bromoform		<5.0	<5.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Bromomethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Carbon tetrachloride		<0.20	<0.20	RPD-NA	ug/L	N/A	30	20-DEC-19
Chlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Chloroform		<1.0	<1.0	RPD-NA	ug/L	N/A	30	20-DEC-19
cis-1,2-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
cis-1,3-Dichloropropene		<0.30	< 0.30	RPD-NA	ug/L	N/A	30	20-DEC-19
Dibromochloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Dichlorodifluoromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Ethylbenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
n-Hexane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
m+p-Xylenes		<0.40	<0.40	RPD-NA	ug/L	N/A	30	20-DEC-19
Methyl Ethyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	20-DEC-19
Methyl Isobutyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	20-DEC-19
Methylene Chloride		<5.0	<5.0	RPD-NA	ug/L	N/A	30	20-DEC-19
MTBE		<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-DEC-19
o-Xylene		<0.30	< 0.30	RPD-NA	ug/L	N/A	30	20-DEC-19
Styrene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Tetrachloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Toluene		<0.50	< 0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
trans-1,2-Dichloroethyler	ne	<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
trans-1,3-Dichloropropen	ne	<0.30	< 0.30	RPD-NA	ug/L	N/A	30	20-DEC-19
Trichloroethylene		1.27	1.25		ug/L	1.6	30	20-DEC-19
Trichlorofluoromethane		<5.0	<5.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Vinyl chloride		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
WG3243074-1 LCS	e		90.4		%		70-130	20-DEC-19
1,1,2,2-Tetrachloroethan			91.8		%		70-130	20-DEC-19 20-DEC-19
1,1,1-Trichloroethane			91.6		%			
1,1,2-Trichloroethane			91.0		%		70-130	20-DEC-19
1,1,2-THORIDIOEURANE			91.0		70		70-130	20-DEC-19



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4949168								
WG3243074-1 LCS			00.4		0/			
1,1-Dichloroethane			92.1		%		70-130	20-DEC-19
1,1-Dichloroethylene			88.2		%		70-130	20-DEC-19
1,2-Dibromoethane			93.1		%		70-130	20-DEC-19
1,2-Dichlorobenzene			85.9		%		70-130	20-DEC-19
1,2-Dichloroethane			91.5		%		70-130	20-DEC-19
1,2-Dichloropropane			100.5		%		70-130	20-DEC-19
1,3-Dichlorobenzene			84.8		%		70-130	20-DEC-19
1,4-Dichlorobenzene			84.8		%		70-130	20-DEC-19
Acetone			96.5		%		60-140	20-DEC-19
Benzene			95.2		%		70-130	20-DEC-19
Bromodichloromethane			88.8		%		70-130	20-DEC-19
Bromoform			93.9		%		70-130	20-DEC-19
Bromomethane			83.1		%		60-140	20-DEC-19
Carbon tetrachloride			91.6		%		70-130	20-DEC-19
Chlorobenzene			89.1		%		70-130	20-DEC-19
Chloroform			93.5		%		70-130	20-DEC-19
cis-1,2-Dichloroethylene)		90.3		%		70-130	20-DEC-19
cis-1,3-Dichloropropene			91.3		%		70-130	20-DEC-19
Dibromochloromethane			88.4		%		70-130	20-DEC-19
Dichlorodifluoromethane	e		94.0		%		50-140	20-DEC-19
Ethylbenzene			88.3		%		70-130	20-DEC-19
n-Hexane			87.2		%		70-130	20-DEC-19
m+p-Xylenes			87.9		%		70-130	20-DEC-19
Methyl Ethyl Ketone			90.7		%		60-140	20-DEC-19
Methyl Isobutyl Ketone			92.9		%		60-140	20-DEC-19
Methylene Chloride			90.7		%		70-130	20-DEC-19
MTBE			94.0		%		70-130	20-DEC-19
o-Xylene			88.4		%		70-130	20-DEC-19
Styrene			90.8		%		70-130	20-DEC-19
Tetrachloroethylene			87.6		%		70-130	20-DEC-19
Toluene			89.7		%		70-130	20-DEC-19
trans-1,2-Dichloroethyle	ne		89.5		%		70-130	20-DEC-19
trans-1,3-Dichloroprope			90.6		%		70-130	20-DEC-19



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R49491	68							
WG3243074-1 LCS Trichloroethylene	3		91.7		%		70.400	00 DEO 40
Trichlorofluorometha	20				%		70-130	20-DEC-19
	ile		90.9 104.1		%		60-140	20-DEC-19
Vinyl chloride			104.1		70		60-140	20-DEC-19
WG3243074-2 MB 1,1,1,2-Tetrachloroet			<0.50		ug/L		0.5	20-DEC-19
1,1,2,2-Tetrachloroet			<0.50		ug/L		0.5	20-DEC-19
1,1,1-Trichloroethane			<0.50		ug/L		0.5	20-DEC-19
1,1,2-Trichloroethane			<0.50		ug/L		0.5	20-DEC-19
1,1-Dichloroethane			<0.50		ug/L		0.5	20-DEC-19
1,1-Dichloroethylene			<0.50		ug/L		0.5	20-DEC-19
1,2-Dibromoethane			<0.20		ug/L		0.2	20-DEC-19
1,2-Dichlorobenzene			<0.50		ug/L		0.5	20-DEC-19
1,2-Dichloroethane			<0.50		ug/L		0.5	20-DEC-19
1,2-Dichloropropane			<0.50		ug/L		0.5	20-DEC-19
1,3-Dichlorobenzene			<0.50		ug/L		0.5	20-DEC-19
1,4-Dichlorobenzene			<0.50		ug/L		0.5	20-DEC-19
Acetone			<30		ug/L		30	20-DEC-19
Benzene			<0.50		ug/L		0.5	20-DEC-19
Bromodichlorometha	ne		<2.0		ug/L		2	20-DEC-19
Bromoform			<5.0		ug/L		5	20-DEC-19
Bromomethane			< 0.50		ug/L		0.5	20-DEC-19
Carbon tetrachloride			<0.20		ug/L		0.2	20-DEC-19
Chlorobenzene			<0.50		ug/L		0.5	20-DEC-19
Chloroform			<1.0		ug/L		1	20-DEC-19
cis-1,2-Dichloroethyle	ene		<0.50		ug/L		0.5	20-DEC-19
cis-1,3-Dichloroprope	ene		<0.30		ug/L		0.3	20-DEC-19
Dibromochlorometha	ne		<2.0		ug/L		2	20-DEC-19
Dichlorodifluorometh	ane		<2.0		ug/L		2	20-DEC-19
Ethylbenzene			<0.50		ug/L		0.5	20-DEC-19
n-Hexane			<0.50		ug/L		0.5	20-DEC-19
m+p-Xylenes			<0.40		ug/L		0.4	20-DEC-19
Methyl Ethyl Ketone			<20		ug/L		20	20-DEC-19
Methyl Isobutyl Ketor	ne		<20		ug/L		20	20-DEC-19
Methylene Chloride			<5.0		ug/L		5	20-DEC-19



Workorder: L2398115 Report Date: 27-DEC-19 Page 9 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4949	168							
WG3243074-2 M MTBE	В		.0.0		/		0	
			<2.0		ug/L		2	20-DEC-19
o-Xylene			<0.30		ug/L		0.3	20-DEC-19
Styrene			<0.50		ug/L		0.5	20-DEC-19
Tetrachloroethylene	•		<0.50		ug/L		0.5	20-DEC-19
Toluene	the dama		<0.50		ug/L		0.5	20-DEC-19
trans-1,2-Dichloroe	-		<0.50		ug/L		0.5	20-DEC-19
trans-1,3-Dichlorop	ropene		<0.30		ug/L		0.3	20-DEC-19
Trichloroethylene			<0.50		ug/L		0.5	20-DEC-19
Trichlorofluorometh	ane		<5.0		ug/L		5	20-DEC-19
Vinyl chloride			<0.50		ug/L		0.5	20-DEC-19
Surrogate: 1,4-Diflu			93.6		%		70-130	20-DEC-19
Surrogate: 4-Bromo			92.4		%		70-130	20-DEC-19
WG3243074-5 M : 1,1,1,2-Tetrachloro		WG3243074-3	91.5		%		50-140	23-DEC-19
1,1,2,2-Tetrachloro	ethane		91.3		%		50-140	23-DEC-19
1,1,1-Trichloroethar	ne		92.7		%		50-140	23-DEC-19
1,1,2-Trichloroethar	ne		95.7		%		50-140	23-DEC-19
1,1-Dichloroethane			87.1		%		50-140	23-DEC-19
1,1-Dichloroethylen	e		84.8		%		50-140	23-DEC-19
1,2-Dibromoethane			96.8		%		50-140	23-DEC-19
1,2-Dichlorobenzen	е		82.4		%		50-140	23-DEC-19
1,2-Dichloroethane			97.3		%		50-140	23-DEC-19
1,2-Dichloropropan	е		95.5		%		50-140	23-DEC-19
1,3-Dichlorobenzen	е		82.3		%		50-140	23-DEC-19
1,4-Dichlorobenzen	е		78.8		%		50-140	23-DEC-19
Acetone			106.3		%		50-140	23-DEC-19
Benzene			94.5		%		50-140	23-DEC-19
Bromodichlorometh	ane		94.0		%		50-140	23-DEC-19
Bromoform			95.2		%		50-140	23-DEC-19
Bromomethane			81.7		%		50-140	23-DEC-19
Carbon tetrachloride	е		89.9		%		50-140	23-DEC-19
Chlorobenzene			88.5		%		50-140	23-DEC-19
Chloroform			93.9		%		50-140	23-DEC-19
cis-1,2-Dichloroethy	/lene		88.6		%		50-140	23-DEC-19
ĺ								



Workorder: L2398115 Report Date: 27-DEC-19 Page 10 of 11

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test M	latrix (Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT V	Nater							
Batch R4949168								
WG3243074-5 MS		WG3243074-3						
cis-1,3-Dichloropropene			86.4		%		50-140	23-DEC-19
Dibromochloromethane			93.4		%		50-140	23-DEC-19
Dichlorodifluoromethane			71.7		%		50-140	23-DEC-19
Ethylbenzene			85.7		%		50-140	23-DEC-19
n-Hexane			81.7		%		50-140	23-DEC-19
m+p-Xylenes			84.8		%		50-140	23-DEC-19
Methyl Ethyl Ketone			93.6		%		50-140	23-DEC-19
Methyl Isobutyl Ketone			96.9		%		50-140	23-DEC-19
Methylene Chloride			93.7		%		50-140	23-DEC-19
MTBE			90.2		%		50-140	23-DEC-19
o-Xylene			87.0		%		50-140	23-DEC-19
Styrene			88.4		%		50-140	23-DEC-19
Tetrachloroethylene			83.4		%		50-140	23-DEC-19
Toluene			89.0		%		50-140	23-DEC-19
trans-1,2-Dichloroethylene			77.8		%		50-140	23-DEC-19
trans-1,3-Dichloropropene			85.4		%		50-140	23-DEC-19
Trichloroethylene			87.3		%		50-140	23-DEC-19
Trichlorofluoromethane			87.8		%		50-140	23-DEC-19
Vinyl chloride			100.1		%		50-140	23-DEC-19

Workorder: L2398115 Report Date: 27-DEC-19

Client: TERRAPROBE-BRAMPTON Page 11 of 11

11 Indell Lane

Brampton ON L6T 3Y3 Kossay Makhzoumi

Legend:

Contact:

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
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
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.

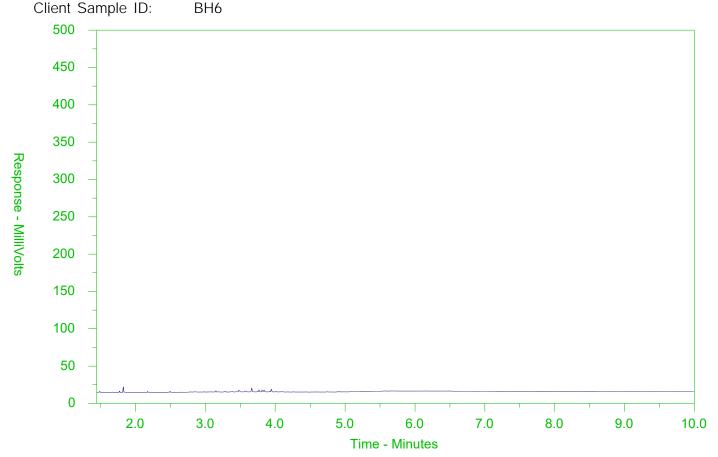
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined data quality objectives to provide 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: L2398115-1



← -F2-	→ ←	—F3—→ ← —F4—	→	
nC10	nC16	nC34	nC50	
174°C	287°C	481°C	575°C	
346°F	549°F	898°F	1067°F	
Gasolin	ıe →	← Mot	or Oils/Lube Oils/Grease——	
←	-Diesel/Je	t 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.

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Chain of Custody (COC) / Analyti **Request Form**



L2398115-COFC

COC Number: 15 -

(ALS)	www.alsglobal.com	Canada To	II Free: 1 800 6	68 9878	L239	18115-COFC	•													
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Contact:	Kossay Makhzoumi		Quality Control	(QC) Report with Re	port 🗹 YES	□ NO	<u></u>	4	day [F	4]			ţ	1	Busi	ness	day [E	:1]		
Phone:	905-796-2650		☑ Compare Resu	lts to Criteria on Report	provide details belo	ow if box checked	PORUT.	3	3 day [P3]				RGE	s	same	Day,	Week	end or		П
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Street:	11 Indell Lane		Email 1 or Fax	kmakhzoumi@terr	aprobe.ca			Date a	nd Time	Require	d for a	ii E&P	TATs:							
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ALS Lab Wo	rk Order# (lab use only)	L2398115RD	ALS Contact:		Sampler:		letals and Inorganics		Hyride Forming Metals						ticides					2
ALS Sample # (lab use only)	-	e Identification and/or Coordinates description will appear on the report)		Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	Aetals a	Metals	lyride F	ပ္သ	SAR	PAH	200	报	OC Pesticides	PCBs				
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TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 28-FEB-20

Report Date: 05-MAR-20 10:58 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2422396

Project P.O. #: NOT SUBMITTED

Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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L2422396 CONT'D....

Job Reference: 1-19-0603-42

PAGE 2 of 15

05-MAR-20 10:58 (MT)

Summary of Guideline Exceedances

Guideline						
ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit
Ontario Reg	gulation 153/04	- April 15, 2011 Standards - T3-Non-Potable Gi	ound Water-All Types	of Property Uses (Coarse)		
L2422396-1	DUP 5	Anions and Nutrients	Chloride (CI)	2900	2300	mg/L
Ontario Reg	gulation 153/04	- April 15, 2011 Standards - T3-Non-Potable G	ound Water-All Types	of Property Uses (Fine)		
L2422396-1	DUP 5	Anions and Nutrients	Chloride (CI)	2900	2300	mg/L

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2422396 CONT'D....

Job Reference: 1-19-0603-42

PAGE 3 of 15

05-MAR-20 10:58 (MT)

Physical Tests - WATER

			Lab ID	L2422396-1
	5	Sampl	e Date	27-FEB-20
		San	nple ID	DUP 5
		Guide	Limits	
Analyte	Unit	Guide #1	Limits #2	
Analyte Conductivity				7.85
-	Unit			7.85 7.28

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2422396 CONT'D....

Job Reference: 1-19-0603-42

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Anions and Nutrients - WATER

Alliono ana italiicillo	**/				
			L	_ab ID	L2422396-1
			Sample	e Date	27-FEB-20
			Sam	ple ID	DUP 5
Analyte		Unit	Guide #1	Limits #2	
Chloride (CI)		mg/L	2300	2300	2900 DLHC

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2422396 CONT'D....

Job Reference: 1-19-0603-42

PAGE 5 of 15

05-MAR-20 10:58 (MT)

Cyanides - WATER

Gyannado III/II En	
	Lab ID L2422396-1
	Sample Date 27-FEB-20
	Sample ID DUP 5
Analyte	Guide Limits Unit #1 #2
Cyanide, Weak Acid Diss	ug/L 66 66 <2.0

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2422396 CONT'D....

Job Reference: 1-19-0603-42

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Dissolved Metals - WATER

		Sample	ab ID Date ple ID	L2422396-1 27-FEB-20 DUP 5
Analyte	Unit	Guide #1	Limits #2	
Dissolved Mercury Filtration Location		-	-	FIELD
Dissolved Metals Filtration Location		-	-	FIELD
Antimony (Sb)-Dissolved	ug/L	20000	20000	<1.0 DLHC
Arsenic (As)-Dissolved	ug/L	1900	1900	<1.0 DLHC
Barium (Ba)-Dissolved	ug/L	29000	29000	102 DLHC
Beryllium (Be)-Dissolved	ug/L	67	67	<1.0 DLHC
Boron (B)-Dissolved	ug/L	45000	45000	100 DLHC
Cadmium (Cd)-Dissolved	ug/L	2.7	2.7	<0.050 ^{DLHC}
Chromium (Cr)-Dissolved	ug/L	810	810	<5.0 DLHC
Cobalt (Co)-Dissolved	ug/L	66	66	<1.0 DLHC
Copper (Cu)-Dissolved	ug/L	87	87	<2.0 DLHC
Lead (Pb)-Dissolved	ug/L	25	25	<0.50 DLHC
Mercury (Hg)-Dissolved	ug/L	0.29	2.8	<0.0050
Molybdenum (Mo)-Dissolved	ug/L	9200	9200	5.76 DLHC
Nickel (Ni)-Dissolved	ug/L	490	490	<5.0 DLHC
Selenium (Se)-Dissolved	ug/L	63	63	<0.50 DLHC
Silver (Ag)-Dissolved	ug/L	1.5	1.5	<0.50 DLHC
Sodium (Na)-Dissolved	ug/L	2300000	2300000	1320000 ^{LHC}
Thallium (TI)-Dissolved	ug/L	510	510	<0.10 DLHC
Uranium (U)-Dissolved	ug/L	420	420	1.61 DLHC
Vanadium (V)-Dissolved	ug/L	250	250	<5.0 DLHC
Zinc (Zn)-Dissolved	ug/L	1100	1100	<10 DLHC

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2422396 CONT'D....

Job Reference: 1-19-0603-42

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05-MAR-20 10:58 (MT)

Speciated Metals - WATER

	Lab ID L242239	6-1
	Sample Date 27-FEB-	20
	Sample ID DUP 5	5
	Guide Limits	
Analyte	Guide Limits Unit #1 #2	

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



Styrene

ANALYTICAL REPORT

L2422396 CONT'D.... Job Reference: 1-19-0603-42 PAGE 8 of 15 05-MAR-20 10:58 (MT)

Volatile Organic Compound	ls - WATER				
		Lab ID Sample Date Sample ID		L2422396-1 27-FEB-20 DUP 5	
Analyte	Unit	Guide #1	Limits #2		
Acetone	ug/L	130000	130000	<30	
Benzene	ug/L	44	430	<0.50	
Bromodichloromethane	ug/L	85000	85000	<2.0	
Bromoform	ug/L	380	770	<5.0	
Bromomethane	ug/L	5.6	56	<0.50	
Carbon tetrachloride	ug/L	0.79	8.4	<0.20	
Chlorobenzene	ug/L	630	630	<0.50	
Dibromochloromethane	ug/L	82000	82000	<2.0	
Chloroform	ug/L	2.4	22	<1.0	
1,2-Dibromoethane	ug/L	0.25	0.83	<0.20	
1,2-Dichlorobenzene	ug/L	4600	9600	<0.50	
1,3-Dichlorobenzene	ug/L	9600	9600	<0.50	
1,4-Dichlorobenzene	ug/L	8	67	<0.50	
Dichlorodifluoromethane	ug/L	4400	4400	<2.0	
1,1-Dichloroethane	ug/L	320	3100	<0.50	
1,2-Dichloroethane	ug/L	1.6	12	<0.50	
1,1-Dichloroethylene	ug/L	1.6	17	<0.50	
cis-1,2-Dichloroethylene	ug/L	1.6	17	<0.50	
trans-1,2-Dichloroethylene	ug/L	1.6	17	<0.50	
Methylene Chloride	ug/L	610	5500	<5.0	
1,2-Dichloropropane	ug/L	16	140	<0.50	
cis-1,3-Dichloropropene	ug/L	-	-	<0.30	
trans-1,3-Dichloropropene	ug/L	-	-	<0.30	
1,3-Dichloropropene (cis & trans)	ug/L	5.2	45	<0.50	
Ethylbenzene	ug/L	2300	2300	<0.50	
n-Hexane	ug/L	51	520	<0.50	
Methyl Ethyl Ketone	ug/L	470000	1500000	<20	
Methyl Isobutyl Ketone	ug/L	140000	580000	<20	
MTBE	ug/L	190	1400	<2.0	
04		4000	0400		

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

ug/L

1300 9100

< 0.50

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2422396 CONT'D....

Job Reference: 1-19-0603-42

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05-MAR-20 10:58 (MT)

Volatile Organic Compounds - WATER

Volatile Organic Compound	S - WAIER			
		L	_ab ID	L2422396-1
		Sample	e Date	27-FEB-20
		Sam	ple ID	DUP 5
		Cuida	l imita	
	11:4	Guide		
Analyte	Unit	#1	#2	
1,1,1,2-Tetrachloroethane	ug/L	3.3	28	<0.50
1,1,2,2-Tetrachloroethane	ug/L	3.2	15	<0.50
Tetrachloroethylene	ug/L	1.6	17	<0.50
Toluene	ug/L	18000	18000	<0.50
1,1,1-Trichloroethane	ug/L	640	6700	<0.50
1,1,2-Trichloroethane	ug/L	4.7	30	<0.50
Trichloroethylene	ug/L	1.6	17	<0.50
Trichlorofluoromethane	ug/L	2500	2500	<5.0
Vinyl chloride	ug/L	0.5	1.7	<0.50
o-Xylene	ug/L	-	-	<0.30
m+p-Xylenes	ug/L	-	-	<0.40
Xylenes (Total)	ug/L	4200	4200	<0.50
Surrogate: 4-Bromofluorobenzene	%	-	-	95.4
Surrogate: 1,4-Difluorobenzene	%	-	-	102.4

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Hydrocarbons - WATER

Hydrocarbons - WATER				1.0400006.4
			Lab ID	L2422396-1
		•	e Date	27-FEB-20
		Sam	ple ID	DUP 5
		Guide	Limits	
Analyte	Unit	#1	#2	
F1 (C6-C10)	ug/L	750	750	<25
F1-BTEX	ug/L	750	750	<25
F2 (C10-C16)	ug/L	150	150	<100
F2-Naphth	ug/L	-	-	<100
F3 (C16-C34)	ug/L	500	500	<250
F3-PAH	ug/L	-	-	<250
F4 (C34-C50)	ug/L	500	500	<250
Total Hydrocarbons (C6-C50)	ug/L	-	-	<370
Chrom. to baseline at nC50		-	-	YES
Surrogate: 2-Bromobenzotrifluoride	%	-	-	97.7
Surrogate: 3,4-Dichlorotoluene	%	-	-	72.3

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2422396 CONT'D....

Job Reference: 1-19-0603-42

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Polycyclic Aromatic Hydrocarbons - WATER

 Lab ID
 L2422396-1

 Sample Date
 27-FEB-20

 Sample ID
 DUP 5

		Guide	Limits	
Analyte	Unit	#1	#2	
Acenaphthene	ug/L	600	1700	<0.020
Acenaphthylene	ug/L	1.8	1.8	0.026 R
Anthracene	ug/L	2.4	2.4	<0.020
Benzo(a)anthracene	ug/L	4.7	4.7	<0.020
Benzo(a)pyrene	ug/L	0.81	0.81	<0.010
Benzo(b)fluoranthene	ug/L	0.75	0.75	<0.020
Benzo(g,h,i)perylene	ug/L	0.2	0.2	<0.020
Benzo(k)fluoranthene	ug/L	0.4	0.4	<0.020
Chrysene	ug/L	1	1	<0.020
Dibenzo(ah)anthracene	ug/L	0.52	0.52	<0.020
Fluoranthene	ug/L	130	130	0.023
Fluorene	ug/L	400	400	<0.020
Indeno(1,2,3-cd)pyrene	ug/L	0.2	0.2	<0.020
1+2-Methylnaphthalenes	ug/L	1800	1800	0.082
1-Methylnaphthalene	ug/L	1800	1800	0.035
2-Methylnaphthalene	ug/L	1800	1800	0.046
Naphthalene	ug/L	1400	6400	<0.050
Phenanthrene	ug/L	580	580	0.028
Pyrene	ug/L	68	68	0.023
Surrogate: d10-Acenaphthene	%	-	-	93.0
Surrogate: d12-Chrysene	%	-	-	83.5
Surrogate: d8-Naphthalene	%	-	-	96.4
Surrogate: d10-Phenanthrene	%	-	-	101.2

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Job Reference: 1-19-0603-42

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Polychlorinated Biphenyls - WATER

		Sampl	Lab ID e Date iple ID	L2422396-1 27-FEB-20 DUP 5
Analyte	Unit	Guide #1	Limits #2	
Aroclor 1242	ug/L	-	-	<0.020
Aroclor 1248	ug/L	-	-	<0.020
Aroclor 1254	ug/L	-	-	<0.020
Aroclor 1260	ug/L	-	-	<0.020
Surrogate: Decachlorobiphenyl	%	-	-	94.0
Total PCBs	ug/L	7.8	15	<0.040
Surrogate: Tetrachloro-m-xylene	%	-	-	91.1

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.

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Qualifiers for Individual Parameters Listed:

Qualifier Description

R The ion abundance ratio(s) did not meet the acceptance criteria. Value is an estimated maximum.

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**

CL-IC-N-WT Water Chloride by IC EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

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).

CN-WAD-R511-WT Water Cyanide (WAD)-O.Reg 153/04 APHA 4500CN I-Weak acid Dist Colorimet

Weak acid dissociable cyanide (WAD) is determined by undergoing a distillation procedure. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

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-R511-WT Water Hex Chrom-O.Reg 153/04 (July 2011) EPA 7199

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. Chromium (III) is calculated as the difference between the total chromium and the chromium (VI) results.

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-R511-WT Water Conductivity-O.Reg 153/04 (July 2011) APHA 2510 B

Water samples can be measured directly by immersing the conductivity cell into 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).

EC-SCREEN-WT Water Conductivity Screen (Internal Use APHA 2510

Only)

Qualitative analysis of conductivity where required during preparation of other tests - e.g. TDS, metals, etc.

F1-F4-511-CALC-WT Water F1-F4 Hydrocarbon Calculated CCME CWS-PHC, Pub #1310, Dec 2001-L

Parameters

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

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.

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Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

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 Water F1-O.Reg 153/04 (July 2011)

Fraction F1 is determined by 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).

E3398/CCME TIER 1-HS

F2-F4-511-WT Water F2-F4-O.Reg 153/04 (July 2011) EPA 3511/CCME Tier 1

Petroleum Hydrocarbons (F2-F4 fractions) are extracted from water using a hexane micro-extraction technique. Instrumental analysis is by GC-FID, as per the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Tier 1 Method, CCME, 2001.

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-D-UG/L-CVAA-WT Water Diss. Mercury in Water by CVAAS EPA 1631E (mod)

(ug/L)

Water samples are filtered (0.45 um), preserved with hydrochloric acid, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed 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-D-UG/L-MS-WT Water Diss. Metals in Water by ICPMS (ug/L) EPA 200.8

The metal constituents of a non-acidified sample that pass through a membrane filter prior to ICP/MS analysis.

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 Water PAH-Calculated Parameters SW846 8270

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

Aqueous samples, fortified with surrogates, are extracted using liquid/liquid extraction technique. The sample extracts are concentrated and then analyzed using 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 Water PCB-O. Reg 153/04 (July 2011) SW846 3510/8082

Aqueous samples are extracted, then concentrated, reconstituted, and analyzed by 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 Water pH APHA 4500 H-Electrode

Water samples are analyzed directly by a calibrated pH 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). Holdtime for samples under this regulation is 28 days

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Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

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

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

Liquid samples are analyzed by headspace GC/MSD.

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 Water 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

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: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CL-IC-N-WT	Water							
Batch R5013226								
WG3284708-13 DUP Chloride (CI)		WG3284708-1 5.54	5 5.54		mg/L	0.0	20	02-MAR-20
WG3284708-12 LCS Chloride (Cl)			103.9		%		90-110	02-MAR-20
WG3284708-11 MB Chloride (Cl)			<0.50		mg/L		0.5	02-MAR-20
WG3284708-14 MS Chloride (Cl)		WG3284708-1	5 99.1		%		75-125	02-MAR-20
CN-WAD-R511-WT	Water							
Batch R5013229								
WG3284843-3 DUP Cyanide, Weak Acid Dis	s	L2422396-1 <2.0	<2.0	RPD-NA	ug/L	N/A	20	02-MAR-20
WG3284843-2 LCS Cyanide, Weak Acid Dis	s		100.0		%		80-120	02-MAR-20
WG3284843-1 MB Cyanide, Weak Acid Dis	s		<2.0		ug/L		2	02-MAR-20
CR-CR6-IC-R511-WT	Water							
Batch R5012632								
WG3284757-4 DUP Chromium, Hexavalent		WG3284757-3 <0.50	<0.50	RPD-NA	ug/L	N/A	20	02-MAR-20
WG3284757-2 LCS Chromium, Hexavalent			99.4		%		80-120	02-MAR-20
WG3284757-1 MB Chromium, Hexavalent			<0.50		ug/L		0.5	02-MAR-20
WG3284757-5 MS Chromium, Hexavalent		WG3284757-3	96.0		%		70-130	02-MAR-20
EC-R511-WT	Water							
Batch R5012946								
WG3284273-4 DUP Conductivity		WG3284273-3 0.622	0.625		mS/cm	0.5	10	29-FEB-20
WG3284273-2 LCS Conductivity			100.5		%		90-110	29-FEB-20
WG3284273-1 MB Conductivity			<0.0030		mS/cm		0.003	29-FEB-20
F1-HS-511-WT	Water							



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test		Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT		Water							
WG3282676-4 F1 (C6-C10)	012001 DUP		WG3282676-3 <25	<25	RPD-NA	ug/L	N/A	30	02-MAR-20
WG3282676-1 F1 (C6-C10)	LCS			91.3		%		80-120	02-MAR-20
WG3282676-2 F1 (C6-C10)	MB			<25		ug/L		25	02-MAR-20
Surrogate: 3,4-D	ichloroto	oluene		101.5		%		60-140	02-MAR-20
WG3282676-5 F1 (C6-C10)	MS		WG3282676-3	81.5		%		60-140	02-MAR-20
F2-F4-511-WT		Water							
Batch R50	12153								
WG3284543-2 F2 (C10-C16)	LCS			104.8		%		70-130	02-MAR-20
F3 (C16-C34)				104.1		%		70-130	02-MAR-20
F4 (C34-C50)				110.9		%		70-130	02-MAR-20
WG3284543-1 F2 (C10-C16)	MB			<100		ug/L		100	02-MAR-20
F3 (C16-C34)				<250		ug/L		250	02-MAR-20
F4 (C34-C50)				<250		ug/L		250	02-MAR-20
Surrogate: 2-Bro	mobenz	otrifluoride		102.4		%		60-140	02-MAR-20
HG-D-UG/L-CVAA-V	ντ	Water							
Batch R50)12117								
WG3284635-3 Mercury (Hg)-Dis	DUP ssolved		L2422396-1 <0.0050	<0.0050	RPD-NA	ug/L	N/A	20	02-MAR-20
WG3284635-2 Mercury (Hg)-Dis	LCS ssolved			108.0		%		80-120	02-MAR-20
WG3284635-1 Mercury (Hg)-Dis	MB ssolved			<0.0050		ug/L		0.005	02-MAR-20
WG3284635-4 Mercury (Hg)-Dis	MS ssolved		L2422401-1	102.5		%		70-130	02-MAR-20
MET-D-UG/L-MS-W	т	Water							
Batch R50)12163								
WG3284562-4 Antimony (Sb)-D	DUP issolved	l	WG3284562-3 <1.0	<1.0	RPD-NA	ug/L	N/A	20	02-MAR-20
Arsenic (As)-Dis	solved		2.5	2.5		ug/L	1.5	20	02-MAR-20
Barium (Ba)-Diss	solved		30.0	30.2		ug/L	0.7	20	02-MAR-20



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test Ma	atrix Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT Wa	ater						
Batch R5012163							
WG3284562-4 DUP	WG3284562-		000 114	/1	N 1/A	00	
Beryllium (Be)-Dissolved	<1.0	<1.0	RPD-NA	ug/L	N/A	20	02-MAR-20
Boron (B)-Dissolved	550	550		ug/L	0.8	20	02-MAR-20
Cadmium (Cd)-Dissolved	0.608	0.723		ug/L	17	20	02-MAR-20
Chromium (Cr)-Dissolved	<5.0	<5.0	RPD-NA	ug/L	N/A	20	02-MAR-20
Cobalt (Co)-Dissolved	6.9	7.1		ug/L	2.8	20	02-MAR-20
Copper (Cu)-Dissolved	4.0	4.0		ug/L	0.5	20	02-MAR-20
Lead (Pb)-Dissolved	<0.50	<0.50	RPD-NA	ug/L	N/A	20	02-MAR-20
Molybdenum (Mo)-Dissolved		51.9		ug/L	4.3	20	02-MAR-20
Nickel (Ni)-Dissolved	7.4	7.3		ug/L	1.4	20	02-MAR-20
Selenium (Se)-Dissolved	0.83	0.90		ug/L	8.1	20	02-MAR-20
Silver (Ag)-Dissolved	<0.50	<0.50	RPD-NA	ug/L	N/A	20	02-MAR-20
Sodium (Na)-Dissolved	117000	117000		ug/L	0.3	20	02-MAR-20
Thallium (TI)-Dissolved	0.13	0.13		ug/L	4.2	20	02-MAR-20
Uranium (U)-Dissolved	13.9	14.1		ug/L	1.1	20	02-MAR-20
Vanadium (V)-Dissolved	<5.0	<5.0	RPD-NA	ug/L	N/A	20	02-MAR-20
Zinc (Zn)-Dissolved	14	14	J	ug/L	11	20	02-MAR-20
WG3284562-2 LCS Antimony (Sb)-Dissolved		93.7		%		80-120	02-MAR-20
Arsenic (As)-Dissolved		95.3		%		80-120	02-MAR-20
Barium (Ba)-Dissolved		100.3		%		80-120	02-MAR-20
Beryllium (Be)-Dissolved		91.9		%		80-120	02-MAR-20
Boron (B)-Dissolved		92.0		%		80-120	02-MAR-20
Cadmium (Cd)-Dissolved		94.8		%		80-120	02-MAR-20
Chromium (Cr)-Dissolved		91.3		%		80-120	02-MAR-20
Cobalt (Co)-Dissolved		88.8		%		80-120	02-MAR-20
Copper (Cu)-Dissolved		85.9		%		80-120	02-MAR-20
Lead (Pb)-Dissolved		97.7		%		80-120	02-MAR-20
Molybdenum (Mo)-Dissolved	1	95.1		%		80-120	02-MAR-20
Nickel (Ni)-Dissolved		90.1		%		80-120	02-MAR-20
Selenium (Se)-Dissolved		91.7		%		80-120	02-MAR-20
Silver (Ag)-Dissolved		95.7		%		80-120	02-MAR-20
Sodium (Na)-Dissolved		92.6		%		80-120	02-MAR-20
Thallium (TI)-Dissolved		96.8		%		80-120	02-MAR-20



Workorder: L2422396 Report Date: 05-MAR-20 Page 4 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R50121	63							
WG3284562-2 LC	_							
Uranium (U)-Dissolv			95.1		%		80-120	02-MAR-20
Vanadium (V)-Dissol	ved		94.7		%		80-120	02-MAR-20
Zinc (Zn)-Dissolved			92.4		%		80-120	02-MAR-20
WG3284562-1 MB			0.40				0.4	
Antimony (Sb)-Disso			<0.10		ug/L		0.1	02-MAR-20
Arsenic (As)-Dissolv			<0.10		ug/L		0.1	02-MAR-20
Barium (Ba)-Dissolve			<0.10		ug/L		0.1	02-MAR-20
Beryllium (Be)-Disso	ived		<0.10		ug/L		0.1	02-MAR-20
Boron (B)-Dissolved			<10		ug/L		10	02-MAR-20
Cadmium (Cd)-Disso			<0.0050		ug/L		0.005	02-MAR-20
Chromium (Cr)-Disso			<0.50		ug/L		0.5	02-MAR-20
Cobalt (Co)-Dissolve			<0.10		ug/L		0.1	02-MAR-20
Copper (Cu)-Dissolv	ed		<0.20		ug/L		0.2	02-MAR-20
Lead (Pb)-Dissolved			<0.050		ug/L		0.05	02-MAR-20
Molybdenum (Mo)-D			<0.050		ug/L		0.05	02-MAR-20
Nickel (Ni)-Dissolved			<0.50		ug/L		0.5	02-MAR-20
Selenium (Se)-Disso			<0.050		ug/L		0.05	02-MAR-20
Silver (Ag)-Dissolved			<0.050		ug/L		0.05	02-MAR-20
Sodium (Na)-Dissolv			<50		ug/L		50	02-MAR-20
Thallium (TI)-Dissolv			<0.010		ug/L		0.01	02-MAR-20
Uranium (U)-Dissolv	ed		<0.010		ug/L		0.01	02-MAR-20
Vanadium (V)-Dissol	ved		<0.50		ug/L		0.5	02-MAR-20
Zinc (Zn)-Dissolved			<1.0		ug/L		1	02-MAR-20
WG3284562-5 MS		WG3284562-3						
Antimony (Sb)-Disso			91.5		%		70-130	02-MAR-20
Arsenic (As)-Dissolv			90.5		%		70-130	02-MAR-20
Barium (Ba)-Dissolve			N/A	MS-B	%		-	02-MAR-20
Beryllium (Be)-Disso	ived		88.4		%		70-130	02-MAR-20
Boron (B)-Dissolved			N/A	MS-B	%		-	02-MAR-20
Cadmium (Cd)-Disso			79.1		%		70-130	02-MAR-20
Chromium (Cr)-Disse			87.0		%		70-130	02-MAR-20
Lead (Pb)-Dissolved			89.7		%		70-130	02-MAR-20
Molybdenum (Mo)-D			N/A	MS-B	%		-	02-MAR-20
Selenium (Se)-Disso	lved		90.1		%		70-130	02-MAR-20



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R5012163								
WG3284562-5 MS		WG3284562-3			0/			
Silver (Ag)-Dissolved			92.7	MO 5	%		70-130	02-MAR-20
Sodium (Na)-Dissolved			N/A	MS-B	%		-	02-MAR-20
Thallium (TI)-Dissolved			91.5		%		70-130	02-MAR-20
Uranium (U)-Dissolved			N/A	MS-B	%		-	02-MAR-20
Vanadium (V)-Dissolved			91.3		%		70-130	02-MAR-20
PAH-511-WT	Water							
Batch R5013129								
WG3284543-2 LCS 1-Methylnaphthalene			90.8		%		50-140	03-MAR-20
2-Methylnaphthalene			87.7		%		50-140	03-MAR-20
Acenaphthene			98.0		%		50-140	03-MAR-20
Acenaphthylene			101.4		%		50-140	03-MAR-20
Anthracene			100.6		%		50-140	03-MAR-20
Benzo(a)anthracene			113.5		%		50-140	03-MAR-20
Benzo(a)pyrene			89.1		%		50-140	03-MAR-20
Benzo(b)fluoranthene			80.8		%		50-140	03-MAR-20
Benzo(g,h,i)perylene			100.4		%		50-140	03-MAR-20
Benzo(k)fluoranthene			92.6		%		50-140	03-MAR-20
Chrysene			106.2		%		50-140	03-MAR-20
Dibenzo(ah)anthracene			104.7		%		50-140	03-MAR-20
Fluoranthene			104.3		%		50-140	03-MAR-20
Fluorene			99.8		%		50-140	03-MAR-20
Indeno(1,2,3-cd)pyrene			114.0		%		50-140	03-MAR-20
Naphthalene			95.0		%		50-140	03-MAR-20
Phenanthrene			104.3		%		50-140	03-MAR-20
Pyrene			103.4		%		50-140	03-MAR-20
WG3284543-1 MB								
1-Methylnaphthalene			<0.020		ug/L		0.02	03-MAR-20
2-Methylnaphthalene			<0.020		ug/L		0.02	03-MAR-20
Acenaphthene			<0.020		ug/L		0.02	03-MAR-20
Acenaphthylene			<0.020		ug/L		0.02	03-MAR-20
Anthracene			<0.020		ug/L		0.02	03-MAR-20
Benzo(a)anthracene			<0.020		ug/L		0.02	03-MAR-20
Benzo(a)pyrene			<0.010		ug/L		0.01	03-MAR-20



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Water							
	5013129							
WG3284543-1 Benzo(b)fluora	MB		<0.020		ug/l		0.02	00 MAD 00
Benzo(g,h,i)pe			<0.020		ug/L ug/L		0.02	03-MAR-20
			<0.020		•		0.02	03-MAR-20
Benzo(k)fluora	antinene		<0.020		ug/L		0.02	03-MAR-20
Chrysene Dibonzo(oh)or	athragana				ug/L		0.02	03-MAR-20
Dibenzo(ah)ar	imacene		<0.020		ug/L			03-MAR-20
Fluoranthene			<0.020		ug/L		0.02	03-MAR-20
Fluorene			<0.020		ug/L		0.02	03-MAR-20
Indeno(1,2,3-c	cd)pyrene		<0.020		ug/L		0.02	03-MAR-20
Naphthalene			<0.050		ug/L		0.05	03-MAR-20
Phenanthrene			<0.020		ug/L		0.02	03-MAR-20
Pyrene			<0.020		ug/L		0.02	03-MAR-20
Surrogate: d8-			107.4		%		60-140	03-MAR-20
Surrogate: d10	0-Phenanthrene		104.5		%		60-140	03-MAR-20
Surrogate: d12	2-Chrysene		98.3		%		60-140	03-MAR-20
Surrogate: d10	0-Acenaphthene		103.6		%		60-140	03-MAR-20
PCB-511-WT	Water							
Batch R	5014166							
WG3284619-2	LCS		95.7		0/		00.440	04.144.D.00
Aroclor 1242					%		60-140	04-MAR-20
Aroclor 1248 Aroclor 1254			110.9 95.8		%		60-140	04-MAR-20
					%		60-140	04-MAR-20
Aroclor 1260			115.6		70		60-140	04-MAR-20
WG3284619-1 Aroclor 1242	МВ		<0.020		ug/L		0.02	04-MAR-20
Aroclor 1248			<0.020		ug/L		0.02	04-MAR-20
Aroclor 1254			<0.020		ug/L		0.02	04-MAR-20
Aroclor 1260			<0.020		ug/L		0.02	04-MAR-20
Surrogate: De	cachlorobiphenyl		120.1		%		50-150	04-MAR-20
_	trachloro-m-xylene		74.1		%		50-150	04-MAR-20
PH-WT	Water							5 · · · · · · · · · · · · · · · · · · ·
	VV ater 25012946							
WG3284273-4		WG3284273	-3					
pH		8.09	8.10	J	pH units	0.01	0.2	29-FEB-20
WG3284273-2	LCS							



Qualifier

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RPD

Limit

Analyzed

Units

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Matrix

Reference

Result

Contact: Kossay Makhzoumi

Test

1631	Watiix	Reference	Result	Qualifier	Units	KFD	Liiiit	Allalyzeu
PH-WT	Water							
Batch R501	2946							
WG3284273-2 L pH	.CS		7.04		pH units		6.9-7.1	29-FEB-20
VOC-511-HS-WT	Water							
Batch R501	2001							
WG3282676-4 D 1,1,1,2-Tetrachloro	OUP	WG3282676-		555 MA	/	N1/A	22	00 144 5 00
1,1,2-Tetrachlord		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,1,1-Trichloroetha		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,1,2-Trichloroetha		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,1-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,1-Dichloroethyle		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,2-Dibromoethan		<0.20	<0.20	RPD-NA	ug/L	N/A	30	02-MAR-20
1,2-Dichlorobenze		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,2-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,2-Dichloropropa		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,3-Dichlorobenze		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,4-Dichlorobenze	ne	<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
Acetone		<30	<30	RPD-NA	ug/L	N/A	30	02-MAR-20
Benzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
Bromodichloromet	thane	<2.0	<2.0	RPD-NA	ug/L	N/A	30	02-MAR-20
Bromoform		<5.0	<5.0	RPD-NA	ug/L	N/A	30	02-MAR-20
Bromomethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
Carbon tetrachlorion	de	<0.20	<0.20	RPD-NA	ug/L	N/A	30	02-MAR-20
Chlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
Chloroform		<1.0	<1.0	RPD-NA	ug/L	N/A	30	02-MAR-20
cis-1,2-Dichloroeth	nylene	<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
cis-1,3-Dichloropro	•	<0.30	< 0.30	RPD-NA	ug/L	N/A	30	02-MAR-20
Dibromochloromet	thane	<2.0	<2.0	RPD-NA	ug/L	N/A	30	02-MAR-20
Dichlorodifluorome	ethane	<2.0	<2.0	RPD-NA	ug/L	N/A	30	02-MAR-20
Ethylbenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
n-Hexane		<0.50	< 0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
m+p-Xylenes		<0.40	<0.40	RPD-NA	ug/L	N/A	30	02-MAR-20
Methyl Ethyl Keton	ne	<20	<20	RPD-NA	ug/L	N/A	30	02-MAR-20
i								



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R5012001	1							
WG3282676-4 DUP		WG3282676-						
Methyl Isobutyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	02-MAR-20
Methylene Chloride		<5.0	<5.0	RPD-NA	ug/L	N/A	30	02-MAR-20
MTBE		<2.0	<2.0	RPD-NA	ug/L	N/A	30	02-MAR-20
o-Xylene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	02-MAR-20
Styrene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
Tetrachloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
Toluene		<0.50	< 0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
trans-1,2-Dichloroethyl	ene	<0.50	< 0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
trans-1,3-Dichloroprop	ene	<0.30	< 0.30	RPD-NA	ug/L	N/A	30	02-MAR-20
Trichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
Trichlorofluoromethane	Э	<5.0	<5.0	RPD-NA	ug/L	N/A	30	02-MAR-20
Vinyl chloride		<0.50	< 0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
WG3282676-1 LCS								
1,1,1,2-Tetrachloroetha			91.8		%		70-130	02-MAR-20
1,1,2,2-Tetrachloroetha	ane		88.6		%		70-130	02-MAR-20
1,1,1-Trichloroethane			94.2		%		70-130	02-MAR-20
1,1,2-Trichloroethane			101.4		%		70-130	02-MAR-20
1,1-Dichloroethane			87.7		%		70-130	02-MAR-20
1,1-Dichloroethylene			86.8		%		70-130	02-MAR-20
1,2-Dibromoethane			101.2		%		70-130	02-MAR-20
1,2-Dichlorobenzene			95.0		%		70-130	02-MAR-20
1,2-Dichloroethane			85.8		%		70-130	02-MAR-20
1,2-Dichloropropane			88.4		%		70-130	02-MAR-20
1,3-Dichlorobenzene			94.0		%		70-130	02-MAR-20
1,4-Dichlorobenzene			93.2		%		70-130	02-MAR-20
Acetone			92.6		%		60-140	02-MAR-20
Benzene			93.0		%		70-130	02-MAR-20
Bromodichloromethane	е		90.5		%		70-130	02-MAR-20
Bromoform			91.5		%		70-130	02-MAR-20
Bromomethane			91.7		%		60-140	02-MAR-20
Carbon tetrachloride			91.1		%		70-130	02-MAR-20
Chlorobenzene			93.0		%		70-130	02-MAR-20
Chloroform			92.7		%		70-130	02-MAR-20



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R5012001								
WG3282676-1 LCS			20.7		0/			
cis-1,2-Dichloroethylene			93.7		%		70-130	02-MAR-20
cis-1,3-Dichloropropene			80.8		%		70-130	02-MAR-20
Dibromochloromethane			97.4		%		70-130	02-MAR-20
Dichlorodifluoromethane)		116.3		%		50-140	02-MAR-20
Ethylbenzene			86.6		%		70-130	02-MAR-20
n-Hexane			84.9		%		70-130	02-MAR-20
m+p-Xylenes			86.5		%		70-130	02-MAR-20
Methyl Ethyl Ketone			108.6		%		60-140	02-MAR-20
Methyl Isobutyl Ketone			79.3		%		60-140	02-MAR-20
Methylene Chloride			102.6		%		70-130	02-MAR-20
MTBE			94.9		%		70-130	02-MAR-20
o-Xylene			94.1		%		70-130	02-MAR-20
Styrene			85.1		%		70-130	02-MAR-20
Tetrachloroethylene			93.8		%		70-130	02-MAR-20
Toluene			92.6		%		70-130	02-MAR-20
trans-1,2-Dichloroethyle	ne		85.7		%		70-130	02-MAR-20
trans-1,3-Dichloroproper	ne		87.4		%		70-130	02-MAR-20
Trichloroethylene			100.3		%		70-130	02-MAR-20
Trichlorofluoromethane			98.1		%		60-140	02-MAR-20
Vinyl chloride			116.9		%		60-140	02-MAR-20
WG3282676-2 MB								
1,1,1,2-Tetrachloroethar			<0.50		ug/L		0.5	02-MAR-20
1,1,2,2-Tetrachloroethar	ne		<0.50		ug/L		0.5	02-MAR-20
1,1,1-Trichloroethane			<0.50		ug/L		0.5	02-MAR-20
1,1,2-Trichloroethane			<0.50		ug/L		0.5	02-MAR-20
1,1-Dichloroethane			<0.50		ug/L		0.5	02-MAR-20
1,1-Dichloroethylene			<0.50		ug/L		0.5	02-MAR-20
1,2-Dibromoethane			<0.20		ug/L		0.2	02-MAR-20
1,2-Dichlorobenzene			<0.50		ug/L		0.5	02-MAR-20
1,2-Dichloroethane			<0.50		ug/L		0.5	02-MAR-20
1,2-Dichloropropane			<0.50		ug/L		0.5	02-MAR-20
1,3-Dichlorobenzene			<0.50		ug/L		0.5	02-MAR-20
1,4-Dichlorobenzene			<0.50		ug/L		0.5	02-MAR-20
Acetone			<30		ug/L		30	02-MAR-20



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R5012001								
WG3282676-2 MB								
Benzene			<0.50		ug/L		0.5	02-MAR-20
Bromodichloromethane			<2.0		ug/L		2	02-MAR-20
Bromoform			<5.0		ug/L		5	02-MAR-20
Bromomethane			<0.50		ug/L		0.5	02-MAR-20
Carbon tetrachloride			<0.20		ug/L		0.2	02-MAR-20
Chlorobenzene			<0.50		ug/L		0.5	02-MAR-20
Chloroform			<1.0		ug/L		1	02-MAR-20
cis-1,2-Dichloroethylene			<0.50		ug/L		0.5	02-MAR-20
cis-1,3-Dichloropropene			<0.30		ug/L		0.3	02-MAR-20
Dibromochloromethane			<2.0		ug/L		2	02-MAR-20
Dichlorodifluoromethane)		<2.0		ug/L		2	02-MAR-20
Ethylbenzene			<0.50		ug/L		0.5	02-MAR-20
n-Hexane			< 0.50		ug/L		0.5	02-MAR-20
m+p-Xylenes			< 0.40		ug/L		0.4	02-MAR-20
Methyl Ethyl Ketone			<20		ug/L		20	02-MAR-20
Methyl Isobutyl Ketone			<20		ug/L		20	02-MAR-20
Methylene Chloride			<5.0		ug/L		5	02-MAR-20
MTBE			<2.0		ug/L		2	02-MAR-20
o-Xylene			<0.30		ug/L		0.3	02-MAR-20
Styrene			<0.50		ug/L		0.5	02-MAR-20
Tetrachloroethylene			<0.50		ug/L		0.5	02-MAR-20
Toluene			<0.50		ug/L		0.5	02-MAR-20
trans-1,2-Dichloroethyler	ne		<0.50		ug/L		0.5	02-MAR-20
trans-1,3-Dichloroproper	ne		< 0.30		ug/L		0.3	02-MAR-20
Trichloroethylene			<0.50		ug/L		0.5	02-MAR-20
Trichlorofluoromethane			<5.0		ug/L		5	02-MAR-20
Vinyl chloride			< 0.50		ug/L		0.5	02-MAR-20
Surrogate: 1,4-Difluorob	enzene		101.4		%		70-130	02-MAR-20
Surrogate: 4-Bromofluor	obenzene		96.9		%		70-130	02-MAR-20
WG3282676-5 MS 1,1,1,2-Tetrachloroethar	ne	WG3282676-3	91.9		%		50-140	02-MAR-20
1,1,2,2-Tetrachloroethar			81.5		%		50-140	02-MAR-20
1,1,1-Trichloroethane	· -		96.6		%		50-140	02-MAR-20
1,1,2-Trichloroethane			93.7		%		50-140	02-MAR-20
1,1,2 111011101001110110			30.7		,,		50-140	UZ-IVIMIN-ZU



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R5012001								
WG3282676-5 MS		WG3282676-			0/			
1,1-Dichloroethane			94.6		%		50-140	02-MAR-20
1,1-Dichloroethylene			86.5		%		50-140	02-MAR-20
1,2-Dibromoethane			90.5		%		50-140	02-MAR-20
1,2-Dichlorobenzene			95.4		%		50-140	02-MAR-20
1,2-Dichloroethane			77.8		%		50-140	02-MAR-20
1,2-Dichloropropane			85.1		%		50-140	02-MAR-20
1,3-Dichlorobenzene			96.9		%		50-140	02-MAR-20
1,4-Dichlorobenzene			95.6		%		50-140	02-MAR-20
Acetone			76.5		%		50-140	02-MAR-20
Benzene			92.2		%		50-140	02-MAR-20
Bromodichloromethane			87.3		%		50-140	02-MAR-20
Bromoform			83.8		%		50-140	02-MAR-20
Bromomethane			84.5		%		50-140	02-MAR-20
Carbon tetrachloride			94.4		%		50-140	02-MAR-20
Chlorobenzene			93.4		%		50-140	02-MAR-20
Chloroform			91.3		%		50-140	02-MAR-20
cis-1,2-Dichloroethylene			91.9		%		50-140	02-MAR-20
cis-1,3-Dichloropropene			78.1		%		50-140	02-MAR-20
Dibromochloromethane			91.6		%		50-140	02-MAR-20
Dichlorodifluoromethane			102.0		%		50-140	02-MAR-20
Ethylbenzene			90.6		%		50-140	02-MAR-20
n-Hexane			84.8		%		50-140	02-MAR-20
m+p-Xylenes			90.5		%		50-140	02-MAR-20
Methyl Ethyl Ketone			75.9		%		50-140	02-MAR-20
Methyl Isobutyl Ketone			66.1		%		50-140	02-MAR-20
Methylene Chloride			96.4		%		50-140	02-MAR-20
MTBE			95.3		%		50-140	02-MAR-20
o-Xylene			97.0		%		50-140	02-MAR-20
Styrene			84.6		%		50-140	02-MAR-20
Tetrachloroethylene			100.2		%		50-140	02-MAR-20
Toluene			94.5		%		50-140	02-MAR-20
trans-1,2-Dichloroethylen	ie		86.2		%		50-140	02-MAR-20
trans-1,3-Dichloropropen			83.4		%		50-140	02-MAR-20



Workorder: L2422396 Report Date: 05-MAR-20 Page 12 of 13

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R5012001								
WG3282676-5 MS		WG3282676-3						
Trichloroethylene			103.9		%		50-140	02-MAR-20
Trichlorofluoromethane			97.0		%		50-140	02-MAR-20
Vinyl chloride			109.7		%		50-140	02-MAR-20

Workorder: L2422396 Report Date: 05-MAR-20

Client: TERRAPROBE-BRAMPTON Page 13 of 13

11 Indell Lane

Brampton ON L6T 3Y3 Kossay Makhzoumi

Legend:

Contact:

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.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
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.

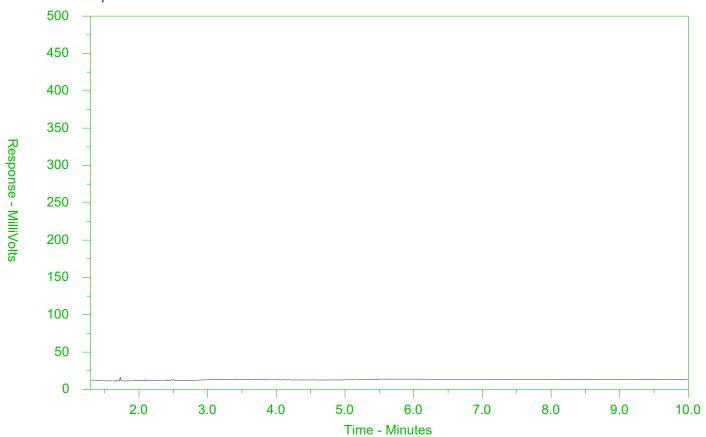
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined data quality objectives to provide 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: L2422396-1 Client Sample ID: DUP 5



← -F2-	→ ←	—F3——◆4—F4-	→	
nC10	nC16	nC34	nC50	
174°C	287°C	481°C	575°C	
346°F	549°F	898°F	1067°F	
Gasolin	e →	← M	otor 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) / Analy **Request Form**



COC Number: 15 -

re

Environmental

Canada Toll Free: 1 800 668 9878

L2422396-COFC

	www.alsglobal.com																			
Report To	Contact and company name below will ap	opear on the final report		Report Format	/ Distribution	· · · · · · · · · · · · · · · · · · ·	Select	ect Service Level Below - Please confirm all E&P TATs with your AM - surcharges will apply												
Company:	Terraprobe		Select Report F	ormat: 🕡 PDF	Z EXCEL E	DD (DIGITAL)		Re	gular	[R]	☑ Sta	ndard T	AT if re	ceived	by 3 pi	m - bus	iness da	iys - no s	urcharg	es apply
Contact:	Kossay Makhzoumi		Quality Control (QC) Report with Re	port 🗹 YES	□ NO	ۇ خ	4	day [F	4]			ķ	1	Busiį	ness (lay [E	1]		o
Phone:	905-796-2650	·	☑ Compare Resu	☑ Compare Results to Criteria on Report - provide details below if box checked			9 g	3	day [F	23]			EMERGENC					end or		o
	Company address below will appear on the fina	al report	Select Distribution	on: 🗹 EMAIL	MAIL	FAX	E #	2	day [F	2]			EM		Statu	itory i	olida	y [E0]		
Street:	11 Indell Lane		Email 1 or Fax	kmakhzoumi@tem	aprobe.ca			Date a	nd Time	Requi	red for a	# E&P 1	TATs:							
City/Province:	Brampton		Email 2				For tes	ts that c	an not b	е регіоп	ned acco	ording to	the ser	vice lev	el sele	cted, yo	u will be	contacte	d.	
Postal Code:	L6T 3Y3		Email 3									1	Analy	sis R	eque	st				
Invoice To	Same as Report To	☑ NO		Invoice Dis	tribution			Ind	licate Fi	ltered (F), Prese	rved (P)	or Filte	red an	d Prese	erved (f	/P) belo	w		
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Company:	Terraprobe		Email 1 or Fax	Irossi@terraprobe.	ca													1		
Contact:	Lorena Rossi		Email 2									İ							ı	و
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ALS Lab Wor	rk Order # (lab use only) \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	122396 A	ALS Contact:	13	Sampler:		and Inorganics		Forming						OC Pesticides				1	-
ALS Sample #	Sample Identification	on and/or Coordinates ~	,	Date	Time	Sample Type	Metals a	Metals	Hyride F		·	۱.	ا ر	O	Pes	မ္ဃ	- 1			
(lab use only)	(This description wil	l appear on the report)		(dd-mmm-yy)	(ħh:mm)	Sample Type	Me	Me	Ŧ	ដ	SAR	PAH	8	PHC	၁၀	PCBs	_			
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Drinking	Water (DW) Samples ¹ (client use)	Special Instructions / Special Instructions /		idd on report by clic stronic COC only)	king on the drop-	down list below	Froze			JAM	PLEC	A		Obser		`	Yes		No	
Are samples take	en from a Regulated DW System?		(0.00	,			4	acks		_	Cubes	M	Cust				Yes		No	
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Released by: Ke	ossay Makhzoumi Date:	Time:	Received by	777	Data: 1		Time	36	Rece	eived b					_		7 (Īī	imex 0:1/
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REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - LABORATORY COPY



TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 18-DEC-19

Report Date: 27-DEC-19 10:53 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2398138

Project P.O. #: NOT SUBMITTED

Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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L2398138 CONT'D....

Job Reference: 1-19-0603-42

PAGE 2 of 4

27-DEC-19 10:53 (MT)

Summary of Guideline Exceedances

Guideline						
ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) (No parameter exceedances)

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

(No parameter exceedances)



L2398138 CONT'D.... Job Reference: 1-19-0603-42 PAGE 3 of 4 27-DEC-19 10:53 (MT)

Polychlorinated Biphenyls - WATER

		Sampl	Lab ID e Date iple ID	L2398138-1 16-DEC-19 DUP 2
Analyte	Unit	Guide #1	Limits #2	
Aroclor 1242	ug/L	-	-	<0.020
Aroclor 1248	ug/L	-	-	<0.020
Aroclor 1254	ug/L	-	-	<0.020
Aroclor 1260	ug/L	-	-	<0.020
Surrogate: Decachlorobiphenyl	%	-	-	58.8
Total PCBs	ug/L	7.8	15	<0.040
Surrogate: Tetrachloro-m-xylene	%	-	-	84.3

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

L2398138 CONT'D....
Job Reference: 1-19-0603-42
PAGE 4 of 4
27-DEC-19 10:53 (MT)

Methods Listed (if applicable):

ALS Test Code	Matrix	Test Description	Method Reference**						
PCB-511-WT Water PCB-O. Reg 153/04 (July 2011) SW846 3510/8082									
Aqueous samples are extracted, then concentrated, reconstituted, and analyzed by GC/MS.									
Analysis conducted	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).								
**ALS test methods may	incorporate modif	fications from specified reference method	ds 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:									

GLOSSARY OF REPORT TERMS

Laboratory Definition Code

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.

WT

D.L. - The reporting limit.

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

Laboratory Location

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.

ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA

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.



Workorder: L2398138 Report Date: 27-DEC-19 Page 1 of 2

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PCB-511-WT	Water							
Batch R4949187								
WG3246028-2 LCS Aroclor 1242			104.7		%		60-140	19-DEC-19
Aroclor 1248			92.4		%		60-140	19-DEC-19
Aroclor 1254			109.4		%		60-140	19-DEC-19
Aroclor 1260			116.0		%		60-140	19-DEC-19
WG3246028-1 MB			.0.000		//		0.00	
Aroclor 1242			<0.020		ug/L		0.02	19-DEC-19
Aroclor 1248			<0.020		ug/L		0.02	19-DEC-19
Aroclor 1254			< 0.020		ug/L		0.02	19-DEC-19
Aroclor 1260			<0.020		ug/L		0.02	19-DEC-19
Surrogate: Decachlorobi	iphenyl		89.6		%		50-150	19-DEC-19
Surrogate: Tetrachloro-r	n-xylene		76.5		%		50-150	19-DEC-19

Workorder: L2398138 Report Date: 27-DEC-19

Client: TERRAPROBE-BRAMPTON Page 2 of 2

11 Indell Lane

Brampton ON L6T 3Y3

Contact: Kossay Makhzoumi

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

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 predetermined 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.

Enuironental

Chain of Custody (COC) / Analytical Request Form



2398138-COFC

COC Number: 15 -

Canada Toli Free: 1 800 668 9878

www.alsglobal.com Select Service Level Below - Please confirm all E&P TATs with your AM - surcharges will apply Report To Contact and company name below will appear on the final report Report Format / Distribution Standard TAT if received by 3 pm - business days - no surcharges apply Terraprobe Select Report Format: PDF EXCEL EDD (DIGITAL) Regular (R) Company: 4 day [P4] 1 Business day [E1] Contact: Kossay Makhzoumi ☑ Compare Results to Criteria on Report - provide details below if box checked 905-796-2650 3 day [P3] Phone: Same Day, Weekend or ☑ EMAIL ☐ MAIL ☐ FAX Statutory holiday [E0] Company address below will appear on the final report 2 day [P2] Street: 11 Indell Lane Email 1 or Fax kmakhzoumi@terraprobe.ca Date and Time Required for all E&P TATs: For tests that can not be performed according to the service level selected, you will be contacted. City/Province: Brampton Email 2 Postal Code: L6T 3Y3 Fmail 3 **Analysis Request** YES V NO Invoice Distribution Indicate Filtered (F), Preserved (P) or Filtered and Preserved (F/P) below Invoice To Same as Report To ☐ YES ☑ NO Select Invoice Distribution:

EMAIL

MAIL

FAX Copy of Invoice with Report Terraprobe Email 1 or Fax |rossi@terraprobe.ca Company: Contact: Lorena Rossi Email 2 Number of Containers Oil and Gas Required Fields (client use) Project Information ALS Account # / Quote #: PO# Q62481 AFE/Cost Center 1-19-0603-42 Routing Code: Job #: Major/Minor Code: PO / AFE: Requisitioner: SD: ocation: ALS Lab Work Order # (lab use only) ALS Contact: Sampler: Sample Identification and/or Coordinates Date Time ALS Sample # õ Sample Type (lab use only) (This description will appear on the report) (dd-mmm-yy) (hh:mm) GM 2 Dup 2 16-12-19 SAMPLE CONDITION AS RECEIVED (lab use only) Special Instructions / Specify Criteria to add on report by clicking on the drop-down list below Drinking Water (DW) Samples¹ (client use) (electronic COC only) SIF Observations No Frozen Are samples taken from a Regulated DW System? П Yes \square Ice Cubes Custody seal intact Ice Packs ☐ YES ☐ NO Cooling Initiated INITIAL COOLER TEMPERATURES °C FINAL COOLER TEMPERATURES °C Are samples for human drinking water use? ☐ YES ☐ NO FINAL SHIPMENT RECEPTION (lab use only) SHIPMENT RELEASE (client use) INITIAL SHIPMENT RECEPTION (lab use only) Released by: Kossay Makhzoumi Received by: Time: Received by: 12-17-19 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.



TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 18-DEC-19

Report Date: 27-DEC-19 10:12 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2398126

Project P.O. #: NOT SUBMITTED

Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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L2398126 CONT'D....

Job Reference: 1-19-0603-42

PAGE 2 of 14

27-DEC-19 10:12 (MT)

Summary of Guideline Exceedances

Guideline						
ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

(No parameter exceedances)

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

(No parameter exceedances)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2398126 CONT'D....

Job Reference: 1-19-0603-42

PAGE 3 of 14

27-DEC-19 10:12 (MT)

Physical Tests - WATER

, o. oa oo to	•	
	Lab ID L2398	126-1
	Sample Date 16-DE	C-19
	Sample ID DUI	P 3
	Guide Limits	
Analyte	Unit #1 #2	
Conductivity	mS/cm 2.3	31
рН	pH units 7.4	10

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2398126 CONT'D....

Job Reference: 1-19-0603-42

PAGE 4 of 14

27-DEC-19 10:12 (MT)

Anions and Nutrients - WATER

Allions and Hatricins	***				
			L	_ab ID	L2398126-1
			Sample	e Date	16-DEC-19
			Sam	ple ID	DUP 3
Analyte		Unit	Guide #1	Limits #2	

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2398126 CONT'D....

Job Reference: 1-19-0603-42

PAGE 5 of 14

27-DEC-19 10:12 (MT)

Cyanides - WATER

January Willer				
			Lab ID	L2398126-1
		Sampl	e Date	16-DEC-19
		San	iple ID	DUP 3
Analyte	Unit	Guide #1	Limits #2	
Cyanide, Weak Acid Diss	ug/L	66	66	<2.0

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



L2398126 CONT'D....

Job Reference: 1-19-0603-42

PAGE 6 of 14

27-DEC-19 10:12 (MT)

Dissolved Metals - WATER

Antimony (Sb)-Dissolved ug/L 2000 2000 21.0 Arsenic (As)-Dissolved ug/L 1900 1900 21.0 DE Arsenic (As)-Dissolved ug/L 29000 29000 45.2 DE Arsenic (As)-Dissolved ug/L 29000 29000 45.2 DE Arsenic (As)-Dissolved ug/L 67 67 41.0 DE Arsenic (As)-Dissolved ug/L 45000 45000 45000 45.0 DE Arsenic (As)-Dissolved ug/L 45000 45000 45000 45000 DE Arsenic (As)-Dissolved ug/L 2.7 2.7 2.7 <0.050 DE Arsenic (As)-Dissolved ug/L 810 810 85.0 DE Arsenic (As)-Dissolved ug/L 810 810 85.0 DE Arsenic (As)-Dissolved ug/L 87 87 2.0 DE Arsenic (As)-Dissolved ug/L 87 87 42.0 DE Arsenic (As)-Dissolved ug/L 25 25 40.50 DE Arsenic (As)-Dissolved ug/L 9200 9200 2.51 DE Arsenic (As)-Dissolved ug/L 490 490 45.0 DE Arsenic (As)-Dissolved ug/L 490 490 490 45.0 DE Arsenic (As)-Dissolved ug/L 2300000230000 286000 DE Arsenic (As)-Dissolved ug/L 510 510 40.10 DE Arsenic (As)-Dissolved ug/L 420 420 2.34 DE Arsenic (As)-Dissolved			Sample	ab ID Date ple ID	L2398126-1 16-DEC-19 DUP 3
Dissolved Metals Filtration Location - - FIELD Antimony (Sb)-Dissolved ug/L 20000 20000 <1.0 Column (Column) Arsenic (As)-Dissolved ug/L 1900 1900 <1.0 Column (Column) Barium (Ba)-Dissolved ug/L 29000 29000 45.2 Column (Column) Beryllium (Be)-Dissolved ug/L 67 67 <1.0 Column (Column) Boron (B)-Dissolved ug/L 45000 45000 <100 Column (Column) Cadmium (Cd)-Dissolved ug/L 810 810 <5.0 Column (Column) Cobalt (Co)-Dissolved ug/L 66 66 <1.0 Column (Column) Column 87 <2.0 Column Copper (Cu)-Dissolved ug/L 87 87 <2.0 Column Column Column Rocal (Column) Column Column Column Column Column Column Column Column Column Column Column Column Column Colum	Analyte	Unit			
Antimony (Sb)-Dissolved ug/L 20000 20000 <1.0 PM (Arsenic (As)-Dissolved ug/L 1900 1900 <1.0 PM (Arsenic (As)-Dissolved ug/L 29000 29000 45.2 PM (Asper) (As)-Dissolved ug/L 29000 29000 45.2 PM (Asper) (Aspe	Dissolved Mercury Filtration Location		-	-	FIELD
Antimony (Sb)-Dissolved ug/L 2000 2000 21.0 Arsenic (As)-Dissolved ug/L 1900 1900 21.0 DE Arsenic (As)-Dissolved ug/L 29000 29000 45.2 DE Arsenic (As)-Dissolved ug/L 29000 29000 45.2 DE Arsenic (As)-Dissolved ug/L 67 67 41.0 DE Arsenic (As)-Dissolved ug/L 45000 45000 45000 45.0 DE Arsenic (As)-Dissolved ug/L 45000 45000 45000 45000 DE Arsenic (As)-Dissolved ug/L 2.7 2.7 2.7 <0.050 DE Arsenic (As)-Dissolved ug/L 810 810 85.0 DE Arsenic (As)-Dissolved ug/L 810 810 85.0 DE Arsenic (As)-Dissolved ug/L 87 87 2.0 DE Arsenic (As)-Dissolved ug/L 87 87 2.0 DE Arsenic (As)-Dissolved ug/L 25 25 25 0.50 DE Arsenic (As)-Dissolved ug/L 9200 9200 2.51 DE Arsenic (As)-Dissolved ug/L 490 490 45.0 DE Arsenic (As)-Dissolved ug/L 490 490 490 45.0 DE Arsenic (As)-Dissolved ug/L 2300000230000 286000 DE Arsenic (As)-Dissolved ug/L 510 510 40.10 DE Arsenic (As)-Dissolved ug/L 420 420 2.34 DE Arsenic (As)-Dissolve	Dissolved Metals Filtration Location		-	-	FIELD
Arsenic (As)-Dissolved ug/L 1900 1900 ≥1.0 Barium (Ba)-Dissolved ug/L 29000 29000 45.2 DL Beryllium (Be)-Dissolved ug/L 67 67 <1.0	Antimony (Sb)-Dissolved	ug/L	20000	20000	<1.0 DLHC
Beryllium (Ba)-Dissolved ug/L 67 67 <1.0 PM	Arsenic (As)-Dissolved	ug/L	1900	1900	<1.0 DLHC
Beryllium (Be)-Dissolved Ug/L 45000 45000 <100 Clubration (Cd)-Dissolved Ug/L 2.7 2.7 <0.050 Clubration (Cr)-Dissolved Ug/L 810 810 <5.0 Clubration (Cr)-Dissolved Ug/L 87 87 <2.0 Clubration (Co)-Dissolved Ug/L 87 87 <2.0 Clubration (Co)-Dissolved Ug/L 87 87 <2.0 Clubration (Co)-Dissolved Ug/L 25 25 <0.50 Clubration (Co)-Dissolved Ug/L 25 25 <0.50 Clubration (Co)-Dissolved Ug/L 0.29 2.8 <0.0050 Clubration (Co)-Dissolved Ug/L 9200 9200 2.51 Clubration (Co)-Dissolved Ug/L 490 490 <5.0 Clubration (Co)-Dissolved Ug/L 490 490 <5.0 Clubration (Co)-Dissolved Ug/L 1.5 1.5 <0.50 Clubration (Co)-Dissolved Ug/L 23000002300000 286000 Clubration (Co)-Dissolved Ug/L 23000002300000 286000 Clubration (Co)-Dissolved Ug/L 420 420 2.34 Clubration (Co)-Dissolved Ug/L 420 420 2.34 Clubration (Co)-Dissolved Ug/L 420 420 2.34 Clubration (Co)-Dissolved Ug/L 420 420 2.34 Clubration (Co)-Dissolved Ug/L 420 420 2.34 Clubration (Co)-Dissolved Ug/L 420 420 2.34 Clubration (Co)-Dissolved Ug/L 420 420 2.34 Clubration (Co)-Dissolved Ug/L 420 420 2.34 Clubration (Co)-Dissolved Ug/L 420 420 2.34 Clubration (Co)-Dissolved Ug/L 420 420 2.34 Clubration (Co)-Dissolved Ug/L 420 420 2.34 Clubration (Co)-Dissolved Ug/L 420 420 2.34 Clubration (Co)-Dissolved Ug/L 420 420 2.34 Clubration (Co)-Dissolved Ug/L 420 420 2.34 Clubration (Co)-Dissolved Ug/L 420 420 2.34 Clubration (Co)-Dissolved Ug/L 420 420 2.34 Clubration (Co)-Dissolved Ug/L 420 420 2.34 Clubration (Co)-Dissolved Ug/L 420	Barium (Ba)-Dissolved	ug/L	29000	29000	45.2 DLHC
Boron (B)-Dissolved ug/L 45000 <td>Beryllium (Be)-Dissolved</td> <td>ug/L</td> <td>67</td> <td>67</td> <td><1.0 DLHC</td>	Beryllium (Be)-Dissolved	ug/L	67	67	<1.0 DLHC
Chromium (Cr)-Dissolved ug/L 810 810 <5.0 Column Cobalt (Co)-Dissolved ug/L 66 66 <1.0	Boron (B)-Dissolved	ug/L	45000	45000	
Chromium (Cr)-Dissolved ug/L 810 810 <5.0 Chromium (Cr)-Dissolved Cobalt (Co)-Dissolved ug/L 66 66 <1.0	Cadmium (Cd)-Dissolved	ug/L	2.7	2.7	< 0.050 DLHC
Cobait (Co)-Dissolved ug/L 66 66 <1.0 Copper (Cu)-Dissolved ug/L 87 87 <2.0	Chromium (Cr)-Dissolved	ug/L	810	810	DILLO
Copper (Cu)-Dissolved ug/L 87 87 <2.0	Cobalt (Co)-Dissolved	ug/L	66	66	<1.0 DLHC
Mercury (Hg)-Dissolved ug/L 25 25 20.50 Molybdenum (Mo)-Dissolved ug/L 9200 9200 2.51 920 Nickel (Ni)-Dissolved ug/L 490 490 45.0 920 Selenium (Se)-Dissolved ug/L 63 63 <0.50	Copper (Cu)-Dissolved	ug/L	87	87	<2.0 DLHC
Molybdenum (Mo)-Dissolved ug/L 9200 9200 9200 2.51 PL Nickel (Ni)-Dissolved ug/L 490 490 490 45.0 PL Selenium (Se)-Dissolved ug/L 63 63 <0.50	Lead (Pb)-Dissolved	ug/L	25	25	<0.50 DLHC
Molybdenum (Mo)-Dissolved ug/L 9200 9200 2.51 Nickel (Ni)-Dissolved ug/L 490 490 <5.0	Mercury (Hg)-Dissolved	ug/L	0.29	2.8	<0.0050
Nickel (NI)-Dissolved ug/L 490 490 <5.0 Selenium (Se)-Dissolved ug/L 63 63 <0.50 PL	Molybdenum (Mo)-Dissolved	ug/L	9200	9200	2.51 DLHC
Selential (Se)-Dissolved ug/L 03 03 20.50 Silver (Ag)-Dissolved ug/L 1.5 1.5 <0.50	Nickel (Ni)-Dissolved	ug/L	490	490	<5.0 DLHC
Soliver (Ag)-Dissolved ug/L 1.5 1.5 20.50 Sodium (Na)-Dissolved ug/L 23000002300000 286000 ^{PL} Thallium (TI)-Dissolved ug/L 510 510 <0.10	Selenium (Se)-Dissolved	ug/L	63	63	<0.50 DLHC
Thallium (TI)-Dissolved ug/L 510 510 <0.10 PL Uranium (U)-Dissolved ug/L 420 420 2.34 PL Vanadium (V)-Dissolved ug/L 250 250 <5.0 PL	Silver (Ag)-Dissolved	ug/L	1.5	1.5	
Uranium (U)-Dissolved ug/L 510 510 <0.10 Uranium (U)-Dissolved ug/L 420 420 2.34 Vanadium (V)-Dissolved ug/L 250 250 <5.0	Sodium (Na)-Dissolved	ug/L	2300000	2300000	286000 ^{DLHC}
Vanadium (V)-Dissolved ug/L 250 250 <5.0 DL	Thallium (TI)-Dissolved	ug/L	510	510	<0.10 DLHC
variadium (v)-Dissolved ug/L 250 250 <5.0	Uranium (U)-Dissolved	ug/L	420	420	2.34 DLHC
Zinc (Zn)-Dissolved ug/l 1100 1100 -10 ^{DL}	Vanadium (V)-Dissolved	ug/L	250	250	<5.0 DLHC
2110 (211) DISSOVED 49/L 1100 1100 210	Zinc (Zn)-Dissolved	ug/L	1100	1100	<10 DLHC

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Speciated Metals - WATER

		_ab ID	L2398126-1
	Sample	e Date	16-DEC-19
	Sam	ple ID	DUP 3
nit	Guide #1	Limits #2	
g/L	140	140	
	nit	Sample Sam Guide nit #1	Sample Date Sample ID Guide Limits nit #1 #2

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



MTBE

Styrene

ANALYTICAL REPORT

L2398126 CONT'D.... Job Reference: 1-19-0603-42 PAGE 8 of 14 27-DEC-19 10:12 (MT)

Volatile Organic Compounds - WATER

L2398126-1 Lab ID 16-DEC-19 **Sample Date** DUP 3 Sample ID **Guide Limits** #1 #2 Unit **Analyte** Acetone ug/L 130000 130000 <30 Benzene 44 430 ug/L < 0.50 Bromodichloromethane 85000 85000 ug/L <2.0 Bromoform ug/L 380 770 < 5.0 Bromomethane ug/L 5.6 56 < 0.50 Carbon tetrachloride 0.79 ug/L 8.4 < 0.20 Chlorobenzene ug/L 630 630 < 0.50 Dibromochloromethane 82000 ug/L 82000 <2.0 Chloroform ug/L 2.4 22 <1.0 1,2-Dibromoethane ug/L 0.25 0.83 <0.20 ug/L 4600 9600 1,2-Dichlorobenzene < 0.50 1,3-Dichlorobenzene ug/L 9600 9600 < 0.50 8 67 1,4-Dichlorobenzene ug/L < 0.50 Dichlorodifluoromethane 4400 4400 ug/L <2.0 1,1-Dichloroethane ug/L 320 3100 < 0.50 1,2-Dichloroethane ug/L 1.6 12 < 0.50 1,1-Dichloroethylene ug/L 1.6 17 < 0.50 cis-1,2-Dichloroethylene 17 ug/L 1.6 < 0.50 17 trans-1,2-Dichloroethylene ug/L 1.6 < 0.50 Methylene Chloride ug/L 610 5500 < 5.0 ug/L 1,2-Dichloropropane 16 140 < 0.50 cis-1,3-Dichloropropene ug/L < 0.30 trans-1,3-Dichloropropene ug/L < 0.30 1,3-Dichloropropene (cis & trans) ug/L 5.2 45 < 0.50 Ethylbenzene ug/L 2300 2300 < 0.50 n-Hexane ug/L 51 520 < 0.50 Methyl Ethyl Ketone 470000 1500000 ug/L <20 Methyl Isobutyl Ketone ug/L 140000 580000 <20

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

ug/L

ug/L

190

1300

1400

9100

<2.0

< 0.50

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Volatile Organic Compounds - WATER

		Sample Sam	L2398126-1 16-DEC-19 DUP 3	
		Guide		
Analyte	Unit	#1	#2	
1,1,1,2-Tetrachloroethane	ug/L	3.3	28	<0.50
1,1,2,2-Tetrachloroethane	ug/L	3.2	15	<0.50
Tetrachloroethylene	ug/L	1.6	17	<0.50
Toluene	ug/L	18000	18000	<0.50
1,1,1-Trichloroethane	ug/L	640	6700	<0.50
1,1,2-Trichloroethane	ug/L	4.7	30	<0.50
Trichloroethylene	ug/L	1.6	17	0.64
Trichlorofluoromethane	ug/L	2500	2500	<5.0
Vinyl chloride	ug/L	0.5	1.7	<0.50
o-Xylene	ug/L	-	-	< 0.30
m+p-Xylenes	ug/L	-	-	<0.40
Xylenes (Total)	ug/L	4200	4200	<0.50
Surrogate: 4-Bromofluorobenzene	%	-	-	93.6
Surrogate: 1,4-Difluorobenzene	%	-	-	95.0

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Hydrocarbons - WATER

	ı	Lab ID	L2398126-1
	Sample	e Date	16-DEC-19
	Sam	ple ID	DUP 3
	Guide		
Unit	#1	#2	
ug/L	750	750	<25
ug/L	750	750	<25
ug/L	150	150	<100
ug/L	-	-	<100
ug/L	500	500	<250
ug/L	-	-	<250
ug/L	500	500	<250
ug/L	-	-	<370
	-	-	YES
%	-	-	99.2
%	-	-	78.0
	ug/L ug/L ug/L ug/L ug/L ug/L ug/L	#1 ug/L 750 ug/L 750 ug/L 750 ug/L 500 ug/L - ug/L 500 ug/L - ug/L 500 ug/L -	ug/L 750 750 ug/L 750 750 ug/L 150 150 ug/L ug/L 500 500 ug/L ug/L 500 500 ug/L ug/L 500 500 ug/L

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.



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Polycyclic Aromatic Hydrocarbons - WATER

 Lab ID
 L2398126-1

 Sample Date
 16-DEC-19

 Sample ID
 DUP 3

		Guide l	Limits	
Analyte	Unit	#1	#2	
Acenaphthene	ug/L	600	1700	<0.020
Acenaphthylene	ug/L	1.8	1.8	<0.020
Anthracene	ug/L	2.4	2.4	0.029
Benzo(a)anthracene	ug/L	4.7	4.7	0.102
Benzo(a)pyrene	ug/L	0.81	0.81	0.075
Benzo(b)fluoranthene	ug/L	0.75	0.75	0.111
Benzo(g,h,i)perylene	ug/L	0.2	0.2	0.044
Benzo(k)fluoranthene	ug/L	0.4	0.4	0.044
Chrysene	ug/L	1	1	0.096
Dibenzo(ah)anthracene	ug/L	0.52	0.52	<0.020
Fluoranthene	ug/L	130	130	0.212
Fluorene	ug/L	400	400	<0.020
Indeno(1,2,3-cd)pyrene	ug/L	0.2	0.2	0.056
1+2-Methylnaphthalenes	ug/L	1800	1800	<0.028
1-Methylnaphthalene	ug/L	1800	1800	<0.020
2-Methylnaphthalene	ug/L	1800	1800	<0.020
Naphthalene	ug/L	1400	6400	<0.050
Phenanthrene	ug/L	580	580	0.131
Pyrene	ug/L	68	68	0.184
Surrogate: d10-Acenaphthene	%	-	-	99.3
Surrogate: d12-Chrysene	%	-	-	69.1
Surrogate: d8-Naphthalene	%	-	-	90.0
Surrogate: d10-Phenanthrene	%	-	-	99.5

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

^{*} Please refer to the Reference Information section for an explanation of any qualifiers noted.

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Qualifiers for Individual Parameters Listed:

Qualifier Description

DLDS Detection Limit Raised: Dilution required due to high Dissolved Solids / Electrical Conductivity.

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**

CL-IC-N-WT Water Chloride by IC EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

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).

CN-WAD-R511-WT Water Cyanide (WAD)-O.Reg 153/04 APHA 4500CN I-Weak acid Dist Colorimet

Weak acid dissociable cyanide (WAD) is determined by undergoing a distillation procedure. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

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-R511-WT Water Hex Chrom-O.Reg 153/04 (July 2011) EPA 7199

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. Chromium (III) is calculated as the difference between the total chromium and the chromium (VI) results.

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-R511-WT Water Conductivity-O.Reg 153/04 (July 2011) APHA 2510 B

Water samples can be measured directly by immersing the conductivity cell into 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).

EC-SCREEN-WT Water Conductivity Screen (Internal Use APHA 2510

Only)

Qualitative analysis of conductivity where required during preparation of other tests - e.g. TDS, metals, etc.

F1-F4-511-CALC-WT Water F1-F4 Hydrocarbon Calculated CCME CWS-PHC, Pub #1310, Dec 2001-L

Parameters

Analytical methods used for analysis of CCME Petroleum Hydrocarbons have been validated and comply with the Reference Method for the CWS PHC.

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.

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Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

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 Water F1-O.Reg 153/04 (July 2011) E3398/CCME TIER 1-HS

Fraction F1 is determined by 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 Water F2-F4-O.Reg 153/04 (July 2011) EPA 3511/CCME Tier 1

Petroleum Hydrocarbons (F2-F4 fractions) are extracted from water using a hexane micro-extraction technique. Instrumental analysis is by GC-FID, as per the Reference Method for the Canada-Wide Standard for Petroleum Hydrocarbons in Soil Tier 1 Method, CCME, 2001.

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-D-UG/L-CVAA-WT Water Diss. Mercury in Water by CVAAS EPA 1631E (mod)

(ug/L)

Water samples are filtered (0.45 um), preserved with hydrochloric acid, then undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed 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-D-UG/L-MS-WT Water Diss. Metals in Water by ICPMS (ug/L) EPA 200.8

The metal constituents of a non-acidified sample that pass through a membrane filter prior to ICP/MS analysis.

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 Water PAH-Calculated Parameters SW846 8270

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

Aqueous samples, fortified with surrogates, are extracted using liquid/liquid extraction technique. The sample extracts are concentrated and then analyzed using 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 Water pH APHA 4500 H-Electrode

Water samples are analyzed directly by a calibrated pH 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). Holdtime for samples under this regulation is 28 days

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

VOC-511-HS-WT Water VOC by GCMS HS O.Reg 153/04 (July SW846 8260

2011)

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Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

Liquid samples are analyzed by headspace GC/MSD.

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 Water

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

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.



Workorder: L2398126 Report Date: 27-DEC-19 Page 1 of 12

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CL-IC-N-WT	Water							
Batch R4948668 WG3246535-4 DUP Chloride (CI)		WG3246535-3 6.98	6.99		mg/L	0.2	20	19-DEC-19
WG3246535-2 LCS Chloride (CI)			104.2		%		90-110	19-DEC-19
WG3246535-1 MB Chloride (CI)			<0.50		mg/L		0.5	19-DEC-19
WG3246535-5 MS Chloride (CI)		WG3246535-3	103.4		%		75-125	19-DEC-19
CN-WAD-R511-WT	Water							
Batch R4948388								
WG3246441-3 DUP Cyanide, Weak Acid Dis	s	L2398120-1 <2.0	<2.0	RPD-NA	ug/L	N/A	20	19-DEC-19
WG3246441-2 LCS Cyanide, Weak Acid Dis	s		100.7		%		80-120	19-DEC-19
WG3246441-1 MB Cyanide, Weak Acid Dis	s		<2.0		ug/L		2	19-DEC-19
WG3246441-4 MS Cyanide, Weak Acid Dis	s	L2398120-1	104.1		%		75-125	19-DEC-19
CR-CR6-IC-R511-WT	Water							
Batch R4948092								
WG3246367-4 DUP Chromium, Hexavalent		WG3246367-3 <0.50	<0.50	RPD-NA	ug/L	N/A	20	19-DEC-19
WG3246367-2 LCS Chromium, Hexavalent			101.1		%		80-120	19-DEC-19
WG3246367-1 MB Chromium, Hexavalent			<0.50		ug/L		0.5	19-DEC-19
WG3246367-5 MS Chromium, Hexavalent		WG3246367-3	96.2		%		70-130	19-DEC-19
EC-R511-WT	Water							
Batch R4948309								
WG3246108-4 DUP Conductivity		WG3246108-3 0.297	0.296		mS/cm	0.3	10	19-DEC-19
WG3246108-2 LCS Conductivity			102.3		%		90-110	19-DEC-19
WG3246108-1 MB Conductivity			<0.0030		mS/cm		0.003	19-DEC-19
F1-HS-511-WT	Water							



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TERRAPROBE-BRAMPTON Client:

11 Indell Lane

Brampton ON L6T 3Y3

Kossay Makhzoumi Contact:

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F1-HS-511-WT	Water							
Batch R4951330 WG3247542-1 LCS F1 (C6-C10)			96.3		%		80-120	21-DEC-19
WG3247542-2 MB F1 (C6-C10)			<25		ug/L		25	21-DEC-19
Surrogate: 3,4-Dichlorot	oluene		91.7		%		60-140	21-DEC-19
F2-F4-511-WT	Water							
Batch R4948447								
WG3245881-2 LCS F2 (C10-C16)			92.9		%		70-130	19-DEC-19
F3 (C16-C34)			98.2		%		70-130	19-DEC-19
F4 (C34-C50)			96.4		%		70-130	19-DEC-19
WG3245881-1 MB F2 (C10-C16)			<100		ug/L		100	19-DEC-19
F3 (C16-C34)			<250		ug/L		250	19-DEC-19
F4 (C34-C50)			<250		ug/L		250	19-DEC-19
Surrogate: 2-Bromobenz	zotrifluoride		89.6		%		60-140	19-DEC-19
HG-D-UG/L-CVAA-WT	Water							-
Batch R4946371								
WG3246069-4 DUP Mercury (Hg)-Dissolved		WG3246069-3 < 0.0050	0.0064	RPD-NA	ug/L	N/A	20	19-DEC-19
WG3246069-2 LCS Mercury (Hg)-Dissolved			94.4		%		80-120	19-DEC-19
WG3246069-1 MB			<0.0050				0.005	
Mercury (Hg)-Dissolved WG3246069-6 MS		WG3246069-5	<0.0000		ug/L		0.005	19-DEC-19
Mercury (Hg)-Dissolved		1100240003-3	93.3		%		70-130	19-DEC-19
MET-D-UG/L-MS-WT	Water							
Batch R4946430								
WG3245950-4 DUP Antimony (Sb)-Dissolved	d	WG3245950-3 <0.10	<0.10	RPD-NA	ug/L	N/A	20	19-DEC-19
Arsenic (As)-Dissolved	-	0.13	0.16	IN DIMA	ug/L	15	20	19-DEC-19
Barium (Ba)-Dissolved		104	104		ug/L	0.1	20	19-DEC-19
Beryllium (Be)-Dissolved	d	<0.10	<0.10	RPD-NA	ug/L	N/A	20	19-DEC-19
Boron (B)-Dissolved		36	36	2	ug/L	0.5	20	19-DEC-19
Cadmium (Cd)-Dissolve	d	0.0130	0.0124		ug/L	4.7	20	19-DEC-19
Chromium (Cr)-Dissolve		<0.50	<0.50	RPD-NA	ug/L	N/A	20	19-DEC-19



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R4946	430							
WG3245950-4 DU		WG3245950-3			4			
Cobalt (Co)-Dissolv		<0.10	<0.10	RPD-NA	ug/L	N/A	20	19-DEC-19
Copper (Cu)-Dissol		0.90	0.87		ug/L	3.4	20	19-DEC-19
Lead (Pb)-Dissolved		<0.050	<0.050	RPD-NA	ug/L	N/A	20	19-DEC-19
Molybdenum (Mo)-E		3.79	3.81		ug/L	0.7	20	19-DEC-19
Nickel (Ni)-Dissolve		0.65	0.64		ug/L	1.3	20	19-DEC-19
Selenium (Se)-Diss		0.844	0.860		ug/L	1.9	20	19-DEC-19
Silver (Ag)-Dissolve		<0.050	<0.050	RPD-NA	ug/L	N/A	20	19-DEC-19
Sodium (Na)-Dissol		202000	204000		ug/L	0.8	20	19-DEC-19
Thallium (TI)-Dissol		<0.010	<0.010	RPD-NA	ug/L	N/A	20	19-DEC-19
Uranium (U)-Dissol		0.897	0.893		ug/L	0.4	20	19-DEC-19
Vanadium (V)-Disso		<0.50	<0.50	RPD-NA	ug/L	N/A	20	19-DEC-19
Zinc (Zn)-Dissolved		<1.0	<1.0	RPD-NA	ug/L	N/A	20	19-DEC-19
WG3245950-2 LC	-		100.7		0/			
Antimony (Sb)-Disse			103.7		%		80-120	19-DEC-19
Arsenic (As)-Dissolv			105.5		%		80-120	19-DEC-19
Barium (Ba)-Dissolv			108.5		%		80-120	19-DEC-19
Beryllium (Be)-Disso Boron (B)-Dissolved			102.8 102.4		%		80-120	19-DEC-19
` ,					%		80-120	19-DEC-19
Cadmium (Cd)-Diss Chromium (Cr)-Diss			106.4 108.6		%		80-120	19-DEC-19
Cobalt (Co)-Dissolv			107.7		%		80-120	19-DEC-19
Copper (Cu)-Dissolv			107.7		%		80-120	19-DEC-19
Lead (Pb)-Dissolved			106.1		%		80-120 80-120	19-DEC-19 19-DEC-19
Molybdenum (Mo)-E			107.2		%		80-120	19-DEC-19
Nickel (Ni)-Dissolve			108.3		%		80-120	19-DEC-19 19-DEC-19
Selenium (Se)-Diss			101.9		%		80-120 80-120	19-DEC-19
Silver (Ag)-Dissolve			105.8		%		80-120	19-DEC-19
Sodium (Na)-Dissol			109.0		%		80-120	19-DEC-19
Thallium (TI)-Dissol			104.8		%		80-120	19-DEC-19
Uranium (U)-Dissolv			106.9		%		80-120	19-DEC-19
Vanadium (V)-Disso			108.5		%		80-120	19-DEC-19
Zinc (Zn)-Dissolved			107.4		%		80-120	19-DEC-19
WG3245950-1 MI							00 120	.0 220 10
Antimony (Sb)-Disse			<0.10				0.1	
1								



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R4946	6430							
WG3245950-1 M Antimony (Sb)-Diss			<0.10		ua/l		0.1	40 PEO ::
					ug/L		0.1	19-DEC-19
Arsenic (As)-Dissol			<0.10		ug/L			19-DEC-19
Barium (Ba)-Dissol			<0.10		ug/L		0.1	19-DEC-19
Beryllium (Be)-Diss			<0.10		ug/L		0.1	19-DEC-19
Boron (B)-Dissolve			<10		ug/L		10	19-DEC-19
Cadmium (Cd)-Diss			<0.0050		ug/L		0.005	19-DEC-19
Chromium (Cr)-Dis			<0.50		ug/L		0.5	19-DEC-19
Cobalt (Co)-Dissolv			<0.10		ug/L		0.1	19-DEC-19
Copper (Cu)-Dissol			<0.20		ug/L		0.2	19-DEC-19
Lead (Pb)-Dissolve			<0.050		ug/L		0.05	19-DEC-19
Molybdenum (Mo)-l			<0.050		ug/L		0.05	19-DEC-19
Nickel (Ni)-Dissolve	ed		<0.50		ug/L		0.5	19-DEC-19
Selenium (Se)-Diss	solved		<0.050		ug/L		0.05	19-DEC-19
Silver (Ag)-Dissolve	ed		<0.050		ug/L		0.05	19-DEC-19
Sodium (Na)-Disso	lved		<50		ug/L		50	19-DEC-19
Thallium (TI)-Disso	lved		<0.010		ug/L		0.01	19-DEC-19
Uranium (U)-Dissol	ved		<0.010		ug/L		0.01	19-DEC-19
Vanadium (V)-Diss	olved		< 0.50		ug/L		0.5	19-DEC-19
Zinc (Zn)-Dissolved	I		<1.0		ug/L		1	19-DEC-19
WG3245950-5 M Antimony (Sb)-Diss		WG3245950-6	100.9		%		70-130	19-DEC-19
Arsenic (As)-Dissol	ved		114.9		%		70-130	19-DEC-19
Barium (Ba)-Dissol			N/A	MS-B	%		-	19-DEC-19
Beryllium (Be)-Diss	olved		109.4		%		70-130	19-DEC-19
Boron (B)-Dissolve	d		100.3		%		70-130	19-DEC-19
Cadmium (Cd)-Diss	solved		98.7		%		70-130	19-DEC-19
Chromium (Cr)-Dis	solved		109.3		%		70-130	19-DEC-19
Cobalt (Co)-Dissolv			101.4		%		70-130	19-DEC-19
Copper (Cu)-Dissol			93.5		%		70-130	19-DEC-19
Lead (Pb)-Dissolve			93.5		%		70-130	19-DEC-19
Molybdenum (Mo)-l			106.1		%		70-130	19-DEC-19
Nickel (Ni)-Dissolve			95.7		%		70-130	19-DEC-19
Selenium (Se)-Diss			117.1		%		70-130	19-DEC-19
Silver (Ag)-Dissolve			92.2		%		70-130	19-DEC-19
(3, 3, 3, 3, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,							. 5 100	.0 220 10



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11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-UG/L-MS-WT	Water							
Batch R4946430 WG3245950-5 MS		WG3245950-6	i					
Sodium (Na)-Dissolved			N/A	MS-B	%		-	19-DEC-19
Thallium (TI)-Dissolved			94.4		%		70-130	19-DEC-19
Uranium (U)-Dissolved			N/A	MS-B	%		-	19-DEC-19
Vanadium (V)-Dissolved			112.2		%		70-130	19-DEC-19
Zinc (Zn)-Dissolved			97.9		%		70-130	19-DEC-19
PAH-511-WT	Water							
Batch R4949666								
WG3245881-2 LCS 1-Methylnaphthalene			94.6		%		50-140	20-DEC-19
2-Methylnaphthalene			84.5		%		50-140	20-DEC-19
Acenaphthene			100.4		%		50-140	20-DEC-19
Acenaphthylene			99.8		%		50-140	20-DEC-19
Anthracene			98.4		%		50-140	20-DEC-19
Benzo(a)anthracene			102.2		%		50-140	20-DEC-19
Benzo(a)pyrene			95.3		%		50-140	20-DEC-19
Benzo(b)fluoranthene			95.0		%		50-140	20-DEC-19
Benzo(g,h,i)perylene			101.3		%		50-140	20-DEC-19
Benzo(k)fluoranthene			101.2		%		50-140	20-DEC-19
Chrysene			100.5		%		50-140	20-DEC-19
Dibenzo(ah)anthracene			100.1		%		50-140	20-DEC-19
Fluoranthene			101.8		%		50-140	20-DEC-19
Fluorene			98.6		%		50-140	20-DEC-19
Indeno(1,2,3-cd)pyrene			104.9		%		50-140	20-DEC-19
Naphthalene			90.7		%		50-140	20-DEC-19
Phenanthrene			101.9		%		50-140	20-DEC-19
Pyrene			101.2		%		50-140	20-DEC-19
WG3245881-1 MB 1-Methylnaphthalene			<0.020		ug/L		0.02	20-DEC-19
2-Methylnaphthalene			<0.020		ug/L		0.02	20-DEC-19
Acenaphthene			<0.020		ug/L		0.02	20-DEC-19
Acenaphthylene			<0.020		ug/L		0.02	20-DEC-19
Anthracene			<0.020		ug/L		0.02	20-DEC-19
Benzo(a)anthracene			<0.020		ug/L		0.02	20-DEC-19
Benzo(a)pyrene			<0.010		ug/L		0.01	20-DEC-19
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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PAH-511-WT	Water							
Batch R494966	6							
WG3245881-1 MB			-0.020				0.02	00 PEO 40
Benzo(b)fluoranthene			<0.020 <0.020		ug/L		0.02	20-DEC-19
Benzo(g,h,i)perylene					ug/L		0.02	20-DEC-19
Benzo(k)fluoranthene			<0.020 <0.020		ug/L			20-DEC-19
Chrysene					ug/L		0.02 0.02	20-DEC-19
Dibenzo(ah)anthracer	ie		<0.020		ug/L			20-DEC-19
Fluoranthene			<0.020		ug/L		0.02	20-DEC-19
Fluorene	_		<0.020		ug/L		0.02	20-DEC-19
Indeno(1,2,3-cd)pyrer	e		<0.020		ug/L		0.02	20-DEC-19
Naphthalene			<0.050		ug/L		0.05	20-DEC-19
Phenanthrene			<0.020		ug/L		0.02	20-DEC-19
Pyrene			<0.020		ug/L		0.02	20-DEC-19
Surrogate: d8-Naphth			85.7		%		60-140	20-DEC-19
Surrogate: d10-Phena			91.4		%		60-140	20-DEC-19
Surrogate: d12-Chrys			86.1		%		60-140	20-DEC-19
Surrogate: d10-Acena	phthene		92.4		%		60-140	20-DEC-19
PH-WT	Water							
Batch R494830								
WG3246108-4 DUP pH	1	WG3246108- 8.21	∙3 8.20	J	pH units	0.01	0.2	19-DEC-19
WG3246108-2 LCS		0.21	0.20	3	pri dillo	0.01	0.2	19-020-19
pH			7.00		pH units		6.9-7.1	19-DEC-19
VOC-511-HS-WT	Water							
Batch R494916								
WG3243074-4 DUP		WG3243074-	3					
1,1,1,2-Tetrachloroeth		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,1,2,2-Tetrachloroeth	ane	<0.50	< 0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,1,1-Trichloroethane		<0.50	< 0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,1,2-Trichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,1-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,1-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,2-Dibromoethane		<0.20	<0.20	RPD-NA	ug/L	N/A	30	20-DEC-19
1,2-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,2-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,2-Dichloropropane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,2 Distribiopropario		10.00	30.00	IXI D-IVA	~g, _	1 N/ / \	50	20-DEO-18



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11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4949168								
WG3243074-4 DUP		WG3243074-			4			
1,3-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,4-Dichlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Acetone		<30	<30	RPD-NA	ug/L	N/A	30	20-DEC-19
Benzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Bromodichloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Bromoform		<5.0	<5.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Bromomethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Carbon tetrachloride		<0.20	<0.20	RPD-NA	ug/L	N/A	30	20-DEC-19
Chlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Chloroform		<1.0	<1.0	RPD-NA	ug/L	N/A	30	20-DEC-19
cis-1,2-Dichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
cis-1,3-Dichloropropene		<0.30	< 0.30	RPD-NA	ug/L	N/A	30	20-DEC-19
Dibromochloromethane		<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Dichlorodifluoromethane)	<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Ethylbenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
n-Hexane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
m+p-Xylenes		<0.40	< 0.40	RPD-NA	ug/L	N/A	30	20-DEC-19
Methyl Ethyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	20-DEC-19
Methyl Isobutyl Ketone		<20	<20	RPD-NA	ug/L	N/A	30	20-DEC-19
Methylene Chloride		<5.0	<5.0	RPD-NA	ug/L	N/A	30	20-DEC-19
MTBE		<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-DEC-19
o-Xylene		<0.30	<0.30	RPD-NA	ug/L	N/A	30	20-DEC-19
Styrene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Tetrachloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Toluene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
trans-1,2-Dichloroethylei	ne	<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
trans-1,3-Dichloroproper	ne	<0.30	<0.30	RPD-NA	ug/L	N/A	30	20-DEC-19
Trichloroethylene		1.27	1.25		ug/L	1.6	30	20-DEC-19
Trichlorofluoromethane		<5.0	<5.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Vinyl chloride		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
WG3243074-1 LCS								
1,1,1,2-Tetrachloroethar	ne		90.4		%		70-130	20-DEC-19
1,1,2,2-Tetrachloroethar	ne		91.8		%		70-130	20-DEC-19



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Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix Reference Result Qualifier Units RPD		Limit	Analyzed			
VOC-511-HS-WT	Water			 			
Batch R4949168	3						
WG3243074-1 LCS 1,1,1-Trichloroethane			91.6	%		70.400	00 DEO 10
1,1,2-Trichloroethane			91.6	%		70-130	20-DEC-19
1,1-Dichloroethane			91.0	%		70-130	20-DEC-19
•			88.2	%		70-130	20-DEC-19
1,1-Dichloroethylene 1,2-Dibromoethane				%		70-130	20-DEC-19
			93.1	%		70-130	20-DEC-19
1,2-Dichlorobenzene			85.9 91.5	%		70-130	20-DEC-19
1,2-Dichloroethane						70-130	20-DEC-19
1,2-Dichloropropane			100.5	%		70-130	20-DEC-19
1,3-Dichlorobenzene			84.8	%		70-130	20-DEC-19
1,4-Dichlorobenzene			84.8	%		70-130	20-DEC-19
Acetone			96.5	%		60-140	20-DEC-19
Benzene			95.2	%		70-130	20-DEC-19
Bromodichloromethane)		88.8	%		70-130	20-DEC-19
Bromoform			93.9	%		70-130	20-DEC-19
Bromomethane			83.1	%		60-140	20-DEC-19
Carbon tetrachloride			91.6	%		70-130	20-DEC-19
Chlorobenzene			89.1	%		70-130	20-DEC-19
Chloroform			93.5	%		70-130	20-DEC-19
cis-1,2-Dichloroethylen			90.3	%		70-130	20-DEC-19
cis-1,3-Dichloropropen			91.3	%		70-130	20-DEC-19
Dibromochloromethane			88.4	%		70-130	20-DEC-19
Dichlorodifluoromethan	ie		94.0	%		50-140	20-DEC-19
Ethylbenzene			88.3	%		70-130	20-DEC-19
n-Hexane			87.2	%		70-130	20-DEC-19
m+p-Xylenes			87.9	%		70-130	20-DEC-19
Methyl Ethyl Ketone			90.7	%		60-140	20-DEC-19
Methyl Isobutyl Ketone			92.9	%		60-140	20-DEC-19
Methylene Chloride			90.7	%		70-130	20-DEC-19
MTBE			94.0	%		70-130	20-DEC-19
o-Xylene			88.4	%		70-130	20-DEC-19
Styrene			90.8	%		70-130	20-DEC-19
Tetrachloroethylene			87.6	%		70-130	20-DEC-19
Toluene			89.7	%		70-130	20-DEC-19



Workorder: L2398126 Report Date: 27-DEC-19 Page 9 of 12

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4949168								
WG3243074-1 LCS			00.5		0/			
trans-1,2-Dichloroethyle			89.5		%		70-130	20-DEC-19
trans-1,3-Dichloroprope	ene		90.6		%		70-130	20-DEC-19
Trichloroethylene			91.7		%		70-130	20-DEC-19
Trichlorofluoromethane			90.9		%		60-140	20-DEC-19
Vinyl chloride			104.1		%		60-140	20-DEC-19
WG3243074-2 MB 1,1,1,2-Tetrachloroetha	ine		<0.50		ug/L		0.5	20-DEC-19
1,1,2,2-Tetrachloroetha			<0.50		ug/L		0.5	20-DEC-19
1,1,1-Trichloroethane			<0.50		ug/L		0.5	20-DEC-19
1,1,2-Trichloroethane			<0.50		ug/L		0.5	20-DEC-19
1,1-Dichloroethane			<0.50		ug/L		0.5	20-DEC-19
1,1-Dichloroethylene			<0.50		ug/L		0.5	20-DEC-19
1,2-Dibromoethane			<0.20		ug/L		0.2	20-DEC-19
1,2-Dichlorobenzene			<0.50		ug/L		0.5	20-DEC-19
1,2-Dichloroethane			<0.50		ug/L		0.5	20-DEC-19
1,2-Dichloropropane			<0.50		ug/L		0.5	20-DEC-19
1,3-Dichlorobenzene			<0.50		ug/L		0.5	20-DEC-19
1,4-Dichlorobenzene			<0.50		ug/L		0.5	20-DEC-19
Acetone			<30		ug/L		30	20-DEC-19
Benzene			<0.50		ug/L		0.5	20-DEC-19
Bromodichloromethane	:		<2.0		ug/L		2	20-DEC-19
Bromoform			<5.0		ug/L		5	20-DEC-19
Bromomethane			<0.50		ug/L		0.5	20-DEC-19
Carbon tetrachloride			<0.20		ug/L		0.2	20-DEC-19
Chlorobenzene			<0.50		ug/L		0.5	20-DEC-19
Chloroform			<1.0		ug/L		1	20-DEC-19
cis-1,2-Dichloroethylene	е		<0.50		ug/L		0.5	20-DEC-19
cis-1,3-Dichloropropene	Э		< 0.30		ug/L		0.3	20-DEC-19
Dibromochloromethane)		<2.0		ug/L		2	20-DEC-19
Dichlorodifluoromethan	е		<2.0		ug/L		2	20-DEC-19
Ethylbenzene			<0.50		ug/L		0.5	20-DEC-19
n-Hexane			<0.50		ug/L		0.5	20-DEC-19
m+p-Xylenes			<0.40		ug/L		0.4	20-DEC-19
Methyl Ethyl Ketone			<20		ug/L		20	20-DEC-19



Workorder: L2398126 Report Date: 27-DEC-19 Page 10 of 12

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix Reference Result Qualifier Units RPI		RPD	Limit	Analyzed		
VOC-511-HS-WT	Water			 			
Batch R4949168							
WG3243074-2 MB			00	//		00	
Methyl Isobutyl Ketone			<20	ug/L		20	20-DEC-19
Methylene Chloride			<5.0	ug/L		5	20-DEC-19
MTBE			<2.0	ug/L		2	20-DEC-19
o-Xylene			<0.30	ug/L		0.3	20-DEC-19
Styrene			<0.50	ug/L		0.5	20-DEC-19
Tetrachloroethylene			<0.50	ug/L		0.5	20-DEC-19
Toluene			<0.50	ug/L		0.5	20-DEC-19
trans-1,2-Dichloroethylen			<0.50	ug/L		0.5	20-DEC-19
trans-1,3-Dichloropropen	ie		<0.30	ug/L		0.3	20-DEC-19
Trichloroethylene			<0.50	ug/L		0.5	20-DEC-19
Trichlorofluoromethane			<5.0	ug/L		5	20-DEC-19
Vinyl chloride			<0.50	ug/L		0.5	20-DEC-19
Surrogate: 1,4-Difluorobe	enzene		93.6	%		70-130	20-DEC-19
Surrogate: 4-Bromofluoro	obenzene		92.4	%		70-130	20-DEC-19
WG3243074-5 MS		WG3243074-3	04.5	0/			
1,1,1,2-Tetrachloroethan			91.5	%		50-140	23-DEC-19
1,1,2,2-Tetrachloroethan	е		91.3	%		50-140	23-DEC-19
1,1,1-Trichloroethane			92.7	%		50-140	23-DEC-19
1,1,2-Trichloroethane			95.7	%		50-140	23-DEC-19
1,1-Dichloroethane			87.1	%		50-140	23-DEC-19
1,1-Dichloroethylene			84.8	%		50-140	23-DEC-19
1,2-Dibromoethane			96.8	%		50-140	23-DEC-19
1,2-Dichlorobenzene			82.4	%		50-140	23-DEC-19
1,2-Dichloroethane			97.3	%		50-140	23-DEC-19
1,2-Dichloropropane			95.5	%		50-140	23-DEC-19
1,3-Dichlorobenzene			82.3	%		50-140	23-DEC-19
1,4-Dichlorobenzene			78.8	%		50-140	23-DEC-19
Acetone			106.3	%		50-140	23-DEC-19
Benzene			94.5	%		50-140	23-DEC-19
Bromodichloromethane			94.0	%		50-140	23-DEC-19
Bromoform			95.2	%		50-140	23-DEC-19
Bromomethane			81.7	%		50-140	23-DEC-19
Carbon tetrachloride			89.9	%		50-140	23-DEC-19
Chlorobenzene			88.5	%		50-140	23-DEC-19



Workorder: L2398126 Report Date: 27-DEC-19 Page 11 of 12

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

est	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R494916	3							
WG3243074-5 MS		WG3243074-3			0.4			
Chloroform			93.9		%		50-140	23-DEC-19
cis-1,2-Dichloroethyler			88.6		%		50-140	23-DEC-19
cis-1,3-Dichloroproper			86.4		%		50-140	23-DEC-19
Dibromochloromethan	9		93.4		%		50-140	23-DEC-19
Dichlorodifluorometha	ne		71.7		%		50-140	23-DEC-19
Ethylbenzene			85.7		%		50-140	23-DEC-19
n-Hexane			81.7		%		50-140	23-DEC-19
m+p-Xylenes			84.8		%		50-140	23-DEC-19
Methyl Ethyl Ketone			93.6		%		50-140	23-DEC-19
Methyl Isobutyl Ketone			96.9		%		50-140	23-DEC-19
Methylene Chloride			93.7		%		50-140	23-DEC-19
MTBE			90.2		%		50-140	23-DEC-19
o-Xylene			87.0		%		50-140	23-DEC-19
Styrene			88.4		%		50-140	23-DEC-19
Tetrachloroethylene			83.4		%		50-140	23-DEC-19
Toluene			89.0		%		50-140	23-DEC-19
trans-1,2-Dichloroethy	ene		77.8		%		50-140	23-DEC-19
trans-1,3-Dichloroprop	ene		85.4		%		50-140	23-DEC-19
Trichloroethylene			87.3		%		50-140	23-DEC-19
Trichlorofluoromethan	9		87.8		%		50-140	23-DEC-19
Vinyl chloride			100.1		%		50-140	23-DEC-19

Workorder: L2398126 Report Date: 27-DEC-19

Client: TERRAPROBE-BRAMPTON Page 12 of 12

11 Indell Lane

Brampton ON L6T 3Y3 Kossay Makhzoumi

Legend:

Contact:

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.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
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.

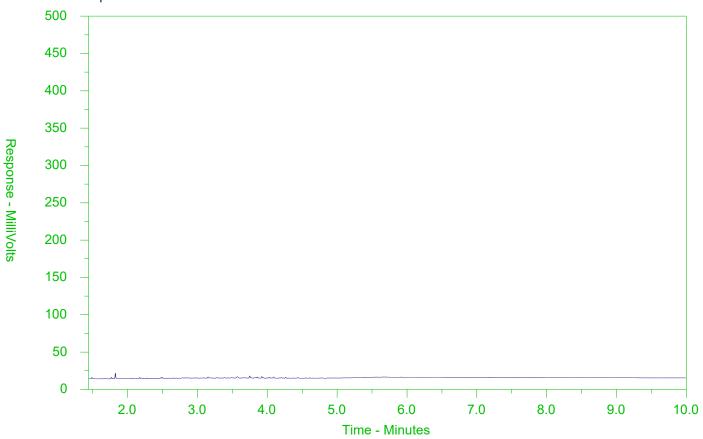
The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against predetermined data quality objectives to provide 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: L2398126-1 Client Sample ID: DUP 3



← -F2-	→←	—F3—→ ← —F4—	>
nC10	nC16	nC34	nC50
174°C	287°C	481°C	575°C
346°F	549°F	898°F	1067⁰F
Gasolin	e →	← Mot	or Oils/Lube Oils/Grease
←	-Diesel/Je	t 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) Environmentai

Chain of Custody (COC) / Analytical Request Form

L2398126-COFC

COC Number: 15 -

Canada Toll Free: 1 800 668 9878

	www.alsglobal.com	Ω																									
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Contact:	Kossay Makhzoumi					Quality Control (QC) Report with Re	eport 🗸 YES	□ NO	Î	4	day [F	24]			5	1	Busi	ness	day [E	1]						
Phone:	905-796-2650					☑ Compare Resul	ts to Criteria on Report -	provide details belo	w if box checked	6.	3	day [F	23]			RGEN	9	same	Dav.	Weeke	nd or	_					
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Street:	11 Indell Lane					Email 1 or Fax	kmakhzoumi@terr	aprobe.ca		Date and Time Required for all E&P TATs:																	
City/Province:	Brampton					Email 2				For tes	ts that c	an not b	e perfor	ned acco	ording to	the ser	vice lev	rel sele	cted, yo	u will be	contacted						
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TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 18-DEC-19

Report Date: 27-DEC-19 09:03 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2398098

Project P.O. #: NOT SUBMITTED

Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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ANALYTICAL REPORT

L2398098 CONT'D....

Job Reference: 1-19-0603-42

PAGE 2 of 5

27-DEC-19 09:03 (MT)

Summary of Guideline Exceedances

Guideline						
ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Non-Potable Ground Water-All Types of Property Uses (Coarse)

(No parameter exceedances)

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

(No parameter exceedances)



ANALYTICAL REPORT

L2398098 CONT'D....

Job Reference: 1-19-0603-42

PAGE 3 of 5

27-DEC-19 09:03 (MT)

Volatile Organic Compounds - WATER

Lab ID L2398098-1
Sample Date 16-DEC-19
Sample ID TRIP BLANK

			-	
Analyte	Unit	Guide #1	Limits #2	
Acetone	ug/L	130000	130000	<30
Benzene	ug/L	44	430	< 0.50
Bromodichloromethane	ug/L	85000	85000	<2.0
Bromoform	ug/L	380	770	<5.0
Bromomethane	ug/L	5.6	56	<0.50
Carbon tetrachloride	ug/L	0.79	8.4	<0.20
Chlorobenzene	ug/L	630	630	<0.50
Dibromochloromethane	ug/L	82000	82000	<2.0
Chloroform	ug/L	2.4	22	<1.0
1,2-Dibromoethane	ug/L	0.25	0.83	<0.20
1,2-Dichlorobenzene	ug/L	4600	9600	<0.50
1,3-Dichlorobenzene	ug/L	9600	9600	<0.50
1,4-Dichlorobenzene	ug/L	8	67	<0.50
Dichlorodifluoromethane	ug/L	4400	4400	<2.0
1,1-Dichloroethane	ug/L	320	3100	<0.50
1,2-Dichloroethane	ug/L	1.6	12	<0.50
1,1-Dichloroethylene	ug/L	1.6	17	<0.50
cis-1,2-Dichloroethylene	ug/L	1.6	17	<0.50
trans-1,2-Dichloroethylene	ug/L	1.6	17	<0.50
Methylene Chloride	ug/L	610	5500	<5.0
1,2-Dichloropropane	ug/L	16	140	<0.50
cis-1,3-Dichloropropene	ug/L	-	-	< 0.30
trans-1,3-Dichloropropene	ug/L	-	-	<0.30
1,3-Dichloropropene (cis & trans)	ug/L	5.2	45	<0.50
Ethylbenzene	ug/L	2300	2300	<0.50
n-Hexane	ug/L	51	520	<0.50
Methyl Ethyl Ketone	ug/L	470000	1500000	<20
Methyl Isobutyl Ketone	ug/L	140000	580000	<20
MTBE	ug/L	190	1400	<2.0
Styrene	ug/L	1300	9100	<0.50

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)



Surrogate: 1,4-Difluorobenzene

ANALYTICAL REPORT

L2398098 CONT'D....

Job Reference: 1-19-0603-42

PAGE 4 of 5

27-DEC-19 09:03 (MT)

Volatile Organic Compounds - WATER

			ab ID	L2398098-1 16-DEC-19
		Sample Sam	ple ID	TRIP BLANK
			•	
		Guide		
Analyte	Unit	#1	#2	
1,1,1,2-Tetrachloroethane	ug/L	3.3	28	<0.50
1,1,2,2-Tetrachloroethane	ug/L	3.2	15	<0.50
Tetrachloroethylene	ug/L	1.6	17	<0.50
Toluene	ug/L	18000	18000	<0.50
1,1,1-Trichloroethane	ug/L	640	6700	<0.50
1,1,2-Trichloroethane	ug/L	4.7	30	<0.50
Trichloroethylene	ug/L	1.6	17	<0.50
Trichlorofluoromethane	ug/L	2500	2500	<5.0
Vinyl chloride	ug/L	0.5	1.7	<0.50
o-Xylene	ug/L	-	-	<0.30
m+p-Xylenes	ug/L	-	-	<0.40
Xylenes (Total)	ug/L	4200	4200	<0.50
Surrogate: 4-Bromofluorobenzene	%	-	-	93.5

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

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

Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

94.7

Reference Information

L2398098 CONT'D....
Job Reference: 1-19-0603-42
PAGE 5 of 5
27-DEC-19 09:03 (MT)

Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

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

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

Liquid samples are analyzed by headspace GC/MSD.

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 Water 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

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.



Workorder: L2398098 Report Date: 27-DEC-19 Page 1 of 6

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4949	168							
	UP	WG3243074		000 114	/1	11/4	00	
1,1,1,2-Tetrachloro		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,1,2,2-Tetrachloro		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,1,1-Trichloroetha		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,1,2-Trichloroetha	ne	<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,1-Dichloroethane	_	<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,1-Dichloroethylen		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,2-Dibromoethane		<0.20	<0.20	RPD-NA	ug/L	N/A	30	20-DEC-19
1,2-Dichlorobenzen		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,2-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,2-Dichloropropan		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,3-Dichlorobenzen		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
1,4-Dichlorobenzen	e	<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Acetone		<30	<30	RPD-NA	ug/L	N/A	30	20-DEC-19
Benzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Bromodichlorometh	ane	<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Bromoform		<5.0	<5.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Bromomethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Carbon tetrachlorid	е	<0.20	<0.20	RPD-NA	ug/L	N/A	30	20-DEC-19
Chlorobenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Chloroform		<1.0	<1.0	RPD-NA	ug/L	N/A	30	20-DEC-19
cis-1,2-Dichloroethy	/lene	<0.50	< 0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
cis-1,3-Dichloroprop	pene	<0.30	< 0.30	RPD-NA	ug/L	N/A	30	20-DEC-19
Dibromochlorometh	nane	<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Dichlorodifluoromet	hane	<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Ethylbenzene		<0.50	< 0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
n-Hexane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
m+p-Xylenes		<0.40	<0.40	RPD-NA	ug/L	N/A	30	20-DEC-19
Methyl Ethyl Ketone)	<20	<20	RPD-NA	ug/L	N/A	30	20-DEC-19
Methyl Isobutyl Keto	one	<20	<20	RPD-NA	ug/L	N/A	30	20-DEC-19
Methylene Chloride		<5.0	<5.0	RPD-NA	ug/L	N/A	30	20-DEC-19
MTBE		<2.0	<2.0	RPD-NA	ug/L	N/A	30	20-DEC-19
o-Xylene		<0.30	< 0.30	RPD-NA	ug/L	N/A	30	20-DEC-19
Styrene		<0.50	<0.50		ug/L			20-DEC-19
i								



Workorder: L2398098 Report Date: 27-DEC-19 Page 2 of 6

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4949168	;							
WG3243074-4 DUP		WG3243074-		DDD 114	ug/l	A1/A	00	00 PEO 15
Styrene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Tetrachloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
Toluene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
trans-1,2-Dichloroethyle		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
trans-1,3-Dichloroprope	ene	<0.30	<0.30	RPD-NA	ug/L	N/A	30	20-DEC-19
Trichloroethylene		1.27	1.25		ug/L	1.6	30	20-DEC-19
Trichlorofluoromethane	!	<5.0	<5.0	RPD-NA	ug/L	N/A	30	20-DEC-19
Vinyl chloride		<0.50	<0.50	RPD-NA	ug/L	N/A	30	20-DEC-19
WG3243074-1 LCS 1,1,1,2-Tetrachloroetha	ine		90.4		%		70-130	20-DEC-19
1,1,2,2-Tetrachloroetha			91.8		%		70-130	20-DEC-19 20-DEC-19
1,1,1-Trichloroethane			91.6		%		70-130	20-DEC-19 20-DEC-19
1,1,2-Trichloroethane			91.0		%		70-130	20-DEC-19
1,1-Dichloroethane			92.1		%		70-130	20-DEC-19
1,1-Dichloroethylene			88.2		%		70-130	20-DEC-19
1,2-Dibromoethane			93.1		%		70-130	20-DEC-19
1,2-Dichlorobenzene			85.9		%		70-130	20-DEC-19
1,2-Dichloroethane			91.5		%		70-130	20-DEC-19
1,2-Dichloropropane			100.5		%		70-130	20-DEC-19
1,3-Dichlorobenzene			84.8		%		70-130	20-DEC-19
1,4-Dichlorobenzene			84.8		%		70-130	20-DEC-19
Acetone			96.5		%		60-140	20-DEC-19
Benzene			95.2		%		70-130	20-DEC-19
Bromodichloromethane	•		88.8		%		70-130	20-DEC-19
Bromoform			93.9		%		70-130	20-DEC-19
Bromomethane			83.1		%		60-140	20-DEC-19
Carbon tetrachloride			91.6		%		70-130	20-DEC-19
Chlorobenzene			89.1		%		70-130	20-DEC-19
Chloroform			93.5		%		70-130	20-DEC-19
cis-1,2-Dichloroethylen	е		90.3		%		70-130	20-DEC-19
cis-1,3-Dichloropropene	Э		91.3		%		70-130	20-DEC-19
Dibromochloromethane)		88.4		%		70-130	20-DEC-19
Dichlorodifluoromethan	е		94.0		%		50-140	20-DEC-19



Workorder: L2398098 Report Date: 27-DEC-19 Page 3 of 6

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Satch R494018 W6324297-4 LCS Ethylbenzane 88.3 % 70-130 20-DEC-19 1-Hexane 87.2 % 70-130 20-DEC-19 1-Hexane 87.2 % 70-130 20-DEC-19 1-Hexane 87.2 % 70-130 20-DEC-19 1-Hexane 87.2 % 70-130 20-DEC-19 1-Hexane 87.2 % 70-130 20-DEC-19 1-Hexane 87.2 % 70-130 20-DEC-19 1-Hexane 87.2 % 70-130 20-DEC-19 1-Hexane 90.7 % 60-140 20-DEC-19 1-Hexane 90.7 % 60-140 20-DEC-19 1-Hexane 90.7 % 70-130 20-DEC-19 1-Hexane 90.7 % 70-130 20-DEC-19 1-Hexane 90.7 % 70-130 20-DEC-19 1-Hexane 90.7 % 70-130 20-DEC-19 1-Hexane 90.8 % 70-130 20-DEC-19 1-Hexane 90.8 % 70-130 20-DEC-19 1-Hexane 90.8 % 70-130 20-DEC-19 1-Hexane 90.8 % 70-130 20-DEC-19 1-Hexane 90.8 % 70-130 20-DEC-19 1-Hexane 90.8 % 70-130 20-DEC-19 1-Hexane 90.8 % 70-130 20-DEC-19 1-Hexane 90.8 % 70-130 20-DEC-19 1-Hexane 90.8 % 70-130 20-DEC-19 1-Hexane 90.9 % 60-140 20-DEC-19 1-Hexane 90.9 % 60-140 20-DEC-19 1-Hexane 90.9 % 60-140 20-DEC-19 1-Hexane 90.9 % 60-140 20-DEC-19 1-Hexane 90.9 % 60-140 20-DEC-19 1-Hexane 90.9 % 60-140 20-DEC-19 1-Hexane 90.9 % 60-140 20-DEC-19 1-Hexane 90.9 % 60-140 20-DEC-19 1-Hexane 90.9 % 60-140 20-DEC-19 1-Hexane 90.9 % 60-140 20-DEC-19 1-Hexane 90.9 % 90-DEC-19	Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
Bithylbenzane 88.3 % 70-130 20-DEC-19 n-Hexane 87.2 % 70-130 20-DEC-19 m+p-Xylenes 87.9 % 70-130 20-DEC-19 Methyl Ethyl Ketone 90.7 % 60-140 20-DEC-19 Methyl Isobulyl Ketone 92.9 % 60-140 20-DEC-19 Methyl Isobulyl Ketone 90.7 % 70-130 20-DEC-19 Methyl Isobulyl Ketone 90.7 % 70-130 20-DEC-19 Methyl Isobulyl Ketone 90.7 % 70-130 20-DEC-19 Methyl Isobulyl Ketone 90.7 % 70-130 20-DEC-19 Methyl Isobulyl Ketone 90.7 % 70-130 20-DEC-19 Methyl Isobulyl Ketone 90.7 % 70-130 20-DEC-19 METHYL Isobulyl Ketone 90.7 % 70-130 20-DEC-19 Trichlore Methylene 87.6 % 70-130 20-DEC-19 Trichlore Miylene 89.7 % 70-130	VOC-511-HS-WT	Water							
Ethybenzene 88.3 % 70-130 20-DEC-19 n-Hexane 87.2 % 70-130 20-DEC-19 m+p-Xylones 87.9 % 60-140 20-DEC-19 Methyl Ethyl Ketone 90.7 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 92.9 % 60-140 20-DEC-19 Methylene Chloride 90.7 % 70-130 20-DEC-19 MTBE 94.0 % 70-130 20-DEC-19 Styrene 88.4 % 70-130 20-DEC-19 Styrene 90.8 % 70-130 20-DEC-19 Tetachloroethylene 87.6 % 70-130 20-DEC-19 Toluene 89.7 % 70-130 20-DEC-19 trans-1,2-Dichloroethylene 89.5 % 70-130 20-DEC-19 trans-1,3-Dichloroethylene 91.7 % 70-130 20-DEC-19 Trichloroethylene 91.7 % 60-140 20-DEC-19 Viry chloride </td <td>Batch R4949168</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Batch R4949168								
n-Hexane 87.2 % 70-130 20-DEC-19 m+p-Xylenes 87.9 % 70-130 20-DEC-19 Methyl Ethyl Ketone 90.7 % 60-140 20-DEC-19 Methyl Ethyl Ketone 92.9 % 60-140 20-DEC-19 Methyl Ethyl Ketone 92.9 % 70-130 20-DEC-19 Methylene Chloride 90.7 % 70-130 20-DEC-19 Methylene Chloride 90.7 % 70-130 20-DEC-19 MTBE 94.0 % 70-130 20-DEC-19 Slyrene 90.8 % 70-130 20-DEC-19 Slyrene 90.8 % 70-130 20-DEC-19 Tetrachloroethylene 87.6 % 70-130 20-DEC-19 Toluene 88.7 % 70-130 20-DEC-19 I trans-1,2-Dichloroethylene 89.5 % 70-130 20-DEC-19 I trans-1,3-Dichloroethylene 90.6 % 70-130 20-DEC-19 I trans-1,3-Dichloropropene 90.6 % 70-130 20-DEC-19 I trans-1,3-Dichloropropene 90.6 % 70-130 20-DEC-19 I trans-1,3-Dichloropropene 90.6 % 70-130 20-DEC-19 I trans-1,3-Dichloropropene 90.6 % 70-130 20-DEC-19 I trans-1,3-Dichloropropene 90.9 % 60-140 20-DEC-19 I trans-1,3-Dichloropropene 90.9 % 60-140 20-DEC-19 I trans-1,3-Dichloropropene 90.9 % 60-140 20-DEC-19 I trans-1,3-Dichloropropene 90.9 % 60-140 20-DEC-19 I trans-1,3-Dichloropropene 90.5 ug/L 0.5 20-DEC-19 I 1,1,2-Tetrachloroethane 90.50 ug/L 0.5 20-DEC-19 I 1,1,2-Tetrachloroethane 90.50 ug/L 0.5 20-DEC-19 I 1,1,2-Tirchloroethane 90.50 ug/L 0.5 20-DEC-19 I 1,1-Dichloroethane 90.50 ug/L 0.5 20-DEC-19 I 1,1-Dichloroethane 90.50 ug/L 0.5 20-DEC-19 I 1,1-Dichloroethane 90.50 ug/L 0.5 20-DEC-19 I 1,1-Dichloroethane 90.50 ug/L 0.5 20-DEC-19 I 1,2-Dichlorophylene 90.50 ug/L 0.5 20-DEC-19 I 1,2-Dichlorophylene 90.50 ug/L 0.5 20-DEC-19 I 1,2-Dichlorophylene 90.50 ug/L 0.5 20-DEC-19 I 1,2-Dichlorophylene 90.50 ug/L 0.5 20-DEC-19 I 1,2-Dichlorophylene 90.50 ug/L 0.5 20-DEC-19 I 1,2-Dichlorophylene 90.50 ug/L 0.5 20-DEC-19 I 1,2-Dichlorophylene 90.50 ug/L 0.5 20-DEC-19 I 1,2-Dichlorophylene 90.50 ug/L 0.5 20-DEC-19 I 1,2-Dichlorophylene 90.50 ug/L 0.5 20-DEC-19 I 1,2-Dichlorophylene 90.50 ug/L 0.5 20-DEC-19 I 1,2-Dichlorophylene 90.50 ug/L 0.5 20-DEC-19 I 1,2-Dichlorophylene 90.50 ug/L 0.5 20-DEC-19 I 1,2-Dichlorophylene 90.50 ug/L 0.5 20-DEC-19 I 1,2-Dichlorophylene 90.50 ug/L 0.5 20-DEC-19 I 1,2-Dichlorophylene				00 2		0/_		70 120	20 DEC 40
m+p-Xylenes 87.9 % 70.130 20.DEC-19 Methyl Ethyl Ketone 90.7 % 60-140 20-DEC-19 Methyl Isobutyl Ketone 92.9 % 60-140 20-DEC-19 Methylene Chloride 90.7 % 70-130 20-DEC-19 MTBE 94.0 % 70-130 20-DEC-19 O-Xylene 88.4 % 70-130 20-DEC-19 Styrene 90.8 % 70-130 20-DEC-19 Tetrachloroethylene 87.6 % 70-130 20-DEC-19 Toluene 89.7 % 70-130 20-DEC-19 trans-1,2-Dichloroethylene 89.5 % 70-130 20-DEC-19 trans-1,3-Dichloropropene 90.6 % 70-130 20-DEC-19 trans-1,3-Dichloropropene 91.7 % 70-130 20-DEC-19 Vinyl chloride 104.1 % 60-140 20-DEC-19 Vinyl chloride 104.1 % 60-140 20-DEC-19									
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Methyl Isobutyl Ketone 92.9 % 60-140 20-DEC-19 Methylene Chloride 90.7 % 70-130 20-DEC-19 MTBE 94.0 % 70-130 20-DEC-19 o-Xylene 88.4 % 70-130 20-DEC-19 Styrene 90.8 % 70-130 20-DEC-19 Tetrachloroethylene 87.6 % 70-130 20-DEC-19 Toluene 88.7 % 70-130 20-DEC-19 trans-1,2-Dichloroethylene 89.5 % 70-130 20-DEC-19 trans-1,2-Dichloropropene 90.6 % 70-130 20-DEC-19 Trichloroethylene 91.7 % 70-130 20-DEC-19 Trichloroethylene 91.7 % 60-140 20-DEC-19 Trichloroethylene 90.9 % 60-140 20-DEC-19 Winyl chloride 104.1 % 60-140 20-DEC-19 Trichloroethane <0.50									
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MTBE 94.0 % 70-130 20-DEC-19 o-Xylene 88.4 % 70-130 20-DEC-19 Styrene 90.8 % 70-130 20-DEC-19 Tetrachloroethylene 87.6 % 70-130 20-DEC-19 Toluene 89.7 % 70-130 20-DEC-19 trans-1,2-Dichloroethylene 89.5 % 70-130 20-DEC-19 trans-1,3-Dichloropropene 90.6 % 70-130 20-DEC-19 Trichloroethylene 91.7 % 70-130 20-DEC-19 Trichlorofluoromethane 90.9 % 60-140 20-DEC-19 Trichlorofluoromethane 90.9 % 60-140 20-DEC-19 Vinyl chloride 104.1 % 60-140 20-DEC-19 WG3243074-2 MB 1,1,1-2-Tetrachloroethane <0.50									
o-Xylene 88.4 % 70-130 20-DEC-19 Styrene 90.8 % 70-130 20-DEC-19 Tetrachloroethylene 87.6 % 70-130 20-DEC-19 Toluene 89.7 % 70-130 20-DEC-19 trans-1,2-Dichloroethylene 89.5 % 70-130 20-DEC-19 trans-1,3-Dichloropropene 90.6 % 70-130 20-DEC-19 Trichloroffluoromethane 91.7 % 70-130 20-DEC-19 Trichloroffluoromethane 90.9 % 60-140 20-DEC-19 Vinyl chloride 104.1 % 60-140 20-DEC-19 Vinyl chloride 104.1 % 60-140 20-DEC-19 Vinyl chloride 104.1 % 60-140 20-DEC-19 WG3243074-2 MB 1,1,12-Tirchloroethane <0.50	-								
Styrene 90.8 % 70-130 20-DEC-19 Tetrachloroethylene 87.6 % 70-130 20-DEC-19 Toluene 89.7 % 70-130 20-DEC-19 trans-1,2-Dichloroethylene 89.5 % 70-130 20-DEC-19 trans-1,3-Dichloropropene 90.6 % 70-130 20-DEC-19 Trichloroethylene 91.7 % 70-130 20-DEC-19 Trichloroftuoromethane 90.9 % 60-140 20-DEC-19 Vinyl chloride 104.1 % 60-140 20-DEC-19 Vinyl chloride 104.1 % 60-140 20-DEC-19 Vinyl chloride 104.1 % 60-140 20-DEC-19 WG3243074-2 MB MB 1,1,2-Trichloroethane <0.50									
Tetrachloroethylene 87.6 % 70-130 20-DEC-19 Toluene 89.7 % 70-130 20-DEC-19 trans-1,2-Dichloroethylene 89.5 % 70-130 20-DEC-19 trans-1,3-Dichloropropene 90.6 % 70-130 20-DEC-19 Trichloroethylene 91.7 % 70-130 20-DEC-19 Trichlorofluoromethane 90.9 % 60-140 20-DEC-19 Vinyl otloride 104.1 % 60-140 20-DEC-19 WG3243074-2 MB *** *** 50-140 20-DEC-19 1,1,2-Tetrachloroethane <0.50	•								
Toluene 89.7 % 70-130 20-DEC-19 trans-1,2-Dichloroethylene 89.5 % 70-130 20-DEC-19 trans-1,3-Dichloropropene 90.6 % 70-130 20-DEC-19 Trichloroethylene 91.7 % 70-130 20-DEC-19 Trichlorofluoromethane 90.9 % 60-140 20-DEC-19 Vinyl chloride 104.1 % 60-140 20-DEC-19 Vinyl chloride 104.1 % 60-140 20-DEC-19 Vinyl chloride 104.1 % 60-140 20-DEC-19 Vinyl chloride 104.1 % 60-140 20-DEC-19 WG3243074-2 MB MB 70-130 20-DEC-19 1,1,2-Tertachloroethane <0.50	•								
trans-1,2-Dichloroethylene 89.5 % 70-130 20-DEC-19 trans-1,3-Dichloropropene 90.6 % 70-130 20-DEC-19 Trichloroethylene 91.7 % 70-130 20-DEC-19 Trichloroethylene 90.9 % 60-140 20-DEC-19 Vinyl chloride 104.1 % 60-140 20-DEC-19 WG3243074-2 MB 1,1,2,2-Tetrachloroethane <0.50	-								
trans-1,3-Dichloropropene 90.6 % 70-130 20-DEC-19 Trichloroethylene 91.7 % 70-130 20-DEC-19 Trichloroethylene 90.9 % 60-140 20-DEC-19 Vinyl chloride 104.1 % 60-140 20-DEC-19 WG3243074-2 MB 11,1,2-Tetrachloroethane <0.50		10							
Trichloroethylene 91.7 % 70-130 20-DEC-19 Trichlorofluoromethane 90.9 % 60-140 20-DEC-19 Vinyl chloride 104.1 % 60-140 20-DEC-19 WG3243074-2 MB 1,1,2,2-Tetrachloroethane <0.50									
Trichlorofluoromethane 90.9 % 60-140 20-DEC-19 Vinyl chloride 104.1 % 60-140 20-DEC-19 WG3243074-2 MB MB Ug/L 0.5 20-DEC-19 1,1,1,2-Tetrachloroethane <0.50									
Vinyl chloride 104.1 % 60-140 20-DEC-19 WG3243074-2 MB MB	•								
WG3243074-2 MB 1,1,1,2-Tetrachloroethane <0.50 ug/L 0.5 20-DEC-19 1,1,2,2-Tetrachloroethane <0.50									
1,1,1,2-Tetrachloroethane <0.50	•			104.1		70		00-140	20-DEC-19
1,1,1-Trichloroethane <0.50		е		<0.50		ug/L		0.5	20-DEC-19
1,1,2-Trichloroethane <0.50	1,1,2,2-Tetrachloroethan	е		<0.50		ug/L		0.5	20-DEC-19
1,1,2-Trichloroethane <0.50	1,1,1-Trichloroethane			<0.50		ug/L		0.5	20-DEC-19
1,1-Dichloroethylene <0.50	1,1,2-Trichloroethane			<0.50		ug/L		0.5	
1,2-Dibromoethane <0.20	1,1-Dichloroethane			<0.50		ug/L		0.5	20-DEC-19
1,2-Dichlorobenzene <0.50	1,1-Dichloroethylene			<0.50		ug/L		0.5	20-DEC-19
1,2-Dichloroethane <0.50	1,2-Dibromoethane			<0.20		ug/L		0.2	20-DEC-19
1,2-Dichloropropane <0.50	1,2-Dichlorobenzene			<0.50		ug/L		0.5	20-DEC-19
1,3-Dichlorobenzene <0.50	1,2-Dichloroethane			<0.50		ug/L		0.5	20-DEC-19
1,4-Dichlorobenzene <0.50	1,2-Dichloropropane			<0.50		ug/L		0.5	20-DEC-19
Acetone <30	1,3-Dichlorobenzene			<0.50		ug/L		0.5	20-DEC-19
Benzene <0.50 ug/L 0.5 20-DEC-19 Bromodichloromethane <2.0	1,4-Dichlorobenzene			<0.50		ug/L		0.5	20-DEC-19
Bromodichloromethane <2.0 ug/L 2 20-DEC-19 Bromoform <5.0	Acetone			<30		ug/L		30	20-DEC-19
Bromoform <5.0 ug/L 5 20-DEC-19	Benzene			<0.50		ug/L		0.5	20-DEC-19
	Bromodichloromethane			<2.0		ug/L		2	20-DEC-19
Bromomethane <0.50 ug/L 0.5 20-DEC-19	Bromoform			<5.0		ug/L		5	20-DEC-19
	Bromomethane			<0.50		ug/L		0.5	20-DEC-19



Workorder: L2398098 Report Date: 27-DEC-19 Page 4 of 6

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4949168								
WG3243074-2 MB			0.00				0.0	
Carbon tetrachloride			<0.20		ug/L		0.2	20-DEC-19
Chlorobenzene			<0.50		ug/L		0.5	20-DEC-19
Chloroform	_		<1.0		ug/L		1	20-DEC-19
cis-1,2-Dichloroethylene			<0.50		ug/L		0.5	20-DEC-19
cis-1,3-Dichloropropene			<0.30		ug/L		0.3	20-DEC-19
Dibromochloromethane			<2.0		ug/L		2	20-DEC-19
Dichlorodifluoromethan	e		<2.0		ug/L		2	20-DEC-19
Ethylbenzene			<0.50		ug/L		0.5	20-DEC-19
n-Hexane			<0.50		ug/L		0.5	20-DEC-19
m+p-Xylenes			<0.40		ug/L		0.4	20-DEC-19
Methyl Ethyl Ketone			<20		ug/L		20	20-DEC-19
Methyl Isobutyl Ketone			<20		ug/L		20	20-DEC-19
Methylene Chloride			<5.0		ug/L		5	20-DEC-19
MTBE			<2.0		ug/L		2	20-DEC-19
o-Xylene			<0.30		ug/L		0.3	20-DEC-19
Styrene			<0.50		ug/L		0.5	20-DEC-19
Tetrachloroethylene			<0.50		ug/L		0.5	20-DEC-19
Toluene			<0.50		ug/L		0.5	20-DEC-19
trans-1,2-Dichloroethyle	ene		<0.50		ug/L		0.5	20-DEC-19
trans-1,3-Dichloroprope	ene		<0.30		ug/L		0.3	20-DEC-19
Trichloroethylene			<0.50		ug/L		0.5	20-DEC-19
Trichlorofluoromethane			<5.0		ug/L		5	20-DEC-19
Vinyl chloride			<0.50		ug/L		0.5	20-DEC-19
Surrogate: 1,4-Difluorob	penzene		93.6		%		70-130	20-DEC-19
Surrogate: 4-Bromofluo	robenzene		92.4		%		70-130	20-DEC-19
WG3243074-5 MS		WG3243074-3						
1,1,1,2-Tetrachloroetha			91.5		%		50-140	23-DEC-19
1,1,2,2-Tetrachloroetha	ne		91.3		%		50-140	23-DEC-19
1,1,1-Trichloroethane			92.7		%		50-140	23-DEC-19
1,1,2-Trichloroethane			95.7		%		50-140	23-DEC-19
1,1-Dichloroethane			87.1		%		50-140	23-DEC-19
1,1-Dichloroethylene			84.8		%		50-140	23-DEC-19
1,2-Dibromoethane			96.8		%		50-140	23-DEC-19
1,2-Dichlorobenzene			82.4		%		50-140	23-DEC-19



Workorder: L2398098 Report Date: 27-DEC-19 Page 5 of 6

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R4949168								
WG3243074-5 MS 1,2-Dichloroethane		WG3243074-			%		50.440	00 050 40
1,2-Dichloropropane			97.3 95.5		%		50-140	23-DEC-19
1,3-Dichlorobenzene			95.5 82.3		%		50-140	23-DEC-19
·			62.3 78.8		%		50-140	23-DEC-19
1,4-Dichlorobenzene Acetone			106.3		%		50-140	23-DEC-19
Benzene					%		50-140	23-DEC-19
Bromodichloromethane			94.5 94.0		%		50-140	23-DEC-19
			94.0 95.2				50-140	23-DEC-19
Bromoform			95.2 81.7		%		50-140	23-DEC-19
Bromomethane					%		50-140	23-DEC-19
Carbon tetrachloride			89.9		%		50-140	23-DEC-19
Chlorobenzene Chloroform			88.5		%		50-140	23-DEC-19
			93.9		%		50-140	23-DEC-19
cis-1,2-Dichloroethylene			88.6		%		50-140	23-DEC-19
cis-1,3-Dichloropropene			86.4		%		50-140	23-DEC-19
Dibromochloromethane	_		93.4		%		50-140	23-DEC-19
Dichlorodifluoromethane	9		71.7		%		50-140	23-DEC-19
Ethylbenzene			85.7		%		50-140	23-DEC-19
n-Hexane			81.7		%		50-140	23-DEC-19
m+p-Xylenes			84.8		%		50-140	23-DEC-19
Methyl Ethyl Ketone			93.6		%		50-140	23-DEC-19
Methyl Isobutyl Ketone			96.9		%		50-140	23-DEC-19
Methylene Chloride			93.7		%		50-140	23-DEC-19
MTBE			90.2		%		50-140	23-DEC-19
o-Xylene			87.0		%		50-140	23-DEC-19
Styrene			88.4		%		50-140	23-DEC-19
Tetrachloroethylene			83.4		%		50-140	23-DEC-19
Toluene			89.0		%		50-140	23-DEC-19
trans-1,2-Dichloroethyle			77.8		%		50-140	23-DEC-19
trans-1,3-Dichloroprope	ne		85.4		%		50-140	23-DEC-19
Trichloroethylene			87.3		%		50-140	23-DEC-19
Trichlorofluoromethane			87.8		%		50-140	23-DEC-19
Vinyl chloride			100.1		%		50-140	23-DEC-19

Workorder: L2398098 Report Date: 27-DEC-19

Client: TERRAPROBE-BRAMPTON Page 6 of 6

11 Indell Lane

Brampton ON L6T 3Y3 Kossay Makhzoumi

Legend:

Contact:

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 predetermined 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.

Courress and an

Chain of Custody (COC) / Analy Request Form

Canada Toll Free: 1 800 668 987:



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COC Number: 15 -

L2398098-COFC

	www.alsglobat.cor	<u>n</u>																					
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Phone:	905-796-2650				•	☑ Compare Resu	lts to Criteria on Report	- provide details belo	w if box checked	8 1	3	day [P3]			Z E		Same	Day	. Weel	kend o	r	_
	Company address belo	w will app	pear on the final	l report		Select Distributi	on: 🗹 EMAIL	☐ MAIL ☐	FAX	E 4	2	day [P2]								ay [E0]		
Street:	11 Indell Lane					Email 1 or Fax	kmakhzoumi@ten	aprobe.ca			Date a	and Tim	e Requi	red for a	il E&P	TATs:	•	Т					
City/Province:	Brampton					Email 2				For tea	sts that o	an not l	e perfon	med acco	ording to	the se	rvice le	evel sel	ected, y	ou will t	be contac	eted.	
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Company:	Terraprobe					Email 1 or Fax	lrossi@terraprobe	ca									· · · · ·	T					
Contact:	Lorena Rossi					Email 2				1											1 1		
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ALS Lab Wo	rk Order # (lab use on	ıly)	L23°	78098	BRD	ALS Contact:		Sampler:		Aetals and Inorganics		Hyride Forming N						OC Pesticides					Ž
ALS Sample #	Sa	mple k	dentification	n and/or Coord	inates	<u>.</u>	Date	Time		ls a	∞	He Fi]		١.,	l	Pesti	_ ا		1	.	I
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Drinking	Water (DW) Samples ¹	(client	t use)	Special Instruc	ctions / S		dd on report by clic	king on the drop-	down list below				_	PLE C	OND						se only		
Are samples take	en from a Regulated DW	System	n?			(elec	tronic COC only)			Froze		H.			\mathbf{A}			rvatio		Yes		No	
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TERRAPROBE-BRAMPTON

ATTN: Kossay Makhzoumi

11 Indell Lane

Brampton ON L6T 3Y3

Date Received: 28-FEB-20

Report Date: 03-MAR-20 18:58 (MT)

Version: FINAL

Client Phone: 905-796-2650

Certificate of Analysis

Lab Work Order #: L2422343

Project P.O. #: NOT SUBMITTED

Job Reference: 1-19-0603-42

C of C Numbers: Legal Site Desc:

Emily Smith Account Manager

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ADDRESS: 5730 Coopers Avenue, Unit #26 , Mississauga, ON L4Z 2E9 Canada | Phone: +1 905 507 6910 | Fax: +1 905 507 6927 ALS CANADA LTD Part of the ALS Group An ALS Limited Company





ANALYTICAL REPORT

L2422343 CONT'D....

Job Reference: 1-19-0603-42

PAGE 2 of 5

03-MAR-20 18:58 (MT)

Summary of Guideline Exceedances

Guideline						
ALS ID	Client ID	Grouping	Analyte	Result	Guideline Limit	Unit

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) (No parameter exceedances)

Ontario Regulation 153/04 - April 15, 2011 Standards - T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

(No parameter exceedances)



ANALYTICAL REPORT

L2422343 CONT'D....

Job Reference: 1-19-0603-42

PAGE 3 of 5

03-MAR-20 18:58 (MT)

Volatile Organic Compounds - WATER

Lab ID L2422343-1 Sample Date 28-FEB-20 Sample ID TRIP BLANK

Analyte	Unit	Guide I	Limits #2	
Acetone	ug/L	130000	130000	<30
Benzene	ug/L	44	430	<0.50
Bromodichloromethane	ug/L	85000	85000	<2.0
Bromoform	ug/L	380	770	<5.0
Bromomethane	ug/L	5.6	56	<0.50
Carbon tetrachloride	ug/L	0.79	8.4	<0.20
Chlorobenzene	ug/L	630	630	<0.50
Dibromochloromethane	ug/L	82000	82000	<2.0
Chloroform	ug/L	2.4	22	<1.0
1,2-Dibromoethane	ug/L	0.25	0.83	<0.20
1,2-Dichlorobenzene	ug/L	4600	9600	<0.50
1,3-Dichlorobenzene	ug/L	9600	9600	<0.50
1,4-Dichlorobenzene	ug/L	8	67	<0.50
Dichlorodifluoromethane	ug/L	4400	4400	<2.0
1,1-Dichloroethane	ug/L	320	3100	<0.50
1,2-Dichloroethane	ug/L	1.6	12	<0.50
1,1-Dichloroethylene	ug/L	1.6	17	<0.50
cis-1,2-Dichloroethylene	ug/L	1.6	17	<0.50
trans-1,2-Dichloroethylene	ug/L	1.6	17	<0.50
Methylene Chloride	ug/L	610	5500	<5.0
1,2-Dichloropropane	ug/L	16	140	<0.50
cis-1,3-Dichloropropene	ug/L	-	-	< 0.30
trans-1,3-Dichloropropene	ug/L	-	-	< 0.30
1,3-Dichloropropene (cis & trans)	ug/L	5.2	45	<0.50
Ethylbenzene	ug/L	2300	2300	<0.50
n-Hexane	ug/L	51	520	<0.50
Methyl Ethyl Ketone	ug/L	470000	1500000	<20
Methyl Isobutyl Ketone	ug/L	140000	580000	<20
MTBE	ug/L	190	1400	<2.0
Styrene	ug/L	1300	9100	<0.50

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)



Analyte

Toluene

1,1,1,2-Tetrachloroethane1,1,2,2-TetrachloroethaneTetrachloroethylene

1,1,1-Trichloroethane 1,1,2-Trichloroethane Trichloroethylene

Trichlorofluoromethane

Surrogate: 4-Bromofluorobenzene

Surrogate: 1,4-Difluorobenzene

Vinyl chloride

m+p-Xylenes

Xylenes (Total)

o-Xylene

ANALYTICAL REPORT

L2422343 CONT'D....

Job Reference: 1-19-0603-42

PAGE 4 of 5

03-MAR-20 18:58 (MT)

Volatile Organic Compounds - WATER

	L	ab ID	L2422343-1
	Sample	Date	28-FEB-20
	Sam	ple ID	TRIP BLANK
Unit	Guide		
Unit	#1	#2	
ug/L	3.3	28	<0.50
ug/L	3.2	15	<0.50
ug/L	1.6	17	<0.50
ug/L	18000	18000	<0.50
ug/L	640	6700	<0.50
ug/L	4.7	30	<0.50
ug/L	1.6	17	<0.50

2500

1.7

4200

<5.0

< 0.50

< 0.30

< 0.40

< 0.50

96.5

102.2

Guide Limit #1: T3-Non-Potable Ground Water-All Types of Property Uses (Coarse) Guide Limit #2: T3-Non-Potable Ground Water-All Types of Property Uses (Fine)

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

Analytical result for this parameter exceeds Guide Limits listed. See Summary of Guideline Exceedances.

2500

0.5

4200

ug/L

ug/L

ug/L

ug/L

ug/L

%

Reference Information

L2422343 CONT'D....
Job Reference: 1-19-0603-42
PAGE 5 of 5
03-MAR-20 18:58 (MT)

Methods Listed (if applicable):

ALS Test Code Matrix Test Description Method Reference**

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

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

Liquid samples are analyzed by headspace GC/MSD.

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 Water 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

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.



Workorder: L2422343 Report Date: 03-MAR-20 Page 1 of 6

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R5012	001							
	UP	WG3282676			//			
1,1,1,2-Tetrachloro		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,1,2,2-Tetrachloro		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,1,1-Trichloroethar		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,1,2-Trichloroethar	ne	<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,1-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,1-Dichloroethylen		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,2-Dibromoethane		<0.20	<0.20	RPD-NA	ug/L	N/A	30	02-MAR-20
1,2-Dichlorobenzen	е	<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,2-Dichloroethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,2-Dichloropropand		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,3-Dichlorobenzen		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
1,4-Dichlorobenzen	е	<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
Acetone		<30	<30	RPD-NA	ug/L	N/A	30	02-MAR-20
Benzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
Bromodichlorometh	ane	<2.0	<2.0	RPD-NA	ug/L	N/A	30	02-MAR-20
Bromoform		<5.0	<5.0	RPD-NA	ug/L	N/A	30	02-MAR-20
Bromomethane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
Carbon tetrachloride	e	<0.20	<0.20	RPD-NA	ug/L	N/A	30	02-MAR-20
Chlorobenzene		<0.50	< 0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
Chloroform		<1.0	<1.0	RPD-NA	ug/L	N/A	30	02-MAR-20
cis-1,2-Dichloroethy	/lene	<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
cis-1,3-Dichloroprop	oene	<0.30	< 0.30	RPD-NA	ug/L	N/A	30	02-MAR-20
Dibromochlorometh	nane	<2.0	<2.0	RPD-NA	ug/L	N/A	30	02-MAR-20
Dichlorodifluoromet	hane	<2.0	<2.0	RPD-NA	ug/L	N/A	30	02-MAR-20
Ethylbenzene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
n-Hexane		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
m+p-Xylenes		<0.40	<0.40	RPD-NA	ug/L	N/A	30	02-MAR-20
Methyl Ethyl Ketone)	<20	<20	RPD-NA	ug/L	N/A	30	02-MAR-20
Methyl Isobutyl Keto	one	<20	<20	RPD-NA	ug/L	N/A	30	02-MAR-20
Methylene Chloride		<5.0	<5.0	RPD-NA	ug/L	N/A	30	02-MAR-20
MTBE		<2.0	<2.0	RPD-NA	ug/L	N/A	30	02-MAR-20
o-Xylene		<0.30	< 0.30	RPD-NA	ug/L	N/A	30	02-MAR-20
Styrene		<0.50	<0.50		ug/L			02-MAR-20
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Workorder: L2422343 Report Date: 03-MAR-20 Page 2 of 6

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R501200	1							
WG3282676-4 DUP		WG3282676-		DDD MA	ug/l	N1/A	20	00 MAD 00
Styrene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
Tetrachloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
Toluene	1	<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
trans-1,2-Dichloroethyl		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
trans-1,3-Dichloroprop	ene	<0.30	<0.30	RPD-NA	ug/L	N/A	30	02-MAR-20
Trichloroethylene		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
Trichlorofluoromethane	е	<5.0	<5.0	RPD-NA	ug/L	N/A	30	02-MAR-20
Vinyl chloride		<0.50	<0.50	RPD-NA	ug/L	N/A	30	02-MAR-20
WG3282676-1 LCS 1,1,1,2-Tetrachloroetha	ane		91.8		%		70-130	02-MAR-20
1,1,2,2-Tetrachloroeth			88.6		%		70-130	02-MAR-20
1,1,1-Trichloroethane	-		94.2		%		70-130	02-MAR-20
1,1,2-Trichloroethane			101.4		%		70-130	02-MAR-20
1,1-Dichloroethane			87.7		%		70-130	02-MAR-20
1,1-Dichloroethylene			86.8		%		70-130	02-MAR-20
1,2-Dibromoethane			101.2		%		70-130	02-MAR-20
1,2-Dichlorobenzene			95.0		%		70-130	02-MAR-20
1,2-Dichloroethane			85.8		%		70-130	02-MAR-20
1,2-Dichloropropane			88.4		%		70-130	02-MAR-20
1,3-Dichlorobenzene			94.0		%		70-130	02-MAR-20
1,4-Dichlorobenzene			93.2		%		70-130	02-MAR-20
Acetone			92.6		%		60-140	02-MAR-20
Benzene			93.0		%		70-130	02-MAR-20
Bromodichloromethan	е		90.5		%		70-130	02-MAR-20
Bromoform			91.5		%		70-130	02-MAR-20
Bromomethane			91.7		%		60-140	02-MAR-20
Carbon tetrachloride			91.1		%		70-130	02-MAR-20
Chlorobenzene			93.0		%		70-130	02-MAR-20
Chloroform			92.7		%		70-130	02-MAR-20
cis-1,2-Dichloroethyler	ne		93.7		%		70-130	02-MAR-20
cis-1,3-Dichloropropen	ne		80.8		%		70-130	02-MAR-20
Dibromochloromethan	е		97.4		%		70-130	02-MAR-20
Dichlorodifluoromethar	ne		116.3		%		50-140	02-MAR-20



Workorder: L2422343 Report Date: 03-MAR-20 Page 3 of 6

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Satch R5012001	Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MG3282878-1 LCS Ethylbenzane 86.6 % 70-130 02-MAR-20	VOC-511-HS-WT	Water							
Ethylbenzene 86.6 % 70-130 02-MAR-20 n+Hexane 84.9 % 70-130 02-MAR-20 m+p-Xylenes 86.5 % 60-140 02-MAR-20 Methyl Ethyl Ketone 108.6 % 60-140 02-MAR-20 Methyl Schupf Ketone 79.3 % 60-140 02-MAR-20 Methylene Chloride 102.6 % 70-130 02-MAR-20 MTBE 94.9 % 70-130 02-MAR-20 -Xylene 94.1 % 70-130 02-MAR-20 Styrene 85.1 % 70-130 02-MAR-20 Tottachlorcethylene 93.8 % 70-130 02-MAR-20 trans-1,2-Dichlorotethylene 85.7 % 70-130 02-MAR-20 trans-1,3-Dichlorotethylene 187.4 % 70-130 02-MAR-20 Trichlorothylene 190.3 % 70-130 02-MAR-20 Trichlorotethylene 190.3 % 60-140 02-MAR-20 <t< td=""><td>Batch R5012001</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Batch R5012001								
n-Hexane 84.9 % 70-130 02-MAR-20 m+p-Xylenes 88.5 % 70-130 02-MAR-20 Methyl Ethyl Ketone 108.6 % 60-140 02-MAR-20 Methyl Ethyl Ketone 79.3 % 60-140 02-MAR-20 Methyl Ethyl Ketone 79.3 % 70-130 02-MAR-20 Methyl Ethyl Ketone 102.6 % 70-130 02-MAR-20 Methylene Chloride 102.6 % 70-130 02-MAR-20 O-Xylene 94.9 % 70-130 02-MAR-20 O-Xylene 94.1 % 70-130 02-MAR-20 O-Xylene 85.1 % 70-130 02-MAR-20 O-Xylene 85.1 % 70-130 02-MAR-20 O-Xylene 99.8 % 70-130 02-MAR-20 O-Xylene 99.8 % 70-130 02-MAR-20 O-Xylene 99.8 % 70-130 02-MAR-20 O-Xylene 99.8 % 70-130 02-MAR-20 O-Xylene 99.8 % 70-130 02-MAR-20 O-Xylene 99.8 % 70-130 02-MAR-20 O-Xylene 99.8 % 70-130 02-MAR-20 O-Xylene 99.8 % 70-130 02-MAR-20 O-Xylene 99.8 % 70-130 02-MAR-20 O-Xylene 99.8 % 70-130 02-MAR-20 O-Xylene 99.1 % 70-130 02-MAR-20 O-Xyle				00.0		0/			
m+p-Xylenes 86.5 % 70-130 02-MAR-20 Methyl Ethyl Ketone 108.6 % 60-140 02-MAR-20 Methyl Isobutyl Ketone 79.3 % 60-140 02-MAR-20 Methylene Chloride 102.6 % 70-130 02-MAR-20 MTBE 94.9 % 70-130 02-MAR-20 o-Xylene 94.1 % 70-130 02-MAR-20 Styrene 85.1 % 70-130 02-MAR-20 Tetrachloroethylene 93.8 % 70-130 02-MAR-20 Toluene 92.6 % 70-130 02-MAR-20 trans-1,2-Dichloroethylene 85.7 % 70-130 02-MAR-20 trans-1,3-Dichloropropene 87.4 % 70-130 02-MAR-20 Trichloroffluoromethane 98.1 % 60-140 02-MAR-20 Viryl chloride 116.9 % 60-140 02-MAR-20 WG3282876-2 MB 1,1,1-2-Tetrachloroethane <0.50 ug/L 0.5	•								
Methyl Ethyl Ketone 108.6 % 60-140 02-MAR-20 Methyl Isobutyl Ketone 79.3 % 60-140 02-MAR-20 Methylene Chloride 102.6 % 70-130 02-MAR-20 MTBE 94.9 % 70-130 02-MAR-20 O-Xylene 94.1 % 70-130 02-MAR-20 Styrene 85.1 % 70-130 02-MAR-20 Tetrachloroethylene 93.8 % 70-130 02-MAR-20 Toluene 92.6 % 70-130 02-MAR-20 trans-1,2-Dichloroethylene 85.7 % 70-130 02-MAR-20 trans-1,3-Dichloropropene 87.4 % 70-130 02-MAR-20 Trichloroethylene 100.3 % 70-130 02-MAR-20 Trichloroethylene 116.9 % 60-140 02-MAR-20 Vinyl chloride 116.9 % 60-140 02-MAR-20 Wind Correlation 0,5 02-MAR-20 02-MAR-20 1,1,1-2 Te									
Methyl Isobutyl Ketone 79.3 % 60-140 02-MAR-20 Methylene Chloride 102.6 % 70-130 02-MAR-20 MTBE 94.9 % 70-130 02-MAR-20 o-Xylene 94.1 % 70-130 02-MAR-20 Styrene 85.1 % 70-130 02-MAR-20 Tetrachloroethylene 93.8 % 70-130 02-MAR-20 Toluene 92.6 % 70-130 02-MAR-20 trans-1,2-Dichloroethylene 85.7 % 70-130 02-MAR-20 trans-1,3-Dichloropropene 87.4 % 70-130 02-MAR-20 Trichloroethylene 100.3 % 70-130 02-MAR-20 Trichloroethylene 100.3 % 60-140 02-MAR-20 Trichloroethylene 100.3 % 60-140 02-MAR-20 Trichlorofluoromethane 98.1 % 60-140 02-MAR-20 Trichlorofluoromethane <0.50									
Methylene Chloride 102.6 % 70-130 02-MAR-20 MTBE 94.9 % 70-130 02-MAR-20 o-Xylene 94.1 % 70-130 02-MAR-20 Styrene 85.1 % 70-130 02-MAR-20 Tetrachloroethylene 93.8 % 70-130 02-MAR-20 Toluene 92.6 % 70-130 02-MAR-20 trans-1,2-Dichloroethylene 85.7 % 70-130 02-MAR-20 trans-1,3-Dichloropropene 87.4 % 70-130 02-MAR-20 Trichloroethylene 100.3 % 70-130 02-MAR-20 Trichlorofluromethane 98.1 % 60-140 02-MAR-20 Vinyl chloride 116.9 % 60-140 02-MAR-20 Vinyl chloride 116.9 % 60-140 02-MAR-20 1,1,2-Tetrachloroethane <0.50									
MTBE 94.9 % 70.130 02-MAR-20 o-Xylene 94.1 % 70-130 02-MAR-20 Styrene 85.1 % 70-130 02-MAR-20 Tetrachloroethylene 93.8 % 70-130 02-MAR-20 Toluene 92.6 % 70-130 02-MAR-20 trans-1,2-Dichloroethylene 85.7 % 70-130 02-MAR-20 trans-1,3-Dichloropropene 87.4 % 70-130 02-MAR-20 Trichloroethylene 100.3 % 70-130 02-MAR-20 Trichlorofluoromethane 98.1 % 60-140 02-MAR-20 Vinyl chloride 116.9 % 60-140 02-MAR-20 WG3282676-2 MB 1,1,1-2-Tetrachloroethane <0.50									
o-Xylene 94.1 % 70-130 02-MAR-20 Styrene 85.1 % 70-130 02-MAR-20 Tetrachloroethylene 93.8 % 70-130 02-MAR-20 Toluene 92.6 % 70-130 02-MAR-20 trans-1,2-Dichloroethylene 85.7 % 70-130 02-MAR-20 trans-1,3-Dichloropropene 87.4 % 70-130 02-MAR-20 Trichloroffluoromethane 100.3 % 70-130 02-MAR-20 Trichloroffluoromethane 98.1 % 60-140 02-MAR-20 Vinyl chloride 116.9 % 60-140 02-MAR-20 WG3282676-2 MB 1,1,12-Tetrachloroethane <0.50	-								
Styrene 85.1 % 70-130 02-MAR-20 Tetrachloroethylene 93.8 % 70-130 02-MAR-20 Toluene 92.6 % 70-130 02-MAR-20 trans-1,2-Dichloroethylene 85.7 % 70-130 02-MAR-20 trans-1,3-Dichloropropene 87.4 % 70-130 02-MAR-20 Trichloroftluoromethane 100.3 % 70-130 02-MAR-20 Trichloroftluoromethane 98.1 % 60-140 02-MAR-20 Vinyl chloride 116.9 % 60-140 02-MAR-20 Vinyl chloride 116.9 % 60-140 02-MAR-20 Vinyl chloride 116.9 % 60-140 02-MAR-20 WG3282676-2 MB 1,1,12-Tetrachloroethane <0.50									
Tetrachloroethylene 93.8 % 70-130 02-MAR-20 Toluene 92.6 % 70-130 02-MAR-20 trans-1,2-Dichloroethylene 85.7 % 70-130 02-MAR-20 trans-1,3-Dichloropropene 87.4 % 70-130 02-MAR-20 Trichlorofluoromethylene 100.3 % 70-130 02-MAR-20 Trichlorofluoromethane 98.1 % 60-140 02-MAR-20 Vinyl chloride 116.9 % 60-140 02-MAR-20 WG3282676-2 MB 1,1,12-Tetrachloroethane <0.50									
Toluene 92.6 % 70-130 02-MAR-20 trans-1,2-Dichloroethylene 85.7 % 70-130 02-MAR-20 trans-1,3-Dichloropropene 87.4 % 70-130 02-MAR-20 Trichlorofuthylene 100.3 % 70-130 02-MAR-20 Trichlorofuromethane 98.1 % 60-140 02-MAR-20 Vinyl chloride 116.9 % 60-140 02-MAR-20 Vinyl chloride 116.9 % 60-140 02-MAR-20 Vinyl chloride 116.9 % 60-140 02-MAR-20 Vinyl chloride 116.9 % 60-140 02-MAR-20 Vinyl chloride 116.9 wg/L 0.5 02-MAR-20 1,1,1,2-Terbachloroethane <0.50	•								
trans-1,2-Dichloroethylene 88.7 % 70-130 02-MAR-20 trans-1,3-Dichloropropene 87.4 % 70-130 02-MAR-20 Trichloroethylene 100.3 % 70-130 02-MAR-20 Trichloroethylene 100.3 % 60-140 02-MAR-20 Viriy chloride 116.9 % 60-140 02-MAR-20 Viriy chloride 116.9 % 60-140 02-MAR-20 Viriy chloride 116.9 % 60-140 02-MAR-20 Viriy chloride 116.9 % 60-140 02-MAR-20 Viriy chloride 116.9 % 60-140 02-MAR-20 Viriy chloride 116.9 % 60-140 02-MAR-20 1,1,2-Tertachloroethane <0.50	-								
trans-1,3-Dichloropropene 87.4 % 70-130 02-MAR-20 Trichloroethylene 100.3 % 70-130 02-MAR-20 Trichlorofluoromethane 98.1 % 60-140 02-MAR-20 Vinyl chloride 116.9 % 60-140 02-MAR-20 WG3282676-2 MB 11.1,1,2-Tetrachloroethane <0.50									
Trichloroethylene 100.3 % 70-130 02-MAR-20 Trichlorofluoromethane 98.1 % 60-140 02-MAR-20 Vinyl chloride 116.9 % 60-140 02-MAR-20 WG3282676-2 MB 0.5 02-MAR-20 1,1,2,2-Tetrachloroethane <0.50	•								02-MAR-20
Trichlorofluoromethane 98.1 % 60-140 02-MAR-20 Vinyl chloride 116.9 % 60-140 02-MAR-20 WG3282676-2 MB MB MB MB 1,1,1,2-Tetrachloroethane <0.50		ie						70-130	02-MAR-20
Vinyl chloride 116.9 % 60-140 02-MAR-20 WG3282676-2 MB MB MB MB MB 1,1,1,2-Tetrachloroethane <0.50	•							70-130	02-MAR-20
WG3282676-2 MB 1,1,1,2-Tetrachloroethane <0.50 ug/L 0.5 02-MAR-20 1,1,2,2-Tetrachloroethane <0.50								60-140	02-MAR-20
1,1,1,2-Tetrachloroethane <0.50	Vinyl chloride			116.9		%		60-140	02-MAR-20
1,1,2,2-Tetrachloroethane <0.50		_		.0.50		//		0.5	
1,1,1-Trichloroethane <0.50									
1,1,2-Trichloroethane <0.50		е							
1,1-Dichloroethane <0.50									
1,1-Dichloroethylene <0.50									
1,2-Dibromoethane <0.20	·								
1,2-Dichlorobenzene <0.50	•								
1,2-Dichloroethane <0.50	,								
1,2-Dichloropropane <0.50									
1,3-Dichlorobenzene <0.50	·								
1,4-Dichlorobenzene <0.50									
Acetone <30	·								02-MAR-20
Benzene <0.50	•								02-MAR-20
Bromodichloromethane <2.0 ug/L 2 02-MAR-20 Bromoform <5.0									02-MAR-20
Bromoform <5.0 ug/L 5 02-MAR-20						ug/L		0.5	02-MAR-20
	Bromodichloromethane					ug/L			02-MAR-20
Bromomethane <0.50 ug/L 0.5 02-MAR-20	Bromoform			<5.0		ug/L		5	02-MAR-20
	Bromomethane			<0.50		ug/L		0.5	02-MAR-20



Workorder: L2422343 Report Date: 03-MAR-20 Page 4 of 6

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R5012001								
WG3282676-2 MB							0.0	
Carbon tetrachloride			<0.20		ug/L		0.2	02-MAR-20
Chlorobenzene			<0.50		ug/L		0.5	02-MAR-20
Chloroform			<1.0		ug/L		1	02-MAR-20
cis-1,2-Dichloroethylen			<0.50		ug/L		0.5	02-MAR-20
cis-1,3-Dichloropropend			<0.30		ug/L		0.3	02-MAR-20
Dibromochloromethane			<2.0		ug/L		2	02-MAR-20
Dichlorodifluoromethan	е		<2.0		ug/L		2	02-MAR-20
Ethylbenzene			<0.50		ug/L		0.5	02-MAR-20
n-Hexane			<0.50		ug/L		0.5	02-MAR-20
m+p-Xylenes			<0.40		ug/L		0.4	02-MAR-20
Methyl Ethyl Ketone			<20		ug/L		20	02-MAR-20
Methyl Isobutyl Ketone			<20		ug/L		20	02-MAR-20
Methylene Chloride			<5.0		ug/L		5	02-MAR-20
MTBE			<2.0		ug/L		2	02-MAR-20
o-Xylene			<0.30		ug/L		0.3	02-MAR-20
Styrene			<0.50		ug/L		0.5	02-MAR-20
Tetrachloroethylene			<0.50		ug/L		0.5	02-MAR-20
Toluene			<0.50		ug/L		0.5	02-MAR-20
trans-1,2-Dichloroethyle	ene		<0.50		ug/L		0.5	02-MAR-20
trans-1,3-Dichloroprope	ene		<0.30		ug/L		0.3	02-MAR-20
Trichloroethylene			<0.50		ug/L		0.5	02-MAR-20
Trichlorofluoromethane)		<5.0		ug/L		5	02-MAR-20
Vinyl chloride			<0.50		ug/L		0.5	02-MAR-20
Surrogate: 1,4-Difluorol	benzene		101.4		%		70-130	02-MAR-20
Surrogate: 4-Bromofluc	probenzene		96.9		%		70-130	02-MAR-20
WG3282676-5 MS		WG3282676-3						
1,1,1,2-Tetrachloroetha			91.9		%		50-140	02-MAR-20
1,1,2,2-Tetrachloroetha	ane		81.5		%		50-140	02-MAR-20
1,1,1-Trichloroethane			96.6		%		50-140	02-MAR-20
1,1,2-Trichloroethane			93.7		%		50-140	02-MAR-20
1,1-Dichloroethane			94.6		%		50-140	02-MAR-20
1,1-Dichloroethylene			86.5		%		50-140	02-MAR-20
1,2-Dibromoethane			90.5		%		50-140	02-MAR-20
1,2-Dichlorobenzene			95.4		%		50-140	02-MAR-20



Workorder: L2422343 Report Date: 03-MAR-20 Page 5 of 6

Client: TERRAPROBE-BRAMPTON

11 Indell Lane

Brampton ON L6T 3Y3

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
VOC-511-HS-WT	Water							
Batch R5012001								
WG3282676-5 MS		WG3282676-3			0.4			
1,2-Dichloroethane			77.8		%		50-140	02-MAR-20
1,2-Dichloropropane			85.1		%		50-140	02-MAR-20
1,3-Dichlorobenzene			96.9		%		50-140	02-MAR-20
1,4-Dichlorobenzene			95.6		%		50-140	02-MAR-20
Acetone			76.5		%		50-140	02-MAR-20
Benzene			92.2		%		50-140	02-MAR-20
Bromodichloromethane			87.3		%		50-140	02-MAR-20
Bromoform			83.8		%		50-140	02-MAR-20
Bromomethane			84.5		%		50-140	02-MAR-20
Carbon tetrachloride			94.4		%		50-140	02-MAR-20
Chlorobenzene			93.4		%		50-140	02-MAR-20
Chloroform			91.3		%		50-140	02-MAR-20
cis-1,2-Dichloroethylene			91.9		%		50-140	02-MAR-20
cis-1,3-Dichloropropene			78.1		%		50-140	02-MAR-20
Dibromochloromethane			91.6		%		50-140	02-MAR-20
Dichlorodifluoromethane	•		102.0		%		50-140	02-MAR-20
Ethylbenzene			90.6		%		50-140	02-MAR-20
n-Hexane			84.8		%		50-140	02-MAR-20
m+p-Xylenes			90.5		%		50-140	02-MAR-20
Methyl Ethyl Ketone			75.9		%		50-140	02-MAR-20
Methyl Isobutyl Ketone			66.1		%		50-140	02-MAR-20
Methylene Chloride			96.4		%		50-140	02-MAR-20
MTBE			95.3		%		50-140	02-MAR-20
o-Xylene			97.0		%		50-140	02-MAR-20
Styrene			84.6		%		50-140	02-MAR-20
Tetrachloroethylene			100.2		%		50-140	02-MAR-20
Toluene			94.5		%		50-140	02-MAR-20
trans-1,2-Dichloroethyler	ne		86.2		%		50-140	02-MAR-20
trans-1,3-Dichloroproper			83.4		%		50-140	02-MAR-20
Trichloroethylene			103.9		%		50-140	02-MAR-20
Trichlorofluoromethane			97.0		%		50-140	02-MAR-20
Vinyl chloride			109.7		%		50-140	02-MAR-20
,							33 140	02 IVI/ II \ 20

Workorder: L2422343 Report Date: 03-MAR-20

Client: TERRAPROBE-BRAMPTON Page 6 of 6

11 Indell Lane

Brampton ON L6T 3Y3 Kossay Makhzoumi

Legend:

Contact:

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 predetermined 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.

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COC Number: 15 -

Canada Toli Free: 1 800 668 9878

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