Terraprobe

Consulting Geotechnical & Environmental Engineering
Construction Materials Inspection & Testing

PHASE II ENVIRONMENTAL SITE ASSESSMENT
6583 TRAFALGAR ROAD
MILTON, ONTARIO

Prepared for: **Hannover Trafalgar Farms Limited and Milton Sheva Land Limited**
1039 Fourth Line
Milton, Ontario
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Attention: Mr. York Gruehl

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1.0 EXECUTIVE SUMMARY

Hannover Trafalgar Farms Limited and Milton Sheva Land Limited retained Terraprobe Inc. (Terraprobe), to complete a Phase II Environmental Site Assessment (Phase II ESA) for due diligence purposes on the property located at 6583 Trafalgar Road in Milton, Ontario, hereafter referred to as 'the Property'.

The Property has a frontage of approximately 350 metres along the east side of Trafalgar Road and extends to the northeast approximately 660 m. It is located between Derry Road East and Britannia Road in Milton. The Property is irregular in shape, with a total area of approximately 30 hectares (75 acres).

In accordance with Ontario Regulation 153/04 (O.Reg. 153/04), the Property is considered to be in mixed residential and agricultural or other Property Use as defined by the Ministry of the Environment, Conservation and Parks (MECP). It is understood that the Phase II ESA is currently required for due diligence purposes related to financing of the Property. It is also understood that in the future, the Property will potentially be developed for residential purposes. As the Property will not be changing to a more sensitive property use in the future, a Record of Site Condition (RSC) is not a mandatory requirement by the MECP. If, in the future, a Record of Site Condition becomes a requirement, the Phase II ESA report will require minor updates to satisfy all of the requirements of O.Reg. 153/04.

The Phase II ESA was required to investigate the Areas of Potential Environmental Concern (APECs) for the Contaminants of Potential Concern (CoPCs) that have been identified on the Property. The Phase II ESA was completed in general accordance with Ontario Regulation 153/04 (O.Reg. 153/04).

A Phase I ESA completed on the Property by Terraprobe entitled, "*Phase I Environmental Site Assessment, 6583 Trafalgar Road, Milton, Ontario;* dated February 5, 2020; File No. 7-20-0004-41", indicated two (2) Areas of Potential Environmental Concern (APECs) that were divided into two (2) physical area groups on the Property. The Contaminants of Potential Concern (COPCs) identified in the Phase I ESA were investigated in this assessment.

The conclusions of the Phase Two II ESA are:

- The applicable Site Condition Standards are the 2011 Ministry of the Environment, Conservation and Parks Table 2 Site Condition Standards for Residential, Parkland, and Institutional Property Use with medium and fine textured soils (MECP Table 2 SCS or applicable Site Condition Standards).
- Seven (7) boreholes (BH1 to BH7) were completed between October 14 and October 15, 2020 extending to depths ranging from 2.1 to 7.6 metres below ground surface (mbgs). Three of the boreholes (BH2, BH4 and BH6) were instrumented with monitoring wells, installed at depths ranging from 6.1 to 7.6 mbgs.
- The ground water depth was identified at approximately 3.0 m below ground surface (mbgs) in monitoring well BH2, 1.6 mbgs in monitoring well BH4 and 4.2 mbgs in BH6.

- Boreholes 1 to 5 and 7 encountered a 0.8 m thick layer of reworked native material at the surface consisting of silty clay with topsoil and organics. Borehole 6 encountered fill consisting of brown to grey clayey silt to silty clay with trace sand and gravel to a depth of 4.9 m bgs. Underlying the reworked native soil and earth fill the boreholes encountered strata consisting of clayey silt/silty clay/silt glacial till with trace to some sand and gravel. The glacial till extended to the depth of termination of the boreholes which ranged from 2.1 to 7.6 m BGS.

- No exceedances of the applicable Site Conditions Standards were noted in the earth fill/disturbed native soil located on the Property.

- No exceedances of the applicable Site Conditions Standards were noted in the native soil located on the Property.

- No exceedances of the applicable Site Condition Standards were noted in the ground water located on the Property.

- No further investigations are warranted on-site at this time.

2.0 INTRODUCTION

Hannover Trafalgar Farms Limited and Milton Sheva Land Limited retained Terraprobe Inc. (Terraprobe), to complete a Phase II Environmental Site Assessment (Phase II ESA) for the property located at 6583 Trafalgar Road in Milton, Ontario. The Phase II ESA was required to investigate the Areas of Potential Environmental Concern (APECs) for the Contaminants of Potential Concern (COPCs) that have been identified on the Property. The Phase II ESA was completed in general accordance with Ontario Regulation 153/04 (O.Reg. 153/04). A Record of Site Condition is not a mandatory requirement with the Ministry of the Environment, Conservation and Parks (MECP), as the Property is not undergoing a change in Property use to a more sensitive use. If, in the future, a Record of Site Condition becomes a requirement, the Phase II ESA report will require minor updates to satisfy all of the requirements of O.Reg. 153/04 (i.e. registered plan of survey, Phase Two CSM, etc.).

2.1 Site Description

The Property is irregular in shape, with a total area of approximately 30 hectares (75 acres). The Property has a frontage of approximately 350 metres along the east side of Trafalgar Road and extends to the northeast approximately 660 m. The Property is zoned A1 – Agricultural Zone under the Town of Milton Zoning By-Law # 144-2003.

In accordance with O.Reg. 153/04, the Property is considered to be in mixed residential and agricultural or other property use as defined by the MECP. It is understood that the Phase II ESA is currently required for due diligence purposes related to the financing of the Property. It is also understood that in the future the Property will potentially be developed for residential purposes. The general location of the Property is presented on Figure 1.

2.2 Property Ownership

The Phase II Property information is as follows:

Municipal Addresses	6583 Trafalgar Road, Milton, Ontario
Legal Description	PT LT 9, CON 8 TRAF NS, PT1, 20R19009.; TOWN OF MILTON
PIN(s)	PIN: 24938-0144 (LT)
Zoning	The Property is zoned A1 (agricultural zone) as per Town of Milton Rural Zoning By-law No. 144-2003
Area	Approximately 30 hectares (75 acres)
Property Owner Information	Hannover Trafalgar Farms Limited & Milton Sheva Land Limited 1039 Fourth Line Milton, ON L9T 6P9

Persons, other than Property Owner, who engaged the Qualified Person to conduct the Phase II ESA	None

2.3 Current and Proposed Future Uses

2.3.1 Current Property Use

The Property currently consists of a two-storey residence with associated outbuilding located at the southwest portion of the building. The remainder of the Property was in agricultural use. The current property use would be considered mixed Residential and Agricultural or other Property Use as defined by O.Reg. 153/04.

2.3.2 Future Property Use

It is understood that it is intended to develop the Property for residential use sometime in the future. No redevelopment plans had been provided to Terraprobe at the time of this report. On this basis, the future use of the Property would be considered Residential Property Use under O.Reg. 153/04.

2.4 Applicable Site Condition Standards

The applicable soil and ground water Standards for the Property were determined to be those in **Table 2 - Full Depth Generic Site Condition Standards in a Potable Ground Water Condition** of the April 15, 2011 Ontario Ministry of the Environment, Conservation and Parks (MECP) "*Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act*" for Residential, Parkland, Institutional Property Use for medium and fine textured soil (MECP Table 2 SCS).

These are considered to be the applicable Site Condition Standards (SCS) for the following reasons:

- The intended use of the Property is for Residential Property Use.
- 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 an area of Milton where domestic wells are used for drinking water.
- Soil pH was within the ranges within which generic criteria other than the Table 1 (Background) Site Condition Standards may be applied.
- Three (3) grain size analyses indicated the soil was medium/fine textured.

2.5 Objectives of Investigation

The general objectives of the investigation include the following:

- To determine the concentration and location of Contaminants of Potential Concern identified for the Property, and found through the course of conducting the subsurface investigation, in soil, and ground water, as applicable.
- To prepare a report detailing the condition of the Property to be used for due diligence purposes.

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 Property; and
- That one or more rounds of field sampling are conducted for all Contaminants of Potential Concern (COPCs) found through the course of conducting the Subsurface Investigation, in soil, 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), the Region of Halton Official Plan and the Town of Milton Official Plan were reviewed to determine if water bodies or Areas of Natural Significance 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 bodies of water were identified on the Property.
Water Bodies (Study Area)	• The nearest water body is East Sixteen Mile Creek, located approximately 270 m southwest of the Property.
Wetland (Property)	Provincially Significant • No Provincially Significant wetlands were present on the Property Non-Provincially Significant • No Non-Provincially Significant wetlands were present on the Property Unevaluated • One Unevaluated wetland was present on the northern portion of the Property
Wetland (Study Area)	Provincially Significant • No Provincially Significant wetlands were present in the Study Area. Non-Provincially Significant • No Non-Provincially Significant wetlands were present in the Study Area Unevaluated • Unevaluated wetlands were present in the Study Area to the west and northeast of the Property.
ANSIs (Property)	Provincially Significant Life Science ANSI • No Life Science ANSIs were identified on the Property. Provincially Significant Earth Science ANSI • No Earth Science ANSIs were identified on the Property.
ANSIs (Study Area)	Provincially Significant Life Science ANSI • 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 obtained from the mapping is summarized below.

Topography	The ground surface elevation in the vicinity of the Property is approximately 192 m above mean sea level and approximately 5 metres above the level of East Sixteen Mile Creek, located to the southwest. The ground surface in the area of the Property slopes to the southwest.
Hydrology & Hydrogeology	The nearest water body is East Sixteen Mile Creek located approximately 270 m southwest of the Property. The approximate depth to ground water is 3.0 m below ground surface as indicated by the one well record located on the Property. Ground water is interpreted to flow towards the southwest.
Geology (overburden)	Based on published geological information for the general area, the near surface soil at the central portion of the Property and in the vicinity of the Property consists of Pleistocene age Deltaic and Lacustrine deposits of predominately gravelly sand and silty sand. The northern and southeastern portion of the Property consists of Glaciolacustrine deposits comprised of massive to laminated silt and clay, and may contain poorly sorted diamicton layers. The southwestern side of the Property is comprised of Halton Till: red to brown, gritty to clayey silt till alongside Cenozoic Modern Alluvium undifferentiated gravel, sand, silt, clay and muck.
Geology (bedrock)	The bedrock under the Property is Upper Ordovician Queenston Formation. The Queenston Formation consists of red shale with interlayers of green shale and minor interbeds of limestone and dolomite.
Geology (depth to bedrock)	Based upon published information and review of Ontario Well Records, the depth to bedrock on the Property and within the Study Area ranges from approximately 10 to 14.5 metres below ground surface.

Site specific information can be found on the Borehole logs and the grain size analyses for this investigation in Appendix A and B, respectively.

3.2 Past Investigations

Terraprobe has previously completed a Phase One Environmental Site Assessment on the Property in 2020. The results of the investigation were presented in the following report.

Report Title	Phase I Environmental Site Assessment, 6583 Trafalgar Road, Milton, Ontario
Report Date	February 5, 2020
Prepared By	Terraprobe Inc. File no 7-20-0004-41
Prepared For	Hannover Trafalgar Farms Limited

- The objective of the investigation was to assess the environmental condition of the Property in order to identify any potentially contaminating activities (PCAs) on the Property or within the

Phase I Study Area. Based on the PCAs, issues of obvious or potential environmental concern with respect to the Property were identified.

- At the time of the assessment, the southwest portion of the Property was developed with a two-storey residence and associated outbuilding. The remainder of the Property was in agricultural use.
- The Property was developed for its current use prior to 1946. Historically, the Property and adjacent properties were undeveloped or in agricultural and residential property use.
- The Phase I ESA identified two (2) Areas of Potential Environmental Concern (APECs) caused by two (2) on-site PCAs. The APECs have been divided into two (2) physical area groups on the Property.

Area of Potential Environmental Concern	Location of Area of Potential Environmental Concern on Phase I Property	Potentially Contaminating Activity	Location of PCA (On-Site or Off-Site)	Contaminants of Potential Concern	Media Potentially Impacted (Soil, Ground Water and/or Sediment)
APEC 1: (On-Site) Agricultural Use	Entire Property	#40 – Pesticides (including herbicides fungicides, and anti-fouling agents) manufacturing, processing, bulk storage and large scale application	On-Site	Metals, Hydride Metals, ORPs, OCs.	Soil, Ground Water
APEC 2: (On-Site) Presence of fill material of unknown quality	Area of former pond (east of residence)	#30 – Importation of fill material of unknown quality	On-Site	Metals, Hydride Metals, ORPs, PHCs (F1-F4), VOCs, PAHs, OCs	Soil, Ground Water

- A Phase II ESA was recommended in order to eliminate the concern of potential adverse environmental impact on the Phase I Property.

4.0 SCOPE OF THE INVESTIGATION

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

4.1 Overview of Site Investigation

In October 2020, Terraprobe conducted the following subsurface work at the Property. The subsurface work was completed to satisfy the requirements of the Phase II ESA:

- Completion of seven (7) boreholes (BH1 to BH7) to a maximum depth of 7.6 m below existing grades.
- Installation of monitoring wells in three (3) boreholes (BH2, BH4 and BH6) to depths ranging from 6.1 to approximately 7.6 m.
- Laboratory analysis of selected soil samples for parameters including:
    - Metals
    - Hydride Metals
    - Other Regulated Parameters (ORPs)
        - Boron, hot water soluble (HWS)
        - Electrical Conductivity (EC)
        - Mercury (Hg)
        - Cyanide (CN-)
        - Hexavalent Chromium (CrVI)
        - pH
        - Sodium Adsorption Ratio (SAR)
    - Volatile Organic Compounds (VOCs)
    - Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX)
    - Petroleum Hydrocarbons (PHCs)
    - Polycyclic Aromatic Hydrocarbons (PAHs)
    - Organochlorine Pesticides (OC Pest)
- Survey 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 in three (3) boreholes (BH2, BH4 and BH6) for:
    - Metals
    - Hydride Metals
    - Other Regulated Parameters (ORPs)
        - Sodium (Na)
        - Chloride (Cl)

- Mercury (Hg)
- Cyanide (CN-)
- Hexavalent Chromium (CrVI)
- pH

- Volatile Organic Compounds (VOCs)
- Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX)
- Petroleum Hydrocarbons (PHCs)
- Polycyclic Aromatic Hydrocarbons (PAHs)
- Organochlorine Pesticides (OC Pest)

The table below summarizes the scope of work conducted by Terraprobe during the Phase II ESA. The number of samples conducted includes duplicate analyses, but do not include the trip blanks that were collected. Field protocols are provided in Appendix C.

Date	Scope of Investigation	Scope of Soil Analysis	Scope of Ground Water Analysis
October 14, 2020	• Drilled four (4) boreholes (BH1 to BH4) and sampled for soil • Installed one (1) monitoring (BH1)	• 4 metals analyses • 4 H-M analyses • 4 ORPs analyses • 4 OC Pest analyses	
October 15, 2020	• Drilled three (3) boreholes (BH5, BH6 and BH7) and sampled for soil • Installed two (2) monitoring wells (BH4 and BH6)	• 5 metals analyses • 5 H-M analyses • 5 ORPs analyses • 3 VOC analyses • 3 PHCs analyses • 3 BTEX analyses • 4 OC Pest analyses • 3 PAH analyses	
October 23, 2020	• Took water levels and developed monitoring wells (BH2, BH4 and BH6) • Surveyed all well and borehole locations		
November 3, 2020	• Took water levels of all wells • Stabilized and sampled all monitoring wells (BH2, BH4 and BH6) • Hand dug three shallow test pits (BH6 SA1 A, SA1 B, SA1C) and sampled for soil	• 3 ORPs (EC) analysis	• 4 metals analyses • 4 H-M analyses • 4 ORPs analyses • 2 VOC analyses • 2 PHCs analyses • 2 BTEX analyses • 4 OC Pest analyses • 2 PAH analyses

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 I ESA, soil sampling was required on the Property for the contaminants of potential concern (CoPCs). Sample locations were selected to investigate soil across the Property.
Sediment	Excluded	Surface water bodies were not present on the Property. As such, sediment sampling was not conducted during the investigation.
Ground Water	Included	Based upon the Phase I ESA, ground water sampling was required on the Property for the CoPCs. Monitoring wells were installed to investigate ground water quality on the Property.
Surface Water	Excluded	Surface water bodies were not present on the Property. As such, surface water sampling was not conducted during the investigation.

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 (boreholes). Ground water sampling was conducted from monitoring wells installed within the completed boreholes.

4.3 Deviations from Sampling and Analysis Plan

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

4.4 Impediments

There were no impediments encountered during the Phase II ESA.

5.0 INVESTIGATION METHOD

5.1 General

Public and private utility clearances were undertaken prior to commencing the subsurface investigation. The Phase II ESA generally followed the methods outlined in the following documents:

- *"Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario"*, December 1996 (the "1996 Guideline");

The methods used in the Phase II ESA investigation did not differ from the associated standard operating procedures.

5.2 Drilling

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

Borehole	BH1 to BH4	BH4 to BH7
Date of Work	October 14, 2020	October 15, 2020
Name of Contractor	Kodiak Drilling	
Equipment Used	Track mounted drill rig (Mini-Mole), 2 inch split spoon sampling device.	
Decontamination Measures	The split spoon sampling device was washed between each sample to minimize the potential for cross-contamination.	
Sampling Frequency	Please refer to the borehole logs in Appendix A 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 Monitor

5.3.2 Geological Description of Soil

Please refer to the borehole logs in Appendix A and Section 6.1.3 of this report 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 "Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario", MECP, December 1996.

Samples were screened using an RKI Instruments EAGLE 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 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 July 2001.

Field screening measurements were used to help select samples for laboratory analysis. Complete field screening readings are provided on the borehole logs in Appendix A.

5.5 Ground Water Monitoring Well Installation

Monitoring wells were installed in three (3) boreholes (BH2, BH4 and BH6) by a drilling sub-contractor on October 14 & 15, 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 wells were finished with monument casings.

As per Ontario Regulation 903, the monitoring wells were tagged with water well records. The monitoring well locations are provided on Figures 3 and 4. The monitoring well installation details are provided on the borehole logs in Appendix A and the well construction details are provided in Appendix B.

5.6 Field Measurement of Water Quality Parameters Ground Water Sampling

Field measurement of water quality parameters were measured using a Hanna Instruments portable pH/EC/TDS/Temperature meter (model HI 991301).

HI991301 portable pH/EC/TDS/temperature meter

Range

- pH 0.00 to 14.00 pH units
- EC 0.0 to 20.0 mS/cm
- Temperature 0.0 to 60.0°C

Resolution

- pH 0.01 pH units
- EC 0.001 mS/cm
- Temperature 0.1°C

Accuracy

- pH ±0.01 pH units
- EC ±2% F.S.
- Temperature ±0.5°C

5.7 Ground Water Sampling

The monitoring wells were purged using an inertia pump system. Ground water was sampled using a peristaltic pump. Stabilization of parameters (pH, conductivity, temperature) of the purged water are monitored before a sample is taken, thus sampling 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%
- Temperature ± 3%
- pH ± 0.1 unit

Sampling methodologies from the MECP's "*Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario"*, December 1996; "*Guide for Completing Phase Two Environmental Site Assessments under Ontario Regulation 153/04*", rev. March 2019; and "*Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act*", July 2011, were followed in the collection of the ground water samples.

5.8 Sediment Sampling

No sediment sampling was conducted as part of this investigation because no surface water was present on-site.

5.9 Analytical Testing

Analytical testing of all soil and ground water samples was conducted by AGAT Laboratories (AGAT). AGAT is accredited by the Canadian Association for Laboratory Accreditation (CALA).

5.10 Residue Management Procedures

5.10.1 Soil Cuttings

Soil cuttings generated during the drilling activities remained on the Property for management during future development.

5.10.2 Ground Water

Development and purge water generated during the ground water sampling events was disposed of to the ground following receipt of analytical results.

5.10.3 Fluids from Equipment Cleaning

The fluids from cleaning sample equipment (i.e., split spoons) were removed from the Property and disposed of by the driller.

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 elevations of each borehole/monitoring well on the Property are presented on the Borehole Logs in Appendix A.

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, as applicable, for all sampling conducted on the Property.

Soil Parameters	Container
PHC (F1, BTEX), VOCs, 1,4-Dioxane	2 x 40mL glass vial (methanol preservative)
Metals, Mercury, Boron-HWS, Chromium Hexavalent, EC, SAR, pH, Chloride, Cyanide, Mercury	250 mL glass jar, Teflon lined lid

Soil Parameters	Container
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 monitoring and 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, tubing) was 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.
- Sufficient field duplicate samples were collected in each medium being sampled, so that at least one (1) field duplicate sample can be submitted for laboratory analysis for every ten (10) samples submitted for laboratory analysis.
- Calibration checks on field instruments occurred 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. Duplicate samples were submitted at a rate of 10% for the soil and ground water samples.

6.0 REVIEW AND EVALUATION

6.1 Geology

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

6.1.1 Geological Unit Thickness (Estimate)

The geological unit thicknesses as provided on the borehole logs are presented below.

Borehole	BH1	BH2	BH3	BH4	BH5	BH6	BH7
	Thickness (m)	Thickness (m)	Thickness (m)	Thickness (m)	Thickness (m)	Thickness (m)	Thickness (m)
Fill/Disturbed Native Soil	0.8	0.8	0.8	0.8	0.8	4.9	0.8
Native Soil	2.1*	6.9*	2.1*	5.3*	2.1*	2.7*	1.3*

* Native soil extended beyond the vertical extent of the investigation.

6.1.2 Elevations of Geological Units

The geological unit elevations as provided on the borehole logs are presented below.

Elevation (m)							
Borehole	**BH1**	**BH2**	**BH3**	**BH4**	**BH5**	**BH6**	**BH7**
Fill/Disturbed Native Soil	189.8 – 189.0	192.3 – 191.5	191.5 – 190.7	191.3 – 190.5	189.2 – 188.4	190.4 – 185.5	190.9 – 190.1
Native	189.0 – 186.9*	191.5 – 184.6*	190.7 – 188.6	190.5 – 185.2*	188.4 – 186.3*	185.5 – 182.8*	190.1 – 188.8*

* Native soil extended beyond the vertical extent of the investigation.

6.1.3 Material in Geological Units

The following stratigraphy is based on the borehole findings, as well as the geotechnical laboratory testing conducted on selected representative soil samples. The stratigraphic boundaries indicated on the borehole logs are inferred from non-continuous samples and observations of drilling resistance and typically represent a transition from one soil type to another. These boundaries should not be interpreted to represent exact planes of geological change and will vary between and beyond the borehole locations.

Reworked Native

At ground surface of Boreholes 1 to 5, and 7 reworked native material consisting of silty clay with topsoil and organics was encountered extending to a depth of approximately 0.8 meters below ground surface (m BGS). The N values as determined by the Standard Penetration Testing carried out within the reworked native ranged from 15 to 20 blows per 0.3 m, generally indicating a compact state of packing.The reworked native was generally brown and moist. It is noted that the agricultural field portion of the Property was harvested and tilled prior to the subsurface investigation being completed. The upper 0.8 m was reworked and disturbed by harvesting/tilling equipment.

Earth Fill

Borehole 6 encountered fill at the ground surface to a depth of about 4.9 m BGS. The fill primarily consisted of brown to grey clayey silt to silty clay, with trace sand and gravel, however, some variability in texture was observed throughout which is typical of fill material. A thin, black, wet, organic layer was encountered at approximately 4.6 m BGS, just above the fill/native interface. Standard Penetration Testing carried out within the fill determined N values of 10 to 21 blows per 0.3 m within the clayey silt, indicating a compact state of packing, and 7 to 8 blows per 0.3 m within the silty clay, indicating a firm state of packing. The fill was generally moist with in-situ water contents ranging from 8 to 19 percent.

Glacial Till

Underlying the reworked native and earth fill, all boreholes encountered strata consisting of clayey silt/silty clay/silt glacial till with trace to some gravel and trace to some sand extending below the reworked native soil to depths ranging from 2.1 to 7.6 m BGS which were the termination depths of the boreholes. The N values as determined by the Standard Penetration Testing carried out within the glacial till ranged from 22 to greater than 50 blows per 0.3 m, indicating a very stiff to hard state of compaction within the cohesive soils (silty clay), and compact to very dense state of compaction within the cohesionless soils (clayey silt and silt).

6.1.4 Properties of Aquifers and Aquitards

Earth Fill/Disturbed Native

The disturbed native soil on the Property is located within the unsaturated zone and is not considered to be an aquifer. The ground water table on the Property is located below the disturbed native material. Any water within the disturbed native is expected to migrate downward into the undisturbed native soil and bedrock.

As indicated above the aquifer (GW Unit 1) is located within the native soil across the Property. The fill found in borehole 6 was placed to depths that extended to the top of the aquifer. The ground water level

in the area of the fill is consistent with the depth of the shallow aquifer present in the native soils across the property.

Native Soil

The native glacial till is considered to be an unconfined aquifer. The water table is present within the glacial till.

6.1.5 Rationale for Choice of Aquifers and Aquitards Investigated

The clayey silt to silty clay glacial till aquifer was chosen for investigation. This strata was chosen for investigation because of:

- the possibility of free ground water being present; and
- the clayey silt/ silty clay glacial till aquifer is the shallow water-bearing zone (GW Unit 1).

6.2 Ground Water Elevations and Flow Direction

6.2.1 Rationale for Monitoring Well Locations and Screen Intervals

Monitoring wells were located across the Property in order to provide full coverage of the APECs. The monitoring wells were screened within the clayey silt/silty clay glacial till across the Property to allow for the collection of ground water samples from the native strata of interest.

6.2.2 Results of Interface Probe Measurements

Interface probe measurements indicated that only water was present on the Property. No light non-aqueous phase liquids (LNAPL) or dense non-aqueous phase liquids (DNAPL) were detected.

6.2.3 Thickness of Free Flowing Product

No free flowing product was encountered on the Property.

6.2.4 Ground Water Elevations

Ground water levels were measured in each borehole following completion of drilling, as noted in borehole logs in Appendix A. Ground water levels were measured in the installed monitoring wells (BH2, BH4 and BH6) using a Solinst interface probe.

Well ID	BH2	BH4	BH6
Well Depth (mbgs)	7.6	6.1	7.6
Ground Elev. (masl)	193.3	191.3	190.4

Well ID	BH2		BH4		BH6	
Top of Screen (masl)	188.8		188.3		185.9	
Bottom of Screen (masl)	185.7		185.2		182.8	
Date	WL (mbgs)	Elev. (masl)	WL (mbgs)	Elev. (masl)	WL (mbgs)	Elev. (masl)
2020/10/23	2.8	190.5	1.5	189.9	4.0	186.4
2020/11/03	3.0	190.3	1.6	189.7	4.2	186.2

6.2.5 Interpreted Direction of Ground Water Flow

The interpreted direction of ground water flow is to the southwest as presented on Figure 4.

6.2.6 Assessment of Temporal Variability

Two (2) ground water level measurements were collected on the Property within a two week period, therefore seasonal variability of the ground water has not been observed. Additional ground water data will be required to assess seasonal variability. It is not anticipated that seasonal fluctuations in ground water will affect the outcome of the results.

6.2.7 Influence of Buried Utilities

There are no buried utilities located on the Property, as such there is no potential that buried utilities could locally influence shallow ground water flow.

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 ground water table (GW Unit 1) is within the native clayey silt. Based on the current measured ground water levels, the horizontal hydraulic gradient of the ground water for the clayey silt at the Property was determined to be approximately 0.012 m/m from the north to the south between monitoring well BH2 and BH6.

6.3.2 Vertical Hydraulic Gradients

The vertical hydraulic gradient cannot be calculated as there are no nested wells on the Property. Generally, the vertical hydraulic gradient is calculated between two wells within close proximity and installed within a different ground water unit.

6.3.3 Hydraulic Conductivity

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

- Earth Fill/Re-worked Native (Clayey silt earth fill) 10^{-5} m/s to 10^{-6} m/s
- Native Soil (Clayey Silt Glacial Till) 10^{-7} m/s to 10^{-9} m/s

6.4 Soil Texture

6.4.1 Rationale for Use of Medium and fine Soil Texture

The applicable Site Condition Standard chosen for the Property was the MECP Table 2 SCS. Based on the results of grain size analyses, medium and fine soil standards were used during the Phase II ESA.

6.4.2 Results of Grain Size Analysis

The results of the laboratory grain size analyses were used to determine soil texture. Three (3) representative samples were selected for laboratory (sieve/hydrometer) analysis.

Section 42 of Ontario Regulation 153/04 (O.Reg. 153/04) defines soil texture as the following:

- "coarse textured soil" means soil that contains more than 50 per cent by mass of particles that are 75 micrometres or larger in mean diameter; and,

- "medium and fine textured soil" means soil that contains 50 per cent or more by mass of particles that are smaller than 75 micrometres in mean diameter.

The following summarizes the results of the grain size analysis (Appendix E).

Sample ID	Sample Depth (m)	Soil Type	% smaller than 75 micrometres	Soil Texture as per MECP standard
BH2 SA6	3.8 to 4.4	Sand and silt, some clay, trace gravel	57.7	Medium and Fine

Sample ID	Sample Depth (m)	Soil Type	% smaller than 75 micrometres	Soil Texture as per MECP standard
BH4 SA3	1.5 to 2.1	Clayey silt some sand, trace gravel	73.4	Medium and Fine
BH6 SA9	6.1 to 6.7	Sandy silt, some gravel and clay	55.4	Medium and Fine

The results of the grain size analysis indicate that the sand and silt and clayey silt layers from depths of approximately 1.5 to 6.7 m were classified as medium and fine textured soil. On this basis, the predominant soil type on the Property is medium and fine textured.

6.4.3 Rationale for Number of Grain Size Samples

A total of three grain size analyses were completed as part of the Phase II ESA. Three samples were deemed sufficient by the Qualified Person in order to represent the soil conditions at the Property.

6.5 Soil: Field Screening

All recovered soil samples were screened in the field using portable hydrocarbon vapour testing equipment and following the procedure outlined in the "Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario", MECP, December 1996.

Field screening measurements were used to help select samples for laboratory analysis. Complete field screening readings are provided on the borehole logs in Appendix A.

6.6 Soil Quality

6.6.1 Location and Depth of Samples

Borehole Samples (depth measured from original ground surface):

Sample ID	Depth / Elev. (m) / (masl)	Strata	Date Sampled	Soil							
				Metals	H-M	ORPs	PAH	VOCs	PHCs	BTEX	OC Pest
BH1 SA1	0.0-0.6/ 189.8-189.2	Reworked	Oct 14/20	✓	✓	✓ (CN, Cr(IV), Hg, pH)					✓
BH2 SA1	0.0-0.6/ 193.3-192.7	Reworked	Oct 14/20	✓	✓	✓ (CN, Cr(IV), Hg, pH)					✓

Sample ID	Depth / Elev. (m) / (masl)	Strata	Date Sampled	Soil							
				Metals	H-M	ORPs	PAH	VOCs	PHCs	BTEX	OC Pest
BH3 SA1	0.0-0.6/ 191.5-190.9	Reworked Native	Oct 14/20	✓	✓	✓ (CN, Cr(IV), Hg, pH)					✓
BH4 SA1	0.0-0.6/ 191.3-190.7	Reworked Native	Oct 14/20	✓	✓	✓ (CN, Cr(IV), Hg, pH)					✓
BH4 SA7	4.6-5.2/ 186.7-186.1	Native	Oct 14/20			✓ (pH)					
BH5 SA1	0.0-0.6/ 189.2-188.6	Reworked Native	Oct 15/20	✓	✓	✓ (CN, Cr(IV), Hg, pH)					✓
BH6 SA1	0.0-0.6/ 190.4-189.8	Fill	Oct 15/20	✓	✓	✓					✓
BH6 SA1A	0.0-0.6/ 190.4-189.8	Fill	Nov 3/20			✓ (EC)					
BH6 SA1B	0.0-0.6/ 190.4-189.8	Fill	Nov 3/20			✓ (EC)					
BH6 SA1C	0.0-0.6/ 190.4-189.8	Fill	Nov 3/20			✓ (EC)					
BH6 SA2	0.8-1.4/ 189.6-189.0	Fill	Oct 15/20				✓				
BH6 SA4	2.3–2.9/ 188.1-187.5	Fill	Oct 15/20					✓	✓	✓	
BH6 SA8	5.3-5.9/ 185.1-184.5	Native	Oct 15/20	✓	✓	✓ (CN, Cr(IV), Hg, pH)	✓	✓	✓	✓	
BH7 SA1	0.0-0.6/ 190.9-190.3	Reworked Native	Oct 15/20	✓	✓	✓ (CN, Cr(IV), Hg, pH)					✓
Dup1 (BH5 SA1)	0.0-0.6/ 189.2-188.6	Reworked Native	Oct 15/20	✓	✓	✓ (CN, Cr(IV), Hg, pH)					✓
Dup2 (BH6 SA2)	0.8-1.4/ 189.6-189.0	Reworked Native	Oct 15/20				✓				
Dup3 (BH6 SA4)	2.3–2.9/ 188.1-187.5	Reworked Native	Oct 15/20					✓	✓	✓	
Dup4 (BH6 SA1)	0.0-0.6/ 190.4-189.8	Reworked Native	Oct 15/20			✓					

Note: ORPs in soil include B-HWS, EC, SAR, Hg, pH, CN- and Cr(VI) unless otherwise indicated.

6.6.2 Comparison to Applicable Standards (Soil)

Select soil samples were analysed for the Contaminants of Potential Concern (CoPCs). CoPCs include:

- Metals
- Hydride Metals
- Other Regulated Parameters (ORPs)
  - Boron, hot water soluble (HWS)
  - Electrical Conductivity (EC)
  - Mercury (Hg)
  - Cyanide (CN-)
  - Hexavalent Chromium (CrVI)
  - pH
  - Sodium Adsorption Ratio (SAR)
- Volatile Organic Compounds (VOCs)
- Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX)
- Petroleum Hydrocarbons (PHCs)
- Polycyclic Aromatic Hydrocarbons (PAHs)
- Organochlorine Pesticides (OC Pest)

The results of the analyses were compared to the applicable MECP Table 2 SCS for medium and fine textured soils. The laboratory certificates of analysis for soil samples are provided in Appendix F, and the results of the soil chemical analysis are provided in Tables 1 through 6.

Metals in Soil

A total of ten (10) samples including duplicates were submitted for analysis of metals and compared to the MECP Table 2 SCS. No metal exceedances of the MECP Table 2 SCS were noted in the samples analyzed. All metals samples are summarized in Table 1 and the laboratory certificates of analysis are provided in Appendix F.

Hydride Metals in Soil

A total of ten (10) samples including duplicates were submitted for analysis of hydride metals and compared to the MECP Table 2 SCS. No hydride metals exceedances of the MECP Table 2 SCS were noted in the samples analyzed. All hydride metals samples are summarized in Table 1 and the laboratory certificates of analysis are provided in Appendix F.

Other Regulated Parameters in Soil

A total of twelve (12) ORP samples including duplicates were submitted for analysis of hydride metals and compared to the MECP Table 2 SCS.

Electrical Conductivity (EC) exceedances were noted in one sample (BH6 SA1) and its duplicate (Dup 4). BH6 SA1 had an EC analytical result of 0.916 µg/g, and Dup 4 had a result of 0.755 µg/g, while the Table 2 SCS for EC is 0.7 µg/g. O.Reg 153/04 Section 48(2) states, *"if two or more samples of soil or sediment are taken from the sampling points at the same sampling location that are the same depth in, on or under the Property, the property meets a standard mentioned in subsection (1) if the average of the sampling results meets the standard."* On this basis, three additional samples were collected from hang augered holes advanced within 1 m of BH6 and submitted for EC analysis as follows.

Sample ID	Samples Result	Table 2 SCS - EC
BH6 SA1 (Original Sample)	0.916	0.7
Dup 4	0.755	0.7
BH6 SA1A	0.613	0.7
BH6 SA1B	0.473	0.7.
BH6 SA1C	0.346	0.7
Average of all five samples	**0.621**	**0.7**

On the basis of the above, no ORP exceedances of the MECP Table 2 SCS were noted in the samples analyzed, with the exception of the following. All ORP samples are summarized in Table 1 and the laboratory certificates of analysis are presented in Appendix F.

Volatile Organic Compounds in Soil

A total of three (3) samples including duplicates were submitted for analysis of volatile organic compounds and compared to the MECP Table 2 SCS. No VOC exceedances of the MECP Table 2 SCS were noted in the samples analyzed. It should be noted that VOCs were present at detectable levels within in the fill in one sample (Dup 4). However, as indicated above, all samples met the SCS. All VOC samples are summarized in Table 2 and the laboratory certificates of analysis are provided in Appendix F.

Petroleum Hydrocarbons in Soil

A total of three (3) samples including duplicates were submitted for analysis of petroleum hydrocarbons and compared to the MECP Table 2 SCS. No petroleum hydrocarbon exceedances of the MECP Table 2 SCS were noted in the samples analyzed. All PHC samples are summarized in Table 3 and the laboratory certificates of analysis are provided in Appendix F.

Benzene, Toluene, Ethylbenzene, and Xylenes in Soil

A total of three (3) samples including duplicates were submitted for analysis of BTEX and compared to the MECP Table 2 SCS. No BTEX exceedances of the MECP Table 2 SCS were noted in the samples

analyzed. All BTEX samples are summarized in Table 4 and the laboratory certificates of analysis are provided in Appendix F.

Organochlorine Pesticides in Soil

A total of eight (8) samples including duplicates were submitted for analysis of organochlorine pesticides and compared to the MECP Table 2 SCS. No OC Pest exceedances of the MECP Table 2 SCS were noted in the samples analyzed. All OC Pest samples are summarized in Table 5 and the laboratory certificates of analysis are provided in Appendix F.

Polycyclic Aromatic Hydrocarbons in Soil

A total of three (3) samples including duplicates were submitted for analysis of PAHs and compared to the MECP Table 2 SCS. No PAH exceedances of the MECP Table 2 SCS were noted in the samples analyzed. It should be noted that PAHs were present at detectable levels within in the fill, however, as indicated above, all samples met the SCS. All PAH samples are summarized in Table 6 and the laboratory certificates of analysis are provided in Appendix F.

6.6.3 Contaminants of Concern (Soil)

There are no contaminants of concern that exceeded their respective Site Condition Standards associated with the soil on the Property.

6.6.4 Contamination Impact on Other Media

There are no contaminants of concern that exceeded their respective Site Condition Standards identified within the soil on the Property and thus there is no impact to other media.

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/reworked native 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. Ground water samples were analysed for parameters including Metals, Hydride Metals (H-M), Other Regulated Parameters (ORPs), Petroleum Hydrocarbons (PHCs), Volatile Organic Compounds (VOCs), BTEX, Organochlorine Pesticides (OCs) and Polycyclic Aromatic Hydrocarbons (PAHs). The laboratory certificates of analysis for ground water are provided in Appendix G.

Monitoring Well	Screen/Sample Elevation (masl)	Metals	H-M	ORPs	VOCs	PHCs	BTEX	OCs	PAHs
BH2	185.3 – 182.2	✓	✓	✓ (CN-, Cr(VI), Hg)				✓	
BH4	190.3 – 187.2	✓	✓	✓ (CN-, Cr(VI), Hg)				✓	
BH6	184.3 – 182.8	✓	✓	✓	✓	✓	✓	✓	✓
Dup 1 (BH2)	185.3 – 182.2							✓	
Dup 2 (BH6)	184.3 – 182.8	✓	✓	✓	✓	✓	✓		✓

6.7.2 Field Filtering

Field filtering occurred for all metal samples analyses that require field filtering as per the requirements of *Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act"*, MECP, July 2011. 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 Metals
- Other Regulated Parameters (ORPs)
  - Mercury (Hg)
  - Cyanide (CN-)
  - Hexavalent Chromium (CrVI)
  - pH
  - Sodium
  - Chloride
- Volatile Organic Compounds (VOCs)
- Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX)
- Petroleum Hydrocarbons (PHCs)
- Polycyclic Aromatic Hydrocarbons (PAHs)
- Organochlorine Pesticides (OC Pest)

The results of the analysis were compared to the applicable MECP Table 2 SCS in a medium and fine textured soil condition. The laboratory certificates of analysis are provided in Appendix G, and the results of the ground water chemical analyses are provided in Tables 7 through 12.

Metals in Ground Water

No metal exceedances of the MECP Table 2 SCS were noted in the ground water samples analyzed. The metal results are summarized in Table 7 and the laboratory certificates of analysis are provided in Appendix G.

Hydride Metals in Ground Water

No hydride metal exceedances of the MECP Table 2 SCS were noted in the ground water samples analyzed. The metal results are summarized in Table 7 and the laboratory certificates of analysis are provided in Appendix G.

Other Regulated Parameters in Ground Water

No ORP exceedances of the MECP Table 2 SCS were noted in the ground water samples analyzed. The metal results are summarized in Table 7 and the laboratory certificates of analysis are provided in Appendix G.

Volatile Organic Compounds in Ground Water

No volatile organic compound exceedances of the MECP Table 2 SCS were noted in the samples analyzed. All VOC samples are summarized in Table 8 and the laboratory certificates of analysis are provided in Appendix G.

Petroleum Hydrocarbons in Ground Water

No petroleum hydrocarbon exceedances of the MECP Table 2 SCS were noted in the ground water samples analyzed. The PHC results are summarized in Table 9 and the laboratory certificates of analysis are provided in Appendix G.

Benzene, Toluene, Ethylbenzene, and Xylenes in Ground Water

No BTEX exceedances of the MECP Table 2 SCS were noted in the ground water samples analyzed. The BTEX results are summarized in Table 10 and the laboratory certificates of analysis are provided in Appendix G.

Organochlorine Pesticides in Ground Water

No OC Pesticide exceedances of the MECP Table 2 SCS were noted in the samples analyzed. All OC Pesticide samples are summarized in Table 11 and the laboratory certificates of analysis are provided in Appendix G.

Polycyclic Aromatic Hydrocarbons in Ground Water

No PAH exceedances of the MECP Table 2 SCS were noted in the samples analyzed. All PAH samples are summarized in Table 12 and the laboratory certificates of analysis are provided in Appendix G.

6.7.4 Contaminants of Concern (Ground Water)

There are no contaminants of concern that exceeded their respective Site Condition Standards associated with the ground water located on the Property.

6.7.5 Chemical or Biological Transformations

No Contaminants of Concern that exceeded their respective Site Condition Standards are associated with the ground water located on the Property. Therefore no Chemical or Biological Transformations are likely to have occurred.

6.7.6 Contaminant Impact on Other Media

No Contaminants of Concern that exceeded their respective Site Condition Standards are associated with the ground water located on the Property. Therefore, there is no impact to other media.

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 requirements of *Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act"*, MECP, July 2011 (the "Analytical Protocol"), with respect to holding time, preservation method, storage requirements and sample container type. Laboratory results were compared to the performance criteria of the Analytical Protocol (specified surrogate recovery ranges, mandatory reporting limits [method detection limits], etc.).

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

6.8.2 Samples Not Handled in Accordance with the Analytical Methods

Holding Time

All samples met the holding times as specified in "*Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act"*, MECP, July 01, 2011, with the exception of a single soil sample analyzed for pH outside its holding time. This is not considered to be a significant issue because the sample was stored in a sealed container prior to analysis.

Preservation Method

All samples met the preservation methods as specified in "*Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act"*, MECP, July 01, 2011.

Storage Requirement

All samples met the storage requirements as specified in "*Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act"*, MECP, July 01, 2011.

Container Type

All samples met the container type as specified in "*Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act"*, MECP, July 01, 2011.

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 F and Appendix G.

6.8.4 Results Qualified by Laboratory

The laboratory made no qualifier remarks 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.

7.0 CONCLUSIONS

7.1 Location and Concentration of Contamination

7.1.1 Land

There were no exceedances of the applicable Site Condition Standards noted in the soil for the parameters analyzed at the locations investigated on the Property.

7.1.2 Ground Water

There were no exceedances of the applicable Site Condition Standards noted in the ground water for the parameters analyzed at the locations investigated on the Property.

7.2 Environmental Conditions Requiring Remediation

No exceedances of the applicable Site Condition Standards were noted in the earth fill, disturbed native soil, native soil or ground water on the Property.

7.3 Whether Applicable Site Condition Standards Were Met

Soil – Earth Fill

The applicable Site Condition Standards were met for the earth fill/disturbed native material located on the Property.

Soil – Native Soils

The applicable Site Condition Standards were met for the native soils located on the Property.

Ground Water

The applicable Site Condition Standards were met for the ground water located on the Property.

7.4 Signatures

The Phase II Environmental Site Assessment was completed under the direction and supervision of R. Baker Wohayeb, M.A.Sc., P.Eng, QP_{RA}. The report was reviewed by David Mably, P. Eng. 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 for the Phase II 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.

Katie Greenman, B.Sc.
Environmental Scientist

Amber Brooks, B.Sc.
Project Manager

David Mably, P. Eng.
Senior Environmental Engineer

LICENSED PROFESSIONAL ENGINEER
11/23/20
D. M. MABLY
PROVINCE OF ONTARIO

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. Ontario Ministry of the Environment, December 1996. *Guidance on Sampling and Analytical Methods for Use at Contaminated Sites in Ontario.*

5. Ontario Ministry of Environment, 15 April 2011. *Soil, Ground Water and Sediment Standards for Use under Part XV.1of the Environmental Protection Act.*

6. Terraprobe, February 2020. *Phase I Environmental Site Assessment, 6583 Trafalgar Road, Milton, Ontario.* File no. 7-20-0004-41.

9.0 LIMITATIONS AND USE OF THE REPORT

This report was prepared for the exclusive use of Hanover Trafalgar Farms Limited and Milton Sheva Land Limited and is intended to provide an assessment of the environmental condition on the property located at 6583 Trafalgar Road in Milton, 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, if any, 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.

TABLES

TERRAPROBE INC.

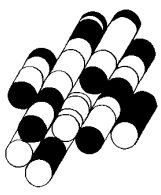


Table 1
Soil Quality Analysis
Metals and Inorganics
6583 Trafalgar Road, Milton
Project No. 7-20-0004-42

									Duplicate		Duplicate						
Sample Description		**MECP**		**BH1 SA1**	**BH2 SA1**	**BH3 SA1**	**BH4 SA1**	**BH4 SA7**	**BH5 SA1**	**Dup 1**	**BH6 SA1**	**Dup 4**	**BH6 SA1 A**	**BH6 SA1 B**	**BH6 SA1 C**	**BH6 SA8**	**BH7 SA1**
Date Sampled		**2011**		**10/14/2020**	**10/14/2020**	**10/14/2020**	**10/14/2020**	**10/14/2020**	**10/15/2020**	**10/15/2020**	**10/15/2020**	**10/15/2020**	**11/03/2020**	**11/03/2020**	**11/03/2020**	**10/15/2020**	**10/15/2020**
Lab ID	**Unit**	**Table 2**	**RDL**	**1571000**	**1571021**	**1571022**	**1571095**	**1571096**	**1571024**	**1571101**	**1571105**	**1595476**	**1647838**	**1647842**	**1647843**	**1571108**	**1570999**
Sample Elevation (masl)		**RPI**		**189.8-189.2**	**193.3-192.7**	**191.5 - 190.9**	**191.3-190.7**	**186.7-186.1**	**189.2-188.6**	**189.2-188.6**	**190.4-189.8**	**190.4-189.8**	**190.4-189.8**	**190.4-189.8**	**190.4-189.8**	**185.1-184.4**	**190.9-190.3**
Parameter																	
Metals																	
Barium	µg/g	390	2	68	102	76	83	NA	72	81	94	NA	NA	NA	NA	66	97
Beryllium	µg/g	5	0.5	0.7	0.9	0.9	1.0	NA	0.7	0.9	0.6	NA	NA	NA	NA	0.6	0.9
Boron	µg/g	120	5	6	8	7	9	NA	6	8	9	NA	NA	NA	NA	12	10
Cadmium	µg/g	1.2	0.5	<0.5	<0.5	<0.5	<0.5	NA	<0.5	<0.5	<0.5	NA	NA	NA	NA	<0.5	<0.5
Chromium	µg/g	160	5	27	24	23	27	NA	18	20	22	NA	NA	NA	NA	17	26
Cobalt	µg/g	22	0.5	6.2	10.5	8.7	12.0	NA	5.8	9.7	9.8	NA	NA	NA	NA	8.4	11.8
Copper	µg/g	180	1	13	17	17	22	NA	21	27	25	NA	NA	NA	NA	34	26
Lead	µg/g	120	1	14	16	15	20	NA	13	14	14	NA	NA	NA	NA	7	15
Molybdenum	µg/g	6.9	0.5	2.0	<0.5	<0.5	0.5	NA	<0.5	<0.5	<0.5	NA	NA	NA	NA	0.5	<0.5
Nickel	µg/g	130	1	14	20	17	25	NA	15	23	21	NA	NA	NA	NA	17	24
Silver	µg/g	25	0.2	<0.2	<0.2	<0.2	<0.2	NA	<0.2	<0.2	<0.2	NA	NA	NA	NA	<0.2	<0.2
Thallium	µg/g	1	0.4	<0.4	<0.4	<0.4	<0.4	NA	<0.4	<0.4	<0.4	NA	NA	NA	NA	<0.4	<0.4
Uranium	µg/g	23	0.5	0.8	0.7	0.8	0.9	NA	1.0	0.7	0.7	NA	NA	NA	NA	0.7	0.7
Vanadium	µg/g	86	1	23	36	33	39	NA	28	29	28	NA	NA	NA	NA	25	35
Zinc	µg/g	340	5	67	105	72	80	NA	60	68	76	NA	NA	NA	NA	46	76
Hydride Metals																	
Antimony	µg/g	7.5	0.8	<0.8	<0.8	<0.8	<0.8	NA	<0.8	<0.8	<0.8	NA	NA	NA	NA	<0.8	<0.8
Arsenic	µg/g	18	1	3	4	4	6	NA	6	7	4	NA	NA	NA	NA	8	5
Selenium	µg/g	2.4	0.4	0.5	0.5	0.6	0.7	NA	0.6	0.5	0.4	NA	NA	NA	NA	<0.4	0.5
Other Regulated Parameters																	
Chromium, Hexavalent	µg/g	10	0.2	<0.2	<0.2	<0.2	<0.2	NA	<0.2	<0.2	<0.2	NA	NA	NA	NA	<0.2	<0.2
Cyanide, Free	µg/g	0.051	0.040	<0.040	<0.040	<0.040	<0.040	NA	<0.040	<0.040	<0.040	NA	NA	NA	NA	<0.040	<0.040
Mercury	µg/g	1.8	0.10	<0.10	<0.10	<0.10	<0.10	NA	<0.10	<0.10	<0.10	NA	NA	NA	NA	<0.10	<0.10
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA	6.64	7.18	5.76	7.48	7.81	7.21	7.32	7.65	NA	NA	NA	NA	7.82	7.59
Boron (Hot Water Soluble)	µg/g	1.5	0.10	NA	NA	NA	NA	NA	NA	NA	0.57	0.48	NA	NA	NA	0.67	NA
Electrical Conductivity (2:1)	mS/cm	0.7	0.005	NA	NA	NA	NA	NA	NA	NA	**0.916**	**0.755**	0.613	0.473	0.346	0.284	NA
Sodium Adsorption Ratio	NV	5	NV	NA	NA	NA	NA	NA	NA	NA	2.26	2.78	NA	NA	NA	0.920	NA

Comments:

Results compared to MECP 2011 Table 2 Site Condition Standards for
Residential/Parkland/Institutional Land Use in a Medium/Fine Textured Soil Condition

RDL - Reported Detection Limit; G / S - Guideline / Standard

<0.065	RDL exceeded Standard
150	Sample result exceeded Standard
0.916	The average result of BH6 SA1 for EC is deemed not to exceed as per O.Reg 153/04 Section 48(2)

NV- No Value

NA-Not Analyzed

pH values should be between 5 and 9 for surface soils and between 5 and 11 for subsurface soils

Table 2
Soil Quality Analysis
Volatile Organic Compounds
6583 Trafalgar Road, Milton
Project No. 7-20-0004-42

				Duplicate		
Sample Description		**MECP**		**BH6 SA4**	**Dup 3**	**BH6 SA8**
Date Sampled		**2011**		**10/15/2020**	**10/15/2020**	**10/15/2020**
Lab ID	**Unit**	**Table 2**	**RDL**	**1571107**	**1571103**	**1571108**
Sample Elevation (masl)		**RPI**		**188.1-187.5**	**188.1-187.5**	**185.1-184.4**
Parameter						
Acetone	ug/g	28	0.50	<0.50	<0.50	<0.50
Benzene	ug/g	0.17	0.02	<0.02	<0.02	<0.02
Bromodichloromethane	ug/g	1.9	0.05	<0.05	<0.05	<0.05
Bromoform	ug/g	0.26	0.05	<0.05	<0.05	<0.05
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.12	0.05	<0.05	<0.05	<0.05
Chlorobenzene	ug/g	2.7	0.05	<0.05	<0.05	<0.05
Chloroform	ug/g	0.18	0.04	<0.04	<0.04	<0.04
Cis- 1,2-Dichloroethylene	ug/g	2.5	0.02	<0.02	<0.02	<0.02
Dibromochloromethane	ug/g	2.9	0.05	<0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	1.7	0.05	<0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	6	0.05	<0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.097	0.05	<0.05	<0.05	<0.05
Dichlorodifluoromethane	µg/g	25	0.05	<0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	0.6	0.02	<0.02	<0.02	<0.02
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03	<0.03
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05	<0.05
1,2-Dichloropropane	ug/g	0.085	0.03	<0.03	<0.03	<0.03
1,3-Dichloropropene (Cis + Trans)	µg/g	0.081	0.04	<0.04	<0.04	<0.04
Ethylbenzene	ug/g	1.6	0.05	<0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04	<0.04
Methyl Ethyl Ketone	ug/g	44	0.50	<0.50	<0.50	<0.50
Methyl Isobutyl Ketone	ug/g	4.3	0.50	<0.50	<0.50	<0.50
Methyl tert-butyl Ether	ug/g	1.4	0.05	<0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.96	0.05	<0.05	<0.05	<0.05
Styrene	ug/g	2.2	0.05	<0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.05	<0.05	<0.05
Tetrachloroethylene	ug/g	2.3	0.05	<0.05	<0.05	<0.05
Toluene	ug/g	6	0.05	<0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.75	0.05	<0.05	<0.05	<0.05
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04	<0.04
1,1,1-Trichloroethane	ug/g	3.4	0.05	<0.05	<0.05	<0.05
Trichloroethylene	ug/g	0.52	0.03	<0.03	0.14	<0.03
Trichlorofluoromethane	ug/g	5.8	0.05	<0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.022	0.02	<0.02	<0.02	<0.02
Xylenes (Total)	ug/g	25	0.05	<0.05	<0.05	<0.05
m & p-Xylene	ug/g	NV	0.05	<0.05	<0.05	<0.05
n-Hexane	µg/g	34	0.05	<0.05	<0.05	<0.05
o-Xylene	ug/g	NV	0.05	<0.05	<0.05	<0.05

Comments:

Results compared to MECP 2011 Table 2 Site Condition Standards for
Residential/Parkland/Institutional Land Use in a Medium/Fine Textured Soil Condition

RDL - Reported Detection Limit; G / S - Guideline / Standard

<0.065 RDL exceeded Standard

150 Sample result exceeded Standard

NV- No Value

NA-Not Analyzed

Table 3
Soil Quality Analysis
Petroleum Hydrocarbons
6583 Trafalgar Road, Milton
Project No. 7-20-0004-42

				Duplicate		
Sample Description		**MECP**		**BH6 SA4**	**Dup 3**	**BH6 SA8**
Date Sampled		**2011**		**10/15/2020**	**10/15/2020**	**10/15/2020**
Lab ID	**Unit**	**Table 2**	**RDL**	**1571107**	**1571103**	**1571108**
Sample Elevation (masl)		**RPI**		**188.1-187.5**	**188.1-187.5**	**185.1-184.4**
Parameter						
F1 (C6 to C10)	µg/g	65	5	<5	<5	<5
F1 (C6 to C10) minus BTEX	µg/g	65	5	<5	<5	<5
F2 (C10 to C16)	µg/g	150	10	<10	<10	<10
F3 (C16 to C34)	µg/g	1300	50	62	<50	<50
F4 (C34 to C50)	µg/g	5600	50	<50	<50	<50
Gravimetric Heavy Hydrocarbons	µg/g	5600	50	NA	NA	NA

Comments:

Results compared to MECP 2011 Table 2 Site Condition Standards for
Residential/Parkland/Institutional Land Use in a Medium/Fine Textured Soil Condition

RDL - Reported Detection Limit; G / S - Guideline / Standard

<0.065 RDL exceeded Standard

150 Sample result exceeded Standard

NV- No Value

NA-Not Analyzed

Table 4
Soil Quality Analysis
Benzene, Toluene, Ethylbenzene, Xylene
6583 Trafalgar Road, Milton
Project No. 7-20-0004-42

				Duplicate		
Sample Description		**MECP**		**BH6 SA4**	**Dup 3**	**BH6 SA8**
Date Sampled		**2011**		**10/15/2020**	**10/15/2020**	**10/15/2020**
Lab ID	**Unit**	**Table 2**	**RDL**	**1571107**	**1571103**	**1571108**
Sample Elevation (masl)		**RPI**		**188.1-187.5**	**188.1-187.5**	**185.1-184.4**
Parameter						
Benzene	ug/g	0.17	0.02	<0.02	<0.02	<0.02
Ethylbenzene	ug/g	1.6	0.05	<0.05	<0.05	<0.05
Toluene	ug/g	2.3	0.05	<0.05	<0.05	<0.05
Xylenes (Total)	ug/g	6	0.05	<0.05	<0.05	<0.05
m & p-Xylene	ug/g	NV	0.05	<0.05	<0.05	<0.05
o-Xylene	ug/g	NV	0.05	<0.05	<0.05	<0.05

Comments:

Results compared to MECP 2011 Table 2 Site Condition Standards for
Residential/Parkland/Institutional Land Use in a Medium/Fine Textured Soil Condition

RDL - Reported Detection Limit; G / S - Guideline / Standard

<0.065 RDL exceeded Standard

150 Sample result exceeded Standard

NV- No Value

NA-Not Analyzed

Table 5
Soil Quality Analysis
Organochlorine Pesticides
6583 Trafalgar Road, Milton
Project No. 7-20-0004-42

								Duplicate			
Sample Description		**MECP**		**BH1 SA1**	**BH2 SA1**	**BH3 SA1**	**BH4 SA1**	**BH5 SA1**	**Dup 1**	**BH6 SA1**	**BH7 SA1**
Date Sampled		**2011**		**10/14/2020**	**10/14/2020**	**10/14/2020**	**10/14/2020**	**10/15/2020**	**10/15/2020**	**10/15/2020**	**10/15/2020**
Lab ID	**Unit**	**Table 2**	**RDL**	**1571000**	**1571021**	**1571022**	**1571095**	**1571024**	**1571101**	**1571105**	**1570999**
Sample Elevation (masl)		**RPI**		**189.8-189.2**	**193.3-192.7**	**191.5 - 190.9**	**191.3-190.7**	**189.2-188.6**	**189.2-188.6**	**190.4-189.8**	**190.9-190.3**
Parameter											
Aldrin	µg/g	0.05	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Chlordane	µg/g	0.05	0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDD	µg/g	3.3	0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDE	µg/g	0.33	0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
DDT	µg/g	1.4	0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007	<0.007
Dieldrin	µg/g	0.05	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endosulfan	µg/g	0.04	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Endrin	µg/g	0.04	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Gamma-Hexachlorocyclohexane	µg/g	0.063	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor	µg/g	0.15	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Heptachlor Epoxide	µg/g	0.05	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobenzene	µg/g	0.52	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Hexachlorobutadiene	µg/g	0.014	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Hexachloroethane	µg/g	0.071	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Methoxychlor	µg/g	0.13	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

Comments:

Results compared to MECP 2011 Table 2 Site Condition Standards for
Residential/Parkland/Institutional Land Use in a Medium/Fine Textured Soil Condition

RDL - Reported Detection Limit; G / S - Guideline / Standard

<0.065 RDL exceeded Standard

150 Sample result exceeded Standard

NV- No Value

NA-Not Analyzed

Table 6
Soil Quality Analysis
Polycyclic Aromatic Hydrocarbons
6583 Trafalgar Road, Milton
Project No. 7-20-0004-42

				Duplicate		
Sample Description		**MECP**		**BH6 SA2**	**Dup 2**	**BH6 SA8**
Date Sampled		**2011**		**10/15/2020**	**10/15/2020**	**10/15/2020**
Lab ID	**Unit**	**Table 2**	**RDL**	**1571106**	**1571102**	**1571108**
Sample Elevation (masl)		**RPI**		**189.6-189.0**	**189.6-189.0**	**185.1-184.4**
Parameter						
Acenaphthene	µg/g	29	0.05	<0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.17	0.05	<0.05	<0.05	<0.05
Anthracene	µg/g	0.74	0.05	<0.05	<0.05	<0.05
Benz(a)anthracene	µg/g	0.63	0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	0.05	<0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.78	0.05	0.08	<0.05	<0.05
Benzo(g,h,i)perylene	µg/g	7.8	0.05	<0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.78	0.05	<0.05	<0.05	<0.05
Chrysene	µg/g	7.8	0.05	0.06	<0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05	<0.05
Fluoranthene	µg/g	0.69	0.05	0.11	<0.05	<0.05
Fluorene	µg/g	69	0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.48	0.05	<0.05	<0.05	<0.05
Naphthalene	µg/g	0.75	0.05	<0.05	<0.05	<0.05
Phenanthrene	µg/g	7.8	0.05	0.07	<0.05	<0.05
Pyrene	µg/g	78	0.05	0.10	<0.05	<0.05
1 and 2 Methlynaphthalene	µg/g	3.4	0.05	<0.05	<0.05	<0.05

Comments:

Results compared to MECP 2011 Table 2 Site Condition Standards for
Residential/Parkland/Institutional Land Use in a Medium/Fine Textured Soil Condition

RDL - Reported Detection Limit; G / S - Guideline / Standard

<0.065 RDL exceeded Standard

150 Sample result exceeded Standard

NV- No Value

NA-Not Analyzed

Table 7
Ground Water Quality Analysis
Metals and Inorganics
6583 Trafalgar Road, Milton
Project No. 7-20-0004-42

						Duplicate	
Sample Description		**MECP**		**BH2**	**BH4**	**BH6**	**DUP 2**
Date Sampled		**Table 2**		**11/03/2020**	**11/03/2020**	**11/03/2020**	**11/03/2020**
Lab ID	**Unit**	**2011**	**RDL**	**1648947**	**1648797**	**1649232**	**1648732**
Sample/Screen Elevation (masl)		**SCS**		**185.3 - 182.2**	**190.3-187.2**	**184.3-182.8**	**184.3-182.8**
Parameter							
Metals							
Dissolved Barium	µg/L	1000	2.0	61.2	46.3	141	206
Dissolved Beryllium	µg/L	4	0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Boron	µg/L	5000	10.0	426	651	197	324
Dissolved Cadmium	µg/L	2.7	0.20	<0.20	<0.20	<0.20	<0.20
Dissolved Chromium	µg/L	50	2.0	<2.0	<2.0	<2.0	<2.0
Dissolved Cobalt	µg/L	3.8	0.50	0.71	1.91	<0.50	<0.50
Dissolved Copper	µg/L	87	1.0	<1.0	<1.0	<1.0	<1.0
Dissolved Lead	µg/L	10	0.50	<0.50	<0.50	<0.50	<0.50
Dissolved Molybdenum	µg/L	70	0.50	17.8	7.56	4.63	6.26
Dissolved Nickel	µg/L	100	3.0	<3.0	3.2	<3.0	<3.0
Dissolved Silver	µg/L	1.5	0.20	<0.20	<0.20	<0.20	<0.20
Dissolved Thallium	µg/L	2	0.30	<0.30	<0.30	<0.30	<0.30
Dissolved Uranium	µg/L	20	0.50	5.76	4.45	2.13	2.68
Dissolved Vanadium	µg/L	6.2	0.40	1.31	1.13	<0.40	<0.40
Dissolved Zinc	µg/L	1100	5.0	<5.0	<5.0	<5.0	<5.0
Hydride Metals							
Dissolved Antimony	µg/L	6	1.0	<1.0	<1.0	<1.0	<1.0
Dissolved Arsenic	µg/L	25	1.0	1.2	2.6	2.8	3.6
Dissolved Selenium	µg/L	10	1.0	1.2	3.0	1.6	1.5
Other Regulated Parameters							
Chloride	µg/L	790000	1000	NA	NA	387000	384000
Chromium VI	µg/L	25	5	<5	<5	<5	<5
Cyanide, Free	µg/L	66	2	<2	<2	<2	<2
Dissolved Sodium	µg/L	490000	250	NA	NA	129000	128000
Electrical Conductivity	uS/cm	NA	2	NA	NA	1810	1790
Mercury	µg/L	1	0.02	<0.02	<0.02	<0.02	<0.02
pH	pH Units		NA	NA	NA	8.00	8.01

Comments:

Results compared to MECP 2011 Table 2 Site Condition Standards in a Medium/Fine Textured Soil Condition

RDL - Reported Detection Limit; G / S - Guideline / Standard

<0.065 RDL exceeded Standard

150 Sample result exceeded Standard

NV- No Value

NA-Not Analyzed

Table 8
Ground Water Quality Analysis
Volatile Organic Compounds
6583 Trafalgar Road, Milton
Project No. 7-20-0004-42

				Duplicate		
Sample Description		**MECP**		**BH6**	**DUP 2**	**Trip Blank**
Date Sampled		**Table 2**		**11/03/2020**	**11/03/2020**	**11/03/2020**
Lab ID	**Unit**	**2011**	**RDL**	**1649232**	**1648732**	**1648741**
Sample/Screen Elevation (masl)		**SCS**		**184.3-182.8**	**184.3-182.8**	**-**
Parameter						
Acetone	µg/L	2700	1.0	<1.0	<1.0	<1.0
Benzene	µg/L	5.0	0.20	<0.20	<0.20	<0.20
Bromodichloromethane	µg/L	16	0.20	<0.20	<0.20	<0.20
Bromoform	µg/L	25	0.10	<0.10	<0.10	<0.10
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20	<0.20
Carbon Tetrachloride	µg/L	5.0	0.20	<0.20	<0.20	<0.20
Chlorobenzene	µg/L	30	0.10	<0.10	<0.10	<0.10
Chloroform	µg/L	22	0.20	<0.20	<0.20	<0.20
Dibromochloromethane	µg/L	25	0.10	<0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	1	0.10	<0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	3	0.10	<0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	59	0.10	<0.10	<0.10	<0.10
Dichlorodifluoromethane	µg/L	590	0.20	<0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	5	0.20	<0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	5	0.30	<0.30	<0.30	<0.30
1,1-Dichloroethylene	µg/L	14	0.30	<0.30	<0.30	<0.30
1,2-Dichloropropane	µg/L	5	0.20	<0.20	<0.20	<0.20
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	<0.30	<0.30
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10	<0.10
Methyl Ethyl Ketone	µg/L	1800	1.0	<1.0	<1.0	<1.0
Methyl Isobutyl Ketone	µg/L	640	1.0	<1.0	<1.0	<1.0
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20	<0.20
Methylene Chloride	µg/L	50	0.30	<0.30	<0.30	<0.30
Styrene	µg/L	5.4	0.10	<0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	1	0.10	<0.10	<0.10	<0.10
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20
1,1,2-Trichloroethane	µg/L	5	0.20	<0.20	<0.20	<0.20
1,1,1-Trichloroethane	µg/L	200	0.30	<0.30	<0.30	<0.30
Trichloroethylene	µg/L	5	0.20	0.65	0.57	<0.20
Trichlorofluoromethane	µg/L	150	0.40	<0.40	<0.40	<0.40
Vinyl Chloride	µg/L	1.7	0.17	<0.17	<0.17	<0.17
cis- 1,2-Dichloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20
n-Hexane	µg/L	520	0.20	<0.20	<0.20	<0.20
trans- 1,2-Dichloroethylene	µg/L	17	0.20	<0.20	<0.20	<0.20

Comments:

Results compared to MECP 2011 Table 2 Site Condition Standards in a Medium/Fine Textured Soil Condition

RDL - Reported Detection Limit; G / S - Guideline / Standard

<0.065 RDL exceeded Standard

150 Sample result exceeded Standard

NV- No Value

NA-Not Analyzed

Table 9
Ground Water Quality Analysis
Petroleum Hydrocarbons
6583 Trafalgar Road, Milton
Project No. 7-20-0004-42

				Duplicate	
Sample Description	**Unit**	**MECP**	**RDL**	**BH6**	**DUP 2**
Date Sampled		**Table 2**		**11/03/2020**	**11/03/2020**
Lab ID		**2011**		**1649232**	**1648732**
Sample/Screen Elevation		**SCS**		**184.3-182.8**	**184.3-182.8**
Parameter					
F1 (C6 to C10) minus BTEX	µg/L	750	25	<25	<25
F1 (C6-C10)	µg/L	750	25	<25	<25
F2 (C10 to C16)	µg/L	150	100	<100	<100
F3 (C16 to C34)	µg/L	500	100	<100	<100
F4 (C34 to C50)	µg/L	500	100	<100	<100
Gravimetric Heavy Hydrocarbons	µg/L	NV	500	NA	NA

Comments:

Results compared to MECP 2011 Table 2 Site Condition Standards in a Medium/Fine Textured Soil Condition

RDL - Reported Detection Limit; G / S - Guideline / Standard

<0.065 RDL exceeded Standard

150 Sample result exceeded Standard

NV- No Value

NA-Not Analyzed

Table 10
Ground Water Quality Analysis
Benzene, Toluene, Ethylbenzene, Xylene
6583 Trafalgar Road, Milton
Project No. 7-20-0004-42

				Duplicate		
Sample Description		**MECP**		**BH6**	**DUP 2**	**Trip Blank**
Date Sampled		**Table 2**		**11/03/2020**	**11/03/2020**	**11/03/2020**
Lab ID	**Unit**	**2011**	**RDL**	**1649232**	**1648732**	**1648741**
Sample/Screen Elevation (masl)		**SCS**		**184.3-182.8**	**184.3-182.8**	**-**
Parameter						
Benzene	µg/L	5.0	0.20	<0.20	<0.20	<0.20
Ethylbenzene	µg/L	2.4	0.10	<0.10	<0.10	<0.10
Toluene	µg/L	24	0.20	<0.20	<0.20	<0.20
Xylenes (Total)	µg/L	300	0.20	<0.20	<0.20	<0.20
m & p-Xylene	µg/L	NV	0.20	<0.20	<0.20	<0.20
o-Xylene	µg/L	NV	0.10	<0.10	<0.10	<0.10

Comments:

Results compared to MECP 2011 Table 2 Site Condition Standards in a Medium/Fine Textured Soil Condition

RDL - Reported Detection Limit; G / S - Guideline / Standard

<0.065 RDL exceeded Standard

150 Sample result exceeded Standard

NV- No Value

NA-Not Analyzed

Table 11
Ground Water Quality Analysis
Organochlorine Pesticides
6583 Trafalgar Road, Milton
Project No. 7-20-0004-42

				Duplicate			
Sample Description	**Unit**	**MECP**	**RDL**	**BH2**	**DUP 1**	**BH4**	**BH6**
Date Sampled		**Table 2**		**11/03/2020**	**11/03/2020**	**11/03/2020**	**11/03/2020**
Lab ID		**2011**		**1648947**	**1648737**	**1648797**	**1649232**
Sample/Screen Elevation (masl)		**SCS**		**185.3 - 182.2**	**185.3 - 182.2**	**190.3-187.2**	**184.3-182.8**
Parameter							
Aldrin	µg/L	0.35	0.01	<0.01	<0.01	<0.01	<0.01
Chlordane	µg/L	7	0.04	<0.04	<0.04	<0.04	<0.04
DDD	µg/L	10	0.05	<0.05	<0.05	<0.05	<0.05
DDE	µg/L	10	0.01	<0.01	<0.01	<0.01	<0.01
DDT	µg/L	2.8	0.04	<0.04	<0.04	<0.04	<0.04
Dieldrin	µg/L	0.35	0.02	<0.02	<0.02	<0.02	<0.02
Endosulfan	µg/L	1.5	0.05	<0.05	<0.05	<0.05	<0.05
Endrin	µg/L	0.48	0.05	<0.05	<0.05	<0.05	<0.05
Gamma-Hexachlorocyclohexane	µg/L	1.2	0.01	<0.01	<0.01	<0.01	<0.01
Heptachlor	µg/L	1.5	0.01	<0.01	<0.01	<0.01	<0.01
Heptachlor Epoxide	µg/L	0.048	0.01	<0.01	<0.01	<0.01	<0.01
Hexachlorobenzene	ug/L	1	0.01	<0.01	<0.01	<0.01	<0.01
Hexachlorobutadiene	ug/L	0.6	0.01	<0.01	<0.01	<0.01	<0.01
Hexachloroethane	ug/L	2.1	0.01	<0.01	<0.01	<0.01	<0.01
Methoxychlor	µg/L	6.5	0.04	<0.04	<0.04	<0.04	<0.04

Comments:

Results compared to MECP 2011 Table 2 Site Condition Standards in a Medium/Fine Textured Soil Condition

RDL - Reported Detection Limit; G / S - Guideline / Standard

<0.065 RDL exceeded Standard

150 Sample result exceeded Standard

NV- No Value

NA-Not Analyzed

Table 12
Ground Water Quality Analysis
Polycyclic Aromatic Hydrocarbons (PAHs)
6583 Trafalgar Road, Milton
Project No. 7-20-0004-42

				Duplicate	
Sample Description	**Unit**	**MECP**	**RDL**	**BH6**	**DUP 2**
Date Sampled		**Table 2**		**11/03/2020**	**11/03/2020**
Lab ID		**2011**		**1649232**	**1648732**
Sample/Screen Elevation (masl)		**SCS**		**184.3-182.8**	**184.3-182.8**
Parameter					
Naphthalene	µg/L	11	0.20	<0.20	<0.20
Acenaphthylene	µg/L	1	0.20	<0.20	<0.20
Acenaphthene	µg/L	4.1	0.20	<0.20	<0.20
Fluorene	µg/L	120	0.20	<0.20	<0.20
Phenanthrene	µg/L	1	0.10	<0.10	<0.10
Anthracene	µg/L	2.4	0.10	<0.10	<0.10
Fluoranthene	µg/L	0.41	0.20	<0.20	<0.20
Pyrene	µg/L	4.1	0.20	<0.20	<0.20
Benzo(a)anthracene	µg/L	1	0.20	<0.20	<0.20
Chrysene	µg/L	0.1	0.10	<0.10	<0.10
Benzo(b)fluoranthene	µg/L	0.1	0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/L	0.1	0.10	<0.10	<0.10
Benzo(a)pyrene	µg/L	0.01	0.01	<0.01	<0.01
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.20	<0.20	<0.20
Dibenz(a,h)anthracene	µg/L	0.2	0.20	<0.20	<0.20
Benzo(g,h,i)perylene	µg/L	0.2	0.20	<0.20	<0.20
2-and 1-methyl Naphthalene	µg/L	3.2	0.20	<0.20	<0.20

Comments:

Results compared to MECP 2011 Table 2 Site Condition Standards in a Medium/Fine Textured Soil Condition

RDL - Reported Detection Limit; G / S - Guideline / Standard

<0.065 RDL exceeded Standard

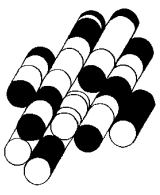
150 Sample result exceeded Standard

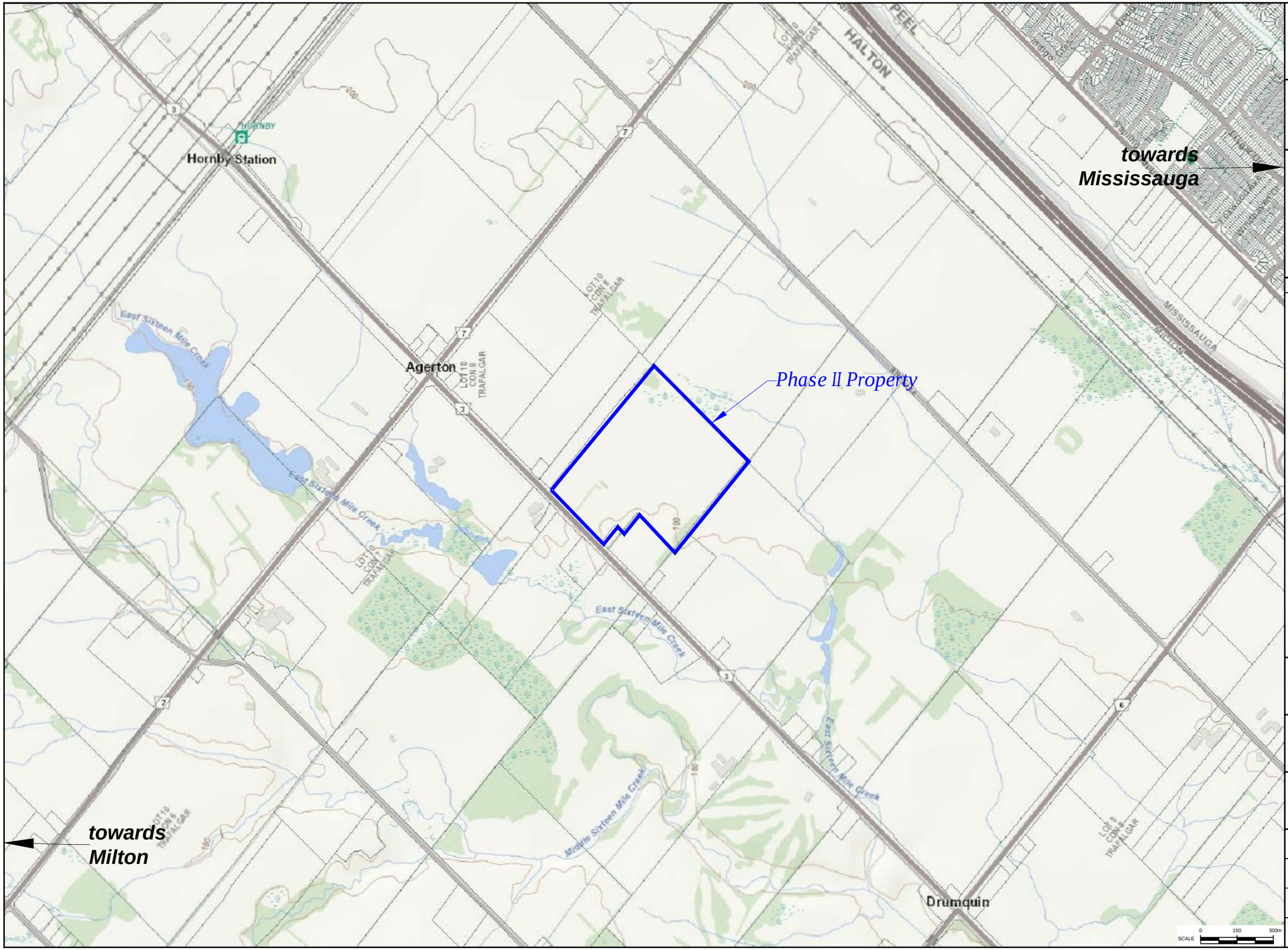
NV- No Value

NA-Not Analyzed

FIGURES

TERRAPROBE INC.





Terraprobe Inc.
Consulting Geotechnical & Environmental Engineering
Construction Materials, Inspection & Testing
11 Indell Lane - Brampton Ontario L6T 3Y3 (905) 796-2650

Reference:
Ministry of Natural Resource and Forestry

Notes:

Legend:
Phase II Property Boundary

Project Title:
Phase II Environmental Site Assessment

Site Location:
6583 Trafalgar Road, Milton, Ontario

Figure Title:
PHASE II PROPERTY LOCATION

Designed By: AB	*File No.:* 7-20-0004-42
Drawn By: AA	*Scale:* As Shown
Reviewed By: BW	*Figure No.:* 1
Date: November 2020	

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Reference: Google Earth Pro 2019

Notes:

PCA - Potentially Contaminating Activity

RED - PCA causing APEC on Property

GREEN - PCA unlikely to affect Property

Legend:

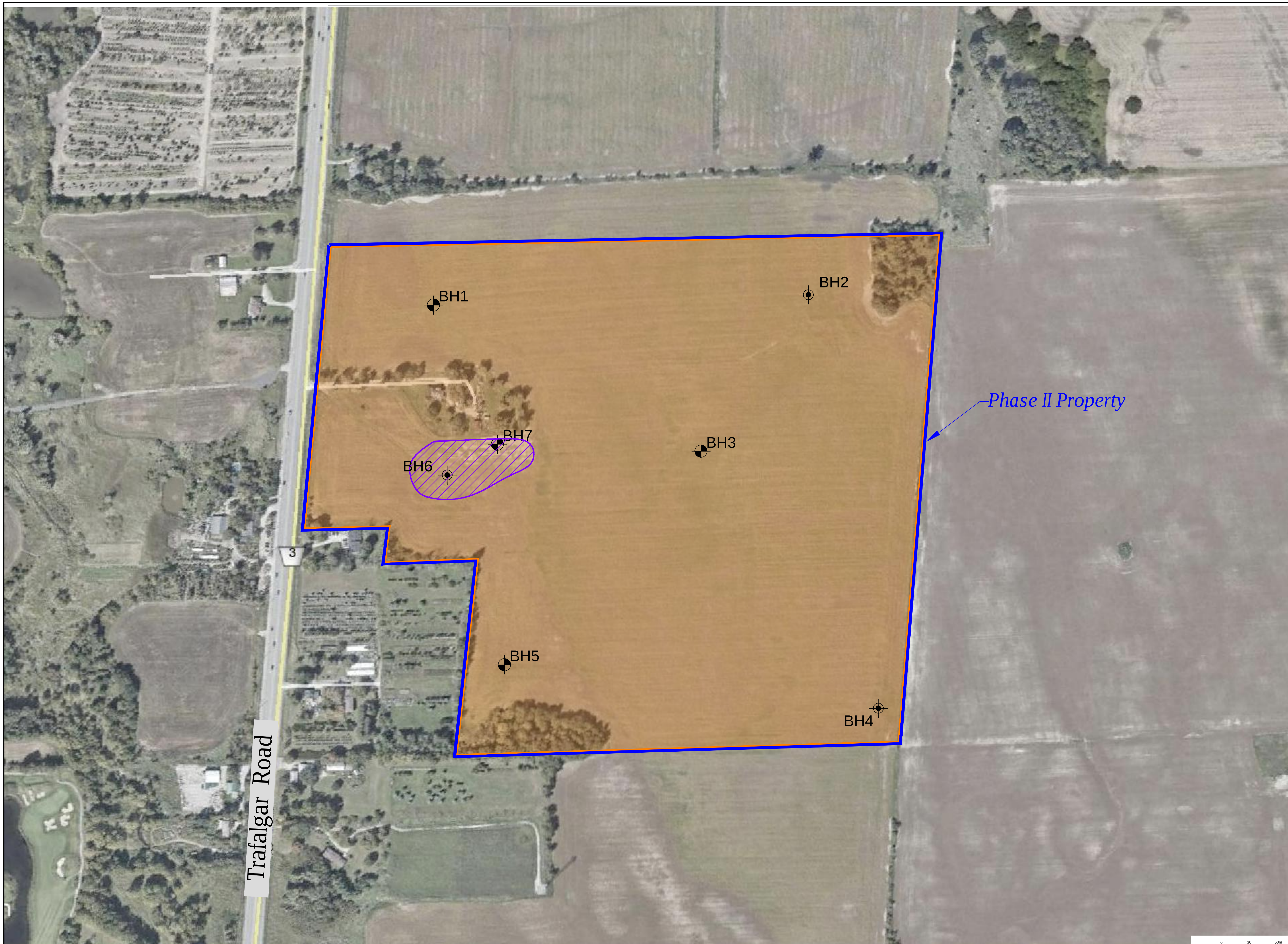
(blue line)	Phase II Property Boundary
PCA	Potentially Contaminating Activity
#30	Importation of Fill Material of Unknown Quality
#40	Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications
Na'	Spill

Project Title: Phase II Environmental Site Assessment

Site Location: 6583 Trafalgar Road, Milton, Ontario

Figure Title: PCA LOCATIONS

Designed By: AB	*File No.:* 7-20-0004-42
Drawn By: AA	*Scale:* As Shown
Reviewed By: BW	*Figure No.:* 2
Date: November 2020	



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Construction Materials, Inspection & Testing
11 Indell Lane - Brampton Ontario L6T 3Y3 (905) 796-2650

Reference: Google Earth Pro 2019

Notes:

Legend:
- Phase II Property Boundary
- Borehole Location
- Monitoring Well Location
- APEC 1
- APEC 2

Project Title: Phase II Environmental Site Assessment

Site Location: 6583 Trafalgar Road, Milton, Ontario

Figure Title: BOREHOLE, MONITORING WELL AND APEC LOCATION PLAN

Designed By: AB	*File No.:* 7-20-0004-42
Drawn By: AA	*Scale:* As Shown
Reviewed By: BW	*Figure No.:* 3
Date: November 2020	

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Reference: Google Earth Pro 2019

Notes:

Legend:

- Phase II Property Boundary
- Borehole Location
- Monitoring Well Location
- 189.3 Stabilized Ground Water Level (masl), Nov. 32020
- 188.0 Groundwater Contour Lines
- Approximate Ground Water Flow Direction

Project Title: Phase II Environmental Site Assessment

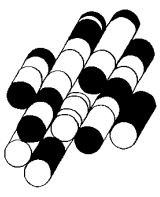
Site Location: 6583 Trafalgar Road, Milton, Ontario

Figure Title: GROUND WATER CONTOURS

Designed By: AB	*File No.:* 7-20-0004-42
Drawn By: AA	*Scale:* As Shown
Reviewed By: BW	
Date: November 2020	*Figure No.:* 4

APPENDIX A

TERRAPROBE INC.



LOG OF BOREHOLE 1

Terraprobe

Project No.	: 7-20-0004-42	Client	: Hornby Land Joint Venture	Originated by	: KG
Date started	: October 14, 2020	Project	: 6583 Trafalgar Road	Compiled by	: AB
Sheet No.	: 1 of 1	Location	: Milton, Ontario	Checked by	: BW

Position : E: 596912, N: 4822727 (UTM 17T) Elevation Datum : Geodetic

Rig type : Mini Mole, track-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Sample Number	Sample Type	SPT 'N' Value	Elevation Scale (m)	Penetration Test Values (Blows / 0.3m) / Undrained Shear Strength (kPa)	Moisture / Plasticity	Headspace Vapour (ppm)	Instrument Details	Lab Data and Comments
0	**189.8**	**GROUND SURFACE**										
	189.0	**SILTY CLAY**, with topsoil and organics, reworked native, compact, brown		1	SS	15				PID: 0		SS1 Analysis: M,H-M,Cn,Cr6,Hg,OC
1	0.8	**SILTY CLAY**, trace gravel, very stiff to hard, brown (GLACIAL TILL)		2	SS	24	189			PID: 0		
				3	SS	33	188			PID: 0		
2				4	SS	52	187			PID: 0		
	186.9											
	2.9	**END OF BOREHOLE**										

Penetration Test Values (Blows / 0.3m): Dynamic Cone — 10, 20, 30, 40

Undrained Shear Strength (kPa): Unconfined, Pocket Penetrometer, Field Vane, Lab Vane — 40, 80, 120, 160

Moisture / Plasticity: Plastic Limit (PL), Natural Water Content (MC), Liquid Limit (LL) — 10, 20, 30

Unstabilized Water Level

Lab Data and Comments: GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

Borehole was dry and open upon completion of drilling.

file: 7-20-0004-42 - 6583 trafalgar road, milton.gpj

LOG OF BOREHOLE 2

Terraprobe

Project No.	: 7-20-0004-42	Client	: Hornby Land Joint Venture	Originated by	: KG
Date started	: October 14, 2020	Project	: 6583 Trafalgar Road	Compiled by	: AB
Sheet No.	: 1 of 1	Location	: Milton, Ontario	Checked by	: BW

Position : E: 597126, N: 4822994 (UTM 17T) Elevation Datum : Geodetic

Rig type : Mini Mole, track-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Sample Number	Sample Type	SPT 'N' Value
0	193.3	**GROUND SURFACE**				
		CLAYEY SILT, with topsoil and organics, reworked native, compact, brown		1	SS	17
	192.5 / 0.8	**CLAYEY SILT**, trace to some gravel, very dense, brown / reddish brown (GLACIAL TILL)		2	SS	46
1				3	SS	37
2				4	SS	40
3				5	SS	50 / 25mm
	189.5 / 3.8	**SILT and SAND**, trace sand, trace gravel, some clay, hard, brown (GLACIAL TILL)		6	SS	50 / 100mm
4				7	SS	50 / 100mm
5		...becoming grey silt at 5.3m depth		8	SS	50 / 75mm
6				9	SS	87 / 225mm
7	185.6 / 7.7			10	SS	50 / 125mm

Elevation Scale (m): 193, 192, 191, 190, 189, 188, 187, 186

Penetration Test Values (Blows / 0.3m): Dynamic Cone; 10 20 30 40

Undrained Shear Strength (kPa): Unconfined, Pocket Penetrometer, Field Vane, Lab Vane; 40 80 120 160

Moisture / Plasticity: Plastic Limit, Natural Water Content, Liquid Limit; PL MC LL; 10 20 30

Headspace Vapour (ppm): PID: 0

Instrument Details

Unstabilized Water Level

Lab Data and Comments

GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

SS1 Analysis: M,H-M,Cn,Cr6,Hg,OC

5 42 38 15

END OF BOREHOLE

Unstabilized water level measured at 6.1 m below ground surface; borehole was open upon completion of drilling.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Oct 23, 2020	2.8	190.5
Nov 3, 2020	3.0	190.3

file: 7-20-0004-42 - 6583 trafalgar road, milton.gpj

LOG OF BOREHOLE 3

Terraprobe

Project No.	: 7-20-0004-42	Client	: Hornby Land Joint Venture	Originated by	: KG
Date started	: October 14, 2020	Project	: 6583 Trafalgar Road	Compiled by	: AB
Sheet No.	: 1 of 1	Location	: Milton, Ontario	Checked by	: BW

Position : E: 597219, N: 4822838 (UTM 17T) Elevation Datum : Geodetic

Rig type : Mini Mole, track-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Sample Number	Sample Type	SPT 'N' Value	Elevation Scale (m)	Penetration Test Values (Blows / 0.3m) / Undrained Shear Strength (kPa)	Moisture / Plasticity (PL, MC, LL)	Headspace Vapour (ppm)	Instrument Details	Lab Data and Comments
0	**191.5**	**GROUND SURFACE**										
		CLAYEY SILT, with topsoil and organics, reworked native, compact, brown		1	SS	17	191			PID: 0		SS1 Analysis: M,H-M,Cn,Cr6,Hg,OC
	190.7											
1	0.8	**CLAYEY SILT**, trace gravel, mottled, very stiff to hard, grey - brown (GLACIAL TILL)		2	SS	22				PID: 0		
							190					
2		...occasional sand seams		3	SS	44				PID: 0		
				4	SS	28	189			PID: 0		
	188.6											
	2.9	**END OF BOREHOLE**										

Penetration Test Values (Blows / 0.3m): Dynamic Cone; 10 20 30 40

Undrained Shear Strength (kPa): Unconfined, Pocket Penetrometer, Field Vane, Lab Vane; 40 80 120 160

Moisture / Plasticity: Plastic Limit, Natural Water Content, Liquid Limit; PL MC LL; 10 20 30

Unstabilized Water Level

Lab Data and Comments: GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

Borehole was dry and open upon completion of drilling.

file: 7-20-0004-42 - 6583 trafalgar road, milton.gpj

LOG OF BOREHOLE 4

Terraprobe

Project No.	: 7-20-0004-42	Client	: Hornby Land Joint Venture	Originated by	: KG
Date started	: October 14, 2020	Project	: 6583 Trafalgar Road	Compiled by	: AB
Sheet No.	: 1 of 1	Location	: Milton, Ontario	Checked by	: BW

Position : E: 597517, N: 4822831 (UTM 17T) Elevation Datum : Geodetic

Rig type : Mini Mole, track-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Sample Number	Sample Type	SPT 'N' Value
0	191.3	**GROUND SURFACE**				
		CLAYEY SILT, with topsoil and organics, reworked native, compact, brown		1	SS	20
	190.5 / 0.8	**CLAYEY SILT**, trace to some gravel, very stiff to hard, brown (GLACIAL TILL)		2	SS	26
1				3	SS	36
2				4	SS	50 / 125mm
	188.3 / 3.0	**SILT**, trace to some sand and gravel, very dense, brown (GLACIAL TILL)		5	SS	50 / 125mm
3	187.5 / 3.8	**CLAYEY SILT**, trace gravel, hard, reddish brown (GLACIAL TILL)		6	SS	50 / 125mm
4		...wet at 4.6m depth		7	SS	50 / 75mm
5						
6	185.2 / 6.1	**END OF BOREHOLE**		8	SS	50 / 25mm

Elevation Scale (m): 191, 190, 189, 188, 187, 186

Penetration Test Values (Blows / 0.3m): Dynamic Cone 10 20 30 40

Undrained Shear Strength (kPa): Unconfined, Pocket Penetrometer, Field Vane, Lab Vane — 40 80 120 160

Moisture / Plasticity: Plastic Limit (PL) Natural Water Content (MC) Liquid Limit (LL) — 10 20 30

Headspace Vapour (ppm): PID: 0

Instrument Details

Unstabilized Water Level

Lab Data and Comments

SS1 Analysis: M,H-M,Cn,Cr6,Hg,OC

GRAIN SIZE DISTRIBUTION (%) (MIT)

GR	SA	SI	CL
9	19	39	33

Unstabilized water level measured at 3.7 m below ground surface; borehole was open upon completion of drilling.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Oct 23, 2020	1.5	189.8
Nov 3, 2020	1.6	189.7

file: 7-20-0004-42 - 6583 trafalgar road, milton.gpj

LOG OF BOREHOLE 5

Terraprobe

Project No.	: 7-20-0004-42	Client	: Hornby Land Joint Venture	Originated by	: KG
Date started	: October 15, 2020	Project	: 6583 Trafalgar Road	Compiled by	: AB
Sheet No.	: 1 of 1	Location	: Milton, Ontario	Checked by	: BW

Position : E: 597239, N: 4822573 (UTM 17T) Elevation Datum : Geodetic

Rig type : Mini Mole, track-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Sample Number	Sample Type	SPT 'N' Value	Elevation Scale (m)	Penetration Test Values (Blows / 0.3m) / Undrained Shear Strength (kPa)	Moisture / Plasticity (PL, Natural Water Content, LL)	Headspace Vapour (ppm)	Instrument Details	Lab Data and Comments
0	**189.2**	**GROUND SURFACE**					189					
	188.4	**CLAYEY SILT**, with topsoil and rootlets, reworked native, compact, brown		1	SS	19				PID: 0		SS1 Analysis: M,H-M,Cn,Cr6,Hg,OC
1	0.8	**CLAYEY SILT**, trace to some sand, trace gravel, trace rootlets, and organics, very stiff, brown (GLACIAL TILL)		2	SS	35	188			PID: 0		
				3	SS	22				PID: 0		
2							187					
				4	SS	32				PID: 0		
	186.3											
	2.9	**END OF BOREHOLE**										

Borehole was dry and open upon completion of drilling.

Penetration Test Values (Blows / 0.3m): × Dynamic Cone; 10 20 30 40

Undrained Shear Strength (kPa): ○ Unconfined ● Pocket Penetrometer + Field Vane ■ Lab Vane; 40 80 120 160

Moisture / Plasticity: Plastic Limit | Natural Water Content | Liquid Limit; PL MC LL; 10 20 30

Unstabilized Water Level

Lab Data and Comments: GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

file: 7-20-0004-42 - 6583 trafalgar road, milton.gpj

LOG OF BOREHOLE 6

Terraprobe

Project No.	: 7-20-0004-42	Client	: Hornby Land Joint Venture	Originated by	: KG
Date started	: October 15, 2020	Project	: 6583 Trafalgar Road	Compiled by	: AB
Sheet No.	: 1 of 1	Location	: Milton, Ontario	Checked by	: BW

Position : E: 597032, N: 4822659 (UTM 17T) Elevation Datum : Geodetic

Rig type : Mini Mole, track-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Sample Number	Sample Type	SPT 'N' Value
0	190.4	**GROUND SURFACE**				
		FILL, clayey silt, trace sand, trace gravel, compact, brown		1	SS	21
				2	SS	13
				3	SS	10
	188.1					
	2.3	**FILL**, silty clay, trace to some sand, and gravel, firm, grey		4	SS	7
				5	SS	7
				6	SS	8
		...black organic layer and wet at 4.6m depth				
	185.5			7	SS	38
	4.9	**SANDY SILT**, trace clay, dense to very dense, grey		8	SS	31
	184.3					
	6.1	**CLAYEY SILT**, some sand, some gravel, very dense, grey (GLACIAL TILL)		9	SS	44
				10	SS	38
	182.8					
	7.6	**END OF BOREHOLE**		11	SS	50 / 25mm

Elevation Scale (m): 190, 189, 188, 187, 186, 185, 184, 183

Penetration Test Values (Blows / 0.3m): Dynamic Cone; 10 20 30 40

Undrained Shear Strength (kPa): Unconfined, Pocket Penetrometer, Field Vane, Lab Vane; 40 80 120 160

Moisture / Plasticity: Plastic Limit, Natural Water Content, Liquid Limit; PL MC LL; 10 20 30

Headspace Vapour (ppm): FID: 0; FID: 5; FID: 0; FID: 5; FID: 0; FID: 0; FID: 0; FID: 0; FID: 0

Instrument Details

Unstabilized Water Level

Lab Data and Comments

GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

SS1 Analysis: M&I, Pest.

SS2 Analysis: PAH

SS4 Analysis: VOC, PHC

SS8 Analysis: M&I, PAH, VOC, PHC

17 31 36 16

Unstabilized water level measured at 6.1 m below ground surface; borehole was open upon completion of drilling.

50 mm dia. monitoring well installed.

WATER LEVEL READINGS

Date	Water Depth (m)	Elevation (m)
Oct 23, 2020	4.0	186.4
Nov 3, 2020	4.2	186.2

file: 7-20-0004-42 - 6583 trafalgar road, milton.gpj

LOG OF BOREHOLE 7

Terraprobe

Project No.	: 7-20-0004-42	Client	: Hornby Land Joint Venture	Originated by	: KG
Date started	: October 15, 2020	Project	: 6583 Trafalgar Road	Compiled by	: AB
Sheet No.	: 1 of 1	Location	: Milton, Ontario	Checked by	: BW

Position : E: 597048, N: 4822708 (UTM 17T) Elevation Datum : Geodetic

Rig type : Mini Mole, track-mounted Drilling Method : Solid stem augers

Depth Scale (m)	Elev Depth (m)	Description	Graphic Log	Sample Number	Sample Type	SPT 'N' Value	Elevation Scale (m)	Penetration Test Values (Blows / 0.3m) / Undrained Shear Strength (kPa)	Moisture / Plasticity (PL, MC, LL)	Headspace Vapour (ppm)	Instrument Details	Lab Data and Comments
0	**190.9**	**GROUND SURFACE**										
	190.1	**CLAYEY SILT**, trace topsoil and organics, reworked native, compact, brown		1	SS	18				FID: 0		SS1 Analysis: M&I, Pest., VOC, PHC
1	0.8	**CLAYEY SILT**, trace gravel, very stiff, brown (GLACIAL TILL)		2	SS	24	190			FID: 0		
				3	SS	25	189			FID: 0		
2	188.8											
	2.1	**END OF BOREHOLE**										

Borehole was dry and open upon completion of drilling.

Penetration Test Values (Blows / 0.3m): Dynamic Cone; 10 20 30 40

Undrained Shear Strength (kPa): Unconfined, Pocket Penetrometer, Field Vane, Lab Vane; 40 80 120 160

Moisture / Plasticity: Plastic Limit, Natural Water Content, Liquid Limit; PL MC LL; 10 20 30

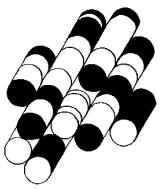
Unstabilized Water Level

Lab Data and Comments: GRAIN SIZE DISTRIBUTION (%) (MIT) GR SA SI CL

file: 7-20-0004-42 - 6583 trafalgar road, milton.gpj

APPENDIX B

TERRAPROBE INC.



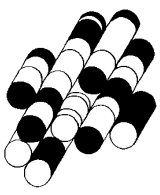
MONITORING WELL CONSTRUCTION
6583 TRAFALGAR ROAD
MILTON, ONTARIO
PROJECT #7-20-0004-42

Well ID	BH2		BH4		BH6	
Stick Up (m)	1.0		1.0		1.3	
Ground Elev. (masl)	193.3		191.3		190.4	
Well Component	**Depth (m)**	**Elev. (masl)**	**Depth (m)**	**Elev. (masl)**	**Depth (m)**	**Elev. (masl)**
Bentonite - Top	0.0	193.3	0.0	191.3	0.0	190.4
Bentonite - Bottom	4.0	189.3	2.4	188.9	5.5	184.9
Sand - Top	4.0	189.3	3.1	188.2	5.5	184.9
Screen - Top	4.5	188.8	3.1	188.2	6.1	184.3
Screen - Bottom	7.6	185.7	6.1	185.2	7.6	182.8
Sand - Bottom	7.6	185.7	6.1	185.2	7.6	182.8

Note: WL = Water Level, Masl = Metres above sea level, Mbgs = metres below ground surface

APPENDIX C

TERRAPROBE INC.



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)
    - 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)
- Ice
- Drums for Soil Storage

Procedure

1. Prior to drilling, boreholes will be numbered and marked and the site cleared for utilities.

2. 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
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
    a. 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
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)

- 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
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
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. Turbidity (± 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. 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*

STANDARD OPERATING PROCEDURE
FIELD MEASUREMENT OF WATER QUALITY INDICATORS
Hanna Instruments Portable pH/EC/TDS/Temperature Meter (HI 991301)

Introduction

Stabilization of parameters (pH, D.O., conductivity, temperature, etc.) and turbidity of the purged water are monitored before a sample is taken. The HI 991301 can be used with all ground water sampling methods (manual or low-flow).

HI 991301'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
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. Calibrate pH and Conductivity on the HI 991301 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

i. While in pH measurement mode, press and hold the ON/OFF/MODE button until "OFF" on the secondary display is replaced by "CAL". Release the button. Place the sensor into the first calibration buffer.

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. If the buffer is recognized "REC" is displayed until the reading is stable and the calibration is accepted.

vi. When the buffer is accepted the "OK" message is displayed and the meter returns to pH measurement mode.

vii. If the buffer is not recognized or the calibration offset is out of the accepted range "WRONG" is displayed.

c. Conductivity Calibration

i. From EC or TDS normal mode, press and hold the ON/OFF/MODE button until "OFF" on the secondary display is replaced by "CAL". Release the button.

ii. The meter enters calibration mode. Immerse the probe in the HI 7030 calibration solution (mS 12.88).

iii. If the standard is recognized "REC" is displayed until the reading is stable and calibration is accepted.

iv. The LCD will display "OK" for 1 second and return to normal measurement mode.

v. If the standard is not recognised or the slope is out of acceptance range "WRONG" is displayed. Change the calibration solution or the electrode or press any key to exit calibration

vi. When the calibration procedure is complete the "Calibrated" tag is turned on.

d. Measurement Mode

i. Press the ON/OFF/MODE button until the display lights up. At start-up, all the LCD segments are displayed for 1 second, then the percent indication of the remaining battery life is displayed for another second. The meter then enters the normal measuring mode.

ii. To select the measurement range, while in normal measurement mode, press the SET/HOLD button quickly to select pH, EC, or TDS value on the primary LCD, while temperature will be simultaneously displayed on the secondary LCD.

iii. Turn off meter by pressing the ON/OFF/MODE button. Rinse the probe and return to storage solution.

References

- *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
- *HI 991300/991301 Instruction Manual*, Hanna Instruments, January 2011

STANDARD OPERATING PROCEDURE
GROUND WATER SAMPLING
Inertial Pump (Waterra/Footvalve)

Introduction

The inertial pump consists of a one way foot valve and low density or high density tubing. The inertial pump can be used in the development, purging and sampling of ground water monitoring wells.

Equipment Required

- Interface or Water Level Meter
- Waterra Tubing (typically 5/8" in diameter)
- Footvalve(s)
- Surge Block(s)
- Nitrile Gloves
- Bucket
- 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 (if known).

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. Assemble Waterra tubing and footvalve.
17. Lower tubing (Footvalve first) into the well until the foot valve is at the depth of the well screen.
18. Cut Waterra, leaving enough room to purge and sample comfortably.
19. Purge well until field parameters (such as temperature, pH, conductivity, etc.) have stabilized. Field parameters are measured by a hand held device (YSI or similar). Record field parameters until parameters have stabilized , and record the water level in the monitoring well.
    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 ¼ casing volume). If the purge volume is large, measurements taken every ½ to 1 casing volume may be sufficient.
    b. Stabilization occurs when:
        i. Turbidity (± 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. pH (± 0.1 unit),
    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. Organize sample bottles so as to easily fill them if alone. If with a partner, have them hold the bottles as pumping occurs.
23. Collect samples in the laboratory supplied bottle
    a. For non-filtered samples collect directly from the tubing into the sample bottle.
    b. For filtered samples, connect the tubing directly to the filter unit.
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.

NOTE: Purging should be completed immediately prior to sample collection although it is acceptable to purge and then collect samples within 24 hours.

References

- *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
GROUND WATER SAMPLING

PERISTALTIC PUMP

Introduction

Low flow purging and sampling involves extracting groundwater at rates comparable to ambient ground water 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.

Equipment Required

- Interface or Water Level Meter
- Peristaltic Pump
- Batteries
- Low Density Polyethylene Tubing (LDPE Tubing)
- Silicon Tubing
- Nitrile Gloves
- Bucket
- 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 (if known).
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. Lower LDPE tubing into the well until the end of the tubing is at the bottom of the well.
17. Cut LDPE tubing, leaving enough room to sample comfortably.
18. Pull the appropriate amount of tubing out of the well so that the end of the tubing is within the well screen.
19. Attach LDPE tubing to approximately 6' of flexible silicon tubing and insert the silicon tubing into the roller on the peristaltic pump, closing the lever in order to secure the tubing.
20. Attach power supply, and purge well until field parameters (such as temperature, pH, conductivity, etc.) have stabilized. Field parameters are measured by a hand held device (YSI or similar). Record field parameters until parameters have stabilized , and record the water level in the monitoring well.
    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 ¼ casing volume). If the purge volume is large, measurements taken every ½ to 1 casing volume may be sufficient.
    b. Stabilization occurs when:
        i. Turbidity (± 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. pH (± 0.1 unit),
    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.
21. Collect and dispose of purge waters as specified in the site-specific sampling plan.
22. Assemble the appropriate laboratory supplied bottles.

23. Organize sample bottles so as to easily fill them if alone. If with a partner, have them hold the bottles as pumping occurs.
24. Collect samples in the laboratory supplied bottle
    a. For non-filtered samples collect directly from the tubing into the sample bottle.
    b. For filtered samples, connect the tubing directly to the filter unit.
25. Cap the sample bottle tightly and place relabeled sample container in a carrier
26. Replace the well cap.
27. Log all samples in the site logbook and label all samples.
28. Package samples and complete necessary paperwork.
29. Transport sample to staging area for preparation for transport to analytical laboratory.

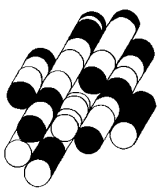
NOTE: Purging should be completed immediately prior to sample collection although it is acceptable to purge and then collect samples within 24 hours.

References

- *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

APPENDIX D

TERRAPROBE INC.



APPENDIX D: SAMPLING AND ANALYSIS PLAN

6583 Trafalgar Road, Milton

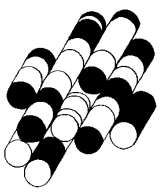
Project #7-20-0004-42

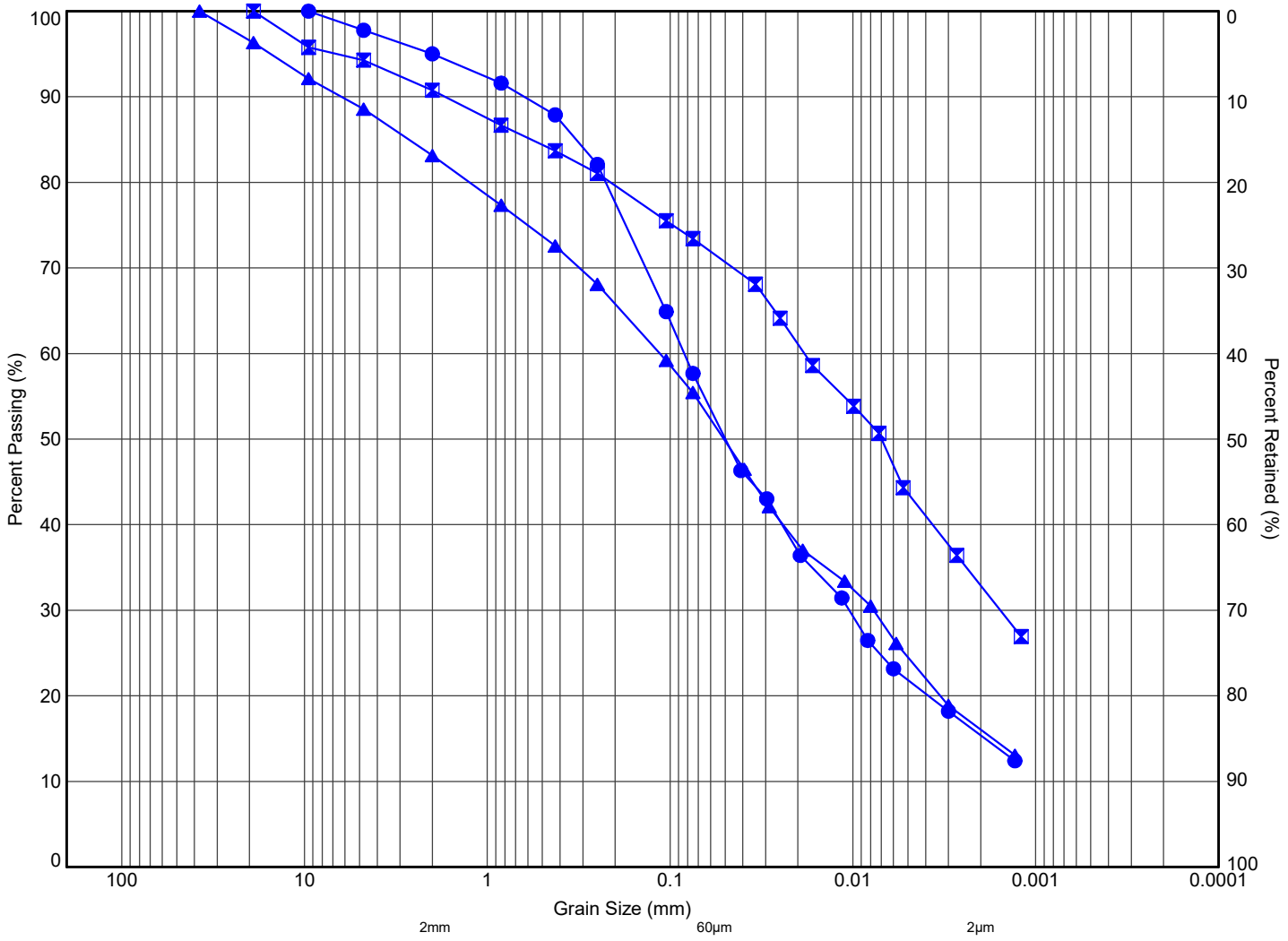
Borehole/ Confirmatory Sample	APEC	PCA	Media	Metals	H-M	ORPs	OC Pest	PHCs	VOCs	PAHs
BH1 to BH7	APEC 1	#40 - Pesticides (including herbicides, fungicides and anti-fouling agent) manufacturing, processing, bulk storage and large scale applications	Soil	✓	✓	✓	✓			
BH6	APEC 2	#30 – Importation of fill material of unknown quality	Soil	✓	✓	✓	✓	✓	✓	✓
BH2, BH4, BH6	APEC 1	#40 - Pesticides (including herbicides, fungicides and anti-fouling agent) manufacturing, processing, bulk storage and large scale applications	Ground Water	✓	✓	✓	✓			
BH6	APEC 2	#30 – Importation of fill material of unknown quality	Ground Water	✓	✓	✓	✓	✓	✓	✓

Note: ORPs for soil and ground water include CN-, Cr(VI), Hg, B-HWS, EC, SAR, Na, Cl where applicable

APPENDIX E

TERRAPROBE INC.





MIT SYSTEM	COBBLES	GRAVEL			SAND			SILT	CLAY
		COARSE	MEDIUM	FINE	COARSE	MEDIUM	FINE		

MIT SYSTEM

	Hole ID	Sample	Depth (m)	Elev. (m)	Gravel (%)	Sand (%)	Silt (%)	Clay (%)	*(Fines, %)*
●	**2**	SS6	3.9	188.4	5	42	38	15	
⊠	**4**	SS3	1.8	189.5	9	19	39	33	
▲	**6**	SS9	6.4	184.0	17	31	36	16	

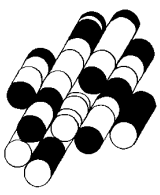
Terraprobe
903 Barton Street, Unit 22, Stoney Creek ON L8E 5P5
(905) 643-7560

Title: **GRAIN SIZE DISTRIBUTION**

File No.: **7-20-0004-42**

APPENDIX F

TERRAPROBE INC.



AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

CLIENT NAME: TERRAPROBE INC
903 Barton Street
Stoney Creek, ON L8E5P5
(905) 643-7560

ATTENTION TO: Amber Brooks

PROJECT: 7-20-0004-42

AGAT WORK ORDER: 20H664762

SOIL ANALYSIS REVIEWED BY: Jacky Zhu, Spectroscopy Technician

TRACE ORGANICS REVIEWED BY: Pinkal Patel, Report Reviewer

DATE REPORTED: Oct 22, 2020

PAGES (INCLUDING COVER): 19

VERSION*: 1

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

*Notes

Disclaimer:

- *All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.*
- *All samples will be disposed of within 30 days following analysis, unless expressly agreed otherwise in writing. Please contact your Client Project Manager if you require additional sample storage time.*
- *AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.*
- *This Certificate shall not be reproduced except in full, without the written approval of the laboratory.*
- *The test results reported herewith relate only to the samples as received by the laboratory.*
- *Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.*
- *All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.*

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Certificate of Analysis

AGAT WORK ORDER: 20H664762

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - Metals (Including Hydrides) (Soil)

DATE RECEIVED: 2020-10-16

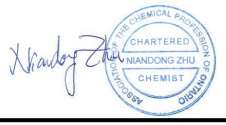
DATE REPORTED: 2020-10-22

		SAMPLE DESCRIPTION:		Dup 1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2020-10-15
Parameter	Unit	G / S	RDL	1571101
Antimony	µg/g	7.5	0.8	<0.8
Arsenic	µg/g	18	1	7
Barium	µg/g	390	2	81
Beryllium	µg/g	4	0.5	0.9
Boron	µg/g	120	5	8
Cadmium	µg/g	1.2	0.5	<0.5
Chromium	µg/g	160	5	20
Cobalt	µg/g	22	0.5	9.7
Copper	µg/g	140	1	27
Lead	µg/g	120	1	14
Molybdenum	µg/g	6.9	0.5	<0.5
Nickel	µg/g	100	1	23
Selenium	µg/g	2.4	0.4	0.5
Silver	µg/g	20	0.2	<0.2
Thallium	µg/g	1	0.4	<0.4
Uranium	µg/g	23	0.5	0.7
Vanadium	µg/g	86	1	29
Zinc	µg/g	340	5	68

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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Certificate of Analysis

AGAT WORK ORDER: 20H664762

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-10-16

DATE REPORTED: 2020-10-22

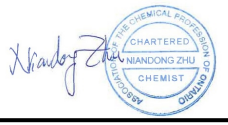
		SAMPLE DESCRIPTION:		Dup 1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2020-10-15
Parameter	Unit	G / S	RDL	1571101
Chromium, Hexavalent	µg/g	8	0.2	<0.2
Cyanide, Free	µg/g	0.051	0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA	7.32

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1571101 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract obtained from 2:1 leaching procedure (2 parts extraction fluid:1 part wet soil). SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



AGAT Laboratories

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TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 20H664762

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - OC Pesticides (Soil)

DATE RECEIVED: 2020-10-16

DATE REPORTED: 2020-10-22

		SAMPLE DESCRIPTION:		Dup 1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2020-10-15
Parameter	Unit	G / S	RDL	1571101
Aldrin	µg/g	0.05	0.005	<0.005
Chlordane	µg/g	0.05	0.007	<0.007
DDD	µg/g	3.3	0.007	<0.007
DDE	µg/g	0.26	0.007	<0.007
DDT	µg/g	1.4	0.007	<0.007
Dieldrin	µg/g	0.05	0.005	<0.005
Endosulfan	µg/g	0.04	0.005	<0.005
Endrin	µg/g	0.04	0.005	<0.005
Gamma-Hexachlorocyclohexane	µg/g	0.056	0.005	<0.005
Heptachlor	µg/g	0.15	0.005	<0.005
Heptachlor Epoxide	µg/g	0.05	0.005	<0.005
Hexachlorobenzene	µg/g	0.52	0.005	<0.005
Hexachlorobutadiene	µg/g	0.012	0.01	<0.01
Hexachloroethane	µg/g	0.089	0.01	<0.01
Methoxychlor	µg/g	0.13	0.005	<0.005
Moisture Content	%		0.1	16.1
wet weight OC	g		NA	5.34
Surrogate	Unit	Acceptable Limits		
Decachlorobiphenyl	%	50-140		91
TCMX	%	50-140		84

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1571101 Results are based on the dry weight of the soil.
DDT total is a calculated parameter. The calculated value is the sum of op'DDT and pp'DDT.
DDD total is a calculated parameter. The calculated value is the sum of op'DDD and pp'DDD.
DDE total is a calculated parameter. The calculated value is the sum of op'DDE and pp'DDE.
Endosulfan total is a calculated parameter. The calculated value is the sum of Endosulfan I and Endosulfan II.
Chlordane total is a calculated parameter. The calculated value is the sum of Alpha-Chlordane and Gamma-Chlordane.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Pinkal Patel

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Certificate of Analysis

AGAT WORK ORDER: 20H664762

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-10-16

DATE REPORTED: 2020-10-22

		SAMPLE DESCRIPTION:		Dup 2
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2020-10-15
Parameter	Unit	G / S	RDL	1571102
Acenaphthene	µg/g	7.9	0.05	<0.05
Acenaphthylene	µg/g	0.15	0.05	<0.05
Anthracene	µg/g	0.67	0.05	<0.05
Benz(a)anthracene	µg/g	0.5	0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.78	0.05	<0.05
Benzo(g,h,i)perylene	µg/g	6.6	0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.78	0.05	<0.05
Chrysene	µg/g	7	0.05	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05
Fluoranthene	µg/g	0.69	0.05	<0.05
Fluorene	µg/g	62	0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.38	0.05	<0.05
Moisture Content	%		0.1	15.4
Naphthalene	µg/g	0.6	0.05	<0.05
Phenanthrene	µg/g	6.2	0.05	<0.05
Pyrene	µg/g	78	0.05	<0.05
1 and 2 Methlynaphthalene	µg/g	0.99	0.05	<0.05
Surrogate	Unit	Acceptable Limits		
Acenaphthene-d10	%	50-140		87
Chrysene-d12	%	50-140		101
Naphthalene-d8	%	50-140		79

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1571102 Results are based on the dry weight of the soil.
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

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AGAT WORK ORDER: 20H664762

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-10-16

DATE REPORTED: 2020-10-22

		SAMPLE DESCRIPTION:		Dup 3
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2020-10-15
Parameter	Unit	G / S	RDL	1571103
F1 (C6 to C10)	µg/g	55	5	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5	<5
F2 (C10 to C16)	µg/g	98	10	<10
F3 (C16 to C34)	µg/g	300	50	<50
F4 (C34 to C50)	µg/g	2800	50	<50
Gravimetric Heavy Hydrocarbons	µg/g	2800	50	NA
Moisture Content	%		0.1	8.5
Surrogate	Unit	Acceptable Limits		
Terphenyl	%	60-140		73

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1571103 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified without the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

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AGAT WORK ORDER: 20H664762

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-10-16

DATE REPORTED: 2020-10-22

		SAMPLE DESCRIPTION:		Dup 3
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2020-10-15
Parameter	Unit	G / S	RDL	1571103
Acetone	ug/g	16	0.50	<0.50
Benzene	ug/g	0.21	0.02	<0.02
Bromodichloromethane	ug/g	1.5	0.05	<0.05
Bromoform	ug/g	0.27	0.05	<0.05
Bromomethane	ug/g	0.05	0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	0.05	<0.05
Chlorobenzene	ug/g	2.4	0.05	<0.05
Chloroform	ug/g	0.05	0.04	<0.04
Cis- 1,2-Dichloroethylene	ug/g	1.9	0.02	<0.02
Dibromochloromethane	ug/g	2.3	0.05	<0.05
1,2-Dichlorobenzene	ug/g	1.2	0.05	<0.05
1,3-Dichlorobenzene	ug/g	4.8	0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.083	0.05	<0.05
Dichlorodifluoromethane	µg/g	16	0.05	<0.05
1,1-Dichloroethane	ug/g	0.47	0.02	<0.02
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05
1,2-Dichloropropane	ug/g	0.05	0.03	<0.03
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05	0.04	<0.04
Ethylbenzene	ug/g	1.1	0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04
Methyl Ethyl Ketone	ug/g	16	0.50	<0.50
Methyl Isobutyl Ketone	ug/g	1.7	0.50	<0.50
Methyl tert-butyl Ether	ug/g	0.75	0.05	<0.05
Methylene Chloride	ug/g	0.1	0.05	<0.05
Moisture Content	%		0.1	8.5
Styrene	ug/g	0.7	0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.058	0.04	<0.04
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.05
Tetrachloroethylene	ug/g	0.28	0.05	<0.05

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Certificate of Analysis

AGAT WORK ORDER: 20H664762

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-10-16

DATE REPORTED: 2020-10-22

		SAMPLE DESCRIPTION:		Dup 3
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2020-10-15
Parameter	Unit	G / S	RDL	1571103
Toluene	ug/g	2.3	0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.084	0.05	<0.05
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04
1,1,1-Trichloroethane	ug/g	0.38	0.05	<0.05
Trichloroethylene	ug/g	0.061	0.03	0.14
Trichlorofluoromethane	ug/g	4	0.05	<0.05
Vinyl Chloride	ug/g	0.02	0.02	<0.02
Xylenes (Total)	ug/g	3.1	0.05	<0.05
m & p-Xylene	ug/g		0.05	<0.05
n-Hexane	µg/g	2.8	0.05	<0.05
o-Xylene	ug/g		0.05	<0.05
Surrogate	Unit	Acceptable Limits		
4-Bromofluorobenzene	% Recovery	50-140		88
Toluene-d8	% Recovery	50-140		81

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1571103 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Jinkal Patel

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Exceedance Summary

AGAT WORK ORDER: 20H664762

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
1571103	Dup 3	ON T2 S RPI CT	O. Reg. 153(511) - VOCs (Soil)	Trichloroethylene	ug/g	0.061	0.14

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Quality Assurance

CLIENT NAME: TERRAPROBE INC
PROJECT: 7-20-0004-42
SAMPLING SITE:

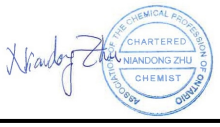
AGAT WORK ORDER: 20H664762
ATTENTION TO: Amber Brooks
SAMPLED BY:

Soil Analysis

RPT Date: Oct 22, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals (Including Hydrides) (Soil)															
Antimony	1575222		<0.8	<0.8	NA	< 0.8	124%	70%	130%	82%	80%	120%	102%	70%	130%
Arsenic	1575222		8	8	0.0%	< 1	104%	70%	130%	100%	80%	120%	100%	70%	130%
Barium	1575222		96	100	4.1%	< 2	102%	70%	130%	106%	80%	120%	108%	70%	130%
Beryllium	1575222		1.0	1.0	NA	< 0.5	99%	70%	130%	98%	80%	120%	101%	70%	130%
Boron	1575222		27	27	0.0%	< 5	80%	70%	130%	90%	80%	120%	80%	70%	130%
Cadmium	1575222		<0.5	<0.5	NA	< 0.5	98%	70%	130%	102%	80%	120%	104%	70%	130%
Chromium	1575222		24	23	NA	< 5	93%	70%	130%	98%	80%	120%	98%	70%	130%
Cobalt	1575222		12.8	12.4	3.2%	< 0.5	87%	70%	130%	100%	80%	120%	92%	70%	130%
Copper	1575222		11	11	0.0%	< 1	90%	70%	130%	110%	80%	120%	96%	70%	130%
Lead	1575222		12	12	0.0%	< 1	101%	70%	130%	104%	80%	120%	100%	70%	130%
Molybdenum	1575222		0.9	0.9	NA	< 0.5	88%	70%	130%	101%	80%	120%	91%	70%	130%
Nickel	1575222		28	28	0.0%	< 1	87%	70%	130%	104%	80%	120%	93%	70%	130%
Selenium	1575222		0.6	0.5	NA	< 0.4	119%	70%	130%	102%	80%	120%	99%	70%	130%
Silver	1575222		<0.2	<0.2	NA	< 0.2	85%	70%	130%	107%	80%	120%	93%	70%	130%
Thallium	1575222		<0.4	<0.4	NA	< 0.4	121%	70%	130%	104%	80%	120%	102%	70%	130%
Uranium	1575222		0.8	0.8	NA	< 0.5	119%	70%	130%	109%	80%	120%	109%	70%	130%
Vanadium	1575222		34	34	0.0%	< 1	92%	70%	130%	95%	80%	120%	92%	70%	130%
Zinc	1575222		64	63	1.6%	< 5	96%	70%	130%	108%	80%	120%	109%	70%	130%
O. Reg. 153(511) - ORPs (Soil)															
Chromium, Hexavalent	1570659		<0.2	<0.2	NA	< 0.2	97%	70%	130%	93%	80%	120%	81%	70%	130%
Cyanide, Free	1565500		<0.040	<0.040	NA	< 0.040	92%	70%	130%	97%	80%	120%	100%	70%	130%
Mercury	1575222		<0.10	<0.10	NA	< 0.10	103%	70%	130%	98%	80%	120%	97%	70%	130%
pH, 2:1 CaCl2 Extraction	1570659		7.64	7.69	0.7%	NA	100%	80%	120%						

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

Certified By:



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Quality Assurance

CLIENT NAME: TERRAPROBE INC
PROJECT: 7-20-0004-42
SAMPLING SITE:

AGAT WORK ORDER: 20H664762
ATTENTION TO: Amber Brooks
SAMPLED BY:

Trace Organics Analysis

RPT Date: Oct 22, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - OC Pesticides (Soil)															
Aldrin	1571095		< 0.005	< 0.005	NA	< 0.005	99%	50%	140%	102%	50%	140%	85%	50%	140%
Chlordane	1571095		< 0.007	< 0.007	NA	< 0.007	90%	50%	140%	95%	50%	140%	88%	50%	140%
DDD	1571095		< 0.007	< 0.007	NA	< 0.007	89%	50%	140%	94%	50%	140%	82%	50%	140%
DDE	1571095		< 0.007	< 0.007	NA	< 0.007	98%	50%	140%	90%	50%	140%	82%	50%	140%
DDT	1571095		< 0.007	< 0.007	NA	< 0.007	85%	50%	140%	103%	50%	140%	87%	50%	140%
Dieldrin	1571095		< 0.005	< 0.005	NA	< 0.005	96%	50%	140%	98%	50%	140%	83%	50%	140%
Endosulfan	1571095		< 0.005	< 0.005	NA	< 0.005	89%	50%	140%	97%	50%	140%	84%	50%	140%
Endrin	1571095		< 0.005	< 0.005	NA	< 0.005	86%	50%	140%	107%	50%	140%	90%	50%	140%
Gamma-Hexachlorocyclohexane	1571095		< 0.005	< 0.005	NA	< 0.005	92%	50%	140%	107%	50%	140%	89%	50%	140%
Heptachlor	1571095		< 0.005	< 0.005	NA	< 0.005	94%	50%	140%	103%	50%	140%	99%	50%	140%
Heptachlor Epoxide	1571095		< 0.005	< 0.005	NA	< 0.005	90%	50%	140%	93%	50%	140%	83%	50%	140%
Hexachlorobenzene	1571095		< 0.005	< 0.005	NA	< 0.005	103%	50%	140%	96%	50%	140%	96%	50%	140%
Hexachlorobutadiene	1571095		< 0.01	< 0.01	NA	< 0.01	99%	50%	140%	88%	50%	140%	83%	50%	140%
Hexachloroethane	1571095		< 0.01	< 0.01	NA	< 0.01	91%	50%	140%	86%	50%	140%	88%	50%	140%
Methoxychlor	1571095		< 0.005	< 0.005	NA	< 0.005	91%	50%	140%	105%	50%	140%	107%	50%	140%
O. Reg. 153(511) - PAHs (Soil)															
Acenaphthene	1570106		<0.05	<0.05	NA	< 0.05	111%	50%	140%	115%	50%	140%	107%	50%	140%
Acenaphthylene	1570106		<0.05	<0.05	NA	< 0.05	112%	50%	140%	116%	50%	140%	106%	50%	140%
Anthracene	1570106		<0.05	<0.05	NA	< 0.05	109%	50%	140%	107%	50%	140%	98%	50%	140%
Benz(a)anthracene	1570106		<0.05	<0.05	NA	< 0.05	104%	50%	140%	115%	50%	140%	108%	50%	140%
Benzo(a)pyrene	1570106		<0.05	<0.05	NA	< 0.05	113%	50%	140%	93%	50%	140%	101%	50%	140%
Benzo(b)fluoranthene	1570106		<0.05	<0.05	NA	< 0.05	117%	50%	140%	100%	50%	140%	116%	50%	140%
Benzo(g,h,i)perylene	1570106		<0.05	<0.05	NA	< 0.05	87%	50%	140%	87%	50%	140%	80%	50%	140%
Benzo(k)fluoranthene	1570106		<0.05	<0.05	NA	< 0.05	109%	50%	140%	108%	50%	140%	99%	50%	140%
Chrysene	1570106		<0.05	<0.05	NA	< 0.05	107%	50%	140%	111%	50%	140%	96%	50%	140%
Dibenz(a,h)anthracene	1570106		<0.05	<0.05	NA	< 0.05	95%	50%	140%	93%	50%	140%	82%	50%	140%
Fluoranthene	1570106		<0.05	<0.05	NA	< 0.05	112%	50%	140%	88%	50%	140%	107%	50%	140%
Fluorene	1570106		<0.05	<0.05	NA	< 0.05	119%	50%	140%	92%	50%	140%	113%	50%	140%
Indeno(1,2,3-cd)pyrene	1570106		<0.05	<0.05	NA	< 0.05	98%	50%	140%	102%	50%	140%	90%	50%	140%
Naphthalene	1570106		<0.05	<0.05	NA	< 0.05	100%	50%	140%	107%	50%	140%	96%	50%	140%
Phenanthrene	1570106		<0.05	<0.05	NA	< 0.05	115%	50%	140%	95%	50%	140%	107%	50%	140%
Pyrene	1570106		<0.05	<0.05	NA	< 0.05	114%	50%	140%	98%	50%	140%	108%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Soil)															
F1 (C6 to C10)	1571103	1571103	< 5	< 5	NA	< 5	94%	60%	140%	107%	60%	140%	84%	60%	140%
F2 (C10 to C16)	1566874		< 10	< 10	NA	< 10	94%	60%	140%	103%	60%	140%	87%	60%	140%
F3 (C16 to C34)	1566874		< 50	< 50	NA	< 50	94%	60%	140%	100%	60%	140%	93%	60%	140%
F4 (C34 to C50)	1566874		< 50	< 50	NA	< 50	100%	60%	140%	85%	60%	140%	90%	60%	140%
O. Reg. 153(511) - VOCs (Soil)															

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Quality Assurance

CLIENT NAME: TERRAPROBE INC
PROJECT: 7-20-0004-42
SAMPLING SITE:

AGAT WORK ORDER: 20H664762
ATTENTION TO: Amber Brooks
SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Oct 22, 2020

PARAMETER	Batch	Sample Id	DUPLICATE			Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
			Dup #1	Dup #2	RPD		Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Acetone	1575282		<0.50	<0.50	NA	< 0.50	99%	50%	140%	100%	50%	140%	91%	50%	140%
Benzene	1575282		<0.02	<0.02	NA	< 0.02	77%	50%	140%	76%	60%	130%	86%	50%	140%
Bromodichloromethane	1575282		<0.05	<0.05	NA	< 0.05	104%	50%	140%	90%	60%	130%	80%	50%	140%
Bromoform	1575282		<0.05	<0.05	NA	< 0.05	110%	50%	140%	94%	60%	130%	92%	50%	140%
Bromomethane	1575282		<0.05	<0.05	NA	< 0.05	79%	50%	140%	88%	50%	140%	90%	50%	140%
Carbon Tetrachloride	1575282		<0.05	<0.05	NA	< 0.05	74%	50%	140%	82%	60%	130%	78%	50%	140%
Chlorobenzene	1575282		<0.05	<0.05	NA	< 0.05	82%	50%	140%	71%	60%	130%	76%	50%	140%
Chloroform	1575282		<0.04	<0.04	NA	< 0.04	79%	50%	140%	114%	60%	130%	109%	50%	140%
Cis- 1,2-Dichloroethylene	1575282		<0.02	<0.02	NA	< 0.02	80%	50%	140%	104%	60%	130%	97%	50%	140%
Dibromochloromethane	1575282		<0.05	<0.05	NA	< 0.05	109%	50%	140%	83%	60%	130%	89%	50%	140%
1,2-Dichlorobenzene	1575282		<0.05	<0.05	NA	< 0.05	93%	50%	140%	72%	60%	130%	77%	50%	140%
1,3-Dichlorobenzene	1575282		<0.05	<0.05	NA	< 0.05	90%	50%	140%	72%	60%	130%	80%	50%	140%
1,4-Dichlorobenzene	1575282		<0.05	<0.05	NA	< 0.05	102%	50%	140%	81%	60%	130%	88%	50%	140%
Dichlorodifluoromethane	1575282		<0.05	<0.05	NA	< 0.05	81%	50%	140%	100%	50%	140%	83%	50%	140%
1,1-Dichloroethane	1575282		<0.02	<0.02	NA	< 0.02	103%	50%	140%	92%	60%	130%	88%	50%	140%
1,2-Dichloroethane	1575282		<0.03	<0.03	NA	< 0.03	92%	50%	140%	102%	60%	130%	105%	50%	140%
1,1-Dichloroethylene	1575282		<0.05	<0.05	NA	< 0.05	72%	50%	140%	100%	60%	130%	95%	50%	140%
1,2-Dichloropropane	1575282		<0.03	<0.03	NA	< 0.03	88%	50%	140%	83%	60%	130%	83%	50%	140%
Ethylbenzene	1575282		<0.05	<0.05	NA	< 0.05	99%	50%	140%	75%	60%	130%	81%	50%	140%
Ethylene Dibromide	1575282		<0.04	<0.04	NA	< 0.04	117%	50%	140%	85%	60%	130%	85%	50%	140%
Methyl Ethyl Ketone	1575282		<0.50	<0.50	NA	< 0.50	100%	50%	140%	96%	50%	140%	92%	50%	140%
Methyl Isobutyl Ketone	1575282		<0.50	<0.50	NA	< 0.50	79%	50%	140%	88%	50%	140%	82%	50%	140%
Methyl tert-butyl Ether	1575282		<0.05	<0.05	NA	< 0.05	105%	50%	140%	108%	60%	130%	116%	50%	140%
Methylene Chloride	1575282		<0.05	<0.05	NA	< 0.05	104%	50%	140%	76%	60%	130%	102%	50%	140%
Styrene	1575282		<0.05	<0.05	NA	< 0.05	79%	50%	140%	77%	60%	130%	71%	50%	140%
1,1,1,2-Tetrachloroethane	1575282		<0.04	<0.04	NA	< 0.04	96%	50%	140%	76%	60%	130%	78%	50%	140%
1,1,2,2-Tetrachloroethane	1575282		<0.05	<0.05	NA	< 0.05	97%	50%	140%	96%	60%	130%	87%	50%	140%
Tetrachloroethylene	1575282		<0.05	<0.05	NA	< 0.05	72%	50%	140%	71%	60%	130%	75%	50%	140%
Toluene	1575282		<0.05	<0.05	NA	< 0.05	74%	50%	140%	71%	60%	130%	74%	50%	140%
Trans- 1,2-Dichloroethylene	1575282		<0.05	<0.05	NA	< 0.05	73%	50%	140%	94%	60%	130%	96%	50%	140%
1,1,2-Trichloroethane	1575282		<0.04	<0.04	NA	< 0.04	95%	50%	140%	89%	60%	130%	95%	50%	140%
1,1,1-Trichloroethane	1575282		<0.05	<0.05	NA	< 0.05	106%	50%	140%	97%	60%	130%	102%	50%	140%
Trichloroethylene	1575282		<0.03	<0.03	NA	< 0.03	89%	50%	140%	74%	60%	130%	84%	50%	140%
Trichlorofluoromethane	1575282		<0.05	<0.05	NA	< 0.05	74%	50%	140%	93%	50%	140%	95%	50%	140%
Vinyl Chloride	1575282		<0.02	<0.02	NA	< 0.02	73%	50%	140%	97%	50%	140%	79%	50%	140%
m & p-Xylene	1575282		<0.05	<0.05	NA	< 0.05	94%	50%	140%	92%	60%	130%	70%	50%	140%
n-Hexane	1575282		<0.05	<0.05	NA	< 0.05	105%	50%	140%	90%	60%	130%	79%	50%	140%
o-Xylene	1575282		<0.05	<0.05	NA	< 0.05	78%	50%	140%	90%	60%	130%	73%	50%	140%

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

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http://www.agatlabs.com

Quality Assurance

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664762

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Oct 22, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper

Certified By:

AGAT Laboratories

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Method Summary

CLIENT NAME: TERRAPROBE INC

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Mercury	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
pH, 2:1 CaCl2 Extraction	INOR-93-6031	modified from EPA 9045D and MCKEAGUE 3.11	PH METER

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CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664762

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Aldrin	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Chlordane	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
DDD	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
DDE	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
DDT	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Dieldrin	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Endosulfan	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Endrin	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Gamma-Hexachlorocyclohexane	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Heptachlor	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Heptachlor Epoxide	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Hexachlorobenzene	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Hexachlorobutadiene	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Hexachloroethane	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Methoxychlor	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Moisture Content		Tier 1 method	BALANCE
TCMX	ORG-91-5112	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
wet weight OC	ORG-91-5113		BALANCE
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene-d10	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS

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CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664762

PROJECT: 7-20-0004-42

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SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene-d12	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	ORG-91-5106	Tier 1 Method	BALANCE
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
1 and 2 Methlynaphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
F1 (C6 to C10)	VOL-91-5009	modified from CCME Tier 1 Method, SW846 5035	P&T GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method, SW846 5035	P&T GC/FID
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Acetone	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664762

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664762

PROJECT: 7-20-0004-42

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SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
m & p-Xylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS

AGAT Laboratories

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Chain of Custody Record

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

Laboratory Use Only

Work Order #: 20H6647 62

Cooler Quantity: 1 COOLER

Arrival Temperatures: 4.6 | 4.5 | 4.2 | 5.2 | 5.4 | 5.7

Custody Seal Intact: ☐ Yes ☐ No ☐ N/A

Notes: ON ICE

Report Information:

Company:
Contact:
Address:
Phone:

Terraprobe Inc. 903 Barton Street, Unit 22
Stoney Creek, Ontario L8E 5P5
Ph: (905) 643-7560 **Fax:** (905) 643-7559
Attn.: Amber Brooks abrooks@terraprobe.ca

Reports to be sent to:
1. Email:
2. Email:

Regulatory Requirements: ☐ No Regulatory Requirement

(Please check all applicable boxes)

☒ Regulation 153/04
Table: D *(Indicate One)*
☐ Ind/Com
☒ Res/Park
☐ Agriculture
Soil Texture *(Check One)*
☒ Coarse
☐ Fine

☐ Sewer Use
☐ Sanitary
☐ Storm
Region: *(Indicate One)*
☐ MISA

☐ Regulation 558
☐ CCME
☐ Prov. Water Quality Objectives (PWQO)
☐ Other
(Indicate One)

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

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

OR Date Required (Rush Surcharges May Apply):

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

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

Project Information:

Project: 7-20-0004-42
Site Location:
Sampled By: K. Greenman
AGAT Quote #: PO:

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

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

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

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company:
Contact: Lorena Rossi
Address:
Email: lrossi@terraprobe.ca

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI (Y/N)	Metals and Inorganics: ☐ All Metals ☐ Hydride Metals ☐ 153 Metals (excl. Hydrides) ☒ 153 Metals (incl. Hydrides)	O. Reg 153 ORPs: ☐ B-HWS ☐ Cl ☒ CN ☐ EC ☐ FOC ☒ Hg ☐ SAR	Full Metals Scan	Regulation/Custom Metals	Nutrients: ☐ TP ☐ NH_3 ☐ TKN ☐ NO_3 ☐ NO_2 ☐ NO_3+NO_2	Volatiles: ☒ VOC ☒ BTEX ☐ THM	PHCs F1 - F4	ABNs	PAHs	PCBs: ☐ Total ☐ Aroclors	Organochlorine Pesticides	TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	Sewer Use	Potentially Hazardous or High Concentration (Y/N)
Dup 1	Oct 15/20		2	S			X	X				X	X		X		X		
Dup 2	↓			↓															
Dup 3																			

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
K. Greenman	Oct 16/20	12:30pm	Daniella Jaic	OCT 16/20	12:45pm
Daniella Jaic	OCT 16/20	3pm	John Chypyha	Oct/16	4:00
			John Chypyha	Oct 16	5:40

Page 1 of 1

Nº: T 099034

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

AGAT Laboratories

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http://www.agatlabs.com

CLIENT NAME: TERRAPROBE INC
903 Barton Street
Stoney Creek, ON L8E5P5
(905) 643-7560

ATTENTION TO: Amber Brooks

PROJECT: 7-20-0004-42

AGAT WORK ORDER: 20H664770

SOIL ANALYSIS REVIEWED BY: Jacky Zhu, Spectroscopy Technician

TRACE ORGANICS REVIEWED BY: Pinkal Patel, Report Reviewer

DATE REPORTED: Oct 22, 2020

PAGES (INCLUDING COVER): 9

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days following analysis, unless expressly agreed otherwise in writing. Please contact your Client Project Manager if you require additional sample storage time.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

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Certificate of Analysis

AGAT WORK ORDER: 20H664770

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - Metals (Including Hydrides) (Soil)

DATE RECEIVED: 2020-10-16

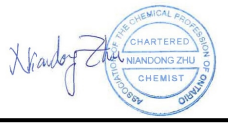
DATE REPORTED: 2020-10-22

		SAMPLE DESCRIPTION:		BH1 SA1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2020-10-14
Parameter	Unit	G / S	RDL	1571000
Antimony	µg/g	7.5	0.8	<0.8
Arsenic	µg/g	18	1	3
Barium	µg/g	390	2	68
Beryllium	µg/g	4	0.5	0.7
Boron	µg/g	120	5	6
Cadmium	µg/g	1.2	0.5	<0.5
Chromium	µg/g	160	5	27
Cobalt	µg/g	22	0.5	6.2
Copper	µg/g	140	1	13
Lead	µg/g	120	1	14
Molybdenum	µg/g	6.9	0.5	2.0
Nickel	µg/g	100	1	14
Selenium	µg/g	2.4	0.4	0.5
Silver	µg/g	20	0.2	<0.2
Thallium	µg/g	1	0.4	<0.4
Uranium	µg/g	23	0.5	0.8
Vanadium	µg/g	86	1	23
Zinc	µg/g	340	5	67

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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Certificate of Analysis

AGAT WORK ORDER: 20H664770

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-10-16

DATE REPORTED: 2020-10-22

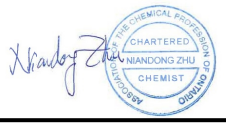
		SAMPLE DESCRIPTION:		BH1 SA1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2020-10-14
Parameter	Unit	G / S	RDL	1571000
Chromium, Hexavalent	µg/g	8	0.2	<0.2
Cyanide, Free	µg/g	0.051	0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA	6.64

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1571000 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract obtained from 2:1 leaching procedure (2 parts extraction fluid:1 part wet soil). SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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Certificate of Analysis

AGAT WORK ORDER: 20H664770

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - OC Pesticides (Soil)

DATE RECEIVED: 2020-10-16

DATE REPORTED: 2020-10-22

		SAMPLE DESCRIPTION:		BH1 SA1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2020-10-14
Parameter	Unit	G / S	RDL	1571000
Aldrin	µg/g	0.05	0.005	<0.005
Chlordane	µg/g	0.05	0.007	<0.007
DDD	µg/g	3.3	0.007	<0.007
DDE	µg/g	0.26	0.007	<0.007
DDT	µg/g	1.4	0.007	<0.007
Dieldrin	µg/g	0.05	0.005	<0.005
Endosulfan	µg/g	0.04	0.005	<0.005
Endrin	µg/g	0.04	0.005	<0.005
Gamma-Hexachlorocyclohexane	µg/g	0.056	0.005	<0.005
Heptachlor	µg/g	0.15	0.005	<0.005
Heptachlor Epoxide	µg/g	0.05	0.005	<0.005
Hexachlorobenzene	µg/g	0.52	0.005	<0.005
Hexachlorobutadiene	µg/g	0.012	0.01	<0.01
Hexachloroethane	µg/g	0.089	0.01	<0.01
Methoxychlor	µg/g	0.13	0.005	<0.005
Moisture Content	%		0.1	15.0
wet weight OC	g		NA	5.25
Surrogate	Unit	Acceptable Limits		
Decachlorobiphenyl	%	50-140		99
TCMX	%	50-140		95

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1571000 Results are based on the dry weight of the soil.
DDT total is a calculated parameter. The calculated value is the sum of op'DDT and pp'DDT.
DDD total is a calculated parameter. The calculated value is the sum of op'DDD and pp'DDD.
DDE total is a calculated parameter. The calculated value is the sum of op'DDE and pp'DDE.
Endosulfan total is a calculated parameter. The calculated value is the sum of Endosulfan I and Endosulfan II.
Chlordane total is a calculated parameter. The calculated value is the sum of Alpha-Chlordane and Gamma-Chlordane.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Pinkal Patel

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Quality Assurance

CLIENT NAME: TERRAPROBE INC
PROJECT: 7-20-0004-42
SAMPLING SITE:

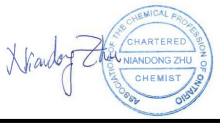
AGAT WORK ORDER: 20H664770
ATTENTION TO: Amber Brooks
SAMPLED BY:

Soil Analysis

RPT Date: Oct 22, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals (Including Hydrides) (Soil)															
Antimony	1575222		<0.8	<0.8	NA	< 0.8	124%	70%	130%	82%	80%	120%	102%	70%	130%
Arsenic	1575222		8	8	0.0%	< 1	104%	70%	130%	100%	80%	120%	100%	70%	130%
Barium	1575222		96	100	4.1%	< 2	102%	70%	130%	106%	80%	120%	108%	70%	130%
Beryllium	1575222		1.0	1.0	NA	< 0.5	99%	70%	130%	98%	80%	120%	101%	70%	130%
Boron	1575222		27	27	0.0%	< 5	80%	70%	130%	90%	80%	120%	80%	70%	130%
Cadmium	1575222		<0.5	<0.5	NA	< 0.5	98%	70%	130%	102%	80%	120%	104%	70%	130%
Chromium	1575222		24	23	NA	< 5	93%	70%	130%	98%	80%	120%	98%	70%	130%
Cobalt	1575222		12.8	12.4	3.2%	< 0.5	87%	70%	130%	100%	80%	120%	92%	70%	130%
Copper	1575222		11	11	0.0%	< 1	90%	70%	130%	110%	80%	120%	96%	70%	130%
Lead	1575222		12	12	0.0%	< 1	101%	70%	130%	104%	80%	120%	100%	70%	130%
Molybdenum	1575222		0.9	0.9	NA	< 0.5	88%	70%	130%	101%	80%	120%	91%	70%	130%
Nickel	1575222		28	28	0.0%	< 1	87%	70%	130%	104%	80%	120%	93%	70%	130%
Selenium	1575222		0.6	0.5	NA	< 0.4	119%	70%	130%	102%	80%	120%	99%	70%	130%
Silver	1575222		<0.2	<0.2	NA	< 0.2	85%	70%	130%	107%	80%	120%	93%	70%	130%
Thallium	1575222		<0.4	<0.4	NA	< 0.4	121%	70%	130%	104%	80%	120%	102%	70%	130%
Uranium	1575222		0.8	0.8	NA	< 0.5	119%	70%	130%	109%	80%	120%	109%	70%	130%
Vanadium	1575222		34	34	0.0%	< 1	92%	70%	130%	95%	80%	120%	92%	70%	130%
Zinc	1575222		64	63	1.6%	< 5	96%	70%	130%	108%	80%	120%	109%	70%	130%
O. Reg. 153(511) - ORPs (Soil)															
Chromium, Hexavalent	1570659		<0.2	<0.2	NA	< 0.2	97%	70%	130%	93%	80%	120%	81%	70%	130%
Cyanide, Free	1565500		<0.040	<0.040	NA	< 0.040	92%	70%	130%	97%	80%	120%	100%	70%	130%
Mercury	1575222		<0.10	<0.10	NA	< 0.10	103%	70%	130%	98%	80%	120%	97%	70%	130%
pH, 2:1 CaCl2 Extraction	1570659		7.64	7.69	0.7%	NA	100%	80%	120%						

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

Certified By:



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Quality Assurance

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664770

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Oct 22, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - OC Pesticides (Soil)															
Aldrin	1571095		< 0.005	< 0.005	NA	< 0.005	99%	50%	140%	102%	50%	140%	85%	50%	140%
Chlordane	1571095		< 0.007	< 0.007	NA	< 0.007	90%	50%	140%	95%	50%	140%	88%	50%	140%
DDD	1571095		< 0.007	< 0.007	NA	< 0.007	89%	50%	140%	94%	50%	140%	82%	50%	140%
DDE	1571095		< 0.007	< 0.007	NA	< 0.007	98%	50%	140%	90%	50%	140%	82%	50%	140%
DDT	1571095		< 0.007	< 0.007	NA	< 0.007	85%	50%	140%	103%	50%	140%	87%	50%	140%
Dieldrin	1571095		< 0.005	< 0.005	NA	< 0.005	96%	50%	140%	98%	50%	140%	83%	50%	140%
Endosulfan	1571095		< 0.005	< 0.005	NA	< 0.005	89%	50%	140%	97%	50%	140%	84%	50%	140%
Endrin	1571095		< 0.005	< 0.005	NA	< 0.005	86%	50%	140%	107%	50%	140%	90%	50%	140%
Gamma-Hexachlorocyclohexane	1571095		< 0.005	< 0.005	NA	< 0.005	92%	50%	140%	107%	50%	140%	89%	50%	140%
Heptachlor	1571095		< 0.005	< 0.005	NA	< 0.005	94%	50%	140%	103%	50%	140%	99%	50%	140%
Heptachlor Epoxide	1571095		< 0.005	< 0.005	NA	< 0.005	90%	50%	140%	93%	50%	140%	83%	50%	140%
Hexachlorobenzene	1571095		< 0.005	< 0.005	NA	< 0.005	103%	50%	140%	96%	50%	140%	96%	50%	140%
Hexachlorobutadiene	1571095		< 0.01	< 0.01	NA	< 0.01	99%	50%	140%	88%	50%	140%	83%	50%	140%
Hexachloroethane	1571095		< 0.01	< 0.01	NA	< 0.01	91%	50%	140%	86%	50%	140%	88%	50%	140%
Methoxychlor	1571095		< 0.005	< 0.005	NA	< 0.005	91%	50%	140%	105%	50%	140%	107%	50%	140%

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

Certified By:

AGAT Laboratories

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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664770

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Mercury	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
pH, 2:1 CaCl2 Extraction	INOR-93-6031	modified from EPA 9045D and MCKEAGUE 3.11	PH METER

AGAT Laboratories

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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664770

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Aldrin	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Chlordane	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
DDD	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
DDE	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
DDT	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Dieldrin	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Endosulfan	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Endrin	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Gamma-Hexachlorocyclohexane	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Heptachlor	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Heptachlor Epoxide	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Hexachlorobenzene	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Hexachlorobutadiene	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Hexachloroethane	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Methoxychlor	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Moisture Content		Tier 1 method	BALANCE
TCMX	ORG-91-5112	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
wet weight OC	ORG-91-5113		BALANCE

AGAT Laboratories

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Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
webearth.agatlabs.com

Laboratory Use Only

Work Order #: 20T664770
Cooler Quantity: LG COOLER
Arrival Temperatures: 4.6 | 4.5 | 4.2 ; 5.2 | 5.4 | 5.2
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: ON ICE.

Chain of Custody Record

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

Report Information:

Company: **Terraprobe Inc.** 903 Barton Street, Unit 22
Contact: Stoney Creek, Ontario L8E 5P5
Address: **Ph:** (905) 643-7560 **Fax:** (905) 643-7559
Attn.: Amber Brooks abrooks@terraprobe.ca
Phone:
Reports to be sent to:
1. Email:
2. Email:

Regulatory Requirements:

☐ No Regulatory Requirement
(Please check all applicable boxes)

- ☒ Regulation 153/04 — Table 2 (Indicate One): ☐ Ind/Com ☒ Res/Park ☐ Agriculture
- Soil Texture (Check One): ☒ Coarse ☐ Fine
- ☐ Sewer Use: ☐ Sanitary ☐ Storm — Region ____ (Indicate One)
- ☐ MISA
- ☐ Regulation 558
- ☐ CCME
- ☐ Prov. Water Quality Objectives (PWQO)
- ☐ Other ____ (Indicate One)

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

Report Guideline on Certificate of Analysis ☒ Yes ☐ No

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)
☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

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

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

Project Information:

Project: 1-20-0034-42
Site Location:
Sampled By: K Greenman
AGAT Quote #: ____ PO: ____
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐
Company:
Contact: Lorena Rossi
Address:
Email: lrossi@terraprobe.ca

Sample Matrix Legend

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

Analysis columns: Field Filtered - Metals, Hg, CrVI (Y/N); O. Reg 153: Metals and Inorganics; ☐ All Metals ☐ 153 Metals (excl. Hydrides); ☒ Hydride Metals ☐ 153 Metals (incl. Hydrides); ORPs: ☐ B-HWS ☐ Cl ☒ CN ☒ Cr6+ ☐ EC ☐ FOC ☒ Hg ☒ pH ☐ SAR; Full Metals Scan; Regulation/Custom Metals; Nutrients: ☐ TP ☐ NH₃ ☐ TKN ☐ NO₃ ☐ NO₂ ☐ NO₃+NO₂; Volatiles: ☐ VOC ☐ BTEX ☐ THM; PHCs F1 - F4; ABNs; PAHs; PCBs: ☐ Total ☐ Aroclors; Organochlorine Pesticides; TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs; Sewer Use; Potentially Hazardous or High Concentration (Y/N)

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered (Y/N)	Metals and Inorganics	ORPs	Full Metals Scan	Regulation/Custom Metals	Nutrients	Volatiles	PHCs F1 - F4	ABNs	PAHs	PCBs	Organochlorine Pesticides	TCLP	Sewer Use	Potentially Hazardous (Y/N)
BH1 SA1	Oct 14/20		2	S			X	X									X			

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
K.Greenman [signature]	Oct 16/20	12:30pm	Daniella Jaic [signature]	Oct 16/20	12:45pm
Daniella Jaic [signature]	Oct 16/20	3pm	John Chypyha	Oct 16	4:00
[signature]			John Chypyha	Oct 16	5:41

Page 1 of 1

Nº: T 099037

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

AGAT Laboratories

5835 COOPERS AVENUE
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FAX (905)712-5122
http://www.agatlabs.com

CLIENT NAME: TERRAPROBE INC
903 Barton Street
Stoney Creek, ON L8E5P5
(905) 643-7560

ATTENTION TO: Amber Brooks

PROJECT: 7-20-0004-42

AGAT WORK ORDER: 20H664773

SOIL ANALYSIS REVIEWED BY: Jacky Zhu, Spectroscopy Technician

TRACE ORGANICS REVIEWED BY: Pinkal Patel, Report Reviewer

DATE REPORTED: Oct 22, 2020

PAGES (INCLUDING COVER): 9

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days following analysis, unless expressly agreed otherwise in writing. Please contact your Client Project Manager if you require additional sample storage time.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 20H664773

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - Metals (Including Hydrides) (Soil)

DATE RECEIVED: 2020-10-16

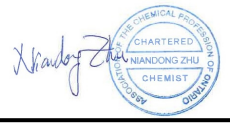
DATE REPORTED: 2020-10-22

		SAMPLE DESCRIPTION:		BH2 SA1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2020-10-14
Parameter	Unit	G / S	RDL	1571021
Antimony	µg/g	7.5	0.8	<0.8
Arsenic	µg/g	18	1	4
Barium	µg/g	390	2	102
Beryllium	µg/g	4	0.5	0.9
Boron	µg/g	120	5	8
Cadmium	µg/g	1.2	0.5	<0.5
Chromium	µg/g	160	5	24
Cobalt	µg/g	22	0.5	10.5
Copper	µg/g	140	1	17
Lead	µg/g	120	1	16
Molybdenum	µg/g	6.9	0.5	<0.5
Nickel	µg/g	100	1	20
Selenium	µg/g	2.4	0.4	0.5
Silver	µg/g	20	0.2	<0.2
Thallium	µg/g	1	0.4	<0.4
Uranium	µg/g	23	0.5	0.7
Vanadium	µg/g	86	1	36
Zinc	µg/g	340	5	105

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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Certificate of Analysis

AGAT WORK ORDER: 20H664773

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-10-16

DATE REPORTED: 2020-10-22

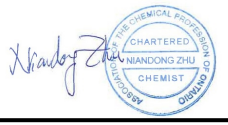
		SAMPLE DESCRIPTION:		BH2 SA1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2020-10-14
Parameter	Unit	G / S	RDL	1571021
Chromium, Hexavalent	µg/g	8	0.2	<0.2
Cyanide, Free	µg/g	0.051	0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA	7.18

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1571021 pH was determined on the 0.01M CaCl2 extract obtained from 2:1 leaching procedure (2 parts extraction fluid:1 part wet soil).

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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Certificate of Analysis

AGAT WORK ORDER: 20H664773

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - OC Pesticides (Soil)

DATE RECEIVED: 2020-10-16

DATE REPORTED: 2020-10-22

		SAMPLE DESCRIPTION:		BH2 SA1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2020-10-14
Parameter	Unit	G / S	RDL	1571021
Aldrin	µg/g	0.05	0.005	<0.005
Chlordane	µg/g	0.05	0.007	<0.007
DDD	µg/g	3.3	0.007	<0.007
DDE	µg/g	0.26	0.007	<0.007
DDT	µg/g	1.4	0.007	<0.007
Dieldrin	µg/g	0.05	0.005	<0.005
Endosulfan	µg/g	0.04	0.005	<0.005
Endrin	µg/g	0.04	0.005	<0.005
Gamma-Hexachlorocyclohexane	µg/g	0.056	0.005	<0.005
Heptachlor	µg/g	0.15	0.005	<0.005
Heptachlor Epoxide	µg/g	0.05	0.005	<0.005
Hexachlorobenzene	µg/g	0.52	0.005	<0.005
Hexachlorobutadiene	µg/g	0.012	0.01	<0.01
Hexachloroethane	µg/g	0.089	0.01	<0.01
Methoxychlor	µg/g	0.13	0.005	<0.005
Moisture Content	%		0.1	17.8
wet weight OC	g		NA	5.37
Surrogate	Unit	Acceptable Limits		
Decachlorobiphenyl	%	50-140		110
TCMX	%	50-140		100

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1571021 Results are based on the dry weight of the soil.
DDT total is a calculated parameter. The calculated value is the sum of op'DDT and pp'DDT.
DDD total is a calculated parameter. The calculated value is the sum of op'DDD and pp'DDD.
DDE total is a calculated parameter. The calculated value is the sum of op'DDE and pp'DDE.
Endosulfan total is a calculated parameter. The calculated value is the sum of Endosulfan I and Endosulfan II.
Chlordane total is a calculated parameter. The calculated value is the sum of Alpha-Chlordane and Gamma-Chlordane.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Pinkal Patel

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Quality Assurance

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664773

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

Soil Analysis

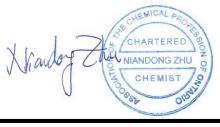
RPT Date: Oct 22, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals (Including Hydrides) (Soil)															
Antimony	1575222		<0.8	<0.8	NA	< 0.8	124%	70%	130%	82%	80%	120%	102%	70%	130%
Arsenic	1575222		8	8	0.0%	< 1	104%	70%	130%	100%	80%	120%	100%	70%	130%
Barium	1575222		96	100	4.1%	< 2	102%	70%	130%	106%	80%	120%	108%	70%	130%
Beryllium	1575222		1.0	1.0	NA	< 0.5	99%	70%	130%	98%	80%	120%	101%	70%	130%
Boron	1575222		27	27	0.0%	< 5	80%	70%	130%	90%	80%	120%	80%	70%	130%
Cadmium	1575222		<0.5	<0.5	NA	< 0.5	98%	70%	130%	102%	80%	120%	104%	70%	130%
Chromium	1575222		24	23	NA	< 5	93%	70%	130%	98%	80%	120%	98%	70%	130%
Cobalt	1575222		12.8	12.4	3.2%	< 0.5	87%	70%	130%	100%	80%	120%	92%	70%	130%
Copper	1575222		11	11	0.0%	< 1	90%	70%	130%	110%	80%	120%	96%	70%	130%
Lead	1575222		12	12	0.0%	< 1	101%	70%	130%	104%	80%	120%	100%	70%	130%
Molybdenum	1575222		0.9	0.9	NA	< 0.5	88%	70%	130%	101%	80%	120%	91%	70%	130%
Nickel	1575222		28	28	0.0%	< 1	87%	70%	130%	104%	80%	120%	93%	70%	130%
Selenium	1575222		0.6	0.5	NA	< 0.4	119%	70%	130%	102%	80%	120%	99%	70%	130%
Silver	1575222		<0.2	<0.2	NA	< 0.2	85%	70%	130%	107%	80%	120%	93%	70%	130%
Thallium	1575222		<0.4	<0.4	NA	< 0.4	121%	70%	130%	104%	80%	120%	102%	70%	130%
Uranium	1575222		0.8	0.8	NA	< 0.5	119%	70%	130%	109%	80%	120%	109%	70%	130%
Vanadium	1575222		34	34	0.0%	< 1	92%	70%	130%	95%	80%	120%	92%	70%	130%
Zinc	1575222		64	63	1.6%	< 5	96%	70%	130%	108%	80%	120%	109%	70%	130%

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

O. Reg. 153(511) - ORPs (Soil)															
Chromium, Hexavalent	1570659		<0.2	<0.2	NA	< 0.2	97%	70%	130%	93%	80%	120%	81%	70%	130%
Cyanide, Free	1565500		<0.040	<0.040	NA	< 0.040	92%	70%	130%	97%	80%	120%	100%	70%	130%
Mercury	1575222		<0.10	<0.10	NA	< 0.10	103%	70%	130%	98%	80%	120%	97%	70%	130%
pH, 2:1 CaCl2 Extraction	1570659		7.64	7.69	0.7%	NA	100%	80%	120%						

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

Certified By:



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Quality Assurance

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664773

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Oct 22, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - OC Pesticides (Soil)															
Aldrin	1571095		< 0.005	< 0.005	NA	< 0.005	99%	50%	140%	102%	50%	140%	85%	50%	140%
Chlordane	1571095		< 0.007	< 0.007	NA	< 0.007	90%	50%	140%	95%	50%	140%	88%	50%	140%
DDD	1571095		< 0.007	< 0.007	NA	< 0.007	89%	50%	140%	94%	50%	140%	82%	50%	140%
DDE	1571095		< 0.007	< 0.007	NA	< 0.007	98%	50%	140%	90%	50%	140%	82%	50%	140%
DDT	1571095		< 0.007	< 0.007	NA	< 0.007	85%	50%	140%	103%	50%	140%	87%	50%	140%
Dieldrin	1571095		< 0.005	< 0.005	NA	< 0.005	96%	50%	140%	98%	50%	140%	83%	50%	140%
Endosulfan	1571095		< 0.005	< 0.005	NA	< 0.005	89%	50%	140%	97%	50%	140%	84%	50%	140%
Endrin	1571095		< 0.005	< 0.005	NA	< 0.005	86%	50%	140%	107%	50%	140%	90%	50%	140%
Gamma-Hexachlorocyclohexane	1571095		< 0.005	< 0.005	NA	< 0.005	92%	50%	140%	107%	50%	140%	89%	50%	140%
Heptachlor	1571095		< 0.005	< 0.005	NA	< 0.005	94%	50%	140%	103%	50%	140%	99%	50%	140%
Heptachlor Epoxide	1571095		< 0.005	< 0.005	NA	< 0.005	90%	50%	140%	93%	50%	140%	83%	50%	140%
Hexachlorobenzene	1571095		< 0.005	< 0.005	NA	< 0.005	103%	50%	140%	96%	50%	140%	96%	50%	140%
Hexachlorobutadiene	1571095		< 0.01	< 0.01	NA	< 0.01	99%	50%	140%	88%	50%	140%	83%	50%	140%
Hexachloroethane	1571095		< 0.01	< 0.01	NA	< 0.01	91%	50%	140%	86%	50%	140%	88%	50%	140%
Methoxychlor	1571095		< 0.005	< 0.005	NA	< 0.005	91%	50%	140%	105%	50%	140%	107%	50%	140%

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

Certified By:

AGAT Laboratories

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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664773

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Mercury	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
pH, 2:1 CaCl2 Extraction	INOR-93-6031	modified from EPA 9045D and MCKEAGUE 3.11	PH METER

AGAT Laboratories

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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664773

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Aldrin	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Chlordane	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
DDD	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
DDE	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
DDT	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Dieldrin	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Endosulfan	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Endrin	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Gamma-Hexachlorocyclohexane	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Heptachlor	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Heptachlor Epoxide	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Hexachlorobenzene	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Hexachlorobutadiene	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Hexachloroethane	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Methoxychlor	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Moisture Content		Tier 1 method	BALANCE
TCMX	ORG-91-5112	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
wet weight OC	ORG-91-5113		BALANCE

AGAT Laboratories

5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
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Chain of Custody Record

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

Laboratory Use Only

Work Order #: 20H664773

Cooler Quantity: LG COOLER

Arrival Temperatures: 4.6 | 4.5 | 4.2
3.2 | 5.4 | 5.2

Custody Seal Intact: ☐ Yes ☐ No ☐ N/A

Notes: NO ICE.

Report Information:

Company:
Contact:
Address:
Phone:

Terraprobe Inc. 903 Barton Street, Unit 22
Stoney Creek, Ontario L8E 5P5
Ph: (905) 643-7560 Fax: (905) 643-7559
Attn.: Amber Brooks abrooks@terraprobe.ca

Reports to be sent to:
1. Email:
2. Email:

Regulatory Requirements: ☐ No Regulatory Requirement

(Please check all applicable boxes)

☒ Regulation 153/04
Table 2 *Indicate One*
☐ Ind/Com
☒ Res/Park
☐ Agriculture
Soil Texture *(Check One)*
☒ Coarse
☐ Fine

☐ Sewer Use
☐ Sanitary
☐ Storm
Region *Indicate One*
☐ MISA

☐ Regulation 558
☐ CCME
☐ Prov. Water Quality Objectives (PWQO)
☐ Other
Indicate One

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

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

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

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

OR Date Required (Rush Surcharges May Apply):

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

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

Project Information:

Project: 7-20-0004-42
Site Location:
Sampled By: K. Greenman
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company:
Contact: Lorena Rossi
Address:
Email: lrossi@terraprobe.ca

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Field Filtered - Metals, Hg, CrVI	O. Reg 153	Full Metals Scan	Regulation/Custom Metals	Nutrients	Volatiles	PHCs F1 - F4	ABNs	PAHs	PCBs	Organochlorine Pesticides	TCLP	Sewer Use	Potentially Hazardous or High Concentration (Y/N)
								Metals and Inorganics; ORPs												
BH2 SA1	Oct 14/20		2	S				X / X									X			

Sample Relinquished By (Print Name and Sign): K. Greenman — Date: Oct 16/20 — Time: 12:30pm
Samples Received By (Print Name and Sign): Daniella Jaic — Date: Oct 16/20 — Time: 12:45pm

Samples Relinquished By (Print Name and Sign): Daniella Jaic — Date: Oct 16/20 — Time: 3pm
Samples Received By (Print Name and Sign): John Chypyha — Date: Oct 16 — Time: 4:00

Samples Relinquished By (Print Name and Sign): John Chypyha — Date: Oct 16 — Time: 5:48
Samples Received By (Print Name and Sign): — Date: — Time:

Page 1 of 1

Nº: T 099038

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

Date Issued: March 22, 2019

AGAT Laboratories

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

CLIENT NAME: TERRAPROBE INC
903 Barton Street
Stoney Creek, ON L8E5P5
(905) 643-7560

ATTENTION TO: Amber Brooks

PROJECT: 7-20-0004-42

AGAT WORK ORDER: 20H664775

SOIL ANALYSIS REVIEWED BY: Jacky Zhu, Spectroscopy Technician

TRACE ORGANICS REVIEWED BY: Pinkal Patel, Report Reviewer

DATE REPORTED: Oct 22, 2020

PAGES (INCLUDING COVER): 9

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days following analysis, unless expressly agreed otherwise in writing. Please contact your Client Project Manager if you require additional sample storage time.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

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Certificate of Analysis

AGAT WORK ORDER: 20H664775

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - Metals (Including Hydrides) (Soil)

DATE RECEIVED: 2020-10-16

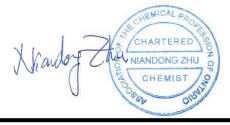
DATE REPORTED: 2020-10-22

		SAMPLE DESCRIPTION:		BH3 SA1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2020-10-14
Parameter	Unit	G / S	RDL	1571022
Antimony	µg/g	7.5	0.8	<0.8
Arsenic	µg/g	18	1	4
Barium	µg/g	390	2	76
Beryllium	µg/g	4	0.5	0.9
Boron	µg/g	120	5	7
Cadmium	µg/g	1.2	0.5	<0.5
Chromium	µg/g	160	5	23
Cobalt	µg/g	22	0.5	8.7
Copper	µg/g	140	1	17
Lead	µg/g	120	1	15
Molybdenum	µg/g	6.9	0.5	<0.5
Nickel	µg/g	100	1	17
Selenium	µg/g	2.4	0.4	0.6
Silver	µg/g	20	0.2	<0.2
Thallium	µg/g	1	0.4	<0.4
Uranium	µg/g	23	0.5	0.8
Vanadium	µg/g	86	1	33
Zinc	µg/g	340	5	72

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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Certificate of Analysis

AGAT WORK ORDER: 20H664775

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-10-16

DATE REPORTED: 2020-10-22

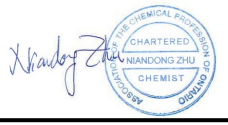
		SAMPLE DESCRIPTION:		BH3 SA1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2020-10-14
Parameter	Unit	G / S	RDL	1571022
Chromium, Hexavalent	µg/g	8	0.2	<0.2
Cyanide, Free	µg/g	0.051	0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA	5.76

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1571022 pH was determined on the 0.01M CaCl2 extract obtained from 2:1 leaching procedure (2 parts extraction fluid:1 part wet soil).

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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Certificate of Analysis

AGAT WORK ORDER: 20H664775

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - OC Pesticides (Soil)

DATE RECEIVED: 2020-10-16

DATE REPORTED: 2020-10-22

		SAMPLE DESCRIPTION:		BH3 SA1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2020-10-14
Parameter	Unit	G / S	RDL	1571022
Aldrin	µg/g	0.05	0.005	<0.005
Chlordane	µg/g	0.05	0.007	<0.007
DDD	µg/g	3.3	0.007	<0.007
DDE	µg/g	0.26	0.007	<0.007
DDT	µg/g	1.4	0.007	<0.007
Dieldrin	µg/g	0.05	0.005	<0.005
Endosulfan	µg/g	0.04	0.005	<0.005
Endrin	µg/g	0.04	0.005	<0.005
Gamma-Hexachlorocyclohexane	µg/g	0.056	0.005	<0.005
Heptachlor	µg/g	0.15	0.005	<0.005
Heptachlor Epoxide	µg/g	0.05	0.005	<0.005
Hexachlorobenzene	µg/g	0.52	0.005	<0.005
Hexachlorobutadiene	µg/g	0.012	0.01	<0.01
Hexachloroethane	µg/g	0.089	0.01	<0.01
Methoxychlor	µg/g	0.13	0.005	<0.005
Moisture Content	%		0.1	15.3
wet weight OC	g		NA	5.12
Surrogate	Unit	Acceptable Limits		
Decachlorobiphenyl	%	50-140		100
TCMX	%	50-140		91

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1571022 Results are based on the dry weight of the soil.
DDT total is a calculated parameter. The calculated value is the sum of op'DDT and pp'DDT.
DDD total is a calculated parameter. The calculated value is the sum of op'DDD and pp'DDD.
DDE total is a calculated parameter. The calculated value is the sum of op'DDE and pp'DDE.
Endosulfan total is a calculated parameter. The calculated value is the sum of Endosulfan I and Endosulfan II.
Chlordane total is a calculated parameter. The calculated value is the sum of Alpha-Chlordane and Gamma-Chlordane.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Pinkal Patel

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Quality Assurance

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664775

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

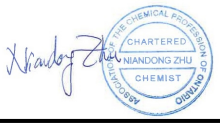
SAMPLED BY:

Soil Analysis

RPT Date: Oct 22, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals (Including Hydrides) (Soil)															
Antimony	1575222		<0.8	<0.8	NA	< 0.8	124%	70%	130%	82%	80%	120%	102%	70%	130%
Arsenic	1575222		8	8	0.0%	< 1	104%	70%	130%	100%	80%	120%	100%	70%	130%
Barium	1575222		96	100	4.1%	< 2	102%	70%	130%	106%	80%	120%	108%	70%	130%
Beryllium	1575222		1.0	1.0	NA	< 0.5	99%	70%	130%	98%	80%	120%	101%	70%	130%
Boron	1575222		27	27	0.0%	< 5	80%	70%	130%	90%	80%	120%	80%	70%	130%
Cadmium	1575222		<0.5	<0.5	NA	< 0.5	98%	70%	130%	102%	80%	120%	104%	70%	130%
Chromium	1575222		24	23	NA	< 5	93%	70%	130%	98%	80%	120%	98%	70%	130%
Cobalt	1575222		12.8	12.4	3.2%	< 0.5	87%	70%	130%	100%	80%	120%	92%	70%	130%
Copper	1575222		11	11	0.0%	< 1	90%	70%	130%	110%	80%	120%	96%	70%	130%
Lead	1575222		12	12	0.0%	< 1	101%	70%	130%	104%	80%	120%	100%	70%	130%
Molybdenum	1575222		0.9	0.9	NA	< 0.5	88%	70%	130%	101%	80%	120%	91%	70%	130%
Nickel	1575222		28	28	0.0%	< 1	87%	70%	130%	104%	80%	120%	93%	70%	130%
Selenium	1575222		0.6	0.5	NA	< 0.4	119%	70%	130%	102%	80%	120%	99%	70%	130%
Silver	1575222		<0.2	<0.2	NA	< 0.2	85%	70%	130%	107%	80%	120%	93%	70%	130%
Thallium	1575222		<0.4	<0.4	NA	< 0.4	121%	70%	130%	104%	80%	120%	102%	70%	130%
Uranium	1575222		0.8	0.8	NA	< 0.5	119%	70%	130%	109%	80%	120%	109%	70%	130%
Vanadium	1575222		34	34	0.0%	< 1	92%	70%	130%	95%	80%	120%	92%	70%	130%
Zinc	1575222		64	63	1.6%	< 5	96%	70%	130%	108%	80%	120%	109%	70%	130%
O. Reg. 153(511) - ORPs (Soil)															
Chromium, Hexavalent	1571022	1571022	<0.2	<0.2	NA	< 0.2	97%	70%	130%	93%	80%	120%	76%	70%	130%
Cyanide, Free	1571022	1571022	<0.040	<0.040	NA	< 0.040	92%	70%	130%	97%	80%	120%	98%	70%	130%
Mercury	1575222		<0.10	<0.10	NA	< 0.10	103%	70%	130%	98%	80%	120%	97%	70%	130%
pH, 2:1 CaCl2 Extraction	1570659		7.64	7.69	0.7%	NA	100%	80%	120%						

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

Certified By:



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http://www.agatlabs.com

Quality Assurance

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664775

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Oct 22, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - OC Pesticides (Soil)															
Aldrin	1571095		< 0.005	< 0.005	NA	< 0.005	99%	50%	140%	102%	50%	140%	85%	50%	140%
Chlordane	1571095		< 0.007	< 0.007	NA	< 0.007	90%	50%	140%	95%	50%	140%	88%	50%	140%
DDD	1571095		< 0.007	< 0.007	NA	< 0.007	89%	50%	140%	94%	50%	140%	82%	50%	140%
DDE	1571095		< 0.007	< 0.007	NA	< 0.007	98%	50%	140%	90%	50%	140%	82%	50%	140%
DDT	1571095		< 0.007	< 0.007	NA	< 0.007	85%	50%	140%	103%	50%	140%	87%	50%	140%
Dieldrin	1571095		< 0.005	< 0.005	NA	< 0.005	96%	50%	140%	98%	50%	140%	83%	50%	140%
Endosulfan	1571095		< 0.005	< 0.005	NA	< 0.005	89%	50%	140%	97%	50%	140%	84%	50%	140%
Endrin	1571095		< 0.005	< 0.005	NA	< 0.005	86%	50%	140%	107%	50%	140%	90%	50%	140%
Gamma-Hexachlorocyclohexane	1571095		< 0.005	< 0.005	NA	< 0.005	92%	50%	140%	107%	50%	140%	89%	50%	140%
Heptachlor	1571095		< 0.005	< 0.005	NA	< 0.005	94%	50%	140%	103%	50%	140%	99%	50%	140%
Heptachlor Epoxide	1571095		< 0.005	< 0.005	NA	< 0.005	90%	50%	140%	93%	50%	140%	83%	50%	140%
Hexachlorobenzene	1571095		< 0.005	< 0.005	NA	< 0.005	103%	50%	140%	96%	50%	140%	96%	50%	140%
Hexachlorobutadiene	1571095		< 0.01	< 0.01	NA	< 0.01	99%	50%	140%	88%	50%	140%	83%	50%	140%
Hexachloroethane	1571095		< 0.01	< 0.01	NA	< 0.01	91%	50%	140%	86%	50%	140%	88%	50%	140%
Methoxychlor	1571095		< 0.005	< 0.005	NA	< 0.005	91%	50%	140%	105%	50%	140%	107%	50%	140%

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

Certified By:

AGAT Laboratories

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CANADA L4Z 1Y2
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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664775

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Mercury	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
pH, 2:1 CaCl2 Extraction	INOR-93-6031	modified from EPA 9045D and MCKEAGUE 3.11	PH METER

AGAT Laboratories

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MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664775

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Aldrin	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Chlordane	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
DDD	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
DDE	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
DDT	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Dieldrin	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Endosulfan	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Endrin	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Gamma-Hexachlorocyclohexane	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Heptachlor	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Heptachlor Epoxide	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Hexachlorobenzene	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Hexachlorobutadiene	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Hexachloroethane	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Methoxychlor	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Moisture Content		Tier 1 method	BALANCE
TCMX	ORG-91-5112	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
wet weight OC	ORG-91-5113		BALANCE

AGAT Laboratories

5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
webearth.agatlabs.com

Chain of Custody Record

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

Laboratory Use Only

Work Order #: 20H664775

Cooler Quantity: 1 COOLER

Arrival Temperatures: 4.6 | 4.5 | 4.2
5.2 | 5.4 | 5.2

Custody Seal Intact: ☐ Yes ☐ No ☐ N/A

Notes: ON ICE

Report Information:

Company:
Contact:
Address: **Terraprobe Inc.** 903 Barton Street, Unit 22
Stoney Creek, Ontario L8E 5P5
Ph: (905) 643-7560 **Fax:** (905) 643-7559
Attn.: Amber Brooks abrooks@terraprobe.ca
Phone:
Reports to be sent to:
1. Email:
2. Email:

Regulatory Requirements: ☐ No Regulatory Requirement

(Please check all applicable boxes)

☒ Regulation 153/04
Table 3 *Indicate One*
☐ Ind/Com
☒ Res/Park
☐ Agriculture

Soil Texture *(Check One)*
☒ Coarse
☐ Fine

☐ Sewer Use
☐ Sanitary
☐ Storm

Region _____ *Indicate One*
☐ MISA

☐ Regulation 558
☐ CCME
☐ Prov. Water Quality Objectives (PWQO)
☐ Other

_____ *Indicate One*

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

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

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

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

OR Date Required (Rush Surcharges May Apply):

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

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

Project Information:

Project: 7-20-0004-42
Site Location:
Sampled By: K. Greenman
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company:
Contact: Lorena Rossi
Address:
Email: lrossi@terraprobe.ca

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI (Y/N)	O. Reg 153: Metals and Inorganics (☐ All Metals ☐ 153 Metals (excl. Hydrides) ☐ Hydride Metals ☒ 153 Metals (Incl. Hydrides))	O. Reg 153: ORPs: ☐ B-HWS ☐ Cr ☒ CN ☐ EC ☐ FOC ☒ Hg ☐ SAR ☐ pH	Full Metals Scan	Regulation/Custom Metals	Nutrients: ☐ TP ☐ NH_3 ☐ TKN ☐ NO_3 ☐ NO_2 ☐ NO_3+NO_2	Volatiles: ☐ VOC ☐ BTEX ☐ THM	PHCs F1 - F4	ABNs	PAHs	PCBs: ☐ Total ☐ Aroclors	Organochlorine Pesticides	TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	Sewer Use	Potentially Hazardous or High Concentration (Y/N)
BH3 SA1	Oct 14/20		2	S			X	X									X			

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
K. Greenman	Oct 16/20	12:30pm	Daniella Jaic	OCT 16/20	12:45pm
Daniella Jaic	OCT 16/20	3pm	John Chyzyha	Oct/16	21:07
			John Chyzyha	Oct 16	5:40

Page 1 of 1

№: T099039

Document ID: DIV-78-1511-016

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

Date Revised: Oct 29, 2019

AGAT Laboratories

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CLIENT NAME: TERRAPROBE INC
903 Barton Street
Stoney Creek, ON L8E5P5
(905) 643-7560

ATTENTION TO: Amber Brooks

PROJECT: 7-20-0004-42

AGAT WORK ORDER: 20H664777

SOIL ANALYSIS REVIEWED BY: Jacky Zhu, Spectroscopy Technician

TRACE ORGANICS REVIEWED BY: Pinkal Patel, Report Reviewer

DATE REPORTED: Oct 22, 2020

PAGES (INCLUDING COVER): 10

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days following analysis, unless expressly agreed otherwise in writing. Please contact your Client Project Manager if you require additional sample storage time.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 20H664777

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - Metals (Including Hydrides) (Soil)

DATE RECEIVED: 2020-10-16

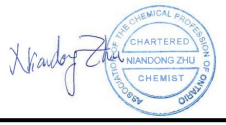
DATE REPORTED: 2020-10-22

		SAMPLE DESCRIPTION:		BH4 SA1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2020-10-14
Parameter	Unit	G / S	RDL	1571095
Antimony	µg/g	7.5	0.8	<0.8
Arsenic	µg/g	18	1	6
Barium	µg/g	390	2	83
Beryllium	µg/g	4	0.5	1.0
Boron	µg/g	120	5	9
Cadmium	µg/g	1.2	0.5	<0.5
Chromium	µg/g	160	5	27
Cobalt	µg/g	22	0.5	12.0
Copper	µg/g	140	1	22
Lead	µg/g	120	1	20
Molybdenum	µg/g	6.9	0.5	0.5
Nickel	µg/g	100	1	25
Selenium	µg/g	2.4	0.4	0.7
Silver	µg/g	20	0.2	<0.2
Thallium	µg/g	1	0.4	<0.4
Uranium	µg/g	23	0.5	0.9
Vanadium	µg/g	86	1	39
Zinc	µg/g	340	5	80

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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Certificate of Analysis

AGAT WORK ORDER: 20H664777

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-10-16

DATE REPORTED: 2020-10-22

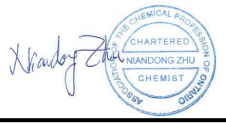
		SAMPLE DESCRIPTION:		BH4 SA1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2020-10-14
Parameter	Unit	G / S	RDL	1571095
Chromium, Hexavalent	µg/g	8	0.2	<0.2
Cyanide, Free	µg/g	0.051	0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA	7.48

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1571095 pH was determined on the 0.01M CaCl2 extract obtained from 2:1 leaching procedure (2 parts extraction fluid:1 part wet soil).

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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Certificate of Analysis

AGAT WORK ORDER: 20H664777

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-10-16

DATE REPORTED: 2020-10-22

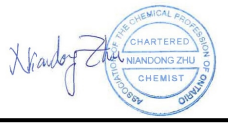
SAMPLE DESCRIPTION:				BH4 SA7
SAMPLE TYPE:				Soil
DATE SAMPLED:				2020-10-14
Parameter	Unit	G / S	RDL	1571096
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA	7.81

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1571096 pH was determined on the 0.01M CaCl2 extract obtained from 2:1 leaching procedure (2 parts extraction fluid:1 part wet soil).

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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Certificate of Analysis

AGAT WORK ORDER: 20H664777

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - OC Pesticides (Soil)

DATE RECEIVED: 2020-10-16

DATE REPORTED: 2020-10-22

		SAMPLE DESCRIPTION:		BH4 SA1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2020-10-14
Parameter	Unit	G / S	RDL	1571095
Aldrin	µg/g	0.05	0.005	<0.005
Chlordane	µg/g	0.05	0.007	<0.007
DDD	µg/g	3.3	0.007	<0.007
DDE	µg/g	0.26	0.007	<0.007
DDT	µg/g	1.4	0.007	<0.007
Dieldrin	µg/g	0.05	0.005	<0.005
Endosulfan	µg/g	0.04	0.005	<0.005
Endrin	µg/g	0.04	0.005	<0.005
Gamma-Hexachlorocyclohexane	µg/g	0.056	0.005	<0.005
Heptachlor	µg/g	0.15	0.005	<0.005
Heptachlor Epoxide	µg/g	0.05	0.005	<0.005
Hexachlorobenzene	µg/g	0.52	0.005	<0.005
Hexachlorobutadiene	µg/g	0.012	0.01	<0.01
Hexachloroethane	µg/g	0.089	0.01	<0.01
Methoxychlor	µg/g	0.13	0.005	<0.005
Moisture Content	%		0.1	14.0
wet weight OC	g		NA	5.11
Surrogate	Unit	Acceptable Limits		
Decachlorobiphenyl	%	50-140		99
TCMX	%	50-140		88

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1571095 Results are based on the dry weight of the soil.
DDT total is a calculated parameter. The calculated value is the sum of op'DDT and pp'DDT.
DDD total is a calculated parameter. The calculated value is the sum of op'DDD and pp'DDD.
DDE total is a calculated parameter. The calculated value is the sum of op'DDE and pp'DDE.
Endosulfan total is a calculated parameter. The calculated value is the sum of Endosulfan I and Endosulfan II.
Chlordane total is a calculated parameter. The calculated value is the sum of Alpha-Chlordane and Gamma-Chlordane.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Jinkal Patel

AGAT Laboratories

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Quality Assurance

CLIENT NAME: TERRAPROBE INC
PROJECT: 7-20-0004-42
SAMPLING SITE:

AGAT WORK ORDER: 20H664777
ATTENTION TO: Amber Brooks
SAMPLED BY:

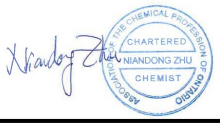
Soil Analysis

RPT Date: Oct 22, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals (Including Hydrides) (Soil)															
Antimony	1575222		<0.8	<0.8	NA	< 0.8	124%	70%	130%	82%	80%	120%	102%	70%	130%
Arsenic	1575222		8	8	0.0%	< 1	104%	70%	130%	100%	80%	120%	100%	70%	130%
Barium	1575222		96	100	4.1%	< 2	102%	70%	130%	106%	80%	120%	108%	70%	130%
Beryllium	1575222		1.0	1.0	NA	< 0.5	99%	70%	130%	98%	80%	120%	101%	70%	130%
Boron	1575222		27	27	0.0%	< 5	80%	70%	130%	90%	80%	120%	80%	70%	130%
Cadmium	1575222		<0.5	<0.5	NA	< 0.5	98%	70%	130%	102%	80%	120%	104%	70%	130%
Chromium	1575222		24	23	NA	< 5	93%	70%	130%	98%	80%	120%	98%	70%	130%
Cobalt	1575222		12.8	12.4	3.2%	< 0.5	87%	70%	130%	100%	80%	120%	92%	70%	130%
Copper	1575222		11	11	0.0%	< 1	90%	70%	130%	110%	80%	120%	96%	70%	130%
Lead	1575222		12	12	0.0%	< 1	101%	70%	130%	104%	80%	120%	100%	70%	130%
Molybdenum	1575222		0.9	0.9	NA	< 0.5	88%	70%	130%	101%	80%	120%	91%	70%	130%
Nickel	1575222		28	28	0.0%	< 1	87%	70%	130%	104%	80%	120%	93%	70%	130%
Selenium	1575222		0.6	0.5	NA	< 0.4	119%	70%	130%	102%	80%	120%	99%	70%	130%
Silver	1575222		<0.2	<0.2	NA	< 0.2	85%	70%	130%	107%	80%	120%	93%	70%	130%
Thallium	1575222		<0.4	<0.4	NA	< 0.4	121%	70%	130%	104%	80%	120%	102%	70%	130%
Uranium	1575222		0.8	0.8	NA	< 0.5	119%	70%	130%	109%	80%	120%	109%	70%	130%
Vanadium	1575222		34	34	0.0%	< 1	92%	70%	130%	95%	80%	120%	92%	70%	130%
Zinc	1575222		64	63	1.6%	< 5	96%	70%	130%	108%	80%	120%	109%	70%	130%
O. Reg. 153(511) - ORPs (Soil)															
Chromium, Hexavalent	1570659		<0.2	<0.2	NA	< 0.2	97%	70%	130%	93%	80%	120%	81%	70%	130%
Cyanide, Free	1565500		<0.040	<0.040	NA	< 0.040	92%	70%	130%	97%	80%	120%	100%	70%	130%
Mercury	1575222		<0.10	<0.10	NA	< 0.10	103%	70%	130%	98%	80%	120%	97%	70%	130%
pH, 2:1 CaCl2 Extraction	1570659		7.64	7.69	0.7%	NA	100%	80%	120%						

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

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

Certified By:



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Quality Assurance

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664777

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Oct 22, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - OC Pesticides (Soil)															
Aldrin	1571095	1571095	< 0.005	< 0.005	NA	< 0.005	99%	50%	140%	102%	50%	140%	85%	50%	140%
Chlordane	1571095	1571095	< 0.007	< 0.007	NA	< 0.007	90%	50%	140%	95%	50%	140%	88%	50%	140%
DDD	1571095	1571095	< 0.007	< 0.007	NA	< 0.007	89%	50%	140%	94%	50%	140%	82%	50%	140%
DDE	1571095	1571095	< 0.007	< 0.007	NA	< 0.007	98%	50%	140%	90%	50%	140%	82%	50%	140%
DDT	1571095	1571095	< 0.007	< 0.007	NA	< 0.007	85%	50%	140%	103%	50%	140%	87%	50%	140%
Dieldrin	1571095	1571095	< 0.005	< 0.005	NA	< 0.005	96%	50%	140%	98%	50%	140%	83%	50%	140%
Endosulfan	1571095	1571095	< 0.005	< 0.005	NA	< 0.005	89%	50%	140%	97%	50%	140%	84%	50%	140%
Endrin	1571095	1571095	< 0.005	< 0.005	NA	< 0.005	86%	50%	140%	107%	50%	140%	90%	50%	140%
Gamma-Hexachlorocyclohexane	1571095	1571095	< 0.005	< 0.005	NA	< 0.005	92%	50%	140%	107%	50%	140%	89%	50%	140%
Heptachlor	1571095	1571095	< 0.005	< 0.005	NA	< 0.005	94%	50%	140%	103%	50%	140%	99%	50%	140%
Heptachlor Epoxide	1571095	1571095	< 0.005	< 0.005	NA	< 0.005	90%	50%	140%	93%	50%	140%	83%	50%	140%
Hexachlorobenzene	1571095	1571095	< 0.005	< 0.005	NA	< 0.005	103%	50%	140%	96%	50%	140%	96%	50%	140%
Hexachlorobutadiene	1571095	1571095	< 0.01	< 0.01	NA	< 0.01	99%	50%	140%	88%	50%	140%	83%	50%	140%
Hexachloroethane	1571095	1571095	< 0.01	< 0.01	NA	< 0.01	91%	50%	140%	86%	50%	140%	88%	50%	140%
Methoxychlor	1571095	1571095	< 0.005	< 0.005	NA	< 0.005	91%	50%	140%	105%	50%	140%	107%	50%	140%

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

Certified By:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664777

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Mercury	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
pH, 2:1 CaCl2 Extraction	INOR-93-6031	modified from EPA 9045D and MCKEAGUE 3.11	PH METER

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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664777

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Aldrin	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Chlordane	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
DDD	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
DDE	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
DDT	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Dieldrin	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Endosulfan	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Endrin	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Gamma-Hexachlorocyclohexane	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Heptachlor	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Heptachlor Epoxide	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Hexachlorobenzene	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Hexachlorobutadiene	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Hexachloroethane	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Methoxychlor	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Moisture Content		Tier 1 method	BALANCE
TCMX	ORG-91-5112	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
wet weight OC	ORG-91-5113		BALANCE

AGAT Laboratories

5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
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Chain of Custody Record

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

Laboratory Use Only

Work Order #: 2DH664777

Cooler Quantity: LG COOLER

Arrival Temperatures: 4.6 | 4.5 | 4.2
5.7 | 5.4 | 5.3

Custody Seal Intact: ☐ Yes ☐ No ☐ N/A

Notes: NO ICE

Report Information:

Company:
Contact:
Address: **Terraprobe Inc.** 903 Barton Street, Unit 22, Stoney Creek, Ontario L8E 5P5
Ph: (905) 643-7560 **Fax:** (905) 643-7559
Attn.: Amber Brooks abrooks@terraprobe.ca
Phone:
Reports to be sent to:
1. Email:
2. Email:

Regulatory Requirements: ☐ No Regulatory Requirement

(Please check all applicable boxes)

☒ Regulation 153/04
Table 2 *Indicate One*
☐ Ind/Com
☒ Res/Park
☐ Agriculture
Soil Texture *(Check One)*
☒ Coarse
☐ Fine

☐ Sewer Use
☐ Sanitary
☐ Storm
Region *Indicate One*
☐ MISA

☐ Regulation 558
☐ CCME
☐ Prov. Water Quality Objectives (PWQO)
☐ Other
Indicate One

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

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

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

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

OR Date Required (Rush Surcharges May Apply):

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

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

Project Information:

Project: 7-20-0034-42
Site Location:
Sampled By: K. Greenman
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company:
Contact: Lorena Rossi
Address:
Email: lrossi@terraprobe.ca

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Field Filtered - Metals, Hg, CrVI	O. Reg 153: Metals and Inorganics (☐ All Metals ☐ 153 Metals (excl. Hydrides) ☐ Hydride Metals ☒ 153 Metals (Incl. Hydrides))	O. Reg 153: ORPs (☐ B-HWS ☐ Cl ☒ CN ☐ EC ☐ FOC ☒ Hg ☐ pH ☐ SAR)	Full Metals Scan	Regulation/Custom Metals	Nutrients: (☐ TP ☐ NH_3 ☐ TKN ☐ NO_3 ☐ NO_2 ☐ NO_3+NO_2)	Volatiles: (☐ VOC ☐ BTEX ☐ THM)	PHCs F1 - F4	ABNs	PAHs	PCBs: (☐ Total ☐ Aroclors)	Organochlorine Pesticides	TCLP: (☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs)	Sewer Use	HOLD					Potentially Hazardous or High Concentration (Y/N)
BH4 SA1	OCT 14/20		2	S				X	X									X			X					
BH4 SA7	↓		1	S																	X					

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
K. Greenman	Oct 16/20	12:30pm	Daniella Jaic	OCT 16/20	12:45pm
Daniella Jaic	OCT 16/20	3pm	John Chypyha	Oct 16	4:00
			John Chypyha	Oct 16	5:40

Page 1 of 1

No: T 099040

Document ID: DIV-78-1511-010

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

AGAT Laboratories

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http://www.agatlabs.com

CLIENT NAME: TERRAPROBE INC
903 Barton Street
Stoney Creek, ON L8E5P5
(905) 643-7560

ATTENTION TO: Amber Brooks

PROJECT: 7-20-0004-42

AGAT WORK ORDER: 20H664781

SOIL ANALYSIS REVIEWED BY: Jacky Zhu, Spectroscopy Technician

TRACE ORGANICS REVIEWED BY: Pinkal Patel, Report Reviewer

DATE REPORTED: Oct 22, 2020

PAGES (INCLUDING COVER): 9

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days following analysis, unless expressly agreed otherwise in writing. Please contact your Client Project Manager if you require additional sample storage time.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 20H664781

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - Metals (Including Hydrides) (Soil)

DATE RECEIVED: 2020-10-16

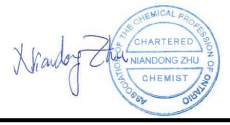
DATE REPORTED: 2020-10-22

		SAMPLE DESCRIPTION:		BH5 SA1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2020-10-15
Parameter	Unit	G / S	RDL	1571024
Antimony	µg/g	7.5	0.8	<0.8
Arsenic	µg/g	18	1	6
Barium	µg/g	390	2	72
Beryllium	µg/g	4	0.5	0.7
Boron	µg/g	120	5	6
Cadmium	µg/g	1.2	0.5	<0.5
Chromium	µg/g	160	5	18
Cobalt	µg/g	22	0.5	5.8
Copper	µg/g	140	1	21
Lead	µg/g	120	1	13
Molybdenum	µg/g	6.9	0.5	<0.5
Nickel	µg/g	100	1	15
Selenium	µg/g	2.4	0.4	0.6
Silver	µg/g	20	0.2	<0.2
Thallium	µg/g	1	0.4	<0.4
Uranium	µg/g	23	0.5	1.0
Vanadium	µg/g	86	1	28
Zinc	µg/g	340	5	60

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 20H664781

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-10-16

DATE REPORTED: 2020-10-22

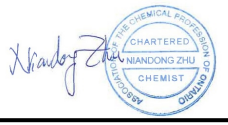
		SAMPLE DESCRIPTION:		BH5 SA1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2020-10-15
Parameter	Unit	G / S	RDL	1571024
Chromium, Hexavalent	µg/g	8	0.2	<0.2
Cyanide, Free	µg/g	0.051	0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA	7.21

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1571024 pH was determined on the 0.01M CaCl2 extract obtained from 2:1 leaching procedure (2 parts extraction fluid:1 part wet soil).

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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Certificate of Analysis

AGAT WORK ORDER: 20H664781

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - OC Pesticides (Soil)

DATE RECEIVED: 2020-10-16

DATE REPORTED: 2020-10-22

		SAMPLE DESCRIPTION:		BH5 SA1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2020-10-15
Parameter	Unit	G / S	RDL	1571024
Aldrin	µg/g	0.05	0.005	<0.005
Chlordane	µg/g	0.05	0.007	<0.007
DDD	µg/g	3.3	0.007	<0.007
DDE	µg/g	0.26	0.007	<0.007
DDT	µg/g	1.4	0.007	<0.007
Dieldrin	µg/g	0.05	0.005	<0.005
Endosulfan	µg/g	0.04	0.005	<0.005
Endrin	µg/g	0.04	0.005	<0.005
Gamma-Hexachlorocyclohexane	µg/g	0.056	0.005	<0.005
Heptachlor	µg/g	0.15	0.005	<0.005
Heptachlor Epoxide	µg/g	0.05	0.005	<0.005
Hexachlorobenzene	µg/g	0.52	0.005	<0.005
Hexachlorobutadiene	µg/g	0.012	0.01	<0.01
Hexachloroethane	µg/g	0.089	0.01	<0.01
Methoxychlor	µg/g	0.13	0.005	<0.005
Moisture Content	%		0.1	35.2
wet weight OC	g		NA	5.11
Surrogate	Unit	Acceptable Limits		
Decachlorobiphenyl	%	50-140		95
TCMX	%	50-140		91

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1571024 Results are based on the dry weight of the soil.
DDT total is a calculated parameter. The calculated value is the sum of op'DDT and pp'DDT.
DDD total is a calculated parameter. The calculated value is the sum of op'DDD and pp'DDD.
DDE total is a calculated parameter. The calculated value is the sum of op'DDE and pp'DDE.
Endosulfan total is a calculated parameter. The calculated value is the sum of Endosulfan I and Endosulfan II.
Chlordane total is a calculated parameter. The calculated value is the sum of Alpha-Chlordane and Gamma-Chlordane.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Pinkal Patel

AGAT Laboratories

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Quality Assurance

CLIENT NAME: TERRAPROBE INC
PROJECT: 7-20-0004-42
SAMPLING SITE:

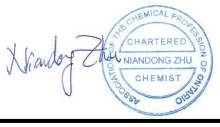
AGAT WORK ORDER: 20H664781
ATTENTION TO: Amber Brooks
SAMPLED BY:

Soil Analysis

RPT Date: Oct 22, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals (Including Hydrides) (Soil)															
Antimony	1575222		<0.8	<0.8	NA	< 0.8	124%	70%	130%	82%	80%	120%	102%	70%	130%
Arsenic	1575222		8	8	0.0%	< 1	104%	70%	130%	100%	80%	120%	100%	70%	130%
Barium	1575222		96	100	4.1%	< 2	102%	70%	130%	106%	80%	120%	108%	70%	130%
Beryllium	1575222		1.0	1.0	NA	< 0.5	99%	70%	130%	98%	80%	120%	101%	70%	130%
Boron	1575222		27	27	0.0%	< 5	80%	70%	130%	90%	80%	120%	80%	70%	130%
Cadmium	1575222		<0.5	<0.5	NA	< 0.5	98%	70%	130%	102%	80%	120%	104%	70%	130%
Chromium	1575222		24	23	NA	< 5	93%	70%	130%	98%	80%	120%	98%	70%	130%
Cobalt	1575222		12.8	12.4	3.2%	< 0.5	87%	70%	130%	100%	80%	120%	92%	70%	130%
Copper	1575222		11	11	0.0%	< 1	90%	70%	130%	110%	80%	120%	96%	70%	130%
Lead	1575222		12	12	0.0%	< 1	101%	70%	130%	104%	80%	120%	100%	70%	130%
Molybdenum	1575222		0.9	0.9	NA	< 0.5	88%	70%	130%	101%	80%	120%	91%	70%	130%
Nickel	1575222		28	28	0.0%	< 1	87%	70%	130%	104%	80%	120%	93%	70%	130%
Selenium	1575222		0.6	0.5	NA	< 0.4	119%	70%	130%	102%	80%	120%	99%	70%	130%
Silver	1575222		<0.2	<0.2	NA	< 0.2	85%	70%	130%	107%	80%	120%	93%	70%	130%
Thallium	1575222		<0.4	<0.4	NA	< 0.4	121%	70%	130%	104%	80%	120%	102%	70%	130%
Uranium	1575222		0.8	0.8	NA	< 0.5	119%	70%	130%	109%	80%	120%	109%	70%	130%
Vanadium	1575222		34	34	0.0%	< 1	92%	70%	130%	95%	80%	120%	92%	70%	130%
Zinc	1575222		64	63	1.6%	< 5	96%	70%	130%	108%	80%	120%	109%	70%	130%
O. Reg. 153(511) - ORPs (Soil)															
Chromium, Hexavalent	1570659		<0.2	<0.2	NA	< 0.2	97%	70%	130%	93%	80%	120%	81%	70%	130%
Cyanide, Free	1565500		<0.040	<0.040	NA	< 0.040	92%	70%	130%	97%	80%	120%	100%	70%	130%
Mercury	1575222		<0.10	<0.10	NA	< 0.10	103%	70%	130%	98%	80%	120%	97%	70%	130%
pH, 2:1 CaCl2 Extraction	1570659		7.64	7.69	0.7%	NA	100%	80%	120%						

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

Certified By:



AGAT Laboratories

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CANADA L4Z 1Y2
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Quality Assurance

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664781

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Oct 22, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - OC Pesticides (Soil)															
Aldrin	1571095		< 0.005	< 0.005	NA	< 0.005	99%	50%	140%	102%	50%	140%	85%	50%	140%
Chlordane	1571095		< 0.007	< 0.007	NA	< 0.007	90%	50%	140%	95%	50%	140%	88%	50%	140%
DDD	1571095		< 0.007	< 0.007	NA	< 0.007	89%	50%	140%	94%	50%	140%	82%	50%	140%
DDE	1571095		< 0.007	< 0.007	NA	< 0.007	98%	50%	140%	90%	50%	140%	82%	50%	140%
DDT	1571095		< 0.007	< 0.007	NA	< 0.007	85%	50%	140%	103%	50%	140%	87%	50%	140%
Dieldrin	1571095		< 0.005	< 0.005	NA	< 0.005	96%	50%	140%	98%	50%	140%	83%	50%	140%
Endosulfan	1571095		< 0.005	< 0.005	NA	< 0.005	89%	50%	140%	97%	50%	140%	84%	50%	140%
Endrin	1571095		< 0.005	< 0.005	NA	< 0.005	86%	50%	140%	107%	50%	140%	90%	50%	140%
Gamma-Hexachlorocyclohexane	1571095		< 0.005	< 0.005	NA	< 0.005	92%	50%	140%	107%	50%	140%	89%	50%	140%
Heptachlor	1571095		< 0.005	< 0.005	NA	< 0.005	94%	50%	140%	103%	50%	140%	99%	50%	140%
Heptachlor Epoxide	1571095		< 0.005	< 0.005	NA	< 0.005	90%	50%	140%	93%	50%	140%	83%	50%	140%
Hexachlorobenzene	1571095		< 0.005	< 0.005	NA	< 0.005	103%	50%	140%	96%	50%	140%	96%	50%	140%
Hexachlorobutadiene	1571095		< 0.01	< 0.01	NA	< 0.01	99%	50%	140%	88%	50%	140%	83%	50%	140%
Hexachloroethane	1571095		< 0.01	< 0.01	NA	< 0.01	91%	50%	140%	86%	50%	140%	88%	50%	140%
Methoxychlor	1571095		< 0.005	< 0.005	NA	< 0.005	91%	50%	140%	105%	50%	140%	107%	50%	140%

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

Certified By:

AGAT Laboratories

5835 COOPERS AVENUE
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FAX (905)712-5122
http://www.agatlabs.com

Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664781

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Mercury	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
pH, 2:1 CaCl2 Extraction	INOR-93-6031	modified from EPA 9045D and MCKEAGUE 3.11	PH METER

AGAT Laboratories

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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664781

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Aldrin	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Chlordane	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
DDD	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
DDE	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
DDT	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Dieldrin	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Endosulfan	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Endrin	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Gamma-Hexachlorocyclohexane	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Heptachlor	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Heptachlor Epoxide	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Hexachlorobenzene	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Hexachlorobutadiene	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Hexachloroethane	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Methoxychlor	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Moisture Content		Tier 1 method	BALANCE
TCMX	ORG-91-5112	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
wet weight OC	ORG-91-5113		BALANCE

AGAT Laboratories

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

Chain of Custody Record

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

Laboratory Use Only

Work Order #: 20H664781

Cooler Quantity: 6 COOLER

Arrival Temperatures: 4.6 | 4.5 | 4.2
3.7 | 3.4 | 5.2

Custody Seal Intact: ☐Yes ☐No ☐N/A

Notes: ON ICE

Report Information:

Company:
Contact:
Address:
Phone:

Terraprobe Inc. 903 Barton Street, Unit 22
Stoney Creek, Ontario L8E 5P5
Ph: (905) 643-7560 **Fax:** (905) 643-7559
Attn.: Amber Brooks abrooks@terraprobe.ca

Reports to be sent to:
1. Email:
2. Email:

Regulatory Requirements:

☐ No Regulatory Requirement

(Please check all applicable boxes)

☒ Regulation 153/04
Table 2 (Indicate One)
☐ Ind/Com
☒ Res/Park
☐ Agriculture

Soil Texture (Check One)
☒ Coarse
☐ Fine

☐ Sewer Use
☐ Sanitary
☐ Storm

Region _____ (Indicate One)
☐ MISA

☐ Regulation 558
☐ CCME
☐ Prov. Water Quality Objectives (PWQO)
☐ Other _____ (Indicate One)

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

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

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

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

OR Date Required (Rush Surcharges May Apply): _____

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

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

Project Information:

Project: 7-20-0004-42
Site Location:
Sampled By: K. Greenman
AGAT Quote #: _____ PO: _____
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company:
Contact: Lorena Rossi
Address:
Email: lrossi@terraprobe.ca

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI (Y/N)	O. Reg 153: Metals and Inorganics (☐ All Metals ☐ 153 Metals (excl. Hydrides) ☐ Hydride Metals ☒ 153 Metals (Incl. Hydrides))	O. Reg 153: ORPs: ☐ B-HWS ☐ Cl ☒ CN ☐ Cr^{6+} ☐ EC ☐ FOC ☒ Hg ☐ pH ☐ SAR	Full Metals Scan	Regulation/Custom Metals	Nutrients: ☐ TP ☐ NH_3 ☐ TKN ☐ NO_3 ☐ NO_2 ☐ NO_3+NO_2	Volatiles: ☐ VOC ☐ BTEX ☐ THM	PHCs F1 - F4	ABNs	PAHs	PCBs: ☐ Total ☐ Aroclors	Organochlorine Pesticides	TCLP ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	Sewer Use	Potentially Hazardous or High Concentration (Y/N)
BH5 SA1	Oct 15/20		2	S			X	X									X			

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
K. Greenman	Oct 16/20	12:30pm	Daniella Jaic	Oct 16/20	12:45pm
Daniella Jaic	Oct 16/20	3pm	John Chypyha	Oct 16	4:10
			John Chypyha	Oct 16	5:40

Page 1 of 1

Nº: T099041

Document ID: DIV-78-1511-016

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

Date Issued: November 29, 2019

AGAT Laboratories

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MISSISSAUGA, ONTARIO
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http://www.agatlabs.com

CLIENT NAME: TERRAPROBE INC
903 Barton Street
Stoney Creek, ON L8E5P5
(905) 643-7560

ATTENTION TO: Amber Brooks

PROJECT: 7-20-0004-42

AGAT WORK ORDER: 20H664789

SOIL ANALYSIS REVIEWED BY: Amanjot Bhela, Inorganic Lab Manager

TRACE ORGANICS REVIEWED BY: Oksana Gushyla, Trace Organics Lab Supervisor

DATE REPORTED: Nov 02, 2020

PAGES (INCLUDING COVER): 24

VERSION*: 1

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

*Notes

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 20H664789

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-10-16

DATE REPORTED: 2020-11-02

		SAMPLE DESCRIPTION:		BH6 SA1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2020-10-15
Parameter	Unit	G / S	RDL	1571105
Antimony	µg/g	7.5	0.8	<0.8
Arsenic	µg/g	18	1	4
Barium	µg/g	390	2	94
Beryllium	µg/g	4	0.5	0.6
Boron	µg/g	120	5	9
Boron (Hot Water Soluble)	µg/g	1.5	0.10	0.57
Cadmium	µg/g	1.2	0.5	<0.5
Chromium	µg/g	160	5	22
Chromium, Hexavalent	µg/g	8	0.2	<0.2
Cobalt	µg/g	22	0.5	9.8
Copper	µg/g	140	1	25
Cyanide, Free	µg/g	0.051	0.040	<0.040
Electrical Conductivity (2:1)	mS/cm	0.7	0.005	0.916
Lead	µg/g	120	1	14
Mercury	µg/g	0.27	0.10	<0.10
Molybdenum	µg/g	6.9	0.5	<0.5
Nickel	µg/g	100	1	21
Selenium	µg/g	2.4	0.4	0.4
Silver	µg/g	20	0.2	<0.2
Sodium Adsorption Ratio	NA	5	NA	2.26
Thallium	µg/g	1	0.4	<0.4
Uranium	µg/g	23	0.5	0.7
Vanadium	µg/g	86	1	28
Zinc	µg/g	340	5	76
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA	7.65

Certified By:

Amanjot Bhela

ASSOCIATION OF THE CHEMICAL PROFESSION OF ONTARIO
CHARTERED
AMANJOT BHELA
CHEMIST

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 20H664789

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-10-16

DATE REPORTED: 2020-11-02

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils **pH range listed applies to surface soil only**
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1571105 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 20H664789

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-10-16

DATE REPORTED: 2020-11-02

		SAMPLE DESCRIPTION:		BH6 SA8
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2020-10-15
Parameter	Unit	G / S	RDL	1571108
Antimony	µg/g	7.5	0.8	<0.8
Arsenic	µg/g	18	1	8
Barium	µg/g	390	2	66
Beryllium	µg/g	4	0.5	0.6
Boron	µg/g	120	5	12
Boron (Hot Water Soluble)	µg/g	1.5	0.10	0.67
Cadmium	µg/g	1.2	0.5	<0.5
Chromium	µg/g	160	5	17
Chromium, Hexavalent	µg/g	8	0.2	<0.2
Cobalt	µg/g	22	0.5	8.4
Copper	µg/g	140	1	34
Cyanide, Free	µg/g	0.051	0.040	<0.040
Electrical Conductivity (2:1)	mS/cm	0.7	0.005	0.284
Lead	µg/g	120	1	7
Mercury	µg/g	0.27	0.10	<0.10
Molybdenum	µg/g	6.9	0.5	0.5
Nickel	µg/g	100	1	17
Selenium	µg/g	2.4	0.4	<0.4
Silver	µg/g	20	0.2	<0.2
Sodium Adsorption Ratio	NA	5	NA	0.920
Thallium	µg/g	1	0.4	<0.4
Uranium	µg/g	23	0.5	0.7
Vanadium	µg/g	86	1	25
Zinc	µg/g	340	5	46

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils **pH range listed applies to surface soil only**
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1571108 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). pH was determined on the 0.01M CaCl2 extract prepared at 2:1 ratio. SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

AGAT Laboratories

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

Certificate of Analysis

AGAT WORK ORDER: 20H664789

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-10-16

DATE REPORTED: 2020-11-02

				SAMPLE DESCRIPTION:	BH6 SA8
				SAMPLE TYPE:	Soil
				DATE SAMPLED:	2020-10-15
Parameter	Unit	G / S	RDL	1571108	
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA	7.82	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils **pH range listed applies to surface soil only**
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1571108 pH was determined on the 0.01M CaCl2 extract obtained from 2:1 leaching procedure (2 parts extraction fluid:1 part wet soil).

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 20H664789

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - OC Pesticides (Soil)

DATE RECEIVED: 2020-10-16

DATE REPORTED: 2020-11-02

		SAMPLE DESCRIPTION:		BH6 SA1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2020-10-15
Parameter	Unit	G / S	RDL	1571105
Aldrin	µg/g	0.05	0.005	<0.005
Chlordane	µg/g	0.05	0.007	<0.007
DDD	µg/g	3.3	0.007	<0.007
DDE	µg/g	0.26	0.007	<0.007
DDT	µg/g	1.4	0.007	<0.007
Dieldrin	µg/g	0.05	0.005	<0.005
Endosulfan	µg/g	0.04	0.005	<0.005
Endrin	µg/g	0.04	0.005	<0.005
Gamma-Hexachlorocyclohexane	µg/g	0.056	0.005	<0.005
Heptachlor	µg/g	0.15	0.005	<0.005
Heptachlor Epoxide	µg/g	0.05	0.005	<0.005
Hexachlorobenzene	µg/g	0.52	0.005	<0.005
Hexachlorobutadiene	µg/g	0.012	0.01	<0.01
Hexachloroethane	µg/g	0.089	0.01	<0.01
Methoxychlor	µg/g	0.13	0.005	<0.005
Moisture Content	%		0.1	10.9
wet weight OC	g		NA	5.99
Surrogate	Unit	Acceptable Limits		
Decachlorobiphenyl	%	50-140		88
TCMX	%	50-140		79

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils **pH range listed applies to surface soil only**
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1571105 Results are based on the dry weight of the soil.
DDT total is a calculated parameter. The calculated value is the sum of op'DDT and pp'DDT.
DDD total is a calculated parameter. The calculated value is the sum of op'DDD and pp'DDD.
DDE total is a calculated parameter. The calculated value is the sum of op'DDE and pp'DDE.
Endosulfan total is a calculated parameter. The calculated value is the sum of Endosulfan I and Endosulfan II.
Chlordane total is a calculated parameter. The calculated value is the sum of Alpha-Chlordane and Gamma-Chlordane.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 20H664789

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-10-16

DATE REPORTED: 2020-11-02

		SAMPLE DESCRIPTION:		BH6 SA2	BH6 SA8
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2020-10-15	2020-10-15
Parameter	Unit	G / S	RDL	1571106	1571108
Acenaphthene	µg/g	7.9	0.05	<0.05	<0.05
Acenaphthylene	µg/g	0.15	0.05	<0.05	<0.05
Anthracene	µg/g	0.67	0.05	<0.05	<0.05
Benz(a)anthracene	µg/g	0.5	0.05	<0.05	<0.05
Benzo(a)pyrene	µg/g	0.3	0.05	0.05	<0.05
Benzo(b)fluoranthene	µg/g	0.78	0.05	0.08	<0.05
Benzo(g,h,i)perylene	µg/g	6.6	0.05	<0.05	<0.05
Benzo(k)fluoranthene	µg/g	0.78	0.05	<0.05	<0.05
Chrysene	µg/g	7	0.05	0.06	<0.05
Dibenz(a,h)anthracene	µg/g	0.1	0.05	<0.05	<0.05
Fluoranthene	µg/g	0.69	0.05	0.11	<0.05
Fluorene	µg/g	62	0.05	<0.05	<0.05
Indeno(1,2,3-cd)pyrene	µg/g	0.38	0.05	<0.05	<0.05
Moisture Content	%		0.1	15.5	21.7
Naphthalene	µg/g	0.6	0.05	<0.05	<0.05
Phenanthrene	µg/g	6.2	0.05	0.07	<0.05
Pyrene	µg/g	78	0.05	0.10	<0.05
1 and 2 Methlynaphthalene	µg/g	0.99	0.05	<0.05	<0.05
Surrogate	Unit	Acceptable Limits			
Acenaphthene-d10	%	50-140		90	82
Chrysene-d12	%	50-140		117	103
Naphthalene-d8	%	50-140		82	74

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils **pH range listed applies to surface soil only**
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1571106-1571108 Results are based on the dry weight of the soil.
Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&j)Fluoranthene isomers because the isomers co-elute on the GC column.
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene.

Analysis performed at AGAT Toronto (unless marked by *)

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Certificate of Analysis

AGAT WORK ORDER: 20H664789

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-10-16

DATE REPORTED: 2020-11-02

		SAMPLE DESCRIPTION:		BH6 SA4
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2020-10-15
Parameter	Unit	G / S	RDL	1571107
F1 (C6 to C10)	µg/g	55	5	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5	<5
F2 (C10 to C16)	µg/g	98	10	<10
F3 (C16 to C34)	µg/g	300	50	62
F4 (C34 to C50)	µg/g	2800	50	<50
Gravimetric Heavy Hydrocarbons	µg/g	2800	50	NA
Moisture Content	%		0.1	10.6
Surrogate	Unit	Acceptable Limits		
Terphenyl	%	60-140		74

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils **pH range listed applies to surface soil only**
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1571107 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX contribution.
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC6 and nC10 response factors are within 30% of Toluene response factor.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.
Fractions 1-4 are quantified without the contribution of PAHs. Under Ontario Regulation 153, results are considered valid without determining the PAH contribution if not requested by the client.

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Certificate of Analysis

AGAT WORK ORDER: 20H664789

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-10-16

DATE REPORTED: 2020-11-02

		SAMPLE DESCRIPTION:		BH6 SA8
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2020-10-15
Parameter	Unit	G / S	RDL	1571108
F1 (C6 to C10)	µg/g	55	5	<5
F1 (C6 to C10) minus BTEX	µg/g	55	5	<5
F2 (C10 to C16)	µg/g	98	10	<10
F2 (C10 to C16) minus Naphthalene	µg/g		10	<10
F3 (C16 to C34)	µg/g	300	50	<50
F3 (C16 to C34) minus PAHs	µg/g		50	<50
F4 (C34 to C50)	µg/g	2800	50	<50
Gravimetric Heavy Hydrocarbons	µg/g	2800	50	NA
Moisture Content	%		0.1	21.7
Surrogate	Unit	Acceptable Limits		
Terphenyl	%	60-140		124

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils **pH range listed applies to surface soil only**
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1571108 Results are based on sample dry weight.
The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 20H664789

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-10-16

DATE REPORTED: 2020-11-02

		SAMPLE DESCRIPTION:		BH6 SA4	BH6 SA8
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2020-10-15	2020-10-15
Parameter	Unit	G / S	RDL	1571107	1571108
Acetone	ug/g	16	0.50	<0.50	<0.50
Benzene	ug/g	0.21	0.02	<0.02	<0.02
Bromodichloromethane	ug/g	1.5	0.05	<0.05	<0.05
Bromoform	ug/g	0.27	0.05	<0.05	<0.05
Bromomethane	ug/g	0.05	0.05	<0.05	<0.05
Carbon Tetrachloride	ug/g	0.05	0.05	<0.05	<0.05
Chlorobenzene	ug/g	2.4	0.05	<0.05	<0.05
Chloroform	ug/g	0.05	0.04	<0.04	<0.04
Cis- 1,2-Dichloroethylene	ug/g	1.9	0.02	<0.02	<0.02
Dibromochloromethane	ug/g	2.3	0.05	<0.05	<0.05
1,2-Dichlorobenzene	ug/g	1.2	0.05	<0.05	<0.05
1,3-Dichlorobenzene	ug/g	4.8	0.05	<0.05	<0.05
1,4-Dichlorobenzene	ug/g	0.083	0.05	<0.05	<0.05
Dichlorodifluoromethane	µg/g	16	0.05	<0.05	<0.05
1,1-Dichloroethane	ug/g	0.47	0.02	<0.02	<0.02
1,2-Dichloroethane	ug/g	0.05	0.03	<0.03	<0.03
1,1-Dichloroethylene	ug/g	0.05	0.05	<0.05	<0.05
1,2-Dichloropropane	ug/g	0.05	0.03	<0.03	<0.03
1,3-Dichloropropene (Cis + Trans)	µg/g	0.05	0.04	<0.04	<0.04
Ethylbenzene	ug/g	1.1	0.05	<0.05	<0.05
Ethylene Dibromide	ug/g	0.05	0.04	<0.04	<0.04
Methyl Ethyl Ketone	ug/g	16	0.50	<0.50	<0.50
Methyl Isobutyl Ketone	ug/g	1.7	0.50	<0.50	<0.50
Methyl tert-butyl Ether	ug/g	0.75	0.05	<0.05	<0.05
Methylene Chloride	ug/g	0.1	0.05	<0.05	<0.05
Moisture Content	%		0.1	10.6	21.7
Styrene	ug/g	0.7	0.05	<0.05	<0.05
1,1,1,2-Tetrachloroethane	ug/g	0.058	0.04	<0.04	<0.04
1,1,2,2-Tetrachloroethane	ug/g	0.05	0.05	<0.05	<0.05
Tetrachloroethylene	ug/g	0.28	0.05	<0.05	<0.05

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Certificate of Analysis

AGAT WORK ORDER: 20H664789

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-10-16

DATE REPORTED: 2020-11-02

		SAMPLE DESCRIPTION:		BH6 SA4	BH6 SA8
		SAMPLE TYPE:		Soil	Soil
		DATE SAMPLED:		2020-10-15	2020-10-15
Parameter	Unit	G / S	RDL	1571107	1571108
Toluene	ug/g	2.3	0.05	<0.05	<0.05
Trans- 1,2-Dichloroethylene	ug/g	0.084	0.05	<0.05	<0.05
1,1,2-Trichloroethane	ug/g	0.05	0.04	<0.04	<0.04
1,1,1-Trichloroethane	ug/g	0.38	0.05	<0.05	<0.05
Trichloroethylene	ug/g	0.061	0.03	<0.03	<0.03
Trichlorofluoromethane	ug/g	4	0.05	<0.05	<0.05
Vinyl Chloride	ug/g	0.02	0.02	<0.02	<0.02
Xylenes (Total)	ug/g	3.1	0.05	<0.05	<0.05
m & p-Xylene	ug/g		0.05	<0.05	<0.05
n-Hexane	µg/g	2.8	0.05	<0.05	<0.05
o-Xylene	ug/g		0.05	<0.05	<0.05
Surrogate	Unit	Acceptable Limits			
4-Bromofluorobenzene	% Recovery	50-140		83	104
Toluene-d8	% Recovery	50-140		81	98

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils **pH range listed applies to surface soil only**
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1571107-1571108 The sample was analyzed using the high level technique. The sample was extracted using methanol, a small amount of the methanol extract was diluted in water and the purge & trap GC/MS analysis was performed. Results are based on the dry weight of the soil.
Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene + o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

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Exceedance Summary

AGAT WORK ORDER: 20H664789

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
1571105	BH6 SA1	ON T2 S RPI CT	O. Reg. 153(511) - Metals & Inorganics (Soil)	Electrical Conductivity (2:1)	mS/cm	0.7	0.916

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Quality Assurance

CLIENT NAME: TERRAPROBE INC
PROJECT: 7-20-0004-42
SAMPLING SITE:

AGAT WORK ORDER: 20H664789
ATTENTION TO: Amber Brooks
SAMPLED BY:

Soil Analysis

RPT Date: Nov 02, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Soil)															
Antimony	1575222		<0.8	<0.8	NA	< 0.8	124%	70%	130%	82%	80%	120%	102%	70%	130%
Arsenic	1575222		8	8	0.0%	< 1	104%	70%	130%	100%	80%	120%	100%	70%	130%
Barium	1575222		96	100	4.1%	< 2	102%	70%	130%	106%	80%	120%	108%	70%	130%
Beryllium	1575222		1.0	1.0	NA	< 0.5	99%	70%	130%	98%	80%	120%	101%	70%	130%
Boron	1575222		27	27	0.0%	< 5	80%	70%	130%	90%	80%	120%	80%	70%	130%
Boron (Hot Water Soluble)	1575222		0.37	0.38	NA	< 0.10	118%	60%	140%	103%	70%	130%	83%	60%	140%
Cadmium	1575222		<0.5	<0.5	NA	< 0.5	98%	70%	130%	102%	80%	120%	104%	70%	130%
Chromium	1575222		24	23	NA	< 5	93%	70%	130%	98%	80%	120%	98%	70%	130%
Chromium, Hexavalent	1570659		<0.2	<0.2	NA	< 0.2	97%	70%	130%	93%	80%	120%	81%	70%	130%
Cobalt	1575222		12.8	12.4	3.2%	< 0.5	87%	70%	130%	100%	80%	120%	92%	70%	130%
Copper	1575222		11	11	0.0%	< 1	90%	70%	130%	110%	80%	120%	96%	70%	130%
Cyanide, Free	1565500		<0.040	<0.040	NA	< 0.040	92%	70%	130%	97%	80%	120%	100%	70%	130%
Electrical Conductivity (2:1)	1575222		0.132	0.133	0.8%	< 0.005	100%	80%	120%						
Lead	1575222		12	12	0.0%	< 1	101%	70%	130%	104%	80%	120%	100%	70%	130%
Mercury	1575222		<0.10	<0.10	NA	< 0.10	103%	70%	130%	98%	80%	120%	97%	70%	130%
Molybdenum	1575222		0.9	0.9	NA	< 0.5	88%	70%	130%	101%	80%	120%	91%	70%	130%
Nickel	1575222		28	28	0.0%	< 1	87%	70%	130%	104%	80%	120%	93%	70%	130%
Selenium	1575222		0.6	0.5	NA	< 0.4	119%	70%	130%	102%	80%	120%	99%	70%	130%
Silver	1575222		<0.2	<0.2	NA	< 0.2	85%	70%	130%	107%	80%	120%	93%	70%	130%
Sodium Adsorption Ratio	1575222		0.317	0.306	3.5%	NA									
Thallium	1575222		<0.4	<0.4	NA	< 0.4	121%	70%	130%	104%	80%	120%	102%	70%	130%
Uranium	1575222		0.8	0.8	NA	< 0.5	119%	70%	130%	109%	80%	120%	109%	70%	130%
Vanadium	1575222		34	34	0.0%	< 1	92%	70%	130%	95%	80%	120%	92%	70%	130%
Zinc	1575222		64	63	1.6%	< 5	96%	70%	130%	108%	80%	120%	109%	70%	130%
pH, 2:1 CaCl2 Extraction	1570659		7.64	7.69	0.7%	NA	100%	80%	120%						
O. Reg. 153(511) - Metals & Inorganics (Soil) (excl. pH)															
Antimony	1587763		<0.8	<0.8	NA	< 0.8	127%	70%	130%	90%	80%	120%	100%	70%	130%
Arsenic	1587763		11	11	0.0%	< 1	114%	70%	130%	109%	80%	120%	106%	70%	130%
Barium	1587763		31	31	0.0%	< 2	99%	70%	130%	93%	80%	120%	88%	70%	130%
Beryllium	1587763		0.5	<0.5	NA	< 0.5	125%	70%	130%	115%	80%	120%	118%	70%	130%
Boron	1587763		<5	<5	NA	< 5	95%	70%	130%	101%	80%	120%	86%	70%	130%
Boron (Hot Water Soluble)	1613342		<0.10	0.10	NA	< 0.10	114%	60%	140%	97%	70%	130%	90%	60%	140%
Cadmium	1587763		<0.5	<0.5	NA	< 0.5	107%	70%	130%	103%	80%	120%	101%	70%	130%
Chromium	1587763		12	12	NA	< 5	100%	70%	130%	101%	80%	120%	97%	70%	130%
Chromium, Hexavalent	1611207		<0.2	<0.2	NA	< 0.2	96%	70%	130%	90%	80%	120%	93%	70%	130%
Cobalt	1587763		5.5	5.5	0.0%	< 0.5	94%	70%	130%	97%	80%	120%	95%	70%	130%

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

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Quality Assurance

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664789

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

Soil Analysis (Continued)

RPT Date: Nov 02, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Copper	1587763		23	23	0.0%	< 1	93%	70%	130%	107%	80%	120%	102%	70%	130%
Cyanide, Free	1605336		<0.040	<0.040	NA	< 0.040	106%	70%	130%	93%	80%	120%	107%	70%	130%
Electrical Conductivity (2:1)	1611955		0.364	0.364	0.0%	< 0.005	100%	80%	120%	NA			NA		
Lead	1587763		51	50	2.0%	< 1	108%	70%	130%	104%	80%	120%	98%	70%	130%
Mercury	1587763		<0.10	<0.10	NA	< 0.10	107%	70%	130%	103%	80%	120%	101%	70%	130%
Molybdenum	1587763		<0.5	<0.5	NA	< 0.5	93%	70%	130%	98%	80%	120%	95%	70%	130%
Nickel	1587763		9	9	0.0%	< 1	91%	70%	130%	99%	80%	120%	98%	70%	130%
Selenium	1587763		<0.4	<0.4	NA	< 0.4	125%	70%	130%	106%	80%	120%	104%	70%	130%
Silver	1587763		<0.2	<0.2	NA	< 0.2	97%	70%	130%	97%	80%	120%	92%	70%	130%
Sodium Adsorption Ratio	1596949		24.9	24.8	0.4%	NA	NA			NA			NA		
Thallium	1587763		<0.4	<0.4	NA	< 0.4	110%	70%	130%	102%	80%	120%	99%	70%	130%
Uranium	1587763		0.5	0.5	NA	< 0.5	115%	70%	130%	105%	80%	120%	103%	70%	130%
Vanadium	1587763		22	22	0.0%	< 1	98%	70%	130%	94%	80%	120%	93%	70%	130%
Zinc	1587763		50	49	2.0%	< 5	101%	70%	130%	108%	80%	120%	115%	70%	130%

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

Certified By:

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Quality Assurance

CLIENT NAME: TERRAPROBE INC
PROJECT: 7-20-0004-42
SAMPLING SITE:

AGAT WORK ORDER: 20H664789
ATTENTION TO: Amber Brooks
SAMPLED BY:

Trace Organics Analysis

RPT Date: Nov 02, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - OC Pesticides (Soil)															
Aldrin	1571095		< 0.005	< 0.005	NA	< 0.005	99%	50%	140%	102%	50%	140%	85%	50%	140%
Chlordane	1571095		< 0.007	< 0.007	NA	< 0.007	90%	50%	140%	95%	50%	140%	88%	50%	140%
DDD	1571095		< 0.007	< 0.007	NA	< 0.007	89%	50%	140%	94%	50%	140%	82%	50%	140%
DDE	1571095		< 0.007	< 0.007	NA	< 0.007	98%	50%	140%	90%	50%	140%	82%	50%	140%
DDT	1571095		< 0.007	< 0.007	NA	< 0.007	85%	50%	140%	103%	50%	140%	87%	50%	140%
Dieldrin	1571095		< 0.005	< 0.005	NA	< 0.005	96%	50%	140%	98%	50%	140%	83%	50%	140%
Endosulfan	1571095		< 0.005	< 0.005	NA	< 0.005	89%	50%	140%	97%	50%	140%	84%	50%	140%
Endrin	1571095		< 0.005	< 0.005	NA	< 0.005	86%	50%	140%	107%	50%	140%	90%	50%	140%
Gamma-Hexachlorocyclohexane	1571095		< 0.005	< 0.005	NA	< 0.005	92%	50%	140%	107%	50%	140%	89%	50%	140%
Heptachlor	1571095		< 0.005	< 0.005	NA	< 0.005	94%	50%	140%	103%	50%	140%	99%	50%	140%
Heptachlor Epoxide	1571095		< 0.005	< 0.005	NA	< 0.005	90%	50%	140%	93%	50%	140%	83%	50%	140%
Hexachlorobenzene	1571095		< 0.005	< 0.005	NA	< 0.005	103%	50%	140%	96%	50%	140%	96%	50%	140%
Hexachlorobutadiene	1571095		< 0.01	< 0.01	NA	< 0.01	99%	50%	140%	88%	50%	140%	83%	50%	140%
Hexachloroethane	1571095		< 0.01	< 0.01	NA	< 0.01	91%	50%	140%	86%	50%	140%	88%	50%	140%
Methoxychlor	1571095		< 0.005	< 0.005	NA	< 0.005	91%	50%	140%	105%	50%	140%	107%	50%	140%
O. Reg. 153(511) - PAHs (Soil)															
Acenaphthene	1570106		<0.05	<0.05	NA	< 0.05	111%	50%	140%	115%	50%	140%	107%	50%	140%
Acenaphthylene	1570106		<0.05	<0.05	NA	< 0.05	112%	50%	140%	116%	50%	140%	106%	50%	140%
Anthracene	1570106		<0.05	<0.05	NA	< 0.05	109%	50%	140%	107%	50%	140%	98%	50%	140%
Benz(a)anthracene	1570106		<0.05	<0.05	NA	< 0.05	104%	50%	140%	115%	50%	140%	108%	50%	140%
Benzo(a)pyrene	1570106		<0.05	<0.05	NA	< 0.05	113%	50%	140%	93%	50%	140%	101%	50%	140%
Benzo(b)fluoranthene	1570106		<0.05	<0.05	NA	< 0.05	117%	50%	140%	100%	50%	140%	116%	50%	140%
Benzo(g,h,i)perylene	1570106		<0.05	<0.05	NA	< 0.05	87%	50%	140%	87%	50%	140%	80%	50%	140%
Benzo(k)fluoranthene	1570106		<0.05	<0.05	NA	< 0.05	109%	50%	140%	108%	50%	140%	99%	50%	140%
Chrysene	1570106		<0.05	<0.05	NA	< 0.05	107%	50%	140%	111%	50%	140%	96%	50%	140%
Dibenz(a,h)anthracene	1570106		<0.05	<0.05	NA	< 0.05	95%	50%	140%	93%	50%	140%	82%	50%	140%
Fluoranthene	1570106		<0.05	<0.05	NA	< 0.05	112%	50%	140%	88%	50%	140%	107%	50%	140%
Fluorene	1570106		<0.05	<0.05	NA	< 0.05	119%	50%	140%	92%	50%	140%	113%	50%	140%
Indeno(1,2,3-cd)pyrene	1570106		<0.05	<0.05	NA	< 0.05	98%	50%	140%	102%	50%	140%	90%	50%	140%
Naphthalene	1570106		<0.05	<0.05	NA	< 0.05	100%	50%	140%	107%	50%	140%	96%	50%	140%
Phenanthrene	1570106		<0.05	<0.05	NA	< 0.05	115%	50%	140%	95%	50%	140%	107%	50%	140%
Pyrene	1570106		<0.05	<0.05	NA	< 0.05	114%	50%	140%	98%	50%	140%	108%	50%	140%
O. Reg. 153(511) - PHCs F1 - F4 (-BTEX) (Soil)															
F1 (C6 to C10)	1570659		< 5	< 5	NA	< 5	94%	60%	140%	107%	60%	140%	84%	60%	140%
F2 (C10 to C16)	1566874		< 10	< 10	NA	< 10	94%	60%	140%	103%	60%	140%	87%	60%	140%
F3 (C16 to C34)	1566874		< 50	< 50	NA	< 50	94%	60%	140%	100%	60%	140%	93%	60%	140%
F4 (C34 to C50)	1566874		< 50	< 50	NA	< 50	100%	60%	140%	85%	60%	140%	90%	60%	140%
O. Reg. 153(511) - VOCs (Soil)															

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Quality Assurance

CLIENT NAME: TERRAPROBE INC
PROJECT: 7-20-0004-42
SAMPLING SITE:

AGAT WORK ORDER: 20H664789
ATTENTION TO: Amber Brooks
SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Nov 02, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Acetone	1575282		<0.50	<0.50	NA	< 0.50	99%	50%	140%	100%	50%	140%	91%	50%	140%
Benzene	1575282		<0.02	<0.02	NA	< 0.02	77%	50%	140%	76%	60%	130%	86%	50%	140%
Bromodichloromethane	1575282		<0.05	<0.05	NA	< 0.05	104%	50%	140%	90%	60%	130%	80%	50%	140%
Bromoform	1575282		<0.05	<0.05	NA	< 0.05	110%	50%	140%	94%	60%	130%	92%	50%	140%
Bromomethane	1575282		<0.05	<0.05	NA	< 0.05	79%	50%	140%	88%	50%	140%	90%	50%	140%
Carbon Tetrachloride	1575282		<0.05	<0.05	NA	< 0.05	74%	50%	140%	82%	60%	130%	78%	50%	140%
Chlorobenzene	1575282		<0.05	<0.05	NA	< 0.05	82%	50%	140%	71%	60%	130%	76%	50%	140%
Chloroform	1575282		<0.04	<0.04	NA	< 0.04	79%	50%	140%	114%	60%	130%	109%	50%	140%
Cis- 1,2-Dichloroethylene	1575282		<0.02	<0.02	NA	< 0.02	80%	50%	140%	104%	60%	130%	97%	50%	140%
Dibromochloromethane	1575282		<0.05	<0.05	NA	< 0.05	109%	50%	140%	83%	60%	130%	89%	50%	140%
1,2-Dichlorobenzene	1575282		<0.05	<0.05	NA	< 0.05	93%	50%	140%	72%	60%	130%	77%	50%	140%
1,3-Dichlorobenzene	1575282		<0.05	<0.05	NA	< 0.05	90%	50%	140%	72%	60%	130%	80%	50%	140%
1,4-Dichlorobenzene	1575282		<0.05	<0.05	NA	< 0.05	102%	50%	140%	81%	60%	130%	88%	50%	140%
Dichlorodifluoromethane	1575282		<0.05	<0.05	NA	< 0.05	81%	50%	140%	100%	50%	140%	83%	50%	140%
1,1-Dichloroethane	1575282		<0.02	<0.02	NA	< 0.02	103%	50%	140%	92%	60%	130%	88%	50%	140%
1,2-Dichloroethane	1575282		<0.03	<0.03	NA	< 0.03	92%	50%	140%	102%	60%	130%	105%	50%	140%
1,1-Dichloroethylene	1575282		<0.05	<0.05	NA	< 0.05	72%	50%	140%	100%	60%	130%	95%	50%	140%
1,2-Dichloropropane	1575282		<0.03	<0.03	NA	< 0.03	88%	50%	140%	83%	60%	130%	83%	50%	140%
Ethylbenzene	1575282		<0.05	<0.05	NA	< 0.05	99%	50%	140%	75%	60%	130%	81%	50%	140%
Ethylene Dibromide	1575282		<0.04	<0.04	NA	< 0.04	117%	50%	140%	85%	60%	130%	85%	50%	140%
Methyl Ethyl Ketone	1575282		<0.50	<0.50	NA	< 0.50	100%	50%	140%	96%	50%	140%	92%	50%	140%
Methyl Isobutyl Ketone	1575282		<0.50	<0.50	NA	< 0.50	79%	50%	140%	88%	50%	140%	82%	50%	140%
Methyl tert-butyl Ether	1575282		<0.05	<0.05	NA	< 0.05	105%	50%	140%	108%	60%	130%	116%	50%	140%
Methylene Chloride	1575282		<0.05	<0.05	NA	< 0.05	104%	50%	140%	76%	60%	130%	102%	50%	140%
Styrene	1575282		<0.05	<0.05	NA	< 0.05	79%	50%	140%	77%	60%	130%	71%	50%	140%
1,1,1,2-Tetrachloroethane	1575282		<0.04	<0.04	NA	< 0.04	96%	50%	140%	76%	60%	130%	78%	50%	140%
1,1,2,2-Tetrachloroethane	1575282		<0.05	<0.05	NA	< 0.05	97%	50%	140%	96%	60%	130%	87%	50%	140%
Tetrachloroethylene	1575282		<0.05	<0.05	NA	< 0.05	72%	50%	140%	71%	60%	130%	75%	50%	140%
Toluene	1575282		<0.05	<0.05	NA	< 0.05	74%	50%	140%	71%	60%	130%	74%	50%	140%
Trans- 1,2-Dichloroethylene	1575282		<0.05	<0.05	NA	< 0.05	73%	50%	140%	94%	60%	130%	96%	50%	140%
1,1,2-Trichloroethane	1575282		<0.04	<0.04	NA	< 0.04	95%	50%	140%	89%	60%	130%	95%	50%	140%
1,1,1-Trichloroethane	1575282		<0.05	<0.05	NA	< 0.05	106%	50%	140%	97%	60%	130%	102%	50%	140%
Trichloroethylene	1575282		<0.03	<0.03	NA	< 0.03	89%	50%	140%	74%	60%	130%	84%	50%	140%
Trichlorofluoromethane	1575282		<0.05	<0.05	NA	< 0.05	74%	50%	140%	93%	50%	140%	95%	50%	140%
Vinyl Chloride	1575282		<0.02	<0.02	NA	< 0.02	73%	50%	140%	97%	50%	140%	79%	50%	140%
m & p-Xylene	1575282		<0.05	<0.05	NA	< 0.05	94%	50%	140%	92%	60%	130%	70%	50%	140%
n-Hexane	1575282		<0.05	<0.05	NA	< 0.05	105%	50%	140%	90%	60%	130%	79%	50%	140%
o-Xylene	1575282		<0.05	<0.05	NA	< 0.05	78%	50%	140%	90%	60%	130%	73%	50%	140%

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

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Quality Assurance

CLIENT NAME: TERRAPROBE INC
PROJECT: 7-20-0004-42
SAMPLING SITE:

AGAT WORK ORDER: 20H664789
ATTENTION TO: Amber Brooks
SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Nov 02, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Soil)															
F1 (C6 to C10)	1596945		7	7	NA	< 5	89%	60%	140%	108%	60%	140%	91%	60%	140%
F2 (C10 to C16)	1596434		< 10	< 10	NA	< 10	113%	60%	140%	92%	60%	140%	83%	60%	140%
F3 (C16 to C34)	1596434		< 50	< 50	NA	< 50	107%	60%	140%	102%	60%	140%	95%	60%	140%
F4 (C34 to C50)	1596434		< 50	< 50	NA	< 50	102%	60%	140%	104%	60%	140%	95%	60%	140%
O. Reg. 153(511) - PAHs (Soil)															
Acenaphthene	1589339		<0.05	<0.05	NA	< 0.05	97%	50%	140%	93%	50%	140%	101%	50%	140%
Acenaphthylene	1589339		<0.05	<0.05	NA	< 0.05	107%	50%	140%	94%	50%	140%	105%	50%	140%
Anthracene	1589339		<0.05	<0.05	NA	< 0.05	100%	50%	140%	102%	50%	140%	117%	50%	140%
Benz(a)anthracene	1589339		<0.05	<0.05	NA	< 0.05	112%	50%	140%	94%	50%	140%	110%	50%	140%
Benzo(a)pyrene	1589339		<0.05	<0.05	NA	< 0.05	93%	50%	140%	104%	50%	140%	115%	50%	140%
Benzo(b)fluoranthene	1589339		<0.05	<0.05	NA	< 0.05	101%	50%	140%	101%	50%	140%	103%	50%	140%
Benzo(g,h,i)perylene	1589339		<0.05	<0.05	NA	< 0.05	72%	50%	140%	77%	50%	140%	74%	50%	140%
Benzo(k)fluoranthene	1589339		<0.05	<0.05	NA	< 0.05	100%	50%	140%	94%	50%	140%	114%	50%	140%
Chrysene	1589339		<0.05	<0.05	NA	< 0.05	117%	50%	140%	106%	50%	140%	111%	50%	140%
Dibenz(a,h)anthracene	1589339		<0.05	<0.05	NA	< 0.05	70%	50%	140%	72%	50%	140%	77%	50%	140%
Fluoranthene	1589339		<0.05	<0.05	NA	< 0.05	110%	50%	140%	115%	50%	140%	101%	50%	140%
Fluorene	1589339		<0.05	<0.05	NA	< 0.05	110%	50%	140%	102%	50%	140%	112%	50%	140%
Indeno(1,2,3-cd)pyrene	1589339		<0.05	<0.05	NA	< 0.05	77%	50%	140%	80%	50%	140%	80%	50%	140%
Naphthalene	1589339		<0.05	<0.05	NA	< 0.05	86%	50%	140%	84%	50%	140%	90%	50%	140%
Phenanthrene	1589339		<0.05	<0.05	NA	< 0.05	109%	50%	140%	100%	50%	140%	114%	50%	140%
Pyrene	1589339		<0.05	<0.05	NA	< 0.05	118%	50%	140%	112%	50%	140%	103%	50%	140%
O. Reg. 153(511) - VOCs (Soil)															
Acetone	1603678		<0.50	<0.50	NA	< 0.50	102%	50%	140%	113%	50%	140%	108%	50%	140%
Benzene	1603678		<0.02	<0.02	NA	< 0.02	81%	50%	140%	100%	60%	130%	86%	50%	140%
Bromodichloromethane	1603678		<0.05	<0.05	NA	< 0.05	114%	50%	140%	112%	60%	130%	84%	50%	140%
Bromoform	1603678		<0.05	<0.05	NA	< 0.05	104%	50%	140%	92%	60%	130%	101%	50%	140%
Bromomethane	1603678		<0.05	<0.05	NA	< 0.05	105%	50%	140%	102%	50%	140%	88%	50%	140%
Carbon Tetrachloride	1603678		<0.05	<0.05	NA	< 0.05	83%	50%	140%	104%	60%	130%	84%	50%	140%
Chlorobenzene	1603678		<0.05	<0.05	NA	< 0.05	88%	50%	140%	84%	60%	130%	89%	50%	140%
Chloroform	1603678		<0.04	<0.04	NA	< 0.04	86%	50%	140%	98%	60%	130%	83%	50%	140%
Cis- 1,2-Dichloroethylene	1603678		<0.02	<0.02	NA	< 0.02	90%	50%	140%	108%	60%	130%	83%	50%	140%
Dibromochloromethane	1603678		<0.05	<0.05	NA	< 0.05	108%	50%	140%	105%	60%	130%	89%	50%	140%
1,2-Dichlorobenzene	1603678		<0.05	<0.05	NA	< 0.05	98%	50%	140%	98%	60%	130%	94%	50%	140%
1,3-Dichlorobenzene	1603678		<0.05	<0.05	NA	< 0.05	112%	50%	140%	79%	60%	130%	83%	50%	140%
1,4-Dichlorobenzene	1603678		<0.05	<0.05	NA	< 0.05	113%	50%	140%	110%	60%	130%	106%	50%	140%
Dichlorodifluoromethane	1603678		<0.05	<0.05	NA	< 0.05	89%	50%	140%	105%	50%	140%	99%	50%	140%
1,1-Dichloroethane	1603678		<0.02	<0.02	NA	< 0.02	96%	50%	140%	90%	60%	130%	101%	50%	140%
1,2-Dichloroethane	1603678		<0.03	<0.03	NA	< 0.03	80%	50%	140%	102%	60%	130%	102%	50%	140%

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Quality Assurance

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664789

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis (Continued)

RPT Date: Nov 02, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,1-Dichloroethylene	1603678		<0.05	<0.05	NA	< 0.05	87%	50%	140%	101%	60%	130%	90%	50%	140%
1,2-Dichloropropane	1603678		<0.03	<0.03	NA	< 0.03	87%	50%	140%	99%	60%	130%	105%	50%	140%
Ethylbenzene	1603678		<0.05	<0.05	NA	< 0.05	94%	50%	140%	111%	60%	130%	111%	50%	140%
Ethylene Dibromide	1603678		<0.04	<0.04	NA	< 0.04	97%	50%	140%	95%	60%	130%	109%	50%	140%
Methyl Ethyl Ketone	1603678		<0.50	<0.50	NA	< 0.50	108%	50%	140%	103%	50%	140%	88%	50%	140%
Methyl Isobutyl Ketone	1603678		<0.50	<0.50	NA	< 0.50	104%	50%	140%	85%	50%	140%	95%	50%	140%
Methyl tert-butyl Ether	1603678		<0.05	<0.05	NA	< 0.05	88%	50%	140%	100%	60%	130%	92%	50%	140%
Methylene Chloride	1603678		<0.05	<0.05	NA	< 0.05	95%	50%	140%	98%	60%	130%	103%	50%	140%
Styrene	1603678		<0.05	<0.05	NA	< 0.05	106%	50%	140%	82%	60%	130%	81%	50%	140%
1,1,1,2-Tetrachloroethane	1603678		<0.04	<0.04	NA	< 0.04	104%	50%	140%	104%	60%	130%	96%	50%	140%
1,1,2,2-Tetrachloroethane	1603678		<0.05	<0.05	NA	< 0.05	97%	50%	140%	96%	60%	130%	90%	50%	140%
Tetrachloroethylene	1603678		<0.05	<0.05	NA	< 0.05	93%	50%	140%	99%	60%	130%	91%	50%	140%
Toluene	1603678		<0.05	<0.05	NA	< 0.05	89%	50%	140%	86%	60%	130%	84%	50%	140%
Trans- 1,2-Dichloroethylene	1603678		<0.05	<0.05	NA	< 0.05	89%	50%	140%	93%	60%	130%	82%	50%	140%
1,1,2-Trichloroethane	1603678		<0.04	<0.04	NA	< 0.04	90%	50%	140%	98%	60%	130%	115%	50%	140%
1,1,1-Trichloroethane	1603678		<0.05	<0.05	NA	< 0.05	75%	50%	140%	105%	60%	130%	84%	50%	140%
Trichloroethylene	1603678		<0.03	<0.03	NA	< 0.03	113%	50%	140%	104%	60%	130%	93%	50%	140%
Trichlorofluoromethane	1603678		<0.05	<0.05	NA	< 0.05	82%	50%	140%	102%	50%	140%	90%	50%	140%
Vinyl Chloride	1603678		<0.02	<0.02	NA	< 0.02	82%	50%	140%	93%	50%	140%	106%	50%	140%
m & p-Xylene	1603678		<0.05	<0.05	NA	< 0.05	97%	50%	140%	108%	60%	130%	86%	50%	140%
n-Hexane	1603678		<0.05	<0.05	NA	< 0.05	105%	50%	140%	100%	60%	130%	83%	50%	140%
o-Xylene	1603678		<0.05	<0.05	NA	< 0.05	94%	50%	140%	96%	60%	130%	94%	50%	140%

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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664789

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Electrical Conductivity (2:1)	INOR-93-6036	modified from MSA PART 3, CH 14 and SM 2510 B	EC METER
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Mercury	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Sodium Adsorption Ratio	INOR-93-6007	McKeague 4.12 & 3.26 & EPA SW-846 6010C	ICP/OES
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
pH, 2:1 CaCl2 Extraction	INOR-93-6031	modified from EPA 9045D and MCKEAGUE 3.11	PH METER

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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664789

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Aldrin	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Chlordane	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
DDD	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
DDE	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
DDT	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Dieldrin	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Endosulfan	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Endrin	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Gamma-Hexachlorocyclohexane	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Heptachlor	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Heptachlor Epoxide	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Hexachlorobenzene	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Hexachlorobutadiene	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Hexachloroethane	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Methoxychlor	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Moisture Content		Tier 1 method	BALANCE
TCMX	ORG-91-5112	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
wet weight OC	ORG-91-5113		BALANCE
Acenaphthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthene-d10	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benz(a)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS

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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664789

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Chrysene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Chrysene-d12	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Fluorene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Moisture Content	ORG-91-5106	Tier 1 Method	BALANCE
Naphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
Pyrene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
1 and 2 Methlynaphthalene	ORG-91-5106	modified from EPA 3570 and EPA 8270E	GC/MS
F1 (C6 to C10)	VOL-91-5009	modified from CCME Tier 1 Method, SW846 5035	P&T GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method, SW846 5035	P&T GC/FID
F2 (C10 to C16)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F4 (C34 to C50)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Moisture Content	VOL-91-5009	modified from CCME Tier 1 Method	BALANCE
Terphenyl	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F1 (C6 to C10)	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
F1 (C6 to C10) minus BTEX	VOL-91-5009	modified from CCME Tier 1 Method	P&T GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34)	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5009	modified from CCME Tier 1 Method	GC/FID
Acetone	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5002	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664789

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Chloroform	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Cis- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Dichlorodifluoromethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene (Cis + Trans)	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Methyl tert-butyl Ether	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5002	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trans- 1,2-Dichloroethylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664789

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trichlorofluoromethane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5002	modified from EPA 5035C and EPA 8260D	(P&T)GC/MS

AGAT Laboratories

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webearth.agatlabs.com

Chain of Custody Record

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

Laboratory Use Only ADD TO WO# 20H664789
Work Order #:
Cooler Quantity: MD COOLER
Arrival Temperatures: 6.3 6.0 7.0 9.8 9.9 9.8
Custody Seal Intact: ☐Yes ☐No ☐N/A
Notes: NO ICE

Report Information:

Company:
Contact:
Address:
Phone:
Reports to be sent to:
1. Email:
2. Email:

Terraprobe Inc. 903 Barton Street, Unit 22
Stoney Creek, Ontario L8E 5P5
Ph: (905) 643-7560 **Fax:** (905) 643-7559
Attn.: Amber Brooks abrooks@terraprobe.ca

Regulatory Requirements:

(Please check all applicable boxes)

☐ Regulation 558

☒ Regulation 153/04
Table 3 (Indicate One)
☐ Ind/Com
☒ Res/Park
☐ Agriculture
Soil Texture (Check One)
☒ Coarse
☐ Fine

☐ Excess Soils R406
Table _____ (Indicate One)
Sample from APEC?
☐ Yes
☐ No
☐ Stockpile ☐ In-situ

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

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

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

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

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

OR Date Required (Rush Surcharges May Apply):

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

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

Project Information:

Project: T-20-0004-42
Site Location:
Sampled By: K. Greenman
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☑ No ☐

Company:
Contact: Laura Rossi
Address:
Email: lrossi@terraprobe.ca

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics, inc. EC/SAR	Metals - ICPMS, ☐ CrVI, ☐ Hg, ☐ HWSB	BTEX, F1-F4 PHCs Analyze F4G if required ☒ Yes ☐ No	PAHs	PCBs	VOC	Landfill Disposal Characterization TCLP: ☐ TCLP: ☐ M&I ☐ VOCs ☐ AENs ☐ B(a)P ☐ PCBs	Excess Soils SPLP Rainwater Leach ☐ SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
BH6 SA8	Oct 5/20	AM/PM	~~3~~ 3	S	Limited sample		X		X	X		X					
		AM/PM			Additional sample available at lab												
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															
		AM/PM															

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
K. Greenman	Oct 26/20	3:35pm	Daniella Jaic	Oct 26/20	1:00pm
Daniella Jaic	Oct 26/20	3pm	John Chypyha	Oct 26	4:30
			John Chypyha	Oct 26	6:20

Page 1 of 1
N°: T 106871

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

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CLIENT NAME: TERRAPROBE INC
903 Barton Street
Stoney Creek, ON L8E5P5
(905) 643-7560

ATTENTION TO: Amber Brooks

PROJECT: 7-20-0004-42

AGAT WORK ORDER: 20H664786

SOIL ANALYSIS REVIEWED BY: Jacky Zhu, Spectroscopy Technician

TRACE ORGANICS REVIEWED BY: Pinkal Patel, Report Reviewer

DATE REPORTED: Oct 22, 2020

PAGES (INCLUDING COVER): 9

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days following analysis, unless expressly agreed otherwise in writing. Please contact your Client Project Manager if you require additional sample storage time.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

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Certificate of Analysis

AGAT WORK ORDER: 20H664786
PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC
SAMPLING SITE:

ATTENTION TO: Amber Brooks
SAMPLED BY:

O. Reg. 153(511) - Metals (Including Hydrides) (Soil)

DATE RECEIVED: 2020-10-16

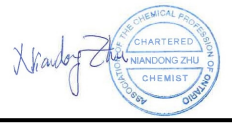
DATE REPORTED: 2020-10-22

		SAMPLE DESCRIPTION:		BH7 SA1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2020-10-15
Parameter	Unit	G / S	RDL	1570999
Antimony	µg/g	7.5	0.8	<0.8
Arsenic	µg/g	18	1	5
Barium	µg/g	390	2	97
Beryllium	µg/g	4	0.5	0.9
Boron	µg/g	120	5	10
Cadmium	µg/g	1.2	0.5	<0.5
Chromium	µg/g	160	5	26
Cobalt	µg/g	22	0.5	11.8
Copper	µg/g	140	1	26
Lead	µg/g	120	1	15
Molybdenum	µg/g	6.9	0.5	<0.5
Nickel	µg/g	100	1	24
Selenium	µg/g	2.4	0.4	0.5
Silver	µg/g	20	0.2	<0.2
Thallium	µg/g	1	0.4	<0.4
Uranium	µg/g	23	0.5	0.7
Vanadium	µg/g	86	1	35
Zinc	µg/g	340	5	76

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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Certificate of Analysis

AGAT WORK ORDER: 20H664786

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-10-16

DATE REPORTED: 2020-10-22

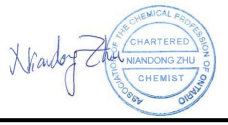
		SAMPLE DESCRIPTION:		BH7 SA1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2020-10-15
Parameter	Unit	G / S	RDL	1570999
Chromium, Hexavalent	µg/g	8	0.2	<0.2
Cyanide, Free	µg/g	0.051	0.040	<0.040
Mercury	µg/g	0.27	0.10	<0.10
pH, 2:1 CaCl2 Extraction	pH Units	5.0-9.0	NA	7.59

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1570999 pH was determined on the 0.01M CaCl2 extract obtained from 2:1 leaching procedure (2 parts extraction fluid:1 part wet soil).

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



AGAT Laboratories

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http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 20H664786

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

O. Reg. 153(511) - OC Pesticides (Soil)

DATE RECEIVED: 2020-10-16

DATE REPORTED: 2020-10-22

		SAMPLE DESCRIPTION:		BH7 SA1
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2020-10-15
Parameter	Unit	G / S	RDL	1570999
Aldrin	µg/g	0.05	0.005	<0.005
Chlordane	µg/g	0.05	0.007	<0.007
DDD	µg/g	3.3	0.007	<0.007
DDE	µg/g	0.26	0.007	<0.007
DDT	µg/g	1.4	0.007	<0.007
Dieldrin	µg/g	0.05	0.005	<0.005
Endosulfan	µg/g	0.04	0.005	<0.005
Endrin	µg/g	0.04	0.005	<0.005
Gamma-Hexachlorocyclohexane	µg/g	0.056	0.005	<0.005
Heptachlor	µg/g	0.15	0.005	<0.005
Heptachlor Epoxide	µg/g	0.05	0.005	<0.005
Hexachlorobenzene	µg/g	0.52	0.005	<0.005
Hexachlorobutadiene	µg/g	0.012	0.01	<0.01
Hexachloroethane	µg/g	0.089	0.01	<0.01
Methoxychlor	µg/g	0.13	0.005	<0.005
Moisture Content	%		0.1	10.7
wet weight OC	g		NA	5.29
Surrogate	Unit	Acceptable Limits		
Decachlorobiphenyl	%	50-140		96
TCMX	%	50-140		87

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1570999 Results are based on the dry weight of the soil.
DDT total is a calculated parameter. The calculated value is the sum of op'DDT and pp'DDT.
DDD total is a calculated parameter. The calculated value is the sum of op'DDD and pp'DDD.
DDE total is a calculated parameter. The calculated value is the sum of op'DDE and pp'DDE.
Endosulfan total is a calculated parameter. The calculated value is the sum of Endosulfan I and Endosulfan II.
Chlordane total is a calculated parameter. The calculated value is the sum of Alpha-Chlordane and Gamma-Chlordane.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Pinkal Patel

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Quality Assurance

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664786

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

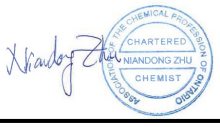
SAMPLED BY:

Soil Analysis

RPT Date: Oct 22, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals (Including Hydrides) (Soil)															
Antimony	1575222		<0.8	<0.8	NA	< 0.8	124%	70%	130%	82%	80%	120%	102%	70%	130%
Arsenic	1575222		8	8	0.0%	< 1	104%	70%	130%	100%	80%	120%	100%	70%	130%
Barium	1575222		96	100	4.1%	< 2	102%	70%	130%	106%	80%	120%	108%	70%	130%
Beryllium	1575222		1.0	1.0	NA	< 0.5	99%	70%	130%	98%	80%	120%	101%	70%	130%
Boron	1575222		27	27	0.0%	< 5	80%	70%	130%	90%	80%	120%	80%	70%	130%
Cadmium	1575222		<0.5	<0.5	NA	< 0.5	98%	70%	130%	102%	80%	120%	104%	70%	130%
Chromium	1575222		24	23	NA	< 5	93%	70%	130%	98%	80%	120%	98%	70%	130%
Cobalt	1575222		12.8	12.4	3.2%	< 0.5	87%	70%	130%	100%	80%	120%	92%	70%	130%
Copper	1575222		11	11	0.0%	< 1	90%	70%	130%	110%	80%	120%	96%	70%	130%
Lead	1575222		12	12	0.0%	< 1	101%	70%	130%	104%	80%	120%	100%	70%	130%
Molybdenum	1575222		0.9	0.9	NA	< 0.5	88%	70%	130%	101%	80%	120%	91%	70%	130%
Nickel	1575222		28	28	0.0%	< 1	87%	70%	130%	104%	80%	120%	93%	70%	130%
Selenium	1575222		0.6	0.5	NA	< 0.4	119%	70%	130%	102%	80%	120%	99%	70%	130%
Silver	1575222		<0.2	<0.2	NA	< 0.2	85%	70%	130%	107%	80%	120%	93%	70%	130%
Thallium	1575222		<0.4	<0.4	NA	< 0.4	121%	70%	130%	104%	80%	120%	102%	70%	130%
Uranium	1575222		0.8	0.8	NA	< 0.5	119%	70%	130%	109%	80%	120%	109%	70%	130%
Vanadium	1575222		34	34	0.0%	< 1	92%	70%	130%	95%	80%	120%	92%	70%	130%
Zinc	1575222		64	63	1.6%	< 5	96%	70%	130%	108%	80%	120%	109%	70%	130%
O. Reg. 153(511) - ORPs (Soil)															
Chromium, Hexavalent	1570659		<0.2	<0.2	NA	< 0.2	97%	70%	130%	93%	80%	120%	81%	70%	130%
Cyanide, Free	1565500		<0.040	<0.040	NA	< 0.040	92%	70%	130%	97%	80%	120%	100%	70%	130%
Mercury	1575222		<0.10	<0.10	NA	< 0.10	103%	70%	130%	98%	80%	120%	97%	70%	130%
pH, 2:1 CaCl2 Extraction	1570659		7.64	7.69	0.7%	NA	100%	80%	120%						

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

Certified By:



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Quality Assurance

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664786

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

Trace Organics Analysis

RPT Date: Oct 22, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - OC Pesticides (Soil)															
Aldrin	1571095		< 0.005	< 0.005	NA	< 0.005	99%	50%	140%	102%	50%	140%	85%	50%	140%
Chlordane	1571095		< 0.007	< 0.007	NA	< 0.007	90%	50%	140%	95%	50%	140%	88%	50%	140%
DDD	1571095		< 0.007	< 0.007	NA	< 0.007	89%	50%	140%	94%	50%	140%	82%	50%	140%
DDE	1571095		< 0.007	< 0.007	NA	< 0.007	98%	50%	140%	90%	50%	140%	82%	50%	140%
DDT	1571095		< 0.007	< 0.007	NA	< 0.007	85%	50%	140%	103%	50%	140%	87%	50%	140%
Dieldrin	1571095		< 0.005	< 0.005	NA	< 0.005	96%	50%	140%	98%	50%	140%	83%	50%	140%
Endosulfan	1571095		< 0.005	< 0.005	NA	< 0.005	89%	50%	140%	97%	50%	140%	84%	50%	140%
Endrin	1571095		< 0.005	< 0.005	NA	< 0.005	86%	50%	140%	107%	50%	140%	90%	50%	140%
Gamma-Hexachlorocyclohexane	1571095		< 0.005	< 0.005	NA	< 0.005	92%	50%	140%	107%	50%	140%	89%	50%	140%
Heptachlor	1571095		< 0.005	< 0.005	NA	< 0.005	94%	50%	140%	103%	50%	140%	99%	50%	140%
Heptachlor Epoxide	1571095		< 0.005	< 0.005	NA	< 0.005	90%	50%	140%	93%	50%	140%	83%	50%	140%
Hexachlorobenzene	1571095		< 0.005	< 0.005	NA	< 0.005	103%	50%	140%	96%	50%	140%	96%	50%	140%
Hexachlorobutadiene	1571095		< 0.01	< 0.01	NA	< 0.01	99%	50%	140%	88%	50%	140%	83%	50%	140%
Hexachloroethane	1571095		< 0.01	< 0.01	NA	< 0.01	91%	50%	140%	86%	50%	140%	88%	50%	140%
Methoxychlor	1571095		< 0.005	< 0.005	NA	< 0.005	91%	50%	140%	105%	50%	140%	107%	50%	140%

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

Certified By:

AGAT Laboratories

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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664786

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Antimony	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Arsenic	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Barium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Beryllium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Boron	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cadmium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Cobalt	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Copper	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Lead	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Molybdenum	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Nickel	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Selenium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Silver	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Thallium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Uranium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Vanadium	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Zinc	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
Chromium, Hexavalent	INOR-93-6068	modified from EPA 3060 and EPA 7196	SPECTROPHOTOMETER
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Mercury	MET-93-6103	modified from EPA 3050B and EPA 6020B and ON MOECC	ICP-MS
pH, 2:1 CaCl2 Extraction	INOR-93-6031	modified from EPA 9045D and MCKEAGUE 3.11	PH METER

AGAT Laboratories

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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H664786

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Aldrin	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Chlordane	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
DDD	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
DDE	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
DDT	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Decachlorobiphenyl	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Dieldrin	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Endosulfan	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Endrin	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Gamma-Hexachlorocyclohexane	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Heptachlor	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Heptachlor Epoxide	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Hexachlorobenzene	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Hexachlorobutadiene	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Hexachloroethane	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Methoxychlor	ORG-91-5113	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
Moisture Content		Tier 1 method	BALANCE
TCMX	ORG-91-5112	modified from EPA SW-846 3541,3620 & 8081	GC/ECD
wet weight OC	ORG-91-5113		BALANCE

AGAT Laboratories

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Chain of Custody Record

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

Laboratory Use Only

Work Order #: 20H664756

Cooler Quantity: LG COOLER

Arrival Temperatures: 4.6 | 4.5 | 4.2 | 5.2 | 5.4 | 5.2

Custody Seal Intact: ☐ Yes ☐ No ☐ N/A

Notes: ON ICE

Report Information:

Company:
Contact:
Address:
Phone:

Terraprobe Inc. 903 Barton Street, Unit 22
Stoney Creek, Ontario L8E 5P5
Ph: (905) 643-7560 **Fax:** (905) 643-7559
Attn.: Amber Brooks abrooks@terraprobe.ca

Reports to be sent to:
1. Email:
2. Email:

Regulatory Requirements: ☐ No Regulatory Requirement

(Please check all applicable boxes)

☒ Regulation 153/04
Table 2 (Indicate One)
☐ Ind/Com
☒ Res/Park
☐ Agriculture
Soil Texture (Check One)
☒ Coarse
☐ Fine

☐ Sewer Use
☐ Sanitary
☐ Storm
Region _____ (Indicate One)
☐ MISA

☐ Regulation 558
☐ CCME
☐ Prov. Water Quality Objectives (PWQO)
☐ Other
_____ (Indicate One)

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

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

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

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

OR Date Required (Rush Surcharges May Apply):

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

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

Project Information:

Project: 7-20-0004-42
Site Location:
Sampled By: K. Greenman
AGAT Quote #: _____ PO: _____
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company:
Contact: Carena Rossi
Address:
Email: crossi@terraprobe.ca

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI (Y/N)	Metals and Inorganics: ☐ All Metals ☐ 153 Metals (excl. Hydrides) ☒ 153 Metals (Incl. Hydrides) ☐ Hydride Metals	O. Reg 153: ORPs: ☐ B-HWS ☐ Cl ☐ CN ☐ EC ☐ FOC ☐ Hg ☐ pH ☐ SAR	Full Metals Scan	Regulation/Custom Metals	Nutrients: ☐ TP ☐ NH_3 ☐ TKN ☐ NO_3 ☐ NO_2 ☐ NO_3+NO_2	Volatiles: ☐ VOC ☐ BTEX ☐ THM	PHCs F1 - F4	ABNs	PAHs	PCBs: ☐ Total ☐ Aroclors	Organochlorine Pesticides	TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	Sewer Use						Potentially Hazardous or High Concentration (Y/N)
BH7 SA1	oct 15/20		2	S			X	X									X								

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
K. Greenman	oct 16/20	17:30pm	Daniella Jail	OCT 16/20	12:45pm
Daniella Jail	OCT 16/20	3pm	John Chyzyka	Oct 16	4:00
			John Chyzyka	Oct 16	5:14

Page 1 of 1

№: T099043

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CLIENT NAME: TERRAPROBE INC
903 Barton Street
Stoney Creek, ON L8E5P5
(905) 643-7560
ATTENTION TO: Amber Brooks
PROJECT: 7-20-0004-42
AGAT WORK ORDER: 20H668090
SOIL ANALYSIS REVIEWED BY: Jacky Zhu, Spectroscopy Technician
DATE REPORTED: Oct 29, 2020
PAGES (INCLUDING COVER): 6
VERSION*: 1

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

*Notes

AGAT Laboratories

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http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 20H668090

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

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

DATE RECEIVED: 2020-10-23

DATE REPORTED: 2020-10-29

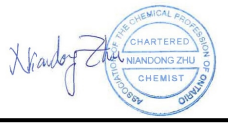
		SAMPLE DESCRIPTION:		Dup4
		SAMPLE TYPE:		Soil
		DATE SAMPLED:		2020-10-15
Parameter	Unit	G / S	RDL	1595476
Boron (Hot Water Soluble)	µg/g	1.5	0.10	0.48
Electrical Conductivity (2:1)	mS/cm	0.7	0.005	0.755
Sodium Adsorption Ratio (2:1) (Calc.)	N/A	5	N/A	2.78

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Coarse Textured Soils **pH range listed applies to surface soil only**
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1595476 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil). SAR is a calculated parameter.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:



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Exceedance Summary

AGAT WORK ORDER: 20H668090

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLEID	SAMPLE TITLE	GUIDELINE	ANALYSIS PACKAGE	PARAMETER	UNIT	GUIDEVALUE	RESULT
1595476	Dup4	ON T2 S RPI CT	O. Reg. 153(511) - ORPs (Soil)	Electrical Conductivity (2:1)	mS/cm	0.7	0.755

AGAT Laboratories

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FAX (905)712-5122
http://www.agatlabs.com

Quality Assurance

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H668090

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

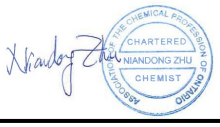
Soil Analysis

RPT Date: Oct 29, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - ORPs (Soil)															
Boron (Hot Water Soluble)	1607990		0.33	0.36	NA	< 0.10	104%	60%	140%	94%	70%	130%	97%	60%	140%
Electrical Conductivity (2:1)	1607990		0.145	0.145	0.0%	< 0.005	101%	80%	120%						
Sodium Adsorption Ratio (2:1) (Calc.)	1607990		0.134	0.121	10.2%	N/A									

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

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

Certified By:



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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H668090

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Boron (Hot Water Soluble)	MET-93-6104	modified from EPA 6010D and MSA PART 3, CH 21	ICP/OES
Electrical Conductivity (2:1)	INOR-93-6036	modified from MSA PART 3, CH 14 and SM 2510 B	EC METER
Sodium Adsorption Ratio (2:1) (Calc.)	INOR-93-6007	modified from EPA 6010D & Analytical Protocol	ICP/OES

AGAT Laboratories

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

Chain of Custody Record

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

Laboratory Use Only

Work Order #: 20H668690

Cooler Quantity: 1 JAR

Arrival Temperatures: 4.8 | 4.6 | 4.5 / 5.2 | 5 | 5.6

Custody Seal Intact: ☐Yes ☐No ☐N/A

Notes:

Report Information:

Company: **Terraprobe Inc.** 903 Barton Street, Unit 22

Contact: Stoney Creek, Ontario L8E 5P5

Address: **Ph:** (905) 643-7560 **Fax:** (905) 643-7559

Attn.: Amber Brooks abrooks@terraprobe.ca

Phone:

Reports to be sent to:

1. Email:

2. Email:

Regulatory Requirements:

(Please check all applicable boxes)

☒ Regulation 153/04
Table 2 (Indicate One)
☐Ind/Com
☒Res/Park
☐Agriculture

Soil Texture *(Check One)*
☐Coarse
☐Fine

☐Excess Soils R406
Table ____ (Indicate One)
Sample from APEC?
☐Yes
☐No
☐Stockpile ☐In-situ

☐ Regulation 558
☐Sewer Use
☐Sanitary ☐Storm
Region ____
☐CCME
☐Prov. Water Quality Objectives (PWQO)
☐Other
Indicate One ____

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

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

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

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

OR Date Required (Rush Surcharges May Apply):

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

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

Project Information:

Project: 7-20-0004-42

Site Location:

Sampled By:

AGAT Quote #: PO:

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

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company:

Contact:

Address:

Email:

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y / N)	O. Reg 153: Metals & Inorganics, inc. EC/SAR	O. Reg 153: Metals - ICPMS, ☐ CrVI, ☐ Hg, ☐ HWSB	O. Reg 153: BTEX, F1-F4 PHCs	O. Reg 153: Analyze F4G if required ☐ Yes ☐ No	PAHs	PCBs	VOC	Landfill Disposal Characterization TCLP: TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	Excess Soils SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Boron - HWS								Potentially Hazardous or High Concentration (Y/N)
Dup4	Oct15/20	AM PM	1	Soil													X	X								
		AM PM																								
		AM PM																								
		AM PM																								
		AM PM																								
		AM PM																								
		AM PM																								
		AM PM																								
		AM PM																								
		AM PM																								
		AM PM																								

Samples Relinquished By (Print Name and Sign):	Date	Time	Samples Received By (Print Name and Sign):	Date	Time
Amber Brooks [signature]	Oct23/20	2:25p	Daniella Jaill [signature]	Oct23/20	2:25pm
Daniella Jaill [signature]	Oct23/20	3pm	John Chypyha	Oct23	3:15
[illegible] [signature]			John Chypyha	Oct23	4:45

Page 1 of 1

Nº: T 106870

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

CLIENT NAME: TERRAPROBE INC
903 Barton Street
Stoney Creek, ON L8E5P5
(905) 643-7560
ATTENTION TO: Amber Brooks
PROJECT: 7-20-0004-42
AGAT WORK ORDER: 20H673131
SOIL ANALYSIS REVIEWED BY: Amanjot Bhela, Inorganic Lab Manager
DATE REPORTED: Nov 09, 2020
PAGES (INCLUDING COVER): 5
VERSION*: 1

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

*Notes

AGAT Laboratories

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

Certificate of Analysis

AGAT WORK ORDER: 20H673131

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:K. Greenman

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

DATE RECEIVED: 2020-11-04

DATE REPORTED: 2020-11-09

		SAMPLE DESCRIPTION:		BH6 SA1 A	BH6 SA1 B	BH6 SA1 C
		SAMPLE TYPE:		Soil	Soil	Soil
		DATE SAMPLED:		2020-11-03	2020-11-03	2020-11-03
Parameter	Unit	G / S	RDL	1647838	1647842	1647843
Electrical Conductivity (2:1)	mS/cm	0.7	0.005	0.613	0.473	0.346

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Soil - Residential/Parkland/Institutional Property Use - Medium and Fine Textured Soils **pH range listed applies to surface soil only**
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1647838-1647843 EC was determined on the DI water extract obtained from the 2:1 leaching procedure (2 parts DI water:1 part soil).

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

AGAT Laboratories

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

Quality Assurance

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H673131

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:K. Greenman

Soil Analysis

RPT Date: Nov 09, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - ORPs (Soil)															
Electrical Conductivity (2:1)	1628830		0.265	0.265	0.0%	< 0.005	101%	80%	120%	NA			NA		

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

Certified By:

AGAT Laboratories

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

Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H673131

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:K. Greenman

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Soil Analysis			
Electrical Conductivity (2:1)	INOR-93-6036	modified from MSA PART 3, CH 14 and SM 2510 B	EC METER

AGAT Laboratories

5835 Coopers Avenue
Mississauga, Ontario L4Z 1Y2
Ph: 905.712.5100 Fax: 905.712.5122
webearth.agatlabs.com

Chain of Custody Record

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

Laboratory Use Only

Work Order #: 20H673131

Cooler Quantity: LG COOLER

Arrival Temperatures: 6.5 | 6.0 | 6.3
6.0 | 6.2 | 6.4

Custody Seal Intact: ☐ Yes ☐ No ☐ N/A

Notes: ON ICE

Report Information:

Company:
Contact:
Address:
Phone:

Terraprobe Inc. 903 Barton Street, Unit 22
Stoney Creek, Ontario L8E 5P5
Ph: (905) 643-7560 **Fax:** (905) 643-7559
Attn.: Amber Brooks abrooks@terraprobe.ca

Reports to be sent to:
1. Email:
2. Email:

Regulatory Requirements:

☐ No Regulatory Requirement

(Please check all applicable boxes)

☒ Regulation 153/04
Table 2 (Indicate One)
☐ Ind/Com
☒ Res/Park
☐ Agriculture
Soil Texture (Check One)
☐ Coarse
☒ Fine

☐ Sewer Use
☐ Sanitary
☐ Storm
Region _____ (Indicate One)
☐ MISA

☐ Regulation 558
☐ CCME
☐ Prov. Water Quality Objectives (PWQO)
☐ Other
_____ (Indicate One)

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

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

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

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

OR Date Required (Rush Surcharges May Apply):

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

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

Project Information:

Project: 7-20-0004-42
Site Location:
Sampled By: K. Greenman
AGAT Quote #: _____ PO: _____
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company:
Contact: Lorena Rossi
Address:
Email: lrossi@terraprobe.ca

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Field Filtered - Metals, Hg, CrVI	O. Reg 153: Metals and Inorganics	O. Reg 153: All Metals (exclude Hydrides)	O. Reg 153: Hydride Metals (incl. Hydrides)	O. Reg 153: ORPs: B-HWS, Cl, CN	O. Reg 153: Cr6+, EC, FOC, Hg	O. Reg 153: pH, SAR	Full Metals Scan	Regulation/Custom Metals	Nutrients: TP, NH3, TKN, NO3, NO2, NO2+NO3	Volatiles: VOC, BTEX, THM	PHCs F1 - F4	ABNs	PAHs	PCBs: Total, Aroclors	Organochlorine Pesticides	TCLP: M&I, VOCs, ABNs, B(a)P, PCBs	Sewer Use	Potentially Hazardous or High Concentration (Y/N)
BH6 SA1 A	Nov 3/20		1	S							X														
BH6 SA1 B	↓		↓	↓							X														
BH6 SA1 C											X														

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
K. Greenman	Nov 3/20	5:20pm	Daniella Jaic	Nov 4/20	8am
Daniella Jaic	Nov 4/20	3pm	John Chypyha	Nov4	3:00
			John Chypyha	Nov4	3:00

Page 1 of 1

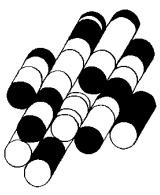
№: T 102131

Document ID: DW-78-1511.010

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

APPENDIX G

TERRAPROBE INC.



AGAT Laboratories

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TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

CLIENT NAME: TERRAPROBE INC
903 Barton Street
Stoney Creek, ON L8E5P5
(905) 643-7560

ATTENTION TO: Amber Brooks

PROJECT: 7-20-0004-42

AGAT WORK ORDER: 20H673122

TRACE ORGANICS REVIEWED BY: Oksana Gushyla, Trace Organics Lab Supervisor

WATER ANALYSIS REVIEWED BY: Amanjot Bhela, Inorganic Lab Manager

DATE REPORTED: Nov 10, 2020

PAGES (INCLUDING COVER): 9

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days following analysis, unless expressly agreed otherwise in writing. Please contact your Client Project Manager if you require additional sample storage time.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

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FAX (905)712-5122
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 20H673122
PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC
SAMPLING SITE:

ATTENTION TO: Amber Brooks
SAMPLED BY:K. Greenman

O. Reg. 153(511) - OC Pesticides (Water)

DATE RECEIVED: 2020-11-04

DATE REPORTED: 2020-11-10

				SAMPLE DESCRIPTION:	BH2
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2020-11-03 13:00
Parameter	Unit	G / S	RDL		1648947
Aldrin	µg/L	0.35	0.01		<0.01
Chlordane	µg/L	7	0.04		<0.04
DDD	µg/L	10	0.05		<0.05
DDE	µg/L	10	0.01		<0.01
DDT	µg/L	2.8	0.04		<0.04
Dieldrin	µg/L	0.35	0.02		<0.02
Endosulfan	µg/L	1.5	0.05		<0.05
Endrin	µg/L	0.48	0.05		<0.05
Gamma-Hexachlorocyclohexane	µg/L	1.2	0.01		<0.01
Heptachlor	µg/L	1.5	0.01		<0.01
Heptachlor Epoxide	µg/L	0.048	0.01		<0.01
Hexachlorobenzene	ug/L	1	0.01		<0.01
Hexachlorobutadiene	ug/L	0.6	0.01		<0.01
Hexachloroethane	ug/L	2.1	0.01		<0.01
Methoxychlor	µg/L	6.5	0.04		<0.04
Surrogate	Unit	Acceptable Limits			
Decachlorobiphenyl	%	60-140			78
TCMX	%	50-140			76

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1648947 DDT total is a calculated parameter. The calculated value is the sum of op'DDT and pp'DDT.
DDD total is a calculated parameter. The calculated value is the sum of op'DDD and pp'DDD.
DDE total is a calculated parameter. The calculated value is the sum of op'DDE and pp'DDE.
Endosulfan total is a calculated parameter. The calculated value is the sum of Endosulfan I and Endosulfan II.
Chlordane total is a calculated parameter. The calculated value is the sum of Alpha-Chlordane and Gamma-Chlordane.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

AGAT Laboratories

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CANADA L4Z 1Y2
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Certificate of Analysis

AGAT WORK ORDER: 20H673122
PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC
SAMPLING SITE:

ATTENTION TO: Amber Brooks
SAMPLED BY:K. Greenman

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

DATE RECEIVED: 2020-11-04

DATE REPORTED: 2020-11-10

				SAMPLE DESCRIPTION:	BH2
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2020-11-03 13:00
Parameter	Unit	G / S	RDL	1648947	
Dissolved Antimony	µg/L	6	1.0	<1.0	
Dissolved Arsenic	µg/L	25	1.0	1.2	
Dissolved Barium	µg/L	1000	2.0	61.2	
Dissolved Beryllium	µg/L	4	0.50	<0.50	
Dissolved Boron	µg/L	5000	10.0	426	
Dissolved Cadmium	µg/L	2.7	0.20	<0.20	
Dissolved Chromium	µg/L	50	2.0	<2.0	
Dissolved Cobalt	µg/L	3.8	0.50	0.71	
Dissolved Copper	µg/L	87	1.0	<1.0	
Dissolved Lead	µg/L	10	0.50	<0.50	
Dissolved Molybdenum	µg/L	70	0.50	17.8	
Dissolved Nickel	µg/L	100	3.0	<3.0	
Dissolved Selenium	µg/L	10	1.0	1.2	
Dissolved Silver	µg/L	1.5	0.20	<0.20	
Dissolved Thallium	µg/L	2	0.30	<0.30	
Dissolved Uranium	µg/L	20	0.50	5.76	
Dissolved Vanadium	µg/L	6.2	0.40	1.31	
Dissolved Zinc	µg/L	1100	5.0	<5.0	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1648947 Metals analysis completed on a filtered sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

AGAT Laboratories

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CANADA L4Z 1Y2
TEL (905)712-5100
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http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 20H673122
PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC
SAMPLING SITE:

ATTENTION TO: Amber Brooks
SAMPLED BY:K. Greenman

O. Reg. 153(511) - ORPs (Water)

DATE RECEIVED: 2020-11-04

DATE REPORTED: 2020-11-10

				SAMPLE DESCRIPTION:	BH2
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2020-11-03 13:00
Parameter	Unit	G / S	RDL	1648947	
Chromium VI	µg/L	25	5	<5	
Cyanide, Free	µg/L	66	2	<2	
Mercury	µg/L	1	0.02	<0.02	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Quality Assurance

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H673122

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:K. Greenman

Trace Organics Analysis

RPT Date: Nov 10, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - OC Pesticides (Water)															
Aldrin	1648772		< 0.01	< 0.01	NA	< 0.01	103%	50%	140%	83%	50%	140%	81%	50%	140%
Chlordane	1648772		< 0.04	< 0.04	NA	< 0.04	99%	50%	140%	89%	50%	140%	83%	50%	140%
DDD	1648772		< 0.05	< 0.05	NA	< 0.05	108%	50%	140%	104%	50%	140%	105%	50%	140%
DDE	1648772		< 0.01	< 0.01	NA	< 0.01	99%	50%	140%	92%	50%	140%	88%	50%	140%
DDT	1648772		< 0.04	< 0.04	NA	< 0.04	82%	50%	140%	81%	50%	140%	80%	50%	140%
Dieldrin	1648772		< 0.02	< 0.02	NA	< 0.02	97%	50%	140%	92%	50%	140%	86%	50%	140%
Endosulfan	1648772		< 0.05	< 0.05	NA	< 0.05	101%	50%	140%	95%	50%	140%	104%	50%	140%
Endrin	1648772		< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	83%	50%	140%	87%	50%	140%
Gamma-Hexachlorocyclohexane	1648772		< 0.01	< 0.01	NA	< 0.01	95%	50%	140%	88%	50%	140%	85%	50%	140%
Heptachlor	1648772		< 0.01	< 0.01	NA	< 0.01	85%	50%	140%	89%	50%	140%	89%	50%	140%
Heptachlor Epoxide	1648772		< 0.01	< 0.01	NA	< 0.01	108%	50%	140%	108%	50%	140%	89%	50%	140%
Hexachlorobenzene	1648772		< 0.01	< 0.01	NA	< 0.01	106%	50%	140%	82%	50%	140%	81%	50%	140%
Hexachlorobutadiene	1648772		< 0.01	< 0.01	NA	< 0.01	94%	50%	140%	92%	50%	140%	82%	50%	140%
Hexachloroethane	1648772		< 0.01	< 0.01	NA	< 0.01	88%	50%	140%	85%	50%	140%	80%	50%	140%
Methoxychlor	1648772		< 0.04	< 0.04	NA	< 0.04	83%	50%	140%	81%	50%	140%	90%	50%	140%

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

Certified By:

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Quality Assurance

CLIENT NAME: TERRAPROBE INC
PROJECT: 7-20-0004-42
SAMPLING SITE:

AGAT WORK ORDER: 20H673122
ATTENTION TO: Amber Brooks
SAMPLED BY:K. Greenman

Water Analysis

RPT Date: Nov 10, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals (Including Hydrides) (Water)															
Dissolved Antimony	1637917		<1.0	<1.0	NA	< 1.0	99%	70%	130%	101%	80%	120%	101%	70%	130%
Dissolved Arsenic	1637917		<1.0	<1.0	NA	< 1.0	99%	70%	130%	103%	80%	120%	105%	70%	130%
Dissolved Barium	1637917		66.2	66.8	0.9%	< 2.0	101%	70%	130%	101%	80%	120%	103%	70%	130%
Dissolved Beryllium	1637917		<0.50	<0.50	NA	< 0.50	100%	70%	130%	105%	80%	120%	121%	70%	130%
Dissolved Boron	1637917		26.1	26.2	NA	< 10.0	100%	70%	130%	103%	80%	120%	117%	70%	130%
Dissolved Cadmium	1637917		<0.20	<0.20	NA	< 0.20	100%	70%	130%	100%	80%	120%	104%	70%	130%
Dissolved Chromium	1637917		<2.0	<2.0	NA	< 2.0	100%	70%	130%	99%	80%	120%	98%	70%	130%
Dissolved Cobalt	1637917		<0.50	<0.50	NA	< 0.50	96%	70%	130%	100%	80%	120%	98%	70%	130%
Dissolved Copper	1637917		1.2	1.1	NA	< 1.0	99%	70%	130%	100%	80%	120%	94%	70%	130%
Dissolved Lead	1637917		<0.50	<0.50	NA	< 0.50	98%	70%	130%	95%	80%	120%	92%	70%	130%
Dissolved Molybdenum	1637917		2.74	2.79	1.8%	< 0.50	98%	70%	130%	101%	80%	120%	104%	70%	130%
Dissolved Nickel	1637917		<3.0	<3.0	NA	< 3.0	95%	70%	130%	99%	80%	120%	92%	70%	130%
Dissolved Selenium	1637917		3.7	<1.0	NA	< 1.0	97%	70%	130%	108%	80%	120%	103%	70%	130%
Dissolved Silver	1637917		<0.20	<0.20	NA	< 0.20	96%	70%	130%	101%	80%	120%	93%	70%	130%
Dissolved Thallium	1637917		<0.30	<0.30	NA	< 0.30	98%	70%	130%	98%	80%	120%	96%	70%	130%
Dissolved Uranium	1637917		0.54	0.54	NA	< 0.50	91%	70%	130%	98%	80%	120%	102%	70%	130%
Dissolved Vanadium	1637917		0.99	1.17	NA	< 0.40	96%	70%	130%	100%	80%	120%	103%	70%	130%
Dissolved Zinc	1637917		<5.0	<5.0	NA	< 5.0	98%	70%	130%	100%	80%	120%	96%	70%	130%

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

O. Reg. 153(511) - ORPs (Water)															
Chromium VI	1648947	1648947	<5	<5	NA	< 5	103%	70%	130%	99%	80%	120%	102%	70%	130%
Cyanide, Free	1648732		<2	<2	NA	< 2	105%	70%	130%	96%	80%	120%	109%	70%	130%
Mercury	1649232		<0.02	<0.02	NA	< 0.02	100%	70%	130%	100%	80%	120%	90%	70%	130%

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

Certified By: Amanjot Bhela

CHARTERED CHEMIST AMANJOT BHELA — ASSOCIATION OF THE CHEMICAL PROFESSION OF ONTARIO

AGAT Laboratories

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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H673122

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:K. Greenman

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Aldrin	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Chlordane	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
DDD	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
DDE	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
DDT	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Decachlorobiphenyl	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Dieldrin	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Endosulfan	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Endrin	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Gamma-Hexachlorocyclohexane	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Heptachlor	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Heptachlor Epoxide	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Hexachlorobenzene	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Hexachlorobutadiene	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Hexachloroethane	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Methoxychlor	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
TCMX	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD

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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H673122

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:K. Greenman

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Chromium VI	INOR-93-6034	modified from SM 3500-CR B	SPECTROPHOTOMETER
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Mercury	MET-93-6100	modified from EPA 245.2 and SM 3112 B	CVAAS

AGAT Laboratories

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Chain of Custody Record

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

Laboratory Use Only 20H673122
Work Order #: ~~20H673122~~ SH

Cooler Quantity: LG COOLER
Arrival Temperatures: 6.5 | 6.0 | 6.3
6 | 6.7 | 6.4
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: ON ICE

Report Information:

Company:
Contact:
Address:
Phone:
Reports to be sent to:
1. Email:
2. Email:

Terraprobe Inc. 903 Barton Street, Unit 22
Stoney Creek, Ontario L8E 5P5
Ph: (905) 643-7560 **Fax:** (905) 643-7559
Attn.: Amber Brooks abrooks@terraprobe.ca

Regulatory Requirements: ☐ No Regulatory Requirement

(Please check all applicable boxes)

☒ Regulation 153/04
Table 2 *Indicate One*
☐ Ind/Com
☒ Res/Park
☐ Agriculture
Soil Texture *(Check One)*
☐ Coarse
☒ Fine

☐ Sewer Use
☐ Sanitary
☐ Storm
Region _____ *Indicate One*
☐ MISA

☐ Regulation 558
☐ CCME
☐ Prov. Water Quality Objectives (PWQO)
☐ Other
_____ *Indicate One*

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

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

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

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

OR Date Required (Rush Surcharges May Apply):

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

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

Project Information:

Project: 7-20-0004-42
Site Location:
Sampled By: K. Greenman
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company:
Contact: Lorena Rossi
Address:
Email: lrossi@terraprobe.ca

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI (Y/N)	O. Reg 153: Metals and Inorganics (☐ All Metals ☐ 153 Metals (excl. Hydrides) ☐ Hydride Metals ☒ 153 Metals (Incl. Hydrides))	O. Reg 153: ORPs (☐ B-HWS ☐ Cl ☒ CN⁻ ☐ Cr⁶⁺ ☐ EC ☒ FOC ☒ Hg ☐ pH ☐ SAR)	O. Reg 153: Full Metals Scan	O. Reg 153: Regulation/Custom Metals	Nutrients: ☐ TP ☐ NH_3 ☐ TKN ☐ NO_3 ☐ NO_2 ☐ NO_3+NO_2	Volatiles: ☐ VOC ☐ BTEX ☐ THM	PHCs F1 - F4	ABNs	PAHs	PCBs: ☐ Total ☐ Aroclors	Organochlorine Pesticides	TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	Sewer Use						Potentially Hazardous or High Concentration (Y/N)
BH2	Nov 3/20	13:00	7	GW		Y	X	X										X							

Samples Relinquished By (Print Name and Sign): K Greenman
Samples Relinquished By (Print Name and Sign): Daniella Jaic
Samples Relinquished By (Print Name and Sign):
Date: Nov 3/20 Time: 5:20pm
Date: Nov 4/20 Time: 3pm
Date: Time:

Samples Received By (Print Name and Sign): Daniella Jaic
Samples Received By (Print Name and Sign): John Chypyha
Samples Received By (Print Name and Sign): John Chypyha
Date: Nov 4/20 Time: 8am
Date: Nov 4 Time: 3:06
Date: Nov 4 Time: 5:20

Page 1 of 1
N°: T102126

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

AGAT Laboratories

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CLIENT NAME: TERRAPROBE INC
903 Barton Street
Stoney Creek, ON L8E5P5
(905) 643-7560
ATTENTION TO: Amber Brooks
PROJECT: 7-20-0004-42
AGAT WORK ORDER: 20H673119
TRACE ORGANICS REVIEWED BY: Pinkal Patel, Report Reviewer
WATER ANALYSIS REVIEWED BY: Amanjot Bhela, Inorganic Lab Manager
DATE REPORTED: Nov 10, 2020
PAGES (INCLUDING COVER): 9
VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days following analysis, unless expressly agreed otherwise in writing. Please contact your Client Project Manager if you require additional sample storage time.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 20H673119
PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC
SAMPLING SITE:

ATTENTION TO: Amber Brooks
SAMPLED BY:K. Greenman

O. Reg. 153(511) - OC Pesticides (Water)

DATE RECEIVED: 2020-11-04

DATE REPORTED: 2020-11-10

				SAMPLE DESCRIPTION:	BH4
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2020-11-03 14:00
Parameter	Unit	G / S	RDL		1648797
Aldrin	µg/L	0.35	0.01		<0.01
Chlordane	µg/L	7	0.04		<0.04
DDD	µg/L	10	0.05		<0.05
DDE	µg/L	10	0.01		<0.01
DDT	µg/L	2.8	0.04		<0.04
Dieldrin	µg/L	0.35	0.02		<0.02
Endosulfan	µg/L	1.5	0.05		<0.05
Endrin	µg/L	0.48	0.05		<0.05
Gamma-Hexachlorocyclohexane	µg/L	1.2	0.01		<0.01
Heptachlor	µg/L	1.5	0.01		<0.01
Heptachlor Epoxide	µg/L	0.048	0.01		<0.01
Hexachlorobenzene	ug/L	1	0.01		<0.01
Hexachlorobutadiene	ug/L	0.6	0.01		<0.01
Hexachloroethane	ug/L	2.1	0.01		<0.01
Methoxychlor	µg/L	6.5	0.04		<0.04
Surrogate	Unit	Acceptable Limits			
Decachlorobiphenyl	%	60-140			78
TCMX	%	50-140			77

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1648797 DDT total is a calculated parameter. The calculated value is the sum of op'DDT and pp'DDT.
DDD total is a calculated parameter. The calculated value is the sum of op'DDD and pp'DDD.
DDE total is a calculated parameter. The calculated value is the sum of op'DDE and pp'DDE.
Endosulfan total is a calculated parameter. The calculated value is the sum of Endosulfan I and Endosulfan II.
Chlordane total is a calculated parameter. The calculated value is the sum of Alpha-Chlordane and Gamma-Chlordane.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Jinkal Patel

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 20H673119
PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC
SAMPLING SITE:

ATTENTION TO: Amber Brooks
SAMPLED BY:K. Greenman

O. Reg. 153(511) - Metals (Including Hydrides) (Water)

DATE RECEIVED: 2020-11-04

DATE REPORTED: 2020-11-10

				SAMPLE DESCRIPTION:	BH4
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2020-11-03 14:00
Parameter	Unit	G / S	RDL	1648797	
Dissolved Antimony	µg/L	6	1.0	<1.0	
Dissolved Arsenic	µg/L	25	1.0	2.6	
Dissolved Barium	µg/L	1000	2.0	46.3	
Dissolved Beryllium	µg/L	4	0.50	<0.50	
Dissolved Boron	µg/L	5000	10.0	651	
Dissolved Cadmium	µg/L	2.7	0.20	<0.20	
Dissolved Chromium	µg/L	50	2.0	<2.0	
Dissolved Cobalt	µg/L	3.8	0.50	1.91	
Dissolved Copper	µg/L	87	1.0	<1.0	
Dissolved Lead	µg/L	10	0.50	<0.50	
Dissolved Molybdenum	µg/L	70	0.50	7.56	
Dissolved Nickel	µg/L	100	3.0	3.2	
Dissolved Selenium	µg/L	10	1.0	3.0	
Dissolved Silver	µg/L	1.5	0.20	<0.20	
Dissolved Thallium	µg/L	2	0.30	<0.30	
Dissolved Uranium	µg/L	20	0.50	4.45	
Dissolved Vanadium	µg/L	6.2	0.40	1.13	
Dissolved Zinc	µg/L	1100	5.0	<5.0	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1648797 Metals analysis completed on a filtered sample.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 20H673119

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:K. Greenman

O. Reg. 153(511) - ORPs (Water)

DATE RECEIVED: 2020-11-04

DATE REPORTED: 2020-11-10

				SAMPLE DESCRIPTION:	BH4
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2020-11-03 14:00
Parameter	Unit	G / S	RDL	1648797	
Chromium VI	µg/L	25	5	<5	
Cyanide, Free	µg/L	66	2	<2	
Mercury	µg/L	1	0.02	<0.02	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

AGAT Laboratories

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Quality Assurance

CLIENT NAME: TERRAPROBE INC
PROJECT: 7-20-0004-42
SAMPLING SITE:

AGAT WORK ORDER: 20H673119
ATTENTION TO: Amber Brooks
SAMPLED BY:K. Greenman

Trace Organics Analysis

RPT Date: Nov 10, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - OC Pesticides (Water)															
Aldrin	1648772		< 0.01	< 0.01	NA	< 0.01	103%	50%	140%	83%	50%	140%	81%	50%	140%
Chlordane	1648772		< 0.04	< 0.04	NA	< 0.04	99%	50%	140%	89%	50%	140%	83%	50%	140%
DDD	1648772		< 0.05	< 0.05	NA	< 0.05	108%	50%	140%	104%	50%	140%	105%	50%	140%
DDE	1648772		< 0.01	< 0.01	NA	< 0.01	99%	50%	140%	92%	50%	140%	88%	50%	140%
DDT	1648772		< 0.04	< 0.04	NA	< 0.04	82%	50%	140%	81%	50%	140%	80%	50%	140%
Dieldrin	1648772		< 0.02	< 0.02	NA	< 0.02	97%	50%	140%	92%	50%	140%	86%	50%	140%
Endosulfan	1648772		< 0.05	< 0.05	NA	< 0.05	101%	50%	140%	95%	50%	140%	104%	50%	140%
Endrin	1648772		< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	83%	50%	140%	87%	50%	140%
Gamma-Hexachlorocyclohexane	1648772		< 0.01	< 0.01	NA	< 0.01	95%	50%	140%	88%	50%	140%	85%	50%	140%
Heptachlor	1648772		< 0.01	< 0.01	NA	< 0.01	85%	50%	140%	89%	50%	140%	89%	50%	140%
Heptachlor Epoxide	1648772		< 0.01	< 0.01	NA	< 0.01	108%	50%	140%	108%	50%	140%	89%	50%	140%
Hexachlorobenzene	1648772		< 0.01	< 0.01	NA	< 0.01	106%	50%	140%	82%	50%	140%	81%	50%	140%
Hexachlorobutadiene	1648772		< 0.01	< 0.01	NA	< 0.01	94%	50%	140%	92%	50%	140%	82%	50%	140%
Hexachloroethane	1648772		< 0.01	< 0.01	NA	< 0.01	88%	50%	140%	85%	50%	140%	80%	50%	140%
Methoxychlor	1648772		< 0.04	< 0.04	NA	< 0.04	83%	50%	140%	81%	50%	140%	90%	50%	140%

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

Certified By: Jinkal Patel

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Quality Assurance

CLIENT NAME: TERRAPROBE INC
PROJECT: 7-20-0004-42
SAMPLING SITE:

AGAT WORK ORDER: 20H673119
ATTENTION TO: Amber Brooks
SAMPLED BY:K. Greenman

Water Analysis

RPT Date: Nov 10, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals (Including Hydrides) (Water)															
Dissolved Antimony	1648314		<1.0	<1.0	NA	< 1.0	97%	70%	130%	101%	80%	120%	99%	70%	130%
Dissolved Arsenic	1648314		<1.0	<1.0	NA	< 1.0	96%	70%	130%	104%	80%	120%	103%	70%	130%
Dissolved Barium	1648314		149	145	2.7%	< 2.0	99%	70%	130%	102%	80%	120%	97%	70%	130%
Dissolved Beryllium	1648314		<0.50	<0.50	NA	< 0.50	101%	70%	130%	110%	80%	120%	113%	70%	130%
Dissolved Boron	1648314		63.3	59.2	6.7%	< 10.0	103%	70%	130%	105%	80%	120%	108%	70%	130%
Dissolved Cadmium	1648314		<0.20	<0.20	NA	< 0.20	96%	70%	130%	101%	80%	120%	100%	70%	130%
Dissolved Chromium	1648314		<2.0	<2.0	NA	< 2.0	96%	70%	130%	101%	80%	120%	95%	70%	130%
Dissolved Cobalt	1648314		1.55	1.71	NA	< 0.50	97%	70%	130%	105%	80%	120%	96%	70%	130%
Dissolved Copper	1648314		1.3	1.6	NA	< 1.0	96%	70%	130%	101%	80%	120%	93%	70%	130%
Dissolved Lead	1648314		<0.50	<0.50	NA	< 0.50	95%	70%	130%	98%	80%	120%	92%	70%	130%
Dissolved Molybdenum	1648314		9.94	10.3	3.6%	< 0.50	96%	70%	130%	103%	80%	120%	98%	70%	130%
Dissolved Nickel	1648314		<3.0	<3.0	NA	< 3.0	96%	70%	130%	104%	80%	120%	95%	70%	130%
Dissolved Selenium	1648314		<1.0	<1.0	NA	< 1.0	98%	70%	130%	108%	80%	120%	108%	70%	130%
Dissolved Silver	1648314		<0.20	<0.20	NA	< 0.20	96%	70%	130%	105%	80%	120%	90%	70%	130%
Dissolved Thallium	1648314		<0.30	<0.30	NA	< 0.30	96%	70%	130%	102%	80%	120%	95%	70%	130%
Dissolved Uranium	1648314		0.66	0.62	NA	< 0.50	93%	70%	130%	100%	80%	120%	100%	70%	130%
Dissolved Vanadium	1648314		<0.40	<0.40	NA	< 0.40	96%	70%	130%	102%	80%	120%	97%	70%	130%
Dissolved Zinc	1648314		<5.0	<5.0	NA	< 5.0	96%	70%	130%	102%	80%	120%	96%	70%	130%
O. Reg. 153(511) - ORPs (Water)															
Chromium VI	1648947		<5	<5	NA	< 5	103%	70%	130%	99%	80%	120%	102%	70%	130%
Cyanide, Free	1648732		<2	<2	NA	< 2	105%	70%	130%	96%	80%	120%	109%	70%	130%
Mercury	1649232		<0.02	<0.02	NA	< 0.02	100%	70%	130%	100%	80%	120%	90%	70%	130%

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

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

Certified By:

AGAT Laboratories

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http://www.agatlabs.com

Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H673119

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:K. Greenman

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Aldrin	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Chlordane	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
DDD	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
DDE	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
DDT	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Decachlorobiphenyl	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Dieldrin	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Endosulfan	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Endrin	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Gamma-Hexachlorocyclohexane	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Heptachlor	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Heptachlor Epoxide	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Hexachlorobenzene	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Hexachlorobutadiene	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Hexachloroethane	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Methoxychlor	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
TCMX	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD

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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H673119

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:K. Greenman

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Chromium VI	INOR-93-6034	modified from SM 3500-CR B	SPECTROPHOTOMETER
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Mercury	MET-93-6100	modified from EPA 245.2 and SM 3112 B	CVAAS

AGAT Laboratories

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Chain of Custody Record

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

Laboratory Use Only

Work Order #: 20H673119

Cooler Quantity: LG COOLER

Arrival Temperatures: 6.5 | 6.0 | 6.3
6.2 | 6.2 | 6.4

Custody Seal Intact: ☐ Yes ☐ No ☐ N/A

Notes: ON ICE

Report Information:

Company:
Contact:
Address: **Terraprobe Inc.** 903 Barton Street, Unit 22, Stoney Creek, Ontario L8E 5P5
Ph: (905) 643-7560 **Fax:** (905) 643-7559
Attn.: Amber Brooks abrooks@terraprobe.ca
Phone:
Reports to be sent to:
1. Email:
2. Email:

Regulatory Requirements: ☐ No Regulatory Requirement

(Please check all applicable boxes)

☒ Regulation 153/04
Table 2 (Indicate One)
☐ Ind/Com
☒ Res/Park
☐ Agriculture
Soil Texture *(Check One)*
☐ Coarse
☒ Fine

☐ Sewer Use
☐ Sanitary
☐ Storm
Region _____ (Indicate One)
☐ MISA

☐ Regulation 558
☐ CCME
☐ Prov. Water Quality Objectives (PWQO)
☐ Other
_____ (Indicate One)

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

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

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

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

OR Date Required (Rush Surcharges May Apply):

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

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

Project Information:

Project: 7-20-0004-42
Site Location:
Sampled By: K. Greenman
AGAT Quote #: PO:
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company:
Contact: Lorena Rossi
Address:
Email: lrossi@terraprobe.ca

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI (Y/N)	O. Reg 153: Metals and Inorganics	O. Reg 153: Metals (excl. Hydrides)	O. Reg 153: Hydride Metals	O. Reg 153: ORPs: B-HWS, Cl, FOC, Hg, pH, SAR	Full Metals Scan	Regulation/Custom Metals	Nutrients: TP, NH_3, TKN, NO_3, NO_2, NO_3+NO_2	Volatiles: VOC, BTEX, THM	PHCs F1 - F4	AEHs	PAHs	PCBs: Total, Aroclors	Organochlorine Pesticides	TCLP: M&I, VOCs, ABNs, B(a)P, PCBs	Sewer Use						Potentially Hazardous or High Concentration (Y/N)
BH4	Nov 3/20	14:00	7	GW		Y		X		X									X								

Samples Relinquished By (Print Name and Sign): K. Greenman	Date: Nov 3/20	Time: 5:20pm	Samples Received By (Print Name and Sign): Daniella Jaic	Date: Nov 4/20	Time: 8am
Samples Relinquished By (Print Name and Sign): Daniella Jaic	Date: Nov 4/20	Time: 3pm	Samples Received By (Print Name and Sign): John Chypyha	Date: Nov 4	Time: 3:00
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign): John Chypyha	Date: Nov 4	Time: 5:20

Page 1 of 1

N°: T 102129

Document ID: DM-76-1511.016

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

Date: November 2019

AGAT Laboratories

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http://www.agatlabs.com

CLIENT NAME: TERRAPROBE INC
903 Barton Street
Stoney Creek, ON L8E5P5
(905) 643-7560

ATTENTION TO: Amber Brooks

PROJECT: 7-20-0004-42

AGAT WORK ORDER: 20H673077

TRACE ORGANICS REVIEWED BY: Pinkal Patel, Report Reviewer

WATER ANALYSIS REVIEWED BY: Amanjot Bhela, Inorganic Lab Manager

DATE REPORTED: Nov 10, 2020

PAGES (INCLUDING COVER): 16

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days following analysis, unless expressly agreed otherwise in writing. Please contact your Client Project Manager if you require additional sample storage time.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

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Certificate of Analysis

AGAT WORK ORDER: 20H673077

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

SAMPLING SITE:

ATTENTION TO: Amber Brooks

SAMPLED BY:K. Greenman

O. Reg. 153(511) - OC Pesticides (Water)

DATE RECEIVED: 2020-11-04

DATE REPORTED: 2020-11-10

				SAMPLE DESCRIPTION:	BH6
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2020-11-03 14:30
Parameter	Unit	G / S	RDL		1649232
Aldrin	µg/L	0.35	0.01		<0.01
Chlordane	µg/L	7	0.04		<0.04
DDD	µg/L	10	0.05		<0.05
DDE	µg/L	10	0.01		<0.01
DDT	µg/L	2.8	0.04		<0.04
Dieldrin	µg/L	0.35	0.02		<0.02
Endosulfan	µg/L	1.5	0.05		<0.05
Endrin	µg/L	0.48	0.05		<0.05
Gamma-Hexachlorocyclohexane	µg/L	1.2	0.01		<0.01
Heptachlor	µg/L	1.5	0.01		<0.01
Heptachlor Epoxide	µg/L	0.048	0.01		<0.01
Hexachlorobenzene	ug/L	1	0.01		<0.01
Hexachlorobutadiene	ug/L	0.6	0.01		<0.01
Hexachloroethane	ug/L	2.1	0.01		<0.01
Methoxychlor	µg/L	6.5	0.04		<0.04
Surrogate	Unit	Acceptable Limits			
Decachlorobiphenyl	%	60-140			89
TCMX	%	50-140			87

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1649232 DDT total is a calculated parameter. The calculated value is the sum of op'DDT and pp'DDT.
DDD total is a calculated parameter. The calculated value is the sum of op'DDD and pp'DDD.
DDE total is a calculated parameter. The calculated value is the sum of op'DDE and pp'DDE.
Endosulfan total is a calculated parameter. The calculated value is the sum of Endosulfan I and Endosulfan II.
Chlordane total is a calculated parameter. The calculated value is the sum of Alpha-Chlordane and Gamma-Chlordane.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

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Certificate of Analysis

AGAT WORK ORDER: 20H673077

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

SAMPLING SITE:

ATTENTION TO: Amber Brooks

SAMPLED BY:K. Greenman

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

DATE RECEIVED: 2020-11-04

DATE REPORTED: 2020-11-10

				SAMPLE DESCRIPTION:	BH6
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2020-11-03 14:30
Parameter	Unit	G / S	RDL	1649232	
Naphthalene	µg/L		0.20	<0.20	
Acenaphthylene	µg/L		0.20	<0.20	
Acenaphthene	µg/L		0.20	<0.20	
Fluorene	µg/L		0.20	<0.20	
Phenanthrene	µg/L		0.10	<0.10	
Anthracene	µg/L		0.10	<0.10	
Fluoranthene	µg/L		0.20	<0.20	
Pyrene	µg/L		0.20	<0.20	
Benzo(a)anthracene	µg/L		0.20	<0.20	
Chrysene	µg/L		0.10	<0.10	
Benzo(b)fluoranthene	µg/L		0.10	<0.10	
Benzo(k)fluoranthene	µg/L		0.10	<0.10	
Benzo(a)pyrene	µg/L		0.01	<0.01	
Indeno(1,2,3-cd)pyrene	µg/L		0.20	<0.20	
Dibenz(a,h)anthracene	µg/L		0.20	<0.20	
Benzo(g,h,i)perylene	µg/L		0.20	<0.20	
2-and 1-methyl Naphthalene	µg/L		0.20	<0.20	
Sediment				No	
Surrogate	Unit	Acceptable Limits			
Naphthalene-d8	%	50-140		72	
Acenaphthene-d10	%	50-140		93	
Chrysene-d12	%	50-140		79	

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

1649232 Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&(j)Fluoranthene isomers because the isomers co-elute on the GC column.
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Pinkal Patel

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 20H673077

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

SAMPLING SITE:

ATTENTION TO: Amber Brooks

SAMPLED BY:K. Greenman

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

DATE RECEIVED: 2020-11-04

DATE REPORTED: 2020-11-10

				SAMPLE DESCRIPTION:	BH6
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2020-11-03 14:30
Parameter	Unit	G / S	RDL		1649232
F1 (C6 to C10) minus BTEX	µg/L	750	25		<25
F1 (C6-C10)	µg/L	750	25		<25
F2 (C10 to C16)	µg/L	150	100		<100
F2 (C10 to C16) minus Naphthalene	µg/L		100		<100
F3 (C16 to C34)	µg/L	500	100		<100
F3 (C16 to C34) minus PAHs	µg/L		100		<100
F4 (C34 to C50)	µg/L	500	100		<100
Gravimetric Heavy Hydrocarbons	µg/L		500		NA
Sediment					No
Surrogate	Unit	Acceptable Limits			
Terphenyl	%	60-140			90

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1649232 The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Jinkal Patel

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Certificate of Analysis

AGAT WORK ORDER: 20H673077

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

SAMPLING SITE:

ATTENTION TO: Amber Brooks

SAMPLED BY:K. Greenman

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

DATE RECEIVED: 2020-11-04

DATE REPORTED: 2020-11-10

				SAMPLE DESCRIPTION:	BH6
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2020-11-03 14:30
Parameter	Unit	G / S	RDL		1649232
Acetone	µg/L	2700	1.0		<1.0
Benzene	µg/L	5.0	0.20		<0.20
Bromodichloromethane	µg/L	16	0.20		<0.20
Bromoform	µg/L	25	0.10		<0.10
Bromomethane	µg/L	0.89	0.20		<0.20
Carbon Tetrachloride	µg/L	5.0	0.20		<0.20
Chlorobenzene	µg/L	30	0.10		<0.10
Chloroform	µg/L	22	0.20		<0.20
Dibromochloromethane	µg/L	25	0.10		<0.10
1,4-Dichlorobenzene	µg/L	1	0.10		<0.10
1,2-Dichlorobenzene	µg/L	3	0.10		<0.10
1,3-Dichlorobenzene	µg/L	59	0.10		<0.10
Dichlorodifluoromethane	µg/L	590	0.20		<0.20
1,2-Dichloroethane	µg/L	5	0.20		<0.20
1,1-Dichloroethane	µg/L	5	0.30		<0.30
1,1-Dichloroethylene	µg/L	14	0.30		<0.30
1,2-Dichloropropane	µg/L	5	0.20		<0.20
1,3-Dichloropropene	µg/L	0.5	0.30		<0.30
Ethylbenzene	µg/L	2.4	0.10		<0.10
Ethylene Dibromide	µg/L	0.2	0.10		<0.10
Methyl Ethyl Ketone	µg/L	1800	1.0		<1.0
Methyl Isobutyl Ketone	µg/L	640	1.0		<1.0
Methyl tert-butyl ether	µg/L	15	0.20		<0.20
Methylene Chloride	µg/L	50	0.30		<0.30
Styrene	µg/L	5.4	0.10		<0.10
1,1,2,2-Tetrachloroethane	µg/L	1	0.10		<0.10
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10		<0.10
Tetrachloroethylene	µg/L	17	0.20		<0.20
Toluene	µg/L	24	0.20		<0.20

Certified By: Pinkal Patel

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Certificate of Analysis

AGAT WORK ORDER: 20H673077

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:K. Greenman

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

DATE RECEIVED: 2020-11-04

DATE REPORTED: 2020-11-10

				SAMPLE DESCRIPTION:	BH6
				SAMPLE TYPE:	Water
				DATE SAMPLED:	2020-11-03 14:30
Parameter	Unit	G / S	RDL		1649232
1,1,2-Trichloroethane	µg/L	5	0.20		<0.20
1,1,1-Trichloroethane	µg/L	200	0.30		<0.30
Trichloroethylene	µg/L	5	0.20		0.65
Trichlorofluoromethane	µg/L	150	0.40		<0.40
Vinyl Chloride	µg/L	1.7	0.17		<0.17
Xylenes (Total)	µg/L	300	0.20		<0.20
cis- 1,2-Dichloroethylene	µg/L	17	0.20		<0.20
m & p-Xylene	µg/L		0.20		<0.20
n-Hexane	µg/L	520	0.20		<0.20
o-Xylene	µg/L		0.10		<0.10
trans- 1,2-Dichloroethylene	µg/L	17	0.20		<0.20
Surrogate	Unit	Acceptable Limits			
4-Bromofluorobenzene	% Recovery	50-140			86
Toluene-d8	% Recovery	50-140			91

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1649232 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Pinkal Patel

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AGAT WORK ORDER: 20H673077

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:K. Greenman

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

DATE RECEIVED: 2020-11-04

DATE REPORTED: 2020-11-10

		SAMPLE DESCRIPTION:		BH6
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2020-11-03 14:30
Parameter	Unit	G / S	RDL	1649232
Chloride	µg/L	790000	1000	387000
Chromium VI	µg/L	25	5	<5
Cyanide, Free	µg/L	66	2	<2
Dissolved Antimony	µg/L	6	1.0	<1.0
Dissolved Arsenic	µg/L	25	1.0	2.8
Dissolved Barium	µg/L	1000	2.0	141
Dissolved Beryllium	µg/L	4	0.50	<0.50
Dissolved Boron	µg/L	5000	10.0	197
Dissolved Cadmium	µg/L	2.7	0.20	<0.20
Dissolved Chromium	µg/L	50	2.0	<2.0
Dissolved Cobalt	µg/L	3.8	0.50	<0.50
Dissolved Copper	µg/L	87	1.0	<1.0
Dissolved Lead	µg/L	10	0.50	<0.50
Dissolved Molybdenum	µg/L	70	0.50	4.63
Dissolved Nickel	µg/L	100	3.0	<3.0
Dissolved Selenium	µg/L	10	1.0	1.6
Dissolved Silver	µg/L	1.5	0.20	<0.20
Dissolved Sodium	µg/L	490000	250	129000
Dissolved Thallium	µg/L	2	0.30	<0.30
Dissolved Uranium	µg/L	20	0.50	2.13
Dissolved Vanadium	µg/L	6.2	0.40	<0.40
Dissolved Zinc	µg/L	1100	5.0	<5.0
Electrical Conductivity	uS/cm	NA	2	1810
Mercury	µg/L	1	0.02	<0.02
pH	pH Units		NA	8.00

Certified By:

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AGAT WORK ORDER: 20H673077

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:K. Greenman

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

DATE RECEIVED: 2020-11-04

DATE REPORTED: 2020-11-10

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1649232 Metals analysis completed on a filtered sample.
Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By:

Amanjot Bhela

ASSOCIATION OF THE CHEMICAL PROFESSION OF ONTARIO
CHARTERED
AMANJOT BHELA
CHEMIST

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Quality Assurance

CLIENT NAME: TERRAPROBE INC
PROJECT: 7-20-0004-42
SAMPLING SITE:

AGAT WORK ORDER: 20H673077
ATTENTION TO: Amber Brooks
SAMPLED BY:K. Greenman

Trace Organics Analysis

RPT Date: Nov 10, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)															
F1 (C6-C10)	1620796		< 25	< 25	NA	< 25	88%	60%	140%	82%	60%	140%	96%	60%	140%
F2 (C10 to C16)	1620787		< 100	< 100	NA	< 100	115%	60%	140%	83%	60%	140%	90%	60%	140%
F3 (C16 to C34)	1620787		< 100	< 100	NA	< 100	103%	60%	140%	84%	60%	140%	87%	60%	140%
F4 (C34 to C50)	1620787		< 100	< 100	NA	< 100	96%	60%	140%	97%	60%	140%	106%	60%	140%
O. Reg. 153(511) - VOCs (Water)															
Acetone	1635603		<1.0	<1.0	NA	< 1.0	105%	50%	140%	106%	50%	140%	99%	50%	140%
Benzene	1635603		15	15	1.7%	< 0.20	97%	50%	140%	91%	60%	130%	106%	50%	140%
Bromodichloromethane	1635603		<0.20	<0.20	NA	< 0.20	82%	50%	140%	111%	60%	130%	101%	50%	140%
Bromoform	1635603		<0.10	<0.10	NA	< 0.10	105%	50%	140%	105%	60%	130%	80%	50%	140%
Bromomethane	1635603		<0.20	<0.20	NA	< 0.20	97%	50%	140%	110%	50%	140%	108%	50%	140%
Carbon Tetrachloride	1635603		<0.20	<0.20	NA	< 0.20	83%	50%	140%	84%	60%	130%	83%	50%	140%
Chlorobenzene	1635603		<0.10	<0.10	NA	< 0.10	103%	50%	140%	94%	60%	130%	91%	50%	140%
Chloroform	1635603		<0.20	<0.20	NA	< 0.20	96%	50%	140%	93%	60%	130%	106%	50%	140%
Dibromochloromethane	1635603		<0.10	<0.10	NA	< 0.10	97%	50%	140%	92%	60%	130%	107%	50%	140%
1,4-Dichlorobenzene	1635603		<0.10	<0.10	NA	< 0.10	110%	50%	140%	108%	60%	130%	105%	50%	140%
1,2-Dichlorobenzene	1635603		<0.10	<0.10	NA	< 0.10	110%	50%	140%	111%	60%	130%	108%	50%	140%
1,3-Dichlorobenzene	1635603		<0.10	<0.10	NA	< 0.10	103%	50%	140%	104%	60%	130%	99%	50%	140%
Dichlorodifluoromethane	1635603		<0.20	<0.20	NA	< 0.20	82%	50%	140%	92%	50%	140%	88%	50%	140%
1,2-Dichloroethane	1635603		<0.20	<0.20	NA	< 0.20	98%	50%	140%	98%	60%	130%	90%	50%	140%
1,1-Dichloroethane	1635603		<0.30	<0.30	NA	< 0.30	88%	50%	140%	80%	60%	130%	101%	50%	140%
1,1-Dichloroethylene	1635603		<0.30	<0.30	NA	< 0.30	94%	50%	140%	76%	60%	130%	90%	50%	140%
1,2-Dichloropropane	1635603		<0.20	<0.20	NA	< 0.20	82%	50%	140%	108%	60%	130%	112%	50%	140%
Ethylbenzene	1635603		0.61	0.58	5%	< 0.10	104%	50%	140%	97%	60%	130%	92%	50%	140%
Ethylene Dibromide	1635603		<0.10	<0.10	NA	< 0.10	109%	50%	140%	116%	60%	130%	102%	50%	140%
Methyl Ethyl Ketone	1635603		<1.0	<1.0	NA	< 1.0	101%	50%	140%	107%	50%	140%	84%	50%	140%
Methyl Isobutyl Ketone	1635603		<1.0	<1.0	NA	< 1.0	99%	50%	140%	89%	50%	140%	109%	50%	140%
Methyl tert-butyl ether	1635603		<0.20	<0.20	NA	< 0.20	86%	50%	140%	89%	60%	130%	98%	50%	140%
Methylene Chloride	1635603		<0.30	<0.30	NA	< 0.30	92%	50%	140%	109%	60%	130%	97%	50%	140%
Styrene	1635603		<0.10	<0.10	NA	< 0.10	92%	50%	140%	87%	60%	130%	86%	50%	140%
1,1,2,2-Tetrachloroethane	1635603		<0.10	<0.10	NA	< 0.10	100%	50%	140%	109%	60%	130%	78%	50%	140%
1,1,1,2-Tetrachloroethane	1635603		<0.10	<0.10	NA	< 0.10	93%	50%	140%	84%	60%	130%	87%	50%	140%
Tetrachloroethylene	1635603		<0.20	<0.20	NA	< 0.20	104%	50%	140%	81%	60%	130%	94%	50%	140%
Toluene	1635603		6.6	6.4	2.5%	< 0.20	95%	50%	140%	79%	60%	130%	111%	50%	140%
1,1,2-Trichloroethane	1635603		<0.20	<0.20	NA	< 0.20	99%	50%	140%	85%	60%	130%	113%	50%	140%
1,1,1-Trichloroethane	1635603		<0.30	<0.30	NA	< 0.30	79%	50%	140%	80%	60%	130%	75%	50%	140%
Trichloroethylene	1635603		<0.20	<0.20	NA	< 0.20	107%	50%	140%	102%	60%	130%	93%	50%	140%
Trichlorofluoromethane	1635603		<0.40	<0.40	NA	< 0.40	94%	50%	140%	99%	50%	140%	94%	50%	140%
Vinyl Chloride	1635603		<0.17	<0.17	NA	< 0.17	115%	50%	140%	99%	50%	140%	103%	50%	140%
cis- 1,2-Dichloroethylene	1635603		<0.20	<0.20	NA	< 0.20	99%	50%	140%	96%	60%	130%	104%	50%	140%

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Quality Assurance

CLIENT NAME: TERRAPROBE INC
PROJECT: 7-20-0004-42
SAMPLING SITE:

AGAT WORK ORDER: 20H673077
ATTENTION TO: Amber Brooks
SAMPLED BY:K. Greenman

Trace Organics Analysis (Continued)

RPT Date: Nov 10, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
m & p-Xylene	1635603		6.4	5.9	7.5%	< 0.20	108%	50%	140%	83%	60%	130%	93%	50%	140%
n-Hexane	1635603		1.0	1.1	7.5%	< 0.20	94%	50%	140%	114%	60%	130%	96%	50%	140%
o-Xylene	1635603		21	20	6.8%	< 0.10	95%	50%	140%	85%	60%	130%	92%	50%	140%
trans- 1,2-Dichloroethylene	1635603		<0.20	<0.20	NA	< 0.20	95%	50%	140%	81%	60%	130%	102%	50%	140%
O. Reg. 153(511) - OC Pesticides (Water)															
Aldrin	1648772		< 0.01	< 0.01	NA	< 0.01	103%	50%	140%	83%	50%	140%	81%	50%	140%
Chlordane	1648772		< 0.04	< 0.04	NA	< 0.04	99%	50%	140%	89%	50%	140%	83%	50%	140%
DDD	1648772		< 0.05	< 0.05	NA	< 0.05	108%	50%	140%	104%	50%	140%	105%	50%	140%
DDE	1648772		< 0.01	< 0.01	NA	< 0.01	99%	50%	140%	92%	50%	140%	88%	50%	140%
DDT	1648772		< 0.04	< 0.04	NA	< 0.04	82%	50%	140%	81%	50%	140%	80%	50%	140%
Dieldrin	1648772		< 0.02	< 0.02	NA	< 0.02	97%	50%	140%	92%	50%	140%	86%	50%	140%
Endosulfan	1648772		< 0.05	< 0.05	NA	< 0.05	101%	50%	140%	95%	50%	140%	104%	50%	140%
Endrin	1648772		< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	83%	50%	140%	87%	50%	140%
Gamma-Hexachlorocyclohexane	1648772		< 0.01	< 0.01	NA	< 0.01	95%	50%	140%	88%	50%	140%	85%	50%	140%
Heptachlor	1648772		< 0.01	< 0.01	NA	< 0.01	85%	50%	140%	89%	50%	140%	89%	50%	140%
Heptachlor Epoxide	1648772		< 0.01	< 0.01	NA	< 0.01	108%	50%	140%	108%	50%	140%	89%	50%	140%
Hexachlorobenzene	1648772		< 0.01	< 0.01	NA	< 0.01	106%	50%	140%	82%	50%	140%	81%	50%	140%
Hexachlorobutadiene	1648772		< 0.01	< 0.01	NA	< 0.01	94%	50%	140%	92%	50%	140%	82%	50%	140%
Hexachloroethane	1648772		< 0.01	< 0.01	NA	< 0.01	88%	50%	140%	85%	50%	140%	80%	50%	140%
Methoxychlor	1648772		< 0.04	< 0.04	NA	< 0.04	83%	50%	140%	81%	50%	140%	90%	50%	140%

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

Certified By: Jinkal Patel

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Quality Assurance

CLIENT NAME: TERRAPROBE INC
PROJECT: 7-20-0004-42
SAMPLING SITE:

AGAT WORK ORDER: 20H673077
ATTENTION TO: Amber Brooks
SAMPLED BY:K. Greenman

Water Analysis

RPT Date: Nov 10, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Water)															
Chloride	1643856		177000	178000	0.6%	< 100	95%	70%	130%	103%	80%	120%	NA	70%	130%
Chromium VI	1648947		<5	<5	NA	< 5	103%	70%	130%	99%	80%	120%	102%	70%	130%
Cyanide, Free	1648732		<2	<2	NA	< 2	105%	70%	130%	96%	80%	120%	109%	70%	130%
Dissolved Antimony	1648314		<1.0	<1.0	NA	< 1.0	97%	70%	130%	101%	80%	120%	99%	70%	130%
Dissolved Arsenic	1648314		<1.0	<1.0	NA	< 1.0	96%	70%	130%	104%	80%	120%	103%	70%	130%
Dissolved Barium	1648314		149	145	2.7%	< 2.0	99%	70%	130%	102%	80%	120%	97%	70%	130%
Dissolved Beryllium	1648314		<0.50	<0.50	NA	< 0.50	101%	70%	130%	110%	80%	120%	113%	70%	130%
Dissolved Boron	1648314		63.3	59.2	6.7%	< 10.0	103%	70%	130%	105%	80%	120%	108%	70%	130%
Dissolved Cadmium	1648314		<0.20	<0.20	NA	< 0.20	96%	70%	130%	101%	80%	120%	100%	70%	130%
Dissolved Chromium	1648314		<2.0	<2.0	NA	< 2.0	96%	70%	130%	101%	80%	120%	95%	70%	130%
Dissolved Cobalt	1648314		1.55	1.71	NA	< 0.50	97%	70%	130%	105%	80%	120%	96%	70%	130%
Dissolved Copper	1648314		1.3	1.6	NA	< 1.0	96%	70%	130%	101%	80%	120%	93%	70%	130%
Dissolved Lead	1648314		<0.50	<0.50	NA	< 0.50	95%	70%	130%	98%	80%	120%	92%	70%	130%
Dissolved Molybdenum	1648314		9.94	10.3	3.6%	< 0.50	96%	70%	130%	103%	80%	120%	98%	70%	130%
Dissolved Nickel	1648314		<3.0	<3.0	NA	< 3.0	96%	70%	130%	104%	80%	120%	95%	70%	130%
Dissolved Selenium	1648314		<1.0	<1.0	NA	< 1.0	98%	70%	130%	108%	80%	120%	108%	70%	130%
Dissolved Silver	1648314		<0.20	<0.20	NA	< 0.20	96%	70%	130%	105%	80%	120%	90%	70%	130%
Dissolved Sodium	1648732		128000	124000	3.2%	< 50	102%	70%	130%	100%	80%	120%	99%	70%	130%
Dissolved Thallium	1648314		<0.30	<0.30	NA	< 0.30	96%	70%	130%	102%	80%	120%	95%	70%	130%
Dissolved Uranium	1648314		0.66	0.62	NA	< 0.50	93%	70%	130%	100%	80%	120%	100%	70%	130%
Dissolved Vanadium	1648314		<0.40	<0.40	NA	< 0.40	96%	70%	130%	102%	80%	120%	97%	70%	130%
Dissolved Zinc	1648314		<5.0	<5.0	NA	< 5.0	96%	70%	130%	102%	80%	120%	96%	70%	130%
Electrical Conductivity	1648732		1790	1800	0.6%	< 2	101%	90%	110%	NA			NA		
Mercury	1649232	1649232	<0.02	<0.02	NA	< 0.02	100%	70%	130%	100%	80%	120%	90%	70%	130%
pH	1648732		8.01	7.91	1.3%		100%	90%	110%	NA			NA		

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

Certified By:

AGAT Laboratories

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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H673077

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:K. Greenman

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Aldrin	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Chlordane	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
DDD	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
DDE	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
DDT	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Decachlorobiphenyl	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Dieldrin	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Endosulfan	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Endrin	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Gamma-Hexachlorocyclohexane	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Heptachlor	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Heptachlor Epoxide	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Hexachlorobenzene	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Hexachlorobutadiene	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Hexachloroethane	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Methoxychlor	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
TCMX	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluorene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Phenanthrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Chrysene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS

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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H673077

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:K. Greenman

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Benzo(b)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
2-and 1-methyl Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5105	modified from EPA SW-846 3510C & 8270E	GC/MS
Acenaphthene-d10	ORG-91-5105	modified from EPA SW-846 3510C & 8270E	GC/MS
Chrysene-d12	ORG-91-5105	modified from EPA SW-846 3510C & 8270E	GC/MS
Sediment			
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	P&T GC/FID
F1 (C6-C10)	VOL-91- 5010	modified from MOE PHC-E3421	P&T GC/FID
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H673077

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:K. Greenman

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H673077

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:K. Greenman

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Water Analysis			
Chloride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Chromium VI	INOR-93-6034	modified from SM 3500-CR B	SPECTROPHOTOMETER
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Sodium	MET-93-6105	modified from EPA 6010D	ICP/OES
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Electrical Conductivity	INOR-93-6000	SM 2510 B	PC TITRATE
Mercury	MET-93-6100	modified from EPA 245.2 and SM 3112 B	CVAAS
pH	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE

AGAT Laboratories

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webearth.agatlabs.com

Chain of Custody Record

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

Report Information:

Company:
Contact: **Terraprobe Inc.** 903 Barton Street, Unit 22
Address: Stoney Creek, Ontario L8E 5P5
Ph: (905) 643-7560 **Fax:** (905) 643-7559
Attn.: Amber Brooks abrooks@terraprobe.ca
Phone:
Reports to be sent to:
1. Email:
2. Email:

Regulatory Requirements:

(Please check all applicable boxes)

☐ Regulation 558

☒ Regulation 153/04
Table 3 *Indicate One*
☐ Ind/Com
☒ Res/Park
☐ Agriculture

Soil Texture *(Check One)*
☐ Coarse
☒ Fine

☐ Excess Soils R406
Table _____ *Indicate One*
Sample from APEC?
☐ Yes
☐ No
☐ Stockpile ☐ In-situ

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

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

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

Laboratory Use Only

Work Order #: 20#673077
Cooler Quantity: LG COOLER
Arrival Temperatures: 6.5 | 6.0 | 6.3
6.0 | 6.2 | 6.4
Custody Seal Intact: ☐ Yes ☐ No ☐ N/A
Notes: NO ICE

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)
☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day
OR Date Required (Rush Surcharges May Apply):

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

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

Project Information:

Project: 7-20-0004-42
Site Location:
Sampled By: K. Greenman
AGAT Quote #: _____ PO: _____
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company:
Contact: Lorena Rossi
Address:
Email: lrossi@terraprobe.ca

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics, inc. EC/SAR	Metals - ICPMS, ☐ CrVI, ☐ Hg, ☐ HWSB	BTEX, F1-F4 PHCs, Analyze F4G if required ☒ Yes ☐ No	PAHs	PCBs	VOC	Landfill Disposal Characterization TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	Excess Soils SPLP Rainwater Leach ☐ Metals ☐ VOCs ☐ SVOCs	Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	OC Pesticides	Potentially Hazardous or High Concentrat on (Y/N)
BH6	Nov3/20	14:30 AM PM	16	GW		Y	X		X	X		X					X	
		AM PM																
		AM PM																
		AM PM																
		AM PM																
		AM PM																
		AM PM																
		AM PM																
		AM PM																
		AM PM																
		AM PM																

Samples Relinquished By (Print Name and Sign): K. Greenman	Date: Nov 3/20	Time: 5:20pm	Samples Received By (Print Name and Sign): Daniella Jaic	Date: NOV 4/20	Time: 8am
Samples Relinquished By (Print Name and Sign): Daniella Jaic	Date: NOV 4/20	Time: 3pm.	Samples Received By (Print Name and Sign): John Chypyha	Date: Nov 4	Time: 3:00
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign): John Chypyha	Date: Nov 4	Time: 6:20

Page 1 of 1

N°: T 106837

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

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CLIENT NAME: TERRAPROBE INC
903 Barton Street
Stoney Creek, ON L8E5P5
(905) 643-7560

ATTENTION TO: Amber Brooks

PROJECT: 7-20-0004-42

AGAT WORK ORDER: 20H673071

TRACE ORGANICS REVIEWED BY: Pinkal Patel, Report Reviewer

DATE REPORTED: Nov 10, 2020

PAGES (INCLUDING COVER): 5

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days following analysis, unless expressly agreed otherwise in writing. Please contact your Client Project Manager if you require additional sample storage time.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 20H673071
PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC
SAMPLING SITE:

ATTENTION TO: Amber Brooks
SAMPLED BY:K. Greenman

O. Reg. 153(511) - OC Pesticides (Water)

DATE RECEIVED: 2020-11-04

DATE REPORTED: 2020-11-10

		SAMPLE DESCRIPTION:		DUP 1
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2020-11-03
Parameter	Unit	G / S	RDL	1648737
Aldrin	µg/L	0.35	0.01	<0.01
Chlordane	µg/L	7	0.04	<0.04
DDD	µg/L	10	0.05	<0.05
DDE	µg/L	10	0.01	<0.01
DDT	µg/L	2.8	0.04	<0.04
Dieldrin	µg/L	0.35	0.02	<0.02
Endosulfan	µg/L	1.5	0.05	<0.05
Endrin	µg/L	0.48	0.05	<0.05
Gamma-Hexachlorocyclohexane	µg/L	1.2	0.01	<0.01
Heptachlor	µg/L	1.5	0.01	<0.01
Heptachlor Epoxide	µg/L	0.048	0.01	<0.01
Hexachlorobenzene	ug/L	1	0.01	<0.01
Hexachlorobutadiene	ug/L	0.6	0.01	<0.01
Hexachloroethane	ug/L	2.1	0.01	<0.01
Methoxychlor	µg/L	6.5	0.04	<0.04
Surrogate	Unit	Acceptable Limits		
Decachlorobiphenyl	%	60-140		86
TCMX	%	50-140		81

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1648737 DDT total is a calculated parameter. The calculated value is the sum of op'DDT and pp'DDT.
DDD total is a calculated parameter. The calculated value is the sum of op'DDD and pp'DDD.
DDE total is a calculated parameter. The calculated value is the sum of op'DDE and pp'DDE.
Endosulfan total is a calculated parameter. The calculated value is the sum of Endosulfan I and Endosulfan II.
Chlordane total is a calculated parameter. The calculated value is the sum of Alpha-Chlordane and Gamma-Chlordane.
The calculated parameters are non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Jinkal Patel

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Quality Assurance

CLIENT NAME: TERRAPROBE INC
PROJECT: 7-20-0004-42
SAMPLING SITE:

AGAT WORK ORDER: 20H673071
ATTENTION TO: Amber Brooks
SAMPLED BY:K. Greenman

Trace Organics Analysis

RPT Date: Nov 10, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - OC Pesticides (Water)															
Aldrin	1648772		< 0.01	< 0.01	NA	< 0.01	103%	50%	140%	83%	50%	140%	81%	50%	140%
Chlordane	1648772		< 0.04	< 0.04	NA	< 0.04	99%	50%	140%	89%	50%	140%	83%	50%	140%
DDD	1648772		< 0.05	< 0.05	NA	< 0.05	108%	50%	140%	104%	50%	140%	105%	50%	140%
DDE	1648772		< 0.01	< 0.01	NA	< 0.01	99%	50%	140%	92%	50%	140%	88%	50%	140%
DDT	1648772		< 0.04	< 0.04	NA	< 0.04	82%	50%	140%	81%	50%	140%	80%	50%	140%
Dieldrin	1648772		< 0.02	< 0.02	NA	< 0.02	97%	50%	140%	92%	50%	140%	86%	50%	140%
Endosulfan	1648772		< 0.05	< 0.05	NA	< 0.05	101%	50%	140%	95%	50%	140%	104%	50%	140%
Endrin	1648772		< 0.05	< 0.05	NA	< 0.05	85%	50%	140%	83%	50%	140%	87%	50%	140%
Gamma-Hexachlorocyclohexane	1648772		< 0.01	< 0.01	NA	< 0.01	95%	50%	140%	88%	50%	140%	85%	50%	140%
Heptachlor	1648772		< 0.01	< 0.01	NA	< 0.01	85%	50%	140%	89%	50%	140%	89%	50%	140%
Heptachlor Epoxide	1648772		< 0.01	< 0.01	NA	< 0.01	108%	50%	140%	108%	50%	140%	89%	50%	140%
Hexachlorobenzene	1648772		< 0.01	< 0.01	NA	< 0.01	106%	50%	140%	82%	50%	140%	81%	50%	140%
Hexachlorobutadiene	1648772		< 0.01	< 0.01	NA	< 0.01	94%	50%	140%	92%	50%	140%	82%	50%	140%
Hexachloroethane	1648772		< 0.01	< 0.01	NA	< 0.01	88%	50%	140%	85%	50%	140%	80%	50%	140%
Methoxychlor	1648772		< 0.04	< 0.04	NA	< 0.04	83%	50%	140%	81%	50%	140%	90%	50%	140%

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

Certified By: Jinkal Patel

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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H673071

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:K. Greenman

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Aldrin	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Chlordane	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
DDD	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
DDE	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
DDT	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Decachlorobiphenyl	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Dieldrin	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Endosulfan	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Endrin	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Gamma-Hexachlorocyclohexane	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Heptachlor	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Heptachlor Epoxide	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Hexachlorobenzene	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Hexachlorobutadiene	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Hexachloroethane	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
Methoxychlor	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD
TCMX	ORG-91-5112	modified from EPA SW-846 3510C & 8081B	GC/ECD

AGAT Laboratories

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Mississauga, Ontario L4Z 1Y2
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Chain of Custody Record

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

Laboratory Use Only

Work Order #: 2OH673071

Cooler Quantity: 4 COOLER

Arrival Temperatures: 6.5 | 6.0 | 6.3
6.0 | 6.2 | 6.4

Custody Seal Intact: ☐ Yes ☐ No ☐ N/A

Notes: ON ICE

Report Information:

Company:
Contact:
Address: **Terraprobe Inc.** 903 Barton Street, Unit 22, Stoney Creek, Ontario L8E 5P5
Phone: **Ph:** (905) 643-7560 **Fax:** (905) 643-7559
Attn.: Amber Brooks abrooks@terraprobe.ca

Reports to be sent to:
1. Email:
2. Email:

Regulatory Requirements: ☐ No Regulatory Requirement

(Please check all applicable boxes)

☒ Regulation 153/04
Table 2 *Indicate One*
☐ Ind/Com
☒ Res/Park
☐ Agriculture
Soil Texture *(Check One)*
☒ Coarse
☒ Fine

☐ Sewer Use
☐ Sanitary
☐ Storm
Region _____ *Indicate One*
☐ MISA

☐ Regulation 558
☐ CCME
☐ Prov. Water Quality Objectives (PWQO)
☐ Other
_____ *Indicate One*

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

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

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply)

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

OR Date Required (Rush Surcharges May Apply):

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

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

Project Information:

Project: 7-20-0004-42
Site Location:
Sampled By: K Greenman
AGAT Quote #: _____ PO: _____
Please note: If quotation number is not provided, client will be billed full price for analysis.

Invoice Information:

Bill To Same: Yes ☒ No ☐

Company:
Contact: Lorena Rossi
Address:
Email: lrossi@terraprobe.ca

Sample Matrix Legend

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

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Y / N	Field Filtered - Metals, Hg, CrVI	O. Reg 153: Metals and Inorganics	O. Reg 153: All Metals ☐ 153 Metals (excl. Hydrides) ☐ Hydride Metals ☐ 153 Metals (incl. Hydrides)	O. Reg 153: ORPs: ☐ B-HWS ☐ Cl ☐ CN ☐ Cr^{6+} ☐ EC ☐ FOC ☐ Hg ☐ pH ☐ SAR	Full Metals Scan	Regulation/Custom Metals	Nutrients: ☐ TP ☐ NH_3 ☐ TKN ☐ NO_3 ☐ NO_2 ☐ NO_3+NO_2	Volatiles: ☐ VOC ☐ BTEX ☐ THM	PHCs F1 - F4	ABNs	PAHs	PCBs: ☐ Total ☐ Aroclors	Organochlorine Pesticides	TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	Sewer Use					Potentially Hazardous or High Concentration (Y/N)
Dup 1	Nov 3/20		1	GW															X								

Samples Relinquished By (Print Name and Sign): K Greenman	Date: Nov 3/20	Time: 5:20pm	Samples Received By (Print Name and Sign): Daniella Jaic	Date: Nov 4/20	Time: 8am
Samples Relinquished By (Print Name and Sign): Daniella Jaic	Date: Nov 4/20	Time: 3pm	Samples Received By (Print Name and Sign): John Chypyha	Date: Nov 4	Time: 3:00
Samples Relinquished By (Print Name and Sign):	Date:	Time:	Samples Received By (Print Name and Sign): John Chypyha	Date: Nov 4	Time: 3:2

Page 1 of 1

N°: T102130

Document ID: DIV-78-1513-010

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

AGAT Laboratories

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CLIENT NAME: TERRAPROBE INC
903 Barton Street
Stoney Creek, ON L8E5P5
(905) 643-7560

ATTENTION TO: Amber Brooks

PROJECT: 7-20-0004-42

AGAT WORK ORDER: 20H673044

TRACE ORGANICS REVIEWED BY: Neli Popnikolova, Senior Chemist

WATER ANALYSIS REVIEWED BY: Yris Verastegui, Report Reviewer

DATE REPORTED: Nov 10, 2020

PAGES (INCLUDING COVER): 16

VERSION*: 1

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

*Notes

Disclaimer:

- All work conducted herein has been done using accepted standard protocols, and generally accepted practices and methods. AGAT test methods may incorporate modifications from the specified reference methods to improve performance.
- All samples will be disposed of within 30 days following analysis, unless expressly agreed otherwise in writing. Please contact your Client Project Manager if you require additional sample storage time.
- AGAT's liability in connection with any delay, performance or non-performance of these services is only to the Client and does not extend to any other third party. Unless expressly agreed otherwise in writing, AGAT's liability is limited to the actual cost of the specific analysis or analyses included in the services.
- This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
- The test results reported herewith relate only to the samples as received by the laboratory.
- Application of guidelines is provided "as is" without warranty of any kind, either expressed or implied, including, but not limited to, warranties of merchantability, fitness for a particular purpose, or non-infringement. AGAT assumes no responsibility for any errors or omissions in the guidelines contained in this document.
- All reportable information as specified by ISO/IEC 17025:2017 is available from AGAT Laboratories upon request.

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Certificate of Analysis

AGAT WORK ORDER: 20H673044

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:K. Greenman

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

DATE RECEIVED: 2020-11-04

DATE REPORTED: 2020-11-10

		SAMPLE DESCRIPTION:		DUP 2
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2020-11-03
Parameter	Unit	G / S	RDL	1648732
Acenaphthene	µg/L	4.1	0.20	<0.20
Acenaphthylene	µg/L	1	0.20	<0.20
Anthracene	µg/L	2.4	0.10	<0.10
Benzo(a)anthracene	µg/L	1	0.20	<0.20
Benzo(a)pyrene	µg/L	0.01	0.01	<0.01
Benzo(b)fluoranthene	µg/L	0.1	0.10	<0.10
Benzo(g,h,i)perylene	µg/L	0.2	0.20	<0.20
Benzo(k)fluoranthene	µg/L	0.1	0.10	<0.10
Chrysene	µg/L	0.1	0.10	<0.10
Dibenz(a,h)anthracene	µg/L	0.2	0.20	<0.20
Fluoranthene	µg/L	0.41	0.20	<0.20
Fluorene	µg/L	120	0.20	<0.20
Indeno(1,2,3-cd)pyrene	µg/L	0.2	0.20	<0.20
Naphthalene	µg/L	11	0.20	<0.20
Phenanthrene	µg/L	1	0.10	<0.10
Pyrene	µg/L	4.1	0.20	<0.20
Sediment				No
2-and 1-methyl Naphthalene	µg/L	3.2	0.20	<0.20
Surrogate	Unit	Acceptable Limits		
Acenaphthene-d10	%	50-140		110
Chrysene-d12	%	50-140		85
Naphthalene-d8	%	50-140		98

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1648732 Note: The result for Benzo(b)Fluoranthene is the total of the Benzo(b)&(j)Fluoranthene isomers because the isomers co-elute on the GC column.
2- and 1-Methyl Naphthalene is a calculated parameter. The calculated value is the sum of 2-Methyl Naphthalene and 1-Methyl Naphthalene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopowich

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 20H673044

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:K. Greenman

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

DATE RECEIVED: 2020-11-04

DATE REPORTED: 2020-11-10

		SAMPLE DESCRIPTION:		DUP 2
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2020-11-03
Parameter	Unit	G / S	RDL	1648732
F1 (C6 to C10) minus BTEX	µg/L	750	25	<25
F1 (C6-C10)	µg/L	750	25	<25
F2 (C10 to C16)	µg/L	150	100	<100
F2 (C10 to C16) minus Naphthalene	µg/L		100	<100
F3 (C16 to C34)	µg/L	500	100	<100
F3 (C16 to C34) minus PAHs	µg/L		100	<100
F4 (C34 to C50)	µg/L	500	100	<100
Gravimetric Heavy Hydrocarbons	µg/L		500	NA
Sediment				No
Surrogate	Unit	Acceptable Limits		
Terphenyl	%	60-140		74

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1648732 The C6-C10 fraction is calculated using toluene response factor.
C6–C10 (F1 minus BTEX) is a calculated parameter. The calculated value is F1 minus BTEX. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.
The C10 - C16, C16 - C34, and C34 - C50 fractions are calculated using the average response factor for n-C10, n-C16, and n-C34.
Gravimetric Heavy Hydrocarbons are not included in the Total C16-C50 and are only determined if the chromatogram of the C34 - C50 hydrocarbons indicates that hydrocarbons >C50 are present.
The chromatogram has returned to baseline by the retention time of nC50.
Total C6 - C50 results are corrected for BTEX and PAH contributions.
C>10 – C16 (F2- Naphthalene) is a calculated parameter. The calculated value is F2 - Naphthalene.
C>16 - C34 (F3-PAH) is a calculated parameter. The calculated value is F3-PAH (PAH: sum of Phenanthrene, Benzo(a)anthracene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Fluoranthene, Dibenzo(a,h)anthracene, Indeno(1,2,3-c,d)pyrene and Pyrene).
This method complies with the Reference Method for the CWS PHC and is validated for use in the laboratory.
nC10, nC16 and nC34 response factors are within 10% of their average.
C50 response factor is within 70% of nC10 + nC16 + nC34 average.
Linearity is within 15%.
Extraction and holding times were met for this sample.

Sediment parameter is comment only based on visual inspection of the sample prior to extraction and is not an accredited test.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: N Popnikolof

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Certificate of Analysis

AGAT WORK ORDER: 20H673044

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

SAMPLING SITE:

ATTENTION TO: Amber Brooks

SAMPLED BY:K. Greenman

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

DATE RECEIVED: 2020-11-04

DATE REPORTED: 2020-11-10

SAMPLE DESCRIPTION:				DUP 2	Trip Blank
SAMPLE TYPE:				Water	Water
DATE SAMPLED:				2020-11-03	2020-11-03
Parameter	Unit	G / S	RDL	1648732	1648741
Acetone	µg/L	2700	1.0	<1.0	<1.0
Benzene	µg/L	5.0	0.20	<0.20	<0.20
Bromodichloromethane	µg/L	16	0.20	<0.20	<0.20
Bromoform	µg/L	25	0.10	<0.10	<0.10
Bromomethane	µg/L	0.89	0.20	<0.20	<0.20
Carbon Tetrachloride	µg/L	5.0	0.20	<0.20	<0.20
Chlorobenzene	µg/L	30	0.10	<0.10	<0.10
Chloroform	µg/L	22	0.20	<0.20	<0.20
Dibromochloromethane	µg/L	25	0.10	<0.10	<0.10
1,4-Dichlorobenzene	µg/L	1	0.10	<0.10	<0.10
1,2-Dichlorobenzene	µg/L	3	0.10	<0.10	<0.10
1,3-Dichlorobenzene	µg/L	59	0.10	<0.10	<0.10
Dichlorodifluoromethane	µg/L	590	0.20	<0.20	<0.20
1,2-Dichloroethane	µg/L	5	0.20	<0.20	<0.20
1,1-Dichloroethane	µg/L	5	0.30	<0.30	<0.30
1,1-Dichloroethylene	µg/L	14	0.30	<0.30	<0.30
1,2-Dichloropropane	µg/L	5	0.20	<0.20	<0.20
1,3-Dichloropropene	µg/L	0.5	0.30	<0.30	<0.30
Ethylbenzene	µg/L	2.4	0.10	<0.10	<0.10
Ethylene Dibromide	µg/L	0.2	0.10	<0.10	<0.10
Methyl Ethyl Ketone	µg/L	1800	1.0	<1.0	<1.0
Methyl Isobutyl Ketone	µg/L	640	1.0	<1.0	<1.0
Methyl tert-butyl ether	µg/L	15	0.20	<0.20	<0.20
Methylene Chloride	µg/L	50	0.30	<0.30	<0.30
Styrene	µg/L	5.4	0.10	<0.10	<0.10
1,1,2,2-Tetrachloroethane	µg/L	1	0.10	<0.10	<0.10
1,1,1,2-Tetrachloroethane	µg/L	1.1	0.10	<0.10	<0.10
Tetrachloroethylene	µg/L	17	0.20	<0.20	<0.20
Toluene	µg/L	24	0.20	<0.20	<0.20
1,1,2-Trichloroethane	µg/L	5	0.20	<0.20	<0.20

Certified By: N Popnikolof

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AGAT WORK ORDER: 20H673044

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:K. Greenman

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

DATE RECEIVED: 2020-11-04

DATE REPORTED: 2020-11-10

		SAMPLE DESCRIPTION:		DUP 2	Trip Blank
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		2020-11-03	2020-11-03
Parameter	Unit	G / S	RDL	1648732	1648741
1,1,1-Trichloroethane	µg/L	200	0.30	<0.30	<0.30
Trichloroethylene	µg/L	5	0.20	0.57	<0.20
Trichlorofluoromethane	µg/L	150	0.40	<0.40	<0.40
Vinyl Chloride	µg/L	1.7	0.17	<0.17	<0.17
Xylenes (Total)	µg/L	300	0.20	<0.20	<0.20
cis- 1,2-Dichloroethylene	µg/L	17	0.20	<0.20	<0.20
m & p-Xylene	µg/L		0.20	<0.20	<0.20
n-Hexane	µg/L	520	0.20	<0.20	<0.20
o-Xylene	µg/L		0.10	<0.10	<0.10
trans- 1,2-Dichloroethylene	µg/L	17	0.20	<0.20	<0.20
Surrogate	Unit	Acceptable Limits			
4-Bromofluorobenzene	% Recovery	50-140		100	86
Toluene-d8	% Recovery	50-140		109	120

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1648732-1648741 Xylenes total is a calculated parameter. The calculated value is the sum of m&p-Xylene and o-Xylene.
1,3-Dichloropropene total is a calculated parameter. The calculated value is the sum of Cis-1,3-Dichloropropene and Trans-1,3-Dichloropropene. The calculated parameter is non-accredited. The parameters that are components of the calculation are accredited.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: NPopowkolof

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 20H673044

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

SAMPLING SITE:

ATTENTION TO: Amber Brooks

SAMPLED BY:K. Greenman

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

DATE RECEIVED: 2020-11-04

DATE REPORTED: 2020-11-10

		SAMPLE DESCRIPTION:		DUP 2
		SAMPLE TYPE:		Water
		DATE SAMPLED:		2020-11-03
Parameter	Unit	G / S	RDL	1648732
Chloride	µg/L	790000	1000	384000
Chromium VI	µg/L	25	5	<5
Cyanide, Free	µg/L	66	2	<2
Dissolved Antimony	µg/L	6	1.0	<1.0
Dissolved Arsenic	µg/L	25	1.0	3.6
Dissolved Barium	µg/L	1000	2.0	206
Dissolved Beryllium	µg/L	4	0.50	<0.50
Dissolved Boron	µg/L	5000	10.0	324
Dissolved Cadmium	µg/L	2.7	0.20	<0.20
Dissolved Chromium	µg/L	50	2.0	<2.0
Dissolved Cobalt	µg/L	3.8	0.50	<0.50
Dissolved Copper	µg/L	87	1.0	<1.0
Dissolved Lead	µg/L	10	0.50	<0.50
Dissolved Molybdenum	µg/L	70	0.50	6.26
Dissolved Nickel	µg/L	100	3.0	<3.0
Dissolved Selenium	µg/L	10	1.0	1.5
Dissolved Silver	µg/L	1.5	0.20	<0.20
Dissolved Sodium	µg/L	490000	250	128000
Dissolved Thallium	µg/L	2	0.30	<0.30
Dissolved Uranium	µg/L	20	0.50	2.68
Dissolved Vanadium	µg/L	6.2	0.40	<0.40
Dissolved Zinc	µg/L	1100	5.0	<5.0
Electrical Conductivity	uS/cm	NA	2	1790
Mercury	µg/L	1	0.02	<0.02
pH	pH Units		NA	8.01

Certified By: Iris Verástegui

AGAT Laboratories

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Certificate of Analysis

AGAT WORK ORDER: 20H673044

PROJECT: 7-20-0004-42

CLIENT NAME: TERRAPROBE INC

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:K. Greenman

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

DATE RECEIVED: 2020-11-04

DATE REPORTED: 2020-11-10

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to Table 2: Full Depth Generic Site Condition Standards in a Potable Ground Water Condition - Potable Ground Water - All Types of Property Uses - Medium and Fine Textured Soils
Guideline values are for general reference only. The guidelines provided may or may not be relevant for the intended use. Refer directly to the applicable standard for regulatory interpretation.

1648732 Metals analysis completed on a filtered sample.
Dilution required, RDL has been increased accordingly.

Analysis performed at AGAT Toronto (unless marked by *)

Certified By: Iris Verástegui

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Quality Assurance

CLIENT NAME: TERRAPROBE INC
PROJECT: 7-20-0004-42
SAMPLING SITE:

AGAT WORK ORDER: 20H673044
ATTENTION TO: Amber Brooks
SAMPLED BY:K. Greenman

Trace Organics Analysis

RPT Date: Nov 10, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - PHCs F1 - F4 (with PAHs and VOC) (Water)															
F1 (C6-C10)	1620796		< 25	< 25	NA	< 25	86%	60%	140%	82%	60%	140%	96%	60%	140%
F2 (C10 to C16)	1620787		< 100	< 100	NA	< 100	115%	60%	140%	83%	60%	140%	90%	60%	140%
F3 (C16 to C34)	1620787		< 100	< 100	NA	< 100	103%	60%	140%	84%	60%	140%	87%	60%	140%
F4 (C34 to C50)	1620787		< 100	< 100	NA	< 100	96%	60%	140%	97%	60%	140%	106%	60%	140%
O. Reg. 153(511) - PAHs (Water)															
Acenaphthene	1635600		<0.20	<0.20	NA	< 0.20	95%	50%	140%	101%	50%	140%	82%	50%	140%
Acenaphthylene	1635600		<0.20	<0.20	NA	< 0.20	109%	50%	140%	107%	50%	140%	85%	50%	140%
Anthracene	1635600		<0.10	<0.10	NA	< 0.10	95%	50%	140%	106%	50%	140%	85%	50%	140%
Benzo(a)anthracene	1635600		<0.20	<0.20	NA	< 0.20	74%	50%	140%	79%	50%	140%	86%	50%	140%
Benzo(a)pyrene	1635600		<0.01	<0.01	NA	< 0.01	99%	50%	140%	97%	50%	140%	77%	50%	140%
Benzo(b)fluoranthene	1635600		<0.10	<0.10	NA	< 0.10	86%	50%	140%	90%	50%	140%	79%	50%	140%
Benzo(g,h,i)perylene	1635600		<0.20	<0.20	NA	< 0.20	108%	50%	140%	97%	50%	140%	92%	50%	140%
Benzo(k)fluoranthene	1635600		<0.10	<0.10	NA	< 0.10	111%	50%	140%	112%	50%	140%	90%	50%	140%
Chrysene	1635600		<0.10	<0.10	NA	< 0.10	95%	50%	140%	109%	50%	140%	82%	50%	140%
Dibenz(a,h)anthracene	1635600		<0.20	<0.20	NA	< 0.20	88%	50%	140%	78%	50%	140%	76%	50%	140%
Fluoranthene	1635600		<0.20	<0.20	NA	< 0.20	102%	50%	140%	110%	50%	140%	84%	50%	140%
Fluorene	1635600		<0.20	<0.20	NA	< 0.20	99%	50%	140%	100%	50%	140%	81%	50%	140%
Indeno(1,2,3-cd)pyrene	1635600		<0.20	<0.20	NA	< 0.20	106%	50%	140%	89%	50%	140%	71%	50%	140%
Naphthalene	1635600		<0.20	<0.20	NA	< 0.20	114%	50%	140%	95%	50%	140%	76%	50%	140%
Phenanthrene	1635600		<0.10	<0.10	NA	< 0.10	98%	50%	140%	87%	50%	140%	69%	50%	140%
Pyrene	1635600		<0.20	<0.20	NA	< 0.20	108%	50%	140%	106%	50%	140%	81%	50%	140%
O. Reg. 153(511) - VOCs (Water)															
Acetone	1635603		<1.0	<1.0	NA	< 1.0	105%	50%	140%	106%	50%	140%	99%	50%	140%
Benzene	1635603		15	15	1.7%	< 0.20	97%	50%	140%	91%	60%	130%	106%	50%	140%
Bromodichloromethane	1635603		<0.20	<0.20	NA	< 0.20	82%	50%	140%	111%	60%	130%	101%	50%	140%
Bromoform	1635603		<0.10	<0.10	NA	< 0.10	105%	50%	140%	105%	60%	130%	80%	50%	140%
Bromomethane	1635603		<0.20	<0.20	NA	< 0.20	97%	50%	140%	110%	50%	140%	108%	50%	140%
Carbon Tetrachloride	1635603		<0.20	<0.20	NA	< 0.20	83%	50%	140%	84%	60%	130%	83%	50%	140%
Chlorobenzene	1635603		<0.10	<0.10	NA	< 0.10	103%	50%	140%	94%	60%	130%	91%	50%	140%
Chloroform	1635603		<0.20	<0.20	NA	< 0.20	96%	50%	140%	93%	60%	130%	106%	50%	140%
Dibromochloromethane	1635603		<0.10	<0.10	NA	< 0.10	97%	50%	140%	92%	60%	130%	107%	50%	140%
1,4-Dichlorobenzene	1635603		<0.10	<0.10	NA	< 0.10	110%	50%	140%	108%	60%	130%	105%	50%	140%
1,2-Dichlorobenzene	1635603		<0.10	<0.10	NA	< 0.10	110%	50%	140%	111%	60%	130%	108%	50%	140%
1,3-Dichlorobenzene	1635603		<0.10	<0.10	NA	< 0.10	103%	50%	140%	104%	60%	130%	99%	50%	140%
Dichlorodifluoromethane	1635603		<0.20	<0.20	NA	< 0.20	82%	50%	140%	92%	50%	140%	88%	50%	140%
1,2-Dichloroethane	1635603		<0.20	<0.20	NA	< 0.20	98%	50%	140%	98%	60%	130%	90%	50%	140%
1,1-Dichloroethane	1635603		<0.30	<0.30	NA	< 0.30	88%	50%	140%	80%	60%	130%	101%	50%	140%
1,1-Dichloroethylene	1635603		<0.30	<0.30	NA	< 0.30	94%	50%	140%	76%	60%	130%	90%	50%	140%

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Quality Assurance

CLIENT NAME: TERRAPROBE INC
PROJECT: 7-20-0004-42
SAMPLING SITE:

AGAT WORK ORDER: 20H673044
ATTENTION TO: Amber Brooks
SAMPLED BY:K. Greenman

Trace Organics Analysis (Continued)

RPT Date: Nov 10, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
1,2-Dichloropropane	1635603		<0.20	<0.20	NA	< 0.20	82%	50%	140%	108%	60%	130%	112%	50%	140%
Ethylbenzene	1635603		0.61	0.58	5%	< 0.10	104%	50%	140%	97%	60%	130%	92%	50%	140%
Ethylene Dibromide	1635603		<0.10	<0.10	NA	< 0.10	109%	50%	140%	116%	60%	130%	102%	50%	140%
Methyl Ethyl Ketone	1635603		<1.0	<1.0	NA	< 1.0	101%	50%	140%	107%	50%	140%	84%	50%	140%
Methyl Isobutyl Ketone	1635603		<1.0	<1.0	NA	< 1.0	99%	50%	140%	89%	50%	140%	109%	50%	140%
Methyl tert-butyl ether	1635603		<0.20	<0.20	NA	< 0.20	86%	50%	140%	89%	60%	130%	98%	50%	140%
Methylene Chloride	1635603		<0.30	<0.30	NA	< 0.30	92%	50%	140%	109%	60%	130%	97%	50%	140%
Styrene	1635603		<0.10	<0.10	NA	< 0.10	92%	50%	140%	87%	60%	130%	86%	50%	140%
1,1,2,2-Tetrachloroethane	1635603		<0.10	<0.10	NA	< 0.10	100%	50%	140%	109%	60%	130%	78%	50%	140%
1,1,1,2-Tetrachloroethane	1635603		<0.10	<0.10	NA	< 0.10	93%	50%	140%	84%	60%	130%	87%	50%	140%
Tetrachloroethylene	1635603		<0.20	<0.20	NA	< 0.20	104%	50%	140%	81%	60%	130%	94%	50%	140%
Toluene	1635603		6.6	6.4	2.5%	< 0.20	95%	50%	140%	79%	60%	130%	111%	50%	140%
1,1,2-Trichloroethane	1635603		<0.20	<0.20	NA	< 0.20	99%	50%	140%	85%	60%	130%	113%	50%	140%
1,1,1-Trichloroethane	1635603		<0.30	<0.30	NA	< 0.30	79%	50%	140%	80%	60%	130%	75%	50%	140%
Trichloroethylene	1635603		<0.20	<0.20	NA	< 0.20	107%	50%	140%	102%	60%	130%	93%	50%	140%
Trichlorofluoromethane	1635603		<0.40	<0.40	NA	< 0.40	94%	50%	140%	99%	50%	140%	94%	50%	140%
Vinyl Chloride	1635603		<0.17	<0.17	NA	< 0.17	115%	50%	140%	99%	50%	140%	103%	50%	140%
cis- 1,2-Dichloroethylene	1635603		<0.20	<0.20	NA	< 0.20	99%	50%	140%	96%	60%	130%	104%	50%	140%
m & p-Xylene	1635603		6.4	5.9	7.5%	< 0.20	108%	50%	140%	83%	60%	130%	93%	50%	140%
n-Hexane	1635603		1.0	1.1	7.5%	< 0.20	94%	50%	140%	114%	60%	130%	96%	50%	140%
o-Xylene	1635603		21	20	6.8%	< 0.10	95%	50%	140%	85%	60%	130%	92%	50%	140%
trans- 1,2-Dichloroethylene	1635603		<0.20	<0.20	NA	< 0.20	95%	50%	140%	81%	60%	130%	102%	50%	140%

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

Certified By: N Popnikolof

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Quality Assurance

CLIENT NAME: TERRAPROBE INC
PROJECT: 7-20-0004-42
SAMPLING SITE:

AGAT WORK ORDER: 20H673044
ATTENTION TO: Amber Brooks
SAMPLED BY:K. Greenman

Water Analysis

RPT Date: Nov 10, 2020			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
O. Reg. 153(511) - Metals & Inorganics (Water)															
Chloride	1652436		17000	17100	0.6%	< 100	95%	70%	130%	103%	80%	120%	104%	70%	130%
Chromium VI	1648947		<5	<5	NA	< 5	103%	70%	130%	99%	80%	120%	102%	70%	130%
Cyanide, Free	1648732	1648732	<2	<2	NA	< 2	105%	70%	130%	96%	80%	120%	109%	70%	130%
Dissolved Antimony	1648314		<1.0	<1.0	NA	< 1.0	97%	70%	130%	101%	80%	120%	99%	70%	130%
Dissolved Arsenic	1648314		<1.0	<1.0	NA	< 1.0	96%	70%	130%	104%	80%	120%	103%	70%	130%
Dissolved Barium	1648314		149	145	2.7%	< 2.0	99%	70%	130%	102%	80%	120%	97%	70%	130%
Dissolved Beryllium	1648314		<0.50	<0.50	NA	< 0.50	101%	70%	130%	110%	80%	120%	113%	70%	130%
Dissolved Boron	1648314		63.3	59.2	6.7%	< 10.0	103%	70%	130%	105%	80%	120%	108%	70%	130%
Dissolved Cadmium	1648314		<0.20	<0.20	NA	< 0.20	96%	70%	130%	101%	80%	120%	100%	70%	130%
Dissolved Chromium	1648314		<2.0	<2.0	NA	< 2.0	96%	70%	130%	101%	80%	120%	95%	70%	130%
Dissolved Cobalt	1648314		1.55	1.71	NA	< 0.50	97%	70%	130%	105%	80%	120%	96%	70%	130%
Dissolved Copper	1648314		1.3	1.6	NA	< 1.0	96%	70%	130%	101%	80%	120%	93%	70%	130%
Dissolved Lead	1648314		<0.50	<0.50	NA	< 0.50	95%	70%	130%	98%	80%	120%	92%	70%	130%
Dissolved Molybdenum	1648314		9.94	10.3	3.6%	< 0.50	96%	70%	130%	103%	80%	120%	98%	70%	130%
Dissolved Nickel	1648314		<3.0	<3.0	NA	< 3.0	96%	70%	130%	104%	80%	120%	95%	70%	130%
Dissolved Selenium	1648314		<1.0	<1.0	NA	< 1.0	98%	70%	130%	108%	80%	120%	108%	70%	130%
Dissolved Silver	1648314		<0.20	<0.20	NA	< 0.20	96%	70%	130%	105%	80%	120%	90%	70%	130%
Dissolved Sodium	1648732	1648732	128000	124000	3.2%	< 50	102%	70%	130%	100%	80%	120%	99%	70%	130%
Dissolved Thallium	1648314		<0.30	<0.30	NA	< 0.30	96%	70%	130%	102%	80%	120%	95%	70%	130%
Dissolved Uranium	1648314		0.66	0.62	NA	< 0.50	93%	70%	130%	100%	80%	120%	100%	70%	130%
Dissolved Vanadium	1648314		<0.40	<0.40	NA	< 0.40	96%	70%	130%	102%	80%	120%	97%	70%	130%
Dissolved Zinc	1648314		<5.0	<5.0	NA	< 5.0	96%	70%	130%	102%	80%	120%	96%	70%	130%
Electrical Conductivity	1648732	1648732	1790	1800	0.6%	< 2	101%	90%	110%						
Mercury	1649232		<0.02	<0.02	NA	< 0.02	100%	70%	130%	100%	80%	120%	90%	70%	130%
pH	1648732	1648732	8.01	7.91	1.3%	NA	100%	90%	110%						

Comments: NA signifies Not Applicable.
If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Certified By: Iris Verástegui

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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H673044

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:K. Greenman

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Trace Organics Analysis			
Acenaphthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Acenaphthene-d10	ORG-91-5105	modified from EPA SW-846 3510C & 8270E	GC/MS
Acenaphthylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(a)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(b)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(g,h,i)perylene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Benzo(k)fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Chrysene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Chrysene-d12	ORG-91-5105	modified from EPA SW-846 3510C & 8270E	GC/MS
Dibenz(a,h)anthracene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluoranthene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Fluorene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Indeno(1,2,3-cd)pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Naphthalene-d8	ORG-91-5105	modified from EPA SW-846 3510C & 8270E	GC/MS
Phenanthrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Pyrene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
Sediment			
2-and 1-methyl Naphthalene	ORG-91-5105	modified from EPA 3510C and EPA 8270E	GC/MS
F1 (C6 to C10) minus BTEX	VOL-91-5010	modified from MOE PHC-E3421	P&T GC/FID
F1 (C6-C10)	VOL-91- 5010	modified from MOE PHC-E3421	P&T GC/FID
F2 (C10 to C16)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F2 (C10 to C16) minus Naphthalene	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F3 (C16 to C34) minus PAHs	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
F4 (C34 to C50)	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Gravimetric Heavy Hydrocarbons	VOL-91-5010	modified from MOE PHC-E3421	BALANCE
Terphenyl	VOL-91-5010	modified from MOE PHC-E3421	GC/FID
Acetone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Benzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H673044

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SAMPLING SITE:

SAMPLED BY:K. Greenman

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Bromodichloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
4-Bromofluorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromoform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Bromomethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Carbon Tetrachloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Chloroform	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dibromochloromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,4-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichlorobenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Dichlorodifluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,2-Dichloropropane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,3-Dichloropropene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylbenzene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Ethylene Dibromide	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Ethyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl Isobutyl Ketone	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methyl tert-butyl ether	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Methylene Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Styrene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1,2-Tetrachloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Tetrachloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Toluene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

AGAT Laboratories

5835 COOPERS AVENUE
MISSISSAUGA, ONTARIO
CANADA L4Z 1Y2
TEL (905)712-5100
FAX (905)712-5122
http://www.agatlabs.com

Method Summary

CLIENT NAME: TERRAPROBE INC

AGAT WORK ORDER: 20H673044

PROJECT: 7-20-0004-42

ATTENTION TO: Amber Brooks

SAMPLING SITE:

SAMPLED BY:K. Greenman

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Toluene-d8	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,2-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
1,1,1-Trichloroethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Trichlorofluoromethane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Vinyl Chloride	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
Xylenes (Total)	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
cis- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
m & p-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
n-Hexane	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
o-Xylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS
trans- 1,2-Dichloroethylene	VOL-91-5001	modified from EPA 5030B & EPA 8260D	(P&T)GC/MS

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PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
Chloride	INOR-93-6004	modified from SM 4110 B	ION CHROMATOGRAPH
Chromium VI	INOR-93-6034	modified from SM 3500-CR B	SPECTROPHOTOMETER
Cyanide, Free	INOR-93-6052	modified from ON MOECC E3015, SM 4500-CN- I, G-387	TECHNICON AUTO ANALYZER
Dissolved Antimony	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Arsenic	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Barium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Beryllium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Boron	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cadmium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Chromium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Cobalt	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Copper	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Lead	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Molybdenum	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Nickel	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Selenium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Silver	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Sodium	MET-93-6105	modified from EPA 6010D	ICP/OES
Dissolved Thallium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Uranium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Vanadium	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Dissolved Zinc	MET-93-6103	modified from EPA 200.8 and EPA 3005A	ICP-MS
Electrical Conductivity	INOR-93-6000	SM 2510 B	PC TITRATE
Mercury	MET-93-6100	modified from EPA 245.2 and SM 3112 B	CVAAS
pH	INOR-93-6000	modified from SM 4500-H+ B	PC TITRATE

sm 4.1 4.4 4.0

AGAT Laboratories

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

Chain of Custody Record

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

Laboratory Use Only

Work Order #: 20H673044

Cooler Quantity: 1L6 1 Sm

Arrival Temperatures: LA cooler 6.5 16.0 16.3 / 6 16.2 16.4

Custody Seal Intact: ☐Yes ☐No ☐N/A

Notes: ON ICE

Report Information:

Company: Terraprobe Inc.
Contact: Attn.: Amber Brooks abrooks@terraprobe.ca
Address: 903 Barton Street, Unit 22, Stoney Creek, Ontario L8E 5P5
Phone: Ph: (905) 643-7560 Fax: (905) 643-7559
Reports to be sent to:
1. Email:
2. Email:

Regulatory Requirements: (Please check all applicable boxes)

- ☒ Regulation 153/04 — Table 2 (Indicate One): ☐Ind/Com ☒Res/Park ☐Agriculture
- Soil Texture (Check One): ☐Coarse ☒Fine
- ☐ Excess Soils R406 — Table (Indicate One)
- Sample from APEC? ☐Yes ☐No
- ☐Stockpile ☐In-situ
- ☐ Regulation 558
- ☐ Sewer Use: ☐Sanitary ☐Storm — Region
- ☐CCME
- ☐Prov. Water Quality Objectives (PWQO)
- ☐Other (Indicate One)

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

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

Turnaround Time (TAT) Required:

Regular TAT ☒ 5 to 7 Business Days

Rush TAT (Rush Surcharges Apply): ☐ 3 Business Days ☐ 2 Business Days ☐ Next Business Day

OR Date Required (Rush Surcharges May Apply):

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

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

Project Information:

Project: 7-20-0004-42
Site Location:
Sampled By: K. Greenman
AGAT Quote #: PO:

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

Invoice Information: Bill To Same: Yes ☒ No ☐

Company:
Contact: Lorena Rossi
Address:
Email: lrossi@terraprobe.ca

Sample Matrix Legend

Code	Matrix
B	Biota
GW	Ground Water
O	Oil
P	Paint
S	Soil
SD	Sediment
SW	Surface Water

Sample Identification	Date Sampled	Time Sampled	# of Containers	Sample Matrix	Comments/ Special Instructions	Field Filtered - Metals, Hg, CrVI, DOC (Y/N)	O. Reg 153: Metals & Inorganics, incl. EC/SAR	Metals - ICPMS, ☐ CrVI, ☐ Hg, ☐ HWSB	BTEX, F1-F4 PHCs / Analyze F4G if required ☒Yes ☐No	PAHs	PCBs	VOC	Landfill Disposal Characterization TCLP: TCLP: ☐ M&I ☐ VOCs ☐ ABNs ☐ B(a)P ☐ PCBs	Excess Soils SPLP Rainwater Leach SPLP: ☐ Metals ☐ VOCs ☐ SVOCs	Excess Soils Characterization Package pH, ICPMS Metals, BTEX, F1-F4	Salt - EC/SAR	Potentially Hazardous or High Concentration (Y/N)
Dup 8	Nov 3/20	AM PM	15	GW		Y	X		X	X		X					
Trip Blank	—	AM PM	3	—								X					

Samples Relinquished By (Print Name and Sign)	Date	Time	Samples Received By (Print Name and Sign)	Date	Time
K. Greenman [signature]	Nov 3/20	5:20 pm	Daniella Jaic [signature]	Nov 4/20	8am
Daniella Jaic [signature]	Nov 4/20	3pm	John Chypyha	Nov 4	3:00
[signature]			John Chypyha [signature]	Nov 4	5:20

Page 1 of 1

Nº: T 106804

AGAT Laboratories

Sample Temperature Log

Client: Terraprobe

COC# or Work Order #:

# of Coolers: 2

# of Submissions:

Arrival Temperatures - Branch/Driver

Cooler #1:	6.5	6	6.3
Cooler #2:	6	6.2	6.4
Cooler #3:			
Cooler #4:			
Cooler #5:			
Cooler #6:			
Cooler #7:			
Cooler #8			
Cooler #9:			
Cooler #10:			

IR Gun ID:

Taken By: John Chyzyke

Date (yyyy/mm/dd): NOV 4 Time: 3:00 AM / PM

Arrival Temperatures - Laboratory

Cooler #1:	6	6.2	6.4
Cooler #2:	6.4	6.8	6.8
Cooler #3:			
Cooler #4:			
Cooler #5:			
Cooler #6:			
Cooler #7:			
Cooler #8			
Cooler #9:			
Cooler #10:			

IR Gun ID:

Taken By: John Chyzyke

Date (yyyy/mm/dd): NOV 4 Time: 5:20 AM / PM

Instructions for use of this form: 1) complete all fields of info including total # of coolers and # of submissions rec'd, 2) photocopy and place in each submission prior to giving a WO#, 3) Proceed as normal, write the WO# and scan (please make sure to scan along with the COC)

Document ID: SR-78-9511.003
Date Issued: 2017-2-23

Page:_____ of _____